CITY OF DELAND
REGULAR MEETING OF THE PLANNING BOARD
SEPTEMBER 10, 2025 AT 5:00 PM
CITY HALL, COMMISSION CHAMBERS
120 SOUTH FLORIDA AVENUE

AGENDA

CALL TO ORDER

PLEDGE OF ALLEGIANCE

ROLL CALL

VERBAL REPORT ON CITY COMMISSION MEETINGS

MINUTES

1. Approval of the August 13, 2025 meeting minutes.

VARIANCE OLD BUSINESS

VARIANCE NEW BUSINESS

1. Applicant Name: David Seilkop - West Volusia Habitat for Humanity
   Project Number: V25-140
   Project Location: 703 & 707 E. Walts Ave.
   Project Description: Variance request to reduce the required number of parking spaces from 4 to 2 within the Core Gateway District.
   Staff Planner: Sam Nelson

2. Applicant Name: David Seilkop - West Volusia Habitat for Humanity
   Project Number: V25-142
   Project Location: 721 & 725 E. Walts Ave.
   Project Description: Variance request to reduce the required number of parking spaces from 4 to 2 within the Core Gateway District.
   Staff Planner: Sam Nelson

PUBLIC PARTICIPATION PROCEEDINGS

PLANNING - OLD BUSINESS

1. Applicant Name: Corey D. Brown, Esq., Storch Law Firm
   Project Number: AN25-082 - DeLand Reserve
   Project Location: 210 North Ridgewood Avenue
   Project Description: Annexation of +/-20.13 acres into the City of DeLand
   Project Planner: Emily Kunkel

2. Applicant Name: Corey D. Brown, Esq., Storch Law Firm
   Project Number: SMLU25-083 - DeLand Reserve
   Project Location: 210 North Ridgewood Avenue
   Project Description: To amend the land use designation from Volusia County Rural to City of

DeLand Medium-Density Residential (MDR)
Project Planner: Emily Kunkel

3. Applicant Name: Corey D. Brown, Esq., Storch Law Firm
Project Number: Z25-084 - Rezoning for DeLand Reserve
Project Location: 210 North Ridgewood Avenue
Project Description: Rezone ±20.13 acres from Volusia County A-3C (Transitional Agricultural) to DeLand Reserve Planned Development, a Residential Townhome Development
Project Planner: Emily Kunkel

PLANNING - NEW BUSINESS

1. Applicant Name: Michael Arth
Project Number: SE25-107 – Special Exception
Project Location: ±.35 acres located at 302 S. Hayden Ave.
Project Description: Special exception request to Permit a Bed and Breakfast Homestay and to Eliminate the Landscape Buffer Requirement
Project Planner: Sam Nelson

2. Applicant Name: Nicole Martin - Madden Moorhead & Stokes LLC
Project Number: SP24-134 – Site Plan for New York Ave Apartments
Project Location: ±1.63 acres located at 225 W New York Ave.
Project Description:
Project Planner: Carol Kuhn

3. Applicant Name: Mr. Mark Watts, Esq. - Cobb & Cole, P.A.
Project Number: AN25-026
Project Location: North of SR 472 and east of S. Blue Lake Ave.
Project Description: Voluntary Annexation of ± 41.41 acres of property into the City limits of DeLand
Staff Planner: Chris Carson

4. Applicant Name: Mark Watts, Esq. - Cobb & Cole, P.A.
Project Number: SMLU25-025
Project Location: North of SR 472 and east of S. Blue Lake Ave.
Project Description: To amend the future land use designation from Volusia County Southwest Activity Center Community (SWAC Community) and Volusia County Southwest Activity Center Commerce (SWAC Commerce) to City of DeLand Low Density Residential (LDR)

5. Applicant Name: Mark Watts, Esq. - Cobb & Cole, P.A
Project Number: Z25-024
Project Location: North of SR 472 and east of S. Blue Lake Ave.
Project Description: Change of zoning for ±39.24 acres from Volusia County Southwest Activity Center Community (SWR) and Volusia County Southwest Activity Center Commerce (SWC) to Canopy Preserve PD (Planned Development)
Staff Planner: Chris Carson

6. Applicant Name: City of DeLand
Project Number: LDR25-136
Project Location: City-wide
Project Description: City-Initiated Land Development Regulations Text Amendment to Modify

Section 33-17 – Zoning Districts, to clarify where Tiny Home Communities are permitted by conditional use; add a new Section, 33-19.15 titled Tiny Home Community Performance Standards and Conditions to allow Tiny Home Communities in some of the single-family residential and commercial zoning districts, add specific performance standards for the tiny home communities; and amend Section 33-12, Definitions, to include several new definitions pertaining to Tiny Home Communities.
Staff Planner: Chris Carson

OTHER BUSINESS

1. Land Development Code Discussion.

ADJOURNMENT

CITY OF DELAND
PLANNING BOARD REGULAR MEETING
MINUTES
WEDNESDAY, AUGUST 13, 2025 - 5:00 P.M.
CITY HALL

CALL TO ORDER

The meeting began at 5:00 p.m.

PLEDGE OF ALLEGIANCE

Pledge of Allegiance – Mr. Owens, Chairperson

ROLL CALL

Henry Thiry	Present
Nora Lewis	Present
Aaron Preston	Present
Don Liska	Present
Troy Baumgartner	Present
Harper Hill, *Vice Chairperson*	Present – Late: Arrived at 5:15p.m.
Jeremy Owens, *Chairperson*	Present

Quorum: Yes

Present – Darren Elkind, City Attorney; Rick Werbiskis, Community Development Director; Carol Kuhn, Planning Director; Deborah Glick, Development Services Manager; Belinda Williams-Collins, Senior Planner; Kendall Story, Senior Planner; Emily Kunkel, Senior Planner; Chris Carson, Senior Planner; Vivian Ford, Administrative Coordinator; applicants; and members of the public.

VERBAL REPORT ON CITY COMMISSION MEETINGS

Ms. Kuhn provided a verbal report.

MINUTES

1. Approval of the April 9, 2025 revised meeting minutes.

   Mr. Owens abstained from voting. The board otherwise unanimously voted to approve the April 9, 2025 revised Meeting Minutes.

2. Approval of the May 20, 2025 Planning Board Special Meeting - Workshop minutes.

Mr. Liska abstained from voting. The board otherwise unanimously voted to approve the May 20, 2025 Planning Board Special Meeting - Workshop Minutes.

3. Approval of the June 11, 2025 Meeting Minutes.

   The board unanimously voted to approve the June 11, 2025 Meeting Minutes.

4. Approval of the July 9, 2025 Meeting Minutes.

   Ms. Lewis abstained from voting. The board otherwise unanimously voted to approve the July 9, 2025 Meeting Minutes.

VARIANCE OLD BUSINESS

None.

VARIANCE NEW BUSINESS

None.

PUBLIC PARTICIPATION PROCEEDINGS

Mr. Owens read the Public Participation procedures.

OLD BUSINESS

None.

PLANNING – NEW BUSINESS

1. RECEIVED REQUEST TO CONTINUE TO SEPTEMBER 10, 2025 MEETING
   Applicant Name: Corey D. Brown, Esq., Storch Law Firm
   Project Number: AN25-082 - DeLand Reserve
   Project Location: 210 North Ridgewood Avenue
   Project Description: Annexation of +/-20.13 acres into the City of DeLand
   Project Planner: Emily Kunkel

Mr. Liska moved to continue this item to the September 10, 2025 meeting. Ms. Lewis seconded the motion. The motion to continue passed unanimously.

2. RECEIVED REQUEST TO CONTINUE TO SEPTEMBER 10, 2025 MEETING
   Applicant Name: Corey D. Brown, Esq., Storch Law Firm
   Project Number: SMLU25-083 - DeLand Reserve
   Project Location: 210 North Ridgewood Avenue
   Project Description: To amend the land use designation from Volusia County Rural to City of DeLand Medium-Density Residential (MDR)
   Project Planner: Emily Kunkel

Mr. Liska moved to continue this item to the September 10, 2025 meeting. Ms. Lewis seconded the motion. The motion to continue passed unanimously.

3. RECEIVED REQUEST TO CONTINUE TO SEPTEMBER 10, 2025 MEETING
   Applicant Name: Corey D. Brown, Esq., Storch Law Firm
   Project Number: Z25-084 - Rezoning for DeLand Reserve
   Project Location: 210 North Ridgewood Avenue
   Project Description: Rezone ±20.13 acres from Volusia County A-3C (Transitional Agricultural) to DeLand Reserve Planned Development, a Residential Townhome Development
   Project Planner: Emily Kunkel

Mr. Liska moved to continue this item to the September 10, 2025 meeting. Ms. Lewis seconded the motion. The motion to continue passed unanimously.

4. Applicant Name: Scott Banta
   Project Number: Z25-115
   Project Location: Northwest corner of S. Blue Lake Ave. & E. Beresford Ave.
   Project Description: Rezoning request from Volusia County R-3 (Residential) to City of DeLand R-1A (Residential)
   Project Planner: Kendall Story

Staff was present and available to answer questions from the board. The applicant was not present.

Public participation: George Wright spoke against due to concerns for the endangered reindeer moss currently on the property. Marywayne Wright spoke against due to concerns for the proposed 8,000 sq. ft. lots and having tiny homes in the area due to the landscape which would flood. She stated she is not opposed to development but would like to compromise with the property owner to mitigate the residents' concerns.

Mr. Baumgartner refrained from participating and voting on this item, citing a conflict of interest, form 8B was submitted.

Mr. Thiry moved to recommend approval for this item. Ms. Lewis seconded the motion. The motion to recommend approval passed unanimously, with Mr. Baumgartner abstaining.

5. Applicant Name: Tim Exner
   Project Number: SMLU25-118
   Project Location: 955 W New York Ave
   Project Description: To amend the land use designation from Mixed Office/Residential to Mixed Commercial and retain the existing Historic Core Overlay-Downtown Design District Overlay
   Project Planner: Belinda Williams-Collins

Staff was present and available to answer questions from the board. The applicant was not present.

Matt Darwin inquired as to the meaning and impact of the Historic Core Overlay designation. Staff provided an explanation of the designation.

Ms. Lewis moved to recommend approval for this item. Mr. Liska seconded the motion. The motion to recommend approval passed unanimously.

6. Applicant Name: Tim Exner
   Project Number: Z25-119

Project Location: 955 W New York Ave
Project Description: Rezone ±1.3 Acres Of Property From P-1 (Professional-Residential) To C-1 (Neighborhood Commercial)
Project Planner: Belinda Williams-Collins

Staff was present and available to answer questions from the board. The applicant was not present.

George Segna inquired as to the property's intended use, if the zoning change is granted. Staff provided information regarding permitted uses.

Ms. Lewis moved to recommend approval for this item. Mr. Thiry seconded the motion. The motion to recommend approval passed unanimously.

OTHER BUSINESS

1. Mr. Carson presented the Housing Options - Virtual Tour.

ADJOURNMENT

The meeting ended at 5:52 p.m.

PLANNING DIVISION STAFF REPORT
TO
PLANNING BOARD

DATE: September 10, 2025

APPLICATION NO.: V25-140

STAFF PLANNER: Sam Nelson, *Planner I*

APPLICANT: David Seilkop, West Volusia Habitat for Humanity

REQUEST: To reduce the required number of parking spaces for single-family residences from four (4) to two (2), within the Core Gateway District.

APPLICABLE REGULATIONS:

Article II **Primary Uses**
Sec. 33-17.05 – R-1 - Single-Family Dwelling District

Article VIII **Development Design and Improvement Standards**
Sec. 33-91.03 – Number and type of parking spaces required

SITE FACTORS:

Location: 703 & 707 E. Walts Ave.
Parcel Size: ± 0.32 Acres
Existing Zoning: R-1 Single-Family Dwelling

Existing Land Use: Medium Density Residential

	SURROUNDING USE:	SURROUNDING ZONING:
North:	Medium Density Residential	R-1, Single-Family Dwelling
South:	Low Density Residential	R-1, Single-Family Dwelling, Beresford Reserve PD
East:	Medium Density Residential	R-1, Single-Family Dwelling
West:	Medium Density Residential	R-1, Single-Family Dwelling

Required Minimum Setbacks in feet				
Front	**Rear**	**Side**	**Corner Lot: Street Side**	**Accessory Uses & Structure**
30’	25’	7.5’	15’	7.5’

Parking Requirements		
Residential Uses	**Minimum off-street parking requirement**	**Notes**
Single-family and duplex	1, 2, 3 bedrooms: 4 spaces/unit 4+ bedrooms: 5 spaces/unit	Single-family or duplex residential parking spaces may be tandem. In all zoning districts except the Core Gateway District, a minimum of 2 of the required parking spaces for each unit must be indoor spaces. No indoor parking spaces are required within the Core Gateway District. Parking is prohibited on front lawns.

BACKGROUND: The vacant properties located on E. Walts Ave. are part of Bleck's Subdivision, which was platted in 1909 with 40 and 50-foot wide lots. The subdivision is generally in the same configuration (Exhibit B) as the original 1909 subdivision. The surrounding area consists primarily of single-family residences (SFRs) constructed between 1920 and 1970. There are no known records of previous development on the subject parcels. The applicant, West Volusia Habitat for Humanity, has obtained these properties for the purpose of constructing affordable housing.

On May 6, 2019, the City Commission approved Ordinance 2019-10 which required all one, two, and three-bedroom single-family residences to provide a minimum of four (4) parking spaces, with two (2) of these being interior. Single-family residences with four or more bedrooms are required to provide a minimum of five (5) parking spaces. On June 19, 2023, the City Commission approved Ordinance to maintain the same number of parking spaces required but the requirement to provide two (2) interior parking spaces for single-family residences was waived for properties located within the Core Gateway District only. The subject properties are located within the Core Gateway District and thus exempt from the interior parking requirement, but must provide 4 parking spaces.

On July 30, 2025, the applicant applied for building permits to construct two (2), two-bedroom two-bathroom, 900 square feet (SF) single-family residences without garages on E. Walts Ave. As part of the submittal, the applicant is proposing driveways which are approximately 10-ft wide by 40-ft long to accommodate two (2) parking spaces for each residence. which is deficient of the code-required four (4) off-street parking spaces for two-bedroom single-family residences by two (2). The construction of a two, (2) two-bedroom residence requires four (4) parking spaces, therefore the site is deficient by two (2) spaces for each unit. The applicant is now requesting variance approval to reduce the minimum number of required parking spaces for two, two-bedroom single-family residences from four (4) to two (2), for each of the lots.

ANALYSIS: Each of the subject properties are 50-ft wide at the street line and 140-ft deep, with areas of approximately 7,000 square feet (Exhibit A). The R-1 zone district requires a minimum lot width of 60 feet. The properties are deficient of the required 60-ft width by 10-ft. The subject properties are legal lots of record and therefore, will comply with the minimum lot size, setback, and maximum impervious coverage requirements for the R-1 district, but are exempt from meeting the minimum lot width. For parking, Sec. 33-91.03 of the Land Development Regulations requires all two-bedroom, single-family residences to provide four (4) parking spaces, with two (2) of these being interior for properties located outside of the Core Gateway District. These properties are located within the Core Gateway District, therefore, the requirement to provide interior parking spaces is waived. The requirement to provide a minimum of four (4) off-street parking spaces applies and the applicant is requesting to provide a total of two (2) off-street parking spaces on each property, which will be deficient of the requirement by two (2). Interior parking could be used to meet the total parking requirement; however, this would add significant cost to the applicant, .

Some administrative relief is offered by the Land Development Regulations (LDRs) for development on nonconforming lots. Section 33-102.05 allows vacant nonconforming lots to be developed for single-family residences provided the residence conforms with the established setbacks of the surrounding area. Additionally, one of the listed criteria states, "The development of the property will provide adequate off-street parking for the use of the property." The code does

not define “adequate” parking, so the standard requirement of 4 spaces is applied. There is no similar provision for staff to administratively approve a reduction of parking as exists for setbacks. The proposed 900 sf two-bedroom single-family residences will be largely consistent with surrounding development. Neighboring residences were constructed between 1920 and 1970 with home sizes ranging from 660 to 2,000 square feet. The proposed residences will be setback further than the neighborhoods established front-yard setback to accommodate a tandem, two-car driveway. No residences on the same portion of E. Walts Ave. are conforming to the current parking requirement (Exhibit C).

Per aerial imagery and arborist reports provided by the applicant, each property contains an abundance of trees, including historic trees, in the front-yard areas. The code promotes the protection of historic trees and requires City Commission approval for removal. To protect the root zones of these historic trees, the applicant has proposed narrow driveways. Per the applicant, providing parking as required by the code would impact the historic trees.

VARIANCE CRITERIA: Per Section 33-103.03, as amended, the Planning Board will consider the following criteria in making a determination concerning the granting or denial of the requested variance:

1. Special conditions and circumstances exist which are peculiar to the land, structure or building involved, and which are not applicable to other lands, structures or buildings in the same zoning district;

   The widths of the subject propertiess are undersized per current R-1 standards by 10-ft. In conjunction with the placement of historic trees within the front-yards, there appears to be limited area for additional parking beyond the proposed two car tandem parking. .

2. Literal interpretation and enforcement of these Land Development Regulations will deprive the applicant of rights commonly enjoyed by other properties in the same zoning district under the terms of these Land Development Regulations, and work unnecessary and undue hardship on the applicant such as natural site conditions, size or shape of lot or existing structure(s);

   Literal interpretation and enforcement of these Land Development Regulations is unlikely to deprive the applicant of rights commonly enjoyed by other properties in the same zoning district as the applicant could construct garages to provide the required parking, as is common on other properties. The applicant’s specific affordable business-model does not include garages.

3. Granting of the variance request will not confer on the applicant any special privilege that is denied by these Land Development Regulations to other lands, buildings or structures in the same zoning district;

   Granting of the variance will confer special privileges when compared with other R-1 district properties, as all new Single-Family Residences (SFRs) must meet the parking requirements. However, all surrounding properties were constructed prior to 2019, when the parking requirement was increased.

4. The granting of the variance will be in harmony with the general intent and purpose of these Land Development Regulations and the Comprehensive Plan, as amended, and will not be injurious to the surrounding properties or detrimental to the public welfare;

   The granting of this variance may be considered to be in harmony with the general intent and purpose of these Land Development Regulations as there are existing provisions for staff to administratively approve development on vacant, nonconforming lots, with one of the requirements being "adequate" off-street parking is provided. The granting of this variance is unlikely to be injurious to surrounding properties, as all properties within the same block are non-conforming to current parking standards.

5. The variance, if granted, is the minimum variance necessary to make possible the reasonable use of the land, building or structure; and

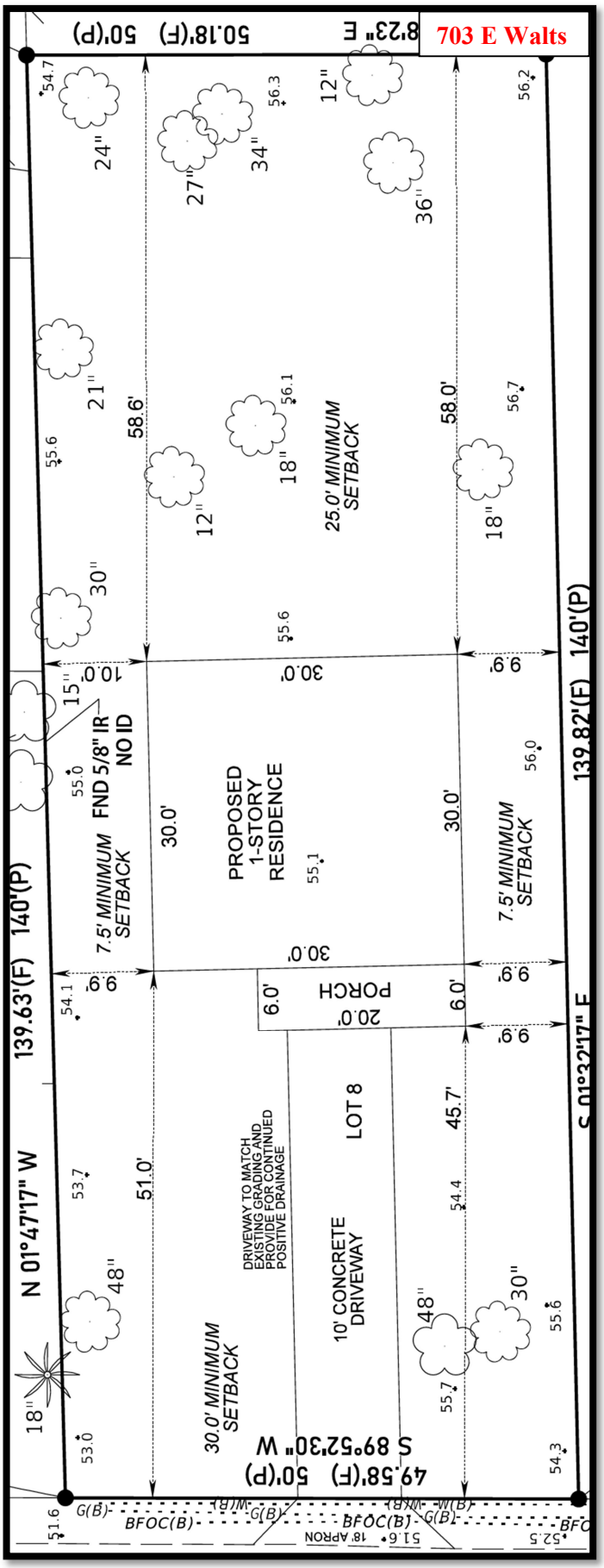
   The applicant could construct a garage to provide the required parking without the need for a variance. The applicant does not intend to construct garages, as garages increase the cost for these affordable housing units.

6. The special conditions or circumstances are not the result of actions of the applicant or owner.

   Each lot was in the existing, nonconforming configuration prior to acquisition by the applicant.

STAFF SUMMARY: The applicant is requesting a variance to reduce the required number of parking spaces for two (2), two-bedroom single-family residences from four (4) to two (2) within the Core Gateway District. Some hardship may exist on the properties as the widths of the properties are undersized to R-1 standards by 10-ft, and historic trees are present in the front yards. When combining these site factors, there may be some hinderance in placing the code required four (4) parking spaces. Interior parking could be provided to meet the code requirement without further impacting historic trees, however, the applicant's available affordable home models do not include garages. The code offers some administrative relief for development of vacant nonconforming lots; however, a parking reduction is not specifically permitted. The proposal will not be injurious to surrounding properties, as no property on the same block contains the currently required parking due to the time of their construction. The Planning Board may choose to grant this variance request, grant this variance request with conditions, or deny this variance request. Please note, two separate motions are required, one for each of the properties located at 703 and 707 E. Walts Ave.

EXHIBIT A
Plot Plans



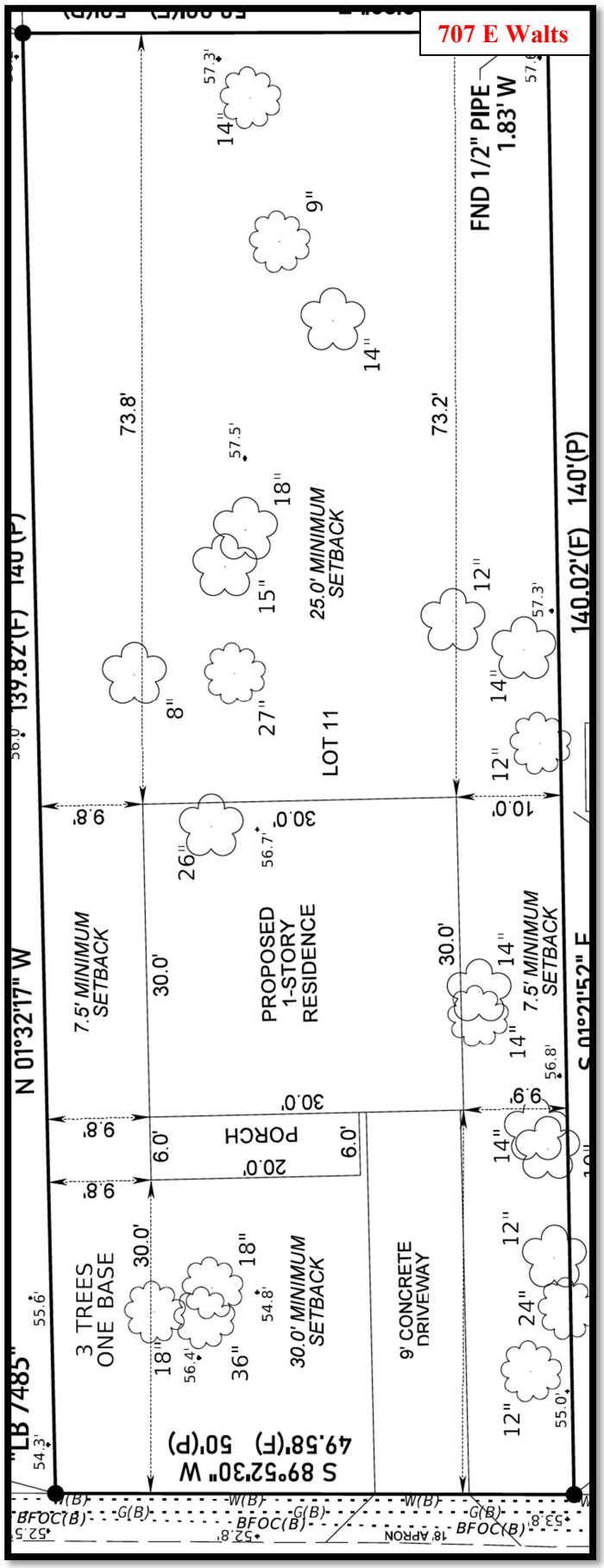


EXHIBIT B
Bleck's Subdivision

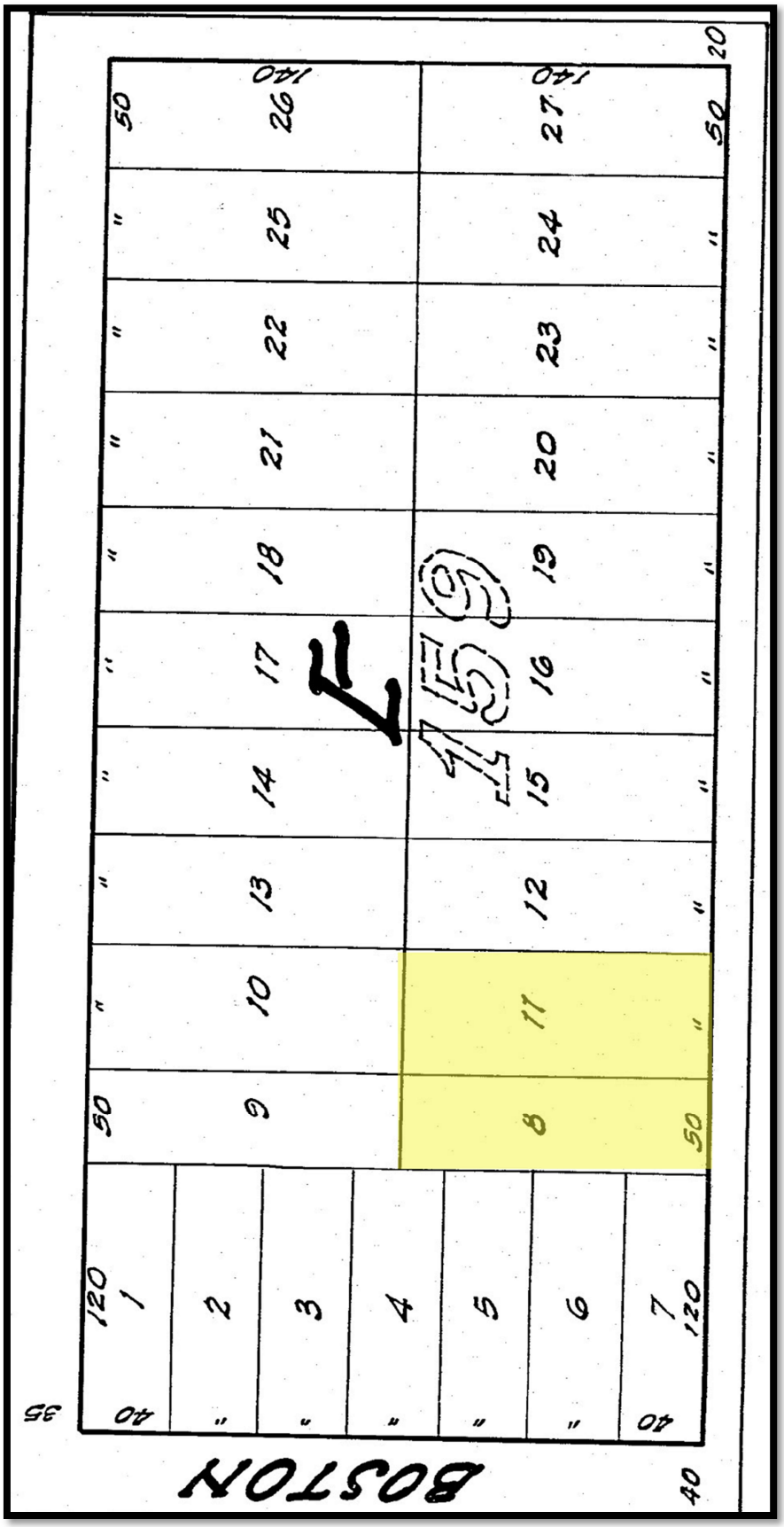

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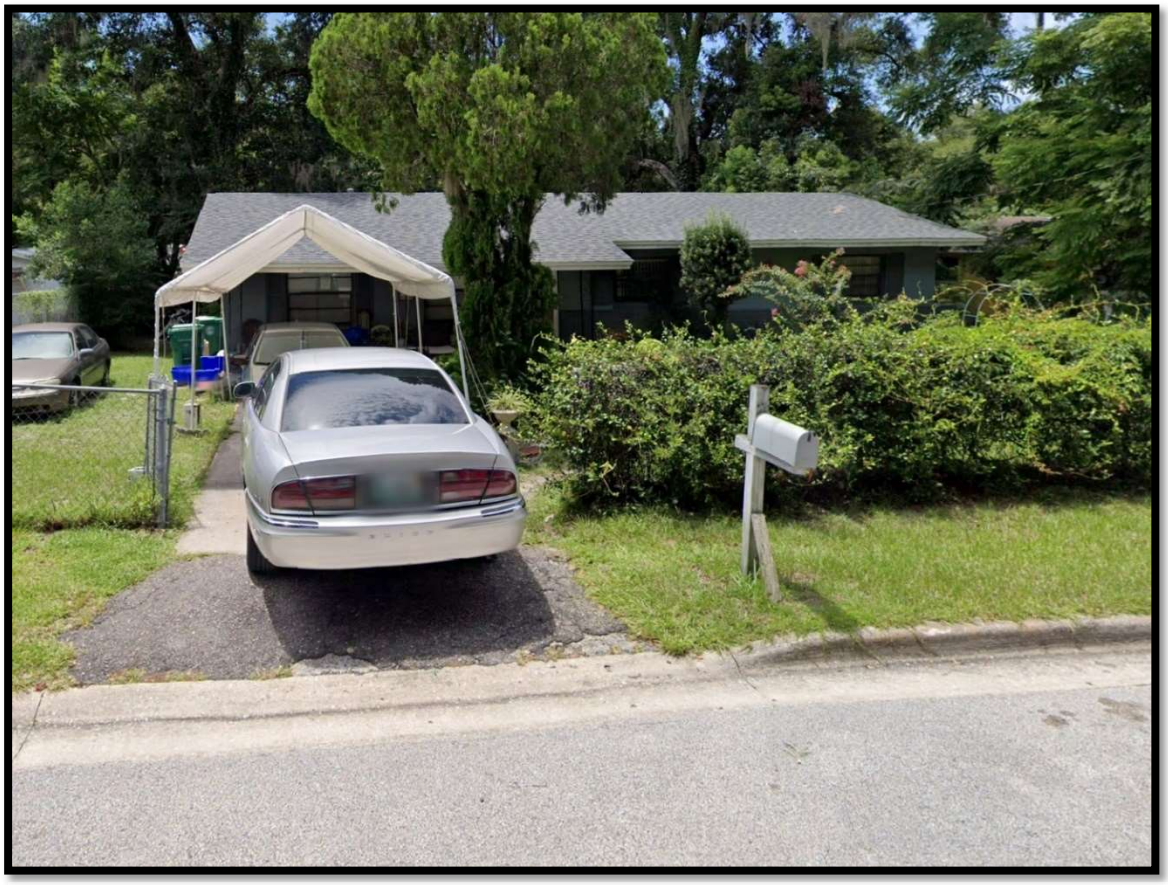
EXHIBIT C
Surrounding Properties



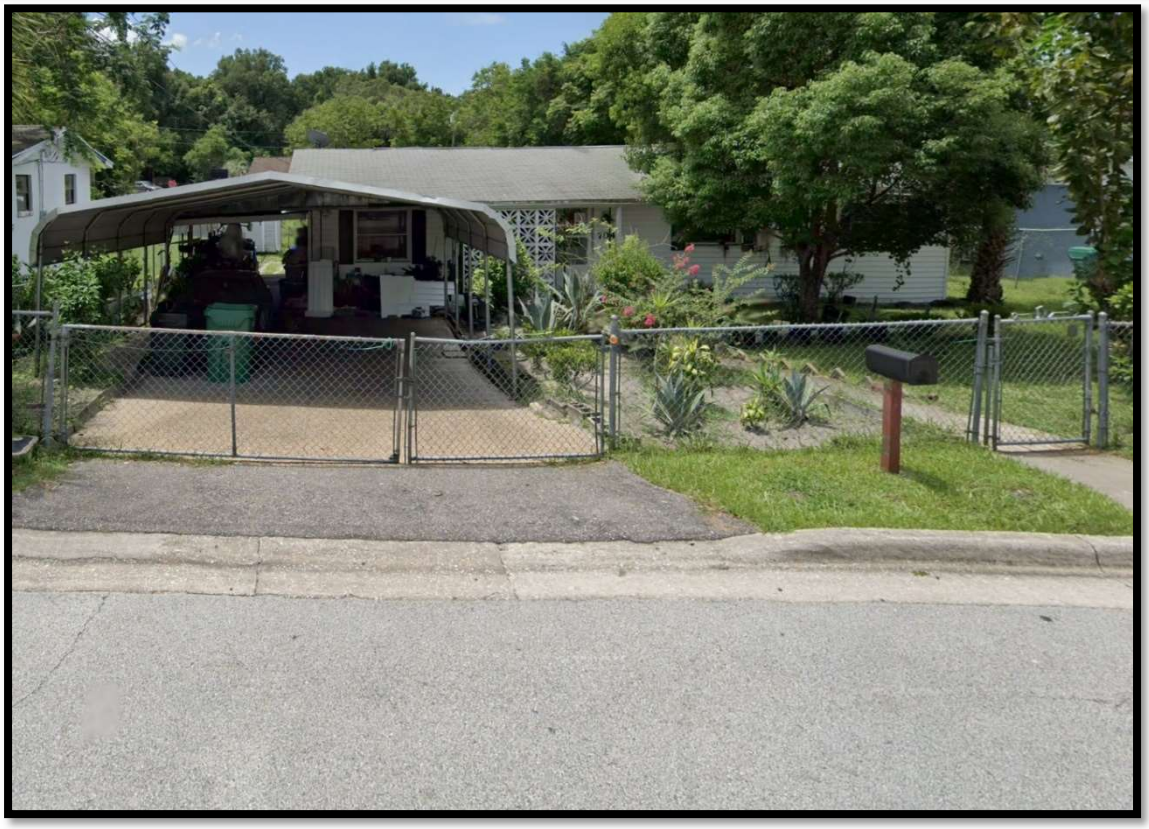


EXHIBIT C
Surrounding Properties





EXHIBIT D
Aerial

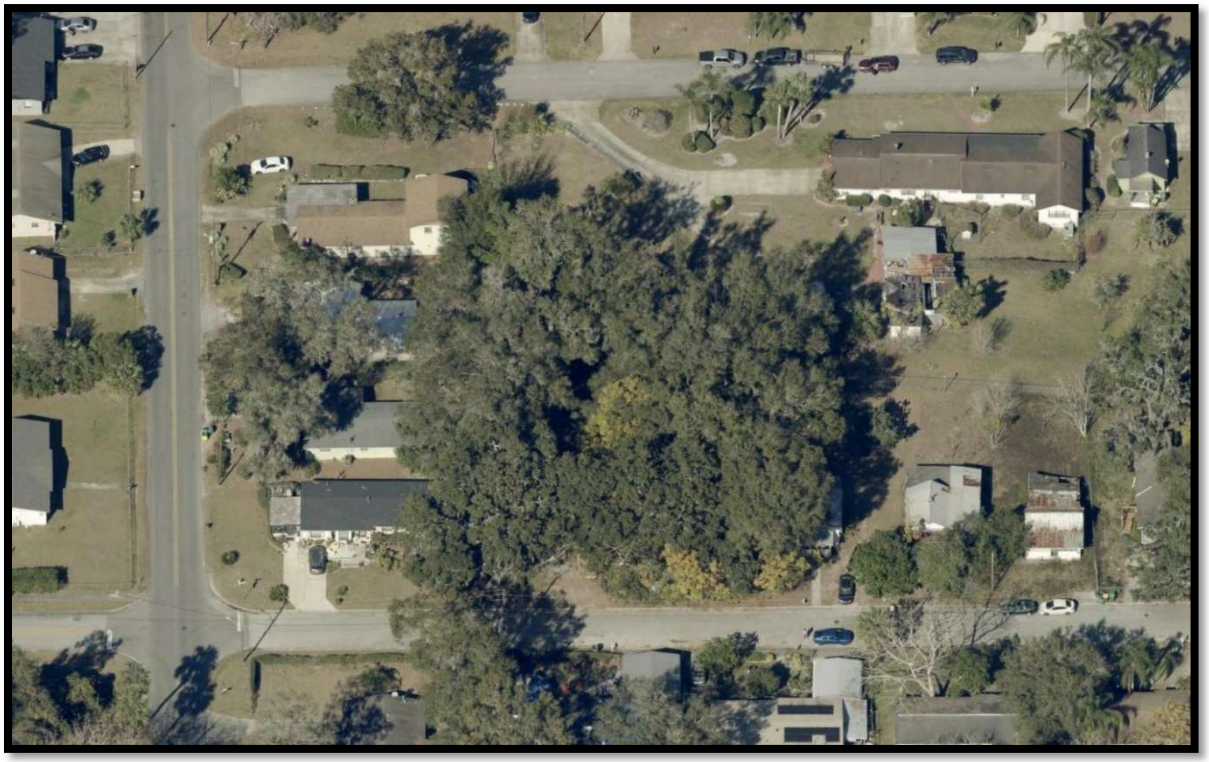
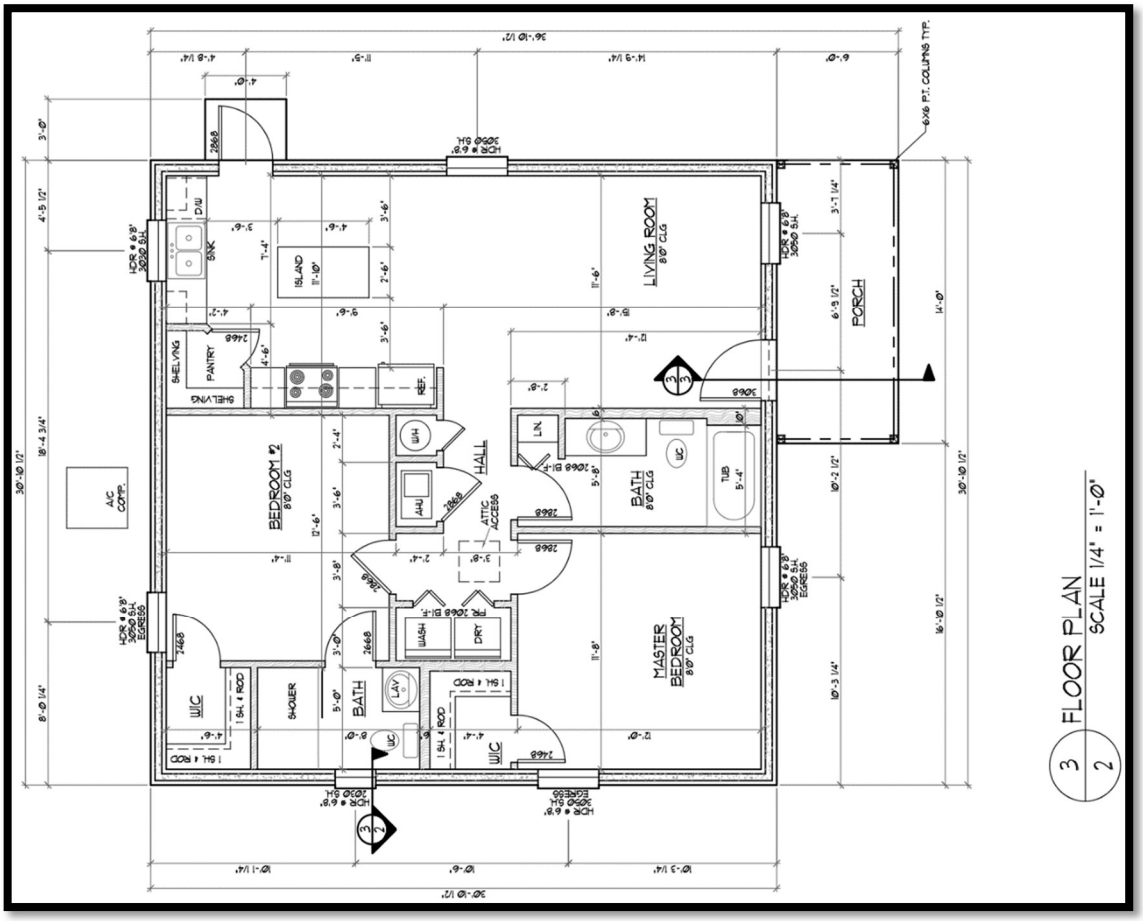
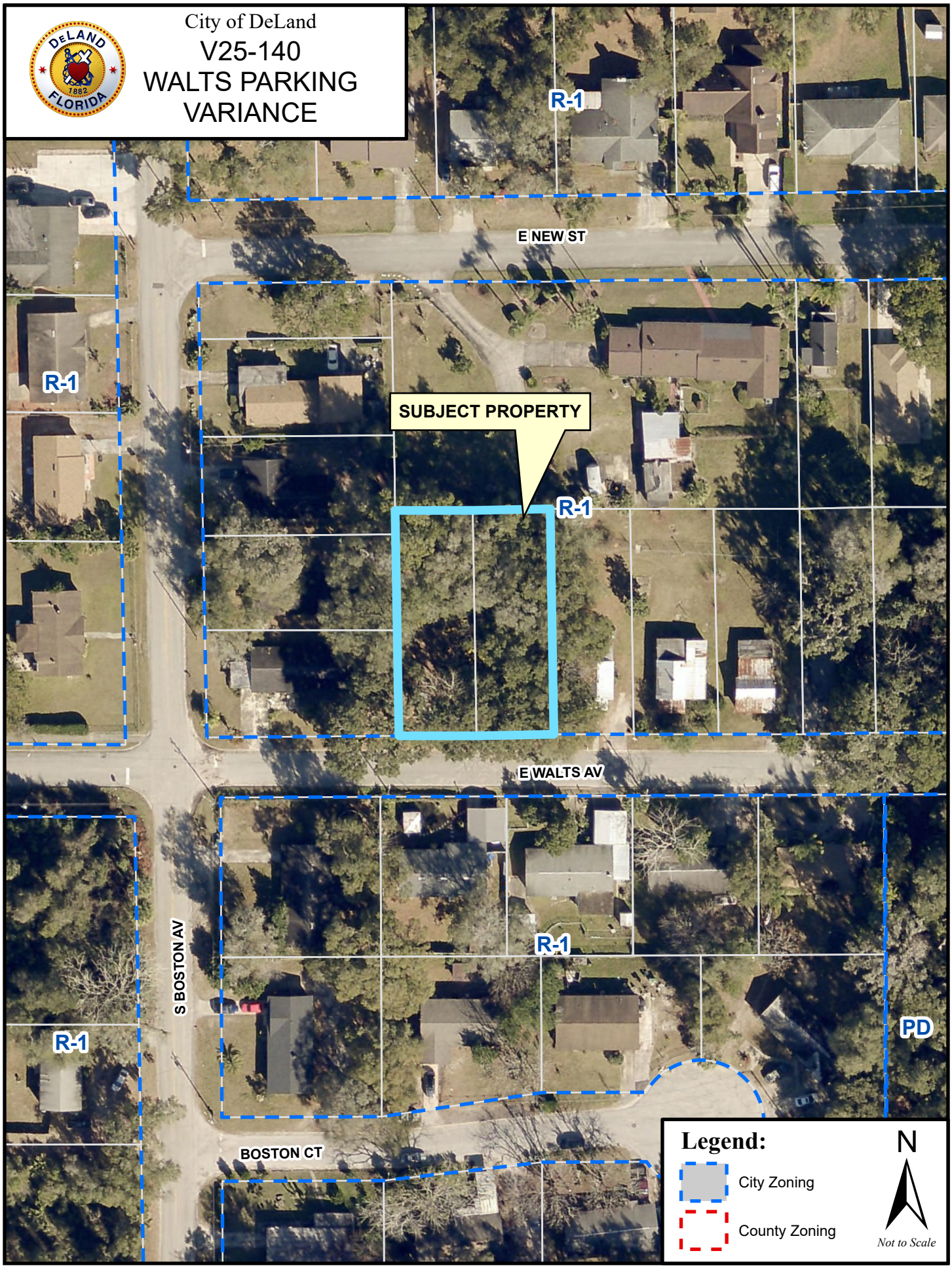


EXHIBIT E
Floor Plan




City of DeLand
V25-140
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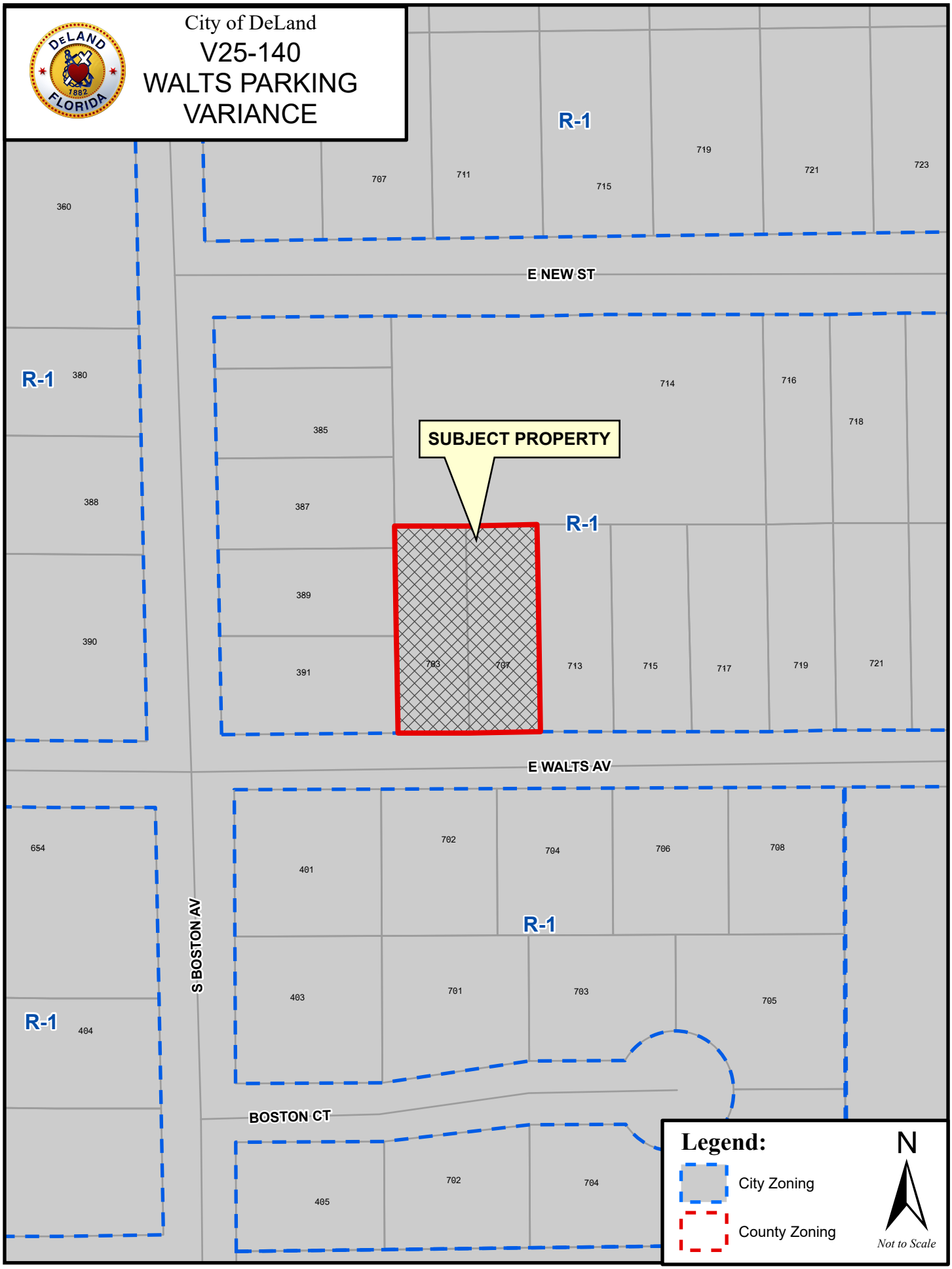
City of DeLand
V25-140
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County Zoning
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PLOT PLAN

THIS IS NOT A SURVEY

Scale: 1" = 20'

LEGAL DESCRIPTION

AS FURNISHED BY CLIENT PER DEED

LOT 8, BLOCK E, CORRECTED PLAT OF BLECK'S SUBDIVISION OF BLOCKS 150, 160 AND THE SOUTH 1/2 OF BLOCK 159, OF THE CORPORATION MAP OF THE CITY OF DELAND, ACCORDING TO THE MAP OR PLAT THEREOF AS RECORDED IN MAP BOOK 5, PAGE 157, OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

703 E WALTS AVE. DELAND FL. 32724

NOTES:

1. THIS IS NOT A BOUNDARY SURVEY.
2. THIS IS A PLOT PLAN INTENDED TO SHOW THE LOCATION OF THE BOUNDARY, TREES AND PLANNDED IMPROVEMENTS ON A PARCEL OF LAND DESCRIBED AS LOT 8, BLOCK E, CORRECTED PLAT OF BLECK'S SUBDIVISION, ACCORDING TO THE PLAT AS RECORDED IN MAP BOOK 5, PAGE 157, OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.
3. NO TITLE SEARCH WAS PERFORMED OR PROVIDED TO THIS SURVEYOR. ALL PROPERTY RECORDS SHOWN HEREON ARE BASED ON THE LAST DEED OF RECORD AS RECORDED IN THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.
4. PROPERTY MAY BE SUBJECT TO ADDITIONAL EASEMENTS, RIGHTS OF WAY, COVENANTS AND RESTRICTIONS NOT SHOW HEREON BUT FOUND IN THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.
5. ALL DISTANCE MEASUREMENTS SHOWN HEREON ARE EXPRESSED IN U.S. SURVEY FEET. ALL ANGULAR MEASUREMENTS ARE EXPRESSED IN DEGREES, MINUTES AND SECONDS.
6. BEARINGS SHOWN HEREON ARE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE. THE REFERENCE BEARING FOR THIS SURVEY IS THE SOUTH LINE OF BLOCK E, WHICH HAS A BEARING OF NORTH 89°52'30" WEST.
7. ELEVATIONS SHOWN HEREON ARE GPS DERIVED AND BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988.
8. UNDERGROUND UTILITIES SHOWN HEREON WERE DESIGNATED BY OTHERS.
9. NOT VALID WITH OUT THE AUTHORIZED ELECTRONIC SEAL OR THE ORIGINAL RAISED SEAL AND SIGNATURE OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

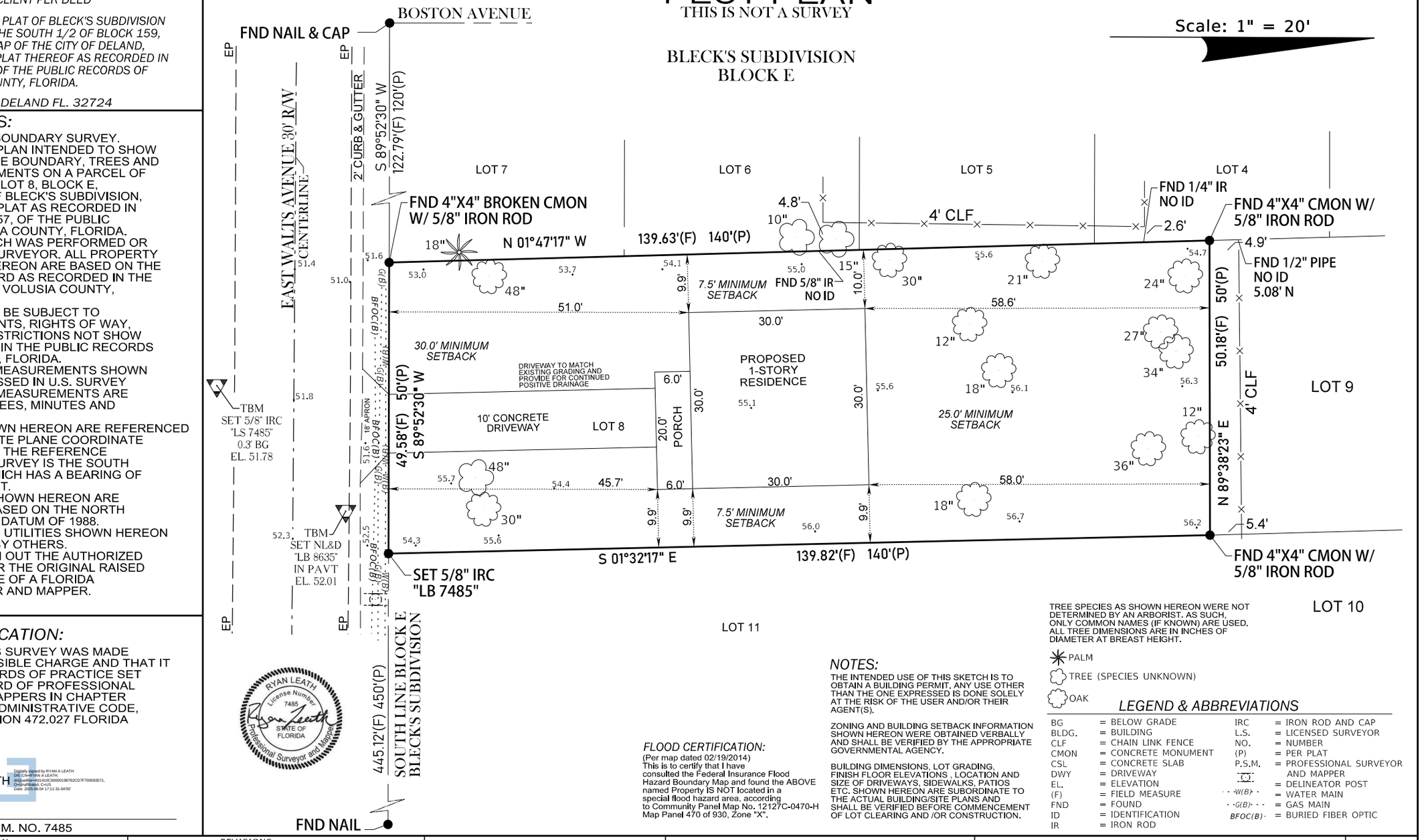
CERTIFICATION:

I CERTIFY THAT THIS SURVEY WAS MADE UNDER MY RESPONSIBLE CHARGE AND THAT IT MEETS THE STANDARDS OF PRACTICE SET FORTH BY THE BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 5J-17.052 FLORIDA ADMINISTRATIVE CODE, PERSUANT TO SECTION 472.027 FLORIDA STATUTES.

RYAN A LEATH

Digitally signed by RYAN A LEATH
DN: CN=RYAN A LEATH, O=Brevis-A0141E0000019B762CD7F70009357L, OU=Certificate, C=US
Date: 2025.09.04 17:11:31-04'00'

RYAN A. LEATH P.S.M. NO. 7485



FLOOD CERTIFICATION:

(Per map dated 02/19/2014)
This is to certify that I have consulted the Federal Insurance Flood Hazard Boundary Map and found the ABOVE named Property IS NOT located in a special flood hazard area, according to Community Panel Map No. 12127C-0470-H Map Panel 470 of 930, Zone "X".

NOTES:

THE INTENDED USE OF THIS SKETCH IS TO OBTAIN A BUILDING PERMIT. ANY USE OTHER THAN THE ONE EXPRESSED IS DONE SOLELY AT THE RISK OF THE USER AND/OR THEIR AGENT(S).

ZONING AND BUILDING SETBACK INFORMATION SHOWN HEREON WERE OBTAINED VERBALLY AND SHALL BE VERIFIED BY THE APPROPRIATE GOVERNMENTAL AGENCY.

BUILDING DIMENSIONS, LOT GRADING, FINISH FLOOR ELEVATIONS , LOCATION AND SIZE OF DRIVEWAYS, SIDEWALKS, PATIOS ETC. SHOWN HEREON ARE SUBORDINATE TO THE ACTUAL BUILDING/SITE PLANS AND SHALL BE VERIFIED BEFORE COMMENCEMENT OF LOT CLEARING AND /OR CONSTRUCTION.

TREE SPECIES AS SHOWN HEREON WERE NOT DETERMINED BY AN ARBORIST. AS SUCH, ONLY COMMON NAMES (IF KNOWN) ARE USED. ALL TREE DIMENSIONS ARE IN INCHES OF DIAMETER AT BREAST HEIGHT.

PALM
TREE (SPECIES UNKNOWN)
OAK

LEGEND & ABBREVIATIONS

BG	= BELOW GRADE	IRC	= IRON ROD AND CAP
BLDG.	= BUILDING	L.S.	= LICENSED SURVEYOR
CLF	= CHAIN LINK FENCE	NO.	= NUMBER
CMON	= CONCRETE MONUMENT	(P)	= PER PLAT
CSL	= CONCRETE SLAB	P.S.M.	= PROFESSIONAL SURVEYOR AND MAPPER
DWY	= DRIVEWAY	⊡	= DELINEATOR POST
EL.	= ELEVATION	-W(B)-	= WATER MAIN
(F)	= FIELD MEASURE	-G(B)-	= GAS MAIN
FND	= FOUND	BFOC(B)	= BURIED FIBER OPTIC
ID	= IDENTIFICATION		
IR	= IRON ROD		

DESCRIPTION			REVISIONS	
DRAWN BY:	CHECKED:	FIELD DATE:	DATE	
RAL	RAL	03/22/2025	08/03/25	DRIVEWAY AND FOUNDATION LOCATION

BREVIS SURVEYING LLC
LB 8635
1180 14TH STREET
ORANGE CITY, FLORIDA, 32763

PLOT PLAN

PROJ.	COUNTY	DATE
H4H-001	VOLUSIA	04/09/2025

CERTIFIED TO:

DAVID SEILKOP
WEST VOLUSIA HABITAT FOR HUMANITY

SHEET NO. 1

LEGAL DESCRIPTION
AS FURNISHED BY CLIENT PER DEED

LOT 11, BLOCK E, CORRECTED PLAT OF BLECK'S SUBDIVISION OF BLOCKS 150, 160 AND THE SOUTH 1/2 OF 159, OF THE CORPORATION MAP OF THE CITY OF DELAND, ACCORDING TO THE MAP OR PLAT THEREOF AS RECORDED IN MAP BOOK 4, PAGE 39, AND CORRECTED IN MAP BOOK 5, PAGE 157, OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

ADDRESS NOT ASSIGNED

NOTES:

1. THIS IS NOT A BOUNDARY SURVEY.
2. THIS IS A PLOT PLAN INTENDED TO SHOW THE LOCATION OF THE BOUNDARY, TREES AND PLANNDED IMPROVEMENTS ON A PARCEL OF LAND DESCRIBED AS LOT 11, BLOCK E, CORRECTED PLAT OF BLECK'S SUBDIVISION, ACCORDING TO THE PLAT AS RECORDED IN MAP BOOK 5, PAGE 157, OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.
3. NO TITLE SEARCH WAS PERFORMED OR PROVIDED TO THIS SURVEYOR. ALL PROPERTY RECORDS SHOWN HEREON ARE BASED ON THE LAST DEED OF RECORD AS RECORDED IN THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.
4. PROPERTY MAY BE SUBJECT TO ADDITIONAL EASEMENTS, RIGHTS OF WAY, COVENANTS AND RESTRICTIONS NOT SHOW HEREON BUT FOUND IN THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.
5. ALL DISTANCE MEASUREMENTS SHOWN HEREON ARE EXPRESSED IN U.S. SURVEY FEET. ALL ANGULAR MEASUREMENTS ARE EXPRESSED IN DEGREES, MINUTES AND SECONDS.
6. BEARINGS SHOWN HEREON ARE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE. THE REFERENCE BEARING FOR THIS SURVEY IS THE SOUTH LINE OF BLOCK E, WHICH HAS A BEARING OF NORTH 89°52'30" WEST.
7. ELEVATIONS SHOWN HEREON ARE GPS DERIVED AND BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988.
8. UNDERGROUND UTILITIES SHOWN HEREON WERE DESIGNATED BY OTHERS.
9. NOT VALID WITH OUT THE AUTHORIZED ELECTRONIC SEAL OR THE ORIGINAL RAISED SEAL AND SIGNATURE OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

CERTIFICATION:

I CERTIFY THAT THIS SURVEY WAS MADE UNDER MY RESPONSIBLE CHARGE AND THAT IT MEETS THE STANDARDS OF PRACTICE SET FORTH BY THE BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 5J-17.052 FLORIDA ADMINISTRATIVE CODE, PERSUANT TO SECTION 472.027 FLORIDA STATUTES.

Ryan A Leath

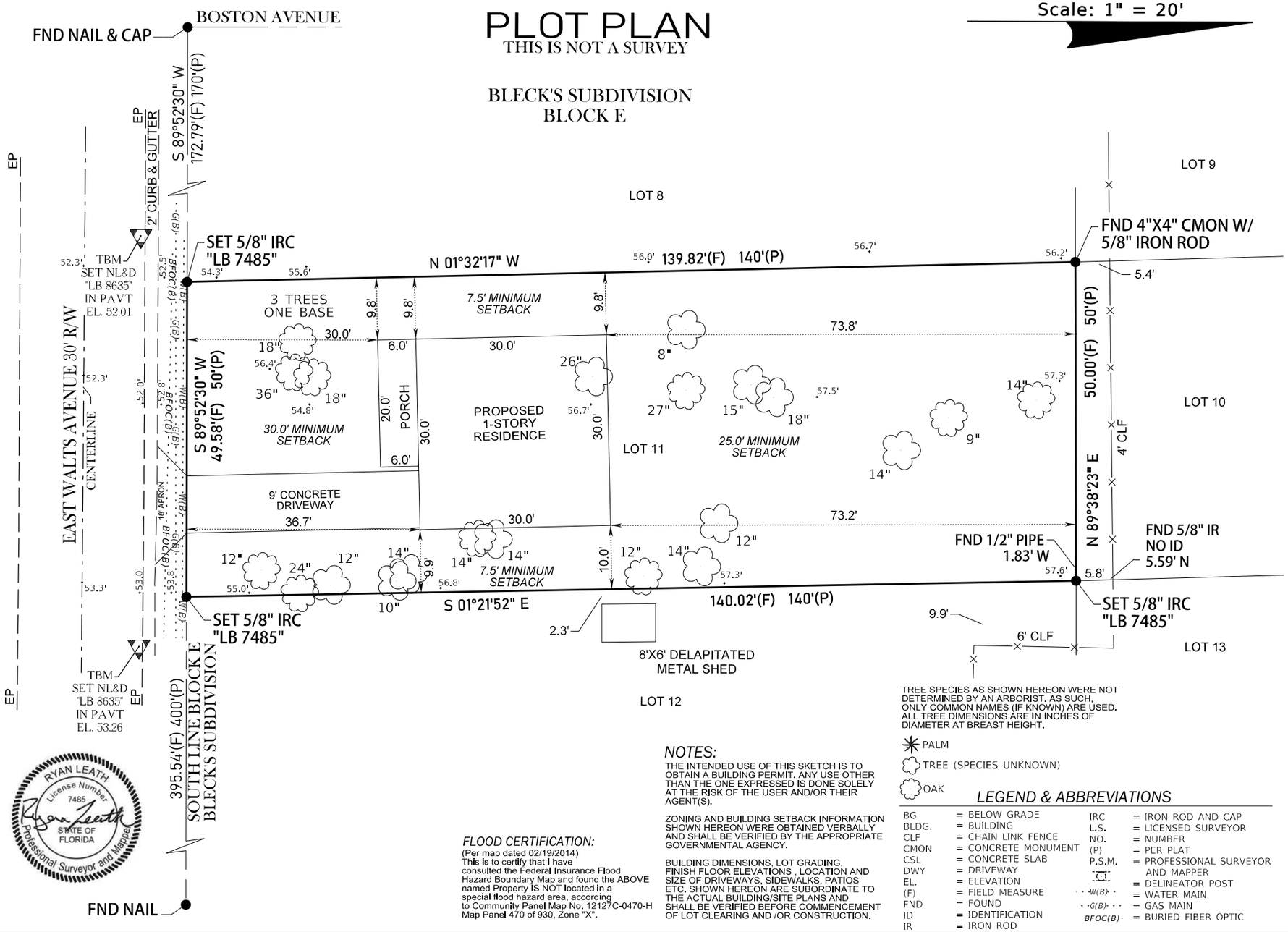
Digitally signed by Ryan A Leath
DN: C=Ryan A Leath, dnQualifier=A01410C000001896574E895B00060E9B, O=Florida, CN=S
Date: 2025.04.10 17:55:15-04'00'

RYAN A. LEATH P.S.M. NO. 7485

PLOT PLAN
THIS IS NOT A SURVEY

Scale: 1" = 20'

BLECK'S SUBDIVISION
BLOCK E



TREE SPECIES AS SHOWN HEREON WERE NOT DETERMINED BY AN ARBORIST. AS SUCH, ONLY COMMON NAMES (IF KNOWN) ARE USED. ALL TREE DIMENSIONS ARE IN INCHES OF DIAMETER AT BREAST HEIGHT.

PALM
TREE (SPECIES UNKNOWN)
OAK

NOTES:

THE INTENDED USE OF THIS SKETCH IS TO OBTAIN A BUILDING PERMIT. ANY USE OTHER THAN THE ONE EXPRESSED IS DONE SOLELY AT THE RISK OF THE USER AND/OR THEIR AGENT(S).

ZONING AND BUILDING SETBACK INFORMATION SHOWN HEREON WERE OBTAINED VERBALLY AND SHALL BE VERIFIED BY THE APPROPRIATE GOVERNMENTAL AGENCY.

BUILDING DIMENSIONS, LOT GRADING, FINISH FLOOR ELEVATIONS , LOCATION AND SIZE OF DRIVEWAYS, SIDEWALKS, PATIOS ETC. SHOWN HEREON ARE SUBORDINATE TO THE ACTUAL BUILDING/SITE PLANS AND SHALL BE VERIFIED BEFORE COMMENCEMENT OF LOT CLEARING AND /OR CONSTRUCTION.

FLOOD CERTIFICATION:
(Per map dated 02/19/2014)
This is to certify that I have consulted the Federal Insurance Flood Hazard Boundary Map and found the ABOVE named Property IS NOT located in a special flood hazard area, according to Community Panel Map No. 12127C-0470-H Map Panel 470 of 930, Zone "X".

LEGEND & ABBREVIATIONS

BG	= BELOW GRADE	IRC	= IRON ROD AND CAP
BLDG.	= BUILDING	L.S.	= LICENSED SURVEYOR
CLF	= CHAIN LINK FENCE	NO.	= NUMBER
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ID	= IDENTIFICATION		
IR	= IRON ROD		

DESCRIPTION			REVISIONS	
DRAWN BY:	CHECKED:	FIELD DATE:	DATE	
RAL	RAL	03/22/2025		

BREVIS SURVEYING LLC
LB 8635
1180 14TH STREET
ORANGE CITY, FLORIDA, 32763

BOUNDARY SURVEY

PROJ.	COUNTY	DATE
H4H-002	VOLUSIA	04/09/2025

CERTIFIED TO:
DAVID SEILKOP
WEST VOLUSIA HABITAT FOR HUMANITY

SHEET NO. 1

Arbor Report – Tree Protection Plan

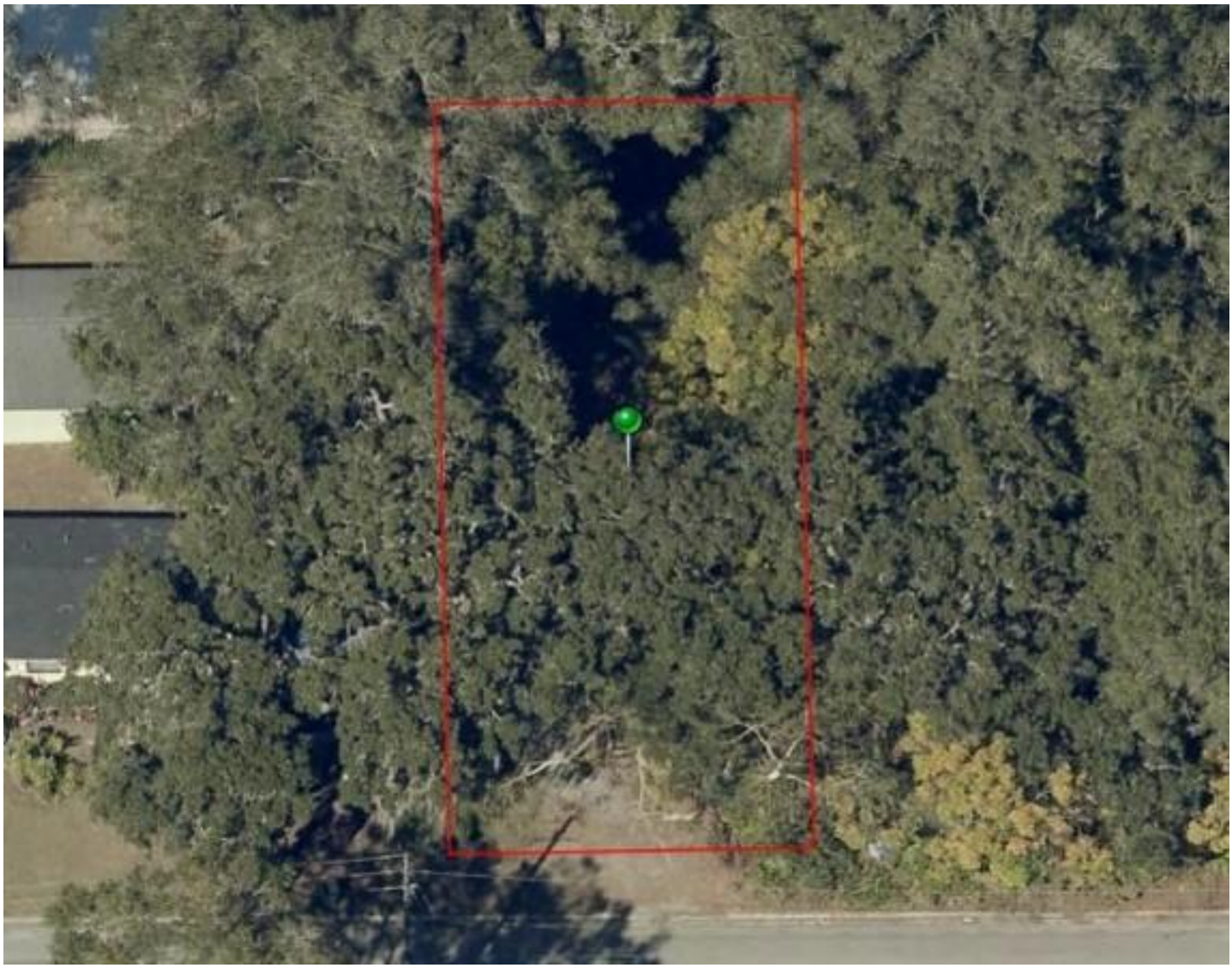
August 5, 2025

David Seilkop
West Volusia Habitat for Humanity
604 S Spring Garden Avenue
Deland, Fl 32720

Re: 703 E Walts Avenue (Lot 8), Deland, Florida - Tree Protection, Monitoring and Recovery Plan for a 48" Historic Live Oak.

Scope:

Services were retained to prepare a Tree Protection and Monitoring Plan for a 48" Historic as defined by the City of Deland Land Development code. This project is located at 703 E Walts Ave., Deland, Fl.



Aerial view of project site.

City of Deland Code definitions:

(d) *Historic tree protection.* Unless otherwise authorized by this article, no historic tree shall be removed without a recommendation by the city forester, the tree advisory committee, and a finding by the city commission that the tree is a hazard (due to health or natural damage) or that it is not economically or practically feasible to develop the parcel without removing the tree. The developer shall explain in detail why

the tree is a hazard or why it is not economically or practically feasible to develop the parcel without removing the historic tree. The city forester shall make a presentation to the tree advisory committee on the application and make a recommendation as to whether it should be approved or denied. The tree advisory committee shall make a recommendation to the city commission on the application. Any historic tree permitted to be removed shall be replaced by a sufficient number of replacement trees so that their DBH equals 100 percent of the total DBH of the historic tree to be removed from the property. In no case shall replacement stock be less than ten feet in height, have a DBH of less than four inches, or a caliper of less than six inches.

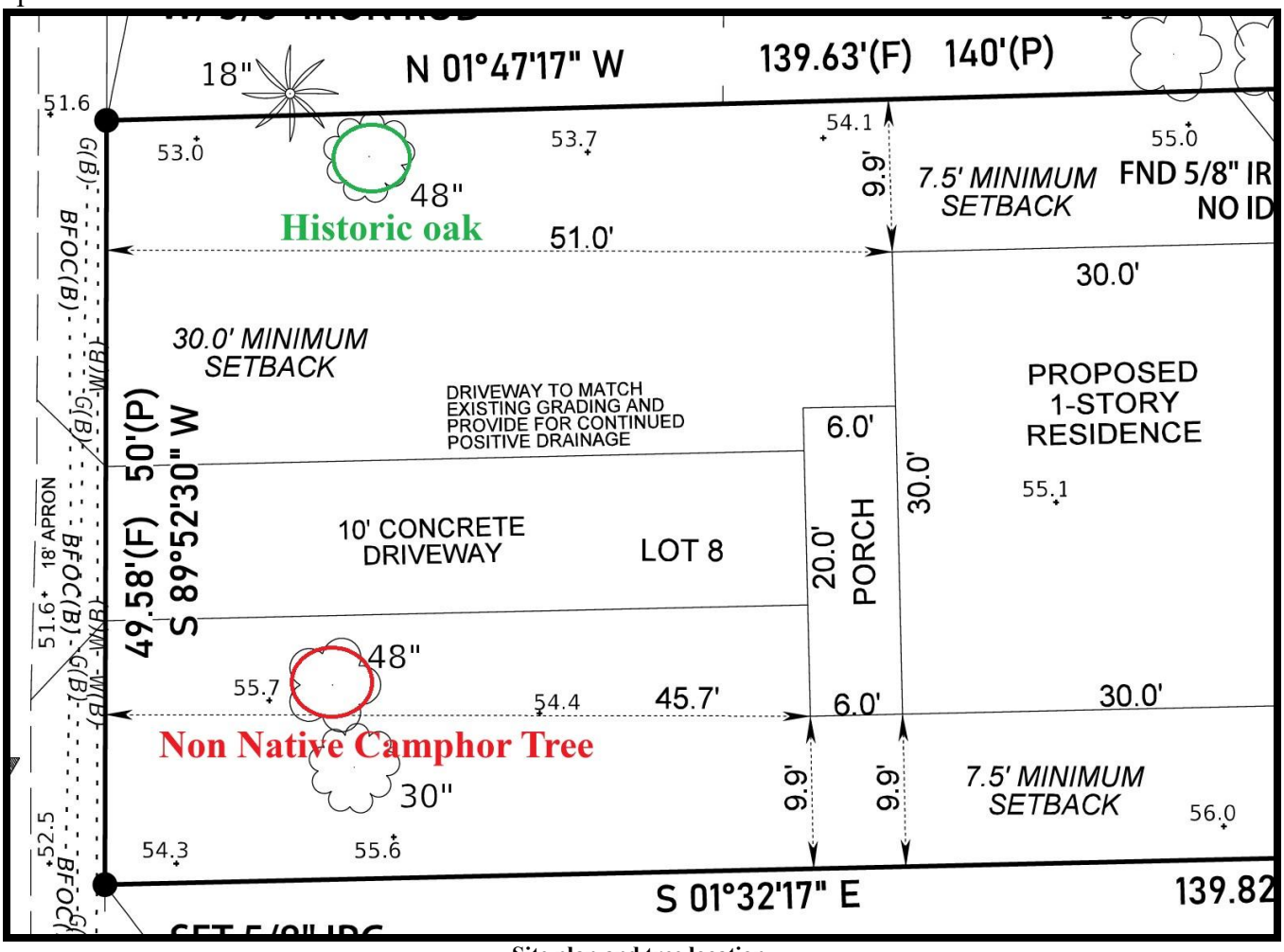
Historically significant trees shall be as follows:

1. Bald cypress if 20-inch or larger DBH.
2. Live oak or sand live oak if 25-inch or larger DBH.
3. Red cedar if 25-inch or larger DBH.

OBSERVATIONS / DISCUSSION:

This undeveloped lot has a canopy consisting of live oaks (*Quercus virginiana*), laurel oaks (*Quercus laurifolia*) and non-native camphor trees (*Camphora officinarum*).

There is a 48” Historic live oak located in front of the proposed home, on the west side of the lot. This Historic live oak is approximately 70’ tall with a DBH of 48” and a live crown ratio of around 40% and is healthy and vigorous with no visual signs of decay, insect pests, or disease. The suite plan has been adjusted, and the house has been set 15’ further back from the street setback to give more root space for the oak. The site plan below shows a proposed 9’ driveway to provide more root protection for the tree. The current development code requires a 20’ driveway. The project seeks a variance from the City of Deland for a 9’ driveway to provide more root protection for the Historic oak.



Site plan and tree location.

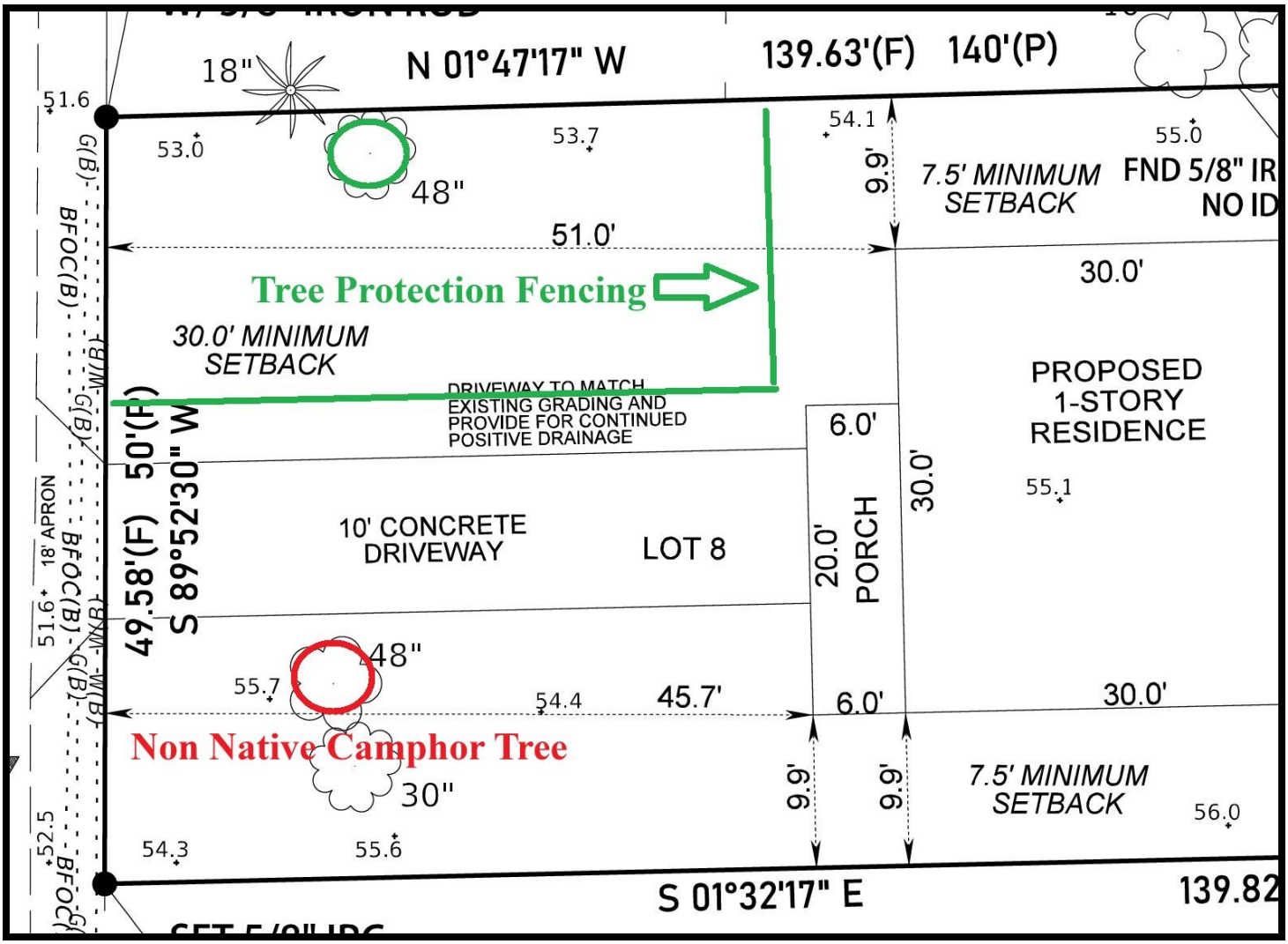
CONCLUSION:

The project seeks a variance from the City of Deland for a 9" driveway to give more root protection for the Historic tree.

This tree will be protected for this project and the following recommendations are standard tree care protection measures and follow methodologies of the International Society of Arboriculture (ISA) and Best Management Practices (BMPs) published in the ***American National Standard for tree Care Operations – Tree, Shrub, and Woody Plant Management – Standard Practices (Management of Trees and Shrubs During Planning, Site Development, and Construction)*** **(ANSI A300, Part 5).** These recommendations are to help reduce root impacts stress to the tree.

Forestry Mow – Bushhog, forestry mow, or remove by hand crews, the vegetation around the Historic tree and remove any non-native trees so that TPZ fencing can be installed prior to land clearing.

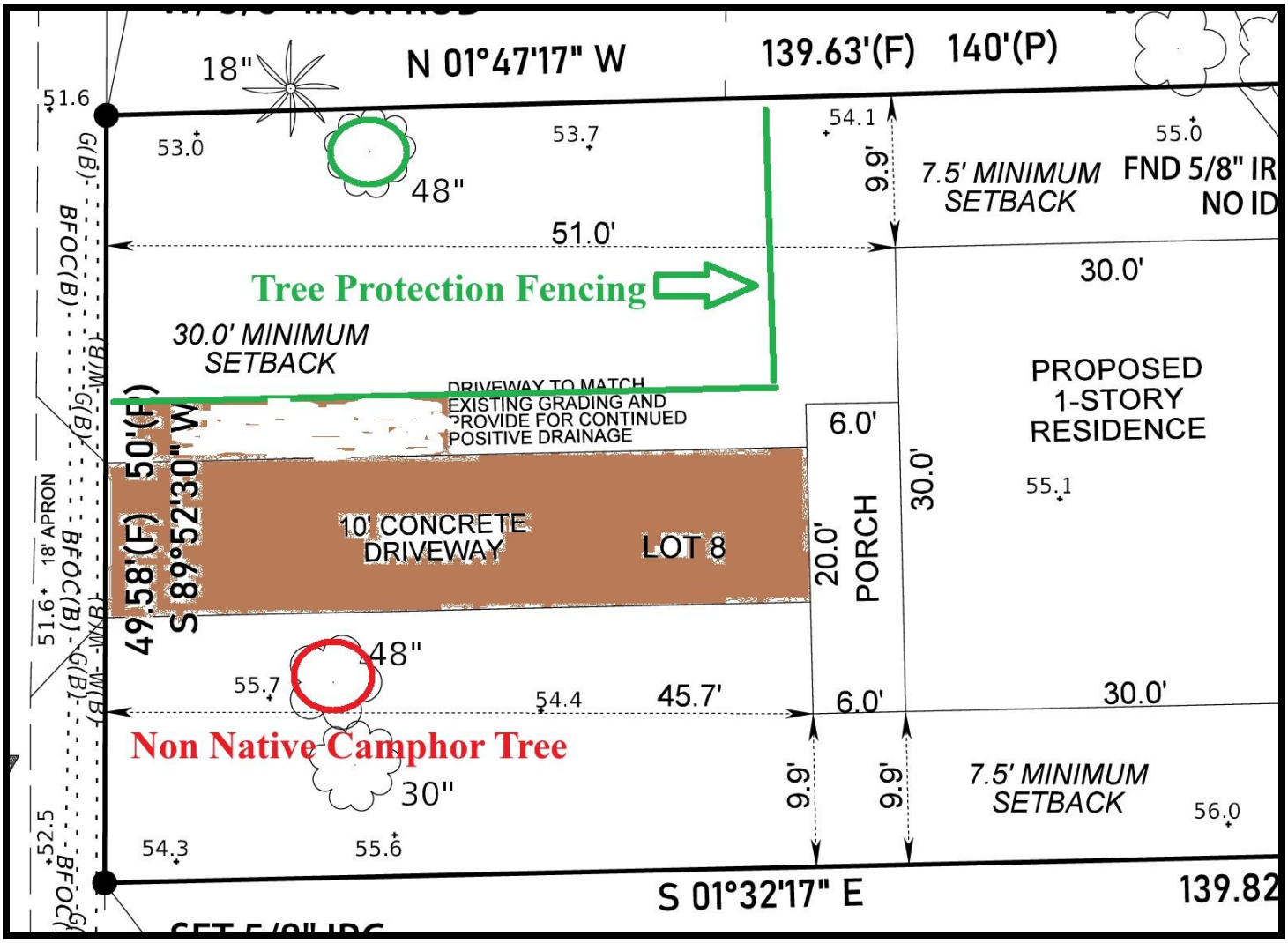
TPZ – Set TPZ fencing to the edges of construction activities as shown below.



Signage - Add signage to the TPZ fence to ensure all subcontractors, deliveries of construction materials, etc. are aware of the intent of the TPZ fencing. Typical language for a TPZ sign should say something like, **'Tree Protection Zone - No vehicles, equipment, soil or building material are to be stored within this boundary.** An example of this type of signage is attached.

Monitoring – Monthly monitoring of the tree will be done to ensure tree protection measures are still in place until construction is completed and to monitor the health and vigor of the tree.

Construction egress within the TPZ – Heavy equipment and construction activities will egress the site using the proposed 9' driveway, adjacent to the TPZ fencing. This egress area should be protected with a minimum of 4 - 6" of wood chip mulch, to help cushion roots from construction equipment and prevent soil compaction as shown below. Other methods for temporary soil and root protection include using ¾" plywood, Geotextile fabric / gravel and logging / road mats. Once the site is cleared and the home is built, the mulch can be reused elsewhere in the landscape, so that the driveway can be poured.



Pruning (roots and canopy) - Pruning will be overseen by an **International Society of Arboriculture (ISA), Certified Arborist** to ensure reduction cuts are done properly and to ANSI standards. **Reduction pruning** will reduce the likelihood of failure from high wind events that can put pressure and leverage on large diameter branches. 'A reduction cut shortens a branch by removing a stem back to a lateral branch that is large enough to resist extensive disfunction and decay behind the cut. This is generally interpreted as cutting back to a lateral branch that is at least one-third the diameter of the cut stem.' (Ref: https://hort.ifas.ufl.edu/woody/stem-reduction.shtml). Any roots that are exposed during land clearing and site prep will be clean cut using hand pruners, loppers or a chain saw. Cut roots will not be treated with pruning paint and fungicides and will be covered with soil.

Post construction – The tree will be aerated twice within the TPZ with a hand aeration tool to alleviate any soil compaction and apply a granular, slow-release fertilizer, 8-2-12, +4% Mg with micronutrients at a rate of one pound per 100 Sq. ft. of canopy.

Order of Events Prior to Construction Activities:

1. Forestry mow vegetation around the Historic oak so that the TPZ fencing can be set.
2. Install TPZ fencing and signage.
3. Add 4 – 6" wood chips along the proposed driveway and designated egress area.
4. Begin monthly monitoring and proposed treatments for the tree.

SINCERELY,

Ray Jarrett
Biologist / Arborist
ISA Certified Arborist FL-5343A
ISA Tree Risk Assessment Qualified (TRAQ)



ASSUMPTIONS, LIMITING CONDITIONS and DISCLAIMER

Trees and plants are living things and are subject to an array of potential health problems, abiotic factors and unpredictable weather that can cause healthy trees and plants to fail. Information provided in this report is for consideration; and is based on my professional experience, formal education, and methodologies of the International Society of Arboriculture, ISA. Ultimately the client must use their own judgment and decisions but may consider these recommendations.

Technical Literature References

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Matheny, Nelda P., and James R. Clark. ***Evaluation of Hazard Trees in Urban Areas***. 1994. International Society of Arboriculture. Champaign, Illinois.

Merullo, Victor D and Michael J. Valentine. ***Arboriculture & The Law***. 1992. International Society of Arboriculture, Champaign, Illinois.

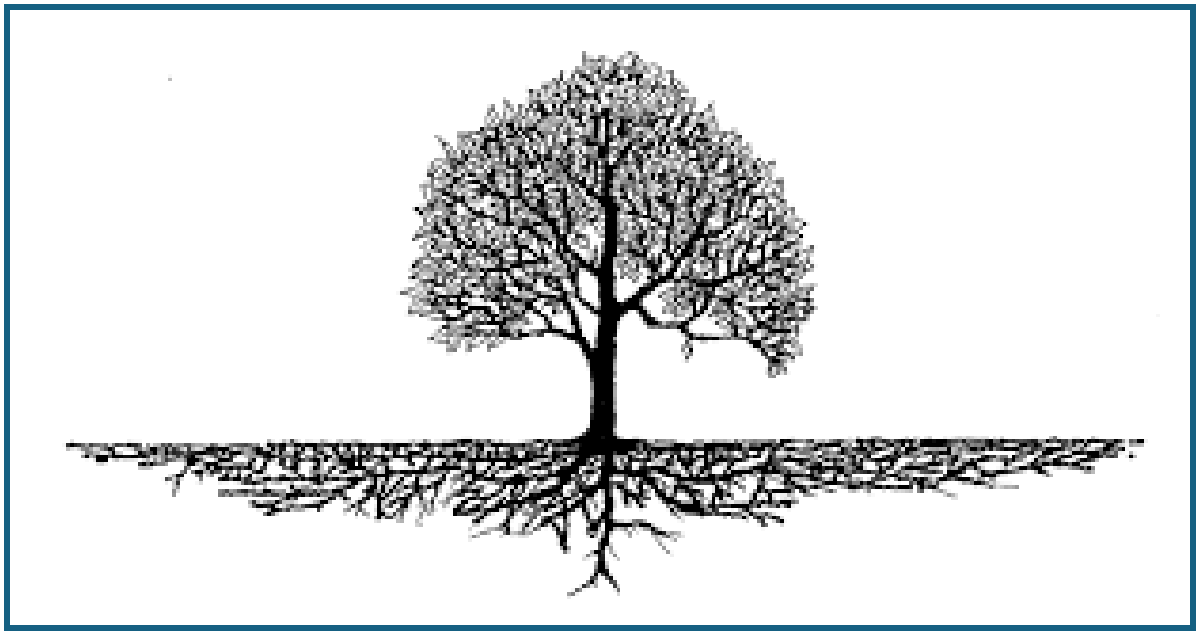
Purcell, Lindsey. Arboricultural Practices: A Science-Based Approach. 2024.Waveland Press, Inc. Long Grove, Illinois.

Smiley, E. Thomas, Nelda Matheny and Sharon Lil. 2017. Best Management Practices, ***Tree Risk Assessment***. International Society of Arboriculture, Champaign, Illinois.

Watson, Gary. 2014. Best Management Practices, ***Tree Planting***. International Society of Arboriculture, Champaign, Illinois.

Wunderlin, R. P., and B. F. Hansen. 2004. *Atlas of Florida Vascular Plants* (http://www.plantatlas.usf.edu/).[S. M. Landry and K. N. Campbell (application development), Florida Center for Community Design and Research.] Institute for Systematic Botany, University of South Florida, Tampa.

Tree Protection Zone



No vehicles, equipment, soil or building materials are allowed within this boundary.

This fencing is to remain in place until it is authorized to be removed by the Project Manager.

Any questions, please contact the Project Manager Arborist – Ray (386) 295-0481

Arbor Report – Tree Protection Plan

August 3, 2025

David Seilkop
West Volusia Habitat for Humanity
604 S Spring Garden Avenue
Deland, Fl 32720

Re: 707 E Walts Avenue (Lot 11), Deland, Florida - Tree Protection, Monitoring and Recovery Plan for a 36" Historic Live Oak.

Scope:

Services were retained to prepare a Tree Protection and Monitoring Plan for a 36" Historic as defined by the City of Deland Land Development code. This project is located at 707 E Walts Ave., Deland, Fl.



Aerial view of project site.

City of Deland Code definitions:

(d) *Historic tree protection.* Unless otherwise authorized by this article, no historic tree shall be removed without a recommendation by the city forester, the tree advisory committee, and a finding by the city commission that the tree is a hazard (due to health or natural damage) or that it is not economically or practically feasible to develop the parcel without removing the tree. The developer shall explain in detail why

the tree is a hazard or why it is not economically or practically feasible to develop the parcel without removing the historic tree. The city forester shall make a presentation to the tree advisory committee on the application and make a recommendation as to whether it should be approved or denied. The tree advisory committee shall make a recommendation to the city commission on the application. Any historic tree permitted to be removed shall be replaced by a sufficient number of replacement trees so that their DBH equals 100 percent of the total DBH of the historic tree to be removed from the property. In no case shall replacement stock be less than ten feet in height, have a DBH of less than four inches, or a caliper of less than six inches.

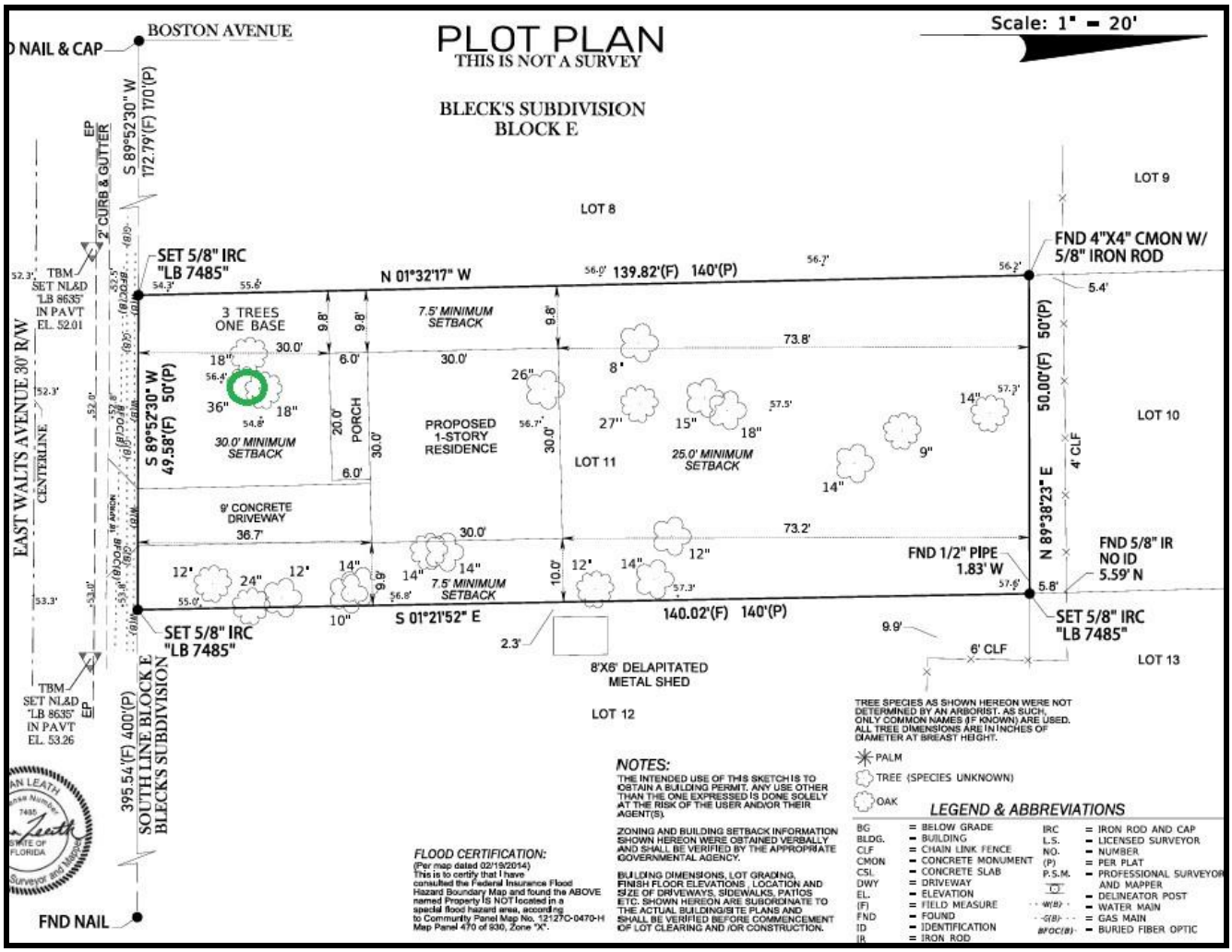
Historically significant trees shall be as follows:

1. Bald cypress if 20-inch or larger DBH.
2. Live oak or sand live oak if 25-inch or larger DBH.
3. Red cedar if 25-inch or larger DBH.

OBSERVATIONS / DISCUSSION:

This undeveloped lot has a canopy consisting of live oaks (*Quercus virginiana*), laurel oaks (*Quercus laurifolia*) and non-native camphor trees (*Camphora officinarum*) and ear pod trees (*Enterolobium contortisiliquum*).

There is a 36" Historic live oak located in front of the proposed home, southwest corner of the lot. This Historic live oak is approximately 60' tall with a DBH of 36" and a live crown ratio of around 40% and is healthy and vigorous with no visual signs of decay, insect pests, or disease. The site plan below shows a proposed 9' driveway to provide more root protection for the tree. The current development code requires a 20' driveway. The project seeks a variance from the City of Deland for a 9' driveway to provide more root protection for the Historic oak.



Site plan and tree location.

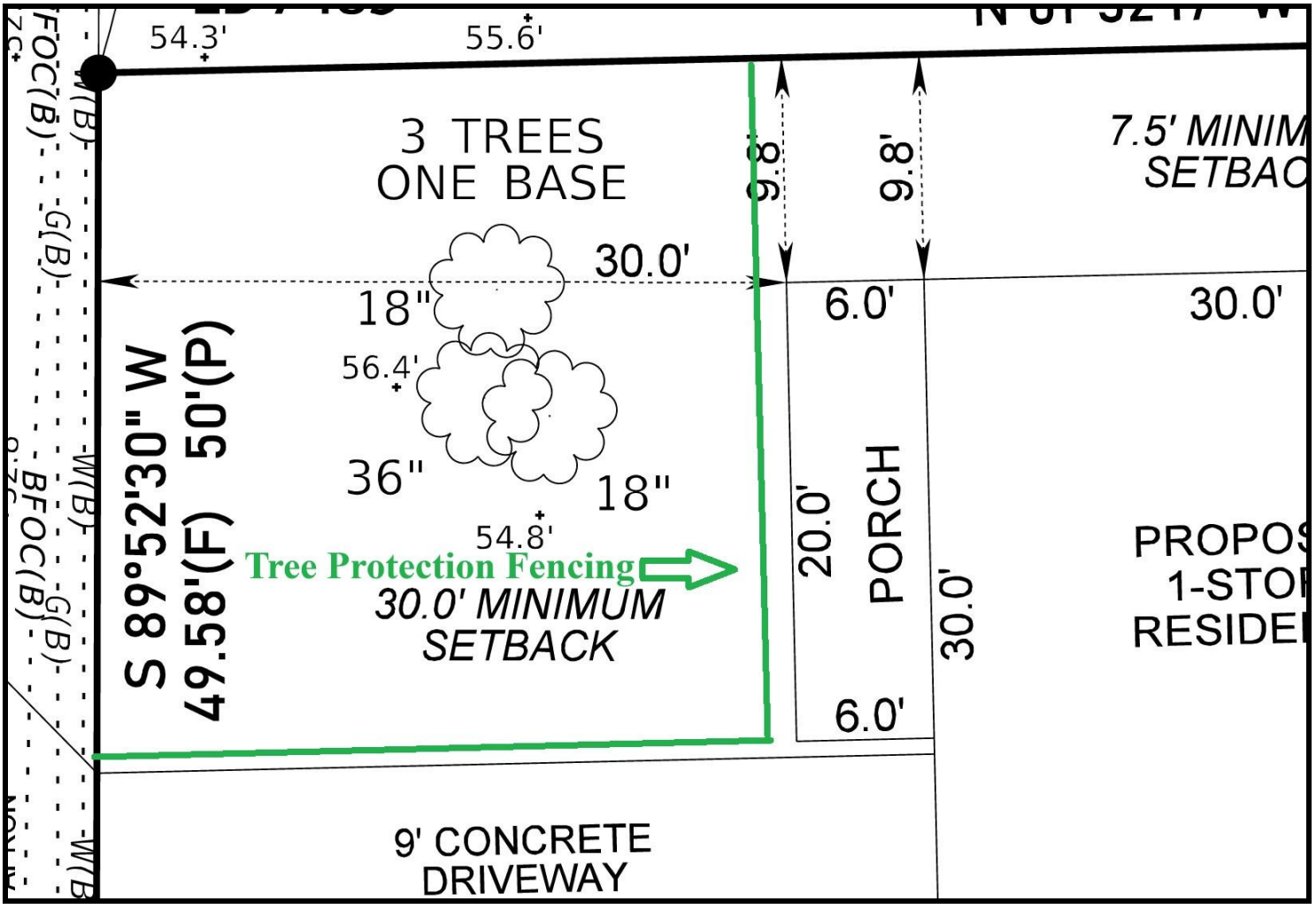
CONCLUSION:

The project seeks a variance from the City of Deland for a 9" driveway to give more root protection for the Historic tree.

This tree will be protected for this project and the following recommendations are standard tree care protection measures and follow methodologies of the International Society of Arboriculture (ISA) and Best Management Practices (BMPs) published in the ***American National Standard for tree Care Operations – Tree, Shrub, and Woody Plant Management – Standard Practices (Management of Trees and Shrubs During Planning, Site Development, and Construction)*** **(ANSI A300, Part 5).** These recommendations are to help reduce root impacts stress to the tree.

Forestry Mow – Bushhog, forestry mow., or remove by hand crews, the vegetation around the Historic tree and remove any non-native trees so that TPZ fencing can be installed prior to land clearing.

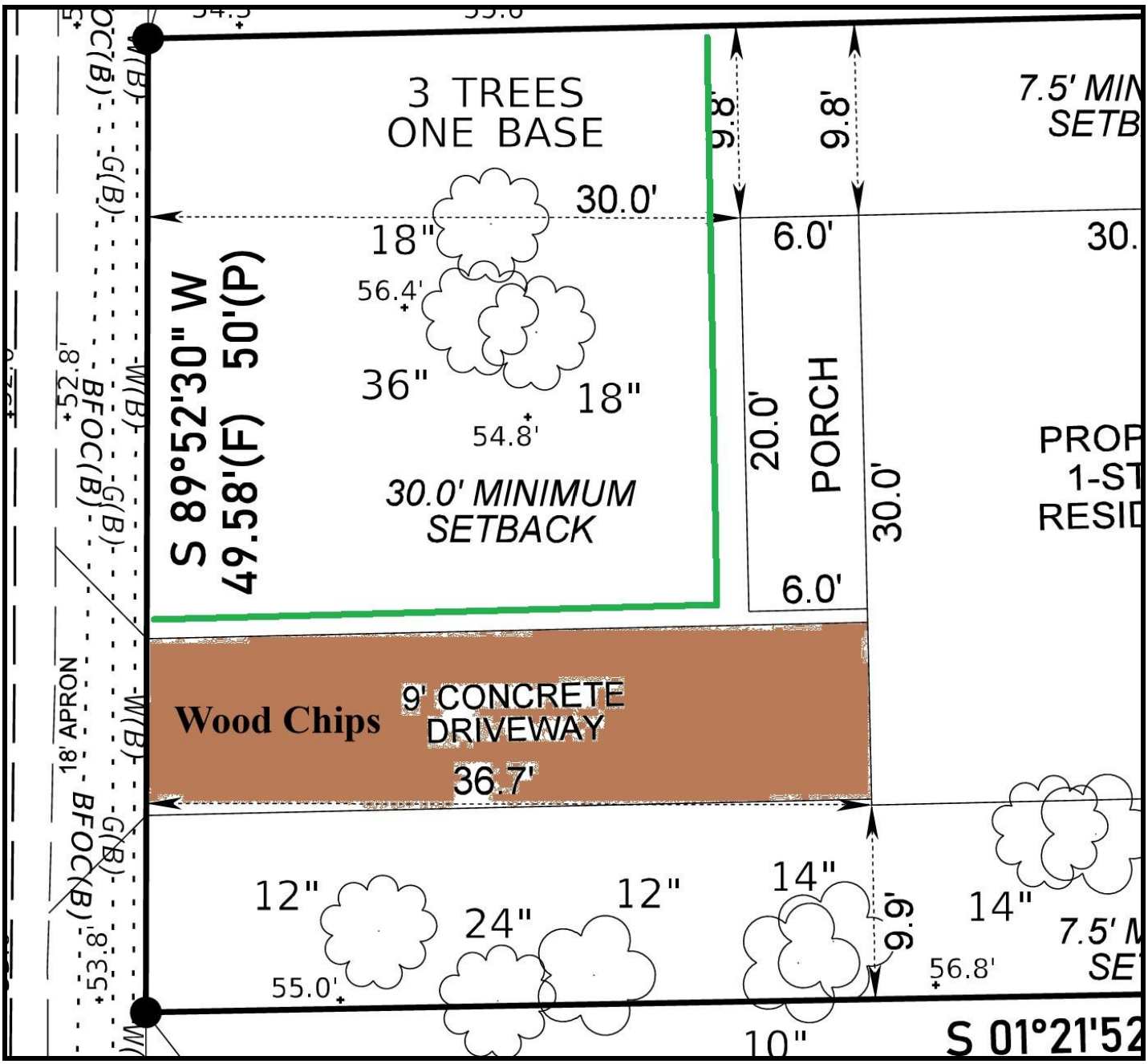
TPZ – Set TPZ fencing to the edges of construction activities as shown below.



Signage - Add signage to the TPZ fence to ensure all subcontractors, deliveries of construction materials, etc. are aware of the intent of the TPZ fencing. Typical language for a TPZ sign should say something like, **'Tree Protection Zone - No vehicles, equipment, soil or building material are to be stored within this boundary.** An example of this type of signage is attached.

Monitoring – Monthly monitoring of the tree will be done to ensure tree protection measures are still in place until construction is completed and to monitor the health and vigor of the tree.

Construction egress within the TPZ – Heavy equipment and construction activities will egress the site using the proposed 9' driveway, adjacent to the TPZ fencing. This egress area should be protected with a minimum of 4 - 6" of wood chip mulch, to help cushion roots from construction equipment and prevent soil compaction as shown below. Other methods for temporary soil and root protection include using ¾" plywood, Geotextile fabric / gravel and logging / road mats. Once the site is cleared and the home is built, the mulch can be reused elsewhere in the landscape, so that the driveway can be poured.



Pruning (roots and canopy) - Pruning will be overseen by an **International Society of Arboriculture (ISA), Certified Arborist** to ensure reduction cuts are done properly and to ANSI standards. **Reduction pruning** will reduce the likelihood of failure from high wind events that can put pressure and leverage on large diameter branches. 'A reduction cut shortens a branch by removing a stem back to a lateral branch that is large enough to resist extensive disfunction and decay behind the cut. This is generally interpreted as cutting back to a lateral branch that is at least one-third the diameter of the cut stem.' (Ref: https://hort.ifas.ufl.edu/woody/stem-reduction.shtml). Any roots that are exposed during land clearing and site prep will be clean cut using hand pruners, loppers or a chain saw. Cut roots will not be treated with pruning paint and fungicides and will be covered with soil.

Post construction – The tree will be aerated twice within the TPZ with a hand aeration tool to alleviate any soil compaction and apply a granular, slow-release fertilizer, 8-2-12, +4% Mg with micronutrients at a rate of one pound per 100 Sq. ft. of canopy.

Order of Events Prior to Construction Activities:

1. Forestry mow vegetation around the Historic oak so that the TPZ fencing can be set.
2. Install TPZ fencing and signage.
3. Add 4 – 6" wood chips along the proposed driveway and designated egress area.
4. Begin monthly monitoring and proposed treatments for the tree.

SINCERELY,

Ray Jarrett
Biologist / Arborist
ISA Certified Arborist FL-5343A
ISA Tree Risk Assessment Qualified (TRAQ)



ASSUMPTIONS, LIMITING CONDITIONS and DISCLAIMER

Trees and plants are living things and are subject to an array of potential health problems, abiotic factors and unpredictable weather that can cause healthy trees and plants to fail. Information provided in this report is for consideration; and is based on my professional experience, formal education, and methodologies of the International Society of Arboriculture, ISA. Ultimately the client must use their own judgment and decisions but may consider these recommendations.

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American National Standard Institute (ANSI) A300 (Part 8) 2020. ***Tree, Shrub, and Woody Plant Management – Standard Practices (Root Management)***, **Tree Care Industry Association, Inc.** (TCIA), Manchester, NH.

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Fishel, Frederick M., Susan W. Williams and O. Norman Nesheim. 2013. ***Ornamental and Turfgrass Management***. University of Florida.

Florida Exotic Pest Plant Council. 2005. *List of Florida's Invasive Species.* Internet: http://fleppc.org. Florida Exotic Pest Plant Council.

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Matheny, Nelda P., and James R. Clark. ***Evaluation of Hazard Trees in Urban Areas***. 1994. International Society of Arboriculture. Champaign, Illinois.

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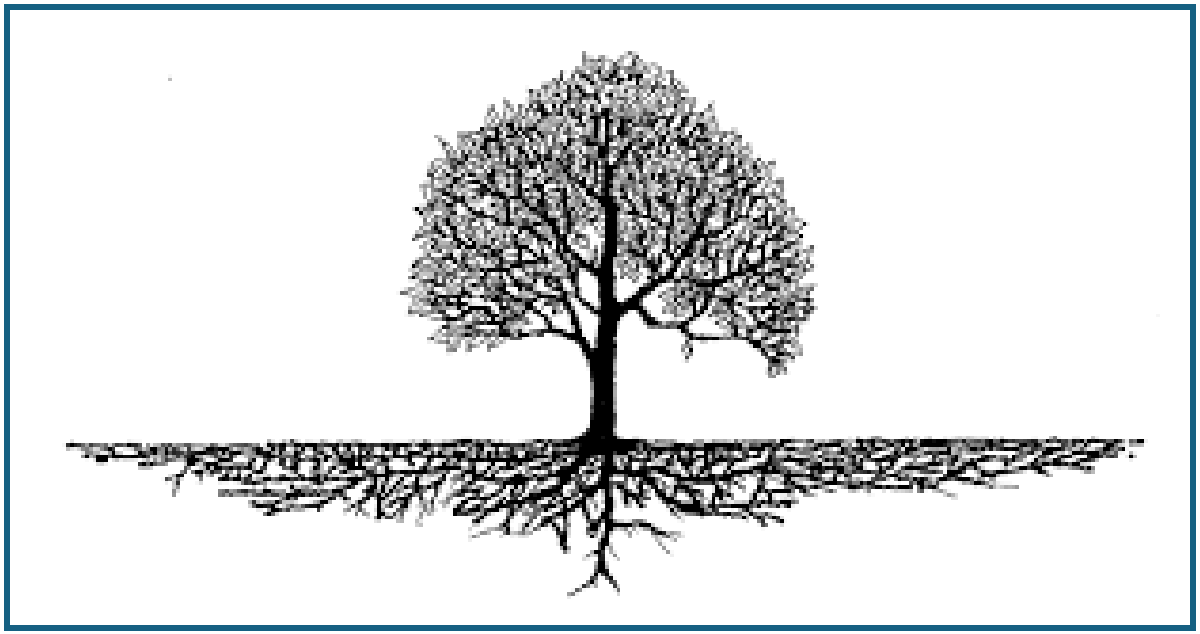
Watson, Gary. 2014. Best Management Practices, ***Tree Planting***. International Society of Arboriculture, Champaign, Illinois.

Wunderlin, R. P., and B. F. Hansen. 2004. *Atlas of Florida Vascular Plants* (http://www.plantatlas.usf.edu/).[S. M. Landry and K. N. Campbell (application development), Florida Center for Community Design and Research.] Institute for Systematic Botany, University of South Florida, Tampa.

Tree Protection Zone



No vehicles, equipment, soil or building materials are allowed within this boundary.

This fencing is to remain in place until it is authorized to be removed by the Project Manager.

Any questions, please contact the Project Manager Arborist – Ray (386) 295-0481

PLANNING DIVISION STAFF REPORT
TO
PLANNING BOARD

DATE: September 10, 2025

APPLICATION NO.: V25-142

STAFF PLANNER: Sam Nelson, *Planner I*

APPLICANT: David Seilkop, West Volusia Habitat for Humanity

REQUEST: To reduce the required number of parking spaces for single-family residences from four (4) to two (2), within the Core Gateway District.

APPLICABLE REGULATIONS:

Article II **Primary Uses**
Sec. 33-17.05 – R-1 - Single-Family Dwelling District

Article VIII **Development Design and Improvement Standards**
Sec. 33-91.03 – Number and type of parking spaces required

SITE FACTORS:

Location: 721 & 725 E Walts Ave
Parcel Size: ± 0.32 Acres
Existing Zoning: R-1 Single-Family Dwelling

Existing Land Use: Medium Density Residential

	SURROUNDING USE:	SURROUNDING ZONING:
North:	Medium Density Residential	R-1, Single-Family Dwelling
South:	Low Density Residential	R-1, Single-Family Dwelling, Beresford Reserve PD
East:	Medium Density Residential	R-1, Single-Family Dwelling
West:	Medium Density Residential	R-1, Single-Family Dwelling

Required Minimum Setbacks in feet				
Front	**Rear**	**Side**	**Corner Lot: Street Side**	**Accessory Uses & Structure**
30’	25’	7.5’	15’	7.5’

Parking Requirements		
Residential Uses	**Minimum off-street parking requirement**	**Notes**
Single-family and duplex	1, 2, 3 bedrooms: 4 spaces/unit 4+ bedrooms: 5 spaces/unit	Single-family or duplex residential parking spaces may be tandem. In all zoning districts except the Core Gateway District, a minimum of 2 of the required parking spaces for each unit must be indoor spaces. No indoor parking spaces are required within the Core Gateway District. Parking is prohibited on front lawns.

BACKGROUND: The vacant properties located on E. Walts Ave. are part of Bleck's Subdivision, which was platted in 1909 with 40 and 50-foot wide lots. The subdivision is generally in the same configuration (Exhibit B) as the original 1909 subdivision. The surrounding area consists primarily of single-family residences (SFRs) constructed between 1920 and 1970. There are no known records of previous development on the subject parcels. The applicant, West Volusia Habitat for Humanity, has obtained these properties for the purpose of constructing affordable housing.

On May 6, 2019, the City Commission approved Ordinance 2019-10 which required all one, two, and three-bedroom single-family residences to provide a minimum of four (4) parking spaces, with two (2) of these being interior. Single-family residences with four or more bedrooms are required to provide a minimum of five (5) parking spaces. On June 19, 2023, the City Commission approved Ordinance to maintain the same number of parking spaces required but the requirement to provide two (2) interior parking spaces for single-family residences was waived for properties located within the Core Gateway District only. The subject properties are located within the Core Gateway District and thus exempt from the interior parking requirement, but must provide 4 parking spaces.

On July 30, 2025, the applicant applied for building permits to construct two (2), two-bedroom two-bathroom, 900 square feet (SF) single-family residences without garages on E. Walts Ave. As part of the submittal, the applicant is proposing driveways which are approximately 10-ft wide by 40-ft long to accommodate two (2) parking spaces for each residence. which is deficient of the code-required four (4) off-street parking spaces for two-bedroom single-family residences by two (2). The construction of a two, (2) two-bedroom residence requires four (4) parking spaces, therefore the site is deficient by two (2) spaces for each unit. The applicant is now requesting variance approval to reduce the minimum number of required parking spaces for two, two-bedroom single-family residences from four (4) to two (2), for each of the lots.

ANALYSIS: Each of the subject properties are 50-ft wide at the street line and 140-ft deep, with areas of approximately 7,000 square feet (Exhibit A). The R-1 zone district requires a minimum lot width of 60 feet. The properties are deficient of the required 60-ft width by 10-ft. The subject properties are legal lots of record and therefore, will comply with the minimum lot size, setback, and maximum impervious coverage requirements for the R-1 district, but are exempt from meeting the minimum lot width. For parking, Sec. 33-91.03 of the Land Development Regulations requires all two-bedroom, single-family residences to provide four (4) parking spaces, with two (2) of these being interior for properties located outside of the Core Gateway District. These properties are located within the Core Gateway District, therefore, the requirement to provide interior parking spaces is waived. The requirement to provide a minimum of four (4) off-street parking spaces applies and the applicant is requesting to provide a total of two (2) off-street parking spaces on each property, which will be deficient of the requirement by two (2). Interior parking could be used to meet the total parking requirement; however, this would add significant cost to the applicant, .

Some administrative relief is offered by the Land Development Regulations (LDRs) for development on nonconforming lots. Section 33-102.05 allows vacant nonconforming lots to be developed for single-family residences provided the residence conforms with the established setbacks of the surrounding area. Additionally, one of the listed criteria states, "The development of the property will provide adequate off-street parking for the use of the property." The code does

not define “adequate” parking, so the standard requirement of 4 spaces is applied. There is no similar provision for staff to administratively approve a reduction of parking as exists for setbacks. The proposed 900 sf two-bedroom single-family residences will be largely consistent with surrounding development. Neighboring residences were constructed between 1920 and 1970 with home sizes ranging from 660 to 2,000 square feet. The proposed residences will be setback further than the neighborhoods established front-yard setback to accommodate a tandem, two-car driveway. No residences on the same portion of E. Walts Ave. are conforming to the current parking requirement (Exhibit C).

Per aerial imagery and arborist reports provided by the applicant, each property contains an abundance of trees, including historic trees, in the front-yard areas. The code promotes the protection of historic trees and requires City Commission approval for removal. To protect the root zones of these historic trees, the applicant has proposed narrow driveways. Per the applicant, providing parking as required by the code would impact the historic trees.

VARIANCE CRITERIA: Per Section 33-103.03, as amended, the Planning Board will consider the following criteria in making a determination concerning the granting or denial of the requested variance:

1. Special conditions and circumstances exist which are peculiar to the land, structure or building involved, and which are not applicable to other lands, structures or buildings in the same zoning district;

   The widths of the subject propertiess are undersized per current R-1 standards by 10-ft. In conjunction with the placement of historic trees within the front-yards, there appears to be limited area for additional parking beyond the proposed two car tandem parking. .

2. Literal interpretation and enforcement of these Land Development Regulations will deprive the applicant of rights commonly enjoyed by other properties in the same zoning district under the terms of these Land Development Regulations, and work unnecessary and undue hardship on the applicant such as natural site conditions, size or shape of lot or existing structure(s);

   Literal interpretation and enforcement of these Land Development Regulations is unlikely to deprive the applicant of rights commonly enjoyed by other properties in the same zoning district as the applicant could construct garages to provide the required parking, as is common on other properties. The applicant’s specific affordable business-model does not include garages.

3. Granting of the variance request will not confer on the applicant any special privilege that is denied by these Land Development Regulations to other lands, buildings or structures in the same zoning district;

   Granting of the variance will confer special privileges when compared with other R-1 district properties, as all new Single-Family Residences (SFRs) must meet the parking requirements. However, all surrounding properties were constructed prior to 2019, when the parking requirement was increased.

4. The granting of the variance will be in harmony with the general intent and purpose of these Land Development Regulations and the Comprehensive Plan, as amended, and will not be injurious to the surrounding properties or detrimental to the public welfare;

   The granting of this variance may be considered to be in harmony with the general intent and purpose of these Land Development Regulations as there are existing provisions for staff to administratively approve development on vacant, nonconforming lots, with one of the requirements being "adequate" off-street parking is provided. The granting of this variance is unlikely to be injurious to surrounding properties, as all properties within the same block are non-conforming to current parking standards.

5. The variance, if granted, is the minimum variance necessary to make possible the reasonable use of the land, building or structure; and

   The applicant could construct a garage to provide the required parking without the need for a variance. The applicant does not intend to construct garages, as garages increase the cost for these affordable housing units.

6. The special conditions or circumstances are not the result of actions of the applicant or owner.

   Each lot was in the existing, nonconforming configuration prior to acquisition by the applicant.

STAFF SUMMARY: The applicant is requesting a variance to reduce the required number of parking spaces for two (2), two-bedroom single-family residences from four (4) to two (2) within the Core Gateway District. Some hardship may exist on the properties as the widths of the properties are undersized to R-1 standards by 10-ft, and historic trees are present in the front yards. When combining these site factors, there may be some hinderance in placing the code required four (4) parking spaces. Interior parking could be provided to meet the code requirement without further impacting historic trees, however, the applicant's available affordable home models do not include garages. The code offers some administrative relief for development of vacant nonconforming lots; however, a parking reduction is not specifically permitted. The proposal will not be injurious to surrounding properties, as no property on the same block contains the currently required parking due to the time of their construction. The Planning Board may choose to grant this variance request, grant this variance request with conditions, or deny this variance request. Please note, two separate motions are required, one for each of the properties located at 721 and 725 E. Walts Ave.

EXHIBIT A
Plot Plans

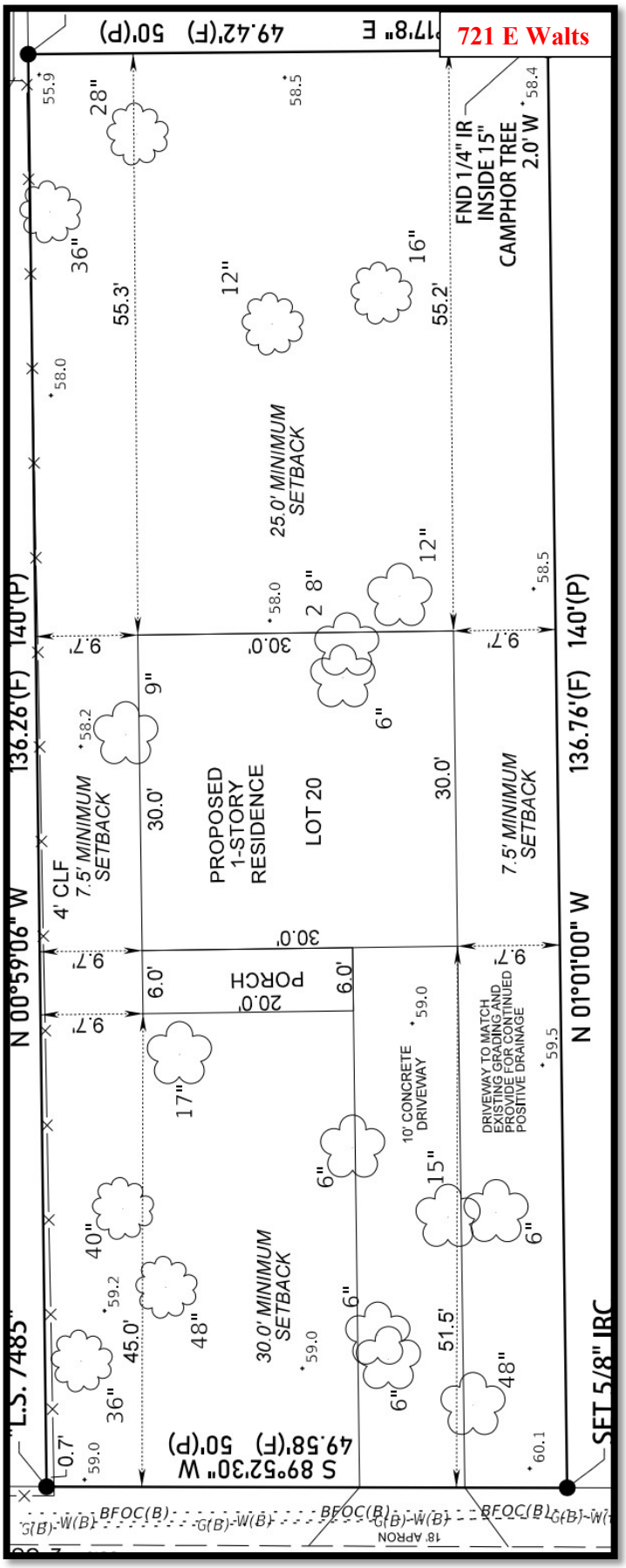


EXHIBIT B
Bleck's Subdivision

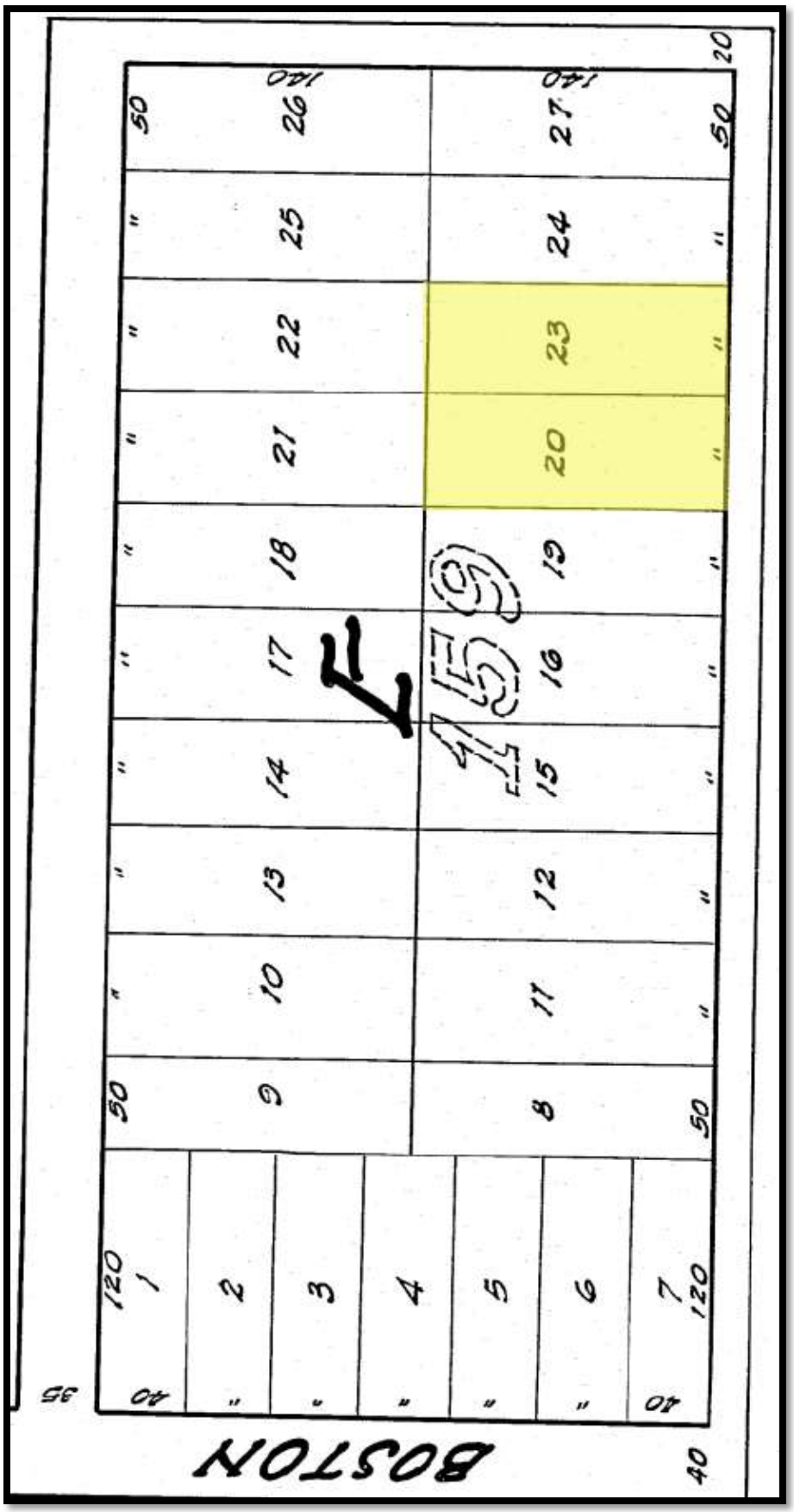
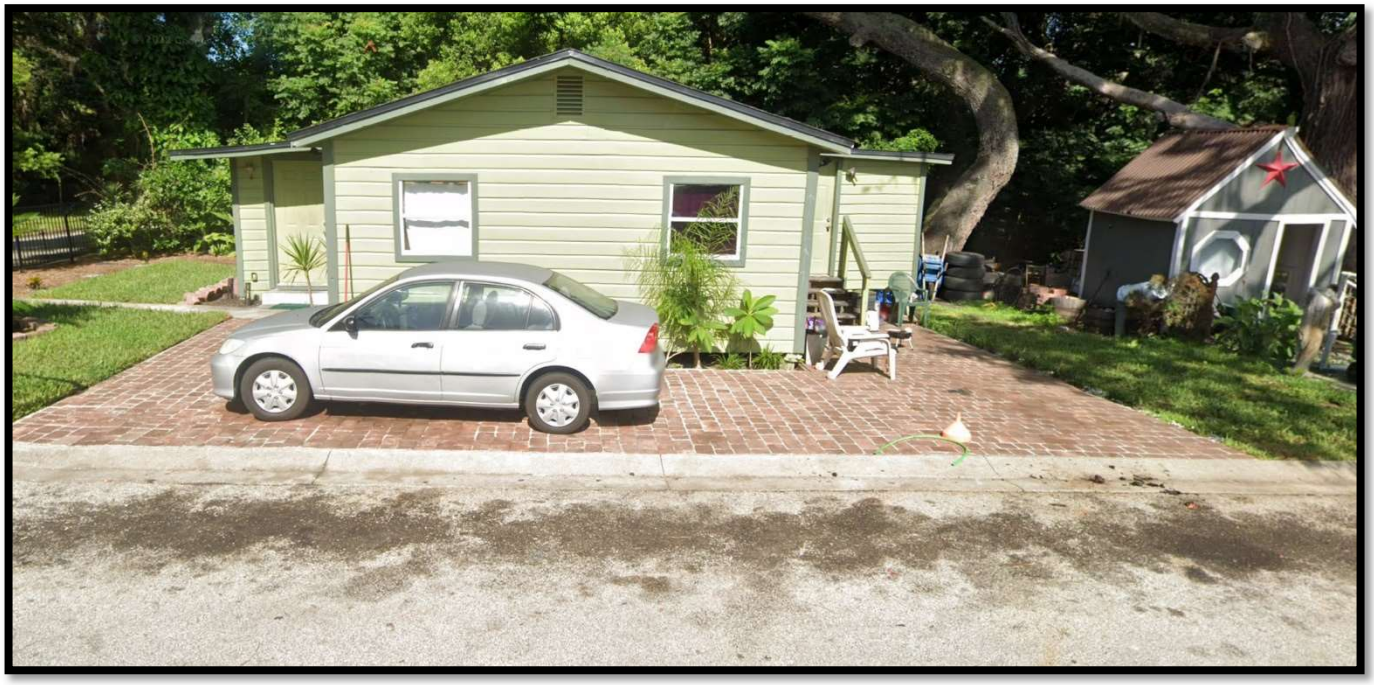


EXHIBIT C
Surrounding Properties



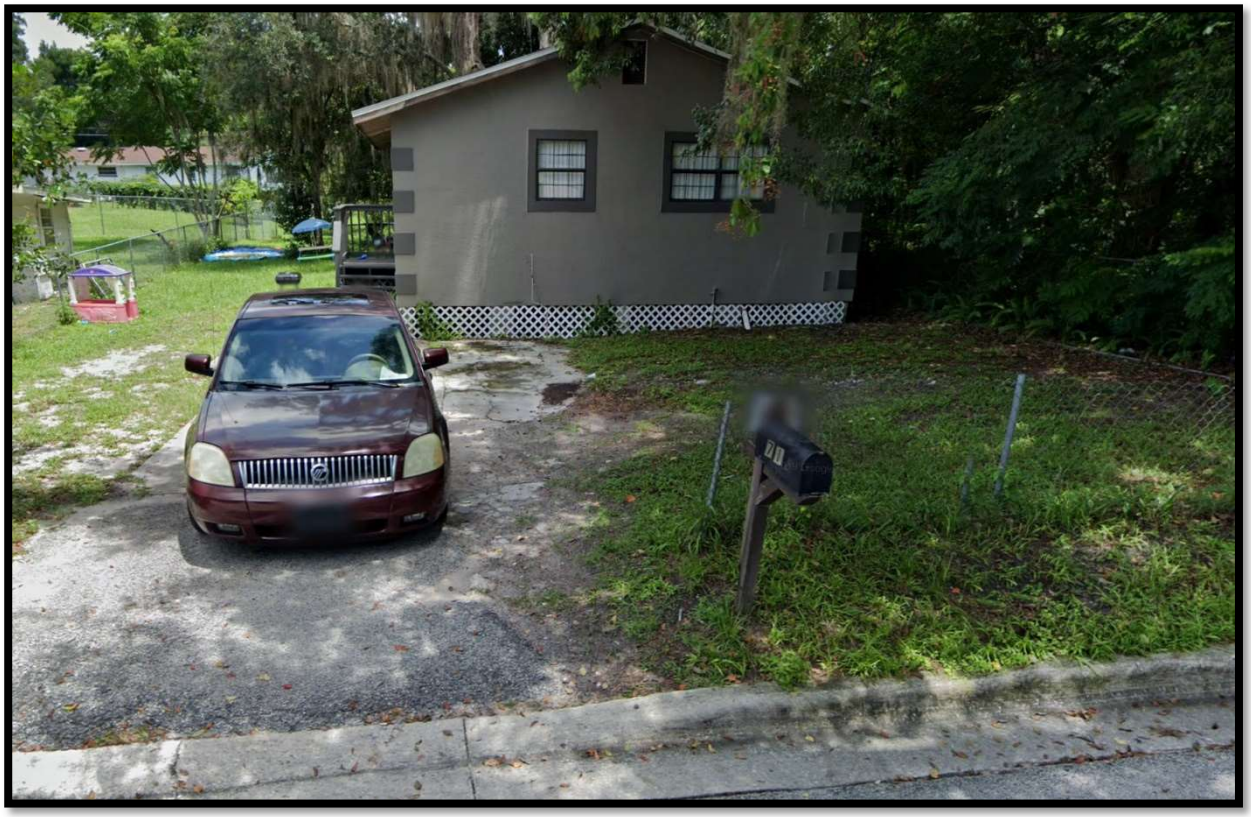


EXHIBIT C
Surrounding Properties





EXHIBIT D
Aerial

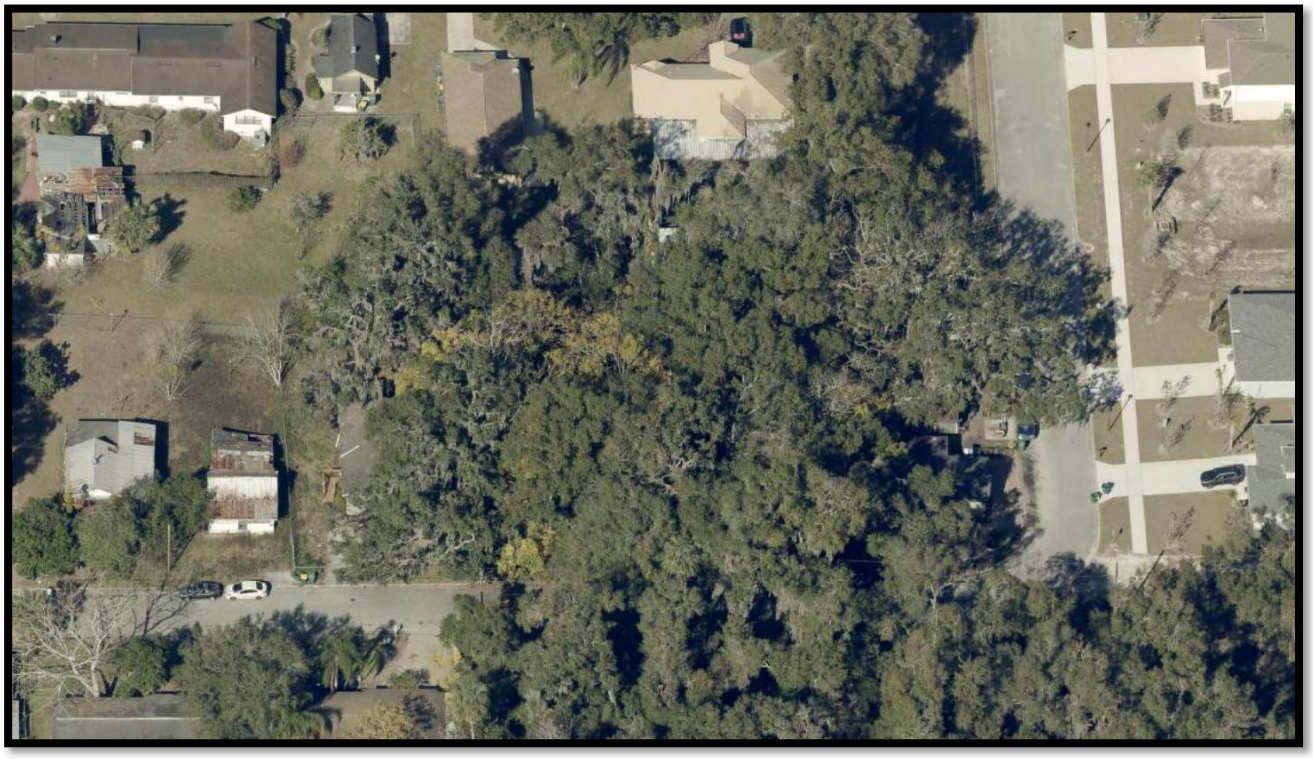
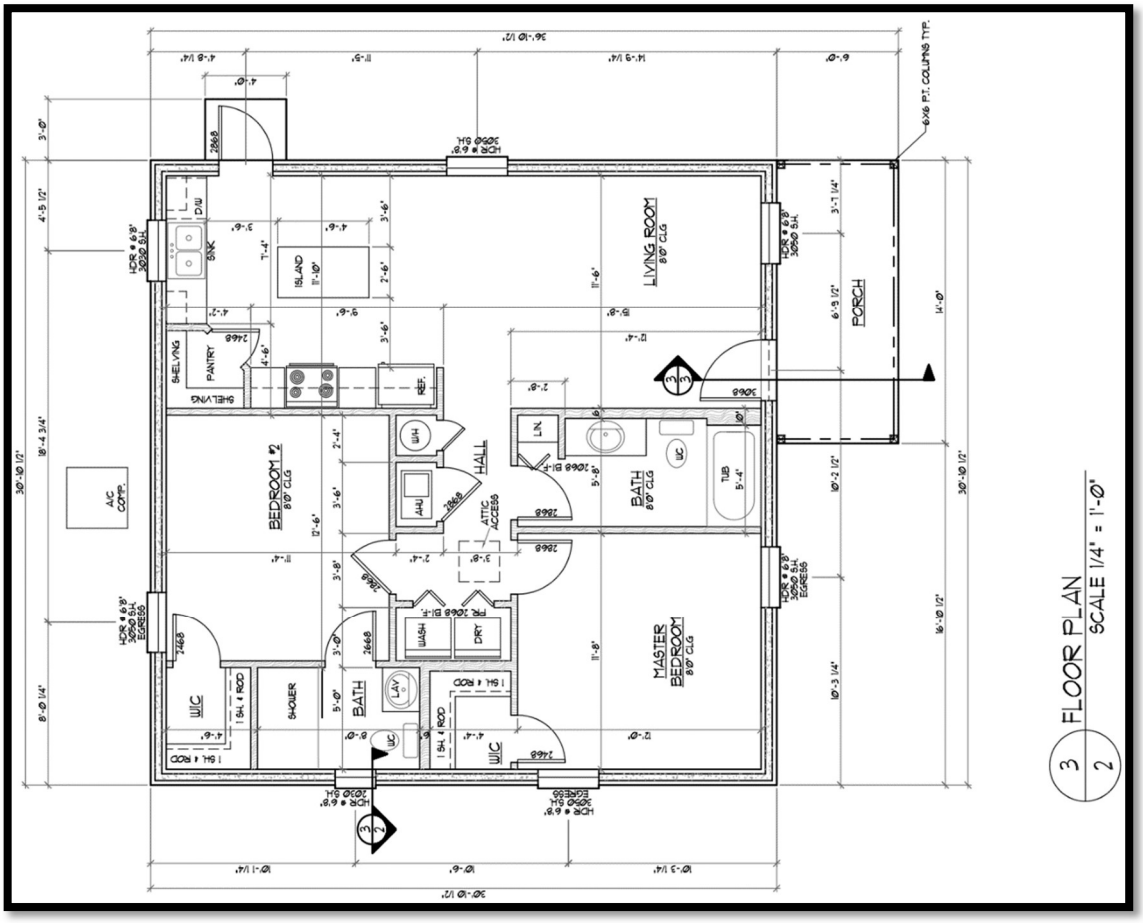
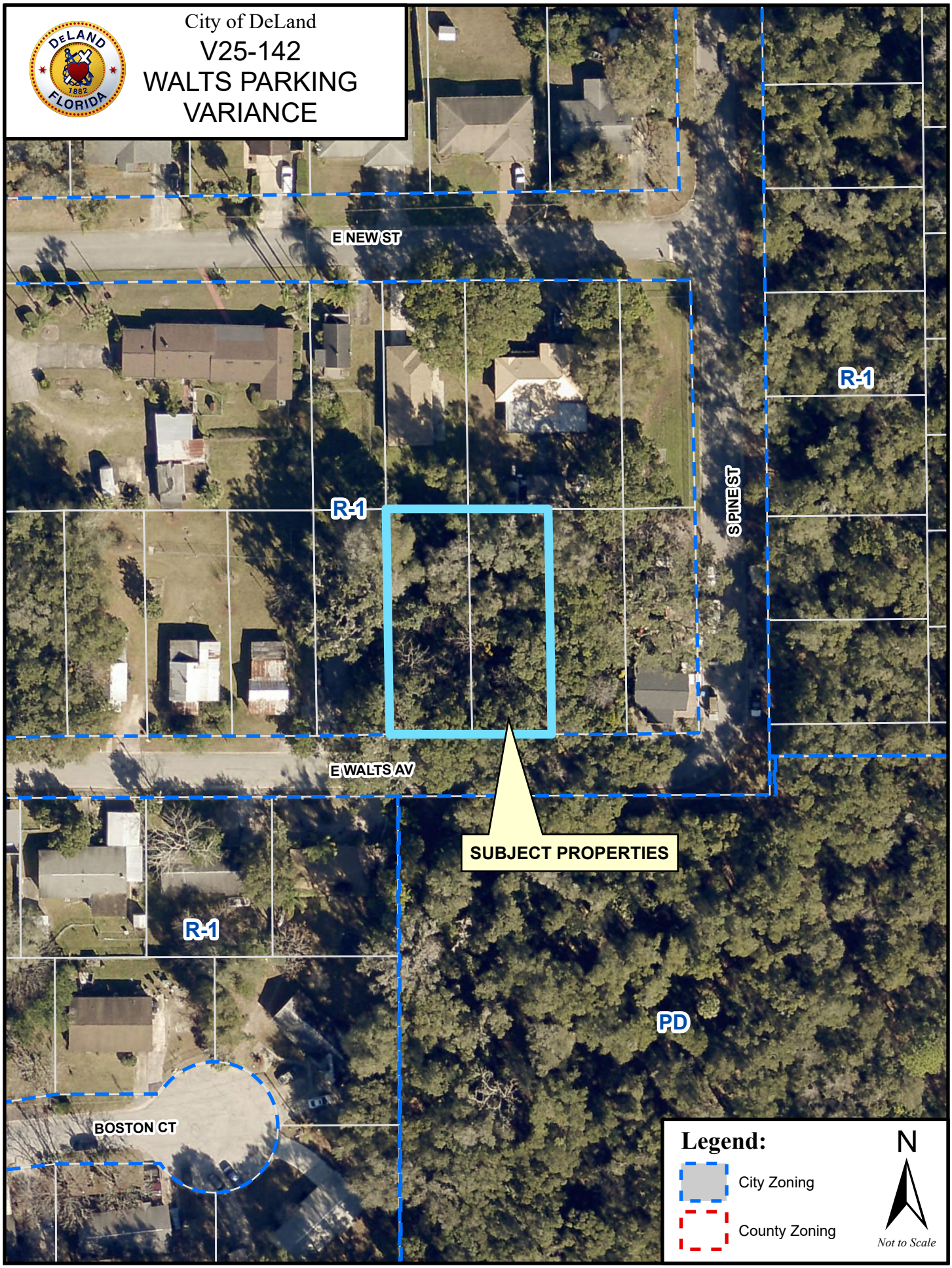


EXHIBIT E
Floor Plan




City of DeLand
V25-142
WALTS PARKING
VARIANCE
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Legend:
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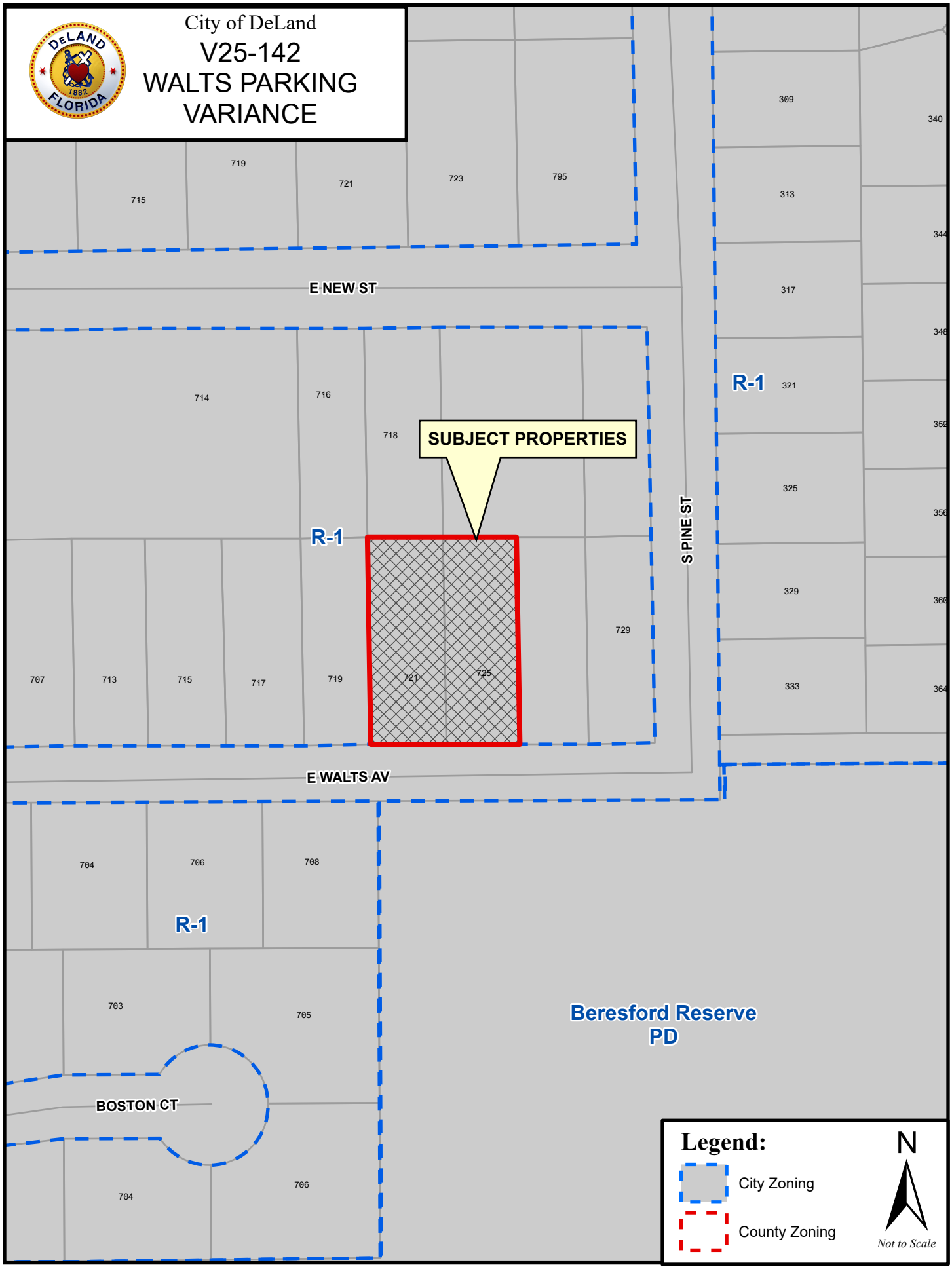
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Legend:
City Zoning
County Zoning
N
Not to Scale

LEGAL DESCRIPTION
AS FURNISHED BY CLIENT PER DEED

LOT 20, BLOCK E, CORRECTED PLAT OF BLECK'S SUBDIVISION OF BLOCKS 150, 160 AND THE SOUTH 1/2 OF 159, OF THE CORPORATION MAP OF THE CITY OF DELAND, ACCORDING TO THE PLAT THEREOF AS RECORDED IN MAP BOOK 4, PAGE 39, AND CORRECTED IN MAP BOOK 5, PAGE 157, AND PLAT BOOK 14, PAGE 94, OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

721 E WALTS AVE. DELAND FL. 32724

NOTES:

1. THIS IS NOT A BOUNDARY SURVEY.
2. THIS IS A PLOT PLAN INTENDED TO SHOW THE LOCATION OF THE BOUNDARY, TREES AND PLANNDED IMPROVEMENTS ON A PARCEL OF LAND DESCRIBED AS LOT 20, BLOCK E, CORRECTED PLAT OF BLECK'S SUBDIVISION, ACCORDING TO THE PLAT AS RECORDED IN MAP BOOK 5, PAGE 157, OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.
3. NO TITLE SEARCH WAS PERFORMED OR PROVIDED TO THIS SURVEYOR. ALL PROPERTY RECORDS SHOWN HEREON ARE BASED ON THE LAST DEED OF RECORD AS RECORDED IN THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.
4. PROPERTY MAY BE SUBJECT TO ADDITIONAL EASEMENTS, RIGHTS OF WAY, COVENANTS AND RESTRICTIONS NOT SHOW HEREON BUT FOUND IN THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.
5. ALL DISTANCE MEASUREMENTS SHOWN HEREON ARE EXPRESSED IN U.S. SURVEY FEET. ALL ANGULAR MEASUREMENTS ARE EXPRESSED IN DEGREES, MINUTES AND SECONDS.
6. BEARINGS SHOWN HEREON ARE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE. THE REFERENCE BEARING FOR THIS SURVEY IS THE SOUTH LINE OF BLOCK E, WHICH HAS A BEARING OF NORTH 89°52'30" WEST.
7. ELEVATIONS SHOWN HEREON ARE GPS DERIVED AND BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988.
8. UNDERGROUND UTILITIES SHOWN HEREON WERE DESIGNATED BY OTHERS.
9. NOT VALID WITH OUT THE AUTHORIZED ELECTRONIC SEAL OR THE ORIGINAL RAISED SEAL AND SIGNATURE OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

CERTIFICATION:

I CERTIFY THAT THIS SURVEY WAS MADE UNDER MY RESPONSIBLE CHARGE AND THAT IT MEETS THE STANDARDS OF PRACTICE SET FORTH BY THE BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 5J-17.052 FLORIDA ADMINISTRATIVE CODE, PERSUANT TO SECTION 472.027 FLORIDA STATUTES.

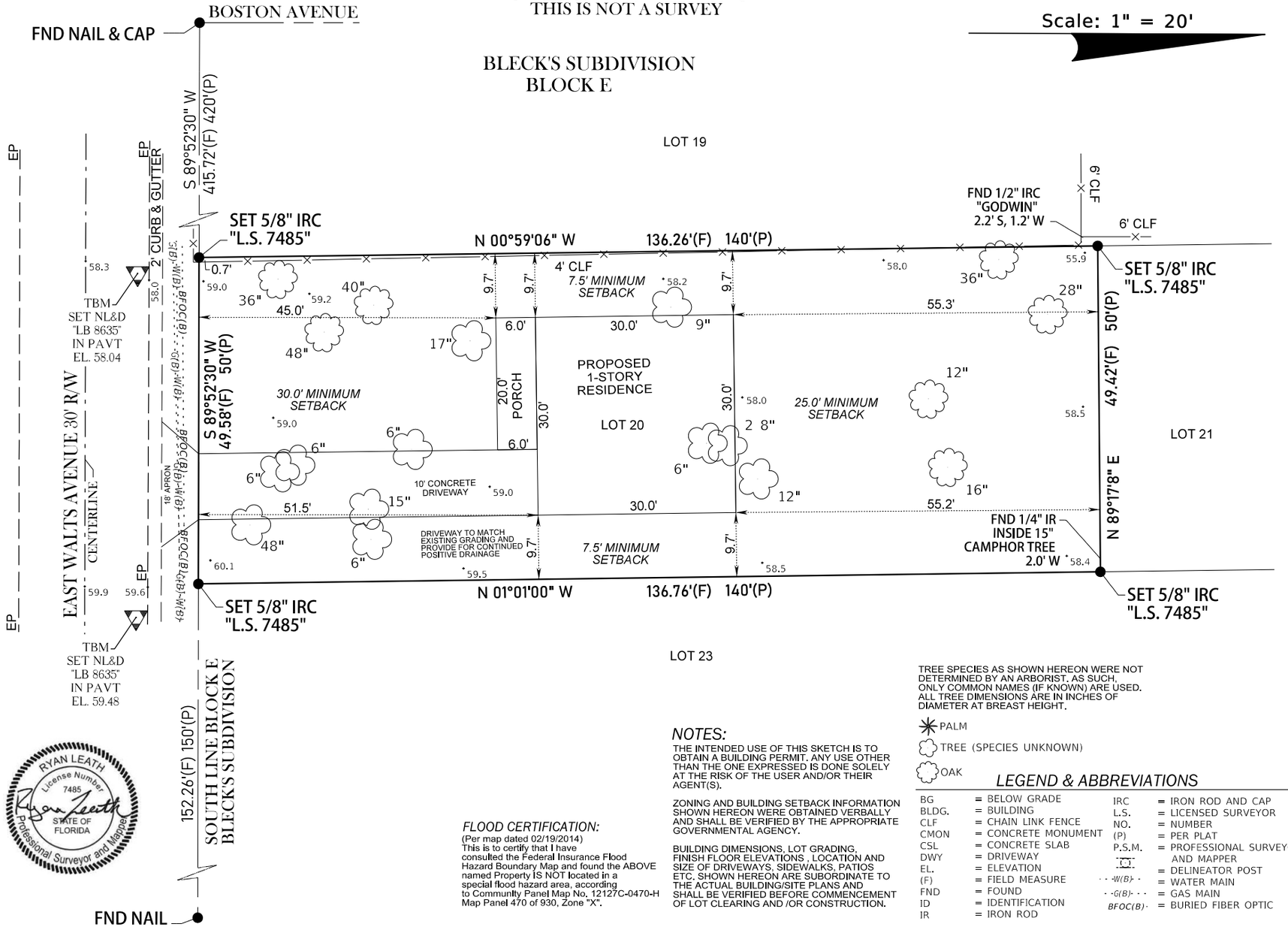
RYAN A LEATH

Digitally signed by RYAN A LEATH
DN: CN=RYAN A LEATH, emailAddress=AG140C000001987E2CD7F7000093571, OU=Unaffiliated, C=US
Date: 2025.08.04 17:16:40-04'00'

RYAN A. LEATH P.S.M. NO. 7485

PLOT PLAN
THIS IS NOT A SURVEY

Scale: 1" = 20'



RYAN LEATH
License Number 7485
STATE OF FLORIDA
Professional Surveyor and Mapper

FLOOD CERTIFICATION:
(Per map dated 02/19/2014)
This is to certify that I have consulted the Federal Insurance Flood Hazard Boundary Map and found the ABOVE named Property IS NOT located in a special flood hazard area, according to Community Panel Map No. 12127C-0470-H Map Panel 470 of 930, Zone "X".

NOTES:
THE INTENDED USE OF THIS SKETCH IS TO OBTAIN A BUILDING PERMIT. ANY USE OTHER THAN THE ONE EXPRESSED IS DONE SOLELY AT THE RISK OF THE USER AND/OR THEIR AGENT(S).

ZONING AND BUILDING SETBACK INFORMATION SHOWN HEREON WERE OBTAINED VERBALLY AND SHALL BE VERIFIED BY THE APPROPRIATE GOVERNMENTAL AGENCY.

BUILDING DIMENSIONS, LOT GRADING, FINISH FLOOR ELEVATIONS , LOCATION AND SIZE OF DRIVEWAYS, SIDEWALKS, PATIOS ETC. SHOWN HEREON ARE SUBORDINATE TO THE ACTUAL BUILDING/SITE PLANS AND SHALL BE VERIFIED BEFORE COMMENCEMENT OF LOT CLEARING AND /OR CONSTRUCTION.

TREE SPECIES AS SHOWN HEREON WERE NOT DETERMINED BY AN ARBORIST. AS SUCH, ONLY COMMON NAMES (IF KNOWN) ARE USED. ALL TREE DIMENSIONS ARE IN INCHES OF DIAMETER AT BREAST HEIGHT.

PALM
TREE (SPECIES UNKNOWN)
OAK

LEGEND & ABBREVIATIONS

BG	= BELOW GRADE	IRC	= IRON ROD AND CAP
BLDG.	= BUILDING	L.S.	= LICENSED SURVEYOR
CLF	= CHAIN LINK FENCE	NO.	= NUMBER
CMON	= CONCRETE MONUMENT	(P)	= PER PLAT
CSL	= CONCRETE SLAB	P.S.M.	= PROFESSIONAL SURVEYOR AND MAPPER
DWY	= DRIVEWAY		= DELINEATOR POST
EL.	= ELEVATION	-W(B)-	= WATER MAIN
(F)	= FIELD MEASURE	-G(B)-	= GAS MAIN
FND	= FOUND	BFOC(B)	= BURIED FIBER OPTIC
ID	= IDENTIFICATION		
IR	= IRON ROD		

DESCRIPTION			REVISIONS	
DRAWN BY:	CHECKED:	FIELD DATE:	DATE	
RAL	RAL	04/04/2025	08/03/25	DRIVEWAY AND FOUNDATION LOCATION

BREVIS SURVEYING LLC
LB 8635
1180 14TH STREET
ORANGE CITY, FLORIDA, 32763

BOUNDARY SURVEY

PROJ.	COUNTY	DATE
H4H-003	VOLUSIA	04/15/2025

CERTIFIED TO:
DAVID SEILKOP
WEST VOLUSIA HABITAT FOR HUMANITY

SHEET NO. 1

PLOT PLAN

THIS IS NOT A SURVEY

Scale: 1" = 20'

LEGAL DESCRIPTION

AS FURNISHED BY CLIENT PER DEED

LOT 23, BLOCK E, BLECK'S SUBDIVISION, BLOCK 159, DELAND, SECTION 15, TOWNSHIP 17 SOUTH, RANGE 30 EAST, AS PER MAP BOOK 5, PAGE 157, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

725 E WALTS AVE. DELAND FL. 32724

NOTES:

1. THIS IS NOT A BOUNDARY SURVEY.
2. THIS IS A PLOT PLAN INTENDED TO SHOW THE LOCATION OF THE BOUNDARY, TREES AND PLANNDED IMPROVEMENTS ON A PARCEL OF LAND DESCRIBED AS LOT 23, BLOCK E, CORRECTED PLAT OF BLECK'S SUBDIVISION, ACCORDING TO THE PLAT AS RECORDED IN MAP BOOK 5, PAGE 157, OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.
3. NO TITLE SEARCH WAS PERFORMED OR PROVIDED TO THIS SURVEYOR. ALL PROPERTY RECORDS SHOWN HEREON ARE BASED ON THE LAST DEED OF RECORD AS RECORDED IN THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.
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8. UNDERGROUND UTILITIES SHOWN HEREON WERE DESIGNATED BY OTHERS.
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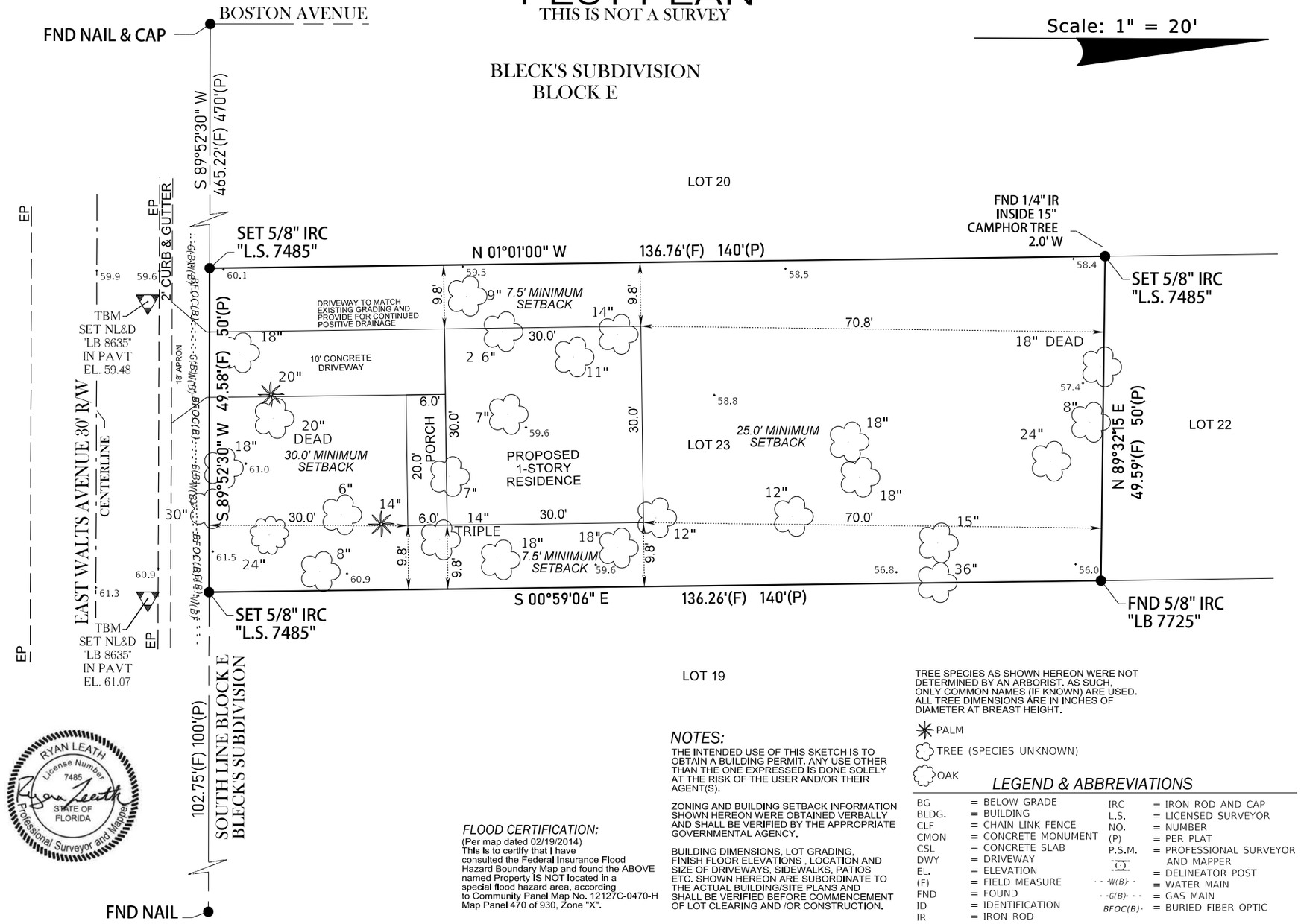
CERTIFICATION:

I CERTIFY THAT THIS SURVEY WAS MADE UNDER MY RESPONSIBLE CHARGE AND THAT IT MEETS THE STANDARDS OF PRACTICE SET FORTH BY THE BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 5J-17.052 FLORIDA ADMINISTRATIVE CODE, PERSUANT TO SECTION 472.027 FLORIDA STATUTES.

RYAN A LEATH

Digitally signed by RYAN A LEATH
DN: CN=RYAN A LEATH, email=RLeath@brevissurveying.com, C=US
Date: 2025.08.04 17:17:12-04'00'

RYAN A. LEATH P.S.M. NO. 7485



RYAN LEATH License Number 7485 STATE OF FLORIDA Professional Surveyor and Mapper

FLOOD CERTIFICATION:

(Per map dated 02/19/2014)
This is to certify that I have consulted the Federal Insurance Flood Hazard Boundary Map and found the ABOVE named Property IS NOT located in a special flood hazard area, according to Community Panel Map No. 12127C-0470-H Map Panel 470 of 930, Zone "X".

NOTES:

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BUILDING DIMENSIONS, LOT GRADING, FINISH FLOOR ELEVATIONS , LOCATION AND SIZE OF DRIVEWAYS, SIDEWALKS, PATIOS ETC. SHOWN HEREON ARE SUBORDINATE TO THE ACTUAL BUILDING/SITE PLANS AND SHALL BE VERIFIED BEFORE COMMENCEMENT OF LOT CLEARING AND /OR CONSTRUCTION.

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TREE (SPECIES UNKNOWN)
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DESCRIPTION			REVISIONS	
DRAWN BY:	CHECKED:	FIELD DATE:	DATE	
RAL	RAL	04/04/2025	08/03/25	DRIVEWAY UPDATE

BREVIS SURVEYING LLC
LB 8635
1180 14TH STREET
ORANGE CITY, FLORIDA, 32763

BOUNDARY SURVEY

PROJ.	COUNTY	DATE
H4H-004	VOLUSIA	04/15/2025

CERTIFIED TO:

DAVID SEILKOP
WEST VOLUSIA HABITAT FOR HUMANITY

SHEET NO. 1

Arbor Report – Tree Protection Plan

August 5, 2025

David Seilkop
West Volusia Habitat for Humanity
604 S Spring Garden Avenue
Deland, Fl 32720

Re: 721 E Walts Avenue (Lot 20), Deland, Florida - Tree Protection, Monitoring and Recovery Plan for a 48" Historic Live Oak.

Scope:

Services were retained to prepare a Tree Protection and Monitoring Plan for a 48" Historic as defined by the City of Deland Land Development code. This project is located at 703 E Walts Ave., Deland, Fl.



Aerial view of project site.

City of Deland Code definitions:

(d) *Historic tree protection.* Unless otherwise authorized by this article, no historic tree shall be removed without a recommendation by the city forester, the tree advisory committee, and a finding by the city commission that the tree is a hazard (due to health or natural damage) or that it is not economically or practically feasible to develop the parcel without removing the tree. The developer shall explain in detail why the tree is a hazard or why it is not economically or practically feasible to develop the parcel without removing

the historic tree. The city forester shall make a presentation to the tree advisory committee on the application and make a recommendation as to whether it should be approved or denied. The tree advisory committee shall make a recommendation to the city commission on the application. Any historic tree permitted to be removed shall be replaced by a sufficient number of replacement trees so that their DBH equals 100 percent of the total DBH of the historic tree to be removed from the property. In no case shall replacement stock be less than ten feet in height, have a DBH of less than four inches, or a caliper of less than six inches.

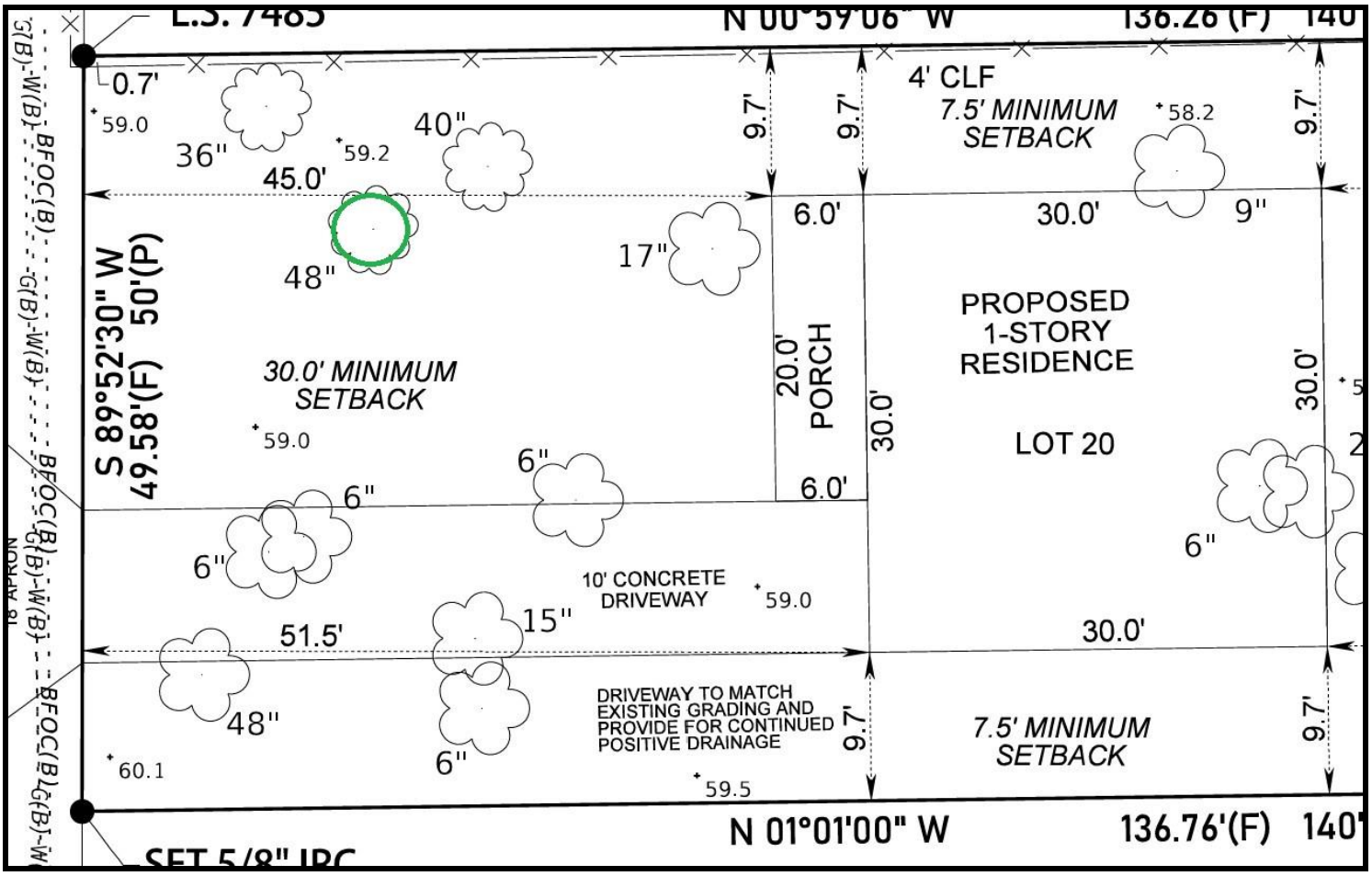
Historically significant trees shall be as follows:

1. Bald cypress if 20-inch or larger DBH.
2. Live oak or sand live oak if 25-inch or larger DBH.
3. Red cedar if 25-inch or larger DBH.

OBSERVATIONS / DISCUSSION:

This undeveloped lot has a canopy consisting of live oaks (*Quercus virginiana*), laurel oaks (*Quercus laurifolia*) and non-native camphor trees (*Camphora officinarum*).

There is a 48" Historic live oak located in front of the proposed home. This Historic live oak is approximately 60' tall with a DBH of 48" and a live crown ratio of around 40% and is healthy and vigorous with no visual signs of decay, insect pests, or disease. The suite plan has been adjusted, and the house has been set 15' further back from the street setback to give more root space for the oak. The site plan below shows a proposed 9' driveway to provide more root protection for the tree. The current development code requires a 20' driveway. The project seeks a variance from the City of Deland for a 9' driveway to provide more root protection for the Historic oak.



Site plan and tree location.

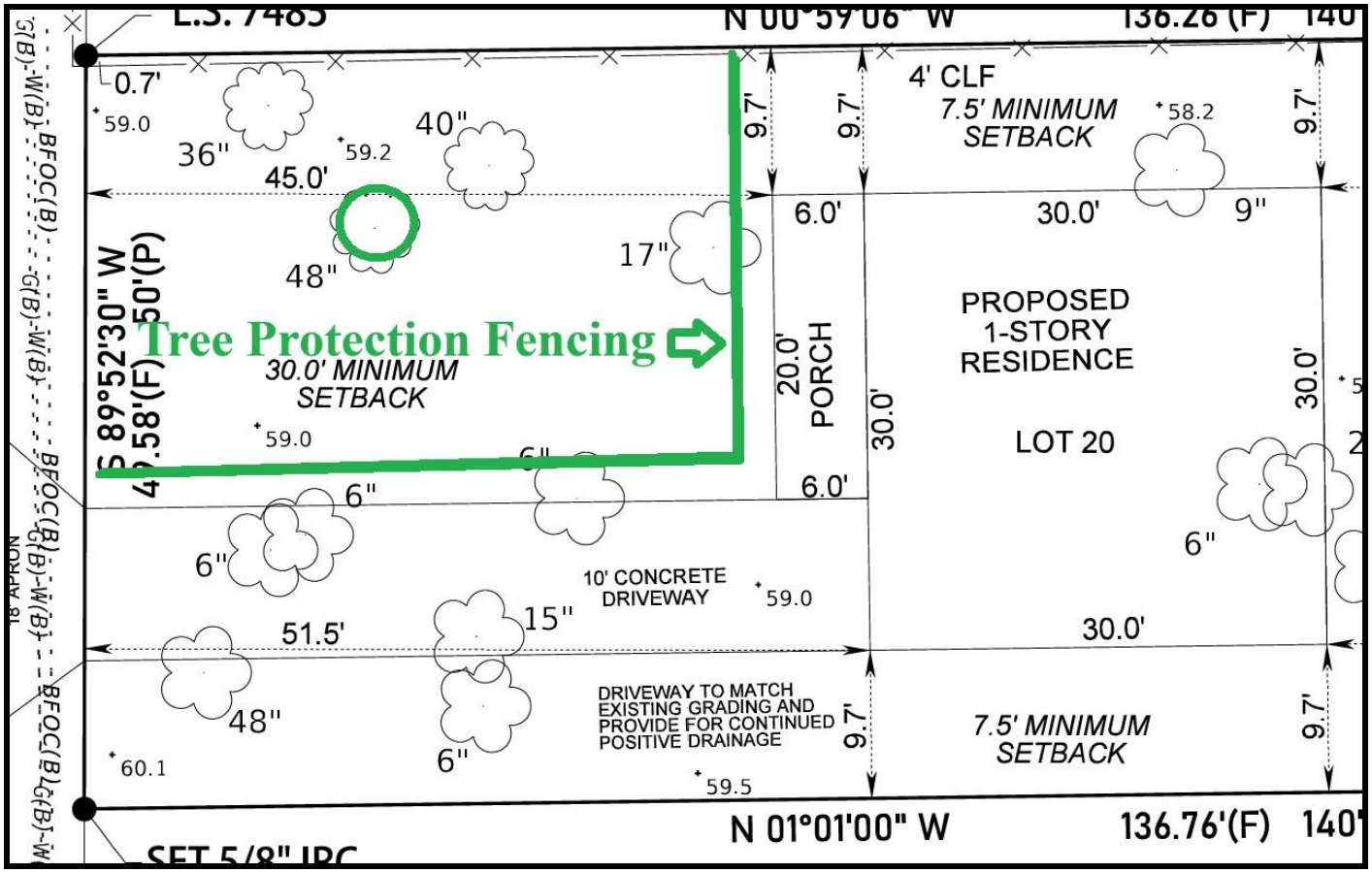
CONCLUSION:

The project seeks a variance from the City of Deland for a 9" driveway to give more root protection for the Historic tree.

This tree will be protected for this project and the following recommendations are standard tree care protection measures and follow methodologies of the International Society of Arboriculture (ISA) and Best Management Practices (BMPs) published in the ***American National Standard for tree Care Operations – Tree, Shrub, and Woody Plant Management – Standard Practices (Management of Trees and Shrubs During Planning, Site Development, and Construction)*** **(ANSI A300, Part 5).** These recommendations are to help reduce root impacts stress to the tree.

Forestry Mow – Bushhog, forestry mow, or remove by hand crews, the vegetation around the Historic tree and remove any non-native trees so that TPZ fencing can be installed prior to land clearing.

TPZ – Set TPZ fencing to the edges of construction activities as shown below.

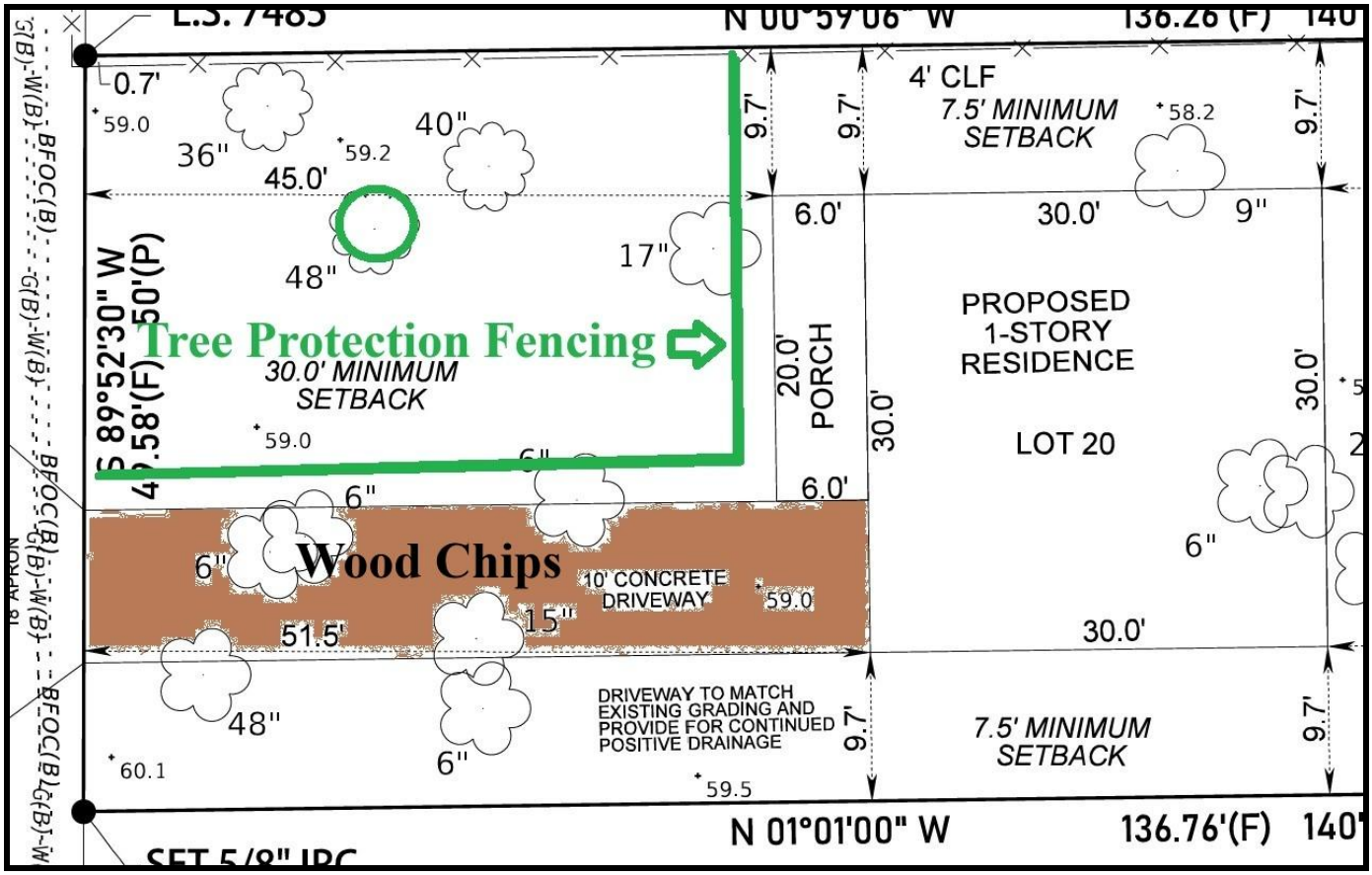


Signage - Add signage to the TPZ fence to ensure all subcontractors, deliveries of construction materials, etc. are aware of the intent of the TPZ fencing. Typical language for a TPZ sign should say something like, **'Tree Protection Zone - No vehicles, equipment, soil or building material are to be stored within this boundary.** An example of this type of signage is attached.

Monitoring – Monthly monitoring of the tree will be done to ensure tree protection measures are still in place until construction is completed and to monitor the health and vigor of the tree.

Construction egress within the TPZ – Heavy equipment and construction activities will egress the site using the proposed 9' driveway, adjacent to the TPZ fencing. This egress area should be protected with a minimum of 4 - 6" of wood chip mulch, to help cushion roots from construction equipment and prevent soil compaction as

shown below. Other methods for temporary soil and root protection include using ¾" plywood, Geotextile fabric / gravel and logging / road mats. Once the site is cleared and the home is built, the mulch can be reused elsewhere in the landscape, so that the driveway can be poured.



Pruning (roots and canopy) - Pruning will be overseen by an **International Society of Arboriculture (ISA), Certified Arborist** to ensure reduction cuts are done properly and to ANSI standards. **Reduction pruning** will reduce the likelihood of failure from high wind events that can put pressure and leverage on large diameter branches. 'A reduction cut shortens a branch by removing a stem back to a lateral branch that is large enough to resist extensive disfunction and decay behind the cut. This is generally interpreted as cutting back to a lateral branch that is at least one-third the diameter of the cut stem.' (Ref: https://hort.ifas.ufl.edu/woody/stem-reduction.shtml). Any roots that are exposed during land clearing and site prep will be clean cut using hand pruners, loppers or a chain saw. Cut roots will not be treated with pruning paint and fungicides and will be covered with soil.

Post construction – The tree will be aerated twice within the TPZ with a hand aeration tool to alleviate any soil compaction and apply a granular, slow-release fertilizer, 8-2-12, +4% Mg with micronutrients at a rate of one pound per 100 Sq. ft. of canopy.

Order of Events Prior to Construction Activities:

1. Forestry mow vegetation around the Historic oak so that the TPZ fencing can be set.
2. Install TPZ fencing and signage.
3. Add 4 – 6" wood chips along the proposed driveway and designated egress area.
4. Begin monthly monitoring and proposed treatments for the tree.

SINCERELY,

Ray Jarrett

Ray Jarrett
Biologist / Arborist
ISA Certified Arborist FL-5343A
ISA Tree Risk Assessment Qualified (TRAQ)



ASSUMPTIONS, LIMITING CONDITIONS and DISCLAIMER

Trees and plants are living things and are subject to an array of potential health problems, abiotic factors and unpredictable weather that can cause healthy trees and plants to fail. Information provided in this report is for consideration; and is based on my professional experience, formal education, and methodologies of the International Society of Arboriculture, ISA. Ultimately the client must use their own judgment and decisions but may consider these recommendations.

Technical Literature References

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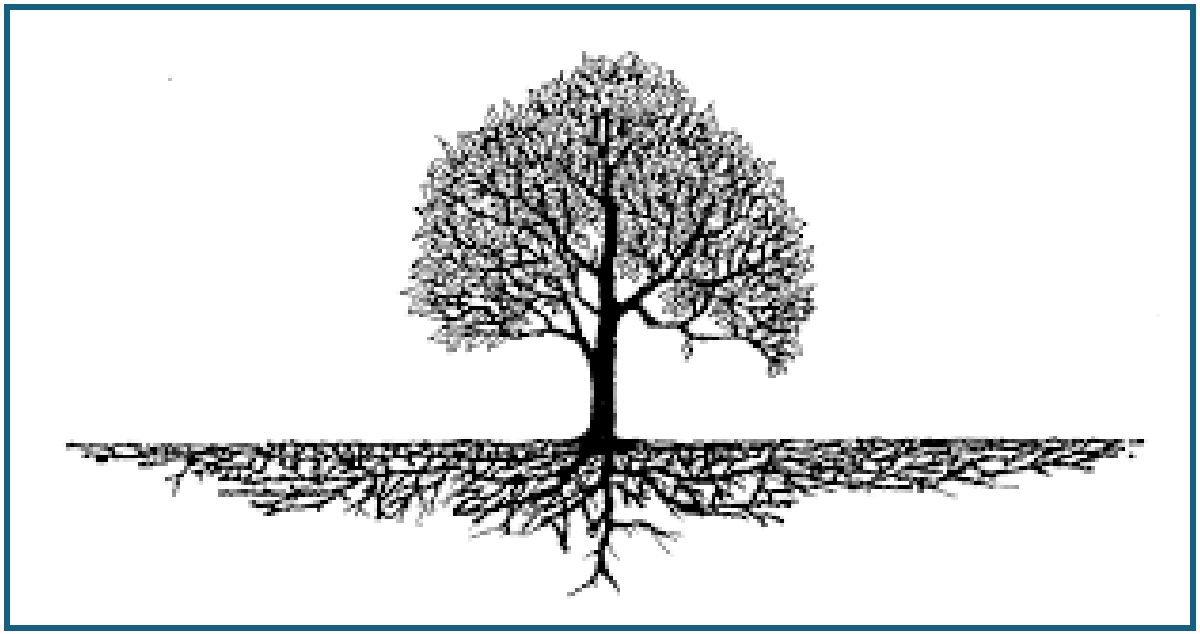
Tree Protection Zone



No vehicles, equipment, soil or building materials are allowed within this boundary.

This fencing is to remain in place until it is authorized to be removed by the Project Manager.

Any questions, please contact the Project Manager Arborist – Ray (386) 295-0481

Arbor Report – Tree Protection Plan

August 3, 2025

David Seilkop
West Volusia Habitat for Humanity
604 S Spring Garden Avenue
Deland, Fl 32720

Re: 725 E Walts Avenue (Lot 23), Deland, Florida - Tree Protection, Monitoring and Recovery Plan for a 36" Historic Live Oak.

Scope:

Services were retained to prepare a Tree Protection and Monitoring Plan for a 30" Historic as defined by the City of Deland Land Development code. This project is located at 725 E Walts Ave., Deland, Fl.



Aerial view of project site.

City of Deland Code definitions:

(d) *Historic tree protection.* Unless otherwise authorized by this article, no historic tree shall be removed without a recommendation by the city forester, the tree advisory committee, and a finding by the city commission that the tree is a hazard (due to health or natural damage) or that it is not economically or practically feasible to develop the parcel without removing the tree. The developer shall explain in detail why the tree is a hazard or why it is not economically or practically feasible to develop the parcel without removing the historic tree. The city forester shall make a presentation to the tree advisory committee on the application

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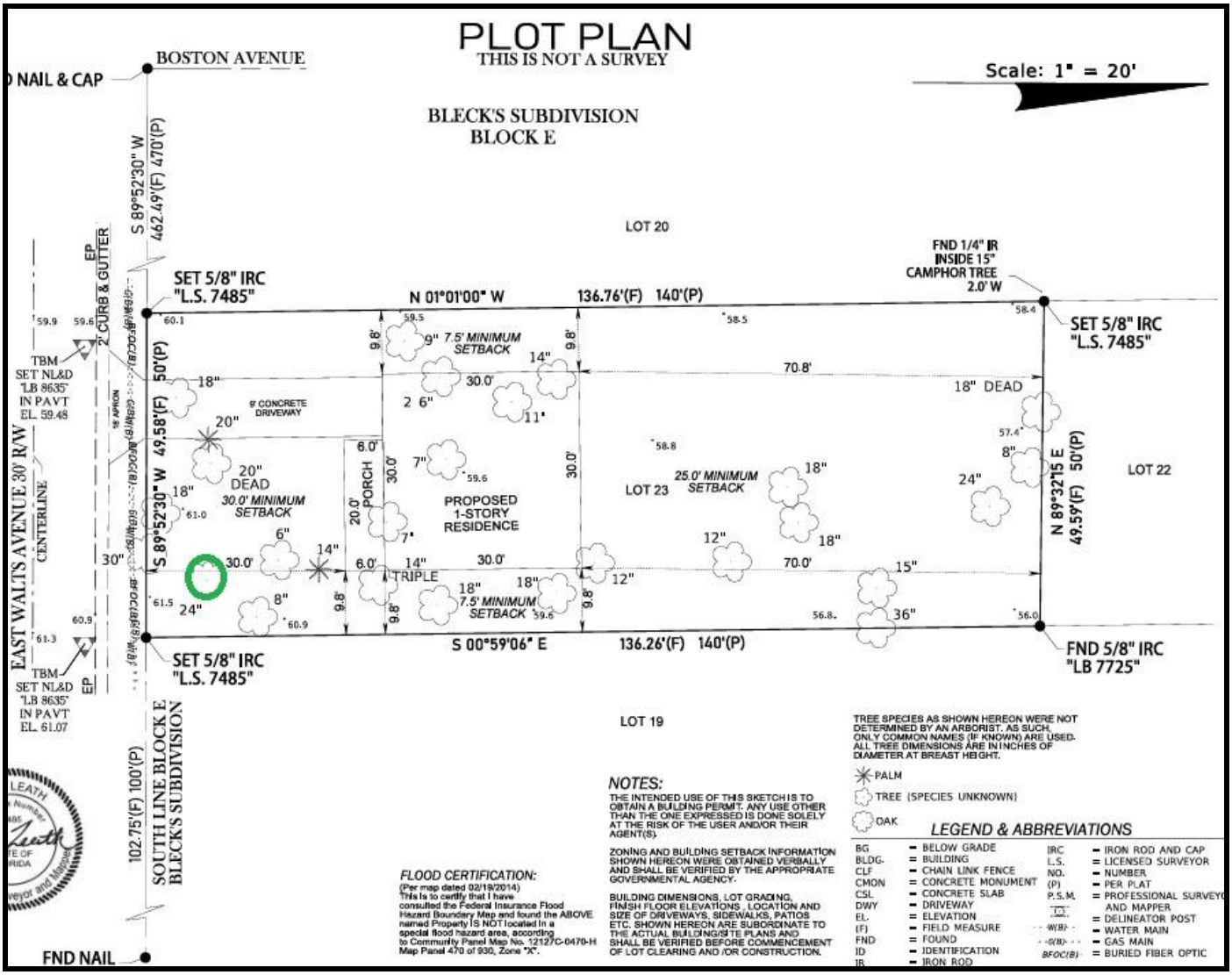
Historically significant trees shall be as follows:

1. Bald cypress if 20-inch or larger DBH.
2. Live oak or sand live oak if 25-inch or larger DBH.
3. Red cedar if 25-inch or larger DBH.

OBSERVATIONS / DISCUSSION:

This undeveloped lot has a canopy consisting of live oaks (*Quercus virginiana*), laurel oaks (*Quercus laurifolia*) and non-native camphor trees (*Camphora officinarum*) and ear pod trees (*Enterolobium contortisiliquum*).

There is a 30" Historic live oak located in front of the proposed home, southwest corner of the lot. This Historic live oak is approximately 55' tall with a DBH of 30" and a live crown ratio of around 50% and is healthy and vigorous with no visual signs of decay, insect pests, or disease. The site plan below shows a proposed 9' driveway to provide more root protection for the tree. The current development code requires a 20' driveway. The project seeks a variance from the City of Deland for a 9' driveway to provide more root protection for the Historic oak.



Site plan and tree location.

CONCLUSION:

The project seeks a variance from the City of Deland for a 9" driveway to give more root protection for the Historic tree.

This tree will be protected for this project and the following recommendations are standard tree care protection measures and follow methodologies of the International Society of Arboriculture (ISA) and Best Management Practices (BMPs) published in the ***American National Standard for tree Care Operations – Tree, Shrub, and Woody Plant Management – Standard Practices (Management of Trees and Shrubs During Planning, Site Development, and Construction)*** **(ANSI A300, Part 5).** These recommendations are to help reduce root impacts stress to the tree.

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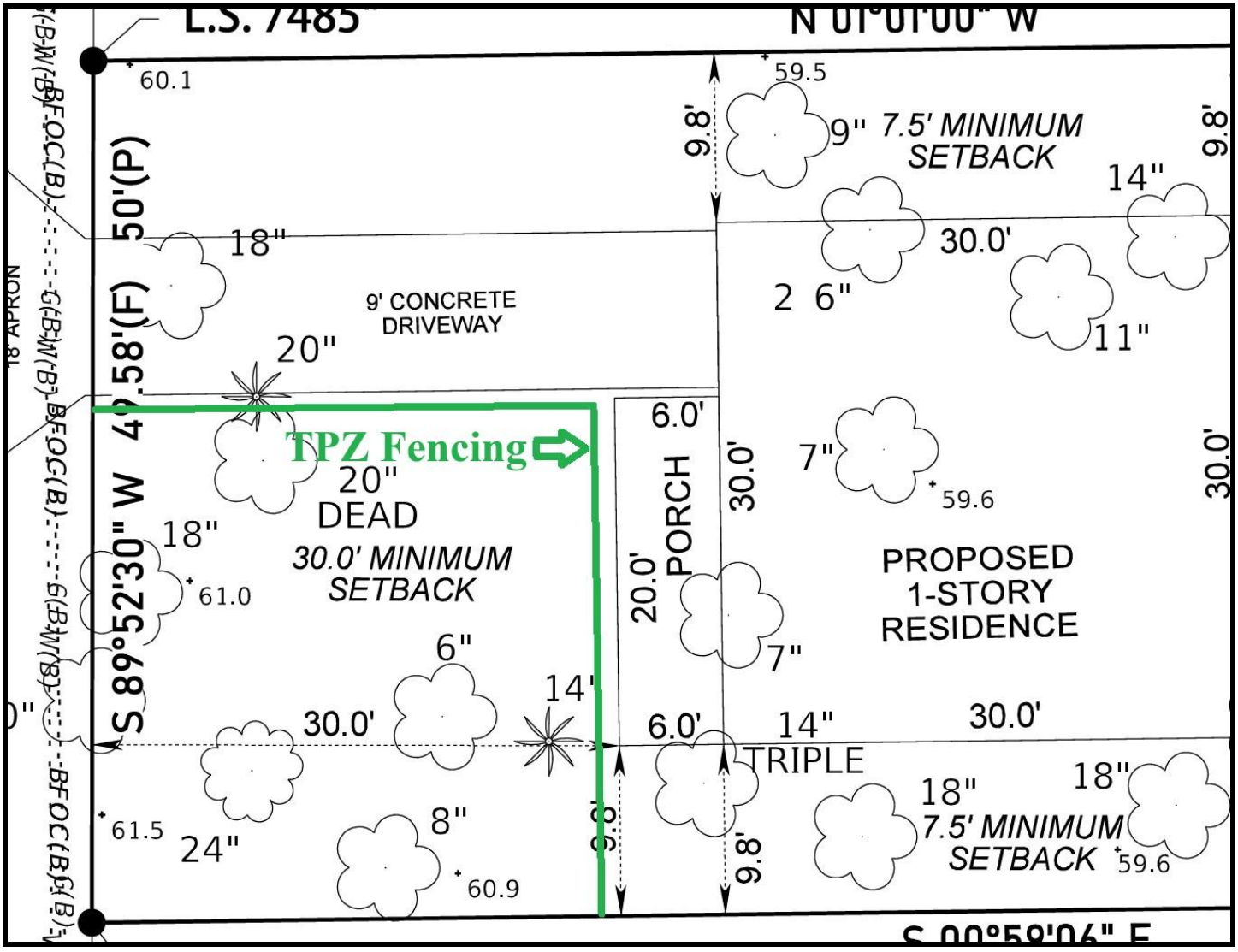

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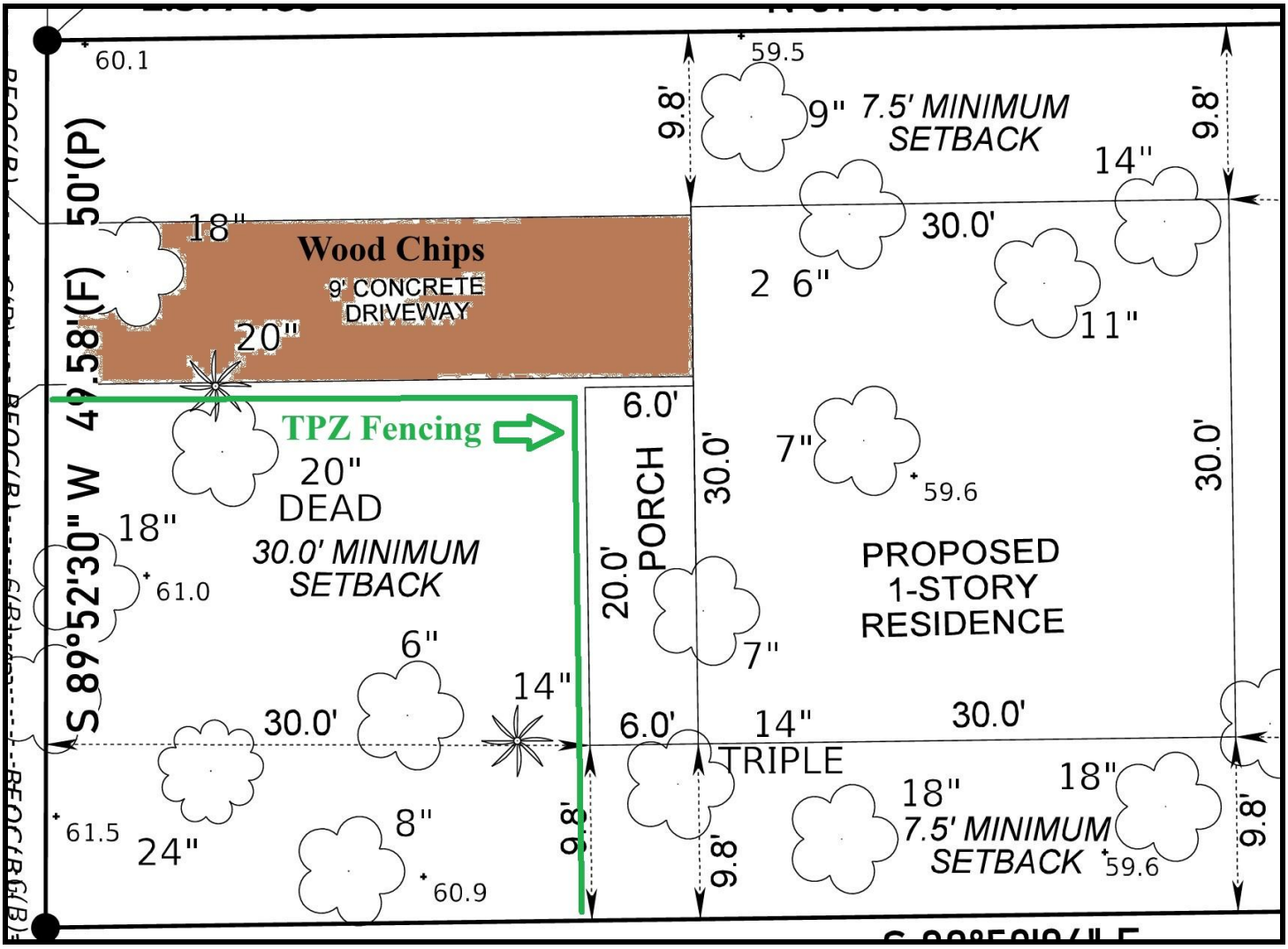
Monitoring – Monthly monitoring of the tree will be done to ensure tree protection measures are still in place until construction is completed and to monitor the health and vigor of the tree.

Construction egress within the TPZ – Heavy equipment and construction activities will egress the site using the proposed 9' driveway, adjacent to the TPZ fencing. This egress area should be protected with a minimum of 4 - 6" of wood chip mulch, to help cushion roots from construction equipment and prevent soil compaction as shown below. Other methods for temporary soil and root protection include using ¾" plywood, Geotextile fabric / gravel and logging / road mats. Once the site is cleared and the home is built, the mulch can be reused elsewhere in the landscape, so that the driveway can be poured.



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Post construction – The tree will be aerated twice within the TPZ with a hand aeration tool to alleviate any soil compaction and apply a granular, slow-release fertilizer, 8-2-12, +4% Mg with micronutrients at a rate of one pound per 100 Sq. ft. of canopy.

Order of Events Prior to Construction Activities:

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2. Install TPZ fencing and signage.
3. Add 4 – 6" wood chips along the proposed driveway and designated egress area.
4. Begin monthly monitoring and proposed treatments for the tree.

SINCERELY,



Ray Jarrett
Biologist / Arborist
ISA Certified Arborist FL-5343A
ISA Tree Risk Assessment Qualified (TRAQ)





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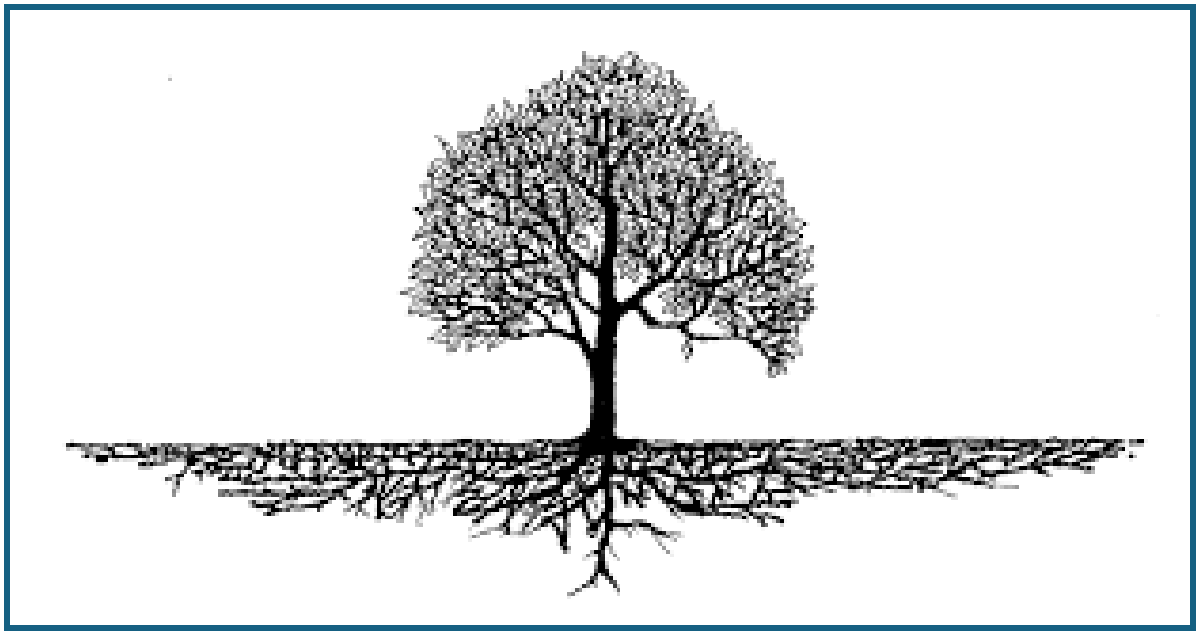
Tree Protection Zone



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Any questions, please contact the Project Manager Arborist – Ray (386) 295-0481

PLANNING DIVISION STAFF REPORT
TO
THE CITY OF DELAND PLANNING BOARD

September 10, 2025

A. **APPLICATION NO.**: AN25-082 *(DeLand Reserve Annexation)*

APPLICANT: Storch Law Firm

OWNER: James K & Scarlet M Trust

STAFF PLANNER: Emily Kunkel, *Senior Planner*

REQUEST: Annexation of ±20.13 acres of property into the City limits of DeLand

B. **SITE FACTORS:**

PARCEL NUMBER*:* 791200000061

LOCATION: 210 North Ridgewood Ave.

SIZE OF PROPERTY: ±20.13 acres

C. **LAND USE DESIGNATION & ZONING OF SUBJECT PROPERTY:**

FUTURE LAND USE: Volusia County: Rural and located in the City Transit Oriented Development/Redevelopment area

EXISTING ZONING: Volusia County: Transitional Agriculture with Thoroughfare Overlay Zone (A-3C)

EXISTING USE: Vacant, undeveloped

D. **SURROUNDING LAND USE & ZONING:**

	LAND USE	ZONING
North:	VC: Urban Low Intensity (ULI)	Grandview Gardens PD
South:	VC: SunRail DeLand Area Activity Center	VC: Transitional Agriculture (A-3C)
East:	VC: Urban Low Intensity (ULI)	VC: Transitional Agriculture (A-3C)
West:	VC: Rural	VC: PUD

E. **PHYSICAL CHARACTERISTICS:** The subject property is ±20.13 acres in size, including the west portion of the North Ridgewood Avenue right-of-way. The subject property is vacant, undeveloped, and does not appear to contain any wetlands and does not lie within the 100-year flood zone. The subject property is located in unincorporated Volusia County and is currently zoned VC: A-3C (Volusia County Transitional Agriculture

with Thoroughfare Overlay Zone). The subject property has a future land use designation of Volusia County: Rural and located within the City's Transit Oriented Development/Redevelopment area as defined in the 2050 Vision Plan. It is owned by James K & Scarlet M Trust, and the property is currently vacant, being utilized as a pine tree plantation. This application is accompanied by a request for a future land use amendment (SMLU25-083) to MDR (Medium Density Residential), and a PD rezoning application (Z25-084) proposing to develop the site into a 155-unit maximum residential subdivision, to include a mixture of front loaded and rear loaded Townhome (multi-family) units. The applicant has included standards within the PD document to include the flexibility for front loaded, rear loaded, and zero-lot line single-family units, but at this time the applicant plans to development only townhome (multi-family) units. If the future land use and rezoning requests are approved, any future site improvements will first require approval of a separate development application.

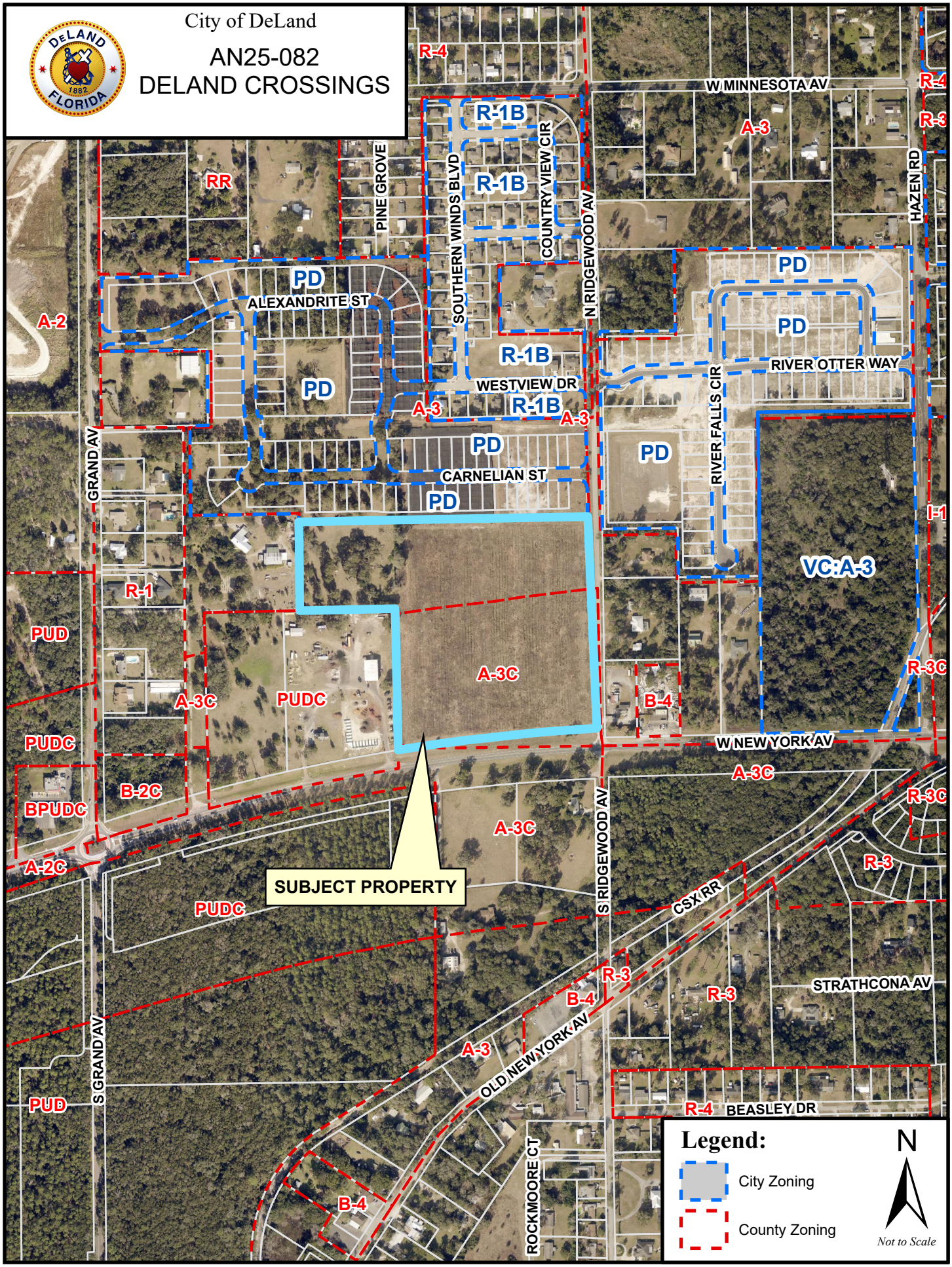
F. **PUBLIC SERVICES & UTILITIES:** The City's Utilities Department determined the closest City water main is at New York Avenue (SR-44) and North Ridgewood Avenue, which contains a 12-inch and 3-inch water main. The closest city sewer main is also located at Hazen Road as a 16-inch force main, as well as an 8-inch gravity sewer system. The subject property will also require payment into the Westside Force Main Proportionate Fair Share, at the cost of $899 per ERU.

G. **GROWTH MANAGEMENT PLAN CONSISTENCY:** North of the property is the Grandview Gardens PD (single-family residential subdivision); south is a mix of single-family residential properties and vacant properties; to the east are single-family residential properties; and to the west is a mix of one rural single-family residential property and a commercial/industrial use property.

H. **ANALYSIS:** The City's guidelines for annexation require a property be sufficiently contiguous to property already within the city limits and to be accessible to public services provided. In addition, the State requires the property be reasonably compact, not circuitous, and does not create an enclave. The subject property is contiguous to the City of DeLand, is reasonably compact, is not circuitous, and does not create an enclave. The parcel is contiguous to the city to the north by ± 1,207.70-ft.

I. **RECOMMENDATION:** Staff recommends that the Planning Board forward this annexation petition to the City Commission, with a recommendation for approval.

Based upon the concurrency requirements of the State of Florida and the City's concurrency management plan, as adopted in Article 5, Sec. 33-41 of the Land Development Regulations, approval of the proposed annexation does not automatically provide vested development rights. At the time the developer applies for a development permit, adequate infrastructure must exist to support the proposed development. If such infrastructure does not exist, the developer may be required to incur additional expense to ensure that the necessary infrastructure is provided.


City of DeLand
AN25-082
DELAND CROSSINGS
SUBJECT PROPERTY
W MINNESOTA AV
W NEW YORK AV
OLD NEW YORK AV
BEASLEY DR
STRATHCONA AV
CSX RR
ALEXANDRITE ST
CARNELIAN ST
WESTVIEW DR
RIVER OTTER WAY
PINE GROVE
SOUTHERN WINDS BLVD
COUNTRY VIEW CIR
N RIDGEWOOD AV
S RIDGEWOOD AV
HAZEN RD
GRAND AV
S GRAND AV
RIVER FALLS CIR
ROCKMOORE CT
R-4
R-1B
A-3
RR
PD
A-2
R-1
PUD
A-3C
PUDC
B-2C
BPUDC
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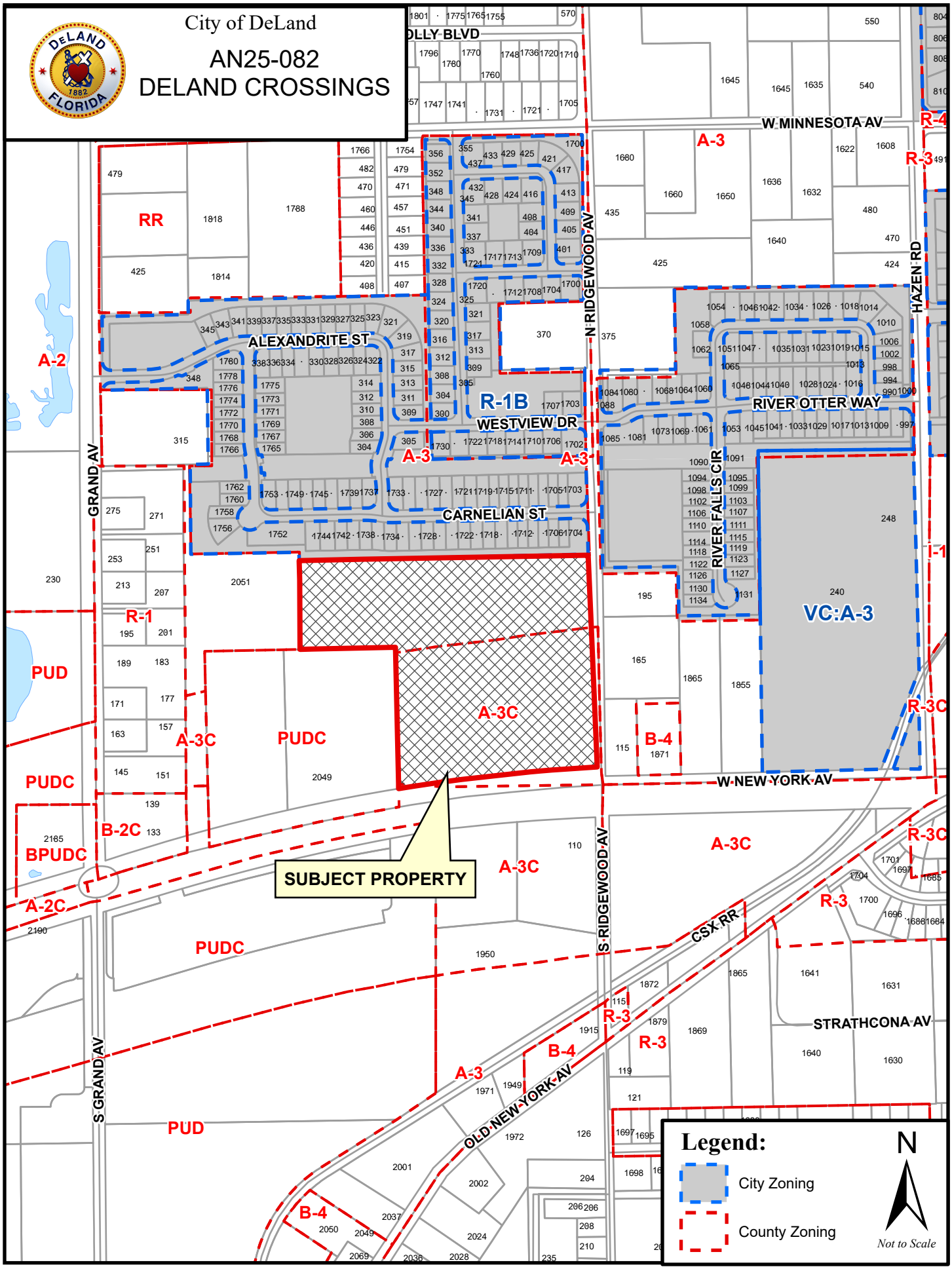
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AN25-082
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S GRAND AV
HAZEN RD
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A-3C
R-1
R-1B
R-3
R-4
VC:A-3
PUD
PUDC
B-2C
BPUDC
A-2C
B-4
Legend:
City Zoning
County Zoning
N
Not to Scale

STORCH
LAW FIRM

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May 5, 2025

Via Hand Delivery
Carol Kuhn, AICP
Planning Director
City of DeLand
120 South Florida Avenue
DeLand, FL 32720

Re: Annexation, Comprehensive Plan Amendment and PD Rezoning for DeLand Crossings

Dear Carol:

I have the privilege of representing DeLand Crossings, LLC with regard to the above-referenced applications for a new townhome project called DeLand Crossings. The subject property is 20.13 +/- acres in size and located at the intersection of Ridgewood Avenue and New York Avenue, Parcel ID Number 7912-00-00-0061. The property is adjoining incorporated City of DeLand to the north, has a Future Land Use Designation of Volusia County Rural and a zoning designation of Volusia County Agriculture. We are proposing a City FLU of Medium Density Residential (maximum of 12 units per acre), which is consistent with a PD rezoning for a maximum of 160 townhome units (7.94 units per acre). The proposed DeLand Crossings PD will feature up to 160 townhome units with minimum lot widths of 20 feet, a combination of front and rear-loaded (alley access) units and space for at least 2 vehicles on each lot. At least 30% of the project will be dedicated to open space, and the project will include amenities such as a park area nature trail, dog park and tot lot.

The DeLand Crossings PD and Medium Density Residential Future Land Use are consistent with the surrounding area and appropriate for this location, which is near the DeLand SunRail Station in a growing part of the City. The project is directly adjacent to New York Avenue / SR 44, granting easy access to an arterial roadway for new residents, and is across the street from the County's SunRail DeLand Area Activity Center Future Land Use Designation. This County FLU permits up to 30 du/acre in the "Core District" and up to 15 du/acre in the "Transition District", which adjoins the subject property across SR 44 to the south. Within this Activity Center FLU designation right across the street, Volusia County approved the Pelham Square PUD with 648 units, including 114 single-family homes, 210 townhomes, 324 apartments, commercial

development and densities between 8 and 20 units per acre. Additionally, a new single-family development adjoins the subject property to the north, with another residential subdivision in the City to the northeast. In summary, the surrounding area, both within the City limits and in unincorporated Volusia County, is well-suited for a project like DeLand Crossings.

While the DeLand Crossings PD is a townhome development with a fee simple ownership pattern for units, the City of DeLand considers townhomes as a multi-family use. And because the City's Land Development Regulations have dimensional standards that are geared toward large-lot apartment buildings in multi-family zonings and not for townhomes, we are asking for a number of deviations from the dimensional requirements of the R-8 zoning district (at staff's request). The deviations we are requesting are as follows:

1. Minimum lot width of 20 ft. in lieu of 75 ft.;
2. Minimum lot size of 1,800 sq. ft. in lieu of 10,000+ sq. ft.;
3. Maximum impervious surface coverage over entire PD Property of 60% in lieu of 50%;
4. Minimum front yard setback of 20 ft. for front-loaded townhomes and 15 ft. for rear-loaded townhomes in lieu of 30 ft. from project perimeter lot line;
5. Minimum rear yard setback of 10 ft. for front-loaded townhomes and 20 ft. for rear-loaded townhomes in lieu of 20 ft. from project perimeter lot line;
6. Minimum side yard setback of 7.5 ft., with a 0 ft. setback for internal side setbacks, in lieu of 20 ft. from project perimeter lot line;
7. Minimum building separation of 15 ft. in lieu of 25 ft.;
8. Maximum building length of 192 ft. in lieu of 150 ft.; and

The requested deviations will allow for project dimensions and features that are typical of townhome communities and townhome zoning requirements in other area jurisdictions.

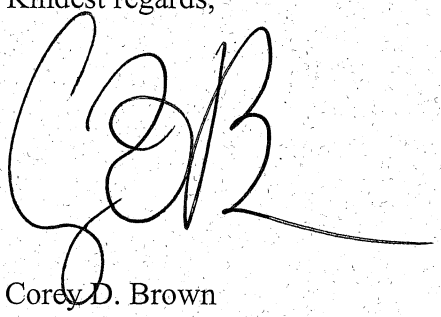
The following is a list of the application documents and materials that are being submitted along with this application letter:

1. Signed application submittal checklist;
2. Application fee check in the amount of $700.00 for the annexation;
3. Application fee check in the amount of $1,900.00 for the Comprehensive Plan Future Land Use map amendment;
4. Application fee check in the amount of $4,425.00 for the PD Rezoning;
5. Signed and notarized authorization of owner;
6. Typed mailing labels names and mailing addresses of all property owners within a 500-ft. radius of the subject property;
7. Current signed and sealed survey of the subject property;

8. Metes and bounds legal description including the adjacent half (to centerline) of rights of way that border the subject property;
9. Draft of proposed Planned Development Agreement;
10. Conceptual Development Plan for the PD, including PD site plan, preliminary drainage plan, preliminary landscape plan and tree removal plan;
11. Exhibit showing typical roadway cross-sections;
12. Elevations of the proposed townhome buildings;
13. Trip generation statement;
14. Endangered species report; and
15. Volusia County School Planning and Concurrency Application.

We are excited to work with you on these applications to bring the DeLand Crossings community from a dream to a reality. Please let me know if you have any questions or need any additional application documents for the DeLand Crossings annexation, Comp. Plan amendment and PD rezoning.

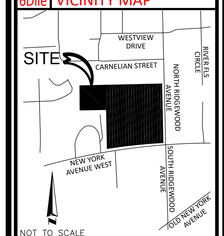
Kindest regards,



Corey D. Brown
For Glenn D. Storch

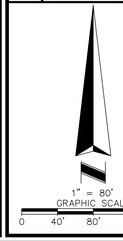
CDB
Enclosures

6Diie VICINITY MAP



NOT TO SCALE

6Diic NORTH ARROW & SCALE



5Ciii OBSERVED POTENTIAL ENCROACHMENTS

- (A) BARBED WIRE FENCE CROSSES BOUNDARY, POSSIBLE ENCROACHMENT, NO GREATER THAN 2.1'
- (B) BARBED WIRE AND WOOD & WIRE FENCE CROSS BOUNDARY, POSSIBLE ENCROACHMENT, NO GREATER THAN 1.3'
- (C) NORTH RIDGEWOOD AVENUE PAVEMENT CROSSES BOUNDARY, POSSIBLE ENCROACHMENT, NO GREATER THAN 23.7'
- (D) NORTH RIDGEWOOD AVENUE PAVEMENT CROSSES BOUNDARY, POSSIBLE ENCROACHMENT, NO GREATER THAN 17.8'

3 FLOOD INFORMATION

BY GRAPHIC PLOTTING ONLY, THIS PROPERTY LIES WITHIN ZONE "X", AS SHOWN ON THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 125155 0465 H (MAP NO. 12127C0465H), WHICH BEARS AN EFFECTIVE DATE OF 02/19/2014, AND IS NOT IN A SPECIAL FLOOD HAZARD AREA. NO FIELD SURVEYING WAS PERFORMED TO DETERMINE THIS ZONE. ZONE "X" DENOTES AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

6Diid LEGEND AND ABBREVIATIONS

	CONCRETE SURFACE	ALUM	ALUMINUM
	ROAD STRIPING	BM	BENCHMARK
	FIRE HYDRANT	(C)	CALCULATED DATA
	GAS VALVE	C/L	CENTERLINE
	UTILITY POLE	CM	CONCRETE MONUMENT
	GUY ANCHOR	CONC	CONCRETE
MB	MAIL BOX	CRNR	CORNER
	BENCHMARK	(T)	TITLE DATA
	RECOVERED MONUMENT AS NOTED	EL	ELEVATION
	SET MONUMENT AS NOTED	EP	EDGE OF PAVEMENT
	CONCRETE MONUMENT AS NOTED	FLDOT	FLORIDA DEPARTMENT OF TRANSPORTATION
		FND	FOUND
x	VINYL FENCE	IR	IRON ROD
	WIRE FENCE	LB	LICENSED BUSINESS
	ADJACENT LINE	LS	LICENSED SURVEYOR
	SECTION LINE	(M)	FIELD MEASURED DATA
OHU	OVERHEAD UTILITY LINE	MB	MAIL BOX
	CONTOUR MAJOR	N/D	NAIL & DISK
	CONTOUR MINOR	NGS	NATIONAL GEODETIC SURVEY
•XXX	SPOT SHOT	NO.	NUMBER
	CENTERLINE	ORB	OFFICIAL RECORDS BOOK
	BREAK LINE	(P)	PLAT DATA
		PB	PLAT BOOK
	SECTION CORNER	PG	PAGE
	CANPHOR TREE	PID	PARCEL IDENTIFICATION
	OAK TREE	PLS	PROFESSIONAL LICENSED SURVEYOR
	PALM TREE	POB	POINT OF BEGINNING
		POC	POINT OF COMMENCEMENT
		R/W	RIGHT OF WAY

6Ciic PLATTED SETBACK OR RECORDED BUILDING RESTRICTION LINES

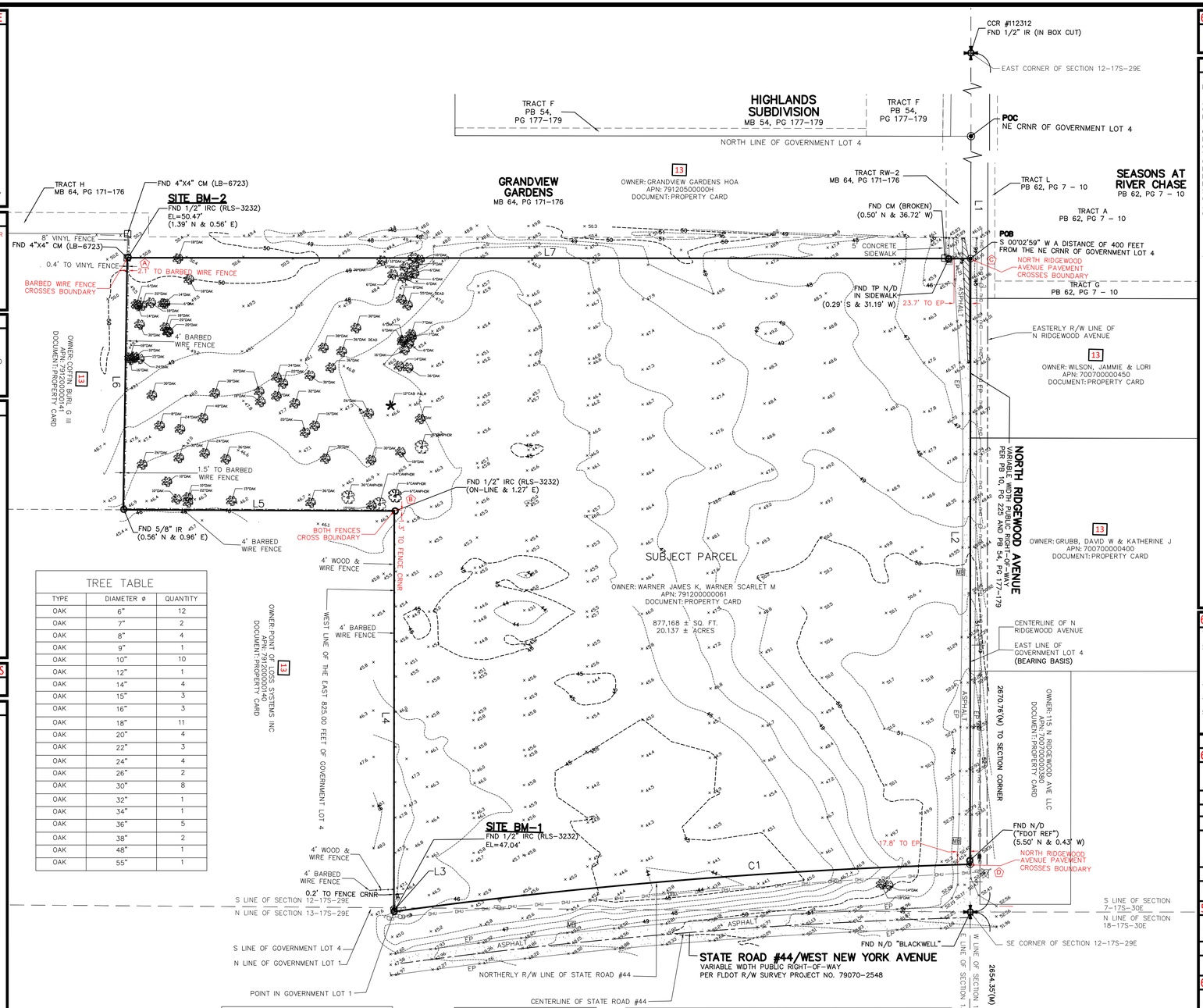
NONE PROVIDED TO THIS SURVEYOR.

5Ei "SCHEDULE B - SECTION 2" ITEMS

(9) — EASEMENT IN FAVOR OF FLORIDA POWER CORPORATION RECORDED FEBRUARY 15, 1961 IN OFFICIAL RECORDS BOOK 349, PAGE 570. (DOES NOT AFFECT)

ALTA/NSPS LAND TITLE SURVEY IDENTIFICATION TABLE

2	"TABLE A" PROPERTY ADDRESS	6Bvii	CONTIGUITY STATEMENT	8	"TABLE A" SUBSTANTIAL FEATURES OBSERVED
3	"TABLE A" FLOOD INFORMATION	6Bxii	TITLE COMMITMENT INFORMATION	9	"TABLE A" PARKING SPACES
4	"TABLE A" LAND AREA	6Cvii	RECORDED SETBACKS/RESTRICTIONS PROVIDED BY INSURED	10	"TABLE A" DIVISION/PARTY WALLS
5Biii	ACCESS TO PROPERTY	6Diic	NORTH ARROW & SCALE	11	"TABLE A" UTILITY INFORMATION
5Ciii	SURVEYOR OBSERVED POTENTIAL ENCROACHMENTS	6Diid	LEGEND & ABBREVIATIONS	13	"TABLE A" ADJOINING OWNERS
5Ei	"SCHEDULE B – SECTION 2" ITEMS	6Diie	VICINITY MAP	14	"TABLE A" INTERSECTING STREET
5F	CEMETERY NOTE	6Diig	SURVEYOR'S NOTES	16	"TABLE A" EARTH MOVING NOTE
6	TABLE "A" ZONING INFORMATION	6Diik	TYPE OF SURVEY	17	"TABLE A" RIGHT OF WAY CHANGES
6Bi	TITLE DESCRIPTION	7	SURVEYOR'S CERTIFICATE	18	"TABLE A" OFFSITE EASEMENTS OR SERVITUDES
		7b	"TABLE A" BUILDING AREA		
6Biv	BEARING BASIS	7c	"TABLE A" BUILDING HEIGHT		



TREE TABLE

TYPE	DIAMETER ø	QUANTITY
OAK	6"	12
OAK	7"	2
OAK	8"	4
OAK	9"	1
OAK	10"	10
OAK	12"	1
OAK	14"	4
OAK	15"	3
OAK	16"	3
OAK	18"	11
OAK	20"	4
OAK	22"	3
OAK	24"	4
OAK	26"	2
OAK	30"	8
OAK	32"	1
OAK	34"	1
OAK	36"	5
OAK	38"	2
OAK	48"	1
OAK	55"	1

TREE TABLE

TYPE	DIAMETER ø	QUANTITY
CANPHOR	6"	3
CANPHOR	24"	1
CANPHOR	36"	1

TREE TABLE

TYPE	DIAMETER ø	QUANTITY
PALM	12"	1

LINE TABLE

LINE	BEARING	DISTANCE
L1(T&C)	S 00°02'59" W	400.00'
L2(T&C)	S 00°02'59" W	867.52'
L3(T&C)	N 07°45'26" W	3.60'
L4(T&C)	N 00°02'59" E	570.00'
L5(T)	N 89°44'24" W	388.20'
L5(M)	N 89°38'58" W	388.57'
L6(T)	N 00°55'19" E	360.95'
L6(M)	N 00°46'46" E	360.28'
L7(T&C)	S 89°56'42" E	1207.70'

CURVE TABLE

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1(T&C)	7714.49'	827.72'	827.33'	S 85°19'00" W	6°08'51"

THIS SURVEY MEETS OR EXCEEDS THE FLORIDA STANDARDS OF PRACTICE AS SET IN FLORIDA ADMINISTRATIVE CODE CHAPTER 5J-17-0.50 FOR A BOUNDARY SURVEY. ALL PARTS OF THIS SURVEY AND DRAWING HAVE BEEN COMPLETED IN ACCORDANCE WITH THE CURRENT REQUIREMENTS FOR SURVEYING IN THE STATE OF FLORIDA TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

DATE	REVISIONS	TECH
03/07/25	NEW TITLE/CERTS	BS
05/22/25	UPDATE CERTS	BS
06/02/25	UPDATE EXCEPTIONS	BS
07/15/25	UPDATE ALTA	BS

FIELD	SM	DRAWING SCALE	1"=80'
DRAWN BY	BS	QC BY	EGT
DRAWING NAME	240638 210 N RIDGEWOOD AVE, DELAND ALTA W TITLE BEARING BASIS 07-14-25.DWG		

6Bxii TITLE COMMITMENT INFORMATION

THE TITLE DESCRIPTION AND SCHEDULE "B" ITEMS HEREON ARE FROM: FIRST AMERICAN TITLE INSURANCE COMPANY, COMMITMENT NO.: #110588914, HAVING AN EFFECTIVE DATE OF FEBRUARY 13, 2025.

SHEET 1 OF 1

6Bi TITLE DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNTY OF VOLUSIA, STATE OF FLORIDA AND IS DESCRIBED AS FOLLOWS:

A PARCEL OF LAND LYING IN GOVERNMENT LOT 4, SECTION 12, TOWNSHIP 17 SOUTH, RANGE 29 EAST AND GOVERNMENT LOT 1, SECTION 13, TOWNSHIP 17 SOUTH, RANGE 29 EAST, VOLUSIA COUNTY, FLORIDA BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID GOVERNMENT LOT 4, RUN THENCE S 00°02'59" W ALONG THE EAST LINE OF SAID GOVERNMENT LOT 4 A DISTANCE OF 400.00 FEET TO THE **POINT OF BEGINNING**, THENCE CONTINUE S 00°02'59" W ALONG SAID EAST LINE OF DISTANCE OF 867.52 FEET TO THE NORTHERLY RIGHT OF WAY LINE OF STATE ROAD #44, BEING ON A CURVE CONCAVE TO THE SOUTH, HAVING A CENTRAL ANGLE OF 06°08'51", A RADIUS OF 7714.49 FEET, A CHORD BEARING OF S85°19'00" W AND A CHORD DISTANCE OF 827.33 FEET, THENCE RUN ALONG THE ARC AND SAID NORTHERLY RIGHT OF WAY LINE AN ARC DISTANCE OF 827.72 FEET TO A POINT IN SAID GOVERNMENT LOT 1, THENCE RUN N 07°45'26" W A DISTANCE OF 3.60 FEET TO A POINT ON THE NORTH LINE OF SAID GOVERNMENT LOT 1, ALSO BEING THE SOUTH LINE OF GOVERNMENT LOT 4, SAID POINT BEING ON THE WEST LINE OF THE EAST 825.00 FEET OF SAID GOVERNMENT LOT 4, THENCE RUN N 00°02'59" E ALONG SAID WEST LINE A DISTANCE OF 570.00 FEET, THENCE RUN N 89°44'24" W A DISTANCE OF 388.20 FEET, THENCE RUN N 00°55'19" E A DISTANCE OF 360.95 FEET, THENCE RUN S 89°56'42" E, A DISTANCE OF 1207.70 FEET TO THE **POINT OF BEGINNING**.

THIS SURVEY DESCRIBES AND DEPICTS THE SAME LAND AS DESCRIBED IN THE TITLE COMMITMENT AS REFERENCED ABOVE.

6Diig SURVEYOR'S NOTES

1. NO UNDERGROUND UTILITIES ARE SHOWN ON THIS SURVEY, ONLY ABOVE GROUND VISIBLE EVIDENCE OF UTILITIES ARE SHOWN.
2. ALL STATEMENTS WITHIN THE CERTIFICATION, AND OTHER REFERENCES LOCATED ELSEWHERE HEREON, RELATED TO: UTILITIES, IMPROVEMENTS, STRUCTURES, BUILDINGS, PARTY WALLS, PARKING, EASEMENTS, SERVITUDES, AND ENCROACHMENTS ARE BASED SOLELY ON ABOVE GROUND, VISIBLE EVIDENCE, UNLESS ANOTHER SOURCE OF INFORMATION IS SPECIFICALLY REFERENCED HEREON.
3. THIS SURVEY MEETS OR EXCEEDS THE SURVEY STANDARDS/STANDARDS OF CARE AS SET FORTH IN SECTION 3 OF THE 2021 ALTA/NSPS SURVEY REQUIREMENTS.
4. TREES SHOWN HEREON ARE DESCRIBED BY SPECIES AND DIAMETER OF TRUNK AT BREAST HEIGHT.
5. VERTICAL INFORMATION BASED ON: BENCHMARK 01-049-0-02 HAVING A PUBLISHED ELEVATION OF 41.881 FEET (NAVD88)
   DESCRIBED AS: "SET 4" X 4" PRECAST CONCRETE MONUMENT WITH S.J.R.W.M.D. DISK

4 LAND AREA

877,168 ± SQUARE FEET 20.137 ± ACRES

6Biv BEARING BASIS

BEARINGS SHOWN HEREON ARE BASED ON EAST LINE OF GOVERNMENT LOT 4, WHICH BEARS S 00°02'59" W, PER ASSUMED DATUM.

5F CEMETERY NOTE

THERE IS NO VISIBLE EVIDENCE OF CEMETERIES ON SUBJECT PROPERTY.

8 SUBSTANTIAL FEATURES OBSERVED

SUBSTANTIAL ABOVE GROUND FEATURES THAT WERE OBSERVED ON THE SUBJECT PARCEL, SUCH AS PARKING AREAS, DRIVES, WALKS, PLANTERS/LANDSCAPE AREAS AND OTHER, HAVE BEEN LOCATED AS SHOWN HEREON. NOTE: THERE WERE NO OBSERVED SUBSTANTIAL AREAS OF REFUSE ON THE SUBJECT PARCEL PER THE DATE OF THIS SURVEY.

9 PARKING SPACES

REGULAR = 0 HANDICAP = 0 TOTAL = 0

5Biii ACCESS TO PROPERTY

THE SUBJECT PROPERTY HAS DIRECT PHYSICAL ACCESS TO NEW YORK AVENUE WEST, AND NORTH RIDGEWOOD AVENUE, BOTH BEING DEDICATED PUBLIC STREETS OR HIGHWAYS.

16 EARTH MOVING NOTE

THERE IS NO OBSERVABLE EVIDENCE OF EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS WITHIN RECENT MONTHS.

6Bvii CONTIGUITY STATEMENT

THE PARCELS CONTAINED IN THE LEGAL DESCRIPTION ARE CONTIGUOUS WITHOUT ANY GAPS, GORES OR OVERLAPS.

7 SURVEYOR'S CERTIFICATE

TO: MERITAGE HOMES

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 7(a), 7(b)(1), 7(c), 8, 9, 13, 14, 16, AND 19 OF TABLE A THEREOF.
THE FIELD WORK WAS COMPLETED ON 03/06/2025.
DATE OF PLAT OR MAP: 03/07/2025.

Digitally signed by E Glenn Turner
DN: cn=E Glenn Turner, o=American Surveying & Mapping, ou=Professional Land Surveyor, email=eglenn@asmcorporate.com, c=US
Date: 2025.07.15 12:38:41 -04'00'
Adobe Acrobat version: 2020.005.30774

E. GLENN TURNER — DATE

PROFESSIONAL SURVEYOR & MAPPER NO: 5643
STATE OF: FLORIDA
PROJECT NO: 240638

SURVEY PREPARED BY:
AMERICAN SURVEYING AND MAPPING, INC.
221 CIRCLE DRIVE
MAITLAND, FLORIDA 32751
CERTIFICATE OF AUTHORIZATION # LB6393
PHONE: (407) 426-7979
FAX: (407) 426-9741
INFO@ASMCORPORATE.COM

NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED PROFESSIONAL SURVEYOR & MAPPER PER F.S. 472.025 OR THE CERTIFIED ELECTRONIC SIGNATURE AND SEAL OF A FLORIDA LICENSED PROFESSIONAL SURVEYOR & MAPPER PER F.A.C. 5J-17.062(2) AND 5J17.062(3).

6Diik 2

ALTA/NSPS LAND TITLE SURVEY

BOUNDARY AND TOPOGRAPHIC SURVEY OF
210 NORTH RIDGEWOOD AVENUE
SECTION 12, TOWNSHIP 17 SOUTH, RANGE 29 EAST;
AND SECTION 13, TOWNSHIP 17 SOUTH, RANGE 29 EAST

VOLUSIA COUNTY DELAND, FLORIDA

AMERICAN SURVEYING & MAPPING, INC.
NDDS NATIONAL DUE DILIGENCE SERVICES
A DIVISION OF AMERICAN SURVEYING & MAPPING, INC
221 Circle Drive, Maitland, FL 32751
Phone: 407-426-7979 nationalduediligenceservices.com

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CONTAINING 20.137 ACRES, MORE OR LESS.

Sec. 72-297. - Thoroughfare overlay zone regulations.

(a) *Purpose and intent:*

(1) The purpose of this section is to provide regulations to ensure safe ingress to and egress from proposed development along thoroughfares, to maintain adequate highway capacity, eliminate hazardous traffic conditions, lessen or prevent traffic congestion, establish a high standard for development, including additional sign regulations and create a more attractive streetscape. Commercial development typically expands along thoroughfares as population and traffic volumes increase in the vicinity of and along the thoroughfare. Eventually, conflicts result between the thoroughfare's function and its ability to move high volumes of traffic through an area.

(2) This congestion is intensified when commercial growth increases along the entire length of the thoroughfare.

(3) The increased commercial growth also changes the public's image of the thoroughfare. What was once considered an attractive tree-lined thoroughfare gradually and often rapidly begins to exhibit characteristics of uncontrolled strip commercial development. Once this pattern has been established, it is difficult to establish alternative types of development (e.g. residential) along these thoroughfares. Therefore, these regulations apply to thoroughfares which; (1) move large volumes of through traffic in addition to significant volumes of everyday local traffic; and (2) do not contain significant amounts of strip commercial development. These thoroughfare overlay zone regulations are intended to supplement all of the regulations of the existing zoning classifications except for permitted uses and special exceptions. The type of permitted uses or special exceptions allowed would be determined according to the existing zoning classification and the site design, signage, building location and the dimensional requirements would be regulated by these overlay zone regulations.

(b) *[Thoroughfare overlay zone:]* A thoroughfare overlay zone is hereby established, and the regulations of this section shall apply in said zone. Said zone shall apply to all zoning classifications established in division 7 of this article, and the official zoning map shall identify said overlay zone by adding the letter "C" as a suffix to the existing zoning classification that currently exists on said maps. The thoroughfares, or portions thereof, to which these regulations apply are as follows:

(1) *North coastal area:*

State Road #40: Western boundary lines of Section 26, Township 14 South, Range 31 East to Ormond Beach west city limits.

U.S. #92: Indian Lake Road east to Daytona Beach west city limit.

(2) *South coastal area:*

State Road #44: New Smyrna Beach city limit west to Tomoka Farms Road (CR 415).

(3) *West Volusia area:*

U.S. #92: Eastern boundary line of Section 25, Township 16 South, Range 30 East, to State Road 15-A.

State Road 15-A: U.S. #17 South to U.S. #17-92.

U.S. #17: Eastern boundary of Section 39, Township 16 South, Range 30 East, to South boundary line of Section 4, Township 17 South, Range 30 East.

U.S. #17-92: North Line of Section 21, Township 17 South, Range 30 East, to South line of Section 33, Township 17 South, Range 30 East.

State Road #44: Western boundary line of Section 14, Township 17 South, Range 29 East, to East boundary line of Section 17, Township 17 South, Range 31 East.

West Volusia Beltline: State Road #44, to North boundary line of Section 13, Township 18 South, Range 30 East. (Ord. No. 85-24, § XVII, 10-10-85; Ord. No. 86-16, § XXXII, 10-23-86; Ord. No. 88-2, § XXI, 1-19-88; Ord. No. 84-25, § XXV, 10-10-84; Ord. No. 88-2, § XXII, 1-19-88; Ord. No. 02-07, § I, 3-7-02)

(c) *Dimensional requirements:*

(1) *Minimum lot width:* No premises shall be divided for the purpose of development of sale such that the width of each or any premises is less than 300 feet measured along the right-of-way line, except as follows:

If vehicle access to any premises is provided by means other than directly onto an arterial, then the minimum lot width requirement may be reduced to 150 feet, and direct vehicle access to a major arterial shall be prohibited.

(2) *Minimum yard size:* Front yard: 50 feet.

(3) *Maximum building height:* Three stories, not to exceed 35 feet.

(4) *Maximum lot coverage:* Total coverage of principal and accessory buildings shall not exceed 30 percent.

(5) *Thoroughfare overlay zone depth:* The thoroughfare overlay zone requirements shall be applied to all premises that front onto or have access to the thoroughfare to a distance equal to the depth of the rear property line, but not to exceed a depth of 660 feet as measured perpendicular from the centerline of the thoroughfare right-of-way.

(d) *Off-street parking and loading requirements:* Off-street parking and loading space shall meet the requirements of section 72-286 and in addition shall meet the following:

Off-street parking and loading areas shall be permitted in the front yard or the side yard that is adjacent to a thoroughfare as long as the off-street parking and loading areas are designed outside the 35-foot-wide landscaped buffer area along the project perimeter adjacent to thoroughfares. Said area shall contain landscaped fences, walls or berms of sufficient heights and opacity to generally obscure parked vehicles from view of the traveling public. All parking areas shall contain a minimum of 20 percent interior landscaping, excluding any required landscaped buffer area as provided in subsection (e), below.

(e) *Landscaping buffer requirements:* In addition to meeting the landscape buffer requirements in section 72-284, the following requirements shall also be met:

(1) A landscape plan shall be provided identifying the quantity, botanical and common name, size and location of plant material, including those existing plant materials to be retained. Plans and specifications for an underground irrigation system are required for any landscaped area.

(2) A minimum of 30 percent of the area of the site shall be covered by landscape materials as specified in subsection 72-284(1) of this article.

(3) Except for access driveways, it is intended that development along the thoroughfare corridor shall be designed to prevent the need for fill material or such other treatment which would remove or harm existing trees within the required front yard.

(4) A landscaped buffer area shall be provided along the perimeter of the property. The width of the buffer shall be determined by the requirements in subsection 72-284(2) unless the site is located on a thoroughfare, then the front buffer shall be a minimum of 35 feet. If the thoroughfare right-of-way is less than 140 feet, then the buffer area will start at a point 70 feet from the centerline of the thoroughfare.

(f) *Final site plan requirements:* In addition to meeting the final site plan requirements in division 3 of the Land Development Code [article III], the following requirements shall be met:

All site plans, reports and general information will be submitted to the development review committee to ensure compliance and consistency for all developments along the thoroughfare.

(g) *Service road requirement:* All premises fronting thoroughfares upon which the thoroughfare overlay zone regulations have been applied shall be provided access via a service road, unless as otherwise specified herein. The service road may either be in the front or rear of the project site depending on the location of any existing service road.

(h) *Transportation impact analysis report; purpose:* The transportation impact analysis report is designed to identify the transportation impacts and problems which are likely to be generated by a proposed use because of the size, density, traffic generation rates or location. The report will also identify all improvements required to ensure safe ingress and egress from a proposed development, maintenance of adequate street capacity, and elimination of hazardous conditions and improvements necessary for immediately surrounding roadways and intersections as a result of the proposed development.

(1)

Threshold for traffic impact analysis report: A transportation impact analysis report shall be required, unless waived by the county traffic engineer, for all uses which meet or exceed any one or more of the following thresholds:

a. Any development which proposes to have direct access to any roadway designated in subsection (b) of this section.

b. Any use which, according to the Institute of Transportation Engineers Trip Generation Manual, latest edition, rates published by the Florida Department of Transportation, or rates documented by study as agreed prior to use by the Volusia County Traffic Engineer will generate in excess of 1,000 trips per day.

(2) *Contents of transportation impact analysis report:* The transportation impact analysis report shall include the following:

a. *General site description:* A detailed description of the highway network within a radius as determined by the county traffic engineer of the site, a description of the proposed project, the anticipated stages of construction, and the anticipated completion date of the proposed land development. This description, which may be in the form of a map, shall include the following items:

1. All major intersections;
2. All proposed and existing ingress and egress locations;
3. All existing roadway widths and rights-of-way;
4. All existing traffic signals and regulatory signage;
5. All existing and proposed public transportation services and facilities within the above-determined radius of the site.

b. *Description of existing traffic conditions:* A 24-hour traffic count shall be conducted for a typical weekday on all roadways which have direct access to a proposed development site. The existing average daily traffic volume, and the highest average peak hour volume for any weekday hour between 3:00 p.m. and 6:00 p.m. shall be recorded. These traffic volumes shall be averaged to determine the average hourly peak traffic volume for a weekday. The methodology used to calculate existing traffic conditions and use of traffic counts and data other than those described above to represent existing traffic conditions shall be subject to the approval of the county traffic engineer.

c. *Transportation impact of the development.* A report shall be made detailing the nature and extent of the trip generation expected to result from the proposed development. Trip generation analysis shall include an estimate of internal/external split, if applicable, and a determination of what characteristics of the development will yield such a split. The source of all trip generation rates shall be according to the Institute of Transportation Engineers Trip Generation Manual, latest edition, rates published by the Florida Department of Transportation, or rates documented by study and agreed to prior to use by the Volusia County Traffic Engineer.

d. *Determination of roadway service level—Calculate service volumes:* Roadway service volumes shall be calculated at the level of service for the thoroughfare which is specified in the comprehensive plan. Data and procedures contained in the Highway Capacity Manual, Special Report, 209, 1985, published by the transportation research board shall be utilized in deriving the information required by the transportation impact analysis report.

e *Determination of intersection service level:*

1. Data and procedures in the Highway Capacity Manual, Special Report, 209, 1985, published by the transportation research board shall be utilized in determining intersection service levels.
2. The post-developing level of service for all intersections shall be in accordance with the comprehensive plan.
3. Determine the existing level of service of all intersections within one-half mile of the proposed development using the critical movement analysis techniques provided in subsection e.1., above.

f. *Analysis of transportation impact:* An analysis shall be undertaken to determine if roadways and intersections will operate at the level of service specified by the comprehensive plan following completion of the development given the future peak hour traffic that will be generated by the proposed development. This analysis shall consist of a comparison of the total future peak hour roadway traffic demand with the plan's mandated level of service standard and a critical movement analysis for intersections to determine the impact of total future peak hour traffic on intersection level of service. All roadways and intersections that would operate below the required level of service following completion of the development shall be considered deficient.

Maintenance of levels of service. Whenever level of service is determined to be below the level specified by the comprehensive plan, development is not permitted unless the developer makes the roadway or other improvements necessary to maintain the specified level of service.

(3) *Traffic-control devices:* Whenever, as a result of additional traffic generated by a proposed development, the manual on uniform traffic control devices determines the need for a traffic signal or regulatory sign, the developer shall be responsible for installing all said devices and signs.

(4) *Large developments:* [Large developments] (over 250 vehicle trips generated per one hour during 3:00 p.m. and 6:00 p.m.) shall also include the following:

a. The impact report for developments which will generate between 250 and 1,000 trips during the peak hour shall involve an analysis of all arterials and all intersections within one mile of the proposed project.

b. Except for developments of regional impact as defined by F.S. § 380.06, the impact report for developments which will generate over 100 trips during the peak hour shall involve an analysis of all arterial and collector roadways and all intersections within three miles of the proposed project.

(i) *Temporary access:* No developer shall be denied a rezoning or building permit for the sole reason that the parcel for which it is sought cannot physically accommodate the requirements of this classification because adjoining segments of service roads or public roadways are not yet constructed. In such an event, a temporary access permit will be issued which shall expire when the proposed access becomes available to the parcel.

(j) *Sign regulations:* The sign regulations established in section 72-298 et seq. shall also apply in any thoroughfare overlay zone; provided, however, the maximum permissible height for any ground sign is eight feet, and the maximum permissible copy area for any ground sign is 40 square feet.

(Ord. No. 85-24, §§ XVIII—XXIV, 10-10-85; Ord. No. 86-16, § XXXIII, 10-23-86; Ord. No. 88-2, §§ XXIII—XXX, 1-19-88; Ord. No. 89-20, § XLIII, 6-20-89; Ord. No. 92-6, § LXVI, 6-4-92; Ord. No. 02-07, § II, 3-7-02; Ord. No. 2008-25, § II, 12-4-08; Ord. No. 2018-05, § IX, 1-18-18)

PLANNING DIVISION STAFF REPORT
TO
THE CITY OF DELAND PLANNING BOARD

September 10, 2025

A. **APPLICATION NO**.: SMLU25-083 *(DeLand Reserve Land Use)*
APPLICANT: Storch Law Firm
OWNER: James K & Scarlet M Trust
STAFF PLANNER: Emily Kunkel, *Senior Planner*
REQUEST: To amend the land use designation from Volusia County Rural to City of DeLand Medium-Density Residential (MDR)

B. **SITE FACTORS:**
PARCEL NUMBER*:* 791200000061
LOCATION: 210 North Ridgewood Ave.
SIZE OF PROPERTY: ±20.13 acres

C. **LAND USE DESIGNATION & ZONING OF SUBJECT PROPERTY:**
Future Land Use: Volusia County: Rural and located in the City Transit Oriented Development/Redevelopment area
Existing Zoning: Volusia County: Transitional Agriculture with Thoroughfare Overlay Zone (A-3C)
Existing Use: Vacant, undeveloped (pine plantation)

D. **SURROUNDING LAND USE & ZONING:**

	LAND USE	ZONING
North:	VC: Urban Low Intensity (ULI)	Grandview Gardens PD
South:	VC: SunRail DeLand Area Activity Center	VC: Transitional Agriculture (A-3C)
East:	VC: Urban Low Intensity (ULI)	VC: Transitional Agriculture (A-3C)
West:	VC: Rural	VC: PUD

E. **REQUESTED ACTION:**

1. **REQUEST:** The applicant is requesting the future land use designation be amended for a ±20.13-acre parcel located at 210 North Ridgewood Avenue from Volusia County's Rural land use designation to the City of DeLand's Medium-Density Residential (MDR) land use designation. *The Applicant has also petitioned for annexation (AN25-082) and submitted a rezoning application (Z25-084).*

F. **ANALYSIS:**
The purpose of this section is to analyze the reasonableness of the applicant's request for an amendment of the land use designation for the subject property. This analysis will

include a description of the current and future land uses of the site and the surrounding area, potential impacts on the transportation system, and any significant adverse environmental impacts. Florida Statute 163.3187 allows for a Future Land Use Map amendment for area of use under 50 acres, and are not an area of critical state concern.

1. **Availability of Public Facilities *(water, sewer, drainage, traffic, and schools if residential):***

   The City's Utilities Department determined the closest City water main is at New York Avenue (SR-44) and North Ridgewood Avenue, which contains a 12-inch and 3-inch water main. The closest city sewer main is located at Hazen Road as a 16-inch force main, as well as an 8-inch gravity sewer system. The subject property will also require payment into the Westside Force Main Proportionate Fair Share, at the cost of $899 per ERU.

   A Traffic Impact Analysis Methodology letter from Traffic & Mobility Consultants (TMC) dated April 29, 2025, states that the proposed development is projected to generate 1,169 new daily trips of which 78 trips occur during the AM peak hour and 92 trips occur during the PM peak hour. Per the R2CTPO traffic study guidelines, since the proposed development is anticipated to generate more than 1,000 daily new trips, a TIA will be required at the time of the Preliminary Plat process.

   In a memo dated June 18, 2025, the Volusia County School Board issued a capacity determination letter which found that there is adequate capacity for the proposed project.

2. **Compatibility with Land Use and Other Elements:** The Future Land Use element requires that the subject property be consistent with surrounding development. The subject property is located, within the City's Transit Oriented Development/ Redevelopment area, and the future land use is Medium-Density Residential. The 2050 Vision plan, describes the Transit Oriented Development/Redevelopment area, as being an area that will encourage higher density and a mixture of uses, in order to make a transit system more efficient for the DeLand area. These areas will see a transition from the current development pattern to a more transit friendly pattern, over time.

   The Comprehensive Plan describes the Medium-Density Residential land use designation as being typified by detached and attached moderate density housing types, serving as a transitional area between nonresidential or high-density residential and low-density residential land use with a maximum density of 12 dwelling units per acre. The development should provide recreation and open space through the clustering of dwelling units and shall include on-site amenities such as, but not limited to, recreational facilities, open space, and pedestrian walkways.

   The proposed maximum density of 8 dwelling units per acre provide a transition from the lower density residential to the higher density residential and proposed nonresidential/residential uses within this area, specifically on the southern side of SR-44. The subject property is 1.6 miles from the DeLand SunRail station, and the applicant has coordinated with Florida Department of Transportation (FDOT) and Volusia County to provide a more transit friendly pattern by constructing additional

sidewalks along North Ridgewood Avenue and State Road 44. Therefore, the request is compatible with the Comprehensive Plan and the 2050 Vision Plan.

	LAND USE	DU/AC	CURRENT USE
North:	VC: Urban Low Intensity (ULI)	4 units/acre	Grandview Gardens PD (single-family residential subdivision)
South:	VC: SunRail DeLand Area Activity Center	4 units/acre	Single-family residential and vacant
East:	VC: Urban Low Intensity (ULI)	4 units/acre	Single-family residential
West:	VC: Rural	1 unit/acre	Rural single-family residential and a commercial/industrial use.

3. **Future Land Use Map:** The proposed change in the land use designation to Medium-Density Residential (MDR) will be shown on the revised Future Land Use Map. There will be no change in the 2050 Vision Map, as a portion of the subject property is within the Transit Oriented Development/Redevelopment area.

4. **Location of Lakes, Floodplains, and Wetlands:** The property does not contain bodies of water, nor is it located within a floodplain.

5. **Analysis of Natural Resources:**
   - **a.** *Soil types:* Apopka, fine sand & Astatula, fine sand
   - **b.** *Presence of Endangered Species*: None known at this time. A full report will be required with the Preliminary Plat application.

6. **Existing and Future Impact upon Infrastructure Capacity:**
   - **a.** ***Water:*** The City's Utility Department indicates sufficient water supply is available for the proposed land use designation. The City's Utilities Department determined the closest City water main is at New York Avenue (SR-44) and North Ridgewood Avenue, which contains a 12-inch and 3-inch water main. The fully engineered plans and final determination will be reviewed at the time of preliminary plat.
   - **b.** ***Sewer:*** The City's Utility Department has indicated sufficient existing capacity. The closest city sewer main is located at Hazen Road as a 16-inch force main, as well as an 8-inch gravity sewer system. The subject property will also require payment into the Westside Force Main Proportionate Fair Share, at the cost of $899 per ERU. The fully engineered plans and final determination will be reviewed at the time of preliminary plat.
   - **c.** ***Drainage:*** The city adheres to the County's standard to retain for the 100-year frequency, 24-hour storm event for landlocked basins. Stormwater capture for future development will be addressed on-site and will be further evaluated at the time of preliminary plat.
   - **d.** ***Solid Waste:*** Solid waste services are available for the property.
   - **e.** ***Transportation*****:** The proposed use of the property is for residential use. In order to estimate traffic generation by development on the subject property,

Staff must make projections for the most intense type of development allowed under the existing and proposed land use designations. Development under the most intensive of the uses allowed under the current land use designation of Volusia County Rural must be compared with the most intensive use proposed under the City's Medium-Density Residential (MDR) designation.

The Volusia County Rural land use designation allows a maximum density of 1 dwelling unit per acre; and with the most-intense allowable residential use, the property would currently be permitted to yield up to 20 units and would generate **146** calculated trips per day according to Trip Generation by the Institute of Transportation Engineers. (11th ed.)

DeLand's Medium-Density Residential land use designation allows for a maximum residential density up to 12 dwelling units per acre. If the land use amendment is approved, the +/- 20.13 acres of property could yield as many as 242 units. The traffic generation will be calculated based on the ITE Trip Generation manual. Assuming the maximum density, 12 dwelling units per acre, the +/- 20.13 acres of property would generate **1,767** calculated trips per day at build-out. At the time of the subdivision process, the applicant will dedicate the necessary 25-ft right-of-way as well as additional right-of-way to Volusia County for a 5-ft sidewalk along North Ridgewood.

7. **Impact upon Recreation and Open Space:** The development includes on-site amenities such as open space, walking paths and a park; therefore, all residents will have access to recreational opportunities. Therefore, the future land use amendment should not have an impact to the existing level of service.

8. **New Public Facilities Needed to Serve Land Use:** Per the feasibility analysis completed by staff, no need for new public facilities is anticipated.

9. **Impact Upon Existing Facilities:** Any future development on this site will be required to manage its own stormwater, based on retaining for the 100 year/24-hour storm event, and it will be further reviewed as part of the preliminary plat submittal.

10. **Impact upon Ability of the City to Fund Capital Improvements:** The development should not create an additional impact upon the City's ability to fund the projects listed in the adopted Five-Year Capital Improvement Program and will not require revision to the City's adopted Five-Year Capital Improvement Program.

11. **Compatibility with Existing Zoning Classification:** The proposed DeLand Reserve PD would be compatible with the Medium-Density Residential land use designation.

12. **Will the proposed land use change impact schools?** The applicant has provided a current Finding of Adequate Capacity letter from the Volusia County School Board, determining that capacity is available for the proposed land use. At the time of the preliminary plat, the applicant will be required to reserve said capacity and submit an approval letter from the school board at that time.

13. **How does this proposal fit with the guidelines developed for DeLand 2050 Vision and the City's Strategic Plan?**
    a. **2050 Vision Plan:** The proposed development is located within Category 3, "Transit Oriented Development/Redevelopment" which encourages higher density and mixed uses to support a more efficient transit system in the DeLand area. Located 1.6 miles from the DeLand SunRail station, the applicant has coordinated with FDOT and Volusia County to improve transit accessibility. Planned improvements include additional sidewalks along North Ridgewood Avenue and State Road 44.
    b. **DeLand Strategic Plan:** "To manage growth, the city will institute a number of smart growth principles. For reasons of both community identity and governmental efficiency, an annexation strategy is required which will 'square off' the city's boundaries". A Transit Oriented Development (TOD) is an area that will encourage higher density and a mixture of uses, in order to make a transit system more efficient for the DeLand area. These areas will see a transition from the current development pattern to a more transit friendly pattern, overtime. *A portion of the subject property is located within the Transit Oriented Development/Redevelopment, as shown on the DeLand 2050 Land Use Map and is within the Volusia County Thoroughfare overlay zone which encourages safe ingress/egress from the development. The increase in density is appropriate for the proposed location as it is located along an arterial road, in close proximity to the DeLand SunRail station and encouraging higher intensity along select corridors or major centers will encourage transit and lessen traffic congestion.*

G. CONCLUSION: The facility analysis presented in the above sections suggests the proposed land use should not cause any of the City's facilities to degrade below the adopted or current operational level of service (LOS). The proposed land use designation, Medium-Density Residential, is consistent with the surrounding area, and is not expected to create any land use incompatibilities.

H. NEXT STEPS: The request for a small-scale future land use map amendment will go before the City Commission on October 6, 2025 for first reading, followed by Volusia Growth Management Commission Review (VGMC). After VGMC review, the request is anticipated to go before City Commission on November 17, 2025 for second reading.

I. STAFF RECOMMENDATION: Staff recommends that the Planning Board forward the request to the City Commission with a recommendation of approval of the proposed amendment of the subject property's future land use designation to the City's Medium-Density Residential.

J. VGMC INFRASTRUCTURE IMPACT ASSESSMENT:

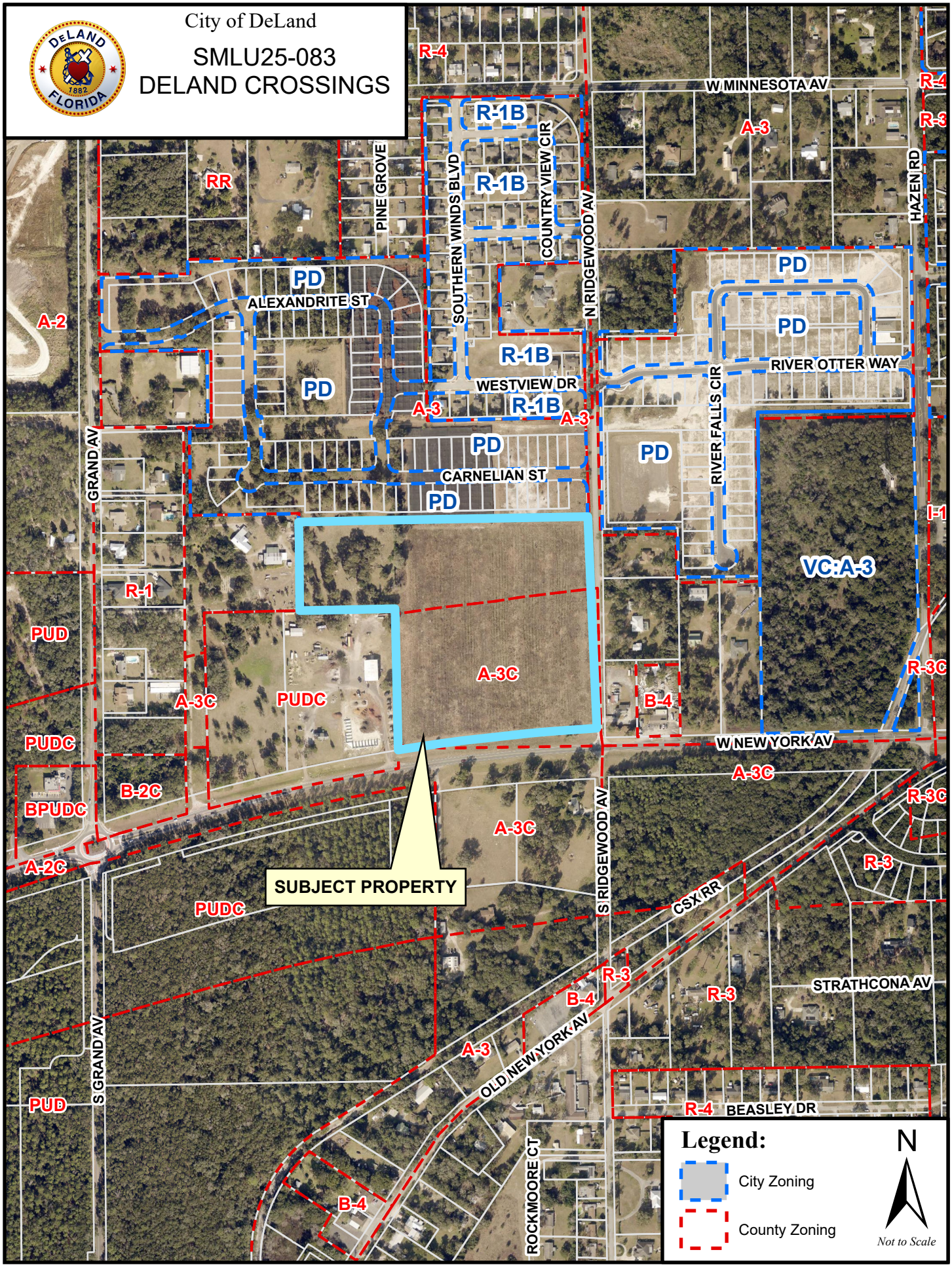
In accordance with standard practice from the Florida Department of Economic Opportunity (DEO) and other review agencies, an impact comparison analysis of the proposed amendment has been completed based upon the theoretical maximum development potential under the currently adopted future land use designation versus the proposed designation.

The following seven public facilities and services were examined (Table 4): Transportation, Stormwater Drainage, Sanitary Sewer, Recreation, Potable Water, Schools, and Solid Waste.

Table 4. Impact Analysis (Theoretical Maximums)

Development Variable	**Theoretical Maximums**		
	EXISTING ***VC: Rural***	**PROPOSED** ***City: MDR***	**Net Change**
Permitted Density/Intensity	1 du/acre	12 du/acre	+11 du/acre
Dwelling Units	20	242	+222
Non-residential Sq. Ft.	N/A	N/A	N/A
Population *2.44 persons per household (per 2020 Census)*	48.8	590	+541.2
Transportation ***(PM Peak Hr. Trips/Daily Trips)*** *(ITE Trip Generation Manual, 11th Edition): PM PEAK HR rate (215): 0.58 trips per unit; ADT rate RM (215): 7.30 trips per day per unit*	11.6 peak/146 ADT	140 peak/1,767 ADT	+128.4 peak/+1,621 ADT
Sanitary Sewer ***(gallons/day)*** *225 GPD per Equivalent Residential Unit (ERU)*	4,500	54,450	+49,950
Potable Water ***(gallons/day)*** *255 GPD per Equivalent Residential Unit (ERU)*	5,100	61,710	+56,610
Solid Waste ***(pounds/day)*** *8.6 pounds per person per day*	419.69	5,074	+4,654.31
Stormwater Drainage *LOS Standard 100-yr/24-hr event. Drainage system to be designed to meet the req. of the LDR during subdivision or site plan review.*	N/A	N/A	N/A
Recreation/Open Space *4.6 parkland acres/1,000 persons (0.0046 acres/person)*	.224	2.71	+2.49

The proposed amendment results in increased impacts to all public infrastructure and services based on the theoretical maximum impact analysis.


City of DeLand
SMLU25-083
DELAND CROSSINGS
SUBJECT PROPERTY
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W NEW YORK AV
OLD NEW YORK AV
BEASLEY DR
STRATHCONA AV
CSX RR
ALEXANDRITE ST
CARNELIAN ST
WESTVIEW DR
RIVER OTTER WAY
PINE GROVE
SOUTHERN WINDS BLVD
COUNTRY VIEW CIR
N RIDGEWOOD AV
S RIDGEWOOD AV
HAZEN RD
GRAND AV
S GRAND AV
RIVER FALLS CIR
ROCKMOOR CT
R-4
R-1B
A-3
RR
PD
A-2
R-1
PUD
A-3C
PUDC
B-2C
BPUDC
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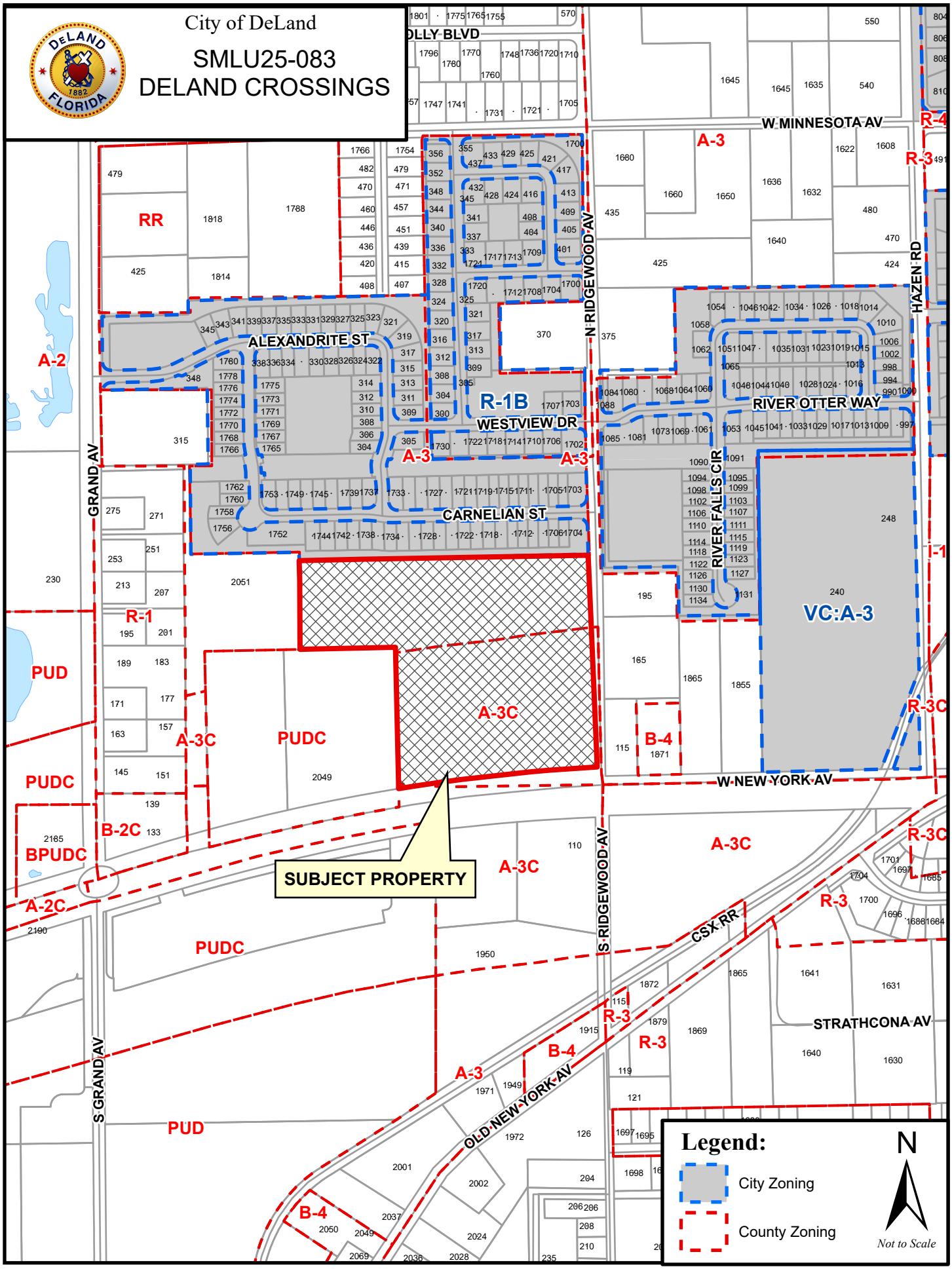
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B-2C
BPUDC
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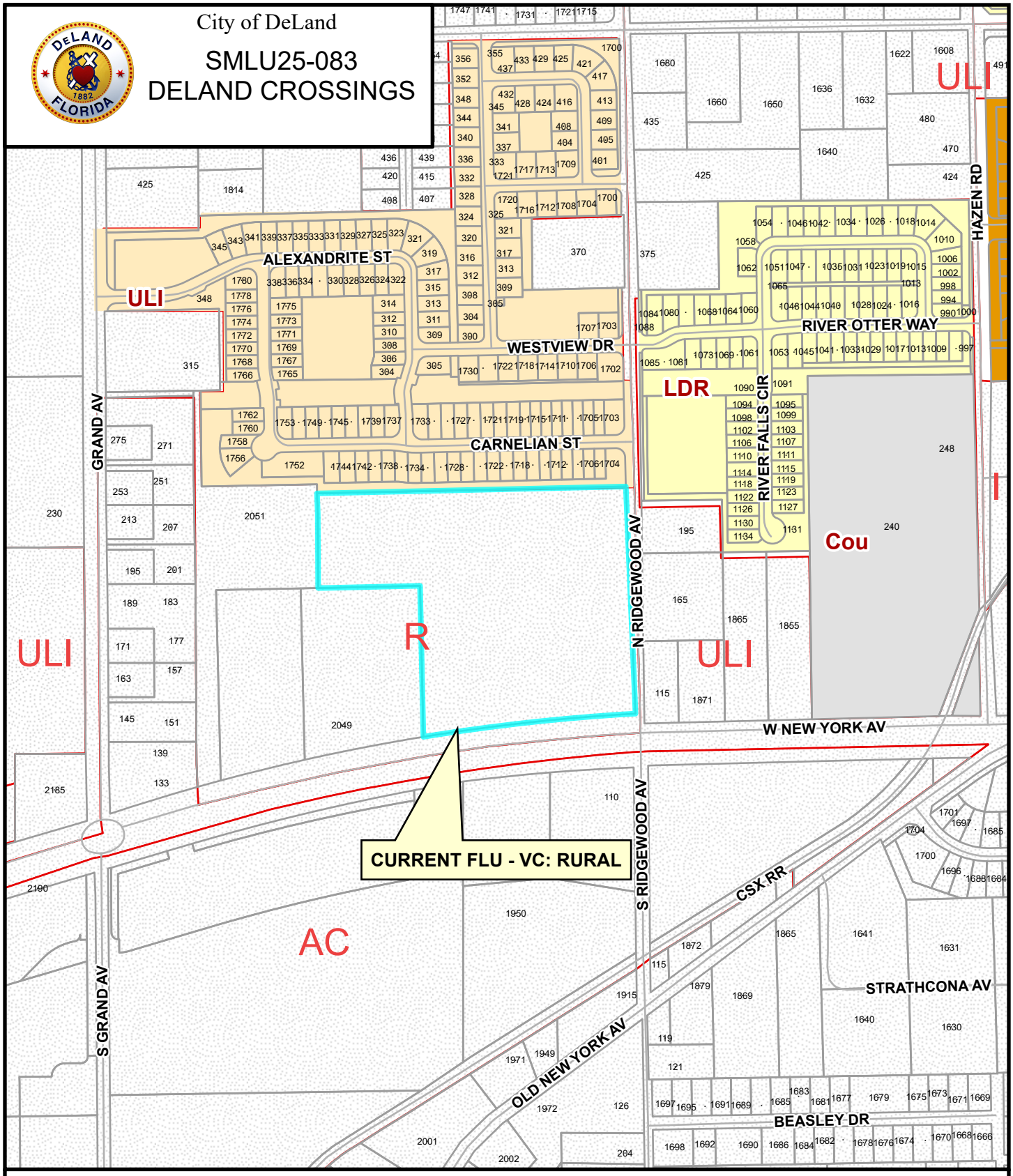
City of DeLand

SMLU25-083
DELAND CROSSINGS



DeLand Future Land Use:

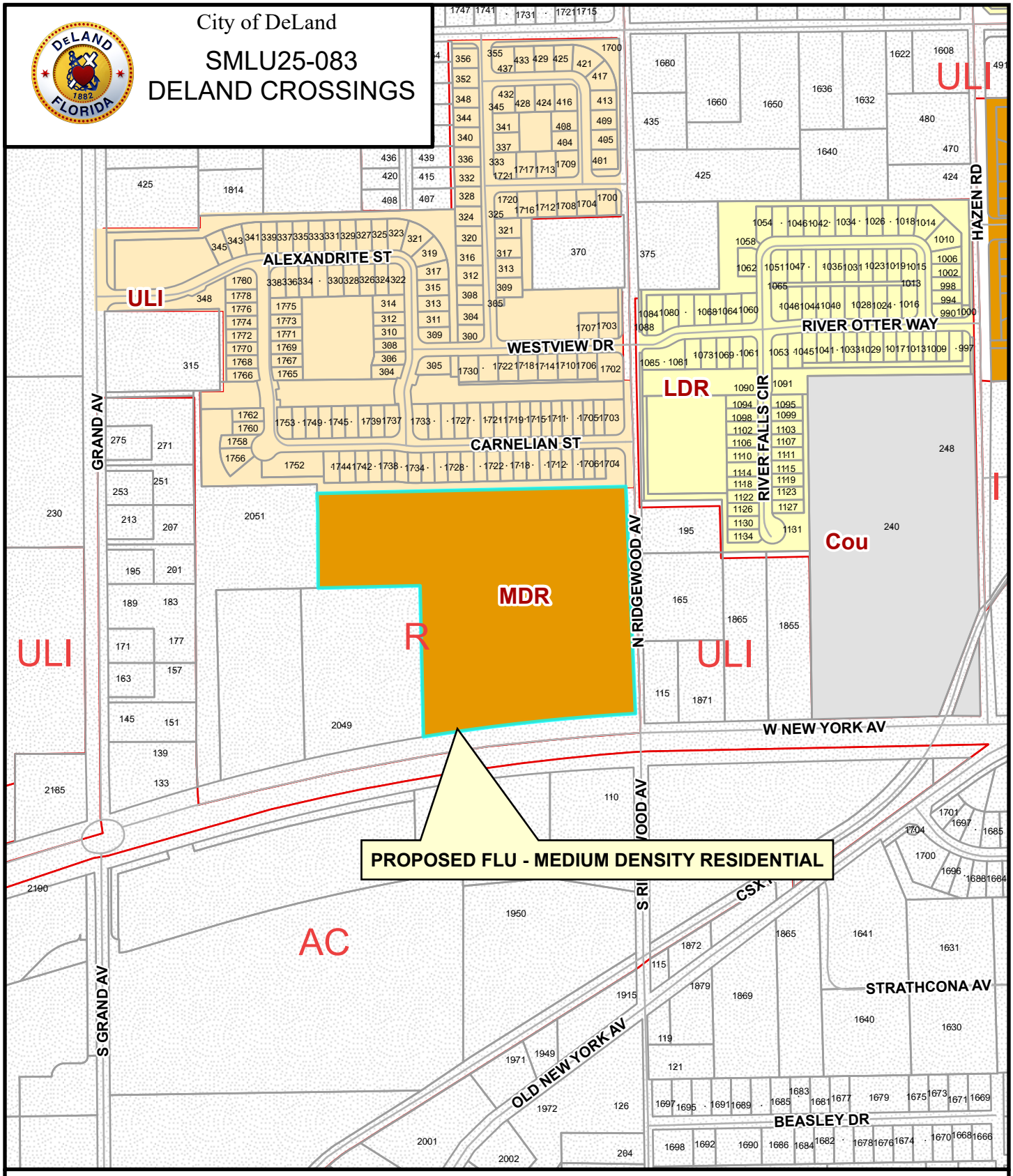
- Agricultural Conservation
- Urban Low Intensity
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Educational
- Mixed Office - Residential
- Mixed Commercial
- Business Retail
- Highway Commercial
- Downtown Commercial
- Redevelopment
- Gateway
- Rail Spur
- Industrial
- New Community Development
- Community
- Commerce
- West Central District
- County

N

Not to Scale

City of DeLand

SMLU25-083
DELAND CROSSINGS



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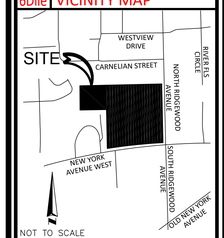
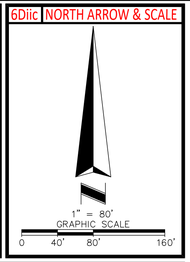
Not to Scale

6Diie VICINITY MAP



6Diic NORTH ARROW & SCALE



5Ciii OBSERVED POTENTIAL ENCROACHMENTS

- (A) BARBED WIRE FENCE CROSSES BOUNDARY, POSSIBLE ENCROACHMENT, NO GREATER THAN 2.1'
- (B) BARBED WIRE AND WOOD & WIRE FENCE CROSS BOUNDARY, POSSIBLE ENCROACHMENT, NO GREATER THAN 1.3'
- (C) NORTH RIDGEWOOD AVENUE PAVEMENT CROSSES BOUNDARY, POSSIBLE ENCROACHMENT, NO GREATER THAN 23.7'
- (D) NORTH RIDGEWOOD AVENUE PAVEMENT CROSSES BOUNDARY, POSSIBLE ENCROACHMENT, NO GREATER THAN 17.8'

3 FLOOD INFORMATION

BY GRAPHIC PLOTTING ONLY, THIS PROPERTY LIES WITHIN ZONE "X", AS SHOWN ON THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 125155 0465 H (MAP NO. 12127C0465H), WHICH BEARS AN EFFECTIVE DATE OF 02/19/2014, AND IS NOT IN A SPECIAL FLOOD HAZARD AREA. NO FIELD SURVEYING WAS PERFORMED TO DETERMINE THIS ZONE. ZONE "X" DENOTES AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

6Diid LEGEND AND ABBREVIATIONS

	CONCRETE SURFACE	ALUM	ALUMINUM
	ROAD STRIPING	BM	BENCHMARK
	FIRE HYDRANT	(C)	CALCULATED DATA
	GAS VALVE	C/L	CENTERLINE
	UTILITY POLE	CM	CONCRETE MONUMENT
	GUY ANCHOR	CONC	CONCRETE
MB	MAIL BOX	CRNR	CORNER
	BENCHMARK	(T)	TITLE DATA
	RECOVERED MONUMENT AS NOTED	EL	ELEVATION
	SET MONUMENT AS NOTED	EP	EDGE OF PAVEMENT
	CONCRETE MONUMENT AS NOTED	FLDOT	FLORIDA DEPARTMENT OF TRANSPORTATION
		FND	FOUND
x	VINYL FENCE	IR	IRON ROD
	WIRE FENCE	LB	LICENSED BUSINESS
	ADJACENT LINE	LS	LICENSED SURVEYOR
	SECTION LINE	(M)	FIELD MEASURED DATA
OHU	OVERHEAD UTILITY LINE	MB	MAIL BOX
	CONTOUR MAJOR	N/D	NAIL & DISK
	CONTOUR MINOR	NGS	NATIONAL GEODETIC SURVEY
•XXX	SPOT SHOT	NO.	NUMBER
	CENTERLINE	ORB	OFFICIAL RECORDS BOOK
	BREAK LINE	(P)	PLAT DATA
		PB	PLAT BOOK
	SECTION CORNER	PG	PAGE
	CANPHOR TREE	PID	PARCEL IDENTIFICATION
	OAK TREE	PLS	PROFESSIONAL LICENSED SURVEYOR
	PALM TREE	POB	POINT OF BEGINNING
		POC	POINT OF COMMENCEMENT
		R/W	RIGHT OF WAY

6Cvii PLATTED SETBACK OR RECORDED BUILDING RESTRICTION LINES

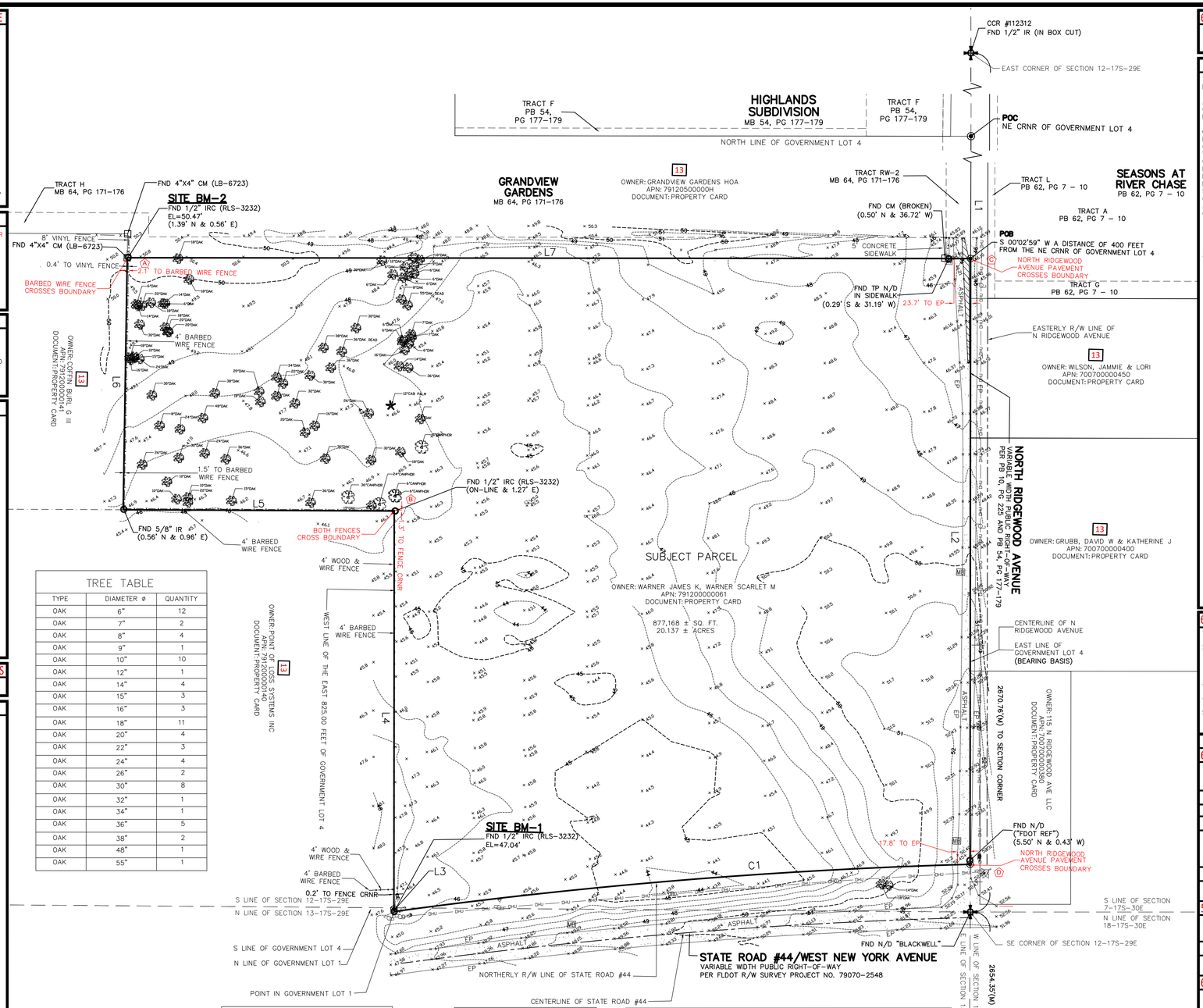
NONE PROVIDED TO THIS SURVEYOR.

5Ei "SCHEDULE B - SECTION 2" ITEMS

(9) — EASEMENT IN FAVOR OF FLORIDA POWER CORPORATION RECORDED FEBRUARY 15, 1961 IN OFFICIAL RECORDS BOOK 349, PAGE 570. (DOES NOT AFFECT)

ALTA/NSPS LAND TITLE SURVEY IDENTIFICATION TABLE

2	"TABLE A" PROPERTY ADDRESS	6Bvii	CONTIGUITY STATEMENT	8	"TABLE A" SUBSTANTIAL FEATURES OBSERVED
3	"TABLE A" FLOOD INFORMATION	6Bxii	TITLE COMMITMENT INFORMATION	9	"TABLE A" PARKING SPACES
4	"TABLE A" LAND AREA	6Cvii	RECORDED SETBACKS/RESTRICTIONS PROVIDED BY INSURED	10	"TABLE A" DIVISION/PARTY WALLS
5Biii	ACCESS TO PROPERTY	6Diic	NORTH ARROW & SCALE	11	"TABLE A" UTILITY INFORMATION
5Ciii	SURVEYOR OBSERVED POTENTIAL ENCROACHMENTS	6Diid	LEGEND & ABBREVIATIONS	13	"TABLE A" ADJOINING OWNERS
5Ei	"SCHEDULE B – SECTION 2" ITEMS	6Diie	VICINITY MAP	14	"TABLE A" INTERSECTING STREET
5F	CEMETERY NOTE	6Diig	SURVEYOR'S NOTES	16	"TABLE A" EARTH MOVING NOTE
6	TABLE "A" ZONING INFORMATION	6Diik	TYPE OF SURVEY	17	"TABLE A" RIGHT OF WAY CHANGES
6Bi	TITLE DESCRIPTION	7	SURVEYOR'S CERTIFICATE	18	"TABLE A" OFFSITE EASEMENTS OR SERVITUDES
		7b	"TABLE A" BUILDING AREA		
6Biv	BEARING BASIS	7c	"TABLE A" BUILDING HEIGHT		



TREE TABLE

TYPE	DIAMETER ø	QUANTITY
OAK	6"	12
OAK	7"	2
OAK	8"	4
OAK	9"	1
OAK	10"	10
OAK	12"	1
OAK	14"	4
OAK	15"	3
OAK	16"	3
OAK	18"	11
OAK	20"	4
OAK	22"	3
OAK	24"	4
OAK	26"	2
OAK	30"	8
OAK	32"	1
OAK	34"	1
OAK	36"	5
OAK	38"	2
OAK	48"	1
OAK	55"	1

TREE TABLE

TYPE	DIAMETER ø	QUANTITY
CANPHOR	6"	3
CANPHOR	24"	1
CANPHOR	36"	1

TREE TABLE

TYPE	DIAMETER ø	QUANTITY
PALM	12"	1

LINE TABLE

LINE	BEARING	DISTANCE
L1(T&C)	S 00°02'59" W	400.00'
L2(T&C)	S 00°02'59" W	867.52'
L3(T&C)	N 07°45'26" W	3.60'
L4(T&C)	N 00°02'59" E	570.00'
L5(T)	N 89°44'24" W	388.20'
L5(M)	N 89°38'58" W	388.57'
L6(T)	N 00°55'19" E	360.95'
L6(M)	N 00°46'46" E	360.28'
L7(T&C)	S 89°56'42" E	1207.70'

CURVE TABLE

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1(T&C)	7714.49'	827.72'	827.33'	S 85°19'00" W	6°08'51"

THIS SURVEY MEETS OR EXCEEDS THE FLORIDA STANDARDS OF PRACTICE AS SET IN FLORIDA ADMINISTRATIVE CODE CHAPTER 5J-17-0.50 FOR A BOUNDARY SURVEY. ALL PARTS OF THIS SURVEY AND DRAWING HAVE BEEN COMPLETED IN ACCORDANCE WITH THE CURRENT REQUIREMENTS FOR SURVEYING IN THE STATE OF FLORIDA TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

DATE	REVISIONS	TECH
03/07/25	NEW TITLE/CERTS	BS
05/22/25	UPDATE CERTS	BS
06/02/25	UPDATE EXCEPTIONS	BS
07/15/25	UPDATE ALTA	BS

FIELD	SM	DRAWING SCALE	1"=80'
DRAWN BY	BS	QC BY	EGT
DRAWING NAME	240638 210 N RIDGEWOOD AVE, DELAND ALTA W TITLE BEARING BASIS 07-14-25.DWG		

6Bxii TITLE COMMITMENT INFORMATION

THE TITLE DESCRIPTION AND SCHEDULE "B" ITEMS HEREON ARE FROM: FIRST AMERICAN TITLE INSURANCE COMPANY, COMMITMENT NO.: #110588914, HAVING AN EFFECTIVE DATE OF FEBRUARY 13, 2025.

SHEET 1 OF 1

6Bi TITLE DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNTY OF VOLUSIA, STATE OF FLORIDA AND IS DESCRIBED AS FOLLOWS:

A PARCEL OF LAND LYING IN GOVERNMENT LOT 4, SECTION 12, TOWNSHIP 17 SOUTH, RANGE 29 EAST AND GOVERNMENT LOT 1, SECTION 13, TOWNSHIP 17 SOUTH, RANGE 29 EAST, VOLUSIA COUNTY, FLORIDA BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID GOVERNMENT LOT 4, RUN THENCE S 00°02'59" W ALONG THE EAST LINE OF SAID GOVERNMENT LOT 4 A DISTANCE OF 400.00 FEET TO THE **POINT OF BEGINNING**, THENCE CONTINUE S 00°02'59" W ALONG SAID EAST LINE OF DISTANCE OF 867.52 FEET TO THE NORTHERLY RIGHT OF WAY LINE OF STATE ROAD #44, BEING ON A CURVE CONCAVE TO THE SOUTH, HAVING A CENTRAL ANGLE OF 06°08'51", A RADIUS OF 7714.49 FEET, A CHORD BEARING OF S85°19'00" W AND A CHORD DISTANCE OF 827.33 FEET, THENCE RUN ALONG THE ARC AND SAID NORTHERLY RIGHT OF WAY LINE AN ARC DISTANCE OF 827.72 FEET TO A POINT IN SAID GOVERNMENT LOT 1, THENCE RUN N 07°45'26" W A DISTANCE OF 3.60 FEET TO A POINT ON THE NORTH LINE OF SAID GOVERNMENT LOT 1, ALSO BEING THE SOUTH LINE OF GOVERNMENT LOT 4, SAID POINT BEING ON THE WEST LINE OF THE EAST 825.00 FEET OF SAID GOVERNMENT LOT 4, THENCE RUN N 00°02'59" E ALONG SAID WEST LINE A DISTANCE OF 570.00 FEET, THENCE RUN N 89°44'24" W A DISTANCE OF 388.20 FEET, THENCE RUN N 00°55'19" E A DISTANCE OF 360.95 FEET, THENCE RUN S 89°56'42" E, A DISTANCE OF 1207.70 FEET TO THE **POINT OF BEGINNING**.

THIS SURVEY DESCRIBES AND DEPICTS THE SAME LAND AS DESCRIBED IN THE TITLE COMMITMENT AS REFERENCED ABOVE.

6Diig SURVEYOR'S NOTES

1. NO UNDERGROUND UTILITIES ARE SHOWN ON THIS SURVEY, ONLY ABOVE GROUND VISIBLE EVIDENCE OF UTILITIES ARE SHOWN.
2. ALL STATEMENTS WITHIN THE CERTIFICATION, AND OTHER REFERENCES LOCATED ELSEWHERE HEREON, RELATED TO: UTILITIES, IMPROVEMENTS, STRUCTURES, BUILDINGS, PARTY WALLS, PARKING, EASEMENTS, SERVITUDES, AND ENCROACHMENTS ARE BASED SOLELY ON ABOVE GROUND, VISIBLE EVIDENCE, UNLESS ANOTHER SOURCE OF INFORMATION IS SPECIFICALLY REFERENCED HEREON.
3. THIS SURVEY MEETS OR EXCEEDS THE SURVEY STANDARDS/STANDARDS OF CARE AS SET FORTH IN SECTION 3 OF THE 2021 ALTA/NSPS SURVEY REQUIREMENTS.
4. TREES SHOWN HEREON ARE DESCRIBED BY SPECIES AND DIAMETER OF TRUNK AT BREAST HEIGHT.
5. VERTICAL INFORMATION BASED ON: BENCHMARK 01-049-0-02 HAVING A PUBLISHED ELEVATION OF 41.881 FEET (NAVD88)
   DESCRIBED AS: "SET 4" X 4" PRECAST CONCRETE MONUMENT WITH S.J.R.W.M.D. DISK

4 LAND AREA

877,168 ± SQUARE FEET 20.137 ± ACRES

6Biv BEARING BASIS

BEARINGS SHOWN HEREON ARE BASED ON EAST LINE OF GOVERNMENT LOT 4, WHICH BEARS S 00°02'59" W, PER ASSUMED DATUM.

5F CEMETERY NOTE

THERE IS NO VISIBLE EVIDENCE OF CEMETERIES ON SUBJECT PROPERTY.

8 SUBSTANTIAL FEATURES OBSERVED

SUBSTANTIAL ABOVE GROUND FEATURES THAT WERE OBSERVED ON THE SUBJECT PARCEL, SUCH AS PARKING AREAS, DRIVES, WALKS, PLANTERS/LANDSCAPE AREAS AND OTHER, HAVE BEEN LOCATED AS SHOWN HEREON. NOTE: THERE WERE NO OBSERVED SUBSTANTIAL AREAS OF REFUSE ON THE SUBJECT PARCEL PER THE DATE OF THIS SURVEY.

9 PARKING SPACES

REGULAR = 0 HANDICAP = 0 TOTAL = 0

5Biii ACCESS TO PROPERTY

THE SUBJECT PROPERTY HAS DIRECT PHYSICAL ACCESS TO NEW YORK AVENUE WEST, AND NORTH RIDGEWOOD AVENUE, BOTH BEING DEDICATED PUBLIC STREETS OR HIGHWAYS.

16 EARTH MOVING NOTE

THERE IS NO OBSERVABLE EVIDENCE OF EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS WITHIN RECENT MONTHS.

6Bvii CONTIGUITY STATEMENT

THE PARCELS CONTAINED IN THE LEGAL DESCRIPTION ARE CONTIGUOUS WITHOUT ANY GAPS, GORES OR OVERLAPS.

7 SURVEYOR'S CERTIFICATE

TO: MERITAGE HOMES

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 7(a), 7(b)(1), 7(c), 8, 9, 13, 14, 16, AND 19 OF TABLE A THEREOF.
THE FIELD WORK WAS COMPLETED ON 03/06/2025.
DATE OF PLAT OR MAP: 03/07/2025.

Digitally signed by E Glenn Turner
DN: cn=E Glenn Turner, o=American Surveying & Mapping, ou=Professional Land Surveyor, email=eglturner@asmcorporate.com, c=US
Date: 2025.07.15 12:38:41 -04'00'
Adobe Acrobat version: 2020.005.30774

E. GLENN TURNER — DATE

PROFESSIONAL SURVEYOR & MAPPER NO: 5643
STATE OF: FLORIDA
PROJECT NO: 240638

SURVEY PREPARED BY:
AMERICAN SURVEYING AND MAPPING, INC.
221 CIRCLE DRIVE
MAITLAND, FLORIDA 32751
CERTIFICATE OF AUTHORIZATION # LB6393
PHONE: (407) 426-7979
FAX: (407) 426-9741
INFO@ASMCORPORATE.COM

NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED PROFESSIONAL SURVEYOR & MAPPER PER F.S. 472.025 OR THE CERTIFIED ELECTRONIC SIGNATURE AND SEAL OF A FLORIDA LICENSED PROFESSIONAL SURVEYOR & MAPPER PER F.A.C. 5J-17.062(2) AND 5J17.062(3).

6Diik ALTA/NSPS LAND TITLE SURVEY
2
BOUNDARY AND TOPOGRAPHIC SURVEY OF
210 NORTH RIDGEWOOD AVENUE
SECTION 12, TOWNSHIP 17 SOUTH, RANGE 29 EAST;
AND SECTION 13, TOWNSHIP 17 SOUTH, RANGE 29 EAST
VOLUSIA COUNTY DELAND, FLORIDA

AMERICAN SURVEYING & MAPPING, INC.
A DIVISION OF AMERICAN SURVEYING & MAPPING, INC.
NDDS NATIONAL DUE DILIGENCE SERVICES
221 Circle Drive, Maitland, FL 32751
Phone: 407-426-7979 nationalduediligenceservices.com

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School Board of Volusia County

Ms. Jamie M. Haynes, Chair
Mr. Ruben Colón, Vice Chair
Ms. Krista Goodrich
Mrs. Jessie Thompson
Ms. Donna Brosemer

Carmen J. Balgobin, Ed.D
Superintendent of Schools

School Adequate Capacity Determination
Finding of Adequate Capacity Letter

June 18, 2025

Ms. Nika Zyryanova
MAS Development
2875 NE 191st St Suite 305
Aventura, FL 33180

RE : DeLand Crossings – City of DeLand
School Concurrency Case # 25-06-10-001-A

Ms. Zyryanova:

The County Charter requires any Comprehensive Plan Amendment or Rezoning that allows increased residential density to be effective only when adequate public schools can be timely planned and constructed to serve the projected increase in student population. The district uses this requirement as the guiding principle behind the school adequate capacity review.

District staff reviewed the information for the proposed project known as DeLand Crossings associated with 20 +/- acres of property located at or near the intersection of N Ridgewood and New York Ave within an unincorporated part of DeLand city limits. The proposed project would provide one hundred and sixty (160) multi-family units.

The district uses a county wide Student Generation Rate (SGR) of (0.137) per multi-family dwelling unit to calculate projected students. By applying the SGR to the use types in Table 1 below, the project could generate twenty (20) full-time students.

Table 1

UNIT TYPE	SGR	UNIT COUNT	STUDENTS GENERATED
Single Family Dwelling Unit	0.258	0	0
Multifamily Dwelling Unit	0.137	160	20
Manufactured Home Dwelling Unit	0.052	0	0
Total		**0**	**0**

When performing an adequate capacity review, district staff evaluates the effects of the proposed change compared to any remaining permanent capacity within the impacted schools, up to 100%, Table 2 (next page). The projected increase in student population may be over 100% if there are plans to serve increased student population in that planning area within the long-term planning horizon. A finding of adequate capacity may be issued in either case.

Table 2

Schools	SY 2024/25 Enrollment	% of Permanent Capacity	Plans for Capacity Increase Long-Term	Traditional K-12 students projected
Woodward Elementary	538	76%	No	9
Southwestern Middle	644	83%	No	4
West CSA DeLand High	2956	110%	No	7
Other				0

The student projections generated by this project **will** increase the existing percentage above 100% permanent capacity at the high school level. However, the concurrency service area (CSA) for DeLand High school is at or over 100% but below 115% for level of service (LOS) standards. Based on this, the school district has no objections to the proposed development plan.

Minimum planning considerations should include pedestrian and vehicular access, safety, connectivity, and buffering. Additional considerations, particularly for gated and muti-family communities, include accessibility for school buses, by ensuring a turn radius of at least 60 feet at all entrances and exits, and the inclusion of dedicated pickup/drop off sites.

All future development orders, such as site plans and subdivisions, are subject to school concurrency review. School concurrency will be evaluated at the time when the impact of development is specifically quantified and known. Only funded school improvements and then current capacity will be considered at that time.

No student reservations have been made at this time.

Please note the School Board has the right to adjust the attendance boundaries to balance the student enrollment populations at these area schools. Consequently, students generated from this project may not attend the current assigned schools.

Should you need additional information, please contact me at (386) 947-8786, extension 50802.

Sincerely,

Cody F. Shepard

Cody F. Shepard
Specialist, Planning & GIS

CC: Carmen J. Balgobin, Ed.D, Superintendent of Schools
Ron Young, Director of Planning & Construction
Robert J. Voges, Ed.S, Planning Coordinator
Carol Kuhn, Planning Director, City of DeLand

FACILITIES SERVICES
3750 OLSON DRIVE ◆ DAYTONA BEACH, FL 32124
PHONE: (386) 947-8786 ◆ FAX (386) 506-5056

Finding of Adequate School Capacity

VOLUSIA COUNTY SCHOOL BOARD

Project Information	
Project Name	DeLand Crossings
VCSB Project #	**25-06-10-001-A**
Jurisdiction Project #	
Parcel ID Numbers	791200000061
Project Location	N Ridgewood and New York Ave
Potential Residential Units	160 Multi-Family Units
Property Owner/Applicant	Nika Zyryanova, MAS Development

Notes: Additional review will be required at the time of subdivision/site plan submittal(s).
No Student Reservations have been made.

Based upon the Findings of Fact, pursuant to School Board Policy 612 and Section 206 of the County Charter, the school district has determined at this time that school capacity is adequate to serve the proposed increase in residential density. This Finding shall constitute competent substantial evidence that adequate public school capacity is likely to be available at the time it is required to serve the planned new development.

Capacity is not being reserved with this Finding unless otherwise noted on this document. This Finding of Adequate School Capacity allows this subject project to continue through the Comprehensive Plan Amendment and/or rezoning process; however, it may be subject to additional school capacity review in the future.

Cody F. Shepard

Cody F. Shepard
Specialist, Planning & GIS

June 18, 2025
Issue Date

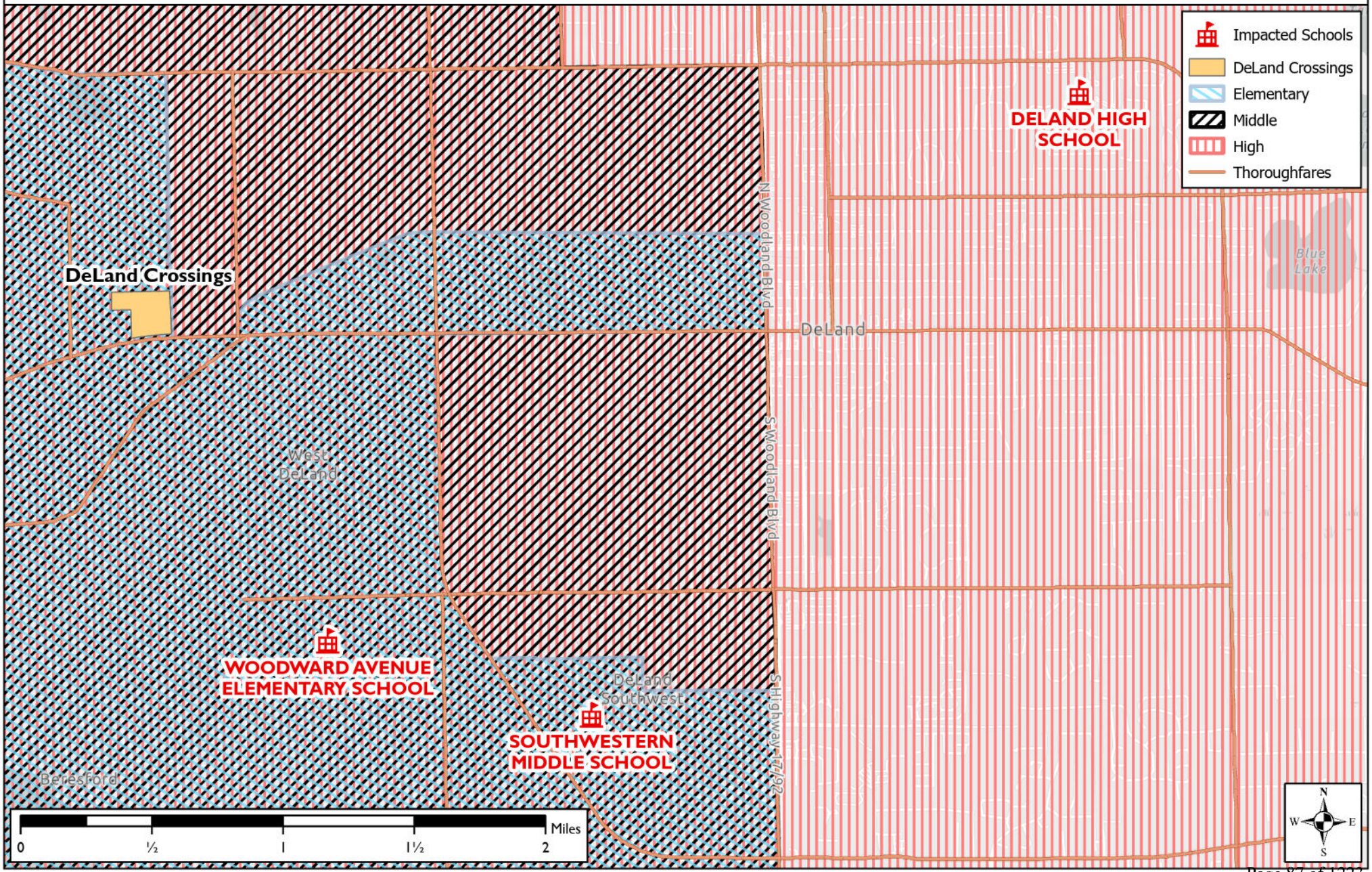
Created: 9/2007
Owner: Facilities Services

2007-073-VCS
Print Locally

VCSB Schools Impacted by Development

School Adequacy Determination - DeLand Crossings

VOLUSIA COUNTY SCHOOLS
Planning & Business Services
June 2025



MEMORANDUM

April 29, 2025

Re: Ridgewood Avenue Residential
Traffic Impact Analysis Methodology
Volusia County, Florida
Project № 25042.01.01 v1.1

The following methodology outlines the methods and assumptions of the Traffic Impact Analysis (TIA) for the above referenced project. The TIA will conform to the methodology requirements and guidelines documented by the River to Sea Transportation Planning Organization (R2CTPO). It addresses comments received from Volusia County as detailed in the **Attachments**.

Project Description

The proposed development consists of 160 multi-family townhome residential homes with an anticipated buildout year of 2027. The site consists of parcel 79-1200000061 and is located at the northwest corner SR 44 and North Ridgewood Avenue in Volusia County, Florida, as shown in **Figure 1**. Access to the site is proposed via two (2) full access driveways on North Ridgewood Avenue. A copy of the conceptual site plan is provided in the **Attachments**.

Trip Generation

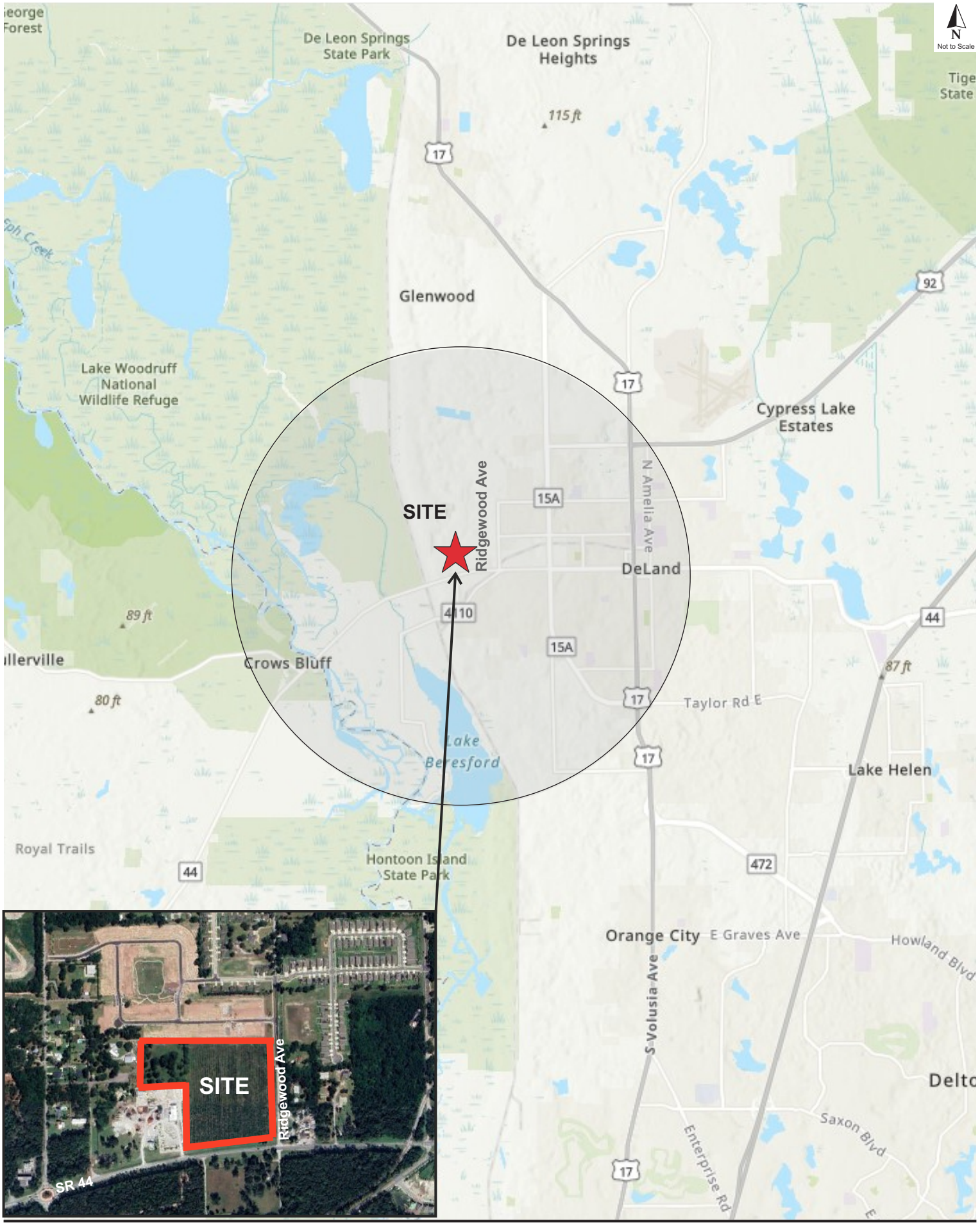
The trip generation analysis for the proposed development was conducted using the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, *11th Edition*. The trip generation calculation for the project is summarized in **Table 1**. Detailed trip generation sheets are provided in the **Attachments**.

Table 1
Trip Generation Calculation

ITE Code	Land Use	Size	Daily		AM Peak Hour				PM Peak Hour			
			Rate	Trips	Rate	Total	Enter	Exit	Rate	Total	Enter	Exit
215	Single-Family Attached (Townhouses)	160 DU	7.30	1,169	0.48	78	19	59	0.58	92	54	38

Trip generation analysis based on ITE Trip Generation Manual, 11th Edition

The proposed development is projected to generate 1,169 new daily trips of which 78 trips occur during the AM peak hour and 92 trips occur during the PM peak hour. Per the R2CTPO traffic study guidelines, since the proposed development is anticipated to generate more than 1,000 daily new trips, a TIA is required.


N
Not to Scale
De Leon Springs State Park
De Leon Springs Heights
115 ft
Glenwood
Lake Woodruff National Wildlife Refuge
Cypress Lake Estates
SITE
Ridgewood Ave
N Amelia Ave
DeLand
15A
4110
Crows Bluff
89 ft
80 ft
87 ft
Taylor Rd E
Lake Beresford
Lake Helen
Royal Trails
Hontoon Island State Park
472
Orange City
E Graves Ave
Howland Blvd
S Volusia Ave
Saxon Blvd
Enterprise Rd
SR 44
17
92
44

Trip Distribution

The trip distribution pattern was estimated using the *Central Florida Regional Planning Model (CFRPM, v7.0)*. The model distribution was adjusted to reflect the local network as well as prevailing traffic flow patterns. The raw model output is included in the **Attachments** and the adjusted trip distribution is shown in **Figure 2**.

Study Area

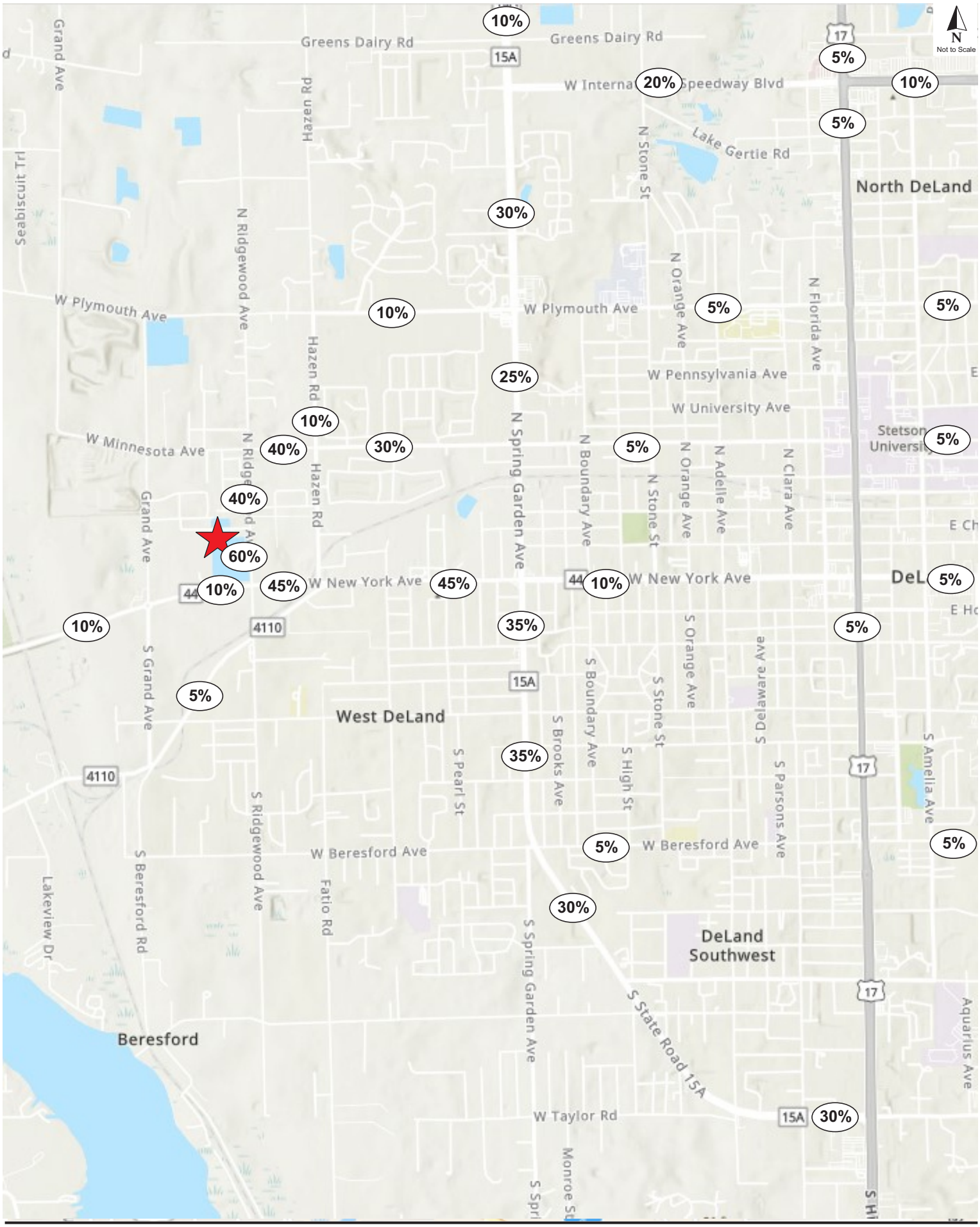
Per the TIA requirements, all roadways of the project where the project's peak hour trips consume three percent (3%) or more of a roadway's two-way peak hour generalized service volume based on the adopted LOS and committed number of lanes shall be analyzed. In addition, the Critical/Near Critical and Vested Critical/Near Vested Critical (C/NC/VC/NVC) data was reviewed for roadway segments within a 3-mile radius. The 3-mile C/NC/VC/NVC roadway buffer is shown in **Figure 3**. Roadway segments and peak two-way LOS capacities were obtained from the *Volusia County 2022 AADT & Historical Counts*, included in the **Attachments**. Findings are summarized in **Table 2.**

Two (2) roadway segments within the 3-mile radius were determined to be C/NC/VC/NVC designated facilities. One (1) segment is projected to consume three percent (3%) or more of the surrounding roadway's two-way peak hour generalized service volume. One (1) additional segment was added based on its proximity to the project. Therefore, the study will include the roadway segments and intersections displayed in **Figure 4**.

Roadway Segment and Intersection Analysis

The traffic analysis will include existing and 2027 buildout conditions for both roadway segment and intersection capacity analysis. Roadway segments will be analyzed for the PM peak two-way volume. The analysis will be based on volumes and service volumes obtained from *Volusia County 2022 AADT & Historical Counts.*

The intersection analysis will be conducted for the AM and PM peak hours based on field counts, projected movements, *Synchro* software and the methods of the *Highway Capacity Manual (HCM).* The intersection field counts will include non-vehicular modes of travel (e.g., pedestrians and bicycles).

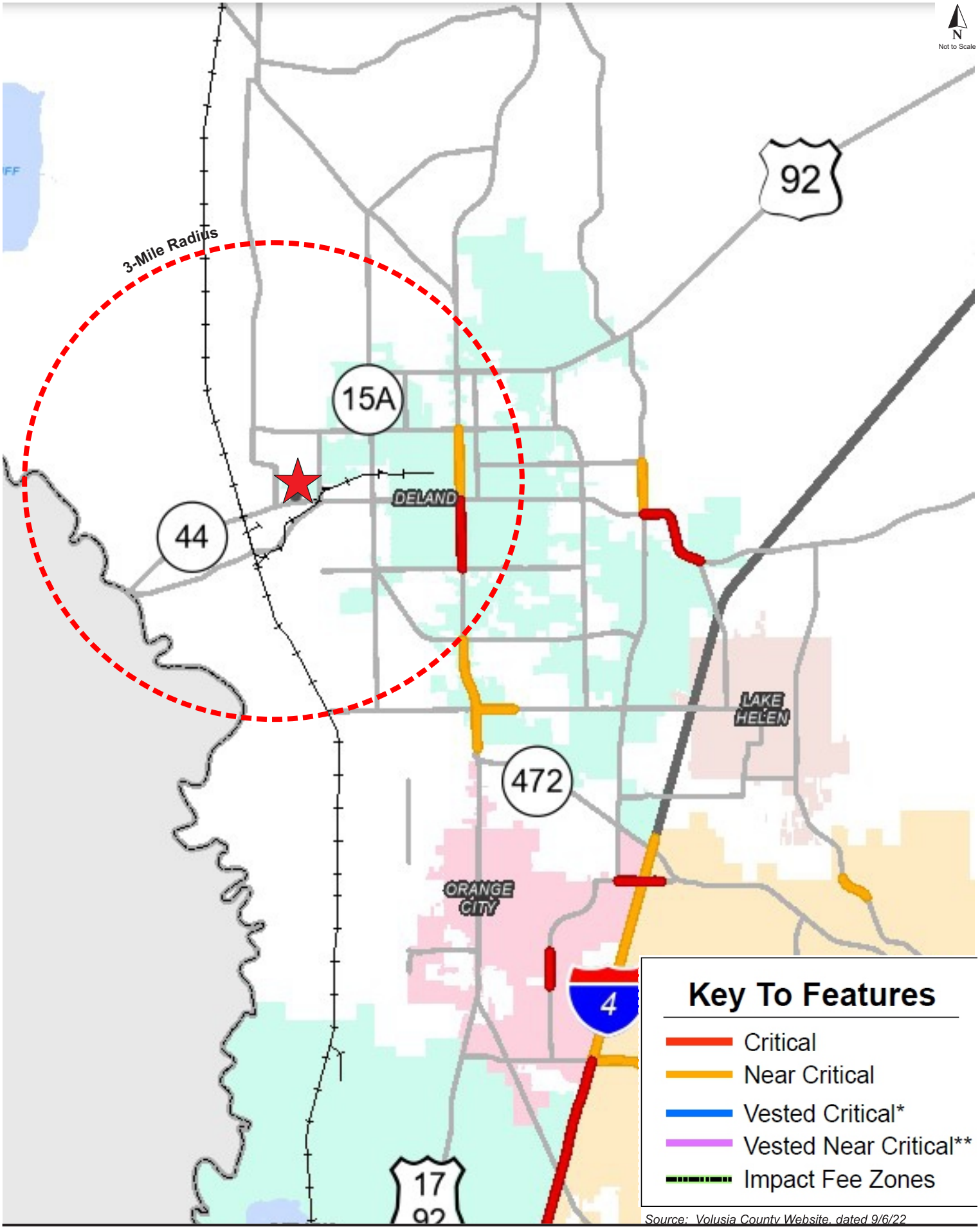


TMC Traffic & Mobility CONSULTANTS

25042.01.01 Ridgewood Avenue Residential

Project Trip Distribution **Figure 2**

Page 91 of 1223



Source: Volusia County Website, dated 9/6/22

Table 2
Study Area Significance Review

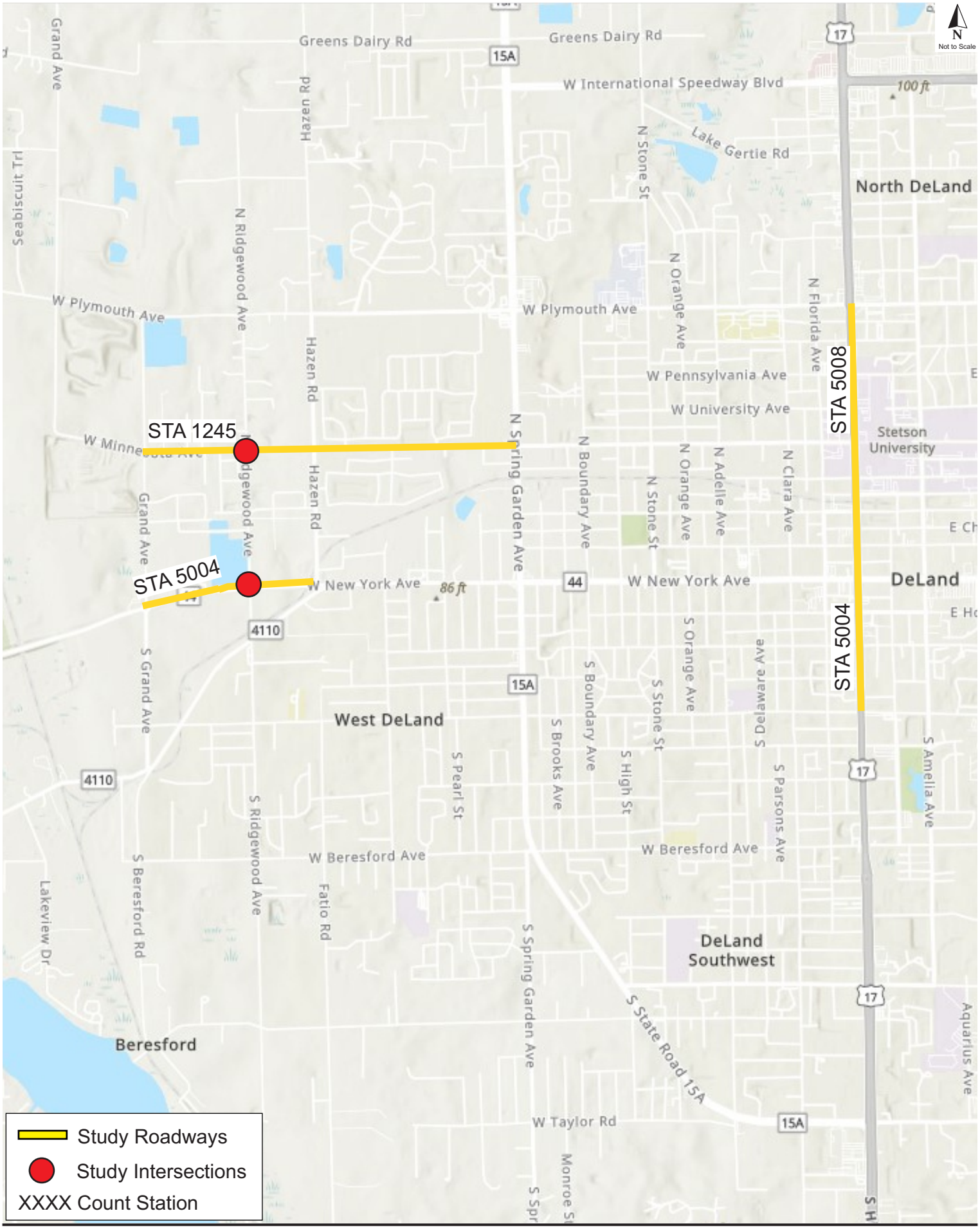
Roadway Segment	Seg Num	A T	Function Class	# of Lns	PK 2W Cap	Project Trips Dist	Trips	%Cap	Signif-icant?	C/ NC?	w/in 3-miles	In Study?
US 17/92												
SR 15A/Taylor Rd. to Beresford Ave.	1006	U	Principal Arterial	4	3,790	0%	0	0.00%	NO	NO	YES	NO
Beresford Ave. to Euclid Ave.	5173	U	Principal Arterial	4	1,480	0%	0	0.00%	NO	NO	YES	NO
Euclid Ave. to SR 44/New York Ave.	5004	U	Principal Arterial	2	1,410	5%	4	0.28%	NO	C	YES	YES
SR 44/New York Ave. to Plymouth Ave.	5008	U	Principal Arterial	2	1,410	0%	0	0.00%	NO	NC	YES	YES
Plymouth Ave. to US 92/ISB	66	U	Principal Arterial	4	3,790	5%	4	0.11%	NO	NO	YES	NO
SR 15A												
US 17/92/Taylor to New Hampshire Ave.	1005	U	Principal Arterial	4	3,580	30%	25	0.70%	NO	NO	YES	NO
New Hampshire Ave. to Beresford Ave.	6	U	Principal Arterial	4	3,580	30%	25	0.70%	NO	NO	YES	NO
Beresford Ave. to SR 44/New York Ave.	474	U	Principal Arterial	4	3,580	35%	29	0.81%	NO	NO	YES	NO
SR 44/New York Ave. to Plymouth Ave.	463	U	Principal Arterial	4	3,580	25%	21	0.59%	NO	NO	YES	NO
Plymouth Ave. to CR 92	537	U	Principal Arterial	4	3,580	30%	25	0.70%	NO	NO	YES	NO
CR 92 to Glenwood Rd.	465	U	Principal Arterial	4	3,580	10%	8	0.22%	NO	NO	YES	NO
SR 44												
Lake Co. to Shell Rd.	1007	U	Principal Arterial	2	1,490	10%	8	0.54%	NO	NO	YES	NO
Shell Rd. to Grand Ave.	1007	U	Principal Arterial	2	2,180	10%	8	0.37%	NO	NO	YES	NO
Grand Ave. to Old New York/Hazen Rd.	1007	U	Principal Arterial	2	2,180	45%	37	1.70%	NO	NO	YES	NO
Old New York/Hazen Rd. to SR 15A/Spring Garden A	274	U	Principal Arterial	2	2,180	45%	37	1.70%	NO	NO	YES	NO
SR 15A/Spring Garden Ave. to Stone St.	447	U	Principal Arterial	2	1,712	10%	8	0.47%	NO	NO	YES	NO
Stone St. to Clara Ave.	5012	U	Principal Arterial	2	1,712	10%	8	0.47%	NO	NO	YES	NO
Clara Ave. to Amelia Ave.	5015	U	Principal Arterial	2	1,410	10%	8	0.57%	NO	NO	YES	NO
Amelia Ave. to Hill Ave.	80	U	Principal Arterial	2	1,712	5%	4	0.23%	NO	NO	YES	NO
Amelia Ave												
SR 44 to Ohio Ave.	73	U	Major-Collector	4	2,060	0%	0	0.00%	NO	NO	YES	NO
Ohio Ave. to Minnesota Ave.	74	U	Major-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Minnesota Ave. to Plymouth Ave.	75	U	Major-Collector	2	1,270	0%	0	0.00%	NO	NO	YES	NO
Plymouth Ave. to US 92	77	U	Major-Collector	2	1,270	0%	0	0.00%	NO	NO	YES	NO
Beresford Ave												
Beresford Rd. to Fatio Rd	161	U	Major-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Fatio Rd. to SR 15A	162	U	Major-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
SR 15A to US 17/92	164	U	Major-Collector	2	1,020	5%	4	0.39%	NO	NO	YES	NO
US 17/92 to Amelia Ave	165	U	Major-Collector	2	1,330	5%	4	0.30%	NO	NO	YES	NO
Amelia Ave. to Hill Ave.	167	U	Major-Collector	2	1,620	5%	4	0.25%	NO	NO	YES	NO
Hill Ave. to Blue Lake Ave.	169	U	Major-Collector	2	1,230	5%	4	0.33%	NO	NO	YES	NO
Beresford Rd												
SR 15A to Spring Garden Ave.	180	U	Major-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Spring Garden Ave. to Fatio Rd.	181	U	Major-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Fatio Rd.. to Beresford Ave	182	U	Major-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Beresford Ave. to Old New York Ave.	183	U	Major-Collector	2	1,020	5%	4	0.39%	NO	NO	YES	NO
CR 92 (International Speedway Blvd)												
SR 15A to Stone St.	450	U	Principal Arterial	4	3,410	20%	16	0.47%	NO	NO	YES	NO
Stone St. to US 17/92	452	U	Principal Arterial	4	3,410	20%	16	0.47%	NO	NO	YES	NO
Euclid Ave												
Grand to Fatio Rd.	610	U	Minor-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Fatio Rd. to Woodward Ave.	611	U	Minor-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Woodward Ave. to SR 15A	612	U	Minor-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
SR 15A to Adelle Ave.	613	U	Minor-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Adelle Ave. to US 17/92	614	U	Minor-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Garfield Ave												
SR 44 to Plymouth Ave.	700	U	Local	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Plymouth Ave. to US 92	702	U	Local	2	1,020	0%	0	0.00%	NO	NO	YES	NO

Source: 2022 Volusia County AADTs

Table 2
Study Area Significance Review (Cont'd)

Roadway Segment	Seg Num	A T	Function Class	# of Lns	PK 2W Cap	Project Trips			Signif-icant?	C/ NC?	w/in 3-miles	In Study?
						Dist	Trips	%Cap				
Grand Ave / CR 4053												
Old New York Ave. to SR 44	748	U	Major-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
SR 44 to Minnesota Ave.	750	U	Major-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Minnesota Ave. to Plymouth Ave.	751	U	Major-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Plymouth Ave. to Glenwood Rd.	752	U	Major-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Glenwood Rd. to Lemon St.	754	U	Major-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Minnesota Ave												
Grand Ave. to SR 15A	1245	U	Minor-Collector	2	1,020	40%	33	3.24%	YES	NO	YES	YES
SR 15A to US 17/92	1247	U	Minor-Collector	2	1,020	5%	4	0.39%	NO	NO	YES	NO
Amelia Ave. to Hill Ave	1249	U	Major-Collector	2	1,020	5%	4	0.39%	NO	NO	YES	NO
New Hampshire Ave												
SR 15A to Adelle Ave	1270	U	Minor-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Adelle Ave to Clara Ave.	1271	U	Minor-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Clara Ave. to US 17/92	1272	U	Minor-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Plymouth Ave												
Grand Ave. to Hazen Rd.	1490	U	Major-Collector	2	1,230	0%	0	0.00%	NO	NO	YES	NO
Hazen Rd. to SR 15A	1491	U	Major-Collector	2	1,230	10%	8	0.65%	NO	NO	YES	NO
SR 15A to Stone St.	1493	U	Major-Collector	2	1,020	5%	4	0.39%	NO	NO	YES	NO
Stone St. to Clara Ave	1495	U	Major-Collector	2	1,020	5%	4	0.39%	NO	NO	YES	NO
Clara Ave. to US 17/92	1497	U	Major-Collector	2	1,270	5%	4	0.31%	NO	NO	YES	NO
US 17/92 to Amelia Ave	1498	U	Major-Collector	2	1,270	5%	4	0.31%	NO	NO	YES	NO
Amelia Ave. to Garfield Ave.	1500	U	Major-Collector	2	1,020	5%	4	0.39%	NO	NO	YES	NO
Garfield Ave. to Blue Lake Rd./Jacobs Dairy Rd	1502	U	Major-Collector	2	1,020	5%	4	0.39%	NO	NO	YES	NO
Woodward Ave												
Beresford Ave. to Euclid Ave.	2031	U	Minor-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Euclid Ave. to SR 44	2030	U	Minor-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO

Source: 2022 Volusia County AADTs


Not to Scale
STA 1245
STA 5004
STA 5008
STA 5004
Study Roadways
Study Intersections
XXXX Count Station
Greens Dairy Rd
W International Speedway Blvd
Lake Gertie Rd
North DeLand
W Plymouth Ave
W Pennsylvania Ave
W University Ave
Stetson University
W New York Ave
DeLand
West DeLand
DeLand Southwest
Beresford
W Beresford Ave
W Taylor Rd
S State Road 15A
N Ridgewood Ave
Hazen Rd
N Spring Garden Ave
N Boundary Ave
N Orange Ave
N Florida Ave
N Stone St
N Adelle Ave
N Clara Ave
S Grand Ave
S Ridgewood Ave
S Pearl St
S Brooks Ave
S High St
S Stone St
S Orange Ave
S Delaware Ave
S Parsons Ave
S Amelia Ave
S Beresford Rd
Fatio Rd
S Spring Garden Ave
Lakeview Dr
Aquarius Ave
Grand Ave
Seabiscuit Trl
15A
17
44
4110
100 ft
86 ft

Background Traffic

Background traffic will be projected to the buildout year 2027 per *Volusia County's Segment Growth Rates and Vested Trips Instructions Policy*, included in **Attachments**. Growth rates will be calculated based on the historical AADT obtained from the latest *Volusia County AADT & Historical Counts*. The vested trips will be calculated based on the most recent version of *Volusia County Vested Trip Database*. Vested developments as coordinated with the City of Deland will also be included. The locations of the count stations used to collect the historical AADT data are included in **Figure 4**. Necessary adjustments will be made to both the growth rates and the vested trips per Volusia County guidelines.

Buildout Traffic

Buildout conditions will be analyzed by comparing the total projected traffic volumes to their service volumes at the adopted LOS standard for the roadway segments and intersections. Total projected traffic volumes at buildout year 2027 will be calculated as the sum of background traffic and project trips.

Planned and Programmed Improvements

The *FDOT Work Program* and the *River to Sea Transportation Planning Organization (TPO) Transportation Improvement Program (TIP)* were reviewed to determine if any roadway or intersection capacity improvements were funded for construction within the next three (3) years. One (1) improvement is currently funded. The St. Johns Loop Trail Gap between Lake Beresford Park and Grand Avenue is a multi-use 3.6-mile trail where a *Project Development & Environment (PD&E) Study* is currently underway. An excerpt from the FDOT *www.cflroads.com* website is provided in the **Attachments**.

Access and Turn Lane Analysis

An assessment of turn lane needs for the project driveways will also be performed for proposed full access driveway utilized by project traffic. Turn lane requirements will be based on section 72-619 of the *Volusia County Land Development Code*.

Proportionate Share

If the development results in offsite impacts, the development will mitigate its impact to the deficient facilities by contributing a proportionate share. The proportionate share calculation will be based on costs approved by the Volusia County.

Alternative Mode Analysis

An alternative mode review will be included in the traffic study and will include a narrative of any transit stops within ¼ mile of the site, ½ mile of a rail line station or intermodal facility, provisions for sidewalks adjacent to public roads within the limits of the site, sidewalk connectivity between parcels, provisions for any bicycle amenities, and identification of any schools within 1-mile of the site.

Crash Analysis

A review of historical crash data within the vicinity of the site access points will be conducted to determine if any design features could potentially mitigate the observed crash frequency/ severity. A crash diagram with georeferenced crash locations highlighting crash trends based on five (5) years period will be included. Five (5) years of crash data will be obtained from Signal Four Analytics (S4A) for the analysis. The crash analysis will include all listed study intersections/segments adjoining the development and intersection(s)/segment(s) with mitigated development measure(s). In summary the crash analysis review will include consideration to the following:

- Crash patterns near proposed driveways should be assessed to identify if additional mitigations like access restriction or median treatments are warranted.
- Analyze crash data to identify trends, patterns, and crash diagram with georeferenced crash locations highlighting crash trends based on 5yrs period.
- Mitigation measure(s) as proposed to address potential crash trends will be required by using CMF factors to include the following tabulated information.
- Confirm that full access is operationally and safely feasible on North Ridgewood Avenue based on existing traffic volumes and access spacing policies.

Report

A report will be prepared detailing the methods, findings, and recommendations of the traffic analysis for the proposed development.

ATTACHMENTS

May 7, 2025

William White
Engineering Assistant II
Volusia County Traffic Engineering
123 West Indiana Avenue
DeLand, FL 32720
WDWhite@volusia.org

Re: Ridgewood Ave Residential
Response to Methodology Comments
TMC Project № 25042.01.01
Volusia County, Florida

Dear Mr. White,

Please find below our responses to the review comments prepared by Volusia County Traffic Engineering dated April 24, 2025 regarding the above referenced Methodology dated April 14, 2025. The comments are listed in **bold** typeface and the TMC responses follow in *italic* typeface. Additionally, a revised Methodology v1.1 is provided under cover reflecting the changes resulting from these comments.

1. **Secure written confirmation from relevant agencies their listed vested development(s) to be considered within your impacted study area.**

   TMC Response: Acknowledged. The TIA will include applicable vested developments as coordinated with the City of Deland and Volusia County.

2. **Please confirm if the study area is within ¼-mile of a transit route, or ½-mile of a rail line rail station, or intermodal facility.**

   TMC Response: Acknowledged. The TIA will include details on the transit routes, rail lines, and intermodal facilities that are within the study area, as defined per Volusia County standards.

3. **Evaluates the impact of proposed development interaction with high school, bicycle, and pedestrian traffic.**

   TMC Response: Acknowledged. This information will be included in the TIA.

4. ***Refer to TIA guideline section 7 (though an analysis of safety and access management issues may still need to be completed) and provide documentation that support this requirement. A crash diagram with georeferenced crash locations highlighting crash trends based on 5yrs period. Analysis of safety and access management issues will be required to include:***

- **Crash patterns near proposed driveways should be assessed to identify if additional mitigations like access restriction or median treatments are warranted.**
- **Analyze crash data to identify trends, patterns, and crash diagram with georeferenced crash locations highlighting crash trends based on 5yrs period.**
- **Mitigation measure(s) as proposed to address potential crash trends will be required by using CMF factors to include the following tabulated information:**

Countermeasure	CMF Description	CMF ID & CMF Value	Clearinghouse Quality Level	Crash Applicability Description	Included in Analysis?

TMC Response: The section of the methodology titled Crash Analysis already included this level of detail for the safety/crash review. The text has been expanded to include the above listed bullets as well.

5. **Confirm that full access is operationally and safely feasible on North Ridgewood Avenue based on existing traffic volumes and access spacing policies.**

   TMC Response: The Crash Analysis section has been expanded to include this requirement.

6. **Include justification for local adjustments (e.g., observed traffic patterns, major attractors/employers) in the final report for transparency.**

   TMC Response: Acknowledged.

7. **Pay special attention to potential need for northbound/southbound left-turn lanes due to full access configuration and proximity to SR 44.**

   TMC Response: The access review will include an assessment of the feasibility of accommodating a full left turn lane based on the site's proximity to SR 44, if a turn lane is determined to meet agency thresholds.

8. **Please submit soft copy of the Synchro files used.**

   TMC Response: Acknowledged. We understand this to be standard County requirement.

9. **Please submit a soft copy of the excel spreadsheet used for your PFS calculation.**

   TMC Response: Acknowledged. We understand this to be standard County requirement.

10. Present traffic count results to account for all modes of movements and provide soft copy of all count survey data using the following file types:

- **Intersection data - .txt export from PetraPro; .txt export from Traffic Data Online.**
- **Midblock data: .prn export from TraxPro/StarNEXT; .csv export from VIAS; .prn export from TrafficViewerPro**

TMC Response: Acknowledged.

END OF COMMENTS

We trust these responses and the revised Methodology adequately address the review comments. We remain available to discuss this matter further or to answer any questions you may have.

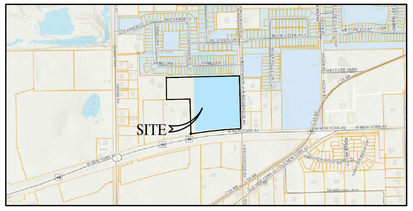
Kind regards,

TRAFFIC & MOBILITY CONSULTANTS LLC

Charlotte Davidson, PE, PTP
Project Manager



LOCATION MAP



AERIAL MAP

LEGAL DESCRIPTION:

12-17-29 IRREG PARCEL LYING IN GOVT LOT 4 E OF GRAND AVE & N OF SR 44 & W OF N RIDGEWOOD AVE MEAS 827.72 ALONG N R/W OF SR 44 & 867.52 FT ALONG W R/W OF N RIDGEWOOD AVE & 1207.70 FT ON N/L AS DESCRIBED IN OR 7709 PG 3083 PER OR 7233 PG 1560

FLOOD ZONE:

PROPERTY SHOWN HEREON LIES IN FLOOD ZONE "X" AN AREA WHICH LIES OUTSIDE THE 100 YEAR FLOOD AREA ACCORDING TO F.I.R.M. MAP PANEL No. 12127C0465H, DATED FEBRUARY 19, 2014.

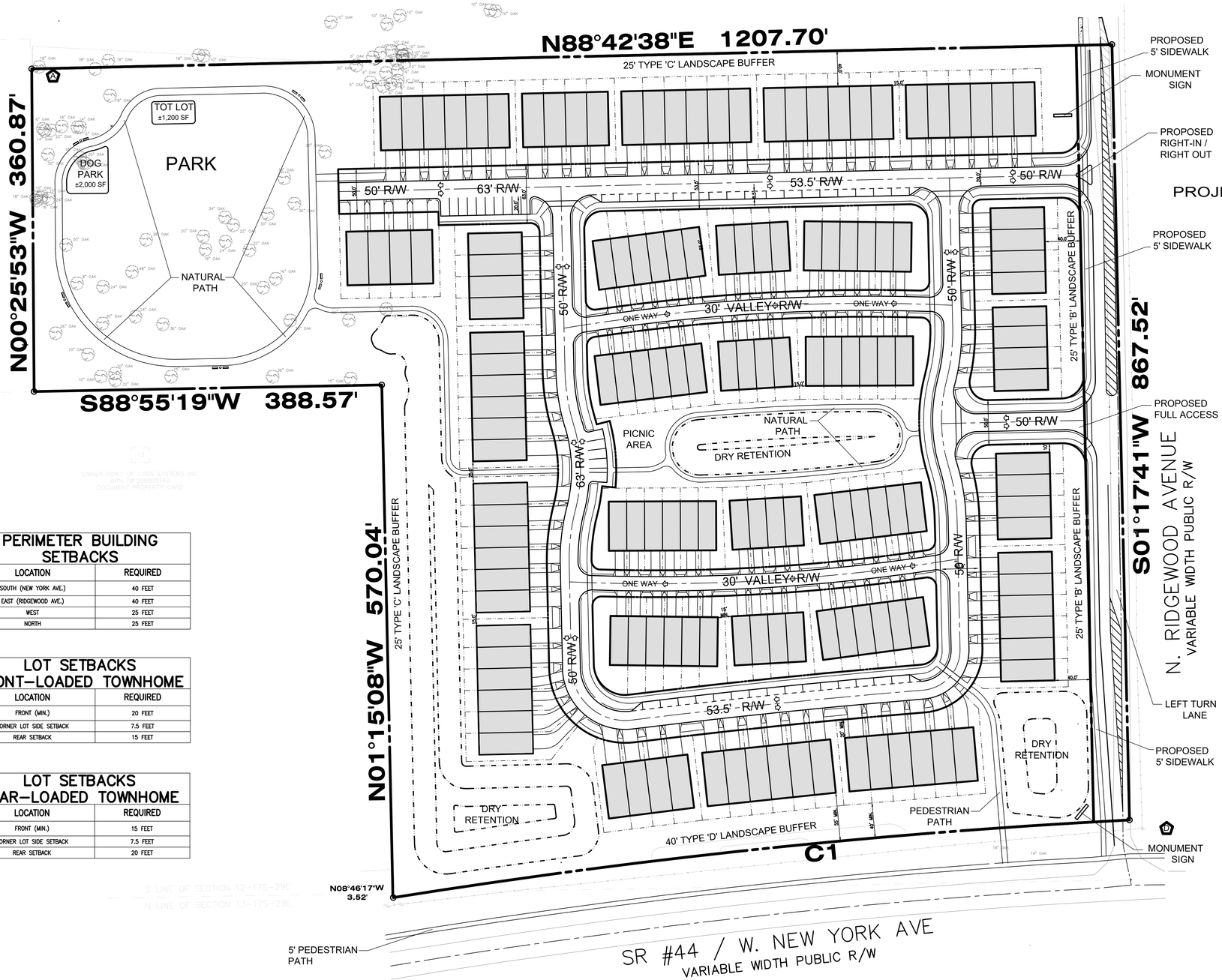
TAX PARCEL ID #:
791200000061

ALT ID #:
2061880

ADDRESS:
210 N. RIDGEWOOD AVE.
DELAND, FLORIDA 32720

N
W E
S

0' 60' 120'
SCALE: 1" = 60'



LEGEND
- PROPOSED BUILDING
- PROPOSED PAVEMENT
- PROPOSED CONCRETE

PROJECT AREA = 20.13 ACRES

PROJECT DATA:

TOTAL AREA:	20.13 AC
MAX. No. OF UNITS:	160 UNITS
MAXIMUM DENSITY:	8 UNITS / AC
MAX. IMP. ALLOWED:	60%
MIN. OPEN SPACE REQ'D:	30%

PROPOSED PARKING:

FRONT LOADED UNITS:	1 GARAGE + 2 CAR D/W EACH
REAR LOADED UNITS:	1 GARAGE + 1 CAR D/W EACH
STREET SIDE:	8.5' X 20' PARALLEL PARKING
	9' X 20' - 90° PARKING

PROPOSED BUILDINGS:

MAX. NO. UNITS / BLDG.:	8 UNITS
MIN. NO. UNITS / BLDG.:	4 UNITS
MIN. DIST. BETWEEN BLDGS:	15'

PERIMETER BUILDING SETBACKS

LOCATION	REQUIRED
SOUTH (NEW YORK AVE.)	40 FEET
EAST (RIDGEWOOD AVE.)	40 FEET
WEST	25 FEET
NORTH	25 FEET

LOT SETBACKS FRONT-LOADED TOWNHOME

LOCATION	REQUIRED
FRONT (MIN.)	20 FEET
CORNER LOT SIDE SETBACK	7.5 FEET
REAR SETBACK	15 FEET

LOT SETBACKS REAR-LOADED TOWNHOME

LOCATION	REQUIRED
FRONT (MIN.)	15 FEET
CORNER LOT SIDE SETBACK	7.5 FEET
REAR SETBACK	20 FEET

OWNER:POINT OF LOSS SYSTEMS INC
APN:791200000140
DOCUMENT:PROPERTY CARD
S LINE OF SECTION 12-17S-29E
N LINE OF SECTION 13-17S-29E

DATE: MAY 2, 2025
SCALE: 1" = 60'
DESIGNED: THS
DRAWN: MOS
CHECKED BY: THS
JOB NO.: 25045
EMAIL: tomskelton4568@gmail.com

REVISIONS | DATE | REVISED | CHECKED

AMERICAN CIVIL ENGINEERING CO.
207 N. MOSS ROAD, SUITE 211 WINTER SPRINGS, FLORIDA 32708
PHONE: (407) 327-7700, FAX (407) 327-0227
CERTIFICATE OF AUTHORIZATION NO.: 00006729

PD SITE PLAN
DELAND CROSSINGS
MULTI-FAMILY DEVELOPMENT
DELAND, FLORIDA

THOMAS H. SKELTON, PE
REGISTRATION NO. 42752

SHEET: C1

Single-Family Attached Housing
(215)

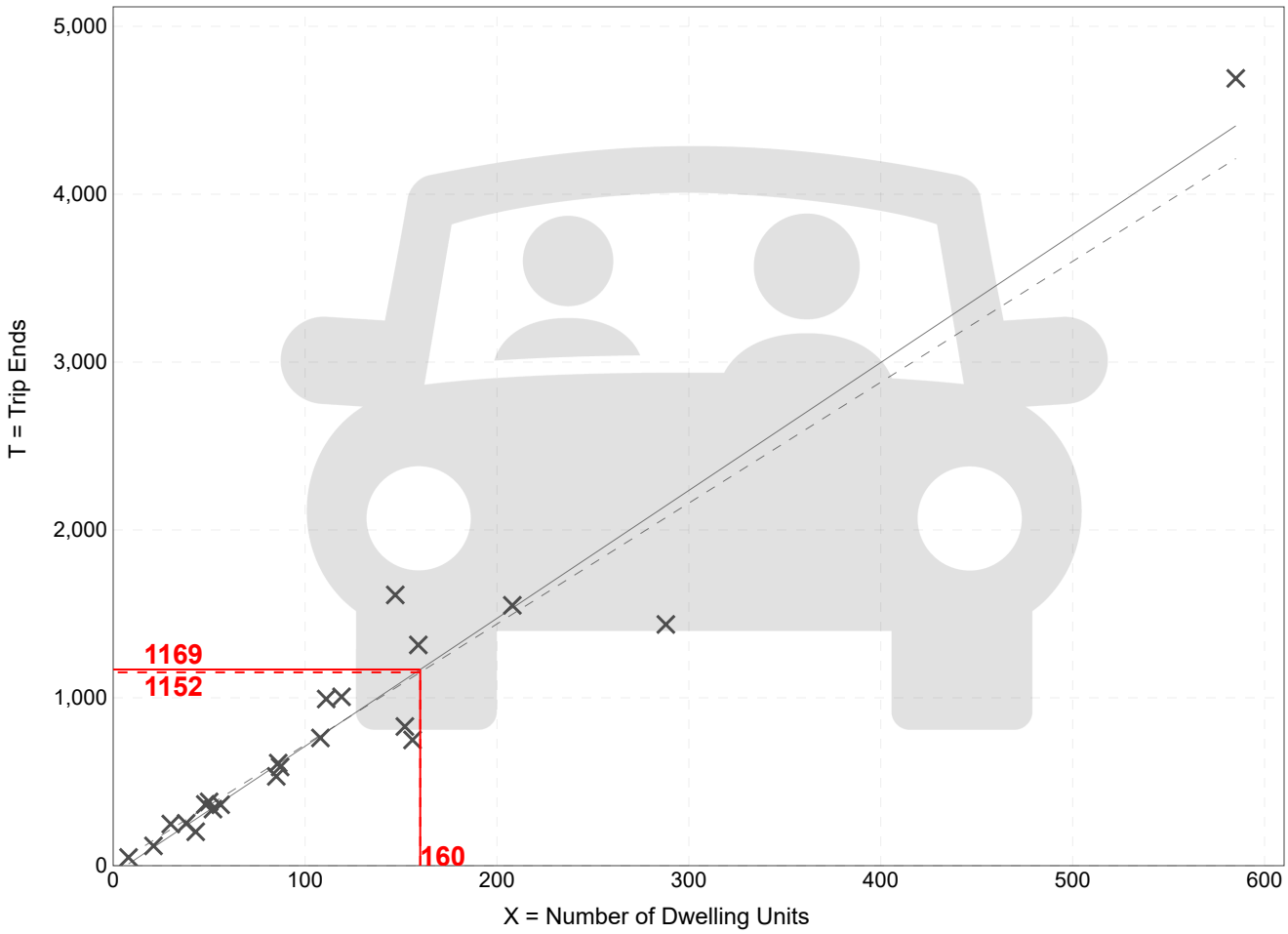
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 22
Avg. Num. of Dwelling Units: 120
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
7.20	4.70 - 10.97	1.61

Data Plot and Equation



Fitted Curve Equation: T = 7.62(X) - 50.48

R^2= 0.94

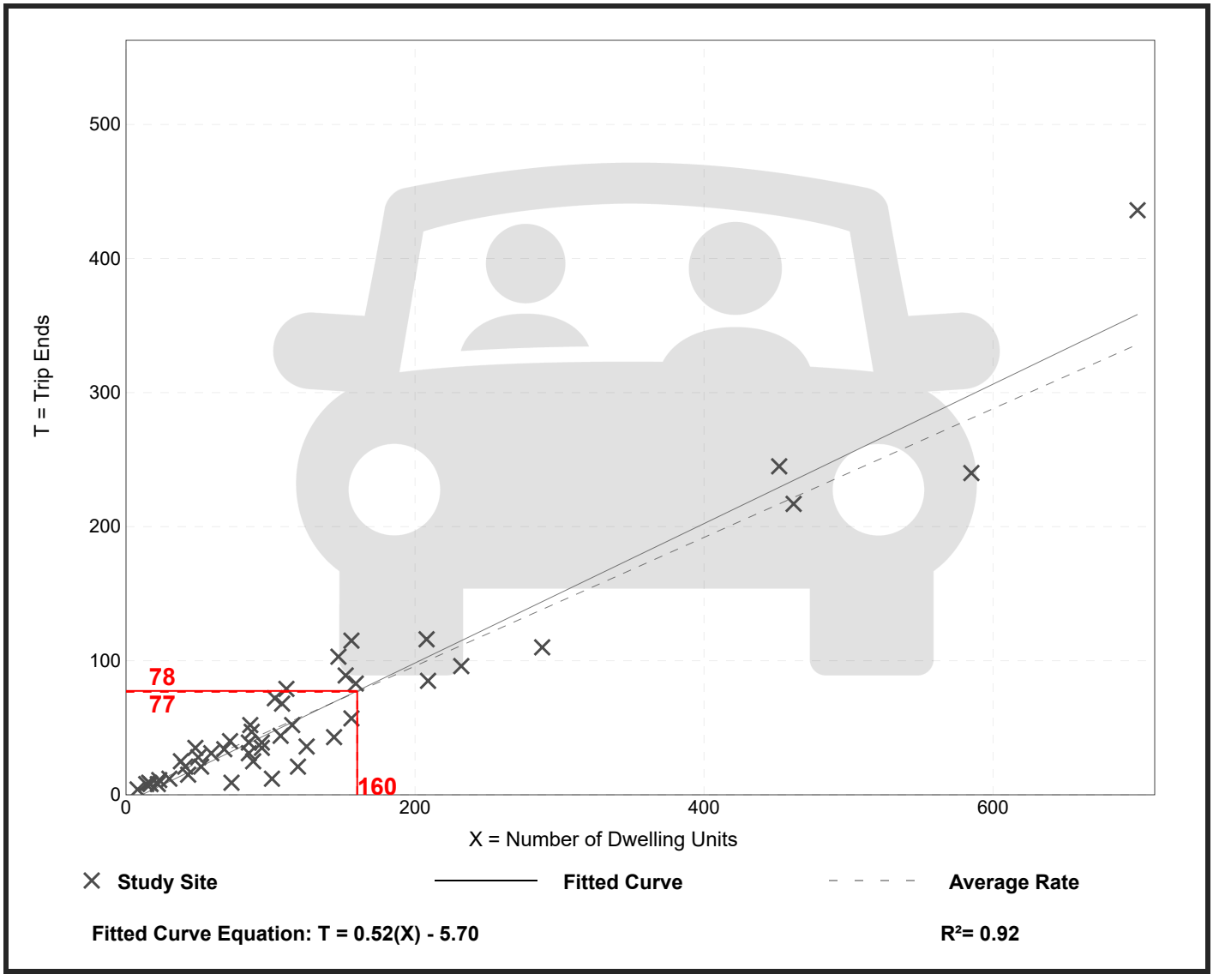
Single-Family Attached Housing
(215)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	46
Avg. Num. of Dwelling Units:	135
Directional Distribution:	25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.48	0.12 - 0.74	0.14

Data Plot and Equation



Trip Gen Manual, 11th Edition • Institute of Transportation Engineers

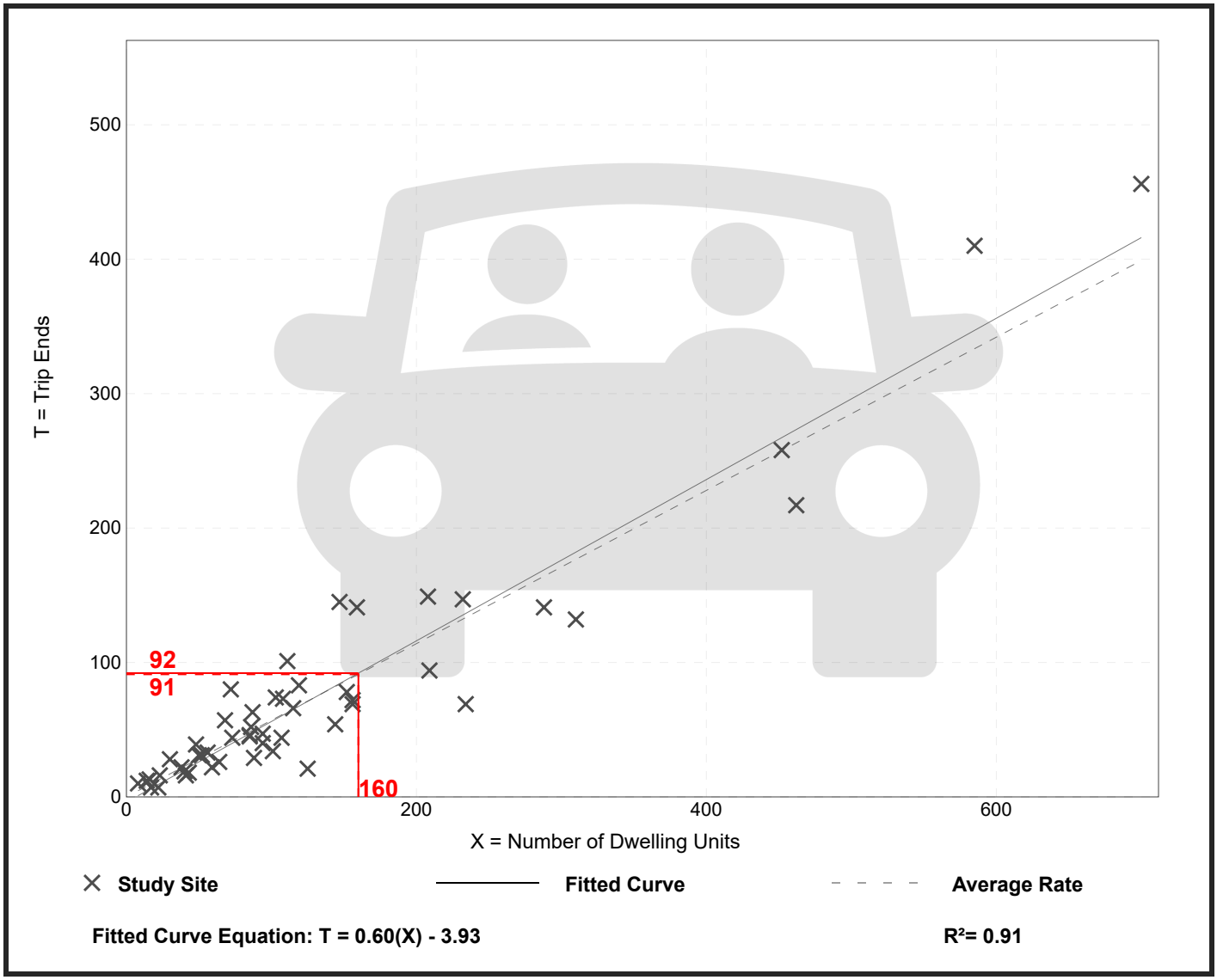
Single-Family Attached Housing
(215)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	51
Avg. Num. of Dwelling Units:	136
Directional Distribution:	59% entering, 41% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.57	0.17 - 1.25	0.18

Data Plot and Equation



Road Name	Limits (From - To)	Count Station Number	Roadway Maintaining Agency	2021 Roadway on County's Thoroughfare	Distance (in miles)	Posted Speed						2021 QLOS Facility Type	2010 Federal Functional Classification	VC 2022 Allowable LOS	DAILY 2022 LOS Capacity	DAILY 2021 V/C Ratio	DAILY 2022 LOS	2022 AM Peak	2022 PM Peak	PEAK 2Way 2022 LOS Capacity	2021 No. of Lanes
Rd_Name	Limits	Cnt_Sta	MainRes	Tfare21	Distance	SPD2013	Direction	F_Type_08	F_Type_09	F_Type_10	F_Type_11	F_Type_14	F_Type_21	Fun_Class_2010	VCA_LOS_22	Cap_22	VCRatio_22	LOS_22	AMPKHR_22	PMPKHR_22	2W_Cap_22	Lanes_20
US 1	10th Ave. to Canal St./Bus. SR 44	5154	FDOT	Yes	1.52	35	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	Principal Arterial - Other - Urban	D	32,400	0.68	D	-	-	2,920	4
US 1	Canal St./Bus. SR 44 to Turnbull Bay	5155	FDOT	Yes	1.34	40	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.60	C	-	-	3,580	4
US 1	Turnbull Bay Rd. to Art Center Ave.	5159	FDOT	Yes	2.24	55	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.63	C	-	-	3,580	4
US 1	Art Center Ave. to SR 5A/Nova Rd.	13	FDOT	Yes	3.19	45	N+S	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	Principal Arterial - Other - Urban	D	66,200	0.39	B	-	-	5,960	4
US 1	SR 5A/Nova Rd. to Commonwealth	152	FDOT	Yes	1.23	45	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.39	C	1,170	1,350	3,580	4
US 1	Commonwealth to SR 421/Dunlawton	5057	FDOT	Yes	1.37	40	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.44	C	1,340	1,440	3,580	4
US 1	SR 421/Dunlawton Ave. to Reed Can	213	FDOT	Yes	1.18	40	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.63	C	-	-	3,580	4
US 1	Reed Canal Rd. to Big Tree Rd.	5061	FDOT	Yes	1.17	45	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.58	C	-	-	3,580	4
US 1	Big Tree Rd. to Bellewood Ave.	5063	FDOT	Yes	0.45	40	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.73	C	-	-	3,580	4
US 1	Bellewood Ave. to SR 400/Beville Rd	5063	FDOT	Yes	0.27	40	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.73	C	-	-	3,580	4
US 1	SR 400/Beville Rd to Bellevue Ave.	452	FDOT	Yes	1.05	40	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.73	C	2,040	2,350	3,580	4
US 1	Bellevue Ave. to Orange Ave.	5066	FDOT	Yes	0.72	40	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.72	C	-	-	3,580	4
US 1	Orange Ave. to US 92/ISB	5070	FDOT	Yes	0.30	35	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	Principal Arterial - Other - Urban	D	32,400	0.88	D	-	-	2,920	4
US 1	US 92/ISB to Fairview/Main St.	5074	FDOT	Yes	0.66	35	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	Principal Arterial - Other - Urban	D	32,400	0.86	D	-	-	2,920	4
US 1	Fairview/Main St. to SR 430/Mason A	5074	FDOT	Yes	0.54	35	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	Principal Arterial - Other - Urban	D	32,400	0.86	D	-	-	2,920	4
US 1	SR 430/Mason Ave. to LPGA Blvd.	1018	FDOT	Yes	1.47	35	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	Principal Arterial - Other - Urban	D	32,400	0.74	D	-	-	2,920	4
US 1	LPGA Blvd. to Hand Ave.	1018	FDOT	Yes	2.00	40	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.60	C	-	-	3,580	4
US 1	Hand Ave. to SR 40/Granada Blvd.	5142	FDOT	Yes	0.84	40	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.55	C	-	-	3,580	4
US 1	SR 40/Granada Blvd. to SR 5A/Nova	1019	FDOT	Yes	1.83	55	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.49	C	-	-	3,580	4
US 1	SR 5A/Nova Rd. to Airport Rd.	100	FDOT	Yes	1.13	55	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.83	C	-	-	3,580	4
US 1	Airport Rd. to I-95	351	FDOT	Yes	2.81	45	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.62	C	2,040	2,330	3,580	4
US 1	I-95. to Flagler Co Line	536	FDOT	Yes	1.53	60	N+S	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	Principal Arterial - Other - Urban	D	66,200	0.26	B	-	-	5,960	4
US 17/92	Seminole Co. to Barwick Rd.	0040-S	FDOT	Yes	0.52	50	N+S	TA_S2WAC1_2W_4L_D_WL	TA_S2WAC1_2W_4L_D_WL	TA_S2WAC1_2W_4L_D_WL	TA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.88	C	-	-	3,580	4
US 17/92	Barwick Rd to Ft. Florida Rd.	0040-S	FDOT	Yes	0.76	50	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.79	C	-	-	3,580	4
US 17/92	Ft. Florida Rd. to Dirksen Dr.	101	FDOT	Yes	0.72	50	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.79	C	2,280	2,920	3,580	4
US 17/92	Dirksen Dr. to Valencia Rd.	479	FDOT	Yes	1.05	50	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.70	C	-	-	3,580	4
US 17/92	Valencia Rd to Highbanks Rd.	7	FDOT	Yes	0.74	40	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.64	C	1,790	2,410	3,580	4
US 17/92	Highbanks Rd. to DeBary Plantation I	8	FDOT	Yes	0.92	45	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.60	C	-	-	3,580	4
US 17/92	DeBary Plantation Blvd to Saxon Blvd	509	FDOT	Yes	0.61	45	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.87	C	-	-	3,580	4
US 17/92	Saxon Blvd. to Enterprise Rd.	539	FDOT	Yes	0.80	45	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.65	C	-	-	3,580	4
US 17/92	Enterprise Rd. to Rhode Island Ave.	444	FDOT	Yes	0.75	45	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.87	C	-	-	3,580	4
US 17/92	Rhode Island Ave. to Graves Ave.	444	FDOT	Yes	1.01	40	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.87	C	-	-	3,580	4
US 17/92	Graves Ave. to New York Ave.	445	FDOT	Yes	1.00	45	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.84	C	-	-	3,580	4
US 17/92	New York Ave to SR 472	445	FDOT	Yes	0.75	55	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.84	C	-	-	3,580	4
US 17/92	SR 472 to SR 15A/Taylor Rd.	1004	FDOT	Yes	1.75	45	N+S	UA_S2WAC1_2W_6L_D_WL	UA_S2WAC1_2W_6L_D_WL	UA_S2WAC1_2W_6L_D_WL	UA_S2WAC1_2W_6L_D_WL	UA_SSAC1_2W_6L_D_WL	UA_SSAC1_2W_6L_D_WL	Principal Arterial - Other - Urban	D	59,900	0.93	C	-	-	5,390	6
US 17/92	SR 15A/Taylor Rd. to Beresford Ave.	1006	FDOT	Yes	1.02	40	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	42,190	0.76	C	1,850	2,660	3,790	4
US 17/92	Beresford Ave. to Euclid Ave.	5173	FDOT	Yes	0.49	35	N+S	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC2_2W_2L_D_WL	UA_S2WAC2_2W_2L_D_WL	UA_S2WAC2_2W_2L_D_WL	UA_SSAC2_2W_2L_U_WL	UA_SSAC2_2W_2L_U_WL	Principal Arterial - Other - Urban	E	16,380	1.22	F	1,120	1,510	1,480	2
US 17/92	Euclid Ave. to SR 44/New York Ave.	5004	FDOT	Yes	0.49	30	N+S	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC2_2W_2L_D_WL	UA_S2WAC2_2W_2L_D_WL	UA_S2WAC2_2W_2L_D_WL	UA_SSAC2_2W_2L_U_WL	UA_SSAC2_2W_2L_U_WL	Principal Arterial - Other - Urban	E	15,600	1.20	D	-	-	1,410	2
US 17/92	SR 44/New York Ave. to Plymouth Av	5008	FDOT	Yes	1.01	30	N+S	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC3_2W_2L_U_WL	UA_S2WAC3_2W_2L_U_WL	UA_S2WAC3_2W_2L_U_WL	UA_SSAC2_2W_2L_U_WL	UA_SSAC2_2W_2L_U_WL	Principal Arterial - Other - Urban	DeLand	19,150	0.98	DeLand	-	-	1,410	2
US 17/92	Plymouth Ave. to US 92/ISB	66	FDOT	Yes	0.83	45	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	42,190	0.57	C	-	-	3,790	4
US 17	US 92 to Mercers Fernery Rd.	1000	FDOT	Yes	0.68	45	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	42,190	0.79	C	-	-	3,790	4
US 17	Mercers Fernery Rd. to Glenwood Rd	69	FDOT	Yes	0.51	55	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.55	C	1,170	1,890	3,580	4
US 17	Glenwood Rd. to SR 15A/CR 15A	236	FDOT	Yes	1.64	55	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.40	C	-	-	3,580	4
US 17	SR 15A/CR 15A to Reynolds Rd	476	FDOT	Yes	2.76	45	N+S	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	Principal Arterial - Other - Urban	D	66,200	0.30	B	1,320	1,680	5,960	4
US 17	Reynolds Rd to Spring Garden Ranch	519	FDOT	Yes	1.09	55	N+S	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	Principal Arterial - Other - Urban	D	24,200	0.48	B	-	-	2,180	2
US 17	Spring Garden Ranch Rd. to Lake Wi	104	FDOT	Yes	0.56	45	N+S	TA_UFH_2W_2L_U_WL	TA_UFH_2W_2L_U_WL	TA_UFH_2W_2L_U_WL	TA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	Principal Arterial - Other - Urban	D	24,200	0.39	B	-	-	2,180	2
US 17	Lake Winona Rd. to SR 40	104	FDOT	Yes	4.93	45	N+S	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	Principal Arterial - Other - Rural	D	18,000	0.52	B	-	-	1,620	2
US 17	SR 40 to Washington Ave.	448	FDOT	Yes	5.02	45	N+S	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	Principal Arterial - Other - Rural	C	15,700	0.50	B	760	770	1,490	2
US 17	Washington Ave. to CR 305/Lk Geor	46	FDOT	Yes	5.28	55	N+S	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	Principal Arterial - Other - Rural	C	15,700	0.37	B	-	-	1,490	2
US 17	CR 305/Lk George Rd to Putnam Co	280	FDOT	Yes	3.41	60	N+S	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	Principal Arterial - Other - Rural	C	18,000	0.33	B	510	510	1,620	2
US 92	US 17 to Jacobs Rd.	1001	FDOT	Yes	1.41	45	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.67	C	-	-	3,580	4
US 92	Jacobs Rd. to Kepler Rd.	5	FDOT	Yes	1.23	45	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.60	C	1,580	1,880	3,580	4
US 92	Kepler Rd. to Old Daytona Rd.	9925	FDOT	Yes	1.32	65	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.40	C	-	-	3,580	4
US 92	Old Daytona Rd. to Red John Dr.	9925	FDOT	Yes	7.20	55	E+W	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RUA_UFH_2W_4L_D_WL	Principal Arterial - Other - Urban/Rural	C	44,900	0.35	B	-	-	4,270	4
US 92	Red John Dr. to I-4 EB Ramp	478	FDOT	Yes	2.26	55	E+W	TA_S2WAC1_2W_4L_D_WL	TA_S2WAC1_2W_4L_D_WL	TA_S2WAC1_2W_4L_D_WL	TA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.43	C	-	-	3,580	4
US 92	I-4 EB Ramp to LPGA Blvd.	478	FDOT	Yes	0.58	55	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.43	C	-	-	3,580	4
US 92	LPGA Blvd. to I-95	532	FDOT	Yes	2.03	55	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.77	C	-	-	3,580	4
US 92	I-95 to Williamson Blvd.	508	FDOT	Yes	0.71	50	E+W	UA_S2WAC1_2W_8L_D_WL	UA_S2WAC2_2W_8L_D_WL	UA_S2WAC2_2W_8L_D_WL	UA_S2WAC2_2W_8L_D_WL	UA_SSAC1_2W_8L_D_WL	UA_SSAC1_2W_8L_D_WL	Principal Arterial - Other - Urban	C	78,800	0.50	C	3,180	3,290	7,090	8
US 92	Williamson Blvd. to Bill France Blvd.	5172	FDOT	Yes	1.13	50	E+W	UA_S2WAC1_2W_8L_D_WL	UA_S2WAC2_2W_8L_D_WL	UA_S2WAC2_2W_8L_D_WL	UA_S2WAC2_2W_8L_D_WL	UA_SSAC1_2W_8L_D_WL	UA_SSAC1_2W_8L_D_WL	Principal Arterial - Other - Urban	C	78,800	0.58	C	-	-	7,090	8
US 92	Bill France Blvd. to SR 483/Clyde Mo	5094	FDOT	Yes	0.86	50	E+W	UA_S2WAC1_2W_8L_D_WL	UA_S2WAC2_2W_8L_D_WL	UA_S2WAC2_2W_8L_D_WL	UA_S2WAC2_2W_8L_D_WL	UA_SSAC1_2W_8L_D_WL	UA_SSAC1_2W_8L_D_WL	Principal Arterial - Other - Urban	D	78,800	0.50	C	2,620	3,270	7,210	8
US 92	SR 483/Clyde Morris Blvd. to SR 5A/I	5096	FDOT	Yes	0.93	45	E+W	UA_S2WAC1_2W_6L_D_WL	UA_S2WAC2_2W_6L_D_WL	UA_S2WAC2_2W_6L_D_WL	UA_S2WAC2_2W_6L_D_WL	UA_SSAC1_2W_6L_D_WL	UA_SSAC1_2W_6L_D_WL	Principal Arterial - Other - Urban	D	59,900	0.60	C	2,570	2,800	5,390	6
US 92	SR 5A/Nova Rd. to Martin Luther Kin	5099	FDOT	Yes	0.78	40	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.57	C	-	-	3,580	4
US 92	Martin Luther King Blvd. to US 1	5104	FDOT	Yes	0.38	40	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.57	C	1,410	1,620	3,580	4
US 92	US 1 to Beach St.	5105	FDOT	Yes	0.23	30	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	Principal Arterial - Other - Urban	D	32,400	0.46	D	-	-	2,920	4
US 92	Beach St. to SR 441/Peninsula Dr.	337	FDOT	Yes	0.88	40	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.43	C	-	-	3,580	4
US 92	SR 441/Peninsula Dr. to SR A1A/Atla	5109	FDOT	Yes	0.30	30	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	Principal Arterial - Other - Urban	D	32,400	0.28	C	480	740	2,920	4
SR A1A - Dunlawton Ave.	US 1 to SR A1A/Atlantic Ave.	427	FDOT	Yes	1.25	35	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	Principal Arterial - Other - Urban	D	32,400	0.82	D	-	-	2,920	4
SR A1A - Atlantic Ave. So	SRA1A/Dunlawton Ave. to Van Ave.	477	FDOT	Yes	1.05	35	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	Principal Arterial - Other - Urban	D	32,400	0.44	D	-	-	2,920	4
SR A1A - Atlantic Ave. So	Van Ave. to Florida Shores	5179	FDOT	Yes	1.29	35	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	Principal Arterial - Other - Urban	D	32,400	0.41	D	840	1,120	2,920	4
SR A1A - Atlantic Ave. So	Florida Shores to Silver Beach Ave.	436	FDOT	Yes	2.34	35	N+S	UA_

Road Name	Limits (From - To)	Count Station Number	Roadway Maintaining Agency	2021 Roadway on County's Thoroughfare	Distance (in miles)	Posted Speed							2021 QLOS Facility Type	2010 Federal Functional Classification	VC 2022 Allowable LOS	DAILY 2022 LOS Capacity	DAILY 2021 V/C Ratio	DAILY 2022 LOS	2022 AM Peak	2022 PM Peak	PEAK 2Way 2022 LOS Capacity	2021 No. of Lanes
Rd_Name	Limits	Cnt_Sta	MainRes	Tfare21	Distance	SPD2013	Direction	F_Type_08	F_Type_09	F_Type_10	F_Type_11	F_Type_14	F_Type_21	Fun_Class_2010	VCA_LOS_22	Cap_22	VCRatio_22	LOS_22	AMPKHR_22	PMPKHR_22	2W_Cap_22	Lanes_20
SR 15A	CR 92 to Glenwood Rd.	465	FDOT	Yes	1.20	50	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.34	C	-	-	3,580	4
SR 15A	Glenwood Rd. to US 17	466	FDOT	Yes	1.11	50	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.35	C	-	-	3,580	4
SR 40	Lake County to Emporia Rd.	533	FDOT	Yes	0.86	55	E+W	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	Principal Arterial - Other - Rural	C	15,700	0.59	B	-	-	1,490	2
SR 40	Emporia Rd. to US 17	344	FDOT	Yes	5.58	55	E+W	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	Principal Arterial - Other - Rural	C	15,700	0.55	B	550	660	1,490	2
SR 40	US 17 to SR 11	530	FDOT	Yes	6.69	60	E+W	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	Principal Arterial - Other - Rural	C	8,600	0.86	C	-	-	820	2
SR 40	SR 11 to Pinto Lane	530	FDOT	Yes	6.83	60	E+W	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	Principal Arterial - Other - Rural	C	8,600	0.86	C	-	-	820	2
SR 40	Pinto Lane to Rima Ridge Rd (urban	523	FDOT	Yes	1.25	60	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	Principal Arterial - Other - Urban/Rural	C	42,300	0.17	B	-	-	4,020	4
SR 40	Rima Ridge Rd to Tymber Creek Rd.	499	FDOT	Yes	4.36	60	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.34	C	-	-	3,580	4
SR 40	Tymber Creek Rd. to I-95	499	FDOT	Yes	0.79	50	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.67	C	-	-	3,580	4
SR 40	I-95 to Clyde Morris Blvd.	522	FDOT	Yes	1.58	50	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.90	C	-	-	3,580	4
SR 40	Clyde Morris Blvd. to SR 5A/Nova Rd	489	FDOT	Yes	1.06	50	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.90	C	-	-	3,580	4
SR 40	SR5A/Nova Rd. to US 1	1020	FDOT	Yes	1.33	45	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.78	C	-	-	3,580	4
SR 40	US 1 to Halifax Ave.	171	FDOT	Yes	1.11	35	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	Principal Arterial - Other - Urban	D	32,400	1.10	F	3,030	3,380	2,920	4
SR 40	Halifax Ave. to SR A1A	5128	FDOT	Yes	0.37	35	E+W	UA_S2WAC2_2W_4L_U_WL	UA_S2WAC2_2W_4L_U_WL	UA_S2WAC2_2W_4L_U_WL	UA_S2WAC2_2W_4L_U_WL	UA_SSAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	Principal Arterial - Other - Urban	D	32,400	0.66	D	-	-	2,920	4
SR 44	Lake Co. to Shell Rd.	1007	FDOT	Yes	1.19	55	E+W	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	Principal Arterial - Other - Rural	C	15,700	0.89	C	-	-	1,490	2
SR 44	Shell Rd. to Grand Ave.	1007	FDOT	Yes	1.26	45	E+W	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	Principal Arterial - Other - Urban	D	24,200	0.57	C	-	-	2,180	2
SR 44	Grand Ave. to Old New York/Hazen F	1007	FDOT	Yes	0.70	55	E+W	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	Principal Arterial - Other - Urban	D	24,200	0.60	C	-	-	2,180	2
SR 44	Old New York/Hazen Rd. to SR 15A/	274	FDOT	Yes	0.71	40	E+W	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	Principal Arterial - Other - Urban	D	24,200	0.60	C	900	1,180	2,180	2
SR 44	SR 15A/Spring Garden Ave. to Stone	447	FDOT	Yes	0.50	40	E+W	UA_S2WAC2_2W_2L_U_WL	UA_S2WAC2_2W_2L_U_WL	UA_S2WAC2_2W_2L_U_WL	UA_S2WAC2_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	Principal Arterial - Other - Urban	E	18,939	0.62	C	-	-	1,712	2
SR 44	Stone St. to Clara Ave.	5012	FDOT	Yes	0.51	35-40	E+W	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC2_2W_2L_U_WL	UA_S2WAC2_2W_2L_U_WL	UA_S2WAC2_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	Principal Arterial - Other - Urban	E	18,939	0.60	C	730	910	1,712	2
SR 44	Clara Ave. to Amelia Ave.	5015	FDOT	Yes	0.50	25-35	E+W	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC2_2W_2L_U_WL	UA_S2WAC2_2W_2L_U_WL	UA_S2WAC2_2W_2L_U_WL	UA_SSAC2_2W_2L_U_WL	UA_SSAC2_2W_2L_U_WL	Principal Arterial - Other - Urban	E	14,800	0.50	D	-	-	1,410	2
SR 44	Amelia Ave. to Hill Ave.	80	FDOT	Yes	1.00	35/40/45	E+W	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	Principal Arterial - Other - Urban	E	18,939	0.70	C	-	-	1,712	2
SR 44	Hill Ave. to Blue Lake Ave.	80	FDOT	Yes	0.51	45	E+W	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	Principal Arterial - Other - Urban	DeLand	19,800	0.67		-	-	1,712	2
SR 44	Blue Lake Ave. to Kepler Rd.	19	FDOT	Yes	0.94	45	E+W	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	Principal Arterial - Other - Urban	DeLand	20,800	0.87		-	-	1,712	2
SR 44	Kepler Rd. to Summit Ave.	259	FDOT	Yes	1.18	45-50	E+W	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	Principal Arterial - Other - Urban	DeLand	19,800	1.11		-	-	1,712	2
SR 44	Summit Ave. to I-4	538	FDOT	Yes	0.98	45	E+W	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.59	C	-	-	3,580	4
SR 44	I-4 to Prevatt Ave.	480	FDOT	Yes	0.74	55	E+W	TA_UFH_2W_4L_D_WL	TA_UFH_2W_4L_D_WL	TA_UFH_2W_4L_D_WL	TA_UFH_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.41	C	1,630	1,820	3,580	4
SR 44	Prevatt Ave. to Pioneer Tr.	41	FDOT	Yes	5.93	65	E+W	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RUA_UFH_2W_4L_D_WL	Principal Arterial - Other - Rural	C	44,900	0.42	B	1,510	1,700	4,270	4
SR 44	Pioneer Tr. to SR 415/CR 415	1011	FDOT	Yes	3.56	65	E+W	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RUA_UFH_2W_4L_D_WL	Principal Arterial - Other - Rural	C	44,900	0.37	B	-	-	4,270	4
SR 44	SR 415/CR 415 to Samsula Dr.	1012	FDOT	Yes	1.14	65	E+W	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	Principal Arterial - Other - Rural	C	42,300	0.53	B	-	-	4,020	4
SR 44	Samsula Dr. to Airport Rd	423	FDOT	Yes	1.70	65	E+W	TA_UFH_2W_4L_D_WL	TA_UFH_2W_4L_D_WL	TA_UFH_2W_4L_D_WL	TA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	Principal Arterial - Other - Urban/Rural	C	42,300	0.36	B	1,140	1,490	4,020	4
SR 44	Airport Rd. to I-95	423	FDOT	Yes	2.05	65	E+W	TA_UFH_2W_4L_D_WL	TA_UFH_2W_4L_D_WL	TA_UFH_2W_4L_D_WL	TA_UFH_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.39	C	1,140	1,490	3,580	4
SR 44	I-95 to Mission Dr	515	FDOT	Yes	2.83	55	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.90	C	-	-	3,580	4
SR 44	Mission Dr. to Live Oak	514	FDOT	Yes	1.35	45	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.57	C	-	-	3,580	4
SR 44/SR A1A/S Causew	Live Oak to Peninsula Ave.	207	FDOT	Yes	1.30	50	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.65	C	-	-	3,580	4
SR 44/SR A1A/S Causew	Peninsula Ave. to Saxon Dr.	5180	FDOT	Yes	0.35	40	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.55	C	-	-	3,580	4
SR 44/SR A1A/3rd Ave/A	Saxon Dr. to 6th Ave	5043	FDOT	Yes	0.50	40	E+W	UA_S2WAC1_2W_4L_U_WL	UA_S2WAC1_2W_4L_U_WL	UA_S2WAC1_2W_4L_U_WL	UA_S2WAC1_2W_4L_U_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.34	C	900	1,030	3,580	4
SR 44 (Business) - Canal S	SR 44/Lytle St to Pioneer Trail	516	FDOT	Yes	0.17	40	E+W	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	Minor Arterial - Urban	D	17,700	0.69	C	820	950	1,600	2
SR 44 (Business) - Canal S	Pioneer Tr. to US 1	111	FDOT	Yes	0.76	40	E+W	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	Minor Arterial - Urban	D	17,700	0.73	C	840	1,030	1,600	2
SR 46	Seminole Co. to Brevard Co.	0416-B	FDOT	Yes	5.44	55	E+W	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	Principal Arterial - Other - Rural	C	18,000	0.27	B	-	-	1,620	2
SR 400 - Beville Rd.	I-95 to Williamson Blvd.	501	FDOT	Yes	0.28	55	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_6L_D_WL	Principal Arterial - Other - Urban	D	59,900	0.44	C	-	-	5,390	6
SR 400 - Beville Rd.	Williamson Blvd. to SR 483/Clyde Mo	5189	FDOT	Yes	1.91	55	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.63	C	-	-	3,580	4
SR 400 - Beville Rd.	SR 483/Clyde Morris Blvd. to SR 5A/I	511	FDOT	Yes	0.68	45	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.75	C	-	-	3,580	4
SR 400 - Beville Rd.	SR 5A/Nova Rd. to US 1	502	FDOT	Yes	1.34	45	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.58	C	-	-	3,580	4
SR 415	Seminole Co. to Enterprise-Osteen R	25	FDOT	Yes	4.39	55	N+S	TA_UFH_2W_2L_U_WL	TA_UFH_2W_2L_U_WL	TA_UFH_2W_2L_U_WL	TA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_4L_D_WL	Minor Arterial - Urban/Rural	D	66,200	0.40	D	-	-	5,960	4
SR 415	Enterprise-Osteen Rd. to Howland Bl	437	FDOT	Yes	1.83	45	N+S	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_SSAC1_2W_4L_D_WL	Minor Arterial - Urban	D	39,800	0.52	C	1,500	1,860	3,580	4
SR 415	Howland Blvd. to Acorn Lake Rd	321	FDOT	Yes	0.88	45	N+S	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_SSAC1_2W_4L_D_WL	Minor Arterial - Urban	D	39,800	0.25	C	-	-	3,580	4
SR 415	Acorn Lake Rd to SR 44	1009	FDOT	Yes	10.49	55	N+S	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	Minor Arterial - Rural	C	18,000	0.62	C	-	-	1,620	2
SR 421 - Dunlawton Ave.	Williamson to Clyde Morris Blvd.	517	FDOT	Yes	1.07	45	E+W	UA_S2WAC1_2W_6L_D_WL	UA_S2WAC2_2W_6L_D_WL	UA_S2WAC2_2W_6L_D_WL	UA_S2WAC2_2W_6L_D_WL	UA_SSAC1_2W_6L_D_WL	UA_SSAC1_2W_6L_D_WL	Principal Arterial - Other - Urban	D	59,900	0.91	C	-	-	5,390	6
SR 421 - Dunlawton Ave.	Clyde Morris Blvd. to SR 5A/Nova Rd	1014	FDOT	Yes	1.31	50	E+W	UA_S2WAC2_2W_6L_D_WL	UA_S2WAC2_2W_6L_D_WL	UA_S2WAC2_2W_6L_D_WL	UA_S2WAC2_2W_6L_D_WL	UA_SSAC1_2W_6L_D_WL	UA_SSAC1_2W_6L_D_WL	Principal Arterial - Other - Urban	D	59,900	0.73	C	-	-	5,390	6
SR 421 - Dunlawton Ave.	SR5A/Nova Rd. to Spruce Creek Rd.	1015	FDOT	Yes	0.91	45	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.77	C	-	-	3,580	4
SR 421 - Dunlawton Ave.	Spruce Creek Rd. to US 1	5181	FDOT	Yes	0.71	45	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.67	C	-	-	3,580	4
SR 430 - Mason Ave.	SR 483/Clyde Morris Blvd. to SR 5A/I	5197	FDOT	Yes	0.99	35	E+W	UA_S2WAC1_2W_4L_U_0L	UA_S2WAC2_2W_4L_U_0L	UA_S2WAC2_2W_4L_U_0L	UA_S2WAC2_2W_4L_U_0L	UA_SSAC2_2W_4L_U_0L	UA_SSAC2_2W_4L_U_0L	Minor Arterial - Urban	D	24,300	0.81	D	1,330	1,480	2,190	4
SR 430 - Mason Ave.	SR 5A/Nova Rd. to US 1	5197	FDOT	Yes	1.08	35	E+W	UA_S2WAC1_2W_4L_U_0L	UA_S2WAC2_2W_4L_U_0L	UA_S2WAC2_2W_4L_U_0L	UA_S2WAC2_2W_4L_U_0L	UA_SSAC2_2W_4L_U_0L	UA_SSAC2_2W_4L_U_0L	Minor Arterial - Urban	D	24,300	0.81	D	1,330	1,480	2,190	4
SR 430 - Mason Ave.	US 1 to Beach St.	5197	FDOT	Yes	0.30	35	E+W	UA_S2WAC1_2W_4L_U_0L	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	Minor Arterial - Urban	D	32,400	0.60	D	1,330	1,480	2,920	4
SR 430 - Oakridge Blvd. -	Beach St. to Peninsula Dr	5196E	FDOT	Yes	0.70	40	E+W	UA_S2WAC1_1W_2L_D_WL	UA_S2WAC1_1W_2L_D_WL	UA_S2WAC1_1W_2L_D_WL	UA_S2WAC1_1W_2L_D_WL	UA_SSAC1_1W_2L_D_WL	UA_SSAC1_1W_2L_D_WL	Minor Arterial - Urban	D	23,880	0.39	C	-	-	2,150	2
SR 430 - Oakridge Blvd. -	Peninsula Dr to SR A1A/Atlantic	5195	FDOT	Yes	0.28	40	E+W	UA_S2WAC1_1W_2L_D_WL	UA_S2WAC1_1W_2L_D_WL	UA_S2WAC1_1W_2L_D_WL	UA_S2WAC1_1W_2L_D_WL	UA_SSAC1_1W_2L_D_WL	UA_SSAC1_1W_2L_D_WL	Minor Arterial - Urban	D	23,880	0.25	C	-	-	2,150	2
SR 430 - Seabreeze Brid	Beach St. to Peninsula Dr	5196W	FDOT	Yes	1.01	40	E+W	UA_S2WAC1_1W_2L_D_WL	UA_S2WAC1_1W_2L_D_WL	UA_S2WAC1_1W_2L_D_WL	UA_S2WAC1_1W_2L_D_WL	UA_SSAC1_1W_2L_D_WL	UA_SSAC1_1W_2L_D_WL	Minor Arterial - Urban	D	23,880	0.42	C	-	-	2,150	2
SR 430 - Seabreeze Brid	Peninsula Dr to SR A1A/Atlantic	5191	FDOT	Yes	0.29	30	E+W	UA_S2WAC1_1W_2L_D_WL	UA_S2WAC1_1W_2L_D_WL	UA_S2WAC1_1W_2L_D_WL	UA_S2WAC1_1W_2L_D_WL	UA_SSAC2_1W_2L_D_WL	UA_SSAC2_1W_2L_D_WL	Minor Arterial - Urban	D	19,440	0.57	C	-	-	1,750	2
SR 441 - Peninsula Dr.	SR A1A/Dunlawton to Florida Shores	5188	FDOT	Yes	2.42	40	N+S	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	Minor Arterial - Urban	D	17,700	0.33	C	-	-	1,600	2
SR 441 - Peninsula Dr.	Florida Shores to Silver Beach Ave.	5187	FDOT	Yes	2.34	35	N+S	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	Minor Arterial - Urban	D	17,700	0.47	C	-	-	1,600	2
SR 441 - Peninsula Dr.	Silver Beach Ave. to US 92/ISB	5187	FDOT	Yes	0.65	35	N+S	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	Minor Arterial - Urban	D	17,700	0.47	C	-	-	1,600	2
SR 442 - Indian River Blvd	I-95 to Air Park Rd.	170	FDOT	Yes	2.09	55	E+W	TA_S2WAC1_2W_4L_D_WL	TA_S2WAC1_2W_4L_D_WL	TA_S2WAC1_2W_4L_D_WL	TA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Minor Arterial - Urban	D	39,800	0.36	C	-	-	3,580	4
SR 442 - Indian River Blvd	Air Park Rd. to US 1	5190	FDOT	Yes	1.69	45	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Minor Arterial - Urban	D	39,800	0.48	C	-	-	3,580	4
SR 472	US 17/92 to CR 4101/MLK Blvd	472	FDOT	Yes	2.31	60	E+W	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	Principal Arterial - Other - Urban	D	66,200	0.36	B	-	-	5,960	4
SR 472	CR 4101/MLK Blvd to I-4 (end of stat	535	FDOT	Yes	1.10	60	E+W	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.80	C	2,300	2,710	3,580	4
SR 483 - Clyde Morris BV	SR 400/Beville Rd. to Aviation Ctr Pk	5193	FDOT	Yes	0.98	45	N+S	UA_S2WAC1_2W_4L_U_WL	UA_S2WAC1_2W_4L_U_WL	UA_S2WAC1_2W_4L_U_WL	UA_S2WAC1_2W_4L_U_WL	UA_S2WAC1_2W_4L_U_WL	UA_SSAC1_2W_4L_U_WL	Principal Arterial - Other - Urban	D	37,800	0.73	C	-	-	3,400	4
SR 483 - Clyde Morris BV	Aviation Ctr Pkwy/Bellevue to US 92/	5193	FDOT	Yes	1.20	45	N+S	UA_S2WAC1_2W_4L_U_WL	UA_S2WAC1_2W_4L_U_WL	UA_S2WAC1_2W_4L_U_WL	UA_S2WAC1_2W_4L_U_WL	UA_S2WAC1_2W_4L_U_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.69	C	-	-	3,580	4
SR 483 - Clyde Morris BV	US 92/ISB to SR 430/Mason Ave.	5182	FDOT	Yes	1.20	45	N+S	UA_S2WAC1_2W_4L_U_WL	UA_S2WAC1_2W_4L_U_WL	UA_S2WAC1_2W_4L_U_WL	UA_S2WAC1_2W_4L_U_WL	UA_S2WAC1_2W_4L_U_WL	UA_SSAC1_2W_4L_U_WL	Principal Arterial - Other - Urban	D	37,800	0.55	C	-	-	3,400	4
6th St.	Derbyshire Rd. to SR 5A/Nova Rd	11	County		0.50	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_

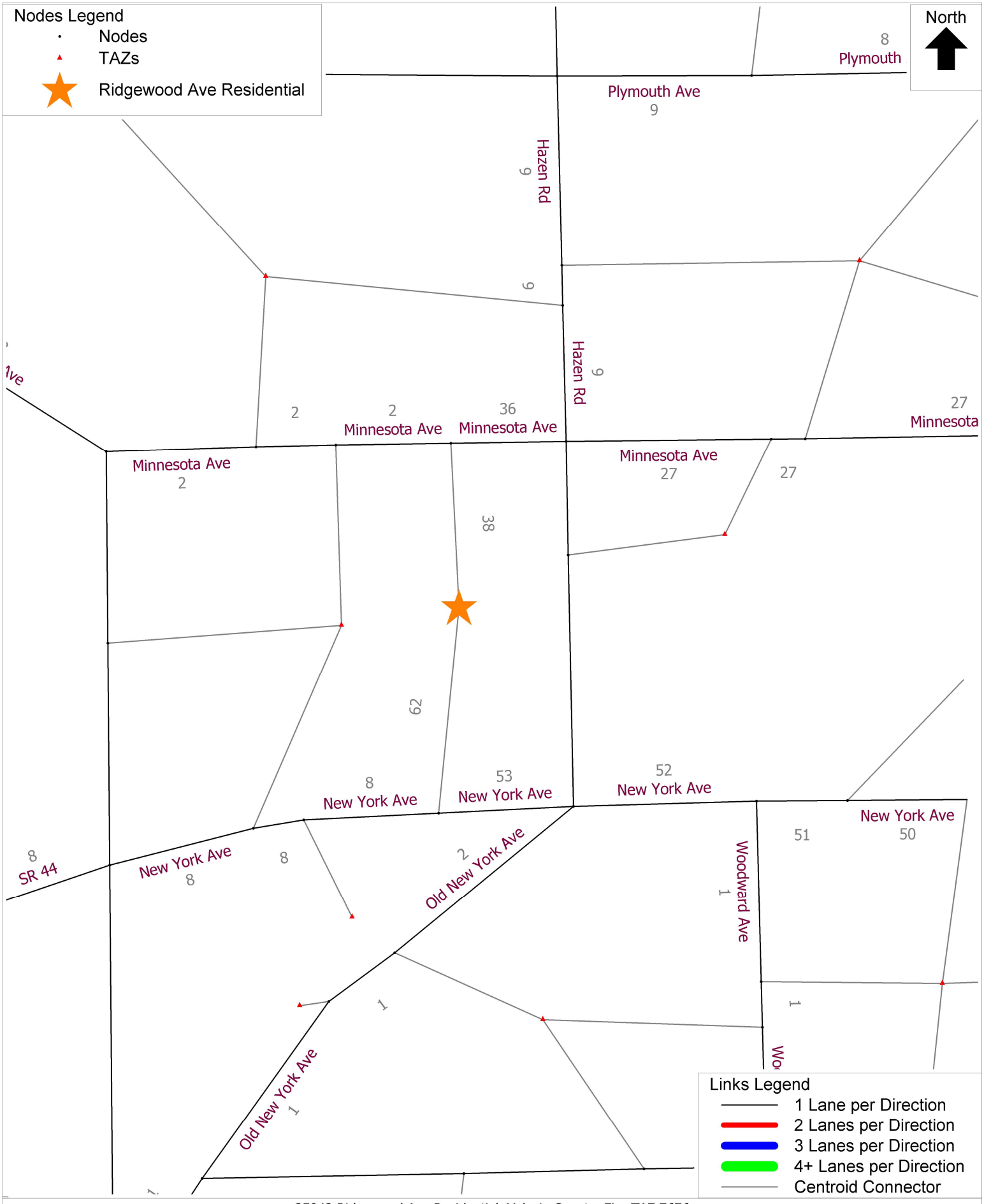
Road Name	Limits (From - To)	Count Station Number	Roadway Maintaining Agency	2021 Roadway on County's Thoroughfare	Distance (in miles)	Posted Speed							2021 QLOS Facility Type	2010 Federal Functional Classification	VC 2022 Allowable LOS	DAILY 2022 LOS Capacity	DAILY 2021 V/C Ratio	DAILY 2022 LOS	2022 AM Peak	2022 PM Peak	PEAK 2Way 2022 LOS Capacity	2021 No. of Lanes
Rd_Name	Limits	Cnt_Sta	MainRes	Tfare21	Distance	SPD2013	Direction	F_Type_08	F_Type_09	F_Type_10	F_Type_11	F_Type_14	F_Type_21	Fun_Class_2010	VCA_LOS_22	Cap_22	VCRatio_22	LOS_22	AMPKHR_22	PMPKHR_22	2W_Cap_22	Lanes_20
Beach/Riverside/Beach (C	SR 40 to Wilmette Ave.	132	County	Yes	0.70	35	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	16,000	0.54	D	580	725	1,440	2
Beach/Riverside/Beach (C	Wilmette Ave. to Inglesa Ave.	135	County	Yes	2.55	35	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	16,000	0.43	D	610	710	1,440	2
Beach/Riverside/Beach (C	Inglesa Ave to Pine Tree Dr.	137	County	Yes	1.10	35	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	16,000	0.18	C	170	250	1,440	2
Beacon Light Rd.	Halifax Ave. to Ariel Rd.	140	County	Yes	2.75	35	N+S	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Minor Collector - Rural	C	6,450	0.05	B	25	35	620	2
Beacon Light Rd.	Ariel Rd. to Volco Rd.	141	County	Yes	1.25	35	N+S	TA_NSOSRS_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Minor Collector - Rural	C	6,450	0.09	B	40	55	620	2
Bellevue Ave. Extension	CR 415/Tomoka Farms Rd to William	151	County	Yes	0.50	35	E+W	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.52	D	500	580	1,020	2
Bellevue Ave. Extension	Williamson Blvd to SR 483/Clyde Mo	153	County	Yes	2.50	45	E+W	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.23	C	220	295	1,230	2
Beresford Ave.	Beresford Rd. to Fatio Rd	161	County	Yes	0.70	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.16	C	175	220	1,020	2
Beresford Ave.	Fatio Rd. to SR 15A	162	County	Yes	1.30	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.30	C	240	350	1,020	2
Beresford Ave.	SR 15A to US 17/92	164	County	Yes	1.75	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.34	C	250	400	1,020	2
Beresford Ave.	US 17/92 to Amelia Ave	165	County	Yes	0.25	35	E+W	UA_NSOSRS_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	Major Collector - Urban	E	14,740	0.73	D	590	895	1,330	2
Beresford Ave.	Amelia Ave. to Hill Ave.	167	County	Yes	1.00	40	E+W	UA_NSOSRS_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC1_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	Major Collector - Urban	E	17,900	0.37	C	390	590	1,620	2
Beresford Ave.	Hill Ave. to Blue Lake Ave.	169	County	Yes	1.35	40	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.31	C	260	400	1,230	2
Beresford Ave.	Blue Lake Ave. to MLK (Kepler Rd.)	Future Rd-17	County	Yes	0.80	40	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Future - Major Collector - Urban	E	13,640	-	-	-	-	1,230	0
Beresford Ave.	MLK (Kepler Rd.) to SR 44	Future Rd-17	County	Yes	0.75	40	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Future - Major Collector - Urban	E	13,640	-	-	-	-	1,230	0
Beresford Rd.	SR 15A to Spring Garden Ave.	180	County		0.40	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.04	C	45	55	1,020	2
Beresford Rd.	Spring Garden Ave. to Fatio Rd.	181	County		0.75	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.07	C	60	85	1,020	2
Beresford Rd.	Fatio Rd.. to Beresford Ave	182	County		1.30	30	E+W	TA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.14	C	125	210	1,020	2
Beresford Rd.	Beresford Ave. to Old New York Ave.	183	County	Yes	0.30	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.25	C	250	365	1,020	2
Big Tree Rd.	Clyde Morris Blvd. to Nova Rd.	192	County	Yes	1.10	35	E+W	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.46	D	375	545	1,020	2
Big Tree Rd.	Nova Rd. to Magnolia Ave.	193	County	Yes	0.40	35	E+W	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	Minor Collector - Urban	E	14,740	0.82	D	750	1,050	1,330	2
Big Tree Rd.	Magnolia Ave. to Kenilworth Ave.	195	County	Yes	0.45	35	E+W	UA_NSOSRS_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	Minor Collector - Urban	E	14,740	0.70	D	630	945	1,330	3
Big Tree Rd.	Kenilworth Ave. to US 1	196	County	Yes	0.55	35	E+W	UA_NSOSRS_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	Minor Collector - Urban	E	14,740	0.51	D	230	605	1,330	3
Blackburn Rd.	CR 3 to Emporia Rd	211	County		1.25	35	N+S	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Minor Collector - Rural	C	6,450	0.10	B	55	65	620	2
Blackwelder Rd.	Lake Winona Rd. to SR 11	221	County		3.25	35	E+W	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Local	C	6,450	0.04	B	20	25	620	2
Blue Lake Ave.	SR 472 to Orange Camp Rd	Future Rd-22	County	Yes	1.05	45	N+S	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Major Collector - Urban	E	17,050	-	-	-	-	1,540	2
Blue Lake Ave.	Orange Camp Rd. to Taylor Rd.	231	County	Yes	1.05	45	N+S	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Major Collector - Urban	E	17,050	0.31	C	565	455	1,540	2
Blue Lake Ave.	Taylor Rd. to Beresford Ave.	232	County	Yes	1.05	45	N+S	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.56	C	650	740	1,230	2
Blue Lake Ave.	Beresford Ave. to Voorhis Ave.	234	County	Yes	0.75	30	N+S	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.38	C	320	585	1,020	2
Blue Lake Ave.	Voorhis Ave. to SR 44	235	County	Yes	0.25	30	N+S	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.27	C	230	370	1,020	2
Blue Lake Ave.	SR 44 to Minnesota Ave.	236	County	Yes	0.55	30	N+S	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.39	D	320	490	1,020	2
Blue Lake Ave.	Minnesota Ave. to Plymouth Ave.	237	County	Yes	1.00	40	N+S	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.55	C	625	695	1,230	2
Blue Springs Av (West)	Sparkman Dr to Lawton Dr	239	County		0.60	35	E+W	UA_NSOSRS_2W_2L_U_WL	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.36	C	500	450	1,020	2
Brownlee Rd.	Raulerson Rd. #1 to Raulerson Rd.	240	County		1.70	35	N+S	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Local	C	6,450	0.03	B	15	20	620	2
Cardinal Blvd.	SR 421/Dunlawton Ave. to Demotte A	245	County		0.15	30	N+S	UA_NSOSRS_2W_2L_U_WL	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.10	C	80	130	1,020	2
Cardinal Blvd.	Demotte Ave. to Marcelle Ave	260	County		0.90	30	N+S	UA_NSOSRS_2W_2L_U_WL	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.41	D	330	485	1,020	2
Cardinal Blvd.	Marcelle Ave to Major St.	261	County		1.00	30	N+S	UA_NSOSRS_2W_2L_U_WL	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	0.06	C	45	80	1,020	2
Carter Rd.	SR 11 to Marsh Rd.	270	County		1.75	40	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Local	E	13,640	0.13	C	120	160	1,230	2
Cassadaga Rd.	W. Volusia Bltwy. to Macy Ave.	280	County	Yes	1.80	30	N+S	UA_UFH_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.18	C	140	210	1,020	2
Clara Ave.	SR 15A to New Hampshire Ave.	301	County		0.50	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.16	C	135	220	1,020	2
Clara Ave.	New Hampshire Ave. to Beresford Av	303	County		0.50	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.22	C	210	270	1,020	2
Clifton Rd.	Lake Winona Rd. to SR 11	311	County		1.70	30	E+W	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Local	C	6,450	0.03	B	20	25	620	2
Clyde Morris Blvd.	Taylor Rd. to SR 421/Dunlawton Ave	330	County	Yes	0.95	40	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Minor Arterial - Urban	E	17,050	0.62	C	1,190	900	1,540	2
Clyde Morris Blvd.	SR 421/Dunlawton Ave. to Willow Ru	332	County	Yes	0.65	45	N+S	UA_NSMCRS_2W_4L_U_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.53	C	1,250	1,575	3,410	4
Clyde Morris Blvd.	Willow Run Blvd. to Madeline Ave.	333	County	Yes	1.30	45	N+S	UA_NSMCRS_2W_4L_U_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.60	C	1,390	1,900	3,410	4
Clyde Morris Blvd.	Madeline Ave. to Big Tree Rd.	335	County	Yes	1.00	45	N+S	UA_NSMCRS_2W_4L_U_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.60	C	1,360	1,865	3,410	4
Clyde Morris Blvd.	Big Tree Rd. to SR 400/Beville Rd.	337	County	Yes	0.90	45	N+S	UA_NSMCRS_2W_4L_U_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_U_WL	Principal Arterial - Other - Urban	E	36,070	0.59	C	1,260	1,785	3,240	4
Clyde Morris Blvd.	SR 430/Mason Ave. to Bill France Bl	338	County	Yes	0.60	45	N+S	UA_NSMCRS_2W_4L_U_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.41	C	1,050	1,140	3,410	4
Clyde Morris Blvd.	Bill France Blvd. to LPGA Blvd.	341	County	Yes	1.25	50	N+S	UA_NSMCRS_2W_4L_U_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.48	C	1,160	1,455	3,410	4
Clyde Morris Blvd.	LPGA Blvd. to Hand Ave.	343	County	Yes	1.50	50	N+S	UA_NSMCRS_2W_4L_U_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.43	C	1,120	1,270	3,410	4
Clyde Morris Blvd.	Hand Ave to SR 40/Granada Blvd.	348	County	Yes	0.80	35	N+S	UA_NSMCRS_2W_4L_U_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_NSSRC2_2W_4L_D_WL	UA_NSSRC2_2W_4L_D_WL	Principal Arterial - Other - Urban	E	30,420	0.43	C	890	1,050	2,740	4
Commonwealth Blvd.	Spruce Creek Rd. to Orange Ave.	360	County		0.55	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.39	C	355	430	1,020	2
Commonwealth Blvd.	Orange Ave. to US 1	361	County		0.35	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.27	C	250	305	1,020	2
CR 3	Ponce DeLeon Blvd. to Lake Winona	380	County	Yes	0.45	45	N+S	TA_NSMCRS_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Local	E	13,640	0.08	C	80	100	1,230	2
CR 3	Lake Winona Rd. to SR 40	380	County	Yes	5.04	35	N+S	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	Local	C	11,775	0.09	B	80	100	1,230	2
CR 3	SR 40 to Emporia Rd	382	County	Yes	3.40	45	N+S	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	Minor Collector - Rural	C	11,775	0.10	B	115	110	1,230	2
CR 3	Emporia Rd to Washington Ave.	384	County	Yes	1.20	30	N+S	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	Minor Collector - Rural	C	11,775	0.17	B	180	200	1,230	2
CR 3	Washington Ave. to 'US 17	386	County	Yes	2.20	35	N+S	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	Minor Collector - Rural	C	11,775	0.09	B	90	100	1,230	2
CR 15A	US 17 to Airport Rd.	440	County	Yes	0.90	50	N+S	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	Minor Arterial - Urban	E	24,450	0.22	B	325	460	2,200	2
CR 15A	Airport Rd. to SR 11	441	County	Yes	1.25	40	E+W	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	Minor Arterial - Urban	E	24,450	0.12	B	220	265	2,200	2
CR 92 (Intn'l Spdwy Blvd.	SR 15A to Stone St.	450	County	Yes	0.25	45	E+W	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.40	C	890	1,250	3,410	4
CR 92 (Intn'l Spdwy Blvd.	Stone St. to US 17/92	452	County	Yes	0.75	45	E+W	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_NSSRC2_2W_4L_D_WL	UA_NSSRC2_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.43	C	930	1,360	3,410	4
CR 305 (Bunnell Rd.)	US 17 to Cowart Rd.	460	County	Yes	1.50	50	E+W	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Major Collector - Rural	C	6,450	0.35	B	205	250	620	2
CR 305 (Bunnell Rd.)	Cowart Rd. to Flagler Co.	461	County	Yes	3.00	50	E+W	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Major Collector - Rural	C	6,450	0.25	B	180	200	620	2
Cow Creek Rd.	SR 442 to Volco Rd.	420	County	Yes	3.50	50	N+S	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Local	C	6,450	0.16	B	80	90	620	2
Cowart Rd.	Bunnell Rd to Little Brown Church Rd	430	County		2.05	40	N+S	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Local	C	6,450	0.03	B	20	20	620	2
Daugharty Rd. (S. End)	Marsh Rd. to SR 11	470	County	Yes	0.80	35	N+S	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Local	C	6,450	0.08	B	35	50	620	2
Daugharty Rd.	SR 11 to Marsh Rd.	472	County		0.95	35	N+S	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Minor Collector - Rural	C	6,450	0.14	B	60	90	620	2
Demotte Ave.	Peninsula Dr. to Cardinal Blvd	500	County		0.20	25	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.37	C	300	450	1,020	2
Derbyshire Rd.	SR 430/Mason Ave. to LPGA Blvd.	511	County		1.45	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2

Road Name	Limits (From - To)	Count Station Number	Roadway Maintaining Agency	2021 Roadway on County's Thoroughfare	Distance (in miles)	Posted Speed						2021 QLOS Facility Type	2010 Federal Functional Classification	VC 2022 Allowable LOS	DAILY 2022 LOS Capacity	DAILY 2021 V/C Ratio	DAILY 2022 LOS	2022 AM Peak	2022 PM Peak	PEAK 2Way 2022 LOS Capacity	2021 No. of Lanes
Rd_Name	Limits	Cnt_Sta	MainRes	Tfare21	Distance	SPD2013	Direction	F_Type_08	F_Type_09	F_Type_10	F_Type_11	F_Type_14	F_Type_21	Fun_Class_2010	VCA_LOS_22	Cap_22	VCRatio_22	LOS_22	AMPKHR_22	PMPKHR_22	2W_Cap_22	Lanes_20
Enterprise-Osteen Rd.	Garfield Rd to Reed Ellis Rd.	601	County	Yes	1.70	35	E+W	TA_NSOSRS_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.22	C	220	330	1,020	2
Enterprise-Osteen Rd.	Reed Ellis Rd. to SR 415	602	County	Yes	2.50	35	E+W	TA_NSOSRS_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.10	C	100	165	1,020	2
Euclid Ave.	Grand to Fatio Rd.	610	County		0.25	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.09	C	85	125	1,020	2
Euclid Ave.	Fatio Rd. to Woodward Ave.	611	County		0.25	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.11	C	105	145	1,020	2
Euclid Ave.	Woodward Ave. to SR 15A	612	County		0.50	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.19	C	185	220	1,020	2
Euclid Ave.	SR 15A to Adelle Ave.	613	County		0.75	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.20	C	165	260	1,020	2
Euclid Ave.	Adelle Ave. to US 17/92	614	County		0.50	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.15	C	100	185	1,020	2
Flomich St.	Derbyshire Rd. to SR 5A/Nova Rd.	650	County	Yes	0.30	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.39	C	315	455	1,020	2
French Ave.	Beginning of road to Blue Springs Pa	690	County		1.00	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.01	C	15	25	1,020	2
French Ave.	Blue Springs Park to Lawton Ave./Ha	691	County		1.25	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.06	C	10	80	1,020	2
Garfield Ave.	SR 44 to Plymouth Ave.	700	County		1.00	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	0.15	C	130	155	1,020	2
Garfield Ave.	Plymouth Ave. to US 92	702	County		0.85	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	0.19	C	210	240	1,020	2
Garfield Rd.	Doyle Rd. to Enterprise-Osteen Rd	711	County		0.90	40	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.15	C	150	180	1,230	2
Glencoe Rd.	Taylor Rd. to Paige Ave.	730	County		1.50	40	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.20	C	195	245	1,230	2
Glencoe Rd.	Paige Ave. to SR 44	731	County		1.10	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.41	C	440	525	1,020	2
Glencoe Rd.	SR 44 to Pioneer Tr.	732	County		0.85	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.16	C	140	210	1,020	2
Glenwood Rd.	Grand Ave. to SR 15A	741	County		1.60	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.28	C	270	310	1,020	2
Glenwood Rd.	SR 15A to US 17	743	County		1.25	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.15	C	130	180	1,020	2
Grand Av/CR 4053	Old New York Ave. to SR 44	748	County	Yes	0.60	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.17	C	155	250	1,020	2
Grand Av/CR 4053	SR 44 to Minnesota Ave.	750	County	Yes	0.90	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.34	C	315	445	1,020	2
Grand Av/CR 4053	Minnesota Ave. to Plymouth Ave.	751	County	Yes	0.50	40	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.14	C	145	200	1,230	2
Grand Av/CR 4053	Plymouth Ave. to Glenwood Rd.	752	County	Yes	2.10	40	N+S	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.19	C	205	240	1,230	2
Grand Av/CR 4053	Glenwood Rd. to Lemon St.	754	County	Yes	1.30	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	Major Collector - Urban	E	14,740	0.27	C	295	385	1,330	2
Grand Av/CR 4053	Lemon St. to Retta St.	756	County	Yes	1.80	40	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.16	C	160	210	1,230	2
Graves Av/CR 4145	Veteran's Memorial Pkwy. to Kentuck	775	County	Yes	0.30	45	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC2_2W_2L_D_WL	UA_MCCRAC2_2W_2L_D_WL	UA_MCCRAC2_2W_2L_D_WL	UA_NSSRC1_2W_2L_D_WL	UA_NSSRC1_2W_2L_D_WL	Minor Arterial - Urban	E	17,900	1.12	F	1,230	1,635	1,620	2
Graves Av/CR 4145	Kentucky Ave. to Normandy Blvd.	900a	County	Yes	0.60	45	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC1_2W_2L_D_WL	UA_NSSRC1_2W_2L_D_WL	Minor Arterial - Urban	E	17,900	1.10	C	1,420	1,675	1,620	2
Graves Av/CR 4145	Normandy Blvd. to Howland Blvd.	900b	County	Yes	0.25	35	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC1_2W_2L_D_WL	UA_NSSRC2_2W_4L_D_WL	Minor Arterial - Urban	E	30,420	0.53	D	1,140	1,340	2,740	4
Greens Dairy Rd.	SR 15A to Stone St.	780	County		0.50	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local		E	13,640	0.01	C	15	15	1,020	2
Halleck St. (NSB)	Wayne Ave. to Enterprise Ave.	810	County	Yes	0.20	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.52	D	475	575	1,020	2
Hand Ave.	Williamson Blvd. to Clyde Morris Blvd	830	County	Yes	1.25	50	E+W	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Major Collector - Urban	E	17,050	0.54	A	615	775	1,540	2
Hand Ave.	Clyde Morris Blvd. to Shangri La Dr.	832	County	Yes	0.75	50	E+W	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_WL	Major Collector - Urban	E	17,050	0.94	C	1,110	1,310	1,540	2
Hand Ave.	Shangri La Dr. to SR 5A/Nova Rd.	833	County	Yes	0.25	45	E+W	UA_NSOSRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Major Collector - Urban	E	37,970	0.43	C	1,110	1,340	3,410	4
Hazen Rd.	SR 44 to Plymouth Ave.	850	County	Yes	1.00	40	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.12	C	120	160	1,230	2
Hazen Rd.	Plymouth Ave. to Mercers Fernery Rd	852	County		1.50	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.07	C	135	100	1,020	2
Highbridge Rd.	Walter Boardman Ln. to John Anders	871	County	Yes	1.60	30	E+W	TA_NSOSRS_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	Major Collector - Rural	C	11,775	0.29	A	200	290	1,120	2
Highbridge Rd.	John Anderson Dr. to SR A1A	872	County	Yes	0.20	30	E+W	TA_NSOSRS_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.21	C	185	245	1,020	2
Hill Ave.	Taylor Rd. to Beresford Ave.	878	County		1.00	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local		E	13,640	0.08	C	80	100	1,020	2
Hill Ave.	Beresford Ave. to Voorhis Ave.	881	County		0.75	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.16	C	140	200	1,020	2
Hill Ave.	Voorhis Ave. to SR 44	882	County		0.25	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.19	C	145	250	1,020	2
Hill Ave./Jacobs Rd.	Plymouth Ave. to US 92	950	County	Yes	0.85	40	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.57	C	705	675	1,230	2
Hontoon Rd.	end of road to Botts Landing Rd.	890	County		2.00	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	C	5,260	0.21	C	75	110	1,020	2
Hontoon Rd.	Botts Landing Rd. to Old New York A	891	County		1.15	40	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Collector - Urban	C	12,100	0.27	C	235	270	1,230	2
Howland Blvd.	I-4/SR 472 to Wolf Pack Run	901	FDOT	Yes	0.40	45	E+W	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Minor Arterial - Urban	E	37,970	0.81	C	2,185	2,410	3,410	4
Howland Blvd.	Wolf Pack Run to Catalina Blvd.	903	County	Yes	1.15	45	N+S	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Minor Arterial - Urban	E	37,970	0.71	C	1,975	2,125	3,410	4
Howland Blvd.	Catalina Blvd. to Providence Blvd.	905	County	Yes	0.35	45	N+S	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Minor Arterial - Urban	E	37,970	0.52	C	1,490	1,460	3,410	4
Howland Blvd.	Providence Blvd. to Elkcam Blvd.	906	County	Yes	2.10	45	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Arterial - Urban	E	13,640	1.02	E	945	1,020	1,230	2
Howland Blvd.	Elkcam Blvd. to Lake Helen-Osteen F	908	County	Yes	0.30	45/40	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Minor Arterial - Urban	E	37,970	0.39	C	915	1,190	3,410	4
Howland Blvd.	Lake Helen-Osteen Rd. to Newmark	909	County	Yes	0.70	40	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Minor Arterial - Urban	E	37,970	0.57	C	1,450	1,780	3,410	4
Howland Blvd.	Newmark Dr. to Courtland Blvd.	911	County	Yes	1.15	45	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Minor Arterial - Urban	E	37,970	0.50	C	1,360	1,530	3,410	4
Howland Blvd.	Courtland Blvd. to Ft Smith Blvd.	913	County	Yes	1.80	45	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_4L_D_WL	Minor Arterial - Urban	E	37,970	0.42	C	1,430	1,320	3,410	4
Howland Blvd.	Ft Smith Blvd. to SR 415	915	County	Yes	0.65	45	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_4L_D_WL	Minor Arterial - Urban	E	37,970	0.48	C	1,150	1,580	3,410	4
I-4 Frontage Rd.	Summit Ave. to Orange Camp Rd.	ure Road-2 la	County	Yes	2.00	45	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	n/c	E	13,640	-	-	-	-	1,230	0
I-4 Frontage Rd.	Orange Campe Rd. to Cassadaga Rd.	ure Road-4 la	County	Yes	1.35	45	N+S	UA_NSOSRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	n/c	E	37,970	-	-	-	-	3,410	0
I-4 Frontage Rd.	Cassadaga Rd. to SR 472	ure Road-4 la	County	Yes	0.70	45	N+S	UA_NSOSRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	n/c	E	37,970	-	-	-	-	3,410	0
Indian Lake Rd.	Tiger Bay Rd. to US 92	935	County		0.80	40	N+S	TA_NSOSRS_2W_2L_U_0L	TA_OCCRAC1_2W_2L_U_0L	TA_OCCRAC1_2W_2L_U_0L	TA_OCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Local		E	13,640	0.38	C	505	440	1,230	2
John Anderson Dr.	Halifax Dr to Lynnhurst	972	County	Yes	0.85	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.41	C	380	445	1,020	2
John Anderson Dr.	Lynnhurst to Highbridge Rd.	974	County	Yes	7.40	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.29	C	265	310	1,020	2
John Anderson Hwy.	Walter Boardman Lane to Flagler Co	990	County	Yes	1.00	5 NB / 30 SI	N+S	TA_NSMCRS_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	Minor Collector - Rural	C	11,775	0.12	B	95	150	1,120	2
Josephine St./10th St.	Old Mission Rd. to Tatum Blvd.	1000	County	Yes	0.30	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.49	D	780	550	1,020	2
Josephine St./10th St. (NS	Tatum Blvd. to US 1	1002	County	Yes	1.80	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC2_2W_2L_U_WL	UA_NSSRC2_2W_2L_U_WL	Major Collector - Urban	E	14,040	0.00	A	-	-	1,270	2
Kathy Dr. (N. Penin.)	John Anderson Dr. to SR A1A	1011	County		0.44	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local		E	13,640	0.03	C	35	35	1,020	2
Kennedy Pkwy (Old SR 3	US 1 to Park Entrance	798158	Federal		4.00	55	E+W	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Major Collector - Rural	C	6,450	0.00	B	-	-	620	2
Kicklighter Rd.	Macy Ave. to Lake Helen-Osteen/Pre	1051	County	Yes	0.75	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.13	C	370	175	1,020	2
Lake George Rd.	Bream Dr. to US 17	1062	County		3.90	30	E+W	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Local	C	6,450	0.11	B	60	70	620	2
Lake Helen-Osteen Rd.	Howland Blvd. to Elkcam Blvd.	1070	County	Yes	0.40	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Arterial - Urban	E	13,640	0.62	D	630	770	1,020	2
Lake Helen-Osteen Rd.	Elkcam Blvd. to Haulover Blvd.	1071	County	Yes	1.75	45	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Arterial - Urban	E	13,640	0.66	C	550	865	1,230	2
Lake Helen-Osteen Rd.	Haulover Blvd. to Catalina Blvd.	1072	County	Yes	0.50	45	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Arterial - Urban	E	13,640	0.95	D	1,140	1,170	1,230	2
Lake Helen-Osteen Rd.	Catalina Blvd. to Captain Dr	1073	County	Yes	0.40	45	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Arterial - Urban	E	13,640	0.64	C	790	805	1,230	2
Lake Helen-Osteen Rd.	Captain Dr. to Kicklighter Rd.	1076	County	Yes	1.40	40	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Arterial - Urban	E	13,640	0.66	C	825

Road Name	Limits (From - To)	Count Station Number	Roadway Maintaining Agency	2021 Roadway on County's Thoroughfare	Distance (in miles)	Posted Speed							2021 QLOS Facility Type	2010 Federal Functional Classification	VC 2022 Allowable LOS	DAILY 2022 LOS Capacity	DAILY 2021 V/C Ratio	DAILY 2022 LOS	2022 AM Peak	2022 PM Peak	PEAK 2Way 2022 LOS Capacity	2021 No. of Lanes
Rd_Name	Limits	Cnt_Sta	MainRes	Tfare21	Distance	SPD2013	Direction	F_Type_08	F_Type_09	F_Type_10	F_Type_11	F_Type_14	F_Type_21	Fun_Class_2010	VCA_LOS_22	Cap_22	VCRatio_22	LOS_22	AMPKHR_22	PMPKHR_22	2W_Cap_22	Lanes_20
Marsh Rd.	Carter Rd. to Daugharty Rd.	1183	County	Yes	3.00	40	N+S	RDA_NSSRS_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	Minor Collector - Rural	C	11,775	0.09	B	80	100	1,120	2
Mason Ave.	Williamson Blvd. to Fentress Blvd.	1190	County	Yes	0.60	45	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC1_2W_2L_D_WL	UA_NSSRC1_2W_2L_D_WL	Minor Arterial - Urban	E	17,900	0.80	C	845	1,155	1,620	2
Mason Ave.	Fentress Blvd. to Bill France Blvd.	1191	County	Yes	0.50	40	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC1_2W_2L_D_WL	UA_NSSRC1_2W_2L_D_WL	Minor Arterial - Urban	E	17,900	0.98	D	1,160	1,570	1,620	2
Mason Ave.	Bill France Blvd. to Jimmy Ann Dr.	1193	County	Yes	0.30	40	E+W	UA_NSMCRS_2W_4L_U_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Minor Arterial - Urban	E	37,970	0.42	C	940	1,370	3,410	4
Mason Ave.	Jimmy Ann Dr. to SR 483/Clyde Morr	1194	County	Yes	0.50	40	E+W	UA_NSMCRS_2W_4L_U_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Minor Arterial - Urban	E	37,970	0.44	C	930	1,435	3,410	4
Maytown Rd.	SR 415/New Smyrna Blvd. to Pell Rd	1196	County	Yes - Future	5.60	50	E+W	RDA_NSSRS_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	Minor Collector - Rural	C	11,775	0.32	B	290	355	1,120	2
Maytown Rd.	Pell Rd. to Beacon Light Rd.	1198	County	Yes - Future	12.90	45	E+W	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Minor Collector - Rural	C	6,450	0.18	B	80	115	620	2
Maytown Rd./Halifax Ave.	Beacon Light Rd. to US 1	790	County	Yes	1.10	35	E+W	RDA_NSSRS_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	Minor Collector - Rural	C	11,775	0.18	B	130	170	1,120	2
McBride Rd.	US 17 to Lake George Rd.	1200	County		3.00	35	N+S	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Local	C	6,450	0.04	B	25	30	620	2
McGregor Rd.	Westside Con./Fatio to Spring Garde	1210	County	Yes	0.70	40	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.20	C	210	295	1,230	2
McGregor Rd.	Spring Garden Ave. to US17/92	1211	County	Yes	1.40	40	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.35	C	355	495	1,230	2
Mercers Fernery Rd.	Glenwood Rd. to SR 15A	1221	County		1.45	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	0.08	C	65	90	1,020	2
Mercers Fernery Rd.	SR 15A to US 17	1223	County		1.25	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	0.11	C	90	125	1,020	2
Midway Ave.	Williamson Blvd. to US 92	1230	County		2.00	40	E+W	UA_NSOSRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Minor Collector - Urban	E	37,970	0.06	C	160	235	3,410	4
Minnesota Ave. (Orange C	Sparkman Ave. to US 17/92	1241	County		0.50	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	0.24	C	160	350	1,020	2
Minnesota Ave. (Orange C	US 17/92 to Leavitt Ave.	1242	County		0.50	25	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.09	C	85	135	1,020	2
Minnesota Ave. (Orange C	Leavitt Ave. to SR 472	1243	County		0.50	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.10	C	85	130	1,020	2
Minnesota Ave. (DeLand)	Grand Ave. to SR 15A	1245	County		1.35	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.29	C	255	360	1,020	2
Minnesota Ave. (DeLand)	SR 15A to US 17/92	1247	County		1.25	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.12	C	135	150	1,020	2
Minnesota Ave. (DeLand)	Amelia Ave. to Hill Ave	1249	County	Yes	0.75	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.15	C	135	195	1,020	2
Minnesota Ave. (DeLand)	Hill Ave. to Blue Lake Ave.	1250	County	Yes	0.50	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.18	C	280	220	1,020	2
Minnesota Ave. (DeLand)	Blue Lake Ave. to Kepler Rd.	1251	County	Yes	0.85	40	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.27	C	280	365	1,230	2
New Hampshire Ave.	SR 15A to Adelle Ave	1270	County		0.15	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.18	C	345	355	1,020	2
New Hampshire Ave.	Adelle Ave to Clara Ave.	1271	County		0.50	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.30	C	310	375	1,020	2
New Hampshire Ave.	Clara Ave. to US 17/92	1272	County		0.25	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.24	C	200	300	1,020	2
New York Ave. (Orange C	Westside Pkwy/Hamilton Ave. to Spa	1281	County		0.50	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.36	C	375	435	1,020	2
New York Ave. (Orange C	Sparkman Ave. to Carpenter Ave	1283	County		0.30	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.40	D	440	465	1,020	2
New York Ave. (Orange C	Carpenter Ave. to US 17/92	1284	County		0.25	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.44	D	450	510	1,020	2
New York Ave. (Lake Hel	Summit Ave. to Lakeview Dr.	1285	County		0.50	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	C	5,260	0.18	C	85	90	1,020	2
Ohio Ave. (LH)	Macy Ave. to Lakeview Dr.	1320	County	Yes	0.20	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	C	5,260	0.15	C	75	95	1,020	2
Old Dixie Hwy.	Ingelsia to Pine Tree Dr.	1330	County	Yes	0.50	35	N+S	TA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.19	C	160	230	1,020	2
Old Dixie Hwy.	Pine Tree Dr. to Walter Boardman Ln	1332	County	Yes	5.10	45	N+S	TA_NSOSRS_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	20,700	0.17	C	225	310	1,860	2
Old Dixie Hwy.	Walter Boardman Ln. to Old Kings Rd	1333	County	Yes	0.55	45	E+W	TA_NSOSRS_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	20,700	0.26	C	335	460	1,860	2
Old Dixie Hwy.	Old Kings Rd. to I-95	1334	County	Yes	0.60	45	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	20,700	0.49	C	675	800	1,860	2
Old Kings Rd.	Old Dixie Hwy. to Flagler Co.	1340	County	Yes	0.60	50	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	22,800	0.18	C	285	320	2,050	2
Old Mission Rd.	SR 44/Mission Dr. to Old Mission Rd	1356	County	Yes	0.60	40	E+W	UA_NSOSRS_2W_2L_U_WL	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Local	E	13,640	0.08	C	90	105	1,230	2
Old New York Ave.	SR 44 to Hontoon Rd.	1360	County	Yes	1.40	40	E+W	RDA_NSSRS_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	Local	C	11,775	0.08	B	55	115	1,120	2
Old New York Ave.	Hontoon Rd. to Lakeview Dr.	1361	County	Yes	0.40	40	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Collector - Urban	C	12,100	0.32	C	250	345	1,230	2
Old New York Ave.	Lakeview Dr. to Grand Ave.	1362	County	Yes	0.50	40	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.32	C	280	380	1,230	2
Old New York Ave.	Grand Ave. to SR 44	1364	County	Yes	0.91	40	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.19	C	155	195	1,230	2
Orange/Silver Beach Ave	US 1 to Beach St.	1374	County	Yes	0.20	30	E+W	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC2_2W_4L_D_WL	UA_NSSRC2_2W_4L_D_WL	Minor Arterial - Urban	E	30,420	-	-	-	-	2,740	4
Orange/Silver Beach Ave	Beach St. to City Island Pkwy.	1375	County	Yes	0.20	30	E+W	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC2_2W_4L_D_WL	UA_NSSRC2_2W_4L_D_WL	Minor Arterial - Urban	E	30,420	0.32	C	675	795	2,740	4
Orange/Silver Beach Ave	City Island Pkwy. to Peninsula Dr.	1710	County	Yes	0.60	30	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC2_2W_2L_U_WL	UA_NSSRC2_2W_2L_U_WL	Minor Arterial - Urban	E	14,040	0.65	D	615	760	1,270	2
Orange/Silver Beach Ave	Peninsula Dr. to SR A1A	1711	County	Yes	0.30	30	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC2_2W_2L_U_WL	UA_NSSRC2_2W_2L_U_WL	Minor Arterial - Urban	E	14,040	0.30	C	265	340	1,270	2
Orange Camp Rd.	US 17/92 to Princeton	1380	County	Yes	0.75	35	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC2_2W_2L_U_WL	UA_NSSRC2_2W_2L_U_WL	Minor Arterial - Urban	E	14,040	0.94	E	840	1,160	1,270	2
Orange Camp Rd.	Princeton. to Blue Lake Ave.	1382	County	Yes	0.90	50	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Minor Arterial - Urban	E	17,050	0.69	C	825	990	1,540	2
Orange Camp Rd.	Blue Lake Ave. to W Volusia Bltwy. (I	1384	County	Yes	0.55	50	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Minor Arterial - Urban	E	17,050	0.73	C	845	1,075	1,540	2
Orange Camp Rd.	W Volusia Bltwy. (Dr MLK Jr) to I-4	1385	County	Yes	1.00	50	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Minor Arterial - Urban	E	17,050	0.78	C	1,310	1,170	1,540	2
Palm Dr.	John Anderson Dr. to SR A1A	1391	County		0.44	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	0.10	C	85	110	1,020	2
Park Ave.	Old Mission Rd. to Air Park Rd.	1409	County	Yes	0.90	45	E+W	TA_NSOSRS_2W_2L_D_WL	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_D_WL	UA_NSSRC1_2W_2L_D_WL	Major Collector - Urban	E	17,900	0.34	C	395	505	1,620	2
Park Ave.	Air Park Rd. to US 1	1413	County	Yes	1.40	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	Major Collector - Urban	E	14,740	0.54	D	475	685	1,330	2
Peninsula Dr. - South (Pl)	Inlet Harbor Rd to Major St.	1419	County		0.55	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.22	C	130	275	1,020	2
Peninsula Dr. - South	Major St. to Marcelle Ave.	1423	County		0.45	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.24	C	180	300	1,020	2
Peninsula Dr. - South	Marcelle Ave to SR 421/Dunlawton A	1420	County		0.15	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.43	D	340	540	1,020	2
Peterson Rd.	Riley Pridgeon Rd. to Emporia/Blackl	1433	County		2.80	35	E+W	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Local	C	6,450	0.07	B	30	45	620	2
Pineland Tr.	Harmony Ave. to US 1	1451	County		2.00	50	E+W	TA_NSOSRS_2W_2L_U_0L	TA_OCCRAC1_2W_2L_U_0L	TA_OCCRAC1_2W_2L_U_0L	TA_OCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Local	E	13,640	-	-	-	-	1,230	2
Pine Tree Dr.	US 1 to Addison Dr	1440	County		1.00	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	0.18	C	150	245	1,020	2
Pine Tree Dr.	Addison Dr. to Old Dixie Hwy	1441	County		1.00	35	E+W	TA_NSOSRS_2W_2L_U_0L	TA_OCCRAC1_2W_2L_U_0L	TA_OCCRAC1_2W_2L_U_0L	TA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	0.10	C	80	125	1,020	2
Pioneer Tr.	SR 44 to Tomoka Farms Rd.	1461	County	Yes	4.00	50	E+W	RDA_NSSRS_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	Major Collector - Rural	C	11,775	0.42	B	400	410	1,120	2
Pioneer Tr.	Tomoka Farms Rd. Airport Rd.	1464	County	Yes	1.40	45	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.41	C	415	490	1,230	2
Pioneer Tr.	Airport Rd. to Turnbull Bay Rd.	1465	County	Yes	2.50	45	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.53	C	480	630	1,230	2
Pioneer Tr.	Turnbull Bay Rd. to Sugar Mill Dr	1467	County	Yes	1.75	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.52	D	500	570	1,020	2
Pioneer Tr.	Sugar Mill Dr. to Williams Rd.	1471	County	Yes	1.45	40	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.77	C	735	855	1,230	2
Pioneer Tr.	Williams Rd. to Enterprise Ave	1473	County	Yes	1.05	40	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.71	C	675	780	1,230	2
Pioneer Tr.	Enterprise Ave. to Jungle Rd	1474	County	Yes	0.50	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.60	D	545	665	1,020	2
Pioneer Tr.	Jungle Rd to Canal St.	1475	County	Yes	0.25	35	N+S	UA_NSOSRS_2W_2L_D_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.21	C	215	245	1,020	2
Wallace Rd.	Canal St to SR 44	1955	County	Yes	0.25	35	N+S	UA_NSOSRS_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	Major Collector - Urban	E	14,740	0.53	D	520	640	1,330	3
Mission Dr.	SR 44 to Old Mission Rd.	1261	County	Yes	0.75	40	N+S	UA_NSOSRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Major Collector - Urban	E	37,970	0.41	C	1,325	1,265	3,410	4
Old Mission Rd./Mission R	Old Mission Rd. to Josephine St.	1354	County	Yes	0.75	40	N+S	UA_NSOSRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Major Coll

Road Name	Limits (From - To)	Count Station Number	Roadway Maintaining Agency	2021 Roadway on County's Thoroughfare	Distance (in miles)	Posted Speed							2021 QLOS Facility Type	2010 Federal Functional Classification	VC 2022 Allowable LOS	DAILY 2022 LOS Capacity	DAILY 2021 V/C Ratio	DAILY 2022 LOS	2022 AM Peak	2022 PM Peak	PEAK 2Way 2022 LOS Capacity	2021 No. of Lanes
Rd_Name	Limits	Cnt_Sta	MainRes	Tfare21	Distance	SPD2013	Direction	F_Type_08	F_Type_09	F_Type_10	F_Type_11	F_Type_14	F_Type_21	Fun_Class_2010	VCA_LOS_22	Cap_22	VCRatio_22	LOS_22	AMPKHR_22	PMPKHR_22	2W_Cap_22	Lanes_20
Rhode Island Ave.	Carpenter Ave to US 17/92	1600	County	Yes	0.25	35	E+W	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	Minor Collector - Urban	E	14,740	0.57	D	995	865	1,330	2
Rhode Island Ave.	Veteran's Memorial Pkwy. to Norman	Future Rd	County	Yes	1.80		E+W	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_D_WL	future Minor Collector - Urban	E	14,740	-	A	-	-	1,330	0
Riley Pridgeon Rd.	Peterson Rd. to SR 40	1610	County		2.55	35	N+S	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Local	C	6,450	0.06	B	30	35	620	2
River Dr.	John Anderson Dr. to SR A1A	1621	County		0.50	30	E+W	UA_NSOSRS_2W_2L_U_WL	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	0.02	C	25	30	1,020	2
Samsula Dr.	Pioneer Tr. to SR 44	1651	County	Yes	2.60	45	N+S	TA_NSOSRS_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	Minor Collector - Rural	C	11,775	0.14	B	105	160	1,120	2
Sandra Dr.	John Anderson Dr. to SR A1A	1661	County		1.00	30	E+W	UA_NSOSRS_2W_2L_U_WL	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	0.02	C	25	25	1,020	2
Saxon Blvd.	Rail Station to Westside Connector	Future Rd	County	Yes	0.62	40	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC1_2W_2L_D_WL	UA_NSSRC1_2W_4L_D_WL	future Minor Collector - Urban	E	37,970	-	A	-	-	3,410	0
Saxon Blvd.	Westside Connector to US 17/92	Future Rd	County	Yes	1.30	40	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC1_2W_2L_D_WL	UA_NSSRC1_2W_4L_D_WL	future Minor Collector - Urban	E	37,970	-	A	-	-	3,410	0
Saxon Blvd.	US 17/92 to Enterprise Rd	1671	County	Yes	0.65	35	E+W	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC2_2W_4L_D_WL	UA_NSSRC2_2W_4L_D_WL	Minor Arterial - Urban	E	30,420	0.54	D	1,070	1,315	2,740	4
Saxon Blvd.	Enterprise Rd. to Veterans Memorial	1673	County	Yes	0.60	45	E+W	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC2_2W_5L_D_WL	UA_MCCRAC2_2W_5L_D_WL	UA_MCCRAC2_2W_5L_D_WL	UA_NSSRC1_2W_6L_D_WL	UA_NSSRC1_2W_6L_D_WL	Minor Arterial - Urban	E	57,140	0.60	C	1,905	2,390	5,140	6
Saxon Blvd.	VMP to FDOT Park & Ride	1674	County	Yes	0.30	45	E+W	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC2_2W_5L_D_WL	UA_MCCRAC2_2W_5L_D_WL	UA_MCCRAC2_2W_5L_D_WL	UA_NSSRC1_2W_6L_D_WL	UA_NSSRC1_2W_6L_D_WL	Minor Arterial - Urban	E	57,140	0.80	C	2,575	3,480	5,140	6
Saxon Blvd.	FDOT Park & Ride to I-4	1685	County	Yes	0.30	45	E+W	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_NSSRC1_2W_6L_D_WL	UA_NSSRC1_2W_6L_D_WL	Minor Arterial - Urban	E	57,140	0.62	C	1,970	2,800	5,140	6
Saxon Blvd.	I-4 to Finland Dr.	1675	County	Yes	0.35	40	E+W	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_5L_D_WL	Minor Arterial - Urban	E	47,560	0.98	E	2,660	3,750	4,280	5
Saxon Blvd.	Finland Dr. to Normandy Blvd.	1676	County	Yes	0.35	40	E+W	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Minor Arterial - Urban	E	37,970	1.06	F	2,210	3,170	3,410	4
Saxon Blvd.	Normandy Blvd. to Tivoli Dr.	1677	County	Yes	1.25	40	E+W	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Minor Arterial - Urban	E	37,970	0.70	C	1,635	2,150	3,410	4
Saxon Blvd.	Tivoli Dr. to Providence Blvd.	1679	County	Yes	0.90	35	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Arterial - Urban	E	13,640	0.84	D	665	925	1,020	2
Saxon Blvd.	Providence Blvd. to Normandy Blvd.	1681	County	Yes	0.70	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.58	D	470	630	1,020	2
Saxon Blvd.	Normandy Blvd. to Doyle Rd.	1684	County	Yes	1.00	40	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.41	C	535	550	1,230	2
Saxon Dr. (NSB)	CR A1A to Hiles Blvd.	1691	County		0.55	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.08	C	70	100	1,020	2
Saxon Dr. (NSB)	Hiles Blvd. to 27th Ave.	1693	County		1.55	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.21	C	205	235	1,020	2
Saxon Dr. (NSB)	27th Ave. to 3rd Ave/SR A1A	1695	County		1.75	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.44	D	445	505	1,020	2
Sparkman Ave.	Rhode Island Ave. to Blue Springs Av	1720	County		0.60	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.20	C	410	295	1,020	2
Sparkman Ave.	Blue Springs Ave. to French Ave.	1721	County		0.65	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.21	C	280	285	1,020	2
Sparkman Ave.	French Ave. to New York Ave. W.	1722	County		0.75	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.12	C	155	160	1,020	2
Sparkman Ave.	New York Ave. W. to Minnesota Ave.	1723	County		0.45	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	0.10	C	120	140	1,020	2
Spring Garden Ave.	McGregor Rd. to Beresford Rd. West	1731	County	Yes	0.90	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.18	C	155	230	1,020	2
Spring Garden Ave.	Beresford Rd. West to Beresford Ave	1732	County	Yes	0.60	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.15	C	130	185	1,020	2
Spring Garden Ranch Rd	US 17 to Aragon Ave	1740	County	Yes	0.20	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.23	C	150	350	1,020	2
Spring Garden Ranch Rd	Aragon Ave to Arrendondo Grant/Eas	1742	County		1.20	35	E+W	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Major Collector - Urban/Rural	C	6,450	0.05	B	70	55	620	2
Spruce Creek Rd.	Taylor Rd. to SR5A/Nova Rd.	1751	County		0.75	45	N+S	UA_NSOSRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Major Collector - Urban	E	37,970	0.06	C	370	265	3,410	4
Spruce Creek Rd.	SR5A/Nova Rd. to Commonwealth Bl	1752	County		0.50	35	N+S	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.62	D	565	730	1,020	2
Stone St.	Plymouth Ave to CR 92/ISB	1770	County		0.80	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.36	C	355	395	1,020	2
Stone St.	CR 92/ISB to Mercers Fernery Rd	1773	County		0.70	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	0.02	C	45	65	1,020	2
Sugar Mill Dr.	Pioneer Tr. to SR 44	1781	County	Yes	1.30	45	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.27	C	250	310	1,230	2
Summit Ave.	SR 44 to Main St.	1791	County	Yes	2.20	50	N+S	UA_NSMCRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.19	C	235	240	1,230	2
Surfside Dr.	John Anderson Dr. to SR A1A	1801	County		0.35	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	0.03	C	45	35	1,020	2
Taylor Rd. (CO)	Tomoka Farms Rd. to Spruce Creek	1810	County	Yes	0.70	45	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Principal Arterial - Other -Urban	E	17,050	0.46	C	465	650	1,540	2
Taylor Rd. (CO)	Spruce Creek Blvd. to Crane Lake Bl	1811	County	Yes	1.10	50	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Principal Arterial - Other -Urban	E	17,050	0.63	C	665	850	1,540	2
Taylor Rd. (CO)	Crane Lake Blvd. to Summertree Rd.	1812	County	Yes	0.75	50	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Principal Arterial - Other -Urban	E	17,050	1.21	C	1,230	1,890	1,540	2
Taylor Rd. (CO)	Summertree Rd. to Williamson Blvd.	1813	County	Yes	0.20	45	E+W	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other -Urban	E	37,970	0.54	C	1,275	1,660	3,410	4
Taylor Rd. (CO)	Williamson Blvd. to I-95 (at Dunlawto	1814	County	Yes	0.15	45	E+W	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC3_2W_5L_D_WL	UA_MCCRAC3_2W_5L_D_WL	UA_MCCRAC3_2W_5L_D_WL	UA_NSSRC1_2W_5L_D_WL	UA_NSSRC1_2W_5L_D_WL	Principal Arterial - Other -Urban	E	47,560	1.00	D	2,865	3,755	4,280	5
Taylor Rd. (PO)	SR 421/Dunlawton Ave. to Clyde Mor	1823	County	Yes	0.55	35	E+W	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_WL	Major Collector - Urban	E	14,040	1.08	D	1,195	1,450	1,270	2
Taylor Rd. (PO)	Clyde Morris Blvd. to Hensel Rd	1824	County		0.50	45	E+W	UA_NSOSRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Major Collector - Urban	E	37,970	0.52	C	1,550	1,775	3,410	4
Taylor Rd. (PO)	Hensel Rd. Spruce Creek Rd.	1826	County		1.00	45	E+W	UA_NSOSRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Major Collector - Urban	E	37,970	0.46	C	1,065	1,630	3,410	4
Taylor Rd. (DL)	US 17/92 to Stratford Dr.	1816	County	Yes	0.80	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Arterial - Urban	E	13,640	0.62	D	610	745	1,020	2
Taylor Rd. (DL)	Stratford Dr. to Blue Lake Ave.	1818	County	Yes	0.95	50	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Minor Arterial - Urban	E	17,050	0.41	C	555	600	1,540	2
Taylor Rd. (DL)	Blue Lake Ave. to Martin Luther King	1819	County	Yes	0.80	50	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Arterial - Urban	E	13,640	0.59	C	645	725	1,230	2
Taylor Rd. (NSB)	Glencoe Rd. to Mission Rd	1821	County		0.75	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.21	C	195	260	1,020	2
Tomoka Farms Rd.	SR 44 to Pioneer Tr	1840	County	Yes	2.20	50	N+S	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	Minor Arterial - Rural	C	11,775	0.74	B	610	725	1,120	2
Tomoka Farms Rd.	Pioneer Tr to Taylor Rd.	1843	County	Yes	2.80	50	N+S	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	Minor Arterial - Urban	E	24,450	0.52	C	870	1,015	2,200	2
Tomoka Farms Rd.	Taylor Rd. to Townwest Blvd	1844	County	Yes	1.45	50	N+S	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	Minor Arterial - Urban	E	24,450	0.35	B	600	715	2,200	2
Tomoka Farms Rd.	Townwest Blvd to Shunz Rd.	1845	County	Yes	1.50	50	N+S	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	Minor Arterial - Urban	E	24,450	0.35	B	655	715	2,200	2
Tomoka Farms Rd.	Shunz Rd. to US 92/ISB	1847	County	Yes	3.02	40	N+S	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	Minor Arterial - Urban	E	24,450	0.39	B	720	825	2,200	2
Tomoka Farms Rd.	US 92/ISB to Dunn Ave.	1848	County	Yes	1.90	40	N+S	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	Major Collector - Urban	E	24,450	0.38	B	575	830	2,200	2
Tomoka Farms Rd.	Dunn Ave. to LPGA Blvd.	1849	County	Yes	1.90	40	N+S	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	Major Collector - Urban	E	24,450	0.27	B	470	565	2,200	2
Turnbull Bay Rd.	Pioneer Tr. to Williams Rd.	1863	County	Yes	2.90	45	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Collector - Urban/Rural	E	13,640	0.32	C	310	370	1,230	2
Turnbull Bay Rd.	Williams Rd. to Industrial Park Ave.	1865	County	Yes	1.20	45	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.28	C	240	365	1,230	2
Turnbull Bay Rd.	Industrial Park Ave. to US 1	1867	County	Yes	0.85	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.39	C	410	430	1,020	2
Tymber Creek Rd.	LPGA Blvd to Terminus	NEW	County	Yes	1.20	35							UA_UFH_2W_4L_D_WL	Major Collector - Urban	E	75,300	-	-	-	-	6,780	4
Tymber Creek Rd.	Terminus to Riverbend Rd/Future Co	Future Rd	County	Yes - Future	1.70	45							UA_UFH_2W_2L_D_WL	future "Major Collector - Urban	E	34,230	-	-	-	-	3,080	2
Tymber Creek Rd.	Riverbend Rd. to SR 40	1880	County	Yes - Future	0.45	30	N+S	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local - future Major Collector - Urban	E	13,640	0.05	C	60	60	1,020	2
Tymber Creek Rd.	SR 40 to Tymber Run	1881	County	Yes	0.50	40	N+S	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Major Collector - Urban	E	37,970	0.31	C	1,300	1,060	3,410	4
Tymber Creek Rd.	Tymber Run to Airport Rd.	1882	County	Yes	0.90	40	N+S	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Major Collector - Urban	E	17,050	0.72	C	1,330	1,110	1,540	2
Tymber Creek Rd.	Airport Rd to Broadway Ave./US 1	1883	County	Yes	4.20	40	N+S	UA_NSOSRS_2W_2L_U_WL	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Local	E	13,640	0.18	C	155	215	1,230	2
Van Ave. (DBS)	Peninsula Dr. to SR A1A	1890	County		0.20	25	E+W	UA_NSOSRS_2W_2L_U_WL	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	-	-	-	-	1,020	2
Volco Rd.	Cow Creek Rd. to Beacon Light Rd.	1920	County	Yes	2.50	30	N+S	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Local	C	6,450	0.05	B	30	35	620	2
Volco Rd.	Beacon Light Rd. to 35th St.	1921	County	Yes	1.40	45	N+S	UA_NSOSRS_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Collector - Urban/Rural	E	13,640	0.05	C	45	65	1,230	2
Volco Rd.	35th St. to US 1	1922	County	Yes	0.50	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.18	C	185	200	1,020	2
Voorhis Ave.	US 17/92 to Amelia Ave.	1931	County		0.20	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.24	C	200	285	1,020	2
Voorhis Ave.	Amelia Ave. to Hill Ave.	1933	County		1.00	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L

Road Name	Limits (From - To)	Count Station Number	Roadway Maintaining Agency	2021 Roadway on County's Thoroughfare	Distance (in miles)	Posted Speed							2021 QLOS Facility Type	2010 Federal Functional Classification	VC 2022 Allowable LOS	DAILY 2022 LOS Capacity	DAILY 2021 V/C Ratio	DAILY 2022 LOS	2022 AM Peak	2022 PM Peak	PEAK 2Way 2022 LOS Capacity	2021 No. of Lanes
Rd_Name	Limits	Cnt_Sta	MainRes	Tfare21	Distance	SPD2013	Direction	F_Type_08	F_Type_09	F_Type_10	F_Type_11	F_Type_14	F_Type_21	Fun_Class_2010	VCA_LOS_22	Cap_22	VCRatio_22	LOS_22	AMPKHR_22	PMPKHR_22	2W_Cap_22	Lanes_20
Williamson Blvd.	Townwest Blvd to Willow Run Blvd.	1991	County	Yes	0.25	55	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Principal Arterial - Other - Urban	E	17,050	0.99	F	915	1,505	1,540	2
Williamson Blvd.	Madeline Ave. to Willow Run Blvd.	1992	County	Yes	1.10	55	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Principal Arterial - Other - Urban	E	17,050	0.95	D	930	1,425	1,540	2
Williamson Blvd.	Madeline Ave. to SR400/Beville Rd.	1993	County	Yes	1.50	45	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Principal Arterial - Other - Urban	E	17,050	1.07	D	1,195	1,570	1,540	2
Williamson Blvd.	SR400/Beville Rd. to Bellevue Ave. E	1994	County	Yes	1.00	50	N+S	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.50	C	1,135	1,595	3,410	4
Williamson Blvd.	Bellevue Ave. Ext. to Midway Ave.	1996	County	Yes	0.50	50	N+S	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.40	C	830	1,300	3,410	4
Williamson Blvd.	Midway Ave. to US 92/ISB	1997	County	Yes	0.50	45	N+S	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.32	C	690	1,035	3,410	4
Williamson Blvd.	US 92/ISB to Dunn Ave.	1998	County	Yes	2.35	45	N+S	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.48	C	1,075	1,595	3,410	4
Williamson Blvd.	Dunn Ave. to Mason Ave.	1999	County	Yes	0.35	45	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.49	C	985	1,535	3,410	4
Williamson Blvd.	Mason Ave. to LPGA Blvd.	2000	County	Yes	0.35	45	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.57	C	1,340	1,735	3,410	4
Williamson Blvd.	LPGA Blvd. to Hand Ave.	2001	County	Yes	2.05	50	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Principal Arterial - Other - Urban	E	17,050	1.14	F	1,160	1,490	1,540	2
Williamson Blvd.	Hand Ave. to SR 40	2004	County	Yes	0.60	40	N+S	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.61	C	1,435	1,690	3,410	4
Woodward Ave.	Beresford Ave. to Euclid Ave.	2031	County		0.50	30	N+S	UA_NSOSRS_2W_2L_U_WL	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.02	C	140	100	1,020	2
Woodward Ave.	Euclid Ave. to SR 44	2030	County		0.50	30	N+S	UA_NSOSRS_2W_2L_U_WL	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.05	C	50	60	1,020	2



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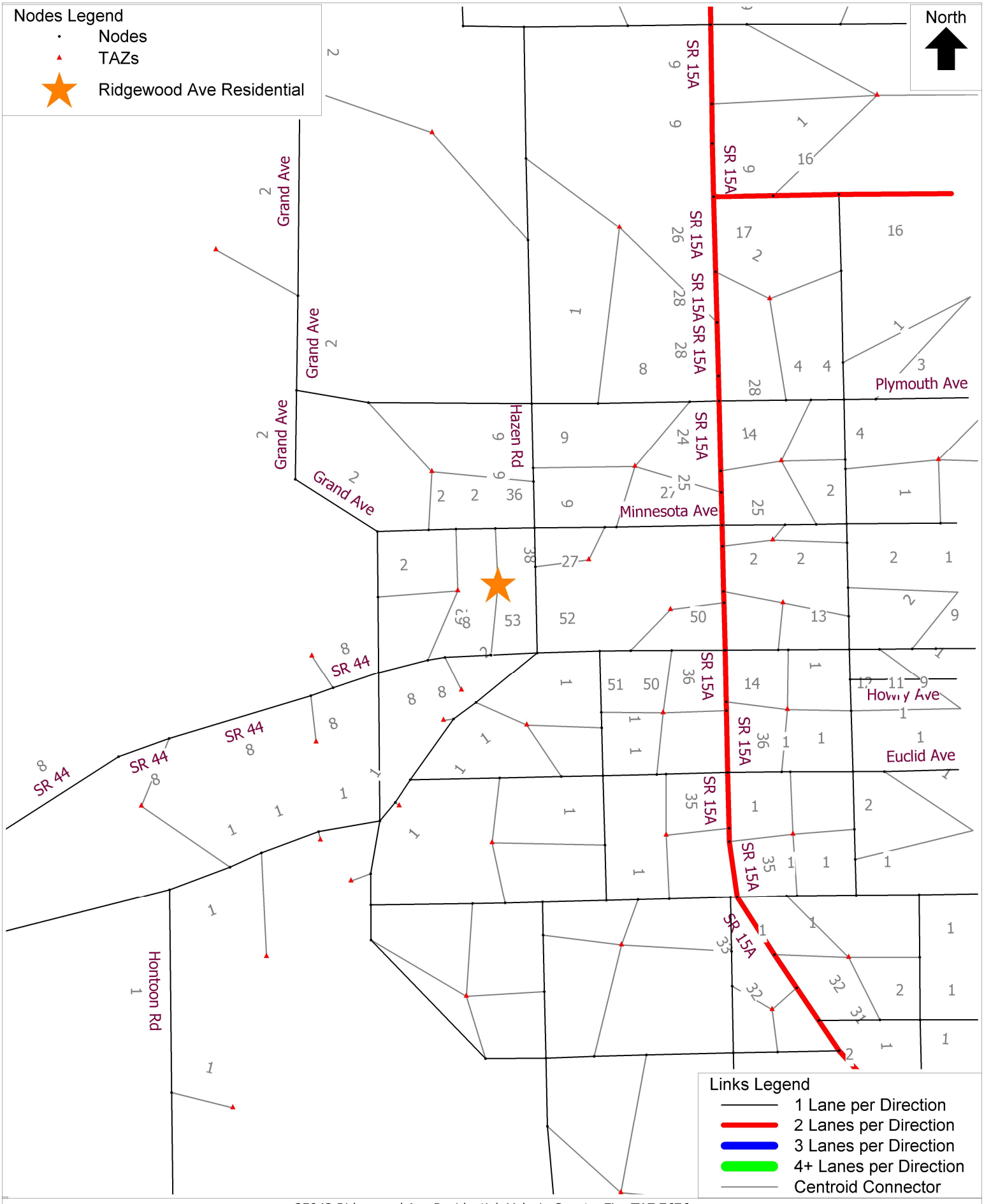

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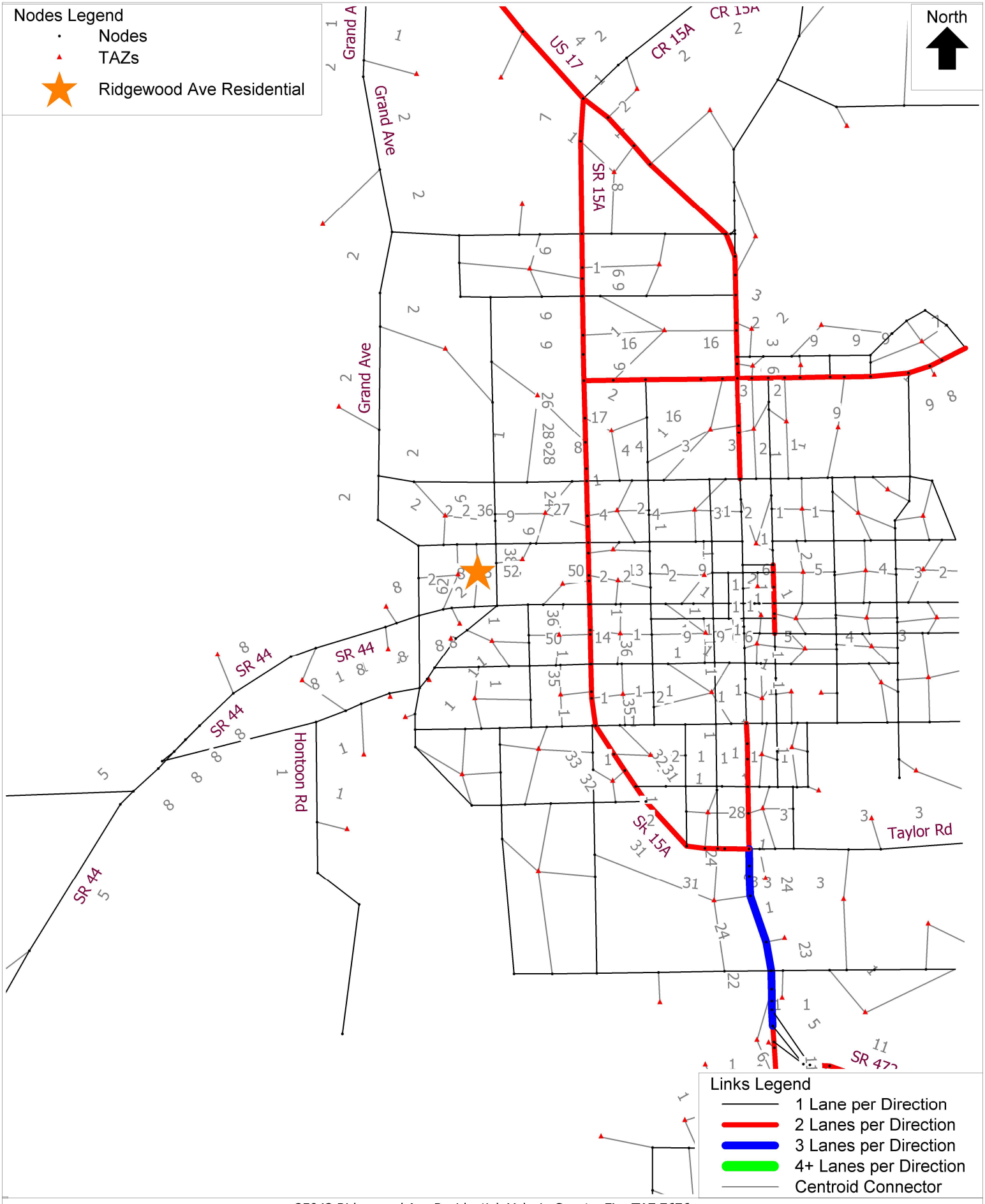

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439874-1 SJR2C Lake Beresford to Grand Avenue PD&E Study



Project Details

Work Type: PD&E Study

Phase: PD&E

Length: 3.6 miles

City: DeLand

County: Volusia

About

The St Johns River to Sea (SJR2C) Loop Trail Gap PD&E Study is completed.

The SJR2C Loop Trail Gap between Lake Beresford Park and Grand Avenue is a multi-use trail in Volusia County that will close the 3.6-mile gap between existing trails within Lake Beresford Park to the south, and the junction of Grand Avenue and Minnesota Avenue to the north, in DeLand.

The St. Johns River to Sea Loop (SJR2C) is a 260-mile trail system that will link together several communities including St. Augustine, Daytona Beach, Titusville, DeLand, and Palatka. This project is part of a greater effort to close the trail gaps and complete the St. Johns River to Sea Loop.

A PD&E study is the FDOT's process for adhering to the National Environmental Policy Act (NEPA) and related federal and state statutes. This process involves preliminary engineering to determine multi-use trail concepts; environmental evaluations to assess impacts associated with a new multi-use trail; and extensive public involvement and agency coordination.

PD&E Study reports are available on this page. A final newsletter was sent to property owners and other interested parties on August 11, 2020.

Send a comment or ask a question about this project

Contact Information

PD&E Project Manager
David Graeber
(386) 943-5392
David.Graeber@dot.state.fl.us

Last Updated

10/03/2024

Sec. 72-297. - Thoroughfare overlay zone regulations.

(a) *Purpose and intent:*

(1) The purpose of this section is to provide regulations to ensure safe ingress to and egress from proposed development along thoroughfares, to maintain adequate highway capacity, eliminate hazardous traffic conditions, lessen or prevent traffic congestion, establish a high standard for development, including additional sign regulations and create a more attractive streetscape. Commercial development typically expands along thoroughfares as population and traffic volumes increase in the vicinity of and along the thoroughfare. Eventually, conflicts result between the thoroughfare's function and its ability to move high volumes of traffic through an area.

(2) This congestion is intensified when commercial growth increases along the entire length of the thoroughfare.

(3) The increased commercial growth also changes the public's image of the thoroughfare. What was once considered an attractive tree-lined thoroughfare gradually and often rapidly begins to exhibit characteristics of uncontrolled strip commercial development. Once this pattern has been established, it is difficult to establish alternative types of development (e.g. residential) along these thoroughfares. Therefore, these regulations apply to thoroughfares which; (1) move large volumes of through traffic in addition to significant volumes of everyday local traffic; and (2) do not contain significant amounts of strip commercial development. These thoroughfare overlay zone regulations are intended to supplement all of the regulations of the existing zoning classifications except for permitted uses and special exceptions. The type of permitted uses or special exceptions allowed would be determined according to the existing zoning classification and the site design, signage, building location and the dimensional requirements would be regulated by these overlay zone regulations.

(b) *[Thoroughfare overlay zone:]* A thoroughfare overlay zone is hereby established, and the regulations of this section shall apply in said zone. Said zone shall apply to all zoning classifications established in division 7 of this article, and the official zoning map shall identify said overlay zone by adding the letter "C" as a suffix to the existing zoning classification that currently exists on said maps. The thoroughfares, or portions thereof, to which these regulations apply are as follows:

(1) *North coastal area:*

State Road #40: Western boundary lines of Section 26, Township 14 South, Range 31 East to Ormond Beach west city limits.

U.S. #92: Indian Lake Road east to Daytona Beach west city limit.

(2) *South coastal area:*

State Road #44: New Smyrna Beach city limit west to Tomoka Farms Road (CR 415).

(3) *West Volusia area:*

U.S. #92: Eastern boundary line of Section 25, Township 16 South, Range 30 East, to State Road 15-A.

State Road 15-A: U.S. #17 South to U.S. #17-92.

U.S. #17: Eastern boundary of Section 39, Township 16 South, Range 30 East, to South boundary line of Section 4, Township 17 South, Range 30 East.

U.S. #17-92: North Line of Section 21, Township 17 South, Range 30 East, to South line of Section 33, Township 17 South, Range 30 East.

State Road #44: Western boundary line of Section 14, Township 17 South, Range 29 East, to East boundary line of Section 17, Township 17 South, Range 31 East.

West Volusia Beltline: State Road #44, to North boundary line of Section 13, Township 18 South, Range 30 East. (Ord. No. 85-24, § XVII, 10-10-85; Ord. No. 86-16, § XXXII, 10-23-86; Ord. No. 88-2, § XXI, 1-19-88; Ord. No. 84-25, § XXV, 10-10-84; Ord. No. 88-2, § XXII, 1-19-88; Ord. No. 02-07, § I, 3-7-02)

(c) *Dimensional requirements:*

(1) *Minimum lot width:* No premises shall be divided for the purpose of development of sale such that the width of each or any premises is less than 300 feet measured along the right-of-way line, except as follows:

If vehicle access to any premises is provided by means other than directly onto an arterial, then the minimum lot width requirement may be reduced to 150 feet, and direct vehicle access to a major arterial shall be prohibited.

(2) *Minimum yard size:* Front yard: 50 feet.

(3) *Maximum building height:* Three stories, not to exceed 35 feet.

(4) *Maximum lot coverage:* Total coverage of principal and accessory buildings shall not exceed 30 percent.

(5) *Thoroughfare overlay zone depth:* The thoroughfare overlay zone requirements shall be applied to all premises that front onto or have access to the thoroughfare to a distance equal to the depth of the rear property line, but not to exceed a depth of 660 feet as measured perpendicular from the centerline of the thoroughfare right-of-way.

(d) *Off-street parking and loading requirements:* Off-street parking and loading space shall meet the requirements of section 72-286 and in addition shall meet the following:

Off-street parking and loading areas shall be permitted in the front yard or the side yard that is adjacent to a thoroughfare as long as the off-street parking and loading areas are designed outside the 35-foot-wide landscaped buffer area along the project perimeter adjacent to thoroughfares. Said area shall contain landscaped fences, walls or berms of sufficient heights and opacity to generally obscure parked vehicles from view of the traveling public. All parking areas shall contain a minimum of 20 percent interior landscaping, excluding any required landscaped buffer area as provided in subsection (e), below.

(e) *Landscaping buffer requirements:* In addition to meeting the landscape buffer requirements in section 72-284, the following requirements shall also be met:

(1) A landscape plan shall be provided identifying the quantity, botanical and common name, size and location of plant material, including those existing plant materials to be retained. Plans and specifications for an underground irrigation system are required for any landscaped area.

(2) A minimum of 30 percent of the area of the site shall be covered by landscape materials as specified in subsection 72-284(1) of this article.

(3) Except for access driveways, it is intended that development along the thoroughfare corridor shall be designed to prevent the need for fill material or such other treatment which would remove or harm existing trees within the required front yard.

(4) A landscaped buffer area shall be provided along the perimeter of the property. The width of the buffer shall be determined by the requirements in subsection 72-284(2) unless the site is located on a thoroughfare, then the front buffer shall be a minimum of 35 feet. If the thoroughfare right-of-way is less than 140 feet, then the buffer area will start at a point 70 feet from the centerline of the thoroughfare.

(f) *Final site plan requirements:* In addition to meeting the final site plan requirements in division 3 of the Land Development Code [article III], the following requirements shall be met:

All site plans, reports and general information will be submitted to the development review committee to ensure compliance and consistency for all developments along the thoroughfare.

(g) *Service road requirement:* All premises fronting thoroughfares upon which the thoroughfare overlay zone regulations have been applied shall be provided access via a service road, unless as otherwise specified herein. The service road may either be in the front or rear of the project site depending on the location of any existing service road.

(h) *Transportation impact analysis report; purpose:* The transportation impact analysis report is designed to identify the transportation impacts and problems which are likely to be generated by a proposed use because of the size, density, traffic generation rates or location. The report will also identify all improvements required to ensure safe ingress and egress from a proposed development, maintenance of adequate street capacity, and elimination of hazardous conditions and improvements necessary for immediately surrounding roadways and intersections as a result of the proposed development.

(1)

Threshold for traffic impact analysis report: A transportation impact analysis report shall be required, unless waived by the county traffic engineer, for all uses which meet or exceed any one or more of the following thresholds:

a. Any development which proposes to have direct access to any roadway designated in subsection (b) of this section.

b. Any use which, according to the Institute of Transportation Engineers Trip Generation Manual, latest edition, rates published by the Florida Department of Transportation, or rates documented by study as agreed prior to use by the Volusia County Traffic Engineer will generate in excess of 1,000 trips per day.

(2) *Contents of transportation impact analysis report:* The transportation impact analysis report shall include the following:

a. *General site description:* A detailed description of the highway network within a radius as determined by the county traffic engineer of the site, a description of the proposed project, the anticipated stages of construction, and the anticipated completion date of the proposed land development. This description, which may be in the form of a map, shall include the following items:

1. All major intersections;
2. All proposed and existing ingress and egress locations;
3. All existing roadway widths and rights-of-way;
4. All existing traffic signals and regulatory signage;
5. All existing and proposed public transportation services and facilities within the above-determined radius of the site.

b. *Description of existing traffic conditions:* A 24-hour traffic count shall be conducted for a typical weekday on all roadways which have direct access to a proposed development site. The existing average daily traffic volume, and the highest average peak hour volume for any weekday hour between 3:00 p.m. and 6:00 p.m. shall be recorded. These traffic volumes shall be averaged to determine the average hourly peak traffic volume for a weekday. The methodology used to calculate existing traffic conditions and use of traffic counts and data other than those described above to represent existing traffic conditions shall be subject to the approval of the county traffic engineer.

c. *Transportation impact of the development.* A report shall be made detailing the nature and extent of the trip generation expected to result from the proposed development. Trip generation analysis shall include an estimate of internal/external split, if applicable, and a determination of what characteristics of the development will yield such a split. The source of all trip generation rates shall be according to the Institute of Transportation Engineers Trip Generation Manual, latest edition, rates published by the Florida Department of Transportation, or rates documented by study and agreed to prior to use by the Volusia County Traffic Engineer.

d. *Determination of roadway service level—Calculate service volumes:* Roadway service volumes shall be calculated at the level of service for the thoroughfare which is specified in the comprehensive plan. Data and procedures contained in the Highway Capacity Manual, Special Report, 209, 1985, published by the transportation research board shall be utilized in deriving the information required by the transportation impact analysis report.

e *Determination of intersection service level:*

1. Data and procedures in the Highway Capacity Manual, Special Report, 209, 1985, published by the transportation research board shall be utilized in determining intersection service levels.
2. The post-developing level of service for all intersections shall be in accordance with the comprehensive plan.
3. Determine the existing level of service of all intersections within one-half mile of the proposed development using the critical movement analysis techniques provided in subsection e.1., above.

f. *Analysis of transportation impact:* An analysis shall be undertaken to determine if roadways and intersections will operate at the level of service specified by the comprehensive plan following completion of the development given the future peak hour traffic that will be generated by the proposed development. This analysis shall consist of a comparison of the total future peak hour roadway traffic demand with the plan's mandated level of service standard and a critical movement analysis for intersections to determine the impact of total future peak hour traffic on intersection level of service. All roadways and intersections that would operate below the required level of service following completion of the development shall be considered deficient.

Maintenance of levels of service. Whenever level of service is determined to be below the level specified by the comprehensive plan, development is not permitted unless the developer makes the roadway or other improvements necessary to maintain the specified level of service.

(3) *Traffic-control devices:* Whenever, as a result of additional traffic generated by a proposed development, the manual on uniform traffic control devices determines the need for a traffic signal or regulatory sign, the developer shall be responsible for installing all said devices and signs.

(4) *Large developments:* [Large developments] (over 250 vehicle trips generated per one hour during 3:00 p.m. and 6:00 p.m.) shall also include the following:

a. The impact report for developments which will generate between 250 and 1,000 trips during the peak hour shall involve an analysis of all arterials and all intersections within one mile of the proposed project.

b. Except for developments of regional impact as defined by F.S. § 380.06, the impact report for developments which will generate over 100 trips during the peak hour shall involve an analysis of all arterial and collector roadways and all intersections within three miles of the proposed project.

(i) *Temporary access:* No developer shall be denied a rezoning or building permit for the sole reason that the parcel for which it is sought cannot physically accommodate the requirements of this classification because adjoining segments of service roads or public roadways are not yet constructed. In such an event, a temporary access permit will be issued which shall expire when the proposed access becomes available to the parcel.

(j) *Sign regulations:* The sign regulations established in section 72-298 et seq. shall also apply in any thoroughfare overlay zone; provided, however, the maximum permissible height for any ground sign is eight feet, and the maximum permissible copy area for any ground sign is 40 square feet.

(Ord. No. 85-24, §§ XVIII—XXIV, 10-10-85; Ord. No. 86-16, § XXXIII, 10-23-86; Ord. No. 88-2, §§ XXIII—XXX, 1-19-88; Ord. No. 89-20, § XLIII, 6-20-89; Ord. No. 92-6, § LXVI, 6-4-92; Ord. No. 02-07, § II, 3-7-02; Ord. No. 2008-25, § II, 12-4-08; Ord. No. 2018-05, § IX, 1-18-18)

PLANNING DIVISION STAFF REPORT
TO
THE CITY OF DELAND PLANNING BOARD

September 10, 2025

A. **APPLICATION NO.**: Z25-084 (DeLand Reserve Rezoning)
APPLICANT: Storch Law Firm
OWNER: James K & Scarlet M Trust
STAFF PLANNER: Emily Kunkel, *Senior Planner*
REQUEST: Change of zoning for ±20.13 acres from Volusia County A-3C (Transitional Agricultural with conservation overlay) to DeLand Reserve PD (Planned Development)

B. **APPLICABLE REGULATIONS:**

Article IV **OVERLAY AND FLOATING ZONES**
Sec. 33-32 – Planned Development District.

Article XII **ADMINISTRATION AND ENFORCEMENT**
Sec. 33-135 – Procedure for text amendments & rezoning.

C. **SITE FACTORS:**

PARCEL NUMBER*:* 791200000061
LOCATION: 210 North Ridgewood Ave.
SIZE OF PROPERTY: ±20.13 acres

D. **LAND USE DESIGNATION & ZONING OF SUBJECT PROPERTY:**

Future Land Use: Volusia County: Rural
Existing Zoning: Volusia County: Transitional Agriculture with Thoroughfare Overlay Zone (A-3C)
Existing Use: Vacant, undeveloped (pine plantation)

E. **SURROUNDING LAND USE & ZONING:**

	LAND USE	ZONING
North:	VC: Urban Low Intensity (ULI)	Grandview Gardens PD
South:	VC: SunRail DeLand Area Activity Center	VC: Transitional Agriculture (A-3C)
East:	VC: Urban Low Intensity (ULI)	VC: Transitional Agriculture (A-3C)
West:	VC: Rural	VC: PUD

F. **BACKGROUND:** The subject property is ±20.13 acres in size, vacant and undeveloped, which also includes the western 25-ft right-of-way of North Ridgewood Avenue, as it was never dedicated to Volusia County. At the time of the subdivision process, the applicant will dedicate the necessary 25-ft right-of-way as well as additional right-of-way to Volusia County for a sidewalk along North Ridgewood. The current zoning is Volusia County A-3C (Transitional Agriculture with a conservation overlay), and the applicant is requesting a rezone to the DeLand Reserve PD (Planned Development) district. The subject property is located at 210 North Ridgewood Avenue, and north of the property is Grandview

Gardens PD (single-family residential subdivision); to the south is mix of single-family residential properties and vacant properties; to the east are single-family residential properties; and to the west is a mix of one rural single-family residential property and a commercial/industrial use property.

G. **ANALYSIS:** The applicant is proposing to develop the site into a 155-unit maximum residential subdivision, to include a mixture of front loaded and rear loaded Townhome (multi-family) units. The applicant has included standards within the PD document to include the flexibility for front loaded, rear loaded, and zero-lot line single-family units, but at this time the applicant plans to development only townhome (multi-family) units. The subject property is currently located within unincorporated Volusia County. Concurrent applications to annex the subject property into the City (AN25-082) and to amend the future land use designation (SMLU25-083) were submitted by the applicant.

Per Sec. 33-32 of the Land Development Regulations, in return for flexibility in site design and development, Planned Developments (PDs) are expected to include exceptional design that preserves critical environmental resources; provides above-average open space and recreational amenities, and incorporates creative design in the layout of buildings.

All development for the property shall rely upon the standards set forth below as identified on the Planned Development Plan. Where this document is silent, the R-8 zoning regulations shall apply.

SITE DATA			
	OVERALL	**TOWNHOMES**	**SINGLE-FAMILY**
Unit count (max)	155		
Overall size	±20.13 Acre		
Density	8 DU/Acre		
Height/stories	35 ft. Max.		
Max. impervious	60%		
Min. Building Setback		Corner lot, side street: 10 ft. Adjacent to single-family: 40 ft.	Corner lot, side street: 15 ft.
Max. Building length		150 ft.	
Min. lot width		20 ft.	30 ft.
Min. floor area		950 sq. ft.	950 sq. ft.
Max. lot coverage		70%	60%
Min. lot area		1,800 sq. ft.	2,850 sq. ft.
Min. lot depth		90 ft.	95 ft.
Min. Setbacks for Front-loaded		Front: 20 ft. Garage: 25 ft. Rear: 10 ft. Side yard: 7.5 ft. Side yard (interior): 0 ft.	Front: 20 ft. Garage: 25 ft. Rear: 10 ft. Side yard: 5 ft.
Min. Setbacks for Rear-loaded *(garages accessed from rear of lot)*		Front: 10 ft. Rear: 5 ft. Side yard: 7.5 ft. Side yard (interior): 0 ft.	Front: 15 ft. Rear: 5 ft. Side yard: 5 ft. Accessory Structure: 5 ft.
Setbacks for zero lot line *(The location of a building on a lot in such a manner that one or more of the building's sides rests directly on a lot line, provided that separations or setbacks between buildings meet all applicable building, fire code provisions, and PD development standards as provided herein)*			Front yard: 20 ft. Garage: 25 ft. Rear yard: 10 ft. Side yard: 0 ft. for the side where the home is placed against the lot line; 10 ft. on the nonzero side

Minimum building separation		15 ft. between sides of buildings; 25 ft. between sides and rear of adjacent buildings; 50 ft. between any combination of fronts or rears of adjacent buildings.	10 ft. between sides of buildings; 25 ft. between sides and rear of adjacent buildings; 50 ft. between any combination of fronts or rears of adjacent buildings.

The concept plan addresses this section by providing a minimum of 40% of open space, which shall include the minimum 15% of Tree Protection Area, that will serve as a buffer between the existing neighborhood to the north and the commercial/industrial use to the west. Additionally, having two connected meaningful, accessible open space areas, with meandering paths, one in the northwest corner and one in the middle of the development, creates a pedestrian corridor that is beneficial for the community. As shown in the elevations, a variety of paint colors and façade finishes are used to differentiate each building, with alternating roof lines/ridgelines, garage overhangs and exterior textures. Sidewalks are included along the internal roadways and along North Ridgewood Avenue facilitating pedestrian access throughout the site.

The development includes landscape designs that will serve environmentally friendly functions including, but not limited to, cooling, privacy screening, shade, aesthetics, wildlife habitat, runoff pollution prevention. The design shall incorporate green infrastructure such as stormwater plantings, rain gardens and/or vegetative swales as appropriate to mimic the natural environment. The perimeter landscape buffers are outlined in the table below which compares the standard buffers for the development, to what the applicant is providing in the PD. As seen in the chart, the buffer widths being provided for the north, south, east, and west boundaries are all exceeding the minimum width requirements.

LANDSCAPE BUFFERS		
	REQUIRED	**PROVIDED**
NORTH	TYPE C	TYPE C
SOUTH	TYPE D	TYPE D
EAST	TYPE B	TYPE B
WEST	TYPE D *(with a 6-ft opaque fence)*	TYPE D *(with a 6-ft opaque fence)*

The development shall comply with the city's Land Development Regulations as well as International Dark Sky standards, designed to reduce light pollution by restricting upward-directed light and avoiding glare.

Parking shall be provided at a ratio of two (2) parking spaces per residential lot, together with an additional allocation of 0.25 guest parking spaces per residential lot. The applicant has included standards within the PD document to include the flexibility for front loaded, rear loaded and zero-lot line single-family units, but at this time the applicant plans to development only multiple-family (townhome) units. The calculations can be seen using the below table.

PARKING		
155 MAX UNITS	**REQUIRED**	**PROPOSED**
SPACES/UNIT	**Townhomes:** 2 **Single-Family:** 4	**Townhomes:** 2 **Single-Family:** 2
GUEST SPACES/UNIT	**Townhomes:** 0.5 **Single-Family:** 0	**Townhomes:** 0.25 **Single-Family:** 0
TOTAL	**Townhomes:** 310 + 78 = **388 spaces** **Single-Family:** 620 + 0 = **620 spaces**	**Townhomes:** 310 + 39 = **349 spaces** **Single-Family:** 310 + 0 = **310 spaces**

The Planned Development District is intended to provide a method for consideration and approval of unique zoning districts for individual Planned Developments (PD) which are not provided for or allowed in the zoning districts otherwise established.

The R-8 zoning district allows multi-family uses such as the DeLand Reserve PD. However, the applicant is requesting deviations from the city's R-8 zoning district and is proposing a PD that will create tailored zoning district for the project. The code deviations from R-8 to the DeLand Reserve PD are outlined in the table below.

DEVELOPMENT STANDARD DEVIATIONS				
	R-8 REQUIRED	**PROPOSED (PD)**		
Max. Impervious (overall site)	50%	60%		
MULTI-FAMILY (TOWNHOME)				
	R-8 REQUIRED	**FRONT LOAD**	**REAR LOAD**	
Front yard setback	30 ft	20 ft	10 ft	
Rear yard setback	20 ft	10 ft	5 ft	
Garage setback	25 ft	25 ft	5 ft	
Side street setback	15 ft	10 ft	10 ft	
Side yard setback	20 ft	7.5 ft 0 ft (internal)		
Min. lot width	75 ft.	20 ft.		
Minimum building separation	25 feet between sides of bldgs.; 25 feet between sides and rear of adjacent bldgs. 50 feet between any combination of fronts or rears of adjacent bldgs.	15 ft. between sides of bldgs. 25 ft. between sides and rear of adjacent bldgs. 50 ft. between any combination of fronts or rears of adjacent bldgs.		
Min. floor area/unit	Efficiency: 425 sq. ft. 1 bedroom: 575 sq. ft. 2+ bedroom: 725 sq. ft.	950 sq. ft.		
Min. lot area (size)	10,000 square feet for first three units plus 5,500 square feet for each additional unit.	1,800 sq. ft.		
SINGLE FAMILY				
	R-8 REQUIRED	**FRONT LOAD**	**REAR LOAD**	**ZERO LOT LINE**
Front yard setback	30 ft.	20 ft.	15 ft.	20 ft.
Garage setback	25 ft.	25 ft.	5 ft.	25 ft.

Rear yard setback	25 ft.	10 ft.	5 ft.	10 ft.
Side street setback (Corner lot)	15 ft.	15 ft.	15 ft.	15 ft.
Side yard setback	7.5 ft.	5 ft.	5 ft.	0 ft. for the side where the home is placed against the lot line; 10 ft. on the nonzero side
Min. lot width	60 ft.	30 ft.		
Min. floor area/unit	750 sq. ft.	950 sq. ft.		
Min. lot size	6,500 sq. ft.	2,850 sq. ft.		

School Concurrency: A school concurrency letter dated June 18, 2025, was provided, stating that the district has no objections to the proposed development plan.

Traffic Analysis: A Traffic Impact Analysis Methodology letter from Traffic & Mobility Consultants (TMC) dated April 29, 2025, states that the proposed development is projected to generate 1,169 new daily trips of which 78 trips occur during the AM peak hour and 92 trips occur during the PM peak hour. Per the R2CTPO traffic study guidelines, since the proposed development is anticipated to generate more than 1,000 daily new trips, a TIA is required.

Stormwater: Stormwater retention ponds are being provided at the southwest border and southeast corner of the site. Per the proposed PD Agreement, the stormwater system will be designed to meet all required governmental regulations, and that it shall be designed to accommodate a 100-year, 24-hour storm event which will be retained on site.

H. LAND DEVELOPMENT REGULATIONS:

Sec. 33-32 – Planned Development District of the Land Development Regulations is intended to provide a method for consideration and approval of unique zoning districts for individual Planned Developments (PD) which are not provided for or allowed in the zoning districts otherwise established by this chapter.

The proposed Planned Development rezoning will allow for the applicant to develop the site into a 155-unit maximum residential subdivision. Included in the PD document are standards to allow for the flexibility of all single-family, all multi-family units or a mixture of each. The standards also allow the flexibility for the mixture of each to be front loaded, rear loaded, and zero-lot line single-family units. However, the applicant is only proposing a mixture of front loaded and rear loaded multi-family units at this time. The approval criteria and standards have been reviewed and staff finds the consistencies as outlined below.

The proposed development would utilize the natural topography and existing drainage to develop the site therefore, proposing to cluster the buildings to allow for separation between development and existing natural conditions. A multi-modal trail is proposed west of the project site along Grand Avenue. Additionally, the subject property is 1.6 miles from the DeLand SunRail station, and the applicant has coordinated with Florida Department of Transportation (FDOT) and Volusia County to provide a more transit friendly pattern by constructing additional sidewalks along North Ridgewood Avenue and SR- 44 connecting to the existing sidewalk network and anticipated future developments in the area.

Sec. 33-135 – Procedure for text amendments & rezoning of the Land Development Regulations provides the following factors to consider during the review of each application for rezoning or for changes in permitted uses, among the factors to be considered are the following:

1. **Is the proposed rezoning consistent with the Comprehensive Land Use Plan, the land use, zoning pattern and character of the surrounding area?**
   The proposed zoning of Planned Development (PD) is consistent with the Comprehensive Plan with a proposed underlying land use designation of MDR (Medium-Density Residential). The MDR land use designation would be compatible with the Planned Development (PD) zoning district, per the Comprehensive Plan.

   To the north of the property is the Grandview Gardens PD (single-family residential subdivision); to the south is a mix of single-family residential properties and vacant properties; to the east are single-family residential properties; and to the west is a mix of one rural single-family residential property and a commercial/industrial use property. On the Future Land Use map, the surrounding properties are designated as Volusia County Urban Low Intensity (ULI) to the north and east, Volusia County Rural to the west, Volusia County SunRail DeLand Area Activity Center to the south, and the subject property is concurrently requesting to amend the land use from Volusia County Rural to City of DeLand Medium Density Residential (MDR).

   According to the 2050 Vision, a portion of the parcel is located within Category 3, "Transit Oriented Development/Redevelopment". A Transit Oriented Development (TOD) is an area that will encourage higher density and a mixture of uses, in order to make a transit system more efficient for the DeLand area. These areas will see a transition from the current development pattern to a more transit friendly pattern, overtime. The proposed DeLand Reserve PD and increase in density fits in with the mixture of residential uses nearby and anticipated nonresidential/residential uses on the south side of SR-44 by serving as a transitional area between nonresidential or high-density residential and low-density residential land use.

2. **Will the proposed rezoning have an impact upon the environment or natural resources?**
   The subject site currently has a cluster of oak trees in the northwest corner that is shown on the concept plan as Tree Protection Area (TPA) and the majority of the site is dominated by a canopy of young, planted pine trees (pine plantation). At the time of preliminary plat, the development standards will ensure that Tree Protection Areas and landscape buffering both meet the requirements of the Land Development Regulations and DeLand Reserve Planned Development. Low Impact Development (LID) standards will be applied and will include green infrastructure such as stormwater plantings, rain gardens and/or vegetative swales as appropriate to mimic the natural environment. Additionally, because the property is greater than 5 acres, a survey of all endangered or threatened species will be required at the preliminary plat application and may require a habitat management plan.

3. **Will the proposed rezoning have an impact upon the economy of the affected area?**
   The site is currently undeveloped; therefore, the development of residential development should have a positive economic impact on the city and the surrounding area. This development, providing additional residential development in close proximity to the DeLand SunRail station, could have the potential for housing new commuter residents. This development could potentially raise overall home values by creating additional jobs, shopping, and convenience.

4. **Will the proposed rezoning have an impact upon governmental services?**
   Governmental services such as potable water, reclaimed water, sewer, code enforcement, police, and fire are available for the subject property and will be provided by the City.

5. **Are there changes in the circumstances or conditions affecting the area since the original assignment of zoning that will support the proposed zoning?**
   Since the original assignment of zoning, there have been changes in the market and demand of the area. Residential developments and development of the new SunRail station in close proximity (1.6 miles) of the subject property have been established. The proposed zoning change will facilitate site improvements, and it is consistent with the surrounding land uses, zoning and anticipated additional development in the immediate area. The development of multi-family units in close proximity to the DeLand SunRail station is an appropriate location by encouraging higher intensity along select corridors or major centers will encourage transit and lessen traffic congestion.

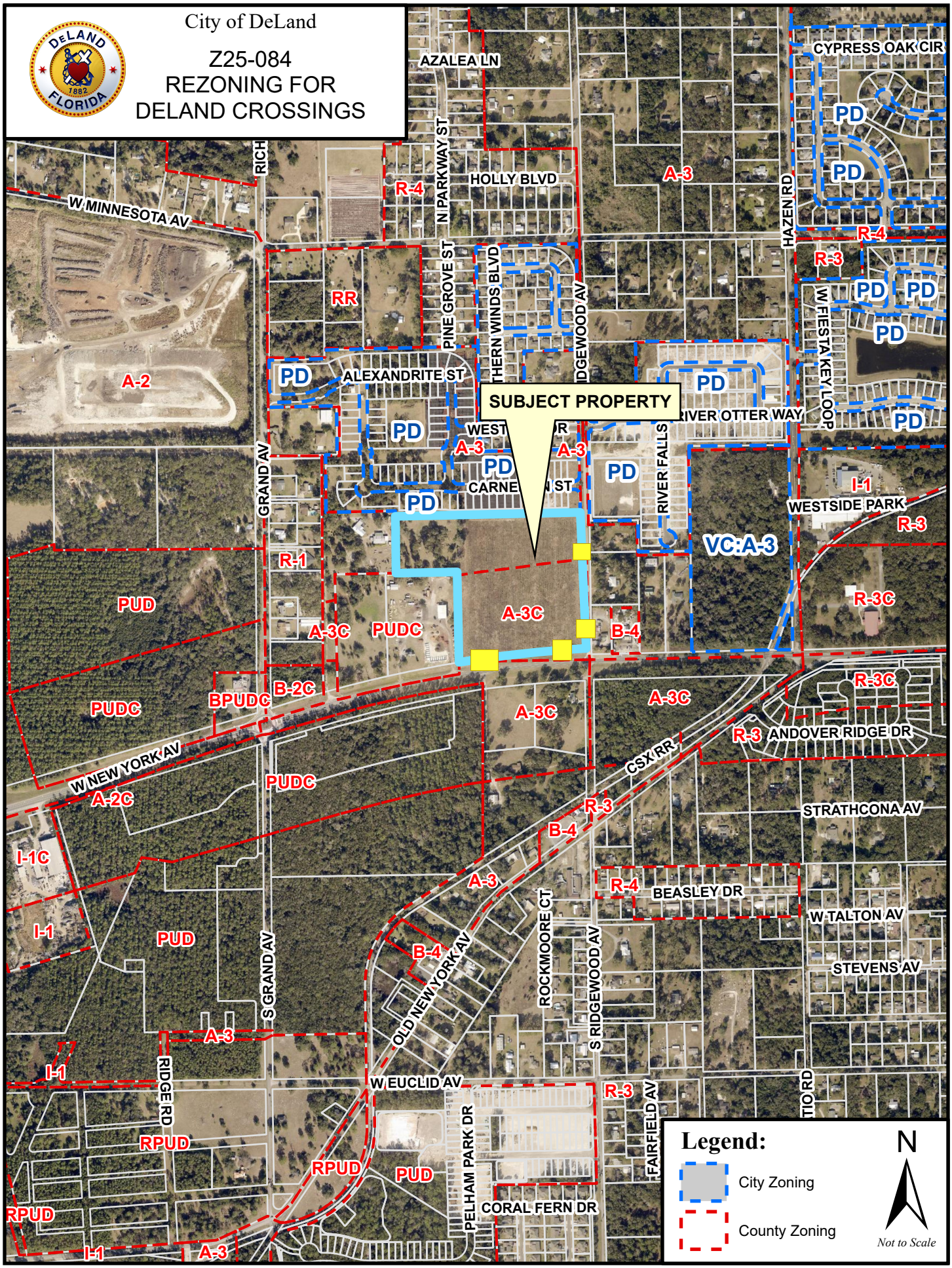
6. **Was there a mistake in the original classification?**
   There were no mistakes in the original classification. Standards that are not included in the PD agreement will default to the R-8 zoning district standards and the Land Development Regulations.

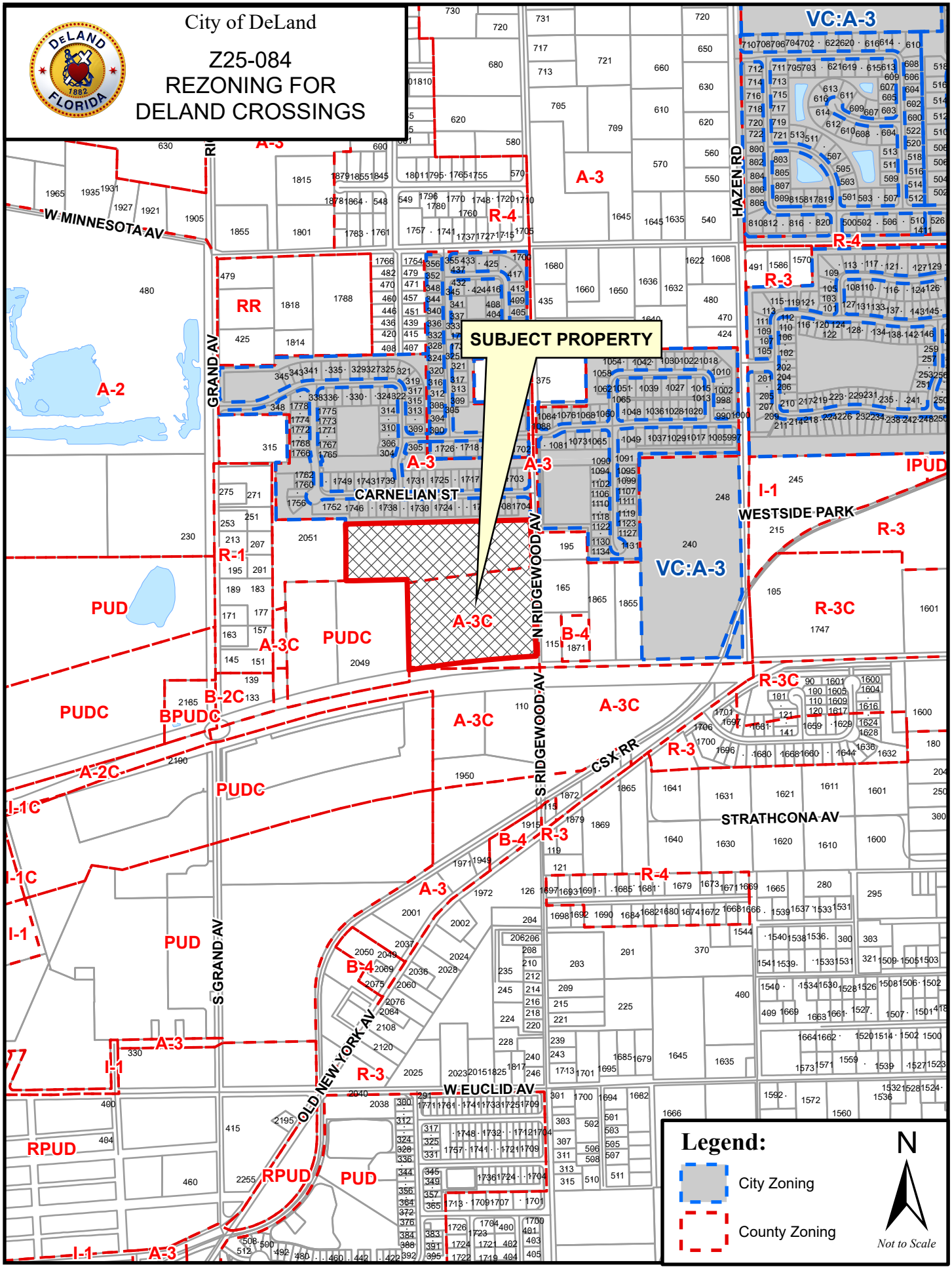
7. **Will the proposed rezoning have any effect upon the use or value of the affected area?**
   The proposed rezoning should have a positive impact upon the surrounding area, as the property would no longer be undeveloped and vacant. The infusion of new homes could have a positive impact to the area and encourage commuter residents.

8. **Will the proposed rezoning have an impact upon public health, safety and welfare?**
   There is no indication at this time that the new proposal will create additional impacts upon public health, safety or welfare, as all provided public services have the capacity needed to accommodate the proposed development. This rezoning would be consistent with the residential uses of the surrounding area.

I. **CONCLUSION:** The applicant is proposing to rezone the subject property from Volusia County Transitional Agriculture (A-3C) to DeLand Reserve Planned Development (PD). Submittal of a preliminary and final plat will be required to ensure the provisions of the Planned Development Agreement are satisfied, as determined by TRC Staff, Planning Board, and City Commission.

J. **STAFF RECOMMENDATION**: Staff recommends that the Planning Board forward the application to the City Commission with a recommendation of approval for the request to rezone from Volusia County Transitional Agriculture (A-3C) to DeLand Reserve Planned Development (PD).


City of DeLand
Z25-084
REZONING FOR
DELAND CROSSINGS
SUBJECT PROPERTY
AZALEA LN
CYPRESS OAK CIR
HOLLY BLVD
N PARKWAY ST
HAZEN RD
W MINNESOTA AV
RICH
PINE GROVE ST
THERN WINDS BLVD
DGEWOOD AV
W FIESTA KEY LOOP
ALEXANDRITE ST
RIVER OTTER WAY
RIVER FALLS
GRAND AV
WESTSIDE PARK
ANDOVER RIDGE DR
W NEW YORK AV
CSX RR
STRATHCONA AV
BEASLEY DR
W TALTON AV
STEVENS AV
OLD NEW YORK AV
ROCKMOORE CT
S RIDGEWOOD AV
S GRAND AV
RIDGE RD
W EUCLID AV
PELHAM PARK DR
CORAL FERN DR
FAIRFIELD AV
PD
R-4
R-3
A-3
RR
A-2
R-1
PUD
A-3C
PUDC
B-4
B-2C
BPUDC
A-2C
I-1C
I-1
RPUD
VC:A-3
R-3C
Legend:
City Zoning
County Zoning
N
Not to Scale


City of DeLand
Z25-084
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WESTSIDE PARK
STRATHCONA AV
CSX RR
W EUCLID AV
OLD NEW YORK AV
VC:A-3
R-4
R-3
A-3
A-2
RR
R-1
PUD
PUDC
A-3C
B-2C
BPUDC
A-2C
I-1C
I-1
B-4
R-3C
IPUD
RPUD
Legend:
City Zoning
County Zoning
N
Not to Scale

PLANNED DEVELOPMENT AGREEMENT

THE CITY COMMISSION OF THE

CITY OF DELAND, FLORIDA

Case # Z25-084

Application of DeLand Crossings, LLC

ORDINANCE # 2025-___

ORDER AND RESOLUTION

GRANTING A REQUEST FOR CHANGE OF ZONING FROM VOLUSIA COUNTY A-3C TO DELAND RESERVE PLANNED DEVELOPMENT (PD)

The application of DeLand Crossings, LLC, hereinafter "Applicant," for rezoning was heard by and before the City Commission, DeLand, Florida, on _____. Based upon the verified Application and other supporting documents, maps, charts, overlays, other evidence and instruments; the advice, report, and recommendations of the Community Development, and other Departments and agencies of DeLand, Florida; and the testimony adduced and evidence received at the Public Hearing on this Application by the Planning Board held on September 10, 2025, and otherwise being fully advised, the City Commission does hereby find and determine as follows:

GENERAL FINDINGS

A. That the application of Applicant was duly and properly filed herein on May 5, 2025 as required by law.

B. That all fees and costs which are by law, regulation, or Ordinance required to be borne and paid by the Applicant have been paid.

C. That the Applicant is the contract purchaser of a 20.13 +/- acres parcel of land which is the subject of this application and which land is situated in DeLand, Florida.

D. That the Applicant has complied with the Planned Development Plan provisions as required by Land Development Regulations of the Code of Ordinances of the City of DeLand.

E. That the Applicant has complied with the "Due Public Notice" requirements of the City Commission, Land Development Regulations of the Code of Ordinances of the City of DeLand.

F. That the owner of the property, James K. Warner and Scarlett M. Warner, as Trustees of The Warner Family Trust dated February 26, 2016, agrees with the provisions of this Development Agreement.

FINDINGS REGARDING REZONING

A. That the applicant has applied for a change of zoning from the present zoning classification of the parcel described in Exhibit "A" from Volusia County A-3C to DeLand Reserve Planned Development (PD).

B. That said rezoning to a PD is consistent with both the City of DeLand Comprehensive Plan and the intent and purpose of the City of DeLand Land Development Regulations contained in Chapter 33 of the Code of Ordinances of the City of DeLand (the "LDR"), and does promote the public health, safety, morals, general welfare and orderly growth of the area affected by the rezoning request.

NOW THEREFORE, BE IT RESOLVED AND ORDERED BY THE CITY OF DELAND, FLORIDA, IN OPEN MEETING DULY ASSEMBLED IN THE CITY COMMISSION CHAMBERS, 120 SOUTH FLORIDA AVENUE, DELAND, FLORIDA, THIS ___ DAY OF _____,2025, AS FOLLOWS:

C. That the Application of DeLand Crossings, LLC for the rezoning of the subject parcel is hereby granted.

D. That the zoning classification of the subject parcels described in Exhibit "A" attached hereto is hereby amended from Volusia County A-3C to DeLand Reserve PD as described in Article VII of the City of DeLand, Land Development Regulations. The Future Land Use designation of the subject parcel is Medium Density Residential.

E. That the Official Zoning Map of the City of DeLand, is hereby amended to show the rezoning of said parcels to DeLand Reserve PD.

F. That the City of DeLand, Land Development Regulations is consistent with the provisions of the "Development Agreement" as hereinafter set forth in this Ordinance and with respect to any conflict between Land Development Regulations, and the "Development Agreement," the provisions of the "Development Agreement" shall govern. The Land Development Regulations shall govern with respect to any matter not covered by the "Development Agreement." The City of DeLand will ensure overall compliance with this Ordinance.

G. Unless otherwise provided for herein, the City of Deland, Land Development Regulations, shall apply to the PD in the same manner as the R-8 zoning classification.

H. Except as otherwise stated herein, nothing in the Development Agreement is intended to abridge the requirements of the Land Development Regulations or any other City Ordinances.

I. All construction activities on the Property shall comply with the noise ordinance requirements of the City of DeLand Code of Ordinances, Chapter 20 - Noise. Construction hours shall be limited to between the hours of 7:00 A.M. and 7:00 P.M.

DEVELOPMENT AGREEMENT

A. Development Concept. The property shall generally be developed as DeLand Reserve PD, substantially in accordance with the Planned Development Plan. The Planned

Development Plan shall govern the development of the property as a PD and shall regulate the future land use of this parcel.

B. Planned Development Plan. The Planned Development Plan shall consist of the Development Plan Map prepared by American Civil Engineering Co. and dated May 2, 2025 and this Development Agreement. The Development Plan Map is hereby approved and incorporated in this Development Agreement by reference as Exhibit "B." The Planned Development Plan shall be filed and retained for public inspection in the Planning Division and it shall constitute a supplement to the Official Zoning Map of the City of DeLand.

C. Amendments. All amendments of the Planned Development Plan shall require the review and recommendation of the Planning Board and action by the City Commission in the same manner as a rezoning of the parcel. No administrative amendments may be authorized.

D. Subdivision Approval. After the Planned Development Plan is recorded, and prior to any construction, including clearing and landfill, the applicant or his successors shall comply with the subdivision review and approval requirements of Article 13 of the City of DeLand Land Development Regulations.

E. Unified Ownership. The applicant or his successors shall maintain unified ownership of each phase on the subject property until after issuance and recordation in the public records of Volusia County of a final plat for that phase.

F. Phases of Development. Development of the Property shall be accomplished in a single or multiple phases. Phasing for the development of the property may generally be provided per the attached Exhibit "B". There shall be no mass-grading of the property absent issuance of City permits for grading of each phase of development. No open burning shall be permitted. No vertical construction materials or combustible materials may be stored onsite for any phase of the development until the utilities and roads serving that specific phase have been inspected and approved by the City's Utilities, Engineering, and Fire Departments. Once the utilities and roads for a particular phase have been inspected and approved by the city, the Developer may apply for

and obtain Certificates of Occupancy (COs) for the units within that approved phase, regardless of whether the utilities and roads in other phases have been approved or are still under construction.

G. Land Uses Within the PD. The location and size of said land use areas are generally shown on the Development Plan Map, Exhibit "B." The following land uses shall be allowed as permitted principal uses and structures along with their customary accessory uses and structures:

1. Permitted Uses:

Multiple-family dwellings (townhomes), and their customary accessory uses

Single-family detached dwellings, and their customary accessory uses

Parks (tot lot and dog park)

Picnic areas/spaces

Open space areas

H. Development Standards. All development for the property shall rely upon the standards set forth below as identified on the Planned Development Plan. Where this document is silent, the R-8 Zoning regulations shall apply.

Development Standard	Overall Property
Number of lots/Maximum unit count	155
Max residential density Note: density shall be calculated based on the remaining acreage of the Property after any right-of-way dedication for N. Ridgewood Avenue	8 units per acre
Max. building height	35 ft.
Max. impervious surface	Overall impervious surfaces across the development shall not exceed 60%

1. Multiple-Family Residences.

Development Standard	
Min. lot width	20 ft.
Min. lot area	1,800 sq. ft
Min. lot depth	90 ft.

Min. setbacks for front-loaded townhome lots	Front yard: 20 ft. Garage setback: 25 ft. Rear yard: 10 ft. Side yard: 7.5 ft. Side yard (interior): 0 ft.
Min. setbacks for rear-loaded townhome lots (garages accessed from rear of lot)	Front yard: 10 ft. Rear yard: 5 ft. Side yard: 7.5 ft. Side yard (interior): 0 ft.
Min. building setback	Corner lot, side street: 10 ft. Adjacent to single-family: 40 ft.
Min. living area	950 sq. ft.
Max. lot coverage	70%
Max. building length	150 ft.
Min. building separation	15 ft. between sides of buildings; 25 ft. between sides and rear of adjacent buildings 50 ft. between any combination of fronts or rears of adjacent buildings.

2. Detached Single-Family Residences.

Development Standard	
Min. lot width	30 ft.
Min. lot area	2,850 sq. ft.
Min. lot depth	95 ft.
Min. setbacks for front-loaded lots	Front yard: 20 ft. Garage setback: 25 ft. Rear yard: 10 ft. Side yard: 5 ft.
Min. setbacks for rear-loaded lots (garages accessed from rear of lot)	Front yard: 15 ft. Rear yard: 5 ft. Side yard: 5 ft. Accessory Structures: 5 ft.
Min. setbacks for zero lot line *(The location of a building on a lot in such a manner that one or more of the building's sides rests directly on a lot line, provided that separations or setbacks between buildings meet all applicable building, fire code provisions, and PD development standards as provided herein)*	Front yard: 20 ft. Garage setback: 25 ft. Rear yard: 10 ft. Side yard: 0 ft. for the side where the home is placed against the lot line; 10 ft. on the nonzero side
Min. building setback	Corner lot, side street: 15 ft.
Min. living area	950 sq. ft.
Max. lot coverage	60%

Min. building separation	10 ft. between sides of buildings; 25 ft. between sides and rear of adjacent buildings 50 ft. between any combination of fronts or rears of adjacent buildings.

3. Accessory Structures associated with detached single-family residential. Unless otherwise stated herein, all accessory structures shall meet the development standards as outlined within the Land Development Regulations.

4. Architectural Standards. The development shall comply with the provisions of Section 33-94 of the City of DeLand Land Development Regulations, except as specifically otherwise provided for herein. Units shall be consistent with the architectural styles shown in the attached architectural elevations and townhome buildings shall incorporate at least two different rooflines and ridgelines per product type (rear-loaded and front-loaded), as shown in Exhibit "C". Four sided architectural elements shall be required for any building sides facing North Ridgewood Avenue and State Road 44.

5. Signage. Signage for the subdivision shall be provided per the Land Development Regulations. Signage shall not be located within the visibility triangle at the corner of New York Avenue and Ridgewood Avenue.

6. Amenities/Community Enhancements. Community enhancements shall include a park area with nature trail, seating areas, dog park and tot lot.

7. Model Homes and Temporary Sales Offices. A maximum of two (2) buildings with up to six (6) townhome model home units in each building (including one temporary sales/leasing office) may be constructed following approval of the preliminary plat and construction plans for the corresponding phase. A maximum of six (6) detached single-family model homes (including one temporary sales/leasing office) may be constructed. Construction of the model homes and temporary sales/leasing office may commence upon approval of a preliminary plat and final construction plans and completion of installation and activation of fire hydrants, and paved roads from the nearest open public road up to the point of the model home(s) within the said phase. Under no circumstances may the homes be occupied or otherwise utilized until such time as they are connected to potable water and sanitary sewer pursuant to a permit issued by the City of DeLand. The applicant and its successors and assigns shall be and remain jointly and severally liable for any violation of this provision. Furthermore, the applicant and its successors and assigns

hereby acknowledge and agree that any violation of this provision shall constitute a serious threat to the public health, safety and welfare for purposes of Section 162.06(4), Florida Statutes, hereby waive any argument in reference thereto, and waive any and all statutory notice requirements as may otherwise be required for entry of a code enforcement lien.

8. Open Space. A minimum of 40% of the development shall be reserved as Open Space. Such areas may include landscape buffers, stormwater ponds and Tree Protection Area provided these areas meet the requirements of the Land Development Regulations.

9. Landscape and Buffers Standards. All landscaping and buffers shall generally utilize Florida-Friendly Landscaping, as defined by the University of Florida/Institute of Food and Agricultural Sciences ("UF/IFAS") Center for Landscape Conservation and Ecology, native, and low-water plant material and shall meet the requirements of the Land Development Regulations. The development of the Property shall include landscape designs such that plants will serve environmentally friendly functions including, but not limited to, cooling, privacy screening, shade, aesthetics, wildlife habitat, and runoff pollution prevention. Special consideration for species/plant types around stormwater ponds should be taken to ensure compatibility in a more wet environment. With the approval of the City Forester, understory species listed in the City of DeLand's List of Approved Tree Replacement Species may be substituted for canopy trees when adjacent to roadways or sidewalks, where root-related damage is a concern.

A. Perimeter Buffers. Except as otherwise specifically provided for in this Development Agreement, the perimeter buffers of the development shall comply with the landscape buffer width and planting requirements provided for in the Land Development Regulations. As shown on Exhibit "B", the buffer types shall be as follows:

LOCATION	**TYPE**
NORTH	C
SOUTH	D
EAST	B
WEST	D

The west landscape buffers shall provide a 6-foot, 100% opaque screening fence (PVC fence). The north landscape buffer shall incorporate dense vegetation designed to create a visual screen and establish privacy between the Property and the adjoining neighborhood. A fence is permitted on the north property line and may be placed within the buffer plantings to reduce the fence's visibility. A variety of tree heights will be incorporated into the north landscape buffer to enhance privacy for the adjoining residential community, as generally depicted on the preliminary landscape plan (Exhibit "B"). It is intended that the existing trees within the landscape buffers are to be preserved and additional tree species will be added to this pine plantation tree buffer. As additional protection for the adjoining residents during Phase 1 construction, the existing trees in the north perimeter buffer will remain in place to act as a buffer until site work necessitates their removal.

B. Subdivision Entryways. Perimeter landscaping at subdivision entryways shall be installed to screen the sides of proposed dwellings from pedestrian viewpoints, utilizing plant materials that provide screening between 3 feet and 8 feet in height at maturity. Screening shall focus on softening views rather than achieving full opacity.

10. Parking Standards.

1. Parking shall be provided at a ratio of two (2) parking spaces per residential lot, together with an additional allocation of 0.25 guest parking spaces per residential lot. Required parking shall be provided through a combination of garage, driveway, and on-street parking spaces.
2. All driveway parking spaces for front-loaded lots shall be a minimum of nine (9) feet wide by twenty-five (25) feet long. Driveways shall be measured from the garage door to the edge of the sidewalk closest to the garage door.
3. To the extent practicable, the placement of driveways within alleys should be minimized to promote visual quality. While the reduction of

driveway parking within alleys is encouraged, driveways for rear-loaded homes are permitted where necessary to ensure functional site design, adequate grading, or compliance with other applicable requirements.

4. On-street parking shall be provided in various locations within the Property.
5. On-street parallel parking spaces shall be nine (9) feet by twenty-two (22) feet measured to back of drop curb.
6. Perpendicular parking spaces are sized nine (9) feet by eighteen (18) feet.
7. Cross sections of the roadway illustrating typical design for parking on one or both sides of the street are included in Exhibit "B".

I. Environmental Considerations. The development shall comply with the requirements as set forth in the Land Development Regulations.

1. Tree Protection Area (TPA). A minimum of 15% of the development shall be reserved as TPA, per the Land Development Regulations, and shall be maintained as generally depicted on Exhibit "B", which may be modified based upon an updated tree survey during the platting process so long as the minimum 15% of development area and 30-foot width is preserved. The ultimate configuration will be determined through the platting process. Permeable materials may be utilized for pathways located within tot lots and dog parks designated as Tree Protection Areas. A certified arborist shall prepare and submit a plan demonstrating that the proposed materials and installation methods will not negatively impact existing trees.

2. Tree mitigation shall be reviewed and approved per the Land Development Regulations.

3. Street Trees. Street trees may be planted within the rights of way within the Property and said trees may be included in mitigation calculations. Street tree installation, based upon the approved landscape plan, shall be required on a lot-by-lot basis and must be planted prior to the issuance of a certificate of occupancy for that particular lot.

4. In meeting the minimum tree coverage requirements of the City's LDR's, required trees may be located within common areas of the project which are adjacent to the structures. The homeowner's association required for the development shall be responsible for ensuring the preservation and, if necessary, the replacement of required trees. The foregoing provision is not intended to divest the City of its code enforcement authority relative to required trees but places an additional burden on the homeowner's association to proactively enforce the tree requirements.

5. A tree survey of all trees 6" DBH or larger is required as part of the review process for the platting and development of the project. The survey shall, at a minimum, identify all specimen and historic trees on the Property.

6. Palm trees and understory trees from the City of DeLand List of Approved Tree Replacement Species shall account for no more than 25 percent of required trees.

7. On-Site Burning of Cleared Vegetation Prohibited. Vegetation and other biomass cleared from the Property during development may not be incinerated on-site.

8. Stormwater Drainage. The stormwater system shall be designed to retain, at a minimum, the one hundred-year, 24-hour storm event. The stormwater system shall also hold the entire volume of such storm event. In all other regards, the stormwater retention shall be in accordance with the Land Development Regulations.

9. Dark Sky Standards. All lighting shall comply with Dark Sky standards and be of the full cut-off, fully-shielded variety in which the light source is recessed and shielded which prohibits upward light overspill into the night sky and off-site nuisance glare.

10. Low Impact Development (LID) Standards. The development has been laid out in a manner to best accommodate the existing topography, drainage and known environmental conditions identified on the property. However, the actual location and layout of the developed areas within the Property shall be determined during preliminary plat review. The design shall incorporate green infrastructure such as rain gardens and/or vegetative swales as appropriate to mimic the natural environment. The following Low Impact Development elements shall be provided:

A. Stormwater Plantings. All stormwater ponds shall utilize supplemental plantings to enhance the functionality and/or aesthetics of the stormwater system. Littoral plantings shall be

utilized if viability is likely - i.e. if a stormwater pond is designed to remain wet. If a pond is designed to remain dry and littoral plantings are unlikely to survive, the supplemental plantings shall be Florida Friendly plants.

J. Sewage Disposal, Potable Water and Reclaimed Water. Provision for sewage disposal, potable and reclaimed water needs of the PD will be provided in accordance with the Comprehensive Plan, the Land Development Regulations, and State of Florida Administrative Code 64E-6. Reclaimed water is not currently available to the Property. Upon reclaimed water becoming available to the site, the development will be required to connect to reclaimed water for both the individual lots and any common areas that are irrigated, but the development shall not be required to have a pond or other facility for receiving and retaining reclaimed water.

K. Access and Transportation System Improvements. All access and transportation system improvements shall be provided in accordance with the Land Development Regulations. The property shall be developed in substantial accordance with the following access and transportation system improvements:

1. Access Points. Access to the site will be from two entrances on North Ridgewood Avenue, as shown in Exhibit "B". The Planned Development Plan indicates the anticipated connection locations; however, the final locations may vary due to final engineering design and permitting considerations.

2. Transportation System Improvements. Transportation system improvements will be provided as required by permitting agencies and as needed according to the Traffic Impact Analysis (TIA) for the project.

3. Sidewalks and Multi-use trails. Five (5) foot wide ADA accessible sidewalks shall be provided throughout the subdivision. Sidewalks shall not be required within alleyways.

4. Internal Roadways. Internal right-of-way dimensions shall be a minimum of 50 feet in width. Alleyways shall consist of at least 1 feet of paved roadway width. Right-of-way and alleyway dimensions shall be as shown in Exhibit "B" and constructed in accordance with the Land Development Regulations. All internal rights-of-way will be publicly owned and dedicated to the City.

L. Homeowners Association (HOA). The Applicant shall create a homeowner's association, which shall be responsible for owning and maintaining all common areas, shared use facilities, alleyways and internal sidewalks. The HOA shall be responsible for the maintenance of Low Impact Design Elements and Stormwater System, and in no event shall either be the responsibility of the City of DeLand. The HOA shall be responsible for the maintenance of street trees. Moreover, the HOA shall also be responsible to repair any and all impacts upon the right of way infrastructure created by the presence of said trees, including any road, sidewalk, curb and gutter facilities. The charter and by-laws of said association and any other agreements, covenants, easements or restrictions shall be furnished to the City of DeLand for review prior to the time of creation. The Applicant shall be responsible for recording said information in the Public Records of Volusia County, Florida. Also, the applicant shall bear and pay all costs for recording all of the aforementioned documents. Furthermore, the HOA Declaration shall include a provision prohibiting short term rentals in the community and governing the placement of trash receptacles in front yards.

With respect to the enforcement of said agreements, covenants, easements or restrictions entered into between the Applicant and the owners or occupiers of property within the Deland Reserve PD, the City of DeLand shall only enforce the provisions of the "Development Agreement" and City of DeLand Land Development Regulations whichever is applicable, and not the private agreements entered into between the aforementioned parties.

M. Expiration. The terms of this Development Agreement shall be vested upon issuance of a final plat development order for the development issued within five (5) years from the effective date of the ordinance which adopts the Planned Development Plan unless the City Commission, for good cause shown, extends the time period indicated in this paragraph. If not vested by said date, the Planned Development Plan shall expire and will be of no further force or effect and no development shall occur on the subject property until it is rezoned. The City Commission may rezone the subject property as may be necessary or appropriate to protect adjoining properties or the public health, safety and welfare if the Planned Development Plan expires.

N. Binding Effect of Plans; Recording; and Effective Date. The Planned Development Plan, including any and all amendments, shall bind and inure to the benefit of the Applicant and its successors in title or interest. The DeLand Reserve PD zoning, provisions of the "Development Agreement," and all approved plans shall run with the land and shall be administered in a manner consistent with Article XII of the City of DeLand Land Development Regulations.

This Ordinance and all subsequent amendments shall be filed with the Clerk of the Court and recorded within forty-five (45) days following execution of the document by the City Commission, in the Official Records of Volusia County, Florida. One copy of the document, bearing the book and page number of the Official Record in which the document was recorded, shall be submitted to the Planning Department for placement in the public file. The date of recording of this document shall constitute the effective date of the DeLand Reserve PD or its subsequent amendments. The Applicant shall pay all filing costs for recording documents.

DONE and ORDERED by the City Commission, City of DeLand, Florida, this _____ day of _____, 20___.

ATTEST:

City Commission of DeLand, Florida

_____
Michael P. Pleus
City Manager

_____
Christopher M. Cloudman
Mayor

STATE OF FLORIDA

COUNTY OF VOLUSIA

The foregoing instrument was acknowledged before me by means of □ physical presence or □ online notarization this ____ day of _____, 2025, by Michael P. Pleus and Christopher M. Cloudman, as City Manager and Mayor of the City of DeLand, respectively, on behalf of the City of DeLand, and who are personally known to me.

NOTARY PUBLIC, STATE OF FLORIDA

Type or Print Name:

_____

Commission No.: _____

My Commission Expires: _____

WITNESSES:

APPLICANT: DELAND CROSSINGS, LLC, a Florida limited liability company

By: MAS Land Venture Opportunity Management, LLC, a Florida limited liability company, its Manager

_____

_____

Printed Name

By: MAS Development, LLC, a Florida limited liability company, its Manager

_____

_____ By:_____

Printed Name Alan Benenson, Manager

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me by means of [_] physical presence or [_] online notarization this ____ day of _____, 2025, by Alan Benenson, as Manager of MAS Development, LLC, a Florida limited liability company, the Manager of MAS Land Venture Opportunity Management, LLC, a Florida limited liability company, the Manager of DeLand Crossings, LLC, a Florida limited liability company, who is [_] personally known to me or [_] who has produced _____ as identification.

NOTARY PUBLIC, STATE OF FLORIDA

Type or Print Name:

_____

Commission No.: _____

My Commission Expires: _____

WITNESSES:

OWNER:

James K. Warner and Scarlett M. Warner, as Trustees of The Warner Family Trust dated February 26, 2016

_____

Printed Name

By: _____

James K. Warner, Trustee

By: _____

Scarlett M. Warner, Trustee

_____

Printed Name

STATE OF FLORIDA

COUNTY OF _____

The foregoing instrument was acknowledged before me by means of ☐ physical presence or ☐ online notarization this ____ day of _____, 2025, by James K. Warner and Scarlett M. Warner, as Trustees of The Warner Family Trust dated February 26, 2016, who are _____ personally known to me or _____ who have produced _____ as identification.

NOTARY PUBLIC, STATE OF FLORIDA

Type or Print Name:

_____

Commission No.: _____

My Commission Expires: _____

TITLE DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNTY OF VOLUSIA, STATE OF FLORIDA AND IS DESCRIBED AS FOLLOWS:

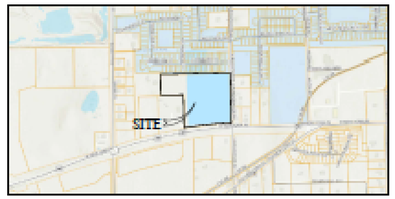
A PARCEL OF LAND LYING IN GOVERNMENT LOT 4, SECTION 12, TOWNSHIP 17 SOUTH, RANGE 29 EAST AND GOVERNMENT LOT 1, SECTION 13, TOWNSHIP 17 SOUTH, RANGE 29 EAST, VOLUSIA COUNTY, FLORIDA BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID GOVERNMENT LOT 4, RUN THENCE S 00°02'59" W ALONG THE EAST LINE OF SAID GOVERNMENT LOT 4 A DISTANCE OF 400.00 FEET TO THE POINT OF BEGINNING, THENCE CONTINUE S 00°02'59" W ALONG SAID EAST LINE OF DISTANCE OF 867.52 FEET TO THE NORTHERLY RIGHT OF WAY LINE OF STATE ROAD #44, BEING ON A CURVE CONCAVE TO THE SOUTH, HAVING A CENTRAL ANGLE OF 06°08'51", A RADIUS OF 7714.49 FEET, A CHORD BEARING OF S85°19'00" W AND A CHORD DISTANCE OF 827.33 FEET, THENCE RUN ALONG THE ARC AND SAID NORTHERLY RIGHT OF WAY LINE AN ARC DISTANCE OF 827.72 FEET TO A POINT IN SAID GOVERNMENT LOT 1, THENCE RUN N 07°45'26" W A DISTANCE OF 3.60 FEET TO A POINT ON THE NORTH LINE OF SAID GOVERNMENT LOT 1, ALSO BEING THE SOUTH LINE OF GOVERNMENT LOT 4, SAID POINT BEING ON THE WEST LINE OF THE EAST 825.00 FEET OF SAID GOVERNMENT LOT 4, THENCE RUN N 00°02'59" E ALONG SAID WEST LINE A DISTANCE OF 570.00 FEET, THENCE RUN N 89°44'24" W A DISTANCE OF 388.20 FEET, THENCE RUN N 00°55'19" E A DISTANCE OF 360.95 FEET, THENCE RUN S 89°56'42" E, A DISTANCE OF 1207.70 FEET TO THE POINT OF BEGINNING.

CONTAINING 20.137 ACRES, MORE OR LESS.



LOCATION MAP



AERIAL MAP

LEGAL DESCRIPTION:

12-17-29 IRREG PARCEL LYING IN GOVT LOT 4 E OF GRAND AVE & N OF SR 44 & W OF N RIDGEWOOD AVE MEAS 827.72 ALONG N R/W OF SR 44 & 867.52 FT ALONG W R/W OF N RIDGEWOOD AVE & 1207.70 FT ON N/L AS DESCRIBED IN OR 7709 PG 3083 PER OR 7233 PG 1560

FLOOD ZONE:

PROPERTY SHOWN HEREON LIES IN FLOOD ZONE "X" AN AREA WHICH LIES OUTSIDE THE 100 YEAR FLOOD AREA ACCORDING TO F.I.R.M. MAP PANEL No. 12127C0465H, DATED FEBRUARY 19, 2014.

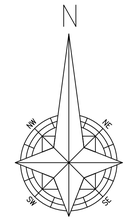
791200000061

2061880

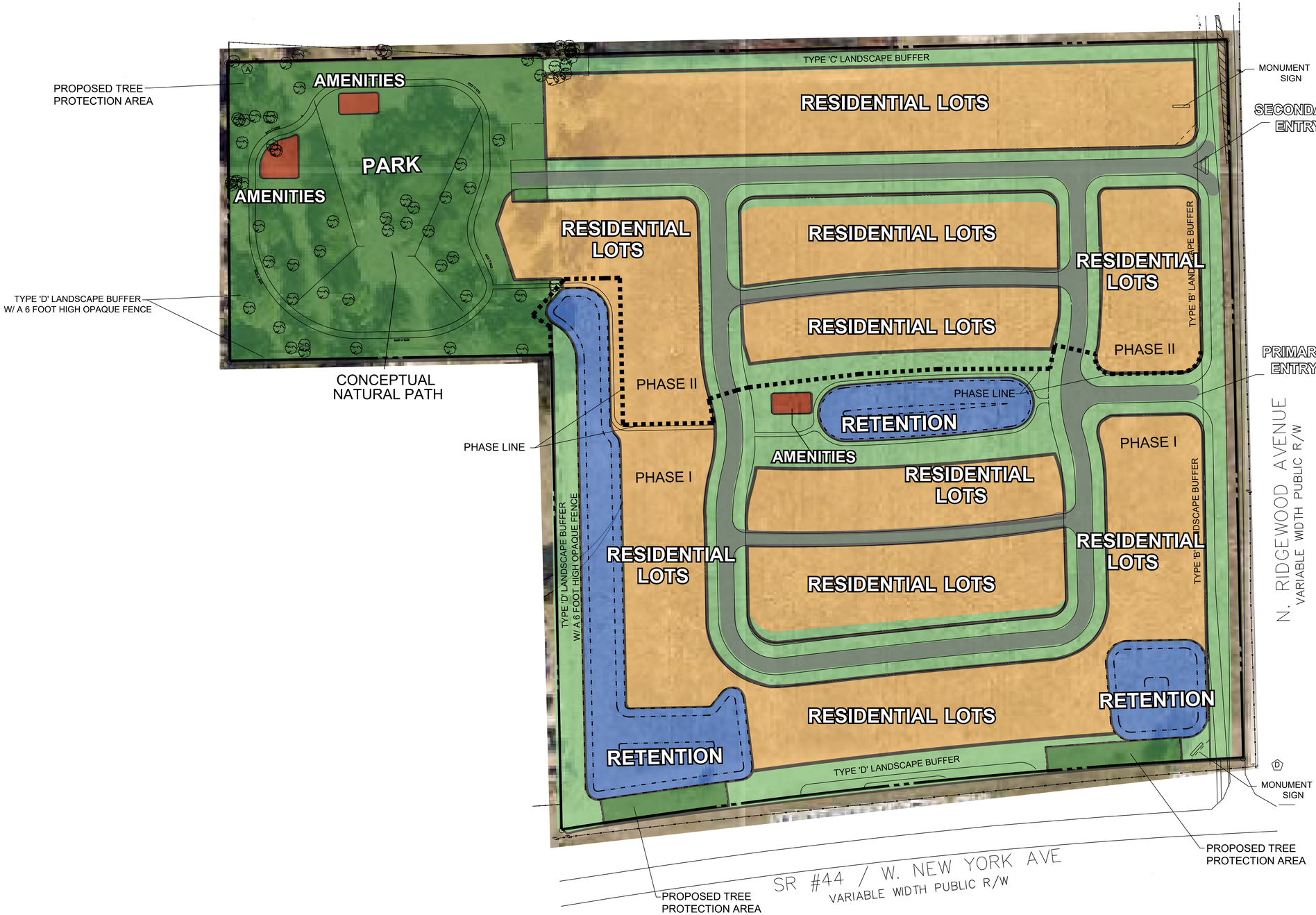
210 N. RIDGEWOOD AVE.
DELAND, FLORIDA 32720

Z25-084

NOTE: THESE PLANS ARE CONCEPTUAL



0' 60' 120'
SCALE: 1" = 60'



PROJECT DATA:

TOTAL GROSS PROJECT AREA:	20.13 AC
AREA OF ADDITONAL ROW:	+/- 0.80 AC
TOTAL NET PROJECT AREA:	+/- 19.33 AC

PROPOSED FLU CHANGE:
VOLUSIA COUNTY RURAL
TO MEDIUM DENSITY RESIDENTIAL

MAX. No. OF UNITS:	155 UNITS
MAXIMUM DENSITY:	8 UNITS / AC
MAX. IMP. ALLOWED:	60%
MIN. OPEN SPACE REQ'D:	40%

PROPOSED BUILDINGS:

MAX. LENGTH OF BUILDING: 150 FEET
MIN. DIST. BETWEEN BLDGS: 15'

TREE PROTECTION AREA:

REQUIRED TPA: 15 % OF TOTAL AREA

PD DEVELOPMENT NOTES:

1. THE FINAL LOCATION OF PARKING, AMENITIES, AND REQUIRED INFRASTRUCTURE SHALL BE DETERMINED AT THE TIME OF PRELIMINARY PLAT SUBMITTAL.
2. INCREASES IN LOT SIZES AND/OR DECREASES IN THE NUMBER OF LOTS SHALL BE DEEMED TO BE IN SUBSTANTIAL CONFORMANCE WITH THIS PD CONCEPT PLAN.
3. THE FINAL MIX OF RESIDENTIAL PRODUCT TYPES (E.G., TOWNHOMES AND/OR SINGLE-FAMILY HOMES) WILL BE DETERMINED AT THE TIME OF PRELIMINARY PLAT SUBMITTAL. THIS PD IS INTENDED TO ALLOW FOR ALL TOWNHOMES, ALL SINGLE-FAMILY HOMES, OR A MIX OF BOTH, IN RESPONSE TO MARKET CONDITIONS.

DATE:	MAY 2, 2025
SCALE:	1" = 60'
DESIGNED:	THS
DRAWN:	MDS
CHECKED BY:	THS
JOB NO.:	25045
EMAIL:	tomskelton4698@gmail.com

DATE	REVISIONS	BY	CHECKED
07/08/2025	REVISED PER CITY OF DELAND	MDS	THS

AMERICAN CIVIL ENGINEERING CO.
207 N. MOSS ROAD, SUITE 211 WINTER SPRINGS, FLORIDA 32708
PHONE: (407) 327-7706 FAX (407) 327-8227
CERTIFICATE OF AUTHORIZATION NO.: 00005709

PD SITE PLAN

DELAND, FLORIDA

THOMAS H. SKELTON, PE
REGISTRATION NO. 42752

SHEET:

Conceptual Elevations - Front Load Townhomes



Elevation A



Elevation B



Elevation C



Elevation D



Elevation E



Elevation F

Conceptual Elevations - Front Load Townhomes



Elevation A



Elevation B



Elevation C

Conceptual Elevations - Front Load Townhomes



Elevation A



Elevation B



Elevation C



Elevation E



Elevation D

Conceptual Elevations - Front Load Townhomes



Elevation A



Elevation B



Elevation C

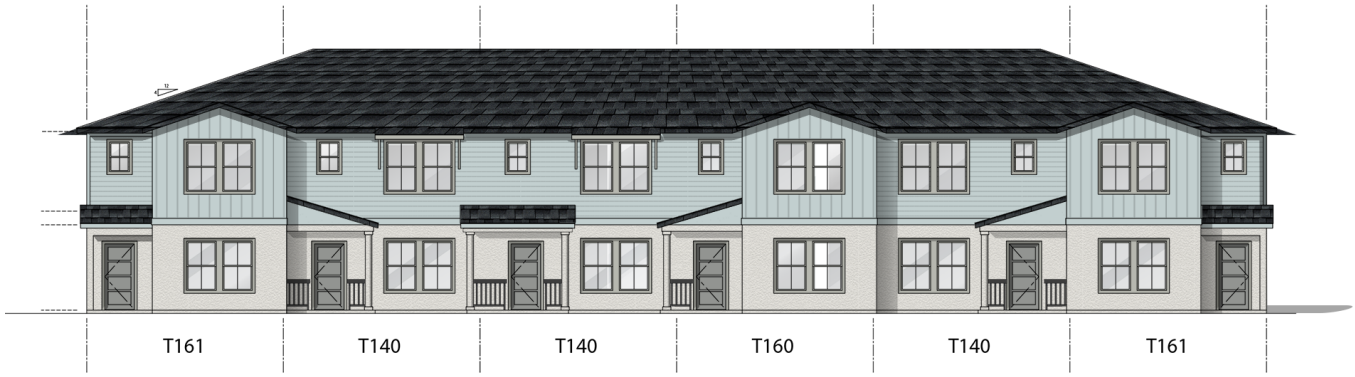


Elevation D

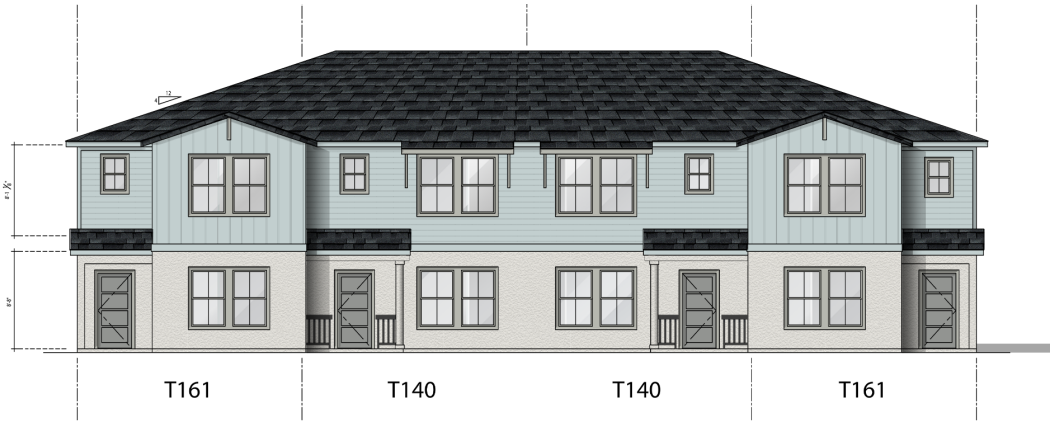


Elevation E

Conceptual Elevations - Rear Load Townhomes





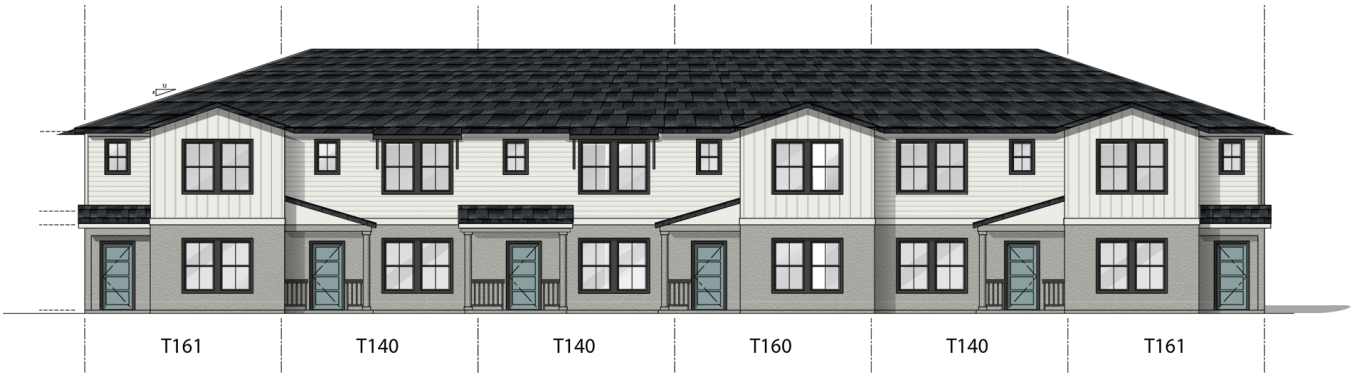


Conceptual Elevations - Rear Load Townhomes

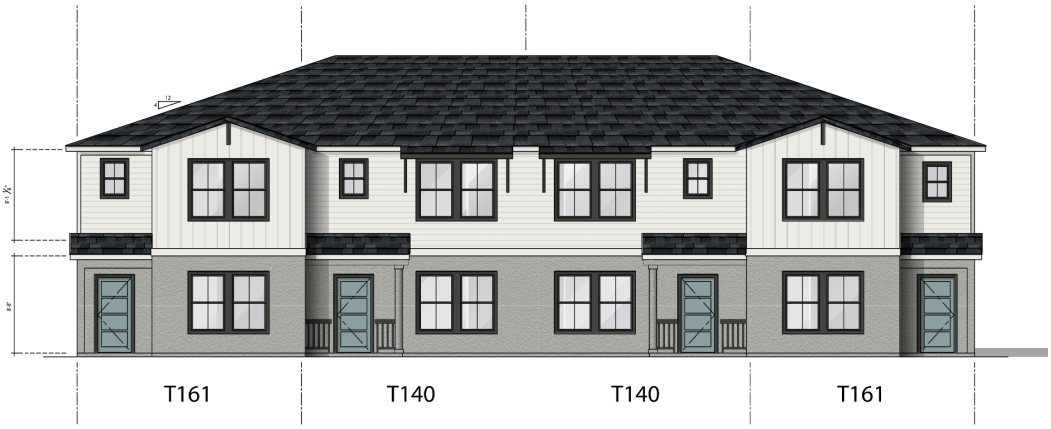




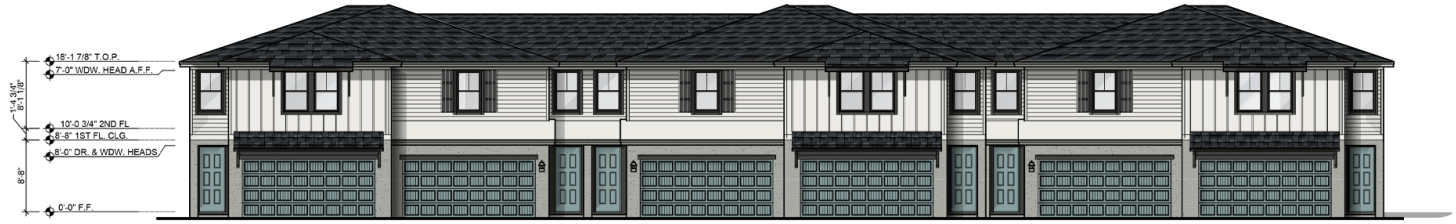
Conceptual Elevations - Rear Load Townhomes





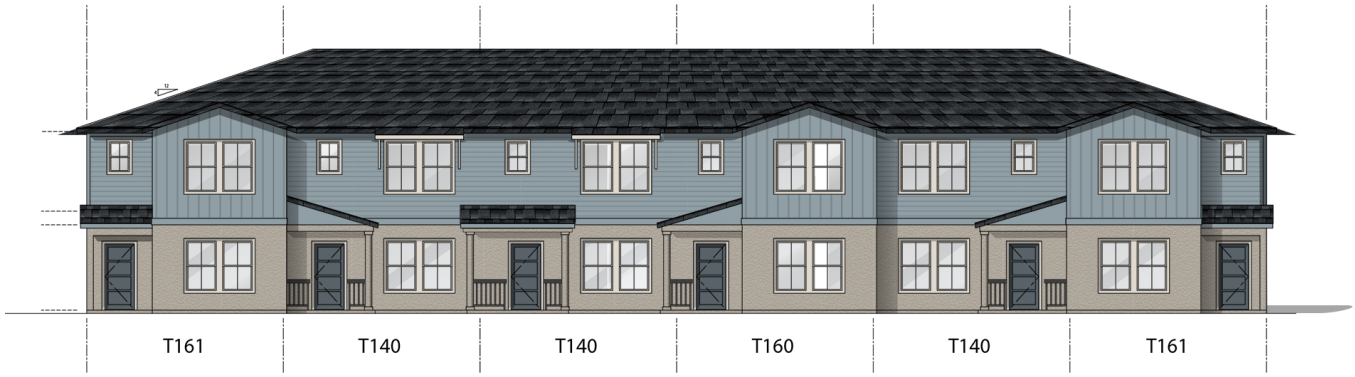


Conceptual Elevations - Rear Load Townhomes

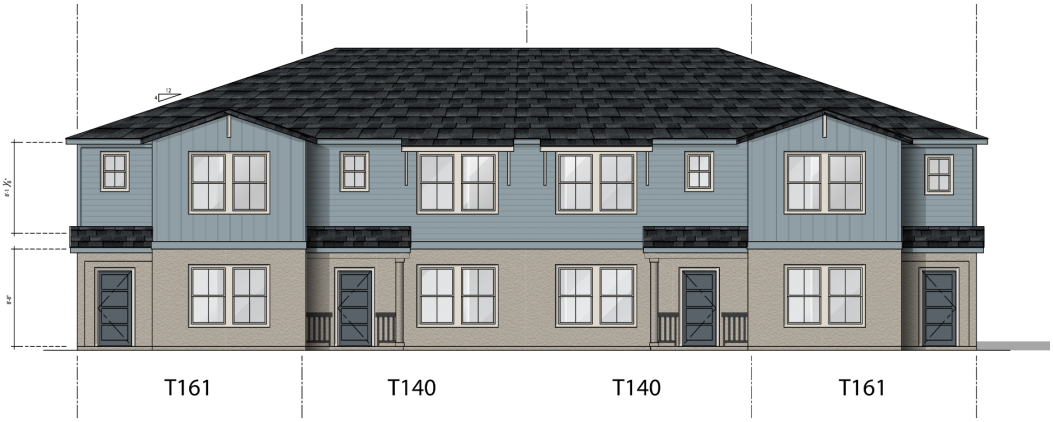




Conceptual Elevations - Rear Load Townhomes

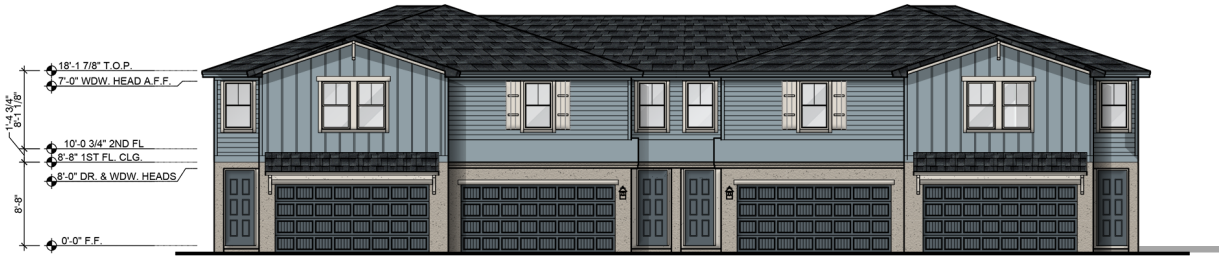






Conceptual Elevations - Rear Load Townhomes

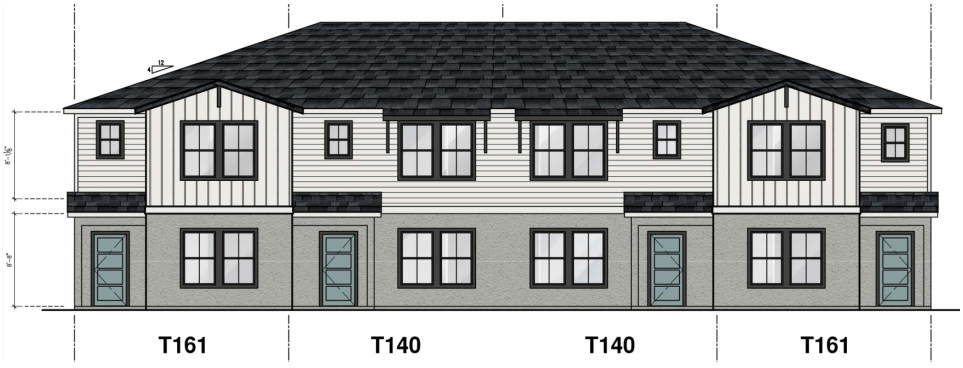




Conceptual Elevations - Rear Load Townhomes







Conceptual Elevations - Rear Load Townhomes







Conceptual Elevations - Rear Load Townhomes







Conceptual Elevations - Front Load Single Family



Elevation A



Elevation B



Elevation C



Elevation D



Elevation E



Elevation F



Elevation G



Elevation H

Conceptual Elevations - Front Load Single Family



Elevation A



Elevation B



Elevation C



Elevation D



Elevation E



Elevation F



Elevation G



Elevation H

Conceptual Elevations - Front Load Single Family



Elevation A



Elevation B



Elevation C



Elevation D

Conceptual Elevations - Front Load Single Family



Elevation A



Elevation B



Elevation C



Elevation D



Elevation E

Conceptual Elevations - Front Load Single Family



Elevation A



Elevation B



Elevation C



Elevation D



Elevation E

Conceptual Elevations - Rear Load Single Family



Elevation A



Elevation B



Elevation C



Elevation K



Elevation L



Elevation M

Conceptual Elevations - Rear Load Single Family



Elevation A



Elevation B



Elevation C



Elevation K



Elevation L



Elevation M

Conceptual Elevations - Rear Load Single Family



Elevation A



Elevation B



Elevation C



Elevation K



Elevation L



Elevation M

Conceptual Elevations - Rear Load Single Family



Elevation A



Elevation B



Elevation C



Elevation K

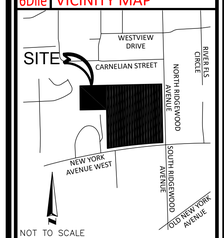


Elevation L

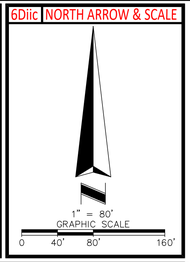


Elevation M

6Diie VICINITY MAP



6Diic NORTH ARROW & SCALE



5Ciii OBSERVED POTENTIAL ENCROACHMENTS

- (A) BARBED WIRE FENCE CROSSES BOUNDARY, POSSIBLE ENCROACHMENT, NO GREATER THAN 2.1'
- (B) BARBED WIRE AND WOOD & WIRE FENCE CROSS BOUNDARY, POSSIBLE ENCROACHMENT, NO GREATER THAN 1.3'
- (C) NORTH RIDGEWOOD AVENUE PAVEMENT CROSSES BOUNDARY, POSSIBLE ENCROACHMENT, NO GREATER THAN 23.7'
- (D) NORTH RIDGEWOOD AVENUE PAVEMENT CROSSES BOUNDARY, POSSIBLE ENCROACHMENT, NO GREATER THAN 17.8'

3 FLOOD INFORMATION

BY GRAPHIC PLOTTING ONLY, THIS PROPERTY LIES WITHIN ZONE "X", AS SHOWN ON THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 125155 0465 H (MAP NO. 12127C0465H), WHICH BEARS AN EFFECTIVE DATE OF 02/19/2014, AND IS NOT IN A SPECIAL FLOOD HAZARD AREA. NO FIELD SURVEYING WAS PERFORMED TO DETERMINE THIS ZONE. ZONE "X" DENOTES AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

6Diid LEGEND AND ABBREVIATIONS

	CONCRETE SURFACE	ALUM	ALUMINUM
	ROAD STRIPING	BM	BENCHMARK
	FIRE HYDRANT	(C)	CALCULATED DATA
	GAS VALVE	C/L	CENTERLINE
	UTILITY POLE	CM	CONCRETE MONUMENT
	GUY ANCHOR	CONC	CONCRETE
	MAIL BOX	CRNR	CORNER
	BENCHMARK	(T)	TITLE DATA
	RECOVERED MONUMENT AS NOTED	EL	ELEVATION
	SET MONUMENT AS NOTED	EP	EDGE OF PAVEMENT
	CONCRETE MONUMENT AS NOTED	FLDOT	FLORIDA DEPARTMENT OF TRANSPORTATION
		FND	FOUND
x	VINYL FENCE	IR	IRON ROD
	WIRE FENCE	LB	LICENSED BUSINESS
	ADJACENT LINE	LS	LICENSED SURVEYOR
	SECTION LINE	(M)	FIELD MEASURED DATA
OHU	OVERHEAD UTILITY LINE	MB	MAIL BOX
	CONTOUR MAJOR	N/D	NAIL & DISK
	CONTOUR MINOR	NGS	NATIONAL GEODETIC SURVEY
•XXX	SPOT SHOT	NO.	NUMBER
	CENTERLINE	ORB	OFFICIAL RECORDS BOOK
	BREAK LINE	(P)	PLAT DATA
		PB	PLAT BOOK
	SECTION CORNER	PG	PAGE
	CANPHOR TREE	PID	PARCEL IDENTIFICATION
	OAK TREE	PLS	PROFESSIONAL LICENSED SURVEYOR
	PALM TREE	POB	POINT OF BEGINNING
		POC	POINT OF COMMENCEMENT
		R/W	RIGHT OF WAY

6Ciie PLATTED SETBACK OR RECORDED BUILDING RESTRICTION LINES

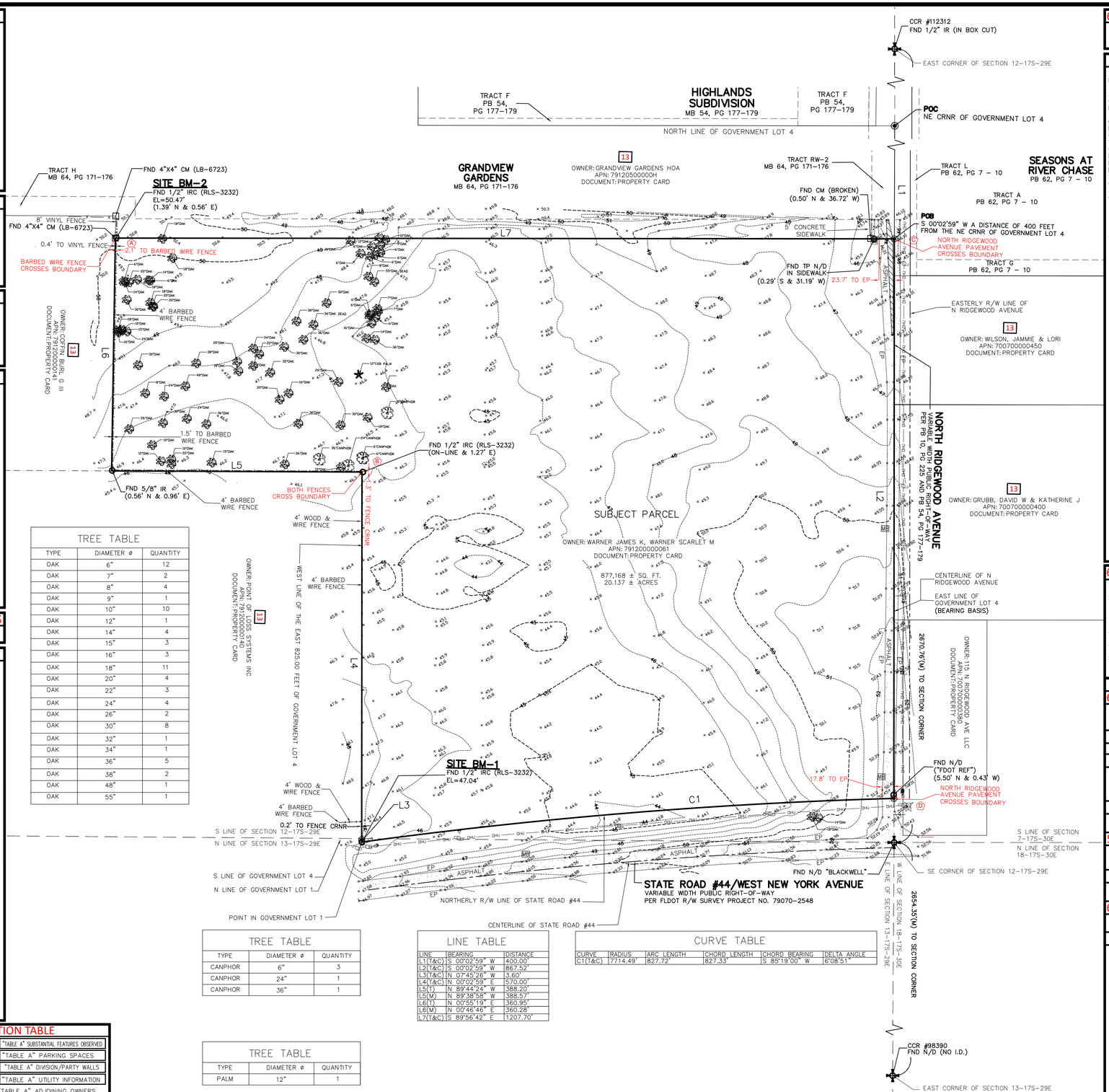
NONE PROVIDED TO THIS SURVEYOR.

5Ei "SCHEDULE B - SECTION 2" ITEMS

(9) — EASEMENT IN FAVOR OF FLORIDA POWER CORPORATION RECORDED FEBRUARY 15, 1961 IN OFFICIAL RECORDS BOOK 349, PAGE 570. (DOES NOT AFFECT)

ALTA/NSPS LAND TITLE SURVEY IDENTIFICATION TABLE

2	"TABLE A" PROPERTY ADDRESS	6Bvii	CONTIGUITY STATEMENT	8	"TABLE A" SUBSTANTIAL FEATURES OBSERVED
3	"TABLE A" FLOOD INFORMATION	6Bxii	TITLE COMMITMENT INFORMATION	9	"TABLE A" PARKING SPACES
4	"TABLE A" LAND AREA	6Cvii	RECORDED SETBACKS/RESTRICTIONS PROVIDED BY INSURED	10	"TABLE A" DIVISION/PARTY WALLS
5Biii	ACCESS TO PROPERTY	6Diic	NORTH ARROW & SCALE	11	"TABLE A" UTILITY INFORMATION
5Ciii	SURVEYOR OBSERVED POTENTIAL ENCROACHMENTS	6Diid	LEGEND & ABBREVIATIONS	13	"TABLE A" ADJOINING OWNERS
5Ei	"SCHEDULE B – SECTION 2" ITEMS	6Diie	VICINITY MAP	14	"TABLE A" INTERSECTING STREET
5F	CEMETERY NOTE	6Diig	SURVEYOR'S NOTES	16	"TABLE A" EARTH MOVING NOTE
6	TABLE "A" ZONING INFORMATION	6Diik	TYPE OF SURVEY	17	"TABLE A" RIGHT OF WAY CHANGES
6Bi	TITLE DESCRIPTION	7	SURVEYOR'S CERTIFICATE	18	"TABLE A" OFFSITE EASEMENTS OR SERVITUDES
		7b	"TABLE A" BUILDING AREA		
6Biv	BEARING BASIS	7c	"TABLE A" BUILDING HEIGHT		



TREE TABLE

TYPE	DIAMETER ø	QUANTITY
OAK	6"	12
OAK	7"	2
OAK	8"	4
OAK	9"	1
OAK	10"	10
OAK	12"	1
OAK	14"	4
OAK	15"	3
OAK	16"	3
OAK	18"	11
OAK	20"	4
OAK	22"	3
OAK	24"	4
OAK	26"	2
OAK	30"	8
OAK	32"	1
OAK	34"	1
OAK	36"	5
OAK	38"	2
OAK	48"	1
OAK	55"	1

TREE TABLE

TYPE	DIAMETER ø	QUANTITY
CANPHOR	6"	3
CANPHOR	24"	1
CANPHOR	36"	1

TREE TABLE

TYPE	DIAMETER ø	QUANTITY
PALM	12"	1

LINE TABLE

LINE	BEARING	DISTANCE
L1(T&C)	S 00°02'59" W	400.00'
L2(T&C)	S 00°02'59" W	867.52'
L3(T&C)	N 07°45'26" W	3.60'
L4(T&C)	N 00°02'59" E	570.00'
L5(T)	N 89°44'24" W	388.20'
L5(M)	N 89°38'58" W	388.57'
L6(T)	N 00°55'19" E	360.95'
L6(M)	N 00°46'46" E	360.28'
L7(T&C)	S 89°56'42" E	1207.70'

CURVE TABLE

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1(T&C)	7714.49'	827.72'	827.33'	S 85°19'00" W	6°08'51"

6Bxii TITLE COMMITMENT INFORMATION

THE TITLE DESCRIPTION AND SCHEDULE "B" ITEMS HEREON ARE FROM: FIRST AMERICAN TITLE INSURANCE COMPANY, COMMITMENT NO.: #110588914, HAVING AN EFFECTIVE DATE OF FEBRUARY 13, 2025.

SHEET 1 OF 1

6Bi TITLE DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNTY OF VOLUSIA, STATE OF FLORIDA AND IS DESCRIBED AS FOLLOWS:

A PARCEL OF LAND LYING IN GOVERNMENT LOT 4, SECTION 12, TOWNSHIP 17 SOUTH, RANGE 29 EAST AND GOVERNMENT LOT 1, SECTION 13, TOWNSHIP 17 SOUTH, RANGE 29 EAST, VOLUSIA COUNTY, FLORIDA BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID GOVERNMENT LOT 4, RUN THENCE S 00°02'59" W ALONG THE EAST LINE OF SAID GOVERNMENT LOT 4 A DISTANCE OF 400.00 FEET TO THE **POINT OF BEGINNING**, THENCE CONTINUE S 00°02'59" W ALONG SAID EAST LINE OF DISTANCE OF 867.52 FEET TO THE NORTHERLY RIGHT OF WAY LINE OF STATE ROAD #44, BEING ON A CURVE CONCAVE TO THE SOUTH, HAVING A CENTRAL ANGLE OF 06°08'51", A RADIUS OF 7714.49 FEET, A CHORD BEARING OF S85°19'00" W AND A CHORD DISTANCE OF 827.33 FEET, THENCE RUN ALONG THE ARC AND SAID NORTHERLY RIGHT OF WAY LINE AN ARC DISTANCE OF 827.72 FEET TO A POINT IN SAID GOVERNMENT LOT 1, THENCE RUN N 07°45'26" W A DISTANCE OF 3.60 FEET TO A POINT ON THE NORTH LINE OF SAID GOVERNMENT LOT 1, ALSO BEING THE SOUTH LINE OF GOVERNMENT LOT 4, SAID POINT BEING ON THE WEST LINE OF THE EAST 825.00 FEET OF SAID GOVERNMENT LOT 4, THENCE RUN N 00°02'59" E ALONG SAID WEST LINE A DISTANCE OF 570.00 FEET, THENCE RUN N 89°44'24" W A DISTANCE OF 388.20 FEET, THENCE RUN N 00°55'19" E A DISTANCE OF 360.95 FEET, THENCE RUN S 89°56'42" E, A DISTANCE OF 1207.70 FEET TO THE **POINT OF BEGINNING**.

THIS SURVEY DESCRIBES AND DEPICTS THE SAME LAND AS DESCRIBED IN THE TITLE COMMITMENT AS REFERENCED ABOVE.

6Diig SURVEYOR'S NOTES

1. NO UNDERGROUND UTILITIES ARE SHOWN ON THIS SURVEY, ONLY ABOVE GROUND VISIBLE EVIDENCE OF UTILITIES ARE SHOWN.
2. ALL STATEMENTS WITHIN THE CERTIFICATION, AND OTHER REFERENCES LOCATED ELSEWHERE HEREON, RELATED TO: UTILITIES, IMPROVEMENTS, STRUCTURES, BUILDINGS, PARTY WALLS, PARKING, EASEMENTS, SERVITUDES, AND ENCROACHMENTS ARE BASED SOLELY ON ABOVE GROUND, VISIBLE EVIDENCE, UNLESS ANOTHER SOURCE OF INFORMATION IS SPECIFICALLY REFERENCED HEREON.
3. THIS SURVEY MEETS OR EXCEEDS THE SURVEY STANDARDS/STANDARDS OF CARE AS SET FORTH IN SECTION 3 OF THE 2021 ALTA/NSPS SURVEY REQUIREMENTS.
4. TREES SHOWN HEREON ARE DESCRIBED BY SPECIES AND DIAMETER OF TRUNK AT BREAST HEIGHT.
5. VERTICAL INFORMATION BASED ON: BENCHMARK 01-049-0-02 HAVING A PUBLISHED ELEVATION OF 41.881 FEET (NAVD88)
DESCRIBED AS: "SET 4" X 4" PRECAST CONCRETE MONUMENT WITH S.J.R.W.M.D. DISK

4 LAND AREA

877,168 ± SQUARE FEET 20.137 ± ACRES

6Biv BEARING BASIS

BEARINGS SHOWN HEREON ARE BASED ON EAST LINE OF GOVERNMENT LOT 4, WHICH BEARS S 00°02'59" W, PER ASSUMED DATUM.

5F CEMETERY NOTE

THERE IS NO VISIBLE EVIDENCE OF CEMETERIES ON SUBJECT PROPERTY.

8 SUBSTANTIAL FEATURES OBSERVED

SUBSTANTIAL ABOVE GROUND FEATURES THAT WERE OBSERVED ON THE SUBJECT PARCEL, SUCH AS PARKING AREAS, DRIVES, WALKS, PLANTERS/LANDSCAPE AREAS AND OTHER, HAVE BEEN LOCATED AS SHOWN HEREON. NOTE: THERE WERE NO OBSERVED SUBSTANTIAL AREAS OF REFUSE ON THE SUBJECT PARCEL PER THE DATE OF THIS SURVEY.

9 PARKING SPACES

REGULAR = 0 HANDICAP = 0 TOTAL = 0

5Biii ACCESS TO PROPERTY

THE SUBJECT PROPERTY HAS DIRECT PHYSICAL ACCESS TO NEW YORK AVENUE WEST, AND NORTH RIDGEWOOD AVENUE, BOTH BEING DEDICATED PUBLIC STREETS OR HIGHWAYS.

16 EARTH MOVING NOTE

THERE IS NO OBSERVABLE EVIDENCE OF EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS WITHIN RECENT MONTHS.

6Bvii CONTIGUITY STATEMENT

THE PARCELS CONTAINED IN THE LEGAL DESCRIPTION ARE CONTIGUOUS WITHOUT ANY GAPS, GORES OR OVERLAPS.

7 SURVEYOR'S CERTIFICATE

TO: MERITAGE HOMES

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 7(a), 7(b)(1), 7(c), 8, 9, 13, 14, 16, AND 19 OF TABLE A THEREOF.
THE FIELD WORK WAS COMPLETED ON 03/06/2025.
DATE OF PLAT OR MAP: 03/07/2025.

Digitally signed by E Glenn Turner
DN: cn=E Glenn Turner, o=American Surveying & Mapping, ou=Professional Land Surveyor, email=eglturner@asmcorporate.com, c=US
Date: 2025.07.15 12:38:41 -04'00'
Adobe Acrobat version: 2020.005.30774

E. GLENN TURNER — DATE

PROFESSIONAL SURVEYOR & MAPPER NO: 5643
STATE OF: FLORIDA
PROJECT NO: 240638

SURVEY PREPARED BY:
AMERICAN SURVEYING AND MAPPING, INC.
221 CIRCLE DRIVE
MAITLAND, FLORIDA 32751
CERTIFICATE OF AUTHORIZATION # LB6393
PHONE: (407) 426-7979
FAX: (407) 426-9741
INFO@ASMCORPORATE.COM

NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED PROFESSIONAL SURVEYOR & MAPPER PER F.S. 472.025 OR THE CERTIFIED ELECTRONIC SIGNATURE AND SEAL OF A FLORIDA LICENSED PROFESSIONAL SURVEYOR & MAPPER PER F.A.C. 5J-17.062(2) AND 5J17.062(3).

THIS SURVEY MEETS OR EXCEEDS THE FLORIDA STANDARDS OF PRACTICE AS SET IN FLORIDA ADMINISTRATIVE CODE CHAPTER 5J-17-0.50 FOR A BOUNDARY SURVEY. ALL PARTS OF THIS SURVEY AND DRAWING HAVE BEEN COMPLETED IN ACCORDANCE WITH THE CURRENT REQUIREMENTS FOR SURVEYING IN THE STATE OF FLORIDA TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

DATE	REVISIONS	TECH
03/07/25	NEW TITLE/CERTS	BS
05/22/25	UPDATE CERTS	BS
06/02/25	UPDATE EXCEPTIONS	BS
07/15/25	UPDATE ALTA	BS

FIELD	SM	DRAWING SCALE	1"=80'
DRAWN BY	BS	QC BY	EGT
DRAWING NAME	240638 210 N RIDGEWOOD AVE, DELAND ALTA W TITLE BEARING BASIS 07-14-25.DWG		

6Diik ALTA/NSPS LAND TITLE SURVEY
2
BOUNDARY AND TOPOGRAPHIC SURVEY OF
210 NORTH RIDGEWOOD AVENUE
SECTION 12, TOWNSHIP 17 SOUTH, RANGE 29 EAST;
AND SECTION 13, TOWNSHIP 17 SOUTH, RANGE 29 EAST
VOLUSIA COUNTY DELAND, FLORIDA

AMERICAN SURVEYING & MAPPING, INC.
A DIVISION OF AMERICAN SURVEYING & MAPPING, INC
NDDS NATIONAL DUE DILIGENCE SERVICES
221 Circle Drive, Maitland, FL 32751
Phone: 407-426-7979 nationalduediligenceservices.com

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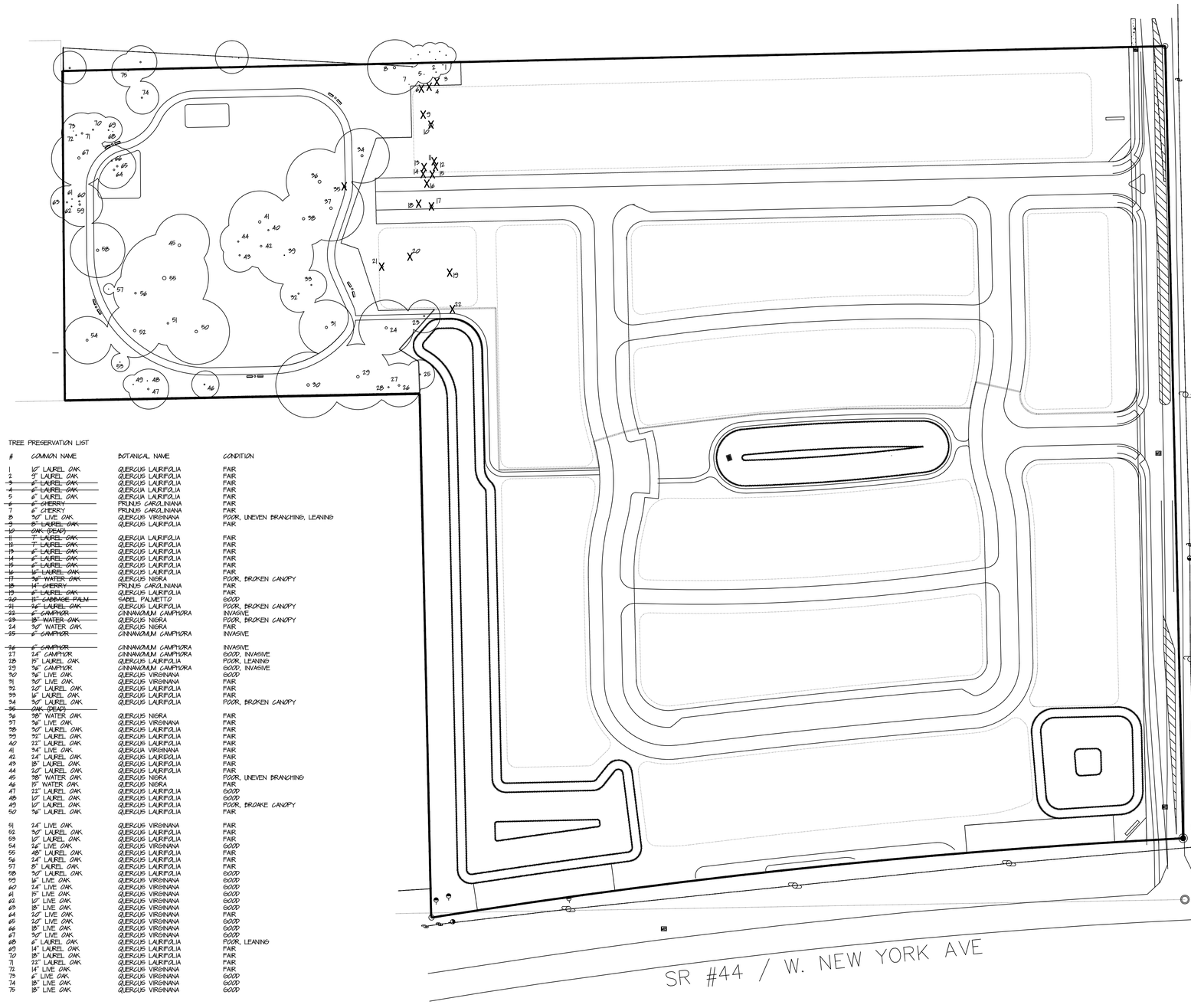


TREE PRESERVATION LIST

#	COMMON NAME	BOTANICAL NAME	CONDITION
1	10" LAUREL OAK	QUERCUS LAURIFOLIA	FAIR
2	5" LAUREL OAK	QUERCUS LAURIFOLIA	FAIR
~~3~~	~~6" LAUREL OAK~~	~~QUERCUS LAURIFOLIA~~	~~FAIR~~
~~4~~	~~6" LAUREL OAK~~	~~QUERCUS LAURIFOLIA~~	~~FAIR~~
~~5~~	~~6" LAUREL OAK~~	~~QUERCUS LAURIFOLIA~~	~~FAIR~~
~~6~~	~~6" CHERRY~~	~~PRUNUS CAROLINIANA~~	~~FAIR~~
7	6" CHERRY	PRUNUS CAROLINIANA	FAIR
8	30" LIVE OAK	QUERCUS VIRGINIANA	POOR, UNEVEN BRANCHING, LEANING
~~9~~	~~8" LAUREL OAK~~	~~QUERCUS LAURIFOLIA~~	~~FAIR~~
~~10~~	~~OAK (DEAD)~~		
~~11~~	~~7" LAUREL OAK~~	~~QUERCUS LAURIFOLIA~~	~~FAIR~~
~~12~~	~~7" LAUREL OAK~~	~~QUERCUS LAURIFOLIA~~	~~FAIR~~
~~13~~	~~6" LAUREL OAK~~	~~QUERCUS LAURIFOLIA~~	~~FAIR~~
~~14~~	~~6" LAUREL OAK~~	~~QUERCUS LAURIFOLIA~~	~~FAIR~~
~~15~~	~~6" LAUREL OAK~~	~~QUERCUS LAURIFOLIA~~	~~FAIR~~
~~16~~	~~16" LAUREL OAK~~	~~QUERCUS LAURIFOLIA~~	~~FAIR~~
~~17~~	~~36" WATER OAK~~	~~QUERCUS NIGRA~~	~~POOR, BROKEN CANOPY~~
~~18~~	~~14" CHERRY~~	~~PRUNUS CAROLINIANA~~	~~FAIR~~
~~19~~	~~8" LAUREL OAK~~	~~QUERCUS LAURIFOLIA~~	~~FAIR~~
~~20~~	~~12" CABBAGE PALM~~	~~SABEL PALMETTO~~	~~GOOD~~
~~21~~	~~36" LAUREL OAK~~	~~QUERCUS LAURIFOLIA~~	~~POOR, BROKEN CANOPY~~
~~22~~	~~6" CAMPHOR~~	~~CINNAMOMUM CAMPHORA~~	~~INVASIVE~~
~~23~~	~~18" WATER OAK~~	~~QUERCUS NIGRA~~	~~POOR, BROKEN CANOPY~~
24	30" WATER OAK	QUERCUS NIGRA	FAIR
~~25~~	~~6" CAMPHOR~~	~~CINNAMOMUM CAMPHORA~~	~~INVASIVE~~
~~26~~	~~6" CAMPHOR~~	~~CINNAMOMUM CAMPHORA~~	~~INVASIVE~~
27	24" CAMPHOR	CINNAMOMUM CAMPHORA	GOOD, INVASIVE
28	15" LAUREL OAK	QUERCUS LAURIFOLIA	POOR, LEANING
29	96" CAMPHOR	CINNAMOMUM CAMPHORA	GOOD, INVASIVE
30	96" LIVE OAK	QUERCUS VIRGINANA	GOOD
31	30" LIVE OAK	QUERCUS VIRGINANA	FAIR
32	20" LAUREL OAK	QUERCUS LAURIFOLIA	FAIR
33	16" LAUREL OAK	QUERCUS LAURIFOLIA	FAIR
34	30" LAUREL OAK	QUERCUS LAURIFOLIA	POOR, BROKEN CANOPY
~~35~~	~~OAK (DEAD)~~		
36	38" WATER OAK	QUERCUS NIGRA	FAIR
37	36" LIVE OAK	QUERCUS VIRGINANA	FAIR
38	30" LAUREL OAK	QUERCUS LAURIFOLIA	FAIR
39	30" LAUREL OAK	QUERCUS LAURIFOLIA	FAIR
40	22" LAUREL OAK	QUERCUS LAURIFOLIA	FAIR
41	34" LIVE OAK	QUERCUA VIRGINANA	FAIR
42	24" LAUREL OAK	QUERCUS LAURIFOLIA	FAIR
43	18" LAUREL OAK	QUERCUS LAURIFOLIA	FAIR
44	20" LAUREL OAK	QUERCUS LAURIFOLIA	FAIR
45	38" WATER OAK	QUERCUS NIGRA	POOR, UNEVEN BRANCHING
46	15" WATER OAK	QUERCUS NIGRA	FAIR
47	22" LAUREL OAK	QUERCUS LAURIFOLIA	GOOD
48	10" LAUREL OAK	QUERCUS LAURIFOLIA	GOOD
49	10" LAUREL OAK	QUERCUS LAURIFOLIA	POOR, BROKEN CANOPY
50	36" LAUREL OAK	QUERCUS LAURIFOLIA	FAIR
51	24" LIVE OAK	QUERCUS VIRGINANA	FAIR
52	30" LAUREL OAK	QUERCUS LAURIFOLIA	FAIR
53	10" LAUREL OAK	QUERCUS LAURIFOLIA	FAIR
54	26" LIVE OAK	QUERCUS VIRGINANA	GOOD
55	48" LAUREL OAK	QUERCUS LAURIFOLIA	FAIR
56	24" LAUREL OAK	QUERCUS LAURIFOLIA	FAIR
57	8" LAUREL OAK	QUERCUS LAURIFOLIA	FAIR
58	30" LAUREL OAK	QUERCUS LAURIFOLIA	GOOD
59	16" LIVE OAK	QUERCUS VIRGINANA	GOOD
60	24" LIVE OAK	QUERCUS VIRGINANA	GOOD
61	15" LIVE OAK	QUERCUS VIRGINANA	GOOD
62	10" LIVE OAK	QUERCUS VIRGINANA	GOOD
63	18" LIVE OAK	QUERCUS VIRGINANA	GOOD
64	20" LIVE OAK	QUERCUS VIRGINANA	FAIR
65	20" LIVE OAK	QUERCUS VIRGINANA	GOOD
66	18" LIVE OAK	QUERCUS VIRGINANA	GOOD
67	30" LIVE OAK	QUERCUS VIRGINANA	GOOD
68	6" LAUREL OAK	QUERCUS LAURIFOLIA	POOR, LEANING
69	14" LAUREL OAK	QUERCUS LAURIFOLIA	FAIR
70	18" LAUREL OAK	QUERCUS LAURIFOLIA	FAIR
71	22" LAUREL OAK	QUERCUS LAURIFOLIA	FAIR
72	14" LIVE OAK	QUERCUS VIRGINANA	FAIR
73	6" LIVE OAK	QUERCUS VIRGINANA	GOOD
74	18" LIVE OAK	QUERCUS VIRGINANA	GOOD
75	18" LIVE OAK	QUERCUS VIRGINANA	GOOD

GOOD – TREE IS HEALTHY AND TRUNK FREE FROM DEFECTS. TREE HAS FULL, EVEN CANOPY. BRANCHING IS EVENLY DISTRIBUTED. SPACING IS PROVIDED TO ALLOW OPTIMUM GROWTH

FAIR – TREE IS HEALTHY AND TRUNK FREE OF DEFECTS. TREE CANOPY IS UNEVEN. BRANCHING HAS GAPS AND/OR UNEVENLY DISTRIBUTED. LOCATION IS CROWDED WITH OTHER TREES LIMITING GROWTH PATTERNS

POOR – MAJOR DEFECTS IN TRUNK AND/OR BRANCHING PATTERN. CANOPY IS ONE-SIDED OR MAJOR GAPS. TREE IS LEANING OR OTHERWISE UNSTABLE. LOCATION PROHIBITS PROPER GROWTH PATTERNS

DEAD – TREE IS EITHER DEAD OR DAMAGED ENOUGH TO PRECLUDE VIABILITY. RECOMMENDED FOR REMOVAL

TREE PRESERVATION CALCULATIONS

TOTAL EXISTING INCHES (TOTAL TREES)	=	1284" (67)
TOTAL INCHES TO BE REMOVED *	=	174" (15)
TOTAL LIVE OAK INCHES TO BE REMOVED	=	–
TOTAL (OTHER) INCHES TO BE REMOVED	=	174" (15)

*DEAD TREES, PALMS, AND CAMPHOR TREES ARE NOT INCLUDED

LIVE OAK CALCULATIONS

EXISTING TREES LESS THAN 10"	=	1
EXISTING SPECIMEN TREES (10" – 24")	=	12
EXISTING HISTORIC TREES (25"+)	=	7

*NO SPECIMEN OR HISTORIC TREES ARE TO BE REMOVED

EXISTING TREE TO BE REMOVED DUE TO PROPOSED GRADING AND PROXIMITY TO PROPOSED IMPROVEMENTS

EXISTING TREES THAT ARE DEAD, ARE PALM TREES, AND/OR INVASIVE SPECIES (CAMPHOR) WILL BE REMOVED BUT ARE NOT INCLUDED IN THE ABOVE CALCULATIONS

SCALE 1" = 60'

0 15 30 45 75 150 225

N

Richard A Kesselring

Digitally signed by Richard A Kesselring
Date: 2025.07.31 15:22:06 -04'00'

RICHARD A KESSELRING JR., PLA, ASLA
LANDSCAPE ARCHITECT , STATE OF FLORIDA #858

NO.	DATE	DESCRIPTION	BY

DRAWN BY: RAK
DATE: 7 / 25
SCALE: 1" = 60'
DRAWING NO.:
VIEW NAME:
FB. PG.
JOB NO.:

ENVIRONMENTAL DESIGN
ANDY KESSELRING, LANDSCAPE ARCHITECT
1920 SE. 8th STREET
OCALA, FLORIDA 34478
P.O. BOX 5121
(352) 622-8899
LANDSCAPE ARCHITECTURE, SITE PLANNING,
GOLF COURSE DESIGN, COMMERCIAL-RESIDENTIAL DESIGN

EDK

TREE PRESERVATION PLAN
DELAND PRESERVE
DELAND FLORIDA

SHEET ___ of ___

MEMORANDUM

April 29, 2025

Re: Ridgewood Avenue Residential
Traffic Impact Analysis Methodology
Volusia County, Florida
Project № 25042.01.01 v1.1

The following methodology outlines the methods and assumptions of the Traffic Impact Analysis (TIA) for the above referenced project. The TIA will conform to the methodology requirements and guidelines documented by the River to Sea Transportation Planning Organization (R2CTPO). It addresses comments received from Volusia County as detailed in the **Attachments**.

Project Description

The proposed development consists of 160 multi-family townhome residential homes with an anticipated buildout year of 2027. The site consists of parcel 79-1200000061 and is located at the northwest corner SR 44 and North Ridgewood Avenue in Volusia County, Florida, as shown in **Figure 1**. Access to the site is proposed via two (2) full access driveways on North Ridgewood Avenue. A copy of the conceptual site plan is provided in the **Attachments**.

Trip Generation

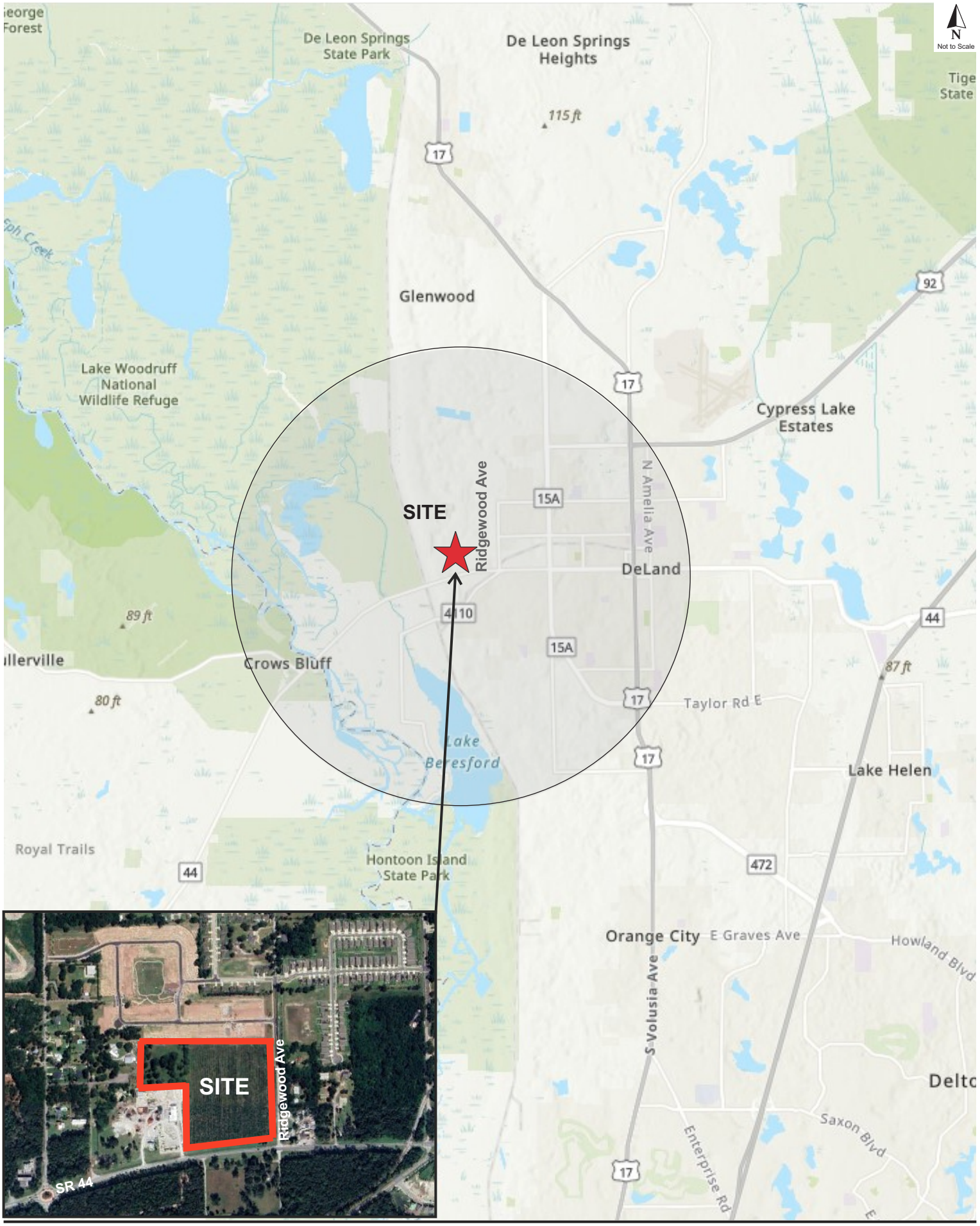
The trip generation analysis for the proposed development was conducted using the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, *11th Edition*. The trip generation calculation for the project is summarized in **Table 1**. Detailed trip generation sheets are provided in the **Attachments**.

Table 1
Trip Generation Calculation

ITE Code	Land Use	Size	Daily		AM Peak Hour				PM Peak Hour			
			Rate	Trips	Rate	Total	Enter	Exit	Rate	Total	Enter	Exit
215	Single-Family Attached (Townhouses)	160 DU	7.30	1,169	0.48	78	19	59	0.58	92	54	38

Trip generation analysis based on ITE Trip Generation Manual, 11th Edition

The proposed development is projected to generate 1,169 new daily trips of which 78 trips occur during the AM peak hour and 92 trips occur during the PM peak hour. Per the R2CTPO traffic study guidelines, since the proposed development is anticipated to generate more than 1,000 daily new trips, a TIA is required.


De Leon Springs State Park
De Leon Springs Heights
115 ft
Glenwood
Lake Woodruff National Wildlife Refuge
Cypress Lake Estates
SITE
Ridgewood Ave
N Amelia Ave
DeLand
15A
4110
89 ft
Crows Bluff
80 ft
Taylor Rd E
87 ft
Lake Beresford
Lake Helen
Royal Trails
Hontoon Island State Park
472
Orange City
E Graves Ave
Howland Blvd
S Volusia Ave
Saxon Blvd
Enterprise Rd
SR 44
Not to Scale

Trip Distribution

The trip distribution pattern was estimated using the *Central Florida Regional Planning Model (CFRPM, v7.0)*. The model distribution was adjusted to reflect the local network as well as prevailing traffic flow patterns. The raw model output is included in the **Attachments** and the adjusted trip distribution is shown in **Figure 2**.

Study Area

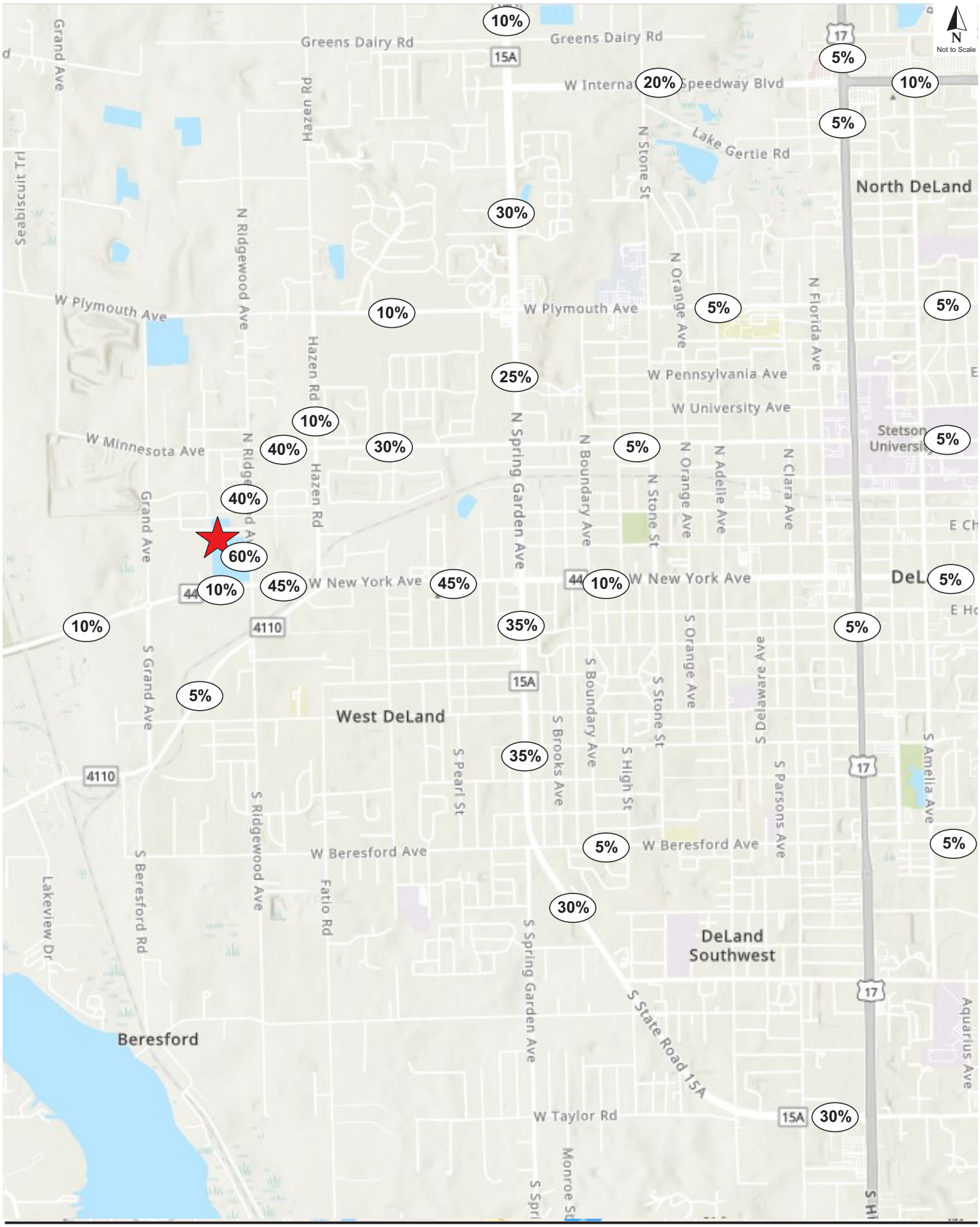
Per the TIA requirements, all roadways of the project where the project's peak hour trips consume three percent (3%) or more of a roadway's two-way peak hour generalized service volume based on the adopted LOS and committed number of lanes shall be analyzed. In addition, the Critical/Near Critical and Vested Critical/Near Vested Critical (C/NC/VC/NVC) data was reviewed for roadway segments within a 3-mile radius. The 3-mile C/NC/VC/NVC roadway buffer is shown in **Figure 3**. Roadway segments and peak two-way LOS capacities were obtained from the *Volusia County 2022 AADT & Historical Counts*, included in the **Attachments**. Findings are summarized in **Table 2.**

Two (2) roadway segments within the 3-mile radius were determined to be C/NC/VC/NVC designated facilities. One (1) segment is projected to consume three percent (3%) or more of the surrounding roadway's two-way peak hour generalized service volume. One (1) additional segment was added based on its proximity to the project. Therefore, the study will include the roadway segments and intersections displayed in **Figure 4**.

Roadway Segment and Intersection Analysis

The traffic analysis will include existing and 2027 buildout conditions for both roadway segment and intersection capacity analysis. Roadway segments will be analyzed for the PM peak two-way volume. The analysis will be based on volumes and service volumes obtained from *Volusia County 2022 AADT & Historical Counts.*

The intersection analysis will be conducted for the AM and PM peak hours based on field counts, projected movements, *Synchro* software and the methods of the *Highway Capacity Manual (HCM).* The intersection field counts will include non-vehicular modes of travel (e.g., pedestrians and bicycles).



TMC Traffic & Mobility CONSULTANTS

25042.01.01 Ridgewood Avenue Residential

Project Trip Distribution **Figure 2**

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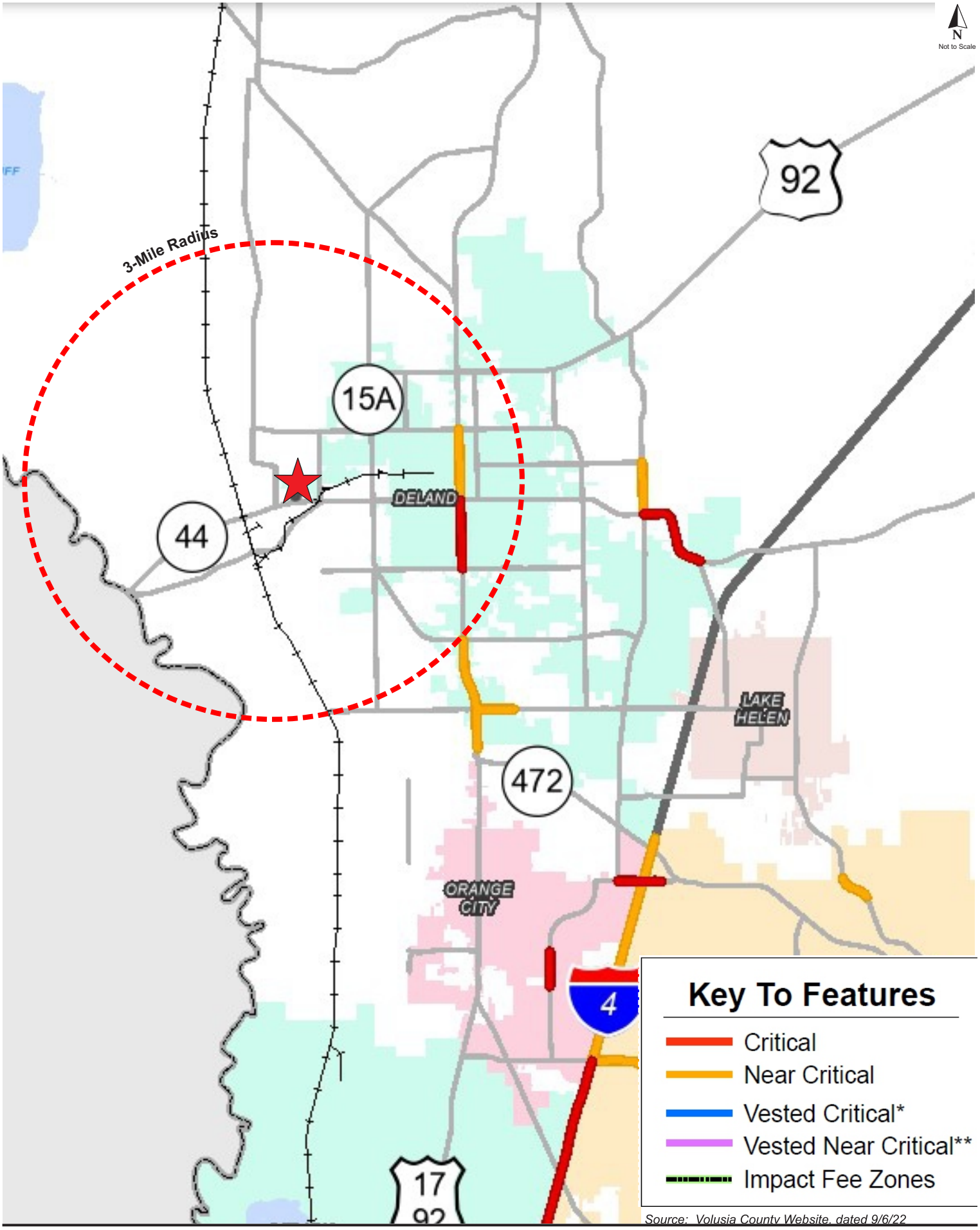

Not to Scale
N
3-Mile Radius
92
15A
44
DELAND
LAKE HELEN
472
ORANGE CITY
4
17
92
Key To Features
Critical
Near Critical
Vested Critical*
Vested Near Critical**
Impact Fee Zones
Source: Volusia County Website, dated 9/6/22

Table 2
Study Area Significance Review

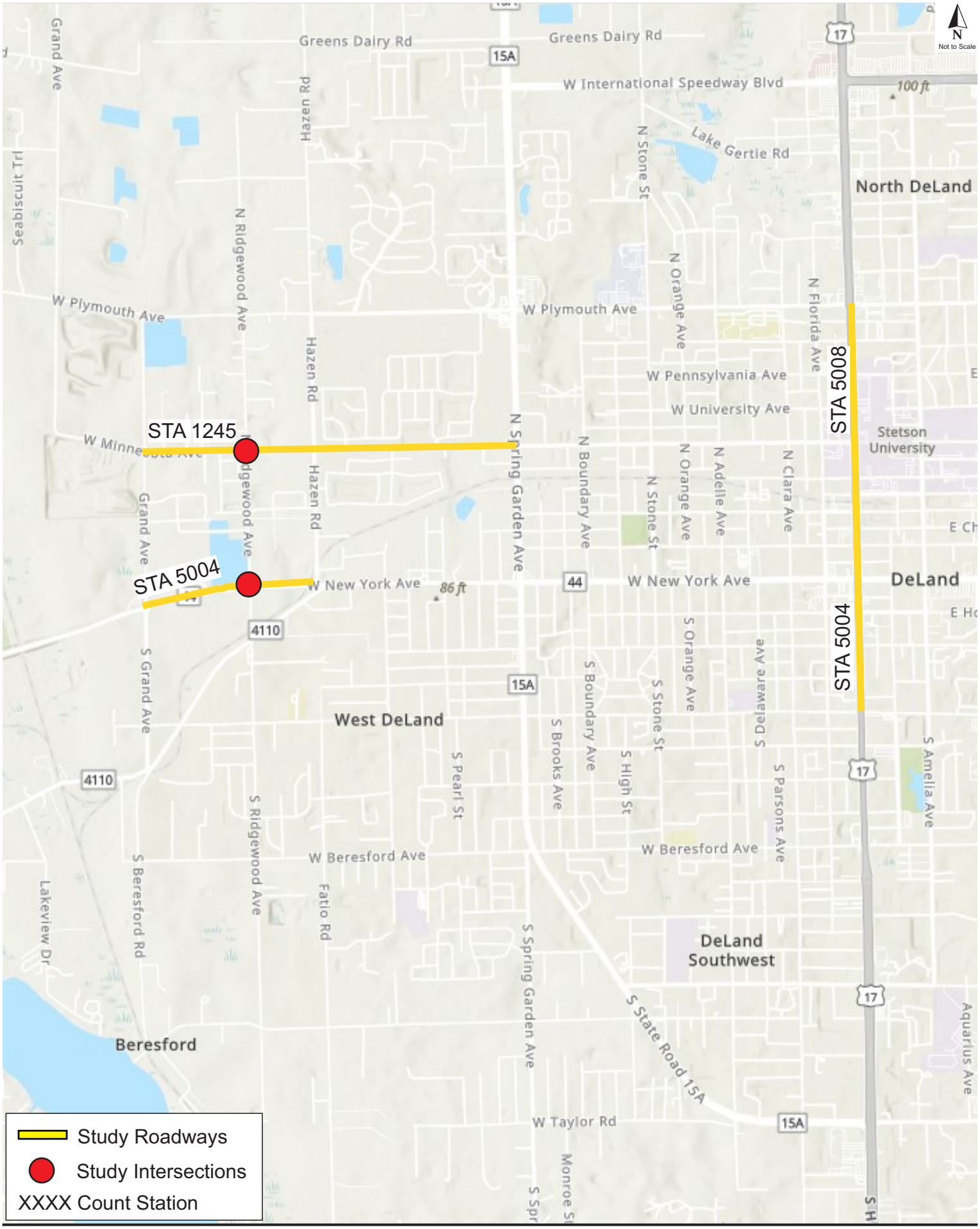
Roadway Segment	Seg Num	A T	Function Class	# of Lns	PK 2W Cap	Project Trips Dist	Trips	%Cap	Signif-icant?	C/ NC?	w/in 3-miles	In Study?
US 17/92												
SR 15A/Taylor Rd. to Beresford Ave.	1006	U	Principal Arterial	4	3,790	0%	0	0.00%	NO	NO	YES	NO
Beresford Ave. to Euclid Ave.	5173	U	Principal Arterial	4	1,480	0%	0	0.00%	NO	NO	YES	NO
Euclid Ave. to SR 44/New York Ave.	5004	U	Principal Arterial	2	1,410	5%	4	0.28%	NO	C	YES	YES
SR 44/New York Ave. to Plymouth Ave.	5008	U	Principal Arterial	2	1,410	0%	0	0.00%	NO	NC	YES	YES
Plymouth Ave. to US 92/ISB	66	U	Principal Arterial	4	3,790	5%	4	0.11%	NO	NO	YES	NO
SR 15A												
US 17/92/Taylor to New Hampshire Ave.	1005	U	Principal Arterial	4	3,580	30%	25	0.70%	NO	NO	YES	NO
New Hampshire Ave. to Beresford Ave.	6	U	Principal Arterial	4	3,580	30%	25	0.70%	NO	NO	YES	NO
Beresford Ave. to SR 44/New York Ave.	474	U	Principal Arterial	4	3,580	35%	29	0.81%	NO	NO	YES	NO
SR 44/New York Ave. to Plymouth Ave.	463	U	Principal Arterial	4	3,580	25%	21	0.59%	NO	NO	YES	NO
Plymouth Ave. to CR 92	537	U	Principal Arterial	4	3,580	30%	25	0.70%	NO	NO	YES	NO
CR 92 to Glenwood Rd.	465	U	Principal Arterial	4	3,580	10%	8	0.22%	NO	NO	YES	NO
SR 44												
Lake Co. to Shell Rd.	1007	U	Principal Arterial	2	1,490	10%	8	0.54%	NO	NO	YES	NO
Shell Rd. to Grand Ave.	1007	U	Principal Arterial	2	2,180	10%	8	0.37%	NO	NO	YES	NO
Grand Ave. to Old New York/Hazen Rd.	1007	U	Principal Arterial	2	2,180	45%	37	1.70%	NO	NO	YES	NO
Old New York/Hazen Rd. to SR 15A/Spring Garden /	274	U	Principal Arterial	2	2,180	45%	37	1.70%	NO	NO	YES	NO
SR 15A/Spring Garden Ave. to Stone St.	447	U	Principal Arterial	2	1,712	10%	8	0.47%	NO	NO	YES	NO
Stone St. to Clara Ave.	5012	U	Principal Arterial	2	1,712	10%	8	0.47%	NO	NO	YES	NO
Clara Ave. to Amelia Ave.	5015	U	Principal Arterial	2	1,410	10%	8	0.57%	NO	NO	YES	NO
Amelia Ave. to Hill Ave.	80	U	Principal Arterial	2	1,712	5%	4	0.23%	NO	NO	YES	NO
Amelia Ave												
SR 44 to Ohio Ave.	73	U	Major-Collector	4	2,060	0%	0	0.00%	NO	NO	YES	NO
Ohio Ave. to Minnesota Ave.	74	U	Major-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Minnesota Ave. to Plymouth Ave.	75	U	Major-Collector	2	1,270	0%	0	0.00%	NO	NO	YES	NO
Plymouth Ave. to US 92	77	U	Major-Collector	2	1,270	0%	0	0.00%	NO	NO	YES	NO
Beresford Ave												
Beresford Rd. to Fatio Rd	161	U	Major-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Fatio Rd. to SR 15A	162	U	Major-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
SR 15A to US 17/92	164	U	Major-Collector	2	1,020	5%	4	0.39%	NO	NO	YES	NO
US 17/92 to Amelia Ave	165	U	Major-Collector	2	1,330	5%	4	0.30%	NO	NO	YES	NO
Amelia Ave. to Hill Ave.	167	U	Major-Collector	2	1,620	5%	4	0.25%	NO	NO	YES	NO
Hill Ave. to Blue Lake Ave.	169	U	Major-Collector	2	1,230	5%	4	0.33%	NO	NO	YES	NO
Beresford Rd												
SR 15A to Spring Garden Ave.	180	U	Major-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Spring Garden Ave. to Fatio Rd.	181	U	Major-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Fatio Rd.. to Beresford Ave	182	U	Major-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Beresford Ave. to Old New York Ave.	183	U	Major-Collector	2	1,020	5%	4	0.39%	NO	NO	YES	NO
CR 92 (International Speedway Blvd)												
SR 15A to Stone St.	450	U	Principal Arterial	4	3,410	20%	16	0.47%	NO	NO	YES	NO
Stone St. to US 17/92	452	U	Principal Arterial	4	3,410	20%	16	0.47%	NO	NO	YES	NO
Euclid Ave												
Grand to Fatio Rd.	610	U	Minor-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Fatio Rd. to Woodward Ave.	611	U	Minor-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Woodward Ave. to SR 15A	612	U	Minor-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
SR 15A to Adelle Ave.	613	U	Minor-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Adelle Ave. to US 17/92	614	U	Minor-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Garfield Ave												
SR 44 to Plymouth Ave.	700	U	Local	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Plymouth Ave. to US 92	702	U	Local	2	1,020	0%	0	0.00%	NO	NO	YES	NO

Source: 2022 Volusia County AADTs

Table 2
Study Area Significance Review (Cont'd)

Roadway Segment	Seg Num	A T	Function Class	# of Lns	PK 2W Cap	Project Trips			Signif-icant?	C/ NC?	w/in 3-miles	In Study?
						Dist	Trips	%Cap				
Grand Ave / CR 4053												
Old New York Ave. to SR 44	748	U	Major-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
SR 44 to Minnesota Ave.	750	U	Major-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Minnesota Ave. to Plymouth Ave.	751	U	Major-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Plymouth Ave. to Glenwood Rd.	752	U	Major-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Glenwood Rd. to Lemon St.	754	U	Major-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Minnesota Ave												
Grand Ave. to SR 15A	1245	U	Minor-Collector	2	1,020	40%	33	3.24%	YES	NO	YES	YES
SR 15A to US 17/92	1247	U	Minor-Collector	2	1,020	5%	4	0.39%	NO	NO	YES	NO
Amelia Ave. to Hill Ave	1249	U	Major-Collector	2	1,020	5%	4	0.39%	NO	NO	YES	NO
New Hampshire Ave												
SR 15A to Adelle Ave	1270	U	Minor-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Adelle Ave to Clara Ave.	1271	U	Minor-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Clara Ave. to US 17/92	1272	U	Minor-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Plymouth Ave												
Grand Ave. to Hazen Rd.	1490	U	Major-Collector	2	1,230	0%	0	0.00%	NO	NO	YES	NO
Hazen Rd. to SR 15A	1491	U	Major-Collector	2	1,230	10%	8	0.65%	NO	NO	YES	NO
SR 15A to Stone St.	1493	U	Major-Collector	2	1,020	5%	4	0.39%	NO	NO	YES	NO
Stone St. to Clara Ave	1495	U	Major-Collector	2	1,020	5%	4	0.39%	NO	NO	YES	NO
Clara Ave. to US 17/92	1497	U	Major-Collector	2	1,270	5%	4	0.31%	NO	NO	YES	NO
US 17/92 to Amelia Ave	1498	U	Major-Collector	2	1,270	5%	4	0.31%	NO	NO	YES	NO
Amelia Ave. to Garfield Ave.	1500	U	Major-Collector	2	1,020	5%	4	0.39%	NO	NO	YES	NO
Garfield Ave. to Blue Lake Rd./Jacobs Dairy Rd	1502	U	Major-Collector	2	1,020	5%	4	0.39%	NO	NO	YES	NO
Woodward Ave												
Beresford Ave. to Euclid Ave.	2031	U	Minor-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO
Euclid Ave. to SR 44	2030	U	Minor-Collector	2	1,020	0%	0	0.00%	NO	NO	YES	NO

Source: 2022 Volusia County AADTs


N
Not to Scale
Greens Dairy Rd
15A
W International Speedway Blvd
100 ft
Lake Gertie Rd
North DeLand
Grand Ave
Hazen Rd
N Stone St
N Ridgewood Ave
W Plymouth Ave
N Orange Ave
N Florida Ave
W Pennsylvania Ave
W University Ave
STA 5008
Stetson University
STA 1245
N Spring Garden Ave
N Boundary Ave
N Adelle Ave
N Clara Ave
Hazen Rd
Grand Ave
STA 5004
W New York Ave
86 ft
44
DeLand
4110
S Grand Ave
S Orange Ave
S Delaware Ave
15A
West DeLand
S Boundary Ave
S Stone St
S Brooks Ave
S High St
S Parsons Ave
S Amelia Ave
17
S Pearl St
S Ridgewood Ave
W Beresford Ave
S Beresford Rd
Fatio Rd
Lakeview Dr
DeLand Southwest
S Spring Garden Ave
S State Road 15A
Aquarius Ave
Beresford
W Taylor Rd
Study Roadways
Study Intersections
XXXX Count Station

Background Traffic

Background traffic will be projected to the buildout year 2027 per *Volusia County's Segment Growth Rates and Vested Trips Instructions Policy*, included in **Attachments**. Growth rates will be calculated based on the historical AADT obtained from the latest *Volusia County AADT & Historical Counts*. The vested trips will be calculated based on the most recent version of *Volusia County Vested Trip Database*. Vested developments as coordinated with the City of Deland will also be included. The locations of the count stations used to collect the historical AADT data are included in **Figure 4**. Necessary adjustments will be made to both the growth rates and the vested trips per Volusia County guidelines.

Buildout Traffic

Buildout conditions will be analyzed by comparing the total projected traffic volumes to their service volumes at the adopted LOS standard for the roadway segments and intersections. Total projected traffic volumes at buildout year 2027 will be calculated as the sum of background traffic and project trips.

Planned and Programmed Improvements

The *FDOT Work Program* and the *River to Sea Transportation Planning Organization (TPO) Transportation Improvement Program (TIP)* were reviewed to determine if any roadway or intersection capacity improvements were funded for construction within the next three (3) years. One (1) improvement is currently funded. The St. Johns Loop Trail Gap between Lake Beresford Park and Grand Avenue is a multi-use 3.6-mile trail where a *Project Development & Environment (PD&E) Study* is currently underway. An excerpt from the FDOT *www.cflroads.com* website is provided in the **Attachments**.

Access and Turn Lane Analysis

An assessment of turn lane needs for the project driveways will also be performed for proposed full access driveway utilized by project traffic. Turn lane requirements will be based on section 72-619 of the *Volusia County Land Development Code*.

Proportionate Share

If the development results in offsite impacts, the development will mitigate its impact to the deficient facilities by contributing a proportionate share. The proportionate share calculation will be based on costs approved by the Volusia County.

Alternative Mode Analysis

An alternative mode review will be included in the traffic study and will include a narrative of any transit stops within ¼ mile of the site, ½ mile of a rail line station or intermodal facility, provisions for sidewalks adjacent to public roads within the limits of the site, sidewalk connectivity between parcels, provisions for any bicycle amenities, and identification of any schools within 1-mile of the site.

Crash Analysis

A review of historical crash data within the vicinity of the site access points will be conducted to determine if any design features could potentially mitigate the observed crash frequency/ severity. A crash diagram with georeferenced crash locations highlighting crash trends based on five (5) years period will be included. Five (5) years of crash data will be obtained from Signal Four Analytics (S4A) for the analysis. The crash analysis will include all listed study intersections/segments adjoining the development and intersection(s)/segment(s) with mitigated development measure(s). In summary the crash analysis review will include consideration to the following:

- Crash patterns near proposed driveways should be assessed to identify if additional mitigations like access restriction or median treatments are warranted.
- Analyze crash data to identify trends, patterns, and crash diagram with georeferenced crash locations highlighting crash trends based on 5yrs period.
- Mitigation measure(s) as proposed to address potential crash trends will be required by using CMF factors to include the following tabulated information.
- Confirm that full access is operationally and safely feasible on North Ridgewood Avenue based on existing traffic volumes and access spacing policies.

Report

A report will be prepared detailing the methods, findings, and recommendations of the traffic analysis for the proposed development.

ATTACHMENTS

May 7, 2025

William White
Engineering Assistant II
Volusia County Traffic Engineering
123 West Indiana Avenue
DeLand, FL 32720
WDWhite@volusia.org

Re: Ridgewood Ave Residential
Response to Methodology Comments
TMC Project № 25042.01.01
Volusia County, Florida

Dear Mr. White,

Please find below our responses to the review comments prepared by Volusia County Traffic Engineering dated April 24, 2025 regarding the above referenced Methodology dated April 14, 2025. The comments are listed in **bold** typeface and the TMC responses follow in *italic* typeface. Additionally, a revised Methodology v1.1 is provided under cover reflecting the changes resulting from these comments.

1. **Secure written confirmation from relevant agencies their listed vested development(s) to be considered within your impacted study area.**

   TMC Response: Acknowledged. The TIA will include applicable vested developments as coordinated with the City of Deland and Volusia County.

2. **Please confirm if the study area is within ¼-mile of a transit route, or ½-mile of a rail line rail station, or intermodal facility.**

   TMC Response: Acknowledged. The TIA will include details on the transit routes, rail lines, and intermodal facilities that are within the study area, as defined per Volusia County standards.

3. **Evaluates the impact of proposed development interaction with high school, bicycle, and pedestrian traffic.**

   TMC Response: Acknowledged. This information will be included in the TIA.

4. ***Refer to TIA guideline section 7 (though an analysis of safety and access management issues may still need to be completed) and provide documentation that support this requirement. A crash diagram with georeferenced crash locations highlighting crash trends based on 5yrs period. Analysis of safety and access management issues will be required to include:***

- **Crash patterns near proposed driveways should be assessed to identify if additional mitigations like access restriction or median treatments are warranted.**
- **Analyze crash data to identify trends, patterns, and crash diagram with georeferenced crash locations highlighting crash trends based on 5yrs period.**
- **Mitigation measure(s) as proposed to address potential crash trends will be required by using CMF factors to include the following tabulated information:**

Countermeasure	CMF Description	CMF ID & CMF Value	Clearinghouse Quality Level	Crash Applicability Description	Included in Analysis?

TMC Response: The section of the methodology titled Crash Analysis already included this level of detail for the safety/crash review. The text has been expanded to include the above listed bullets as well.

5. **Confirm that full access is operationally and safely feasible on North Ridgewood Avenue based on existing traffic volumes and access spacing policies.**

   TMC Response: The Crash Analysis section has been expanded to include this requirement.

6. **Include justification for local adjustments (e.g., observed traffic patterns, major attractors/employers) in the final report for transparency.**

   TMC Response: Acknowledged.

7. **Pay special attention to potential need for northbound/southbound left-turn lanes due to full access configuration and proximity to SR 44.**

   TMC Response: The access review will include an assessment of the feasibility of accommodating a full left turn lane based on the site's proximity to SR 44, if a turn lane is determined to meet agency thresholds.

8. **Please submit soft copy of the Synchro files used.**

   TMC Response: Acknowledged. We understand this to be standard County requirement.

9. **Please submit a soft copy of the excel spreadsheet used for your PFS calculation.**

   TMC Response: Acknowledged. We understand this to be standard County requirement.

10. Present traffic count results to account for all modes of movements and provide soft copy of all count survey data using the following file types:

- **Intersection data - .txt export from PetraPro; .txt export from Traffic Data Online.**
- **Midblock data: .prn export from TraxPro/StarNEXT; .csv export from VIAS; .prn export from TrafficViewerPro**

TMC Response: Acknowledged.

END OF COMMENTS

We trust these responses and the revised Methodology adequately address the review comments. We remain available to discuss this matter further or to answer any questions you may have.

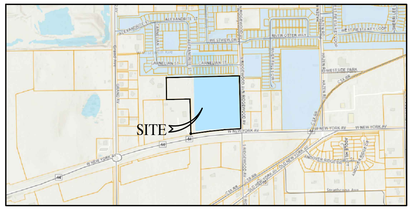
Kind regards,

TRAFFIC & MOBILITY CONSULTANTS LLC

Charlotte Davidson, PE, PTP
Project Manager



LOCATION MAP



AERIAL MAP

LEGAL DESCRIPTION:

12-17-29 IRREG PARCEL LYING IN GOVT LOT 4 E OF GRAND AVE & N OF SR 44 & W OF N RIDGEWOOD AVE MEAS 827.72 ALONG N R/W OF SR 44 & 867.52 FT ALONG W R/W OF N RIDGEWOOD AVE & 1207.70 FT ON N/L AS DESCRIBED IN OR 7709 PG 3083 PER OR 7233 PG 1560

FLOOD ZONE:

PROPERTY SHOWN HEREON LIES IN FLOOD ZONE "X" AN AREA WHICH LIES OUTSIDE THE 100 YEAR FLOOD AREA ACCORDING TO F.I.R.M. MAP PANEL No. 12127C0465H, DATED FEBRUARY 19, 2014.

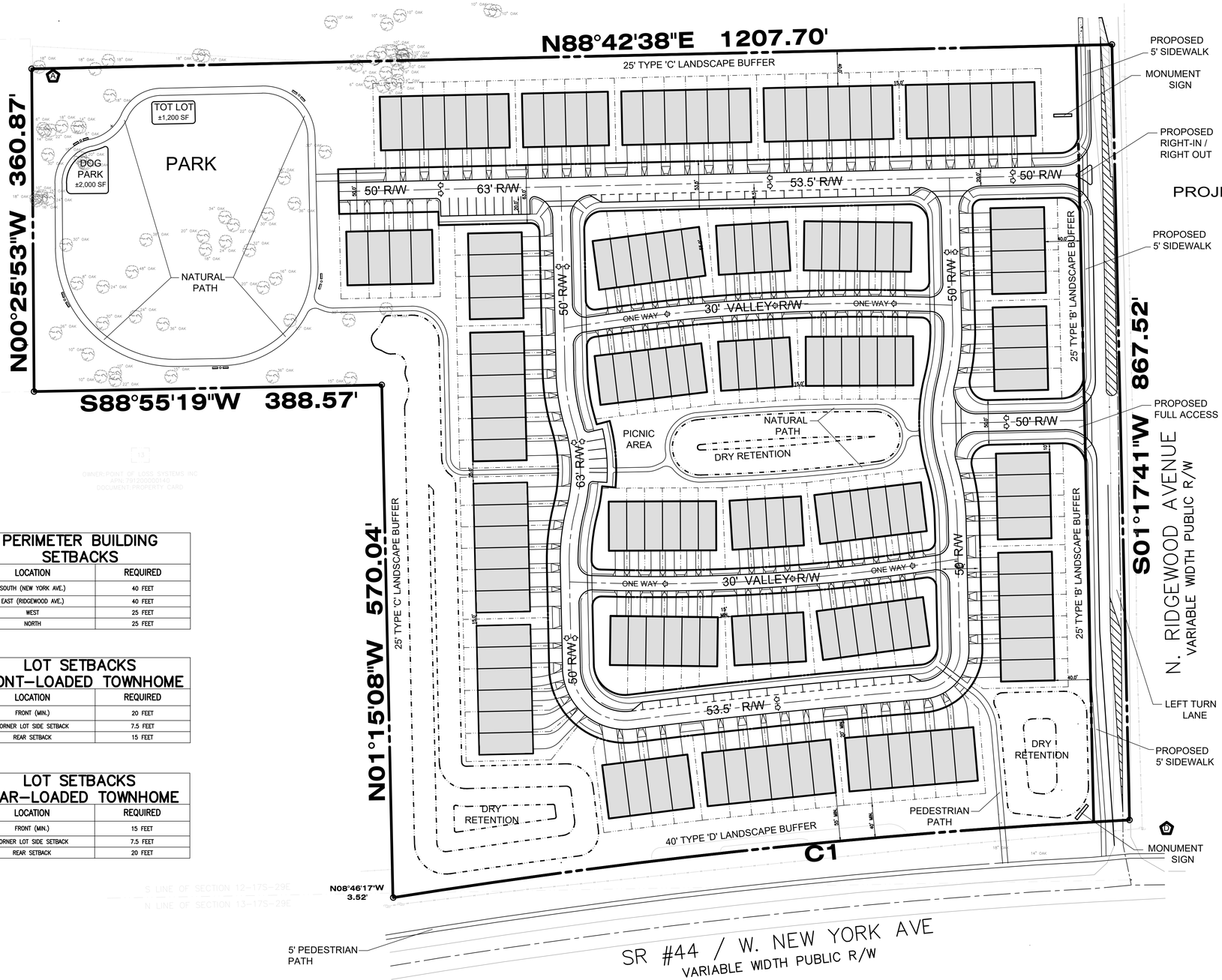
TAX PARCEL ID #:
791200000061

ALT ID #:
2061880

ADDRESS:
210 N. RIDGEWOOD AVE.
DELAND, FLORIDA 32720

N
W E
S

0' 60' 120'
SCALE: 1" = 60'



PROJECT AREA = 20.13 ACRES

LEGEND

- PROPOSED BUILDING
- PROPOSED PAVEMENT
- PROPOSED CONCRETE

PROJECT DATA:

TOTAL AREA:	20.13 AC
MAX. No. OF UNITS:	160 UNITS
MAXIMUM DENSITY:	8 UNITS / AC
MAX. IMP. ALLOWED:	60%
MIN. OPEN SPACE REQ'D:	30%

PROPOSED PARKING:

FRONT LOADED UNITS:	1 GARAGE + 2 CAR D/W EACH
REAR LOADED UNITS:	1 GARAGE + 1 CAR D/W EACH
STREET SIDE:	8.5' X 20' PARALLEL PARKING 9' X 20' - 90° PARKING

PROPOSED BUILDINGS:

MAX. NO. UNITS / BLDG.:	8 UNITS
MIN. NO. UNITS / BLDG.:	4 UNITS
MIN. DIST. BETWEEN BLDGS:	15'

PERIMETER BUILDING SETBACKS

LOCATION	REQUIRED
SOUTH (NEW YORK AVE.)	40 FEET
EAST (RIDGEWOOD AVE.)	40 FEET
WEST	25 FEET
NORTH	25 FEET

LOT SETBACKS FRONT-LOADED TOWNHOME

LOCATION	REQUIRED
FRONT (MIN.)	20 FEET
CORNER LOT SIDE SETBACK	7.5 FEET
REAR SETBACK	15 FEET

LOT SETBACKS REAR-LOADED TOWNHOME

LOCATION	REQUIRED
FRONT (MIN.)	15 FEET
CORNER LOT SIDE SETBACK	7.5 FEET
REAR SETBACK	20 FEET

OWNER-POINT OF LOSS SYSTEMS INC
APN: 791200000140
DOCUMENT-PROPERTY CARD

S LINE OF SECTION 12-17S-29E
N LINE OF SECTION 13-17S-29E

DATE: MAY 2, 2025
SCALE: 1" = 60'
DESIGNED: THS
DRAWN: MOS
CHECKED BY: THS
JOB NO.: 25045
EMAIL: tomskelton4568@gmail.com

REVISIONS | REVISED | CHECKED | DATE

AMERICAN CIVIL ENGINEERING CO.
207 N. MOSS ROAD, SUITE 211 WINTER SPRINGS, FLORIDA 32708
PHONE: (407) 327-7700, FAX (407) 327-0227
CERTIFICATE OF AUTHORIZATION NO.: 00006729

PD SITE PLAN
DELAND CROSSINGS
MULTI-FAMILY DEVELOPMENT
DELAND, FLORIDA

THOMAS H. SKELTON, PE
REGISTRATION NO. 42752

SHEET: C1

Single-Family Attached Housing
(215)

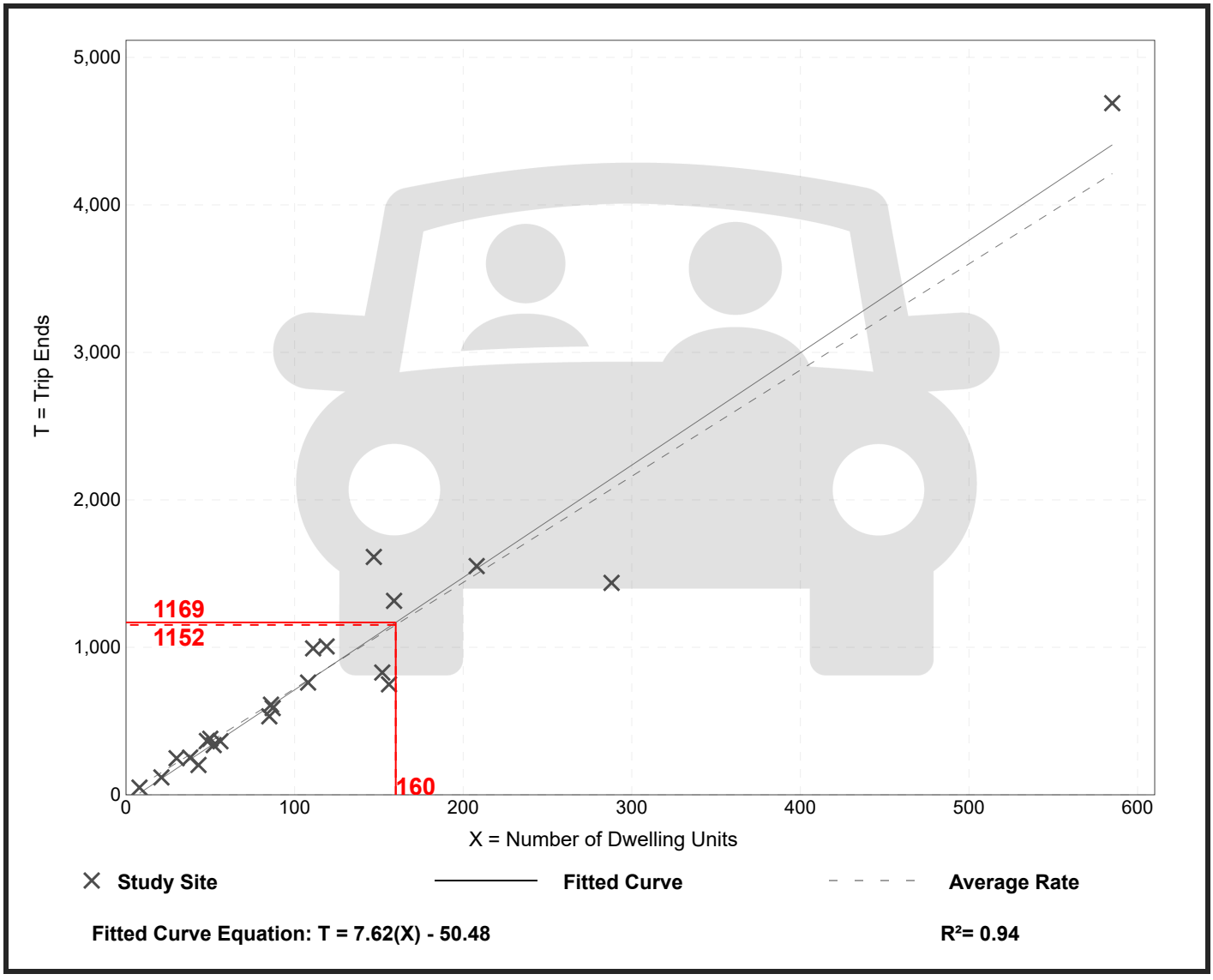
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 22
Avg. Num. of Dwelling Units: 120
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
7.20	4.70 - 10.97	1.61

Data Plot and Equation



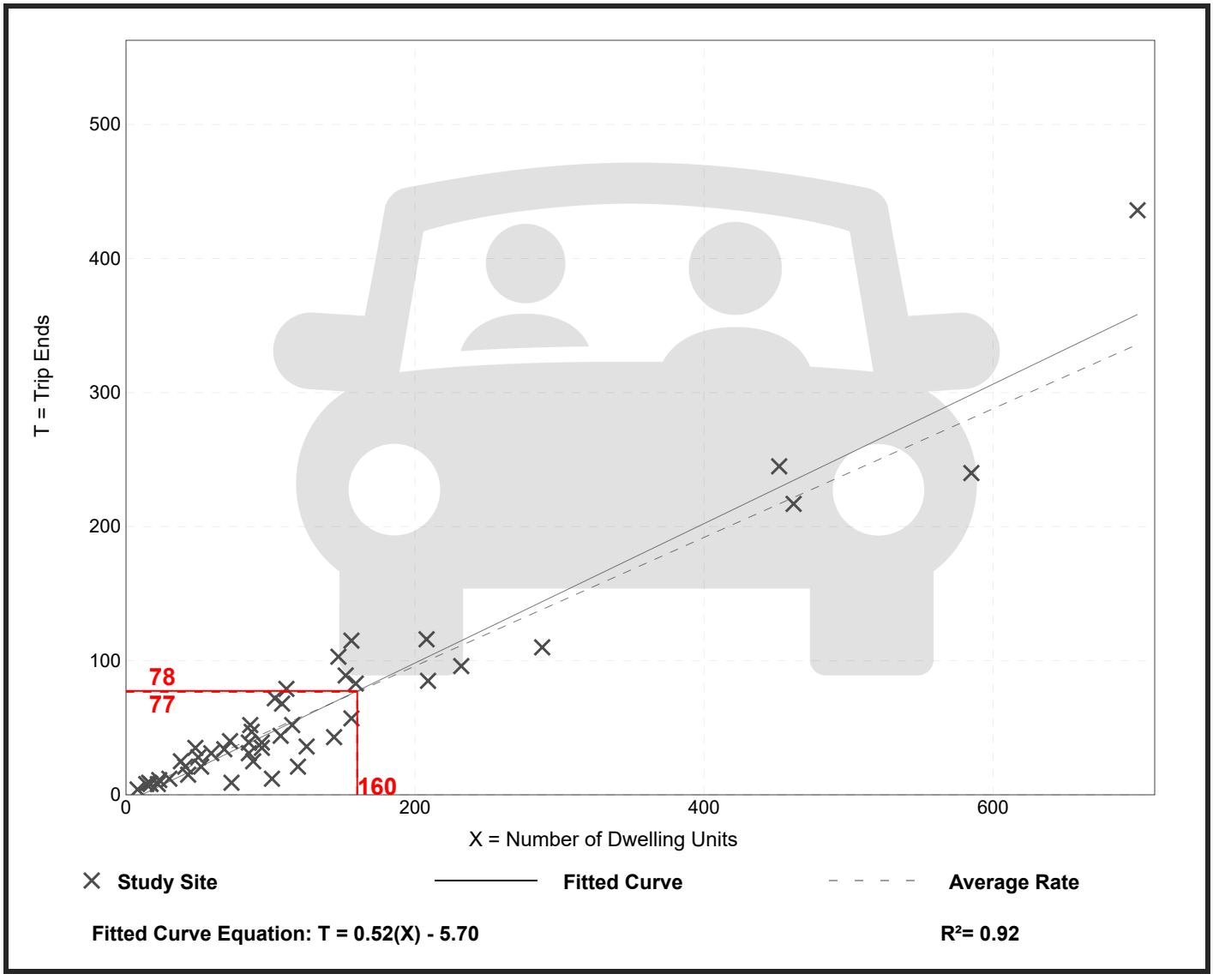
Single-Family Attached Housing
(215)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	46
Avg. Num. of Dwelling Units:	135
Directional Distribution:	25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.48	0.12 - 0.74	0.14

Data Plot and Equation



Trip Gen Manual, 11th Edition • Institute of Transportation Engineers

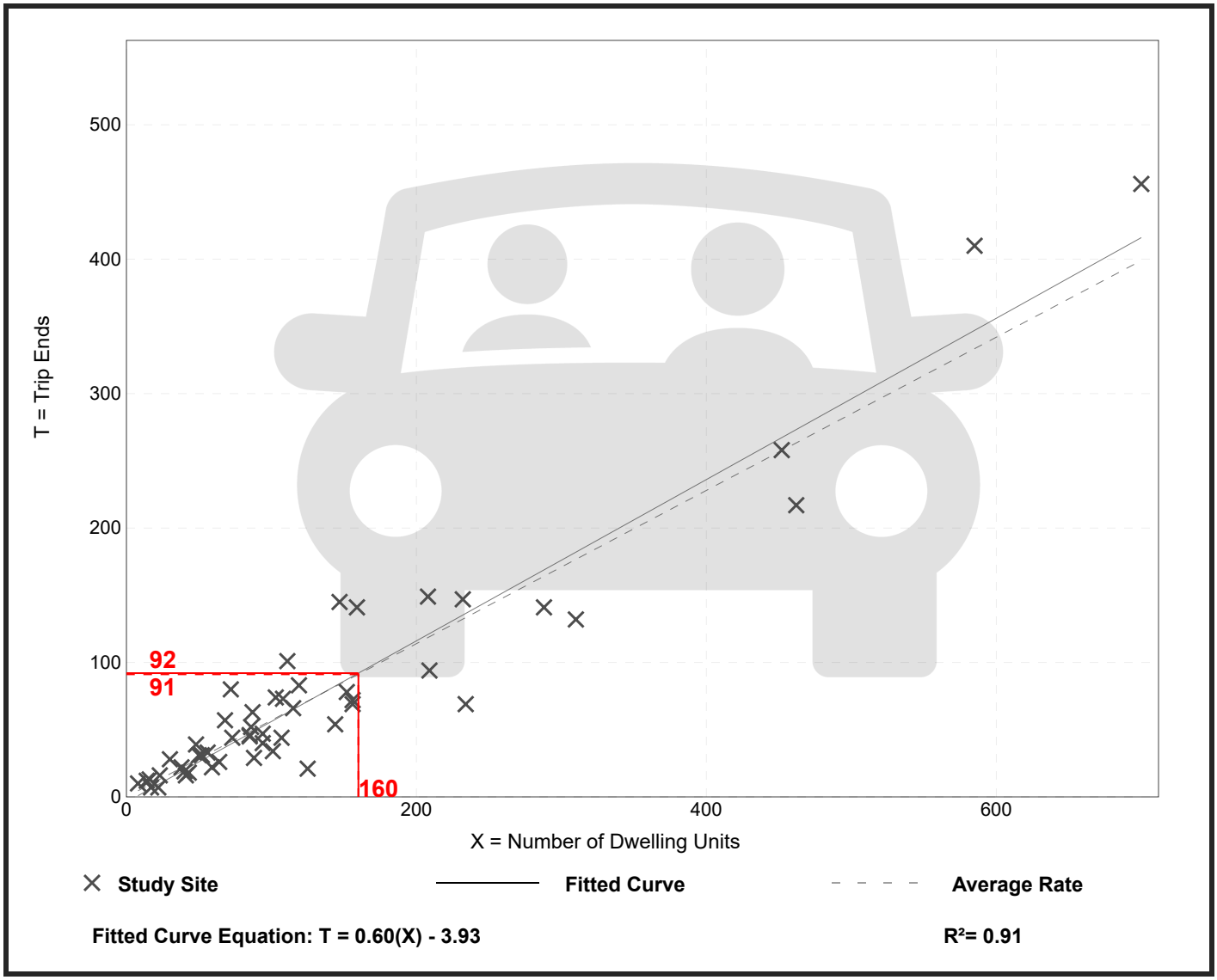
Single-Family Attached Housing
(215)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	51
Avg. Num. of Dwelling Units:	136
Directional Distribution:	59% entering, 41% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.57	0.17 - 1.25	0.18

Data Plot and Equation



Road Name	Limits (From - To)	Count Station Number	Roadway Maintaining Agency	2021 Roadway on County's Thoroughfare	Distance (in miles)	Posted Speed						2021 QLOS Facility Type	2010 Federal Functional Classification	VC 2022 Allowable LOS	DAILY 2022 LOS Capacity	DAILY 2021 V/C Ratio	DAILY 2022 LOS	2022 AM Peak	2022 PM Peak	PEAK 2Way 2022 LOS Capacity	2021 No. of Lanes
Rd_Name	Limits	Cnt_Sta	MainRes	Tfare21	Distance	SPD2013	Direction	F_Type_08	F_Type_09	F_Type_10	F_Type_11	F_Type_14	F_Type_21	Fun_Class_2010	VCA_LOS_22	Cap_22	VCRatio_22	LOS_22	AMPKHR_22	PMPKHR_22	2W_Cap_22	Lanes_20
US 1	10th Ave. to Canal St./Bus. SR 44	5154	FDOT	Yes	1.52	35	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	Principal Arterial - Other - Urban	D	32,400	0.68	D	-	-	2,920	4
US 1	Canal St./Bus. SR 44 to Turnbull Bay	5155	FDOT	Yes	1.34	40	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.60	C	-	-	3,580	4
US 1	Turnbull Bay Rd. to Art Center Ave.	5159	FDOT	Yes	2.24	55	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.63	C	-	-	3,580	4
US 1	Art Center Ave. to SR 5A/Nova Rd.	13	FDOT	Yes	3.19	45	N+S	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	Principal Arterial - Other - Urban	D	66,200	0.39	B	-	-	5,960	4
US 1	SR 5A/Nova Rd. to Commonwealth	152	FDOT	Yes	1.23	45	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.39	C	1,170	1,350	3,580	4
US 1	Commonwealth to SR 421/Dunlawton	5057	FDOT	Yes	1.37	40	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.44	C	1,340	1,440	3,580	4
US 1	SR 421/Dunlawton Ave. to Reed Can	213	FDOT	Yes	1.18	40	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.63	C	-	-	3,580	4
US 1	Reed Canal Rd. to Big Tree Rd.	5061	FDOT	Yes	1.17	45	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.58	C	-	-	3,580	4
US 1	Big Tree Rd. to Bellewood Ave.	5063	FDOT	Yes	0.45	40	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.73	C	-	-	3,580	4
US 1	Bellewood Ave. to SR 400/Beville Rd	5063	FDOT	Yes	0.27	40	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.73	C	-	-	3,580	4
US 1	SR 400/Beville Rd to Bellevue Ave.	452	FDOT	Yes	1.05	40	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.73	C	2,040	2,350	3,580	4
US 1	Bellevue Ave. to Orange Ave.	5066	FDOT	Yes	0.72	40	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.72	C	-	-	3,580	4
US 1	Orange Ave. to US 92/ISB	5070	FDOT	Yes	0.30	35	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	Principal Arterial - Other - Urban	D	32,400	0.88	D	-	-	2,920	4
US 1	US 92/ISB to Fairview/Main St.	5074	FDOT	Yes	0.66	35	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	Principal Arterial - Other - Urban	D	32,400	0.86	D	-	-	2,920	4
US 1	Fairview/Main St. to SR 430/Mason A	5074	FDOT	Yes	0.54	35	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	Principal Arterial - Other - Urban	D	32,400	0.86	D	-	-	2,920	4
US 1	SR 430/Mason Ave. to LPGA Blvd.	1018	FDOT	Yes	1.47	35	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	Principal Arterial - Other - Urban	D	32,400	0.74	D	-	-	2,920	4
US 1	LPGA Blvd. to Hand Ave.	1018	FDOT	Yes	2.00	40	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.60	C	-	-	3,580	4
US 1	Hand Ave. to SR 40/Granada Blvd.	5142	FDOT	Yes	0.84	40	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.55	C	-	-	3,580	4
US 1	SR 40/Granada Blvd. to SR 5A/Nova	1019	FDOT	Yes	1.83	55	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.49	C	-	-	3,580	4
US 1	SR 5A/Nova Rd. to Airport Rd.	100	FDOT	Yes	1.13	55	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.83	C	-	-	3,580	4
US 1	Airport Rd. to I-95	351	FDOT	Yes	2.81	45	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.62	C	2,040	2,330	3,580	4
US 1	I-95. to Flagler Co Line	536	FDOT	Yes	1.53	60	N+S	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	Principal Arterial - Other - Urban	D	66,200	0.26	B	-	-	5,960	4
US 17/92	Seminole Co. to Barwick Rd.	0040-S	FDOT	Yes	0.52	50	N+S	TA_S2WAC1_2W_4L_D_WL	TA_S2WAC1_2W_4L_D_WL	TA_S2WAC1_2W_4L_D_WL	TA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.88	C	-	-	3,580	4
US 17/92	Barwick Rd to Ft. Florida Rd.	0040-S	FDOT	Yes	0.76	50	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.79	C	-	-	3,580	4
US 17/92	Ft. Florida Rd. to Dirksen Dr.	101	FDOT	Yes	0.72	50	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.79	C	2,280	2,920	3,580	4
US 17/92	Dirksen Dr. to Valencia Rd.	479	FDOT	Yes	1.05	50	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.70	C	-	-	3,580	4
US 17/92	Valencia Rd to Highbanks Rd.	7	FDOT	Yes	0.74	40	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.64	C	1,790	2,410	3,580	4
US 17/92	Highbanks Rd. to DeBary Plantation I	8	FDOT	Yes	0.92	45	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.60	C	-	-	3,580	4
US 17/92	DeBary Plantation Blvd to Saxon Blvd	509	FDOT	Yes	0.61	45	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.87	C	-	-	3,580	4
US 17/92	Saxon Blvd. to Enterprise Rd.	539	FDOT	Yes	0.80	45	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.65	C	-	-	3,580	4
US 17/92	Enterprise Rd. to Rhode Island Ave.	444	FDOT	Yes	0.75	45	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.87	C	-	-	3,580	4
US 17/92	Rhode Island Ave. to Graves Ave.	444	FDOT	Yes	1.01	40	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.87	C	-	-	3,580	4
US 17/92	Graves Ave. to New York Ave.	445	FDOT	Yes	1.00	45	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.84	C	-	-	3,580	4
US 17/92	New York Ave to SR 472	445	FDOT	Yes	0.75	55	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.84	C	-	-	3,580	4
US 17/92	SR 472 to SR 15A/Taylor Rd.	1004	FDOT	Yes	1.75	45	N+S	UA_S2WAC1_2W_6L_D_WL	UA_S2WAC1_2W_6L_D_WL	UA_S2WAC1_2W_6L_D_WL	UA_S2WAC1_2W_6L_D_WL	UA_SSAC1_2W_6L_D_WL	UA_SSAC1_2W_6L_D_WL	Principal Arterial - Other - Urban	D	59,900	0.93	C	-	-	5,390	6
US 17/92	SR 15A/Taylor Rd. to Beresford Ave.	1006	FDOT	Yes	1.02	40	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	42,190	0.76	C	1,850	2,660	3,790	4
US 17/92	Beresford Ave. to Euclid Ave.	5173	FDOT	Yes	0.49	35	N+S	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC2_2W_2L_D_WL	UA_S2WAC2_2W_2L_D_WL	UA_S2WAC2_2W_2L_D_WL	UA_SSAC2_2W_2L_U_WL	UA_SSAC2_2W_2L_U_WL	Principal Arterial - Other - Urban	E	16,380	1.22	F	1,120	1,510	1,480	2
US 17/92	Euclid Ave. to SR 44/New York Ave.	5004	FDOT	Yes	0.49	30	N+S	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC2_2W_2L_D_WL	UA_S2WAC2_2W_2L_D_WL	UA_S2WAC2_2W_2L_D_WL	UA_SSAC2_2W_2L_U_WL	UA_SSAC2_2W_2L_U_WL	Principal Arterial - Other - Urban	E	15,600	1.20	D	-	-	1,410	2
US 17/92	SR 44/New York Ave. to Plymouth Av	5008	FDOT	Yes	1.01	30	N+S	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC3_2W_2L_U_WL	UA_S2WAC3_2W_2L_U_WL	UA_S2WAC3_2W_2L_U_WL	UA_SSAC2_2W_2L_U_WL	UA_SSAC2_2W_2L_U_WL	Principal Arterial - Other - Urban	DeLand	19,150	0.98	DeLand	-	-	1,410	2
US 17/92	Plymouth Ave. to US 92/ISB	66	FDOT	Yes	0.83	45	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	42,190	0.57	C	-	-	3,790	4
US 17	US 92 to Mercers Fernery Rd.	1000	FDOT	Yes	0.68	45	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	42,190	0.79	C	-	-	3,790	4
US 17	Mercers Fernery Rd. to Glenwood Rd	69	FDOT	Yes	0.51	55	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.55	C	1,170	1,890	3,580	4
US 17	Glenwood Rd. to SR 15A/CR 15A	236	FDOT	Yes	1.64	55	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.40	C	-	-	3,580	4
US 17	SR 15A/CR 15A to Reynolds Rd	476	FDOT	Yes	2.76	45	N+S	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	Principal Arterial - Other - Urban	D	66,200	0.30	B	1,320	1,680	5,960	4
US 17	Reynolds Rd to Spring Garden Ranch	519	FDOT	Yes	1.09	55	N+S	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	Principal Arterial - Other - Urban	D	24,200	0.48	B	-	-	2,180	2
US 17	Spring Garden Ranch Rd. to Lake Wi	104	FDOT	Yes	0.56	45	N+S	TA_UFH_2W_2L_U_WL	TA_UFH_2W_2L_U_WL	TA_UFH_2W_2L_U_WL	TA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	Principal Arterial - Other - Urban	D	24,200	0.39	B	-	-	2,180	2
US 17	Lake Winona Rd. to SR 40	104	FDOT	Yes	4.93	45	N+S	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	Principal Arterial - Other - Rural	D	18,000	0.52	B	-	-	1,620	2
US 17	SR 40 to Washington Ave.	448	FDOT	Yes	5.02	45	N+S	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	Principal Arterial - Other - Rural	C	15,700	0.50	B	760	770	1,490	2
US 17	Washington Ave. to CR 305/Lk Geor	46	FDOT	Yes	5.28	55	N+S	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	Principal Arterial - Other - Rural	C	15,700	0.37	B	-	-	1,490	2
US 17	CR 305/Lk George Rd to Putnam Co	280	FDOT	Yes	3.41	60	N+S	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	Principal Arterial - Other - Rural	C	18,000	0.33	B	510	510	1,620	2
US 92	US 17 to Jacobs Rd.	1001	FDOT	Yes	1.41	45	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.67	C	-	-	3,580	4
US 92	Jacobs Rd. to Kepler Rd.	5	FDOT	Yes	1.23	45	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.60	C	1,580	1,880	3,580	4
US 92	Kepler Rd. to Old Daytona Rd.	9925	FDOT	Yes	1.32	65	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.40	C	-	-	3,580	4
US 92	Old Daytona Rd. to Red John Dr.	9925	FDOT	Yes	7.20	55	E+W	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RUA_UFH_2W_4L_D_WL	Principal Arterial - Other - Urban/Rural	C	44,900	0.35	B	-	-	4,270	4
US 92	Red John Dr. to I-4 EB Ramp	478	FDOT	Yes	2.26	55	E+W	TA_S2WAC1_2W_4L_D_WL	TA_S2WAC1_2W_4L_D_WL	TA_S2WAC1_2W_4L_D_WL	TA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.43	C	-	-	3,580	4
US 92	I-4 EB Ramp to LPGA Blvd.	478	FDOT	Yes	0.58	55	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.43	C	-	-	3,580	4
US 92	LPGA Blvd. to I-95	532	FDOT	Yes	2.03	55	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.77	C	-	-	3,580	4
US 92	I-95 to Williamson Blvd.	508	FDOT	Yes	0.71	50	E+W	UA_S2WAC1_2W_8L_D_WL	UA_S2WAC2_2W_8L_D_WL	UA_S2WAC2_2W_8L_D_WL	UA_S2WAC2_2W_8L_D_WL	UA_SSAC1_2W_8L_D_WL	UA_SSAC1_2W_8L_D_WL	Principal Arterial - Other - Urban	C	78,800	0.50	C	3,180	3,290	7,090	8
US 92	Williamson Blvd. to Bill France Blvd.	5172	FDOT	Yes	1.13	50	E+W	UA_S2WAC1_2W_8L_D_WL	UA_S2WAC2_2W_8L_D_WL	UA_S2WAC2_2W_8L_D_WL	UA_S2WAC2_2W_8L_D_WL	UA_SSAC1_2W_8L_D_WL	UA_SSAC1_2W_8L_D_WL	Principal Arterial - Other - Urban	C	78,800	0.58	C	-	-	7,090	8
US 92	Bill France Blvd. to SR 483/Clyde Mo	5094	FDOT	Yes	0.86	50	E+W	UA_S2WAC1_2W_8L_D_WL	UA_S2WAC2_2W_8L_D_WL	UA_S2WAC2_2W_8L_D_WL	UA_S2WAC2_2W_8L_D_WL	UA_SSAC1_2W_8L_D_WL	UA_SSAC1_2W_8L_D_WL	Principal Arterial - Other - Urban	D	78,800	0.50	C	2,620	3,270	7,210	8
US 92	SR 483/Clyde Morris Blvd. to SR 5A/I	5096	FDOT	Yes	0.93	45	E+W	UA_S2WAC1_2W_6L_D_WL	UA_S2WAC2_2W_6L_D_WL	UA_S2WAC2_2W_6L_D_WL	UA_S2WAC2_2W_6L_D_WL	UA_SSAC1_2W_6L_D_WL	UA_SSAC1_2W_6L_D_WL	Principal Arterial - Other - Urban	D	59,900	0.60	C	2,570	2,800	5,390	6
US 92	SR 5A/Nova Rd. to Martin Luther Kin	5099	FDOT	Yes	0.78	40	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.57	C	-	-	3,580	4
US 92	Martin Luther King Blvd. to US 1	5104	FDOT	Yes	0.38	40	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.57	C	1,410	1,620	3,580	4
US 92	US 1 to Beach St.	5105	FDOT	Yes	0.23	30	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	Principal Arterial - Other - Urban	D	32,400	0.46	D	-	-	2,920	4
US 92	Beach St. to SR 441/Peninsula Dr.	337	FDOT	Yes	0.88	40	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.43	C	-	-	3,580	4
US 92	SR 441/Peninsula Dr. to SR A1A/Atla	5109	FDOT	Yes	0.30	30	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	Principal Arterial - Other - Urban	D	32,400	0.28	C	480	740	2,920	4
SR A1A - Dunlawton Ave.	US 1 to SR A1A/Atlantic Ave.	427	FDOT	Yes	1.25	35	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	Principal Arterial - Other - Urban	D	32,400	0.82	D	-	-	2,920	4
SR A1A - Atlantic Ave. So	SRA1A/Dunlawton Ave. to Van Ave.	477	FDOT	Yes	1.05	35	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	Principal Arterial - Other - Urban	D	32,400	0.44	D	-	-	2,920	4
SR A1A - Atlantic Ave. So	Van Ave. to Florida Shores	5179	FDOT	Yes	1.29	35	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	Principal Arterial - Other - Urban	D	32,400	0.41	D	840	1,120	2,920	4
SR A1A - Atlantic Ave. So	Florida Shores to Silver Beach Ave.	436	FDOT	Yes	2.34	35	N+S	UA_

Road Name	Limits (From - To)	Count Station Number	Roadway Maintaining Agency	2021 Roadway on County's Thoroughfare	Distance (in miles)	Posted Speed							2021 QLOS Facility Type	2010 Federal Functional Classification	VC 2022 Allowable LOS	DAILY 2022 LOS Capacity	DAILY 2021 V/C Ratio	DAILY 2022 LOS	2022 AM Peak	2022 PM Peak	PEAK 2Way 2022 LOS Capacity	2021 No. of Lanes
Rd_Name	Limits	Cnt_Sta	MainRes	Tfare21	Distance	SPD2013	Direction	F_Type_08	F_Type_09	F_Type_10	F_Type_11	F_Type_14	F_Type_21	Fun_Class_2010	VCA_LOS_22	Cap_22	VCRatio_22	LOS_22	AMPKHR_22	PMPKHR_22	2W_Cap_22	Lanes_20
SR 15A	CR 92 to Glenwood Rd.	465	FDOT	Yes	1.20	50	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.34	C	-	-	3,580	4
SR 15A	Glenwood Rd. to US 17	466	FDOT	Yes	1.11	50	N+S	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.35	C	-	-	3,580	4
SR 40	Lake County to Emporia Rd.	533	FDOT	Yes	0.86	55	E+W	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	Principal Arterial - Other - Rural	C	15,700	0.59	B	-	-	1,490	2
SR 40	Emporia Rd. to US 17	344	FDOT	Yes	5.58	55	E+W	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	Principal Arterial - Other - Rural	C	15,700	0.55	B	550	660	1,490	2
SR 40	US 17 to SR 11	530	FDOT	Yes	6.69	60	E+W	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	Principal Arterial - Other - Rural	C	8,600	0.86	C	-	-	820	2
SR 40	SR 11 to Pinto Lane	530	FDOT	Yes	6.83	60	E+W	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	Principal Arterial - Other - Rural	C	8,600	0.86	C	-	-	820	2
SR 40	Pinto Lane to Rima Ridge Rd (urban	523	FDOT	Yes	1.25	60	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	Principal Arterial - Other - Urban/Rural	C	42,300	0.17	B	-	-	4,020	4
SR 40	Rima Ridge Rd to Tymber Creek Rd.	499	FDOT	Yes	4.36	60	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.34	C	-	-	3,580	4
SR 40	Tymber Creek Rd. to I-95	499	FDOT	Yes	0.79	50	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.67	C	-	-	3,580	4
SR 40	I-95 to Clyde Morris Blvd.	522	FDOT	Yes	1.58	50	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.90	C	-	-	3,580	4
SR 40	Clyde Morris Blvd. to SR 5A/Nova Rd	489	FDOT	Yes	1.06	50	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.90	C	-	-	3,580	4
SR 40	SR5A/Nova Rd. to US 1	1020	FDOT	Yes	1.33	45	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.78	C	-	-	3,580	4
SR 40	US 1 to Halifax Ave.	171	FDOT	Yes	1.11	35	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	Principal Arterial - Other - Urban	D	32,400	1.10	F	3,030	3,380	2,920	4
SR 40	Halifax Ave. to SR A1A	5128	FDOT	Yes	0.37	35	E+W	UA_S2WAC2_2W_4L_U_WL	UA_S2WAC2_2W_4L_U_WL	UA_S2WAC2_2W_4L_U_WL	UA_S2WAC2_2W_4L_U_WL	UA_SSAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	Principal Arterial - Other - Urban	D	32,400	0.66	D	-	-	2,920	4
SR 44	Lake Co. to Shell Rd.	1007	FDOT	Yes	1.19	55	E+W	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	Principal Arterial - Other - Rural	C	15,700	0.89	C	-	-	1,490	2
SR 44	Shell Rd. to Grand Ave.	1007	FDOT	Yes	1.26	45	E+W	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	Principal Arterial - Other - Urban	D	24,200	0.57	C	-	-	2,180	2
SR 44	Grand Ave. to Old New York/Hazen F	1007	FDOT	Yes	0.70	55	E+W	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	Principal Arterial - Other - Urban	D	24,200	0.60	C	-	-	2,180	2
SR 44	Old New York/Hazen Rd. to SR 15A/	274	FDOT	Yes	0.71	40	E+W	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	Principal Arterial - Other - Urban	D	24,200	0.60	C	900	1,180	2,180	2
SR 44	SR 15A/Spring Garden Ave. to Stone	447	FDOT	Yes	0.50	40	E+W	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC2_2W_2L_U_WL	UA_S2WAC2_2W_2L_U_WL	UA_S2WAC2_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	Principal Arterial - Other - Urban	E	18,939	0.62	C	-	-	1,712	2
SR 44	Stone St. to Clara Ave.	5012	FDOT	Yes	0.51	35-40	E+W	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC2_2W_2L_U_WL	UA_S2WAC2_2W_2L_U_WL	UA_S2WAC2_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	Principal Arterial - Other - Urban	E	18,939	0.60	C	730	910	1,712	2
SR 44	Clara Ave. to Amelia Ave.	5015	FDOT	Yes	0.50	25-35	E+W	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC2_2W_2L_U_WL	UA_S2WAC2_2W_2L_U_WL	UA_S2WAC2_2W_2L_U_WL	UA_SSAC2_2W_2L_U_WL	UA_SSAC2_2W_2L_U_WL	Principal Arterial - Other - Urban	E	14,800	0.50	D	-	-	1,410	2
SR 44	Amelia Ave. to Hill Ave.	80	FDOT	Yes	1.00	35/40/45	E+W	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	Principal Arterial - Other - Urban	E	18,939	0.70	C	-	-	1,712	2
SR 44	Hill Ave. to Blue Lake Ave.	80	FDOT	Yes	0.51	45	E+W	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	Principal Arterial - Other - Urban	DeLand	19,800	0.67		-	-	1,712	2
SR 44	Blue Lake Ave. to Kepler Rd.	19	FDOT	Yes	0.94	45	E+W	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	Principal Arterial - Other - Urban	DeLand	20,800	0.87		-	-	1,712	2
SR 44	Kepler Rd. to Summit Ave.	259	FDOT	Yes	1.18	45-50	E+W	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	Principal Arterial - Other - Urban	DeLand	19,800	1.11		-	-	1,712	2
SR 44	Summit Ave. to I-4	538	FDOT	Yes	0.98	45	E+W	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.59	C	-	-	3,580	4
SR 44	I-4 to Prevatt Ave.	480	FDOT	Yes	0.74	55	E+W	TA_UFH_2W_4L_D_WL	TA_UFH_2W_4L_D_WL	TA_UFH_2W_4L_D_WL	TA_UFH_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.41	C	1,630	1,820	3,580	4
SR 44	Prevatt Ave. to Pioneer Tr.	41	FDOT	Yes	5.93	65	E+W	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RUA_UFH_2W_4L_D_WL	Principal Arterial - Other - Rural	C	44,900	0.42	B	1,510	1,700	4,270	4
SR 44	Pioneer Tr. to SR 415/CR 415	1011	FDOT	Yes	3.56	65	E+W	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RUA_UFH_2W_4L_D_WL	Principal Arterial - Other - Rural	C	44,900	0.37	B	-	-	4,270	4
SR 44	SR 415/CR 415 to Samsula Dr.	1012	FDOT	Yes	1.14	65	E+W	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	Principal Arterial - Other - Rural	C	42,300	0.53	B	-	-	4,020	4
SR 44	Samsula Dr. to Airport Rd	423	FDOT	Yes	1.70	65	E+W	TA_UFH_2W_4L_D_WL	TA_UFH_2W_4L_D_WL	TA_UFH_2W_4L_D_WL	TA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	RDA_UFH_2W_4L_D_WL	Principal Arterial - Other - Urban/Rural	C	42,300	0.36	B	1,140	1,490	4,020	4
SR 44	Airport Rd. to I-95	423	FDOT	Yes	2.05	65	E+W	TA_UFH_2W_4L_D_WL	TA_UFH_2W_4L_D_WL	TA_UFH_2W_4L_D_WL	TA_UFH_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.39	C	1,140	1,490	3,580	4
SR 44	I-95 to Mission Dr	515	FDOT	Yes	2.83	55	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.90	C	-	-	3,580	4
SR 44	Mission Dr. to Live Oak	514	FDOT	Yes	1.35	45	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.57	C	-	-	3,580	4
SR 44/SR A1A/S Causew	Live Oak to Peninsula Ave.	207	FDOT	Yes	1.30	50	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.65	C	-	-	3,580	4
SR 44/SR A1A/S Causew	Peninsula Ave. to Saxon Dr.	5180	FDOT	Yes	0.35	40	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.55	C	-	-	3,580	4
SR 44/SR A1A/3rd Ave/A	Saxon Dr. to 6th Ave	5043	FDOT	Yes	0.50	40	E+W	UA_S2WAC1_2W_4L_U_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.34	C	900	1,030	3,580	4
SR 44 (Business) - Canal S	SR 44/Lytle St to Pioneer Trail	516	FDOT	Yes	0.17	40	E+W	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	Minor Arterial - Urban	D	17,700	0.69	C	820	950	1,600	2
SR 44 (Business) - Canal S	Pioneer Tr. to US 1	111	FDOT	Yes	0.76	40	E+W	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	Minor Arterial - Urban	D	17,700	0.73	C	840	1,030	1,600	2
SR 46	Seminole Co. to Brevard Co.	0416-B	FDOT	Yes	5.44	55	E+W	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	Principal Arterial - Other - Rural	C	18,000	0.27	B	-	-	1,620	2
SR 400 - Beville Rd.	I-95 to Williamson Blvd.	501	FDOT	Yes	0.28	55	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_6L_D_WL	Principal Arterial - Other - Urban	D	59,900	0.44	C	-	-	5,390	6
SR 400 - Beville Rd.	Williamson Blvd. to SR 483/Clyde Mo	5189	FDOT	Yes	1.91	55	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.63	C	-	-	3,580	4
SR 400 - Beville Rd.	SR 483/Clyde Morris Blvd. to SR 5A/I	511	FDOT	Yes	0.68	45	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.75	C	-	-	3,580	4
SR 400 - Beville Rd.	SR 5A/Nova Rd. to US 1	502	FDOT	Yes	1.34	45	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.58	C	-	-	3,580	4
SR 415	Seminole Co. to Enterprise-Osteen R	25	FDOT	Yes	4.39	55	N+S	TA_UFH_2W_2L_U_WL	TA_UFH_2W_2L_U_WL	TA_UFH_2W_2L_U_WL	TA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_4L_D_WL	Minor Arterial - Urban/Rural	D	66,200	0.40	D	-	-	5,960	4
SR 415	Enterprise-Osteen Rd. to Howland Bl	437	FDOT	Yes	1.83	45	N+S	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_SSAC1_2W_4L_D_WL	Minor Arterial - Urban	D	39,800	0.52	C	1,500	1,860	3,580	4
SR 415	Howland Blvd. to Acorn Lake Rd	321	FDOT	Yes	0.88	45	N+S	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_WL	UA_SSAC1_2W_4L_D_WL	Minor Arterial - Urban	D	39,800	0.25	C	-	-	3,580	4
SR 415	Acorn Lake Rd to SR 44	1009	FDOT	Yes	10.49	55	N+S	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_WL	RUA_UFH_2W_2L_U_WL	Minor Arterial - Rural	C	18,000	0.62	C	-	-	1,620	2
SR 421 - Dunlawton Ave.	Williamson to Clyde Morris Blvd.	517	FDOT	Yes	1.07	45	E+W	UA_S2WAC1_2W_6L_D_WL	UA_S2WAC2_2W_6L_D_WL	UA_S2WAC2_2W_6L_D_WL	UA_S2WAC2_2W_6L_D_WL	UA_SSAC1_2W_6L_D_WL	UA_SSAC1_2W_6L_D_WL	Principal Arterial - Other - Urban	D	59,900	0.91	C	-	-	5,390	6
SR 421 - Dunlawton Ave.	Clyde Morris Blvd. to SR 5A/Nova Rd	1014	FDOT	Yes	1.31	50	E+W	UA_S2WAC1_2W_6L_D_WL	UA_S2WAC2_2W_6L_D_WL	UA_S2WAC2_2W_6L_D_WL	UA_S2WAC2_2W_6L_D_WL	UA_SSAC1_2W_6L_D_WL	UA_SSAC1_2W_6L_D_WL	Principal Arterial - Other - Urban	D	59,900	0.73	C	-	-	5,390	6
SR 421 - Dunlawton Ave.	SR5A/Nova Rd. to Spruce Creek Rd.	1015	FDOT	Yes	0.91	45	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.77	C	-	-	3,580	4
SR 421 - Dunlawton Ave.	Spruce Creek Rd. to US 1	5181	FDOT	Yes	0.71	45	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.67	C	-	-	3,580	4
SR 430 - Mason Ave.	SR 483/Clyde Morris Blvd. to SR 5A/I	5197	FDOT	Yes	0.99	35	E+W	UA_S2WAC1_2W_4L_U_0L	UA_S2WAC2_2W_4L_U_0L	UA_S2WAC2_2W_4L_U_0L	UA_S2WAC2_2W_4L_U_0L	UA_SSAC2_2W_4L_U_0L	UA_SSAC2_2W_4L_U_0L	Minor Arterial - Urban	D	24,300	0.81	D	1,330	1,480	2,190	4
SR 430 - Mason Ave.	SR 5A/Nova Rd. to US 1	5197	FDOT	Yes	1.08	35	E+W	UA_S2WAC1_2W_4L_U_0L	UA_S2WAC2_2W_4L_U_0L	UA_S2WAC2_2W_4L_U_0L	UA_S2WAC2_2W_4L_U_0L	UA_SSAC2_2W_4L_U_0L	UA_SSAC2_2W_4L_U_0L	Minor Arterial - Urban	D	24,300	0.81	D	1,330	1,480	2,190	4
SR 430 - Mason Ave.	US 1 to Beach St.	5197	FDOT	Yes	0.30	35	E+W	UA_S2WAC1_2W_4L_U_0L	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_S2WAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	UA_SSAC2_2W_4L_D_WL	Minor Arterial - Urban	D	32,400	0.60	D	1,330	1,480	2,920	4
SR 430 - Oakridge Blvd. -	Beach St. to Peninsula Dr	5196E	FDOT	Yes	0.70	40	E+W	UA_S2WAC1_1W_2L_D_WL	UA_S2WAC1_1W_2L_D_WL	UA_S2WAC1_1W_2L_D_WL	UA_S2WAC1_1W_2L_D_WL	UA_SSAC1_1W_2L_D_WL	UA_SSAC1_1W_2L_D_WL	Minor Arterial - Urban	D	23,880	0.39	C	-	-	2,150	2
SR 430 - Oakridge Blvd. -	Peninsula Dr to SR A1A/Atlantic	5195	FDOT	Yes	0.28	40	E+W	UA_S2WAC1_1W_2L_D_WL	UA_S2WAC1_1W_2L_D_WL	UA_S2WAC1_1W_2L_D_WL	UA_S2WAC1_1W_2L_D_WL	UA_SSAC1_1W_2L_D_WL	UA_SSAC1_1W_2L_D_WL	Minor Arterial - Urban	D	23,880	0.25	C	-	-	2,150	2
SR 430 - Seabreeze Brid	Beach St. to Peninsula Dr	5196W	FDOT	Yes	1.01	40	E+W	UA_S2WAC1_1W_2L_D_WL	UA_S2WAC1_1W_2L_D_WL	UA_S2WAC1_1W_2L_D_WL	UA_S2WAC1_1W_2L_D_WL	UA_SSAC1_1W_2L_D_WL	UA_SSAC1_1W_2L_D_WL	Minor Arterial - Urban	D	23,880	0.42	C	-	-	2,150	2
SR 430 - Seabreeze Brid	Peninsula Dr to SR A1A/Atlantic	5191	FDOT	Yes	0.29	30	E+W	UA_S2WAC1_1W_2L_D_WL	UA_S2WAC1_1W_2L_D_WL	UA_S2WAC1_1W_2L_D_WL	UA_S2WAC1_1W_2L_D_WL	UA_SSAC2_1W_2L_D_WL	UA_SSAC2_1W_2L_D_WL	Minor Arterial - Urban	D	19,440	0.57	C	-	-	1,750	2
SR 441 - Peninsula Dr.	SR A1A/Dunlawton to Florida Shores	5188	FDOT	Yes	2.42	40	N+S	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	Minor Arterial - Urban	D	17,700	0.33	C	-	-	1,600	2
SR 441 - Peninsula Dr.	Florida Shores to Silver Beach Ave.	5187	FDOT	Yes	2.34	35	N+S	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	Minor Arterial - Urban	D	17,700	0.47	C	-	-	1,600	2
SR 441 - Peninsula Dr.	Silver Beach Ave. to US 92/ISB	5187	FDOT	Yes	0.65	35	N+S	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_S2WAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	UA_SSAC1_2W_2L_U_WL	Minor Arterial - Urban	D	17,700	0.47	C	-	-	1,600	2
SR 442 - Indian River Blvd	I-95 to Air Park Rd.	170	FDOT	Yes	2.09	55	E+W	TA_S2WAC1_2W_4L_D_WL	TA_S2WAC1_2W_4L_D_WL	TA_S2WAC1_2W_4L_D_WL	TA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Minor Arterial - Urban	D	39,800	0.36	C	-	-	3,580	4
SR 442 - Indian River Blvd	Air Park Rd. to US 1	5190	FDOT	Yes	1.69	45	E+W	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_S2WAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Minor Arterial - Urban	D	39,800	0.48	C	-	-	3,580	4
SR 472	US 17/92 to CR 4101/MLK Blvd	472	FDOT	Yes	2.31	60	E+W	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	Principal Arterial - Other - Urban	D	66,200	0.36	B	-	-	5,960	4
SR 472	CR 4101/MLK Blvd to I-4 (end of stat	535	FDOT	Yes	1.10	60	E+W	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_UFH_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.80	C	2,300	2,710	3,580	4
SR 483 - Clyde Morris BV	SR 400/Beville Rd. to Aviation Ctr Pk	5193	FDOT	Yes	0.98	45	N+S	UA_S2WAC1_2W_4L_U_WL	UA_S2WAC1_2W_4L_U_WL	UA_S2WAC1_2W_4L_U_WL	UA_S2WAC1_2W_4L_U_WL	UA_S2WAC1_2W_4L_U_WL	UA_SSAC1_2W_4L_U_WL	Principal Arterial - Other - Urban	D	37,800	0.73	C	-	-	3,400	4
SR 483 - Clyde Morris BV	Aviation Ctr Pkwy/Bellevue to US 92/	5193	FDOT	Yes	1.20	45	N+S	UA_S2WAC1_2W_4L_U_WL	UA_S2WAC1_2W_4L_U_WL	UA_S2WAC1_2W_4L_U_WL	UA_S2WAC1_2W_4L_U_WL	UA_S2WAC1_2W_4L_U_WL	UA_SSAC1_2W_4L_D_WL	Principal Arterial - Other - Urban	D	39,800	0.69	C	-	-	3,580	4
SR 483 - Clyde Morris BV	US 92/ISB to SR 430/Mason Ave.	5182	FDOT	Yes	1.20	45	N+S	UA_S2WAC1_2W_4L_U_WL	UA_S2WAC1_2W_4L_U_WL	UA_S2WAC1_2W_4L_U_WL	UA_S2WAC1_2W_4L_U_WL	UA_S2WAC1_2W_4L_U_WL	UA_SSAC1_2W_4L_U_WL	Principal Arterial - Other - Urban	D	37,800	0.55	C	-	-	3,400	4
6th St.	Derbyshire Rd. to SR 5A/Nova Rd	11	County		0.50	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCR

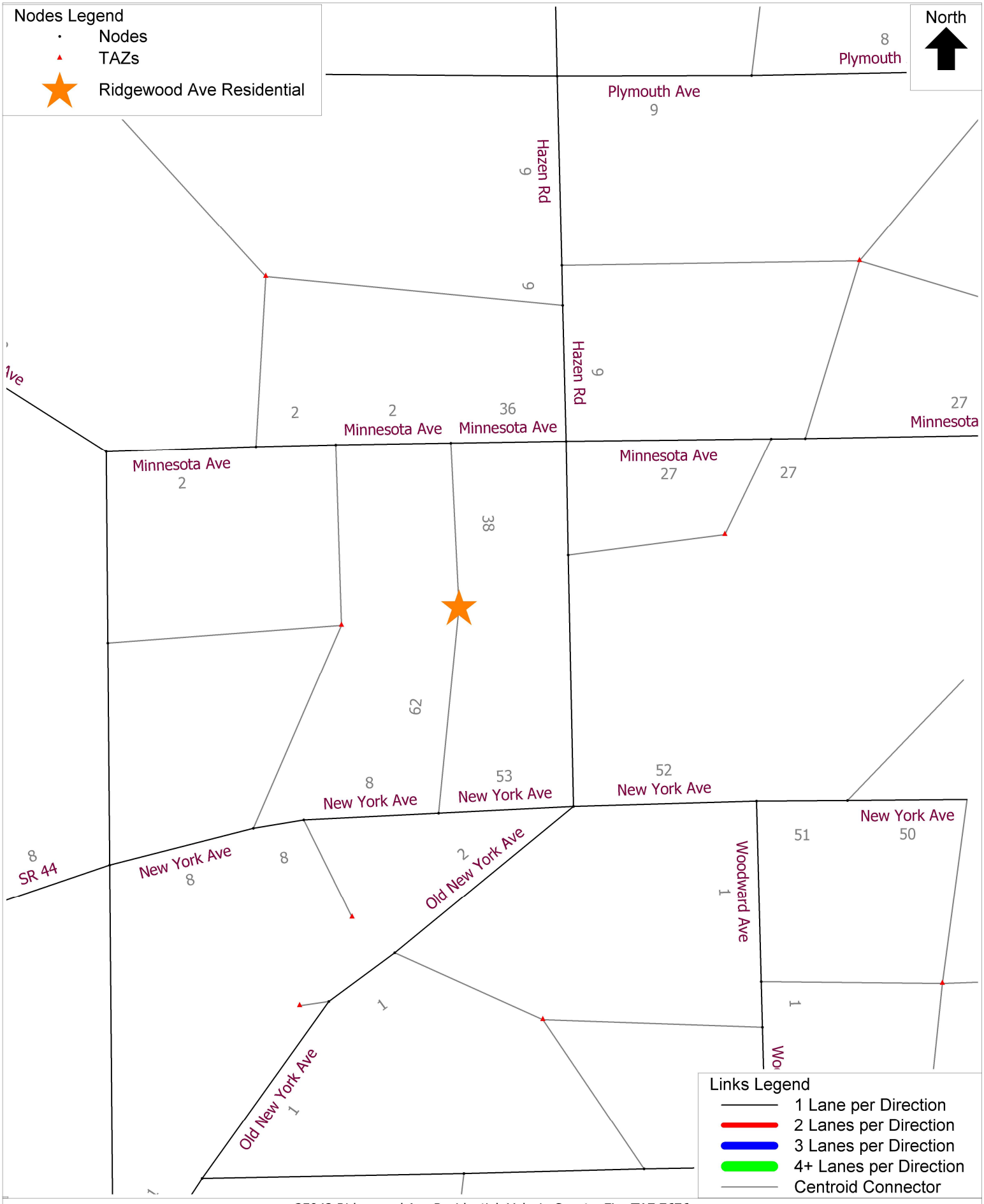
Road Name	Limits (From - To)	Count Station Number	Roadway Maintaining Agency	2021 Roadway on County's Thoroughfare	Distance (in miles)	Posted Speed							2021 QLOS Facility Type	2010 Federal Functional Classification	VC 2022 Allowable LOS	DAILY 2022 LOS Capacity	DAILY 2021 V/C Ratio	DAILY 2022 LOS	2022 AM Peak	2022 PM Peak	PEAK 2Way 2022 LOS Capacity	2021 No. of Lanes
Rd_Name	Limits	Cnt_Sta	MainRes	Tfare21	Distance	SPD2013	Direction	F_Type_08	F_Type_09	F_Type_10	F_Type_11	F_Type_14	F_Type_21	Fun_Class_2010	VCA_LOS_22	Cap_22	VCRatio_22	LOS_22	AMPKHR_22	PMPKHR_22	2W_Cap_22	Lanes_20
Beach/Riverside/Beach (C	SR 40 to Wilmette Ave.	132	County	Yes	0.70	35	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	16,000	0.54	D	580	725	1,440	2
Beach/Riverside/Beach (C	Wilmette Ave. to Inglesa Ave.	135	County	Yes	2.55	35	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	16,000	0.43	D	610	710	1,440	2
Beach/Riverside/Beach (C	Inglesa Ave to Pine Tree Dr.	137	County	Yes	1.10	35	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	16,000	0.18	C	170	250	1,440	2
Beacon Light Rd.	Halifax Ave. to Ariel Rd.	140	County	Yes	2.75	35	N+S	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Minor Collector - Rural	C	6,450	0.05	B	25	35	620	2
Beacon Light Rd.	Ariel Rd. to Volco Rd.	141	County	Yes	1.25	35	N+S	TA_NSOSRS_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Minor Collector - Rural	C	6,450	0.09	B	40	55	620	2
Bellevue Ave. Extension	CR 415/Tomoka Farms Rd to William	151	County	Yes	0.50	35	E+W	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.52	D	500	580	1,020	2
Bellevue Ave. Extension	Williamson Blvd to SR 483/Clyde Mo	153	County	Yes	2.50	45	E+W	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.23	C	220	295	1,230	2
Beresford Ave.	Beresford Rd. to Fatio Rd	161	County	Yes	0.70	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.16	C	175	220	1,020	2
Beresford Ave.	Fatio Rd. to SR 15A	162	County	Yes	1.30	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.30	C	240	350	1,020	2
Beresford Ave.	SR 15A to US 17/92	164	County	Yes	1.75	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.34	C	250	400	1,020	2
Beresford Ave.	US 17/92 to Amelia Ave	165	County	Yes	0.25	35	E+W	UA_NSOSRS_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	Major Collector - Urban	E	14,740	0.73	D	590	895	1,330	2
Beresford Ave.	Amelia Ave. to Hill Ave.	167	County	Yes	1.00	40	E+W	UA_NSOSRS_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC1_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	Major Collector - Urban	E	17,900	0.37	C	390	590	1,620	2
Beresford Ave.	Hill Ave. to Blue Lake Ave.	169	County	Yes	1.35	40	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.31	C	260	400	1,230	2
Beresford Ave.	Blue Lake Ave. to MLK (Kepler Rd.)	Future Rd-17	County	Yes	0.80	40	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Future - Major Collector - Urban	E	13,640	-	-	-	-	1,230	0
Beresford Ave.	MLK (Kepler Rd.) to SR 44	Future Rd-17	County	Yes	0.75	40	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Future - Major Collector - Urban	E	13,640	-	-	-	-	1,230	0
Beresford Rd.	SR 15A to Spring Garden Ave.	180	County		0.40	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.04	C	45	55	1,020	2
Beresford Rd.	Spring Garden Ave. to Fatio Rd.	181	County		0.75	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.07	C	60	85	1,020	2
Beresford Rd.	Fatio Rd.. to Beresford Ave	182	County		1.30	30	E+W	TA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.14	C	125	210	1,020	2
Beresford Rd.	Beresford Ave. to Old New York Ave.	183	County	Yes	0.30	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.25	C	250	365	1,020	2
Big Tree Rd.	Clyde Morris Blvd. to Nova Rd.	192	County	Yes	1.10	35	E+W	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.46	D	375	545	1,020	2
Big Tree Rd.	Nova Rd. to Magnolia Ave.	193	County	Yes	0.40	35	E+W	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	Minor Collector - Urban	E	14,740	0.82	D	750	1,050	1,330	2
Big Tree Rd.	Magnolia Ave. to Kenilworth Ave.	195	County	Yes	0.45	35	E+W	UA_NSOSRS_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	Minor Collector - Urban	E	14,740	0.70	D	630	945	1,330	3
Big Tree Rd.	Kenilworth Ave. to US 1	196	County	Yes	0.55	35	E+W	UA_NSOSRS_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	Minor Collector - Urban	E	14,740	0.51	D	230	605	1,330	3
Blackburn Rd.	CR 3 to Emporia Rd	211	County		1.25	35	N+S	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Minor Collector - Rural	C	6,450	0.10	B	55	65	620	2
Blackwelder Rd.	Lake Winona Rd. to SR 11	221	County		3.25	35	E+W	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Local	C	6,450	0.04	B	20	25	620	2
Blue Lake Ave.	SR 472 to Orange Camp Rd	Future Rd-22	County	Yes	1.05	45	N+S	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Major Collector - Urban	E	17,050	-	-	-	-	1,540	2
Blue Lake Ave.	Orange Camp Rd. to Taylor Rd.	231	County	Yes	1.05	45	N+S	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Major Collector - Urban	E	17,050	0.31	C	565	455	1,540	2
Blue Lake Ave.	Taylor Rd. to Beresford Ave.	232	County	Yes	1.05	45	N+S	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.56	C	650	740	1,230	2
Blue Lake Ave.	Beresford Ave. to Voorhis Ave.	234	County	Yes	0.75	30	N+S	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.38	C	320	585	1,020	2
Blue Lake Ave.	Voorhis Ave. to SR 44	235	County	Yes	0.25	30	N+S	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.27	C	230	370	1,020	2
Blue Lake Ave.	SR 44 to Minnesota Ave.	236	County	Yes	0.55	30	N+S	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.39	D	320	490	1,020	2
Blue Lake Ave.	Minnesota Ave. to Plymouth Ave.	237	County	Yes	1.00	40	N+S	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.55	C	625	695	1,230	2
Blue Springs Av (West)	Sparkman Dr to Lawton Dr	239	County		0.60	35	E+W	UA_NSOSRS_2W_2L_U_WL	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.36	C	500	450	1,020	2
Brownlee Rd.	Raulerson Rd. #1 to Raulerson Rd.	240	County		1.70	35	N+S	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Local	C	6,450	0.03	B	15	20	620	2
Cardinal Blvd.	SR 421/Dunlawton Ave. to Demotte A	245	County		0.15	30	N+S	UA_NSOSRS_2W_2L_U_WL	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.10	C	80	130	1,020	2
Cardinal Blvd.	Demotte Ave. to Marcelle Ave	260	County		0.90	30	N+S	UA_NSOSRS_2W_2L_U_WL	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.41	D	330	485	1,020	2
Cardinal Blvd.	Marcelle Ave to Major St.	261	County		1.00	30	N+S	UA_NSOSRS_2W_2L_U_WL	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	0.06	C	45	80	1,020	2
Carter Rd.	SR 11 to Marsh Rd.	270	County		1.75	40	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Local	E	13,640	0.13	C	120	160	1,230	2
Cassadaga Rd.	W. Volusia Bltwy. to Macy Ave.	280	County	Yes	1.80	30	N+S	UA_UFH_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.18	C	140	210	1,020	2
Clara Ave.	SR 15A to New Hampshire Ave.	301	County		0.50	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.16	C	135	220	1,020	2
Clara Ave.	New Hampshire Ave. to Beresford Av	303	County		0.50	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.22	C	210	270	1,020	2
Clifton Rd.	Lake Winona Rd. to SR 11	311	County		1.70	30	E+W	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Local	C	6,450	0.03	B	20	25	620	2
Clyde Morris Blvd.	Taylor Rd. to SR 421/Dunlawton Ave	330	County	Yes	0.95	40	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Minor Arterial - Urban	E	17,050	0.62	C	1,190	900	1,540	2
Clyde Morris Blvd.	SR 421/Dunlawton Ave. to Willow Ru	332	County	Yes	0.65	45	N+S	UA_NSMCRS_2W_4L_U_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.53	C	1,250	1,575	3,410	4
Clyde Morris Blvd.	Willow Run Blvd. to Madeline Ave.	333	County	Yes	1.30	45	N+S	UA_NSMCRS_2W_4L_U_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.60	C	1,390	1,900	3,410	4
Clyde Morris Blvd.	Madeline Ave. to Big Tree Rd.	335	County	Yes	1.00	45	N+S	UA_NSMCRS_2W_4L_U_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.60	C	1,360	1,865	3,410	4
Clyde Morris Blvd.	Big Tree Rd. to SR 400/Beville Rd.	337	County	Yes	0.90	45	N+S	UA_NSMCRS_2W_4L_U_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_U_WL	Principal Arterial - Other - Urban	E	36,070	0.59	C	1,260	1,785	3,240	4
Clyde Morris Blvd.	SR 430/Mason Ave. to Bill France Bl	338	County	Yes	0.60	45	N+S	UA_NSMCRS_2W_4L_U_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.41	C	1,050	1,140	3,410	4
Clyde Morris Blvd.	Bill France Blvd. to LPGA Blvd.	341	County	Yes	1.25	50	N+S	UA_NSMCRS_2W_4L_U_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.48	C	1,160	1,455	3,410	4
Clyde Morris Blvd.	LPGA Blvd. to Hand Ave.	343	County	Yes	1.50	50	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.43	C	1,120	1,270	3,410	4
Clyde Morris Blvd.	Hand Ave to SR 40/Granada Blvd.	348	County	Yes	0.80	35	N+S	UA_NSMCRS_2W_4L_U_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_NSSRC2_2W_4L_D_WL	UA_NSSRC2_2W_4L_D_WL	Principal Arterial - Other - Urban	E	30,420	0.43	C	890	1,050	2,740	4
Commonwealth Blvd.	Spruce Creek Rd. to Orange Ave.	360	County		0.55	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.39	C	355	430	1,020	2
Commonwealth Blvd.	Orange Ave. to US 1	361	County		0.35	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.27	C	250	305	1,020	2
CR 3	Ponce DeLeon Blvd. to Lake Winona	380	County	Yes	0.45	45	N+S	TA_NSMCRS_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Local	E	13,640	0.08	C	80	100	1,230	2
CR 3	Lake Winona Rd. to SR 40	380	County	Yes	5.04	35	N+S	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	Local	C	11,775	0.09	B	80	100	1,230	2
CR 3	SR 40 to Emporia Rd	382	County	Yes	3.40	45	N+S	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	Minor Collector - Rural	C	11,775	0.10	B	115	110	1,230	2
CR 3	Emporia Rd to Washington Ave.	384	County	Yes	1.20	30	N+S	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	Minor Collector - Rural	C	11,775	0.17	B	180	200	1,230	2
CR 3	Washington Ave. to 'US 17	386	County	Yes	2.20	35	N+S	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	Minor Collector - Rural	C	11,775	0.09	B	90	100	1,230	2
CR 15A	US 17 to Airport Rd.	440	County	Yes	0.90	50	N+S	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	Minor Arterial - Urban	E	24,450	0.22	B	325	460	2,200	2
CR 15A	Airport Rd. to SR 11	441	County	Yes	1.25	40	E+W	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	Minor Arterial - Urban	E	24,450	0.12	B	220	265	2,200	2
CR 92 (Intn'l Spdwy Blvd.	SR 15A to Stone St.	450	County	Yes	0.25	45	E+W	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.40	C	890	1,250	3,410	4
CR 92 (Intn'l Spdwy Blvd.	Stone St. to US 17/92	452	County	Yes	0.75	45	E+W	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_NSSRC2_2W_4L_D_WL	UA_NSSRC2_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.43	C	930	1,360	3,410	4
CR 305 (Bunnell Rd.)	US 17 to Cowart Rd.	460	County	Yes	1.50	50	E+W	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Major Collector - Rural	C	6,450	0.35	B	205	250	620	2
CR 305 (Bunnell Rd.)	Cowart Rd. to Flagler Co.	461	County	Yes	3.00	50	E+W	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Major Collector - Rural	C	6,450	0.25	B	180	200	620	2
Cow Creek Rd.	SR 442 to Volco Rd.	420	County	Yes	3.50	50	N+S	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Local	C	6,450	0.16	B	80	90	620	2
Cowart Rd.	Bunnell Rd to Little Brown Church Rd	430	County		2.05	40	N+S	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Local	C	6,450	0.03	B	20	20	620	2
Daugharty Rd. (S. End)	Marsh Rd. to SR 11	470	County	Yes	0.80	35	N+S	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Local	C	6,450	0.08	B	35	50	620	2
Daugharty Rd.	SR 11 to Marsh Rd.	472	County		0.95	35	N+S	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Minor Collector - Rural	C	6,450	0.14	B	60	90	620	2
Demotte Ave.	Peninsula Dr. to Cardinal Blvd	500	County		0.20	25	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.37	C	300	450	1,020	2
Derbyshire Rd.	SR 430/Mason Ave. to LPGA Blvd.	511	County		1.45	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2

Road Name	Limits (From - To)	Count Station Number	Roadway Maintaining Agency	2021 Roadway on County's Thoroughfare	Distance (in miles)	Posted Speed						2021 QLOS Facility Type	2010 Federal Functional Classification	VC 2022 Allowable LOS	DAILY 2022 LOS Capacity	DAILY 2021 V/C Ratio	DAILY 2022 LOS	2022 AM Peak	2022 PM Peak	PEAK 2Way 2022 LOS Capacity	2021 No. of Lanes
Rd_Name	Limits	Cnt_Sta	MainRes	Tfare21	Distance	SPD2013	Direction	F_Type_08	F_Type_09	F_Type_10	F_Type_11	F_Type_14	F_Type_21	Fun_Class_2010	VCA_LOS_22	Cap_22	VCRatio_22	LOS_22	AMPKHR_22	PMPKHR_22	2W_Cap_22	Lanes_20
Enterprise-Osteen Rd.	Garfield Rd to Reed Ellis Rd.	601	County	Yes	1.70	35	E+W	TA_NSOSRS_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.22	C	220	330	1,020	2
Enterprise-Osteen Rd.	Reed Ellis Rd. to SR 415	602	County	Yes	2.50	35	E+W	TA_NSOSRS_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.10	C	100	165	1,020	2
Euclid Ave.	Grand to Fatio Rd.	610	County		0.25	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.09	C	85	125	1,020	2
Euclid Ave.	Fatio Rd. to Woodward Ave.	611	County		0.25	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.11	C	105	145	1,020	2
Euclid Ave.	Woodward Ave. to SR 15A	612	County		0.50	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.19	C	185	220	1,020	2
Euclid Ave.	SR 15A to Adelle Ave.	613	County		0.75	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.20	C	165	260	1,020	2
Euclid Ave.	Adelle Ave. to US 17/92	614	County		0.50	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.15	C	100	185	1,020	2
Flomich St.	Derbyshire Rd. to SR 5A/Nova Rd.	650	County	Yes	0.30	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.39	C	315	455	1,020	2
French Ave.	Beginning of road to Blue Springs Pa	690	County		1.00	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.01	C	15	25	1,020	2
French Ave.	Blue Springs Park to Lawton Ave./Ha	691	County		1.25	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.06	C	10	80	1,020	2
Garfield Ave.	SR 44 to Plymouth Ave.	700	County		1.00	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	0.15	C	130	155	1,020	2
Garfield Ave.	Plymouth Ave. to US 92	702	County		0.85	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	0.19	C	210	240	1,020	2
Garfield Rd.	Doyle Rd. to Enterprise-Osteen Rd	711	County		0.90	40	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.15	C	150	180	1,230	2
Glencoe Rd.	Taylor Rd. to Paige Ave.	730	County		1.50	40	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.20	C	195	245	1,230	2
Glencoe Rd.	Paige Ave. to SR 44	731	County		1.10	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.41	C	440	525	1,020	2
Glencoe Rd.	SR 44 to Pioneer Tr.	732	County		0.85	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.16	C	140	210	1,020	2
Glenwood Rd.	Grand Ave. to SR 15A	741	County		1.60	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.28	C	270	310	1,020	2
Glenwood Rd.	SR 15A to US 17	743	County		1.25	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.15	C	130	180	1,020	2
Grand Av/CR 4053	Old New York Ave. to SR 44	748	County	Yes	0.60	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.17	C	155	250	1,020	2
Grand Av/CR 4053	SR 44 to Minnesota Ave.	750	County	Yes	0.90	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.34	C	315	445	1,020	2
Grand Av/CR 4053	Minnesota Ave. to Plymouth Ave.	751	County	Yes	0.50	40	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.14	C	145	200	1,230	2
Grand Av/CR 4053	Plymouth Ave. to Glenwood Rd.	752	County	Yes	2.10	40	N+S	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.19	C	205	240	1,230	2
Grand Av/CR 4053	Glenwood Rd. to Lemon St.	754	County	Yes	1.30	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	Major Collector - Urban	E	14,740	0.27	C	295	385	1,330	2
Grand Av/CR 4053	Lemon St. to Retta St.	756	County	Yes	1.80	40	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.16	C	160	210	1,230	2
Graves Av/CR 4145	Veteran's Memorial Pkwy. to Kentuck	775	County	Yes	0.30	45	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC2_2W_2L_D_WL	UA_MCCRAC2_2W_2L_D_WL	UA_MCCRAC2_2W_2L_D_WL	UA_NSSRC1_2W_2L_D_WL	UA_NSSRC1_2W_2L_D_WL	Minor Arterial - Urban	E	17,900	1.12	F	1,230	1,635	1,620	2
Graves Av/CR 4145	Kentucky Ave. to Normandy Blvd.	900a	County	Yes	0.60	45	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC1_2W_2L_D_WL	UA_NSSRC1_2W_2L_D_WL	Minor Arterial - Urban	E	17,900	1.10	C	1,420	1,675	1,620	2
Graves Av/CR 4145	Normandy Blvd. to Howland Blvd.	900b	County	Yes	0.25	35	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC1_2W_2L_D_WL	UA_NSSRC2_2W_4L_D_WL	Minor Arterial - Urban	E	30,420	0.53	D	1,140	1,340	2,740	4
Greens Dairy Rd.	SR 15A to Stone St.	780	County		0.50	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local		E	13,640	0.01	C	15	15	1,020	2
Halleck St. (NSB)	Wayne Ave. to Enterprise Ave.	810	County	Yes	0.20	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.52	D	475	575	1,020	2
Hand Ave.	Williamson Blvd. to Clyde Morris Blvd	830	County	Yes	1.25	50	E+W	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Major Collector - Urban	E	17,050	0.54	A	615	775	1,540	2
Hand Ave.	Clyde Morris Blvd. to Shangri La Dr.	832	County	Yes	0.75	50	E+W	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_WL	Major Collector - Urban	E	17,050	0.94	C	1,110	1,310	1,540	2
Hand Ave.	Shangri La Dr. to SR 5A/Nova Rd.	833	County	Yes	0.25	45	E+W	UA_NSOSRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Major Collector - Urban	E	37,970	0.43	C	1,110	1,340	3,410	4
Hazen Rd.	SR 44 to Plymouth Ave.	850	County	Yes	1.00	40	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.12	C	120	160	1,230	2
Hazen Rd.	Plymouth Ave. to Mercers Fernery Rd	852	County		1.50	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.07	C	135	100	1,020	2
Highbridge Rd.	Walter Boardman Ln. to John Anders	871	County	Yes	1.60	30	E+W	TA_NSOSRS_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	Major Collector - Rural	C	11,775	0.29	A	200	290	1,120	2
Highbridge Rd.	John Anderson Dr. to SR A1A	872	County	Yes	0.20	30	E+W	TA_NSOSRS_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.21	C	185	245	1,020	2
Hill Ave.	Taylor Rd. to Beresford Ave.	878	County		1.00	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local		E	13,640	0.08	C	80	100	1,020	2
Hill Ave.	Beresford Ave. to Voorhis Ave.	881	County		0.75	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.16	C	140	200	1,020	2
Hill Ave.	Voorhis Ave. to SR 44	882	County		0.25	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.19	C	145	250	1,020	2
Hill Ave./Jacobs Rd.	Plymouth Ave. to US 92	950	County	Yes	0.85	40	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.57	C	705	675	1,230	2
Hontoon Rd.	end of road to Botts Landing Rd.	890	County		2.00	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	C	5,260	0.21	C	75	110	1,020	2
Hontoon Rd.	Botts Landing Rd. to Old New York A	891	County		1.15	40	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Collector - Urban	C	12,100	0.27	C	235	270	1,230	2
Howland Blvd.	I-4/SR 472 to Wolf Pack Run	901	FDOT	Yes	0.40	45	E+W	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Minor Arterial - Urban	E	37,970	0.81	C	2,185	2,410	3,410	4
Howland Blvd.	Wolf Pack Run to Catalina Blvd.	903	County	Yes	1.15	45	N+S	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Minor Arterial - Urban	E	37,970	0.71	C	1,975	2,125	3,410	4
Howland Blvd.	Catalina Blvd. to Providence Blvd.	905	County	Yes	0.35	45	N+S	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Minor Arterial - Urban	E	37,970	0.52	C	1,490	1,460	3,410	4
Howland Blvd.	Providence Blvd. to Elkcam Blvd.	906	County	Yes	2.10	45	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Arterial - Urban	E	13,640	1.02	E	945	1,020	1,230	2
Howland Blvd.	Elkcam Blvd. to Lake Helen-Osteen F	908	County	Yes	0.30	45/40	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Minor Arterial - Urban	E	37,970	0.39	C	915	1,190	3,410	4
Howland Blvd.	Lake Helen-Osteen Rd. to Newmark	909	County	Yes	0.70	40	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Minor Arterial - Urban	E	37,970	0.57	C	1,450	1,780	3,410	4
Howland Blvd.	Newmark Dr. to Courtland Blvd.	911	County	Yes	1.15	45	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Minor Arterial - Urban	E	37,970	0.50	C	1,360	1,530	3,410	4
Howland Blvd.	Courtland Blvd. to Ft Smith Blvd.	913	County	Yes	1.80	45	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_4L_D_WL	Minor Arterial - Urban	E	37,970	0.42	C	1,430	1,320	3,410	4
Howland Blvd.	Ft Smith Blvd. to SR 415	915	County	Yes	0.65	45	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_4L_D_WL	Minor Arterial - Urban	E	37,970	0.48	C	1,150	1,580	3,410	4
I-4 Frontage Rd.	Summit Ave. to Orange Camp Rd.	ure Road-2 la	County	Yes	2.00	45	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	n/c	E	13,640	-	-	-	-	1,230	0
I-4 Frontage Rd.	Orange Campe Rd. to Cassadaga Rd.	ure Road-4 la	County	Yes	1.35	45	N+S	UA_NSOSRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	n/c	E	37,970	-	-	-	-	3,410	0
I-4 Frontage Rd.	Cassadaga Rd. to SR 472	ure Road-4 la	County	Yes	0.70	45	N+S	UA_NSOSRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	n/c	E	37,970	-	-	-	-	3,410	0
Indian Lake Rd.	Tiger Bay Rd. to US 92	935	County		0.80	40	N+S	TA_NSOSRS_2W_2L_U_0L	TA_OCCRAC1_2W_2L_U_0L	TA_OCCRAC1_2W_2L_U_0L	TA_OCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Local		E	13,640	0.38	C	505	440	1,230	2
John Anderson Dr.	Halifax Dr to Lynnhurst	972	County	Yes	0.85	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.41	C	380	445	1,020	2
John Anderson Dr.	Lynnhurst to Highbridge Rd.	974	County	Yes	7.40	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.29	C	265	310	1,020	2
John Anderson Hwy.	Walter Boardman Lane to Flagler Co	990	County	Yes	1.00	5 NB / 30 SI	N+S	TA_NSMCRS_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	Minor Collector - Rural	C	11,775	0.12	B	95	150	1,120	2
Josephine St./10th St.	Old Mission Rd. to Tatum Blvd.	1000	County	Yes	0.30	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.49	D	780	550	1,020	2
Josephine St./10th St. (NS	Tatum Blvd. to US 1	1002	County	Yes	1.80	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC2_2W_2L_U_WL	UA_NSSRC2_2W_2L_U_WL	Major Collector - Urban	E	14,040	0.00	A	-	-	1,270	2
Kathy Dr. (N. Penin.)	John Anderson Dr. to SR A1A	1011	County		0.44	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local		E	13,640	0.03	C	35	35	1,020	2
Kennedy Pkwy (Old SR 3	US 1 to Park Entrance	798158	Federal		4.00	55	E+W	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Major Collector - Rural	C	6,450	0.00	B	-	-	620	2
Kicklighter Rd.	Macy Ave. to Lake Helen-Osteen/Pre	1051	County	Yes	0.75	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.13	C	370	175	1,020	2
Lake George Rd.	Bream Dr. to US 17	1062	County		3.90	30	E+W	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Local	C	6,450	0.11	B	60	70	620	2
Lake Helen-Osteen Rd.	Howland Blvd. to Elkcam Blvd.	1070	County	Yes	0.40	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Arterial - Urban	E	13,640	0.62	D	630	770	1,020	2
Lake Helen-Osteen Rd.	Elkcam Blvd. to Haulover Blvd.	1071	County	Yes	1.75	45	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Arterial - Urban	E	13,640	0.66	C	550	865	1,230	2
Lake Helen-Osteen Rd.	Haulover Blvd. to Catalina Blvd.	1072	County	Yes	0.50	45	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Arterial - Urban	E	13,640	0.95	D	1,140	1,170	1,230	2
Lake Helen-Osteen Rd.	Catalina Blvd. to Captain Dr	1073	County	Yes	0.40	45	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Arterial - Urban	E	13,640	0.64	C	790	805	1,230	2
Lake Helen-Osteen Rd.	Captain Dr. to Kicklighter Rd.	1076	County	Yes	1.40	40	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Arterial - Urban	E	13,640	0.66	C	825

Road Name	Limits (From - To)	Count Station Number	Roadway Maintaining Agency	2021 Roadway on County's Thoroughfare	Distance (in miles)	Posted Speed							2021 QLOS Facility Type	2010 Federal Functional Classification	VC 2022 Allowable LOS	DAILY 2022 LOS Capacity	DAILY 2021 V/C Ratio	DAILY 2022 LOS	2022 AM Peak	2022 PM Peak	PEAK 2Way 2022 LOS Capacity	2021 No. of Lanes
Rd_Name	Limits	Cnt_Sta	MainRes	Tfare21	Distance	SPD2013	Direction	F_Type_08	F_Type_09	F_Type_10	F_Type_11	F_Type_14	F_Type_21	Fun_Class_2010	VCA_LOS_22	Cap_22	VCRatio_22	LOS_22	AMPKHR_22	PMPKHR_22	2W_Cap_22	Lanes_20
Marsh Rd.	Carter Rd. to Daugharty Rd.	1183	County	Yes	3.00	40	N+S	RDA_NSSRS_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	Minor Collector - Rural	C	11,775	0.09	B	80	100	1,120	2
Mason Ave.	Williamson Blvd. to Fentress Blvd.	1190	County	Yes	0.60	45	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC1_2W_2L_D_WL	UA_NSSRC1_2W_2L_D_WL	Minor Arterial - Urban	E	17,900	0.80	C	845	1,155	1,620	2
Mason Ave.	Fentress Blvd. to Bill France Blvd.	1191	County	Yes	0.50	40	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC1_2W_2L_D_WL	UA_NSSRC1_2W_2L_D_WL	Minor Arterial - Urban	E	17,900	0.98	D	1,160	1,570	1,620	2
Mason Ave.	Bill France Blvd. to Jimmy Ann Dr.	1193	County	Yes	0.30	40	E+W	UA_NSMCRS_2W_4L_U_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Minor Arterial - Urban	E	37,970	0.42	C	940	1,370	3,410	4
Mason Ave.	Jimmy Ann Dr. to SR 483/Clyde Morr	1194	County	Yes	0.50	40	E+W	UA_NSMCRS_2W_4L_U_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Minor Arterial - Urban	E	37,970	0.44	C	930	1,435	3,410	4
Maytown Rd.	SR 415/New Smyrna Blvd. to Pell Rd	1196	County	Yes - Future	5.60	50	E+W	RDA_NSSRS_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	Minor Collector - Rural	C	11,775	0.32	B	290	355	1,120	2
Maytown Rd.	Pell Rd. to Beacon Light Rd.	1198	County	Yes - Future	12.90	45	E+W	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Minor Collector - Rural	C	6,450	0.18	B	80	115	620	2
Maytown Rd./Halifax Ave.	Beacon Light Rd. to US 1	790	County	Yes	1.10	35	E+W	RDA_NSSRS_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	Minor Collector - Rural	C	11,775	0.18	B	130	170	1,120	2
McBride Rd.	US 17 to Lake George Rd.	1200	County		3.00	35	N+S	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Local	C	6,450	0.04	B	25	30	620	2
McGregor Rd.	Westside Con./Fatio to Spring Garde	1210	County	Yes	0.70	40	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.20	C	210	295	1,230	2
McGregor Rd.	Spring Garden Ave. to US17/92	1211	County	Yes	1.40	40	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.35	C	355	495	1,230	2
Mercers Fernery Rd.	Glenwood Rd. to SR 15A	1221	County		1.45	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	0.08	C	65	90	1,020	2
Mercers Fernery Rd.	SR 15A to US 17	1223	County		1.25	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	0.11	C	90	125	1,020	2
Midway Ave.	Williamson Blvd. to US 92	1230	County		2.00	40	E+W	UA_NSOSRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Minor Collector - Urban	E	37,970	0.06	C	160	235	3,410	4
Minnesota Ave. (Orange C	Sparkman Ave. to US 17/92	1241	County		0.50	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	0.24	C	160	350	1,020	2
Minnesota Ave. (Orange C	US 17/92 to Leavitt Ave.	1242	County		0.50	25	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.09	C	85	135	1,020	2
Minnesota Ave. (Orange C	Leavitt Ave. to SR 472	1243	County		0.50	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.10	C	85	130	1,020	2
Minnesota Ave. (DeLand)	Grand Ave. to SR 15A	1245	County		1.35	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.29	C	255	360	1,020	2
Minnesota Ave. (DeLand)	SR 15A to US 17/92	1247	County		1.25	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.12	C	135	150	1,020	2
Minnesota Ave. (DeLand)	Amelia Ave. to Hill Ave	1249	County	Yes	0.75	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.15	C	135	195	1,020	2
Minnesota Ave. (DeLand)	Hill Ave. to Blue Lake Ave.	1250	County	Yes	0.50	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.18	C	280	220	1,020	2
Minnesota Ave. (DeLand)	Blue Lake Ave. to Kepler Rd.	1251	County	Yes	0.85	40	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.27	C	280	365	1,230	2
New Hampshire Ave.	SR 15A to Adelle Ave	1270	County		0.15	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.18	C	345	355	1,020	2
New Hampshire Ave.	Adelle Ave to Clara Ave.	1271	County		0.50	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.30	C	310	375	1,020	2
New Hampshire Ave.	Clara Ave. to US 17/92	1272	County		0.25	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.24	C	200	300	1,020	2
New York Ave. (Orange C	Westside Pkwy/Hamilton Ave. to Spa	1281	County		0.50	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.36	C	375	435	1,020	2
New York Ave. (Orange C	Sparkman Ave. to Carpenter Ave	1283	County		0.30	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.40	D	440	465	1,020	2
New York Ave. (Orange C	Carpenter Ave. to US 17/92	1284	County		0.25	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.44	D	450	510	1,020	2
New York Ave. (Lake Hel	Summit Ave. to Lakeview Dr.	1285	County		0.50	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	C	5,260	0.18	C	85	90	1,020	2
Ohio Ave. (LH)	Macy Ave. to Lakeview Dr.	1320	County	Yes	0.20	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	C	5,260	0.15	C	75	95	1,020	2
Old Dixie Hwy.	Ingelsia to Pine Tree Dr.	1330	County	Yes	0.50	35	N+S	TA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.19	C	160	230	1,020	2
Old Dixie Hwy.	Pine Tree Dr. to Walter Boardman Ln	1332	County	Yes	5.10	45	N+S	TA_NSOSRS_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	20,700	0.17	C	225	310	1,860	2
Old Dixie Hwy.	Walter Boardman Ln. to Old Kings Rd	1333	County	Yes	0.55	45	E+W	TA_NSOSRS_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	20,700	0.26	C	335	460	1,860	2
Old Dixie Hwy.	Old Kings Rd. to I-95	1334	County	Yes	0.60	45	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	20,700	0.49	C	675	800	1,860	2
Old Kings Rd.	Old Dixie Hwy. to Flagler Co.	1340	County	Yes	0.60	50	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	22,800	0.18	C	285	320	2,050	2
Old Mission Rd.	SR 44/Mission Dr. to Old Mission Rd	1356	County	Yes	0.60	40	E+W	UA_NSOSRS_2W_2L_U_WL	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Local	E	13,640	0.08	C	90	105	1,230	2
Old New York Ave.	SR 44 to Hontoon Rd.	1360	County	Yes	1.40	40	E+W	RDA_NSSRS_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	Local	C	11,775	0.08	B	55	115	1,120	2
Old New York Ave.	Hontoon Rd. to Lakeview Dr.	1361	County	Yes	0.40	40	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Collector - Urban	C	12,100	0.32	C	250	345	1,230	2
Old New York Ave.	Lakeview Dr. to Grand Ave.	1362	County	Yes	0.50	40	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.32	C	280	380	1,230	2
Old New York Ave.	Grand Ave. to SR 44	1364	County	Yes	0.91	40	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.19	C	155	195	1,230	2
Orange/Silver Beach Ave	US 1 to Beach St.	1374	County	Yes	0.20	30	E+W	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC2_2W_4L_D_WL	UA_NSSRC2_2W_4L_D_WL	Minor Arterial - Urban	E	30,420	-	-	-	-	2,740	4
Orange/Silver Beach Ave	Beach St. to City Island Pkwy.	1375	County	Yes	0.20	30	E+W	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC2_2W_4L_D_WL	UA_NSSRC2_2W_4L_D_WL	Minor Arterial - Urban	E	30,420	0.32	C	675	795	2,740	4
Orange/Silver Beach Ave	City Island Pkwy. to Peninsula Dr.	1710	County	Yes	0.60	30	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC2_2W_2L_U_WL	UA_NSSRC2_2W_2L_U_WL	Minor Arterial - Urban	E	14,040	0.65	D	615	760	1,270	2
Orange/Silver Beach Ave	Peninsula Dr. to SR A1A	1711	County	Yes	0.30	30	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC2_2W_2L_U_WL	UA_NSSRC2_2W_2L_U_WL	Minor Arterial - Urban	E	14,040	0.30	C	265	340	1,270	2
Orange Camp Rd.	US 17/92 to Princeton	1380	County	Yes	0.75	35	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC2_2W_2L_U_WL	UA_NSSRC2_2W_2L_U_WL	Minor Arterial - Urban	E	14,040	0.94	E	840	1,160	1,270	2
Orange Camp Rd.	Princeton. to Blue Lake Ave.	1382	County	Yes	0.90	50	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Minor Arterial - Urban	E	17,050	0.69	C	825	990	1,540	2
Orange Camp Rd.	Blue Lake Ave. to W Volusia Bltwy. (I	1384	County	Yes	0.55	50	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Minor Arterial - Urban	E	17,050	0.73	C	845	1,075	1,540	2
Orange Camp Rd.	W Volusia Bltwy. (Dr MLK Jr) to I-4	1385	County	Yes	1.00	50	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Minor Arterial - Urban	E	17,050	0.78	C	1,310	1,170	1,540	2
Palm Dr.	John Anderson Dr. to SR A1A	1391	County		0.44	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	0.10	C	85	110	1,020	2
Park Ave.	Old Mission Rd. to Air Park Rd.	1409	County	Yes	0.90	45	E+W	TA_NSOSRS_2W_2L_D_WL	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_D_WL	UA_NSSRC1_2W_2L_D_WL	Major Collector - Urban	E	17,900	0.34	C	395	505	1,620	2
Park Ave.	Air Park Rd. to US 1	1413	County	Yes	1.40	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	Major Collector - Urban	E	14,740	0.54	D	475	685	1,330	2
Peninsula Dr. - South (Pl)	Inlet Harbor Rd to Major St.	1419	County		0.55	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.22	C	130	275	1,020	2
Peninsula Dr. - South	Major St. to Marcelle Ave.	1423	County		0.45	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.24	C	180	300	1,020	2
Peninsula Dr. - South	Marcelle Ave to SR 421/Dunlawton A	1420	County		0.15	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.43	D	340	540	1,020	2
Peterson Rd.	Riley Pridgeon Rd. to Emporia/Blackt	1433	County		2.80	35	E+W	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Local	C	6,450	0.07	B	30	45	620	2
Pineland Tr.	Harmony Ave. to US 1	1451	County		2.00	50	E+W	TA_NSOSRS_2W_2L_U_0L	TA_OCCRAC1_2W_2L_U_0L	TA_OCCRAC1_2W_2L_U_0L	TA_OCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Local	E	13,640	-	-	-	-	1,230	2
Pine Tree Dr.	US 1 to Addison Dr	1440	County		1.00	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	0.18	C	150	245	1,020	2
Pine Tree Dr.	Addison Dr. to Old Dixie Hwy	1441	County		1.00	35	E+W	TA_NSOSRS_2W_2L_U_0L	TA_OCCRAC1_2W_2L_U_0L	TA_OCCRAC1_2W_2L_U_0L	TA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	0.10	C	80	125	1,020	2
Pioneer Tr.	SR 44 to Tomoka Farms Rd.	1461	County	Yes	4.00	50	E+W	RDA_NSSRS_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	Major Collector - Rural	C	11,775	0.42	B	400	410	1,120	2
Pioneer Tr.	Tomoka Farms Rd. Airport Rd.	1464	County	Yes	1.40	45	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.41	C	415	490	1,230	2
Pioneer Tr.	Airport Rd. to Turnbull Bay Rd.	1465	County	Yes	2.50	45	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.53	C	480	630	1,230	2
Pioneer Tr.	Turnbull Bay Rd. to Sugar Mill Dr	1467	County	Yes	1.75	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.52	D	500	570	1,020	2
Pioneer Tr.	Sugar Mill Dr. to Williams Rd.	1471	County	Yes	1.45	40	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.77	C	735	855	1,230	2
Pioneer Tr.	Williams Rd. to Enterprise Ave	1473	County	Yes	1.05	40	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.71	C	675	780	1,230	2
Pioneer Tr.	Enterprise Ave. to Jungle Rd	1474	County	Yes	0.50	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.60	D	545	665	1,020	2
Pioneer Tr.	Jungle Rd to Canal St.	1475	County	Yes	0.25	35	N+S	UA_NSOSRS_2W_2L_D_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.21	C	215	245	1,020	2
Wallace Rd.	Canal St to SR 44	1955	County	Yes	0.25	35	N+S	UA_NSOSRS_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	Major Collector - Urban	E	14,740	0.53	D	520	640	1,330	3
Mission Dr.	SR 44 to Old Mission Rd.	1261	County	Yes	0.75	40	N+S	UA_NSOSRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Major Collector - Urban	E	37,970	0.41	C	1,325	1,265	3,410	4
Old Mission Rd./Mission R	Old Mission Rd. to Josephine St.	1354	County	Yes	0.75	40	N+S	UA_NSOSRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Major Coll

Road Name	Limits (From - To)	Count Station Number	Roadway Maintaining Agency	2021 Roadway on County's Thoroughfare	Distance (in miles)	Posted Speed							2021 QLOS Facility Type	2010 Federal Functional Classification	VC 2022 Allowable LOS	DAILY 2022 LOS Capacity	DAILY 2021 V/C Ratio	DAILY 2022 LOS	2022 AM Peak	2022 PM Peak	PEAK 2Way 2022 LOS Capacity	2021 No. of Lanes
Rd_Name	Limits	Cnt_Sta	MainRes	Tfare21	Distance	SPD2013	Direction	F_Type_08	F_Type_09	F_Type_10	F_Type_11	F_Type_14	F_Type_21	Fun_Class_2010	VCA_LOS_22	Cap_22	VCRatio_22	LOS_22	AMPKHR_22	PMPKHR_22	2W_Cap_22	Lanes_20
Rhode Island Ave.	Carpenter Ave to US 17/92	1600	County	Yes	0.25	35	E+W	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	UA_NSSRC2_2W_2L_D_WL	Minor Collector - Urban	E	14,740	0.57	D	995	865	1,330	2
Rhode Island Ave.	Veteran's Memorial Pkwy. to Norman	Future Rd	County	Yes	1.80		E+W	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_D_WL	future Minor Collector - Urban	E	14,740	-	A	-	-	1,330	0
Riley Pridgeon Rd.	Peterson Rd. to SR 40	1610	County		2.55	35	N+S	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Local	C	6,450	0.06	B	30	35	620	2
River Dr.	John Anderson Dr. to SR A1A	1621	County		0.50	30	E+W	UA_NSOSRS_2W_2L_U_WL	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	0.02	C	25	30	1,020	2
Samsula Dr.	Pioneer Tr. to SR 44	1651	County	Yes	2.60	45	N+S	TA_NSOSRS_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	Minor Collector - Rural	C	11,775	0.14	B	105	160	1,120	2
Sandra Dr.	John Anderson Dr. to SR A1A	1661	County		1.00	30	E+W	UA_NSOSRS_2W_2L_U_WL	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	0.02	C	25	25	1,020	2
Saxon Blvd.	Rail Station to Westside Connector	Future Rd	County	Yes	0.62	40	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC1_2W_2L_D_WL	UA_NSSRC1_2W_4L_D_WL	future Minor Collector - Urban	E	37,970	-	A	-	-	3,410	0
Saxon Blvd.	Westside Connector to US 17/92	Future Rd	County	Yes	1.30	40	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_MCCRAC1_2W_2L_D_WL	UA_NSSRC1_2W_2L_D_WL	UA_NSSRC1_2W_4L_D_WL	future Minor Collector - Urban	E	37,970	-	A	-	-	3,410	0
Saxon Blvd.	US 17/92 to Enterprise Rd	1671	County	Yes	0.65	35	E+W	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC2_2W_4L_D_WL	UA_NSSRC2_2W_4L_D_WL	Minor Arterial - Urban	E	30,420	0.54	D	1,070	1,315	2,740	4
Saxon Blvd.	Enterprise Rd. to Veterans Memorial	1673	County	Yes	0.60	45	E+W	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC2_2W_5L_D_WL	UA_MCCRAC2_2W_5L_D_WL	UA_MCCRAC2_2W_5L_D_WL	UA_NSSRC1_2W_6L_D_WL	UA_NSSRC1_2W_6L_D_WL	Minor Arterial - Urban	E	57,140	0.60	C	1,905	2,390	5,140	6
Saxon Blvd.	VMP to FDOT Park & Ride	1674	County	Yes	0.30	45	E+W	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC2_2W_5L_D_WL	UA_MCCRAC2_2W_5L_D_WL	UA_MCCRAC2_2W_5L_D_WL	UA_NSSRC1_2W_6L_D_WL	UA_NSSRC1_2W_6L_D_WL	Minor Arterial - Urban	E	57,140	0.80	C	2,575	3,480	5,140	6
Saxon Blvd.	FDOT Park & Ride to I-4	1685	County	Yes	0.30	45	E+W	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_NSSRC1_2W_6L_D_WL	UA_NSSRC1_2W_6L_D_WL	Minor Arterial - Urban	E	57,140	0.62	C	1,970	2,800	5,140	6
Saxon Blvd.	I-4 to Finland Dr.	1675	County	Yes	0.35	40	E+W	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_5L_D_WL	Minor Arterial - Urban	E	47,560	0.98	E	2,660	3,750	4,280	5
Saxon Blvd.	Finland Dr. to Normandy Blvd.	1676	County	Yes	0.35	40	E+W	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_MCCRAC2_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Minor Arterial - Urban	E	37,970	1.06	F	2,210	3,170	3,410	4
Saxon Blvd.	Normandy Blvd. to Tivoli Dr.	1677	County	Yes	1.25	40	E+W	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Minor Arterial - Urban	E	37,970	0.70	C	1,635	2,150	3,410	4
Saxon Blvd.	Tivoli Dr. to Providence Blvd.	1679	County	Yes	0.90	35	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Arterial - Urban	E	13,640	0.84	D	665	925	1,020	2
Saxon Blvd.	Providence Blvd. to Normandy Blvd.	1681	County	Yes	0.70	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.58	D	470	630	1,020	2
Saxon Blvd.	Normandy Blvd. to Doyle Rd.	1684	County	Yes	1.00	40	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.41	C	535	550	1,230	2
Saxon Dr. (NSB)	CR A1A to Hiles Blvd.	1691	County		0.55	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.08	C	70	100	1,020	2
Saxon Dr. (NSB)	Hiles Blvd. to 27th Ave.	1693	County		1.55	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.21	C	205	235	1,020	2
Saxon Dr. (NSB)	27th Ave. to 3rd Ave/SR A1A	1695	County		1.75	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.44	D	445	505	1,020	2
Sparkman Ave.	Rhode Island Ave. to Blue Springs Av	1720	County		0.60	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.20	C	410	295	1,020	2
Sparkman Ave.	Blue Springs Ave. to French Ave.	1721	County		0.65	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.21	C	280	285	1,020	2
Sparkman Ave.	French Ave. to New York Ave. W.	1722	County		0.75	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.12	C	155	160	1,020	2
Sparkman Ave.	New York Ave. W. to Minnesota Ave.	1723	County		0.45	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	0.10	C	120	140	1,020	2
Spring Garden Ave.	McGregor Rd. to Beresford Rd. West	1731	County	Yes	0.90	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.18	C	155	230	1,020	2
Spring Garden Ave.	Beresford Rd. West to Beresford Ave	1732	County	Yes	0.60	30	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.15	C	130	185	1,020	2
Spring Garden Ranch Rd.	US 17 to Aragon Ave	1740	County	Yes	0.20	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.23	C	150	350	1,020	2
Spring Garden Ranch Rd.	Aragon Ave to Arrendondo Grant/Eas	1742	County		1.20	35	E+W	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Major Collector - Urban/Rural	C	6,450	0.05	B	70	55	620	2
Spruce Creek Rd.	Taylor Rd. to SR5A/Nova Rd.	1751	County		0.75	45	N+S	UA_NSOSRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Major Collector - Urban	E	37,970	0.06	C	370	265	3,410	4
Spruce Creek Rd.	SR5A/Nova Rd. to Commonwealth Bl	1752	County		0.50	35	N+S	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.62	D	565	730	1,020	2
Stone St.	Plymouth Ave to CR 92/ISB	1770	County		0.80	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.36	C	355	395	1,020	2
Stone St.	CR 92/ISB to Mercers Fernery Rd	1773	County		0.70	35	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	0.02	C	45	65	1,020	2
Sugar Mill Dr.	Pioneer Tr. to SR 44	1781	County	Yes	1.30	45	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.27	C	250	310	1,230	2
Summit Ave.	SR 44 to Main St.	1791	County	Yes	2.20	50	N+S	UA_NSMCRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.19	C	235	240	1,230	2
Surfside Dr.	John Anderson Dr. to SR A1A	1801	County		0.35	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	0.03	C	45	35	1,020	2
Taylor Rd. (CO)	Tomoka Farms Rd. to Spruce Creek	1810	County	Yes	0.70	45	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Principal Arterial - Other -Urban	E	17,050	0.46	C	465	650	1,540	2
Taylor Rd. (CO)	Spruce Creek Blvd. to Crane Lake Bl	1811	County	Yes	1.10	50	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Principal Arterial - Other -Urban	E	17,050	0.63	C	665	850	1,540	2
Taylor Rd. (CO)	Crane Lake Blvd. to Summertree Rd.	1812	County	Yes	0.75	50	E+W	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Principal Arterial - Other -Urban	E	17,050	1.21	C	1,230	1,890	1,540	2
Taylor Rd. (CO)	Summertree Rd. to Williamson Blvd.	1813	County	Yes	0.20	45	E+W	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other -Urban	E	37,970	0.54	C	1,275	1,660	3,410	4
Taylor Rd. (CO)	Williamson Blvd. to I-95 (at Dunlawto	1814	County	Yes	0.15	45	E+W	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC3_2W_5L_D_WL	UA_MCCRAC3_2W_5L_D_WL	UA_MCCRAC3_2W_5L_D_WL	UA_NSSRC1_2W_5L_D_WL	UA_NSSRC1_2W_5L_D_WL	Principal Arterial - Other -Urban	E	47,560	1.00	D	2,865	3,755	4,280	5
Taylor Rd. (PO)	SR 421/Dunlawton Ave. to Clyde Mor	1823	County	Yes	0.55	35	E+W	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_WL	Major Collector - Urban	E	14,040	1.08	D	1,195	1,450	1,270	2
Taylor Rd. (PO)	Clyde Morris Blvd. to Hensel Rd	1824	County		0.50	45	E+W	UA_NSOSRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Major Collector - Urban	E	37,970	0.52	C	1,550	1,775	3,410	4
Taylor Rd. (PO)	Hensel Rd. Spruce Creek Rd.	1826	County		1.00	45	E+W	UA_NSOSRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Major Collector - Urban	E	37,970	0.46	C	1,065	1,630	3,410	4
Taylor Rd. (DL)	US 17/92 to Stratford Dr.	1816	County	Yes	0.80	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Arterial - Urban	E	13,640	0.62	D	610	745	1,020	2
Taylor Rd. (DL)	Stratford Dr. to Blue Lake Ave.	1818	County	Yes	0.95	50	E+W	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Minor Arterial - Urban	E	17,050	0.41	C	555	600	1,540	2
Taylor Rd. (DL)	Blue Lake Ave. to Martin Luther King	1819	County	Yes	0.80	50	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Arterial - Urban	E	13,640	0.59	C	645	725	1,230	2
Taylor Rd. (NSB)	Glencoe Rd. to Mission Rd	1821	County		0.75	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.21	C	195	260	1,020	2
Tomoka Farms Rd.	SR 44 to Pioneer Tr	1840	County	Yes	2.20	50	N+S	RDA_UFH_2W_2L_U_WL	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	RDA_UFH_2W_2L_U_0L	Minor Arterial - Rural	C	11,775	0.74	B	610	725	1,120	2
Tomoka Farms Rd.	Pioneer Tr to Taylor Rd.	1843	County	Yes	2.80	50	N+S	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	Minor Arterial - Urban	E	24,450	0.52	C	870	1,015	2,200	2
Tomoka Farms Rd.	Taylor Rd. to Townwest Blvd	1844	County	Yes	1.45	50	N+S	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	Minor Arterial - Urban	E	24,450	0.35	B	600	715	2,200	2
Tomoka Farms Rd.	Townwest Blvd to Shunz Rd.	1845	County	Yes	1.50	50	N+S	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	Minor Arterial - Urban	E	24,450	0.35	B	655	715	2,200	2
Tomoka Farms Rd.	Shunz Rd. to US 92/ISB	1847	County	Yes	3.02	40	N+S	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	Minor Arterial - Urban	E	24,450	0.39	B	720	825	2,200	2
Tomoka Farms Rd.	US 92/ISB to Dunn Ave.	1848	County	Yes	1.90	40	N+S	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	Major Collector - Urban	E	24,450	0.38	B	575	830	2,200	2
Tomoka Farms Rd.	Dunn Ave. to LPGA Blvd.	1849	County	Yes	1.90	40	N+S	UA_UFH_2W_2L_U_WL	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	UA_UFH_2W_2L_U_0L	Major Collector - Urban	E	24,450	0.27	B	470	565	2,200	2
Turnbull Bay Rd.	Pioneer Tr. to Williams Rd.	1863	County	Yes	2.90	45	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Collector - Urban/Rural	E	13,640	0.32	C	310	370	1,230	2
Turnbull Bay Rd.	Williams Rd. to Industrial Park Ave.	1865	County	Yes	1.20	45	N+S	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.28	C	240	365	1,230	2
Turnbull Bay Rd.	Industrial Park Ave. to US 1	1867	County	Yes	0.85	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.39	C	410	430	1,020	2
Tymber Creek Rd.	LPGA Blvd to Terminus	NEW	County	Yes	1.20	35							UA_UFH_2W_4L_D_WL	Major Collector - Urban	E	75,300	-	-	-	-	6,780	4
Tymber Creek Rd.	Terminus to Riverbend Rd/Future Co	Future Rd	County	Yes - Future	1.70	45							UA_UFH_2W_2L_D_WL	future "Major Collector - Urban	E	34,230	-	-	-	-	3,080	2
Tymber Creek Rd.	Riverbend Rd. to SR 40	1880	County	Yes - Future	0.45	30	N+S	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local - future Major Collector - Urban	E	13,640	0.05	C	60	60	1,020	2
Tymber Creek Rd.	SR 40 to Tymber Run	1881	County	Yes	0.50	40	N+S	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Major Collector - Urban	E	37,970	0.31	C	1,300	1,060	3,410	4
Tymber Creek Rd.	Tymber Run to Airport Rd.	1882	County	Yes	0.90	40	N+S	UA_NSOSRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Major Collector - Urban	E	17,050	0.72	C	1,330	1,110	1,540	2
Tymber Creek Rd.	Airport Rd to Broadway Ave./US 1	1883	County	Yes	4.20	40	N+S	UA_NSOSRS_2W_2L_U_WL	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Local	E	13,640	0.18	C	155	215	1,230	2
Van Ave. (DBS)	Peninsula Dr. to SR A1A	1890	County		0.20	25	E+W	UA_NSOSRS_2W_2L_U_WL	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Local	E	13,640	-	-	-	-	1,020	2
Volco Rd.	Cow Creek Rd. to Beacon Light Rd.	1920	County	Yes	2.50	30	N+S	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	RUA_UFH_2W_2L_U_0L	Local	C	6,450	0.05	B	30	35	620	2
Volco Rd.	Beacon Light Rd. to 35th St.	1921	County	Yes	1.40	45	N+S	UA_NSOSRS_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	TA_MCCRAC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	UA_NSSRC1_2W_2L_U_0L	Minor Collector - Urban/Rural	E	13,640	0.05	C	45	65	1,230	2
Volco Rd.	35th St. to US 1	1922	County	Yes	0.50	35	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.18	C	185	200	1,020	2
Voorhis Ave.	US 17/92 to Amelia Ave.	1931	County		0.20	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	E	13,640	0.24	C	200	285	1,020	2
Voorhis Ave.	Amelia Ave. to Hill Ave.	1933	County		1.00	30	E+W	UA_NSOSRS_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_MCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_

Road Name	Limits (From - To)	Count Station Number	Roadway Maintaining Agency	2021 Roadway on County's Thoroughfare	Distance (in miles)	Posted Speed							2021 QLOS Facility Type	2010 Federal Functional Classification	VC 2022 Allowable LOS	DAILY 2022 LOS Capacity	DAILY 2021 V/C Ratio	DAILY 2022 LOS	2022 AM Peak	2022 PM Peak	PEAK 2Way 2022 LOS Capacity	2021 No. of Lanes
Rd_Name	Limits	Cnt_Sta	MainRes	Tfare21	Distance	SPD2013	Direction	F_Type_08	F_Type_09	F_Type_10	F_Type_11	F_Type_14	F_Type_21	Fun_Class_2010	VCA_LOS_22	Cap_22	VCRatio_22	LOS_22	AMPKHR_22	PMPKHR_22	2W_Cap_22	Lanes_20
Williamson Blvd.	Townwest Blvd to Willow Run Blvd.	1991	County	Yes	0.25	55	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Principal Arterial - Other - Urban	E	17,050	0.99	F	915	1,505	1,540	2
Williamson Blvd.	Madeline Ave. to Willow Run Blvd.	1992	County	Yes	1.10	55	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Principal Arterial - Other - Urban	E	17,050	0.95	D	930	1,425	1,540	2
Williamson Blvd.	Madeline Ave. to SR400/Beville Rd.	1993	County	Yes	1.50	45	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Principal Arterial - Other - Urban	E	17,050	1.07	D	1,195	1,570	1,540	2
Williamson Blvd.	SR400/Beville Rd. to Bellevue Ave. E	1994	County	Yes	1.00	50	N+S	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.50	C	1,135	1,595	3,410	4
Williamson Blvd.	Bellevue Ave. Ext. to Midway Ave.	1996	County	Yes	0.50	50	N+S	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.40	C	830	1,300	3,410	4
Williamson Blvd.	Midway Ave. to US 92/ISB	1997	County	Yes	0.50	45	N+S	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.32	C	690	1,035	3,410	4
Williamson Blvd.	US 92/ISB to Dunn Ave.	1998	County	Yes	2.35	45	N+S	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.48	C	1,075	1,595	3,410	4
Williamson Blvd.	Dunn Ave. to Mason Ave.	1999	County	Yes	0.35	45	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.49	C	985	1,535	3,410	4
Williamson Blvd.	Mason Ave. to LPGA Blvd.	2000	County	Yes	0.35	45	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.57	C	1,340	1,735	3,410	4
Williamson Blvd.	LPGA Blvd. to Hand Ave.	2001	County	Yes	2.05	50	N+S	UA_NSMCRS_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_MCCRAC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	UA_NSSRC1_2W_2L_U_WL	Principal Arterial - Other - Urban	E	17,050	1.14	F	1,160	1,490	1,540	2
Williamson Blvd.	Hand Ave. to SR 40	2004	County	Yes	0.60	40	N+S	UA_NSMCRS_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_MCCRAC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	UA_NSSRC1_2W_4L_D_WL	Principal Arterial - Other - Urban	E	37,970	0.61	C	1,435	1,690	3,410	4
Woodward Ave.	Beresford Ave. to Euclid Ave.	2031	County		0.50	30	N+S	UA_NSOSRS_2W_2L_U_WL	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.02	C	140	100	1,020	2
Woodward Ave.	Euclid Ave. to SR 44	2030	County		0.50	30	N+S	UA_NSOSRS_2W_2L_U_WL	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_OCCRAC1_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	UA_NSSRC2_2W_2L_U_0L	Minor Collector - Urban	E	13,640	0.05	C	50	60	1,020	2



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Project Trips Directional
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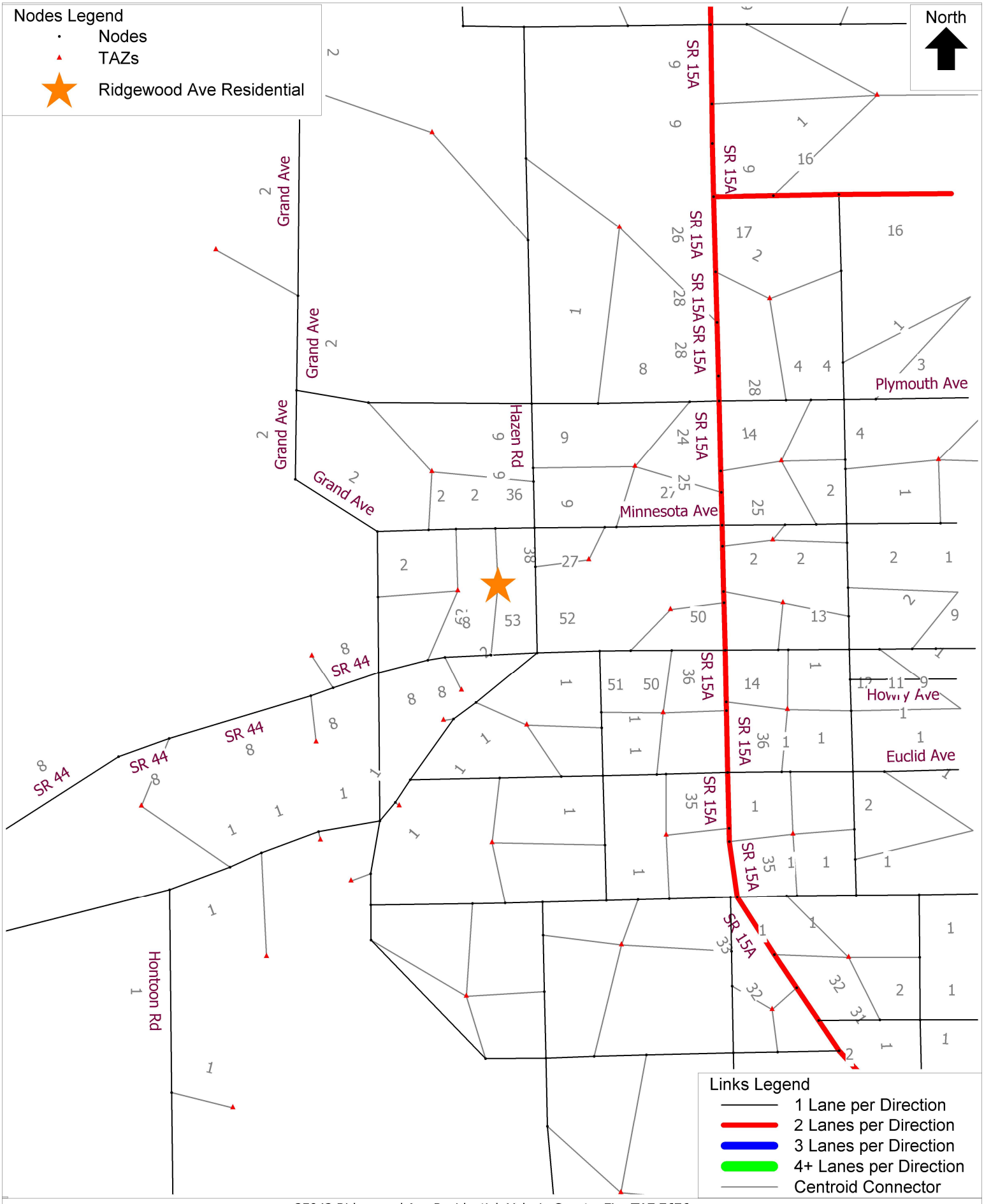

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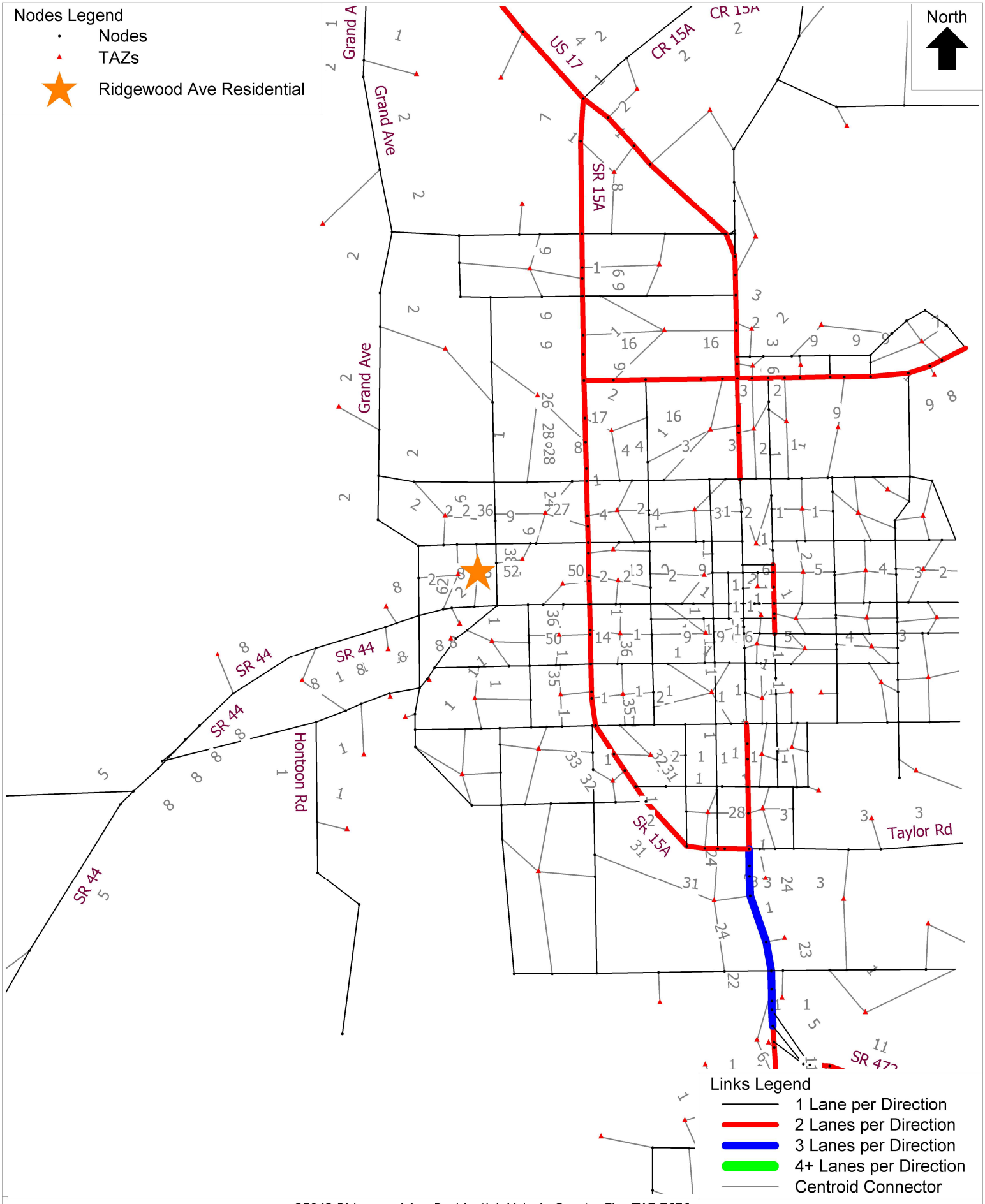

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Project Trips Directional
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439874-1 SJR2C Lake Beresford to Grand Avenue PD&E Study



Project Details

Work Type: PD&E Study

Phase: PD&E

Length: 3.6 miles

City: DeLand

County: Volusia

About

The St Johns River to Sea (SJR2C) Loop Trail Gap PD&E Study is completed.

The SJR2C Loop Trail Gap between Lake Beresford Park and Grand Avenue is a multi-use trail in Volusia County that will close the 3.6-mile gap between existing trails within Lake Beresford Park to the south, and the junction of Grand Avenue and Minnesota Avenue to the north, in DeLand.

The St. Johns River to Sea Loop (SJR2C) is a 260-mile trail system that will link together several communities including St. Augustine, Daytona Beach, Titusville, DeLand, and Palatka. This project is part of a greater effort to close the trail gaps and complete the St. Johns River to Sea Loop.

A PD&E study is the FDOT's process for adhering to the National Environmental Policy Act (NEPA) and related federal and state statutes. This process involves preliminary engineering to determine multi-use trail concepts; environmental evaluations to assess impacts associated with a new multi-use trail; and extensive public involvement and agency coordination.

PD&E Study reports are available on this page. A final newsletter was sent to property owners and other interested parties on August 11, 2020.

Send a comment or ask a question about this project

Contact Information

PD&E Project Manager

David Graeber
(386) 943-5392
David.Graeber@dot.state.fl.us

Last Updated

10/03/2024

School Board of Volusia County

Ms. Jamie M. Haynes, Chair
Mr. Ruben Colón, Vice Chair
Ms. Krista Goodrich
Mrs. Jessie Thompson
Ms. Donna Brosemer

Carmen J. Balgobin, Ed.D
Superintendent of Schools

School Adequate Capacity Determination
Finding of Adequate Capacity Letter

June 18, 2025

Ms. Nika Zyryanova
MAS Development
2875 NE 191st St Suite 305
Aventura, FL 33180

RE : DeLand Crossings – City of DeLand
School Concurrency Case # 25-06-10-001-A

Ms. Zyryanova:

The County Charter requires any Comprehensive Plan Amendment or Rezoning that allows increased residential density to be effective only when adequate public schools can be timely planned and constructed to serve the projected increase in student population. The district uses this requirement as the guiding principle behind the school adequate capacity review.

District staff reviewed the information for the proposed project known as DeLand Crossings associated with 20 +/- acres of property located at or near the intersection of N Ridgewood and New York Ave within an unincorporated part of DeLand city limits. The proposed project would provide one hundred and sixty (160) multi-family units.

The district uses a county wide Student Generation Rate (SGR) of (0.137) per multi-family dwelling unit to calculate projected students. By applying the SGR to the use types in Table 1 below, the project could generate twenty (20) full-time students.

Table 1

UNIT TYPE	SGR	UNIT COUNT	STUDENTS GENERATED
Single Family Dwelling Unit	0.258	0	0
Multifamily Dwelling Unit	0.137	160	20
Manufactured Home Dwelling Unit	0.052	0	0
Total		**0**	**0**

When performing an adequate capacity review, district staff evaluates the effects of the proposed change compared to any remaining permanent capacity within the impacted schools, up to 100%, Table 2 (next page). The projected increase in student population may be over 100% if there are plans to serve increased student population in that planning area within the long-term planning horizon. A finding of adequate capacity may be issued in either case.

Table 2

Schools	SY 2024/25 Enrollment	% of Permanent Capacity	Plans for Capacity Increase Long-Term	Traditional K-12 students projected
Woodward Elementary	538	76%	No	9
Southwestern Middle	644	83%	No	4
West CSA DeLand High	2956	110%	No	7
Other				0

The student projections generated by this project **will** increase the existing percentage above 100% permanent capacity at the high school level. However, the concurrency service area (CSA) for DeLand High school is at or over 100% but below 115% for level of service (LOS) standards. Based on this, the school district has no objections to the proposed development plan.

Minimum planning considerations should include pedestrian and vehicular access, safety, connectivity, and buffering. Additional considerations, particularly for gated and muti-family communities, include accessibility for school buses, by ensuring a turn radius of at least 60 feet at all entrances and exits, and the inclusion of dedicated pickup/drop off sites.

All future development orders, such as site plans and subdivisions, are subject to school concurrency review. School concurrency will be evaluated at the time when the impact of development is specifically quantified and known. Only funded school improvements and then current capacity will be considered at that time.

No student reservations have been made at this time.

Please note the School Board has the right to adjust the attendance boundaries to balance the student enrollment populations at these area schools. Consequently, students generated from this project may not attend the current assigned schools.

Should you need additional information, please contact me at (386) 947-8786, extension 50802.

Sincerely,

Cody F. Shepard

Cody F. Shepard
Specialist, Planning & GIS

CC: Carmen J. Balgobin, Ed.D, Superintendent of Schools
Ron Young, Director of Planning & Construction
Robert J. Voges, Ed.S, Planning Coordinator
Carol Kuhn, Planning Director, City of DeLand

FACILITIES SERVICES
3750 OLSON DRIVE ◆ DAYTONA BEACH, FL 32124
PHONE: (386) 947-8786 ◆ FAX (386) 506-5056

Finding of Adequate School Capacity

VOLUSIA COUNTY SCHOOL BOARD

Project Information	
Project Name	DeLand Crossings
VCSB Project #	**25-06-10-001-A**
Jurisdiction Project #	
Parcel ID Numbers	791200000061
Project Location	N Ridgewood and New York Ave
Potential Residential Units	160 Multi-Family Units
Property Owner/Applicant	Nika Zyryanova, MAS Development

Notes: Additional review will be required at the time of subdivision/site plan submittal(s).
No Student Reservations have been made.

Based upon the Findings of Fact, pursuant to School Board Policy 612 and Section 206 of the County Charter, the school district has determined at this time that school capacity is adequate to serve the proposed increase in residential density. This Finding shall constitute competent substantial evidence that adequate public school capacity is likely to be available at the time it is required to serve the planned new development.

Capacity is not being reserved with this Finding unless otherwise noted on this document. This Finding of Adequate School Capacity allows this subject project to continue through the Comprehensive Plan Amendment and/or rezoning process; however, it may be subject to additional school capacity review in the future.

Cody F. Shepard

Cody F. Shepard
Specialist, Planning & GIS

June 18, 2025
Issue Date

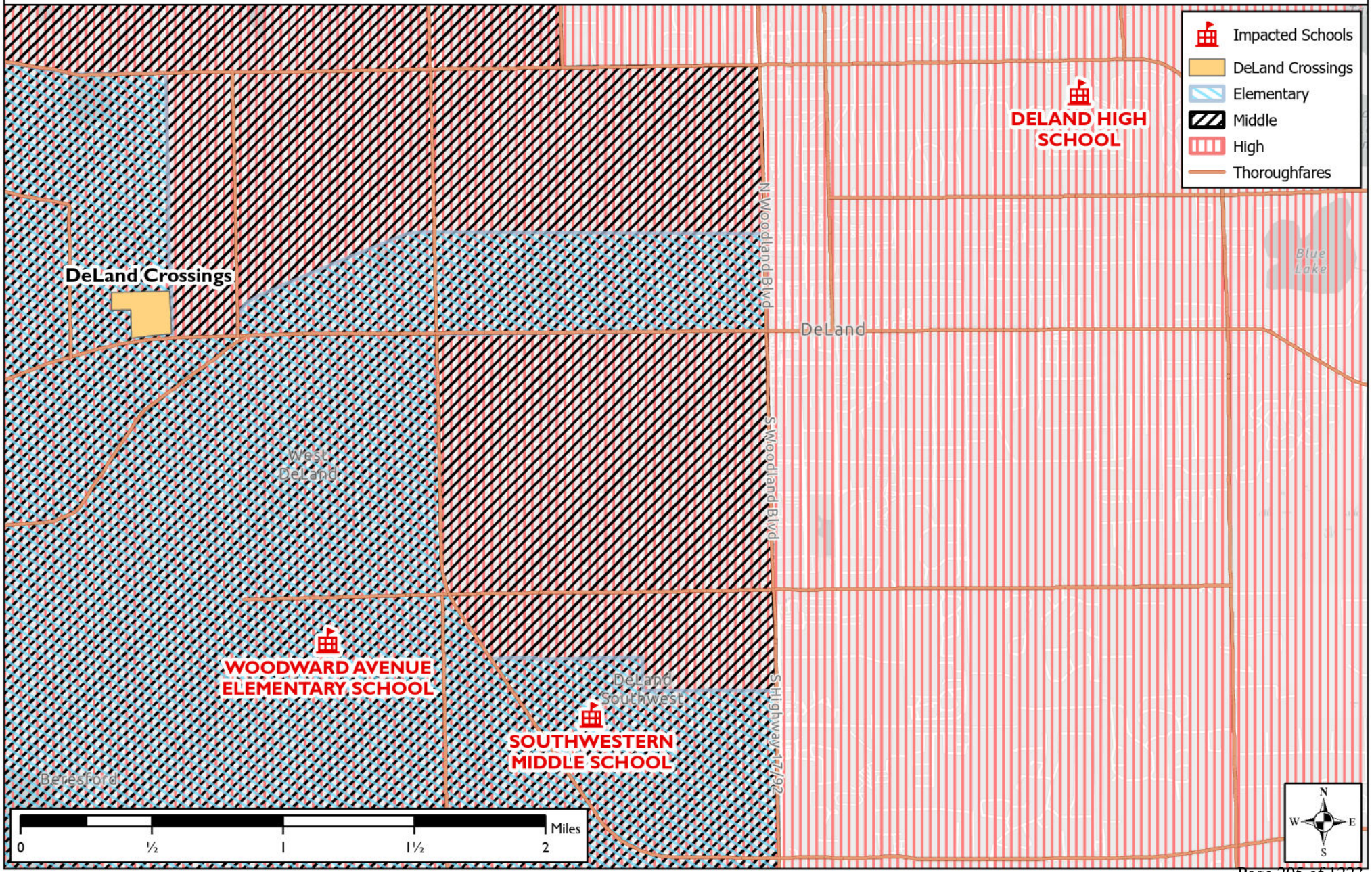
Created: 9/2007
Owner: Facilities Services

2007-073-VCS
Print Locally

VCSB Schools Impacted by Development

School Adequacy Determination - DeLand Crossings

VOLUSIA COUNTY SCHOOLS
Planning & Business Services
June 2025



Neighborhood Meeting Summary
Project: DeLand Reserve
Date: July 15, 2025
Location: Northwest Square – Pearce Chapel, 238 N. Clara Avenue, DeLand, FL 32720
Time: 6:00 PM

The neighborhood meeting was hosted by representatives from Storch Law Firm, MAS Development, and American Civil Engineering Co. The purpose of the meeting was to provide information on the proposed DeLand Reserve development and to receive feedback from nearby residents.

Meeting Materials Shared with the Public:

- Conceptual bubble plan of the proposed development
- Sample elevations of proposed townhomes

Summary of Public Questions and Comments:

1. **Vegetative Buffer Along North Property Line**
   Several residents expressed concern regarding privacy for existing homes adjacent to the proposed development. They inquired about:
   - The type and depth of the vegetative buffer
   - The species of trees to be planted
   - Whether existing trees would be preserved

The project team explained that a landscaped buffer will be provided along the north property line, including appropriate tree species to ensure privacy. The team explained that each side of the property would have a specific type of buffer that the code requires. It was noted that preserving privacy benefits both existing and future residents, and any tree preservation opportunities will be considered during site planning. The project team pointed out that the majority of the existing oak trees will be preserved.

2. **Off-Site Improvements**
   A question was raised about the scope of off-site improvements the project would be responsible for.
   - The project engineer explained that DeLand Reserve will extend the existing 5' sidewalk along Ridgewood Avenue.
   - It will also be anticipated that the development will be constructing turn lanes at its access points, pending the results of a required traffic study and agency review.
3. **Traffic Signal at Ridgewood and SR 44 Intersection**
   One attendee asked whether a traffic signal would be installed at the Ridgewood Avenue and SR 44 intersection.
   - The project team responded that this determination will be made following the completion of a full traffic assessment. If warranted, the development would

contribute its fair share toward any necessary improvements, in coordination with the appropriate transportation agencies.

4. **Details on Proposed Homes**
   Attendees asked whether the homes would be market-rate or affordable, price range, home sizes, number of units per building, and overall building lengths. Concerns were expressed about long, continuous building facades. The team explained that the homes are expected to be market-rate, with four to six units per building, and design will include appropriate building separations.

5. **Parking Within the Community**
   Questions were raised about internal parking availability and layout. The team explained that each unit would have garage/driveway parking and that additional guest parking areas would be provided throughout the site.

6. **Perimeter Fencing**
   Attendees asked about the type and placement of fencing around the site.

7. **Construction Timeline**
   Residents asked when construction would begin and end.

8. **Construction Noise**
   Concerns were shared about noise impacts during construction. The development team agreed to include language in the development agreement to limit construction hours and follow the City of DeLand's noise and construction ordinances.

9. **Phasing and Construction Order**
   Residents asked if Phase 2 (north portion) could be built before Phase 1 (south portion). The team explained that due to the site's existing topography and the location of proposed stormwater ponds/infrastructure, Phase 1 must likely occur first, but the team agreed to explore options and report back.

10. **Stormwater Design and Management**
    Questions were raised about the proposed stormwater ponds, drainage, and flood protection. The civil engineer explained that the pond locations are based on topography and hydrologic function and will be designed in compliance with St. Johns River Water Management District and City regulations, including review and approval by applicable agencies.

11. **Short-Term Rentals**
    A concern was raised about potential short-term (vacation) rentals. The development team committed to including language in the development agreement prohibiting short-term rentals within the community.

12. **Homeowners Association (HOA)**
    Participants inquired about whether there will be a homeowners association and what its responsibilities would include. The project team confirmed that an HOA will be

established and will be responsible for maintaining all common areas and enforcement of community standards.

Closing Remarks:
The project team thanked the attendees for their input and emphasized the team's commitment to continued communication with neighbors throughout the development process.

Sec. 72-297. - Thoroughfare overlay zone regulations.

(a) *Purpose and intent:*

(1) The purpose of this section is to provide regulations to ensure safe ingress to and egress from proposed development along thoroughfares, to maintain adequate highway capacity, eliminate hazardous traffic conditions, lessen or prevent traffic congestion, establish a high standard for development, including additional sign regulations and create a more attractive streetscape. Commercial development typically expands along thoroughfares as population and traffic volumes increase in the vicinity of and along the thoroughfare. Eventually, conflicts result between the thoroughfare's function and its ability to move high volumes of traffic through an area.

(2) This congestion is intensified when commercial growth increases along the entire length of the thoroughfare.

(3) The increased commercial growth also changes the public's image of the thoroughfare. What was once considered an attractive tree-lined thoroughfare gradually and often rapidly begins to exhibit characteristics of uncontrolled strip commercial development. Once this pattern has been established, it is difficult to establish alternative types of development (e.g. residential) along these thoroughfares. Therefore, these regulations apply to thoroughfares which; (1) move large volumes of through traffic in addition to significant volumes of everyday local traffic; and (2) do not contain significant amounts of strip commercial development. These thoroughfare overlay zone regulations are intended to supplement all of the regulations of the existing zoning classifications except for permitted uses and special exceptions. The type of permitted uses or special exceptions allowed would be determined according to the existing zoning classification and the site design, signage, building location and the dimensional requirements would be regulated by these overlay zone regulations.

(b) *[Thoroughfare overlay zone:]* A thoroughfare overlay zone is hereby established, and the regulations of this section shall apply in said zone. Said zone shall apply to all zoning classifications established in division 7 of this article, and the official zoning map shall identify said overlay zone by adding the letter "C" as a suffix to the existing zoning classification that currently exists on said maps. The thoroughfares, or portions thereof, to which these regulations apply are as follows:

(1) *North coastal area:*

State Road #40: Western boundary lines of Section 26, Township 14 South, Range 31 East to Ormond Beach west city limits.

U.S. #92: Indian Lake Road east to Daytona Beach west city limit.

(2) *South coastal area:*

State Road #44: New Smyrna Beach city limit west to Tomoka Farms Road (CR 415).

(3) *West Volusia area:*

U.S. #92: Eastern boundary line of Section 25, Township 16 South, Range 30 East, to State Road 15-A.

State Road 15-A: U.S. #17 South to U.S. #17-92.

U.S. #17: Eastern boundary of Section 39, Township 16 South, Range 30 East, to South boundary line of Section 4, Township 17 South, Range 30 East.

U.S. #17-92: North Line of Section 21, Township 17 South, Range 30 East, to South line of Section 33, Township 17 South, Range 30 East.

State Road #44: Western boundary line of Section 14, Township 17 South, Range 29 East, to East boundary line of Section 17, Township 17 South, Range 31 East.

West Volusia Beltline: State Road #44, to North boundary line of Section 13, Township 18 South, Range 30 East. (Ord. No. 85-24, § XVII, 10-10-85; Ord. No. 86-16, § XXXII, 10-23-86; Ord. No. 88-2, § XXI, 1-19-88; Ord. No. 84-25, § XXV, 10-10-84; Ord. No. 88-2, § XXII, 1-19-88; Ord. No. 02-07, § I, 3-7-02)

(c) *Dimensional requirements:*

(1) *Minimum lot width:* No premises shall be divided for the purpose of development of sale such that the width of each or any premises is less than 300 feet measured along the right-of-way line, except as follows:

If vehicle access to any premises is provided by means other than directly onto an arterial, then the minimum lot width requirement may be reduced to 150 feet, and direct vehicle access to a major arterial shall be prohibited.

(2) *Minimum yard size:* Front yard: 50 feet.

(3) *Maximum building height:* Three stories, not to exceed 35 feet.

(4) *Maximum lot coverage:* Total coverage of principal and accessory buildings shall not exceed 30 percent.

(5) *Thoroughfare overlay zone depth:* The thoroughfare overlay zone requirements shall be applied to all premises that front onto or have access to the thoroughfare to a distance equal to the depth of the rear property line, but not to exceed a depth of 660 feet as measured perpendicular from the centerline of the thoroughfare right-of-way.

(d) *Off-street parking and loading requirements:* Off-street parking and loading space shall meet the requirements of section 72-286 and in addition shall meet the following:

Off-street parking and loading areas shall be permitted in the front yard or the side yard that is adjacent to a thoroughfare as long as the off-street parking and loading areas are designed outside the 35-foot-wide landscaped buffer area along the project perimeter adjacent to thoroughfares. Said area shall contain landscaped fences, walls or berms of sufficient heights and opacity to generally obscure parked vehicles from view of the traveling public. All parking areas shall contain a minimum of 20 percent interior landscaping, excluding any required landscaped buffer area as provided in subsection (e), below.

(e) *Landscaping buffer requirements:* In addition to meeting the landscape buffer requirements in section 72-284, the following requirements shall also be met:

(1) A landscape plan shall be provided identifying the quantity, botanical and common name, size and location of plant material, including those existing plant materials to be retained. Plans and specifications for an underground irrigation system are required for any landscaped area.

(2) A minimum of 30 percent of the area of the site shall be covered by landscape materials as specified in subsection 72-284(1) of this article.

(3) Except for access driveways, it is intended that development along the thoroughfare corridor shall be designed to prevent the need for fill material or such other treatment which would remove or harm existing trees within the required front yard.

(4) A landscaped buffer area shall be provided along the perimeter of the property. The width of the buffer shall be determined by the requirements in subsection 72-284(2) unless the site is located on a thoroughfare, then the front buffer shall be a minimum of 35 feet. If the thoroughfare right-of-way is less than 140 feet, then the buffer area will start at a point 70 feet from the centerline of the thoroughfare.

(f) *Final site plan requirements:* In addition to meeting the final site plan requirements in division 3 of the Land Development Code [article III], the following requirements shall be met:

All site plans, reports and general information will be submitted to the development review committee to ensure compliance and consistency for all developments along the thoroughfare.

(g) *Service road requirement:* All premises fronting thoroughfares upon which the thoroughfare overlay zone regulations have been applied shall be provided access via a service road, unless as otherwise specified herein. The service road may either be in the front or rear of the project site depending on the location of any existing service road.

(h) *Transportation impact analysis report; purpose:* The transportation impact analysis report is designed to identify the transportation impacts and problems which are likely to be generated by a proposed use because of the size, density, traffic generation rates or location. The report will also identify all improvements required to ensure safe ingress and egress from a proposed development, maintenance of adequate street capacity, and elimination of hazardous conditions and improvements necessary for immediately surrounding roadways and intersections as a result of the proposed development.

(1)

Threshold for traffic impact analysis report: A transportation impact analysis report shall be required, unless waived by the county traffic engineer, for all uses which meet or exceed any one or more of the following thresholds:

a. Any development which proposes to have direct access to any roadway designated in subsection (b) of this section.

b. Any use which, according to the Institute of Transportation Engineers Trip Generation Manual, latest edition, rates published by the Florida Department of Transportation, or rates documented by study as agreed prior to use by the Volusia County Traffic Engineer will generate in excess of 1,000 trips per day.

(2) *Contents of transportation impact analysis report:* The transportation impact analysis report shall include the following:

a. *General site description:* A detailed description of the highway network within a radius as determined by the county traffic engineer of the site, a description of the proposed project, the anticipated stages of construction, and the anticipated completion date of the proposed land development. This description, which may be in the form of a map, shall include the following items:

1. All major intersections;
2. All proposed and existing ingress and egress locations;
3. All existing roadway widths and rights-of-way;
4. All existing traffic signals and regulatory signage;
5. All existing and proposed public transportation services and facilities within the above-determined radius of the site.

b. *Description of existing traffic conditions:* A 24-hour traffic count shall be conducted for a typical weekday on all roadways which have direct access to a proposed development site. The existing average daily traffic volume, and the highest average peak hour volume for any weekday hour between 3:00 p.m. and 6:00 p.m. shall be recorded. These traffic volumes shall be averaged to determine the average hourly peak traffic volume for a weekday. The methodology used to calculate existing traffic conditions and use of traffic counts and data other than those described above to represent existing traffic conditions shall be subject to the approval of the county traffic engineer.

c. *Transportation impact of the development.* A report shall be made detailing the nature and extent of the trip generation expected to result from the proposed development. Trip generation analysis shall include an estimate of internal/external split, if applicable, and a determination of what characteristics of the development will yield such a split. The source of all trip generation rates shall be according to the Institute of Transportation Engineers Trip Generation Manual, latest edition, rates published by the Florida Department of Transportation, or rates documented by study and agreed to prior to use by the Volusia County Traffic Engineer.

d. *Determination of roadway service level—Calculate service volumes:* Roadway service volumes shall be calculated at the level of service for the thoroughfare which is specified in the comprehensive plan. Data and procedures contained in the Highway Capacity Manual, Special Report, 209, 1985, published by the transportation research board shall be utilized in deriving the information required by the transportation impact analysis report.

e *Determination of intersection service level:*

1. Data and procedures in the Highway Capacity Manual, Special Report, 209, 1985, published by the transportation research board shall be utilized in determining intersection service levels.
2. The post-developing level of service for all intersections shall be in accordance with the comprehensive plan.
3. Determine the existing level of service of all intersections within one-half mile of the proposed development using the critical movement analysis techniques provided in subsection e.1., above.

f. *Analysis of transportation impact:* An analysis shall be undertaken to determine if roadways and intersections will operate at the level of service specified by the comprehensive plan following completion of the development given the future peak hour traffic that will be generated by the proposed development. This analysis shall consist of a comparison of the total future peak hour roadway traffic demand with the plan's mandated level of service standard and a critical movement analysis for intersections to determine the impact of total future peak hour traffic on intersection level of service. All roadways and intersections that would operate below the required level of service following completion of the development shall be considered deficient.

Maintenance of levels of service. Whenever level of service is determined to be below the level specified by the comprehensive plan, development is not permitted unless the developer makes the roadway or other improvements necessary to maintain the specified level of service.

(3) *Traffic-control devices:* Whenever, as a result of additional traffic generated by a proposed development, the manual on uniform traffic control devices determines the need for a traffic signal or regulatory sign, the developer shall be responsible for installing all said devices and signs.

(4) *Large developments:* [Large developments] (over 250 vehicle trips generated per one hour during 3:00 p.m. and 6:00 p.m.) shall also include the following:

a. The impact report for developments which will generate between 250 and 1,000 trips during the peak hour shall involve an analysis of all arterials and all intersections within one mile of the proposed project.

b. Except for developments of regional impact as defined by F.S. § 380.06, the impact report for developments which will generate over 100 trips during the peak hour shall involve an analysis of all arterial and collector roadways and all intersections within three miles of the proposed project.

(i) *Temporary access:* No developer shall be denied a rezoning or building permit for the sole reason that the parcel for which it is sought cannot physically accommodate the requirements of this classification because adjoining segments of service roads or public roadways are not yet constructed. In such an event, a temporary access permit will be issued which shall expire when the proposed access becomes available to the parcel.

(j) *Sign regulations:* The sign regulations established in section 72-298 et seq. shall also apply in any thoroughfare overlay zone; provided, however, the maximum permissible height for any ground sign is eight feet, and the maximum permissible copy area for any ground sign is 40 square feet.

(Ord. No. 85-24, §§ XVIII—XXIV, 10-10-85; Ord. No. 86-16, § XXXIII, 10-23-86; Ord. No. 88-2, §§ XXIII—XXX, 1-19-88; Ord. No. 89-20, § XLIII, 6-20-89; Ord. No. 92-6, § LXVI, 6-4-92; Ord. No. 02-07, § II, 3-7-02; Ord. No. 2008-25, § II, 12-4-08; Ord. No. 2018-05, § IX, 1-18-18)

PLANNING DIVISION STAFF REPORT
TO
PLANNING BOARD
September 10, 2025

APPLICATION NO.: SE25-107

STAFF PLANNER: Sam Nelson, *Planner I*

APPLICANT: Michael Arth, Owner

REQUEST: Special Exception to Permit a Bed and Breakfast Homestay and to Eliminate the Requirement to Provide Landscape Buffers

APPLICABLE ORDINANCE: Article II - Section 33-18 Special **E**xceptions, Article 12 - Sec. 33-134 Procedures for obtaining a special exception; Article III – Section 33-27 Accessory uses

SITE FACTORS:

Location:	302 S. Hayden Ave.
Size:	±0.35 acres
Land Use:	Medium Density Residential
Existing Zoning:	R-1 Single-Family Dwelling
Existing Use:	Single-Family Dwelling with an Accessory Dwelling Unit

	SURROUNDING LAND USE:	**SURROUNDING ZONING:**
North:	**Downtown Commercial**	**C-2A Downtown Commercial**
South:	**Medium Density Residential**	**R-1 Single-Family**
East:	**Medium Density Residential**	**R-1 Single-Family**
West:	**Medium Density Residential**	**R-1 Single-Family**

R-1 Required Minimum Setbacks in feet				
Front (Hayden Ave)	**Rear (Alabama Ave)**	**Side**	**Corner Lot: Street Side (Voorhis Ave)**	**Vehicle Use Area Separation**
30’	25’	7.5’	15’	1’ Residential 10’ Commercial

Variance Approved Setbacks in feet				
Front (Hayden Ave)	**Rear (Alabama Ave)**	**Side**	**Corner Lot: Street Side (Voorhis Ave)**	**Vehicle Use Area Separation**
2’	0’	0’	15’	4’

ANALYSIS: The property is located within the R-1 Single-Family residential zoning district and with a future land use designation of Medium Density Residential. The surrounding area consists of single-family, multiple-family, and commercial uses. The property is also located within the Historic Garden District, which consists of numerous historic buildings southeast of downtown. The subject property is developed with a single-family residence, and an accessory dwelling unit, and also contains a parking area previously constructed for an off-site commercial use, which has since been abandoned. The applicant received approval for several variance requests to reduce setbacks and buffers to construct the existing buildings and is now seeking special exception approval to permit a bed and breakfast homestay. If approved, the applicant intends to operate a bed and breakfast homestay with (1) guestroom in the primary structure, and two (2) additional guestrooms in an accessory building.

The R-1 zone district allows a bed and breakfast homestay by special exception subject to the requirements of Sec. 33-27.03. If the structure to be used for a bed and breakfast is not 50 years old or is proposed to be located within an accessory structure, special exception review is required. Prior to 2017, an applicant seeking to permit a bed and breakfast homestay would have been required to meet these standards without the option for relief through a special exception. In 2017, the City Commission adopted Ordinance 2017-24 to allow bed and breakfast homestays to be established in areas where they were previously not permitted through the special exception process subject to Sec. 33-134.

The requirements of Sec. 33-27.03 and Sec. 33-134 are further analyzed below.

The proposed use will not meet four (4) of the requirements. The requirements for landscape buffers are unable to be provided due to the placement of structures allowed by prior variances. For these reasons, the applicant is requesting additional relief from the City Commission, as part of the Special Exception request.

Bed and breakfast homestay standards are as follow:

33-27.03. (d) ***Standards.***

1. Bed and breakfast homestays shall be subject to relevant development and design requirements of a single-family residence for the zoning district in which it is located. Each bed and breakfast homestay shall also conform with the following requirements:

    1. No accessory bed and breakfast home stay shall be permitted to have more than six guestrooms.

        The applicant is proposing a total of three (3) guestrooms.

    2. The use of the structure as a bed and breakfast homestay shall be subordinate to its residential purposes and shall not change the character thereof. No stove, oven, or range permitted in bedrooms.

        No stove, oven, or range will be located within the guest bedrooms.

    3. No living quarters or guestrooms may be located in any accessory building. Subject to Special Exception process described below.

        Two (2) guestrooms are proposed to be located within an accessory building. <u>The applicant is requesting relief from this requirement.</u>

    4. The entire perimeter of the property shall be landscaped with a minimum Class A landscape buffer (refer to section 33-92), except for any portion of lot adjacent to Commercial zoning.

        No landscape buffer exists on the western portion of the property where the accessory building is located. A variance was approved by the Planning Board on February 21, 2018, to reduce the required corner-lot street-side, rear, and front-yard setbacks to 0 feet to permit this accessory building. Due to the building

placement, the installation of the required 10-ft Class A landscape buffer at this location is not possible. <u>The applicant is requesting relief from this requirement.</u>

5. No traffic shall be generated by any bed and breakfast homestay in greater volumes than would normally be expected in a residential neighborhood.

The proposed bed and breakfast homestay would generate additional traffic to accommodate visitors for up to three (3) guestrooms, which, per ITE guidelines, will generate less trips when compared with a single-family use.

6. A bed and breakfast home stay shall be subject to all applicable city business tax receipts and all applicable state and local business taxes.

The applicant has obtained the required State licensure to operate. The applicant will be required to obtain a City Business Tax Receipt.

7. Bed and breakfast homestays are restricted to properties, which have at least one side abutting a nonresidential zoning district. Subject to Special Exception process described below.

The property borders the C-2A General Commercial zoning district to the north.

8. Guestrooms shall be located in structures 50 years of age or older. Subject to Special Exception process described below.

The buildings where the guestrooms are proposed were constructed in 2000 and 2025. The property is located within the Historic Garden District, which is primarily composed of historic properties and the proposed use would not be out of place. <u>The applicant is requesting relief from this requirement.</u>

9. Food service shall be restricted to guests staying at the facility.

Food service will be restricted to guests staying at the facility.

10. In addition to other buffer requirements, a Class B buffer shall screen all parking areas unless located in the rear of the building.

The existing parking area received variance approval in January, 2005, to reduce the required landscape buffer to four feet (4') to accommodate parking for an offsite commercial use. This existing buffer largely screens the parking area. Without reducing the size of the parking area, the applicant will be unable to provide the 15' Class B landscape buffer required for bed and breakfast homestays. <u>The applicant is requesting relief from this requirement.</u>

As referenced above, the applicant is proposing to place guestrooms in structures which are not 50 years old, and to place two (2) additional guestrooms in an accessory dwelling unit. Per the code, if the structure to be used for a bed and breakfast is not 50 years old or is proposed to be located within an accessory structure, special exception review is required. Prior to 2017, an applicant seeking to permit a bed and breakfast homestay would have been required to meet these standards without the option for relief through a special exception. In 2017, the City Commission adopted Ordinance 2017-24 to allow bed and breakfast homestays to be established in areas where they were previously not permitted through the special exception process subject to Sec. 33-134. Per Sec. 33-134:

33-134.08. (a) Procedure for obtaining a special exception., Reasons for denial

1. It is inconsistent with the findings and intent of this chapter.

The request is inconsistent with some criteria to permit the special exception. <u>The applicant is requesting relief from these criteria.</u>

2. It is inconsistent with the Comprehensive Plan.

The property has a land use designation of Medium-Density Residential, and is located within the Historic Garden District. The proposed use is compatible with the land use designation.

3. It will adversely affect the public interest.

The proposed bed and breakfast homestay will not negatively affect the public interest.

4. It does not meet the requirements of the applicable special exception regulations.

The request does not meet some of the conditions required to permit a bed and breakfast homestay. The code requires the property to contain landscape buffers. Due to the current placement of buildings and parking areas, which have received variance approval, it is not possible to provide these required buffers at the property. The applicant is requesting additional relief from this requirement.

5. The applicant will not be able to meet all requirements imposed by federal, state or local government or by the city commission.

The applicant has obtained the required State licensing to operate a Bed and Breakfast.

6. It will generate a volume or frequency of traffic, which will substantially interfere with or disrupt the use or enjoyment of properties within 1,000 feet of the use.

The use will generate additional traffic to accommodate visitors for up to three (3) guestrooms in a single and multiple-family residential area. Parking is available to accommodate the guests, which differs from a typical single-family residential neighborhood.

7. It will create a hazard, a public nuisance or be dangerous to individuals or the public.

Parking for guests will be provided entirely on-site through a parking lot, so potential impacts, such as on-street parking, should be minimal.

8. The proposed use is incompatible with the predominant use of the surrounding property and will not alter, disrupt or decrease the character or value of the neighborhood.

The predominant use of the surrounding area is single and multiple-family residential and commercial. The proposed bed and breakfast homestay is compatible with the predominant uses and historic nature of the area.

9. It will adversely affect the natural environment, natural resources or scenic beauty, or cause excessive pollution.

No new construction is proposed for the use, therefore, there will be no adverse effects on the natural environment, resources, or scenic beauty.

The conversion of a single-family residence into a bed and breakfast homestay requires landscaping buffers whether by right or through the special exception process. Per the code, 15-ft landscape buffers are required to be provided around the perimeter of the property and to screen parking areas. Previous variance approval was granted to permit the buildings at their current footprints (Exhibit 1), which restricts construction of the required landscape buffers, therefore the applicant is requesting relief from these criteria. The purpose of providing landscape buffers is to create an attractive boundary and separation between different, and typically incompatible uses. While this property is located in a single-family zoning district, surrounding uses are varied between single-family, multiple-family, and commercial. A new mixed-use development, DeLand Commons, has recently been constructed directly to the northwest. (Exhibit 4) Additionally, the majority of surrounding buildings are historic and were constructed near the property lines and thus do not contain any landscape buffers. The parking area contains a landscape buffer, which reduced to 4-ft from 15-ft through a variance. This buffer provides screening from vehicular and pedestrian view (Exhibit 3). Several neighboring properties are also located within the C-2A Downtown Commercial zone district, which do not require landscape buffers and encourages construction towards the street. The elimination of the required landscape buffer for a bed and breakfast homestay at this location is unlikely to be injurious to surrounding properties.

The code requires any proposed bed and breakfast homestays to obtain Class II Site Plan approval. This application requires review and approval from the Technical Review Committee and is generally for new development for staff to ensure development conforms with the applicable code requirements, including buffering and parking. The code requires the proposed use to provide a minimum of two (2) parking spaces, with one (1) additional space per guestroom. A three (3) guestroom bed and breakfast homestay will require a minimum of five (5) parking spaces, which are provided in the existing 13-space parking area. No development or changes to the site are being proposed, therefore, the applicant is requesting a waiver to eliminate the Class II Site Plan requirement.

SUMMARY: The requests are for special exception approval of a bed and breakfast homestay, removal of the associated landscape buffer requirement, and the removal of the requirement to obtain Class II Site Plan approval. Within the R-1 zoning district, bed and breakfast homestays are permitted by right, or, if certain standards cannot be met, a special exception. The code permits relief for certain standards, such as for the age of the structures and being located within an accessory building, through the special exception process. The applicant is seeking additional relief from the conditions to provide landscape buffers around the property. Relief from the buffering requirements is required due to the existing permitted placement of buildings on the property. If approved, per the requirements of Sec. 33-27.03. (b) and Sec. 33-132.03. (a), the applicant is also required to obtain Class II Site Plan approval. As no new development or changes are proposed, the applicant is also requesting relief from this site plan requirement.

STAFF RECOMMENDATION: The application includes three separate requests. Staff recommends that the Planning Board forward the application to the City Commission with recommendations subject to the findings below:

1. Staff recommends the Planning Board forward a recommendation for the request to eliminate the buffering requirements to City Commission:
    a. The property cannot provide the required landscape buffers around the perimeter due to the permitted placement of existing buildings.
    b. Surrounding properties are historic and uses are varied, with a mix of single-family, multiple-family, and commercial uses, and do not contain landscape buffers.

2. Staff recommends the Planning Board forward a recommendation of approval or denial for the special exception to permit a bed and breakfast homestay to City Commission subject to the following:
    a. If the landscape buffering requirements are eliminated, the request will conform with all other criteria of Sec. 33-27.03 and 33-134 and staff recommends approval.
    b. If the landscape buffer requirements are kept, the request will not conform with the criteria of Sec. 33-27.03 and 33-134 and staff recommends denial.

3. Staff recommends approval of the request to eliminate the requirement for a Class II Site Plan application subject to the following:
    a. The property is already developed, and no new development is proposed which would typically require review through a Class II Site Plan.
    b. The property provides parking as required by the code and, if eliminated through the first request, landscape buffering review will not be required.
    c. As a condition for waiving the site plan application requirement, staff recommends the applicant be required to provide an as-built ALTA survey to ensure compliance with the code.

Exhibits

Exhibit 1 – Site Plan

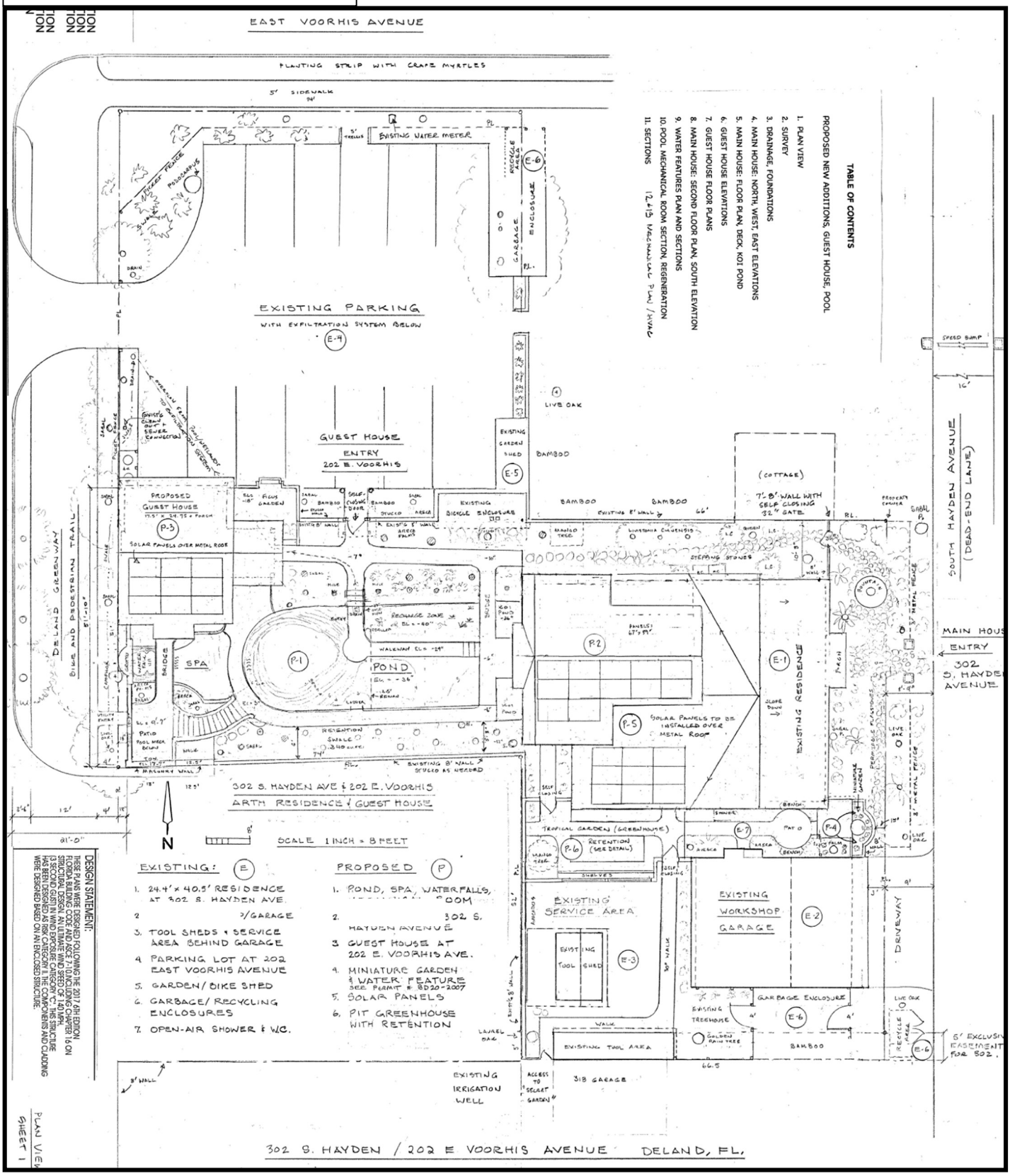
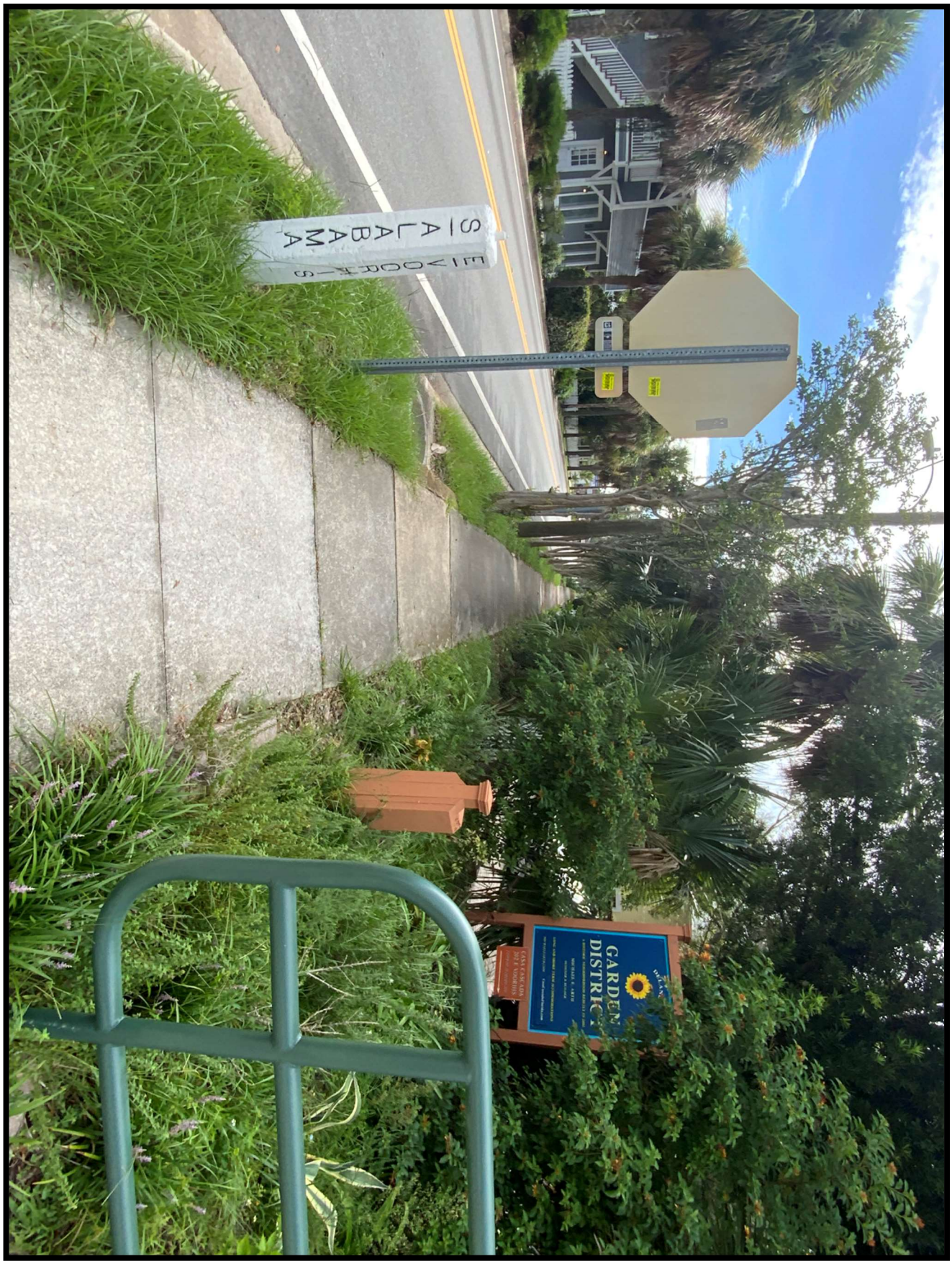


Exhibit 2 – Alabama Ave Frontage



Exhibit 3 – Parking Area



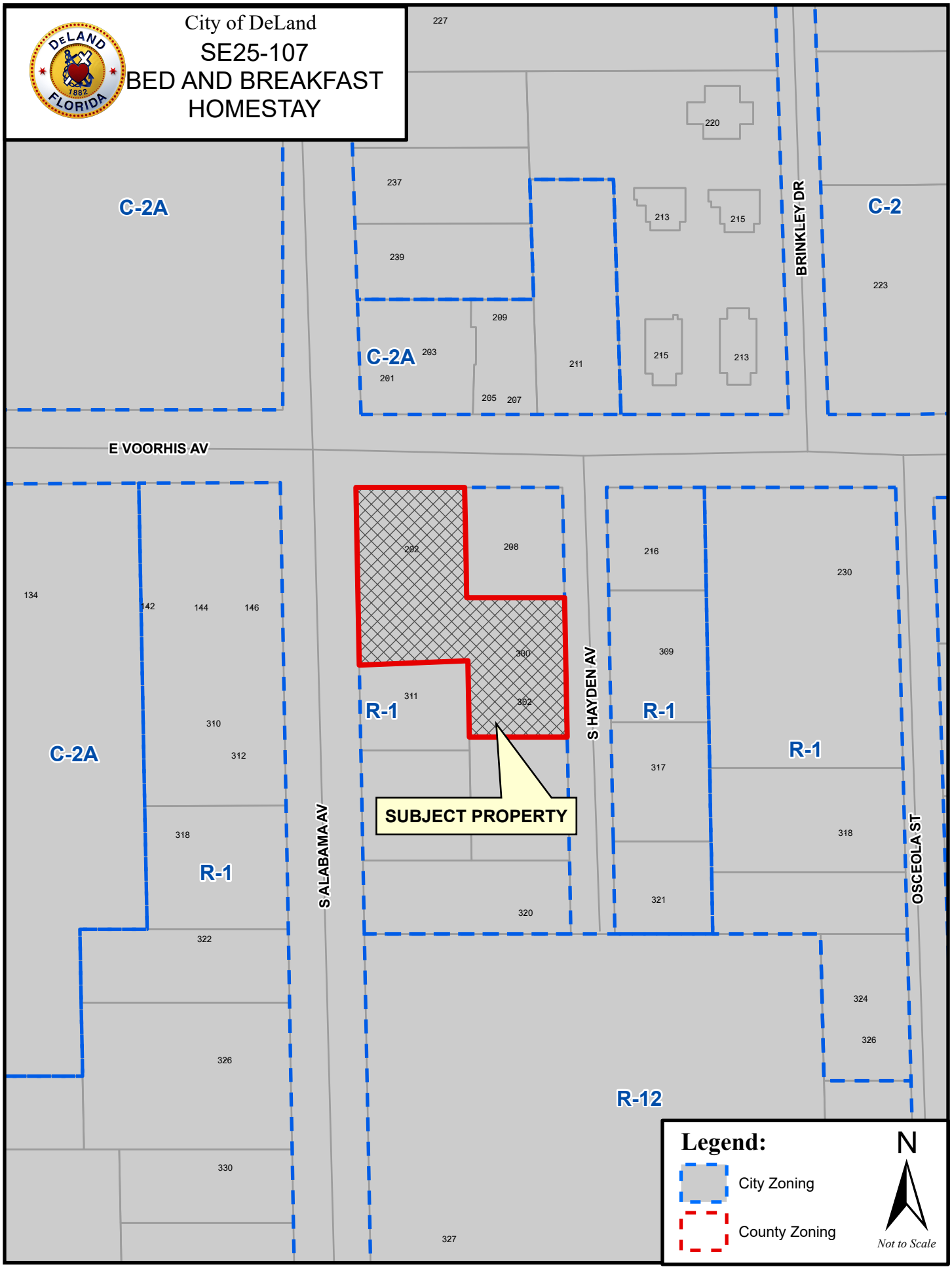

S ALABAMA
GARDEN
DISTRICT

2705

Exhibit 4– Surrounding Properties




City of DeLand
SE25-107
BED AND BREAKFAST
HOMESTAY
C-2
C-2A
C-2A
C-2
BRINKLEY DR
E VOORHIS AV
C-2A
R-1
S HAYDEN AV
R-1
R-1
SUBJECT PROPERTY
S ALABAMA AV
OSCEOLA ST
R-1
R-1
R-12
S CLAKE ST
Legend:
City Zoning
County Zoning
N
Not to Scale


City of DeLand
SE25-107
BED AND BREAKFAST
HOMESTAY
DeLAND
1882
FLORIDA
227
220
237
213
215
C-2A
C-2
239
BRINKLEY DR
223
209
C-2A
203
201
211
215
213
205
207
E VOORHIS AV
202
208
216
230
134
142
144
146
300
309
311
302
R-1
R-1
S HAYDEN AV
310
312
C-2A
R-1
317
SUBJECT PROPERTY
318
318
R-1
S ALABAMA AV
OSCEOLA ST
321
320
322
324
326
326
R-12
330
327
Legend:
City Zoning
County Zoning
N
Not to Scale

Building Design Criteria:

ROOF: LIVE LOAD	=	20 PSF
ROOF: DEAD LOAD	=	7 PSF
CEILING: DEAD LOAD	=	10 PSF
ROOF TOTAL LOAD:		37 PSF

BASIC WIND SPEED (3 SEC.GUST) = 140 MPH V.ult.
WIND EXPOSURE CATEGORY =EXPOSURE C
MEAN ROOF HT. </= 20 FEET
INTERNAL PRESSURE COEFFICIENT = .18
RISK CATEGORY: II
SOIL BEARING: ASSUMED 2000 PSF

WIND DESIGN PRESSURES:

ROOF COMPONENTS AND CLADDING:

ZONE 1 = +7.8 / -21.6
ZONE 2 = +7.8 / -25.5
ZONE 3 = +7.8 / -32.0

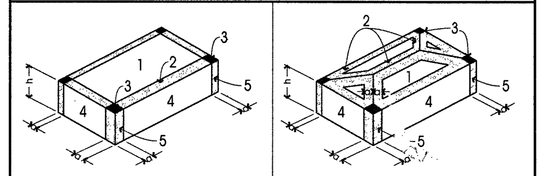
WALL COMPONENTS AND CLADDING:

ZONE 4 = +16.8 / -18.6
ZONE 5 = +18.7 / -23.0

NOTE: a = PRESSURES BASED ON 10% OF LEAST HOR. DIMENSION OR 40% OF MEAN ROOF HEIGHT

End Zone = 2 (a)

Component and Cladding Pressure Zone



Michael Wojtuniak, P.E.
FL PE # 60934
Engineered Permits Inc.
311-A South Woodland Blvd
DeLand, FL 32720
COA # 26298

**THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY MICHAEL J. WOJTUNIAK, P.E. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFED ON ALL ELECTRONIC COPIES. **

MICHAEL J. WOJTUNIAK LICENSE No 60934 STATE OF FLORIDA PROFESSIONAL ENGINEER 10/16/2020

Applicable Codes

Building	Florida Building Code	2017 6th EDITION
Plumbing	Florida Plumbing Code	2017 6th EDITION
ADA	Florida Accessibility Code	2017 6th EDITION
Life Safety	Florida Fire Prevention Code	6th EDITION
Mechanical	Florida Mechanical Code	2017 6th EDITION
Gas	Florida Building Code	2017 6th EDITION
Electrical	National Electrical Code	2014 EDITION

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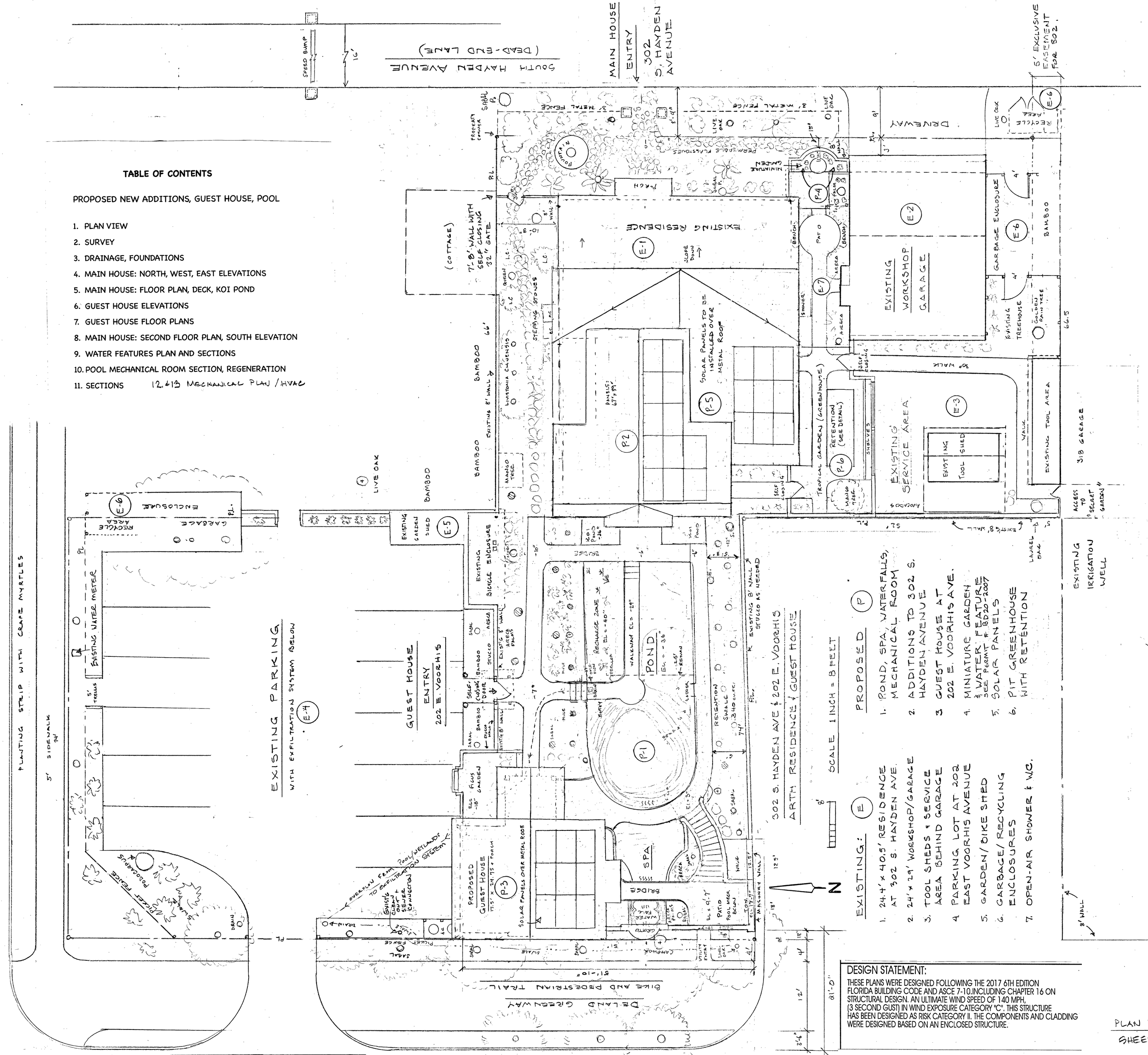
5. MAIN HOUSE: FLOOR PLAN, DECK, KOI POND
6. GUEST HOUSE ELEVATIONS
7. GUEST HOUSE FLOOR PLANS
8. MAIN HOUSE: SECOND FLOOR PLAN, SOUTH ELEVATION
9. WATER FEATURES PLAN AND SECTIONS
10. POOL MECHANICAL ROOM SECTION, REGENERATION
11. SECTIONS 12.613 MECHANICAL PLAN / HVAC



EXISTING: (E)

1. 24'+ x 40.5' RESIDENCE AT 302 S. HAYDEN AVE.
2. 24' x 29' WORKSHOP/GARAGE
3. TOOL SHEDS & SERVICE AREA BEHIND GARAGE
4. PARKING LOT AT 202 EAST VOORHIS AVENUE
5. GARDEN/BIKE SHED
6. GARBAGE/RECYCLING ENCLOSURES
7. OPEN-AIR SHOWER & W.C.

PROPOSED (P)

1. POND, SPA, WATERFALLS, MECHANICAL ROOM
2. ADDITIONS TO 302 S. HAYDEN AVENUE
3. GUEST HOUSE AT 202 E. VOORHIS AVE.
4. MINIATURE GARDEN & WATER FEATURES SEE PERMIT # BD20-2007
5. SOLAR PANELS
6. PIT GREENHOUSE WITH RETENTION

302 S. HAYDEN / 202 E VOORHIS AVENUE DELAND, FL.

PROPOSED IMPROVEMENTS, GUESTHOUSE, AND WATER FEATURES

OWNER/BUILDER: MICHAEL B. ARTH

DESIGN STATEMENT:

THESE PLANS WERE DESIGNED FOLLOWING THE 2017 6TH EDITION FLORIDA BUILDING CODE AND ASCE 7-10,INCLUDING CHAPTER 16 ON STRUCTURAL DESIGN. AN ULTIMATE WIND SPEED OF 140 MPH, (3 SECOND GUST) IN WIND EXPOSURE CATEGORY "C". THIS STRUCTURE HAS BEEN DESIGNED AS RISK CATEGORY II. THE COMPONENTS AND CLADDING WERE DESIGNED BASED ON AN ENCLOSED STRUCTURE.

PLAN VIEW
SHEET 1

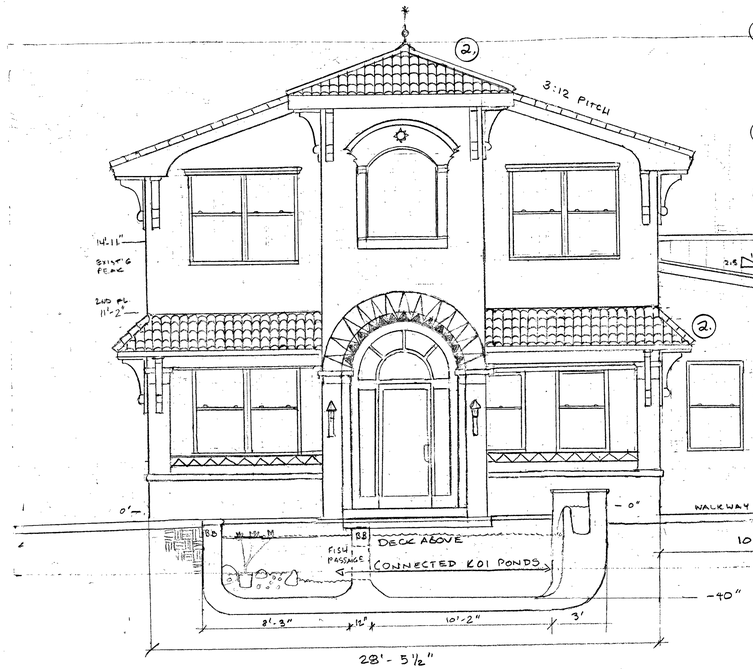
ROOFING:

ULTRA RIB METAL ROOFING PANELS FL PRODUCT APPROVAL # 4595.16

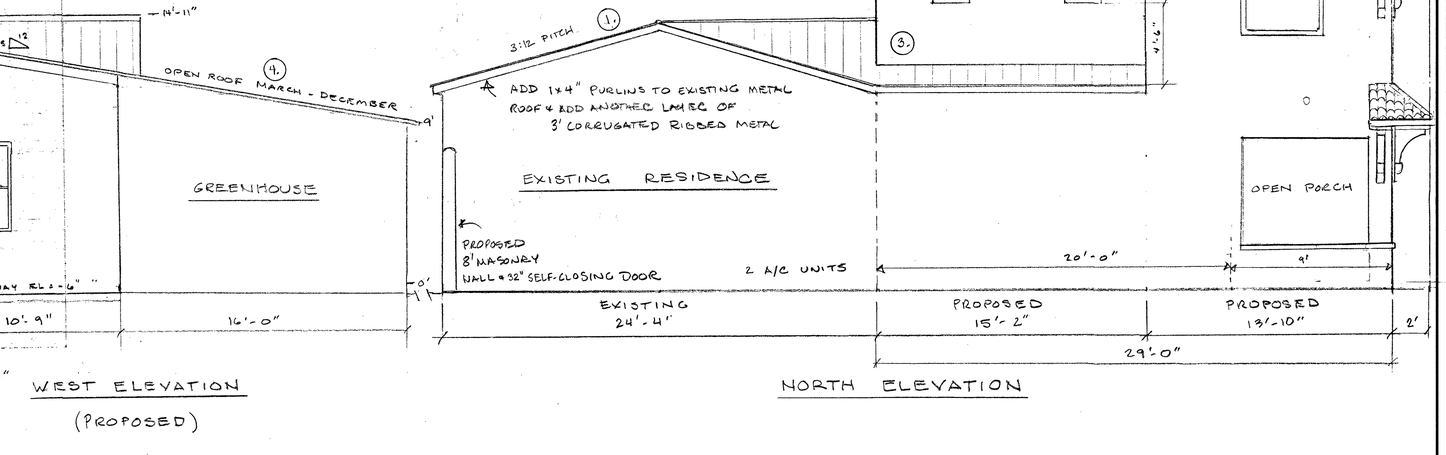
1. RE-ROOF OF EXISTING RESIDENCE: 1X4" PURLINS OVER EXISTING ULTRA-RIB ROOF + NEW ULTRA-RIB GALVALUME OR PAINTED 26 GAUGE ATTACHED WITH "WOODZAK" 5/16" X 1½ OR 2" GALVANIZED SCREWS WITH GASKETS.
2. MATTERHORN "WEATHED CANYON" COLOR, 4 COURSE TILE (METAL) PANELS, EL=26'-0" OR EQUIVALENT, COMPLIES WITH ASTM E108 CLASS A, CLASS B, IMPACT RESISTANCE, UL 2218, CLASS 4 WIND UPLIFT RESISTANCE, TO 130MPH, UL 1897, AC 166, QUALITY TESTING & APPROVALS: CCMC 14115-R, TDI RC-487, FL 21470, IAPMO UEL-5004, IAPMO ER-375. UNDERLAYMENT: SAME AS (3.)
3. NEW ROOF: INSTALL ULTRA-RIB METAL PANELS, 26 GAUGE, GALVALUME OR PAINTED, INSTALLED OVER 15/32" PLYWOOD & PEEL & STICK UNDERLAYMENT. ATTACH WITH "WOODZAK" 5/16" X 1½" OR 2" GALVANIZED SCREWS WITH GASKETS.
4. GREENHOUSE: FOR REMOVABLE (WINTER) ROOF, USE CLEAR, FLAT, OR CORRUGATED POLYCARBONATE SHEETS

GENERAL ROOFING NOTES:

- FASTEN SHEATHING W/ 8d RING SHANK 6" O.C.
- PURLINS ARE YELLOW PINE @ 24" O.C. ATTATCHED WITH TWO DECK SCREWS EVERY 24" (#9 X 3")
- PRE-DRILL HOLES ON ROOFING PANELS
- USE BUTYL TAPE ON PANEL OVERLAPS WHERE PITCH IS LESS THAN 3:12.
- FOLLOW MANUFACTURER'S INSTALLATION GUIDE, (3.)



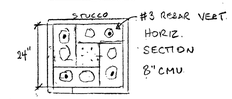
WEST ELEVATION
(PROPOSED)



NORTH ELEVATION



TYPICAL COLUMN (S:5)



DESIGN STATEMENT:
THESE PLANS WERE DESIGNED FOLLOWING THE 2017 6TH EDITION FLORIDA BUILDING CODE AND ASCE 7-10 INCLUDING CHAPTER 26 ON STRUCTURAL DESIGN. AN ULTIMATE WIND SPEED OF 140 MPH. (3 SECOND GUST) IN WIND EXPOSURE CATEGORY "C". THIS STRUCTURE HAS BEEN DESIGNED AS RISK CATEGORY II. THE COMPONENTS AND CLADDING WERE DESIGNED BASED ON AN ENCLOSED STRUCTURE.

Michael Wojtuniak, P.E.
FL PE # 60934
Engineered Permits Inc.
311-A South Woodland Blvd
DeLand, FL 32720
COA # 26298

MICHAEL J. WOJTUNIAK LICENSE No 60934 10/16/2020 STATE OF FLORIDA PROFESSIONAL ENGINEER

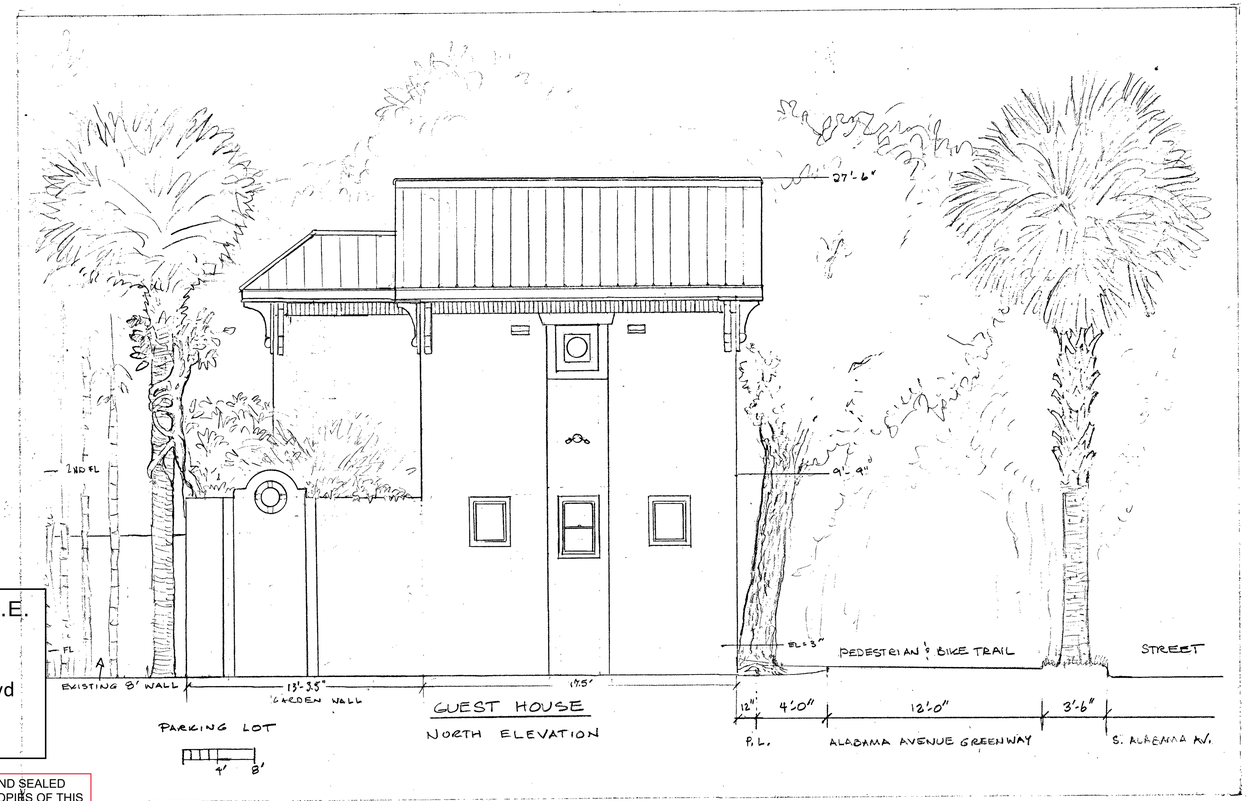
**THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY MICHAEL J. WOJTUNIAK, P.E. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFED ON ALL ELECTRONIC COPIES. **

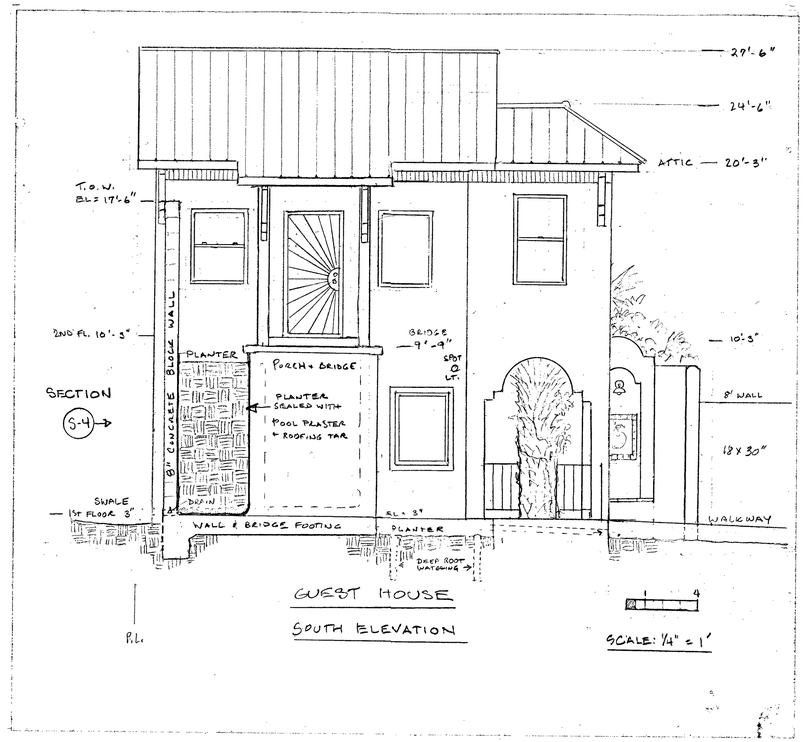
REVISIONS	BY

302 S. HAYDEN AVE DELAND
NORTH, WEST, AND EAST ELEVATIONS

Date	13 OCT 20
Scale	¼" = 1'
Drawn	M. ARTH
Job	M. ARTH
Sheet	4
Of	Sheets

24 X 36 PRINTED ON NO. 1000H CLEARPRINT ®





GUEST HOUSE ELEVATIONS

Michael Wojtuniak, P.E.
FL PE # 60934
Engineered Permits Inc.
311-A South Woodland Blvd
DeLand, FL 32720
COA # 26298

MICHAEL J. WOJTUNIAK LICENSE No. 60934 10/16/2020 STATE OF FLORIDA PROFESSIONAL ENGINEER

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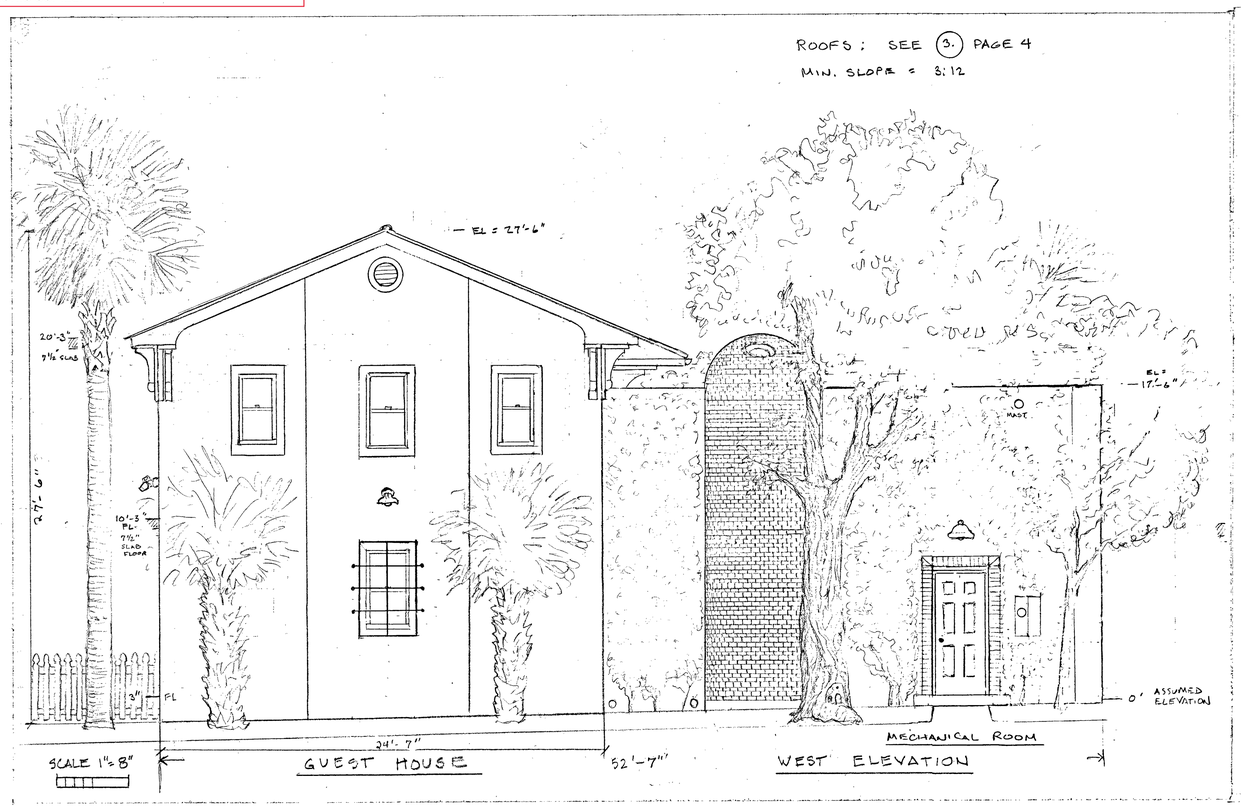




SHEET 6

Casa Cascada Bed and Breakfast Project Narrative
202 E. Voorhis Avenue, DeLand

Property Description: Casa Cascada is a two-unit bed and breakfast homestay currently operating in the City of DeLand at 202 E. Voorhis Avenue. The main house located at 302 S. Hayden Avenue, where I live, is located on the same combined lot. The rear of my house faces the guest house across the water features. The property has two addresses because it was previously two separate lots. I kept the separate addresses to direct bed and breakfast guests to the parking lot at the corner of East Voorhis and South Alabama and away from my front door.

Meets Definition: Bed and Breakfast Homestay means a bed and breakfast facility which is an accessory use to a single-family dwelling unit, in which: no more than six room in the principle residential structure are set aside for guest clients; breakfast is available on site solely to guest clients at no extra charge; length of stay of guest clients ranges from one to 30 days; and the owner/operator of the principal structure resides on-site. Bed and breakfast homestay does not include uses such as motels, hotels, community residential facilities, boarding or lodging houses.

History of Beautification: Casa Cascada and its natural swimming pool, finished early this year, is my latest effort to improve the neighborhood formerly known as Crack Town that has involved 35 units of various sorts (houses, duplexes, a four unit apartment, a tea room and an art gallery). I renamed the neighborhood *The Garden District* in 2001 and initiated the creation of *Downtown DeLand's Historic Garden District* soon thereafter. The City of DeLand was so pleased with my beautification efforts that they gave me a community enhancement award and both the City of DeLand and County of Volusia named a day in my honor (11-12-2002)

Previous Variance for Building: I got a variance to build this guest house and pool on February 22, 2018 (V-18-16). During the proceedings I stated that I planned to use the guest house as a bed and breakfast. The only issue of concern at that time were the setbacks, and they approved a zero setback. This is partly why I was unaware of any prohibition against bed and breakfasts at my location.

Permitting: I obtained the certificate of occupancy, the necessary sales tax permit, and state license; and have been operating a bed and breakfast for a couple of months through Vrbo and Airbnb without knowing that it was not permitted under the City of DeLand code. This

application to the planning board and city council is to bring the bed and breakfast into compliance through a planning and zoning exception.

Current Configuration: The Casa Cascada guest house has two units, one up ("Casita") with a full kitchen, and one down ("Studio"), which is a suite with a bathroom and a small hand sink in the bedroom. It is wheelchair accessible with a curb-less shower.

Potential third unit: Because I am going through this laborious and expensive process, I want to reserve the option to also rent the 572 sq. ft. second floor suite in the main house where I live at some future date, even though I have no plans to do so at present.

Tree Protection and Buffering: This is a finished project. Living up to the name Garden District, I have previously planted approximately 100 trees and plants over 24 years, and hundreds more in the neighborhood, and do not plan to remove any trees. The property is heavily landscaped on all sides, including the parking lot. The parking lot cannot be seen from Voorhis Ave. and there is the landscaped Alabama Avenue Greenway on the west side.

Parking: I have an attractive, heavily landscaped and parking lot, surfaced with paving blocks, that was permitted in 2005 when I was first planning the guest house and pool. There are 13 parking spaces shared with my five-unit apartment building at 208 E. Voorhis, and there are also two additional parking spaces for the apartment building on the Hayden Av. side of the building, for a total of 15 spaces. The lot ranges from empty to half full most of the time.

Exceptions: Having an attractive building next to the Alabama Avenue Greenway that is also a bed and breakfast in downtown DeLand, especially one with the feeling of an urban oasis, offers a special experience for visitors, who will also frequent other downtown businesses within walking distance. There are at least three exceptions to residential use of bed and breakfast homestays here:

1. Chapter 33033-18 to the DeLand Code allows an exception in auxiliary dwelling units.
2. The B & B abuts a non-residential zoning district, C-2, that formerly included a tearoom and an art gallery.
3. Section 8, Chapter 33 of the Code of Ordinances allows bed and breakfast/homestays in the downtown core area.



Above: view looking toward main house. Below: view looking toward guest house.





Above: View of parking entry, and Alabama Greenway.
Below: View of concealed parking from corner of E. Voorhis and S. Alabama





Above: waterfall and view of Casita porch. Below: Entry to Studio



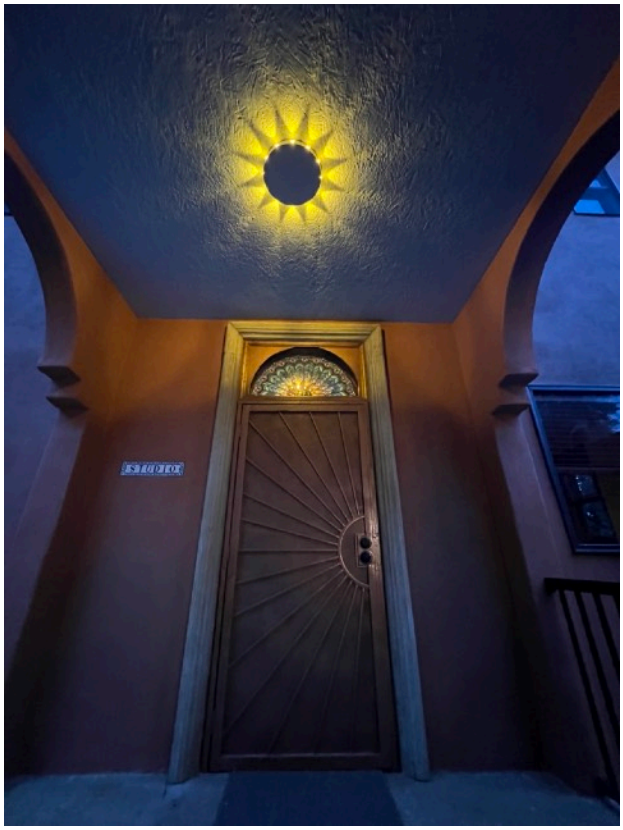


Above: Casita (second floor) Below: Studio, ground floor and wheelchair accessible.





Moon Garden



Entry to first Floor Studio

Applicant and owner:

Michael E. Arth
michaelarth@icloud.com
386 956 1554

Applicant/Owner's Statement regarding the age of the property and the buffers

Regarding the age of building requirement, the applicant states:



The subject property (shown in 1915) consists of 2 combined lots with 2 addresses. The main house is 302 S. Hayden and the guest house is 202 E. Voorhis. 302 is to the left & house at 202 is on right.

The subject property consists of two combined lots with a main house at 302 S Hayden Ave, and a guest house at 202 E Voorhis Ave. The buildings on these two lots date back to as early as 1910, with the traditional Spanish Colonial Revival improvements being finished in 2025.

I created Downtown DeLand's Historic Garden District, where this B & B is located, in the early 2000s after restoring around 33 historic dwelling units consisting of single family homes, duplexes, and one four-unit apartment building. The oldest house in the Garden District dates to 1903. From the 1970s to 2001, this neighborhood was a dangerous drug slum known as "Crack Town."

The guest house replaces a circa 1910 house (see above photo) that was moved to a movie set in the 1990s. I planted many trees that were already mature, beginning in 2001, so the architecture, combined with the landscaping, makes people assume it is one of the DeLand's oldest buildings. Some of the architectural elements, including windows, doors, portals, and built-ins date to the 19th century.

Regarding the landscape buffer zone, the applicant states:

The only reason the buffer requirement is not met at the subject property, located along part of the Alabama Greenway, is because I obtained a zero setback variance from the DeLand City Commission in 2018. The variance was granted owing to the unique character of the historic neighborhood and because it fits in with the eclectic, non-conforming setbacks of surrounding homes. Also, I planted hundreds of trees and plants in the Garden District to set the historic, traditional buildings in a lush, mature botanical garden unlike typical housing developments.



View from the northeast corner at Voorhis & Alabama showing buffer



Entrance to the parking, showing the side setback along the Alabama Greenway

About 60 feet of the frontage on South Alabama consists of the landscaped parking lot with a 60 ft. setback. The other 52 feet has a very small setback, but still has a landscaped planting strip with mature palms and a 35' tall live oak tree.

Surrounding houses located at 201 E. Voorhis, 205 E. Voorhis, 208 E. Voorhis and nearly all the buildings on South Hayden Avenue, have non-conforming setbacks. A former mom and pop grocery store built in 1903 at 205 E. Voorhis actually has a second story overhanging part of the sidewalk.

Bringing the guest house at 202 E. Voorhis close to the Alabama Greenway added character and interest, and the Greenway and landscaped medians together create a 20 ft. buffer from the automobile traffic on South Alabama Avenue.

The buffer from East Voorhis Avenue is about 60 feet, which includes a heavily landscaped parking lot, and mature street trees. The garden gate to the courtyard of the bed and breakfast is set back about 60 feet from East Voorhis, and it faces the parking lot. The subject property is across the street from commercial zoning, and catty corner from the 180 unit DeLand Commons.

September 10, 2025

A. APPLICATION NO.: SP24-134

PROJECT*:* Class IV Site Plan – 225 W. New York Ave. Apartments

PARCEL NUMBER*:* 700962000090; 700962000087

STAFF PLANNER: Carol Kuhn, AICP, Planning Director

APPLICANT: Blue Sky Communities, LLC.

REQUEST: Class IV Site Plan – 84 Affordable Housing Apartments

B. APPLICABLE REGULATIONS:

Article XII **Procedure for review of development plans**

C. SITE FACTORS:

Location: 225 W. New York Avenue
Parcel Size: ± 1.63 Acres
Existing Zoning: C-2A; C-2A&H
Existing Land Use: Downtown Commercial

	SURROUNDING USE:	SURROUNDING ZONING:
North:	Downtown Commercial	C-2A (Downtown Commercial)
South:	Downtown Commercial	C-2A & H (Downtown Commercial & Historic)
East:	Downtown Commercial	C-2A & H (Downtown Commercial & Historic)
West:	Downtown Commercial	C-2A (Downtown Commercial)

D. HISTORY: This 1.63-acre site is located at 225 W. New York Avenue is comprised of two (2) parcels, zoned C-2A and C-2A (with the Historic Overlay), and was once the site of the Historic Putnam Hotel. The property is located within the Historic Design District with a portion located within the Downtown Historic District. The Future Land Use Designation is Downtown Commercial.

Since the site layout depended on the parking reduction, the applicant requested approval of the parking reduction, as well as approval to use off-site parking from the City Commission, before the site plan approval process moved forward to Planning Board.

For 84 units, with a mix of 1, 2, and 3 bedrooms, 188 parking spaces would be required. At this time, the City does not have regulations in place specifically related to reducing parking requirements for affordable housing projects. The City planning staff must therefore apply the parking requirements specified in the City's Land Development Regulations. City Commission may approve a parking reduction and also allow for off-site parking for residential uses. Section 33-91.03(f) specifies the minimum parking

requirements for various uses. City Commission reviewed the applicant's revised parking reduction request at three (3) City Commission meetings and approved a parking reduction as well as a provision to allow 20 off-site parking on the adjacent Volusia County property.

The applicant first presented the parking reduction request on October 21, 2024. The applicant requested a parking reduction, in addition to utilizing the 30% bicycle parking reduction. The applicant proposed 66 parking spaces and 52 bicycle parking spaces (equivalent to 26 vehicle spaces) for 84 units, where 188 parking spaces are required. The applicant also requested limited off-site parking, from 5pm to 8am and on weekends on the adjacent Volusia County parking lot. No guest parking would be provided. The City Commission denied this parking reduction request (Resolution 2024-96).

On April 21, 2025, the applicant proposed 94 off-street parking spaces, a 28-space increase over the initial parking reduction request. This increased parking could be accomplished by increasing the building height to allow for ground floor parking under a portion of the building, bringing the proposed building height to 77 feet. The City Commission conditionally approved the parking, provided 20 additional off-site parking spaces could be secured for the project.

On July 21, 2025, the City Commission approved the parking reduction request, as the applicant was able to secure 20 additional off-site parking spaces on the adjacent Volusia County parking lot. A copy of the resolution is attached (Resolution 2025-49).

Since the site is within the Historic Design District, the applicant requested approval of a Certificate of Appropriateness (COA) from the City's Historic Preservation Board (HPB). On April 4, 2024, the HPB reviewed the concept plan and provided feedback to the applicant regarding the architecture. On August 1, 2024, the HPB approved a COA for the proposed 5-story building, subject to the following two conditions of approval:

1. The mass and scale of the proposed building shall be reduced and the design modified to be compatible with the contiguous properties and surrounding structures and;
2. Additional brick be incorporated into the exterior, specifically the South (New York Avenue) façade, on the tower potion, above storefront doors on floors 2-5.

On November 7, 2024, the applicant submitted revised architectural elevations, which was reviewed by HPB on November 7, 2024. HPB determined the revised elevations met the conditions and approved the request as presented.

The proposed increase in height to accommodate an additional 28 parking spaces required a new COA be approved. Therefore, the HPB reviewed the revised architecture for the 6-story building on June 5, 2025, and approved a COA as presented. These elevations are included with the staff report.

Planning Board and City Commission reviewed the concept plan for this project on April 10, 2024 and May 6, 2024, respectively.

The applicant is requesting approval of a Class IV site plan to construct a 6-story building for 84 affordable apartments, with an approved parking reduction for 94 on-site parking spaces and 20 off-site parking spaces.

E. ANALYSIS: The site consists of two parcels, one of which is within the Downtown CRA. Since the CRA boundary cannot be expanded, the lots cannot be consolidated. The applicant is proposing a Unity of Title Agreement to ensure the two parcels remain together for parking, stormwater and other site plan requirements, without a lot consolidation. A copy of this draft agreement is attached to the staff report.

According to Section 33-17.23, Allowed Uses in Commercial and Industrial Zoning Districts, multi-family residential is allowed as a conditional use in the C-2A zone district. The conditions, as provided for in 33-19.13 state that two- and multiple family units may be permitted on the first floor in the downtown commercial area, provided the following criteria are met: first floor residential dwelling units will not be permitted within 50 feet of Woodland Boulevard or New York Avenue. The street side of the development shall include amenities that encourage pedestrian activities and the building(s) should be located adjacent to the street or slightly setback (less than 20 feet). Parking garages for multifamily structures will be permitted on the first floor with entrances preferably parallel to the street. The garage will be designed to resemble a residential building or commercial store frontage to maintain the downtown.

The Central Business District (CBD) allows principal commercial/retail area restaurants, office, and freestanding multifamily residential and multifamily residential above the first floor of nonresidential land uses, with up to 20 DU/A. In general, retail commercial uses shall be encouraged on the ground floors that front onto streets. Offices and residential should be encouraged to locate above the active ground floor. In order to support development in the downtown core, the Comprehensive Plan allows “a residential density within the DeLand Downtown boundary be calculated based on gross acreage for the entire district and not on an individual property basis. The total number of dwelling units within the Downtown Commercial area shall not exceed a total of 2,777 units. Within the Downtown Commercial land use designation, retail commercial uses shall be encouraged on the ground floors that front on to streets. Offices and residential should be encouraged to locate above the active ground floor.”

The C-2A (Downtown Commercial), and the C-2A&H (Downtown Commercial & Historic) zone districts are intended to include residential, retail, and service businesses to support the Central Business District (CBD).

Planning staff has concerns about the apartment leasing office and bicycle storage areas encompassing the entire ground floor area, rather than commercial uses that activate the street and encourage further expansion of the downtown. Additionally, the Downtown Commercial Future Land Use Designation states: “retail commercial uses shall be encouraged on the ground floors that front on to streets. Offices and residential should

be encouraged to locate above the active ground floor." The applicant is proposing a leasing office and bicycle storage areas to encompass the entire ground floor area. Planning staff has expressed concerns that the proposed uses are not commercial uses that activate the ground floor and the street frontage. The proposed ground floor uses do not meet the intent of the Comprehensive Plan which encourages ground floor retail and commercial uses and calls for the continuation of downtown to Clara Avenue.

Due to the size of the project (>80 units), a Class IV site plan is required. Prior to submitting the site plan, the applicant requested review of a concept plan to gather preliminary feedback ahead of the site plan submittal. The concept plan was reviewed by the Technical Advisory Committee (TRC) on March 21, 2024, Planning Board on April 10, 2024, and City Commission on May 3, 2024. The TRC provided comments related to the site plan submittal requirements and expressed concerns regarding the mass, scale, context, activation of the street frontage, lack of ground floor commercial, colors, materials, access, parking, and general site design. Planning Board provided comments regarding inadequate parking, building architecture, proposed colors and materials, and lack of amenities for the residents. The City Commission provided similar comments.

The applicant revised the concept and submitted a Class IV site plan on June 26, 2024. Since the project was dependent on the parking reduction request and the request to allow off-site parking had to be resolved prior to bringing this request for site plan approval forward to the Planning Board and City Commission.

D. ENVIRONMENTAL

Due to the size of the site, an environmental report is not required. Properties zoned C-2A are exempt from the tree protection minimum tree coverage standards (33-57.07(a)1). However, standards pertaining to Historic Trees must be followed. The site was previously developed and has remained vacant since the demolition of the former Putnam Hotel. The applicant has worked with the City's Forester to minimize impact to the 25-inch Diameter at Breast Height (DBH) Live Oak historic tree on the adjacent property.

E. STORMWATER

The stormwater system has been designed to retain on-site a 100-year, 24-hour storm event. The stormwater will be managed through an underground stormwater system and must meet City and St. Johns River Water Management District (SJRWMD) stormwater standards.

F. ARCHITECTURE

The proposed building shall comply with section 33-94 – Community Design Standards. Since this site is located in the Historic District and the Historic Design District, a Certificate of Appropriateness (COA) is required. The Historic Preservation Board reviewed both the concept plan as well as the requested Certificate of Appropriateness for this project and approved the COA on June 5, 2025.

On April 4, 2024, the HPB reviewed the concept plan and provided feedback to the applicant regarding the architecture. During the concept review, the HPB provided comments related to roof materials, colors, enhanced landscaping, type of materials, building details, and parking. A photometric plan is required. Off-site areas shall be shielded from offensive or excessive illumination. Illumination from any light source onto adjacent properties or into the public right-of-way shall not exceed 0.5-foot candles (33-94.03(g)2). All lighting is downward directed, fully shielded/full cutoff (33-94.03(g)9).

On August 1, 2024, the HPB approved a COA for the proposed 5-story building, subject to the following two conditions of approval: 1. The mass and scale of the proposed building shall be reduced and the design modified to be compatible with the contiguous properties and surrounding structures and 2. Additional brick be incorporated into the exterior, specifically the South (New York Avenue) façade, on the tower potion, above storefront doors on floors 2-5.

On November 7, 2024, the applicant revised the architectural elevations, based on the conditional approval from HPB, and asked for the HPB to review the revised elevations. The HPB approved the application as presented, with no conditions.

However, the proposed increase in height to six (6) stories to accommodate the additional under-building parking (28 spaces) required a new COA, and the HPB reviewed the revised architecture for the 6-story building on June 5, 2025 and approved a COA as presented.

Planning staff review comments related to architecture focused on roof lines, architectural style, colors, massing and scale, compatibility with surrounding properties, and preferred materials, as specified in 33-94.

The building mass and scale needs to be broken up and buildings in established areas shall be designed for a compatible relationship to the existing surrounding neighborhood. Structures shall utilize similar architectural style, character, massing, materials, color, or other elements so as to relate to the surrounding neighborhood. (Section 33-94.03(b)3). This site is located near 1, 2 and 3 story buildings. The massing of a 6-story building (77 feet) is out of character with the area. The historic Putnam Hotel stepped the building height back from the street to maintain a pedestrian scale at the street.

Building design shall have characteristics and elements that relate favorably to the pedestrian scale of the district (33-94.04(a)5). The 5-story building adjacent to the street does not relate to the pedestrian scale of the district. The 77-foot building could impact the view corridor in the downtown. limiting the iconic view of the Court House.

The architectural design of structures shall bear a complementary relationship to the existing architectural context of the surrounding area (similar or related architectural styling or character; similar or related massing, proportions and scale, along with the repetition of the relationship of solids and voids in the architectural design; similar or related fenestration treatment, relating to the repetition and rhythm of openings in exterior walls; similar or related architectural details and decorative treatments such as cornices and

moldings, awnings, parapets, columns, colonnades, arcades, and arches; glazing at street level may be tinted, but shall not utilize reflective glass, Plexiglas, or similar (33-94.04(a)1).

G. LANDSCAPING

Landscape buffers are not required along street frontages in the C-2A zoning district (33-92.02(b)1). Properties within the C-2A zoning district are also not subject to the buffer requirements (33-17.17) and the vehicle use separation area may be reduced to 0-feet (33-91.06(a)2). Landscaping will utilize Florida-Friendly as defined by the University of Florida/Institute of Food and Agricultural Sciences (UF/IFAS). The applicant has provided a landscape plan that includes 8 Crape Myrtle, 3 Wax Myrtle, 5 Slash Pine, 13 High Rise Southern Live Oak, 6 Cabbage Palmetto, and 18 Bald Cypress trees.

H. SCHOOL CONCURRENCY

The Volusia County School District has issued a letter indicating that the proposed project would not exceed the adopted level of service at any school level and stated that there is no objection to the proposed site plan (letter dated August 19, 2024 is attached).

I. TRAFFIC & CIRCULATION

A shared access driveway off of W. New York Avenue, located on county-owned property on the project's west boundary, is proposed to provide the only site access. A recorded cross-access easement shall be recorded and the recordation information shall be included on the site plan prior to issuance of a development order. A Traffic Impact memo for this proposed 84-unit affordable housing project was completed on October 2, 2024. The analysis determined that the project will generate 453 average daily trips, 35 peak hour A.M. and 46 peak hour P.M. trips. Per Sec. 33-41.04 of the LDR, a full Traffic Impact Analysis is not required for projects that generate less than 1,000 daily trips. A copy of the traffic memo is attached.

J. PARKING

Required Parking

For residential uses, Section 33-91.03 of the Development Regulations require 1.5 spaces per 1 bedroom; 2 spaces per 2 & 3 bedroom PLUS 0.5 spaces per unit for guest parking.

Required parking:
44 – 1.5 bedroom – 66 spaces plus 22 guest spaces
28 – 2 bedroom – 56 spaces plus 14 guest spaces
12 – 3 bedroom – 24 spaces plus 6 guest spaces
Total: 188 spaces

On July 21, 2025, the City Commission approved a following parking reduction for 94 on-site parking spaces along with 20 off-site parking spaces on the adjacent Volusia County parking lot (33-91.06(a)3).

The site plan provides the 94 spaces. However, the site plan does not reference the 20 off-site parking spaces. The site plan must include this information prior to scheduling this item

for City Commission. The recordation information for the recorded parking agreement with Volusia County must be included on the site plan prior to the issuance of the development order.

K. TRC

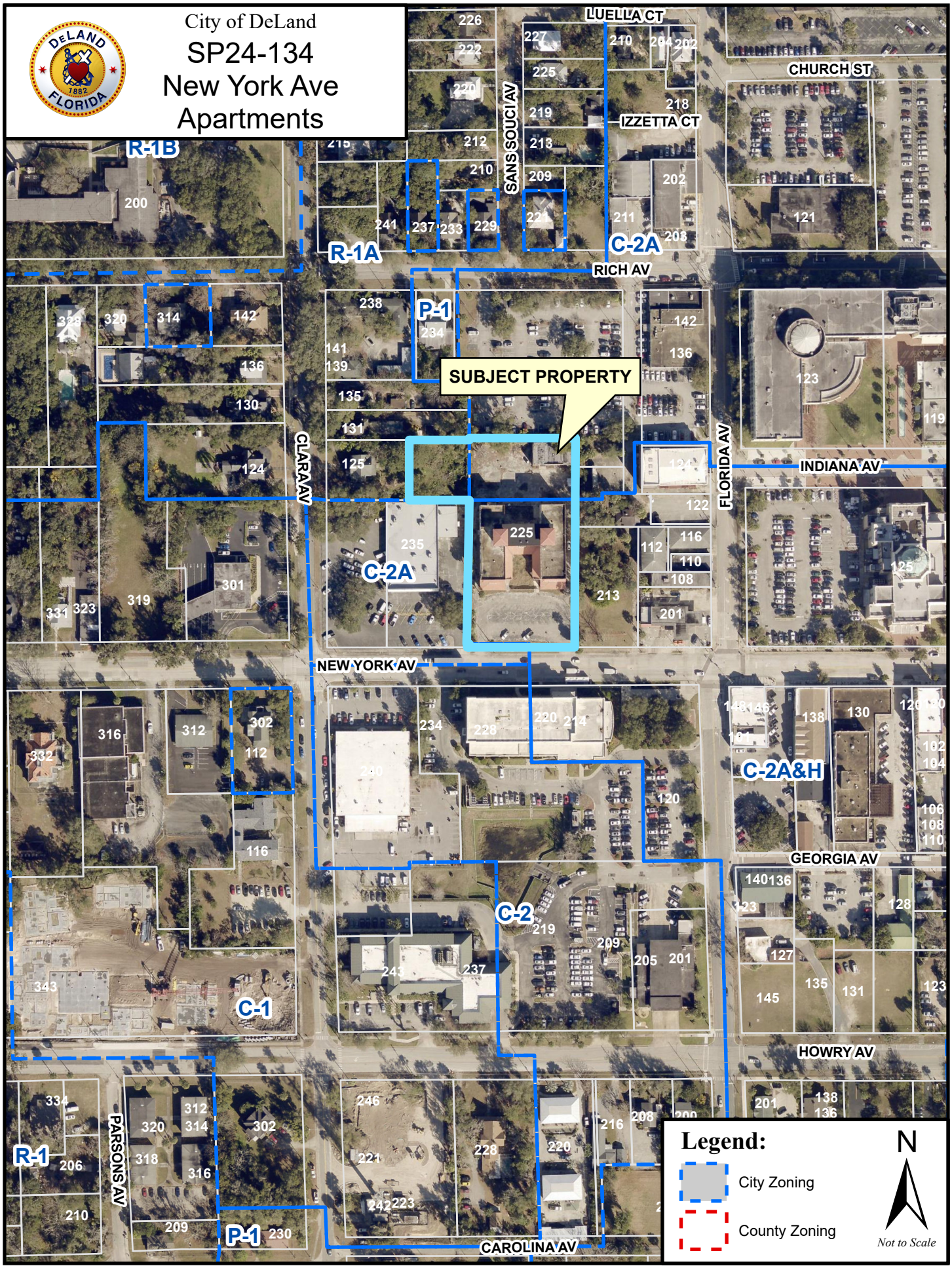
After three (3) rounds of review by the Technical Review Committee, on May 15, 2025, the TRC recommended the item be forwarded to the Planning Board once all of the outstanding comments have been met. The applicant has addressed most of the outstanding comments with the exception of the following:

1. Massing, scale, context of the building.
2. Activation of the ground floor commercial.
3. Reference to the 20 off-site parking spaces on the site plan (sheet C100).
4. Recordation of the cross-access easement agreement.
5. Recordation of the off-site parking agreement with Volusia County.

L. STAFF SUMMARY AND RECOMMENDATION

Staff finds this proposed site plan for 84 affordable apartment units is consistent with the City's Land Development Regulations with the exception of the lack of ground floor commercial and continued concerns regarding the building mass and scale being out of context with the surrounding area. Residential is a conditional use in C-2A, with conditions placed for residential units on the first floor. Also, the 77-foot building is out of scale for the surrounding area, with 1-story buildings on either side of the site and a three (3) story structure across the street. Staff recommends that the Planning Board forward this Class IV site plan to City Commission with a recommendation for approval, subject to the five (5) conditions of approval:

1. The site plan must be revised to include a reference to the 20 off-site parking spaces prior to scheduling this item for City Commission.
2. A cross-access easement agreement must be recorded for the site access on the adjacent Volusia County site and the recordation information shall be added to the site plan, prior to the issuance of a development order.
3. The off-site parking agreement must be approved by Volusia County and the recordation information shall be included on the site plan, prior to the issuance of a development order.
4. The applicant should consider alternative designs to break up the building or to further step the building back from the street to promote a more pedestrian scale and work with the surrounding structures.
5. The applicant should include ground floor commercial uses to activate the street frontage and continue downtown to Clara Avenue, as indicated in the comprehensive plan.


City of DeLand
SP24-134
New York Ave
Apartments
SUBJECT PROPERTY
R-1B
R-1A
C-2A
P-1
C-2A
C-2A&H
C-2
C-1
R-1
P-1
LUELLA CT
CHURCH ST
IZZETTA CT
SANS SOUCI AV
RICH AV
CLARA AV
FLORIDA AV
INDIANA AV
NEW YORK AV
GEORGIA AV
HOWRY AV
PARSONS AV
CAROLINA AV
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City Zoning
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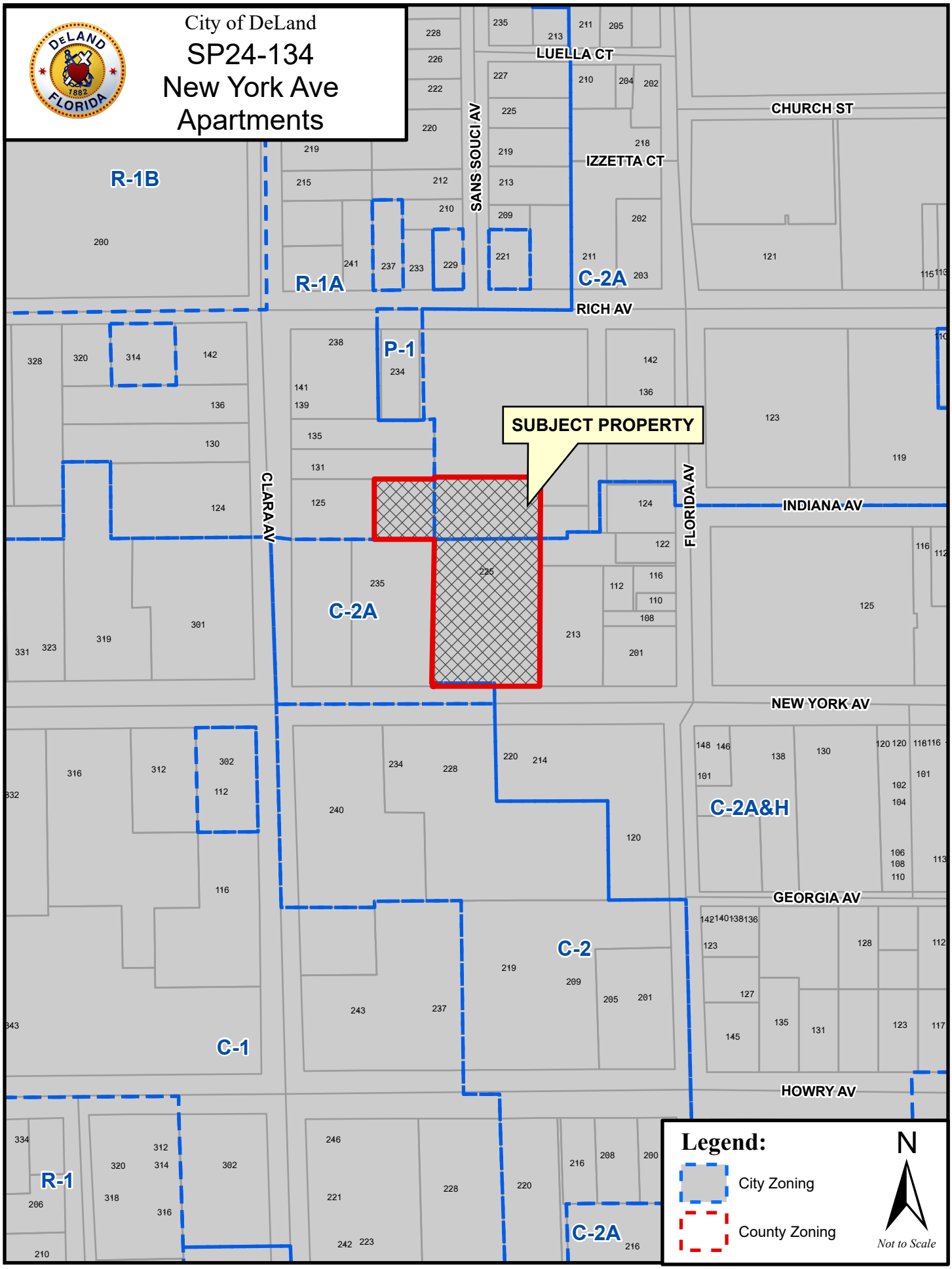
City of DeLand
SP24-134
New York Ave Apartments
LUELLA CT
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IZZETTA CT
SANS SOUCI AV
RICH AV
INDIANA AV
FLORIDA AV
CLARA AV
NEW YORK AV
GEORGIA AV
HOWRY AV
SUBJECT PROPERTY
R-1B
R-1A
C-2A
P-1
C-2A
C-2A&H
C-2
C-1
R-1
C-2A
Legend:
City Zoning
County Zoning
N
Not to Scale

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS

July 3, 2024

City of Deland
Debi Glick

RE: New York Apartments

Dear Debi:

Regarding New York Avenue Apartments, please see the information below pertaining to where the project is located and what is being proposed.

Location: North side of New York Avenue between N. Florida Ave & N. Clara Ave
Deland, FL 32720

Parcel IDs: 700962000087 & 700962000090

Acreage: 1.63

Proposing: 84 multi-family apartment units

Engineer: David A. Stokes, P.E.
Madden, Moorhead & Stokes, LLC
407-629-8330, ext. 130
dstokes@madden-eng.com

Developer: Blue Ian, LLC
Shawn Wilson
813-514-2100
swilson@blueskycommunities.com

If you have any questions, please feel free to contact me.

Sincerely,
Nicole Martin
Permitting Manager
nicole@madden-eng.com
407-629-8330, ext. 129

FINAL ENGINEERING PLAN
FOR
NEW YORK AVE APARTMENTS

PARCEL ID'S: 700962000090, 700962000087
SECTION 09, TOWNSHIP 17 SOUTH, RANGE 30 EAST
CITY OF DELAND, FLORIDA

FOR

BLUE IAN, LLC
180 FOUNTAIN PKWY N., STE 100
ST. PETERSBURG, FL 33716
PHONE:(813) 514-2100

LEGAL DESCRIPTION:

THE EAST 100.00 FEET OF THE SOUTH 100 FEET OF THE WEST 237.5 FEET OF LOT 8, ASSESSOR'S SUBDIVISION OF BLOCK 1, ROGER'S DELAND, ACCORDING TO THE MAP THEREOF RECORDED IN MAP BOOK 16, PAGE 40, OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE SOUTHEAST CORNER OF SAID LOT 8, BLOCK 1; RUN THENCE S89°44'45"W, ALONG THE SOUTH LINE OF SAID LOT 8, A DISTANCE OF 100.00 FEET; THENCE N00°45'34"W, A DISTANCE OF 100.00 FEET TO THE NORTH LINE OF THE SOUTH 100 FEET OF SAID LOT 8; THENCE N89°44'45"E ALONG SAID NORTH LINE, A DISTANCE OF 100.00 FEET TO THE EAST LINE OF SAID LOT 8; THENCE S00°45'34"E, ALONG SAID EAST LINE, A DISTANCE OF 100.00 FEET TO THE POINT OF BEGINNING.

AND
LOT 9, ASSESSOR'S SUBDIVISION OF BLOCK 1, ROGER'S DELAND, A SUBDIVISION ACCORDING TO THE PLAT THEREOF RECORDED AT PLAT BOOK 3, PAGE 48, IN THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA

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LA1.0	KEY PLAN AND CALCULATIONS
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IR1.0	IRRIGATION PLAN
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IR1.2	IRRIGATION DETAILS - 2
HS1.0	HARDSCAPE PLANS
E1.2	SITE PHOTOMETRIC PLAN
E1.3	SITE FIXTURE CUT SHEETS

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. HORATIO AVENUE, SUITE 260
MAITLAND, FLORIDA 32751
PHONE (407) 629-8330
FAX (407) 629-8336

UTILITY PROVIDERS:

CABLE:
CHARTER COMMUNICATIONS
1195 S. WOODLAND BLVD,
DELAND, FL 32720
PHONE: (407) 532-8614
CONTACT: STACY STAFFORD

POWER:
DUKE ENERGY
400 N. SPRING GARDEN AVE.
DELAND, FL 32720
PHONE: (407) 938-6602
CONTACT: KELLY BEARD

GAS:
FLORIDA PUBLIC UTILITIES
450 S. HIGHWAY 17-92
DEBARY, FL 32713
PHONE: (863) 220-1510
CONTACT: KATIE L. COLE

PHONE:
AT&T
1500 HERBERT ST.
PORT ORANGE, FL 32129
PHONE: (386) 281-6955
CONTACT: JAMES FRANKLIN

WATER & WASTE WATER:
CITY OF DELAND
1101 S. AMELIA AVE.
DELAND, FL 32724
PHONE: (386) 626-7250

PROJECT TEAM MEMBERS:

OWNER:
AXIA PUTNAM, LLC
4421 N THANKSGIVING WAY #204
LEHI, UT 84043

DEVELOPER:
BLUE IAN, LLC
180 FOUNTAIN PKWY N.
ST. PETERSBURG, FL 33716
PHONE: (813) 514-2100

ENGINEER:
MADDEN, MOORHEAD, & STOKES, LLC
431 E HORATIO AVE., SUITE 260
MAITLAND, FLORIDA 32751
PHONE: (407) 629-8330

GEOTECHNICAL:
ANDREYEV ENGINEERING, INC
3740 54TH AVENUE NORTH
ST. PETERSBURG, FL 33714
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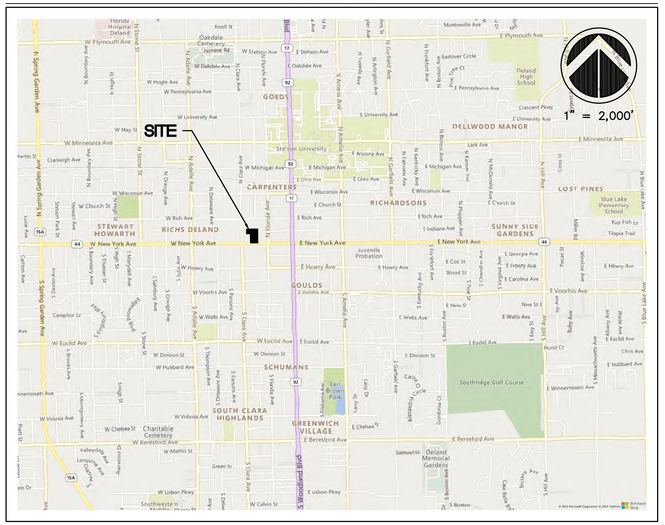
SURVEYOR:
ALTAMAX SURVEYING
910 BELLE AVE, SUITE 1100
CASSELBERRY, FL 32708
PHONE: (407) 677-0200

ARCHITECT:
POWELLSTUDIO ARCHITECTURE
713 W MONTROSE ST.
CLERMONT, FL 34711
PHONE: (352) 874-2340

LANDSCAPE ARCHITECT:
DARK MOSS
308 E 7TH AVE
TAMPA, FL 33602
PHONE: (813) 532-3440

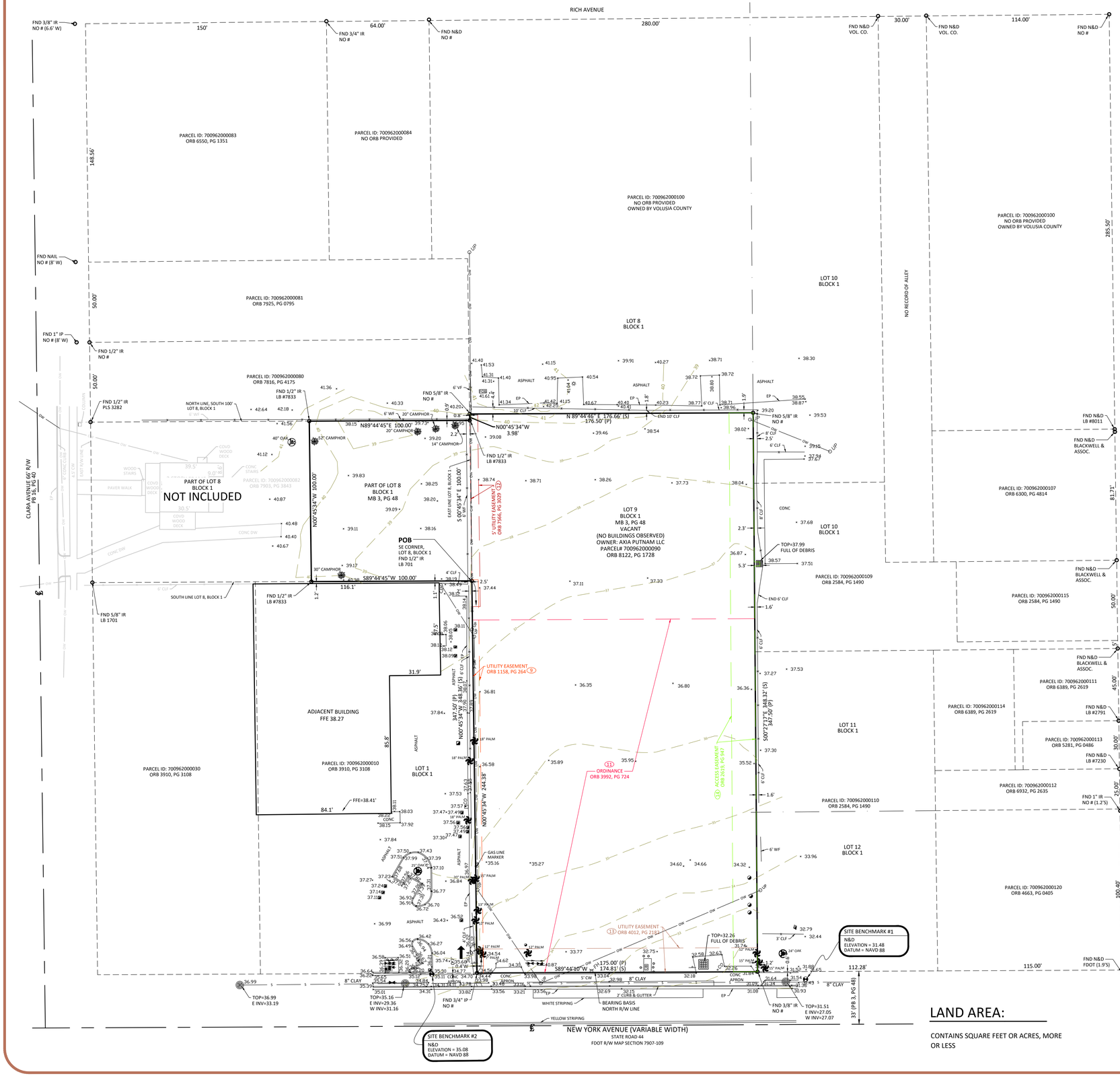
VICINITY MAP



DAVID A. STOKES, P.E. #66527
JULY 10, 2025
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

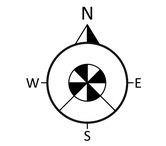
NEW YORK AVE APARTMENTS (23201)
S:\23031 - New York Ave Apartments\Eng\Final\23201_C001-COV.dwg Jul 10, 2025 - 1:57:06 pm

BOUNDARY & TOPOGRAPHIC SURVEY



LAND AREA:

CONTAINS SQUARE FEET OR ACRES, MORE OR LESS



VICINITY MAP (Not to Scale)



DESCRIPTION:

The East 100.00 feet of the South 100 feet of the West 237.5 feet of Lot 8, Assessor's Subdivision of Block 1, Roger's Deland, according to the map thereof recorded in Map Book 16, Page 40, of the Public Records of Volusia County, Florida, being more particularly described as follows:

Begin at the Southeast corner of said Lot 8, Block 1; run thence S89°44'45"W, along the South line of said Lot 8, a distance of 100.00 feet; thence N00°45'34"W, a distance of 100.00 feet to the North line of the South 100 feet of said Lot 8; thence N89°44'45"E along said North line, a distance of 100.00 feet to the East line of said Lot 8; thence S00°45'34"E, along said East line, a distance of 100.00 feet to the Point of Beginning.

And
Lot 9, Assessor's Subdivision of Block 1, Roger's Deland, a subdivision according to the plat thereof recorded at Plat Book 3, Page 48, in the Public Records of Volusia County, Florida

GENERAL SURVEY NOTES:

1. BEARING STRUCTURE IS BASED ON THE MONUMENTED NORTH R/W LINE OF NEW YORK AVENUE; BEING: S89°44'10"W ASSUMED.

2. THIS SURVEY REFLECTS ONLY MATTERS OF RECORD AS PROVIDED BY THE CLIENT OR CLIENTS REPRESENTATIVE.

3. THIS SURVEY WAS MADE ON THE GROUND. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. ENGINEER AND CONTRACTOR SHALL VERIFY MEASUREMENTS OF CONNECTIONS TO EXISTING UTILITIES BEFORE ORDERING MATERIALS AND BEFORE COMMENCEMENT OF CONSTRUCTION. IF THERE IS A DISCREPANCY BETWEEN THE MEASUREMENTS SHOWN HEREON AND THE VERIFYING MEASUREMENTS, THIS SURVEYOR SHALL BE CONTACTED IMMEDIATELY TO FURTHER VERIFY THE DISCREPANCY.

4. THIS SITE LIES IN ZONE X PER FLOOD INSURANCE RATE MAP NO. 12127C0470H, COMMUNITY NO. 120307, CITY OF DELAND, VOLUSIA COUNTY, FLORIDA, EFFECTIVE 02/19/2014.

5. ACCORDING TO FLORIDA STATUTES, CHAPTER 472.025, A LAND SURVEYOR SHALL NOT AFFIX HIS SEAL OR NAME TO ANY PLAN OR DRAWING WHICH DEPICTS WORK WHICH HE IS NOT LICENSED TO PERFORM OR WHICH IS BEYOND HIS PROFESSION OR SPECIALTY THEREIN. THEREFORE, WE ARE UNABLE TO CERTIFY AS TO MUNICIPAL ZONING COMPLIANCE, INTERPRETATION OF ZONING CODES OR THE DETERMINATION OF VIOLATIONS THEREOF.

6. THIS SURVEY MADE WITH BENEFIT OF COMMITMENT FOR TITLE NO. 7222-6423577, EFFECTIVE: APRIL 21, 2023, ISSUED BY FIRST AMERICAN TITLE INSURANCE COMPANY. THE LEGAL DESCRIPTION SHOWN HEREON IS THE SAME AS THE LEGAL DESCRIPTION SET FORTH IN SCHEDULE A OF THE TITLE COMMITMENT REFERENCED HEREON.

7. ELEVATIONS ARE BASED ON BENCHMARK DESIGNATION T 474, BEING: 38.11 FEET, (NAVD 88), PUBLISHED BY NGS (NATIONAL GEODETIC SURVEY).

8. THE MAPPED FEATURES SHOWN HEREON ARE RELATIVE TO FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE, NAD(83)-(2011)-(EPOCH 2010.0000), ESTABLISHED PER FDOT FPRN.

SCHEDULE B-II:

9. Easement granted to Florida Power Corporation by instrument recorded in Book 1158, Page 264.
(ON SUBJECT PROPERTY AS SHOWN HEREON)

10. Fence Boundary Agreement recorded in Book 1980, Page 1770.
(ON SUBJECT PROPERTY. THE LOCATION OF THE FENCE CANNOT BE DETERMINED BY THE DESCRIPTION IN THE RECORDED DOCUMENT)

11. Ordinance 94-36 Designating the Downtown Historic District recorded in Book 3992, Page 724.
(AS TO LOT 9, BLANKET IN NATURE OVER THE PORTION OF SUBJECT PROPERTY SHOWN HEREON.)

12. Easement granted to County of Volusia for Utilities by instrument recorded in Book 7566, Page 3029.
(ON SUBJECT PROPERTY AS SHOWN HEREON)

13. Easement granted to City of Deland by instrument recorded in Book 4012, Page 2182.
(ON SUBJECT PROPERTY AS SHOWN HEREON IN ITS APPROXIMATE LOCATION DUE TO POOR LEGIBILITY.)

14. Reciprocal Easement Agreement recorded in Book 2619, Page 946.
(ON SUBJECT PROPERTY AS SHOWN HEREON)

Certified to:

Blue Sky Communities, LLC, a Florida limited liability company;
First American Title Insurance Company;
Nelson Mullins Riley & Scarborough LLP

This Survey is "Not Valid" without the original signature and seal of this Florida licensed Surveyor and Mapper, unless provided with electronic signature. The seal appearing on this document was authorized by the signing Professional Surveyor and Mapper on the Date of the electronic signature.

JAMES DENNIS BRAY — License Number PSM6507 STATE OF FLORIDA — Professional Surveyor and Mapper

LEGEND

AC	AIR CONDITIONER
-BB-	BOTTOM OF BANK
BHM	BUILDING HEIGHT MEASUREMENT
BFP	BACK FLOW PREVENTER
BM	BENCHMARK
B	BOLLARD
-E-	BURIED ELECTRIC LINE
-C-	BURIED CABLE TELEVISION LINE
CALC	CALCULATED
C&M	CALCULATED & MEASURED
Δ	CENTRAL ANGLE
CBW	CONCRETE BLOCK WALL
CC	COVERED CONCRETE
CCR	CERTIFIED CORNER RECORD
CF	CONCRETE FLUME
CHW	CONCRETE HEADWALL
CLF	CHAIN LINK FENCE
℄	CENTERLINE
CM	CONCRETE MONUMENT
CMP	CORRUGATED METAL PIPE
=CO	CLEAN OUT
CONC	CONCRETE
COVD	COVERED
CP	CONCRETE PAD
	CURB INLET
CW	CONCRETE WALKWAY
-D-	BURIED STORM/DRAIN LINE
DB	DEED BOOK
DE	DRAINAGE EASEMENT
DI	DOT INLET
DP	DUMPSTER PAD
DW	DRIVEWAY
(E)	EASEMENT NUMBER
ED	ELECTRIC BOX
EM	ELECTRICAL METER
EL	ELEVATION
ESMT	EASEMENT
EP	EDGE OF PAVEMENT
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION
FPRN	FLORIDA PERMANENT REFERENCE NETWORK
FIRM	FLOOD INSURANCE RATE MAP
FFE	FINISHED FLOOR ELEVATION
FH	FIRE HYDRANT
-FM-	BURIED FORCE MAIN LINE
FND	FOUND
-FO-	BURIED FIBER OPTIC CABLE LINE
FOB	FIBER OPTIC CABLE BOX
FP	FLAG POLE
-G-	BURIED GAS LINE
GM	GAS METER
GV	GAS VALVE
	GREASE TRAP MANHOLE
	GUY WIRE ANCHOR
	HANDICAP PARKING
HDPE	HIGH DENSITY POLYETHYLENE PIPE
INST#	RECORD INSTRUMENT#
INV	INVERT ELEVATION
IP	IRON PIPE
IR	IRON ROD
L	ARC LENGTH
LB	LICENSED BUSINESS
	LIGHT POLE
LS	LICENSED SURVEYOR
LSA	LANDSCAPED AREA
MF	METAL FENCE
MS	METAL SHED
	MITERED END SECTION
	MONITORING WELL
N&D	NAIL & DISK
NAVD	NORTH AMERICAN VERTICAL DATUM
NAD	NORTH AMERICAN DATUM
NGVD	NATIONAL GEODETIC VERTICAL DATUM
NTS	NOT TO SCALE
ORB	OFFICIAL RECORDS BOOK
-OW-	OVERHEAD WIRE
PB	PLAT BOOK
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PP	PER PLANS
PG	PAGE
PI	POINT OF INTERSECTION
POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
PRC	POINT OF REVERSE CURVATURE
# PS	PARKING SPACES
PSM	PROFESSIONAL SURVEYOR & MAPPER
PSP	PEDESTRIAN SIGNAL POLE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE PIPE
R	CURVE RADIUS
RCP	REINFORCED CONCRETE PIPE
-R-	REUSE WATER LINE
	REUSE WATER METER
	REUSE WATER VALVE
RP	RAMP
R/W	RIGHT-OF-WAY
	SANITARY MANHOLE
-S-	BURIED SANITARY LINE
SF	SQUARE FEET
SP	STATE PLANE
SOO	SHOWN FOR DIRECTION ONLY
SN	SIGN
SWF	STOCK WIRE FENCE
	SEWER VALVE
XXX.00	SPOT ELEVATION
	STORM MANHOLE
-T-	BURIED TELECOMMUNICATIONS LINE
	TELECOMMUNICATIONS MANHOLE
	STORM INLET
TB	TOP OF BANK
DTP	TRAFFIC SIGNAL POLE
	TRAFFIC SIGN
	TRANSFORMER/JUNCTION BOX
	TELEPHONE RISER
	TRAFFIC SIGNAL BOX
	TELEVISION RISER
TSW	TRAFFIC SIGNAL WIRE
TYP	TYPICAL
-U-	UNKNOWN UTILITY
UE	UTILITY EASEMENT
UP	UTILITY POLE
UM	UTILITY MARKER
VCP	VITRIFIED CLAY PIPE
VF	VINYL FENCE
-W-	BURIED WATER LINE
WF	WOOD FENCE
WS	WOOD SHED
	WATER VALVE
	WATER METER
YD	YARD DRAIN

ADDRESS:
225 W. NEW YORK AVE AND 125 N. CLARA AVENUE DELAND, FL 32720

Job Information
JOB NO. 905773
CF NO. VLS-16-40-LOT8-BLK1-Update02
FIELD DATE: 09/29/2023
SCALE: 1" = 30'
DRAWN BY: GLT/DSK

Revisions		
Date:	Description	By:
10/18/23	UPDATE B-II EXCEPTIONS	DSK
10/30/23	OFFSITE TOPOGRAPHY TO WEST	GLT

Altamax Surveying
910 Belle Avenue, Suite 1100
Casselberry, FL 32708
Phone: 407-677-0200
Licensed Business No. 7833
www.altamaxsurveying.com

James D. Bray PSM 6507

SHEET 1 OF 1

ABBREVIATIONS

A	
A	AREA
AB	ANCHOR BOLT
ABD	ABANDON(ED)
AC	ACRE(S)
AC-FT	ACRE FOOT/FEET
ACP	ASBESTOS CEMENT PIPE
ADDL	ADDITIONAL
ADT	AVERAGE DAILY TRAFFIC
AL	ALUMINUM
ALT	ALTERNATE
AM	BEFORE NOON
AMP	AMPERE(S)
APPROX	APPROXIMATE
ARV	AIR RELEASE VALVE
ARVV	AIR RELEASE VACUUM VALVE
ASPH	ASPHALT
ASSY	ASSEMBLY
AVE	AVENUE
AVG	AVERAGE
AZ	AZIMUTH
B	
BFP	BACKFLOW PREVENTER
BL	BASELINE
BLDG	BUILDING
BLVD	BOULEVARD
BM	BENCH MARK
BND	BOUNDARY
BO	BLOWOFF
BOC	BACK OF CURB
BOT	BOTTOM
BRG	BEARING
BS	BOTTOM OF SLOPE
BV	BUTTERFLY VALVE
C	
CAP	CAPACITY
CB	CATCH BASIN
CC	CENTER TO CENTER
CEM	CEMENT
CF	CUBIC FEET
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
C&G	CURB AND GUTTER
CI	CAST IRON
CIP	CAST IRON PIPE
CJ	CONSTRUCTION JOINT
C/L	CENTER LINE
CLP	CONCRETE LIGHT POLE
CLR	CLEAR/CLEARANCE
CLS	CLASS
CM	CONCRETE MONUMENT
CMP	CORRUGATED METAL PIPE
CMPA	CORRUGATED METAL PIPE ARCH
CND	CONDUIT
CO.	COUNTY
CO	CLEANOUT
COL	COLUMN
COMP	COMPLETE
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCT(ION)
CONT	CONTINUOUS
COORD	COORDINATE(S)
COR	CORNER
CPLG	COUPLING
CPP	CONCRETE POWER POLE
CS	CONTROL STRUCTURE
CTG	COATING
CTR	CENTER
CTV	CABLE TELEVISION
CULV	CULVERT
CY	CUBIC YARD
CYL	CYLINDER
D	
DBL	DOUBLE
DEG OR °	DEGREE
DEFL	DEFLECT(ION)
DEPT	DEPARTMENT
DET	DETAIL
DHWL	DESIGN HIGH WATER LEVEL
DI	DUCTILE IRON
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIP	DUCTILE IRON PIPE
DISCH	DISCHARGE
DIST	DISTANCE
DMH	DROP MANHOLE
DN	DOWN
DRN	DRAIN
DWG	DRAWING
DWY	DRIVEWAY
E	
E	EAST
EA	EACH
EC	EDGE OF CONCRETE
ED	ENERGY DISSIPATOR
EF	EACH FACE
EFF	EFFLUENT
EG	EXISTING GRADE
E/L	EASEMENT LINE
ELB	ELBOW
ELEC	ELECTRIC
ELEV	ELEVATION
ELLIP	ELLIPSE/ELLIPTICAL
ENC	ENCASEMENT
ENG	ENGINEER(ING)
EOP	EDGE OF PAVEMENT
EQ	EQUAL/EQUATION
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ESMT	EASEMENT
EST	ESTIMATE
EW	EACH WAY
EWL	ENDWALL
EXC	EXCAVATE/EXCAVATION
EXIST	EXISTING
EXP	EXPAND/EXPANSION
EXT	EXTEND/EXTENSION

F	
F&C	FRAME AND COVER
FD	FLOOR DRAIN
FDN	FOUNDATION
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION
FF	FINISHED FLOOR
FG	FINISHED GRADE
FH	FIRE HYDRANT
F&I	FURNISH AND INSTALL
FIG	FIGURE
FIN	FINISHED
FIT	FITTING
FL	FENCE LINE
FLR	FLOOR
FLEX	FLEXIBLE
FLG	FLANGE
FM	FORCE MAIN
FND	FOUND
FPH	FEET PER HOUR
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FT	FEET/FOOT
FTG	FOOTING
G	
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GM	GAS MAIN
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GPS	GALLONS PER SECOND
GR	GUARD RAIL
GRD	GROUND/GRADE
GSP	GALVANIZED STEEL PIPE
GV	GATE VALVE
GV&B	GATE VALVE AND BOX
GW	GUY WIRE
GWT	GROUND WATER TABLE
H	
HB	HOSE BIBB
HDPE	HIGH DENSITY POLYETHYLENE
HDW	HARDWARE
HOA	HOME OWNERS ASSOCIATION
HORIZ	HORIZONTAL
HP	HORSEPOWER
HR	HOUR
HT	HEIGHT
HW	HEADWALL
HWL	HIGH WATER LEVEL
HWY	HIGHWAY
HYD	HYDRAULIC
I	
I-4	INTERSTATE HIGHWAY
IA	INTERSECTION ANGLE
ID	INSIDE DIAMETER
IF	INSIDE FACE
IN	INCHES
INL	INLET
INS	INSERT
INST	INSTALL
IP	IRON PIPE
IR	IRON ROD
INT	INTERSECT/INTERSECTION
INV	INVERT
J	
JB	JUNCTION BOX
JCT	JUNCTION
JST	JOIST
JT	JOINT
L	
L	LENGTH
LAT	LATITUDE
LATL	LATERAL
LB	POUND
LF	LINEAR FEET/FOOT
LG	LONG
LIM	LIMIT(S)
LP	LIGHT POLE
LONG	LONG
LT	LEFT
LWL	LOW WATER LEVEL
M	
MAINT	MAINTENANCE
MATL	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
ME	MITERED END
MFR	MANUFACTURER
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MHC	MANHOLE COVER
MHWL	MEAN HIGH WATER LEVEL
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MLP	METAL LIGHT POLE
MLWL	MEAN LOW WATER LEVEL
MON	MONUMENT
MPH	MILES PER HOUR
MSL	MEAN SEA LEVEL
MTG	MOUNTING
N	
NAWTH	NORTH
N	NORTH
NA	NOT APPLICABLE
N&C	NAIL AND CAP
NE	NORTHEAST
NG	NATURAL GROUND
NIC	NOT IN CONTRACT
NO OR #	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
NW	NORTHWEST
NWL	NORMAL WATER LEVEL
O	
OC	ON CENTER
OD	OUTSIDE DIAMETER
OE	OR EQUAL
OPNG	OPENING
OPP	OPPOSITE
ORCP	OVAL REINFORCED CONCRETE PIPE
OS	OUTFALL STRUCTURE
OVFL	OVERFLOW
OVHD	OVERHEAD

P	
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PEP	POLYETHYLENE PIPE
PFGP	PROFILE GRADE POINT
PI	POINT OF INTERSECTION
P/L	PROPERTY LINE
POB	POINT OF BEGINNING
POJ	PUSH ON JOINT
PP	POLYPROPYLENE
PR	PHONE RISER
PRC	POINT OF REVERSE CURVATURE
PRESS	PRESSURE
PROJ	PROJECT
PROP	PROPOSED
PRVC	POINT OF REVERSE VERTICAL CURVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PWR	POWER
Q	
Q	FLOW RATE
R	
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
RD	ROAD
RDY	ROADWAY
RED	REDUCER
REF	REFERENCE
REINF	REINFORCE(D)
REQD	REQUIRED
REV	REVISE/REVISION
RPM	REVOLUTIONS PER MINUTE
RR	RAILROAD
RT	RIGHT
RV	RELIEF VALVE
R/W	RIGHT-OF-WAY
RWM	REUSE WATER MAIN
S	
S	SOUTH
SAN	SANITARY SEWER
SB	SPLASH BLOCK
SCH	SCHEDULE
SD	SIDE DRAIN
SDN	SHELF DRAIN
SE	SOUTHEAST
SEC	SECONDS
SECT	SECTION
SH	SHEET
SHGWT	SEASONAL HIGH GROUND WATER TABLE
SIM	SIMILAR
S/L	SETBACK LINE
SL	SLOPE
SM	SHEET METAL
SPEC	SPECIFICATION(S)
SQ	SQUARE
SQ IN	SQUARE INCH(ES)
SQ FT	SQUARE FOOT/FEET
SQ YD	SQUARE YARD(S)
SR	STATE ROAD
SS	STAINLESS STEEL
ST	STREET
STA	STATION
STD	STANDARD
STL	STEEL
STR	STRUCTURE
STS	STORM SEWER
SUP	SUPPORT
SUSP	SUSPEND/SUSPENSION
SVC	SERVICE
SW	SOUTHWEST
SWK	SIDEWALK
SYM	SYMBOL(S)
SYMM	SYMMETRICAL
SYS	SYSTEM
T	
T	TANGENT
TB	TURFBLOCK
T&B	TOP AND BOTTOM
TBM	TEMPORARY BENCH MARK
TC	TIME OF CONCENTRATION
TD	TRENCH DRAIN
TDH	TOTAL DYNAMIC HEAD
TECH	TECHNICIAN/TECHNICAL
TEMP	TEMPORARY
TL	TERMINAL LAMPHOLE
TOB	TOP OF BANK
TOC	TOP OF CURB
TOS	TOE OF SLOPE
TOT	TOTAL
TS	TOP OF SLOPE
TS&V	TAPPING SLEEVE & VALVE
TWP	TOWNSHIP
TYP	TYPICAL
U	
UD	UNDERDRAIN
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
UTC	UNDERGROUND TELEPHONE CABLE
V	
VB	VALVE BOX
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VPC	VERTICAL POINT OF CURVE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
W	
W	WEST
W/	WITH
WM	WATER MAIN
W/O	WITHOUT
WP	WATER/WEATHER PROOF
WPP	WOOD POWER POLE
WS	WATER SURFACE
WSWT	WET SEASON WATER TABLE
WT	WEIGHT
WV	WATER VALVE
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
Y	
YD	YARD
YR	YEAR
MISC	
&	AND
@	AT
Δ	DELTA

EXISTING SYMBOLS

LINES

- CENTER LINE
- WIRE FENCE
- CHAIN LINK FENCE
- WOOD FENCE
- GUARDRAIL
- EXISTING PLATS
- RETAINING WALL
- RIGHT-OF-WAY LINE
- SHORELINE
- SWALE
- BUILDING LINE
- CONTOURS (81 / 80)
- RAILROAD TRACKS
- GAS MAIN (GAS)
- UNDERGROUND ELECTRIC (UE)
- UNDERGROUND TELEPHONE (UGT)
- OVERHEAD ELECTRIC
- OVERHEAD TELEPHONE
- UNDERGROUND CABLE TELEVISION (CTV)
- EASEMENT

SANITARY

- SANITARY SEWER LINE (S)
- CLEANOUT
- FORCE MAIN (EX. FM)
- MANHOLE (S)

WATER & REUSE WATER

- WATER MAIN DIP PIPE (EX. WM)
- REUSE WATER MAIN (EX. RM)
- BACKFLOW PREVENTOR (B.F.P.)
- WATER VALVE (WV)
- FIRE HYDRANT
- WATER METER

STORM DRAIN

- STORM SEWER
- MANHOLE (D)
- MITERED END
- STORM INLET
- FDOT TYPE 6 INLET
- FDOT TYPE 1 INLET
- FDOT TYPE 2 INLET
- FDOT TYPE 3 INLET
- FDOT TYPE 4 INLET
- FDOT TYPE 5 INLET

HIGHWAY & UTILITIES

- BENCHMARK
- RECOVERED 4x4 CM
- SET 4x4 CM
- SET IRON ROD
- RECOVERED IRON ROD
- CONCRETE
- COUNTY ROADS (520)
- INTERSTATE ROADS (95)
- STATE ROADS (50)
- WOOD AND/OR METAL LIGHT POLE
- CONCRETE LIGHT POLE
- YARD LIGHT
- MISCELLANEOUS SIGN
- SECTION CORNER (16 / 15 / 21 / 22)
- EDGE OF PAVEMENT W/O CURB
- EDGE OF PAVEMENT W/CURB
- GUY POLE
- WOOD UTILITY POLE
- CONCRETE UTILITY POLE
- ELECTRIC MANHOLE (E)
- TELEPHONE MANHOLE (T)
- TELEPHONE RISER (T)
- ELECTRIC BOX / TRANSFORMER (E)
- WELL (W)
- MONITORING WELL (MW)
- DUMPSTER
- RR CROSSING SIGN (RR)
- RR CROSSING GATE
- TRAFFIC SIGNAL POLE
- SATELLITE DISH
- GUY WIRE
- HANDICAP PARKING
- 99.50 SPOT ELEVATION
- BRICK PAVERS
- DIRT ROAD
- 8" MAPLE TREE
- 8" OAK TREE
- 8" PINE TREE
- 8" PALM TREE
- 8" MISC. TREE

PROPOSED SYMBOLS

LINES

- PROPERTY LINE
- CONSERVATION SETBACK
- CENTER LINE
- CHAIN LINK FENCE
- CONTOUR (81 / 80)
- EASEMENT
- FENCE
- GUARDRAIL
- LOT LINE
- RETAINING WALL
- RIGHT-OF-WAY LINE
- SETBACK LINE
- SHORELINE
- SWALE
- TREE LINE

SANITARY

- 100 LF SAN 8 PVC 0.40% — 100 LINEAR FEET SANITARY 8" PVC PIPE @ 0.40% SLOPE
- CLEANOUT
- DOUBLE SANITARY SERVICE
- FORCE MAIN PVC PIPE (FM)
- MANHOLE

WATER & REUSE WATER

- WATER MAIN PVC PIPE (WM)
- 11 1/2° BEND
- 22 1/2° BEND
- 45° BEND
- 90° BEND
- TEE
- CROSS
- CHECK VALVE
- DOUBLE DETECTOR CHECK VALVE
- DOUBLE WATER SERVICE
- GATE VALVE
- FIRE HYDRANT
- METER (M)
- REDUCER
- BLOWOFF
- BACKFLOW PREVENTER
- SAMPLE POINT (SP 2)
- CEANOUT
- RECLAIM WATER MAIN (RWM)
- DOUBLE RECLAIM WATER SERVICE

STORM DRAIN

- 100 LF 24 HDPE @ 0.20% — 100 LINEAR FEET STORM PIPE 24" HIGH DENSITY POLYETHELENE PIPE @ 0.20%
- UNDERDRAIN 6" HDPE PIPE
- DRAINAGE FLOW DIRECTION
- FDOT INLET TYPE 1
- FDOT INLET TYPE 2
- FDOT INLET TYPE 3
- FDOT INLET TYPE 4
- FDOT INLET TYPE 5
- FDOT INLET TYPE 6
- MANHOLE
- MITERED END SECTION
- SLOPE DIRECTION ARROW FOR POND SIDE SLOPE
- 000.00 SPOT ELEVATION
- STORM INLET

HIGHWAY & UTILITIES

- BOUND CORNER
- CONCRETE
- 520 COUNTY ROADS
- 711-001 / C900 DETAIL REFERENCE
- DUMPSTER
- FF=98.76 TYPE A — FINISHED FLOOR ELEVATION W/ FHA LOT TYPE
- GUY POLE
- HANDICAP PARKING
- 95 INTERSTATE ROADS
- LIGHT POLE
- SIGNS
- 16 / 15 / 21 / 22 SECTION CORNER
- 50 STATE ROADS
- SILT FENCE
- TRAFFIC FLOW PAVEMENT MARKING
- UTILITY POLE
- BLDG OR STRUCTURE
- TYPE F CURB & GUTTER
- MIAMI CURB
- VERTICAL CURB
- 901 / 24 CROSS SECTION DETAIL

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

SYMBOLS AND ABBREVIATIONS
FOR
NEW YORK AVE APARTMENTS
CITY OF DELAND
FLORIDA

ENGINEER IN CHARGE:
BLUE IAN, LLC
150 FOUNTAIN PKWY N.
ST. PETERSBURG, FL 33716
DAVID A. STOKES, P.E. #66527
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

July 10, 2025

NO	DATE	REVISIONS
1	03/25/25	ENTIRE SET REVISED PER BUILDING CHANGES
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		

JOB # 23201
DATE: 03/25/25
SCALE: N.T.S.
DESIGNED BY: TRF
DRAWN BY: TRF
APPROVED BY: DAS

C002

THESE PLANS ARE THE PROPERTY OF BLUE IAN, LLC AND ARE NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE EXPRESS WRITTEN CONSENT OF BLUE IAN, LLC

GENERAL NOTES

1. ALL CONSTRUCTION WORK SHALL BE IN ACCORDANCE WITH THE LATEST LOCAL AGENCY DETAILS, THE FDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" LATEST EDITIONS OF, AND THE FDOT "STANDARD PLANS", WHICHEVER IS MORE STRINGENT.

2. ALL FDOT DESIGN INDICES ARE HEREBY INCORPORATED AS PLAN REFERENCES HEREIN. CONTRACTOR IS RESPONSIBLE FOR OBTAINING COMPLETE COPIES OF ALL APPLICABLE INDEX DRAWINGS AND CONSTRUCTING ALL WORKS IN CONFORMANCE WITH THE FDOT STANDARD PLANS, LATEST EDITION.

3. THE LOCATIONS OF EXISTING UTILITIES SUCH AS WATER MAINS, SEWER MAINS, GAS LINES, ETC., AS SHOWN ON THE PLANS, WITH THE EXCEPTION OF THE LOCATIONS OF EXISTING UTILITIES AT ALL POINTS OF CONNECTION TO AND AT ALL AREAS OF CONFLICT WITH UTILITY PROVIDER MAINS, WHICH HAVE BEEN FIELD VERIFIED, HAVE BEEN DETERMINED FROM THE BEST AVAILABLE INFORMATION AND ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. HOWEVER, THE ENGINEER AND OWNER DO NOT ASSUME RESPONSIBILITY FOR THE SIZES AND LOCATIONS SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF THE SIZE AND LOCATION OF ALL EXISTING UTILITIES SHOWN AND NOT SHOWN ON THESE PLANS.

4. CONTRACTOR, INCLUDING ANY SUB-CONTRACTORS, IS RESPONSIBLE TO ENSURE THAT ALL REQUIRED PERMITS ARE OBTAINED AND ARE IN HAND AT THE JOB SITE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. CONTRACTOR SHALL ABIDE BY ALL CONDITIONS CONTAINED THEREIN. PERMITS INCLUDED (BUT NOT NECESSARILY LIMITED TO) ARE:
   - ACOE NATIONWIDE OR INDIVIDUAL DREDGE AND FILL
   - FDEP WATER DISTRIBUTION
   - FDEP SANITARY SEWER COLLECTION AND TRANSMISSION
   - FDEP RECEIVING
   - FDEP DREDGE AND FILL
   - FDEP NPDES GENERIC PERMIT FOR STORMWATERDISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES
   - FDOT DRIVEWAY CONNECTION
   - FDOT UTILITY
   - FDOT STORMWATER DISCHARGE CONNECTION
   - FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION PERMIT FOR IMPACTS TO PROTECTED SPECIES
   - LOCAL RIGHT OF WAY USE
   - LOCAL UNDERGROUND UTILITIES
   - WATER MANAGEMENT DISTRICT CONSUMPTIVE USE FOR CONSTRUCTION DEWATERING (CUP)
   - WATER MANAGEMENT DISTRICT ENVIRONMENTAL RESOURCE PERMIT (ERP)

5. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL SETBACKS AND EASEMENTS BEFORE BEGINNING CONSTRUCTION.

6. BENCHMARKS AND OTHER REFERENCE POINTS SHALL BE CAREFULLY MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. IF DISTURBED OR DESTROYED, THESE POINTS SHALL BE REPLACED BY A LICENSED FLORIDA PROFESSIONAL LAND SURVEYOR (P.L.S.) AT CONTRACTOR'S EXPENSE.

7. DIFFERING SITE CONDITIONS FROM THAT WHICH IS REPRESENTED HEREON, WHETHER ABOVE, ON, OR BELOW THE SURFACE OF THE GROUND, SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER AND OWNER IN WRITING. NO CLAIM FOR EXPENSES INCURRED BY THE CONTRACTOR DUE TO DIFFERING SITE CONDITIONS WILL BE ALLOWED IF CONTRACTOR FAILS TO PROVIDE THE REQUIRED WRITTEN NOTIFICATION OF SUCH CONDITIONS TO THE ENGINEER AND OWNER.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEMOLITION AND REMOVAL OF ALL EXISTING STRUCTURES, ETC., UNLESS OTHERWISE NOTED. ALL SOIL STRIPPINGS AND ANY UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR UNLESS OTHERWISE DIRECTED BY THE OWNER.

9. THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES AND UTILITIES NOTED TO REMAIN FROM DAMAGE OR DISPLACEMENT DURING CONSTRUCTION. IN THE EVENT OBSTRUCTIONS ARE ENCOUNTERED, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER AND THE UTILITY COMPANY. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS INCURRED TO REPAIR DAMAGE OR CORRECT DISPLACEMENT.

10. CONTRACTOR SHALL BE EXTREMELY CAUTIOUS WHEN WORKING NEAR TREES WHICH ARE TO BE SAVED, WHETHER SHOWN IN THE PLANS OR DESIGNATED IN THE FIELD. CONTRACTOR SHALL BECOME FAMILIAR WITH AND CONFORM WITH ALL TREE PROTECTION/PRESERVATION PROVISIONS OF THE PRELIMINARY SUBDIVISION PLAN / DEVELOPMENT PLAN AND LOCAL GOVERNMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT AND MITIGATION COSTS FOR ANY TREES REMOVED THAT WERE DESIGNATED TO BE PRESERVED.

11. WHEN DETAILS ARE PROVIDED, CONTRACTOR SHALL CONSTRUCT JOB PER SPECIFIC DETAILS, AND NOT BY SCALING FROM THESE PLANS.

12. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ANY REQUIRED TRAFFIC CONTROL PLANS. ALL WORK SHALL BE EXECUTED UNDER THE ESTABLISHED PLAN AND FDOT, AND LOCAL AGENCY APPROVED PROCEDURES.

13. THE CONTRACTOR SHALL RESTORE OFF SITE CONSTRUCTION AREAS TO EQUAL OR BETTER CONDITION THAN EXISTED PRIOR TO COMMENCEMENT OF CONSTRUCTION.

14. AS-BUILT DRAWINGS SHALL BE KEPT BY THE CONTRACTOR AND SUBMITTED TO THE PROJECT ENGINEER UPON PROJECT COMPLETION.

15. CONTRACTOR SHALL COMPLY WITH ALL LOCAL AGENCY REQUIREMENTS FOR INSPECTION AND TESTING.

16. ALL NEW UTILITIES AND UPGRADED UTILITIES PROVIDED TO OR ON THE SITE MUST BE INSTALLED UNDERGROUND.

17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RESTORATION OF ANY TRAFFIC SIGNAL EQUIPMENT INCLUDING BUT NOT LIMITED TO FIBER LOOP SENSORS PULL BOXES, CONDUIT TRAFFIC SIGNALS, AND CABINETS. ANY ITEMS DAMAGED BY THE CONTRACTOR WILL BE RESTORED TO THEIR ORIGINAL CONDITIONS UNLESS OTHERWISE AGREED UPON BY THE COUNTY TRAFFIC ENGINEER.

18. ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH UTILITY PROVIDER'S STANDARDS AND CONSTRUCTION SPECIFICATIONS, LATEST EDITION.

19. CONTRACTOR SHALL NOTIFY ALL APPROPRIATE UTILITY COMPANIES OF PROPOSED START OF WORK IN ACCORDANCE WITH THEIR STANDARD REQUIREMENTS; INCLUDING BUT NOT LIMITED TO, WATER, RECLAIMED WATER, SEWER, POWER, TELEPHONE, GAS AND CABLE TV COMPANIES.

20. PRIOR TO COMMENCEMENT, CONTRACTOR SHALL PROVIDE ENGINEER WITH CONSTRUCTION SCHEDULE FOR VARIOUS SITE WORK ELEMENTS SO THAT PERIODIC SITE VISITS MAY BE COORDINATED TO ENSURE TIMELY CERTIFICATION OF COMPLETION TO AGENCIES AND AVOID DELAYS IN ISSUANCE OF CERTIFICATES OF OCCUPANCY/COMPLETION.

21. ALL RECOMMENDATIONS AND REQUIREMENTS OF INSPECTION PERSONNEL OTHER THAN OWNER/OWNER'S REPRESENTATIVE SHALL BE REPORTED TO ENGINEER/OWNER/OWNER'S REPRESENTATIVE PRIOR TO IMPLEMENTATION. COMPENSATION WILL NOT BE ALLOWED FOR WORK THAT IS NOT AUTHORIZED BY ENGINEER/OWNER/OWNER'S REPRESENTATIVE.

22. CONTRACTOR SHALL CONFIRM COMPATIBILITY OF PIPE SLOPES AND INVERTS DURING SHOP DRAWING AND MATERIALS ORDERING PHASE OF PROJECT AND ADVISE ENGINEER OF ANY DISCREPANCIES.

23. NO EXISTING MATERIAL SHALL BE USED IN NEW CONSTRUCTION UNLESS APPROVED DURING THE SHOP DRAWING APPROVAL PROCESS BY ENGINEER/OWNER/OWNER'S REPRESENTATIVE IN WRITING.

GENERAL NOTES (CONTINUED)

24. CONTRACTOR SHALL STAKE ALL IMPROVEMENTS USING THE PLAT(S), ROAD CENTERLINE GEOMETRY, AND BUILDING COORDINATES PROVIDED IN THESE PLANS. CONTRACTOR SHALL CONFIRM WITH THE ENGINEER THAT THE PLAT IS CURRENT PRIOR TO CONSTRUCTION.

25. CONTRACTOR SHALL CONFIRM THE BUILDING DIMENSIONS SHOWN HEREIN WITH THOSE IN THE FINAL ARCHITECTURAL DRAWINGS PRIOR TO STAKEOUT. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO COMPLETELY STAKE AND CHECK ALL IMPROVEMENTS TO ENSURE ADEQUATE POSITIONING, BOTH HORIZONTAL AND VERTICAL, INCLUDING MINIMUM BUILDING SETBACKS PRIOR TO THE INSTALLATION OF ANY IMPROVEMENT.

PAVING AND DRAINAGE

1. THE CONTRACTOR SHALL CONSTRUCT PAVEMENT IN ACCORDANCE WITH TYPICAL PAVEMENT SECTIONS AND LOCAL AGENCY SPECIFICATIONS. THE FINISHED PAVEMENT GRADES SHALL CONFORM TO THOSE SPECIFIED ON THE GRADING PLAN.

2. FLORIDA LAW (F.S. 553.851) PROTECTION OF UNDERGROUND PIPELINES MANDATES THAT "NO EXCAVATOR SHALL COMMENCE OR PERFORM ANY EXCAVATION IN ANY PUBLIC OR PRIVATE STREET, ALLEY, RIGHT-OF-WAY DEDICATED TO THE PUBLIC USE, OR GAS UTILITY EASEMENT WITHOUT FIRST OBTAINING INFORMATION CONCERNING THE POSSIBLE LOCATION OF GAS PIPELINES IN THE AREA OF THE PROPOSED EXCAVATION." THIS INCLUDES ANY OPERATION UTILIZING HAND TOOLS OR POWER TOOLS WHICH MOVES OR REMOVES ANY STRUCTURE, EARTH, ROCK, OR OTHER MASS OF MATERIAL BY SUCH METHODS AS DIGGING, BACKFILLING, DEMOLITION, GRADING, DITCHING, DRILLING, BORING AND CABLE PLOWING. THE EXCAVATOR MUST NOTIFY THE GAS UTILITY A MINIMUM OF 48 HOURS AND A MAXIMUM OF 5 DAYS PRIOR TO EXCAVATING (EXCLUDING SATURDAYS, SUNDAYS, AND LEGAL HOLIDAYS).

3. EXCAVATION, PAVING, AND STORM SEWER WORK SHALL BE DONE IN ACCORDANCE WITH FDOT "STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION", LATEST EDITION, AND LOCAL AGENCY SPECIFICATIONS.

4. UNLESS OTHERWISE NOTED, GRADE TO MEET EXISTING ELEVATIONS AT PROPERTY LINES. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE OF THE SITE TO THE RETENTION PONDS AS SHOWN BY PROPOSED GRADES AND FLOW ARROWS.

5. DURING CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE ADEQUATE DRAINAGE AND PROPER SOIL EROSION CONTROL MEASURES FOR PROTECTION OF ALL DRAINAGE AND SEWER STRUCTURES AND AT ALL ADJACENT LANDS AND ROADS.

6. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY AND ALL GEOTECHNICAL REPORTS PREPARED FOR THE SITE. GEOTECHNICAL RECOMMENDATIONS ARE NOT THE RESPONSIBILITY OF ENGINEER. ENGINEER HAS RELIED ON THE GEOTECHNICAL REPORT(S) IN PREPARATION OF THE DRAWINGS. ANY CONFLICT BETWEEN INFORMATION WITHIN THE REPORT AND THESE DRAWINGS SHALL BE REPORTED TO ENGINEER/OWNER /OWNER'S REPRESENTATIVE. ENGINEER ASSUMES NO RESPONSIBILITY FOR THE CORRECTNESS, COMPLETENESS, OR ACCURACY OF GEOTECHNICAL INFORMATION.

7. THE SITE SHALL BE CLEARED OF ALL TREES EXCEPT THOSE WHICH ARE DESIGNATED TO BE SAVED OR RELOCATED. BEFORE CONSTRUCTION, THE CONTRACTOR SHALL MEET AT THE SITE WITH THE OWNER. AT THIS TIME, ANY TREES TO BE SAVED SHALL BE POINTED OUT AND TAGGED. THESE TREES SHALL BE PROTECTED FROM DAMAGE.

8. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE SUPERVISING ENGINEER IF A PAVEMENT OR FOUNDATION STAKE IS DISTURBED.

9. THE CONTRACTOR SHALL INSTALL DROP CURBS AND HANDICAP RAMPS AT ALL INTERSECTIONS OF THE SIDEWALK WITH THE PROPOSED PAVEMENT, UNLESS OTHERWISE SPECIFIED.

10. FOR HORIZONTAL AND VERTICAL CLEARANCES BETWEEN STORM PIPES AND WATER MAINS/SERVICES, SEE WATER NOTES ON THIS SHEET AND FDEP SEPARATION TABLE ON UTILITY PLAN.

11. ALL PUBLIC STORM PIPE MATERIALS SHALL BE REINFORCED CONCRETE PIPE (RCP) ASTM C-76 CLASS III, UNLESS OTHERWISE SPECIFIED. LIFTING HOLES ARE PROHIBITED.

12. ALL PRIVATE STORM PIPE MATERIALS SHALL BE AS FOLLOWS:
    12.1. DIAMETERS LESS THAN OR EQUAL TO 12-INCH SHALL BE HIGH DENSITY POLYETHYLENE (HDPE) PIPE
    12.2. DIAMETERS GREATER THAN OR EQUAL TO 15-INCH SHALL BE POLYPROPYLENE (PP) PIPE.

13. MINIMUM COVER OVER ALL PIPE SHALL BE 36-INCHES FROM TOP OF PIPE TO FINISHED GRADE, UNLESS OTHERWISE NOTED.

14. ALL STORM SYSTEM MANHOLE AND INLET STRUCTURES SHALL BE PRECAST CONCRETE.

15. THE CONTRACTOR SHALL USE CONCRETE WITH A MINIMUM 28 DAY STRENGTH OF 3,000 P.S.I..

16. ALL SIDEWALK WIDTHS SHALL BE AS NOTED ON THE SITE PLAN AND SHALL HAVE 1-INCH DEEP CONTRACTION JOINTS EVERY 5-FEET AND AN EXPANSION JOINT EVERY 20-FEET (MINIMUM). MAXIMUM SIDEWALK CROSS SLOPES SHALL BE 2.00% AND MAXIMUM SIDEWALK RUNNING SLOPES SHALL BE 5.00% EXCEPT AT RAMP LOCATIONS. MAXIMUM RAMP SLOPES SHALL BE 8.33%.

17. PROVIDE FDOT TYPE III SILT FENCE ALONG THE PROPERTY LINES AND PHASE LINES AS WELL AS ANY CONSTRUCTION WITHIN THE OTHER PHASES THAT IS DEEMED NECESSARY.

18. ALL TEST REPORTS GENERATED BY A TESTING FIRM ARE TO HAVE COPIES SENT DIRECTLY TO THE LOCAL AGENCY AS SOON AS THEY ARE GENERATED. CLEARANCE FROM THE LOCAL AGENCY SHALL BE RECEIVED PRIOR TO PAVING.

19. THE BASE COURSE SHALL NOT BE CONSTRUCTED UNTIL AFTER SUBGRADE CONSTRUCTION HAS BEEN COMPLETED AND REQUIRED SUBGRADE TEST RESULTS HAVE BEEN SUBMITTED TO AND APPROVED BY THE LOCAL AGENCY'S ENGINEER.

20. THE FINISHED BASE COURSE SHALL BE PRIMED WITHOUT DELAY, PROTECTED FROM HEAVY TRAFFIC, AND CONTINUOUSLY MAINTAINED FREE OF DAMAGE UNTIL THE WEARING SURFACE IS APPLIED. ALL BAD AREAS SHALL BE CUT OUT AND REPLACED PRIOR TO APPLYING WEARING SURFACE.

21. ASSUMING ACCEPTABLE CURING, THE WEARING SURFACE SHALL BE APPLIED NO SOONER THAN SEVEN (7) DAYS AND NO LATER THAN THIRTY (30) DAYS AFTER BASE COMPLETION.

22. ALL CONCRETE PIPE JOINTS SHALL BE WRAPPED IN FILTER FABRIC.

23. ROADWAY MARKING, STRIPING, SIGNS, AND OTHER TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" (MUTCD), INCLUDING SUBSEQUENT REVISIONS AND ADDENDUMS, AS PUBLISHED BY THE USDOT FEDERAL HIGHWAY ADMINISTRATION AS WELL AS FDOT AND LOCAL AGENCY STANDARDS AND SPECIFICATIONS.

24. ALL OFFSITE ROADWAY MARKING/STRIPING MATERIAL SHALL BE THERMOPLASTIC UNLESS OTHERWISE SPECIFIED.

25. ALL ONSITE ROADWAY MARKING/STRIPING MATERIAL SHALL BE PAINT UNLESS OTHERWISE SPECIFIED.

26. REGULATORY SIGNS AND MARKINGS SHALL BE IN PLACE PRIOR TO FINAL INSPECTION OF PAVING AND DRAINAGE IMPROVEMENTS.

PAVING AND DRAINAGE (CONTINUED)

27. PAVEMENT RETURN RADII SHALL BE MEASURED TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

28. POND SLOPES AND BERMS SHALL BE SODDED TO TWO (2) FEET BELOW THE NORMAL WATER LINE (N.W.L.). IN THE CASE OF DRY BOTTOM PONDS, THE BOTTOM WILL BE SEEDED AND MULCHED UNLESS OTHERWISE SPECIFIED.

29. ALL PRECAST DRAINAGE STRUCTURES TO HAVE STEEL FRAME. ALL STRUCTURES IN PAVED AREAS TO HAVE STEEL RECTILINEAR GRATES WITH H-20 LOADING.

30. CONTRACTOR SHALL NOT COMPACT, STABILIZE, OR CONSTRUCT BASE COURSE WITHIN LANDSCAPE ISLANDS, TRACTS OR MEDIANS. WHERE SUCH TREATMENT DOES OCCUR, IT SHALL BE REMOVED AND REPLACED WITH SUITABLE PLANTING SOILS ACCEPTABLE TO LANDSCAPE ARCHITECT.

31. YARD DRAINS SHALL BE NYOPLAST INLINE DRAINS AND DRAIN BASINS, OR APPROVED EQUAL, WITH CAST IRON GRATES AND WATERTIGHT ADAPTER CONNECTIONS. DOMED GRATES SHALL BE PROVIDED IN NON-SODDED AREAS.

32. ALL FIRE HYDRANT LOCATIONS SHALL BE MARKED BY PLACING BLUE REFLECTIVE PAVEMENT MARKERS IN THE CENTER OF THE NEAREST TRAVEL LANE.

33. MINIMUM LONGITUDINAL SLOPE OF CURB SHALL BE 0.30% UNLESS SPECIFIED OTHERWISE.

34. FINISHED FLOOR ELEVATION IS TYPICALLY 8" INCHES ABOVE DESIGN FINISHED GRADE AT OUTSIDE PERIMETER OF BUILDINGS EXCEPT AT ENTRIES AND WHERE OTHERWISE SHOWN.

35. CONTRACTOR SHALL REMOVE ALL MUCK DEPOSITS IN CONSTRUCTION AREAS AND AREAS TO BE FILLED. SEE GEOTECHNICAL REPORT.

36. DRAINAGE MANHOLES AND INLETS (NOT INCLUDING CONTROL STRUCTURES) IN THE PLANS ARE IDENTIFIED BY TOP TYPE ONLY. CONTRACTOR SHALL PROVIDE STANDARD DITCH BOTTOM INLET TOPS AND TYPE 'J' OR 'P' STRUCTURE BOTTOMS, SIZED AS REQUIRED TO ACCOMMODATE PIPE SIZES AND ORIENTATIONS SHOWN. SHOP DRAWINGS SHALL BE SUBMITTED WHICH CLEARLY REPRESENT SUCH DATA.

37. CONTRACTOR SHALL STABILIZE AND PROTECT ALL END WALL, MITERED END SECTION, FLARED END SECTION, ETC. STRUCTURES THROUGHOUT THE PROJECT UNTIL THE BANK SLOPES OF THE RECEIVING WATER BODY ARE STABILIZED AND ACCEPTED BY OWNER.

SANITARY SEWER

1. ROOF DRAINS, FOUNDATION DRAINS OR OTHER STORM WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.

2. GRAVITY SEWER PIPE SHALL BE SDR35 PVC AND SHALL MEET ASTM D3034, UNLESS OTHERWISE SPECIFIED.

3. ALL SANITARY SERVICE LATERALS SHALL BE 6-INCH DIAMETER PVC AND SHALL END WITH A CLEAN OUT.

4. ALL SANITARY SEWER PIPE SHALL BE COLORED GREEN.

5. ALL SANITARY SEWER MANHOLES SHALL HAVE A MINIMUM DIAMETER OF 48-INCHES AND A MINIMUM ACCESS DIAMETER OF 22-INCHES.

6. MINIMUM COVER OVER ALL PIPE SHALL BE 36-INCHES FROM TOP OF PIPE TO FINISHED GRADE, UNLESS OTHERWISE NOTED.

7. FOR HORIZONTAL AND VERTICAL CLEARANCES BETWEEN SANITARY SEWER MAINS/ LATERALS AND WATER MAINS/SERVICES, SEE WATER NOTES ON THIS SHEET AND FDEP SEPARATION TABLE ON UTILITY PLAN.

8. WHERE SOIL REPORT INDICATES THE POSSIBILITY OF UNSUITABLE MATERIAL IN THE VICINITY OF SANITARY LINES, THE CONTRACTOR SHALL DETERMINE THE NATURE AND EXTENT OF THIS UNSUITABLE MATERIAL, PREPARE TRENCH, AND INSTALL THE SEWER LINE IN ACCORDANCE WITH ASTM D-2321. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER OF THIS UNSUITABLE MATERIAL.

9. THE CONTRACTOR SHALL BE REQUIRED TO PERFORM INFILTRATION OR EXFILTRATION TEST, WHICHEVER IS APPLICABLE. INFILTRATION SHALL NOT EXCEED 50 GALLONS PER DAY PER INCH OF DIAMETER PER MILE OF LENGTH, OR THE COMPUTED EQUIVALENT FOR SHORTER LENGTHS OF TIME. THE CONTRACTOR SHALL MEET ALL REQUIREMENTS, CODES, AND ORDINANCES OF THE WASTEWATER TRANSMISSION AUTHORITY INCLUDING ADVANCED NOTIFICATION PRIOR TO CONSTRUCTION AND TESTING.

10. MADDEN, MOORHEAD & STOKES, LLC SHALL BE NOTIFIED A MINIMUM OF FIVE (5) FULL WORKING DAYS PRIOR TO CONSTRUCTION AND TESTING OF THE SANITARY SEWER, PHONE (407)-629-8330.

11. THE CONTRACTOR SHALL SUPPLY COMPLETE "AS BUILT" INFORMATION RELATIVE TO INVERTS, RIM ELEVATIONS, LOCATION OF MANHOLES AND LENGTHS OF PIPE. LATERALS SHALL BE LOCATED FROM THE CENTERLINE OF THE NEAREST DOWNSTREAM MANHOLE. THE INFORMATION SHALL BE SUBMITTED ON LEGIBLY MARKED-UP PRINTS TO THE ENGINEER WITHIN TWO (2) WEEKS OF COMPLETION OF SEWER CONSTRUCTION.

12. CONTRACTOR SHALL RECEIVE SEWER CERTIFICATION PRIOR TO PLACEMENT OF BASE COURSE.

13. MINIMUM SLOPE ON ALL SANITARY SEWER GRAVITY MAINS SHALL BE IN ACCORDANCE WITH UTILITY PROVIDER'S STANDARDS AND CONSTRUCTION SPECIFICATIONS, LATEST EDITION.

14. ALL SANITARY SERVICE LOCATIONS SHALL BE MARKED BY CUTTING AN "S" INTO THE CURB.

15. MARK RESIDENTIAL LATERALS WITH 6-FOOT HIGH PIECE OF 2"x4" PLANK PAINTED GREEN WITH LOT NUMBER CLEARLY MARKED AND AN 'S' IMPRESSED IN THE CURB.

16. AIR RELEASE VALVES SHALL BE REQUIRED AT ALL HIGH POINTS ALONG THE FORCE MAIN.

17. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT AN EVEN TRANSITION IS MAINTAINED WHERE ASPHALT PAVING ABUTS MANHOLE/VALVE COVERS IN PAVED AREAS. AT EACH OF THESE LOCATIONS THE CONTRACTOR SHALL POUR AN 8-INCH THICK CONCRETE APRON AROUND THE MANHOLE/VALVE COVER A MINIMUM OF 4'x4' AT MANHOLES, AND 2'x2' AT VALVE COVERS LEVEL WITH THE FINAL LIFT OF ASPHALT.

18. PIPE LENGTHS SHOWN REPRESENT SCALED DISTANCES BETWEEN MANHOLE CENTERLINE.

19. INVERTS OF SANITARY SERVICE LATERALS AT THEIR CONNECTION TO SANITARY MANHOLES SHALL BE NO MORE THAN ONE (1) FOOT ABOVE THE MANHOLE INVERT.

20. PRIOR TO PAVING, CONTRACTOR SHALL VERIFY THE AS-BUILT SANITARY SEWER PIPE SLOPES. MINIMUM SLOPES SHALL BE IN ACCORDANCE WITH THE GREATER OF FDEP OR THE UTILITY PROVIDER'S MINIMUM CRITERIA. ANY LINE NOT MEETING MINIMUM SLOPES SHALL BE RELAYED BY CONTRACTOR TO MEET THE MINIMUM SLOPE REQUIREMENT AT NO ADDITIONAL COST.

21. MANHOLE LIFT HOLES AND GRADE ADJUSTMENT RINGS SHALL BE SEALED WITH NON-SHRINKING MORTAR OR OTHER APPROPRIATE MATERIAL.

SEWER (CONTINUED)

22. INLET AND OUTLET PIPES SHALL BE JOINED TO THE MANHOLE WITH A GASKETED FLEXIBLE WATER-TIGHT CONNECTION OR ANOTHER WATER-TIGHT CONNECTION ARRANGEMENT THAT ALLOWS DIFFERENTIAL SETTLEMENT OF THE PIPE AND MANHOLE WALL.

23. WATER-TIGHT MANHOLE COVERS SHALL BE USED WHEREVER THE MANHOLE TOPS MAY BE FLOODED BY STREET RUNOFF OF HIGH WATER.

WATER

1. ALL MATERIALS AND CONSTRUCTION REQUIREMENTS FOR THE FIRE SERVICE, WATER LINES, CHECK VALVES, BACKFLOW PREVENTERS, GATE VALVES, ETC., SHALL BE IN ACCORDANCE WITH LOCAL AGENCY STANDARD DETAILS AND CONSTRUCTION SPECIFICATIONS.

2. ALL CONSTRUCTION AND MATERIALS SHALL BE IN COMPLIANCE WITH AWWA STANDARDS AND IN ACCORDANCE WITH LOCAL AGENCY STANDARDS.

3. ALL PUBLIC WATER SYSTEM COMPONENTS, EXCLUDING FIRE HYDRANTS, THAT WILL BE INSTALLED UNDER THIS PROJECT AND THAT WILL COME INTO CONTACT WITH DRINKING WATER WILL CONFORM TO NSF INTERNATIONAL STANDARD 61 AND WILL BE MARKED WITH THE NSF SEAL OF APPROVAL.

4. CONTRACTOR SHALL VERIFY SIZE AND TYPE OF EXISTING MAIN PRIOR TO ORDERING TAPPING MATERIALS FOR TIE-INS.

5. SITE CONTRACTOR SHALL COORDINATE AND VERIFY ALL UTILITY SERVICES WITH FINAL ARCHITECTURAL DRAWINGS AND BUILDING CONTRACTOR.

6. SITE UTILITY WORK SHALL TERMINATE 5-FEET FROM BUILDINGS UNLESS OTHERWISE STATED.

7. MINIMUM COVER OVER ALL PIPE SHALL BE 36-INCHES FROM TOP OF PIPE TO FINISHED GRADE, UNLESS OTHERWISE NOTED.

8. THE WATER MAIN SHALL BE LOCATED ABOVE THE STORMWATER AND SANITARY MAINS AT CONFLICTS, WHERE POSSIBLE.

9. VERTICAL SEPARATION BETWEEN UNDERGROUND POTABLE WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, AND RECLAIMED WATER PIPELINES:

   9.1. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY- OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.

   9.2. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.

10. HORIZONTAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, RECLAIMED WATER PIPELINES, AND ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS:

    10.1. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.

    10.2. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER.

    10.3. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY- OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.

    10.4. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM" AS DEFINED IN SECTION 381.0065(2), F.S., AND RULE 64E-6.002, F.A.C.

11. AT THE UTILITY CROSSINGS DESCRIBED IN NOTES 8 AND 9 ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSING, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY-OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.

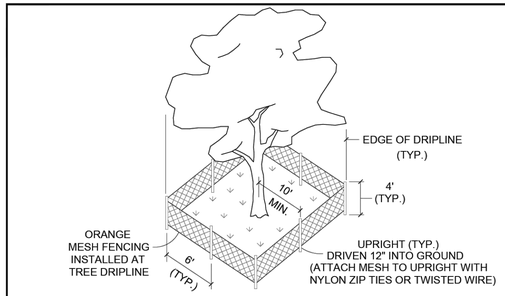
12. WATER LINES 2-INCHES, OR LESS, IN DIAMETER SHALL BE POLYETHYLENE TUBING.

13. WATER LINES 4-INCH TO 12-INCH IN DIAMETER SHALL BE NSF LOGO PVC PIPE CONFORMING TO AWWA C-900 AND BE DR-18.

14. ALL FITTINGS SHALL BE DUCTILE IRON (D.I.) OR GRAY IRON MECHANICAL JOINTS WITH A MINIMUM PRESSURE RATING OF 250 P.S.I. CONFORMING TO ANSI A-21.10 / AWWA C-110, OR D.I. COMPACT FITTINGS FOR DIAMETERS 4-INCH TO 12-INCH CONFORMING TO ANSI A-21.53 / AWWA C-153.

15. FROM THE POINT OF SERVICE (P.O.S.) FORWARD AS DESIGNATED BY F.S. 633, FIRE SUPPLY PIPE SHALL BE DR-14 AND TESTED AT 200 PSI FOR TWO HOURS.

16. GATE VALVES SHALL CONFORM TO AWWA C-509-87, WITH WRENCH NUT EXTENSION STEMS AND OTHER APPURTENANCES AS REQUIRED AND SHALL BE IRON BODY, FULL BRONZE MOUNTED, DOUBLE DISK, PARALLEL SEAT, NON-RISING STEM VALVES WITH O-RING SEALS AND END CONNECTIONS AS CALLED FOR ON THE PLANS. ALL TEES, CAPS, PLUGS, BENDS, VALVES, ETC., SHALL BE PROVIDED WITH GRIP R



TYP. CITY TREE BARRICADE DETAIL

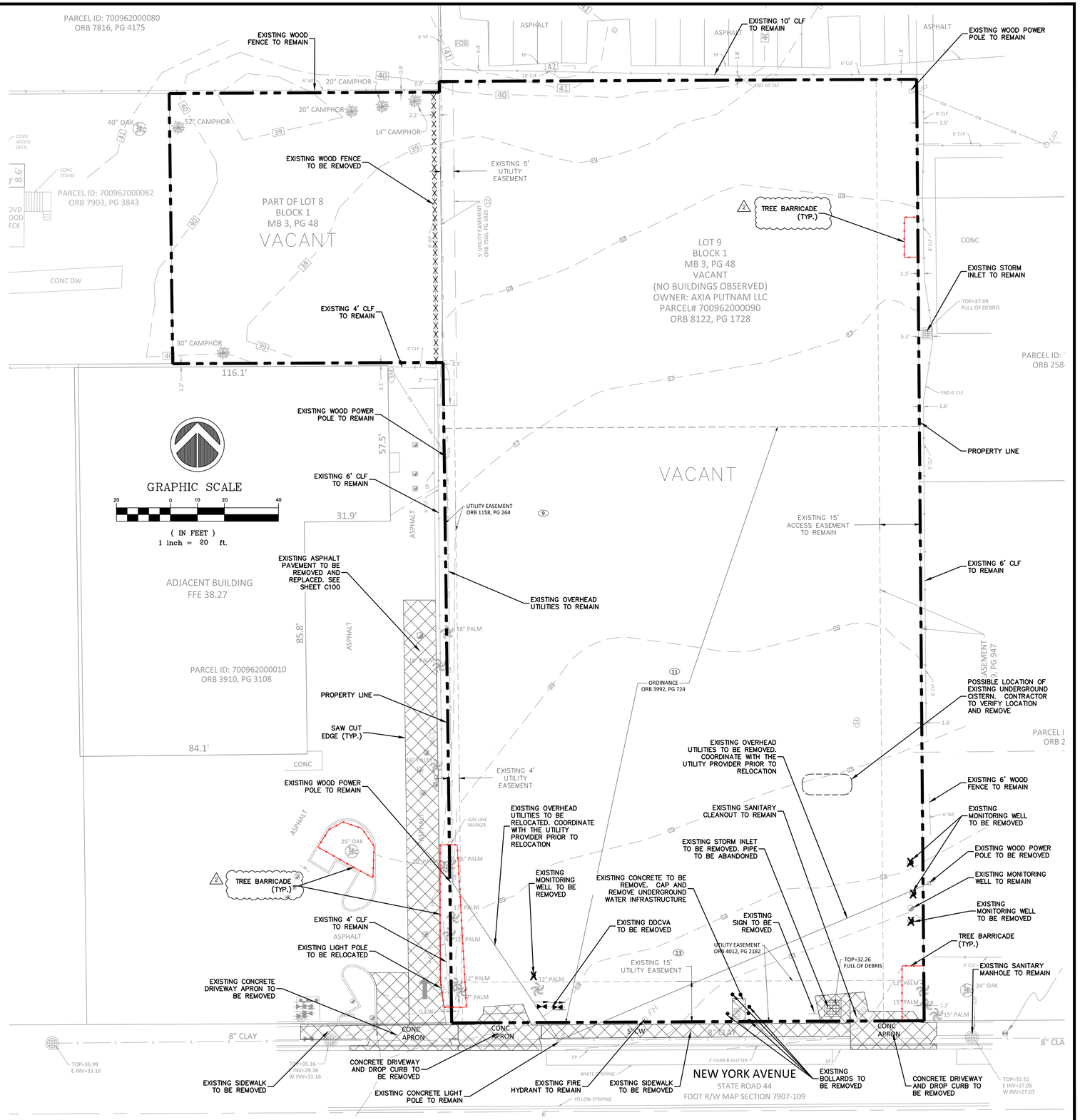
N.T.S.

TREE BARRICADES ARE REQUIRED AROUND ALL TREES WHICH HAVE BEEN DESIGNATED ON THE SITE PLAN TO BE RETAINED. PRIOR TO ANY CLEARING OR CONSTRUCTION ACTIVITY OCCURRING ON THE SITE, TREE BARRICADES SHALL BE CONSTRUCTED BY THE CONTRACTOR AND APPROVED BY THE CITY. TREE BARRICADES SHALL BE PLACED AT THE EDGE OF THE DRIPLINE OR A MINIMUM OF 10' FROM THE TRUNK OF THE TREE, WHICH EVER IS GREATER.

FOR THE BARRIER THE CITY RECOMMENDS SAFETY BARRICADE FENCING.

NOTE: EXISTING TREES IN LANDSCAPE BUFFER SHALL ALSO BE PROTECTED.

DATE: JANUARY 11, 2024	**TREE BARRICADE DETAIL**	**M112**
City of DeLand - Standard Details		



MADDEN
MOORHEAD & STOKES, LLC
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EXIST. CONDITIONS/DEMO PLAN
FOR
NEW YORK AVE APARTMENTS
CITY OF DELAND FLORIDA

BLUE IAN, LLC
180 FOUNTAIN PKWY N.
ST. PETERSBURG, FL 33716

ENGINEER IN CHARGE:
DAVID A. STOKES, P.E. #66527
July 10, 2025
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

NO	DATE	REVISIONS
1	03/25/25	ENTIRE SET REVISED PER BUILDING CHANGES
2	07/02/25	REVISED PER CITY COMMENTS
3		
4		
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JOB #	23201
DATE:	03/25/25
SCALE:	1"=20'
DESIGNED BY:	TRF
DRAWN BY:	TRF
APPROVED BY:	DAS

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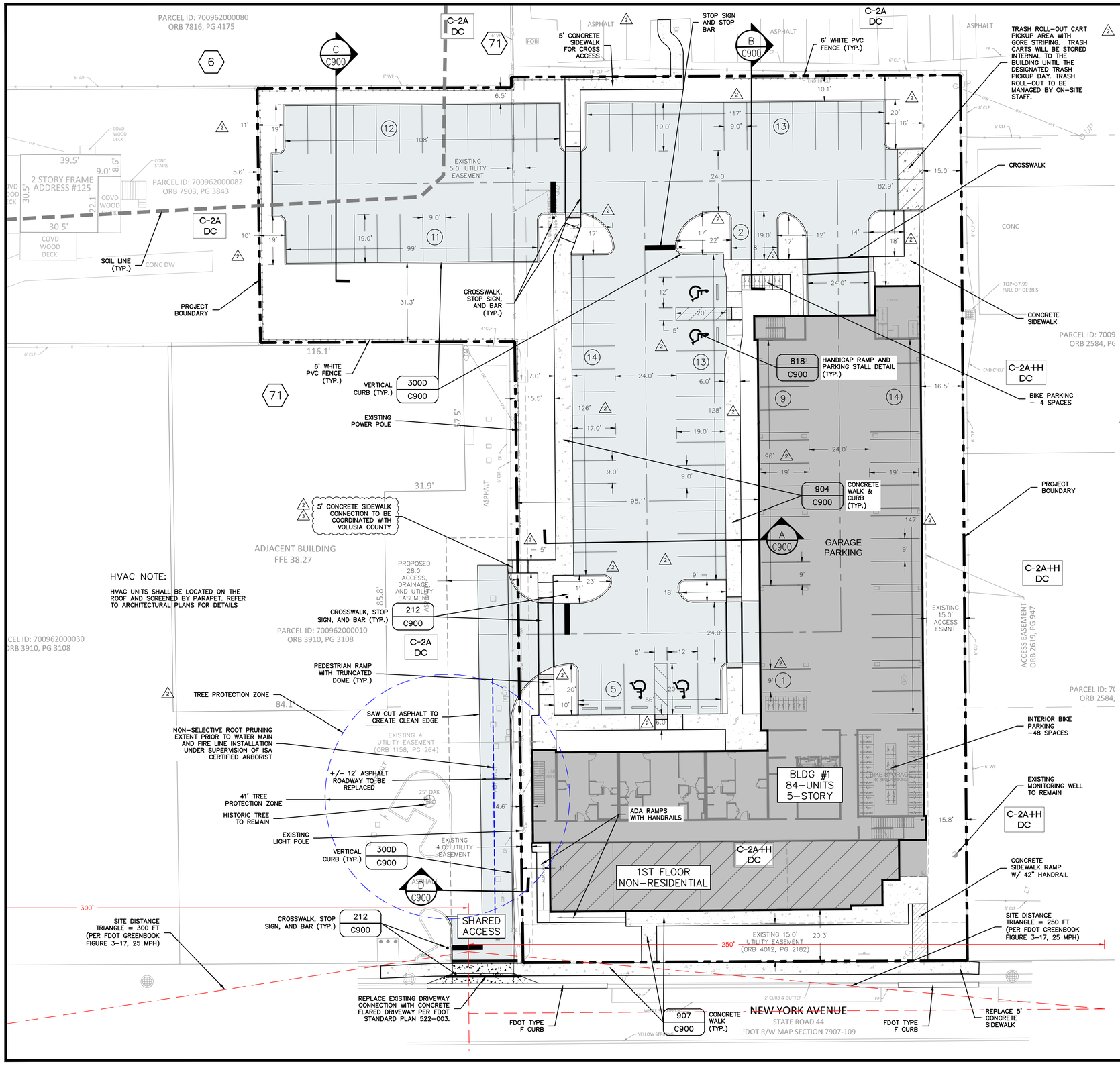

LEGEND

TC — EXISTING ZONING

TCD — EXISTING FUTURE LAND USE

GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 inch = 20 ft.

SITE DATA:

1.	TOTAL PROPERTY AREA:	1.63 ACRES
2.	PARCEL ID'S:	700962000090 & 700962000087
3.	JURISDICTION:	CITY OF DELAND
4.	EXISTING FUTURE LAND USE:	DOWNTOWN COMMERCIAL
5.	EXISTING ZONING:	C-2A&H
6.	BUFFER REQUIREMENTS:	NONE
7.	PROPOSED USE:	MULTI-FAMILY
8.	TOTAL DWELLING UNITS (DU):	84 UNITS
9.	UNIT MIX: 1 BEDROOM = 44 UNITS, 2 BEDROOM = 28 UNITS, 3 BEDROOM = 12 UNITS	
10.	OPEN SPACE REQUIRED	NONE
	OPEN SPACE PROVIDED	0.45 AC. (27.6%)
11.	MAX. IMPERVIOUS SURFACE RATIO REQUIRED	NONE
	MAX. IMPERVIOUS SURFACE RATIO PROVIDED	1.18 AC. (72.4%)
12.	IMPERVIOUS AREA: TOTAL BUILDINGS:	0.47 AC (38.8%)
	IMPERVIOUS AREA: TOTAL SIDEWALK, PAVEMENT, MISC. CONCRETE:	0.71 AC (43.6%)
	TOTAL IMPERVIOUS AREA:	1.18 AC (72.4%)
	TOTAL PERVIOUS AREA:	0.45 AC (28.8%)
	TOTAL AREA:	1.63 AC (100.00%)
13.	MAX. BUILDING HEIGHT	80 FT
3 14.	PROPOSED BUILDING HEIGHT	77 FT
15.	BUILDING SETBACKS:	NONE

16. PARKING:

A) REQUIRED:

APARTMENTS:

1 BEDROOM - 1.5 SP/UNIT X 44 =	66	SPACES
2+ BEDROOMS - 2 SP/UNIT X 40 =	80	SPACES
VISITOR PARKING - 0.5 SP/UNIT X 84 =	42	SPACES
SUBTOTAL =	188	SPACES

B) PROVIDED:

APARTMENTS:

REGULAR (9'x19'/20') =	66	SPACES
GARAGE (9'x19') =	24	SPACES
ACCESSIBLE (12'x20') =	4	SPACES
SUBTOTAL =	94	SPACES

*19' DEPTH TOTAL, 17' PAVED W/2' OVERHANG, OVERHANG IS NOT PART OF A LANDSCAPE AREA

17. BICYCLE PARKING:

A) REQUIRED:

1/EVERY 4 DWELLING UNITS = 84/4 =	21	SPACES
TOTAL =	21	SPACES

B) PROVIDED:

EXTERIOR (4'x6') =	4	SPACES
INTERIOR STORAGE ROOMS (4'x6') =	48	SPACES
TOTAL =	52	SPACES

18. PER FEMA FIRM PANEL NO. 12127C0470H, DATED FEBURARY 19, 2014, THE ENTIRE SITE LIES WITHIN FLOOD ZONE 'X' (AREAS TO BE DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN).

19. WATER AND SEWER ARE TO BE PROVIDED BY THE CITY OF DELAND.

20. ALL UTILITY LINES TO MEET CITY OF DELAND SPECIFICATIONS AND STORM SYSTEM TO MEET ALL APPLICABLE CITY OF DELAND AND ST. JOHNS RIVER WATER MANAGEMENT DISTRICT SPECIFICATIONS.

21. IRRIGATION ON SITE TO BE PROVIDED VIA WELL.

22. THE SITE IS NOT LOCATED WITHIN A WELL FIELD PROTECTION ZONE.

23. THE SITE IS NOT LOCATED WITHIN AN AQUIFER RECHARGE AREA.

24. SITE TO BE DEVELOPED IN ONE PHASE

WATER SERVICE DEMANDS							
LAND USE	UNIT	GPD/UNIT	# UNITS	ADD (GPD)	ADD (GPM)	MDD (GPM)	PHF (GPM)
MULTI-FAMILY RESIDENTIAL	DWELLING UNIT	350	84	29,400	20.42	40.84	81.68

SEWER SERVICE DEMANDS							
LAND USE	UNIT	GPD/UNIT	# UNITS	ADD (GPD)	ADD (GPM)	MDD (GPM)	PHF (GPM)
MULTI-FAMILY RESIDENTIAL	DWELLING UNIT	300	84	25,200	17.50	35.00	70.00

TRAFFIC GENERATION								
ITU CODE	LAND USE	# UNITS	DAILY		PM PEAK HOUR			
			RATE	TRIPS	RATE	TOTAL	ENTER	EXIT
221	MULTI-FAMILY RESIDENTIAL	84	7.42	623	0.53	45	30	15

SOILS LEGEND

SOILS LINE

SOIL NUMBER	SOIL NAME	HYDROLOGIC GROUP
6	ASTATULA-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	A
71	URBAN LAND, 0 TO 2 PERCENT SLOPES	N/A

SOURCE: USGS SOILS SURVEY, NATURAL RESOURCE CONSERVATION SERVICE – VOLUSIA COUNTY, FLORIDA 2022

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431 E. Horatio Avenue
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SITE PLAN FOR NEW YORK AVE APARTMENTS FLORIDA

CITY OF DELAND

BLUE IAN, LLC
150 FOUNTAIN PKWY N.
ST. PETERSBURG, FL 33716

ENGINEER IN CHARGE:
DAVID A. STOKES, P.E. #66527
August 14, 2025
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

#	DATE	REVISIONS
1	03/25/25	ENTIRE SET REVISED PER BUILDING CHANGES
2	07/02/25	REVISED PER CITY COMMENTS
3	08/14/25	REVISED PER CITY COMMENTS
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JOB # 23201
DATE: 03/25/25
SCALE: 1"=20'
DESIGNED BY: TRF
DRAWN BY: TRF
APPROVED BY: DAS

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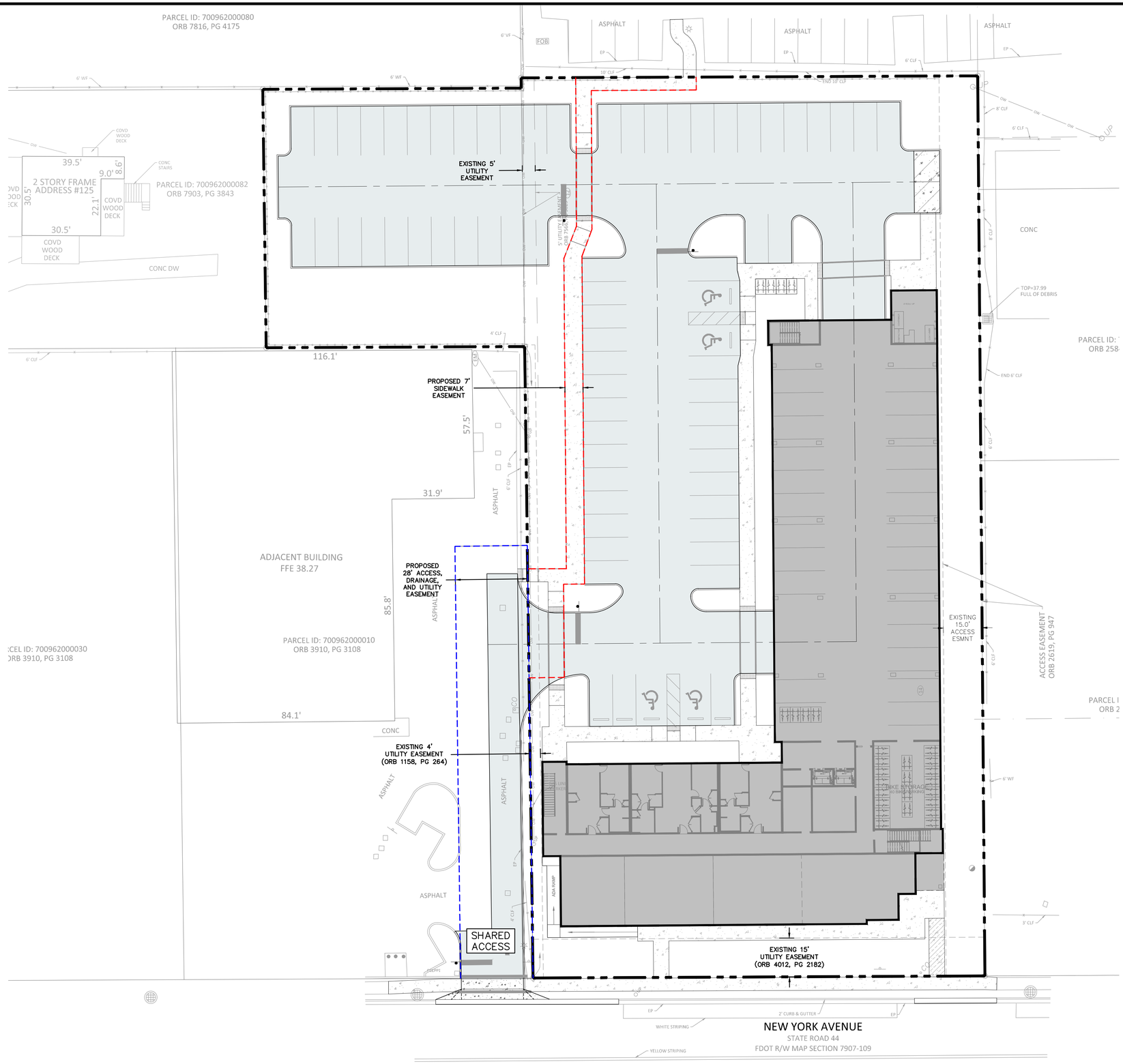

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EASEMENT PLAN
FOR
NEW YORK AVE APARTMENTS
FLORIDA
CITY OF DELAND

BLUE IAN, LLC
180 FOUNTAIN PKWY N.
ST. PETERSBURG, FL 33716

ENGINEER IN CHARGE:
DAVID A. STOKES, P.E. #65527
July 10, 2025
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

NO	DATE	REVISIONS
1	03/25/25	ENTIRE SET REVISED PER BUILDING CHANGES
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JOB #	23201
DATE:	03/25/25
SCALE:	1"=20'
DESIGNED BY:	TRF
DRAWN BY:	TRF
APPROVED BY:	DAS

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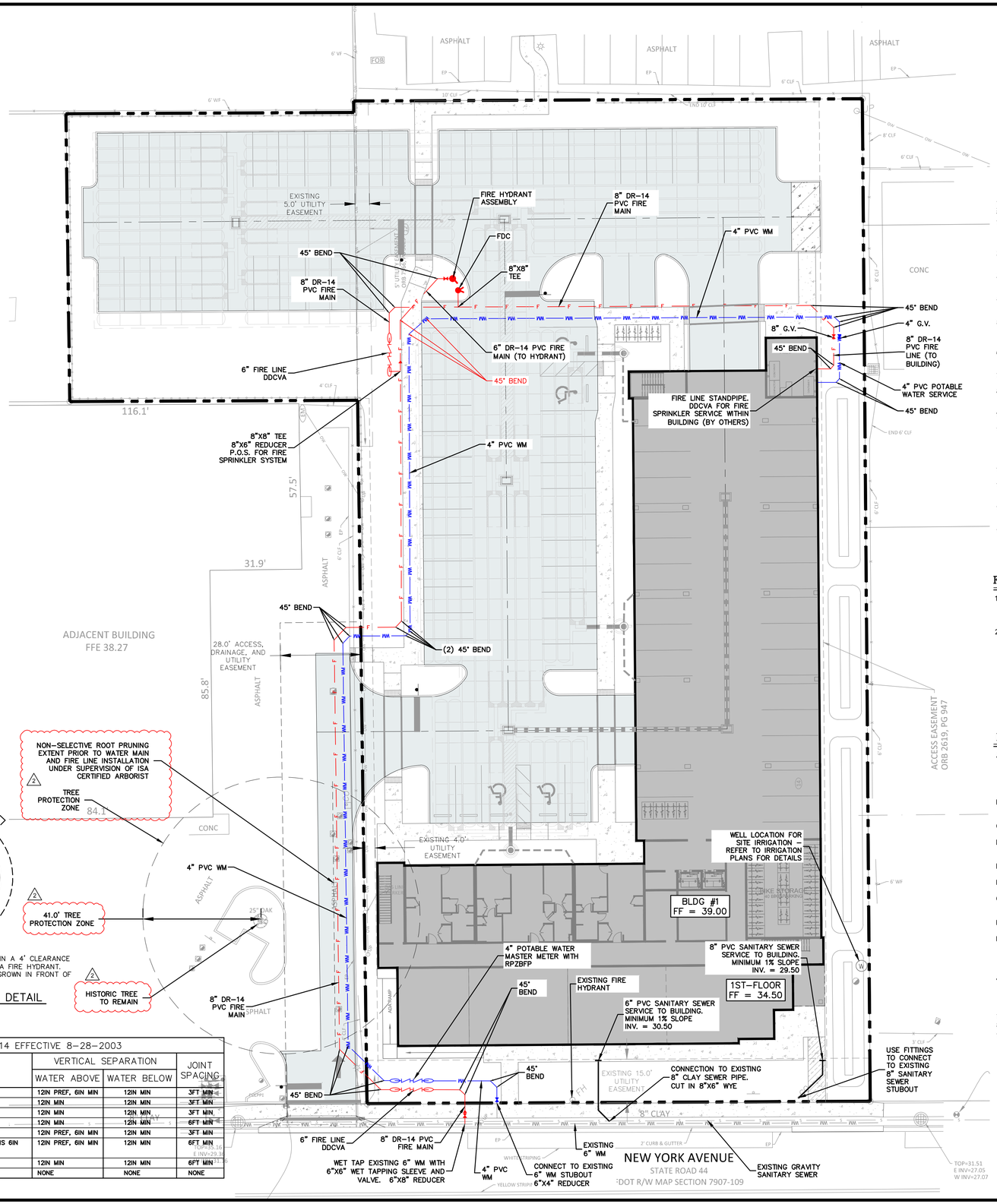

NOTES:
1. NO OBSTRUCTIONS SHALL BE PLACED WITHIN A 4' CLEARANCE DISTANCE FROM THE REAR AND SIDES OF A FIRE HYDRANT.
2. NO OBSTRUCTIONS SHALL BE PLACED OR GROWN IN FRONT OF A FIRE HYDRANT.

FIRE HYDRANT CLEARANCE DETAIL

FDEP SEPARATION REQUIREMENTS UNDER 62-555.314 EFFECTIVE 8-28-2003

HAZARD	HORIZONTAL SEPARATION	VERTICAL SEPARATION		JOINT SPACING
		WATER ABOVE	WATER BELOW	
STORM SEWER	3FT MIN	12IN PREF, 6IN MIN	12IN MIN	3FT MIN
STORM FORCE MAIN	3FT MIN	12IN MIN	12IN MIN	3FT MIN
RECLAIMED WATER IF REGULATED UNDER 62-610	3FT MIN	12IN MIN	12IN MIN	3FT MIN
RECLAIMED WATER IF NOT REGULATED UNDER 62-610	10FT PREF, 6FT MIN	12IN MIN	12IN MIN	6FT MIN
VACUUM SANITARY SEWER	10FT PREF, 3FT MIN	12IN PREF, 6IN MIN	12IN MIN	3FT MIN
GRAVITY SANITARY SEWER	10FT PREF, 6FT MIN, 3FT MIN IF WATER MAIN IS 6IN ABOVE GRAVITY SANITARY SEWER	12IN PREF, 6IN MIN	12IN MIN	6FT MIN
SANITARY SEWER FORCE MAIN	10FT PREF, 6FT MIN	12IN MIN	12IN MIN	6FT MIN
SEWAGE TREATMENT & DISPOSAL SYSTEM	10FT MIN	NONE	NONE	NONE

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

NOTES:

1. CONTRACTOR SHALL COORDINATE AND ATTEND A PRE-CONSTRUCTION MEETING WITH THE CITY OF DELAND UTILITIES DEPARTMENT AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
2. MAINTAIN A MINIMUM OF 3 FEET OF COVER OVER ALL PROPOSED WATER AND WASTEWATER LINES.
3. ALL EXISTING FACILITIES HAVE BEEN FIELD VERIFIED AT ALL POINTS OF CONNECTION TO, AND AT ALL AREAS OF CONFLICT WITH PUBLIC MAINS.
4. ALL UTILITIES LOCATED OUTSIDE OF PUBLIC RIGHTS-OF-WAY AND PUBLIC EASEMENTS SHALL BE PRIVATELY OWNED AND MAINTAINED.
5. FLOW TESTS OF ALL FIRE HYDRANTS SHALL BE CONDUCTED AND FLOW TEST RESULTS PROVIDED TO CITY OF DELAND FIRE DEPARTMENT PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
6. WATER MAINS AND FIRE HYDRANTS SHALL BE INSTALLED, COMPLETED, AND IN SERVICE PRIOR TO COMBUSTIBLE MATERIALS BEING BROUGHT ON TO THE SITE.
7. ALL SANITARY SEWER LATERALS SHALL HAVE A MINIMUM SLOPE OF 1%.
8. ALL FIRE HYDRANT VALVES SHALL BE LOCATED ON THE DOWNSTREAM END OF THE FIRE HYDRANT SUPPLY LINE AT THE TEE.
9. IRRIGATION WATER TO BE PROVIDED VIA WELL.
10. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF THE RECLAIMED WATER AND POTABLE WATER MASTER METER ASSEMBLIES (MASTER METERS, BACKFLOW PREVENTORS, CONCRETE PADS, ETC.) FOR REVIEW AND APPROVAL BY THE CITY OF DELAND PRIOR TO CONSTRUCTION.
11. ELEVATIONS SHOWN ARE BASED ON DATUM NAVD88.
12. SANITARY SEWER LINES MUST BE TELEVISED, AND A JUMP DRIVE PROVIDED TO THE CITY FOR REVIEW AND APPROVAL.
13. WATER MAINS SHALL BE FLUSHED WITH A SWAB PRIOR TO HYDROSTATIC TESTING.
14. ALL CONSTRUCTION IN THE FDOT ROW SHALL CONFIRM TO THE LATEST EDITIONS OF THE FDOT DESIGN PLANS (INDEXES), THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND THE FDOT UTILITY ACCOMMODATION MANUAL.

FIRE FLOW CALCULATIONS

1. PER NFPA 220 (ED. 2018) CH.4, BUILDINGS THAT ARE CONSTRUCTION TYPE V (111): THE V = PROTECTED COMBUSTIBLE AND THE (111) = ONE HOUR PROTECTION FOR EXTERIOR WALLS, INTERIOR STRUCTURES, AND FLOORS (ASSUMED).
2. NFF PER FFPL (NFPA-1) (ED. 7TH) TABLE 18.4.5.2.1: (# OF HYDRANTS PER TABLE 18.5.4.3)

BUILDING	FIRE AREA	SPRINKLED?	NFF (1,000 MIN)	#OF HYDRANTS
BUILDNG 1 TYPE III(200)	106,160	Y	1,688	2

REQUIREMENTS FOR SPRINKLED BUILDINGS:

A) AT MINIMUM, A CLASS FIVE CONTRACTOR IS REQUIRED TO INSTALL FIRE LINES. FIRE LINES SHALL BEGIN AT THE POINT IN WHICH THE PIPING IS USED EXCLUSIVELY FOR FIRE PROTECTION AND END AT A POINT 1-FOOT ABOVE THE FINISHED FLOOR.

B) THE FIRE LINE FOR SPRINKLED BUILDINGS STARTS AT THE DOUBLE DETECTOR CHECK VALVE.

C) NO OTHER WATER CONNECTION SHALL BE OFF OF THE FIRE LINE.

D) THE FIRE DEPARTMENT CONNECTION SHALL BE WITHIN 50 FEET OF THE FIRE HYDRANT.

E) ANY FIRE LINE CHARGED BY THE FDC SHALL BE DR-14 OR CPVC PIPE.

F) THE ONLY VALVE ALLOWED IN THE FDC LINE IS A CHECK VALVE.

G) ALL FIRE LINES SHALL BE INSPECTED BY THE FIRE INSPECTION DEPT. BEFORE BEING COVERED.

H) BUILDING TO BE CONSTRUCTED WITH NFPA 13 R SPRINKLER SYSTEM.

I) A FIRE SPRINKLER PERMIT, TO INCLUDE ADEQUATE WORKING PLANS COMPLYING WITH NFPA 13 & NFPA 24 MINIMUM REQUIREMENTS, SHALL BE SUBMITTED FOR REVIEW AND APPROVED PRIOR TO INSTALLATION OF THE UNDERGROUND FIRE SPRINKLER LINE.

J) APPROPRIATE SIGNAGE SHALL BE PROVIDED AT EACH FDC LOCATION IDENTIFYING THE BUILDING IT SERVES.

WATER MAIN NOTE:

1. WATER MAINS MUST BE FLUSHED PRIOR TO PRESSURE TESTING AND BACTERIOLOGICAL TESTING.

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UTILITY PLAN
FOR
NEW YORK AVE APARTMENTS
CITY OF DELAND FLORIDA

BLUE IAN, LLC
750 FOUNTAIN PKWY N.
ST. PETERSBURG, FL 33716

ENGINEER IN CHARGE:
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July 10, 2025
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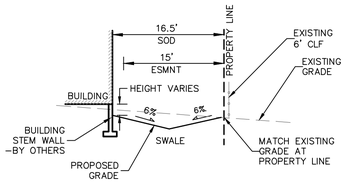
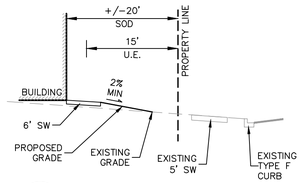
JOB # 23201
DATE: 03/25/25
SCALE: 1"=20'
DESIGNED BY: TRF
DRAWN BY: TRF
APPROVED BY: DAS

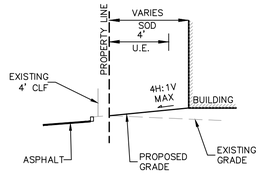
C200



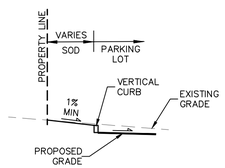
CX1 — TYPICAL GRADING SECTION
N.T.S.



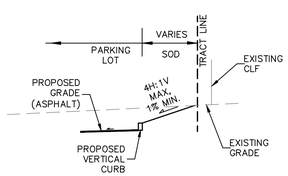
CX2 — TYPICAL GRADING SECTION
N.T.S.



CX3 — TYPICAL GRADING SECTION
N.T.S.

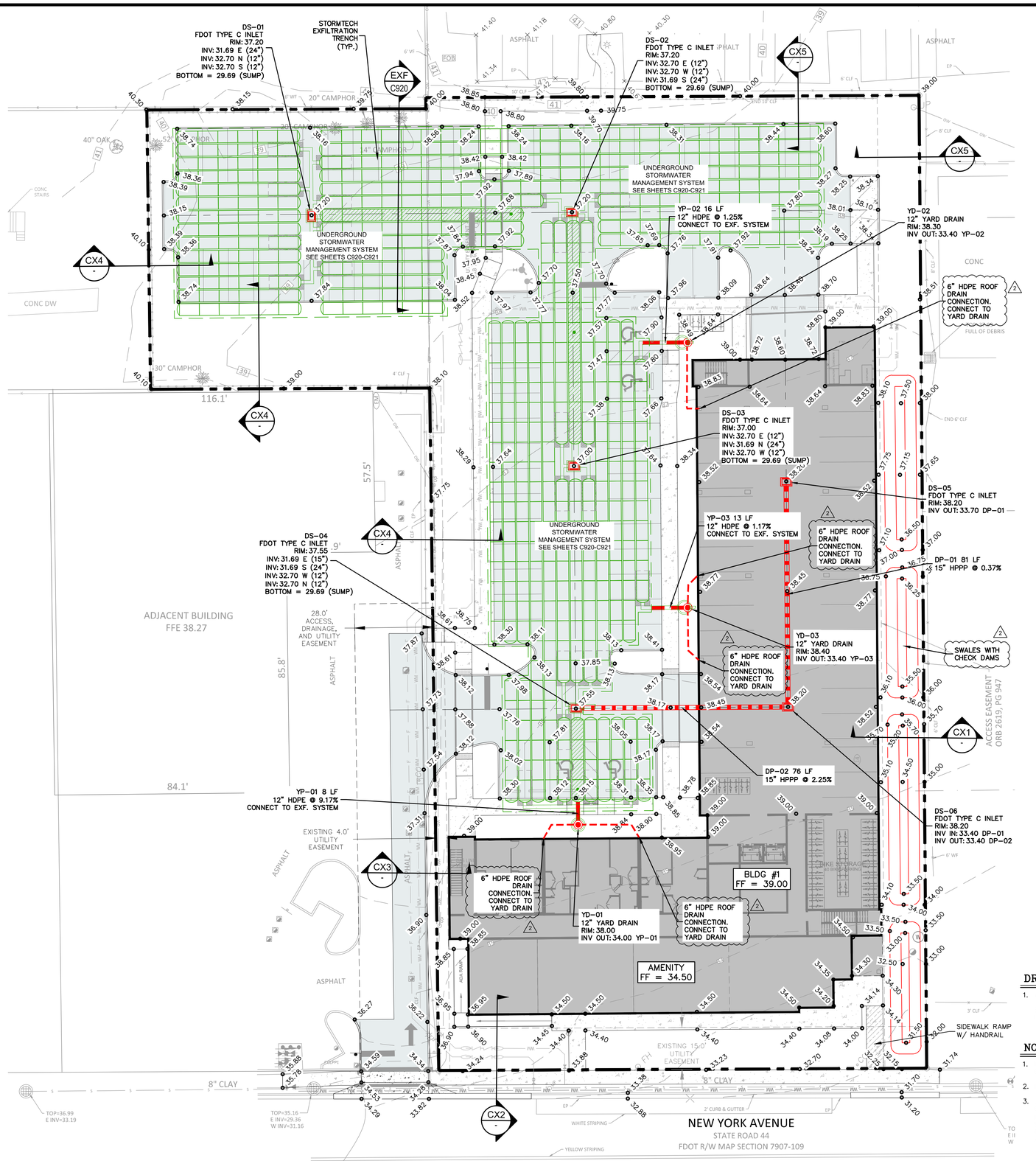


CX4 — TYPICAL GRADING SECTION
N.T.S.



CX5 — TYPICAL GRADING SECTION
N.T.S.

FDOT STORM PEAK STAGE
100YR/72 HR = 33.93



DRAINAGE NOTE

1. ALL RUNOFF FROM BUILDING DOWNSPOUTS SHALL BE TIED DIRECTLY TO THE STORMWATER SYSTEM. THERE SHALL BE NO ROOF RUNOFF TO THE ADJACENT PROPERTIES.

NOTES

1. EXISTING PIPE INVERT MUST BE VERIFIED PRIOR TO CONSTRUCTION.
2. ELEVATIONS SHOWN ARE BASED ON NAVD88 DATUM.
3. ALL CONSTRUCTION IN THE FDOT ROW SHALL CONFIRM TO THE LATEST EDITIONS OF THE FDOT DESIGN PLANS (INDEXES), THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND THE FDOT UTILITY ACCOMMODATION MANUAL.

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
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DRAINAGE AND GRADING PLAN
FOR
NEW YORK AVE APARTMENTS
FLORIDA
CITY OF DELAND

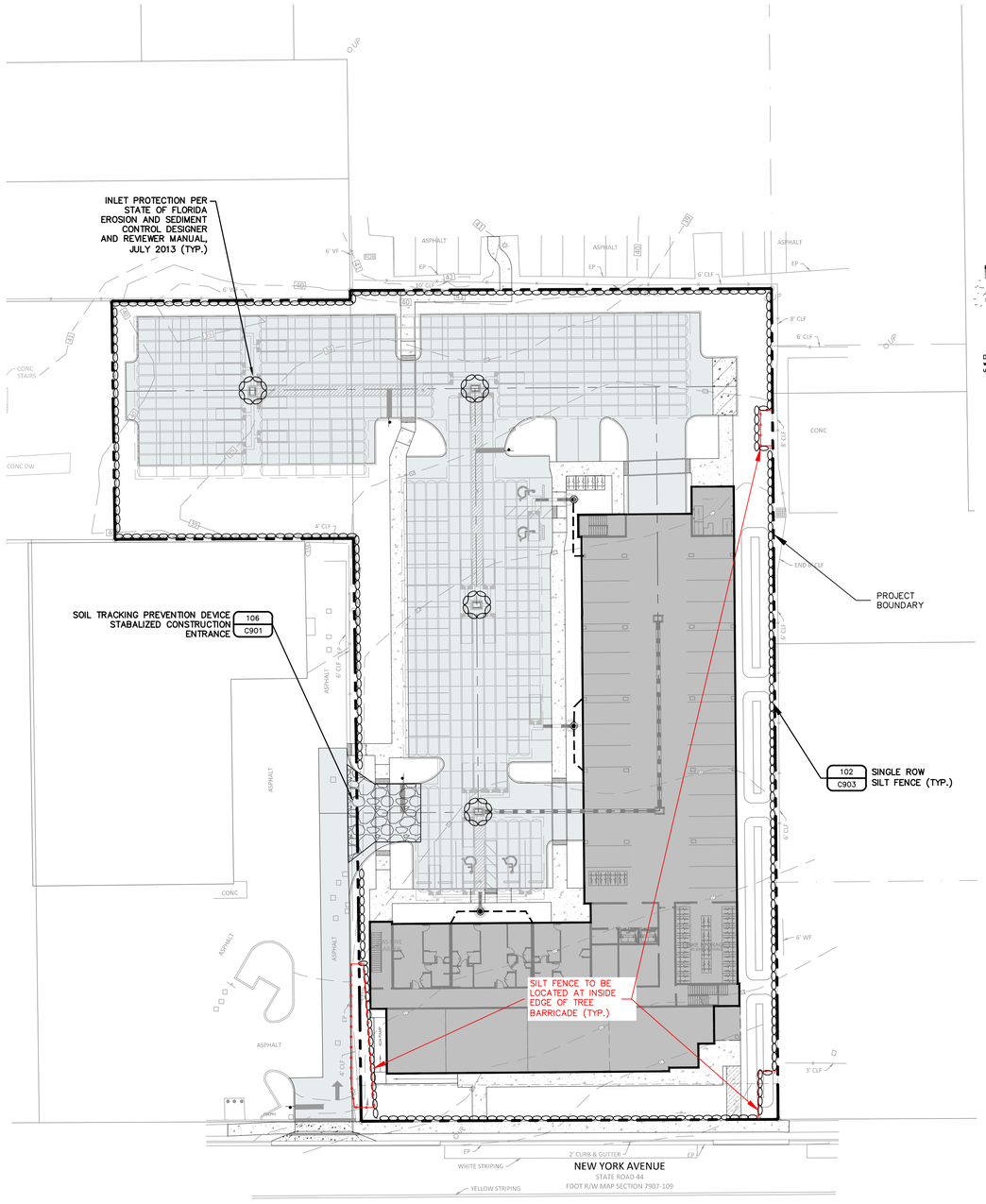
BLUE IAN, LLC
760 FOUNTAIN PKWY N.
ST. PETERSBURG, FL 33716

ENGINEER IN CHARGE:
DAVID A. STOKES, P.E. #66527
July 10, 2025
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

DATE	REVISIONS
01/23/26	ENTIRE SET REVISED PER BUILDING CHANGES
07/09/25	REVISED PER CITY COMMENTS

JOB # 23201
DATE: 03/25/25
SCALE: 1"=20'
DESIGNED BY: TRF
DRAWN BY: TRF
APPROVED BY: DAS

C300

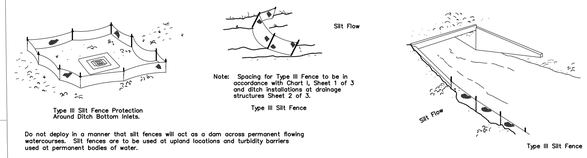


GRAPHIC SCALE

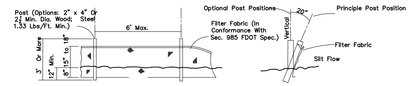
30 0 15 30 60

(IN FEET)

1 inch = 30 ft.



SILT FENCE APPLICATIONS



Note: Silt Fence to be paid for under the contract unit price for Staked Silt Fence (LF).

TYPE III SILT FENCE

NOTES:
1. HAY OR STRAW BALES ARE PROHIBITED.

120 – SILT FENCE N.T.S.

CERTIFICATION FOR CONTRACTORS AND SUB-CONTRACTORS

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND TERMS AND CONDITIONS OF THE GENERIC STORMWATER PERMIT ISSUED PURSUANT TO SECTION 403.0885, F.S., THAT AUTHORIZES THE STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION.

NAME: SIGNATURE: DATE:

ADDRESS: TELEPHONE:

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND TERMS AND CONDITIONS OF THE GENERIC STORMWATER PERMIT ISSUED PURSUANT TO SECTION 403.0885, F.S., THAT AUTHORIZES THE STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION.

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NAME: SIGNATURE: DATE:

ADDRESS: TELEPHONE:

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND TERMS AND CONDITIONS OF THE GENERIC STORMWATER PERMIT ISSUED PURSUANT TO SECTION 403.0885, F.S., THAT AUTHORIZES THE STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION.

NAME: SIGNATURE: DATE:

ADDRESS: TELEPHONE:

EROSION CONTROL

THE CONTRACTOR SHALL PERFORM EROSION CONTROL MEASURES IN ACCORDANCE WITH CITY OF DELAND AND THE S.J.R.W.M.D., DETAILS CONTAINED IN THE PLANS, THE FOLLOWING NOTES AND AS DIRECTED BY THE ENGINEER.

A. TEMPORARY EROSION CONTROL

1. STOCKPILING MATERIAL. NO EXCAVATING MATERIAL SHALL BE STOCKPILED IN SUCH A MANNER AS TO DIRECT RUNOFF DIRECTLY OFF THE PROJECT SITE OR INTO ANY ADJACENT WATERBODY OR STORMWATER COLLECTION FACILITY.
2. INLET PROTECTION – INLETS AND CATCH BASINS SHALL BE PROTECTED FROM SEDIMENT– LADEN STORM RUNOFF DIRECTLY OFF THE PROJECT SITE OR INTO ANY ADJACENT WATERBODY OR STORMWATER COLLECTION FACILITY.
3. TEMPORARY SEEDING / STRIP SODDING – AREAS OPENED BY CONSTRUCTION OPERATIONS AND THAT ARE NOT ANTICIPATED TO BE DRESSED AND RECEIVE FINAL GRASSING TREATMENT WITHIN THIRTY DAYS SHALL BE STRIP–SODDED ALONG ALL DEDICATED ROW's. THIS WILL PREVENT SEDIMENT RUNOFF FROM INDIVIDUAL LOTS INTO THE ROW AND DRAINAGE SYSTEMS, AND WILL NOT LATER COMPETE WITH THE PERMANENT LOT GRASSING.
4. TEMPORARY SEEDING AND MULCHING – SLOPES STEEPER THAN 6:1 THAT FALL WITHIN THE CATEGORY ESTABLISHED IN NOTE 3 ABOVE SHALL ADDITIONALLY RECEIVE MULCHING OF APPROXIMATELY 2 INCHES LOOSE MEASURE OF MULCH MATERIAL CUT INTO THE SOIL OF THE SEEDED AREA TO A DEPTH OF 4 INCHES.
5. TEMPORARY GRASSING – THE SEEDED OR THE SEEDED AND MULCHED AREA(S) SHALL BE ROLLED AND WATERED AS REQUIRED TO ASSURE OPTIMUM GROWING CONDITIONS FOR THE ESTABLISHMENT OF A GOOD GRASS COVER.
6. TEMPORARY REGRASSING – IF AFTER FOURTEEN DAYS, THE TEMPORARY GRASSED AREAS HAVE NOT ATTAINED A MINIMUM OF 75% GOOD GRASS COVER THE AREA WILL BE REWORKED AND ADDITIONAL SEED APPLIED SUFFICIENT TO ESTABLISH THE DESIRED VEGETATION COVER.
7. THE CONTRACTOR SHALL PLACE HAY BALES AROUND ALL EXISTING AND NEWLY CONSTRUCTED INLETS TO CONTROL EROSION DURING CONSTRUCTION.
8. MAINTENANCE – ALL FEATURES OF THE PROJECT DESIGNED AND CONSTRUCTED TO PREVENT EROSION AND SEDIMENT SHALL BE MAINTAINED DURING THE LIFE OF THE CONSTRUCTION SO AS TO FUNCTION AS THEY WERE ORIGINALLY DESIGNED AND CONSTRUCTED.

B. PERMANENT EROSION CONTROL

THE EROSION CONTROL FACILITIES OF THE PROJECT SHOULD BE DESIGNED TO MINIMIZE THE IMPACT ON OFF–SITE FACILITIES. ALL STORMWATER DISCHARGE FROM THE PROJECT LIMITS SHALL BE ROUTED THROUGH DETENTION BASINS TO TRAP SUSPENDED SEDIMENTS AND DISCHARGE FACILITIES FROM THESE BASINS SHALL BE PROVIDED WITH A SKIMMER DEVICE TO TRAP FLOATABLE DEBRIS.

1. PERMANENT SEEDING – ALL AREAS WHICH HAVE BEEN DISTURBED BY THE CONSTRUCTION WILL, AS A MINIMUM, BE FERTILIZED AND SEEDED.
2. PERMANENT SEEDING AND MULCHING – SLOPES OF 6:1 TO 4:1 INCLUSIVE WILL BE MULCHED WITH A UNIFORM THICKNESS OF APPROXIMATELY TWO INCHES, LOOSE MEASURE, OF MULCH MATERIAL INCORPORATED INTO THE SOIL BY MIXING TO A DEPTH OF FOUR INCHES.
3. PERMANENT SODDING – ALL RETENTION/DETENTION BASINS SHALL BE SODDED WITHIN THEIR LIMITS. ALL EXPOSED AREAS WITHIN PUBLIC RIGHT–OF–WAYS WILL BE SOLID SODDED. OTHER AREAS WITH AREAS WITH SLOPES STEEPER THAN 4:1 WILL BE SODDED.
4. STRIP SODDING – STRIP SOD SHALL BE PLACED ADJACENT TO ALL CURBS, WALKS AND PAVEMENTS.
5. REGRASSING – ALL GRASSED AREAS WILL BE MAINTAINED TO ASSURE A GOOD STAND AND SUFFICIENT GROUND COVER TO MINIMIZE EROSION. IF, AFTER 60 DAYS AN ADEQUATE GROUND COVER HAS NOT BEEN ESTABLISHED, THE AREA WILL BE REGRASSED.
6. ADDITIONAL FERTILIZATION – GRASSED AREAS NOT ACCEPTED WITHIN 90 DAYS OF THEIR COMPLETION SHALL BE FERTILIZED.
7. FOR ADDITIONAL SODDING REQUIREMENTS, REFER TO THE LANDSCAPE PLANS.

STORMWATER POLLUTION PREVENTION NOTES

1. THE CONTRACTOR SHALL EXECUTE ALL MEASURES NECESSARY TO LIMIT THE TRANSPORT OF SEDIMENTS OUTSIDE THE LIMITS OF THE PROJECTTO THE VOLUME AND AMOUNT THAT ARE EXISTING PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THIS CONDITION WILL BE SATISFIED FOR THE TOTAL ANTICIPATED CONSTRUCTION PERIOD. PROVISION MUST BE MADE TO PRESERVE THE INTEGRITY GRADING PATTERNS, ETC. REQUIRED TO MEET THIS PROVISION THROUGHOUT THE LIFE OF THE CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE SILT BARRIERS, tEMPORARY GRASSING, ETC. AS REQUIRED TO FULLY COMPLY WITH THE INTENT OF THIS SPECIFICATION.
2. NO EXCAVATED MATERIAL SHALL BE STOCKPILED IN SUCH A MANNER AS TO DIRECT RUNOFF DIRECTLY OFF THE PROJECT SITE OR INTO ANY ADJACENT WATER BODY OR STORMWATER COLLECTION FACILITY.
3. THE SURFACE AREA OF OPEN, RAW ERODIBLE SOIL EXPOSED BY CLEARING AND GRUBBING OPERATIONS OR EXCAVATION AND FILLING OPERATIONS SHALL BE CONTROLLED, SO THAT THIS OPERATION WILL NOT SIGNIFICANTLY AFFECT OFF–SITE DEPOSIT OF SEDIMENTS.
4. INLETS AND CATCH BASINS SHALL BE PROTECTED FROM SEDIMENT LADEN STORMWATER RUNOFF UNTIL THE COMPLETION OF ALL CONSTRUCTION OPERATIONS THAT MAY CONTRIBUTE SEDIMENT TO THE INLET.
5. AREAS OPENED BY CONSTRUCTION OPERATIONS THAT ARE NOT ANTICIPATED TO BE DRESSED OR RECEIVE FINAL GRASSING TREATMENT WITH IN THIRTY DAYS SHALL BE SEEDED WITH A QUICK GROWING GRASS SPECIES WHICH WILL PROVIDE AN EARLY COVER, DURING THE SEASON IN WHICH IT IS PLANTED. TEMPORARY SEEDING SHALL BE CONTROLLED SO AS TO NOT ALTER OR COMPETE WITH PERMANENT GRASSING. THE RATE OF SEEDING SHALL BE 30 POUNDS PER ACRE.
6. THE SEEDED OR SEEDED AND MULCHED AREA(S) SHALL BE ROLLED AND WATERED AS REQUIRED TO ASSURE OPTIMUM GROWING CONDITIONS FOR THE ESTABLISHMENT OF A GOOD GRASS COVER.
7. IF AFTER 14 DAYS, THE TEMPORARY GRASSES AREAS HAVE NOT ATTAINED A MINIMUM OF 75% GOOD GRASS COVER, THE AREA WILL BE REWORKED AND ADDITIONAL SEED APPLIED TO ESTABLISH THE DESIRED VEGETATION COVER.
8. ALL FEATURES OF THE PROJECT SHALL BE CONSTRUCTED TO PREVENT EROSION AND SEDIMENT AND SHALL BE MAINTAINED DURING THE LIFE OF THE CONSTRUCTION SO AS TO FUNCTION PROPERLY WITHOUT THE TRANSPORT OF SEDIMENTS OUTSIDE THE LIMITS OF THE PROJECT.
9. ALL DISTURBED AREAS OUTSIDE THE EXCAVATION AND FILL LIMITS WILL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THEIR CONDITION PRIOR TO CONSTRUCTION.
10. THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTENANCE OF ALL NEWLY PLANTED GRASSES OR VEGETATION AND RETENTION/DETENTION FACILITIES UNTIL THE WORK HAS BEEN ACCEPTED BY THE CITY.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF EMBANKMENTS AND SHALL REPLACE ANY PORTION, WHICH IN THE OPINION OF THE ENGINEER, HAS BECOME DISPLACED DUE TO EROSION OR DUE TO CARELESSNESS OR NEGLIGENCE ON THE PART OF THE CONTRACTOR.
12. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS CONTROLLING POLLUTION OF THE ENVIRONMENT. MEASURES SHALL BE TAKEN BY THE CONTRACTOR TO CONTROL EROSION AND SEDIMENT RUNOFF FROM THE SITE DURING CONSTRUCTION. SUCH METHODS SHALL BE IN ACCORDANCE WITH THE CURRENT FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS.
13. ABSOLUTLEY NO WORK WILL BE ALLOWED WITHIN ANY CONSERVATION AREA, BUFFER AREA, MITIGATION AREA OR DESIGNATED WETLAND AREA UNLESS SO SPECIFICALLY DESCRIBED BY THE PLANS AND GRANTED BY REASON OF PERMIT FROM THE GOVERNMENTAL ENTITY HAVING JURISDICTION OVER SAID AREA.
14. PRIOR TO CLEARING AND GRUBBING, THE LIMITS OF WETLANDS, BUFFERS WETLANDS, BUFFERS AND MITIGATION AREAS SHALL BE CLEARLY MARKED ALONG THE PROPOSED RIGHT OF WAY LINE TO PROTECT THESE AREAS FROM ENCROCHMENT FROM CONSTRUCTION ACTIVITIES.
15. ALL FILL EMBANKMENT AND GRADED AREAS SHALL BE PROTECTED AGAINST EROSION BY METHODS STATED IN SECTION 104. F.D.O.T. STANDARD SPECIFICATIONS FOR BRIDGE AND ROAD CONSTRUCTION. SIDE SLOPE MAY BE SEED AND MULCHED, PROVIDED THAT THE MULCH MATERIAL IS DISC HARROWED AND THE SIDE SLOPES ARE NEITHER GREATER THAN 3:1 NOR PART OF A DRAINAGE CONVEYANCE.
16. REFER TO POND DETAIL SHEETS FOR EROSION CONTROL MEASURES AT POND OUTFALLS.
17. EROSION CONTROL AT ALL INLET DRAINAGE STRUCTURES DURING CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH FDOT INDEX NO. 102.
18. INSPECTIONS ON EROSION CONTROL MEASURES WILL BE PERFORMED BY THE CONTRACTOR ONCE PER WEEK AND WITHIN 24 HOURS AFTER 1/4 INCH OF RAINFALL. THE INSPECTIONS MUST BE LOGGED BY THE CONTRACTOR AND KEPT WITH THE APPROVED PLANS AND SWPPP.
19. GRAVEL CONSTRUCTION ENTRANCES SHALL BE PROVIDED TO MINIMIZE EXPORT OF ONSITE DIRT. IF GRAVEL IS NOT ALLOWED, THE CONSTRUCTION ENTRANCES SHALL BE SWEPT PERIODICALLY AND LOGGED BY THE CONTRACTOR.

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

EROSION CONTROL PLAN
FOR
NEW YORK AVE APARTMENTS
CITY OF DELAND FLORIDA

BLUE IAN, LLC
180 FOUNTAIN PKWY N.
ST. PETERSBURG, FL 33716

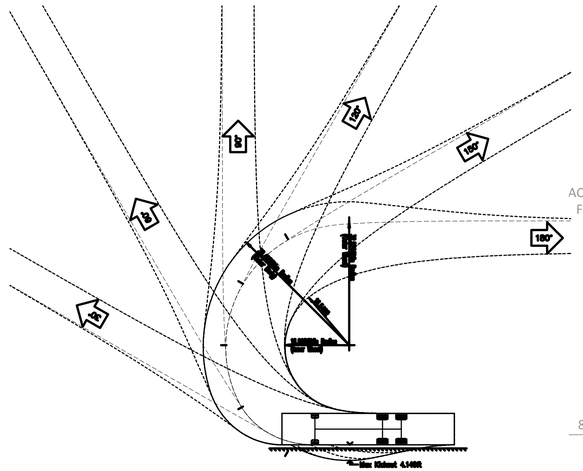
ENGINEER IN CHARGE:
DAVID A. STOKES, P.E. #66527
July 10, 2025
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

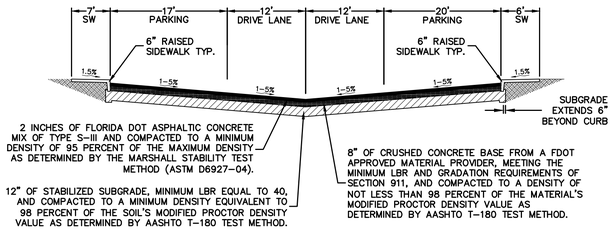
DATE	REVISIONS
03/25/25	ENTIRE SET REVISED PER BUILDING CHANGES
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	

JOB # 23201
DATE: 03/25/25
SCALE: 1"=50'
DESIGNED BY: TRF
DRAWN BY: TRF
APPROVED BY: DAS

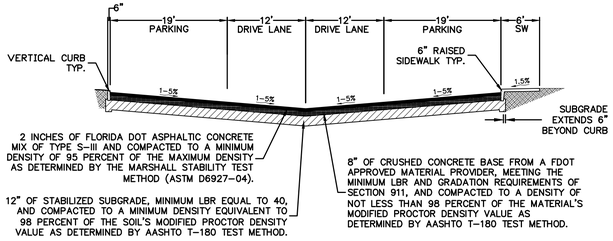
C700

THESE PLANS ARE THE PROPERTY OF MADDEN, MOORHEAD & STOKES, LLC AND ARE NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE EXPRESS WRITTEN CONSENT OF MADDEN, MOORHEAD & STOKES, LLC

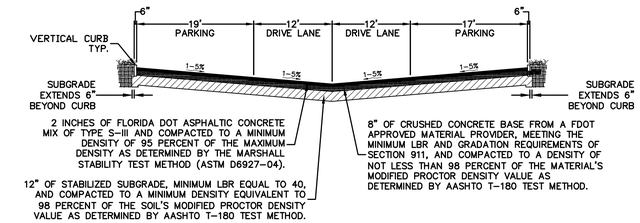

15'
15'
15'
15'
15'
180'
180'
Min Radius 41.00ft
Min Radius 41.00ft
Max Wheel 41.00ft
Max Wheel 41.00ft
Max Wheel



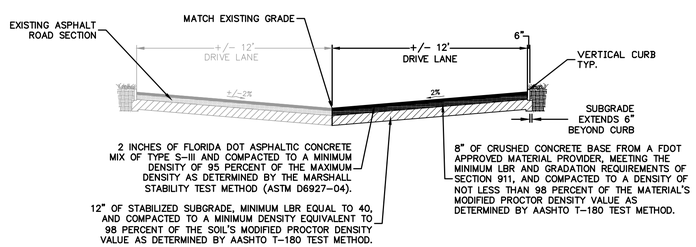
A — TYPICAL DRIVE LANE SECTION
PARKING BOTH SIDES WITH SIDEWALK
N.T.S.



B — TYPICAL DRIVE LANE SECTION
PARKING BOTH SIDES WITH SIDEWALK
N.T.S.



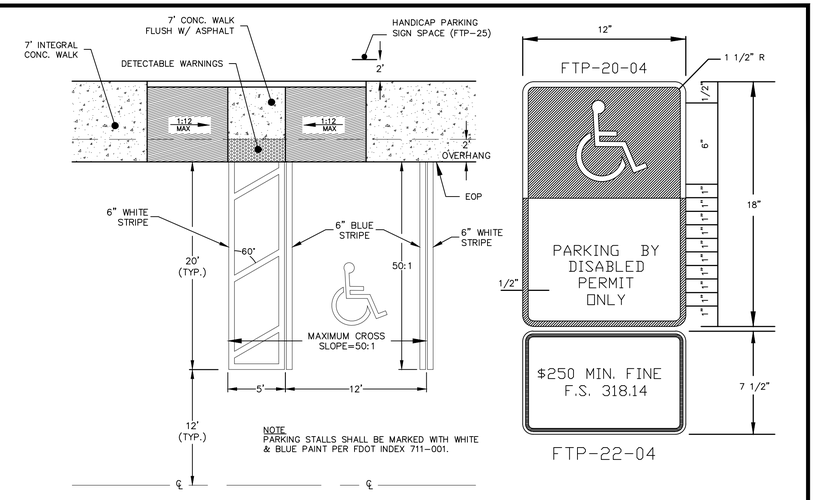
C — TYPICAL DRIVE LANE SECTION
PARKING BOTH SIDES
N.T.S.



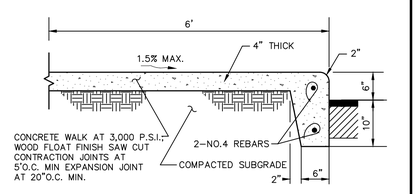
D — TYPICAL DRIVE LANE SECTION
—SHARED ACCESS
N.T.S.

LIMEROCK BASE ALTERNATIVE

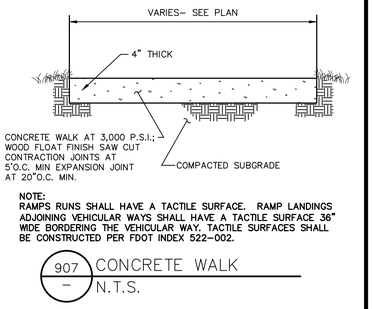
12" OF STABALIZED SUBGRADE WITH A MINIMUM LIMEROCK BEARING RATIO OF 40 PSI, OR A MINIMUM FLORIDA BEARING VALUE OF 75 PSI, COMPACTED TO A MIN. DENSITY EQUIVALENT TO 98% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 1557 TEST METHOD. TO BE PLACED IN MAXIMUM 12" LIFTS.



818 — HANDICAP RAMP AND PARKING STALL DETAIL
N.T.S.

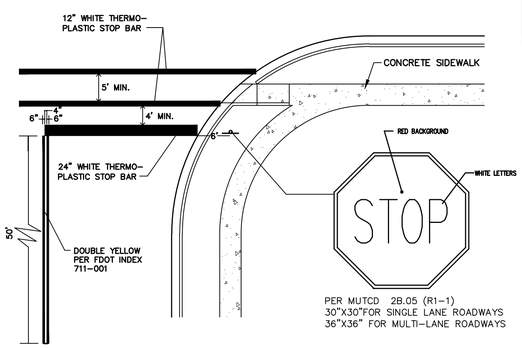


904 — CONC WALK & CURB
N.T.S.

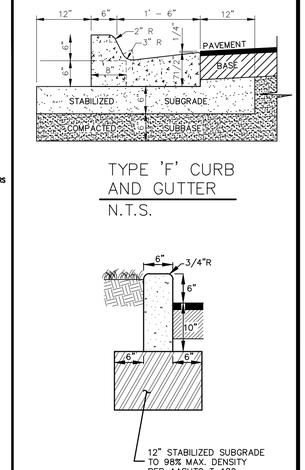


NOTE:
RAMPS RUNS SHALL HAVE A TACTILE SURFACE. RAMP LANDINGS ADJOINING VEHICULAR WAYS SHALL HAVE A TACTILE SURFACE 36" WIDE BORDERING THE VEHICULAR WAY. TACTILE SURFACES SHALL BE CONSTRUCTED PER FDOT INDEX 522-002.

907 — CONCRETE WALK
N.T.S.



212 — STOP SIGN AND BAR DETAIL
N.T.S.



TYPE 'F' CURB AND GUTTER
N.T.S.

300D — VERTICAL CURB
N.T.S.

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

CONSTRUCTION DETAILS
FOR
NEW YORK AVE APARTMENTS
CITY OF DELAND
FLORIDA

BLUE IAN, LLC
180 FOUNTAIN PKWY N.
ST. PETERSBURG, FL 33716

ENGINEER IN CHARGE:
DAVID A. STOKES, P.E. #65227
July 10, 2025
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

NO.	DATE	REVISIONS
1	03/25/25	ENTIRE SET REVISED PER BUILDING CHANGES
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		

JOB # 23201
DATE: 03/25/25
SCALE: AS SHOWN
DESIGNED BY: TRF
DRAWN BY: TRF
APPROVED BY: DAS

C900

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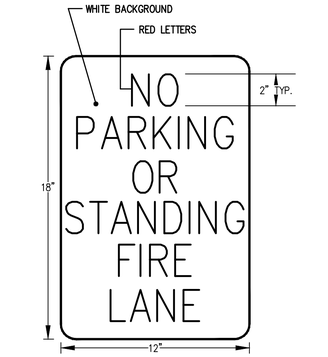
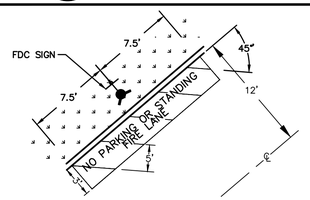


924 — FIRE LANE STRIPPING SIGN
N.T.S.

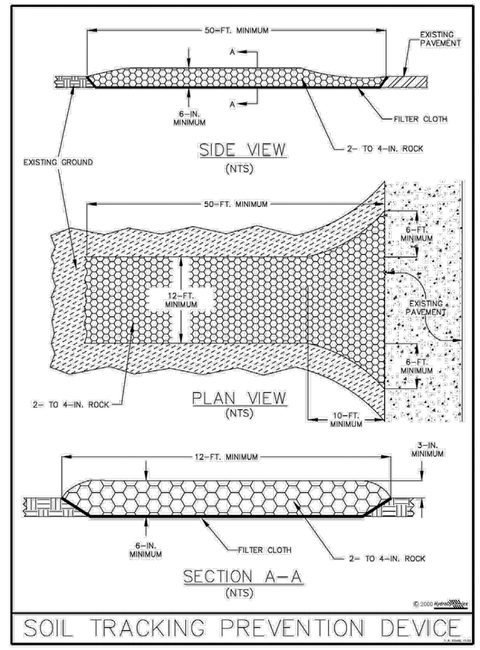


FIRE LANE STRIPING TO MEET THE FOLLOWING DESIGN CTITERIA

MARKING COLOR:	SAFETY YELLOW
MATERIAL:	ADHESIVE THERMOPLASTIC
STRIPES:	4–INCHES WIDE CENTERED 5–FEET APART, TO EXTEND 3–FEET FROM CURB OR BUILDING, AND BE
SLANTED	AT 45° (AGAINST THE FLOW OF TRAFFIC).
LETTERS:	THE LINES OF EACH LETTER SHALL BE 4–INCHES
WIDE,	EACH LETTER SHALL BE 18 TO 24–INCHES HIGH.
MESSAGE:	"NO PARKING OR STANDING – FIRE LANE
LOCATION:	CENTRERED IN FRONT OF ANY FIRE HYDRANT OR FIRE DEPARTMENT CONNECTION.

923 — FIRE LANE STRIPING
N.T.S.

STATE OF FLORIDA E&SC DESIGNER & REVIEWER MANUAL; LATEST EDITION: JULY 2013



SOIL TRACKING PREVENTION DEVICE

106 — SOIL TRACKING PREVENTION DEVICE
N.T.S.

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629–8330

CONSTRUCTION DETAILS
FOR
NEW YORK AVE APARTMENTS
CITY OF DELAND
FLORIDA

BLUE IAN, LLC
180 FOUNTAIN PKWY N.
ST. PETERSBURG, FL 33716

ENGINEER IN CHARGE:
DAVID A. STOKES, P.E. #66527
July 10, 2025
CERTIFICATE OF AUTHORIZATION NO. CA–0007723

	DATE	REVISIONS
1	03/25/25	ENTIRE SET REVISED PER BUILDING CHANGES
2		
3		
4		
5		
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7		
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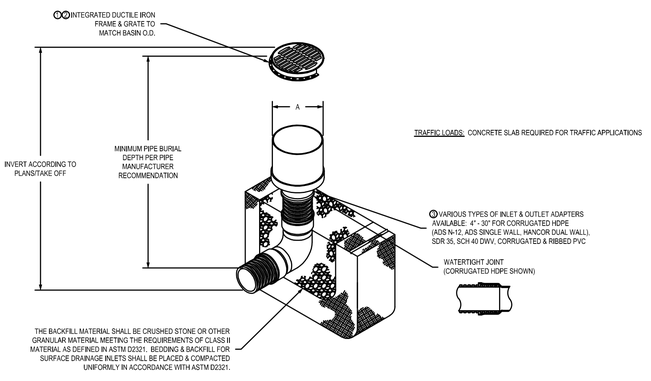
9		
10		
11		

JOB #: 23201
DATE: 03/25/25
SCALE: AS SHOWN
DESIGNED BY: TRF
DRAWN BY: TRF
APPROVED BY: DAS

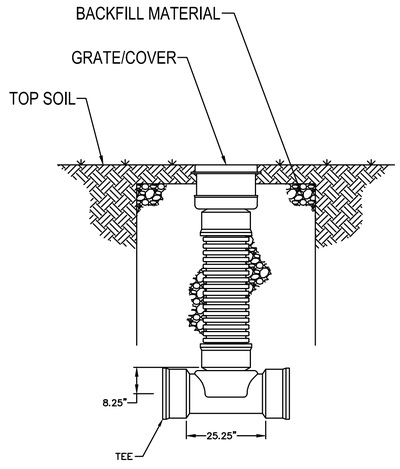
C901

INLINE DRAIN



TRAFFIC LOADS: CONCRETE SLAB REQUIRED FOR TRAFFIC APPLICATIONS

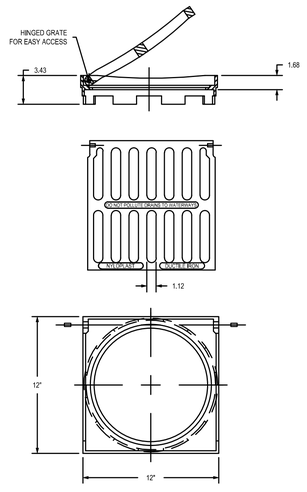
① 12" - 30" GRATES/SOLID COVERS SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
② 12" - 30" FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
③ DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS & HANCOR DUAL WALL) & SDR 35 PVC
④ - GRATES SHALL MEET H-20 LOAD RATING FOR 12" -24" PED



NOTE:
1. FLAT GRATE FOR PAVED AREAS ONLY, DOME GRATE TO BE USED FOR ALL OTHER APPLICATIONS.

FLAT GRATE

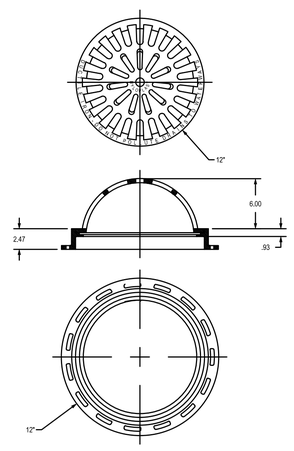
APPROX. DRAIN AREA = 92.70 SQ IN
APPROX. WEIGHT WITH FRAME = 59.62 LBS



FLAT GRATE NOTES:
1. ALL DIMENSIONS IN INCHES UNLESS NOTED OTHERWISE.
2. GRATE MEETS H-20 LOAD RATING.
3. MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05.
4. CASTINGS SHALL BE FURNISHED WITH BLACK PAINT.

DOMED GRATE

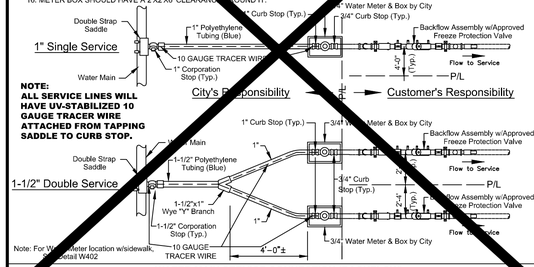
APPROX. DRAIN AREA = 115.49 SQ IN
APPROX. WEIGHT WITH FRAME = 47.30 LBS



DOMED GRATE NOTES:
1. ALL DIMENSIONS IN INCHES UNLESS NOTED OTHERWISE.
2. MATERIAL SHALL CONFORM TO ASTM A536 GRADE 70-50-05.
3. CASTINGS SHALL BE FURNISHED WITH BLACK PAINT.

985 — YARD DRAIN DETAIL
N.T.S.

NOTES:
1. WATER MAINS TO BE ON NORTH or EAST SIDE OF R.O.W., APPROX. 4 FT. BACK OF CURB UNLESS OTHERWISE AUTHORIZED BY CITY ENGINEER.
2. SERVICE CONNECTIONS TO BE 4 FT. FROM SIDE LOT LINE ON EITHER SIDE OF LOT. THESE SERVICES TO BE CONSISTENT WITHIN THE SUBDIVISION. DRIVEWAYS SHALL NOT BE BUILT OVER METERS.
3. ALL LINES SHALL BE CHLORINATED and PRESSURE TESTED (TEST FOR TWO HOURS @ 150 P.S.I.) UNDER THE DIRECTION OF THE UTILITIES DEPARTMENT. AFTER SUCCESSFUL COMPLETION OF THE TESTING and CHLORINATION, THE PRESSURE SHALL REMAIN ON THE SYSTEM AT ALL TIMES.
4. TEN FT. SEPARATION REQUIRED BETWEEN PARALLEL WATER & SANITARY SEWER LINES.
5. SADDLE IS REQUIRED FOR ALL SERVICE CONNECTIONS TO 4" PVC MAINS. SADDLE IS REQUIRED FOR 2" SERVICE CONNECTIONS TO 6" and LARGER MAINS. LARGEST SERVICE CONNECTION TO A 4" MAIN IS MIN. 1-1/2" and LARGEST TO A MAIN IS 2".
6. MINIMUM DISTANCE BETWEEN SERVICE TAPS TO BE NOT LESS THAN 36".
7. SINGLE SERVICE TAP SHALL BE 1".
8. DOUBLE SERVICE TAP SHALL BE 1-1/ 2".
9. ALL FITTINGS SHALL BE BRASS ONLY.
10. ALL CORPORATION STOPS, SHALL BE "FORD" OR "MUELLER" ONLY.
11. FREEZE PROTECTION VALVE, SHALL BE "CONBRACO" 40LF000FPV2F.
12. ALL 3/4", 1", 1-1/2", & 2" W.M., SHALL BE SDR 9, 200 psi, ASTMD 2737, (BLUE) POLYETHYLENE TUBING.
13. ALL BRASS FITTINGS SHALL BE LEAD FREE.
14. NO GALVANIZED FITTINGS CONNECTED TO BRASS FITTINGS.
15. PLANTINGS AND OBSTRUCTIONS SHOULD BE AVOIDED WITHIN 3 FT. RADIUS FOR SERVICE ACTIVITY.
16. METER BOX SHOULD HAVE A 2"X2"X6" CLEARANCE AROUND IT.



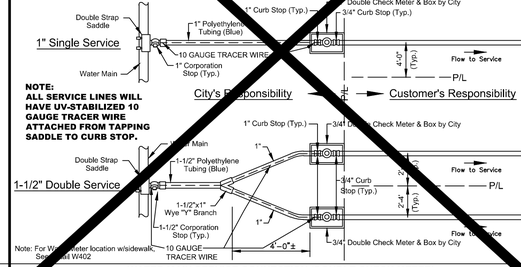
NOTE:
ALL SERVICE LINES WILL HAVE UV-STABILIZED 10 GAUGE TRACER WIRE ATTACHED FROM TAPPING SADDLE TO CURB STOP.

Note: For Water Meter location w/sidewalk, See Detail W402

DATE: 11/07/2023 **WATER MAIN SERVICE CONNECTION (BACKFLOW)** W401

City of DeLand - Standard Details

NOTES:
1. WATER MAINS TO BE ON NORTH or EAST SIDE OF R.O.W., APPROX. 4 FT. BACK OF CURB UNLESS OTHERWISE AUTHORIZED BY CITY ENGINEER.
2. SERVICE CONNECTIONS TO BE 4 FT. FROM SIDE LOT LINE ON EITHER SIDE OF LOT. THESE SERVICES TO BE CONSISTENT WITHIN THE SUBDIVISION. DRIVEWAYS SHALL NOT BE BUILT OVER METERS.
3. ALL LINES SHALL BE CHLORINATED and PRESSURE TESTED (TEST FOR TWO HOURS @ 150 P.S.I.) UNDER THE DIRECTION OF THE UTILITIES DEPARTMENT. AFTER SUCCESSFUL COMPLETION OF THE TESTING and CHLORINATION, THE PRESSURE SHALL REMAIN ON THE SYSTEM AT ALL TIMES.
4. TEN FT. SEPARATION REQUIRED BETWEEN PARALLEL WATER & SANITARY SEWER LINES.
5. SADDLE IS REQUIRED FOR ALL SERVICE CONNECTIONS TO 4" PVC MAINS. SADDLE IS REQUIRED FOR 2" SERVICE CONNECTIONS TO 6" and LARGER MAINS. LARGEST SERVICE CONNECTION TO A 4" MAIN IS MIN. 1-1/2" and LARGEST TO A MAIN IS 2".
6. MINIMUM DISTANCE BETWEEN SERVICE TAPS TO BE NOT LESS THAN 36".
7. SINGLE SERVICE TAP SHALL BE 1".
8. DOUBLE SERVICE TAP SHALL BE 1-1/ 2".
9. ALL FITTINGS SHALL BE BRASS ONLY.
10. ALL CORPORATION STOPS, SHALL BE "FORD" OR "MUELLER" ONLY.
11. ALL 3/4", 1", 1-1/2", & 2" W.M., SHALL BE SDR 9, 200 psi, ASTMD 2737, (BLUE) POLYETHYLENE TUBING.
12. ALL BRASS FITTINGS SHALL BE LEAD FREE.
13. NO GALVANIZED FITTINGS CONNECTED TO BRASS FITTINGS.
14. PLANTINGS AND OBSTRUCTIONS SHOULD BE AVOIDED WITHIN 3 FT. RADIUS FOR SERVICE ACTIVITY.
15. METER BOX SHOULD HAVE A 2"X2"X6" CLEARANCE AROUND IT.



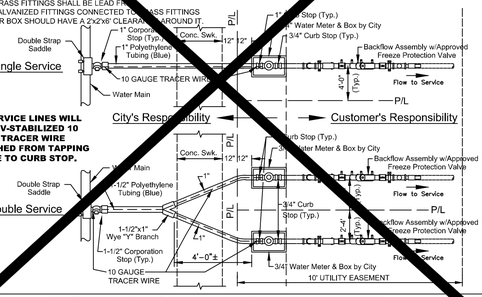
NOTE:
ALL SERVICE LINES WILL HAVE UV-STABILIZED 10 GAUGE TRACER WIRE ATTACHED FROM TAPPING SADDLE TO CURB STOP.

Note: For Water Meter location w/sidewalk, See Detail W402

DATE: 11/07/2023 **WATER MAIN SERVICE CONNECTION (DOUBLE CHECK METER)** W401A

City of DeLand - Standard Details

NOTES:
1. WATER MAINS TO BE ON NORTH or EAST SIDE OF R.O.W., APPROX. 4 FT. BACK OF CURB UNLESS OTHERWISE AUTHORIZED BY CITY ENGINEER.
2. SERVICE CONNECTIONS TO BE 4 FT. FROM SIDE LOT LINE ON EITHER SIDE OF LOT. THESE SERVICES TO BE CONSISTENT WITHIN THE SUBDIVISION. DRIVEWAYS SHALL NOT BE BUILT OVER METERS.
3. ALL LINES SHALL BE CHLORINATED and PRESSURE TESTED (TEST FOR TWO HOURS @ 150 P.S.I.) UNDER THE DIRECTION OF THE UTILITIES DEPARTMENT. AFTER SUCCESSFUL COMPLETION OF THE TESTING and CHLORINATION, THE PRESSURE SHALL REMAIN ON THE SYSTEM AT ALL TIMES.
4. TEN FT. SEPARATION REQUIRED BETWEEN PARALLEL WATER & SANITARY SEWER LINES.
5. SADDLE IS REQUIRED FOR ALL SERVICE CONNECTIONS TO 4" PVC MAINS. SADDLE IS REQUIRED FOR 2" SERVICE CONNECTIONS TO 6" and LARGER MAINS. LARGEST SERVICE CONNECTION TO A 4" MAIN IS MIN. 1-1/2" and LARGEST TO A MAIN IS 2".
6. MINIMUM DISTANCE BETWEEN SERVICE TAPS TO BE NOT LESS THAN 36".
7. SINGLE SERVICE TAP SHALL BE 1".
8. DOUBLE SERVICE TAP SHALL BE 1-1/ 2".
9. ALL FITTINGS SHALL BE BRASS ONLY.
10. ALL CORPORATION STOPS, SHALL BE "FORD" OR "MUELLER" ONLY.
11. FREEZE PROTECTION VALVE, SHALL BE "CONBRACO" 40LF000FPV2F.
12. ALL 3/4", 1", 1-1/2", & 2" W.M., SHALL BE SDR 9, 200 psi, ASTMD 2737, (BLUE) POLYETHYLENE TUBING.
13. ALL BRASS FITTINGS SHALL BE LEAD FREE.
14. NO GALVANIZED FITTINGS CONNECTED TO BRASS FITTINGS.
15. METER BOX SHOULD HAVE A 2"x2"x6" CLEARANCE AROUND IT.

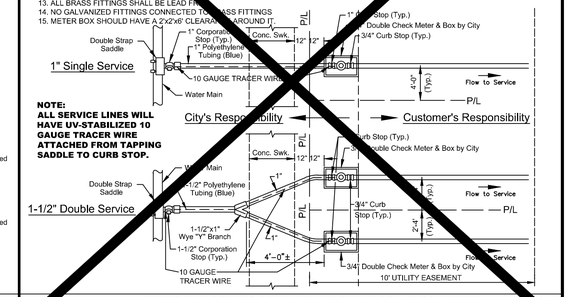


NOTE:
ALL SERVICE LINES WILL HAVE UV-STABILIZED 10 GAUGE TRACER WIRE ATTACHED FROM TAPPING SADDLE TO CURB STOP.

DATE: 11/07/2023 **WATER MAIN SERVICE CONNECTION WITH SIDEWALK (BACKFLOW)** W402

City of DeLand - Standard Details

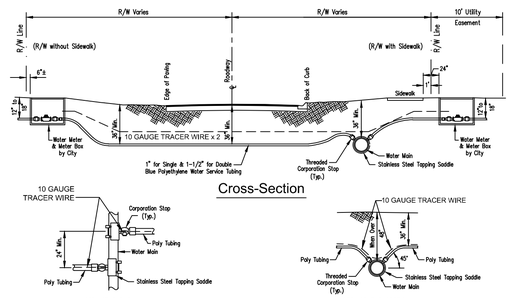
NOTES:
1. WATER MAINS TO BE ON NORTH or EAST SIDE OF R.O.W., APPROX. 4 FT. BACK OF CURB UNLESS OTHERWISE AUTHORIZED BY CITY ENGINEER.
2. SERVICE CONNECTIONS TO BE 4 FT. FROM SIDE LOT LINE ON EITHER SIDE OF LOT. THESE SERVICES TO BE CONSISTENT WITHIN THE SUBDIVISION. DRIVEWAYS SHALL NOT BE BUILT OVER METERS.
3. ALL LINES SHALL BE CHLORINATED and PRESSURE TESTED (TEST FOR TWO HOURS @ 150 P.S.I.) UNDER THE DIRECTION OF THE UTILITIES DEPARTMENT. AFTER SUCCESSFUL COMPLETION OF THE TESTING and CHLORINATION, THE PRESSURE SHALL REMAIN ON THE SYSTEM AT ALL TIMES.
4. TEN FT. SEPARATION REQUIRED BETWEEN PARALLEL WATER & SANITARY SEWER LINES.
5. SADDLE IS REQUIRED FOR ALL SERVICE CONNECTIONS TO 4" PVC MAINS. SADDLE IS REQUIRED FOR 2" SERVICE CONNECTIONS TO 6" and LARGER MAINS. LARGEST SERVICE CONNECTION TO A 4" MAIN IS MIN. 1-1/2" and LARGEST TO A MAIN IS 2".
6. MINIMUM DISTANCE BETWEEN SERVICE TAPS TO BE NOT LESS THAN 36".
7. SINGLE SERVICE TAP SHALL BE 1".
8. DOUBLE SERVICE TAP SHALL BE 1-1/ 2".
9. ALL FITTINGS SHALL BE BRASS ONLY.
10. ALL CORPORATION STOPS, SHALL BE "FORD" OR "MUELLER" ONLY.
11. FREEZE PROTECTION VALVE, SHALL BE "CONBRACO" 40LF000FPV2F.
12. ALL 3/4", 1", 1-1/2", & 2" W.M., SHALL BE SDR 9, 200 psi, ASTMD 2737, (BLUE) POLYETHYLENE TUBING.
13. ALL BRASS FITTINGS SHALL BE LEAD FREE.
14. NO GALVANIZED FITTINGS CONNECTED TO BRASS FITTINGS.
15. METER BOX SHOULD HAVE A 2"x2"x6" CLEARANCE AROUND IT.



NOTE:
ALL SERVICE LINES WILL HAVE UV-STABILIZED 10 GAUGE TRACER WIRE ATTACHED FROM TAPPING SADDLE TO CURB STOP.

DATE: 11/07/2023 **WATER MAIN SERVICE CONN. WITH SIDEWALK (DBL. CHECK METER)** W402A

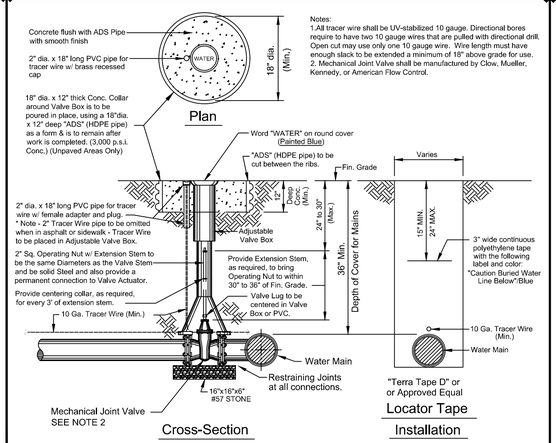
City of DeLand - Standard Details



NOTES:
1. SINGLE WATER SERVICE SHALL BE, 1" POLYETHYLENE TUBING (BLUE).
2. DOUBLE WATER SERVICE SHALL BE, 1-1/2" POLYETHYLENE TUBING (BLUE).
3. WATER MAINS TO BE MIN. 36" BELOW GRADE and APPROX. 4' BACK OF CURB.
4. CURB STOP TO BE LOCATED APPROX. 2 FOOT BACK OF RIGHT-OF-WAY AND MUST HAVE LOCK WING.
5. SERVICE LINE TO BE MIN. 36" BELOW GRADE IN RIGHT-OF-WAY.
6. ALL 3/4", 1", 1-1/2" & 2" W.M., SHALL BE SDR 9, 200 psi, ASTMD 2737, (BLUE) POLYETHYLENE TUBING.
7. ALL TRACER WIRE SHALL BE (BLUE) UV-STABILIZED 10 GAUGE. DIRECTIONAL BORES REQUIRED TO HAVE TWO 10 GAUGE WIRES THAT ARE PULLED WITH DIRECTIONAL DRILL. OPEN CUT MAY USE ONLY ONE 10 GAUGE WIRE.
8. ALL SERVICE TAPS TO MEET AWWA STANDARD 45° FROM HORIZONTAL UNLESS PRIOR AUTHORIZATION RECEIVED FROM CITY.
9. ALL SERVICE LINES WILL HAVE TRACER WIRE ATTACHED FROM TAPPING SADDLE TO CURB STOP.

DATE: 11/07/2023 **WATER MAIN SERVICE LINES** W403

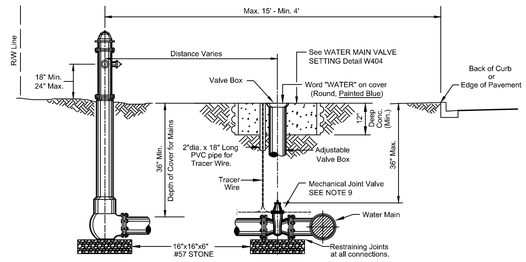
City of DeLand - Standard Details



Notes:
1.All tracer wire shall be UV-stabilized 10 gauge. Directional bores require to have two 10 gauge wires that are pulled with directional drill. Open cut may use only one 10 gauge wire. Wire length must have enough slack to be extended a minimum of 18" above grade for use.
2. Mechanical Joint Valve shall be manufactured by Clow, Mueller, Kennedy, or American Flow Control.

DATE: 11/07/2023 **WATER MAIN VALVE SETTING** W404

City of Deland - Standard Details



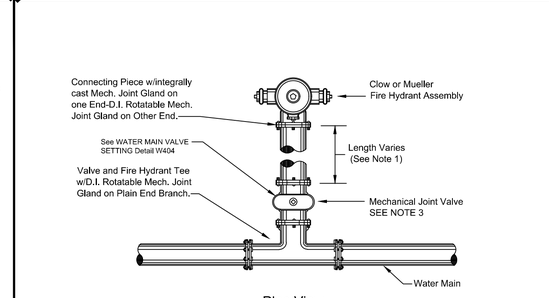
NOTES:
1. Steamer Connection to Face Street.
2. All Fire Hydrants to have 5 1/4" Valve Seat.
3. Fire Hydrants Shall be Placed at Street Corners or in the R.O.W. Adjacent to Side Lot Lines Whenever Possible.
4. See Detail W406 for Typical Connections & Fittings.
5. Fire Hydrants Shall be Painted City Safety Yellow w/Richards Paint No. 1009, Rust Shield Polyurethane.
6. Remove Chains from Cap.
7. Min. 3 ft. Clearance Should be Maintained Around Fire Hydrant for Emergency Operation Purposes.
8. All tracer wire shall be UV-stabilized 10 gauge. Directional bores require to have two 10 gauge wires that are pulled with directional drill. Open cut may use only one 10 gauge wire.
9. Mechanical Joint Valve shall be manufactured by Clow, Mueller, Kennedy, or American Flow Control.

ONLY APPROVED CITY FIRE HYDRANTS
— Mueller Super Centurion 200
— Clow Medallion

See W406 for Plan View

DATE: 11/07/2023 **FIRE HYDRANT SETTING SECTION** W405

City of DeLand -Standard Details



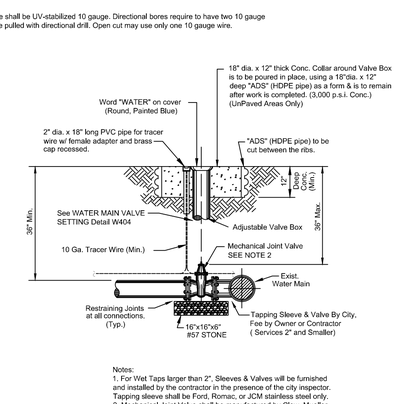
NOTES:
1. On Fire Hydrants Requiring Runout Last Two Joints Must Be Restrained Per Detail W409.
2. Fire Hydrants Should Have a 2'x2'x6' Clearance Around it.
3. Mechanical Joint Valve shall be manufactured by Clow, Mueller, Kennedy, or American Flow Control.

ONLY APPROVED CITY FIRE HYDRANTS
— Mueller Super Centurion 200
— Clow Medallion

See W405 for Cross Section

DATE: 11/07/2023 **FIRE HYDRANT SETTING PLAN** W406

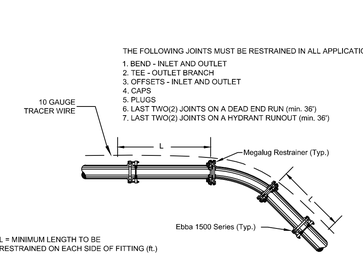
City of DeLand - Standard Details



Notes:
1. For Wet Taps larger than 2", Sleeves & Valves will be furnished and installed by the contractor in the presence of the city inspector. Tapping sleeve shall be Ford, Romac, or JCM stainless steel only.
2. Mechanical Joint Valve shall be manufactured by Clow, Mueller, Kennedy, or American Flow Control.

DATE: 11/07/2023 **TAPPING SLEEVE & VALVE** W407

City of DeLand - Standard Details



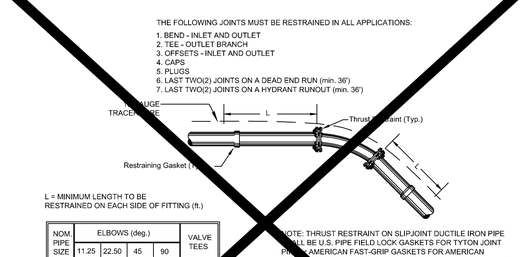
L = MINIMUM LENGTH TO BE RESTRAINED ON EACH SIDE OF FITTING (ft.)

NOM. PIPE SIZE	ELBOWS (deg.) 11.25	22.50	45	90	VALVE TEES
4	3	5	8	12	9
6	4	6	10	15	11
8	4	7	13	20	14
10	5	9	15	25	18
12	6	10	17	29	21
14	6	13	26	61	30
16	7	14	28	67	49
18	8	15	31	73	68
20	8	16	33	80	85

NOTE: THRUST RESTRAINT AT FITTINGS AND VALVES SHALL BE BY USE OF EBBA IRON MEGALUG RESTRAINERS. THRUST RESTRAINT BETWEEN PIPE JOINTS SHALL BE BY EBBA IRON SERIES 1500 RESTRAINERS.

DATE: 11/07/2023 **THRUST RESTRAINING DETAIL FOR PVC PIPE** W408

City of DeLand - Standard Details



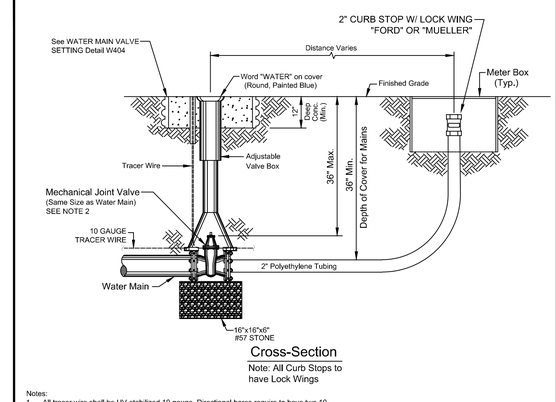
L = MINIMUM LENGTH TO BE RESTRAINED ON EACH SIDE OF FITTING (ft.)

NOM. PIPE SIZE	ELBOWS (deg.) 11.25	22.50	45	90	VALVE TEES
4	3	5	8	12	9
6	4	6	10	15	11
8	4	7	13	20	14
10	5	9	15	25	18
12	6	10	17	29	21
16	6	13	26	61	70
18	9	17	29	66	88
20	10	19	32	94	108
24	11	22	45	109	145

NOTE: THRUST RESTRAINT ON SLIPJOINT DUCTILE IRON PIPE SHALL BE U.S. PIPE FIELD LOCK GASKETS FOR TYTON JOINT PIPE & AMERICAN FAST-GRIP GASKETS FOR AMERICAN FAST PIPE. THRUST RESTRAINT ON DUCTILE IRON FITTINGS SHALL BE PROVIDED BY THE USE OF MEGALUG RETAINERS AND MECHANICAL JOINT FITTINGS.

DATE: 11/07/2023 **THRUST RESTRAINING DETAIL FOR DUCTILE IRON PIPE** W409

City of DeLand - Standard Details



Notes:
1. All tracer wire shall be UV-stabilized 10 gauge. Directional bores require to have two 10 gauge wires that are pulled with directional drill. Open cut may use only one 10 gauge wire.
2. Mechanical Joint Valve shall be manufactured by Clow, Mueller, Kennedy, or American Flow Control.

DATE: 11/07/2023 **WATER MAIN BLOWOFF DETAIL** W410

City of DeLand - Standard Details

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

CITY DETAILS
FOR
NEW YORK AVE APARTMENTS
FLORIDA
CITY OF DELAND

BLUE IAN, LLC
160 FOUNTAIN PKWY N.
ST. PETERSBURG, FL 33716

ENGINEER IN CHARGE:
DAVID A. STOKES, P.E. #65527
July 10, 2025
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

DATE	REVISIONS
1 03/25/25	ENTIRE SET REVISED PER BUILDING CHANGES
2	
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JOB # 23201
DATE: 03/25/25
SCALE: N.T.S.
DESIGNED BY: TRF
DRAWN BY: TRF
APPROVED BY: DAS

C910

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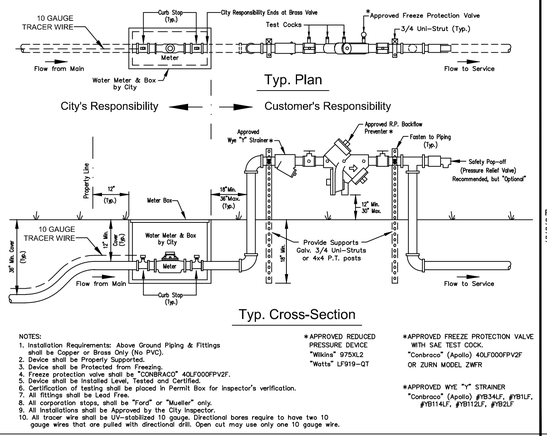
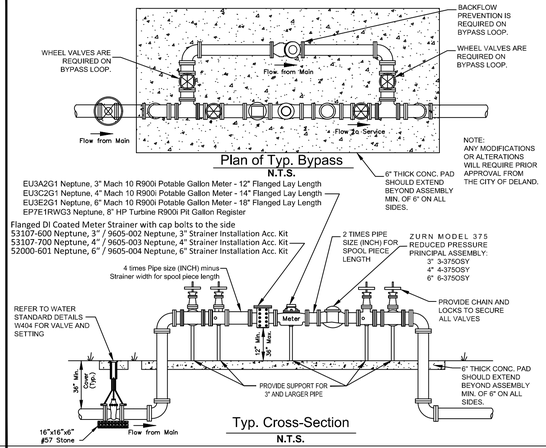


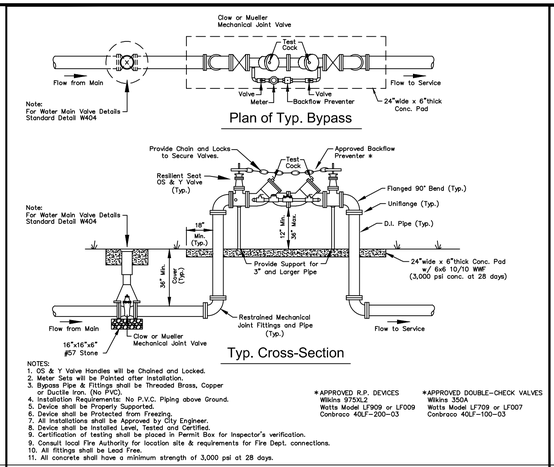
DATE: 11/07/2023 **WATER METER & BACKFLOW ASSEMBLY - 1" THRU 2-1/2" MODELS** **W411**

City of DeLand - Standard Details



DATE: 11/07/2023 **3" AND ABOVE POTABLE WATER METER WITH BYPASS LOOP** **W412**

City of DeLand - Standard Details



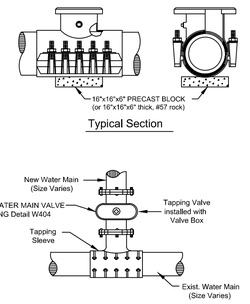
NOTES:
1. Meter Sets will be Painted after Installation.
2. Bypass Pipe & Fittings shall be Threaded Brass, Copper or Ductile Iron. (No PVC).
3. Installation Requirements: No P.V.C. Piping above Ground.
4. Device shall be Properly Supported.
5. Device shall be Protected from Freezing.
6. All Installations shall be Approved by City Engineer.
7. Device shall be Installed Level, Tested and Certified.
8. Certification of testing shall be placed in Permit Box for inspector's verification.
9. Consult local Fire Authority for location site & requirements for Fire Dept. connections.
10. All fittings shall be Lead Free.
11. All concrete shall have a minimum strength of 3,000 psi at 28 days.

*APPROVED R.P. DEVICES Wilkins 975XL2 Watts Model LF909 or LF009 Conbraco 40LF-200-03

*APPROVED DOUBLE-CHECK VALVES Wilkins 350A Watts Model LF709 or LF007 Conbraco 40LF-100-03

DATE: 11/07/2023 **DOUBLE DETECTOR CHECK VALVE ASSEMBLY - 4" THRU 12"** **W413**

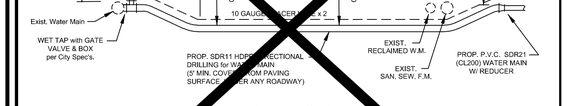
City of DeLand - Standard Details



NOTES:
1. ALL TAPPING SLEEVES ABOVE 2" IN DIA. SHALL BE STAINLESS STEEL ONLY.
2. INSTALL REQUIRED RESTRAINED JOINTS. IN NO INSTANCE SHALL THRUST BLOCKS BE PERMITTED.
3. ONLY ROMAC INDUSTRIES, FORD STAINLESS STEEL OR JCM STAINLESS STEEL TAPPING SLEEVES ARE TO BE USED.
4. IN NEW CONSTRUCTION, ALL SADDLES, SLEEVES, VALVES, CORPORATION & CURB STOPS, TUBING WILL BE FURNISHED BY THE CONTRACTOR.

DATE: 11/07/2023 **STAINLESS STEEL TAPPING SLEEVE** **W414**

City of DeLand - Standard Details

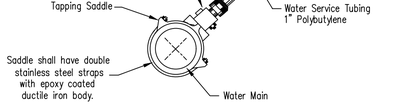


Notes:
1. Directional bores from 1-3 inches diameter must be a minimum of 36 inches in depth below edge of pavement.
2. Directional bores, 4 inches or greater must be 10 times the diameter of the bore/backreamer, whichever is greater, in depth, below edge of pavement and to extend a minimum of 5 feet beyond the edge of pavement, either side.
3. Any/All directional bore displaced drill mud/slurry must be cleaned/reclaimed from right of way/bore pits and disposed of on approved off-site location.
4. All tracer wire shall be UV-stabilized 10 gauge. Directional bores require to have two 10 gauge wires that are pulled with directional drill. Open cut may use only one 10 gauge wire.
5. No directional bores on Fridays, Weekends or Holidays. Pull backs are allowed.
6. Steel to copper wire for main lines only, transition to copper wire only with water pipe connector, pulled into valve can.

NOTE: Exist. Water Service Lines shall be Water Main as per City Specifications.

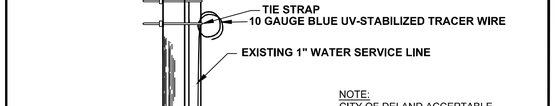
DATE: 11/07/2023 **DIRECTIONAL BORE** **W415**

City of DeLand - Standard Details



DATE: 11/07/2023 **CHLORINATION TAP** **W416**

City of DeLand - Standard Details



NOTE:
CITY OF DELAND ACCEPTABLE BACKFLOW DEVICES FOR TEMPORARY WATER SERVICES: WATTS 1" LF7R DUAL CHECK ZURN WILKINS DUAL CHECK MODEL 700 PART# 1UFX1F-700 OR 1UFMX1F-700

DATE: 11/07/2023 **TEMPORARY RESIDENTIAL CONSTRUCTION POTABLE WATER SERVICE** **W417**

City of DeLand - Standard Details

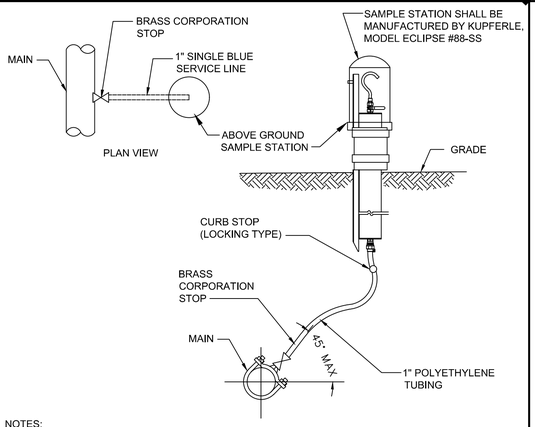


NOTE:
ALL SERVICE LINE WHIPS SHALL BE BULLET LOCKED ***OFF*** BY THE CONTRACTOR AFTER INSTALLATION AND SAMPLING HAVE BEEN COMPLETED

Manufacturer:
"FIROMATIC LOCKSEAL"

DATE: 11/07/2023 **WATER METER LOCKSEAL ASSEMBLY** **W418**

City of DeLand - Standard Details



NOTES:
1. A 1 INCH SAMPLE STATION INSTALLED AT THE END OF A CUL-DE-SAC CAN ALSO SERVE AS A BLOW -OFF VALVE WHEN BOTH ARE REQUIRED.

DATE: 11/07/2023 **WATER SAMPLE STATION** **W419**

City of DeLand - Standard Details

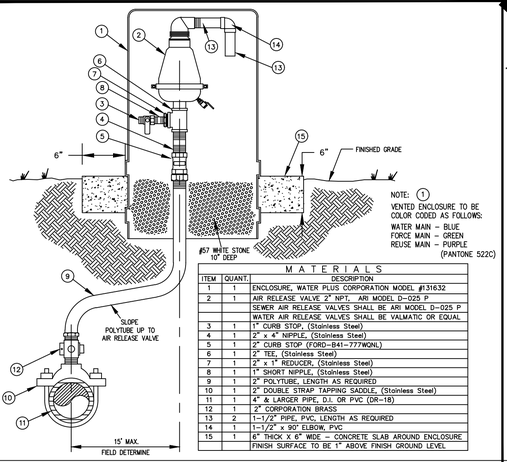
LOCATION OF PUBLIC WATER SYSTEM MAINS IN ACCORDANCE WITH F.A.C. RULE 62-555.314

Other pipe	Horizontal Separation	Crossings (1)	Joint Spacing @ Crossing (Full Joint Centered)
Storm Sewer Stormwater Force Main, Reclaimed Water (2)	WATER MAIN 3 ft. minimum	WATER MAIN 12 inches is the minimum except for storm sewer,then 6 inches is the minimum and 12 inches is preferred	Alternate 3' ft. minimum WATER MAIN
Vacuum Sanitary Sewer	WATER MAIN 10 ft. preferred 3 ft. minimum	WATER MAIN 12 inches preferred 6 inches minimum	Alternate 3' ft. minimum WATER MAIN
Gravity Sewer Sanitary Sewer, Sanitary Sewer Force Main, Reclaimed Water (4)	WATER MAIN 10 ft. preferred 6 ft. minimum (3)	WATER MAIN 12 inches is the minimum except for gravity sewer,then 6 inches is the minimum and 12 inches is preferred	Alternate 6' ft. minimum WATER MAIN
On-Site Sewage Treatment & Disposal System(4)	10 ft minimum	---	---

(1) Water Main Should Cross Above other pipe. When Water Main Must Be Below Other Pipe,the Minimum Separation is 12" Inches.
(2) Reclaimed Water Regulated Under Part III of chapter 62-610, F.A.C.
(3) 3 ft. for Gravity Sanitary sewer where the Bottom of the Water Main is laid at least 6 inches above the top of gravity sanitary sewer.
(4) Reclaimed water not regulated under Part III of Chapter 62-160, F.A.C.

DATE: 11/07/2023 **WATER PIPE SEPERATION REQUIREMENTS** **W420**

City of DeLand - Standard Details

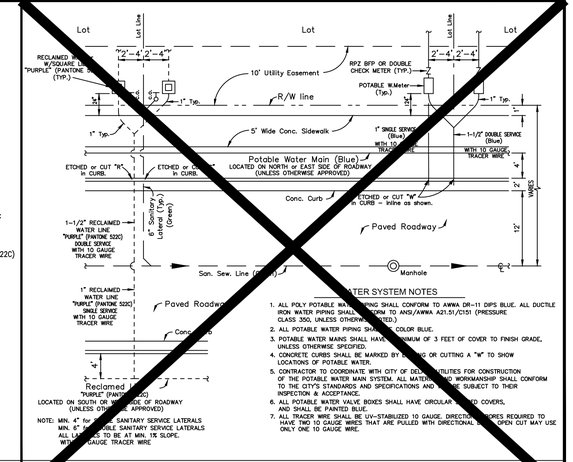


NOTE: (1) VENTED ENCLOSURE TO BE COLOR CODED AS FOLLOWS:
WATER MAIN - BLUE
FORCE MAIN - GREEN
REUSE MAIN - PURPLE (PANTONE 522C)

ITEM	QUANT.	MATERIALS DESCRIPTION
1	1	ENCLOSURE, WATER PLUS CORPORATION MODEL #J1632
2		AIR RELEASE VALVE 2" NPT, ARI MODEL D-025 P
		SEWER AIR RELEASE VALVES SHALL BE ARI MODEL D-025 P
		WATER AIR RELEASE VALVES SHALL BE VALMATIC OR EQUAL
3	1	1" CURB STOP, (Stainless Steel)
4	1	2" x 4" NIPPLE, (Stainless Steel)
5	1	2" CURB STOP (FORD-B41-777WQNL)
6	1	2" TEE, (Stainless Steel)
7	1	2" x 1" REDUCER, (Stainless Steel)
8	1	1" SHORT NIPPLE, (Stainless Steel)
9	1	2" POLYTUBE, LENGTH AS REQUIRED
10	1	2" DOUBLE STRAP TAPPING SADDLE, (Stainless Steel)
11	1	4" & LARGER PIPE, D.I. OR PVC (DR-18)
12	1	2" CORPORATION BRASS
13	2	1-1/2" PIPE, PVC, LENGTH AS REQUIRED
14	1	1-1/2" x 90° ELBOW, PVC
15	1	6" THICK X 6" WIDE – CONCRETE SLAB AROUND ENCLOSURE
		FINISH SURFACE TO BE 1" ABOVE FINISH GROUND LEVEL

DATE: 11/07/2023 **OFFSET AIR RELEASE VALVE** **W421**

City of DeLand - Standard Details



WATER SYSTEM NOTES
1. ALL POLY POTABLE WATER PIPING SHALL CONFORM TO AWWA DR-11 DIPS BLUE. ALL DUCTILE IRON WATER PIPING SHALL CONFORM TO ANSI/AWWA A21.51/C151 (PRESSURE CLASS 350, UNLESS OTHERWISE NOTED.)
2. ALL POTABLE WATER PIPING SHALL BE BLUE COLOR BLUE.
3. POTABLE WATER MAINS SHALL HAVE A MINIMUM OF 3 FEET OF COVER TO FINISH GRADE, UNLESS OTHERWISE SPECIFIED.
4. CONCRETE CURBS SHALL BE MARKED BY STAMPING OR CUTTING A "W" TO SHOW LOCATIONS OF POTABLE WATER.
5. CONTRACTOR TO COORDINATE WITH CITY OF DELAND INSTITUTES FOR CONSTRUCTION OF THE POTABLE WATER MAIN SYSTEM. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE CITY'S STANDARDS AND SPECIFICATIONS AND SHALL BE SUBJECT TO THEIR INSPECTION & ACCEPTANCE.
6. ALL POTABLE WATER VALVE BOXES SHALL HAVE CIRCULAR CAST IRON COVERS, AND SHALL BE PAINTED BLUE.
7. ALL TRACER WIRE SHALL BE UV-STABILIZED 10 GAUGE. DIRECTIONAL BORES REQUIRED TO HAVE TWO 10 GAUGE WIRES THAT ARE PULLED WITH DIRECTIONAL DRILL. OPEN CUT MAY USE ONLY ONE 10 GAUGE WIRE.

DATE: 11/07/2023 **RESIDENTIAL UTILITY LAYOUT** **W422**

City of DeLand - Standard Details

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

CITY DETAILS
FOR
NEW YORK AVE APARTMENTS
CITY OF DELAND FLORIDA

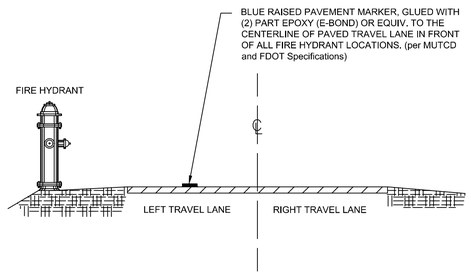
BLUE IAN, LLC
180 FOUNTAIN PKWY N.
ST. PETERSBURG, FL 33716

ENGINEER IN CHARGE:
DAWD A. STOKES, P.E. #65227
July 10, 2025
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

DATE	REVISIONS
1 03/25/25	ENTIRE SET REVISED PER BUILDING CHANGES
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	

JOB # 23201
DATE: 03/25/25
SCALE: N.T.S.
DESIGNED BY: TRF
DRAWN BY: TRF
APPROVED BY: DAS

C911



DATE: 11/07/2023 **REFLECTIVE PAVEMENT MARKER FOR FIRE HYDRANT LOCATION** W423

City of DeLand - Standard Details

Approved Ford Valve for Service Lines

1" SERVICE



Pack Joint for Copper or Plastic Tubing (CTS) Inlet by Meter Swivel Nut

Catalog Number	Description: Valve Size	Serv. Line Size	Meter Size	Approx. Wt. Lbs.
B43-211W-NL	5/8"	1/2"	5/8"	1.4
B43-212W-NL	5/8"	1/2"	5/8"x3/4" & 3/4"	1.5
▶♦ B43-231W-NL	5/8"	3/4"	5/8"	1.6
▶♦ B43-232W-NL	5/8"	3/4"	5/8"x3/4" & 3/4"	1.7
▶ B43-331W-NL	3/4"	3/4"	5/8"	2.1
▶♦ B43-332W-NL	3/4"	3/4"	5/8"x3/4" & 3/4"	2.4
▶♦ B43-334W-NL	3/4"	3/4"	1"	2.3
▶ B43-341W-NL	3/4"	1"	5/8"	2.7
▶♦ B43-342W-NL	3/4"	1"	5/8"x3/4" & 3/4"	2.4
▶♦ B43-344W-NL	3/4"	1"	1"	2.7
▶♦ B43-444W-NL	1"	1"	1"	3.2
B43-454W-NL	1"	1-1/4"	1"	3.4

2" SERVICE

Pack Joint for Copper or Plastic Tubing (CTS) by Female Iron Pipe Thread



Catalog Number	Valve Size	CTS End	FIP End	Approx. Wt. Lbs.
▶♦ * B41-333-NL	3/4"	3/4"	3/4"	2.0
▶♦ B41-334-NL	3/4"	3/4"	1"	2.1
▶♦ B41-343-NL	3/4"	1"	3/4"	2.2
▶♦ B41-344-NL	3/4"	1"	1"	2.4
♦ BL41-344-4-875-NL	3/4"	1"	1"	3.1
▶♦ * B41-444-NL	1"	1"	1"	2.8
♦ B41-454-NL	1"	1-1/4"	1"	3.2
♦ B41-455-NL	1"	1-1/4"	1-1/4"	3.7
♦ B41-555-NL	1-1/4"	1-1/4"	1-1/4"	5.6
♦ **B41-666-NL	1-1/2"	1-1/2"	1-1/2"	7.0
B41-677-NL	1-1/2"	2"	2"	9.6
♦ **B41-777-NL	2"	2"	2"	11.1

DATE: 11/07/2023 **VALVE FOR WATER AND RECLAIM SERVICE LINE** W424

City of DeLand - Standard Details

Approved Muller Valve for Service Lines

1" SERVICE



P-24350N

Mueller 300 Ball Straight Meter Valve
Mueller Pack Joint Connection for CTS O.D.* tubing x meter swivel nut**.
Quarter turn check - lock wing. 360° turn option available by adding -3 suffix to catalog number.
Example: P-24350-3

Catalog size	3/4"x5/8" R †	3/4" R †	3/4"	5/8"x3/4"x1"	1" R †	1"
Meter size	5/8"	5/8"x3/4", 3/4"	5/8"x3/4", 3/4"	5/8"x3/4", 3/4"	1"	1"
Tubing size	3/4"	3/4"	3/4"	1"	1"	1"

2" SERVICE



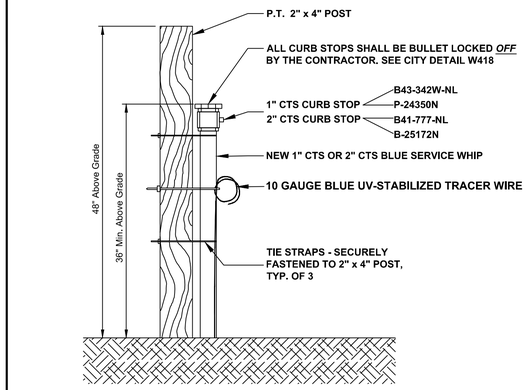
P-25172N

Mueller 300 Ball Curb Valve
Inlet: Mueller Pack Joint Connection for CTS O.D.* tubing
Outlet: F.I.P. thread
Quarter turn check-this valve may be ordered with 360° turn option by adding -3 to end of catalog number (P-25172-3)

3/4"R	3/4"	1"R	1"	1-1/2"	2"

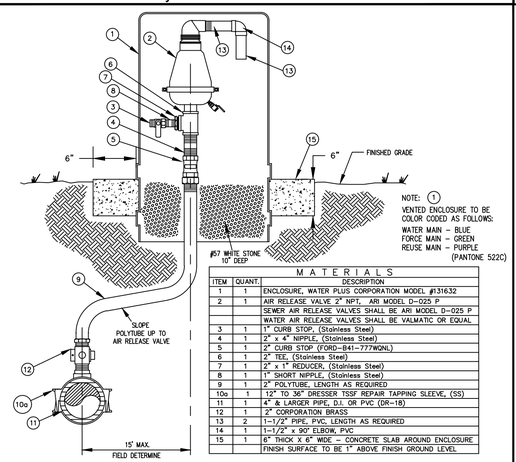
DATE: 11/07/2023 **VALVE FOR WATER AND RECLAIM SERVICE LINE** W425

City of DeLand - Standard Details



DATE: 11/07/2023 **NEW POTABLE SERVICE WHIP** W426

City of DeLand - Standard Details



MATERIALS

ITEM	QUANT.	DESCRIPTION
1	1	ENCLOSURE, WATER PLUS CORPORATION MODEL #131632
2	1	AIR RELEASE VALVE 2" NPT. ARI MODEL D-025 P
		SEWER AIR RELEASE VALVES SHALL BE ARI MODEL D-025 P
		WATER AIR RELEASE VALVES SHALL BE VALMATIC OR EQUAL
3	1	1" CURB STOP, (Stainless Steel)
4	1	2" x 4" NIPPLE, (Stainless Steel)
5	1	2" CURB STOP (FORD–B41–777WQNL)
6	1	2" TEE, (Stainless Steel)
7	1	2" x 1" REDUCER, (Stainless Steel)
8	1	1" SHORT NIPPLE, (Stainless Steel)
9	1	2" POLYTUBE, LENGTH AS REQUIRED
10a	1	12" TO 36" DRESSER TSSF REPAIR TAPPING SLEEVE, (SS)
11	1	4" & LARGER PIPE, D.I. OR PVC (DR–18)
12	1	2" CORPORATION BRASS
13	2	1–1/2" PIPE, PVC, LENGTH AS REQUIRED
14	1	1–1/2" x 90° ELBOW, PVC
15	1	6" THICK X 6" WIDE – CONCRETE SLAB AROUND ENCLOSURE
		FINISH SURFACE TO BE 1" ABOVE FINISH GROUND LEVEL

DATE: 11/07/2023 **OFFSET AIR RELEASE VALVE** W421A

City of DeLand - Standard Details

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629–8330

CITY DETAILS
FOR
NEW YORK AVE APARTMENTS
CITY OF DELAND FLORIDA

BLUE IAN, LLC
150 FOUNTAIN PKWY N.
ST. PETERSBURG, FL 33716

ENGINEER IN CHARGE:
DAVID A. STOKES, P.E. #66527
July 10, 2025
CERTIFICATE OF AUTHORIZATION NO. CA–0007723

	DATE	REVISIONS
1	03/25/25	ENTIRE SET REVISED PER BUILDING CHANGES
2		
3		
4		
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6		
7		
8		
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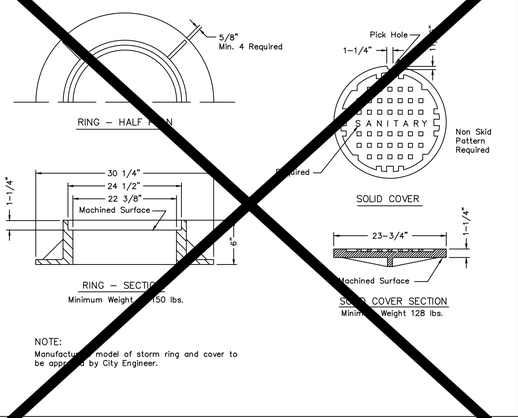
10		
11		

JOB # 23201
DATE: 03/25/25
SCALE: N.T.S.
DESIGNED BY: TRF
DRAWN BY: TRF
APPROVED BY: DAS

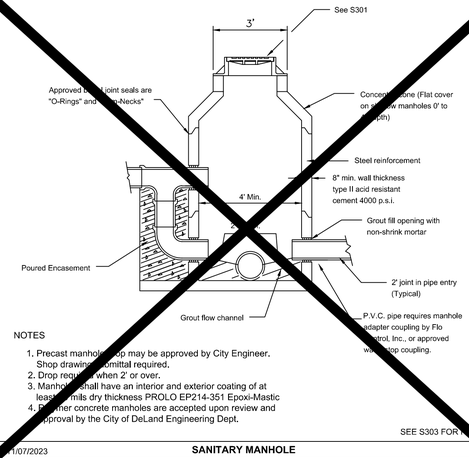
C912

THESE PLANS ARE THE PROPERTY OF MADDEN, MOORHEAD & STOKES, LLC AND ARE NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE EXPRESS WRITTEN PERMISSION OF MADDEN, MOORHEAD & STOKES, LLC



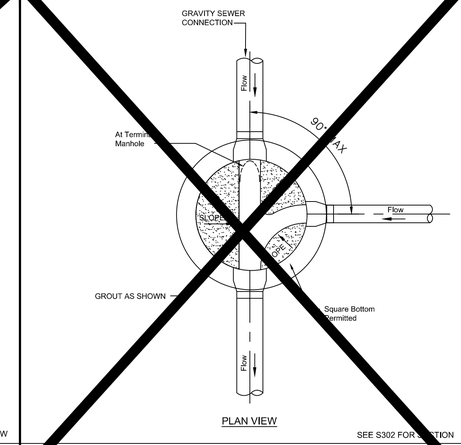
DATE: 11/07/2023 **SANITARY MANHOLE COVER - USF 170-E** S301

City of DeLand - Standard Details



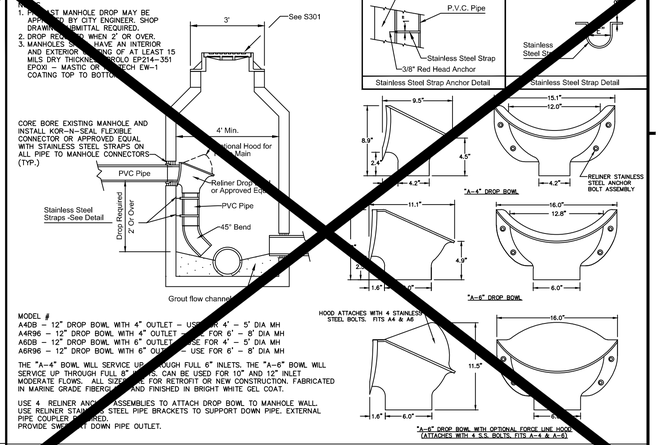
DATE: 11/07/2023 **SANITARY MANHOLE** S302

City of DeLand - Standard Details



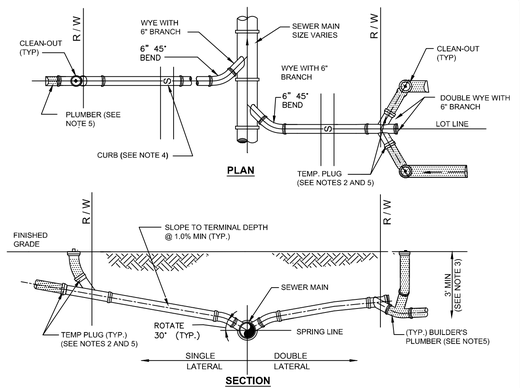
DATE: 11/07/2023 **SANITARY MANHOLE** S303

City of DeLand - Standard Details



DATE: 11/07/2023 **SANITARY MANHOLE - INSIDE DROP FOR GRAVITY & FORCEMAIN** S304

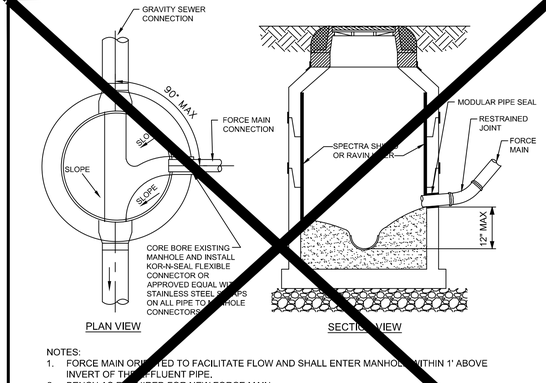
City of DeLand - Standard Details



NOTES:
1. INVERT OF SERVICE LATERAL MUST BE ABOVE SPRING LINE.
2. SERVICE LATERAL SHALL BE CAPPED BY THE CONTRACTOR.
3. WYE SHALL BE NO SHALLOWER THAN 3-FEET AND NO DEEPER THAN 5-FEET.
4. CUT OR CAST "S" IN CONCRETE CURB AT SEWER LATERAL LOCATION AND PAINT GREEN.
5. PLUMBER SHALL REMOVE PLUG, INSTALL CLEAN-OUT, AND CONNECT SERVICE LATERAL TO HOUSE.

DATE: 11/07/2023 **SANITARY SERVICE LATERIALS** S305

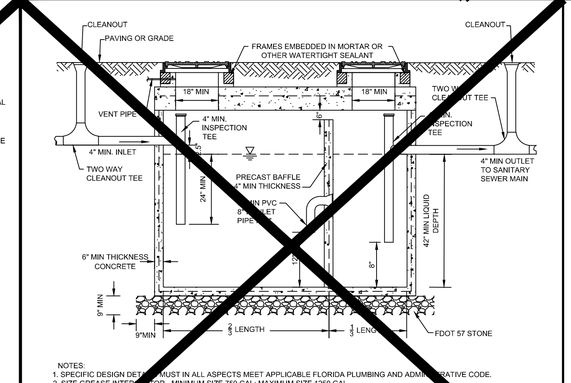
City of DeLand - Standard Details



NOTES:
1. FORCE MAIN ORIENTED TO FACILITATE FLOW AND SHALL ENTER MANHOLE WITHIN 1' ABOVE INVERT OF THE EFFLUENT PIPE.
2. BENCH AS REQUIRED FOR NEW FORCE MAIN.
3. MANHOLE RECEIVING FORCE MAIN AND NEXT MANHOLE SHALL BE LINED. EXISTING MANHOLES RECEIVING FORCE MAIN SHALL BE LINED WITH SPECTRA SHIELD OR RAVIN.
4. CONTRACTOR TO COORDINATE THE PRESENCE OF UTILITIES INSPECTOR DURING CORING AND CONNECTIONS TO EXISTING MANHOLES.

DATE: 11/07/2023 **FORCE MAIN TO GRAVITY SEWER CONNECTION** S306

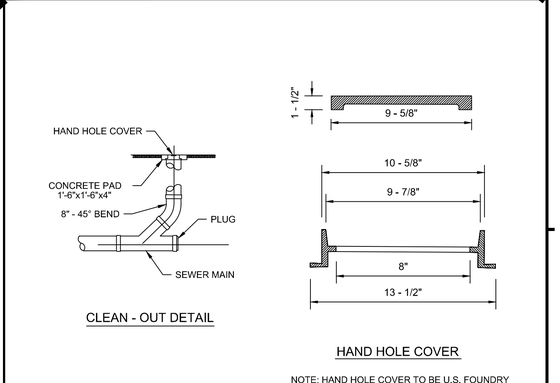
City of DeLand - Standard Details



NOTES:
1. SPECIFIC DESIGN DETAILS MUST IN ALL ASPECTS MEET APPLICABLE FLORIDA PLUMBING AND ADMINISTRATIVE CODE.
2. SIZE GREASE INTERCEPTOR - MINIMUM SIZE 750 GAL; MAXIMUM SIZE 1250 GAL.
3. INTERCEPTORS SHALL BE WATER AND GAS TIGHT.
4. ALL FIXTURES LOCATED IN FOOD AND BEVERAGE PREPARATION AREAS SHALL BE ROUTED THOUGH GREASE INTERCEPTOR. RESTROOMS SHALL NOT BE ROUTED THROUGH INTERCEPTOR.
5. BAFFLES REQUIRED; ALTERNATIVE DESIGNS ARE ACCEPTABLE THAT MEET FLORIDA PLUMBING AND ADMINISTRATIVE CODE.
6. LOADS DESIGNED TO MEET H-20 TRUCK WHEELS WITH 30% IMPACT PER AASHTO. TRAFFIC BEARING FRAME AND COVER TO MEET FDOT STANDARDS AND SHALL BE IMPRINTED WITH THE WORDS "GREASE TRAP".

DATE: 11/07/2023 **GREASE TRAP** S307

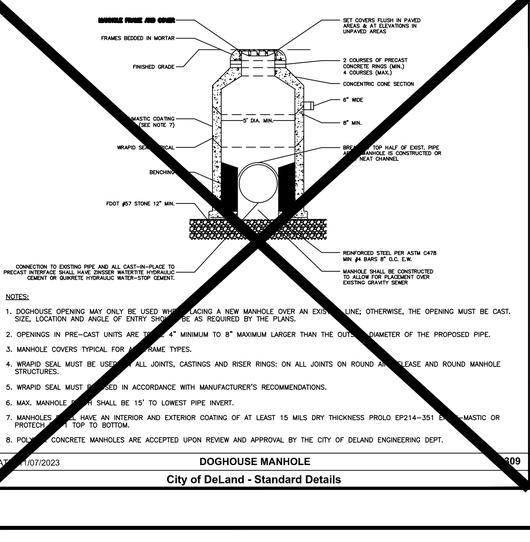
City of DeLand - Standard Details



NOTE: HAND HOLE COVER TO BE U.S. FOUNDRY 7621 OR EQUAL

DATE: 11/07/2023 **CLEAN - OUT** S308

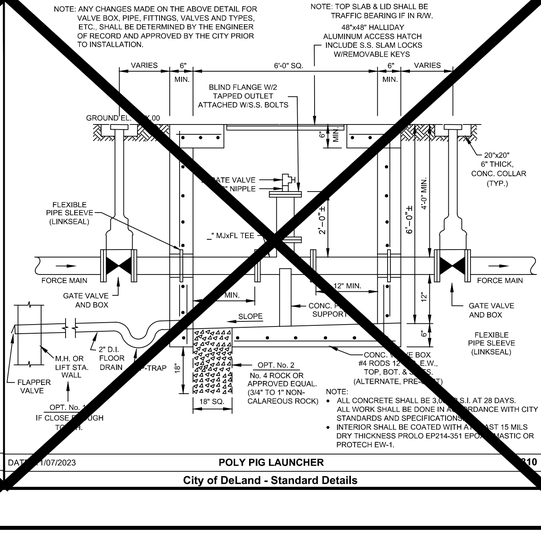
City of DeLand - Standard Details



NOTES:
1. DOGHOUSE OPENING MAY ONLY BE USED WHEN PLACING A NEW MANHOLE OVER AN EXISTING LINE; OTHERWISE, THE OPENING MUST BE CAST. SIZE, LOCATION AND ANGLE OF ENTRY SHOULD BE AS REQUIRED BY THE PLANS.
2. OPENINGS IN PRE–CAST UNITS ARE TO BE 4" MINIMUM TO 8" MAXIMUM LARGER THAN THE OUTSIDE DIAMETER OF THE PROPOSED PIPE.
3. MANHOLE COVERS TYPICAL FOR ALL FRAME TYPES.
4. WRAPID SEAL MUST BE USED ON ALL JOINTS, CASTINGS AND RISER RINGS: ON ALL JOINTS ON ROUND ADJUSTRITE AND ROUND MANHOLE STRUCTURES.
5. WRAPID SEAL MUST BE USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
6. MAX. MANHOLE DEPTH SHALL BE 15' TO LOWEST PIPE INVERT.
7. MANHOLES SHALL HAVE AN INTERIOR AND EXTERIOR COATING OF AT LEAST 15 MILS DRY THICKNESS PROLO EP214–351 EPOXI–MASTIC OR PROTECH EW–1 TOP TO BOTTOM.
8. POLYMER CONCRETE MANHOLES ARE ACCEPTED UPON REVIEW AND APPROVAL BY THE CITY OF DELAND ENGINEERING DEPT.

DATE: 11/07/2023 **DOGHOUSE MANHOLE** S309

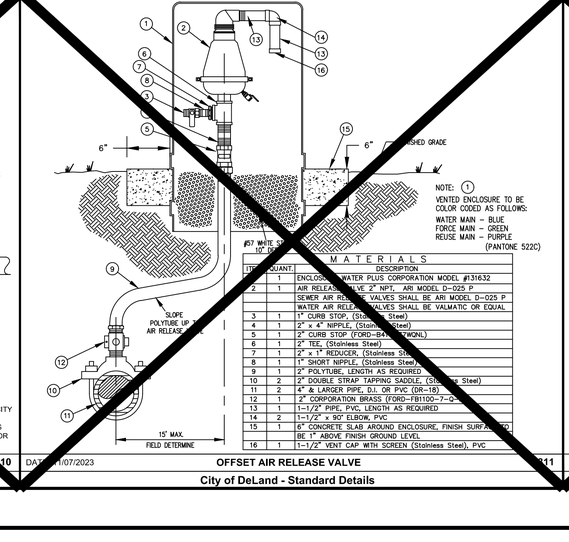
City of DeLand - Standard Details



NOTE:
- ALL CONCRETE SHALL BE 3,000 P.S.I. AT 28 DAYS. ALL WORK SHALL BE DONE IN ACCORDANCE WITH CITY STANDARDS AND SPECIFICATIONS.
- INTERIOR SHALL BE COATED WITH AT LEAST 15 MILS DRY THICKNESS PROLO EP214-351 EPOXI-MASTIC OR PROTECH EW-1

DATE: 11/07/2023 **POLY PIG LAUNCHER** S310

City of DeLand - Standard Details

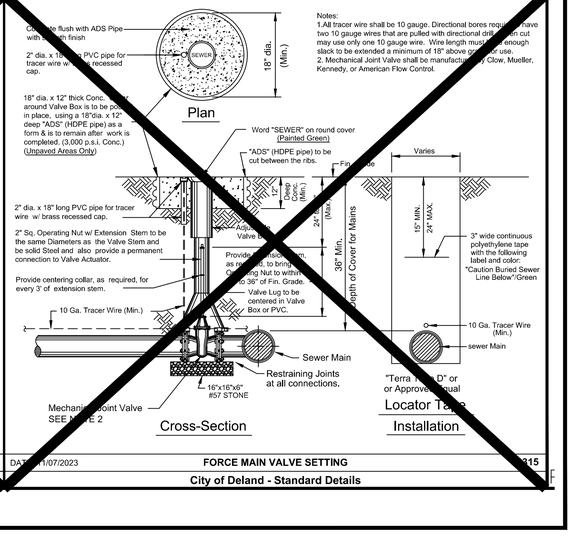


NOTE: (1) VENTED ENCLOSURE TO BE COLOR CODED AS FOLLOWS:
WATER MAIN – BLUE
FORCE MAIN – GREEN
REUSE MAIN – PURPLE
(PANTONE 522C)

ITEM	QUANT.	MATERIALS DESCRIPTION
1	1	ENCLOSURE, WATER PLUS CORPORATION MODEL #131632
2	1	AIR RELEASE VALVE 2" NPT, ARI MODEL D–025 P
		SEWER AIR RELEASE VALVES SHALL BE ARI MODEL D–025 P
		WATER AIR RELEASE VALVES SHALL BE VALMATIC OR EQUAL
3	1	1" CURB STOP, (Stainless Steel)
4	1	2" x 4" NIPPLE, (Stainless Steel)
5	1	2" CURB STOP (FORD–B44 ALTERNATE)
6	1	2" TEE, (Stainless Steel)
7	1	2" x 1" REDUCER, (Stainless Steel)
8	1	1" SHORT NIPPLE, (Stainless Steel)
9	1	2" POLYTUBE, LENGTH AS REQUIRED
10	2	2" DOUBLE STRAP TAPPING SADDLE, (Stainless Steel)
11	2	4" & LARGER PIPE, D.I. OR PVC (DR–18)
12	1	2" CORPORATION BRASS (FORD–FB1100–7–Q–NL)
13	1	1–1/2" PIPE, PVC, LENGTH AS REQUIRED
14	2	1–1/2" x 90° ELBOW, PVC
15	1	6" CONCRETE SLAB AROUND ENCLOSURE, FINISH SURFACE TO BE 1" ABOVE FINISH GROUND LEVEL
16	1	1–1/2" VENT CAP WITH SCREEN (Stainless Steel), PVC

DATE: 11/07/2023 **OFFSET AIR RELEASE VALVE** S311

City of DeLand - Standard Details



DATE: 11/07/2023 **FORCE MAIN VALVE SETTING** S315

City of DeLand - Standard Details

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629–8330

CITY DETAILS
FOR
NEW YORK AVE APARTMENTS
CITY OF DELAND FLORIDA

BLUE ISLAND, LLC
180 FOUNTAIN PKWY N.
ST. PETERSBURG, FL 33716

ENGINEER IN CHARGE:
DAVID A. STOKES, P.E. #66527
July 10, 2025
CERTIFICATE OF AUTHORIZATION NO. CA–0007723

DATE	REVISIONS
1	03/25/25 ENTIRE SET REVISED PER BUILDING CHANGES
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	

JOB # 23201
DATE: 03/25/25
SCALE: N.T.S.
DESIGNED BY: TRF
DRAWN BY: TRF
APPROVED BY: DAS

C913

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER:	ERIC HENRY 407-615-1659 ERIC.HENRY@ADSPIPE.COM
ADS SALES REP:	ALLAN HASH 321-303-4681 ALLAN.HASH@ADSPIPE.COM
PROJECT NO:	S400630

Advanced Drainage Systems, Inc.

SiteAssist® FOR STORMTECH INSTALLATION INSTRUCTIONS VISIT OUR WEBSITE

NEW YORK AVE APARTMENTS

DELAND, FL

SC-800 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH SC-800.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (+1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 750 LBS/FT/% THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS.
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BIRDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE 'TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.
10. MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECHNICAL NOTE 6.32 FOR MANIFOLD SIZING GUIDANCE, DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
11. ADS DOES NOT DESIGN OR PROVIDE MEMBRANE LINER SYSTEMS. TO MINIMIZE THE LEAKAGE POTENTIAL OF LINER SYSTEMS, THE MEMBRANE LINER SYSTEM SHOULD BE DESIGNED BY A KNOWLEDGEABLE GEOTEXTILE PROFESSIONAL AND INSTALLED BY A QUALIFIED CONTRACTOR.

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IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-800 SYSTEM

1. STORMTECH SC-800 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH SC-800 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE; AASHTO M43 #3, 357, 4, 467, 5, 56, OR 57.
8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
9. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH SC-800 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-800 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

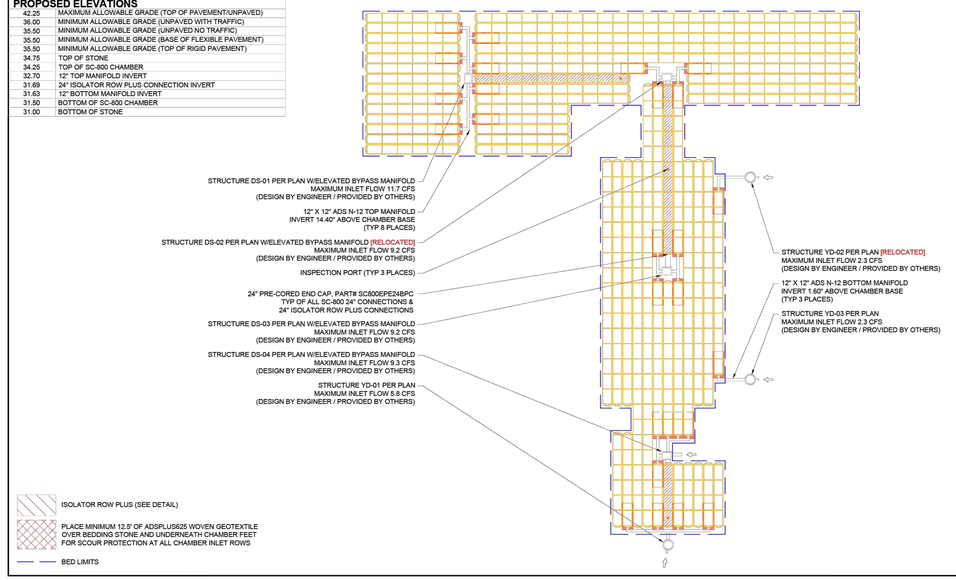
CONTACT STORMTECH AT 1-800-821-6710 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

PROPOSED LAYOUT

590	STORMTECH SC-800 CHAMBERS
112	STORMTECH SC-800 END CAPS
6	STONE ABOVE (in)
6	STONE BELOW (in)
40	% STONE VOID
52,012	**INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED)**
22575	SYSTEM AREA (ft²)
1149	SYSTEM PERIMETER (ft)

PROPOSED ELEVATIONS

42.25	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED)
36.00	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)
35.50	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC)
35.50	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)
35.50	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT)
34.75	TOP OF STONE
34.25	TOP OF SC-800 CHAMBER
32.70	12" TOP MANIFOLD INVERT
31.69	24" ISOLATOR ROW PLUS CONNECTION INVERT
31.63	12" BOTTOM MANIFOLD INVERT
31.50	BOTTOM OF SC-800 CHAMBER
31.00	BOTTOM OF STONE



NEW YORK AVE APARTMENTS — DELAND, FL — DATE: 03/20/24 — PROJECT #: S400630 — DRAWN: SLV — CHECKED: —

ISSUED	BY	DESCRIPTION
03/14/25	JFK	REVISED BIOINFILTRATION SYSTEM
03/18/24	JFK	INCREASED VOLUME WITH NEW SITE PLAN
08/18/23	LMC	REDUCED THE COUNT, EDITED STONE DESIGN.
DATE	[DRAW]	[CHK]

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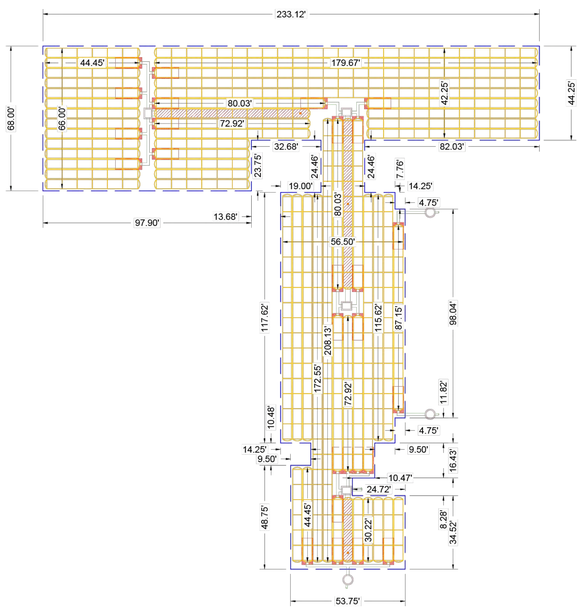
4640 TRUEMAN BLVD HILLIARD, OH 43026

0 30' 60'

THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER OF RECORD. ADS ASSUMES NO RESPONSIBILITY FOR THE SITE DESIGN ENGINEER'S INTERPRETATION OF THIS INFORMATION OR FOR ANY DECISIONS OR RECOMMENDATIONS MADE BY THE APPROVING AGENCY WHICH ALTER ADS' RECOMMENDATIONS. REVIEW THIS DRAWING PRIOR TO CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THIS DRAWING PRIOR TO CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER OF RECORD OF ANY DISCREPANCIES OR CONFLICTS BETWEEN THIS DRAWING AND THE PROJECT REQUIREMENTS. DO NOT USE THIS DRAWING FOR CONSTRUCTION UNLESS IT HAS BEEN APPROVED BY THE SITE DESIGN ENGINEER OF RECORD.

SHEET 2 OF 6



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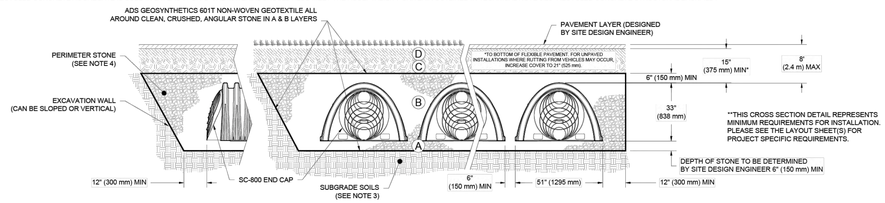
SHEET 3 OF 6

ACCEPTABLE FILL MATERIALS: STORMTECH SC-800 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 15" (375 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[4] A-1, A-2-4, A-3 OR AASHTO M43[4] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[5]	AASHTO M43[4] 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[5]	AASHTO M43[4] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
5. WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".



NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-800 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/FT/%. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

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4640 TRUEMAN BLVD HILLIARD, OH 43026

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SHEET 4 OF 6

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

ADS DETAILS FOR NEW YORK AVE APARTMENTS FLORIDA
CITY OF DELAND

BLUE IAN, LLC
180 FOUNTAIN PKWY N.
ST. PETERSBURG, FL 33716

ENGINEER IN CHARGE:
DAVID A. STOKES, P.E. #65527
July 10, 2025
CERTIFICATE OF AUTHORIZATION NO. CA--0007723

1	03/25/25	ENTIRE SET REVISED PER BUILDING CHANGES
2		
3		
4		
5		
6		
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8		
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10		
11		
	DATE	REVISIONS

JOB # 23201
DATE: 03/25/25
SCALE: AS SHOWN
DESIGNED BY: TRF
DRAWN BY: TRF
APPROVED BY: DAS

C920

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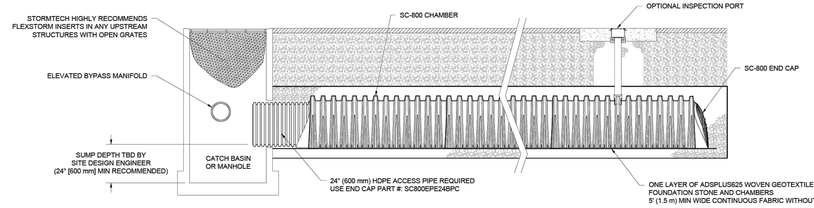


SC-800 ISOLATOR ROW PLUS DETAIL
NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

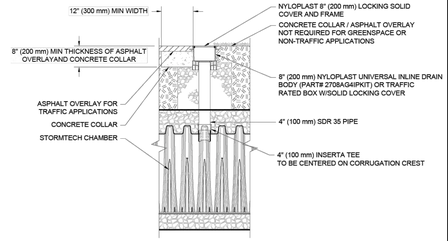
STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



NOTE:
INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION CREST.

4" PVC INSPECTION PORT DETAIL
(SC SERIES CHAMBER)
NTS

NEW YORK AVE APARTMENTS
DELAND, FL
DATE: 03/2024 DRAWN: SLV
PROJECT #: S400930 CHECKED: —

DES'D/DES	REP	—	REVISED SIGNIFICANTLY PER EPM
DRAWN	JPR	JPR	INCREASED VOLUME WITH NEW SITE PLAN
CHECKED	MJC	MJC	REVISED TO SC-800 CHAMBER
DATE	DRWN	CHKD	DESCRIPTION

THE UTILITIES SHOWN ARE FOR THE SITE DESIGN ENGINEER TO PROVIDE A GENERAL REPRESENTATION OF EXISTING UTILITIES. THE SITE DESIGN ENGINEER SHALL REVIEW THIS DRAWING PRIOR TO CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO CONTACT ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION TO FIELD LOCATE ALL UTILITIES AND TO DETERMINE IF ANY CONFLICTS EXIST BETWEEN PROPOSED AND EXISTING UTILITIES.

StormTech® Chamber System
888-892-2694 | WWW.STORMTECH.COM

4640 TRUEMAN BLVD
HILLIARD, OH 43026

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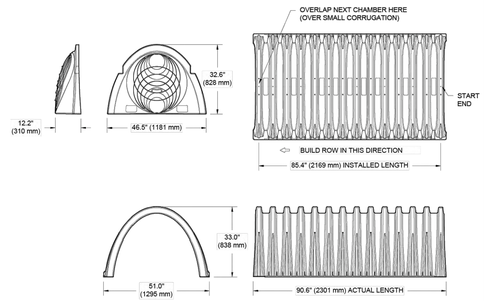
SHEET 5 OF 6



SC-800 TECHNICAL SPECIFICATION
NTS

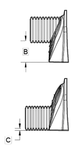
NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	51.0" X 33.0" X 85.4"	(1295 mm X 838 mm X 2169 mm)
CHAMBER STORAGE	50.6 CUBIC FEET	(1.43 m³)
MINIMUM INSTALLED STORAGE*	81.0 CUBIC FEET	(2.29 m³)
WEIGHT	81.8 lbs.	(37.1 kg)

*ASSUMES 6" (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS

PRE-CORED HOLES AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
PRE-CORED HOLES AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

PART #	STUB	B	C
SC800EPE06TPC	6" (150 mm)	21.4" (544 mm)	---
SC800EPE06BPC		---	0.9" (23 mm)
SC800EPE08TPC	8" (200 mm)	19.2" (488 mm)	---
SC800EPE08BPC		---	1.0" (25 mm)
SC800EPE10TPC	10" (250 mm)	17.0" (432 mm)	---
SC800EPE10BPC		---	1.2" (30 mm)
SC800EPE12TPC	12" (300 mm)	14.4" (366 mm)	---
SC800EPE12BPC		---	1.6" (41 mm)
SC800EPE15TPC	15" (375 mm)	11.3" (287 mm)	---
SC800EPE15BPC		---	1.7" (43 mm)
SC800EPE18TPC	18" (450 mm)	8.0" (203 mm)	---
SC800EPE18BPC		---	2.0" (51 mm)
SC800EPE24BPC	24" (600 mm)	---	2.3" (58 mm)
SC800EPE	NONE	SOLID END CAP	



NOTE: ALL DIMENSIONS ARE NOMINAL

NEW YORK AVE APARTMENTS
DELAND, FL
DATE: 03/2024 DRAWN: SLV
PROJECT #: S400930 CHECKED: —

DES'D/DES	REP	—	REVISED SIGNIFICANTLY PER EPM
DRAWN	JPR	JPR	INCREASED VOLUME WITH NEW SITE PLAN
CHECKED	MJC	MJC	REVISED TO SC-800 CHAMBER
DATE	DRWN	CHKD	DESCRIPTION

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SHEET 6 OF 6

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ADS DETAILS
FOR
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CITY OF DELAND
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BLUE IAN, LLC
150 FOUNTAIN PKWY N.
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July 10, 2025
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

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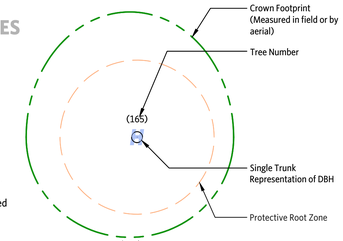
JOB # 23201
DATE: 03/25/25
SCALE: AS SHOWN
DESIGNED BY: TRF
DRAWN BY: TRF
APPROVED BY: DAS

C921

TREE INVENTORY LEGEND

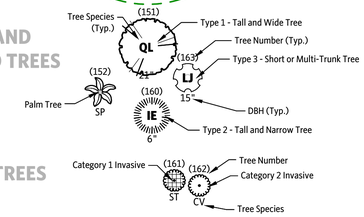
HISTORIC TREES



Note:
Trees to be removed are marked with a RED x mark.

Offsite removals are marked with a PURPLE x mark.

SPECIMEN AND PROTECTED TREES



NUISANCE TREES

DATE OF ASSESSMENT: February 29th, 2024.

INVENTORY ASSIGNMENT NOTES

The objectives of the assignment were limited to the following components:

1. to conduct a tree inventory to identify all the on-site trees,
2. to identify any specimen and historic trees as defined by DeLand LDR *Sec. 33-57.05, Protected trees removal and replacement*,
3. to rectify any tree identification errors shown on the survey, if applicable,
4. to establish natural resource permitting requirements associated with the inventory.

A field investigation was conducted on the date of assessment. Each investigation was limited to the visual inspection of the on-site trees, their surrounding context, and a review of a tree survey prepared by a third-party surveyor. An arborist trainee assisted in collecting tree dimensional data.

Tree survey data was imported to a data collection field tablet. The tablet was used to collect observations and photographs as needed. No physical notes were taken. If individual trees not captured on the survey were found, they were added to the digital record by generally located each tree using a Dual XGPS160 SkyPro GPS unit combined with aerial photograph interpretation.

Upon arrival to the site, I employed the following field review techniques to gather data:

- Trunk diameter at breast height (dbh) or 54 inches above the ground, taken with a diameter tape. For trees with more than one trunk (stem) originating at or near ground level (less than 36" high), the dbh of each stem was measured at 54" and the cross-sectional area of each stem was summed to derive an equivalent single trunk representative dbh.
- Photographs, taken with a field tablet or a Canon EOS 6D Mark II camera.

When advanced assessment was applicable, the following simple tools and review techniques were used:

- Crown spread measurement, taken with a mechanical wheel from the centroid of the trunk. When ground conditions or thick vegetation precluded use of the wheel, a tape measure or recent aerial photograph was used to measure spread.
- Height to base of limb, taken with a 35-foot Tel-O-Pole II measuring stick, when applicable.
- Tree height, taken with a laser hypsometer using three averaged points from one position. When the crown restricted measurement, an average height of 45 was used for tree point calculations.
- Approximation of extent of decay by sounding, listening for tones that may indicate certain conditions, taken with a soft-face mallet.
- Approximation of extent of decay by probing, taken with a 48" steel soil probe.

When overgrowth or obstructions restricted the collection of measurements, the applicable data element was omitted or approximated. No soil, water, or tissue tests were conducted unless otherwise noted. Assessments were a one-sided ground-based and generally followed ANSI A300 (Part 9)-2017 guidance. However, this assessment is not intended to be used as a tree risk assessment except as described in the City of Tampa Land Development Code Section 27-284.1.1 ("Matheny and Clark" hazard rating format for Grand Trees only). Within this permitting context, the time frame for the assessment was two years.

When typically single-trunked trees are fused at or near the ground, a pith test is performed to determine whether the tree grouping is separate trees or a single tree. The pith test is based on a technique discussed in the American Forests Champion Trees Measuring Guidelines Handbook (2019).

To tailor the inventory to jurisdictional requirements, data elements collected varied by tree classification:

- Historic Trees: species, dbh, condition rating, and crown spread
  - ●● *Level 2: Basic Tree Risk Assessments were not performed unless specifically noted.*
- Protected and specimen trees: species, dbh, and condition rating
- Nuisance trees: species only.

ASSUMPTIONS AND LIMITING CONDITIONS

1. Any legal description provided to the consultant is assumed to be correct. Any titles and ownerships to any property are assumed to be good and marketable. No responsibility is assumed for matters legal in character. Any and all property is appraised or evaluated as though free and clear, under responsible ownership and competent management.

2. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consultant can neither guarantee nor be responsible for the accuracy of information provided by others.

3. Unless expressed otherwise: (1) information contained in this inventory covers only those items that were examined and reflects the condition of those items at the time of inspection; and (2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in the future.

4. Not all defects or conditions that predispose a tree or tree part to failure are detectable, nor are all failures predictable.

5. This inventory is not intended to establish a risk rating for every inventoried tree or tree part, evaluate risk mitigation options or recommendations, provide recommendations for additional assessments, determine residual risk following mitigation, or provide recommendations for monitoring or follow-up.

RATING NOTES:

1. **DBH and Permit DBH:**
   The species or structure of a tree can be incompatible with a municipal or jurisdictional ordinance. DBH is the arborist's field adjusted dbh determination, based on DBH measurement guidelines provided in the Guide for Plant Appraisal, 10th Edition (2018). Permit DBH is a translation of the field adjusted dbh to a value relevant to applicable permitting requirements. Typically, multi-stem trees are resolved into single-stem equivalents using trunk formula method. The Permit DBH for small multi-stem species may be visually estimated.

2. **H-S-F = CR**
   "Health, Structure, and Form" to Condition Rating:
   A composite, weighted assessment of health, structure, and form. Adapted from the Guide for Plant Appraisal, 10th Edition, second printing (2019)("10th Edition"). Values range from: A-Excellent, B-Good, C-Fair, D-Poor, F-Very Poor.
   2.1. "SD" is used when the tree is standing dead
   2.2. "N/A" is used when no value is applicable.

3. **Excluded or Reserved**
   Tree survey data quality and utility can vary widely between different surveyors. The initial inventory data involves data transformation to isolate tree data and prepare it for field data collector import. Occasionally extra data points are imported. During the assessment, these points are field verified and either assessed or excluded. The excluded values are preserved in the table to provide consecutive numbering. Reasons to exclude a data point include:
   3.1. another type of survey point, such as a ground shot or irrigation valve;
   3.2. a surveyed tree that did not exist at the time of assessment;
   3.3. a tree part, such as a canopy extent measurement;
   3.4. a tree that is not recognized or protected in the jurisdiction due to size;
   3.5. or by the arborist's professional opinion.

4. **Disposition**
   Tree disposition is the decision to retain or remove the tree based on a the arborist's evaluation of the cumulative impact of the proposed construction activity. This decision is based on the tree protection provided, general knowledge of the species, information on the tree's age and condition, and other relevant factors that may be applicable.

CONDITION RATING COLOR KEY

Color representations of Condition Rating are provided as a visual aid. Preservation or removal suggestions are: 1) not recommendations, 2) apply only to onsite trees, and 3) are based on an opinion of preservation suitability near development. Circles are colored by the following convention:

- Dark Green: Excellent (suitable for preservation)
- Light Green: Good (suitable for preservation)
- White: Fair (somewhat suitable for preservation)
- Light Tan: Poor (removal may be warranted unless the consequence of failure is "negligible" or "minor")
- Brown: Very Poor (removal is likely warranted unless the consequence of failure is "negligible")
- Lavender: Category 1 Invasive (removal is usually required per AHJ) or Category 2 Invasive (consider removing)

For grand tree mitigation, the condition ratings are converted to percentages based on the TABLE 284.4.1-A: TREE RETENTION-MITIGATION EQUIVALENCY TABLES BY TREE TYPE, Footnote 3.

CERTIFICATION OF PERFORMANCE

I, Richard Peterika, certify that:

- An on-staff qualified professional or I have inspected the trees and the property referred to in this inventory and have stated our findings accurately. The extent of the inventory is stated in the Inventory Assignment Notes.
- I have no current or prospective interest in the vegetation or the property that is the subject of this inventory and have no personal interest or bias with respect to the parties involved.
- The analysis, opinions, and conclusions stated herein are our own and are based on current scientific procedures and facts.
- Our analysis, opinions, and conclusions were developed and this inventory has been prepared according to commonly accepted arboricultural practices.
- No one provided significant professional assistance to us, except as indicated within the inventory.
- Our compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events.

I further certify that I am a member in good standing of the American Society of Consulting Arborists and the International Society of Arboriculture. I am licensed by the Florida Department of Business and Professional Regulation as a Landscape Architect. I have been involved in the fields of Landscape Architecture and Arboriculture in a full time capacity since 2009.

July 11, 2025

This document has been digitally signed and sealed by: RICHARD F. PETERIKA
Printed copies of this document are not considered signed and sealed. The signature must be verified on the electronic documents.
Dark Moss LLC, 308 E 7th Ave Tampa, Florida 33602
Richard Peterika, ASLA, AICP, RCA #641, ISA-FL #5893B

dark moss
DESIGNING THE URBAN FOREST
308 E 7th Ave Tampa, Florida 33602
813.523.3442 info@darkmoss.com darkmoss.com
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PROJECT:
NEW YORK AVE APARTMENTS
LOCATION:
DELAND, FLORIDA
FILE:
D-163

PREPARED FOR:
BLUE SKY COMMUNITIES, LLC

PUBLISHED: 2025-07-11

PHASE:
PERMIT ONLY

SHEET TITLE:
TREE INVENTORY AND DISPOSITION PLAN

REVISION:
1: PER STAFF 2024-08-22
2: PER STAFF 2024-10-01
3: PER STAFF 2025-03-25
4: PER STAFF 2025-07-11
5: -

SHEET NUMBER:
TR1.0

TREE DISPOSITION SUMMARY TABLE

4 TABLE

Tree Number	Species Symbol	Botanical Name	Common Name	DBH	HSF	Overall Condition	Matrix	Permit Class	Disposition	Mitigation Required
1	CC	Cinnamomum camphora	Camphor	30	A-B-C	FAIR	F1	Nuisance	Offsite	
2	CC	Cinnamomum camphora	Camphor	38	A-B-C	FAIR	F1	Nuisance	Preserved	
3	CC	Cinnamomum camphora	Camphor	19	B-C-C	FAIR	F1	Nuisance	[--REMOVED--]	
4	CC	Cinnamomum camphora	Camphor	19	B-C-C	FAIR	F1	Nuisance	[--REMOVED--]	
5	CC	Cinnamomum camphora	Camphor	14	D-D-D	POOR	F1	Nuisance	[--REMOVED--]	
6	PO	Platanus occidentalis	(American) Sycamore	23	B-B-B	GOOD	F1	Protected	Offsite	
7	SP	Sabal palmetto	Cabbage Palm	14	A-A-A	EXCELLENT	PA	Protected Palm	Preserved	
8	SP	Sabal palmetto	Cabbage Palm	15	A-A-B	GOOD	PA	Protected Palm	Offsite	
9	SP	Sabal palmetto	Cabbage Palm	16	A-A-B	GOOD	PA	Protected Palm	Offsite	
10	SP	Sabal palmetto	Cabbage Palm	14	A-B-B	GOOD	PA	Protected Palm	[--REMOVED--]	5 inch(es)
11	SP	Sabal palmetto	Cabbage Palm	9	A-A-A	EXCELLENT	PA	Protected Palm	Preserved	
12	SP	Sabal palmetto	Cabbage Palm	15	A-A-A	EXCELLENT	PA	Protected Palm	Preserved	
13	SP	Sabal palmetto	Cabbage Palm	13	A-A-B	GOOD	PA	Protected Palm	Offsite	
14	SP	Sabal palmetto	Cabbage Palm	13	A-A-A	EXCELLENT	PA	Protected Palm	Preserved	
15	SP	Sabal palmetto	Cabbage Palm	14	A-A-B	GOOD	PA	Protected Palm	Preserved	
16	SP	Sabal palmetto	Cabbage Palm	18	A-A-B	GOOD	PA	Protected Palm	Offsite	
17	QV	Quercus virginiana	Southern Live Oak	25	B-B-B	GOOD	F1	Historic	Offsite	
18	SP	Sabal palmetto	Cabbage Palm	18	A-B-B	GOOD	PA	Protected Palm	ROW Removed	Removal Permitted Separately
19	SP	Sabal palmetto	Cabbage Palm	15	A-A-A	EXCELLENT	PA	Protected Palm	ROW Removed	Removal Permitted Separately
20	SP	Sabal palmetto	Cabbage Palm	13	A-A-A	EXCELLENT	PA	Protected Palm	[--REMOVED--]	5 inch(es)
21	CC	Cinnamomum camphora	Camphor	27	B-B-C	FAIR	F1	Nuisance	Preserved	
22	SP	Sabal palmetto	Cabbage Palm	17	A-A-B	GOOD	PA	Protected Palm	Offsite	
23	KP	Koelreuteria paniculata	Goldenrain Tree		n/a		X1	Nuisance	Offsite	
24	KP	Koelreuteria paniculata	Goldenrain Tree		n/a		X1	Nuisance	Offsite	
25	MR	Morus rubra	Red Mulberry	10	C-C-D	POOR	F2	Protected	Offsite	
26	SP	Sabal palmetto	Cabbage Palm	Under 4.5' Cleartrunk	A-A-B	GOOD	PA	N/A	Preserved	
27	QL	Quercus laurifolia	Laurel Oak	18	B-C-C	FAIR	F1	Protected	Offsite	
28	QL	Quercus laurifolia	Laurel Oak	24	B-B-C	FAIR	F1	Protected	Offsite	
29	KP	Koelreuteria paniculata	Goldenrain Tree		n/a		X1	Nuisance	Offsite	
30	KP	Koelreuteria paniculata	Goldenrain Tree		n/a		X1	Nuisance	Offsite	
31	KP	Koelreuteria paniculata	Goldenrain Tree		n/a		X1	Nuisance	Offsite	
32	KP	Koelreuteria paniculata	Goldenrain Tree		n/a		X1	Nuisance	Offsite	
33	KP	Koelreuteria paniculata	Goldenrain Tree		n/a		X1	FISC Listed Species	Offsite	
34	LLU	Ligustrum lucidum	Glossy Privet		n/a		X1	FISC Listed Species	Offsite	
35	KP	Koelreuteria paniculata	Goldenrain Tree		n/a		X1	Nuisance	Offsite	
36	SP	Sabal palmetto	Cabbage Palm	14	A-A-B	GOOD	PA	Protected Palm	Offsite	
37	SP	Sabal palmetto	Cabbage Palm	Under 4.5' Cleartrunk	A-A-B	GOOD	PA	N/A	Preserved	
38	SP	Sabal palmetto	Cabbage Palm	16	A-A-B	GOOD	PA	Protected Palm	Offsite	
39	SP	Sabal palmetto	Cabbage Palm	Under 4.5' Cleartrunk	A-A-B	GOOD	PA	N/A	Offsite	
40	SP	Sabal palmetto	Cabbage Palm	17	A-A-B	GOOD	PA	Protected Palm	Offsite	
41	SR	Syagrus romanzoffiana	Queen Palm		n/a		X2	FISC Listed Species	Offsite	
42	LLU	Ligustrum lucidum	Glossy Privet		n/a		X1	FISC Listed Species	Offsite	
43	QL	Quercus laurifolia	Laurel Oak	20	B-C-C	FAIR	F1	Protected	Offsite	
44	KP	Koelreuteria paniculata	Goldenrain Tree		n/a		X1	Nuisance	Offsite	
45	KP	Koelreuteria paniculata	Goldenrain Tree		n/a		X1	Nuisance	Offsite	
46	SP	Sabal palmetto	Cabbage Palm	16	A-A-B	GOOD	PA	Protected Palm	Offsite	
47	LLU	Ligustrum lucidum	Glossy Privet		n/a		X1	FISC Listed Species	Offsite	
48	SP	Sabal palmetto	Cabbage Palm	18	A-A-A	EXCELLENT	PA	Protected Palm	Offsite	
49	SP	Sabal palmetto	Cabbage Palm	16	A-A-A	EXCELLENT	PA	Protected Palm	Offsite	

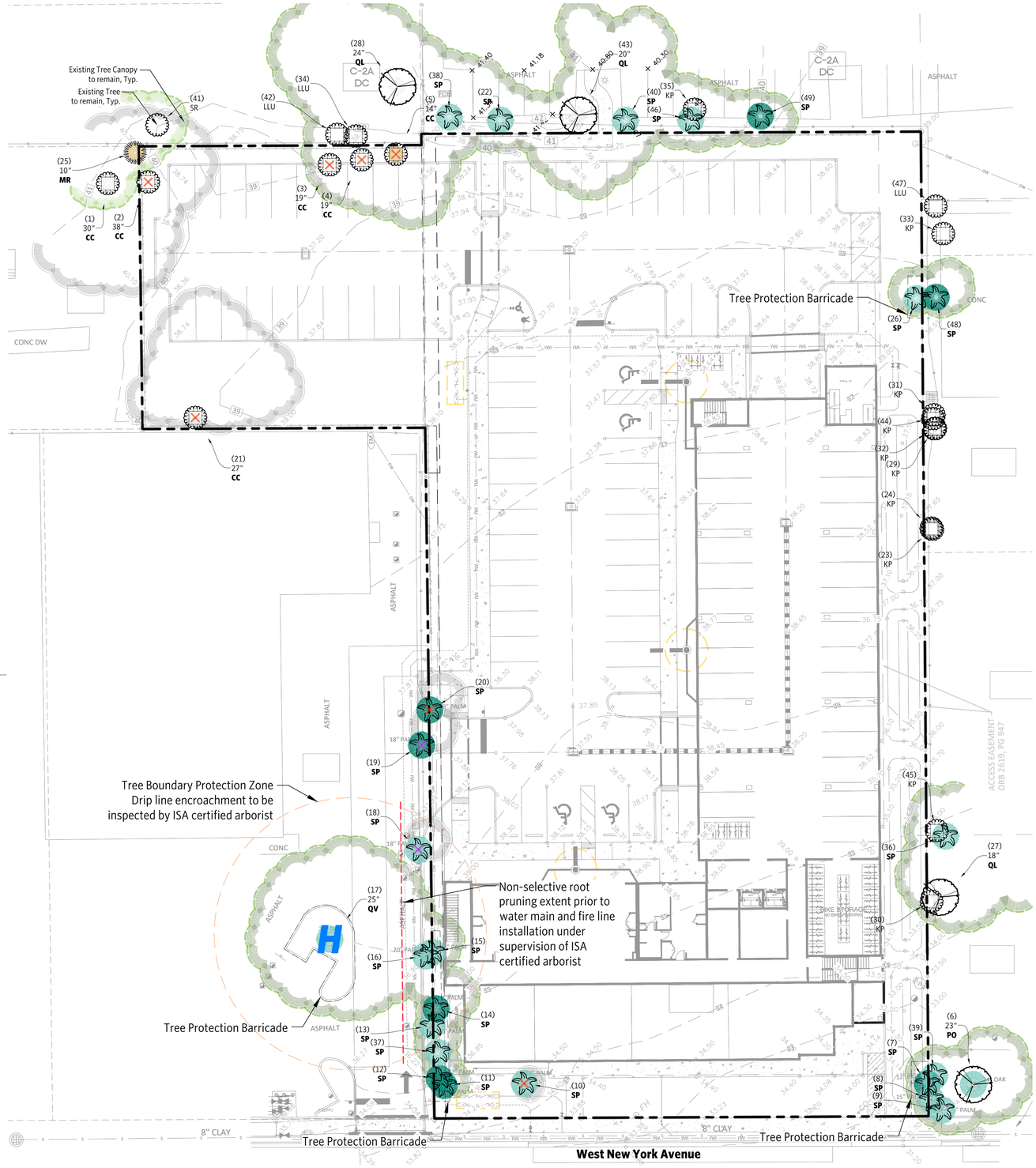
2 MITIGATION

ON-SITE REPLACEMENT INCHES REQUIRED:
0 PROTECTED TREE INCHES
10 PROTECTED PALM INCHES

OFF-SITE REPLACEMENT INCHES REQUIRED:
OFFSITE TREES TO BE PERMITTED AND MITIGATED SEPARATELY

MINI LEGEND

- Historic Tree
- Type 1 Tree
- Type 2 Tree
- Type 3 Tree
- Palm
- Cat. 1 Invasive
- Cat. 2 Invasive
- Excellent
- Good
- Fair
- Poor
- Very Poor
- Exempt or Excluded



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PROJECT:
NEW YORK AVE APARTMENTS
LOCATION:
DELAND, FLORIDA
FILE:
D-163

PREPARED FOR:
BLUE SKY COMMUNITIES, LLC

PUBLISHED: 2025-07-11

PHASE:
PERMIT ONLY

SHEET TITLE:
TREE INVENTORY AND DISPOSITION PLAN (2)

REVISION:
1: PER STAFF 2024-08-22
2: PER STAFF 2024-10-01
3: PER STAFF 2025-03-25
4: PER STAFF 2025-07-11
5: -

SHEET NUMBER:
TR1.1

BUFFER TABLE

Table: 33-92.02(b)

Buffer Location	Abutting	Proposed	Type	Length		Width	Buffer Typical			REQUIRED			EXISTING			PROVIDED		
							Trees		Shrubs	Trees		Shrubs	Trees		Shrubs	Trees		Shrubs
				Gross LF	Net LF	LF	Canopy	Understory		Canopy	Understory		Canopy	Understory		Canopy	Understory	
North - A	Residental Single-Family	RMF	C	61	61	20'	5.6	2.4	24	3	1	14	0	0	0	3	1	15
North - B	Office	RMF	B	215	195	15'	3.6	1.2	12	7	2	23	0	0	0	7	2	60
South	W New York Ave	RMF	B	175	122	15'	3.6	1.2	12	5	2	15	3	0	0	4	1	53
East	Vacant	RMF	n/a	349	349	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
West - A	Residental Single-Family	RMF	C	100	50	20'	5.6	2.4	24	3	2	12	0	0	0	2	1	32
West - B	Office	RMF	B	344	318	15'	3.6	1.2	12	11	3	38	2	0	0	11	3	66

* Overhead Utilities ** Net measurements exclude site elements that impact buffers, including driveway throats, existing tree canopy, transformers, etc)
RMF - Residential Multifamily

Required Landscaping for VUA Interior - Sec. 33-92.02. 9.(a	
Proposed Parking Spaces	**94**
5 to 50 yields 7 sq. ft per space	
51 to 100 yields 10 sq. ft per space	
100 + yields 13 sq. ft per space	
Required VUA Interior Landscaping	**940 sq. ft**
Provided VUA Interior Landscaping	**2335 sq. ft**
Required Canopy Trees	**13**
1 Canopy Tree/ 75 sq. ft.	
Provided Canopy Trees	**9**

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPREAD	REMARKS
TREES							
	LN	8	Lagerstroemia x `Natchez`	Crape Myrtle	5" Cal. / 4" DBH	7'	min. 14` h, min. 44" B&B or 100 gal, Standard Tree Form
	MYC	3	Myrica cerifera	Wax Myrtle	5" Cal. / 4" DBH	7'	min. 14` h, min. 44" B&B or 100 gal
	PE	5	Pinus elliotti	Slash Pine	5" Cal. / 4" DBH	54"	min. 14` h, min. 44" B&B or 100 gal.
	QV	13	Quercus virginiana `High Rise`	`High Rise" Southern Live Oak	5" Cal. / 4" DBH	8`	min. 14` h, min. 44" B&B or 100 gal.
	SP	6	Sabal palmetto	Cabbage Palmetto	---		mixed heights, 10` to 30` CT, no less than 4` height differential between adjacent palms
	TD	18	Taxodium distichum	Bald Cypress	5" Cal. / 4" DBH	54"	min. 14` h, min. 44" B&B or 100 gal.

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	REMARKS
SHRUBS							
	SR	5	Serenoa repens	Saw Palmetto	7 gal.	GC	Florida Fancy, min. 18" h, min. 18" spread, min. 12 fronds
	VO	166	Viburnum obovatum	Walter`s Viburnum	7 gal.	US	min. 30" h, min. 18" spread
	VS	127	Viburnum suspensum	Sandankwa Viburnum	7 gal.	US	min. 30" h, min. 18" spread
	ZP	13	Zamia floridana (Z. pumila)	Coontie	7 gal.	GC	Florida Fancy, min. 24" h, min. 36" spread, well-shaped, dense

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS
GROUND COVERS							
	MU	392 sf	none	Mini Pine Bark Only	---		3" thick layer
	TJ	333	Trachelospermum jasminoides 'Confederate'	Confederate Jasmine	3 gal.	36" o.c.	min. 6" h, min 12" spread, min. 8 perfect runners, full

Native to Florida

CONCEPT PLANT SCHEDULE

	ELECTIVE TREE Lagerstroemia indica `Muskogee` / Muskogee Crape Myrtle min. 7` h, min. 32" B&B or 45 gal, Standard Tree Trunk	**10**	3" Cal., 42"	12' o.c.
	ELECTIVE SHRUBS Elective landscaping that exceed code minimum requirements Zamia floridana (Z. pumila) / Coontie Florida Fancy, min. 24" h, min. 36" spread, well-shaped, dense Crinum asiaticum / Crinum Lily triple stems, full, 20 perfect fronds Rhaphiolepis indica 'Alba' / White Indian Hawthorn Schefflera arboricola 'Emerald Green' / Emerald Green Schefflera	**1,794 sf** 21 21 140 94	 7 gal., GC 15 gal 7 gal. 7 gal.	 10% @ 36" o.c. 10% @ 36" o.c. 30% @ 24" o.c. 20% @ 24" o.c.

SPECIALTY LANDSCAPE SCHEDULE

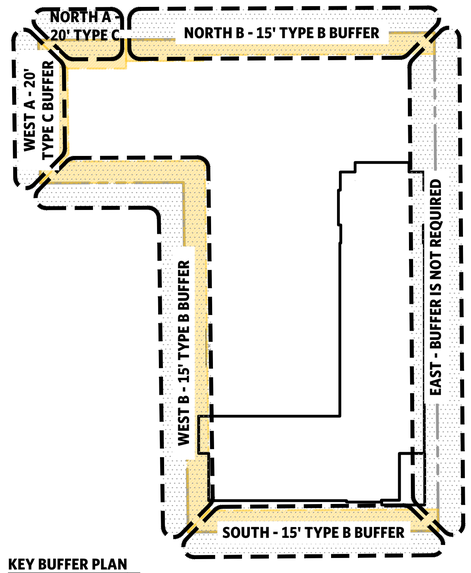
SYMBOL	CODE	DESCRIPTION	QTY	DETAIL
	L-101	Argentine Bahia Sod - Rolled	11,187 sf	

REVISION 1 CLOUD NOTES (1 NOTES)
1. Landscape Plan has been revised. Revision clouds have been omitted for graphic clarity.

REVISION 2 CLOUD NOTES (2 NOTES)
1. Landscape Plan has been revised. Revision clouds have been omitted for graphic clarity.

REVISION 3 CLOUD NOTES (3 NOTES)
1. Landscape Plan has been revised. Revision clouds have been omitted for graphic clarity.

REVISION 4 CLOUD NOTES (4 NOTES)
1. Landscape Plan has been revised. Revision clouds have been omitted for graphic clarity.



KEY BUFFER PLAN
NTS



This document has been digitally signed and sealed by:
Richard Peterka, PLA#6667088
Dark Moss LLC
308 E 7th Ave
Tampa, Florida 33602
Printed copies of this document are not considered signed and sealed. The signature must be verified on the electronic documents.

THE ABOVE NAMED REGISTERED LANDSCAPE ARCHITECT SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G10-12.011, F.A.C.

Sheet List Table

Sheet Number	Sheet Title
LA1.0	KEY PLAN AND CALCULATIONS
LA1.1	LANDSCAPE PLAN
LA1.2	LANDSCAPE DETAILS
IR1.0	IRRIGATION PLAN
IR1.1	IRRIGATION DETAILS - 1
IR1.2	IRRIGATION DETAILS - 2
HS1.0	HARDSCAPE PLAN

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PROJECT: **NEW YORK AVE APARTMENTS**
LOCATION: **DELAND, FLORIDA**
FILE: **D-163**

PREPARED FOR:
BLUE SKY COMMUNITIES, LLC

PUBLISHED: 2025-07-11

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SHEET TITLE:
KEY PLAN AND CALCULATIONS

REVISION:
1: PER STAFF 2024-08-22
2: PER STAFF 2024-10-01
3: PER STAFF 2025-03-25
4: PER STAFF 2025-07-11
5: -

SHEET NUMBER:
LA1.0

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL NAME
TREES			
	LN	8	Lagerstroemia x `Natchez`
	MYC	3	Myrica cerifera
	PE	5	Pinus elliotti
	QV	13	Quercus virginiana `High Rise`
	SP	6	Sabal palmetto
	TD	18	Taxodium distichum
SHRUBS			
	SR	5	Serenoa repens
	VO	166	Viburnum obovatum
	VS	127	Viburnum suspensum
	ZP	13	Zamia floridana (Z. pumila)
GROUND COVERS			
	MU	392 sf	none
	TJ	333	Trachelospermum jasminoides 'Confederate'

Native to Florida

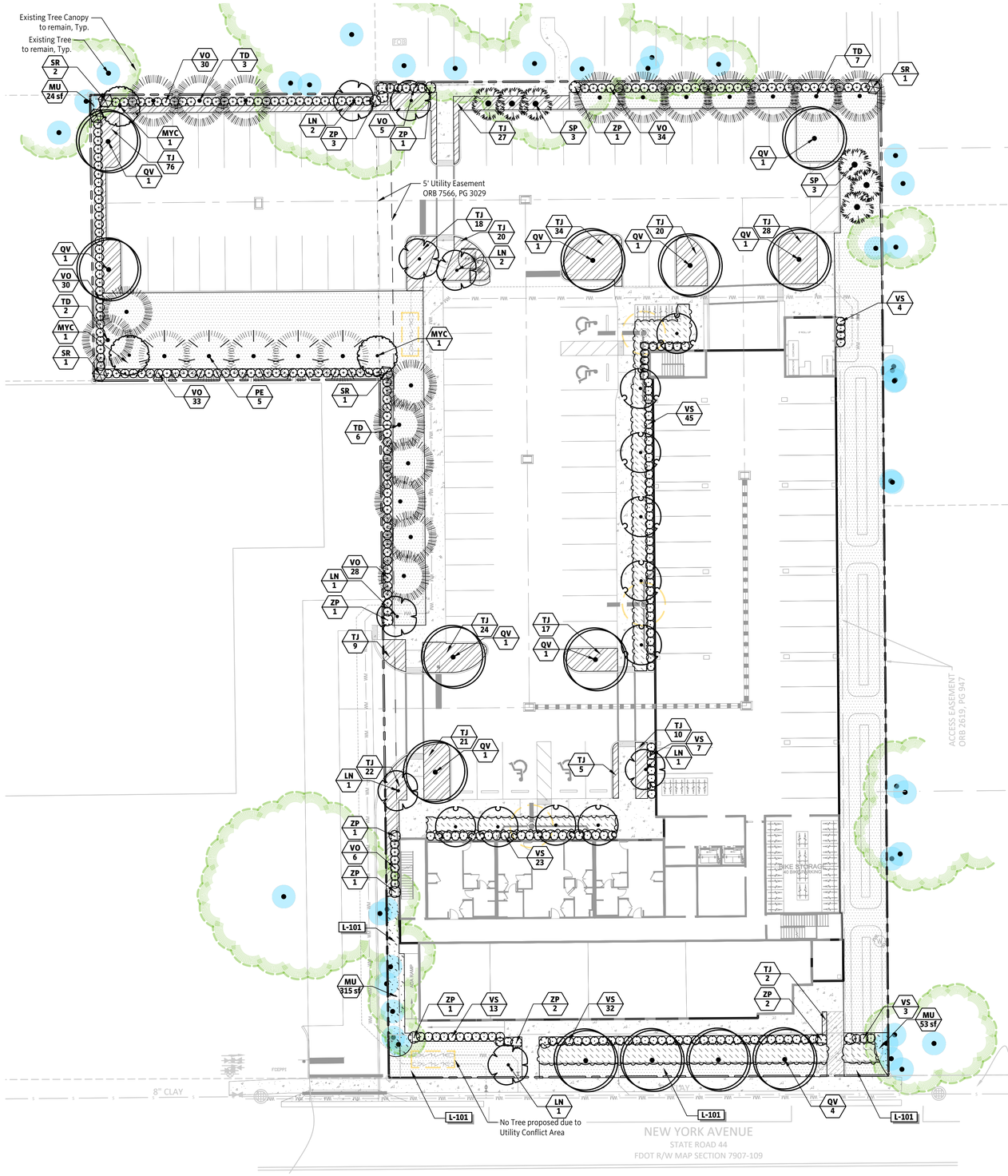
CONCEPT PLANT SCHEDULE

ELECTIVE TREE
Lagerstroemia indica `Muskogee` / Muskogee Crape Myrtle
min. 7` h, min. 32" B&B or 45 gal, Standard Tree Trunk

ELECTIVE SHRUBS
Elective landscaping that exceed code minimum requirements
Zamia floridana (Z. pumila) / Coontie
Florida Fancy, min. 24" h, min. 36" spread, well-shaped, dense
Crinum asiaticum / Crinum Lily
triple stems, full, 20 perfect fronds
Rhaphiolepis indica 'Alba' / White Indian Hawthorn
Schefflera arboricola 'Emerald Green' / Emerald Green Schefflera

SPECIALTY LANDSCAPE SCHEDULE

SYMBOL	CODE	DESCRIPTION
	L-101	Argentine Bahia Sod - Rolled



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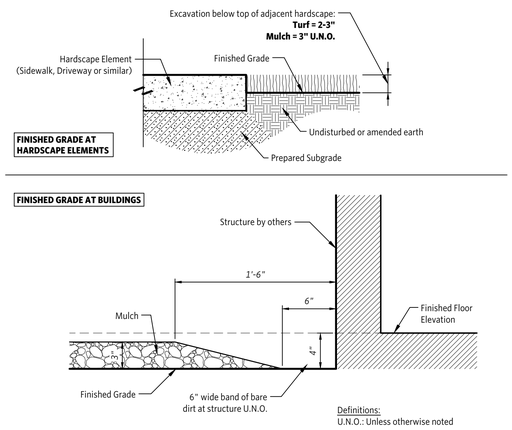
5: -

SHEET NUMBER:
LA1.1

LANDSCAPE NOTES

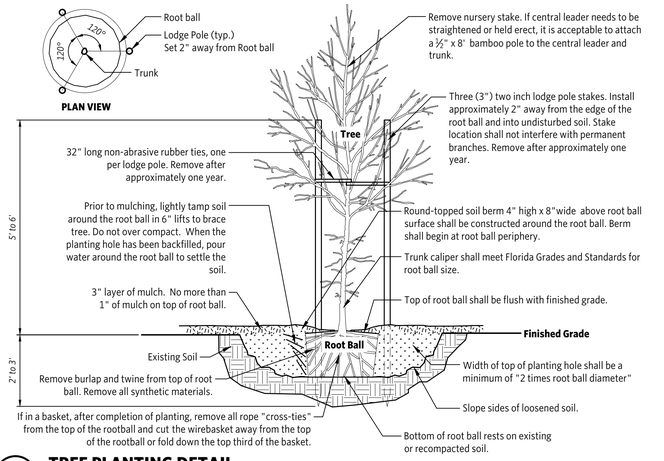
1. **Any and All unmarked landscape areas shall be sodded with Argentine Bahia sod unless otherwise noted.** Seeding is not acceptable without written approval from the Landscape Architect.
2. **All landscape beds shall have a weed-free finished appearance at installation** and through the warranty or maintenance period, whichever is longer.
3. **All plant material shall be Florida Grade No. 1 or better per "Florida Grades and Standards for Nursery Plants"**, latest revision, Florida Department of Agriculture, Tallahassee, FL.
4. All permits necessary for installation/construction are to be provided by the landscape contractor unless otherwise specifically stated in the landscape plans or notes.
5. Installation of landscape must be coordinated with other subcontractors. The landscape contractor will be responsible for locating underground utilities prior to excavation.
6. The contractor shall notify the landscape architect if any conflicts arise between the proposed design and existing conditions on-site.
7. The contractor is responsible for familiarizing himself with on-site conditions as part of the bidding process. The contractor shall notify the landscape architect prior to award of contract of any on-site conditions that would hinder the normal, healthy growth of plant species proposed on these plans.
8. The landscape architect may be contacted for assistance in layout of plant material, if needed. All questions regarding plant placement must be resolved prior to commencement of installation.
9. Carefully review the landscape material specifications. All materials must be as specified on the landscape plans. If materials or methods do not adhere to specifications, the landscape architect will reject them.
10. The landscape architect will accept no substitutions of plant material/species without written approval. Contractor shall submit to the landscape architect proof of non-availability and a proposal for the use of equivalent material.
11. Plant material quantities shown on these plans are supplied as an aid to the contractor for bidding purposes. Final quantity takeoffs are the responsibility of the contractor. Notify the landscape architect if any discrepancies exist prior to proceeding with any changes in material quantities.
12. Plant specifications of height, clear trunk, spread and container size shown on the plans are minimum acceptable sizes. All installed material shall meet or exceed the given specifications. The contractor shall submit to the landscape architect proof of non-availability and a proposal for the use of equivalent material.
13. The general contractor is responsible for rough grading the site to within 0.10 ft. of grades shown on these plans. The landscape contractor is responsible for finish grades in all landscape areas. All proposed contours shown on the landscape plans are to be graded to a maximum slope of 3H:1V.
14. Landscape contractor shall have any applicable licenses or certifications required per state or municipal codes.
15. Planting beds shall be treated with a US EPA approved pre-emergent herbicide prior to installation of plant material. Contractor shall follow manufacturer's specifications for application rates, etc.
16. **Shrub beds shall be mulched with a 3" thick layer of mini pine bark mulch** unless otherwise noted or unless adjacent existing beds have a minimum of 1" layer of differing mulch material, in which case the existing mulch material shall be matched.
17. **Asiatic Jasmine (all varieties) and annual beds** shall be mulched with a **3" thick layer of pine fines**.
18. Planting pits shall be amended and backfilled with a mixture of one part good quality peat or composted fines, and one part native soil or approved equal. All annual beds shall be filled to a depth of 10" with an approved soil mix. **Contractor shall submit samples for approval.**
19. The contractor is responsible for appropriate watering and maintenance of all plant material during the installation phase. Any dead or deficient plant material will be replaced prior to final acceptance by the owner.
20. The contractor shall warranty all workmanship and materials per contractual requirements.
21. The contractor shall verify that the soil is free of excess clay, debris and trash and has a ph level suitable for optimal growing conditions prior to implementation of the proposed plan.
22. The Landscape contractor shall conduct soil nutrient analyses before planting and then apply fertilizer to correct the identified soil deficiencies, if any. **Copies of all test results and fertilization specifications shall be submitted to the Landscape Architect.**
23. All landscape bids shall provide unit price breakdowns for plants and supplemental materials.
24. After completion of planting, the contractor shall remove all rope "cross-ties" from the top of the rootball and cut the wirebasket away from the top of the rootball. The top of the root ball shall have a finished natural appearance.
25. Sod shall be planted as quickly as possible after delivery, but if there are delays, store the sod in a cool, shady place until ready to plant. (Sod life on pallets during summer is less than 48 hours.) The area to be planted shall be properly prepared (e.g., tilled and raked smooth) prior to sod delivery and shall be moistened at the time of laying sod. Sod pieces shall be fitted together as tightly as possible, but the sod should not be stretched to fit an area. If cracks are evident between pieces, they shall be filled with cut up pieces of sod. Lay the sod in a staggered brick pattern so that the seams are offset between sod pieces. Tamp or roll the sod to remove air pockets and ensure good soil contact. Make sure the roots have good contact with the underlying soil so that it does not dry out during establishment. Keep the grass moist for the first 7 days after planting with brief spritzes of water 2-3 times during the day.
26. Unless otherwise noted, pond banks shall be sodded with Argentine Bahia sod from top of bank to a the pond contour twenty-four (24) inches below the pond control elevation. Refer to Civil Plans for hydroperiods.
27. Any tree substitution must be approved by the City Forester.

1 NOTES



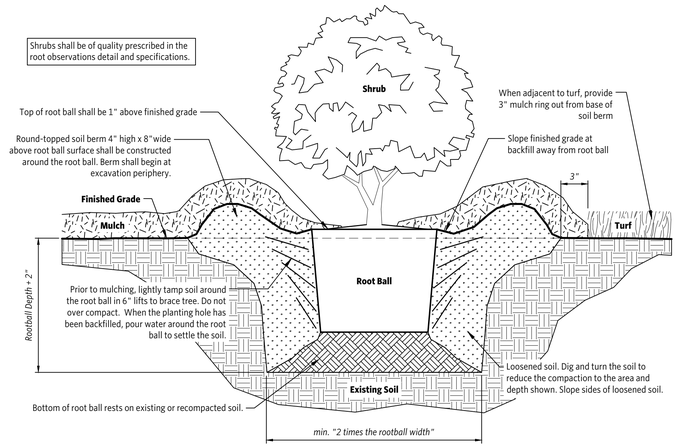
2 LANDSCAPE AND FINISHED GRADE

1 1/2" = 1'-0" I-07



4 TREE PLANTING DETAIL

1/2" = 1'-0" I-07



3 SHRUB PLANTING DETAIL

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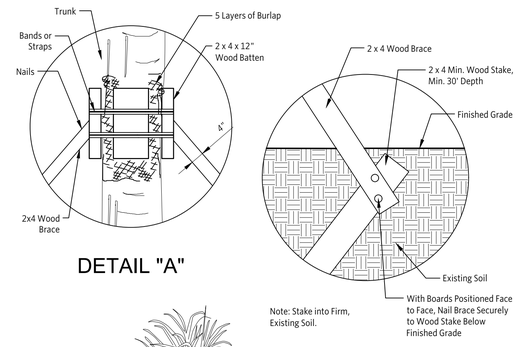
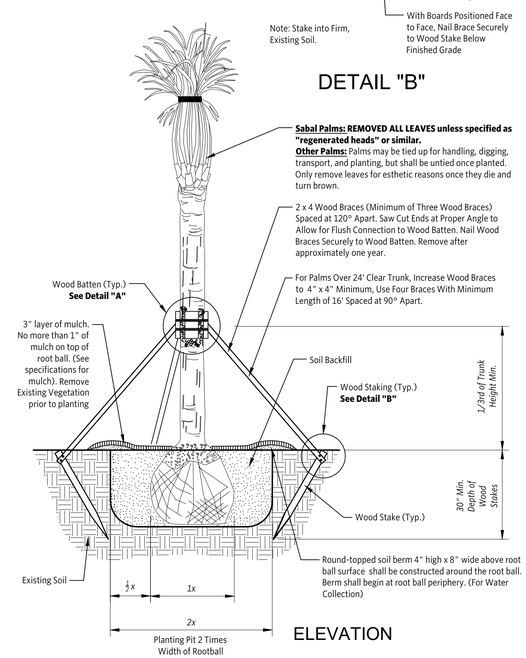
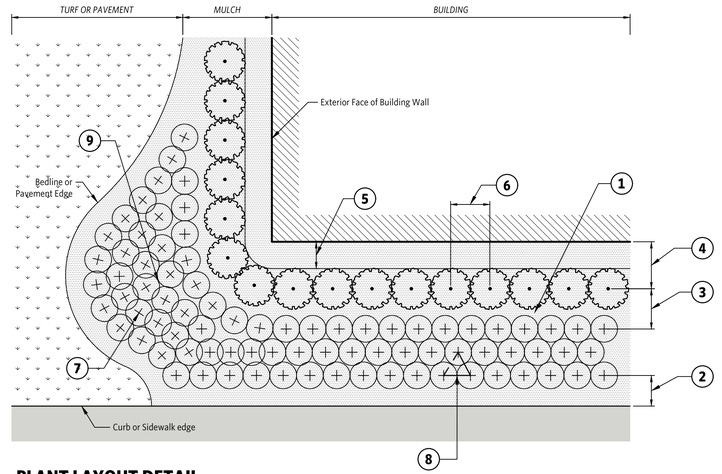




5 PALM PLANTING DETAIL

1/2" = 1'-0" I-07



1. "Center to Center Spacing" (O.C.) varies for different plant species. Space each variety of plant equally in planting areas unless otherwise noted.
2. Distance between the edge of pavement and the centerline of the nearest plant row is 1 to 1.5 times the on center spacing of the nearest plant group.
3. Distance between plant material types shall be the greater of the two plant spacing distances.
4. Distance between the edge of building and the centerline of the nearest plant shall be 2' plus 0.5 times the on center spacing of the plant.
5. Maintain an 18" minimum setback from building faces and 12" setback from freestanding wall faces. Increase as necessary to allow for species growth & maintenance access.
6. O.C. Spacing (See Plant List)
7. Shrubs and groundcover adjacent to curved edges shall be planted in rows parallel to the bedline.
8. Shrubs and Groundcovers adjacent to straight edges shall be planted in triangular spacing with rows parallel to the straight edge.
9. Maintain O.C. spacing and curvature as much as possible within the center of irregularly shaped massings.

1 PLANT LAYOUT DETAIL

3/16" = 1'-0" I-07

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PROJECT: **NEW YORK AVE APARTMENTS**
LOCATION: **DELAND, FLORIDA**
FILE: **D-163**

PREPARED FOR:
BLUE SKY COMMUNITIES, LLC

PUBLISHED: 2025-07-11

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SHEET TITLE:
LANDSCAPE DETAILS

REVISION:
1: PER STAFF 2024-08-22
2: PER STAFF 2024-10-01
3: PER STAFF 2025-03-25
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5: -

SHEET NUMBER:
LA1.2

IRRIGATION SCHEDULE

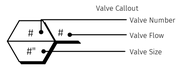
SYMBOL	DESCRIPTION	QTY	PRECIP	PSI	GPM
	SHRUB DRIPLINE 0.9 GPH @ 12" O.C. Dripline with 0.90 gph emitters at 12" O.C., row spacing at 12" O.C.	4,410 sf	1.44 in/h	25	66
	SHRUB SPRAY AREA 4`-15` radius, triangular spaced, head to head coverage.	2,742 sf	1.9 in/h	30	54

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
	Double Tree Bubbler Two Rain Bird 1402 Bubblers	43	30
1401 1402 1404 1408	Rain Bird 1800-1400 Flood 1401 Fixed flow rate (0.25-2.0GPM), full circle bubbler, 1/2" FIPT.	22	30

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird XCZ-150-LCDR (10-30 GPM) 1-1/2" High Flow Control Zone Kit, for Large Commercial Drip Zones. 1-1/2" PESB-R Scrubber Globe Valve with single 1-1/2" Pressure Regulating (40psi) Quick-Check Basket Filters. Flow range: 15-62gpm.	4

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird PESB-PRS-D 1" 1", 1-1/2", 2" Plastic Industrial Valves. Low Flow Operating Capability, Globe Configuration. With Pressure Regulating Module, and Scrubber Technology for Reliable Performance in Dirty Water Irrigation Applications.	5
	Landscape Products Inc. BBV 1/2", 3/4", 1", 1-1/4", 1-1/2", 2", 2-1/2" 3" Full Port Brass Ball Valve. Include two unions, nipples, and adapters as required	1
BF	Watts 800M4QT 2" An anti-siphon pressure vacuum breaker shall be installed where indicated on the plans to prevent the back-siphonage of contaminated water. See specification sheet for more information.	1
C	Rain Bird ESP4ME3 (16 Station Max) 4 Station, Hybrid Modular Outdoor Controller. Include LNK WiFi Module and enough expansion modules to exceed installed valve count by 2 zones minimum.	1
RS	Rain Bird RSD-BEx Rain Sensor, with metal latching bracket, extension wire.	1
W	Well Refer to Civil.	1

Valve Callout



REVISION 1 CLOUD NOTES

1. Irrigation Plan has been revised. Revision clouds have been omitted for graphic clarity.

1 NOTES

REVISION 2 CLOUD NOTES

1. Irrigation Plan has been revised. Revision clouds have been omitted for graphic clarity.

2 NOTES

REVISION 3 CLOUD NOTES

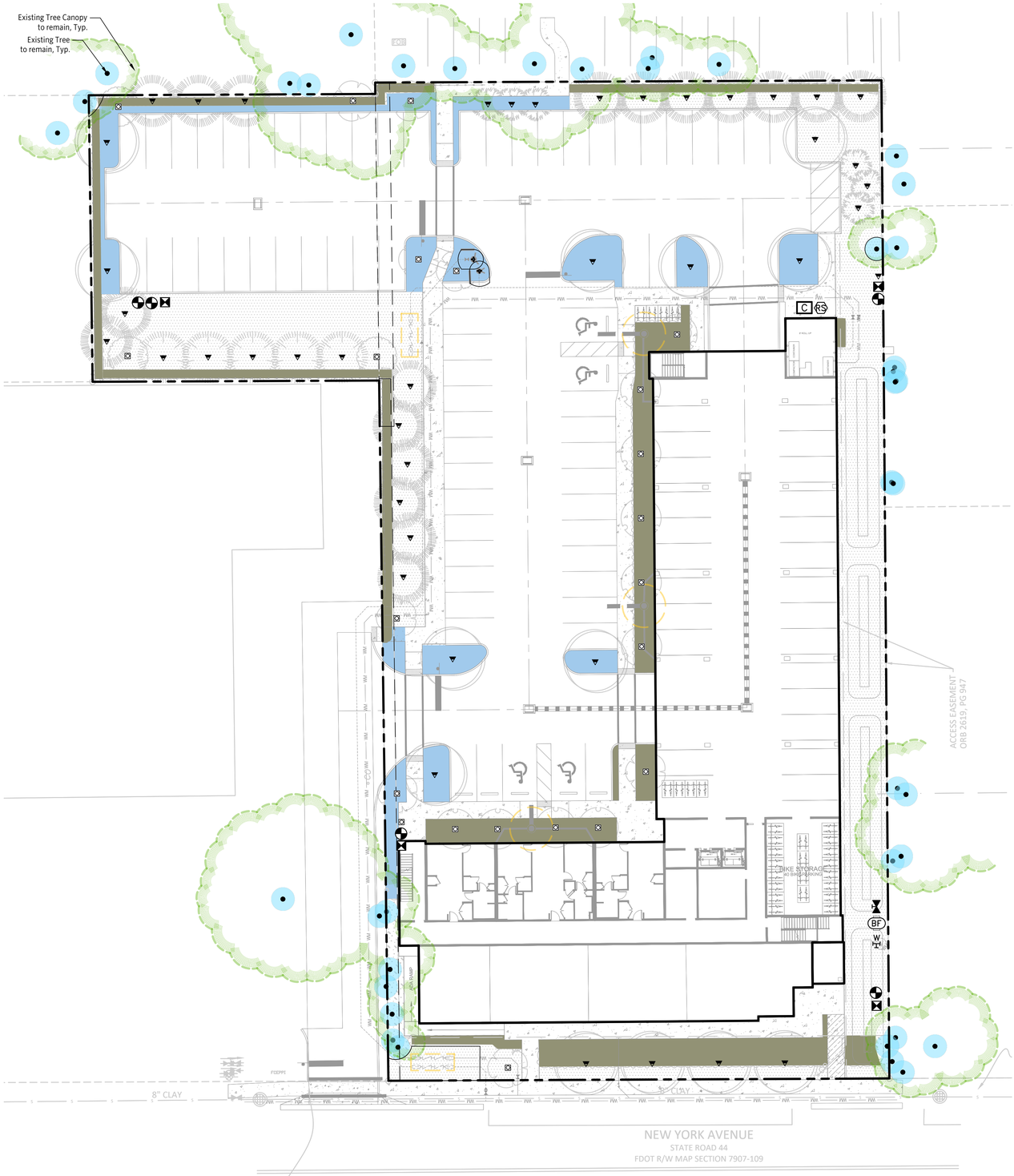
1. Irrigation Plan has been revised. Revision clouds have been omitted for graphic clarity.

3 NOTES

REVISION 4 CLOUD NOTES

1. Irrigation Plan has been revised. Revision clouds have been omitted for graphic clarity.

4 NOTES



dark moss
DESIGNING THE URBAN FOREST

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PROJECT:
NEW YORK AVE APARTMENTS

LOCATION:
DELAND, FLORIDA

FILE:
D-163

PREPARED FOR:
BLUE SKY COMMUNITIES, LLC

PUBLISHED: 2025-07-11

PHASE:
PERMIT ONLY

SHEET TITLE:
IRRIGATION PLAN

REVISION:
1: PER STAFF 2024-08-22
2: PER STAFF 2024-10-01
3: PER STAFF 2025-03-25
4: PER STAFF 2025-07-11
5: -

SHEET NUMBER:
IR1.0

DESIGN FLOW: 40 GPM
DESIGN PRESSURE: 65 PSI
Above parameters are the minimum required at the point of connection.

IRRIGATION NOTES

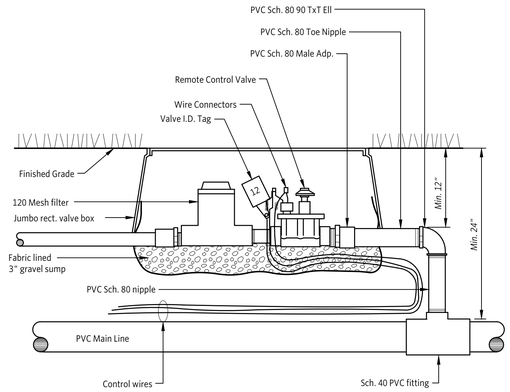
1. Irrigation system design requirements: Refer to above parameters. The Irrigation Contractor shall verify the available GPM and PSI prior to installation of the system.
2. **Do not willfully install the irrigation system as shown on the drawings when it is obvious in the field that conditions exist that might not have been considered in the design process.** For example : obstructions, grade differences, water levels, dimensional differences, etc. Refer to the Landscape Plan to avoid conflicts with proposed trees or shrubs.
3. **Valve and pipe locations are diagrammatic**, install equipment within the property line, in "low traffic" areas with a min. clearance of 12" between the valve box and any fence, wall, sidewalk, pavement or sodline.
4. Piping may sometimes be indicated as being located in unlikely areas: i.e., under buildings or pavement, outside of property lines, in lakes or ditches, etc. **This is done for graphic clarity only.** Whenever possible, piping is to be installed in open, green" areas.
5. If required, the Irrigation Contractor shall provide the necessary "Right of Way" use permits.
6. Pipe sizes shall conform to those on the drawings. Substituting with smaller pipe sizes will not be permitted.
7. Mainline is to be installed with a minimum of 18" depth of cover. Lateral lines are to be installed with a minimum of 12" depth of cover.
8. Unless otherwise indicated, all sleeves are to be PVC Sch 40 and two (2) nominal sizes larger than the pipe to be sleeved. For example: The sleeve for a 2" pipe shall be 3". No irrigation sleeve shall be smaller than 2".
9. Wherever practical, install valves in mulched beds and/or out of high traffic areas. All valves , flush valves and wire splices shall be installed in boxes as noted in the **Valve Box Specifications** below.
10. The bottom and sides of the valve boxes shall be lined with landscape fabric. Install a 3" deep bed of gravel on the landscape fabric to create a drainage sump.
11. Refer to Valve Designation Symbols for controller, station number and designed flow rate for each remote control valve.
12. All wire to be UL Listed. All 24 volt control cable to be single strand, type UF 600 Volt control cable. All 2-wire cable to be blue jacketed cable. Sizes and colors per the **Wiring Designation Guide** below.
13. All splices to the 24 volt control wiring shall be made with Rain Bird #DBTWC 24-600 volt, direct bury splice kits.
14. All control valve wires shall be bundled and taped together at 20' intervals and placed along the side of the mainline pipe.
15. Location of all sprinkler heads shall be site adjusted to minimize water overthrow onto building surfaces and walkways. Throttle valves on spray zones as required to prevent fogging.
16. Install drip tubing, supply header and exhaust header at grade and cover with mulch. Spacing to be determined by plant layout, refer to Landscape Plan. Anchor drip tubing every 5' with 8" long wire tubing stakes. Install vacuum relief valves and flush valve assemblies as needed.
17. Exact controller location(s) shall be coordinated with an Owner's Representative prior to installation. Unless otherwise stated, the General Contractor shall provide 110 volt power to the controller location(s). The Irrigation Contractor is responsible for the connection from the power source to the controller(s).
18. At each irrigation controller, install a "secondary surge arrester" to the incoming (120 volt) power supply (Intermatic #AG2401 or equal).
19. A weather based sensor with interface shall be connected to the irrigation controller. The sensor/ interface shall adjust the irrigation program based on daily weather readings. The sensor shall be installed to meet local codes and/or minimum manufacturer's recommendations. Obstructions, vandalism and ease of service shall be considered in locating the device.
20. **As-Built Drawings Required**
The IRRIGATION CONTRACTOR shall prepare an AS-BUILT drawing on reproducible paper detailing the actual installation of the irrigation system. The AS-BUILT drawings shall locate all main line piping, control wires, wire splices, sleeves and valves by showing exact measurements from permanent features (buildings, edge of pavement, power poles, fire hydrants, etc.). Include depth of cover on mainline and sleeves.
21. No product substitutions will be permitted without the written permission of the Owner's Representative. Irrigation Contractor to provide submittals to the Owner's Representative for approval prior to installation.
22. Any other equipment required that is not otherwise detailed or specified shall be installed as per manufacturer's recommendations and local code.
23. Proposed irrigation controller must include a functioning rain switch which must be installed such that the sensor is exposed to unobstructed rainfall.

Valve Box Specifications

Equipment Housed	Manufacturer	Model	Description
Remote Control Valves	Rain-Bird	VBSTD	Standard Body & Green Lid
Isolation Gate Valves & Wire Splices	Rain-Bird	VB10RND	10" Round Body & Green Lid
Drip Zone Valve / Filter Assembly	Rain-Bird	VB5PRH	Super Jumbo Body & 2 Lock Green Lid

Wiring Designation Guide

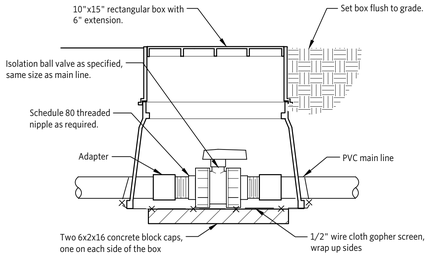
Wire Use	Size AWG	Color
2-Wire	#12 or larger	Blue
Common Wires	#14 or larger	White
Hot Wires	#16 or larger	Red
Spare Wires	#16 or larger	Blue



Note:
Valve box installation shall allow the valve and filter to be serviced without the need for excavation.

2 DRIP ZONE REMOTE CONTROL VALVE

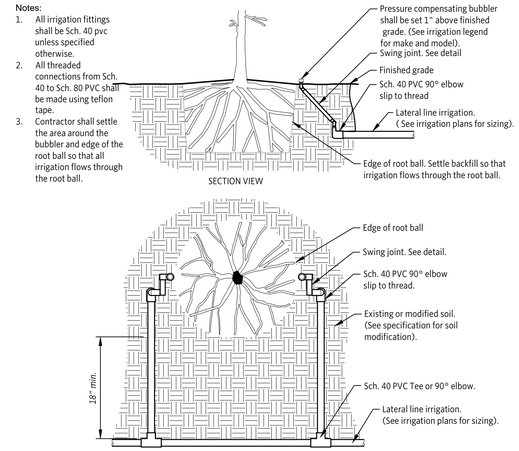
1 1/2" = 1'-0" I-02



4 TRUE UNION BALL ISOLATION VALVE

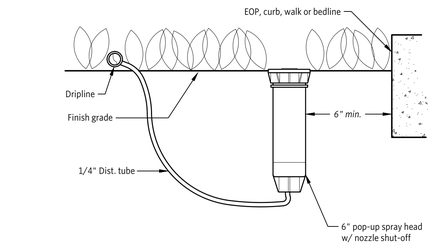
1 1/2" = 1'-0" I-18

Notes:
1. All irrigation fittings shall be Sch. 40 pvc unless specified otherwise.
2. All threaded connections from Sch. 40 to Sch. 80 PVC shall be made using teflon tape.
3. Contractor shall settle the area around the bubbler and edge of the root ball so that all irrigation flows through the root ball.



6 DOUBLE TREE BUBBLER W/ LAYOUT

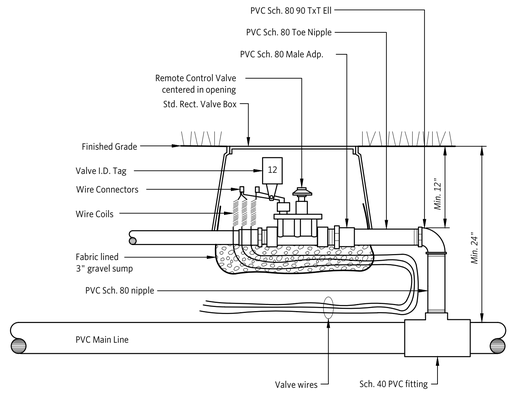
3/4" = 1'-0" I-08



Install one (min.) indicator flag on all dripline zones.

3 ZONE INDICATOR FLAG

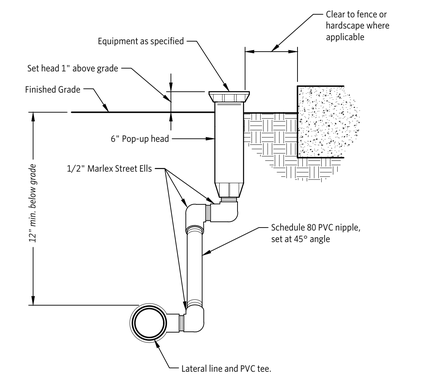
3" = 1'-0" I-05



Note:
Valve box installation shall allow the valve to be serviced without the need for excavation

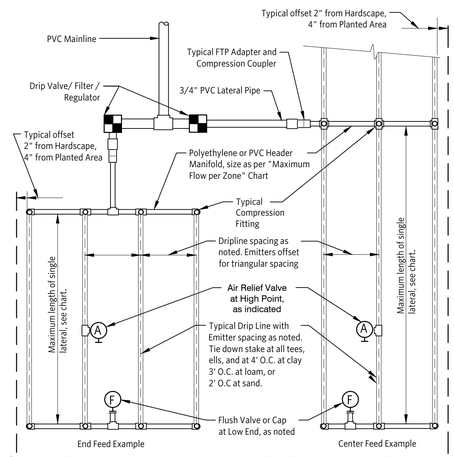
5 REMOTE CONTROL VALVE

1 1/2" = 1'-0" I-01



7 SHRUB SPRAY 6" POPUP W/MARLEX

3" = 1'-0" I-14



Maximum Lateral Length (FEET)

	Emiter Flow Rate GPH					
	12" Spacing		18" Spacing		24" spacing	
PSI	0.6	0.9	0.6	0.9	0.6	0.9
10	125	96	175	135	218	171
20	249	191	350	171	442	340
30	307	236	434	333	550	422
40	350	268	495	380	627	171
50	125	96	175	135	218	171
60	125	96	175	135	218	171

Grid Precipitation Rates (IN/HR)

Emitter Spacing	Lateral Spacing	Emitter Flow Rate 0.6	Emitter Flow Rate 0.9
12	12	0.96	1.44
18	18	0.69	1.03
24	24	0.28	0.41

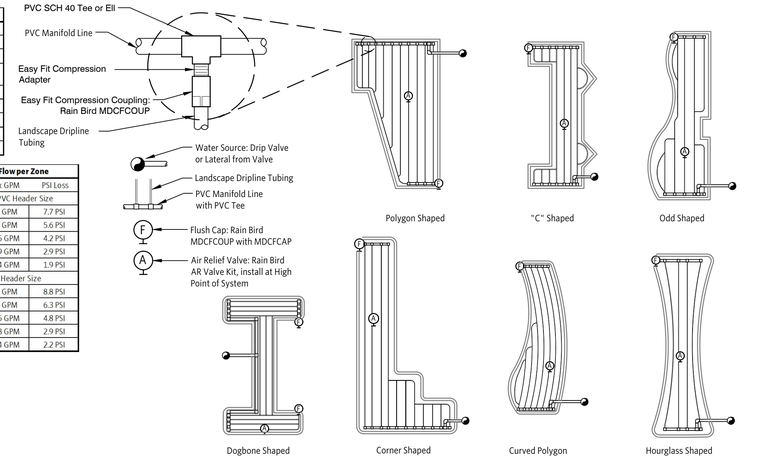
Lateral Flow per 100 FT (GPM)

Emitter Flow	12" Spacing	18" Spacing	24" Spacing
0.6 GPH	1.0 GPM	0.67 GPM	0.50 GPM
0.9 GPH	1.5 GPM	1.0 GPM	0.75 GPM

Maximum Flow per Zone

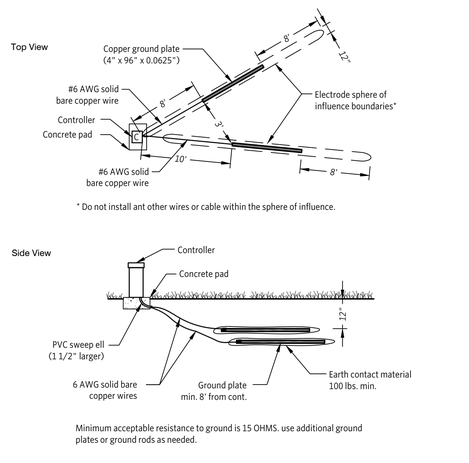
	Max GPM	PSI Loss
Schedule 40 PVC Header Size		
1/2"	4.7 GPM	7.7 PSI
3/4"	8.3 GPM	5.6 PSI
1"	13.5 GPM	4.2 PSI
1-1/2"	33.9 GPM	2.9 PSI
2"	52.4 GPM	1.9 PSI
Poly Pipe Header Size		
1/2"	4.7 GPM	8.8 PSI
3/4"	8.3 GPM	6.3 PSI
1"	13.5 GPM	4.8 PSI
1-1/2"	31.8 GPM	2.9 PSI
2"	52.4 GPM	2.2 PSI

Sloped Condition Note
1. Dripline laterals should follow the contours of the slope whenever possible.
2. nstall air relief valve at highest point.
3. Normal spacing within the top 2/3 of slope.
4. Install dripline at 25% greater spacing at the bottom 1/3 of the slope
5. When elevation change is 10 ft or more, zone the bottom 1/3 on a separate valve.



1 TYPICAL RAIN BIRD DRIPLINE REQUIREMENTS

N.T.S. I-07



Minimum acceptable resistance to ground is 15 OHMS. use additional ground plates or ground rods as needed.

8 CONTROLLER GROUNDING

1/8" = 1'-0" I-17

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PROJECT: **NEW YORK AVE APARTMENTS**
LOCATION: **DELAND, FLORIDA**
FILE: **D-163**

PREPARED FOR:
BLUE SKY COMMUNITIES, LLC

PUBLISHED: 2025-07-11

PHASE:
PERMIT ONLY

SHEET TITLE:
IRRIGATION DETAILS - 1

REVISION:
1: PER STAFF 2024-08-22
2: PER STAFF 2024-10-01
3: PER STAFF 2025-03-25
4: PER STAFF 2025-07-11
5: -

SHEET NUMBER:
IR1.1

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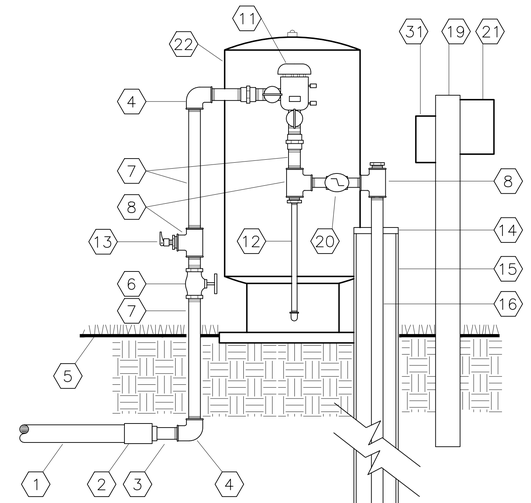
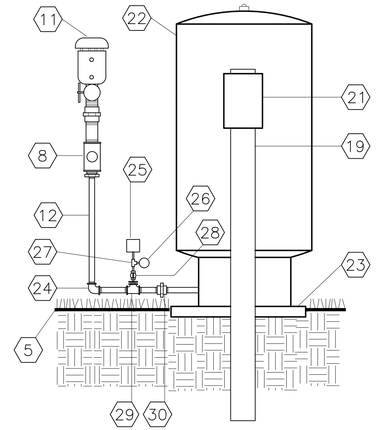




NOTES:

SYSTEM TO TURN ON WITH FALLING PRESSURE (40 PSI) AND TURN OFF WITH PRESSURE SATISFIED (65 PSI).

ALL PIPES AND FITTINGS EXPOSED ABOVE GRADE SHALL BE GALV. SCH 40 STEEL.

ALL ELECTRICAL WIRING SHALL BE INSTALLED IN CONDUIT TO MEET LOCAL ELECTRICAL CODES.

PRESSURE RELIEF VALVE TO EXHAUST AT 75 PSI.

ADJUST "CYCLE STOP" PUMP CONTROL VALVE AND PRESSURE SWITCH PER MANUFACTURER'S RECOMMENDATIONS. VERIFY THAT THE PUMP WILL RUN CONTINUOUSLY DURING ALL IRRIGATION PROGRAMS.

PRIOR TO DRILLING THE WELL, THE WELL CONTRACTOR MUST DISCUSS THE ANTICIPATED DEPTH OF THE WELL AND WATER QUALITY WITH THE LANDSCAPE ARCHITECT. THE POTENTIAL FOR WELL WATER HIGH IN IRON CONTENT THAT RESULTS IN STAINING MUST BE MINIMIZED.

40 GPM PUMP AND WELL SYSTEM

LEGEND:

1. PVC PIPE TO IRR. SYSTEM – 2"
2. PVC SCH 40 COUPLING AND BUSHING
3. PVC SCH 80 TOE NIPPLE – 2" X 4"
4. GALV. SCH 40 90 DEG. ELL – 2"
5. FINISH GRADE
6. NIBCO T–113 GATE VALVE – 2"
7. GALV. SCH 40 NIPPLE (LENGTH AS REQ'D) – 2"
8. GALV. SCH 40 TEE – 2"
9. GARDEN VALVE – 3/4"
10. GALV. SCH 40 UNION – 2"
11. WATTS 800M4QT PVB – 2" (IF REQUIRED BY CODE)
12. GALV. SCH 40 NIPPLE (LENGTH AS REQ'D) – 1–1/4"
13. PRESSURE RELIEF VALVE – 1"
14. WELL SEAL – 5" X 2"
15. WELL CASING (LENGTH AS REQ'D) – 5"
16. GALV. SCH 40 DROP PIPE (LENGTH AS REQ'D) 2"
17. FLOMATIC #80 BRASS CHECK VALVE 2"
18. 3 HP / 40 GPM SUBMERSIBLE PUMP GOULDS #45GS30 OR EQUAL
19. 4" X 4" CONCRETE POST (LENGTH AS REQ'D)
20. #CSV2W 1–1/4" CYCLE STOP PUMP CONTROL VALVE
21. FRANKLIN MOTOR CONTROL BOX
22. WELL–X–TROL PRESSURE TANK #WX–255–TK
23. PRE–FABBED HI–DENSITY CONCRETE PAD FOR TANK– 30" X 30"
24. GALV. SCH 40 90 DEG ELL – 1–1/4"
25. PRESSURE SWITCH
26. LIQUID FILLED PRESSURE GAUGE / 2–1/2" DIAL / 0–160 PSI
27. GALV. SCH 40 TEE – 1/4"
28. WATTS FBV–1 BRASS BALL VALVE – 1/4"
29. GALV. SCH 40 TEE – 1–1/4"
30. GALV. SCH 40 UNION – 1–1/4"
31. DISCONNECT (PER LOCAL CODE) BY OTHERS

PROJECT:
NEW YORK AVE APARTMENTS

LOCATION:
DELAND, FLORIDA

FILE:
D-163

PREPARED FOR:
BLUE SKY COMMUNITIES, LLC

PUBLISHED: 2025-07-11

PHASE:
PERMIT ONLY

SHEET TITLE:
IRRIGATION DETAILS - 2

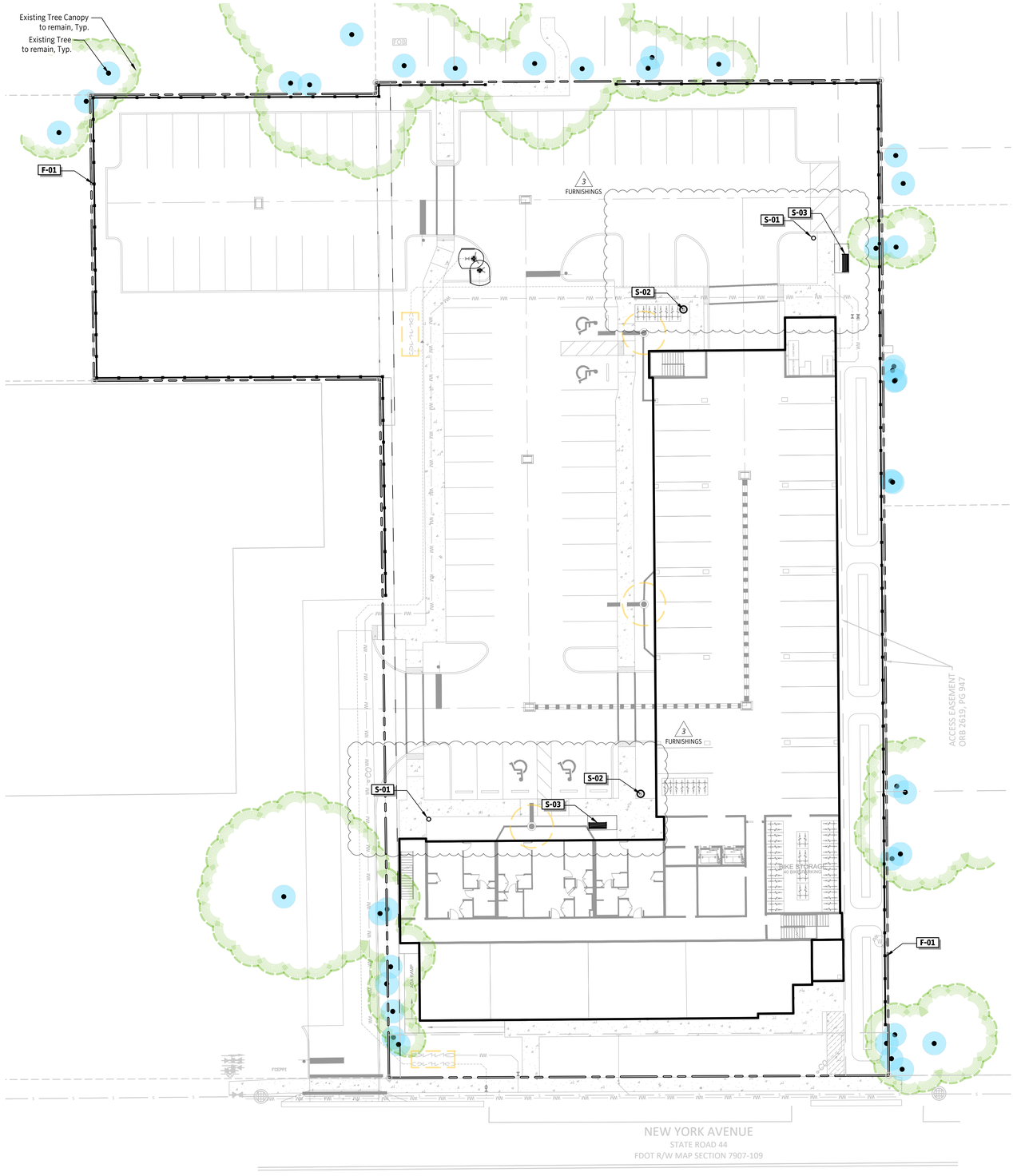
REVISION:
1: PER STAFF 2024-08-22
2: PER STAFF 2024-10-01
3: PER STAFF 2025-03-25
4: PER STAFF 2025-07-11
5: -

SHEET NUMBER:
IR1.2

REFERENCE NOTES SCHEDULE

CODE	DESCRIPTION	QTY	HEIGHT	MATERIAL	COLOR
FENCE					
F-01	6' PVC Fence	889 lf	6`	PVC	White

CODE	DESCRIPTION	QTY
SITE FURNISHINGS		
S-01	Dog Waste Station Manufacturer: Dog Waste Depot Model: Depot-006-B-GRN Type of Can: Round Color: Matte Black	2
S-02	Dumor 157-32 32gal steel receptacle. 10in. opening. Side door emptying. Bonnet and dome cover options found at dumor.com Receptacle: Black Textured Gloss	2
S-03	Dumor 160-60 Bench 160 with cast iron legs and steel seat. 72in. length. Center armrest option and 96in. length option available, upon request. Frame: Black Textured Gloss	2



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PROJECT:
NEW YORK AVE APARTMENTS

LOCATION:
DELAND, FLORIDA

FILE:
D-163

PREPARED FOR:
BLUE SKY COMMUNITIES, LLC

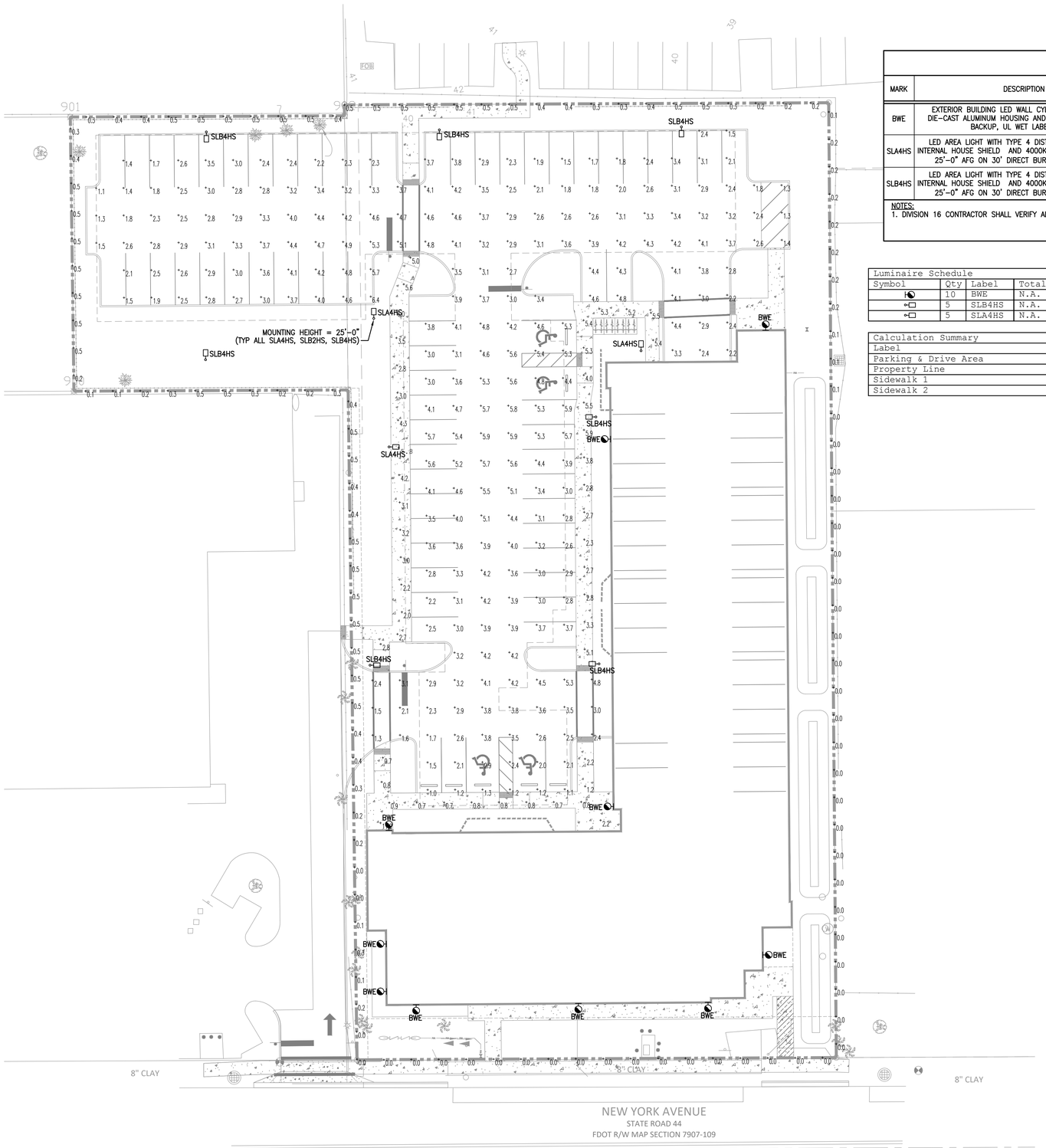
PUBLISHED: 2025-07-11

PHASE:
PERMIT ONLY

SHEET TITLE:
HARDSCAPE PLAN

REVISION:
1: PER STAFF 2024-08-22
2: PER STAFF 2024-10-01
3: PER STAFF 2025-03-25
4: PER STAFF 2025-07-11
5: -

SHEET NUMBER:
HS1.0



LIGHTING FIXTURE SCHEDULE

MARK	DESCRIPTION	MANUFACTURER	MODEL	VOLTS	LAMP QTY	LAMP WATTS	LAMP MODEL	FIXTURE WATTS
BWE	EXTERIOR BUILDING LED WALL CYLINDER FIXTURE WITH DIE-CAST ALUMINUM HOUSING AND EMERGENCY BATTERY BACKUP, UL WET LABEL RATED.	H.E. WILLIAMS	8CR-TL-L20/835-EM/10W-XXX-UNV-RM-CS-WM	120	1	19	LED	19
SLA4HS	LED AREA LIGHT WITH TYPE 4 DIST., INTEGRAL DIMMING, INTERNAL HOUSE SHIELD AND 4000K COLOR TEMP. MOUNTED 25'-0" AFG ON 30' DIRECT BURIAL ALUMINUM POLE	BEACON VIPER	VP-1-160L-75-4K7-4F-HSS-90-B	120	1	40	LED	40
SLB4HS	LED AREA LIGHT WITH TYPE 4 DIST., INTEGRAL DIMMING, INTERNAL HOUSE SHIELD AND 4000K COLOR TEMP. MOUNTED 25'-0" AFG ON 30' DIRECT BURIAL ALUMINUM POLE	BEACON VIPER	VP-1-160L-135-4K7-4F-HSS-90-B	120	1	–	LED	7/H

NOTES:
1. DIVISION 16 CONTRACTOR SHALL VERIFY ALL FIXTURE TYPES AND FINISHES WITH OWNER PRIOR TO ORDERING.

Luminaire Schedule								
Symbol	Qty	Label	Total Lamp Lumens	LLF	Description	Lum. Watts	Total Watts	Lum. Lumens
	10	BWE	N.A.	0.950	8CR-TL-L20-835-DIM-UNV-RW-CS	19	190	1450
	5	SLB4HS	N.A.	0.950	VP-1-160L-75-4K7-4F-HSS-90-B	72.5	362.5	9352
	5	SLA4HS	N.A.	0.950	VP-1-160L-135-4K7-4F-HSS-90-B	144.5	722.5	16897

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Parking & Drive Area	Illuminance	Fc	3.36	6.4	1.0	3.36	6.40
Property Line	Illuminance	Fc	0.27	0.5	0.0	N.A.	N.A.
Sidewalk 1	Illuminance	Fc	3.70	6.0	2.0	1.85	3.00
Sidewalk 2	Illuminance	Fc	3.31	11.2	0.7	4.73	16.00

1 E1.2 SITE PLAN - PHOTOMETRICS
1" = 20'-0"

POWELL STUDIO
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ARCHITECTURE | INTERIOR DESIGN
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ALTAMONTE SPRINGS, FLORIDA 32714
TEL. 321.972.4466
WWW.JLCENG.COM
CA NO. 28730

OWNER / PROJECT:

NEW YORK AVE. APARTMENTS

AN AFFORDABLE HOUSING COMMUNITY

DELAND, FLORIDA

PROFESSIONAL SEAL: JLC24.0085.00

BLAKE L. SUDDUTH
LICENSED
NUMBER
STATE OF FLORIDA
PROFESSIONAL ENGINEER

MARK	DATE	DESCRIPTION
X	09/30/24	PHOTOMETRICS REV 1
X	03/25/25	PHOTOMETRICS REV 2

ISSUE DATE: MAY 12, 2025

SITE PLAN
PHOTOMETRICS

PROJECT NO. PSA 2023-31.00
DRAWN BY
CHECKED BY

E1.2

BEACON

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

VIPER Area/Site

VIPER LUMINAIRE

MICROSTRIKE | STRIKE

FEATURES

- Low profile LED area/site luminaire with a variety of IES distributions for lighting applications such as auto dealership, retail, commercial, and campus parking lots
- Featuring two different optical technologies, Strike and Micro Strike Optics, which provide the best distribution patterns for retrofit or new construction
- Rated for high vibration applications including bridges and overpasses. All sizes are rated for 1.5G
- Control options including photo control, occupancy sensing, NX Lighting Controls®, wiSCAPE and 7-Pin with networked controls
- New customizable lumen output feature allows for the wattage and lumen output to be customized in the factory to meet whatever specification requirements may entail
- Field interchangeable mounting provides additional flexibility after the fixture has shipped



10-DAY QUICK SHIP PROGRAM

QS10

IP65

CONTROL TECHNOLOGY

NX CONTROLS | wiSCAPE

SPECIFICATIONS

CONSTRUCTION

- Die-cast housing with hidden vertical heat fins are optimal for heat dissipation while keeping a clean smooth outer surface
- Corrosion resistant, die-cast aluminum housing with 1000 hour powder coat paint finish
- External hardware is corrosion resistant

OPTICS

- Micro Strike Optics (160, 320, 480, or 720 LED counts) maximize uniformity in applications and come standard with mid-power LEDs which evenly illuminate the entire luminous surface area to provide a low glare appearance. Catalog logic found on page 2
- Strike Optics (96, 72, 108, or 162 LED counts) provide best in class distributions and maximum pole spacing in new applications with high powered LEDs. Strike optics are held in place with a polycarbonate bezel to mimic the appearance of the Micro Strike Optics so both solutions can be combined on the same application. Catalog logic found on page 3
- Both optics maximize target zone illumination with minimal losses at the house-side, reducing light trespass issues. Additional backlight control shields and house side shields can be added for further reduction of illumination behind the pole
- One-piece silicone gasket ensures a weatherproof seal
- Zero up-light at 0 degrees of tilt
- Field rotatable optics

INSTALLATION

- Mounting patterns for each arm can be found on page 11
- Optional universal mounting block for ease of installation during retrofit applications. Available as an option (ASQU) or accessory for square and round poles
- All mounting hardware included

INSTALLATION (CONTINUED)

- Knuckle arm fitter option available for 2-3/8" OD tenon
- For products with EPA less than 1 mounted to a pole greater that 20ft, a vibration damper is recommended

ELECTRICAL

- Universal 120-277 VAC or 347-480 VAC input voltage, 50/60 Hz
- Ambient operating temperature -40°C to 40°C
- Drivers have greater than 90% power factor and less than 20% THD
- LED drivers have output power over-voltage, over-current protection and short circuit protection with auto recovery
- Field replaceable surge protection device provides 20kA protection meeting ANSI/ IEEE C62.41.2 Category C High and Surge Location Category C3. Automatically takes fixture off-line for protection when device is compromised
- Dual Driver option provides 2 drivers within luminaire but only one set of leads exiting the luminaire, where Dual Power Feed provides two drivers which can be wired independently as two sets of leads are extended from the luminaire. Both options cannot be combined

CONTROLS

- Photo control, occupancy sensor programmable controls, and ZigBee wireless controls available for complete on/off and dimming control
- Please consult brand or sales representative when combining control and electrical options as some combinations may not operate as anticipated depending on your application
- 7-pin ANSI C136.41-2013 photocontrol receptacle option available for twist lock photocontrols or wireless control modules (control accessories sold separately)

CONTROLS (CONTINUED)

- 0-10V Dimming Drivers are standard and dimming leads are extended out of the luminaire. Provide 2 wires per fixture for connection to the dimming leads. Must specify if wiring leads are to be greater than the 6" standard
- NX Lighting Controls® available with in fixture wireless control module, features dimming and occupancy sensor
- wiSCAPE® available with in fixture wireless control module, features dimming and occupancy sensor. Also available in 7-pin configuration

CERTIFICATIONS

- DLC Premium Lighting Consortium Qualified, with some Premium Qualified configurations. Not all product variations listed in this document are DLC® qualified. Refer to http://www.designlights.org for the most up-to-date list.
- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations and 40°C ambient temperatures
- 1.5 G rated for ANSI C136.31 high vibration applications
- Fixture is IP65 rated
- Meets IDA recommendations using 3K CCT chip configuration or less
- This product qualifies as a "designated country construction material" per FAR 52.225-5 Buy American-Construction Materials under Trade Agreements effective 04/23/2020.

WARRANTY

- 5 year warranty

KEY DATA	
Lumen Range	5,000–80,000
Wattage Range	36–600
Efficacy Range (LPW)	92–155
Weight lbs. (kg)	13.7-30.9 (6.2-13.9)

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1 E1.3 Fixture Types 'SLA' & 'SLB' Typical

BEACON

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

VIPER Area/Site

VIPER LUMINAIRE

Gray Shading = Service Program Limit of 16 Luminaires QS10

MICROSTRIKE OPTICS – ORDERING GUIDE

Example: VP–2–320L-145–3K7–2–R–UNV–A3–BLT

CATALOG #

VP		1	160L-135	4K7	4F		UNV
Series	Optic Platform	Size	Light Engine	CCT/CRI	Distribution	Optic Rotation	Voltage
VP Viper	Micro Strike	1 Size 1	160L-35 ▲ 5500 lumens	AP AP=Amber Phosphor Converted	2 Type 2	BLANK No Rotation	UNV 120-277V
			160L-50 ▲ 7500 lumens	27K8 2700K, 80 CRI	3 Type 3	L Optic rotation left	120 120V
			160L-75 10000 lumens	3K7 3000K, 70 CRI	4F Type 4 Forward	R Optic rotation right	208 208V
			160L-100 12500 lumens	3K8 3000K, 80 CRI	4W Type 4 Wide		240 240V
			160L-115 15000 lumens	35K8 3500K, 80 CRI	SQW Type 5 Square Wide		277 277V
			160L-135 18000 lumens	3K9 3000K, 90 CRI			347 347V
			160L-150 20000 lumens	4K7 4000K, 70 CRI			480 480V
		2 Size 2	320L-145 ▲ 21000 lumens	4K8 4000K, 80 CRI			
			320L-170 24000 lumens	4K9 4000K, 90 CRI			
			320L-185 27000 lumens	5K7 5000K, 70 CRI			
			320L-210 30000 lumens	5K8 5000K, 80 CRI			
			320L-235 33000 lumens				
			320L-255 36000 lumens				
			320L-295 ▲ 40000 lumens				
		3 Size 3	480L-285 40000 lumens				
			480L-320 44000 lumens				
			480L-340 48000 lumens				
			480L-390 52000 lumens				
			480L-425 59000 lumens				
			480L-470 60000 lumens				
		4 Size 4	720L-435 60000 lumens				
			720L-475 65000 lumens				
			720L-515 70000 lumens				
			720L-565 ▲ 75000 lumens				
			720L-600 ▲ 80000 lumens				
			CLO Custom Lumen Output ▲				

Mounting	BLT	Options	ADD67R6
A Arm mount for square pole/flat surface (B3 Drill Pattern) (Does not include round pole adapter)	Color	F Fusing	Network Control Options
A_ Arm mount for round pole ▲	BLT Black Matte Textured	2PP Dual Power Feed	NXW5N5F NX Networked Wireless Enabled Integral NX5MP2 LMO PR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming ▲▲
ASQU Universal arm mount for square pole. Can be used with B3 or S2 Drill Pattern	BLS Black Gloss Smooth	2DR Dual Driver	NXW540F NX Networked Wireless Enabled Integral NX5MP2+MD PR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming ▲▲
A_U Universal arm mount for round pole ▲	DBT Dark Bronze Matte Textured	TE Tooless Entry	NXW NX Networked Wireless Radio Module NX5M2 and Bluetooth Programming, without Sensor ▲▲
AAU Adjustable arm for pole mounting (universal drill pattern)	DBS Dark Bronze Gloss Smooth	BC Backlight Control ▼	WIR LightGRID® In-Fixture Module ▲▲
AA_U Adjustable arm mount for round pole ▲	GTT Graphite Matte Textured	TB Terminal Block	WIRSC LightGRID® Module and Occupancy Sensor ▲▲
ADU Decorative upsweept Arm (universal drill pattern)	LGS Light Grey Gloss Smooth		Stand Alone Sensors
AD_U Decorative upsweept arm mount for round pole ▲	LGT Light Grey Gloss Textured		BTS-14F Bluetooth® Programmable, BTSMPLMO PR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens
MAF Mast arm fitter for 2-3/8" OD horizontal arm	PSS Platinum Silver Smooth		BTS-40F Bluetooth® Programmable, BTSMPLMO PR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens
K Knuckle	WHT White Matte Textured		BTSO-12F Bluetooth® Programmable, BTSMPLOMNJ-D PR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens
T Trunnion	WHS White Gloss Smooth		7PR 7-Pin Receptacle ▲
WB Wall Bracket, horizontal tenon with MAF	VGT Verde Green Textured		7PR-SC 7-Pin Receptacle with shorting cap ▲
WM Wall mount bracket with decorative upsweept arm			3PR 3-Pin twist lock ▲
WA Wall mount bracket with adjustable arm	Color Option		3PR-SC 3-Pin receptacle with shorting cap ▲
	CC Custom Color		3PR-TL 3-Pin PCR with photocontrol ▲
			Programmed Controls
			SCP_F Sensor Control Programmable, 8F or 40F ▼
			ADD AutoDim Timer Based Dimming ▲
			ADT AutoDim Time of Day Dimming ▲
			Photocontrols
			PC Button Photocontrol ▲▼

1 – Items with a grey background can be done as a custom order. Contact brand representative for more information

2 – Replace "_" with "3" for 3.5"-4.13" OD pole, "4" for 4.18"-5.25" OD pole, "5" for 5.5"-6.5" OD pole

3 – Networked Controls cannot be combined with other control options

4 – Not available with 2PP option

5 – Not available with Dual Driver option

6 – Some voltage restrictions may apply when combined with controls

7 – Not available with 480V

8 – BC not available on 4F and type 5 distributions

9 – At least one SCREMOTE required to program SCP motion sensor. Must select BR or 40R.

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2 E1.3 Fixture Type 'SLA4'

BEACON

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

VIPER Area/Site

VIPER LUMINAIRE

Gray Shading = Service Program Limit of 16 Luminaires QS10

MICROSTRIKE OPTICS – ORDERING GUIDE

Example: VP–2–320L-145–3K7–2–R–UNV–A3–BLT

CATALOG #

VP		1	160L-135	6K7	4F		UNV
Series	Optic Platform	Size	Light Engine	CCT/CRI	Distribution	Optic Rotation	Voltage
VP Viper	Micro Strike	1 Size 1	160L-35 ▲ 5500 lumens	AP AP=Amber Phosphor Converted	2 Type 2	BLANK No Rotation	UNV 120-277V
			160L-50 ▲ 7500 lumens	27K8 2700K, 80 CRI	3 Type 3	L Optic rotation left	120 120V
			160L-75 10000 lumens	3K7 3000K, 70 CRI	4F Type 4 Forward	R Optic rotation right	208 208V
			160L-100 12500 lumens	3K8 3000K, 80 CRI	4W Type 4 Wide		240 240V
			160L-115 15000 lumens	35K8 3500K, 80 CRI	SQW Type 5 Square Wide		277 277V
			160L-135 18000 lumens	3K9 3000K, 90 CRI			347 347V
			160L-150 20000 lumens	4K7 4000K, 70 CRI			480 480V
		2 Size 2	320L-145 ▲ 21000 lumens	4K8 4000K, 80 CRI			
			320L-170 24000 lumens	4K9 4000K, 90 CRI			
			320L-185 27000 lumens	5K7 5000K, 70 CRI			
			320L-210 30000 lumens	5K8 5000K, 80 CRI			
			320L-235 33000 lumens				
			320L-255 36000 lumens				
			320L-295 ▲ 40000 lumens				
		3 Size 3	480L-285 40000 lumens				
			480L-320 44000 lumens				
			480L-340 48000 lumens				
			480L-390 52000 lumens				
			480L-425 59000 lumens				
			480L-470 60000 lumens				
		4 Size 4	720L-435 60000 lumens				
			720L-475 65000 lumens				
			720L-515 70000 lumens				
			720L-565 ▲ 75000 lumens				
			720L-600 ▲ 80000 lumens				
			CLO Custom Lumen Output ▲				

Mounting	BLT	Options	ADD67R6
A Arm mount for square pole/flat surface (B3 Drill Pattern) (Does not include round pole adapter)	Color	F Fusing	Network Control Options
A_ Arm mount for round pole ▲	BLT Black Matte Textured	2PP Dual Power Feed	NXW5N5F NX Networked Wireless Enabled Integral NX5MP2 LMO PR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming ▲▲
ASQU Universal arm mount for square pole. Can be used with B3 or S2 Drill Pattern	BLS Black Gloss Smooth	2DR Dual Driver	NXW540F NX Networked Wireless Enabled Integral NX5MP2+MD PR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming ▲▲
A_U Universal arm mount for round pole ▲	DBT Dark Bronze Matte Textured	TE Tooless Entry	NXW NX Networked Wireless Radio Module NX5M2 and Bluetooth Programming, without Sensor ▲▲
AAU Adjustable arm for pole mounting (universal drill pattern)	DBS Dark Bronze Gloss Smooth	BC Backlight Control ▼	WIR LightGRID® In-Fixture Module ▲▲
AA_U Adjustable arm mount for round pole ▲	GTT Graphite Matte Textured	TB Terminal Block	WIRSC LightGRID® Module and Occupancy Sensor ▲▲
ADU Decorative upsweept Arm (universal drill pattern)	LGS Light Grey Gloss Smooth		Stand Alone Sensors
AD_U Decorative upsweept arm mount for round pole ▲	LGT Light Grey Gloss Textured		BTS-14F Bluetooth® Programmable, BTSMPLMO PR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens
MAF Mast arm fitter for 2-3/8" OD horizontal arm	PSS Platinum Silver Smooth		BTS-40F Bluetooth® Programmable, BTSMPLMO PR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens
K Knuckle	WHT White Matte Textured		BTSO-12F Bluetooth® Programmable, BTSMPLOMNJ-D PR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens
T Trunnion	WHS White Gloss Smooth		7PR 7-Pin Receptacle ▲
WB Wall Bracket, horizontal tenon with MAF	VGT Verde Green Textured		7PR-SC 7-Pin Receptacle with shorting cap ▲
WM Wall mount bracket with decorative upsweept arm			3PR 3-Pin twist lock ▲
WA Wall mount bracket with adjustable arm	Color Option		3PR-SC 3-Pin receptacle with shorting cap ▲
	CC Custom Color		3PR-TL 3-Pin PCR with photocontrol ▲
			Programmed Controls
			SCP_F Sensor Control Programmable, 8F or 40F ▼
			ADD AutoDim Timer Based Dimming ▲
			ADT AutoDim Time of Day Dimming ▲
			Photocontrols
			PC Button Photocontrol ▲▼

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3 – Networked Controls cannot be combined with other control options

4 – Not available with 2PP option

5 – Not available with Dual Driver option

6 – Some voltage restrictions may apply when combined with controls

7 – Not available with 480V

8 – BC not available on 4F and type 5 distributions

9 – At least one SCREMOTE required to program SCP motion sensor. Must select BR or 40R.

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3 E1.3 Fixture Type 'SLA4HS'

BEACON

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

VIPER Area/Site

VIPER LUMINAIRE

Gray Shading = Service Program Limit of 16 Luminaires QS10

MICROSTRIKE OPTICS – ORDERING GUIDE

Example: VP–2–320L-145–3K7–2–R–UNV–A3–BLT

CATALOG #

VP		1	160L-75	4K7	2		UNV
Series	Optic Platform	Size	Light Engine	CCT/CRI	Distribution	Optic Rotation	Voltage
VP Viper	Micro Strike	1 Size 1	160L-35 ▲ 5500 lumens	AP AP=Amber Phosphor Converted	2 Type 2	BLANK No Rotation	UNV 120-277V
			160L-50 ▲ 7500 lumens	27K8 2700K, 80 CRI	3 Type 3	L Optic rotation left	120 120V
			160L-75 10000 lumens	3K7 3000K, 70 CRI	4F Type 4 Forward	R Optic rotation right	208 208V
			160L-100 12500 lumens	3K8 3000K, 80 CRI	4W Type 4 Wide		240 240V
			160L-115 15000 lumens	35K8 3500K, 80 CRI	SQW Type 5 Square Wide		277 277V
			160L-135 18000 lumens	3K9 3000K, 90 CRI			347 347V
			160L-150 20000 lumens	4K7 4000K, 70 CRI			480 480V
		2 Size 2	320L-145 ▲ 21000 lumens	4K8 4000K, 80 CRI			
			320L-170 24000 lumens	4K9 4000K, 90 CRI			
			320L-185 27000 lumens	5K7 5000K, 70 CRI			
			320L-210 30000 lumens	5K8 5000K, 80 CRI			
			320L-235 33000 lumens				
			320L-255 36000 lumens				
			320L-295 ▲ 40000 lumens				
		3 Size 3	480L-285 40000 lumens				
			480L-320 44000 lumens				
			480L-340 48000 lumens				
			480L-390 52000 lumens				
			480L-425 59000 lumens				
			480L-470 60000 lumens				
		4 Size 4	720L-435 60000 lumens				
			720L-475 65000 lumens				
			720L-515 70000 lumens				
			720L-565 ▲ 75000 lumens				
			720L-600 ▲ 80000 lumens				
			CLO Custom Lumen Output ▲				

Mounting	BLT	BC	ADD67R6
A Arm mount for square pole/flat surface (B3 Drill Pattern) (Does not include round pole adapter)	Color	Options	Network Control Options
A_ Arm mount for round pole ▲	BLT Black Matte Textured	F Fusing	NXW5N5F NX Networked Wireless Enabled Integral NX5MP2 LMO PR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming ▲▲
ASQU Universal arm mount for square pole. Can be used with B3 or S2 Drill Pattern	BLS Black Gloss Smooth	2PP Dual Power Feed	NXW540F NX Networked Wireless Enabled Integral NX5MP2+MD PR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming ▲▲
A_U Universal arm mount for round pole ▲	DBT Dark Bronze Matte Textured	2DR Dual Driver	NXW NX Networked Wireless Radio Module NX5M2 and Bluetooth Programming, without Sensor ▲▲
AAU Adjustable arm for pole mounting (universal drill pattern)	DBS Dark Bronze Gloss Smooth	TE Tooless Entry	WIR wiSCAPE® In-Fixture Module ▲▲
AA_U Adjustable arm mount for round pole ▲	GTT Graphite Matte Textured	BC Backlight Control ▼	WIRSC wiSCAPE® Module and Occupancy Sensor ▲▲
ADU Decorative upsweept Arm (universal drill pattern)	LGS Light Grey Gloss Smooth	TB Terminal Block	Stand Alone Sensors
AD_U Decorative upsweept arm mount for round pole ▲	LGT Light Grey Gloss Textured		BTS-14F Bluetooth® Programmable, BTSMPLMO PR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens
MAF Mast arm fitter for 2-3/8" OD horizontal arm	PSS Platinum Silver Smooth		BTS-40F Bluetooth® Programmable, BTSMPLMO PR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens
K Knuckle	WHT White Matte Textured		BTSO-12F Bluetooth® Programmable, BTSMPLOMNJ-D PR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens
T Trunnion	WHS White Gloss Smooth		7PR 7-Pin Receptacle ▲
WB Wall Bracket, horizontal tenon with MAF	VGT Verde Green Textured		7PR-SC 7-Pin Receptacle with shorting cap ▲
WM Wall mount bracket with decorative upsweept arm			3PR 3-Pin twist lock ▲
WA Wall mount bracket with adjustable arm	Color Option		3PR-SC 3-Pin receptacle with shorting cap ▲
	CC Custom Color		3PR-TL 3-Pin PCR with photocontrol ▲
			Programmed Controls
			SCP_F Sensor Control Programmable, 8F or 40F ▼
			ADD AutoDim Timer Based Dimming ▲
			ADT AutoDim Time of Day Dimming ▲
			Photocontrols
			PC Button Photocontrol ▲▼

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3 – Networked Controls cannot be combined with other control options

4 – Not available with 2PP option

5 – Not available with Dual Driver option

6 – Some voltage restrictions may apply when combined with controls

7 – Not available with 480V

8 – BC not available on 4F and type 5 distributions

9 – At least one SCREMOTE required to program SCP motion sensor. Must select BR or 40R.

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4 E1.3 Fixture Type 'SLB2'

BEACON

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

VIPER Area/Site

VIPER LUMINAIRE

Gray Shading = Service Program Limit of 16 Luminaires QS10

MICROSTRIKE OPTICS – ORDERING GUIDE

Example: VP–2–320L-145–3K7–2–R–UNV–A3–BLT

CATALOG #

VP		1	160L-75	4K7	2		UNV
Series	Optic Platform	Size	Light Engine	CCT/CRI	Distribution	Optic Rotation	Voltage
VP Viper	Micro Strike	1 Size 1	160L-35 ▲ 5500 lumens	AP AP=Amber Phosphor Converted	2 Type 2	BLANK No Rotation	UNV 120-277V
			160L-50 ▲ 7500 lumens	27K8 2700K, 80 CRI	3 Type 3	L Optic rotation left	120 120V
			160L-75 10000 lumens	3K7 3000K, 70 CRI	4F Type 4 Forward	R Optic rotation right	208 208V
			160L-100 12500 lumens	3K8 3000K, 80 CRI	4W Type 4 Wide		240 240V
			160L-115 15000 lumens	35K8 3500K, 80 CRI	SQW Type 5 Square Wide		277 277V
			160L-135 18000 lumens	3K9 3000K, 90 CRI			347 347V
			160L-150 20000 lumens	4K7 4000K, 70 CRI			480 480V
		2 Size 2	320L-145 ▲ 21000 lumens	4K8 4000K, 80 CRI			
			320L-170 24000 lumens	4K9 4000K, 90 CRI			
			320L-185 27000 lumens	5K7 5000K, 70 CRI			
			320L-210 30000 lumens	5K8 5000K, 80 CRI			
			320L-235 33000 lumens				
			320L-255 36000 lumens				
			320L-295 ▲ 40000 lumens				
		3 Size 3	480L-285 40000 lumens				
			480L-320 44000 lumens				
			480L-340 48000 lumens				
			480L-390 52000 lumens				
			480L-425 59000 lumens				
			480L-470 60000 lumens				
		4 Size 4	720L-435 60000 lumens				
			720L-475 65000 lumens				
			720L-515 70000 lumens				
			720L-565 ▲ 75000 lumens				
			720L-600 ▲ 80000 lumens				
			CLO Custom Lumen Output ▲				

Mounting	BLT	BC	ADD67R6
A Arm mount for square pole/flat surface (B3 Drill Pattern) (Does not include round pole adapter)	Color	Options	Network Control Options
A_ Arm mount for round pole ▲	BLT Black Matte Textured	F Fusing	NXW5N5F NX Networked Wireless Enabled Integral NX5MP2 LMO PR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming ▲▲
ASQU Universal arm mount for square pole. Can be used with B3 or S2 Drill Pattern	BLS Black Gloss Smooth	2PP Dual Power Feed	NXW540F NX Networked Wireless Enabled Integral NX5MP2+MD PR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming ▲▲
A_U Universal arm mount for round pole ▲	DBT Dark Bronze Matte Textured	2DR Dual Driver	NXW NX Networked Wireless Radio Module NX5M2 and Bluetooth Programming, without Sensor ▲▲
AAU Adjustable arm for pole mounting (universal drill pattern)	DBS Dark Bronze Gloss Smooth	TE Tooless Entry	WIR wiSCAPE® In-Fixture Module ▲▲
AA_U Adjustable arm mount for round pole ▲	GTT Graphite Matte Textured	BC Backlight Control ▼	WIRSC wiSCAPE® Module and Occupancy Sensor ▲▲
ADU Decorative upsweept Arm (universal drill pattern)	LGS Light Grey Gloss Smooth	TB Terminal Block	Stand Alone Sensors
AD_U Decorative upsweept arm mount for round pole ▲	LGT Light Grey Gloss Textured		BTS-14F Bluetooth® Programmable, BTSMPLMO PR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens
MAF Mast arm fitter for 2-3/8" OD horizontal arm	PSS Platinum Silver Smooth		BTS-40F Bluetooth® Programmable, BTSMPLMO PR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens
K Knuckle	WHT White Matte Textured		BTSO-12F Bluetooth® Programmable, BTSMPLOMNJ-D PR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens
T Trunnion	WHS White Gloss Smooth		7PR 7-Pin Receptacle ▲
WB Wall Bracket, horizontal tenon with MAF	VGT Verde Green Textured		7PR-SC 7-Pin Receptacle with shorting cap ▲
WM Wall mount bracket with decorative upsweept arm			3PR 3-Pin twist lock ▲
WA Wall mount bracket with adjustable arm	Color Option		3PR-SC 3-Pin receptacle with shorting cap ▲
	CC Custom Color		3PR-TL 3-Pin PCR with photocontrol ▲
			Programmed Controls
			SCP_F Sensor Control Programmable, 8F or 40F ▼
			ADD AutoDim Timer Based Dimming ▲
			ADT AutoDim Time of Day Dimming ▲
			Photocontrols
			PC Button Photocontrol ▲▼

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9 – At least one SCREMOTE required to program SCP motion sensor. Must select BR or 40R.

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5 E1.3 Fixture Type 'SLB2HS'

BEACON

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

VIPER Area/Site

VIPER LUMINAIRE

Gray Shading = Service Program Limit of 16 Luminaires QS10

MICROSTRIKE OPTICS – ORDERING GUIDE

Example: VP–2–320L-145–3K7–2–R–UNV–A3–BLT

CATALOG #

VP		1	160L-75	6K7	4F		UNV
Series	Optic Platform	Size	Light Engine	CCT/CRI	Distribution	Optic Rotation	Voltage
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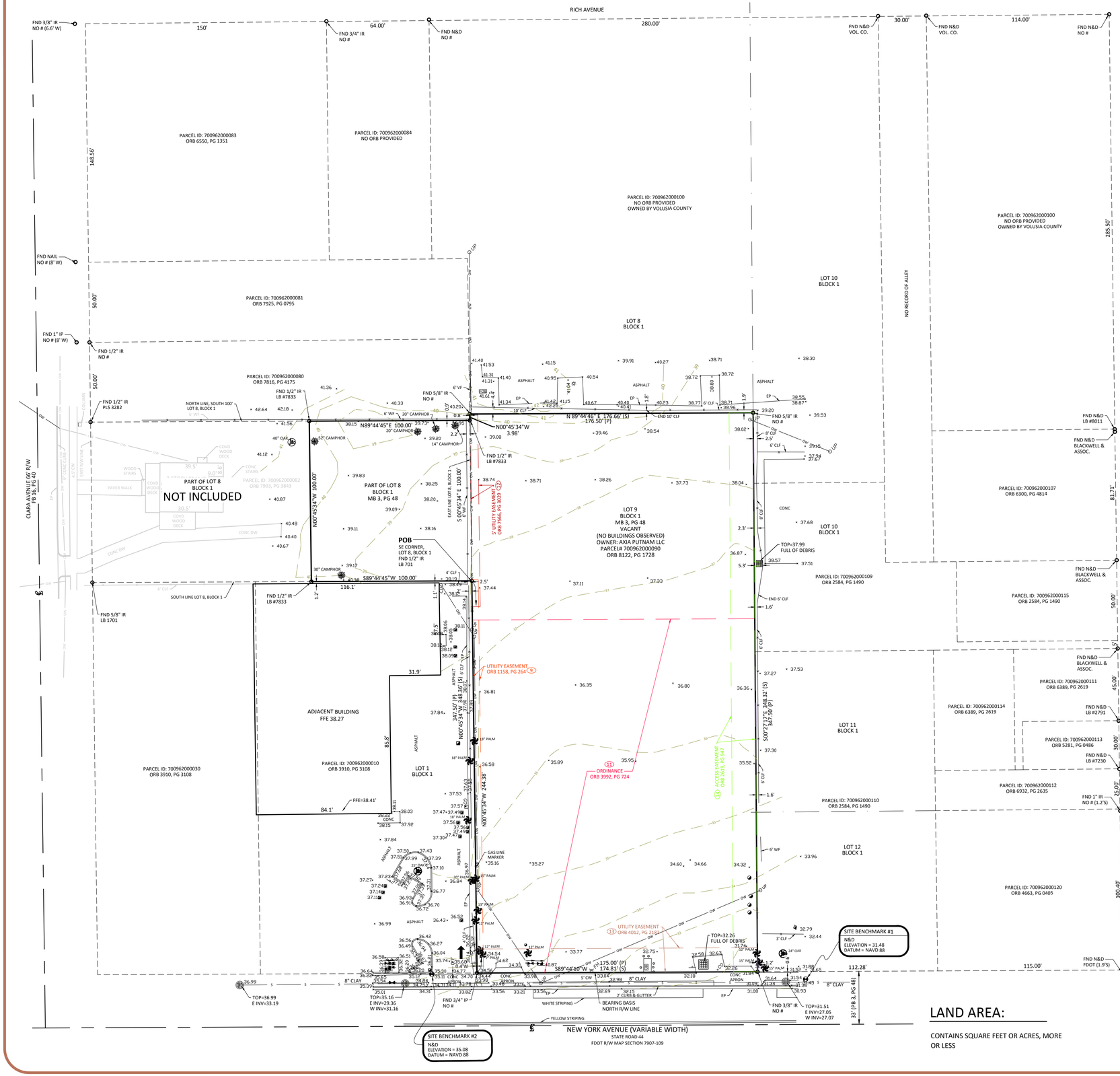
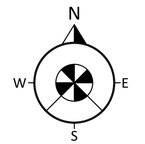
			160L-100 12500 lumens	3K8 3000K, 80 CRI	4W Type 4 Wide		240 240V
			160L-115 15000 lumens	35K8 3500K, 80 CRI	SQW Type 5 Square Wide		277 277V
			160L-135 18000 lumens	3K9 3000K, 90 CRI			347 347V
			160L-150 20000 lumens	4K7 4000K, 70 CRI			480 480V
		2 Size 2	320L-145 ▲ 21000 lumens	4K8 4000K, 80 CRI			
			320L-170 24000 lumens	4K9 4000K, 90 CRI			
			320L-185 27000 lumens	5K7 5000K, 70 CRI			
			320L-210 30000 lumens	5K8 5000K, 80 CRI			
			320L-235 33000 lumens				
			320L-255 36000 lumens				
			320L-295 ▲ 40000 lumens				
		3 Size 3	480L-285 40000 lumens				
			480L-320 44000 lumens				
			480L-340 48000 lumens				
			480L-390 52000 lumens				
			480L-425 59000 lumens				
			480L-470 60000 lumens				
		4 Size 4	720L-435 60000 lumens				
			720L-475 65000 lumens				
			720L-515 70000 lumens				
			720L-565 ▲ 75000 lumens				
			720L-600 ▲ 80000 lumens				
			CLO Custom Lumen Output ▲				

Mounting	BLT	BC	ADD67R6
A Arm mount for square pole/flat surface (B3 Drill Pattern) (Does not include round pole adapter)	Color	Options	Network Control Options
A_ Arm mount for round pole ▲	BLT Black Matte Textured	F Fusing	NXW5N5F NX Networked Wireless Enabled Integral NX5MP2 LMO PR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming ▲▲
ASQU Universal arm mount for square pole. Can be used with B3 or S2 Drill Pattern	BLS Black Gloss Smooth	2PP Dual Power Feed	NXW540F NX Networked Wireless Enabled Integral NX5MP2+MD PR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming ▲▲
A_U Universal arm mount for round pole ▲	DBT Dark Bronze Matte Textured	2DR Dual Driver	NXW NX Networked Wireless Radio Module NX5M2 and Bluetooth Programming, without Sensor ▲▲
AAU Adjustable arm for pole mounting (universal drill pattern)	DBS Dark Bronze Gloss Smooth	TE Tooless Entry	WIR wiSCAPE® In-Fixture Module ▲▲
AA_U Adjustable arm mount for round pole ▲	GTT Graphite Matte Textured	BC Backlight Control ▼	WIRSC wiSCAPE® Module and Occupancy Sensor ▲▲
ADU Decorative upsweept Arm (universal drill pattern)	LGS Light Grey Gloss Smooth	TB Terminal Block	Stand Alone Sensors
AD_U Decorative upsweept arm mount for round pole ▲	LGT Light Grey Gloss Textured		BTS-14F Bluetooth® Programmable, BTSMPLMO PR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens
MAF Mast arm fitter for 2-3/8" OD horizontal arm	PSS Platinum Silver Smooth		BTS-40F Bluetooth® Programmable, BTSMPLMO PR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens
K Knuckle	WHT White Matte Textured		BTSO-12F Bluetooth® Programmable, BTSMPLOMNJ-D PR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens
T Trunnion	WHS White Gloss Smooth		7PR 7-Pin Receptacle ▲
WB Wall Bracket, horizontal tenon with MAF	VGT Ver

BOUNDARY & TOPOGRAPHIC SURVEY





GRAPHIC SCALE

0 30 60

1 INCH = 30 FEET

VICINITY MAP (Not to Scale)



DESCRIPTION:

The East 100.00 feet of the South 100 feet of the West 237.5 feet of Lot 8, Assessor's Subdivision of Block 1, Roger's Deland, according to the map thereof recorded in Map Book 16, Page 40, of the Public Records of Volusia County, Florida, being more particularly described as follows:

Begin at the Southeast corner of said Lot 8, Block 1; run thence S89°44'45"W, along the South line of said Lot 8, a distance of 100.00 feet; thence N00°45'34"W, a distance of 100.00 feet to the North line of the South 100 feet of said Lot 8; thence N89°44'45"E along said North line, a distance of 100.00 feet to the East line of said Lot 8; thence S00°45'34"E, along said East line, a distance of 100.00 feet to the Point of Beginning.

And
Lot 9, Assessor's Subdivision of Block 1, Roger's Deland, a subdivision according to the plat thereof recorded at Plat Book 3, Page 48, in the Public Records of Volusia County, Florida

GENERAL SURVEY NOTES:

1. BEARING STRUCTURE IS BASED ON THE MONUMENTED NORTH R/W LINE OF NEW YORK AVENUE; BEING: S89°44'10"W ASSUMED.

2. THIS SURVEY REFLECTS ONLY MATTERS OF RECORD AS PROVIDED BY THE CLIENT OR CLIENTS REPRESENTATIVE.

3. THIS SURVEY WAS MADE ON THE GROUND. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. ENGINEER AND CONTRACTOR SHALL VERIFY MEASUREMENTS OF CONNECTIONS TO EXISTING UTILITIES BEFORE ORDERING MATERIALS AND BEFORE COMMENCEMENT OF CONSTRUCTION. IF THERE IS A DISCREPANCY BETWEEN THE MEASUREMENTS SHOWN HEREON AND THE VERIFYING MEASUREMENTS, THIS SURVEYOR SHALL BE CONTACTED IMMEDIATELY TO FURTHER VERIFY THE DISCREPANCY.

4. THIS SITE LIES IN ZONE X PER FLOOD INSURANCE RATE MAP NO. 12127C0470H, COMMUNITY NO. 120307, CITY OF DELAND, VOLUSIA COUNTY, FLORIDA, EFFECTIVE 02/19/2014.

5. ACCORDING TO FLORIDA STATUTES, CHAPTER 472.025, A LAND SURVEYOR SHALL NOT AFFIX HIS SEAL OR NAME TO ANY PLAN OR DRAWING WHICH DEPICTS WORK WHICH HE IS NOT LICENSED TO PERFORM OR WHICH IS BEYOND HIS PROFESSION OR SPECIALTY THEREIN. THEREFORE, WE ARE UNABLE TO CERTIFY AS TO MUNICIPAL ZONING COMPLIANCE, INTERPRETATION OF ZONING CODES OR THE DETERMINATION OF VIOLATIONS THEREOF.

6. THIS SURVEY MADE WITH BENEFIT OF COMMITMENT FOR TITLE NO. 7222-6423577, EFFECTIVE: APRIL 21, 2023, ISSUED BY FIRST AMERICAN TITLE INSURANCE COMPANY. THE LEGAL DESCRIPTION SHOWN HEREON IS THE SAME AS THE LEGAL DESCRIPTION SET FORTH IN SCHEDULE A OF THE TITLE COMMITMENT REFERENCED HEREON.

7. ELEVATIONS ARE BASED ON BENCHMARK DESIGNATION T 474, BEING: 38.11 FEET, (NAVD 88), PUBLISHED BY NGS (NATIONAL GEODETIC SURVEY).

8. THE MAPPED FEATURES SHOWN HEREON ARE RELATIVE TO FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE, NAD(83)-(2011)-(EPOCH 2010.0000), ESTABLISHED PER FDOT FPRN.

SCHEDULE B-II:

9. Easement granted to Florida Power Corporation by instrument recorded in Book 1158, Page 264.
(ON SUBJECT PROPERTY AS SHOWN HEREON)

10. Fence Boundary Agreement recorded in Book 1980, Page 1770.
(ON SUBJECT PROPERTY. THE LOCATION OF THE FENCE CANNOT BE DETERMINED BY THE DESCRIPTION IN THE RECORDED DOCUMENT)

11. Ordinance 94-36 Designating the Downtown Historic District recorded in Book 3992, Page 724.
(AS TO LOT 9, BLANKET IN NATURE OVER THE PORTION OF SUBJECT PROPERTY SHOWN HEREON.)

12. Easement granted to County of Volusia for Utilities by instrument recorded in Book 7566, Page 3029.
(ON SUBJECT PROPERTY AS SHOWN HEREON)

13. Easement granted to City of Deland by instrument recorded in Book 4012, Page 2182.
(ON SUBJECT PROPERTY AS SHOWN HEREON IN ITS APPROXIMATE LOCATION DUE TO POOR LEGIBILITY.)

14. Reciprocal Easement Agreement recorded in Book 2619, Page 946.
(ON SUBJECT PROPERTY AS SHOWN HEREON)

LAND AREA:

CONTAINS SQUARE FEET OR ACRES, MORE OR LESS

Certified to:

Blue Sky Communities, LLC, a Florida limited liability company;
First American Title Insurance Company;
Nelson Mullins Riley & Scarborough LLP

JAMES DENNIS BRAY — License Number PSM6507 STATE OF FLORIDA — Professional Surveyor and Mapper

This Survey is "Not Valid" without the original signature and seal of this Florida licensed Surveyor and Mapper, unless provided with electronic signature. The seal appearing on this document was authorized by the signing Professional Surveyor and Mapper on the Date of the electronic signature.

LEGEND

AC	- AIR CONDITIONER
-BB-	- BOTTOM OF BANK
BHM	- BUILDING HEIGHT MEASUREMENT
BFP	- BACK FLOW PREVENTER
BM	- BENCHMARK
B	- BOLLARD
-E-	- BURIED ELECTRIC LINE
-C-	- BURIED CABLE TELEVISION LINE
CALC	- CALCULATED
C&M	- CALCULATED & MEASURED
Δ	- CENTRAL ANGLE
CBW	- CONCRETE BLOCK WALL
CC	- COVERED CONCRETE
CCR	- CERTIFIED CORNER RECORD
CF	- CONCRETE FLUME
CHW	- CONCRETE HEADWALL
CLF	- CHAIN LINK FENCE
℄	- CENTERLINE
CM	- CONCRETE MONUMENT
CMP	- CORRUGATED METAL PIPE
=CO	- CLEAN OUT
CONC	- CONCRETE
COVD	- COVERED
CP	- CONCRETE PAD
	- CURB INLET
CW	- CONCRETE WALKWAY
-D-	- BURIED STORM/DRAIN LINE
DB	- DEED BOOK
DE	- DRAINAGE EASEMENT
	- DOT INLET
DP	- DUMPSTER PAD
DW	- DRIVEWAY
	- EASEMENT NUMBER
	- ELECTRIC BOX
	- ELECTRICAL METER
EL	- ELEVATION
EMT	- EASEMENT
EP	- EDGE OF PAVEMENT
FDOT	- FLORIDA DEPARTMENT OF TRANSPORTATION
FPRN	- FLORIDA PERMANENT REFERENCE NETWORK
FIRM	- FLOOD INSURANCE RATE MAP
FFE	- FINISHED FLOOR ELEVATION
FH	- FIRE HYDRANT
-FM-	- BURIED FORCE MAIN LINE
FND	- FOUND
-FO-	- BURIED FIBER OPTIC CABLE LINE
FOB	- FIBER OPTIC CABLE BOX
FP	- FLAG POLE
-G-	- BURIED GAS LINE
	- GAS METER
	- GAS VALVE
	- GREASE TRAP MANHOLE
	- GUY WIRE ANCHOR
	- HANDICAP PARKING
HDPE	- HIGH DENSITY POLYETHYLENE PIPE
INST#	- RECORD INSTRUMENT#
INV	- INVERT ELEVATION
IP	- IRON PIPE
IR	- IRON ROD
L	- ARC LENGTH
LB	- LICENSED BUSINESS
	- LIGHT POLE
LS	- LICENSED SURVEYOR
LSA	- LANDSCAPED AREA
MF	- METAL FENCE
MS	- METAL SHED
	- MITERED END SECTION
	- MONITORING WELL
N&D	- NAIL & DISK
NAVD	- NORTH AMERICAN VERTICAL DATUM
NAD	- NORTH AMERICAN DATUM
NGVD	- NATIONAL GEODETIC VERTICAL DATUM
NTS	- NOT TO SCALE
ORB	- OFFICIAL RECORDS BOOK
-OW-	- OVERHEAD WIRE
PB	- PLAT BOOK
PC	- POINT OF CURVATURE
PCC	- POINT OF COMPOUND CURVATURE
PP	- PER PLANS
PG	- PAGE
PI	- POINT OF INTERSECTION
POB	- POINT OF BEGINNING
POC	- POINT OF COMMENCEMENT
PRC	- POINT OF REVERSE CURVATURE
# PS	- PARKING SPACES
PSM	- PROFESSIONAL SURVEYOR & MAPPER
PSP	- PEDESTRIAN SIGNAL POLE
PT	- POINT OF TANGENCY
PVC	- POLYVINYL CHLORIDE PIPE
R	- CURVE RADIUS
RCP	- REINFORCED CONCRETE PIPE
-R-	- REUSE WATER LINE
	- REUSE WATER METER
	- REUSE WATER VALVE
RP	- RAMP
R/W	- RIGHT-OF-WAY
	- SANITARY MANHOLE
-S-	- BURIED SANITARY LINE
SF	- SQUARE FEET
SP	- STATE PLANE
SOO	- SHOWN FOR DIRECTION ONLY
SN	- SIGN
SWF	- STOCK WIRE FENCE
	- SEWER VALVE
XXX.00	- SPOT ELEVATION
	- STORM MANHOLE
-T-	- BURIED TELECOMMUNICATIONS LINE
	- TELECOMMUNICATIONS MANHOLE
	- STORM INLET
TB	- TOP OF BANK
	- TRAFFIC SIGNAL POLE
	- TRAFFIC SIGN
	- TRANSFORMER/JUNCTION BOX
	- TELEPHONE RISER
	- TRAFFIC SIGNAL BOX
	- TELEVISION RISER
TSW	- TRAFFIC SIGNAL WIRE
TYP	- TYPICAL
-U-	- UNKNOWN UTILITY
UE	- UTILITY EASEMENT
UP	- UTILITY POLE
UM	- UTILITY MARKER
VCP	- VITRIFIED CLAY PIPE
VF	- VINYL FENCE
-W-	- BURIED WATER LINE
WF	- WOOD FENCE
WS	- WOOD SHED
	- WATER VALVE
	- WATER METER
YD	- YARD DRAIN

ADDRESS:
225 W. NEW YORK AVE AND 125 N. CLARA AVENUE DELAND, FL 32720

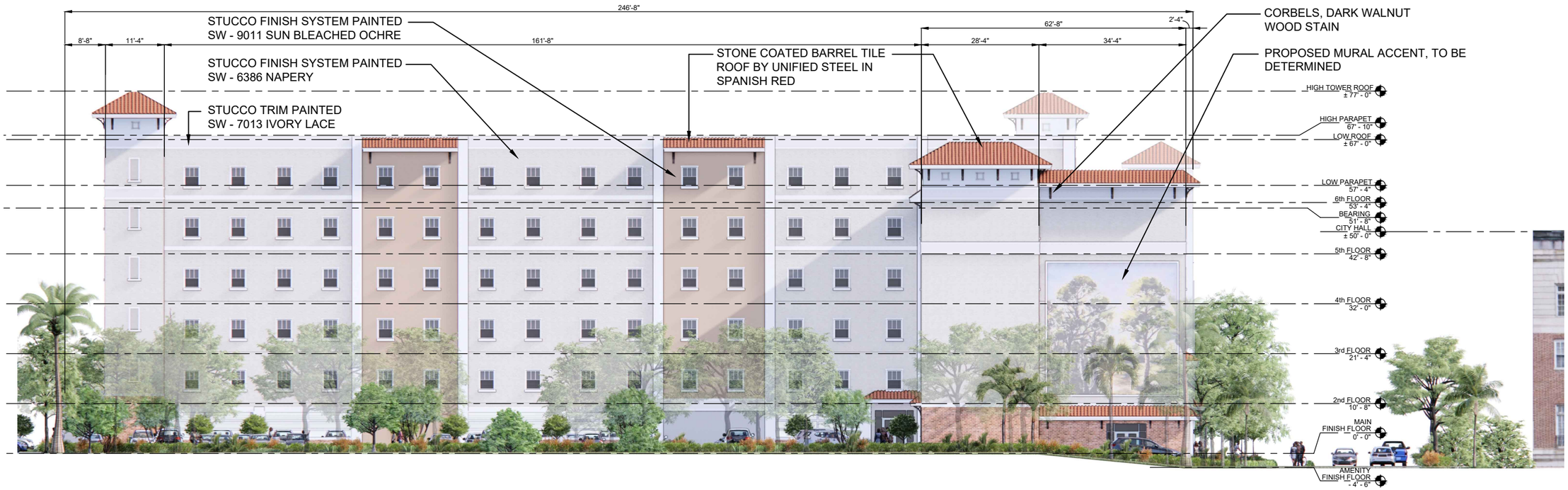
Job Information
JOB NO. 905773
CF NO. VLS-16-40-LOT8-BLK1-Update02
FIELD DATE: 09/29/2023
SCALE: 1" = 30'
DRAWN BY: GLT/DSK

Revisions		
Date:	Description	By:
10/18/23	UPDATE B-II EXCEPTIONS	DSK
10/30/23	OFFSITE TOPOGRAPHY TO WEST	GLT

Altamax Surveying
910 Belle Avenue, Suite 1100
Casselberry, FL 32708
Phone: 407-677-0200
Licensed Business No. 7833
www.altamaxsurveying.com

James D. Bray PSM 6507

SHEET 1 OF 1



2 E-01 WEST ELEVATION (PARKING FACADE)
SCALE: 3/32" = 1'-0"



1 E-01 SOUTH ELEVATION (STREET FACADE)
SCALE: 3/32" = 1'-0"

POWELL STUDIO
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713 W. MONTROSE STREET • CLERMONT, FLORIDA 34711
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CONSULTANT:

OWNER / PROJECT:

NEW YORK AVE. APARTMENTS

AN AFFORDABLE HOUSING COMMUNITY
DELAND, FLORIDA

PROFESSIONAL SEAL:

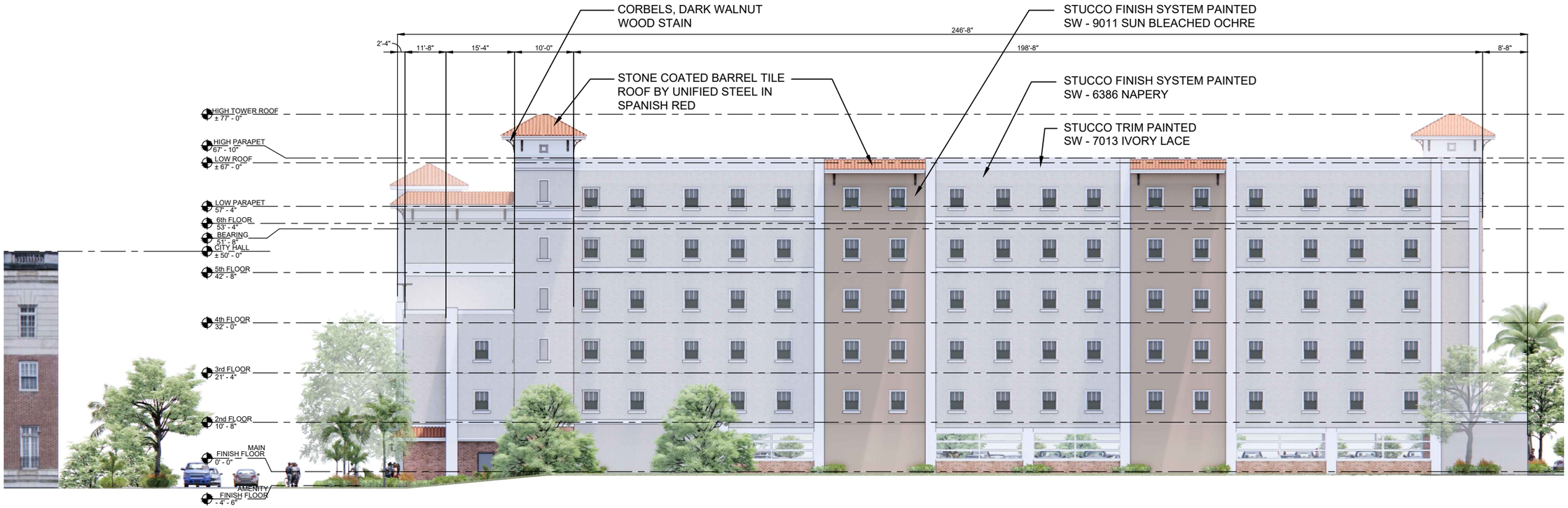
MARK	DATE	DESCRIPTION

ISSUE DATE: JULY 10, 2025

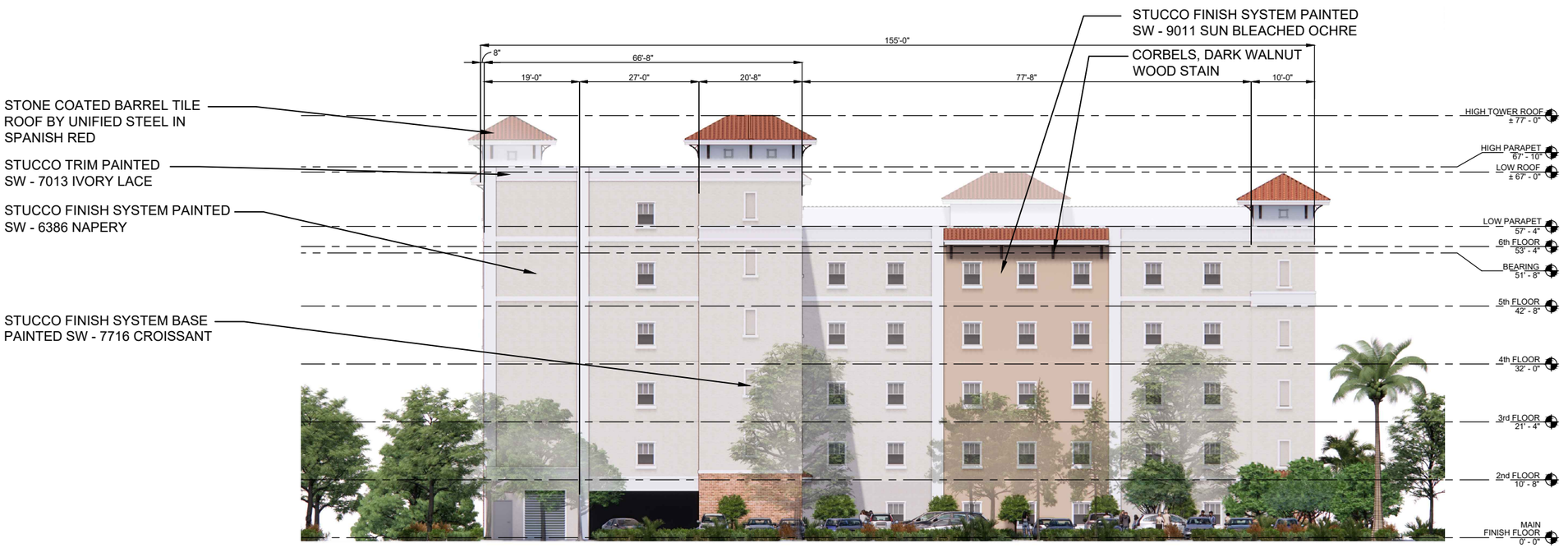
EXTERIOR ELEVATION

PROJECT NO.	PSA 2024-01.00
DRAWN BY	AP
CHECKED BY	JP

E-01



2 E-02 EAST ELEVATION (EMPTY LOT FACADE)
SCALE: 3/32" = 1'-0"



1 E-02 NORTH ELEVATION (REAR FACADE)
SCALE: 3/32" = 1'-0"

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CONSULTANT:

OWNER / PROJECT:

NEW YORK AVE. APARTMENTS
AN AFFORDABLE HOUSING COMMUNITY
DELAND, FLORIDA

PROFESSIONAL SEAL:

MARK	DATE	DESCRIPTION

ISSUE DATE: JULY 10, 2025

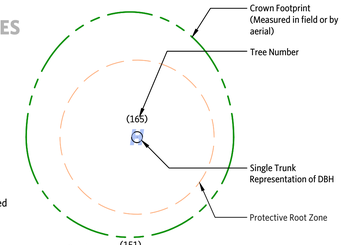
EXTERIOR ELEVATION

PROJECT NO.	PSA 2024-01.00
DRAWN BY	AP
CHECKED BY	JP

E-02

TREE INVENTORY LEGEND

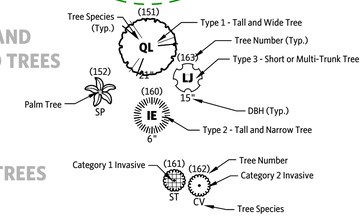
HISTORIC TREES



Note:
Trees to be removed are marked with a RED x mark.

Offsite removals are marked with a PURPLE x mark.

SPECIMEN AND PROTECTED TREES



NUISANCE TREES

DATE OF ASSESSMENT: February 29th, 2024.

INVENTORY ASSIGNMENT NOTES

The objectives of the assignment were limited to the following components:

1. to conduct a tree inventory to identify all the on-site trees,
2. to identify any specimen and historic trees as defined by DeLand LDR *Sec. 33-57.05, Protected trees removal and replacement*,
3. to rectify any tree identification errors shown on the survey, if applicable,
4. to establish natural resource permitting requirements associated with the inventory.

A field investigation was conducted on the date of assessment. Each investigation was limited to the visual inspection of the on-site trees, their surrounding context, and a review of a tree survey prepared by a third-party surveyor. An arborist trainee assisted in collecting tree dimensional data.

Tree survey data was imported to a data collection field tablet. The tablet was used to collect observations and photographs as needed. No physical notes were taken. If individual trees not captured on the survey were found, they were added to the digital record by generally located each tree using a Dual XGPS160 SkyPro GPS unit combined with aerial photograph interpretation.

Upon arrival to the site, I employed the following field review techniques to gather data:

- Trunk diameter at breast height (dbh) or 54 inches above the ground, taken with a diameter tape. For trees with more than one trunk (stem) originating at or near ground level (less than 36" high), the dbh of each stem was measured at 54" and the cross-sectional area of each stem was summed to derive an equivalent single trunk representative dbh.
- Photographs, taken with a field tablet or a Canon EOS 6D Mark II camera.

When advanced assessment was applicable, the following simple tools and review techniques were used:

- Crown spread measurement, taken with a mechanical wheel from the centroid of the trunk. When ground conditions or thick vegetation precluded use of the wheel, a tape measure or recent aerial photograph was used to measure spread.
- Height to base of limb, taken with a 35-foot Tel-O-Pole II measuring stick, when applicable.
- Tree height, taken with a laser hypsometer using three averaged points from one position. When the crown restricted measurement, an average height of 45 was used for tree point calculations.
- Approximation of extent of decay by sounding, listening for tones that may indicate certain conditions, taken with a soft-face mallet.
- Approximation of extent of decay by probing, taken with a 48" steel soil probe.

When overgrowth or obstructions restricted the collection of measurements, the applicable data element was omitted or approximated. No soil, water, or tissue tests were conducted unless otherwise noted. Assessments were a one-sided ground-based and generally followed ANSI A300 (Part 9)-2017 guidance. However, this assessment is not intended to be used as a tree risk assessment except as described in the City of Tampa Land Development Code Section 27-284.1.1 ("Matheny and Clark" hazard rating format for Grand Trees only). Within this permitting context, the time frame for the assessment was two years.

When typically single-trunked trees are fused at or near the ground, a pith test is performed to determine whether the tree grouping is separate trees or a single tree. The pith test is based on a technique discussed in the American Forests Champion Trees Measuring Guidelines Handbook (2019).

To tailor the inventory to jurisdictional requirements, data elements collected varied by tree classification:

- Historic Trees: species, dbh, condition rating, and crown spread
  - ●● *Level 2: Basic Tree Risk Assessments were not performed unless specifically noted.*
- Protected and specimen trees: species, dbh, and condition rating
- Nuisance trees: species only.

ASSUMPTIONS AND LIMITING CONDITIONS

1. Any legal description provided to the consultant is assumed to be correct. Any titles and ownerships to any property are assumed to be good and marketable. No responsibility is assumed for matters legal in character. Any and all property is appraised or evaluated as though free and clear, under responsible ownership and competent management.

2. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consultant can neither guarantee nor be responsible for the accuracy of information provided by others.

3. Unless expressed otherwise: (1) information contained in this inventory covers only those items that were examined and reflects the condition of those items at the time of inspection; and (2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in the future.

4. Not all defects or conditions that predispose a tree or tree part to failure are detectable, nor are all failures predictable.

5. This inventory is not intended to establish a risk rating for every inventoried tree or tree part, evaluate risk mitigation options or recommendations, provide recommendations for additional assessments, determine residual risk following mitigation, or provide recommendations for monitoring or follow-up.

RATING NOTES:

1. **DBH and Permit DBH:**
   The species or structure of a tree can be incompatible with a municipal or jurisdictional ordinance. DBH is the arborist's field adjusted dbh determination, based on DBH measurement guidelines provided in the Guide for Plant Appraisal, 10th Edition (2018). Permit DBH is a translation of the field adjusted dbh to a value relevant to applicable permitting requirements. Typically, multi-stem trees are resolved into single-stem equivalents using trunk formula method. The Permit DBH for small multi-stem species may be visually estimated.

2. **H-S-F = CR**
   "Health, Structure, and Form" to Condition Rating:
   A composite, weighted assessment of health, structure, and form. Adapted from the Guide for Plant Appraisal, 10th Edition, second printing (2019)("10th Edition"). Values range from: A-Excellent, B-Good, C-Fair, D-Poor, F-Very Poor.
   2.1. "SD" is used when the tree is standing dead
   2.2. "N/A" is used when no value is applicable.

3. **Excluded or Reserved**
   Tree survey data quality and utility can vary widely between different surveyors. The initial inventory data involves data transformation to isolate tree data and prepare it for field data collector import. Occasionally extra data points are imported. During the assessment, these points are field verified and either assessed or excluded. The excluded values are preserved in the table to provide consecutive numbering. Reasons to exclude a data point include:
   3.1. another type of survey point, such as a ground shot or irrigation valve;
   3.2. a surveyed tree that did not exist at the time of assessment;
   3.3. a tree part, such as a canopy extent measurement;
   3.4. a tree that is not recognized or protected in the jurisdiction due to size;
   3.5. or by the arborist's professional opinion.

4. **Disposition**
   Tree disposition is the decision to retain or remove the tree based on a the arborist's evaluation of the cumulative impact of the proposed construction activity. This decision is based on the tree protection provided, general knowledge of the species, information on the tree's age and condition, and other relevant factors that may be applicable.

CONDITION RATING COLOR KEY

Color representations of Condition Rating are provided as a visual aid. Preservation or removal suggestions are: 1) not recommendations, 2) apply only to onsite trees, and 3) are based on an opinion of preservation suitability near development. Circles are colored by the following convention:

- Dark Green: Excellent (suitable for preservation)
- Light Green: Good (suitable for preservation)
- White: Fair (somewhat suitable for preservation)
- Light Tan: Poor (removal may be warranted unless the consequence of failure is "negligible" or "minor")
- Brown: Very Poor (removal is likely warranted unless the consequence of failure is "negligible")
- Lavender: Category 1 Invasive (removal is usually required per AHJ) or Category 2 Invasive (consider removing)

For grand tree mitigation, the condition ratings are converted to percentages based on the TABLE 284.4.1-A: TREE RETENTION-MITIGATION EQUIVALENCY TABLES BY TREE TYPE, Footnote 3.

CERTIFICATION OF PERFORMANCE

I, Richard Peterika, certify that:

- An on-staff qualified professional or I have inspected the trees and the property referred to in this inventory and have stated our findings accurately. The extent of the inventory is stated in the Inventory Assignment Notes.
- I have no current or prospective interest in the vegetation or the property that is the subject of this inventory and have no personal interest or bias with respect to the parties involved.
- The analysis, opinions, and conclusions stated herein are our own and are based on current scientific procedures and facts.
- Our analysis, opinions, and conclusions were developed and this inventory has been prepared according to commonly accepted arboricultural practices.
- No one provided significant professional assistance to us, except as indicated within the inventory.
- Our compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events.

I further certify that I am a member in good standing of the American Society of Consulting Arborists and the International Society of Arboriculture. I am licensed by the Florida Department of Business and Professional Regulation as a Landscape Architect. I have been involved in the fields of Landscape Architecture and Arboriculture in a full time capacity since 2009.

July 11, 2025

This document has been digitally signed and sealed by: RICHARD F. PETERIKA
Printed copies of this document are not considered signed and sealed. The signature must be verified on the electronic documents.
Dark Moss LLC, 308 E 7th Ave Tampa, Florida 33602
Richard Peterika, ASLA, AICP, RCA #641, ISA-FL #5893B

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DESIGNING THE URBAN FOREST
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PROJECT:
NEW YORK AVE APARTMENTS
LOCATION:
DELAND, FLORIDA
FILE:
D-163

PREPARED FOR:
BLUE SKY COMMUNITIES, LLC

PUBLISHED: 2025-07-11

PHASE:
PERMIT ONLY

SHEET TITLE:
TREE INVENTORY AND DISPOSITION PLAN

REVISION:
1: PER STAFF 2024-08-22
2: PER STAFF 2024-10-01
3: PER STAFF 2025-03-25
4: PER STAFF 2025-07-11
5: -

SHEET NUMBER:
TR1.0

TREE DISPOSITION SUMMARY TABLE

4 TABLE

Tree Number	Species Symbol	Botanical Name	Common Name	DBH	HSF	Overall Condition	Matrix	Permit Class	Disposition	Mitigation Required
1	CC	Cinnamomum camphora	Camphor	30	A-B-C	FAIR	F1	Nuisance	Offsite	
2	CC	Cinnamomum camphora	Camphor	38	A-B-C	FAIR	F1	Nuisance	Preserved	
3	CC	Cinnamomum camphora	Camphor	19	B-C-C	FAIR	F1	Nuisance	[--REMOVED--]	
4	CC	Cinnamomum camphora	Camphor	19	B-C-C	FAIR	F1	Nuisance	[--REMOVED--]	
5	CC	Cinnamomum camphora	Camphor	14	D-D-D	POOR	F1	Nuisance	[--REMOVED--]	
6	PO	Platanus occidentalis	(American) Sycamore	23	B-B-B	GOOD	F1	Protected	Offsite	
7	SP	Sabal palmetto	Cabbage Palm	14	A-A-A	EXCELLENT	PA	Protected Palm	Preserved	
8	SP	Sabal palmetto	Cabbage Palm	15	A-A-B	GOOD	PA	Protected Palm	Offsite	
9	SP	Sabal palmetto	Cabbage Palm	16	A-A-B	GOOD	PA	Protected Palm	Offsite	
10	SP	Sabal palmetto	Cabbage Palm	14	A-B-B	GOOD	PA	Protected Palm	[--REMOVED--]	5 inch(es)
11	SP	Sabal palmetto	Cabbage Palm	9	A-A-A	EXCELLENT	PA	Protected Palm	Preserved	
12	SP	Sabal palmetto	Cabbage Palm	15	A-A-A	EXCELLENT	PA	Protected Palm	Preserved	
13	SP	Sabal palmetto	Cabbage Palm	13	A-A-B	GOOD	PA	Protected Palm	Offsite	
14	SP	Sabal palmetto	Cabbage Palm	13	A-A-A	EXCELLENT	PA	Protected Palm	Preserved	
15	SP	Sabal palmetto	Cabbage Palm	14	A-A-B	GOOD	PA	Protected Palm	Preserved	
16	SP	Sabal palmetto	Cabbage Palm	18	A-A-B	GOOD	PA	Protected Palm	Offsite	
17	QV	Quercus virginiana	Southern Live Oak	25	B-B-B	GOOD	F1	Historic	Offsite	
18	SP	Sabal palmetto	Cabbage Palm	18	A-B-B	GOOD	PA	Protected Palm	ROW Removed	Removal Permitted Separately
19	SP	Sabal palmetto	Cabbage Palm	15	A-A-A	EXCELLENT	PA	Protected Palm	ROW Removed	Removal Permitted Separately
20	SP	Sabal palmetto	Cabbage Palm	13	A-A-A	EXCELLENT	PA	Protected Palm	[--REMOVED--]	5 inch(es)
21	CC	Cinnamomum camphora	Camphor	27	B-B-C	FAIR	F1	Nuisance	Preserved	
22	SP	Sabal palmetto	Cabbage Palm	17	A-A-B	GOOD	PA	Protected Palm	Offsite	
23	KP	Koelreuteria paniculata	Goldenrain Tree		n/a		X1	Nuisance	Offsite	
24	KP	Koelreuteria paniculata	Goldenrain Tree		n/a		X1	Nuisance	Offsite	
25	MR	Morus rubra	Red Mulberry	10	C-C-D	POOR	F2	Protected	Offsite	
26	SP	Sabal palmetto	Cabbage Palm	Under 4.5' Cleartrunk	A-A-B	GOOD	PA	N/A	Preserved	
27	QL	Quercus laurifolia	Laurel Oak	18	B-C-C	FAIR	F1	Protected	Offsite	
28	QL	Quercus laurifolia	Laurel Oak	24	B-B-C	FAIR	F1	Protected	Offsite	
29	KP	Koelreuteria paniculata	Goldenrain Tree		n/a		X1	Nuisance	Offsite	
30	KP	Koelreuteria paniculata	Goldenrain Tree		n/a		X1	Nuisance	Offsite	
31	KP	Koelreuteria paniculata	Goldenrain Tree		n/a		X1	Nuisance	Offsite	
32	KP	Koelreuteria paniculata	Goldenrain Tree		n/a		X1	Nuisance	Offsite	
33	KP	Koelreuteria paniculata	Goldenrain Tree		n/a		X1	FISC Listed Species	Offsite	
34	LLU	Ligustrum lucidum	Glossy Privet		n/a		X1	FISC Listed Species	Offsite	
35	KP	Koelreuteria paniculata	Goldenrain Tree		n/a		X1	Nuisance	Offsite	
36	SP	Sabal palmetto	Cabbage Palm	14	A-A-B	GOOD	PA	Protected Palm	Offsite	
37	SP	Sabal palmetto	Cabbage Palm	Under 4.5' Cleartrunk	A-A-B	GOOD	PA	N/A	Preserved	
38	SP	Sabal palmetto	Cabbage Palm	16	A-A-B	GOOD	PA	Protected Palm	Offsite	
39	SP	Sabal palmetto	Cabbage Palm	Under 4.5' Cleartrunk	A-A-B	GOOD	PA	N/A	Offsite	
40	SP	Sabal palmetto	Cabbage Palm	17	A-A-B	GOOD	PA	Protected Palm	Offsite	
41	SR	Syagrus romanzoffiana	Queen Palm		n/a		X2	FISC Listed Species	Offsite	
42	LLU	Ligustrum lucidum	Glossy Privet		n/a		X1	FISC Listed Species	Offsite	
43	QL	Quercus laurifolia	Laurel Oak	20	B-C-C	FAIR	F1	Protected	Offsite	
44	KP	Koelreuteria paniculata	Goldenrain Tree		n/a		X1	Nuisance	Offsite	
45	KP	Koelreuteria paniculata	Goldenrain Tree		n/a		X1	Nuisance	Offsite	
46	SP	Sabal palmetto	Cabbage Palm	16	A-A-B	GOOD	PA	Protected Palm	Offsite	
47	LLU	Ligustrum lucidum	Glossy Privet		n/a		X1	FISC Listed Species	Offsite	
48	SP	Sabal palmetto	Cabbage Palm	18	A-A-A	EXCELLENT	PA	Protected Palm	Offsite	
49	SP	Sabal palmetto	Cabbage Palm	16	A-A-A	EXCELLENT	PA	Protected Palm	Offsite	

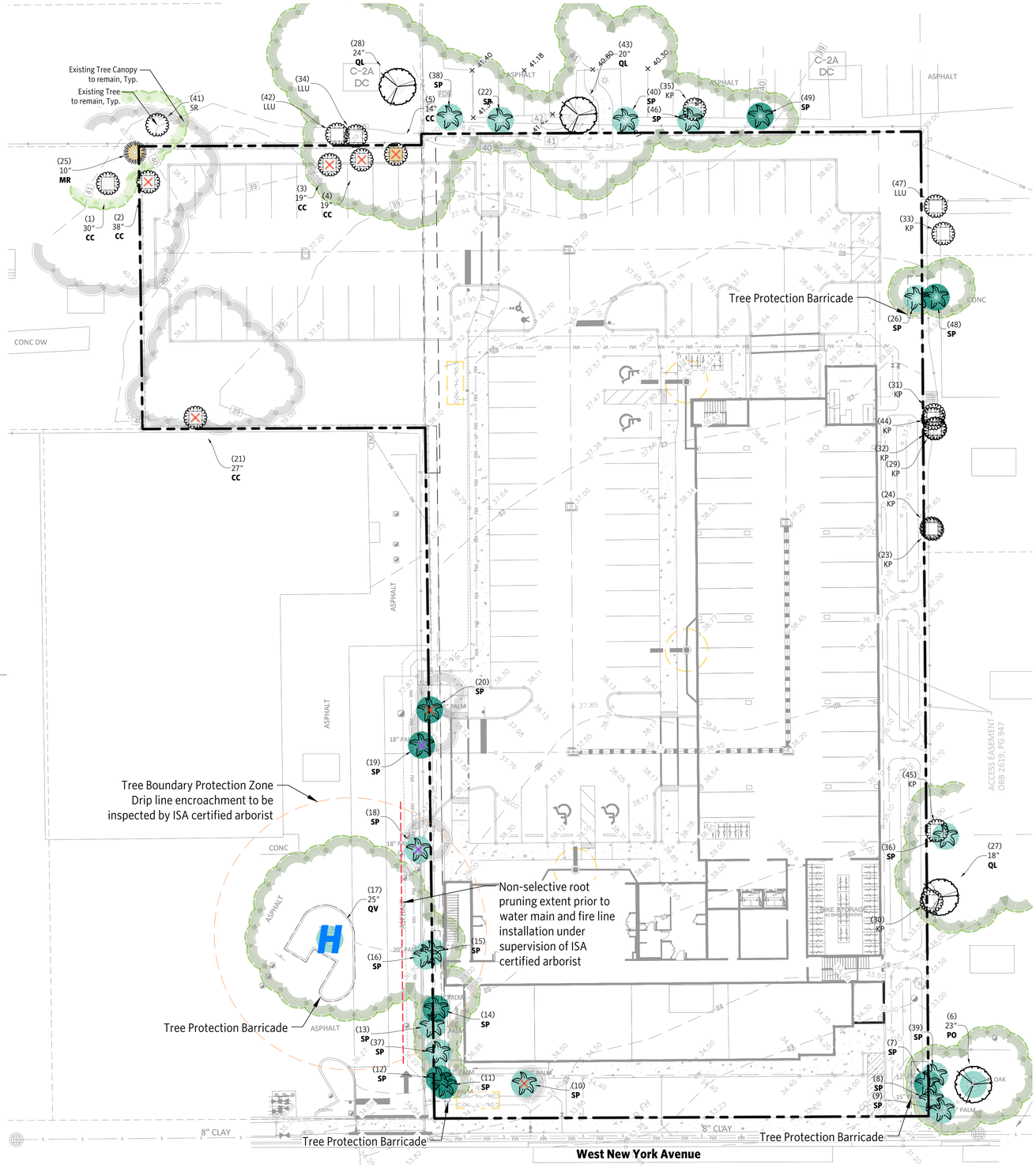
2 MITIGATION

ON-SITE REPLACEMENT INCHES REQUIRED:
0 PROTECTED TREE INCHES
10 PROTECTED PALM INCHES

OFF-SITE REPLACEMENT INCHES REQUIRED:
OFFSITE TREES TO BE PERMITTED AND MITIGATED SEPARATELY

MINI LEGEND

- Historic Tree
- Type 1 Tree
- Type 2 Tree
- Type 3 Tree
- Palm
- Cat. 1 Invasive
- Cat. 2 Invasive
- Excellent
- Good
- Fair
- Poor
- Very Poor
- Exempt or Excluded



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PROJECT:
NEW YORK AVE APARTMENTS
LOCATION:
DELAND, FLORIDA
FILE:
D-163

PREPARED FOR:
BLUE SKY COMMUNITIES, LLC

PUBLISHED: 2025-07-11

PHASE:
PERMIT ONLY

SHEET TITLE:
TREE INVENTORY AND DISPOSITION PLAN (2)

REVISION:
1: PER STAFF 2024-08-22
2: PER STAFF 2024-10-01
3: PER STAFF 2025-03-25
4: PER STAFF 2025-07-11
5: -

SHEET NUMBER:
TR1.1

BUFFER TABLE

Table: 33-92.02(b)

Buffer Location	Abutting	Proposed	Type	Length		Width	Buffer Typical			REQUIRED			EXISTING			PROVIDED		
							Trees		Shrubs	Trees		Shrubs	Trees		Shrubs	Trees		Shrubs
				Gross LF	Net LF	LF	Canopy	Understory		Canopy	Understory		Canopy	Understory		Canopy	Understory	
North - A	Residental Single-Family	RMF	C	61	61	20'	5.6	2.4	24	3	1	14	0	0	0	3	1	15
North - B	Office	RMF	B	215	195	15'	3.6	1.2	12	7	2	23	0	0	0	7	2	60
South	W New York Ave	RMF	B	175	122	15'	3.6	1.2	12	5	2	15	3	0	0	4	1	53
East	Vacant	RMF	n/a	349	349	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
West - A	Residental Single-Family	RMF	C	100	50	20'	5.6	2.4	24	3	2	12	0	0	0	2	1	32
West - B	Office	RMF	B	344	318	15'	3.6	1.2	12	11	3	38	2	0	0	11	3	66

* Overhead Utilities ** Net measurements exclude site elements that impact buffers, including driveway throats, existing tree canopy, transformers, etc)
RMF - Residential Multifamily

Required Landscaping for VUA Interior - Sec. 33-92.02. 9.(a	
Proposed Parking Spaces	**94**
5 to 50 yields 7 sq. ft per space	
51 to 100 yields 10 sq. ft per space	
100 + yields 13 sq. ft per space	
Required VUA Interior Landscaping	**940 sq. ft**
Provided VUA Interior Landscaping	**2335 sq. ft**
Required Canopy Trees	**13**
1 Canopy Tree/ 75 sq. ft.	
Provided Canopy Trees	**9**

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPREAD	REMARKS
TREES							
	LN	8	Lagerstroemia x `Natchez`	Crape Myrtle	5" Cal. / 4" DBH	7'	min. 14` h, min. 44" B&B or 100 gal, Standard Tree Form
	MYC	3	Myrica cerifera	Wax Myrtle	5" Cal. / 4" DBH	7'	min. 14` h, min. 44" B&B or 100 gal
	PE	5	Pinus elliotti	Slash Pine	5" Cal. / 4" DBH	54"	min. 14` h, min. 44" B&B or 100 gal.
	QV	13	Quercus virginiana `High Rise`	`High Rise" Southern Live Oak	5" Cal. / 4" DBH	8`	min. 14` h, min. 44" B&B or 100 gal.
	SP	6	Sabal palmetto	Cabbage Palmetto	---		mixed heights, 10` to 30` CT, no less than 4` height differential between adjacent palms
	TD	18	Taxodium distichum	Bald Cypress	5" Cal. / 4" DBH	54"	min. 14` h, min. 44" B&B or 100 gal.

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	REMARKS
SHRUBS							
	SR	5	Serenoa repens	Saw Palmetto	7 gal.	GC	Florida Fancy, min. 18" h, min. 18" spread, min. 12 fronds
	VO	166	Viburnum obovatum	Walter`s Viburnum	7 gal.	US	min. 30" h, min. 18" spread
	VS	127	Viburnum suspensum	Sandankwa Viburnum	7 gal.	US	min. 30" h, min. 18" spread
	ZP	13	Zamia floridana (Z. pumila)	Coontie	7 gal.	GC	Florida Fancy, min. 24" h, min. 36" spread, well-shaped, dense

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS
GROUND COVERS							
	MU	392 sf	none	Mini Pine Bark Only	---		3" thick layer
	TJ	333	Trachelospermum jasminoides 'Confederate'	Confederate Jasmine	3 gal.	36" o.c.	min. 6" h, min 12" spread, min. 8 perfect runners, full

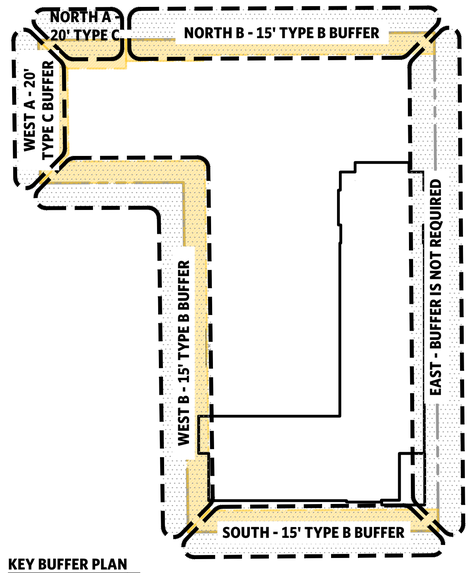
Native to Florida

CONCEPT PLANT SCHEDULE

	ELECTIVE TREE	**10**		
	Lagerstroemia indica `Muskogee` / Muskogee Crape Myrtle min. 7` h, min. 32" B&B or 45 gal, Standard Tree Trunk		3" Cal., 42"	12' o.c.
	ELECTIVE SHRUBS	**1,794 sf**		
	Elective landscaping that exceed code minimum requirements			
	Zamia floridana (Z. pumila) / Coontie	21	7 gal., GC	10% @ 36" o.c.
	Florida Fancy, min. 24" h, min. 36" spread, well-shaped, dense			
	Crinum asiaticum / Crinum Lily	21	15 gal	10% @ 36" o.c.
	triple stems, full, 20 perfect fronds			
	Rhaphiolepis indica 'Alba' / White Indian Hawthorn	140	7 gal.	30% @ 24" o.c.
	Schefflera arboricola 'Emerald Green' / Emerald Green Schefflera	94	7 gal.	20% @ 24" o.c.

SPECIALTY LANDSCAPE SCHEDULE

SYMBOL	CODE	DESCRIPTION	QTY	DETAIL
	L-101	Argentine Bahia Sod - Rolled	11,187 sf	



KEY BUFFER PLAN
NTS

REVISION 1 CLOUD NOTES (1 NOTES)
1. Landscape Plan has been revised. Revision clouds have been omitted for graphic clarity.

REVISION 2 CLOUD NOTES (2 NOTES)
1. Landscape Plan has been revised. Revision clouds have been omitted for graphic clarity.

REVISION 3 CLOUD NOTES (3 NOTES)
1. Landscape Plan has been revised. Revision clouds have been omitted for graphic clarity.

REVISION 4 CLOUD NOTES (4 NOTES)
1. Landscape Plan has been revised. Revision clouds have been omitted for graphic clarity.



This document has been digitally signed and sealed by:
Richard F Peterika 2025.07.11 11:41:14 -04'00'
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Richard Peterika, PLA#6667088
Dark Moss LLC
308 E 7th Ave
Tampa, Florida 33602

THE ABOVE NAMED REGISTERED LANDSCAPE ARCHITECT SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G10-11.011, F.A.C.

Sheet List Table

Sheet Number	Sheet Title
LA1.0	KEY PLAN AND CALCULATIONS
LA1.1	LANDSCAPE PLAN
LA1.2	LANDSCAPE DETAILS
IR1.0	IRRIGATION PLAN
IR1.1	IRRIGATION DETAILS - 1
IR1.2	IRRIGATION DETAILS - 2
HS1.0	HARDSCAPE PLAN

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PROJECT: **NEW YORK AVE APARTMENTS**
LOCATION: **DELAND, FLORIDA**
FILE: **D-163**

PREPARED FOR:
BLUE SKY COMMUNITIES, LLC

PUBLISHED: 2025-07-11

PHASE:
PERMIT ONLY

SHEET TITLE:
KEY PLAN AND CALCULATIONS

REVISION:
1: PER STAFF 2024-08-22
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5: -

SHEET NUMBER:
LA1.0

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL NAME
TREES			
	LN	8	Lagerstroemia x `Natchez`
	MYC	3	Myrica cerifera
	PE	5	Pinus elliotti
	QV	13	Quercus virginiana `High Rise`
	SP	6	Sabal palmetto
	TD	18	Taxodium distichum

SYMBOL	CODE	QTY	BOTANICAL NAME
SHRUBS			
	SR	5	Serenoa repens
	VO	166	Viburnum obovatum
	VS	127	Viburnum suspensum
	ZP	13	Zamia floridana (Z. pumila)

SYMBOL	CODE	QTY	BOTANICAL NAME
GROUND COVERS			
	MU	392 sf	none
	TJ	333	Trachelospermum jasminoides 'Confederate'

Native to Florida

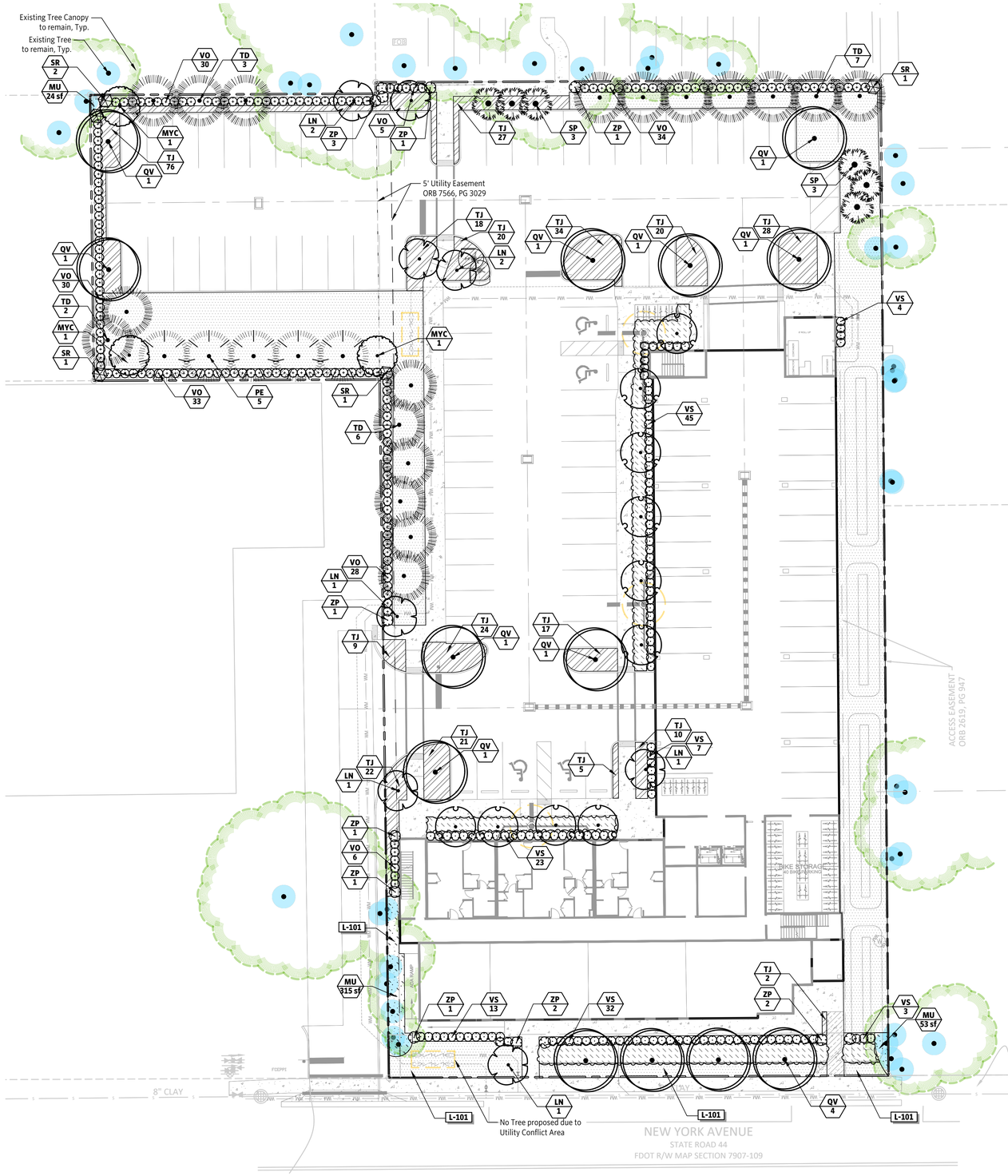
CONCEPT PLANT SCHEDULE

ELECTIVE TREE
Lagerstroemia indica `Muskogee` / Muskogee Crape Myrtle
min. 7` h, min. 32" B&B or 45 gal, Standard Tree Trunk

ELECTIVE SHRUBS
Elective landscaping that exceed code minimum requirements
Zamia floridana (Z. pumila) / Coontie
Florida Fancy, min. 24" h, min. 36" spread, well-shaped, dense
Crinum asiaticum / Crinum Lily
triple stems, full, 20 perfect fronds
Rhaphiolepis indica 'Alba' / White Indian Hawthorn
Schefflera arboricola 'Emerald Green' / Emerald Green Schefflera

SPECIALTY LANDSCAPE SCHEDULE

SYMBOL	CODE	DESCRIPTION
	L-101	Argentine Bahia Sod - Rolled



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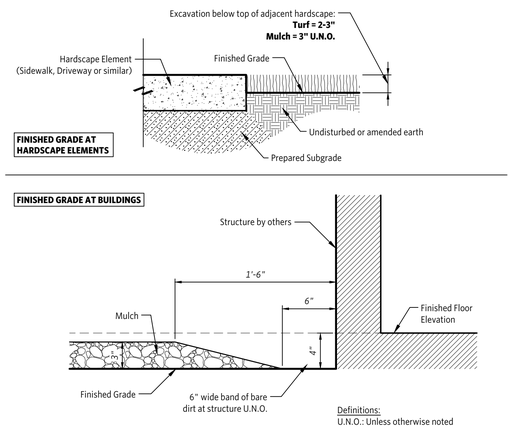
LA1.1

LANDSCAPE NOTES

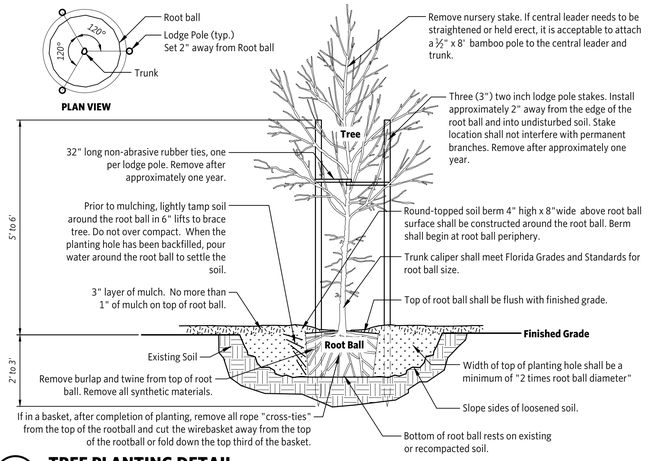
1. **Any and All unmarked landscape areas shall be sodded with Argentine Bahia sod unless otherwise noted.** Seeding is not acceptable without written approval from the Landscape Architect.
2. **All landscape beds shall have a weed-free finished appearance at installation** and through the warranty or maintenance period, whichever is longer.
3. **All plant material shall be Florida Grade No. 1 or better per "Florida Grades and Standards for Nursery Plants"**, latest revision, Florida Department of Agriculture, Tallahassee, FL.
4. All permits necessary for installation/construction are to be provided by the landscape contractor unless otherwise specifically stated in the landscape plans or notes.
5. Installation of landscape must be coordinated with other subcontractors. The landscape contractor will be responsible for locating underground utilities prior to excavation.
6. The contractor shall notify the landscape architect if any conflicts arise between the proposed design and existing conditions on-site.
7. The contractor is responsible for familiarizing himself with on-site conditions as part of the bidding process. The contractor shall notify the landscape architect prior to award of contract of any on-site conditions that would hinder the normal, healthy growth of plant species proposed on these plans.
8. The landscape architect may be contacted for assistance in layout of plant material, if needed. All questions regarding plant placement must be resolved prior to commencement of installation.
9. Carefully review the landscape material specifications. All materials must be as specified on the landscape plans. If materials or methods do not adhere to specifications, the landscape architect will reject them.
10. The landscape architect will accept no substitutions of plant material/species without written approval. Contractor shall submit to the landscape architect proof of non-availability and a proposal for the use of equivalent material.
11. Plant material quantities shown on these plans are supplied as an aid to the contractor for bidding purposes. Final quantity takeoffs are the responsibility of the contractor. Notify the landscape architect if any discrepancies exist prior to proceeding with any changes in material quantities.
12. Plant specifications of height, clear trunk, spread and container size shown on the plans are minimum acceptable sizes. All installed material shall meet or exceed the given specifications. The contractor shall submit to the landscape architect proof of non-availability and a proposal for the use of equivalent material.
13. The general contractor is responsible for rough grading the site to within 0.10 ft. of grades shown on these plans. The landscape contractor is responsible for finish grades in all landscape areas. All proposed contours shown on the landscape plans are to be graded to a maximum slope of 3H:1V.
14. Landscape contractor shall have any applicable licenses or certifications required per state or municipal codes.
15. Planting beds shall be treated with a US EPA approved pre-emergent herbicide prior to installation of plant material. Contractor shall follow manufacturer's specifications for application rates, etc.
16. **Shrub beds shall be mulched with a 3" thick layer of mini pine bark mulch** unless otherwise noted or unless adjacent existing beds have a minimum of 1" layer of differing mulch material, in which case the existing mulch material shall be matched.
17. **Asiatic Jasmine (all varieties) and annual beds** shall be mulched with a **3" thick layer of pine fines**.
18. Planting pits shall be amended and backfilled with a mixture of one part good quality peat or composted fines, and one part native soil or approved equal. All annual beds shall be filled to a depth of 10" with an approved soil mix. **Contractor shall submit samples for approval.**
19. The contractor is responsible for appropriate watering and maintenance of all plant material during the installation phase. Any dead or deficient plant material will be replaced prior to final acceptance by the owner.
20. The contractor shall warranty all workmanship and materials per contractual requirements.
21. The contractor shall verify that the soil is free of excess clay, debris and trash and has a ph level suitable for optimal growing conditions prior to implementation of the proposed plan.
22. The Landscape contractor shall conduct soil nutrient analyses before planting and then apply fertilizer to correct the identified soil deficiencies, if any. **Copies of all test results and fertilization specifications shall be submitted to the Landscape Architect.**
23. All landscape bids shall provide unit price breakdowns for plants and supplemental materials.
24. After completion of planting, the contractor shall remove all rope "cross-ties" from the top of the rootball and cut the wirebasket away from the top of the rootball. The top of the root ball shall have a finished natural appearance.
25. Sod shall be planted as quickly as possible after delivery, but if there are delays, store the sod in a cool, shady place until ready to plant. (Sod life on pallets during summer is less than 48 hours.) The area to be planted shall be properly prepared (e.g., tilled and raked smooth) prior to sod delivery and shall be moistened at the time of laying sod. Sod pieces shall be fitted together as tightly as possible, but the sod should not be stretched to fit an area. If cracks are evident between pieces, they shall be filled with cut up pieces of sod. Lay the sod in a staggered brick pattern so that the seams are offset between sod pieces. Tamp or roll the sod to remove air pockets and ensure good soil contact. Make sure the roots have good contact with the underlying soil so that it does not dry out during establishment. Keep the grass moist for the first 7 days after planting with brief spritzes of water 2-3 times during the day.
26. Unless otherwise noted, pond banks shall be sodded with Argentine Bahia sod from top of bank to a the pond contour twenty-four (24) inches below the pond control elevation. Refer to Civil Plans for hydroperiods.
27. Any tree substitution must be approved by the City Forester.

1 NOTES



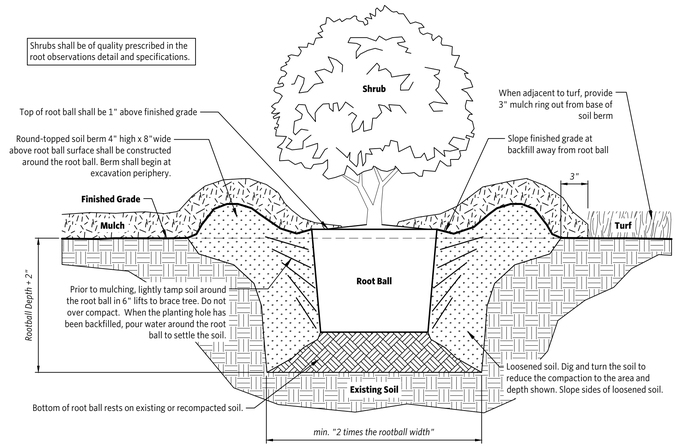
2 LANDSCAPE AND FINISHED GRADE

1 1/2" = 1'-0" I-07



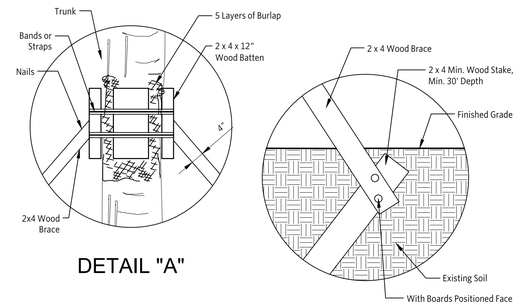
4 TREE PLANTING DETAIL

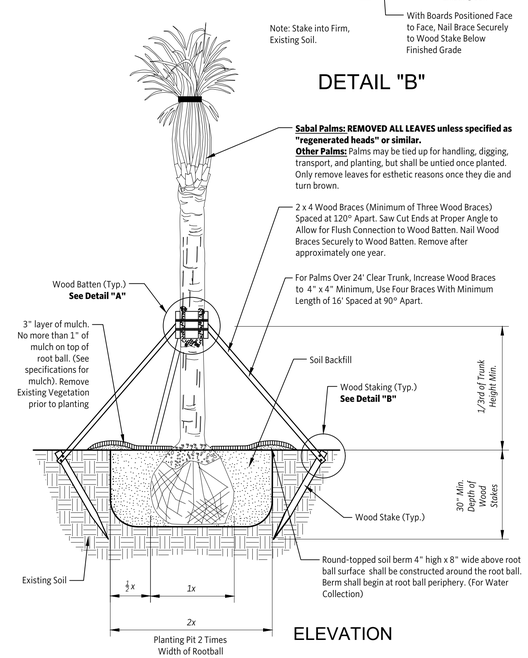
1/2" = 1'-0" I-07



3 SHRUB PLANTING DETAIL

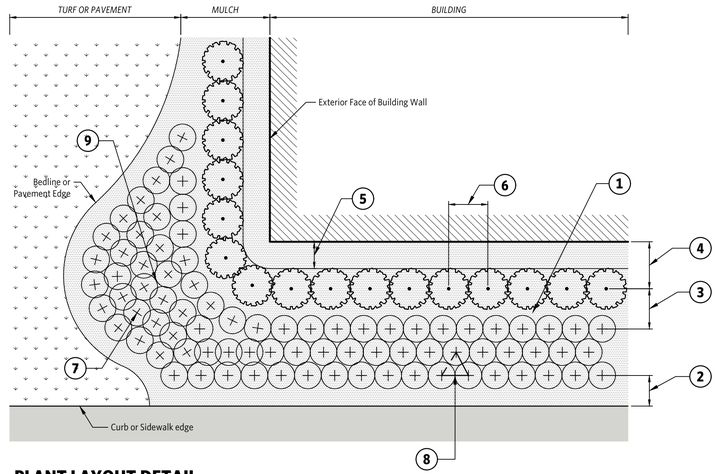
1 1/2" = 1'-0" I-07





5 PALM PLANTING DETAIL

1/2" = 1'-0" I-07



1. "Center to Center Spacing" (O.C.) varies for different plant species. Space each variety of plant equally in planting areas unless otherwise noted.
2. Distance between the edge of pavement and the centerline of the nearest plant row is 1 to 1.5 times the on center spacing of the nearest plant group.
3. Distance between plant material types shall be the greater of the two plant spacing distances.
4. Distance between the edge of building and the centerline of the nearest plant shall be 2' plus 0.5 times the on center spacing of the plant.
5. Maintain an 18" minimum setback from building faces and 12" setback from freestanding wall faces. Increase as necessary to allow for species growth & maintenance access.
6. O.C. Spacing (See Plant List)
7. Shrubs and groundcover adjacent to curved edges shall be planted in rows parallel to the bedline.
8. Shrubs and Groundcovers adjacent to straight edges shall be planted in triangular spacing with rows parallel to the straight edge.
9. Maintain O.C. spacing and curvature as much as possible within the center of irregularly shaped massings.

1 PLANT LAYOUT DETAIL

3/16" = 1'-0" I-07

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PROJECT: **NEW YORK AVE APARTMENTS**
LOCATION: **DELAND, FLORIDA**
FILE: **D-163**

PREPARED FOR:
BLUE SKY COMMUNITIES, LLC

PUBLISHED: 2025-07-11

PHASE:
PERMIT ONLY

SHEET TITLE:
LANDSCAPE DETAILS

REVISION:
1: PER STAFF 2024-08-22
2: PER STAFF 2024-10-01
3: PER STAFF 2025-03-25
4: PER STAFF 2025-07-11
5: -

SHEET NUMBER:
LA1.2

IRRIGATION SCHEDULE

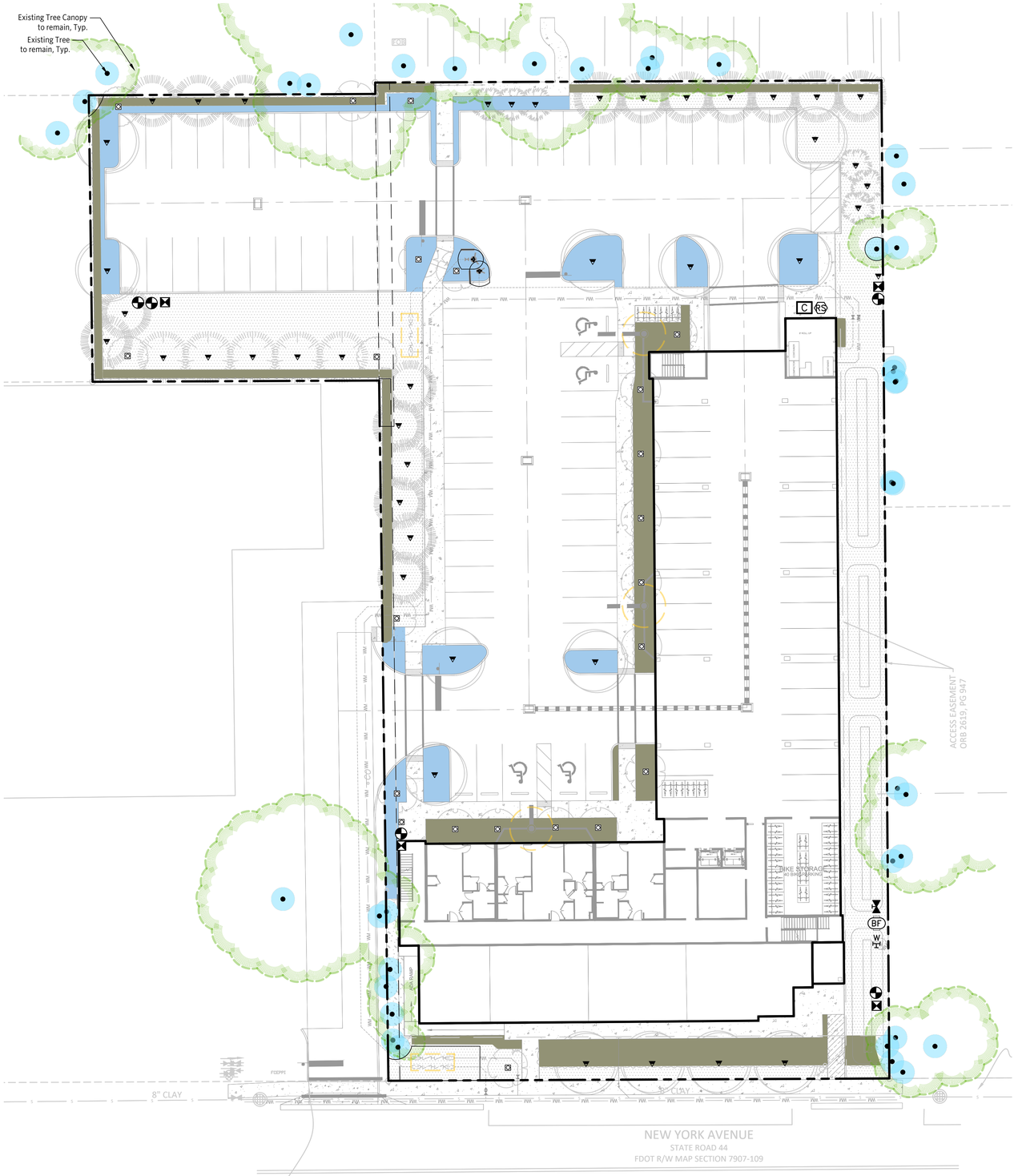
SYMBOL	DESCRIPTION	QTY	PRECIP	PSI	GPM
	SHRUB DRIPLINE 0.9 GPH @ 12" O.C. Dripline with 0.90 gph emitters at 12" O.C., row spacing at 12" O.C.	4,410 sf	1.44 in/h	25	66
	SHRUB SPRAY AREA 4`-15` radius, triangular spaced, head to head coverage.	2,742 sf	1.9 in/h	30	54

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
	Double Tree Bubbler Two Rain Bird 1402 Bubblers	43	30
1401 1402 1404 1408	Rain Bird 1800-1400 Flood 1401 Fixed flow rate (0.25-2.0GPM), full circle bubbler, 1/2" FIPT.	22	30

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird XCZ-150-LCDR (10-30 GPM) 1-1/2" High Flow Control Zone Kit, for Large Commercial Drip Zones. 1-1/2" PESB-R Scrubber Globe Valve with single 1-1/2" Pressure Regulating (40psi) Quick-Check Basket Filters. Flow range: 15-62gpm.	4

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird PESB-PRS-D 1" 1", 1-1/2", 2" Plastic Industrial Valves. Low Flow Operating Capability, Globe Configuration. With Pressure Regulating Module, and Scrubber Technology for Reliable Performance in Dirty Water Irrigation Applications.	5
	Landscape Products Inc. BBV 1/2", 3/4", 1", 1-1/4", 1-1/2", 2", 2-1/2" 3" Full Port Brass Ball Valve. Include two unions, nipples, and adapters as required	1
BF	Watts 800M4QT 2" An anti-siphon pressure vacuum breaker shall be installed where indicated on the plans to prevent the back-siphonage of contaminated water. See specification sheet for more information.	1
C	Rain Bird ESP4ME3 (16 Station Max) 4 Station, Hybrid Modular Outdoor Controller. Include LNK WiFi Module and enough expansion modules to exceed installed valve count by 2 zones minimum.	1
RS	Rain Bird RSD-BEx Rain Sensor, with metal latching bracket, extension wire.	1
W H	Well Refer to Civil.	1

Valve Callout



0 20 40 60 80 feet

1" = 20'

NORTH

REVISION 1 CLOUD NOTES

1. Irrigation Plan has been revised. Revision clouds have been omitted for graphic clarity.

1 NOTES

REVISION 2 CLOUD NOTES

1. Irrigation Plan has been revised. Revision clouds have been omitted for graphic clarity.

2 NOTES

REVISION 3 CLOUD NOTES

1. Irrigation Plan has been revised. Revision clouds have been omitted for graphic clarity.

3 NOTES

REVISION 4 CLOUD NOTES

1. Irrigation Plan has been revised. Revision clouds have been omitted for graphic clarity.

4 NOTES

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SHEET NUMBER:
IR1.0

DESIGN FLOW: 40 GPM
DESIGN PRESSURE: 65 PSI
Above parameters are the minimum required at the point of connection.

IRRIGATION NOTES

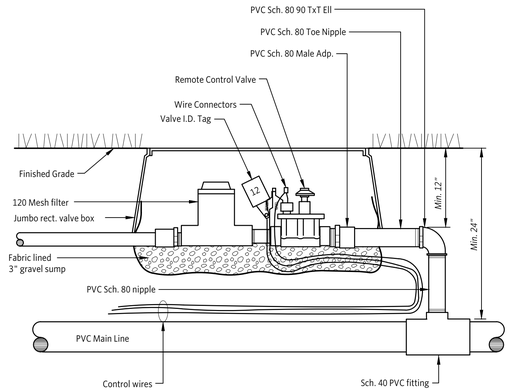
1. Irrigation system design requirements: Refer to above parameters. The Irrigation Contractor shall verify the available GPM and PSI prior to installation of the system.
2. **Do not willfully install the irrigation system as shown on the drawings when it is obvious in the field that conditions exist that might not have been considered in the design process.** For example : obstructions, grade differences, water levels, dimensional differences, etc. Refer to the Landscape Plan to avoid conflicts with proposed trees or shrubs.
3. **Valve and pipe locations are diagrammatic**, install equipment within the property line, in "low traffic" areas with a min. clearance of 12" between the valve box and any fence, wall, sidewalk, pavement or sodline.
4. Piping may sometimes be indicated as being located in unlikely areas: i.e., under buildings or pavement, outside of property lines, in lakes or ditches, etc. **This is done for graphic clarity only.** Whenever possible, piping is to be installed in open, green" areas.
5. If required, the Irrigation Contractor shall provide the necessary "Right of Way" use permits.
6. Pipe sizes shall conform to those on the drawings. Substituting with smaller pipe sizes will not be permitted.
7. Mainline is to be installed with a minimum of 18" depth of cover. Lateral lines are to be installed with a minimum of 12" depth of cover.
8. Unless otherwise indicated, all sleeves are to be PVC Sch 40 and two (2) nominal sizes larger than the pipe to be sleeved. For example: The sleeve for a 2" pipe shall be 3". No irrigation sleeve shall be smaller than 2".
9. Wherever practical, install valves in mulched beds and/or out of high traffic areas. All valves , flush valves and wire splices shall be installed in boxes as noted in the **Valve Box Specifications** below.
10. The bottom and sides of the valve boxes shall be lined with landscape fabric. Install a 3" deep bed of gravel on the landscape fabric to create a drainage sump.
11. Refer to Valve Designation Symbols for controller, station number and designed flow rate for each remote control valve.
12. All wire to be UL Listed. All 24 volt control cable to be single strand, type UF 600 Volt control cable. All 2-wire cable to be blue jacketed cable. Sizes and colors per the **Wiring Designation Guide** below.
13. All splices to the 24 volt control wiring shall be made with Rain Bird #DBTWC 24-600 volt, direct bury splice kits.
14. All control valve wires shall be bundled and taped together at 20' intervals and placed along the side of the mainline pipe.
15. Location of all sprinkler heads shall be site adjusted to minimize water overthrow onto building surfaces and walkways. Throttle valves on spray zones as required to prevent fogging.
16. Install drip tubing, supply header and exhaust header at grade and cover with mulch. Spacing to be determined by plant layout, refer to Landscape Plan. Anchor drip tubing every 5' with 8" long wire tubing stakes. Install vacuum relief valves and flush valve assemblies as needed.
17. Exact controller location(s) shall be coordinated with an Owner's Representative prior to installation. Unless otherwise stated, the General Contractor shall provide 110 volt power to the controller location(s). The Irrigation Contractor is responsible for the connection from the power source to the controller(s).
18. At each irrigation controller, install a "secondary surge arrester" to the incoming (120 volt) power supply (Intermatic #AG2401 or equal).
19. A weather based sensor with interface shall be connected to the irrigation controller. The sensor/ interface shall adjust the irrigation program based on daily weather readings. The sensor shall be installed to meet local codes and/or minimum manufacturer's recommendations. Obstructions, vandalism and ease of service shall be considered in locating the device.
20. **As-Built Drawings Required**
The IRRIGATION CONTRACTOR shall prepare an AS-BUILT drawing on reproducible paper detailing the actual installation of the irrigation system. The AS-BUILT drawings shall locate all main line piping, control wires, wire splices, sleeves and valves by showing exact measurements from permanent features (buildings, edge of pavement, power poles, fire hydrants, etc.). Include depth of cover on mainline and sleeves.
21. No product substitutions will be permitted without the written permission of the Owner's Representative. Irrigation Contractor to provide submittals to the Owner's Representative for approval prior to installation.
22. Any other equipment required that is not otherwise detailed or specified shall be installed as per manufacturer's recommendations and local code.
23. Proposed irrigation controller must include a functioning rain switch which must be installed such that the sensor is exposed to unobstructed rainfall.

Valve Box Specifications

Equipment Housed	Manufacturer	Model	Description
Remote Control Valves	Rain-Bird	VBSTD	Standard Body & Green Lid
Isolation Gate Valves & Wire Splices	Rain-Bird	VB10RND	10" Round Body & Green Lid
Drip Zone Valve / Filter Assembly	Rain-Bird	VB5PRH	Super Jumbo Body & 2 Lock Green Lid

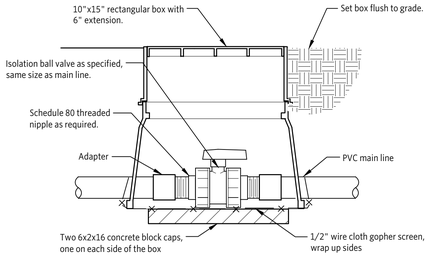
Wiring Designation Guide

Wire Use	Size AWG	Color
2-Wire	#12 or larger	Blue
Common Wires	#14 or larger	White
Hot Wires	#16 or larger	Red
Spare Wires	#16 or larger	Blue



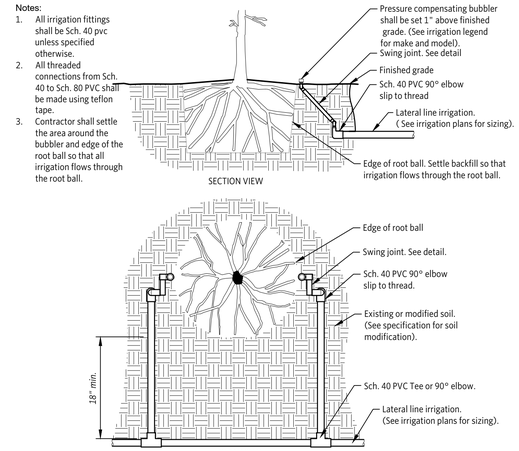
Note:
Valve box installation shall allow the valve and filter to be serviced without the need for excavation.

2 DRIP ZONE REMOTE CONTROL VALVE
1 1/2" = 1'-0" I-02

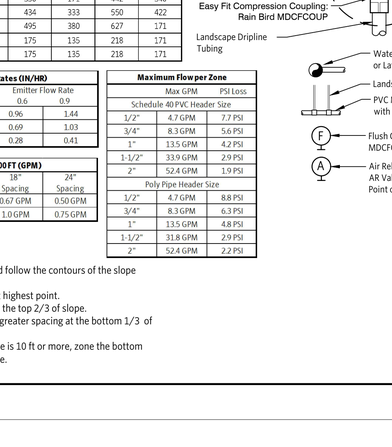


4 TRUE UNION BALL ISOLATION VALVE
1 1/2" = 1'-0" I-18

Notes:
1. All irrigation fittings shall be Sch. 40 pvc unless specified otherwise.
2. All threaded connections from Sch. 40 to Sch. 80 PVC shall be made using teflon tape.
3. Contractor shall settle the area around the bubbler and edge of the root ball so that all irrigation flows through the root ball.

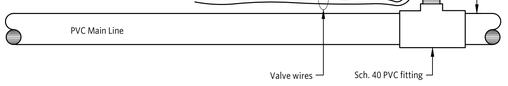


6 DOUBLE TREE BUBBLER W/ LAYOUT
3/4" = 1'-0" I-08



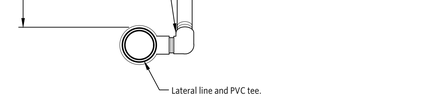
Install one (min.) indicator flag on all dripline zones.

3 ZONE INDICATOR FLAG
3" = 1'-0" I-05

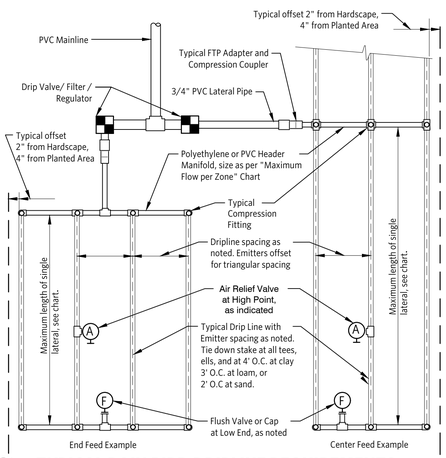


Note:
Valve box installation shall allow the valve to be serviced without the need for excavation

5 REMOTE CONTROL VALVE
1 1/2" = 1'-0" I-01



7 SHRUB SPRAY 6" POPUP W/MARLEX
3" = 1'-0" I-14



Maximum Lateral Length (FEET)

	Emiter Flow Rate GPH					
	12" Spacing		18" Spacing		24" spacing	
PSI	0.6	0.9	0.6	0.9	0.6	0.9
10	125	96	175	135	218	171
20	249	191	350	171	442	340
30	307	236	434	333	550	422
40	350	268	495	380	627	171
50	125	96	175	135	218	171
60	125	96	175	135	218	171

Grid Precipitation Rates (IN/HR)

Emitter Spacing	Lateral Spacing	Emitter Flow Rate 0.6	0.9
12	12	0.96	1.44
18	18	0.69	1.03
24	24	0.28	0.41

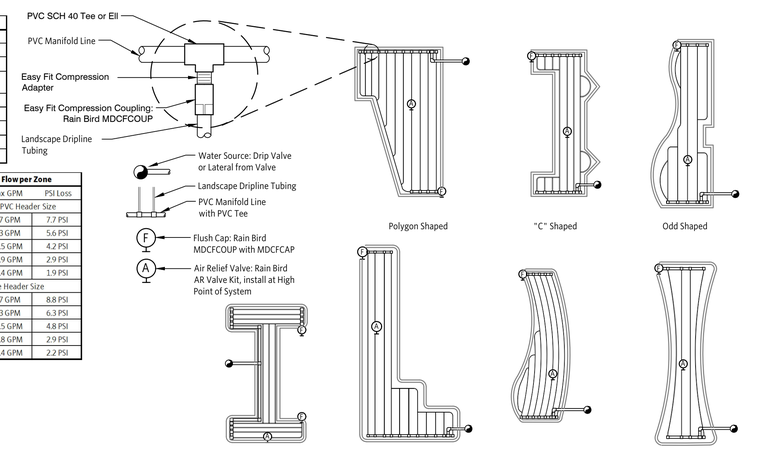
Lateral Flow per 100 FT (GPM)

Emitter Flow	12" Spacing	18" Spacing	24" Spacing
0.6 GPH	1.0 GPM	0.67 GPM	0.50 GPM
0.9 GPH	1.5 GPM	1.0 GPM	0.75 GPM

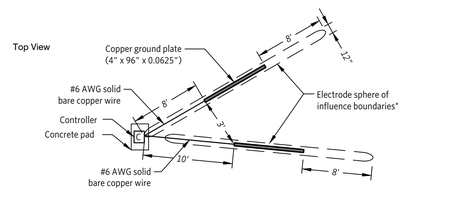
Maximum Flow per Zone

	Max GPM	PSI Loss
Schedule 40 PVC Header Size		
1/2"	4.7 GPM	7.7 PSI
3/4"	8.3 GPM	5.6 PSI
1"	13.5 GPM	4.2 PSI
1-1/2"	33.9 GPM	2.9 PSI
2"	52.4 GPM	1.9 PSI
Poly Pipe Header Size		
1/2"	4.7 GPM	8.8 PSI
3/4"	8.3 GPM	6.3 PSI
1"	13.5 GPM	4.8 PSI
1-1/2"	31.8 GPM	2.9 PSI
2"	52.4 GPM	2.2 PSI

Sloped Condition Note
1. Dripline laterals should follow the contours of the slope whenever possible.
2. nstall air relief valve at highest point.
3. Normal spacing within the top 2/3 of slope.
4. Install dripline at 25% greater spacing at the bottom 1/3 of the slope
5. When elevation change is 10 ft or more, zone the bottom 1/3 on a separate valve.



1 TYPICAL RAIN BIRD DRIPLINE REQUIREMENTS
N.T.S. I-07



8 CONTROLLER GROUNDING
1/8" = 1'-0" I-17

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LOCATION: **DELAND, FLORIDA**
FILE: **D-163**

PREPARED FOR:
BLUE SKY COMMUNITIES, LLC

PUBLISHED: 2025-07-11

PHASE:
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SHEET TITLE:
IRRIGATION DETAILS - 1

REVISION:
1: PER STAFF 2024-08-22
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SHEET NUMBER:
IR1.1

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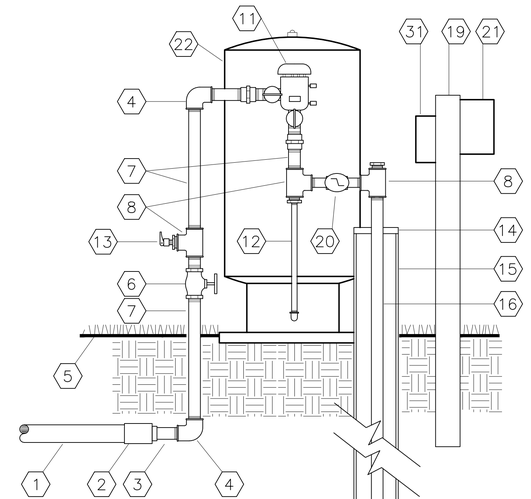

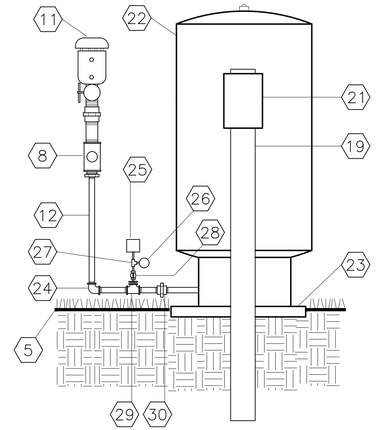

NOTES:

SYSTEM TO TURN ON WITH FALLING PRESSURE (40 PSI) AND TURN OFF WITH PRESSURE SATISFIED (65 PSI).

ALL PIPES AND FITTINGS EXPOSED ABOVE GRADE SHALL BE GALV. SCH 40 STEEL.

ALL ELECTRICAL WIRING SHALL BE INSTALLED IN CONDUIT TO MEET LOCAL ELECTRICAL CODES.

PRESSURE RELIEF VALVE TO EXHAUST AT 75 PSI.

ADJUST "CYCLE STOP" PUMP CONTROL VALVE AND PRESSURE SWITCH PER MANUFACTURER'S RECOMMENDATIONS. VERIFY THAT THE PUMP WILL RUN CONTINUOUSLY DURING ALL IRRIGATION PROGRAMS.

PRIOR TO DRILLING THE WELL, THE WELL CONTRACTOR MUST DISCUSS THE ANTICIPATED DEPTH OF THE WELL AND WATER QUALITY WITH THE LANDSCAPE ARCHITECT. THE POTENTIAL FOR WELL WATER HIGH IN IRON CONTENT THAT RESULTS IN STAINING MUST BE MINIMIZED.

LEGEND:

1. PVC PIPE TO IRR. SYSTEM – 2"
2. PVC SCH 40 COUPLING AND BUSHING
3. PVC SCH 80 TOE NIPPLE – 2" X 4"
4. GALV. SCH 40 90 DEG. ELL – 2"
5. FINISH GRADE
6. NIBCO T–113 GATE VALVE – 2"
7. GALV. SCH 40 NIPPLE (LENGTH AS REQ'D) – 2"
8. GALV. SCH 40 TEE – 2"
9. GARDEN VALVE – 3/4"
10. GALV. SCH 40 UNION – 2"
11. WATTS 800M4QT PVB – 2" (IF REQUIRED BY CODE)
12. GALV. SCH 40 NIPPLE (LENGTH AS REQ'D) – 1–1/4"
13. PRESSURE RELIEF VALVE – 1"
14. WELL SEAL – 5" X 2"
15. WELL CASING (LENGTH AS REQ'D) – 5"
16. GALV. SCH 40 DROP PIPE (LENGTH AS REQ'D) 2"
17. FLOMATIC #80 BRASS CHECK VALVE 2"
18. 3 HP / 40 GPM SUBMERSIBLE PUMP GOULDS #45GS30 OR EQUAL
19. 4" X 4" CONCRETE POST (LENGTH AS REQ'D)
20. #CSV2W 1–1/4" CYCLE STOP PUMP CONTROL VALVE
21. FRANKLIN MOTOR CONTROL BOX
22. WELL–X–TROL PRESSURE TANK #WX–255–TK
23. PRE–FABBED HI–DENSITY CONCRETE PAD FOR TANK– 30" X 30"
24. GALV. SCH 40 90 DEG ELL – 1–1/4"
25. PRESSURE SWITCH
26. LIQUID FILLED PRESSURE GAUGE / 2–1/2" DIAL / 0–160 PSI
27. GALV. SCH 40 TEE – 1/4"
28. WATTS FBV–1 BRASS BALL VALVE – 1/4"
29. GALV. SCH 40 TEE – 1–1/4"
30. GALV. SCH 40 UNION – 1–1/4"
31. DISCONNECT (PER LOCAL CODE) BY OTHERS

40 GPM PUMP AND WELL SYSTEM

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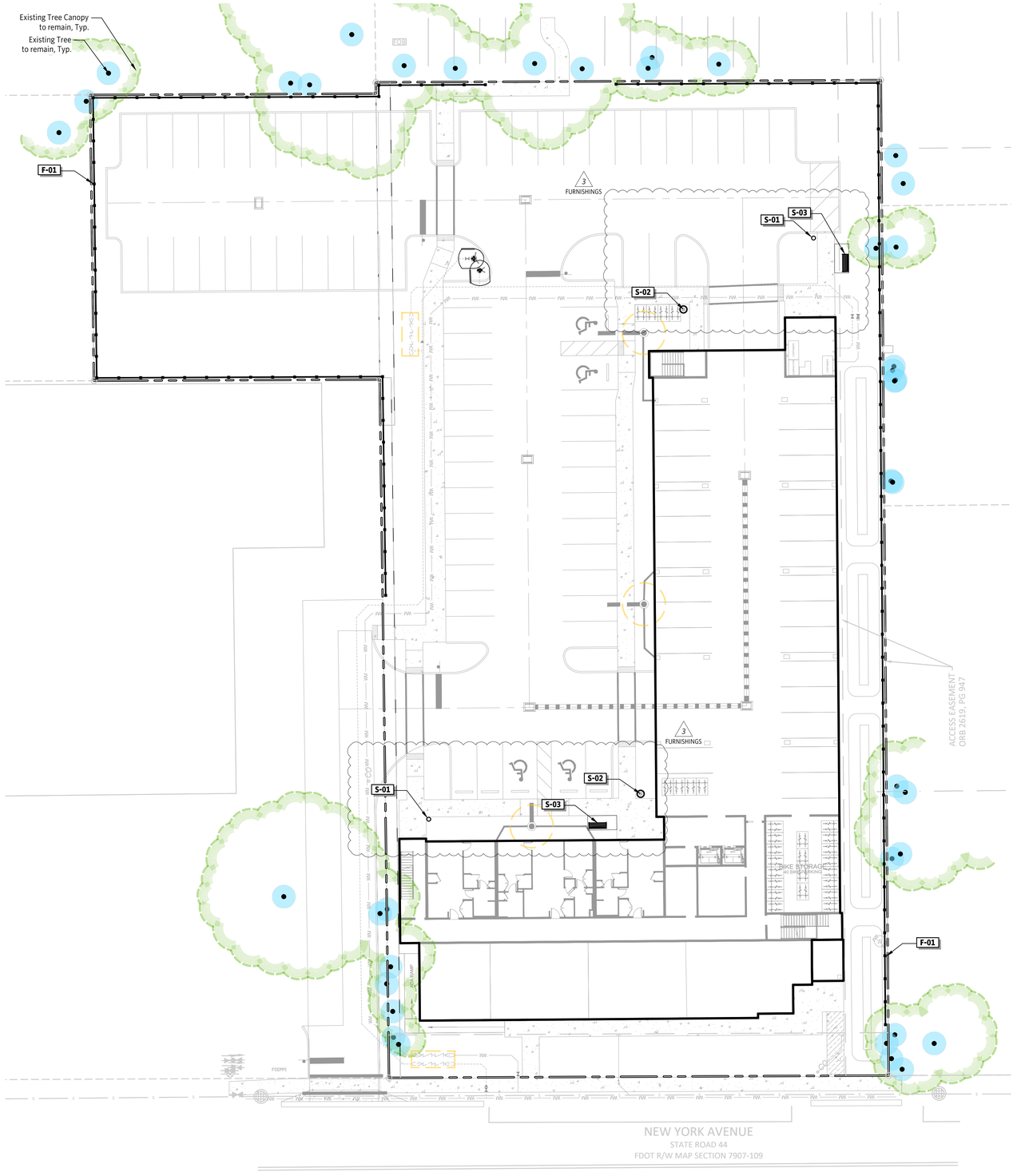
IR1.2

REFERENCE NOTES SCHEDULE

CODE	DESCRIPTION	QTY	HEIGHT	MATERIAL	COLOR
FENCE					
F-01	6' PVC Fence	889 lf	6`	PVC	White

CODE	DESCRIPTION	QTY
SITE FURNISHINGS		
S-01	Dog Waste Station Manufacturer: Dog Waste Depot Model: Depot-006-B-GRN Type of Can: Round Color: Matte Black	2
S-02	Dumor 157-32 32gal steel receptacle. 10in. opening. Side door emptying. Bonnet and dome cover options found at dumor.com Receptacle: Black Textured Gloss	2
S-03	Dumor 160-60 Bench 160 with cast iron legs and steel seat. 72in. length. Center armrest option and 96in. length option available, upon request. Frame: Black Textured Gloss	2



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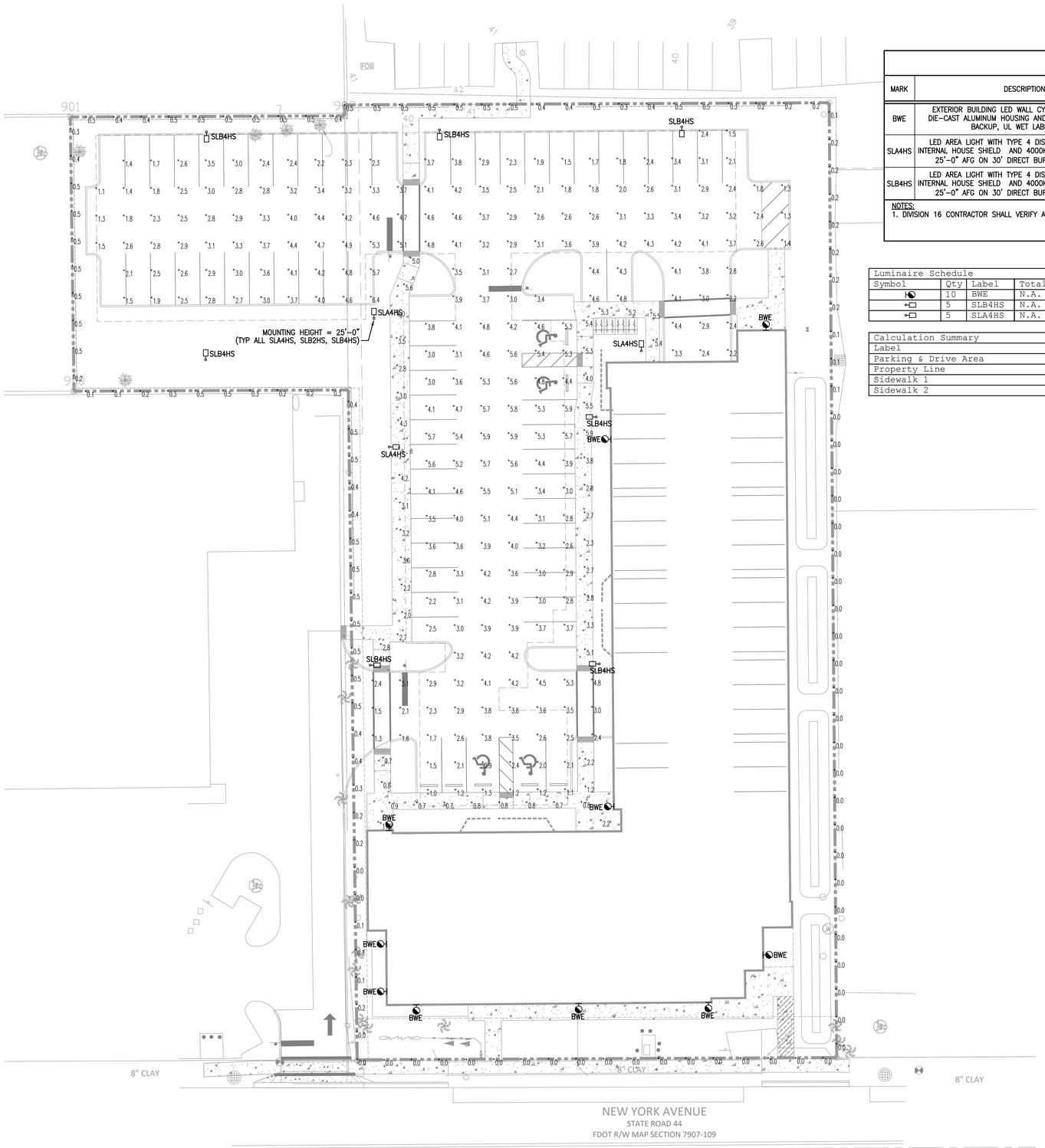

LIGHTING FIXTURE SCHEDULE

MARK	DESCRIPTION	MANUFACTURER	MODEL	VOLTS	LAMP QTY	LAMP WATTS	LAMP MODEL	FIXTURE WATTS
BWE	EXTERIOR BUILDING LED WALL CYLINDER FIXTURE WITH DIE-CAST ALUMINUM HOUSING AND EMERGENCY BATTERY BACKUP, UL WET LABEL RATED.	H.E. WILLIAMS	8CR-TL-L20/835-EM/10W-XXX-UNV-RM-CS-WM	120	1	19	LED	19
SLA4HS	LED AREA LIGHT WITH TYPE 4 DIST., INTEGRAL DIMMING, INTERNAL HOUSE SHIELD AND 4000K COLOR TEMP. MOUNTED 25'-0" AFG ON 30' DIRECT BURIAL ALUMINUM POLE	BEACON VIPER	VP-1-160L-75-4K7-4F-HSS-90-B	120	1	40	LED	40
SLB4HS	LED AREA LIGHT WITH TYPE 4 DIST., INTEGRAL DIMMING, INTERNAL HOUSE SHIELD AND 4000K COLOR TEMP. MOUNTED 25'-0" AFG ON 30' DIRECT BURIAL ALUMINUM POLE	BEACON VIPER	VP-1-160L-135-4K7-4F-HSS-90-B	120	1	–	LED	7/H

NOTES:
1. DIVISION 16 CONTRACTOR SHALL VERIFY ALL FIXTURE TYPES AND FINISHES WITH OWNER PRIOR TO ORDERING.

Luminaire Schedule								
Symbol	Qty	Label	Total Lamp Lumens	LLF	Description	Lum. Watts	Total Watts	Lum. Lumens
	10	BWE	N.A.	0.950	8CR-TL-L20-835-DIM-UNV-RW-CS	19	190	1450
	5	SLB4HS	N.A.	0.950	VP-1-160L-75-4K7-4F-HSS-90-B	72.5	362.5	9352
	5	SLA4HS	N.A.	0.950	VP-1-160L-135-4K7-4F-HSS-90-B	144.5	722.5	16897

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Parking & Drive Area	Illuminance	Fc	3.36	6.4	1.0	3.36	6.40
Property Line	Illuminance	Fc	0.27	0.5	0.0	N.A.	N.A.
Sidewalk 1	Illuminance	Fc	3.70	6.0	2.0	1.85	3.00
Sidewalk 2	Illuminance	Fc	3.31	11.2	0.7	4.73	16.00

1 E1.2 SITE PLAN - PHOTOMETRICS
1" = 20'-0"

POWELL STUDIO ARCHITECTURE
ARCHITECTURE | INTERIOR DESIGN
713 W. MONTROSE STREET ● CLERMONT, FLORIDA 34711
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TEL. 321.972.4466
WWW.JLCENG.COM
CA NO. 28730

OWNER / PROJECT:

NEW YORK AVE. APARTMENTS

AN AFFORDABLE HOUSING COMMUNITY

DELAND, FLORIDA

PROFESSIONAL SEAL: JLC24.0085.00

BLAKE L. SUDDETH LICENSE NUMBER 86787 STATE OF FLORIDA PROFESSIONAL ENGINEER

Blake L Suddeth

This item has been digitally signed and sealed by Blake L. Suddeth, PE on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies. 2025.07.11 10:37:25 -04'00'

MARK	DATE	DESCRIPTION
X	09/30/24	PHOTOMETRICS REV 1
X	03/25/25	PHOTOMETRICS REV 2

ISSUE DATE: MAY 12, 2025

SITE PLAN
PHOTOMETRICS

PROJECT NO. PSA 2023-31.00
DRAWN BY
CHECKED BY

E1.2

BEACON energy. people. technology.

DATE: LOCATION:
TYPE: PROJECT:
CATALOG #:

VIPER Area/Site

VIPER LUMINAIRE

MICROSTRIKE | STRIKE

FEATURES

- Low profile LED area/site luminaire with a variety of IES distributions for lighting applications such as auto dealership, retail, commercial, and campus parking lots
- Featuring two different optical technologies, Strike and Micro Strike Optics, which provide the best distribution patterns for retrofit or new construction
- Rated for high vibration applications including bridges and overpasses. All sizes are rated for 1.5G
- Control options including photo control, occupancy sensing, NX Lighting Controls®, wiSCAPE and 7-Pin with networked controls
- New customizable lumen output feature allows for the wattage and lumen output to be customized in the factory to meet whatever specification requirements may entail
- Field interchangeable mounting provides additional flexibility after the fixture has shipped



10-DAY QUICK SHIP PROGRAM

QS10

c UL us IP65 — DesignLights Consortium Premium — DLC LISTED — DLC LISTED PREMIUM

CONTROL TECHNOLOGY

NX LIGHTING CONTROLS — wiSCAPE

SPECIFICATIONS

CONSTRUCTION
- Die-cast housing with hidden vertical heat fins are optimal for heat dissipation while keeping a clean smooth outer surface
- Corrosion resistant, die-cast aluminum housing with 1000 hour powder coat paint finish
- External hardware is corrosion resistant

OPTICS
- Micro Strike Optics (160, 320, 480, or 720 LED counts) maximize uniformity in applications and come standard with mid-power LEDs which evenly illuminate the entire luminous surface area to provide a low glare appearance. Catalog logic found on page 2
- Strike Optics (96, 72, 108, or 162 LED counts) provide best in class distributions and maximum pole spacing in new applications with high powered LEDs. Strike optics are held in place with a polycarbonate bezel to mimic the appearance of the Micro Strike Optics so both solutions can be combined on the same application. Catalog logic found on page 3
- Both optics maximize target zone illumination with minimal losses at the house-side, reducing light trespass issues. Additional backlight control shields and house side shields can be added for further reduction of illumination behind the pole
- One-piece silicone gasket ensures a weatherproof seal
- Zero up-light at 0 degrees of tilt
- Field rotatable optics

INSTALLATION
- Mounting patterns for each arm can be found on page 11
- Optional universal mounting block for ease of installation during retrofit applications. Available as an option (ASQU) or accessory for square and round poles
- All mounting hardware included

INSTALLATION (CONTINUED)
- Knuckle arm fitter option available for 2-3/8" OD tenon
- For products with EPA less than 1 mounted to a pole greater that 20ft, a vibration damper is recommended

ELECTRICAL
- Universal 120-277 VAC or 347-480 VAC input voltage, 50/60 Hz
- Ambient operating temperature -40°C to 40°C
- Drivers have greater than 90% power factor and less than 20% THD
- LED drivers have output power over-voltage, over-current protection and short circuit protection with auto recovery
- Field replaceable surge protection device provides 20kA protection meeting ANSI/ IEEE C62.41.2 Category C High and Surge Location Category C3. Automatically takes fixture off-line for protection when device is compromised
- Dual Driver option provides 2 drivers within luminaire but only one set of leads exiting the luminaire, where Dual Power Feed provides two drivers which can be wired independently as two sets of leads are extended from the luminaire. Both options cannot be combined

CONTROLS
- Photo control, occupancy sensor programmable controls, and ZigBee wireless controls available for complete on/off and dimming control
- Please consult brand or sales representative when combining control and electrical options as some combinations may not operate as anticipated depending on your application
- 7-pin ANSI C136.41-2013 photocontrol receptacle option available for twist lock photocontrols or wireless control modules (control accessories sold separately)

CONTROLS (CONTINUED)
- 0-10V Dimming Drivers are standard and dimming leads are extended out of the luminaire. Refer to page 11 for typical wiring connection to the dimming leads. Must specify if wiring leads are to be greater than the 6" standard
- NX Lighting Controls® available with in fixture wireless control module, features dimming and occupancy sensor
- wiSCAPE® available with in fixture wireless control module, features dimming and occupancy sensor. Also available in 7-pin configuration

CERTIFICATIONS
- DLC Premium Lights Consortium Qualified, with some Premium Qualified configurations. Not all product variations listed in this document are DLC® qualified. Refer to http://www.designlights.org for the most up-to-date list.
- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations and 40°C ambient temperatures
- 1.5 G rated for ANSI C136.31 high vibration applications
- Fixture is IP65 rated
- Meets IDA recommendations using 3K CCT chip/color temperature
- This product qualifies as a "designated country construction material" per FAR 52.225-5 Buy American-Construction Materials under Trade Agreements effective 04/23/2020.

WARRANTY
- 5 year warranty

KEY DATA	
Lumen Range	5,000–80,000
Wattage Range	36–600
Efficacy Range (LPW)	92–155
Weight lbs. (kg)	13.7-30.9 (6.2-13.9)

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1 E1.3 Fixture Types 'SLA' & 'SLB' Typical

BEACON energy. people. technology.

DATE: LOCATION:
TYPE: PROJECT:
CATALOG #:

VIPER Area/Site

VIPER LUMINAIRE

MICROSTRIKE OPTICS – ORDERING GUIDE

Gray Shading = Service Program Limit of 16 Luminaires — QS10

Example: VP–2–320L-145–3K7–2–R–UNV–A3–BLT

CATALOG #

VP		1	160L-135	4K7	4F		UNV
Series	Optic Platform	Size	Light Engine	CCT/CRI	Distribution	Optic Rotation	Voltage
VP Viper	Micro Strike	1 Size 1	160L-35 [1] 5500 lumens	AP AP-Amber Phosphor Converted	2 Type 2	BLANK No Rotation	UNV 120-277V
			160L-50 [1] 7500 lumens	27K8 2700K, 80 CRI	3 Type 3	L Optic rotation left	120 120V
			160L-75 10000 lumens	3K7 3000K, 70 CRI	4F Type 4 Forward	R Optic rotation right	208 208V
			160L-100 12500 lumens	3K8 3000K, 80 CRI	4W Type 4 Wide		240 240V
			160L-115 15000 lumens	35K8 3500K, 80 CRI	SQW Type 5 Square Wide		277 277V
			160L-135 18000 lumens	3K9 3000K, 90 CRI			347 347V
			160L-150 [2] 20000 lumens	4K7 4000K, 70 CRI			480 480V
		2 Size 2	320L-145 26000 lumens	4K8 4000K, 80 CRI			
			320L-170 24000 lumens	4K9 4000K, 90 CRI			
			320L-185 27000 lumens	5K7 5000K, 70 CRI			
			320L-210 30000 lumens	5K8 5000K, 80 CRI			
			320L-235 33000 lumens				
			320L-255 36000 lumens				
			320L-295 [3] 40000 lumens				
		3 Size 3	480L-285 40000 lumens				
			480L-320 44000 lumens				
			480L-340 48000 lumens				
			480L-390 52000 lumens				
			480L-425 59000 lumens				
			480L-470 [4] 60000 lumens				
		4 Size 4	720L-435 60000 lumens				
			720L-475 65000 lumens				
			720L-515 70000 lumens				
			720L-565 [1] 75000 lumens				
			720L-600 [1] 80000 lumens				
			CLO Custom Lumen Output [1]				

Mounting		BLT		Options	
A Arm mount for square pole/flat surface (B3 Drill Pattern) (Does not include round pole adapter)		BLT Black Matte Textured		F Fusing	
A_ Arm mount for round pole [2]		BLS Black Gloss Smooth		2PP Dual Power Feed	
ASQU Universal arm mount for square pole. Can be used with B3 or S2 Drill Pattern		DBT Dark Bronze Matte Textured		2DR Dual Driver	
A_U Universal arm mount for round pole [2]		DBS Dark Bronze Gloss Smooth		TE Tooless Entry	
AAU Adjustable arm for pole mounting (universal drill pattern)		GTT Graphite Matte Textured		BC Backlight Control [6]	
AA_U Adjustable arm mount for round pole [2]		LGS Light Grey Gloss Smooth		TB Terminal Block	
ADU Decorative upsweep Arm (universal drill pattern)		LGT Light Grey Gloss Textured			
AD_U Decorative upsweep arm mount for round pole [2]		PSS Platinum Silver Smooth			
MAF Mast arm fitter for 2-3/8" OD horizontal arm		WHT White Matte Textured			
K Knuckle		WHS White Gloss Smooth			
T Trunnion		VGT Verde Green Textured			
WB Wall Bracket, horizontal tenon with MAF					
WM Wall mount bracket with decorative upsweep arm					
WA Wall mount bracket with adjustable arm					
Color Option					
CC Custom Color					

ADD67R6	
Network Control Options	
NXWS16F	NX Networked Wireless Enabled Integral NX5MP2 LMO PR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming [5,6]
NXWS40F	NX Networked Wireless Enabled Integral NX5MP2-I-MO PR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming [5,6]
NXW	NX Networked Wireless Radio Module NX5M2 and Bluetooth Programming, without Sensor [5,6]
WR	LightGRID® In-Fixture Module [5,6]
WRSC	LightGRID® Module and Occupancy Sensor [5,6]
Stand Alone Sensors	
BTS-14F	Bluetooth® Programmable, BTSMPLMO PR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens
BTS-40F	Bluetooth® Programmable, BTSMPLMO-I PR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens
BTSO-12F	Bluetooth® Programmable, BTSMPLOMNI-O PR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens
7PR	7-Pin Receptacle [4]
7PR-SC	7-Pin Receptacle with shorting cap [4]
3PR	3-Pin twist lock [4]
3PR-SC	3-Pin receptacle with shorting cap [4]
3PR-TL	3-Pin PCR with photocontrol [4]
Programmed Controls	
SCP_F	Sensor Control Programmable, 8F or 40F [6]
ADD	AutoDim Timer Based Dimming [4]
ADT	AutoDim Time of Day Dimming [4]
Photocontrols	
PC	Button Photocontrol [4,7]

1 – Items with a grey background can be done as a custom order. Contact brand representative for more information
2 – Replace "_" with "2" for 2.5"-3.4" OD pole, "4" for 4.18"-5.25" OD pole, "5" for 5.5"-6.5" OD pole
3 – Networked Controls cannot be combined with other control options
4 – Not available with 2PP option
5 – Not available with Dual Driver option
6 – Some voltage restrictions may apply when combined with controls
7 – Not available with 480V
8 – BC not available on 4F and type 5 distributions
9 – At least one SCREMOTE required to program SCP motion sensor. Must select BR or 40R.
10 – At least one SCREMOTE required to program SCP motion sensor. Must select BR or 40R.

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2 E1.3 Fixture Type 'SLA4'

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DATE: LOCATION:
TYPE: PROJECT:
CATALOG #:

VIPER Area/Site

VIPER LUMINAIRE

MICROSTRIKE OPTICS – ORDERING GUIDE

Gray Shading = Service Program Limit of 16 Luminaires — QS10

Example: VP–2–320L-145–3K7–2–R–UNV–A3–BLT

CATALOG #

VP		1	160L-135	4K7	4F		UNV
Series	Optic Platform	Size	Light Engine	CCT/CRI	Distribution	Optic Rotation	Voltage
VP Viper	Micro Strike	1 Size 1	160L-35 [1] 5500 lumens	AP AP-Amber Phosphor Converted	2 Type 2	BLANK No Rotation	UNV 120-277V
			160L-50 [1] 7500 lumens	27K8 2700K, 80 CRI	3 Type 3	L Optic rotation left	120 120V
			160L-75 10000 lumens	3K7 3000K, 70 CRI	4F Type 4 Forward	R Optic rotation right	208 208V
			160L-100 12500 lumens	3K8 3000K, 80 CRI	4W Type 4 Wide		240 240V
			160L-115 15000 lumens	35K8 3500K, 80 CRI	SQW Type 5 Square Wide		277 277V
			160L-135 18000 lumens	3K9 3000K, 90 CRI			347 347V
			160L-150 [2] 20000 lumens	4K7 4000K, 70 CRI			480 480V
		2 Size 2	320L-145 26000 lumens	4K8 4000K, 80 CRI			
			320L-170 24000 lumens	4K9 4000K, 90 CRI			
			320L-185 27000 lumens	5K7 5000K, 70 CRI			
			320L-210 30000 lumens	5K8 5000K, 80 CRI			
			320L-235 33000 lumens				
			320L-255 36000 lumens				
			320L-295 [3] 40000 lumens				
		3 Size 3	480L-285 40000 lumens				
			480L-320 44000 lumens				
			480L-340 48000 lumens				
			480L-390 52000 lumens				
			480L-425 59000 lumens				
			480L-470 [4] 60000 lumens				
		4 Size 4	720L-435 60000 lumens				
			720L-475 65000 lumens				
			720L-515 70000 lumens				
			720L-565 [1] 75000 lumens				
			720L-600 [1] 80000 lumens				
			CLO Custom Lumen Output [1]				

Mounting		BLT		Options	
A Arm mount for square pole/flat surface (B3 Drill Pattern) (Does not include round pole adapter)		BLT Black Matte Textured		F Fusing	
A_ Arm mount for round pole [2]		BLS Black Gloss Smooth		2PP Dual Power Feed	
ASQU Universal arm mount for square pole. Can be used with B3 or S2 Drill Pattern		DBT Dark Bronze Matte Textured		2DR Dual Driver	
A_U Universal arm mount for round pole [2]		DBS Dark Bronze Gloss Smooth		TE Tooless Entry	
AAU Adjustable arm for pole mounting (universal drill pattern)		GTT Graphite Matte Textured		BC Backlight Control [6]	
AA_U Adjustable arm mount for round pole [2]		LGS Light Grey Gloss Smooth		TB Terminal Block	
ADU Decorative upsweep Arm (universal drill pattern)		LGT Light Grey Gloss Textured			
AD_U Decorative upsweep arm mount for round pole [2]		PSS Platinum Silver Smooth			
MAF Mast arm fitter for 2-3/8" OD horizontal arm		WHT White Matte Textured			
K Knuckle		WHS White Gloss Smooth			
T Trunnion		VGT Verde Green Textured			
WB Wall Bracket, horizontal tenon with MAF					
WM Wall mount bracket with decorative upsweep arm					
WA Wall mount bracket with adjustable arm					
Color Option					
CC Custom Color					

ADD67R6	
Network Control Options	
NXWS16F	NX Networked Wireless Enabled Integral NX5MP2 LMO PR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming [5,6]
NXWS40F	NX Networked Wireless Enabled Integral NX5MP2-I-MO PR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming [5,6]
NXW	NX Networked Wireless Radio Module NX5M2 and Bluetooth Programming, without Sensor [5,6]
WR	LightGRID® In-Fixture Module [5,6]
WRSC	LightGRID® Module and Occupancy Sensor [5,6]
Stand Alone Sensors	
BTS-14F	Bluetooth® Programmable, BTSMPLMO PR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens
BTS-40F	Bluetooth® Programmable, BTSMPLMO-I PR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens
BTSO-12F	Bluetooth® Programmable, BTSMPLOMNI-O PR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens
7PR	7-Pin Receptacle [4]
7PR-SC	7-Pin Receptacle with shorting cap [4]
3PR	3-Pin twist lock [4]
3PR-SC	3-Pin receptacle with shorting cap [4]
3PR-TL	3-Pin PCR with photocontrol [4]
Programmed Controls	
SCP_F	Sensor Control Programmable, 8F or 40F [6]
ADD	AutoDim Timer Based Dimming [4]
ADT	AutoDim Time of Day Dimming [4]
Photocontrols	
PC	Button Photocontrol [4,7]

1 – Items with a grey background can be done as a custom order. Contact brand representative for more information
2 – Replace "_" with "2" for 2.5"-3.4" OD pole, "4" for 4.18"-5.25" OD pole, "5" for 5.5"-6.5" OD pole
3 – Networked Controls cannot be combined with other control options
4 – Not available with 2PP option
5 – Not available with Dual Driver option
6 – Some voltage restrictions may apply when combined with controls
7 – Not available with 480V
8 – BC not available on 4F and type 5 distributions
9 – At least one SCREMOTE required to program SCP motion sensor. Must select BR or 40R.
10 – At least one SCREMOTE required to program SCP motion sensor. Must select BR or 40R.

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3 E1.3 Fixture Type 'SLA4HS'

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DATE: LOCATION:
TYPE: PROJECT:
CATALOG #:

VIPER Area/Site

VIPER LUMINAIRE

MICROSTRIKE OPTICS – ORDERING GUIDE

Gray Shading = Service Program Limit of 16 Luminaires — QS10

Example: VP–2–320L-145–3K7–2–R–UNV–A3–BLT

CATALOG #

VP		1	160L-75	4K7	2		UNV
Series	Optic Platform	Size	Light Engine	CCT/CRI	Distribution	Optic Rotation	Voltage
VP Viper	Micro Strike	1 Size 1	160L-35 [1] 5500 lumens	AP AP-Amber Phosphor Converted	2 Type 2	BLANK No Rotation	UNV 120-277V
			160L-50 [1] 7500 lumens	27K8 2700K, 80 CRI	3 Type 3	L Optic rotation left	120 120V
			160L-75 10000 lumens	3K7 3000K, 70 CRI	4F Type 4 Forward	R Optic rotation right	208 208V
			160L-100 12500 lumens	3K8 3000K, 80 CRI	4W Type 4 Wide		240 240V
			160L-115 15000 lumens	35K8 3500K, 80 CRI	SQW Type 5 Square Wide		277 277V
			160L-135 18000 lumens	3K9 3000K, 90 CRI			347 347V
			160L-150 [2] 20000 lumens	4K7 4000K, 70 CRI			480 480V
		2 Size 2	320L-145 26000 lumens	4K8 4000K, 80 CRI			
			320L-170 24000 lumens	4K9 4000K, 90 CRI			
			320L-185 27000 lumens	5K7 5000K, 70 CRI			
			320L-210 30000 lumens	5K8 5000K, 80 CRI			
			320L-235 33000 lumens				
			320L-255 36000 lumens				
			320L-295 [3] 40000 lumens				
		3 Size 3	480L-285 40000 lumens				
			480L-320 44000 lumens				
			480L-340 48000 lumens				
			480L-390 52000 lumens				
			480L-425 59000 lumens				
			480L-470 [4] 60000 lumens				
		4 Size 4	720L-435 60000 lumens				
			720L-475 65000 lumens				
			720L-515 70000 lumens				
			720L-565 [1] 75000 lumens				
			720L-600 [1] 80000 lumens				
			CLO Custom Lumen Output [1]				

Mounting		BLT		Options	
A Arm mount for square pole/flat surface (B3 Drill Pattern) (Does not include round pole adapter)		BLT Black Matte Textured		F Fusing	
A_ Arm mount for round pole [2]		BLS Black Gloss Smooth		2PP Dual Power Feed	
ASQU Universal arm mount for square pole. Can be used with B3 or S2 Drill Pattern		DBT Dark Bronze Matte Textured		2DR Dual Driver	
A_U Universal arm mount for round pole [2]		DBS Dark Bronze Gloss Smooth		TE Tooless Entry	
AAU Adjustable arm for pole mounting (universal drill pattern)		GTT Graphite Matte Textured		BC Backlight Control [6]	
AA_U Adjustable arm mount for round pole [2]		LGS Light Grey Gloss Smooth		TB Terminal Block	
ADU Decorative upsweep Arm (universal drill pattern)		LGT Light Grey Gloss Textured			
AD_U Decorative upsweep arm mount for round pole [2]		PSS Platinum Silver Smooth			
MAF Mast arm fitter for 2-3/8" OD horizontal arm		WHT White Matte Textured			
K Knuckle		WHS White Gloss Smooth			
T Trunnion		VGT Verde Green Textured			
WB Wall Bracket, horizontal tenon with MAF					
WM Wall mount bracket with decorative upsweep arm					
WA Wall mount bracket with adjustable arm					
Color Option					
CC Custom Color					

ADD67R6	
Network Control Options	
NXWS16F	NX Networked Wireless Enabled Integral NX5MP2 LMO PR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming [5,6]
NXWS40F	NX Networked Wireless Enabled Integral NX5MP2-I-MO PR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming [5,6]
NXW	NX Networked Wireless Radio Module NX5M2 and Bluetooth Programming, without Sensor [5,6]
WR	LightGRID® In-Fixture Module [5,6]
WRSC	LightGRID® Module and Occupancy Sensor [5,6]
Stand Alone Sensors	
BTS-14F	Bluetooth® Programmable, BTSMPLMO PR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens
BTS-40F	Bluetooth® Programmable, BTSMPLMO-I PR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens
BTSO-12F	Bluetooth® Programmable, BTSMPLOMNI-O PR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens
7PR	7-Pin Receptacle [4]
7PR-SC	7-Pin Receptacle with shorting cap [4]
3PR	3-Pin twist lock [4]
3PR-SC	3-Pin receptacle with shorting cap [4]
3PR-TL	3-Pin PCR with photocontrol [4]
Programmed Controls	
SCP_F	Sensor Control Programmable, 8F or 40F [6]
ADD	AutoDim Timer Based Dimming [4]
ADT	AutoDim Time of Day Dimming [4]
Photocontrols	
PC	Button Photocontrol [4,7]

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8 – BC not available on 4F and type 5 distributions
9 – At least one SCREMOTE required to program SCP motion sensor. Must select BR or 40R.

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4 E1.3 Fixture Type 'SLB2'

BEACON energy. people. technology.

DATE: LOCATION:
TYPE: PROJECT:
CATALOG #:

VIPER Area/Site

VIPER LUMINAIRE

MICROSTRIKE OPTICS – ORDERING GUIDE

Gray Shading = Service Program Limit of 16 Luminaires — QS10

Example: VP–2–320L-145–3K7–2–R–UNV–A3–BLT

CATALOG #

VP		1	160L-75	4K7	2		UNV
Series	Optic Platform	Size	Light Engine	CCT/CRI	Distribution	Optic Rotation	Voltage
VP Viper	Micro Strike	1 Size 1	160L-35 [1] 5500 lumens	AP AP-Amber Phosphor Converted	2 Type 2	BLANK No Rotation	UNV 120-277V
			160L-50 [1] 7500 lumens	27K8 2700K, 80 CRI	3 Type 3	L Optic rotation left	120 120V
			160L-75 10000 lumens	3K7 3000K, 70 CRI	4F Type 4 Forward	R Optic rotation right	208 208V
			160L-100 12500 lumens	3K8 3000K, 80 CRI	4W Type 4 Wide		240 240V
			160L-115 15000 lumens	35K8 3500K, 80 CRI	SQW Type 5 Square Wide		277 277V
			160L-135 18000 lumens	3K9 3000K, 90 CRI			347 347V
			160L-150 [2] 20000 lumens	4K7 4000K, 70 CRI			480 480V
		2 Size 2	320L-145 26000 lumens	4K8 4000K, 80 CRI			
			320L-170 24000 lumens	4K9 4000K, 90 CRI			
			320L-185 27000 lumens	5K7 5000K, 70 CRI			
			320L-210 30000 lumens	5K8 5000K, 80 CRI			
			320L-235 33000 lumens				
			320L-255 36000 lumens				
			320L-295 [3] 40000 lumens				
		3 Size 3	480L-285 40000 lumens				
			480L-320 44000 lumens				
			480L-340 48000 lumens				
			480L-390 52000 lumens				
			480L-425 59000 lumens				
			480L-470 [4] 60000 lumens				
		4 Size 4	720L-435 60000 lumens				
			720L-475 65000 lumens				
			720L-515 70000 lumens				
			720L-565 [1] 75000 lumens				
			720L-600 [1] 80000 lumens				
			CLO Custom Lumen Output [1]				

Mounting		BLT		Options	
A Arm mount for square pole/flat surface (B3 Drill Pattern) (Does not include round pole adapter)		BLT Black Matte Textured		F Fusing	
A_ Arm mount for round pole [2]		BLS Black Gloss Smooth		2PP Dual Power Feed	
ASQU Universal arm mount for square pole. Can be used with B3 or S2 Drill Pattern		DBT Dark Bronze Matte Textured		2DR Dual Driver	
A_U Universal arm mount for round pole [2]		DBS Dark Bronze Gloss Smooth		TE Tooless Entry	
AAU Adjustable arm for pole mounting (universal drill pattern)		GTT Graphite Matte Textured		BC Backlight Control [6]	
AA_U Adjustable arm mount for round pole [2]		LGS Light Grey Gloss Smooth		TB Terminal Block	
ADU Decorative upsweep Arm (universal drill pattern)		LGT Light Grey Gloss Textured			
AD_U Decorative upsweep arm mount for round pole [2]		PSS Platinum Silver Smooth			
MAF Mast arm fitter for 2-3/8" OD horizontal arm		WHT White Matte Textured			
K Knuckle		WHS White Gloss Smooth			
T Trunnion		VGT Verde Green Textured			
WB Wall Bracket, horizontal tenon with MAF					
WM Wall mount bracket with decorative upsweep arm					
WA Wall mount bracket with adjustable arm					
Color Option					
CC Custom Color					

ADD67R6	
Network Control Options	
NXWS16F	NX Networked Wireless Enabled Integral NX5MP2 LMO PR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming [5,6]
NXWS40F	NX Networked Wireless Enabled Integral NX5MP2-I-MO PR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming [5,6]
NXW	NX Networked Wireless Radio Module NX5M2 and Bluetooth Programming, without Sensor [5,6]
WR	LightGRID® In-Fixture Module [5,6]
WRSC	LightGRID® Module and Occupancy Sensor [5,6]
Stand Alone Sensors	
BTS-14F	Bluetooth® Programmable, BTSMPLMO PR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens
BTS-40F	Bluetooth® Programmable, BTSMPLMO-I PR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens
BTSO-12F	Bluetooth® Programmable, BTSMPLOMNI-O PR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens
7PR	7-Pin Receptacle [4]
7PR-SC	7-Pin Receptacle with shorting cap [4]
3PR	3-Pin twist lock [4]
3PR-SC	3-Pin receptacle with shorting cap [4]
3PR-TL	3-Pin PCR with photocontrol [4]
Programmed Controls	
SCP_F	Sensor Control Programmable, 8F or 40F [6]
ADD	AutoDim Timer Based Dimming [4]
ADT	AutoDim Time of Day Dimming [4]
Photocontrols	
PC	Button Photocontrol [4,7]

1 – Items with a grey background can be done as a custom order. Contact brand representative for more information
2 – Replace "_" with "2" for 2.5"-3.4" OD pole, "4" for 4.18"-5.25" OD pole, "5" for 5.5"-6.5" OD pole
3 – Networked Controls cannot be combined with other control options
4 – Not available with 2PP option
5 – Not available with Dual Driver option
6 – Some voltage restrictions may apply when combined with controls
7 – Not available with 480V
8 – BC not available on 4F and type 5 distributions
9 – At least one SCREMOTE required to program SCP motion sensor. Must select BR or 40R.

Current

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5 E1.3 Fixture Type 'SLB2HS'

BEACON energy. people. technology.

DATE: LOCATION:
TYPE: PROJECT:
CATALOG #:

VIPER Area/Site

VIPER LUMINAIRE

MICROSTRIKE OPTICS – ORDERING GUIDE

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		2 Size 2	320L-145 26000 lumens	4K8 4000K, 80 CRI			
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			320L-235 33000 lumens				
			320L-255 36000 lumens				
			320L-295 [3] 40000 lumens				
		3 Size 3	480L-285 40000 lumens				
			480L-320 44000 lumens				
			480L-340 48000 lumens				
			480L-390 52000 lumens				
			480L-425 59000 lumens				
			480L-470 [4] 60000 lumens				
		4 Size 4	720L-435 60000 lumens				
			720L-475 65000 lumens				
			720L-515 70000 lumens				
			720L-565 [1] 75000 lumens				
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A_U Universal arm mount for round pole [2]		DBS Dark Bronze Gloss Smooth		TE Tooless Entry	
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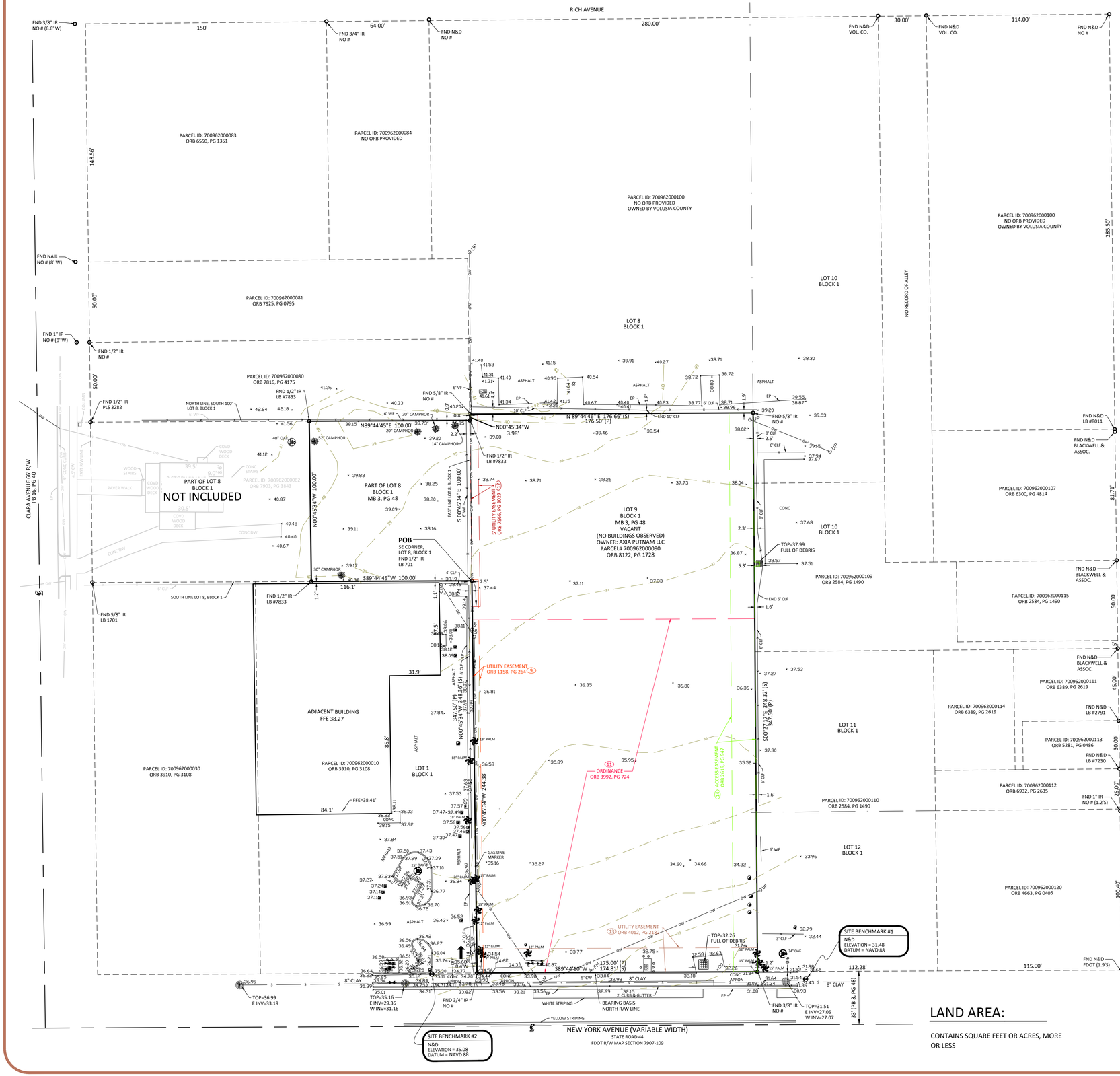
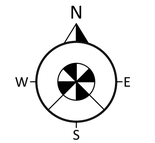
AA_U Adjustable arm mount for round pole [2]		LGS Light Grey Gloss Smooth		TB Terminal Block	
ADU Decorative upsweep Arm (universal drill pattern)		LGT Light Grey Gloss Textured			

BOUNDARY & TOPOGRAPHIC SURVEY





GRAPHIC SCALE

0 30 60

1 INCH = 30 FEET

VICINITY MAP (Not to Scale)



DESCRIPTION:

The East 100.00 feet of the South 100 feet of the West 237.5 feet of Lot 8, Assessor's Subdivision of Block 1, Roger's Deland, according to the map thereof recorded in Map Book 16, Page 40, of the Public Records of Volusia County, Florida, being more particularly described as follows:

Begin at the Southeast corner of said Lot 8, Block 1; run thence S89°44'45"W, along the South line of said Lot 8, a distance of 100.00 feet; thence N00°45'34"W, a distance of 100.00 feet to the North line of the South 100 feet of said Lot 8; thence N89°44'45"E along said North line, a distance of 100.00 feet to the East line of said Lot 8; thence S00°45'34"E, along said East line, a distance of 100.00 feet to the Point of Beginning.

And
Lot 9, Assessor's Subdivision of Block 1, Roger's Deland, a subdivision according to the plat thereof recorded at Plat Book 3, Page 48, in the Public Records of Volusia County, Florida

GENERAL SURVEY NOTES:

1. BEARING STRUCTURE IS BASED ON THE MONUMENTED NORTH R/W LINE OF NEW YORK AVENUE; BEING: S89°44'10"W ASSUMED.

2. THIS SURVEY REFLECTS ONLY MATTERS OF RECORD AS PROVIDED BY THE CLIENT OR CLIENTS REPRESENTATIVE.

3. THIS SURVEY WAS MADE ON THE GROUND. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. ENGINEER AND CONTRACTOR SHALL VERIFY MEASUREMENTS OF CONNECTIONS TO EXISTING UTILITIES BEFORE ORDERING MATERIALS AND BEFORE COMMENCEMENT OF CONSTRUCTION. IF THERE IS A DISCREPANCY BETWEEN THE MEASUREMENTS SHOWN HEREON AND THE VERIFYING MEASUREMENTS, THIS SURVEYOR SHALL BE CONTACTED IMMEDIATELY TO FURTHER VERIFY THE DISCREPANCY.

4. THIS SITE LIES IN ZONE X PER FLOOD INSURANCE RATE MAP NO. 12127C0470H, COMMUNITY NO. 120307, CITY OF DELAND, VOLUSIA COUNTY, FLORIDA, EFFECTIVE 02/19/2014.

5. ACCORDING TO FLORIDA STATUTES, CHAPTER 472.025, A LAND SURVEYOR SHALL NOT AFFIX HIS SEAL OR NAME TO ANY PLAN OR DRAWING WHICH DEPICTS WORK WHICH HE IS NOT LICENSED TO PERFORM OR WHICH IS BEYOND HIS PROFESSION OR SPECIALTY THEREIN. THEREFORE, WE ARE UNABLE TO CERTIFY AS TO MUNICIPAL ZONING COMPLIANCE, INTERPRETATION OF ZONING CODES OR THE DETERMINATION OF VIOLATIONS THEREOF.

6. THIS SURVEY MADE WITH BENEFIT OF COMMITMENT FOR TITLE NO. 7222-6423577, EFFECTIVE: APRIL 21, 2023, ISSUED BY FIRST AMERICAN TITLE INSURANCE COMPANY. THE LEGAL DESCRIPTION SHOWN HEREON IS THE SAME AS THE LEGAL DESCRIPTION SET FORTH IN SCHEDULE A OF THE TITLE COMMITMENT REFERENCED HEREON.

7. ELEVATIONS ARE BASED ON BENCHMARK DESIGNATION T 474, BEING: 38.11 FEET, (NAVD 88), PUBLISHED BY NGS (NATIONAL GEODETIC SURVEY).

8. THE MAPPED FEATURES SHOWN HEREON ARE RELATIVE TO FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE, NAD(83)-(2011)-(EPOCH 2010.0000), ESTABLISHED PER FDOT FPRN.

SCHEDULE B-II:

9. Easement granted to Florida Power Corporation by instrument recorded in Book 1158, Page 264.
(ON SUBJECT PROPERTY AS SHOWN HEREON)

10. Fence Boundary Agreement recorded in Book 1980, Page 1770.
(ON SUBJECT PROPERTY. THE LOCATION OF THE FENCE CANNOT BE DETERMINED BY THE DESCRIPTION IN THE RECORDED DOCUMENT)

11. Ordinance 94-36 Designating the Downtown Historic District recorded in Book 3992, Page 724.
(AS TO LOT 9, BLANKET IN NATURE OVER THE PORTION OF SUBJECT PROPERTY SHOWN HEREON.)

12. Easement granted to County of Volusia for Utilities by instrument recorded in Book 7566, Page 3029.
(ON SUBJECT PROPERTY AS SHOWN HEREON)

13. Easement granted to City of Deland by instrument recorded in Book 4012, Page 2182.
(ON SUBJECT PROPERTY AS SHOWN HEREON IN ITS APPROXIMATE LOCATION DUE TO POOR LEGIBILITY.)

14. Reciprocal Easement Agreement recorded in Book 2619, Page 946.
(ON SUBJECT PROPERTY AS SHOWN HEREON)

LAND AREA:

CONTAINS SQUARE FEET OR ACRES, MORE OR LESS

Certified to:

Blue Sky Communities, LLC, a Florida limited liability company;
First American Title Insurance Company;
Nelson Mullins Riley & Scarborough LLP

This Survey is "Not Valid" without the original signature and seal of this Florida licensed Surveyor and Mapper, unless provided with electronic signature. The seal appearing on this document was authorized by the signing Professional Surveyor and Mapper on the Date of the electronic signature.

JAMES DENNIS BRAY — License Number PSM6507 STATE OF FLORIDA — Professional Surveyor and Mapper

LEGEND

AC	- AIR CONDITIONER
-BB-	- BOTTOM OF BANK
BHM	- BUILDING HEIGHT MEASUREMENT
	- BACK FLOW PREVENTER
	- BENCHMARK
	- BOLLARD
-E-	- BURIED ELECTRIC LINE
-C-	- BURIED CABLE TELEVISION LINE
CALC	- CALCULATED
C&M	- CALCULATED & MEASURED
Δ	- CENTRAL ANGLE
CBW	- CONCRETE BLOCK WALL
CC	- COVERED CONCRETE
CCR	- CERTIFIED CORNER RECORD
CF	- CONCRETE FLUME
CHW	- CONCRETE HEADWALL
CLF	- CHAIN LINK FENCE
	- CENTERLINE
CM	- CONCRETE MONUMENT
CMP	- CORRUGATED METAL PIPE
=CO	- CLEAN OUT
CONC	- CONCRETE
COVD	- COVERED
CP	- CONCRETE PAD
	- CURB INLET
CW	- CONCRETE WALKWAY
-D-	- BURIED STORM/DRAIN LINE
DB	- DEED BOOK
DE	- DRAINAGE EASEMENT
	- DOT INLET
DP	- DUMPSTER PAD
DW	- DRIVEWAY
	- EASEMENT NUMBER
	- ELECTRIC BOX
	- ELECTRICAL METER
EL	- ELEVATION
EMT	- EASEMENT
EP	- EDGE OF PAVEMENT
FDOT	- FLORIDA DEPARTMENT OF TRANSPORTATION
FPRN	- FLORIDA PERMANENT REFERENCE NETWORK
FIRM	- FLOOD INSURANCE RATE MAP
FFE	- FINISHED FLOOR ELEVATION
FH	- FIRE HYDRANT
-FM-	- BURIED FORCE MAIN LINE
FND	- FOUND
-FO-	- BURIED FIBER OPTIC CABLE LINE
	- FIBER OPTIC CABLE BOX
FP	- FLAG POLE
-G-	- BURIED GAS LINE
	- GAS METER
	- GAS VALVE
	- GREASE TRAP MANHOLE
	- GUY WIRE ANCHOR
	- HANDICAP PARKING
HDPE	- HIGH DENSITY POLYETHYLENE PIPE
INST#	- RECORD INSTRUMENT#
INV	- INVERT ELEVATION
IP	- IRON PIPE
IR	- IRON ROD
L	- ARC LENGTH
LB	- LICENSED BUSINESS
	- LIGHT POLE
LS	- LICENSED SURVEYOR
LSA	- LANDSCAPED AREA
MF	- METAL FENCE
MS	- METAL SHED
	- MITERED END SECTION
	- MONITORING WELL
N&D	- NAIL & DISK
NAVD	- NORTH AMERICAN VERTICAL DATUM
NAD	- NORTH AMERICAN DATUM
NGVD	- NATIONAL GEODETIC VERTICAL DATUM
NTS	- NOT TO SCALE
ORB	- OFFICIAL RECORDS BOOK
-OW-	- OVERHEAD WIRE
PB	- PLAT BOOK
PC	- POINT OF CURVATURE
PCC	- POINT OF COMPOUND CURVATURE
PP	- PER PLANS
PG	- PAGE
PI	- POINT OF INTERSECTION
POB	- POINT OF BEGINNING
POC	- POINT OF COMMENCEMENT
PRC	- POINT OF REVERSE CURVATURE
# PS	- PARKING SPACES
PSM	- PROFESSIONAL SURVEYOR & MAPPER
PSP	- PEDESTRIAN SIGNAL POLE
PT	- POINT OF TANGENCY
PVC	- POLYVINYL CHLORIDE PIPE
R	- CURVE RADIUS
RCP	- REINFORCED CONCRETE PIPE
-R-	- REUSE WATER LINE
	- REUSE WATER METER
	- REUSE WATER VALVE
RP	- RAMP
R/W	- RIGHT-OF-WAY
	- SANITARY MANHOLE
-S-	- BURIED SANITARY LINE
SF	- SQUARE FEET
SP	- STATE PLANE
SOO	- SHOWN FOR DIRECTION ONLY
SN	- SIGN
SWF	- STOCK WIRE FENCE
	- SEWER VALVE
XXX.00	- SPOT ELEVATION
	- STORM MANHOLE
-T-	- BURIED TELECOMMUNICATIONS LINE
	- TELECOMMUNICATIONS MANHOLE
	- STORM INLET
TB	- TOP OF BANK
	- TRAFFIC SIGNAL POLE
	- TRAFFIC SIGN
	- TRANSFORMER/JUNCTION BOX
	- TELEPHONE RISER
	- TRAFFIC SIGNAL BOX
	- TELEVISION RISER
TSW	- TRAFFIC SIGNAL WIRE
TYP	- TYPICAL
-U-	- UNKNOWN UTILITY
UE	- UTILITY EASEMENT
	- UTILITY POLE
UM	- UTILITY MARKER
VCP	- VITRIFIED CLAY PIPE
VF	- VINYL FENCE
-W-	- BURIED WATER LINE
WF	- WOOD FENCE
WS	- WOOD SHED
	- WATER VALVE
	- WATER METER
YD	- YARD DRAIN

ADDRESS:
225 W. NEW YORK AVE AND 125 N. CLARA AVENUE DELAND, FL 32720

Job Information

JOB NO. 905773
CF NO. VLS-16-40-LOT8-BLK1-Update02
FIELD DATE: 09/29/2023
SCALE: 1" = 30'
DRAWN BY: GLT/DSK

Revisions

Date:	Description	By:
10/18/23	UPDATE B-II EXCEPTIONS	DSK
10/30/23	OFFSITE TOPOGRAPHY TO WEST	GLT

Altamax Surveying
910 Belle Avenue, Suite 1100
Casselberry, FL 32708
Phone: 407-677-0200
Licensed Business No. 7833
www.altamaxsurveying.com

Digitally signed by James D Bray
DN: cn=James D Bray c=US o=Florida
Date: 2023-11-05 10:11:05-00

James D. Bray PSM 6507

SHEET 1 OF 1

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS

October 2, 2024

City of Deland
Attn: Carol Kuhn, AICP
120 S. Florida Ave.
DeLand, FL 32720

RE: 225 W. New York (SP24-134) - NY Ave Apartments – Traffic Memo

This traffic memo is being provided as requested by the City of Deland to provide the estimated daily traffic generation from the proposed 84-unit New York Ave development. The proposed project is an affordable housing development and includes a commercial component as required by the City of Deland. For the purposes of this memo, we have utilized the ITE Trip Generation Manual 11th Edition (latest edition).

Proposed project;

Affordable Housing	– ITE Land-Use Code 223	– 84-units

Daily Trip Generation Summary;

Average Daily Trip	453
AM Peak Hour total trips	35
PM Peak Hour total trips	46

A detailed trip generation summary table is provided on the following page

If you have any questions, please don't hesitate to contact our office.

Sincerely,

DAVID ASHLEY STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER

David A. Stokes, P.E.
President

BLUE IAN, LLC
New York Ave Apartments
Deland, FL

TABLE 1 - DAILY TRIP GENERATION ESTIMATES

ITE Land-Use Category	ITE Land-Use (Code)	Independent Variable	(1) ITE Rate/Eqn	Size	Total External Trips		
					2-Way	In	Out
Affordable Housing	223	DWELLING UNITS	T = 3.73(X) + 139.35	84	453	226	226

(1) - SOURCE: ITE Trip Generation Manual 11th Edition.

TABLE 2 - AM PEAK HOUR TRIP GENERATION ESTIMATES

ITE Land-Use Category	ITE Land-Use (Code)	Independent Variable	(1) ITE Rate/Eqn	Size	Total External Trips		
					2-Way	In	Out
Affordable Housing	223	DWELLING UNITS	T = 0.21(X) + 17.21	84	35	10	25

(1) - SOURCE: ITE Trip Generation Manual 11th Edition.

TABLE 3 - PM PEAK HOUR TRIP GENERATION ESTIMATES

ITE Land-Use Category	ITE Land-Use (Code)	Independent Variable	(1) ITE Rate/Eqn	Size	Total External Trips		
					2-Way	In	Out
Affordable Housing	223	DWELLING UNITS	Ln(T) = 0.72 Ln(X) + 0.64	84	46	27	19

(1) - SOURCE: ITE Trip Generation Manual 11th Edition.

Document Prepared by:

Mark A. Watts, Esq.
Cobb Cole
231 N. Woodland Boulevard
DeLand, FL 32720

UNITY OF TITLE AGREEMENT

THIS UNITY OF TITLE AGREEMENT ("Agreement") is made and entered into this ___ day of _____, 2025, by and between _____, LLC, a Florida limited liability company ("Owner"), as the sole owner of the parcels of land more particularly described in Exhibit "A" attached hereto.

WITNESSETH:

WHEREAS, Parcel ID No. 7009-62-00-0090, located at 225 W. New York Avenue, and Parcel ID No. 7009-62-00-0087, located on North Clara Avenue, are adjoining parcels under common ownership by the Owner (the "Property"); and

WHEREAS, Parcel 7009-62-00-0090 lies within the City of DeLand Downtown Community Redevelopment Area ("CRA") boundary, while Parcel 7009-62-00-0087 lies outside the CRA boundary; and

WHEREAS, the CRA boundary cannot be expanded, and therefore the Property cannot be consolidated through a traditional platting or lot combination process; and

WHEREAS, Owner proposes to construct and operate an apartment building with associated parking and stormwater retention facilities and related improvements (the "Facility") that will functionally span and rely upon both parcels; and

WHEREAS, the City of DeLand has requested, and Owner is willing to provide, a recorded unity instrument ensuring that the Property shall remain connected and used together for the Facility and that neither parcel shall be separately conveyed, developed, or encumbered so as to impair the unified use and operation of the Facility;

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Owner and City agree as follows:

1. Declaration of Covenants and Restrictions. Owner hereby covenants and agrees that the Property shall be used and maintained together as a single, integrated site for purposes of the Facility. No portion of the Property shall be sold, leased, conveyed, platted, developed, or encumbered independently in any manner that would impair, hinder, or prevent the continued

unified use and operation of the Facility across both parcels without the prior written consent of the City. This Agreement and the covenants herein shall run with title to the Property and shall be binding upon Owner and all successors, assigns, and subsequent owners or holders of any interest in the Property, and shall inure to the benefit of the City, which shall be deemed an intended third-party beneficiary with independent standing to enforce this Agreement.

2. Duration. This Agreement shall constitute a covenant and restriction running with the land and title to the Property and Facility, and shall remain in full force and effect in perpetuity so long as the Facility is in operation, unless earlier revoked by a written agreement between the City and the Owner, or the Owner's successors and assigns, or by order of a court of competent jurisdiction, and such revocation is duly recorded in the Public Records of Volusia County, Florida.

3. Preservation of Covenant. This Unity of Title Agreement and the covenants herein are subject to the provisions of the Florida Marketable Record Title Act, Chapter 712, Florida Statutes, as may be amended. To preserve these covenants and prevent their extinguishment, the City of DeLand, the Owner, or any successor or assign may file a notice of preservation in the Public Records of Volusia County, Florida, in accordance with Section 712.05, Florida Statutes, at any time within thirty (30) years from the date of recording of this Agreement, and thereafter as permitted by law. Each such notice shall have the effect of preserving these covenants for an additional period of up to thirty (30) years, and such preservation may be renewed indefinitely.

4. Recordation. Owner shall cause this Agreement to be recorded in the Official Records of Volusia County, Florida, at Owner's expense. Upon recordation, this Agreement shall constitute record notice to all persons and entities acquiring any interest in the Property.

5. Severability. If any provision of this Agreement is determined to be invalid or unenforceable, the remaining provisions shall remain in full force and effect and shall be construed to effectuate the intent of the parties to the maximum extent permitted by law.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the parties hereto have caused this Unity of Title Agreement to be duly executed as of the day and year first above written.

Witnesses as to Property Owner: _____, LLC,
a Florida limited liability company

Printed Name:_____ _____
By:

Print Name:_____

(CORPORATE SEAL)

STATE OF FLORIDA
COUNTY OF VOLUSIA

The foregoing instrument was acknowledged before me by means of ☐ physical presence or ☐ online notarization this ___ day of _____, 2025, by _____, as _____ of _____, LLC, a Florida limited liability company, who is ☐ personally known to me or ☐ has produced _____ as identification.

_____
Printed Name: _____
NOTARY PUBLIC

My Commission Expires: _____

Witnesses as to

_____
Printed Name:_____

_____
Printed Name: _____

THE CITY OF DELAND:

_____
Print:_____

(CORPORATE SEAL)

STATE OF FLORIDA
COUNTY OF VOLUSIA

The foregoing instrument was acknowledged before me by means of ☐ physical presence or ☐ online notarization this ___ day of _____, 2025, by _____, as _____ of the CITY OF DELAND, FLORIDA, who is ☐ personally known to me or ☐ has produced _____ as identification.

_____
Printed Name: _____
NOTARY PUBLIC

My Commission Expires: _____

EXHIBIT “A”
TO UNITY OF TITLE AGREEMENT
(Parcel Ownership List for Property)

Ownership Entity	**Volusia County Parcel ID #**
AXIA Putnam, LLC	7009-62-00-0090
AXIA Putnam, LLC	7009-62-00-0087

City of DeLand
Historic & Cultural Resources
120 S. Florida Avenue
DeLand, FL 32720
Planning@DeLand.org

DATE: June 5, 2025

TO: Historic Preservation Board

FROM: Emily Kunkel, *Senior Planner/Historic Resource Coordinator*

RE: **Certificate of Appropriateness (New Construction) for a multi-family building at 225 W. New York Avenue**
Application No.: HPB25-071
Applicant: Mark Watts, Esq., *Cobb Cole*
Owner: Axia Partners, LLC
Florida Master Site File: None
Zoning District: C-2A
Current Use: Vacant

Description of Proposed Work:

This property is located within the Downtown Historic District, Historic Design District, Downtown Support District, and Historic Support District. The applicant is proposing to construct a new multi-family (apartment) building at 225 W. New York Avenue. The proposed overall height of this building was previously approved at 67-ft, the NE corner portion of the building is now being increased to 77-ft. The building will remain as primarily 5-stories tall, however the NE portion will be 6-stories, with the first-floor as parking. The SE portion of the building fronting New York Avenue is still proposed as 3-stories. The building is proposed to consist of 84-units (44 one-bedroom units, 28 two-bedroom units, and 12 three-bedroom units). The first-floor fronting along New York will be non-residential space dedicated for the leasing office. The site will include a single L-shaped building, parking (vehicle & bicycle), and required stormwater management.

Previous Certificate of Appropriateness

In August 2024, the Historic Preservation Board reviewed a Certificate of Appropriateness (COA) for the new construction of a new multi-family (apartment) building. The Historic Preservation Board approved the COA with the following conditions:

1) The mass and scale of the proposed building shall be reduced and the design modified to be compatible with the contiguous properties and surrounding structures. and;
2) Additional brick be incorporated into the exterior, specifically the South (New York Avenue) façade, on the tower potion, above storefront doors on floors 2-5.

As outlined in the August 1, 2024 meeting minutes, City staff received public comment via email, and board members stated they received numerous complaints from residents regarding the height/size of this building compared to downtown buildings and how it will "overshadow the historic courthouse."

The applicant revised the building elevations to reflect these conditions, and applied for another Certificate of Appropriateness (COA) in order to have an approval with no conditions.

In November 2024, the Historic Preservation Board reviewed a new Certificate of Appropriateness (COA) for the same scope of work as previously approved in August 2024, except the applicant revised the exterior alterations to incorporate the previous approval with conditions. The Historic Preservation Board approved the application as presented, with no conditions.

Since the approval of both the previous COA's, the applicant has incorporated first-floor covered parking, resulting in an exterior alteration and increase in building height to a portion of the building, thereby requiring review of a new COA.

Staff Analysis

The applicant has a Class IV site plan in review with the Technical Review Committee (TRC) and the project will also require review by the Planning Board and City Commission. The Certificate of Appropriateness (COA) is in addition to these meetings, but the Historic Preservation Board purview is solely on the appearance of the building and how the proposed building would be visually compatible with the existing contributing structures in a designated Historic District.

This application has been reviewed per the City's Land Development Regulation Sections 33-34.03 and the Secretary of Interior Standards for Rehabilitation. The Florida Master Site File for this property, was for the historic Putnam Hotel, built in 1883. The Putnam was demolished in 2023 and the site has since remained vacant. The proposed exterior architectural features pay some homage to the historic Putnam Hotel through the use of matching materials/colors to the former building and other buildings within the historic district.

Guidance from The City of DeLand's Land Development Regulations, The Secretary of the Interior's Standards for Rehabilitation and Design Guidelines for Commercial Buildings in Downtown DeLand.

Land Development Regulations Section 33-34.03 outlines the Certificate of Appropriateness requirements within the City of DeLand and the Secretary of the Interior's Standards for Rehabilitation has criteria outlined below that is used to determine if a rehabilitation project qualifies as a certified rehabilitation. The criteria for each are outlined below, because they are similar in nature, they have been combined.

City of DeLand Land Development Regulation (LDR) Section 33-34.03. Certificates of appropriateness.

(b) Criteria for issuing.

1. **The decision on all certificates of appropriateness, except those for demolition, shall be guided by the Secretary of the Interior's General Standards for Preservation Projects and specific standards for rehabilitation stated as follows: (as outlined below in criteria 1-11)**

The Secretary of the Interior's Standards for Rehabilitation

67.7 Standards for rehabilitation.

b) ***The following Standards are to be applied to specific rehabilitation projects in a reasonable manner, taking into consideration economic and technical feasibility. (The application of these Standards to rehabilitation projects is to be the same as under the previous version so that a project previously acceptable would continue to be acceptable under these Standards.)*** **(as outlined below in criteria 1-10 - italicized)**

(LDR Section 33-34.03(b)(1a)) Every reasonable effort shall be made to provide a compatible use for a property, which requires minimal alteration of the building,

structure, or site and its environment, or to use a property for its originally intended purpose.

(36 CFR 67.7 (b)(1)) A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.

The site is currently vacant, the previous use since 1883 was for a single hotel structure, which was deemed unsafe and demolished in 2023. The proposed new use would be multi-family, with a single L-shaped multi-family building and parking area.

(LDR Section 33-34.03(b)(1b)) The distinguishing original qualities or character of a building, structure, or site and its environment shall not be destroyed. The removal or alteration of any historic material or distinctive architectural features should be avoided when possible.

(36 CFR 67.7 (b)(2)) The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.

This criterion is not applicable as the previous historic building was demolished, resulting in a vacant site.

(LDR Section 33-34.03(b)(1c)) All buildings, structures, and sites shall be recognized as products of their own time. Alterations that have no historical basis and which seek to create an earlier appearance shall be discouraged.

(36 CFR 67.7 (b)(3)) Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.

This criterion is not applicable as the previous historic building, was demolished, resulting in a vacant site. However, in April 2024, the applicant had a concept plan reviewed by the Historic Preservation Board as a courtesy review of the architectural elements of this proposed building. The applicant has also had two (2) previous Certificate of Appropriateness (COA) applications approved. The applicant has since incorporated the Historic Preservation Board members courtesy review comments and conditions of approval by adding some features to reflect aspects of the historic former Putnam Hotel.

(LDR Section 33-34.03(b)(1d)) Changes, which may have taken place in the course of time, are evidence of the history and development of a building, structure, or site and its environment. These changes may have acquired significance in their own right, and this significance shall be recognized and respected.

(36 CFR 67.7 (b)(4)) Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.

This criterion is not applicable as the previous historic building, was demolished, resulting in a vacant site.

(LDR Section 33-34.03(b)(1e)) Distinctive stylistic features or examples of skilled craftsmanship, which characterize a building, structure, or site, shall be treated with sensitivity.

(36 CFR 67.7 (b)(5)) Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.

The applicant has incorporated some distinctive features similar to the former historic Putnam Hotel, such as the red brick, window overhangs, window styles, roof steps roof cornices, etc., which reflects some of the historic aspects of the former Putnam Hotel as requested by the Historic Preservation Board with both previous Certificate of Appropriateness's.

(LDR Section 33-34.03(b)(1f)) Deteriorated architectural features shall be repaired rather than replaced, wherever possible. In the event replacement is necessary, the new material should match the material being replaced in composition, design, color, texture, and other visual qualities. Repair or replacement of missing architectural features should be based on accurate duplication of features, substantiated by historic, physical, or pictorial evidence rather than on conjectural designs or the availability of different architectural elements from other buildings or structures.

(36 CFR 67.7 (b)(6)) Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.

This criterion is not applicable as the previous historic building, was demolished, resulting in a vacant site.

(LDR Section 33-34.03(b)(1g)) The surface cleaning of structure shall be undertaken with the gentlest means possible. Sandblasting and other cleaning methods that will damage the historic building materials shall not be undertaken.

(36 CFR 67.7 (b)(7)) Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.

This criterion is not applicable as the applicant is proposing to construct a new building, rather than clean or repair an older building.

(LDR Section 33-34.03(b)(1h)) Every reasonable effort shall be made to protect and preserve archeological resources affected by, or adjacent to any acquisition, protection, stabilization, preservation, demolition, rehabilitation, restoration, or reconstruction project.

(36 CFR 67.7 (b)(8)) Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.

This criterion is not applicable, as there are no known archeological resources affected.

(LDR Section 33-34.03(b)(1i)) Contemporary design for alterations and additions to existing properties shall not be discouraged when such alterations and additions do not destroy significant historical, architectural or cultural material, and such design is compatible with the size, scale, color, material, and character of the property, neighborhood or environment.

(36 CFR 67.7 (b)(9)) New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

The new construction will not destroy historic materials as the previous building has been demolished. Aspects of the new construction are similar to the previous Putnam Hotel, with some similar architectural features, colors and style. The new building is oriented closer to the street as required by Land Development Regulations Section 33-94 Community Design Standards, but still enhances the district and environment. The applicant has incorporated additional brick into the façade as requested by the Historic Preservation Board to match existing building within the Historic District.

(LDR Section 33-34.03(b)(1j)) Wherever possible, new additions or alteration to structures shall be done in such a manner that if such additions or alterations were to be removed in the future, the essential form and integrity of the structure would be unimpaired.

(36 CFR 67.7 (b)(10))New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

This criterion is not applicable as this is new construction of an entire building on a vacant lot, rather than an addition/alteration to an existing building.

(LDR Section 33-34.03(b)(1k)) The use of integral color, rather than applied color, is encouraged in new construction and in restoration or preservation projects. Colors, whether integral or applied, should be appropriate to the architecture.

The proposed new construction is compatible with the City of DeLand Commercial Building Color Guide, the exterior colors will be:

Trim: SW 7013 (Ivory Lace), Body: SW 6386 (Napery), Body Accent: SW 7716 (Croissant), and Tower Accent: SW 9011 (Sun Bleached Ochre)

(LDR Section 33-34.03(b)(2)) In approving or denying an application for a certificate of appropriateness for new construction, the board shall require the following features of the proposed building be visually compatible with the existing contributing structures in a designated Historic District:

a. Height;

The proposed overall height of this building was previously approved at 67-ft (5-stories), the NE corner portion of the building is now being increased to 77-ft (6-stories); to accommodate the first-floor parking and the SE portion of the building fronting New York Avenue is still proposed as 3-stories. The former Barnett Bank located at 101 N. Woodland Blvd, is a contributing structure in the Downtown Historic District, and is the only existing 5-story building, whereas the remainder of the district consist of a mix of 1 to 4-story buildings, with majority being only 2-stories. However, staff is concerned that the proposed increase in height, to accommodate the first-floor parking along the eastern side of the building will further exacerbate the previous concerns

regarding the height and massing of this building compared to downtown buildings, specifically, the potential to "overshadow the historic courthouse".

b. Scale;

It will not be the tallest building in the district, but it will be the tallest building in the block within it is located. To the North is a county parking lot, South is City Hall at 3-stories, West is a single-story building, and to the East is a vacant lot.

c. Massing;

The proposed building will still be the tallest building in the immediate block, especially with the incorporation of parking on the first-floor, which has increased the NE corner portion of the building height by 10-ft, whereas the rest of the building overall height has remained the same as previously approved (67-ft). The 10-ft increase in a portion of the building height has added additional stacked massing, creating a change in massing from 77-ft (6-stories), 67-ft (5-stories) and 32-ft (3-stories). Staff is concerned that the proposed increase in height, to accommodate the first-floor parking along the eastern side of the building will further exacerbate the previous concerns regarding the massing of this building compared to downtown buildings, specifically, the potential to "overshadow the historic courthouse".

d. Setbacks;

The building is being brought as close to New York Avenue as possible per LDR Sec. 33-94.04, which requires that buildings fronting New York Avenue and Woodland Blvd. shall be oriented as close to the street as possible. The new elevations show a better representation of how the building will be setback and shows proposed landscaping.

e. Fenestration;

The building fenestration is similar to buildings within the district; large storefront windows on the first floor facing New York Avenue, and 3/1 windows on floors 2-5. The incorporation of the first-floor parking has added additional architectural screening/fenestration treatment on the east & west elevations, allowing for vehicle screening and natural ventilation.

f. Roof shape;

Some of the front façade roof features reflect the former historic Putnam Hotel, and the stacked massing portions reflect other historic buildings in the historic district.

g. Use of materials;

The incorporation of different materials and use of materials is similar to other buildings within the district. The overall architecture, especially the first-floor elevations have incorporated different use of materials, such as red brick, stucco and change in paint colors for building accents.

h. Directional expression;

The south elevation of this building, facing New York Avenue has majority of the architectural features, such as change in materials, color, and storefront windows on first-floor whereas the other sides have less enhanced architectural features. The incorporation of the first-floor parking has added additional architectural elements and materials on the east and west elevations to allow for the natural ventilation of the parking garage.

i. Style;

The proposed style is masonry vernacular, similar to the previous Putnam Hotel. In the City, this style is common amongst residential and commercial buildings.

j. Site plan.

The proposed building site plan is different than others within the district, because this is new construction, and has to adhere to Land Development Regulations Sec. 33-94.04. Although not within the Downtown Historic District, the most recent similar new construction in close proximity to this site is the DeLand Commons Apartments at 129 E. Voorhis Avenue. LDR Sec. 33-94.04 requires the building to be as close to the street as possible, to create street frontage activation, additional landscape in the front, and parking in the rear. The applicant has incorporated these elements into their Site Plan application, and the updated layout and elevations are attached.

33-94.04. ***Design criteria for Historic Design and Downtown Support District and Design Guidelines for Commercial Buildings in Downtown DeLand - New Construction and additions***

1. **A new building façade or addition should not attempt to be historic through the use of false historic details. This will only detract from the character of the downtown by compromising what is actually historic.**

This application is completely new construction, not an addition to an existing building. The façade of the new building is utilizing some similar features and materials of existing buildings in the historic downtown to enhance the character of the area, rather than detracting from it.

2. **New structures should respect the surrounding buildings with respect to height, setback, spacing, materials, detailing, massing, proportion and scale.**

As mentioned in criteria from LDR Sec. 33-34.03(b)(2), this building will be one of the tallest buildings among the immediate surrounding properties. Aside from City Hall (50-ft, 3-story building) across the street, the immediate block consists primarily of 1-story buildings and similar to City Hall, it will be oriented close to the road with additional landscaping to allow for pedestrian access and activating the sidewalks along this portion of New York Avenue. However, staff is concerned that the proposed increase in height, to accommodate the first-floor parking along the eastern side of the building will further exacerbate the previous concerns regarding the height and massing of this building compared to downtown buildings, specifically, the potential to "overshadow the historic courthouse".

3. **The type of roof and cornice treatment of new buildings should utilize shape, material, textures, and colors which complement adjacent facades.**

The proposed building is immediately surrounded by a parking lot, vacant lot, 1-story building and City Hall (50-ft, 3-story building). The roof, cornice treatment, color palate, materials and texture of the new building reflect the former Putnam Hotel and aside from City Hall across the street, the immediate block consists primarily of 1-story buildings with a variety of facades and treatments.

4. **Site plans including landscaping and parking for new construction should be compatible with the surrounding buildings and environment. Private parking areas should be provided at the rear of a building, not in the front.**

The new building is being constructed close to the road with parking under the building on the first-floor and in the rear. The landscaping plan is similar to City Hall (50-ft, 3-story building) across the street.

5. **The relationship of solid spaces (walls) to voids (windows and doors) in the façade of a building should be visually compatible with adjacent historic buildings.**

This building is not being constructed adjacent to any historic buildings, although it is being constructed in the historic district, the relationship of solid spaces to voids is visually compatible with other historic buildings within the district.

6. **Additions should not interfere with the structural integrity of the existing building.**

This criterion is not applicable as this is completely new construction, not an addition.

7. **To avoid "fabricating history" do not construct additions and new buildings in architectural style that pre-dates the existence of downtown DeLand (e.g. Colonial Style)**

The Historic Preservation Board previously requested additional brick to be incorporated on the front tower column and along the first-floor, which the applicant has since incorporated into the proposed renderings. The new construction is similar to the former Putnam Hotel such as the barrel tile roof, color palate, roof cornices, roof turrets, and awnings, but this new construction will not pre-date the existence of downtown DeLand.

8. **The design of new buildings and additions that reflect contemporary elements and standards is encouraged as long as the link between "old" and "new" is maintained through the guidelines mentioned above.**

The design of this new building reflects contemporary elements while also being complimentary to the historic Putnam Hotel as previously requested by the Historic Preservation Board.

Staff Recommendation:

Staff finds this proposed project is inconsistent with the City of DeLand Land Development Regulations Sections 33-34.03(b)(2)(a), 33-34.03(b)(2)(c), and 33-94.04 (a)(2).

Staff is further concerned that the proposed increase in height, to accommodate the first-floor parking along the eastern side of the building will further exacerbate the previous concerns regarding the height and massing of this building compared to downtown buildings, specifically, the potential to "overshadow the historic courthouse".

Attachments:

Vicinity Map
Updated Proposed Elevations
Updated Site Plan

Scott W. Cichon
Robert A. Merrell III
John P. Ferguson
Mark A. Watts
Heather Bond Vargas
Michael J. Woods
Raymond L. Schumann
Kathleen L. Crotty
Michael O. Sznapstajler
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March 11, 2025

Carol Kuhn
Planning Director
City of DeLand
120 S. Florida Ave.
DeLand, Florida 32720

Re: Project Narrative – Parking Waiver application (PW25-036)
New York Ave. Apartments

Dear Carol:

As you know, our firm represents Blue Sky Communities, LLC with their New York Ave. Apartments project. Blue Sky is seeking a parking waiver to reduce the on-site parking for the proposed 84-unit, affordable multi-family development to 94 spaces. Since the last time the required parking was considered by the City, the overall site plan and building were redesigned to increase the parking spaces provided on-site by approximately 28 spaces. The new spaces were created by shifting the design of the project's stormwater system to focus on exfiltration and vault stormwater storage that is located under the expanded parking lot. In addition, the building design was modified to increase the proposed height of the northern portion of the building to six stories in order to accommodate parking under that portion of the building. In addition, Blue Sky still proposes to obtain a non-exclusive parking license agreement with Volusia County to accommodate overnight and guest parking on the County of Volusia's property west of the project site. Blue Sky will also work with the County to provide pedestrian connectivity between the County parking lot to the north and Blue Sky's project.

Please let me know if you have any questions.

Sincerely,

Mark A. Watts, Esq.
Mark.Watts@cobbcole.com

PARKING DEMAND STUDY

For

NEW YORK AVENUE APARTMENTS

225 West New York Avenue
DeLand, Florida 32720

Prepared for:

BLUE SKY COMMUNITIES, LLC
180 Fountain Parkway N, Suite 100
St. Petersburg, Florida 33716

Prepared by:

HIGH POINT ENGINEERING, INC
5005 W. Laurel Street, Suite 201
Tampa, Florida 33607

Date: March 10, 2025

BRAULIO GRAJALES LICENSE No. 58626 STATE OF FLORIDA PROFESSIONAL ENGINEER

Digitally signed by Braulio Grajales
DN: c=US, o=HIGH POINT ENGINEERING INC, dnQualifier=A01410D0000018F9D21E3A2000B37F7, cn=Braulio Grajales
Date: 2025.03.11 16:03:45 -04'00'

PARKING DEMAND STUDY

INTRODUCTION

This report summarizes the results of a parking demand study for the New York Avenue Apartments. The proposed affordable housing development for working families is planned to be constructed on the property located at 225 West New York Avenue in DeLand, Volusia County, Florida. Based on the analysis provided herein, on average, a future resident of this development will possess less than one vehicle per bedroom. This parking demand study has been prepared as technical support for a parking waiver request to approve a total of 94 on-site surface parking spaces, for the proposed 84-dwelling unit multi-family affordable housing project. The referenced property will have full access to and from West New York Avenue through cross access with the neighboring property to the west owned by Volusia County.

BACKGROUND

The project site is located on the north side of West New York Avenue (State Road 44), just west of North Florida Avenue in Section 09, Township 17 South, Range 30 East within the incorporated area of the City of DeLand. The property is comprised of two parcels identified by the Volusia County Property Appraiser's Office with parcel identification numbers 700962000087 and 700962000090. The total site area is approximately 1.61 acres and is bounded by West New York Avenue to the south, and commercial and office properties to the north, east and west. The property was previously developed with a hotel developed in 1924, known as the Putnam Hotel. The structure was recently demolished, and the site is currently vacant and undeveloped.

The proposed New York Avenue Apartments development will consist of one (1) 6-story mid-rise podium building, including 84 dwelling units containing 44 units of 1 bedroom, 28 units of 2 bedrooms, and 12 units of 3 bedrooms for a total of 136 bedrooms (i.e., average unit mix of 1.62 bedrooms per dwelling unit), 94 surface parking spaces (i.e., 0.69 spaces per bedroom), an underground stormwater collection system, sanitary sewer system, potable water service for domestic consumption and fire protection, and Florida native drought tolerant landscape. The project will feature ten long-term restricted special need dwelling units to accommodate families transitioning from homelessness ensuring inclusivity and promoting stability for vulnerable populations. The proposed development is planned in a single phase. The setbacks, drainage, parking, and landscaping are designed to support the proposed development of the property.

The City of DeLand Land Development Code (LDC) Section 33-91 requires the following parking ratios for the multi-family land use: Studio: 1 space/unit, 1 bedroom: 1.5 spaces/unit, 2, 3, or more bedrooms: 2 spaces/unit, visitor parking: 0.5 space/unit. The City of DeLand LDC requirement for the proposed apartment building is 188 parking spaces. The proposed site layout and parking plan prepared by Madden, Moorhead & Stokes, LLC shows a total of 94 on-site parking spaces plus 48 covered bicycle parking spaces. LDC Section 33-91.03.I.3.b allows off-street parking reduction by no more than one space for each bicycle parking space, but by no more than 30 percent of the total required spaces. Based on the Code allowance, a 30 percent off-street parking reduction over 188 parking spaces equals 56 parking spaces. Consequently, when considering both vehicular and bicycle parking, the total parking supply ratio provided by the proposed New York Avenue Apartments is 1.78 parking spaces per dwelling unit, representing a deficit from the Code requirements of 38 parking spaces.

Parking ratios per unit may not accurately reflect the actual parking demand generated by a residential development. This is attributed to the fact that the relation between the number of drivers and the various dwelling unit sizes in any apartment complex cannot be adequately captured by measuring parking ratios per unit. For example, a one-bedroom dwelling might be associated with a single resident driver or a couple of drivers. In contrast, a two-bedroom dwelling or three-bedroom dwelling considers the likelihood of a larger household with one adult driver or multiple drivers and with or without teenage drivers. Therefore, a parking study aligned with the number of bedrooms provides a more accurate representation of the parking demand within a multifamily apartment development.

According to ITE Parking Generation Manual 6th Edition, it is expected that the number of bedrooms and number of residents are likely correlated to the parking demand generated by a residential site. Parking studies of multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).

The City of DeLand LDC currently does not specify parking ratios per bedroom for multi-family land use. Thus, the focus of this parking study was to determine the peak period parking demand per bedroom for an affordable housing development for families in DeLand in support of a request for a reduction in parking. The City of DeLand LDC Section 33-91.01(d) provides guidelines for parking studies when the proposed use is not listed in Section 33-91.03(f) - Minimum Off-Street Parking Requirements. The City of DeLand LDC recommends using estimates of parking requirements based on studies from ULI, ITE, or the Traffic Institute, and based on data collected from uses or combinations of uses which are the same or comparable to the proposed use. Density, scale, bulk, area, type of activity, and location shall determine comparability.

There are two affordable housing projects with similar demographics near the project site. These projects were selected due to their geographic location and similarity to the proposed development to estimate future parking demand for the proposed New York Avenue Apartments development.

See Attached:
- *Site Location (Exhibit A)*
- *Proposed Parking Layout (Exhibit B)*

DATA COLLECTION AND EXISTING CONDITIONS

Parking observations were undertaken at two affordable housing apartment complexes in the City of DeLand: (1) The Pines and (2) Taylor Place. The Pines is located at 310 W. New Hampshire Avenue in DeLand while Taylor Place is located at 1575 S. Woodland Boulevard in DeLand. These two existing developments were used in this parking demand study due to similarities in the geographic area, land use, number of units, and number of bedrooms.

Data Collection at The Pines - DeLand

The Pines is an affordable housing community located on the south side of New Hampshire Avenue between Delaware Avenue and Clara Avenue, within the incorporated area of the City of DeLand. The Pines development is located approximately 1.6 miles south of the proposed New York Avenue Apartments development. The Pines is comprised of six (6) 3-story garden style buildings including 100 dwelling units distributed in 24 units of 1 bedroom, 32 units of 2 bedrooms, 24 units of 3 bedrooms, and 20 units of 4 bedrooms for a total of 240 bedrooms (i.e., average unit mix of 2.40 bedrooms per dwelling unit). At the time of this study, the apartment complex had an occupancy level of 100%. The Pines has a surface parking lot with a total of 241 spaces (i.e., 1.00 parking space per bedroom). Parking observations at this location took place on Monday November 13, 2023, from 4:00 am to 9:00 am and from 7:00 pm to 12:00 am. The observations consisted of identifying the number of parking spaces occupied at 5-minute intervals. The weather conditions during the observations were cloudy with temperatures between 60°F and 70°F.

The observations indicate the highest peak period parking demand ratio occurred between 8:00 pm and 9:00 pm. At 8:40 pm, 108 parking spaces of the 241 parking spaces were occupied and 133 parking spaces were available. The computed Peak Parking Demand Ratio vs Bedrooms was 0.45 spaces per bedroom. At 4:00 am, the apartment complex exhibited a parking demand ratio of 0.44 spaces per bedroom and at 7:00 pm a ratio of 0.38 spaces per bedroom. Furthermore, the observation taken at midnight revealed that The Pines had a parking demand ratio of 0.44 spaces per bedroom.

See Attached:

- *Peak Period Parking Demand Summary Tables for Observation Taken on* Monday November 13, 2023 *(Exhibit C)*
- *Peak Period Parking Demand Ratio vs Bedrooms Graphs for Observation Taken on* Monday November 13, 2023 *(Exhibit D)*

Data Collection at Taylor Place – DeLand

Taylor Place is an affordable housing community located on the east side of Woodland Boulevard (S.R. 15 / US Highway 17) between Chipola Avenue and Taylor Road, within the incorporated area of the City of DeLand. Taylor Place development is located approximately 2.2 miles south of the proposed New York Avenue Apartments development. Taylor Place is comprised of five (5) 3-story garden style buildings including 106 dwelling units distributed in 4 units of 1 bedroom, 12 units of 2 bedrooms, 71 units of 3 bedrooms, and 19 units of 4 bedrooms for a total of 317 bedrooms (i.e., average unit mix of 2.99 bedrooms per dwelling unit). At the time of this study, the apartment complex had an occupancy level of 100%. Taylor Place has a surface parking lot with a total of 263 spaces (i.e., 0.83 parking spaces per bedroom). Parking observations at this location took place on Tuesday November 14, 2023, from 4:00 am to 9:00 am and from 7:00 pm to 12:00 am. The observations consisted of identifying the number of parking spaces occupied at 5-minute intervals. The weather conditions were cloudy with temperatures between 60°F and 70°F.

The observations indicate the highest peak period parking demand ratio occurred between 4:00 am and 5:00 am. At 4:00 am, 147 parking spaces of the 263 parking spaces were occupied and 116 parking spaces available. The computed Peak Parking Demand Ratio vs Bedrooms was 0.46 spaces per bedroom. At 9:00 am, the apartment complex exhibited a parking demand ratio

of 0.15 spaces per bedroom and at 7:00 pm a ratio of 0.27 spaces per bedroom. Additionally, the observation taken at midnight revealed that Taylor Place had a parking demand ratio of 0.46 spaces per bedroom.

See Attached:

- *Peak Period Parking Demand Summary Tables for Observation Taken on* Tuesday November 14, 2023 *(Exhibit E)*
- *Peak Period Parking Demand Ratio vs Bedrooms Graphs for Observation Taken on* Tuesday November 14, 2023 *(Exhibit F)*

PARKING DEMAND ANALYSIS

According to Blue Sky Communities, LLC, the developer of the New York Avenue Apartments, the proposed development is an affordable housing community for families that will consist of 84 dwelling units distributed in one (1) 6-story mid-rise podium building with a total of 136 bedrooms.

Exhibits C and E summarize the Peak Parking Demand Ratio vs Bedrooms measured at the two apartment complexes in the City of DeLand. The Peak Parking Demand Ratio vs Bedrooms measured during the two days of observations was very similar to the proposed onsite parking spaces per bedroom. The Peak Parking Demand Ratio vs Bedrooms measured at the two apartment complexes range between 0.45 and 0.46 spaces per bedroom.

The two apartment complexes serve the same geographic area (i.e., urban setting) as the New York Avenue Apartments. The land use, number of units, mix of units, number of bedrooms, and demographic group (i.e., families) for the two existing apartment complexes are comparable with the same features as the New York Avenue Apartments. All sites are surrounded by the same collector/arterial road (i.e., State Road 15 / US Highway 17) and in proximity of bus transit and public transportation routes. Because of these similarities, the Peak Parking Demand Ratios observed at the two existing apartment complexes are considered adequate technical support to estimate the future peak parking demand of the New York Avenue Apartments.

Further, the proposed residential unit mix for the New York Avenue Apartments is 52% of 1 bedroom, 33% of 2 bedrooms, and 15% of 3 bedrooms. The Pines has a unit mix of 24% of 1 bedroom, 32% of 2 bedrooms, 24% of 3 bedrooms, and 20% of 4 bedrooms. Taylor Place has a residential unit mix of 4% of 1 bedroom, 11% of 2 bedrooms, 67% of 3 bedrooms, and 18% of 4 bedrooms. Accordingly, the New York Avenue Apartments will feature a unit mix of 2 bedrooms and 3 bedrooms aligning with the unit mix in The Pines.

In terms of average dwelling unit size, the New York Avenue Apartments are projected to have 1.62 bedrooms per unit (i.e., 136 bedrooms / 84 dwelling units). This average unit size is 2/3 of the average of 2.40 bedrooms per unit (i.e., 240 bedrooms / 100 dwelling units) for The Pines. Moreover, Taylor Place has an average dwelling unit size of 2.99 bedrooms per unit (i.e., 317 bedrooms / 106 dwelling units), making the average unit size at New York Avenue Apartments half that of Taylor Place.

Site Name	The Pines	Taylor Place
Project Size	**100 Dwelling Units**	**106 Dwelling Units**
Occupancy	**100%**	**100%**
Average Unit Mix	**2.40 Bedrooms per Unit**	**2.99 Bedrooms per Unit**
Parking Facility	**77 Spaces**	**146 Spaces**
Parking Supply	**1.00 Spaces per Bedroom**	**0.83 Spaces per Bedroom**
Observation Day	**Monday (11/13/23)**	**Tuesday (11/14/23)**
4:00 am - 5:00 am	0.44	**0.46**
5:00 am - 6:00 am	0.45	0.45
6:00 am - 7:00 am	0.37	0.41
7:00 am - 8:00 am	0.33	0.33
8:00 am - 9:00 am	0.26	0.22
7:00 pm - 8:00 pm	0.38	0.36
8:00 pm - 9:00 pm	**0.45**	0.38
9:00 pm - 10:00 pm	0.42	0.46
10:00 pm - 11:00 pm	0.44	0.46
11:00 pm - 12:00 pm	0.44	**0.46**
Peak	**0.45**	**0.46**
Mean	**0.40**	**0.40**
Median	**0.43**	**0.43**
Mode	**0.44**	**0.46**
Range	**0.26 – 0.45**	**0.22 – 0.46**

Notes: Ratios rounded to two decimals.
Source: High Point Engineering, November 2023

The table above shows a statistical analysis of the parking demand observations at the two existing apartment complexes in DeLand based on vehicles per bedroom.

Despite the different average dwelling unit sizes at the two study sites, the observed peak parking demand ratios are nearly identical. This suggests that the size of the average dwelling unit does not impact the parking demand per bedroom ratio. In other words, the observations from the two study sites indicate that there is no discernible correlation between the average dwelling unit size and the parking demand per bedroom in DeLand.

Thus, considering that the parking demand per bedroom ratio is not impacted by the average dwelling unit size in DeLand, as well as the relatively short distance between the two study sites and the New York Avenue Apartments site, the observed Peak Parking Demand Ratio vs Bedroom in both, The Pines and Taylor Place, can be effectively extrapolated to forecast the future peak parking demand for the New York Apartments.

However, since the unit mix in New York Avenue Apartments is closer to the unit mix in The Pines, the maximum observed Peak Parking Demand Ratio vs Bedrooms at The Pines is used to estimate the future peak parking demand for the New York Avenue Apartments. Applying The Pines Peak Parking Demand Ratio to the New York Avenue Apartments yields:

0.45 spaces per bedroom x 136 bedrooms = 61.2 spaces.

Rounding to the nearest integer, the estimated parking demand for the New York Avenue Apartments is 61 spaces.

The above computed peak parking demand using the extrapolated Peak Parking Demand ratio from The Pines is equal to the proposed parking supply. The probability that the expected peak parking demand for the New York Avenue Apartments can be accommodated by 94 parking spaces is acceptable.

Furthermore, Average Peak Period Parking Demand data from Institute of Transportation Engineers (ITE) Parking Generation, 6th Edition was also used to estimate the future parking demand for the New York Avenue Apartments as well as to compare the ITE published ratios with the results obtained from the observations taken at the two study sites.

The Institute of Transportation Engineers (ITE) Parking Generation, 6th Edition, offers a land use for affordable housing which is defined as all multifamily housing that is rented at below market rate to households that includes at least one employed member. Eligibility to live in affordable housing can be a function of limited household income and resident age (i.e., senior housing). For most of the study sites in the ITE Parking Generation, 6th Edition, 100 percent of the dwelling units are considered affordable. The ITE Parking Generation, 6th Edition does not provide information for Average Peak Period Parking Demand vs. Dwelling Unit Size (i.e., number of units by number of bedrooms per site) or separate parking rates for percentage of visitor parking.

The Average Peak Period Parking Demand Ratio to Bedrooms recommended by the ITE Parking Generation, 6th Edition, Affordable Housing – Income Limits subset, for estimating the off-street parking per bedroom required for workforce housing are as follows:

Weekday (Monday - Friday) in General Urban / Suburban Location:

Peak Period Parking Demand vs Bedrooms: 0.55 parked vehicles
Range of Rates: 0.29 – 0.85
Standard Deviation: 0.14
Number of Studies: 10
Average number of bedrooms: 101

Saturday in General Urban / Suburban Areas:

Peak Period Parking Demand vs Bedrooms: 0.27 parked vehicles
Range of Rates: 0.27 – 0.27
Standard Deviation: N/A
Number of Studies: 1
Average number of bedrooms: 44

Applying the Average Peak Period Parking Demand Ratio to Bedrooms recommended by the ITE Parking Generation, 6th Edition, Affordable Housing – Income Limits to the New York Avenue Apartments yields:

0.55 spaces per bedroom x 136 bedrooms = 74.8 spaces.

Rounding up, the estimated parking demand for the New York Avenue Apartments is 75 spaces.

The above ITE Parking Generation, 6th Edition Peak Period Parking Demand vs Bedrooms is less than the proposed parking supply rate of 0.69 spaces per bedroom. Notably, the sites included the ITE Parking Generation Manual, 6th Edition spanned locations in Alabama, California, Connecticut, District of Columbia, Maryland, Massachusetts, New Jersey, and Oregon, encompassing survey periods in the 1990s and the 2010s. It's important to highlight that the study in ITE Parking Generation Manual, 6th Edition did not include sites in Florida. Additionally, the ITE Parking Generation Manual, 6th Edition, for Land Use 223 - Affordable Housing – Income Limits, does not provide a 95% Confidence Interval due to the limited number of studies available for inclusion.

The following table taken from ITE Parking Generation Manual, 6th Edition, presents a Time-of-Day distribution of parking demand on a weekday in a general urban/suburban setting for income limits land use category:

Percent of Weekday Peak Parking Demand	
Hour Beginning	**Income Limits**
4:00 a.m.	-
5:00 a.m.	100%
6:00 a.m.	94%
7:00 a.m.	85%
8:00 a.m.	77%
9:00 a.m.	73%
10:00 a.m.	71%
11:00 a.m.	-
5:00 p.m.	-
6:00 p.m.	79%
7:00 p.m.	83%
8:00 p.m.	90%
9:00 p.m.	93%
10:00 p.m.	97%
11:00 p.m.	-

See Attached:

- *Institute of Transportation Engineers (ITE) Parking Generation, 6th Edition Data Summary for Land Use: 223 Affordable Housing – Income Limits (Exhibit I)*

In addition, the following unique circumstances apply to the New York Avenue Apartments site:

- Volusia County has agreed to grant residents of New York Avenue Apartments a revocable license and right to park motor vehicles owned or leased by such resident upon the adjacent County Property. Residents of New York Avenue Apartments may not park on the County Property from 8 a.m. to 5 p.m., Monday through Friday. Overnight and over the weekend parking outside the specified restricted hours will be allowed to all residents, thus compensating for the difference of parking spaces required per Code.

- The project will include 10 long-term restricted special need dwelling units to accommodate families transitioning from homelessness, and these families will almost certainly not own a car. Consequently, it is anticipated that the future residents may not fully occupy the proposed 94 parking spaces.

- The project is being developed with unassigned parking. The entire parking facility will be accessible to all future residents based on the order of their arrival.

- The project site is situated in downtown DeLand, offering all future residents the opportunity to work within walking or biking distance.

- Future residents will have the opportunity to use public transit as an alternative method of transportation. Votran Route 20 runs north-south along Woodland Boulevard, with convenient bus stops located approximately a 5-minute walk to the east of the project site.

- The project will be designed with clearly identified 4 exterior uncovered bicycle parking spaces, 8 exterior covered bicycle parking spaces placed adjacent to the building, and 40 covered and secured interior bicycle parking spaces, exceeding the requirements outlined by the City of DeLand LDC.

- The project site is situated in downtown DeLand, offering all future residents superior walkability typical of an urban area.

- A minimum of four on-street parking spaces along the north side of New York Avenue in front of the property will be available for short-term use.

CONCLUSION

The Peak Parking Demand ratio on a weekday for Affordable Housing – Limited Income in general urban / suburban setting suggested by the ITE Parking Generation, 6th Edition slightly exceeds the Peak Parking Demand ratios measured at the two apartment complexes in the City of DeLand. The two measured Peak Parking Demand ratios in DeLand are within the same order of magnitude indicating there is not a significant difference between the two apartment complexes.

The Peak Parking Demand ratios resulting from observations at the two affordable housing developments in the City of DeLand are considered better suited for projecting the future New York Avenue Apartments Peak Parking Demand compared to the ratio suggested by the ITE Parking Generation, 6th Edition, due to their proximity to the project site.

The planned 94 parking spaces equivalent to 0.69 spaces per bedroom for the proposed 84 dwelling units are anticipated to meet the future parking demand for the New York Avenue Apartments during all periods.

If you have any questions regarding the information contained herein, please do not hesitate to contact me.

Sincerely,
HIGH POINT ENGINEERING, INC.



Braulio Grajales, P.E.
Principal Engineer

EXHIBITS

Exhibit A **Site Location**

Exhibit B **Proposed New York Avenue Apartments Site Layout & Parking Plan**

Exhibit C **Peak Period Parking Demand Summary Table for The Pines on Monday, November 13, 2023, Observations**

Exhibit D **Peak Period Parking Demand Ratio vs Bedrooms Graph for The Pines on Monday, November 13, 2023, Observations**

Exhibit E **Peak Period Parking Demand Summary Table for Taylor Place on Tuesday, November 14, 2023, Observations**

Exhibit F **Peak Period Parking Demand Ratio vs Bedrooms Graph for Taylor Place on Tuesday, November 14, 2023, Observations**

Exhibit G **Institute of Transportation Engineers (ITE) Parking Generation, 6th Edition Data Summary for Land Use: 223 Affordable Housing – Income Limits**

EXHIBIT A

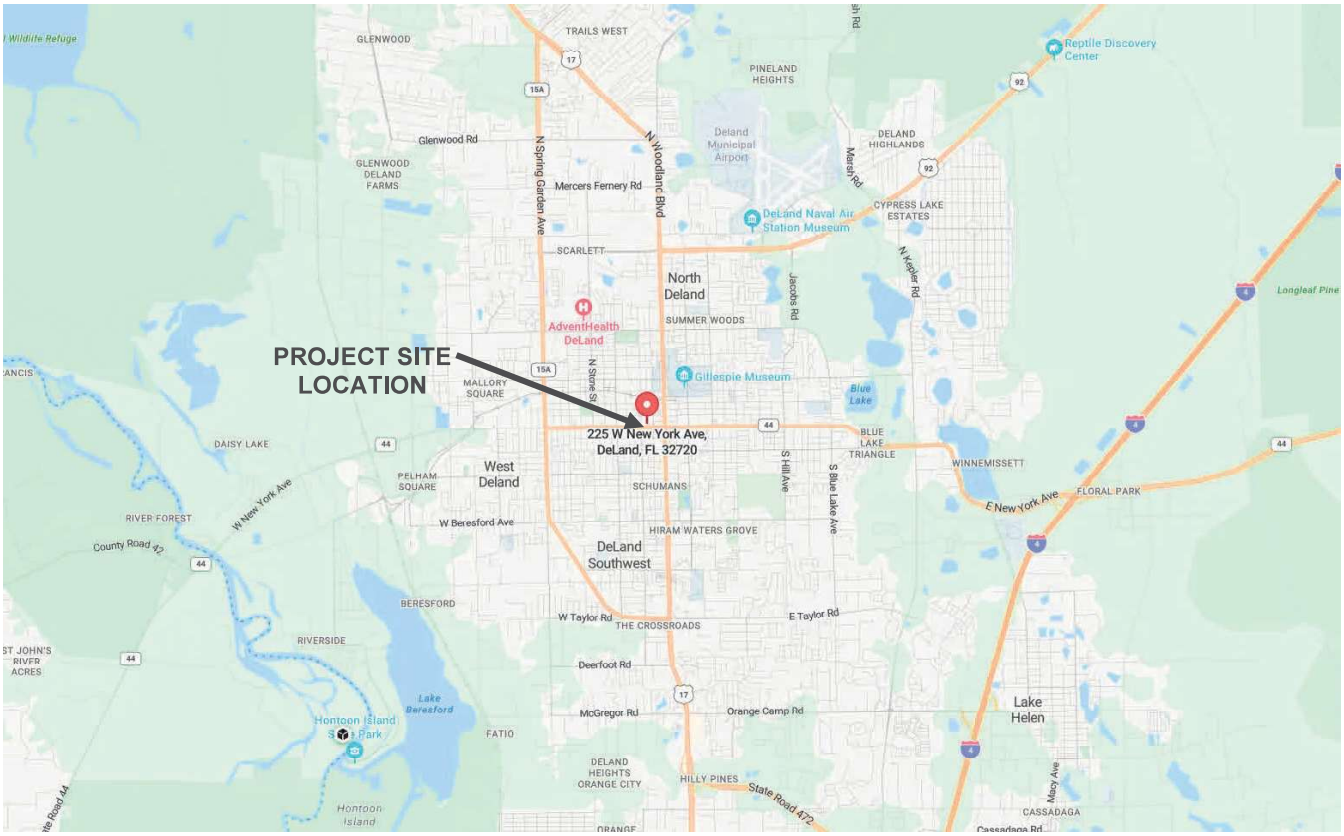
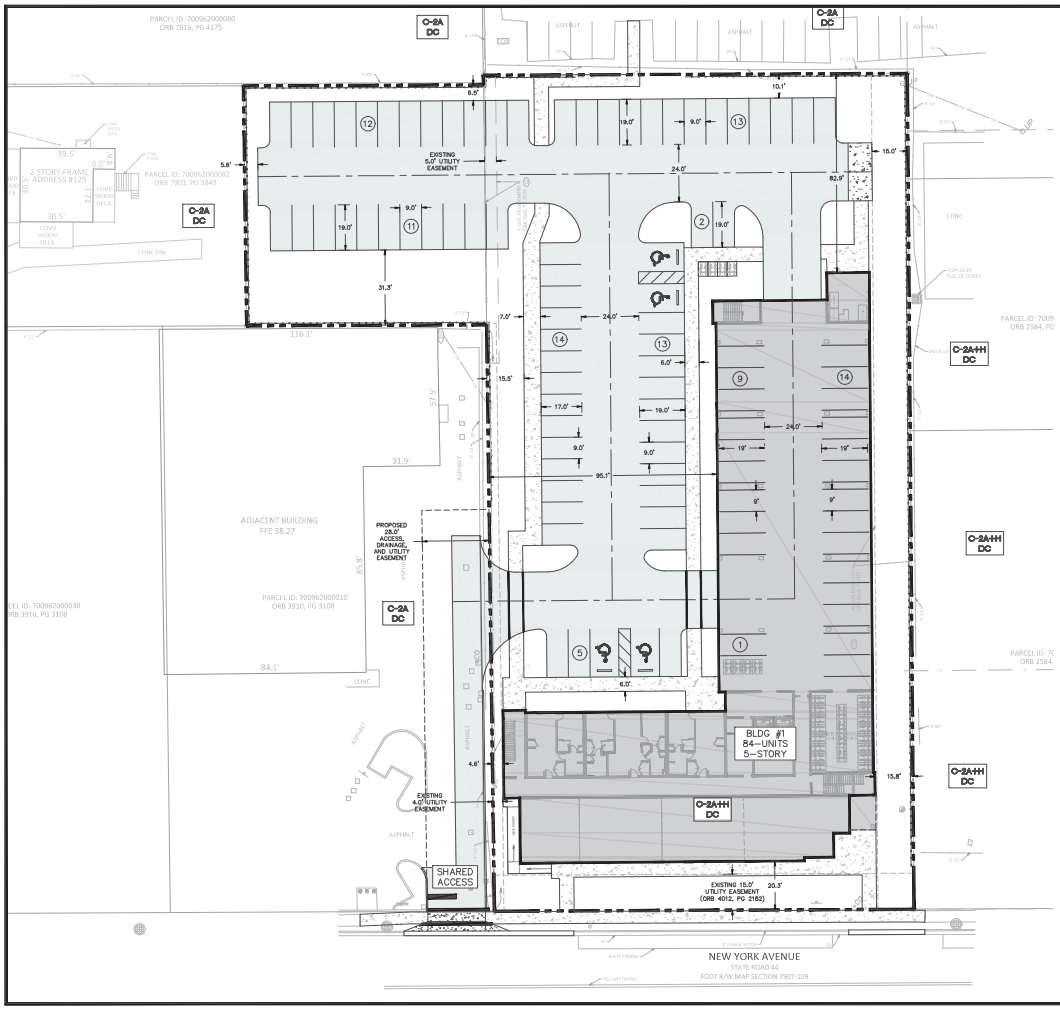

PROJECT SITE LOCATION
225 W New York Ave, DeLand, FL 32720
GLENWOOD
TRAILS WEST
PINELAND HEIGHTS
Reptile Discovery Center
Glenwood Rd
GLENWOOD DELAND FARMS
N Spring Garden Ave
N Woodland Blvd
Deland Municipal Airport
DELAND HIGHLANDS
Marsh Rd
Mercers Fernery Rd
DeLand Naval Air Station Museum
CYPRESS LAKE ESTATES
SCARLETT
North Deland
N Kepler Rd
Jacobs Rd
Longleaf Pine
AdventHealth DeLand
SUMMER WOODS
MALLORY SQUARE
N Stone St
Gillespie Museum
Blue Lake
DAISY LAKE
BLUE LAKE TRIANGLE
WINNEMISSETT
PELHAM SQUARE
West Deland
SCHUMANS
S Hill Ave
S Blue Lake Ave
FLORAL PARK
E New York Ave
W New York Ave
RIVER FOREST
County Road 42
W Beresford Ave
HIRAM WATERS GROVE
DeLand Southwest
BERESFORD
W Taylor Rd
THE CROSSROADS
E Taylor Rd
RIVERSIDE
ST JOHN'S RIVER ACRES
Deerfoot Rd
Lake Beresford
Hontoon Island State Park
McGregor Rd
Orange Camp Rd
Lake Helen
FATIO
DELAND HEIGHTS ORANGE CITY
HILLY PINES
State Road 472
Macy Ave
CASSADAGA
Cassadaga Rd
Hontoon Island

EXHIBIT B



LEGEND

TC — EXISTING ZONING

TCD — EXISTING FUTURE LAND USE

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

SITE DATA:

1.	TOTAL PROPERTY AREA:	1.63 ACRES
2.	PARCEL ID'S:	700962000090 & 700962000087
3.	JURISDICTION:	CITY OF DELAND
4.	EXISTING FUTURE LAND USE:	DOWNTOWN COMMERCIAL
5.	EXISTING ZONING:	C-2A&H
6.	BUFFER REQUIREMENTS:	NONE
7.	PROPOSED USE:	MULTI-FAMILY
8.	TOTAL DWELLING UNITS (DU):	84 UNITS
9.	UNIT MIX: 1 BEDROOM = 44 UNITS 2 BEDROOM = 28 UNITS 3 BEDROOM = 12 UNITS	
10.	OPEN SPACE REQUIRED PROVIDED	 NONE 0.47 AC. (28.8%)
11.	MAX. IMPERVIOUS SURFACE RATIO REQUIRED PROVIDED	 NONE 1.16 AC. (71.2%)
12.	IMPERVIOUS AREA: TOTAL BUILDINGS: TOTAL SIDEWALK, PAVEMENT, MISC. CONCRETE: TOTAL IMPERVIOUS AREA: TOTAL PERVIOUS AREA: TOTAL AREA:	 0.47 AC (28.8%) 0.69 AC (42.3%) 1.16 AC (71.2%) 0.47 AC (28.8%) 1.63 AC (100.00%)
13.	MAX. BUILDING HEIGHT	80 FT
14.	BUILDING SETBACKS:	NONE
15.	PARKING: A) REQUIRED: APARTMENTS: 1 - BEDROOM - 1.5 SP./UNIT X 44 = 2+ BEDROOMS - 2 SP./UNIT X 40 = VISITOR PARKING - 0.5 SP./UNIT X 84 = SUBTOTAL =	 66 SPACES 80 SPACES 42 SPACES 188 SPACES
	B) PROVIDED: APARTMENTS: REGULAR (9'x19'/20') = GARAGE (9'x18') = ACCESSIBLE (12'x20') = SUBTOTAL =	 66 SPACES 24 SPACES 4 SPACES 94 SPACES
	*19' DEPTH TOTAL, 17' PAVED W/2' OVERHANG. OVERHANG IS NOT PART OF A LANDSCAPE AREA	
16.	BICYCLE PARKING: A) REQUIRED: 1/EVERY 4 DWELLING UNITS = 84/4 = TOTAL =	 21 SPACES 21 SPACES
	B) PROVIDED: EXTERIOR (4'x6') = INTERIOR STORAGE ROOMS (4'x6') = TOTAL =	 4 SPACES 48 SPACES 52 SPACES
17.	PER FEMA FIRM PANEL NO. 12127C0470H, DATED FEBURARY 19, 2014, THE ENTIRE SITE LIES WITHIN FLOOD ZONE "X" (AREAS TO BE DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN).	
18.	WATER AND SEWER ARE TO BE PROVIDED BY THE CITY OF DELAND.	
19.	ALL UTILITY LINES TO MEET CITY OF DELAND SPECIFICATIONS AND STORM SYSTEM TO MEET ALL APPLICABLE CITY OF DELAND AND ST. JOHNS RIVER WATER MANAGEMENT DISTRICT SPECIFICATIONS.	
20.	IRRIGATION ON SITE TO BE PROVIDED BY CITY POTABLE WATER.	
21.	THE SITE IS NOT LOCATED WITHIN A WELL FIELD PROTECTION ZONE.	
22.	THE SITE IS NOT LOCATED WITHIN AN AQUIFER RECHARGE AREA.	
23.	SITE TO BE DEVELOPED IN ONE PHASE	

WATER SERVICE DEMAND

LAND USE	UNIT	QTY/UNIT	$ USERS	ADD GPD	ADD GPM	MDD GPM	PHP GPM
MULTI-FAMILY RESIDENTIAL	DWELLING UNIT	350	84	29,400	20.42	40.84	81.68

SEWER SERVICE DEMAND

LAND USE	UNIT	QTY/UNIT	$ USERS	ADD GPD	ADD GPM	MDD GPM	PHP GPM
MULTI-FAMILY RESIDENTIAL	DWELLING UNIT	300	84	25,200	17.50	35.00	70.00

TRAFFIC GENERATION

ITE CODE	LAND USE	$ UNITS	DAILY RATE	DAILY TRIPS	PM PEAK HOUR RATE	PM PEAK HOUR TOTAL	PM PEAK HOUR ENTER	PM PEAK HOUR EXIT
221	MULTI-FAMILY RESIDENTIAL	84	7.42	623	0.53	45	30	15

SOILS LEGEND

SOILS LINE

SOIL NUMBER	SOIL NAME	HYDROLOGIC GROUP
61	ARTATILA-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	A
71	URBAN LAND, 0 TO 2 PERCENT SLOPES	N/A

SOURCE: USDA SOILS SURVEY, NATURAL RESOURCE CONSERVATION SERVICE — VOLUSIA COUNTY, FLORIDA 2022

MADDEN
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

SITE PLAN
FOR
NEW YORK AVE APARTMENTS
CITY OF DELAND
FLORIDA

BLUE IAN, LLC
180 FOUNTAIN PKWY N.
ST. PETERSBURG, FL 33716

ENGINEER IN CHARGE:
DAVID A. STOKES, P.E. #66527
CERTIFICATE OF AUTHORIZATION No. 35-4007733
February 20, 2025

DATE	REVISIONS
2/20/25	REVISED PER CITY 1ST RFI COMMENTS
12/19/24	REVISED PER CITY COMMENTS
11/15/24	REVISED CONCEPT

JOB #: 23201
DATE: 6/20/24
SCALE: 1"=20'
DESIGNED BY: TRE
DRAWN BY: TRE
APPROVED BY: DAS

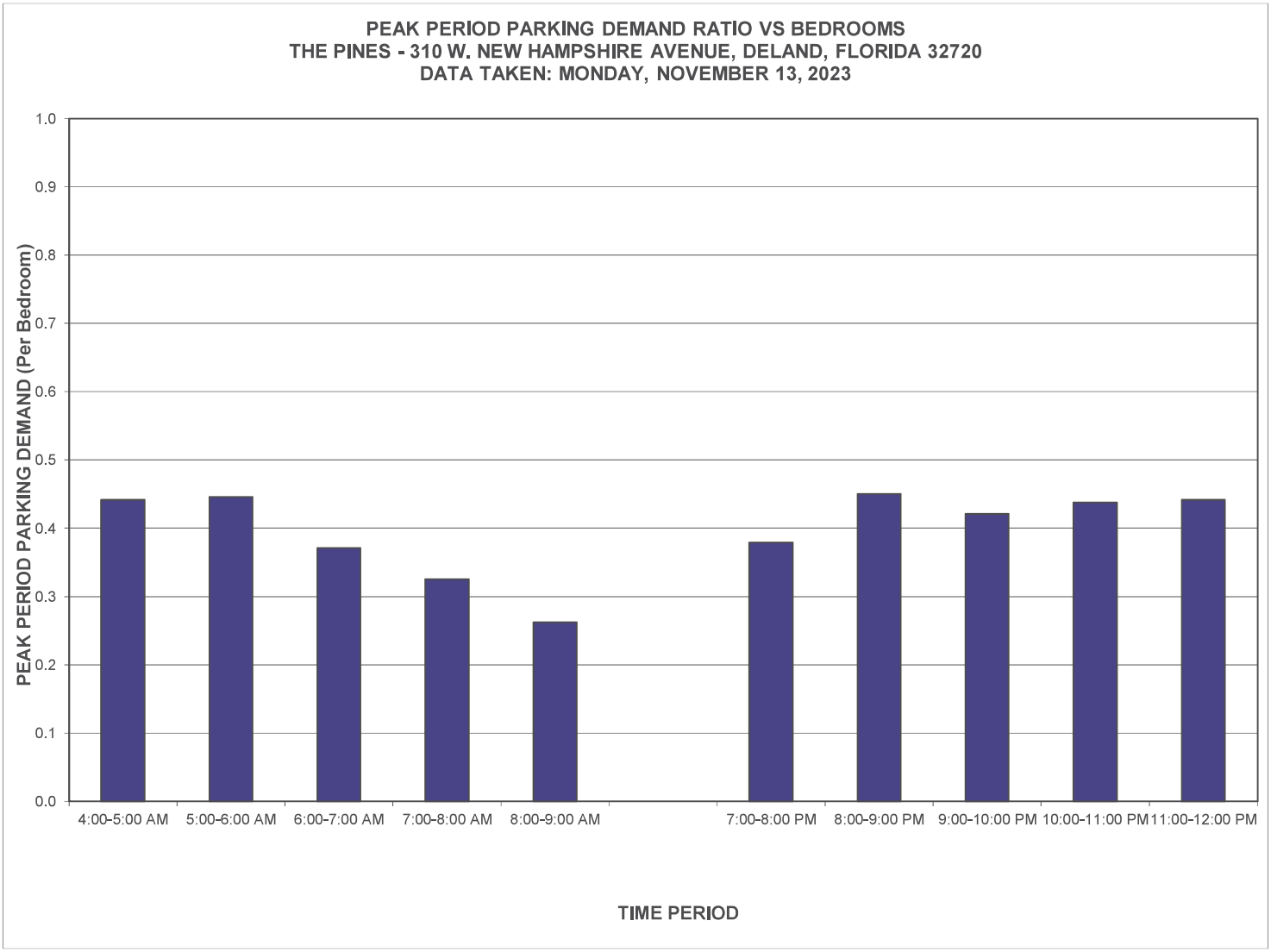
C100

EXHIBIT C

PEAK PERIOD PARKING DEMAND SUMMARY THE PINES - 310 W. NEW HAMPSHIRE AVENUE, FLORIDA 32720 TOTAL DWELLING UNITS = 100, NUMBER OF BEDROOMS = 240 , AVERAGE SIZE OF DWELLING UNITS = 2.40 BEDROOMS TOTAL PARKING SPACES AVAILABLE = 241, PARKING SUPPLY = 1.00 PER BEDROOM					
Observations Taken on Monday, November 13, 2023					
Time Period	Peak Period Parking Spaces Used	Peak Period Unused Parking Spaces	Peak Period Parking Lot Occupancy (%)	Percent of Peak Parking Demand (%)	Peak Period Parking Demand (Per Bedroom)
4:00-5:00 AM	106	135	44	98	0.44
5:00-6:00 AM	107	134	44	99	0.45
6:00-7:00 AM	89	152	37	82	0.37
7:00-8:00 AM	78	163	32	72	0.33
8:00-9:00 AM	63	178	26	58	0.26
	-	-	-	-	-
7:00-8:00 PM	91	150	38	84	0.38
8:00-9:00 PM	108	133	45	100	0.45
9:00-10:00 PM	101	140	42	94	0.42
10:00-11:00 PM	105	136	44	97	0.44
11:00-12:00 PM	106	135	44	98	0.44

THE PINES APARTMENTS			
Address: 310 W. NEW HAMPSHIRE AVENUE, DELAND, FLORIDA 32720			
Date: 11-13-23		Total Parking Spaces Available = 241	
Time Period	Peak Period Parking Spaces Used	Time Period	Peak Period Parking Spaces Used
4:00:00 AM	105	7:00:00 PM	85
4:05:00 AM	105	7:05:00 PM	91
4:10:00 AM	105	7:10:00 PM	83
4:15:00 AM	105	7:15:00 PM	84
4:20:00 AM	104	7:20:00 PM	85
4:25:00 AM	105	7:25:00 PM	84
4:30:00 AM	105	7:30:00 PM	83
4:35:00 AM	105	7:35:00 PM	83
4:40:00 AM	105	7:40:00 PM	86
4:45:00 AM	105	7:45:00 PM	87
4:50:00 AM	106	7:50:00 PM	88
4:55:00 AM	106	7:55:00 PM	91
5:00:00 AM	107	8:00:00 PM	93
5:05:00 AM	102	8:05:00 PM	94
5:10:00 AM	100	8:10:00 PM	99
5:15:00 AM	97	8:15:00 PM	102
5:20:00 AM	96	8:20:00 PM	103
5:25:00 AM	97	8:25:00 PM	101
5:30:00 AM	98	8:30:00 PM	100
5:35:00 AM	97	8:35:00 PM	106
5:40:00 AM	96	8:40:00 PM	108
5:45:00 AM	95	8:45:00 PM	108
5:50:00 AM	91	8:50:00 PM	106
5:55:00 AM	89	8:55:00 PM	101
6:00:00 AM	87	9:00:00 PM	98
6:05:00 AM	89	9:05:00 PM	99
6:10:00 AM	86	9:10:00 PM	95
6:15:00 AM	85	9:15:00 PM	96
6:20:00 AM	86	9:20:00 PM	97
6:25:00 AM	86	9:25:00 PM	94
6:30:00 AM	85	9:30:00 PM	93
6:35:00 AM	85	9:35:00 PM	97
6:40:00 AM	83	9:40:00 PM	99
6:45:00 AM	82	9:45:00 PM	100
6:50:00 AM	81	9:50:00 PM	100
6:55:00 AM	80	9:55:00 PM	101
7:00:00 AM	78	10:00:00 PM	103
7:05:00 AM	78	10:05:00 PM	105
7:10:00 AM	74	10:10:00 PM	103
7:15:00 AM	74	10:15:00 PM	101
7:20:00 AM	69	10:20:00 PM	99
7:25:00 AM	69	10:25:00 PM	98
7:30:00 AM	67	10:30:00 PM	96
7:35:00 AM	67	10:35:00 PM	98
7:40:00 AM	66	10:40:00 PM	99
7:45:00 AM	67	10:45:00 PM	104
7:50:00 AM	66	10:50:00 PM	100
7:55:00 AM	63	10:55:00 PM	100
8:00:00 AM	60	11:00:00 PM	99
8:05:00 AM	62	11:05:00 PM	95
8:10:00 AM	60	11:10:00 PM	103
8:15:00 AM	61	11:15:00 PM	97
8:20:00 AM	63	11:20:00 PM	99
8:25:00 AM	58	11:25:00 PM	103
8:30:00 AM	57	11:30:00 PM	102
8:35:00 AM	53	11:35:00 PM	100
8:40:00 AM	54	11:40:00 PM	101
8:45:00 AM	54	11:45:00 PM	103
8:50:00 AM	56	11:50:00 PM	104
8:55:00 AM	55	11:55:00 PM	106
9:00:00 AM	53	12:00:00 AM	106

EXHIBIT D


PEAK PERIOD PARKING DEMAND RATIO VS BEDROOMS
THE PINES - 310 W. NEW HAMPSHIRE AVENUE, DELAND, FLORIDA 32720
DATA TAKEN: MONDAY, NOVEMBER 13, 2023
PEAK PERIOD PARKING DEMAND (Per Bedroom)
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
4:00-5:00 AM
5:00-6:00 AM
6:00-7:00 AM
7:00-8:00 AM
8:00-9:00 AM
7:00-8:00 PM
8:00-9:00 PM
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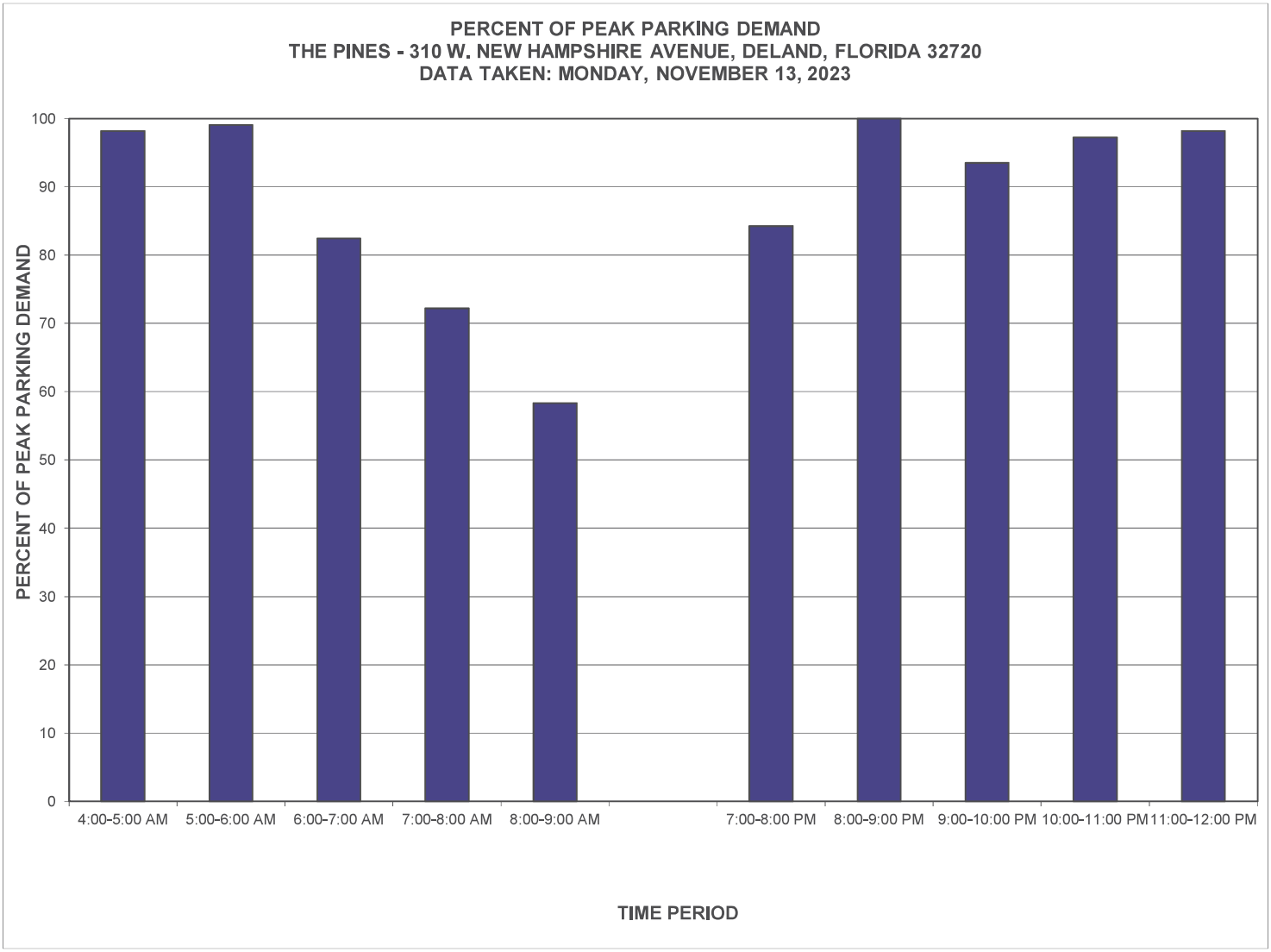
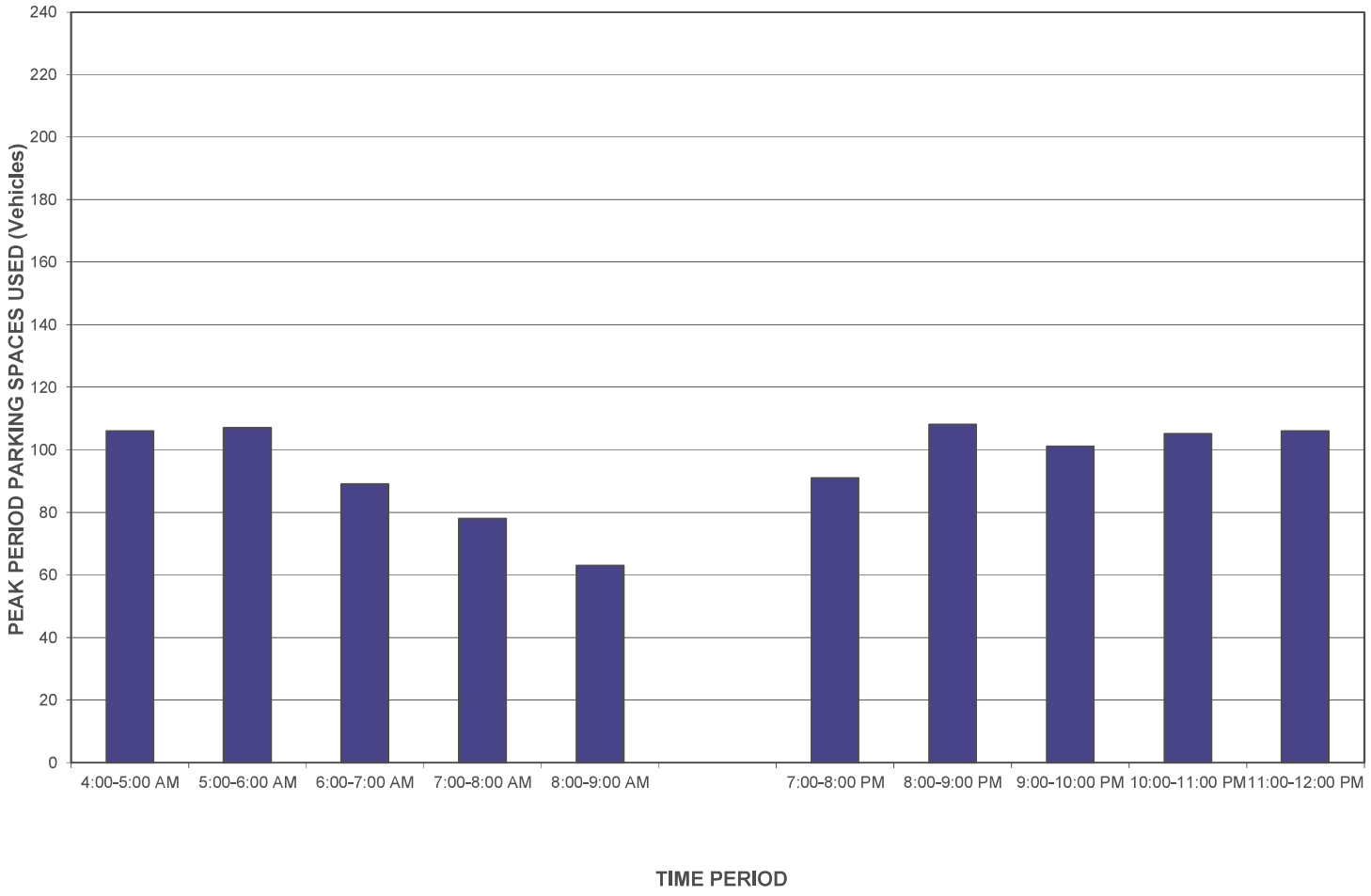
10:00-11:00 PM
11:00-12:00 PM
TIME PERIOD


PERCENT OF PEAK PARKING DEMAND
THE PINES - 310 W. NEW HAMPSHIRE AVENUE, DELAND, FLORIDA 32720
DATA TAKEN: MONDAY, NOVEMBER 13, 2023
PERCENT OF PEAK PARKING DEMAND
100
90
80
70
60
50
40
30
20
10
0
4:00-5:00 AM
5:00-6:00 AM
6:00-7:00 AM
7:00-8:00 AM
8:00-9:00 AM
7:00-8:00 PM
8:00-9:00 PM
9:00-10:00 PM
10:00-11:00 PM
11:00-12:00 PM
TIME PERIOD

PEAK PERIOD PARKING SPACES USED
THE PINES - 310 W. NEW HAMPSHIRE AVENUE, DELAND, FLORIDA 32720
DATA TAKEN: MONDAY, NOVEMBER 13, 2023



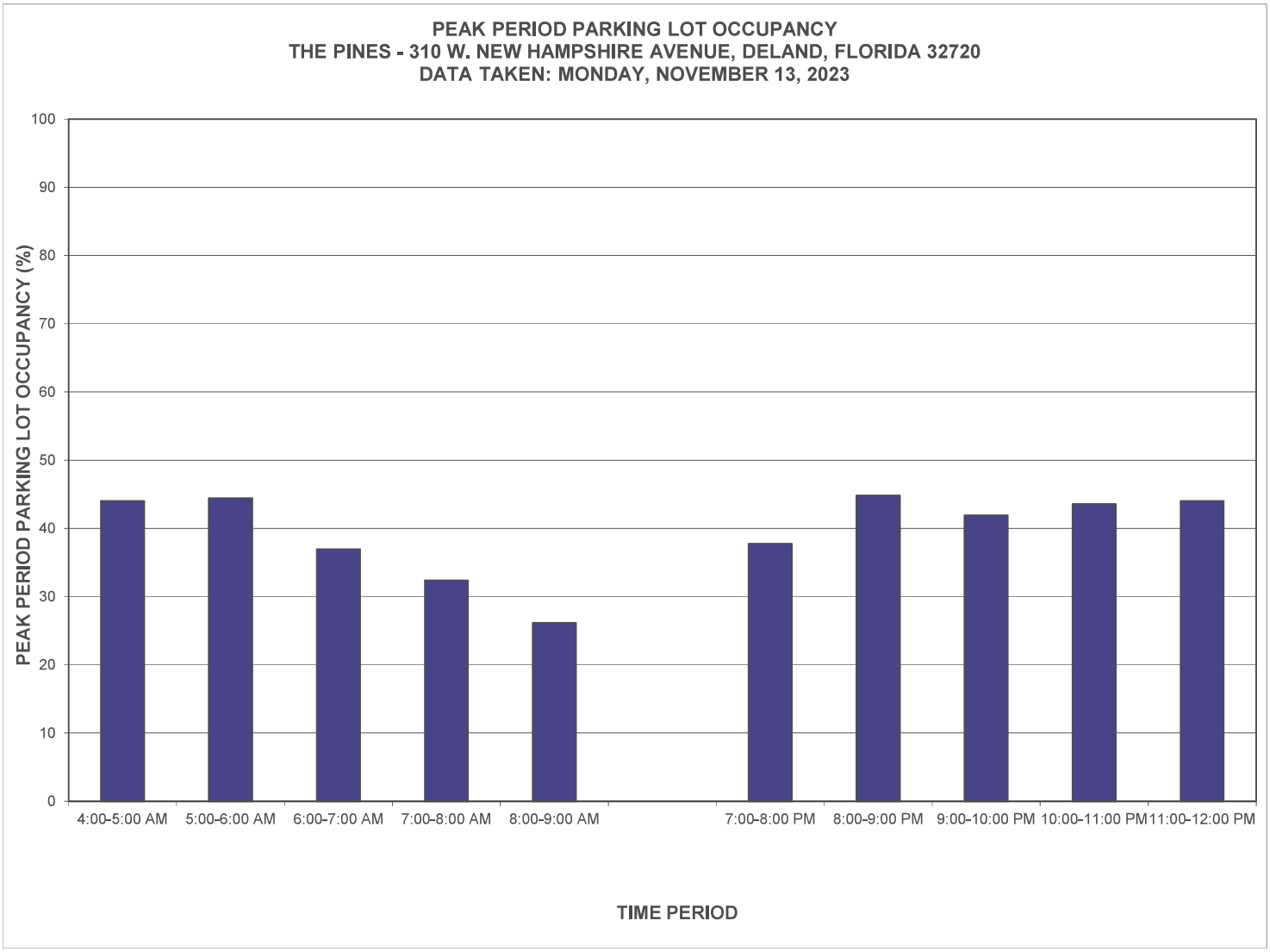

PEAK PERIOD PARKING LOT OCCUPANCY
THE PINES - 310 W. NEW HAMPSHIRE AVENUE, DELAND, FLORIDA 32720
DATA TAKEN: MONDAY, NOVEMBER 13, 2023
PEAK PERIOD PARKING LOT OCCUPANCY (%)
100
90
80
70
60
50
40
30
20
10
0
4:00-5:00 AM
5:00-6:00 AM
6:00-7:00 AM
7:00-8:00 AM
8:00-9:00 AM
7:00-8:00 PM
8:00-9:00 PM
9:00-10:00 PM
10:00-11:00 PM
11:00-12:00 PM
TIME PERIOD

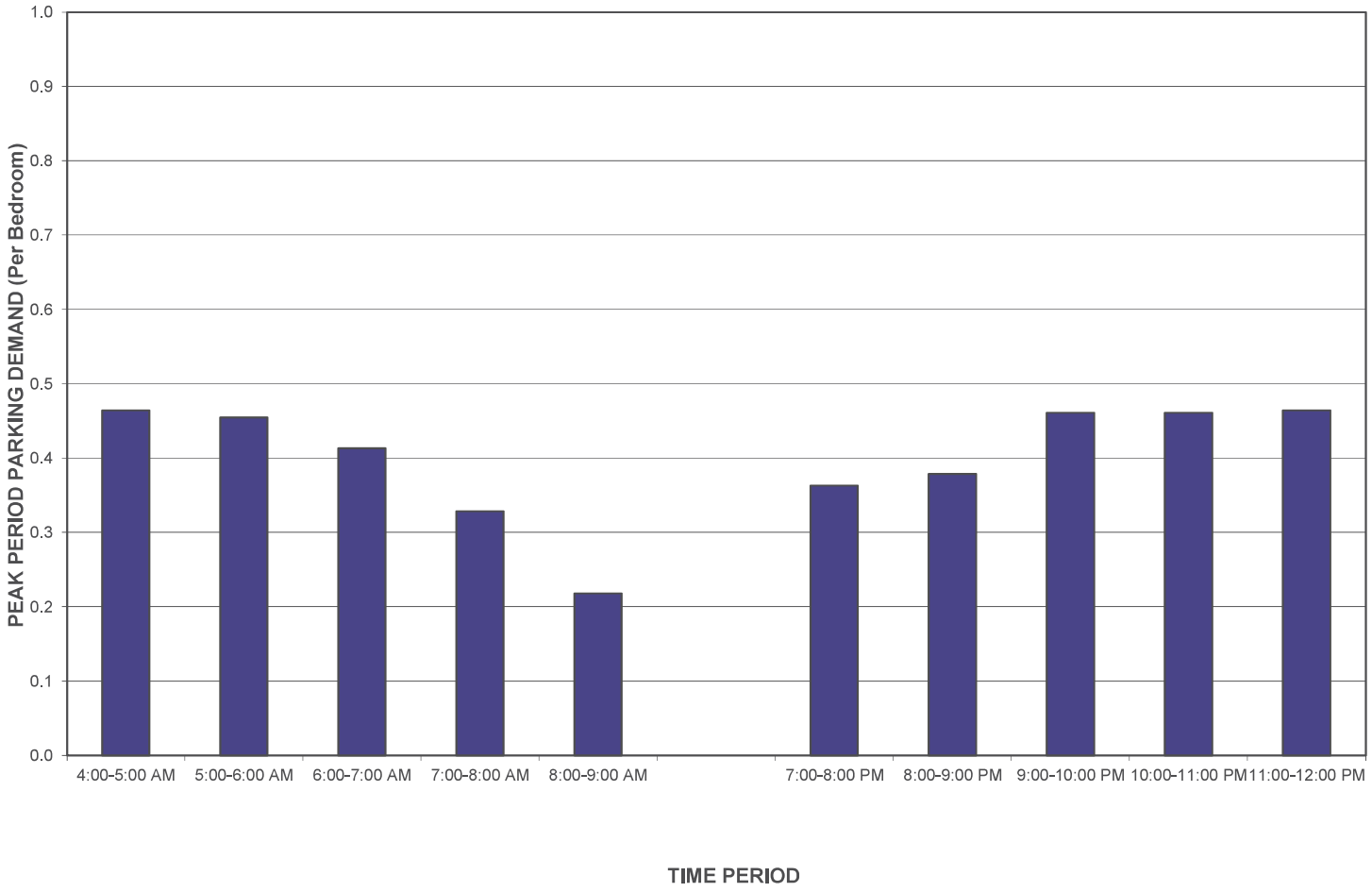
EXHIBIT E

PEAK PERIOD PARKING DEMAND SUMMARY TAYLOR PLACE - 1575 S. WOODLAND BOULEVARD, DELAND, FLORIDA 32720 TOTAL DWELLING UNITS = 106, NUMBER OF BEDROOMS = 317, AVERAGE SIZE OF DWELLING UNITS = 2.99 BEDROOMS TOTAL PARKING SPACES AVAILABLE = 263, PARKING SUPPLY = 0.83 PER BEDROOM					
Observations Taken on Tuesday, November 14, 2023					
Time Period	Peak Period Parking Spaces Used	Peak Period Unused Parking Spaces	Peak Period Parking Lot Occupancy (%)	Percent of Peak Parking Demand (%)	Peak Period Parking Demand (Per Bedroom)
4:00-5:00 AM	147	116	56	100	0.46
5:00-6:00 AM	144	119	55	98	0.45
6:00-7:00 AM	131	132	50	89	0.41
7:00-8:00 AM	104	159	40	71	0.33
8:00-9:00 AM	69	194	26	47	0.22
	-	-	-	-	-
7:00-8:00 PM	115	148	44	78	0.36
8:00-9:00 PM	120	143	46	82	0.38
9:00-10:00 PM	146	117	56	99	0.46
10:00-11:00 PM	146	117	56	99	0.46
11:00-12:00 PM	147	116	56	100	0.46

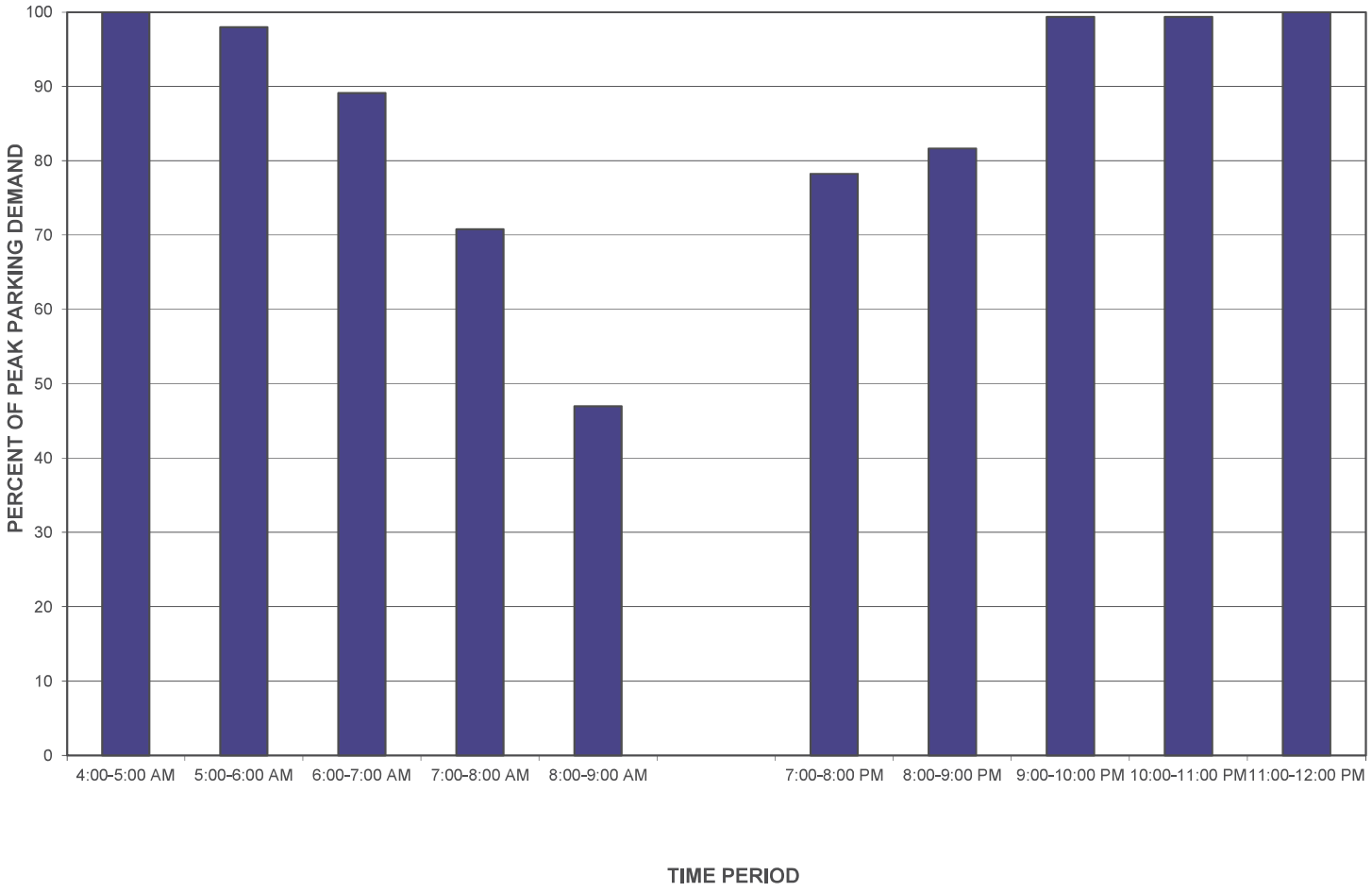
TAYLOR PLACE APARTMENTS			
Address: 1575 S. WOODLAND BOULEVARD, DELAND, FLORIDA 32720			
Date: 11-14-23		Total Parking Spaces Available = 263	
Time Period	Peak Period Parking Spaces Used	Time Period	Peak Period Parking Spaces Used
4:00:00 AM	147	7:00:00 PM	85
4:05:00 AM	147	7:05:00 PM	83
4:10:00 AM	147	7:10:00 PM	87
4:15:00 AM	147	7:15:00 PM	92
4:20:00 AM	147	7:20:00 PM	96
4:25:00 AM	147	7:25:00 PM	97
4:30:00 AM	145	7:30:00 PM	98
4:35:00 AM	145	7:35:00 PM	99
4:40:00 AM	144	7:40:00 PM	101
4:45:00 AM	144	7:45:00 PM	105
4:50:00 AM	144	7:50:00 PM	109
4:55:00 AM	145	7:55:00 PM	115
5:00:00 AM	144	8:00:00 PM	108
5:05:00 AM	143	8:05:00 PM	110
5:10:00 AM	143	8:10:00 PM	113
5:15:00 AM	143	8:15:00 PM	113
5:20:00 AM	142	8:20:00 PM	116
5:25:00 AM	141	8:25:00 PM	120
5:30:00 AM	140	8:30:00 PM	118
5:35:00 AM	138	8:35:00 PM	118
5:40:00 AM	137	8:40:00 PM	118
5:45:00 AM	136	8:45:00 PM	120
5:50:00 AM	134	8:50:00 PM	117
5:55:00 AM	133	8:55:00 PM	117
6:00:00 AM	131	9:00:00 PM	115
6:05:00 AM	128	9:05:00 PM	119
6:10:00 AM	128	9:10:00 PM	120
6:15:00 AM	126	9:15:00 PM	123
6:20:00 AM	125	9:20:00 PM	127
6:25:00 AM	124	9:25:00 PM	131
6:30:00 AM	125	9:30:00 PM	133
6:35:00 AM	119	9:35:00 PM	134
6:40:00 AM	115	9:40:00 PM	138
6:45:00 AM	117	9:45:00 PM	137
6:50:00 AM	111	9:50:00 PM	143
6:55:00 AM	106	9:55:00 PM	146
7:00:00 AM	104	10:00:00 PM	145
7:05:00 AM	101	10:05:00 PM	142
7:10:00 AM	98	10:10:00 PM	140
7:15:00 AM	94	10:15:00 PM	144
7:20:00 AM	91	10:20:00 PM	145
7:25:00 AM	89	10:25:00 PM	143
7:30:00 AM	87	10:30:00 PM	144
7:35:00 AM	84	10:35:00 PM	146
7:40:00 AM	78	10:40:00 PM	145
7:45:00 AM	73	10:45:00 PM	145
7:50:00 AM	71	10:50:00 PM	146
7:55:00 AM	70	10:55:00 PM	143
8:00:00 AM	69	11:00:00 PM	145
8:05:00 AM	67	11:05:00 PM	145
8:10:00 AM	65	11:10:00 PM	146
8:15:00 AM	66	11:15:00 PM	147
8:20:00 AM	66	11:20:00 PM	147
8:25:00 AM	66	11:25:00 PM	142
8:30:00 AM	66	11:30:00 PM	143
8:35:00 AM	60	11:35:00 PM	145
8:40:00 AM	57	11:40:00 PM	145
8:45:00 AM	57	11:45:00 PM	146
8:50:00 AM	51	11:50:00 PM	147
8:55:00 AM	49	11:55:00 PM	147
9:00:00 AM	49	12:00:00 AM	147

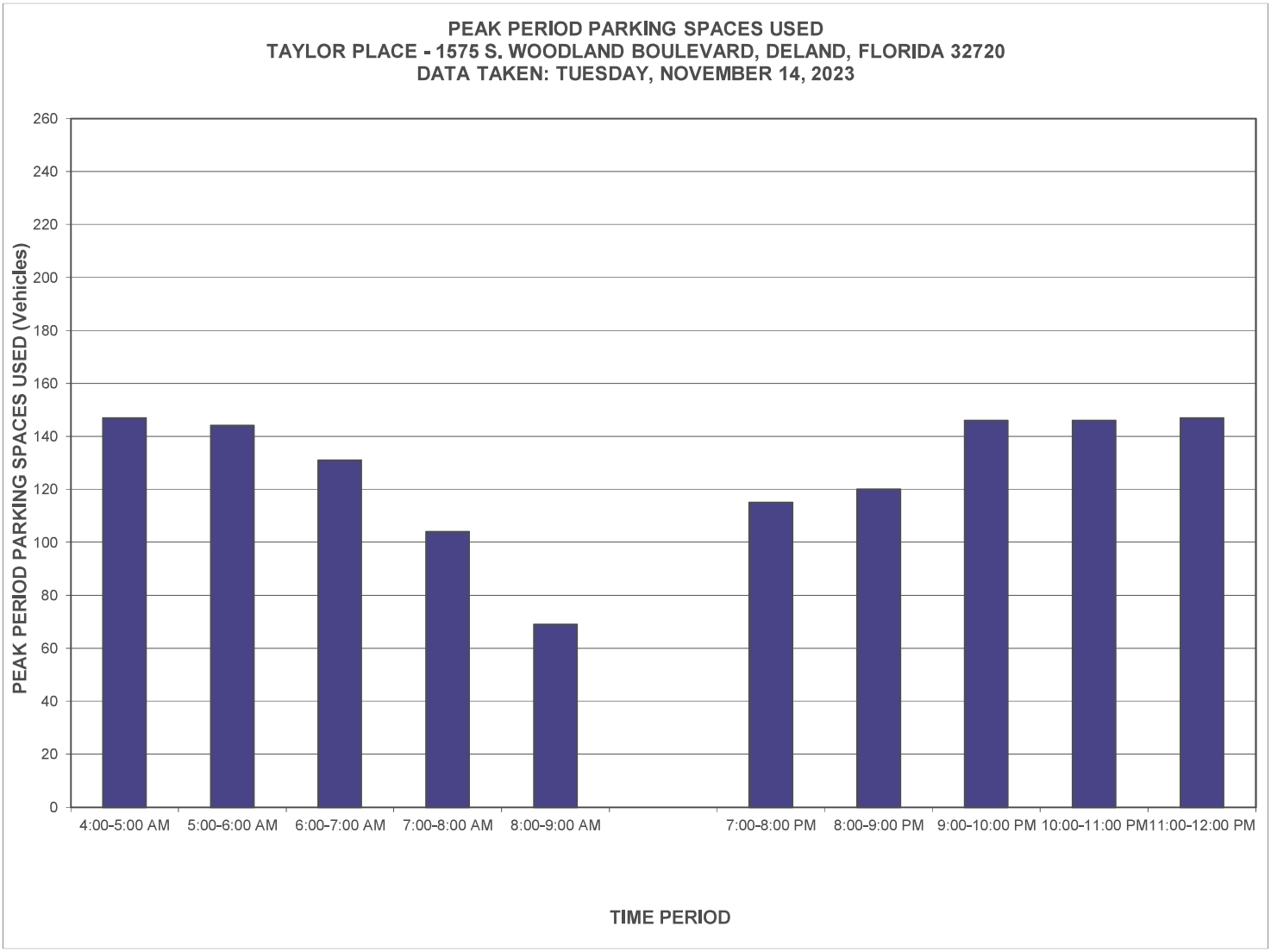
EXHIBIT F

PEAK PERIOD PARKING DEMAND RATIO VS BEDROOMS
TAYLOR PLACE - 1575 S. WOODLAND BOULEVARD, DELAND, FLORIDA 32720
DATA TAKEN: TUESDAY, NOVEMBER 14, 2023



PERCENT OF PEAK PARKING DEMAND
TAYLOR PLACE - 1575 S. WOODLAND BOULEVARD, DELAND, FLORIDA 32720
DATA TAKEN: TUESDAY, NOVEMBER 14, 2023




PEAK PERIOD PARKING SPACES USED
TAYLOR PLACE - 1575 S. WOODLAND BOULEVARD, DELAND, FLORIDA 32720
DATA TAKEN: TUESDAY, NOVEMBER 14, 2023
PEAK PERIOD PARKING SPACES USED (Vehicles)
260
240
220
200
180
160
140
120
100
80
60
40
20
0
4:00-5:00 AM
5:00-6:00 AM
6:00-7:00 AM
7:00-8:00 AM
8:00-9:00 AM
7:00-8:00 PM
8:00-9:00 PM
9:00-10:00 PM
10:00-11:00 PM
11:00-12:00 PM
TIME PERIOD

PEAK PERIOD PARKING LOT OCCUPANCY
TAYLOR PLACE - 1575 S. WOODLAND BOULEVARD, DELAND, FLORIDA 32720
DATA TAKEN: TUESDAY, NOVEMBER 14, 2023

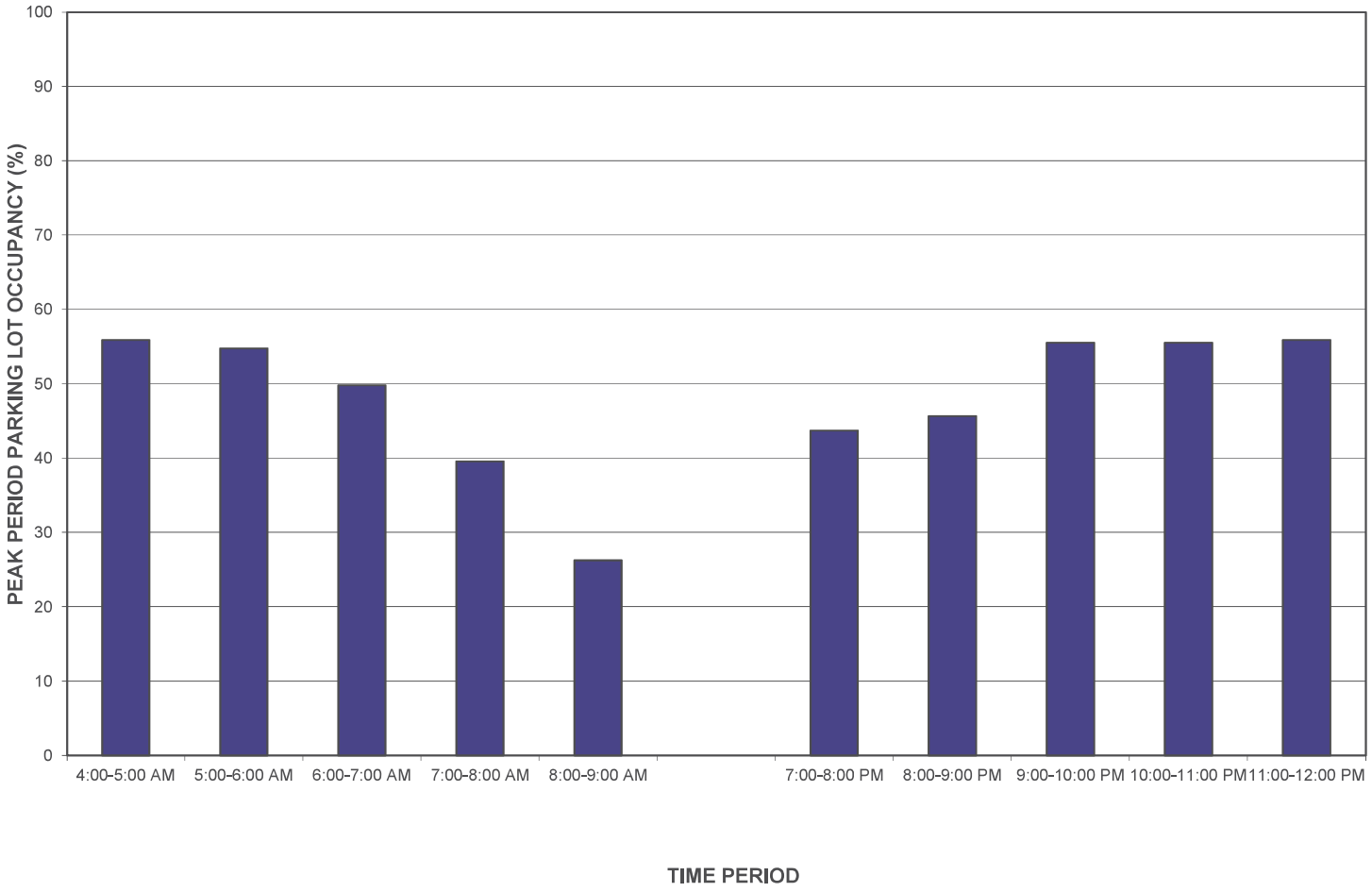


EXHIBIT G

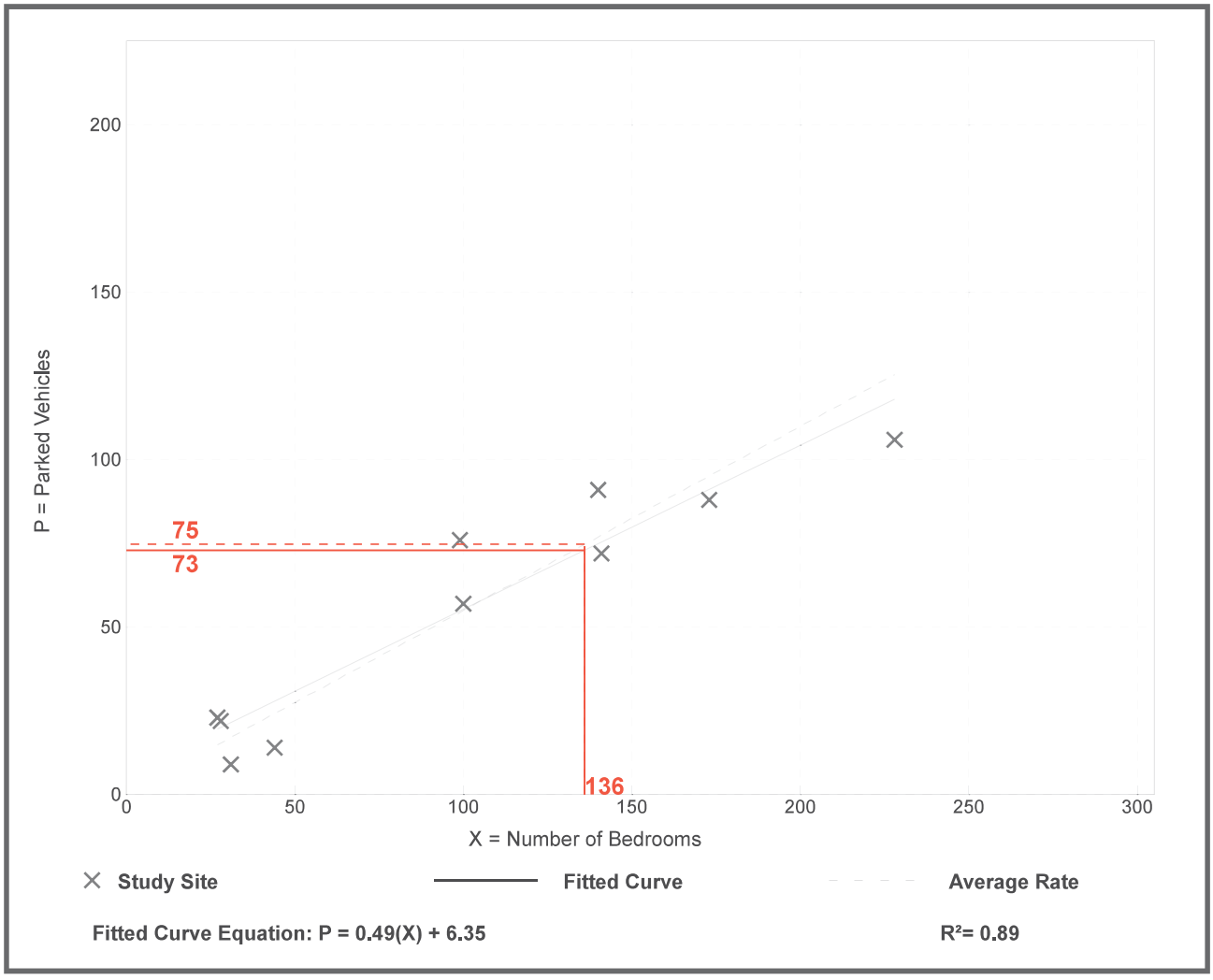
Affordable Housing - Income Limits
(223)

Peak Period Parking Demand vs: **Bedrooms**
On a: **Weekday (Monday - Friday)**
Setting/Location: **General Urban/Suburban**
Number of Studies: 10
Avg. Num. of Bedrooms: 101

Peak Period Parking Demand per Bedroom

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.55	0.29 - 0.85	0.49 / 0.81	***	0.14 (25%)

Data Plot and Equation



Parking Generation Manual, 6th Edition ● Institute of Transportation Engineers

PARKING DEMAND STUDY SUPPLEMENT

For

NEW YORK AVENUE APARTMENTS



225 West New York Avenue
DeLand, Florida 32720

Prepared for:
City of DeLand
Planning Division

Prepared by:
BLUE SKY COMMUNITIES, LLC
180 Fountain Parkway N, Suite 100
St. Petersburg, Florida 33716

ABOUT BLUE SKY COMMUNITIES

Blue Sky is a St. Petersburg-based Real Estate Developer of Affordable and Workforce Housing.

- Experts in Public Funding: 9% Housing Credits, 4% Housing Credits, Tax Exempt Bonds, CDBG, HOME, SHIP, SAIL, and many other incentives.
- A leader across Florida
- Focused on helping Local Governments and Non-Profits achieve their goals.

Formed in 2012, Blue Sky inspires positive change in communities across Florida through high-quality workforce housing development. As a developer and owner of multifamily affordable housing using the Federal Housing Tax Credits program, Blue Sky is a leading advocate for helping nonprofit groups and local governments reach their affordable housing goals by developing state-of-the-art, environmentally sound affordable housing units. Through partnerships, Blue Sky helps these groups by developing neighborhood assets that stakeholders can be proud of for decades. To date, Blue Sky has developed 3,024 units of affordable housing. Additionally, we have 574 units currently under construction and 639 units scheduled to close and start construction in 2025. These units include communities for Families, Elderly, Veterans, and Special Needs.

Blue Sky's principals have been developing and managing affordable housing for 50 years in Florida. Blue Sky understands the importance of development funding being spent locally for the benefit of local businesses and residents. We have the resources and capacity to produce. We align with multiple professional experts to ensure we put together the best team for the delivery of quality housing. Blue Sky has a staff of 19 employees.

Construction and Construction Management

Ever since our first closing in 2014, Blue Sky has managed multiple construction projects simultaneously while also pursuing new opportunities and closing out recently completed projects. We presently have 8 under construction and in the last 36 months, we have completed 14 projects. We presently have 6 in the pipeline that will be starting construction in 2025, including New York Avenue. Blue Sky has a department dedicated to permitting and construction activities.

This department consists of 5 full-time Blue Sky staff members, many of whom are our longest-tenured team members.

Partnering with Neighborhood Groups

Blue Sky has partnered with many neighborhood groups on our developments. At New York Avenue, we have an arrangement with the Neighborhood Center of West Volusia ("NHC") for them to provide referral and support for 13 units. The NHC staff and board are very excited about this development, and we believe this will multiply the overall community benefits of New York Avenue. See attached support letter (Exhibit A).

Service Providers and Supportive and Community Service Programming

Blue Sky has identified a very qualified local service provider who will be responsible for referring and providing wrap-around services to the 13 PSH households. NHC has been providing shelter, housing, and prevention services to the community for over 50 years. Additionally, the property management team works with other local organizations to bring in resources and training to residents, as required by any funding agreements and as is helpful to the community.

Financing

In addition to the government agencies that we work with, Blue Sky has several very strong relationships with private lending institutions including TD Bank, Chase, Truist, Raymond James Bank, Fifth Third Bank, and others. The financing structure on New York Avenue is as follows:

- FHFC Tax-Exempt Bonds
- FHFC RRLP
- FHFC ELI
- Volusia County
- FHFC 4% Tax Credits

State and Local Knowledge and Experience

The Blue Sky Communities' principals are active on the affordable housing advisory committee of our home areas. Shawn Wilson is a former Chairman of the Board of Directors of the Florida Coalition of Providers of Florida, our statewide advocacy organization. Scott Macdonald is a current board member and chairman of the Insurance Committee. This is our first development in the City of Deland, so we have a strong local team including Cobb Cole Law Firm to guide us through any local issues.

THE TEAM

We have the privilege of counting on a high-caliber group of professionals:

Architect

Powell Studio Architecture is based in Clermont. Blue Sky has completed 3 developments and has 2 under construction with Powell.

Civil Engineer

Madden, Moorhead & Stokes is the Civil Engineer for New York Avenue Apartments. The firm is based in Maitland and has worked in the area since 1987. Notably, this firm was the Civil Engineer on a large apartment project currently completed in Downtown DeLand.

Property Manager

Carteret Property Management Corporation is Blue Sky's in-house property manager. Founded in 1971, they are among the best managers in Florida. They have an impeccable reputation with the Compliance agencies. Carteret brings over 50 years of successful compliance/audits. With Carteret's expertise, we ensure our communities are long-term assets for Owners/Investors and the community. Carteret, with over 50 years of multifamily management experience, will be the management agent with legal and fiduciary responsibility to the owner and lenders. They will handle the traditional management functions such as rent collection, maintenance, repairs,

accounting, and regulatory compliance. Carteret is an Accredited Management Organization (AMO), a certified Woman's Business Enterprise (WBE), and an FHFC-approved management agent with a staff of over 160.

Legal Counsel

Cobb Cole Law Firm. Mark A. Watts, Partner

As Managing Partner of Cobb Cole Law Firm, Mark A. Watts continues to build his powerful legacy in the Volusia County community through innovative growth solutions and an intentionally collaborative management style. Mr. Watts is an active member of Cobb Cole's Administrative, Land Use, and Environmental Law Departments. His career is focused on representing landowners and developers in securing entitlements and regulatory approvals for the development of their land. In addition, Mr. Watts is experienced in structuring infrastructure financing using special assessment districts, community development districts, tax increment financing, and other creative financing strategies.

Mr. Watts graduated from Florida State University in 1995 with a degree in International Affairs. He received a Juris Doctor from Stetson University College of Law in 1998. Prior to joining the firm, Mr. Watts served as an Assistant County Attorney in Pinellas County. He is a member of the Florida Bar and the United States District Court for the Middle District of Florida. As a Volusia County native, Mr. Watts has proactively engaged in an extensive variety of leadership opportunities and local board commitments during his time with Cobb Cole. He has dedicated his time and expertise to organizations ranging from the DeLand Breakfast Rotary Club to the Volusia County Association for Responsible Development.

INTRODUCTION

This report is a supplement to the Parking Demand Study for the New York Avenue Apartments revised on 3/10/2025 by High Point Engineering, Inc. This parking demand study has been prepared as technical support for a parking waiver request to approve a total of 94 on-site surface parking spaces, for the proposed 84-dwelling unit multi-family affordable housing project. This supplement was requested by the City of DeLand with the objective of analyzing data from existing similar demographics fully operational affordable housing communities developed by Blue Sky Communities presently managed by our property management partner Carteret Management.

BACKGROUND

New York Ave Apartments' site is located on the north side of West New York Avenue (State Road 44), just west of North Florida Avenue in Section 09, Township 17 South, Range 30 East within the incorporated area of the City of DeLand. The property is comprised of two parcels identified by the Volusia County Property Appraiser's Office with parcel identification numbers 700962000087 and 700962000090. The total site area is approximately 1.61 acres and is bounded by West New York Avenue to the south, and commercial and office properties to the north, east, and west. The property was previously the site of the Putnam Hotel built in 1924. The structure was recently demolished, and the site is currently vacant and undeveloped.

The proposed New York Avenue Apartments development will consist of one (1) 6-story midrise building, including 84 dwelling units containing 44 units of 1 bedroom, 28 units of 2 bedrooms, and 12 units of 3 bedrooms for a total of 136 bedrooms (i.e., average unit mix of 1.62 bedrooms per dwelling unit), 94 on-site surface parking, and 56 bicycle parking spaces (48 interior and 8 exterior spaces); a stormwater collection and exfiltration system, sanitary sewer system, potable water service for domestic consumption and fire protection, plus Florida native drought-tolerant landscape.

The project will feature 13 permanently restricted special needs dwelling units to accommodate families transitioning from homelessness, ensuring inclusivity and promoting stability for vulnerable populations. The proposed development is planned in a single phase. The setbacks, drainage, parking, and landscaping are designed to support the proposed development of the property.

Volusia County has agreed to grant the residents of New York Avenue Apartments a revocable license and right to park motor vehicles owned or leased by such residents in the adjacent County Property's parking lot. Residents of New York Avenue Apartments may not park on the County Property from 8 a.m. to 5 p.m., Monday through Friday. Overnight and over the weekend parking outside the specified restricted hours will be allowed to all residents, thus providing additional spaces to the current surface parking provided on site.

OUR RESIDENTS

Who will live at New York Ave? Most of the units will be occupied by residents earning from 60% to 80% of AMI (Area Median Income). For 2024, Volusia County recorded an AMI of $82,800, which means our residents' income will range from $24,840 to $66,240. It could be a waiter at a restaurant downtown to a teacher, government, or university employee. As was mentioned above, 13 units will be exclusively dedicated to persons transitioning out of homelessness. The non-profit partner, in this case, the Neighborhood Center, and onsite staff will provide the level of services required for all our residents regardless of their income.

DATA COLLECTION AND OBJECTIVE

Parking observations were undertaken at five (4) affordable housing apartment communities in Hillsborough County and St Lucie Counties developed by Blue Sky Communities and managed by Carteret Management: (1) Sweetwater Villas; (2) Uptown Sky; (3) Brandon Palms, and (4) Blue Sky Landing. These existing developments were chosen due to having similar demographics as New York Avenue Apartments. To reiterate, the purpose of this narrative is not, as it is the objective of

the parking study it supports, to analyze developments in close proximity to the subject but to examine similar demographic, affordable housing communities developed by Blue Sky. Our goal is to show real time examples of actual parking usage years after the developments were completed and are fully rented.

(1) Data Collection at Sweetwater Villas – 4131 Sweetwater Villas Ln, Tampa.

The existing Sweetwater Villas is located on the east side of Lois Avenue between Humphrey Street and Waters Avenue, within unincorporated Hillsborough County. Sweetwater Villas is comprised of four (4) 3-story buildings including 56 dwelling units distributed in 36 units of 2 bedrooms, and 20 units of 3 bedrooms for a **total of 132 bedrooms** (i.e., average unit mix of 2.35 bedrooms per dwelling unit). At the time of this study, the apartment complex had an occupancy level of 100%. Sweetwater Villas has a surface parking lot with a **total of 116 spaces** including 14 non-designated spaces for visitors (i.e., 0.77 parking spaces per bedroom). Parking observations at this location took place on Wednesday, December 8, 2021, from 4:00 am to 8:00 am and from 7:00 pm to 12:00 pm. The observations consisted of identifying the number of parking spaces occupied at 10-minute intervals. The weather condition was clear with temperatures between 65°F and 75°F.

The observations show the highest peak period parking demand ratio occurred between 4:00 am and 5:00 am. At 4:00 am, 85 parking spaces of the 116 parking spaces were occupied and 31 parking spaces available. The Peak Parking Demand Ratio vs Bedrooms computed was 0.64 spaces per bedroom and at 7:00 pm, the apartment complex had a parking demand ratio of 0.45 spaces per bedroom. Additionally, the observation taken at midnight shows that Sweetwater Villas had a parking demand ratio of 0.62 spaces per bedroom.

Peak Parking Demand Ratio vs Bedrooms: 0.64. Applying this percentage of usage to the 136 bedrooms present at NYA, the development would be required to have 87 parking spaces.

To update above data, a representative of Blue Sky Communities undertook a night visit to the property on March 12, 2025 at 11:05 PM. We found that 34 spaces were available at that time from the 116 parking spaces for a per bedroom ratio of ***0.62*** *(See photo addendum on Exhibit B).*

(2) Data Collection at Uptown Sky – 13635 N 12th St, Temple Terrace.

The existing Uptown Sky is located on the north side of Fletcher Ave between N 12th St and N 15th St., within unincorporated Hillsborough County. Uptown Sky is comprised of one (1) 4-story building including 61 dwelling units distributed in 37 units of 2 bedrooms, 24 units of 3 bedrooms, for a **total of 183 bedrooms** (i.e., average unit mix of 3.00 bedrooms per dwelling unit). At the time of this study, the apartment complex had an occupancy level of 100%. Uptown Sky has a surface parking lot with a **total of 88 spaces** (i.e., 0.48 parking spaces per bedroom). Parking observations at this location took place on Wednesday, February 14, 2024. At 10:00 am there were 27 occupied spaces, a parking demand ratio of 0.15 spaces per bedroom. At 4:00 PM there were 35 occupied spaces, a parking demand ratio of 0.19 spaces per bedroom. At 10:00 pm, 37 occupied spaces, a parking demand ratio of 0.20 spaces per bedroom.

Peak Parking Demand Ratio vs Bedrooms: 0.20. Applying this percentage of usage to the 136 bedrooms present at NYA, the development would be required to have 27 parking spaces.

To update above data, a representative of Blue Sky Communities undertook a night visit to the property on March 13, 2025 at 11:00 PM. We found that 19 spaces were available at that time from the 84 parking spaces for a per bedroom ratio of ***0.38*** *(See photo addendum on Exhibit C).*

(4) Data Collection at Brandon Palms – 114 N Knights Ave, Brandon.

High Point Engineering conducted a study overnight 9/25 - 9/26/23 at Brandon Palms. This is a 120-unit Affordable Housing complex with many similar demographics as the subject. Brandon Palms has a surface parking lot with a **total of 220 spaces**. They counted the number of occupied parking spaces every ten minutes from 8:00 pm until 8:00 am. The maximum number of observed occupied spaces occurred at 4:00 am, with 142. There are 120 apartments and a **total of 224 bedrooms** at Blue Sky Brandon. The parking demand ratio is 0.64 per bedroom.

Peak Parking Demand Ratio vs Bedrooms: 0.64. Applying this percentage of usage to the 136 bedrooms present at NYA, the development would be required to have 87 parking spaces.

To update above data, a representative of Blue Sky Communities undertook a night visit to the property on March 13, 2025 at 11:30 PM. We found that 94 spaces were available at that time from the 220 parking spaces for a per bedroom ratio of ***0.56*** *(See photo addendum on Exhibit C).*

(4) Data Collection at Blue Sky Landing – 100 Blue Sky Cir Fort Pierce.

Blue Sky Landing is an affordable housing community located on the north side of Okeechobee Road (State Road 70) on the west side of McNeil Road, within the incorporated area of the City of Fort Pierce. Blue Sky Landing is comprised of four (4) 4-story low-rise buildings including 164 dwelling units distributed in 4 studios, 36 units of 1 bedroom, 96 units of 2 bedrooms, 28 units of 3 bedrooms, for a **total of 316 bedrooms** (i.e., average unit mix of 1.93 bedrooms per dwelling unit). At the time of this study, the apartment complex had an occupancy level of 100%. Blue Sky Landing has a surface parking lot with a **total of 246 spaces** (i.e., 0.78 parking space per bedroom). Parking observations at this location took place on Monday November 18, 2024, from 4:00 am to 8:00 am and from 8:00 pm to 12:00 am. The observations consisted of identifying the number of parking spaces occupied at 5-minute intervals. The observations indicate the highest peak period parking demand ratio occurred between 10:00 pm and 11:00 pm. At 10:25 pm, 163 parking spaces of the 246 parking spaces were occupied and 83 parking spaces were available.

Peak Parking Demand Ratio vs Bedrooms: 0.52. Applying this percentage of usage to the 136 bedrooms present at NYA, the development would be required to have 70 parking spaces.

CONCLUSION

After physical observations in multiple of our fully leased communities, peak parking demand ratios of parking spaces required per number of bedrooms fluctuated from 0.38 to 0.64. Even though this is a wide range of variance, using the highest peak demand (0.64) and multiplying it by the number of bedrooms that will be provided in New York Ave (136 x 0.64), the number of spaces required following this rationale will be **87 spaces**. Our current site plan incorporates **94 surface parking spaces, 56 bike spaces, and a license to park at the adjacent County parking**

lot from 5 PM to 8 PM Monday to Friday and all day Saturday and Sunday. We believe, based on our experience and the professionally certified parking study provided, that the current parking proposal is sufficient to accommodate the residents' and staff's parking needs in our development.

EXHIBITS

EXHIBIT A

March 6, 2025
City of DeLand, Florida

From:
Savannah-Jane Griffin
Chief Executive Officer
(386) 734-8120 EXT 202
Neighborhood Center of West Volusia
savannah.griffin@nhcwv.org

Attn:
Carol Kuhn, AICP
Planning Director
City of DeLand
120 S. Florida Ave
DeLand, FL 32720

Subject: Permanent Supportive Housing Units at New York Ave Apartments.

Dear Carol,

We are delighted to confirm that thanks to a partnership with Blue Sky Communities, the developer for New York Ave Apartments, The Neighborhood Center of West Volusia will have 13 units set aside as Permanent Supportive Housing (PHS) units for the benefit of our clients.

These units are designated for extremely-low-income individuals and families transitioning out of homelessness. In our experience the residents of these units are unlikely to own or afford cars. The set aside will be recorded in a Land Use Restriction Agreement (LURA) that will ensure their permanence for as long as the development exists as an affordable housing community. Typically, the affordability period is at least 50 years.

Sincerely,

Savannah-Jane Griffin
Chief Executive Officer

EXHIBIT B

Sweetwater Villas

A Blue Sky team member drove this property on March 12, 2025 at 11:15 PM.
We found that 34 spaces were available at that time from the 116 parking spaces.

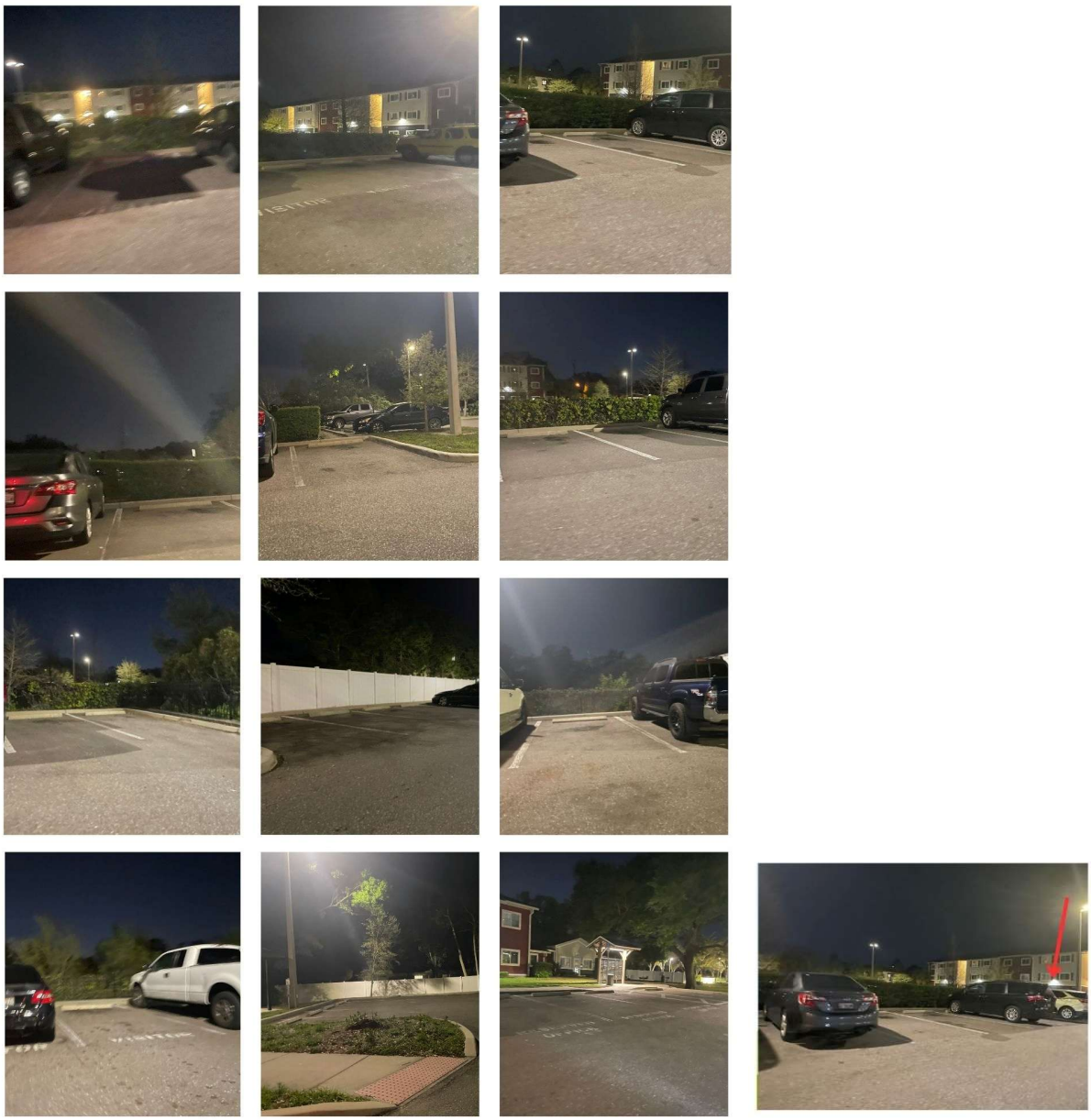
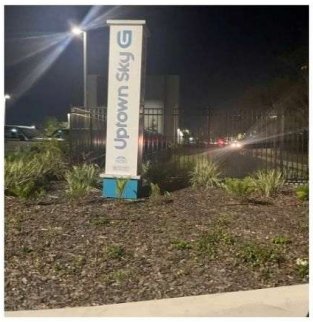
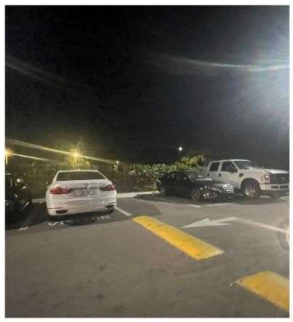


EXHIBIT C

Uptown Sky

A Blue Sky team member drove this property on March 13, 2025 at 11:05 PM.
We found that 19 spaces were available at that time from the 84 parking spaces.













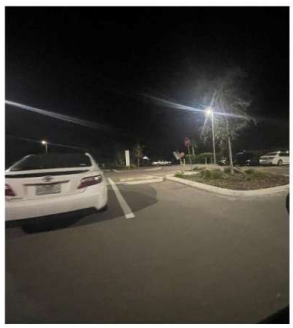
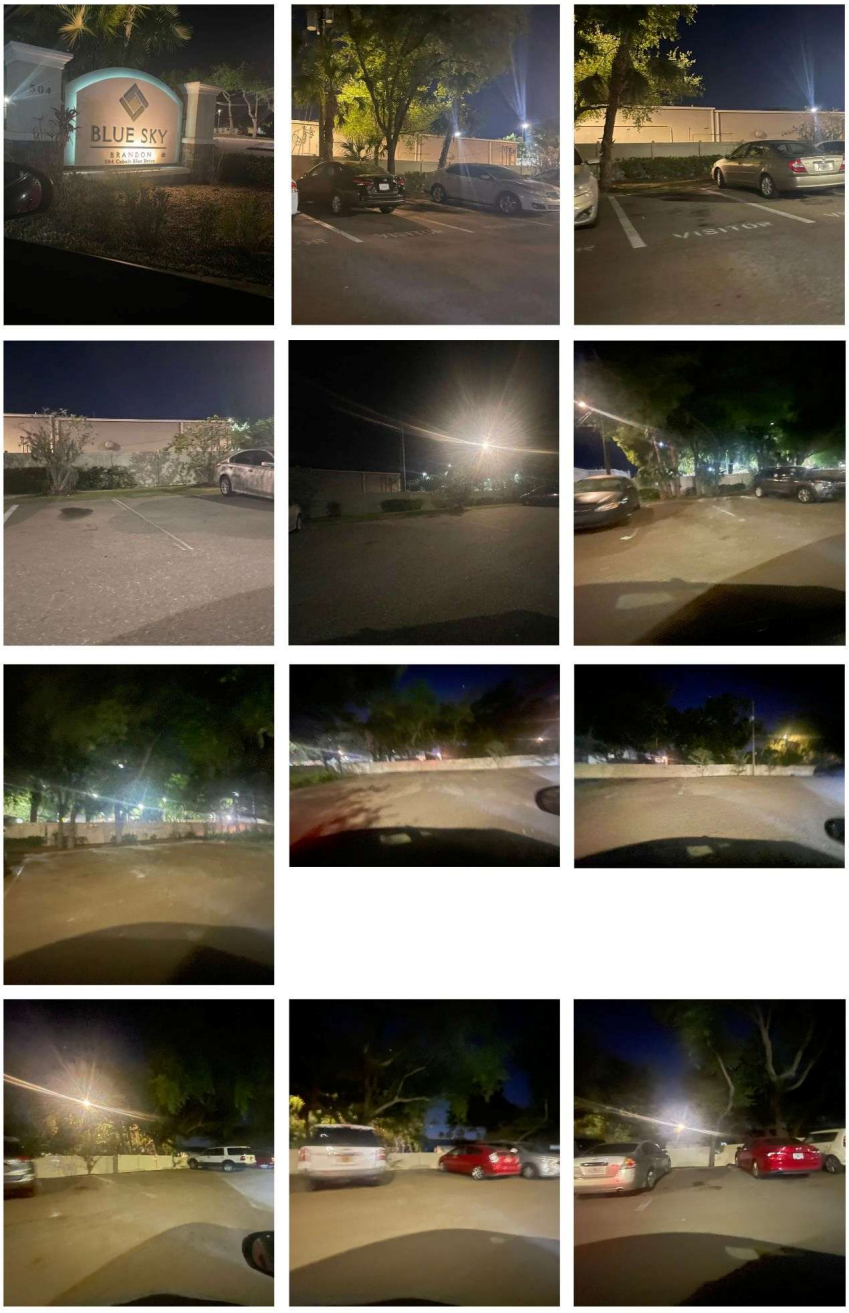
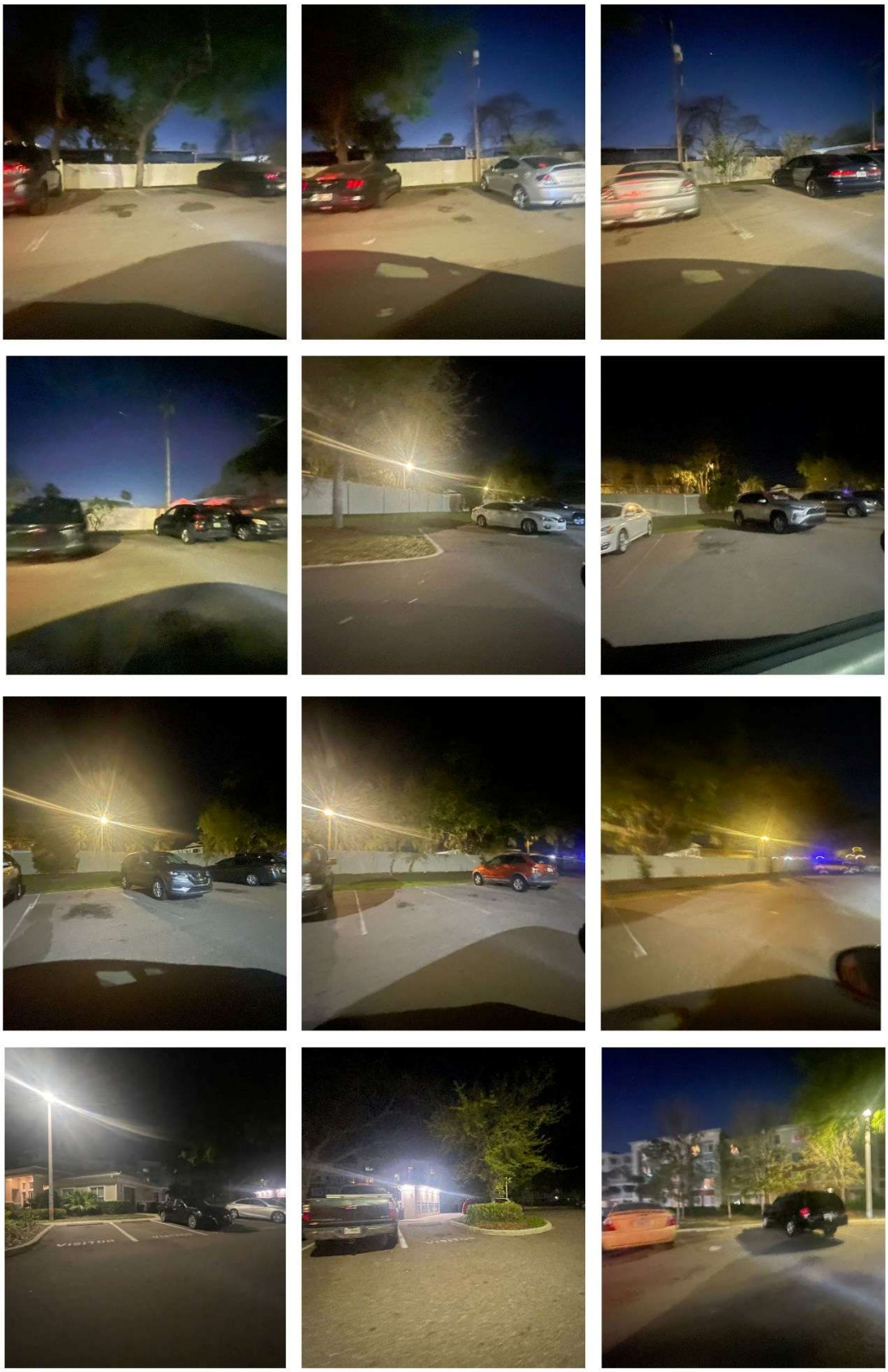


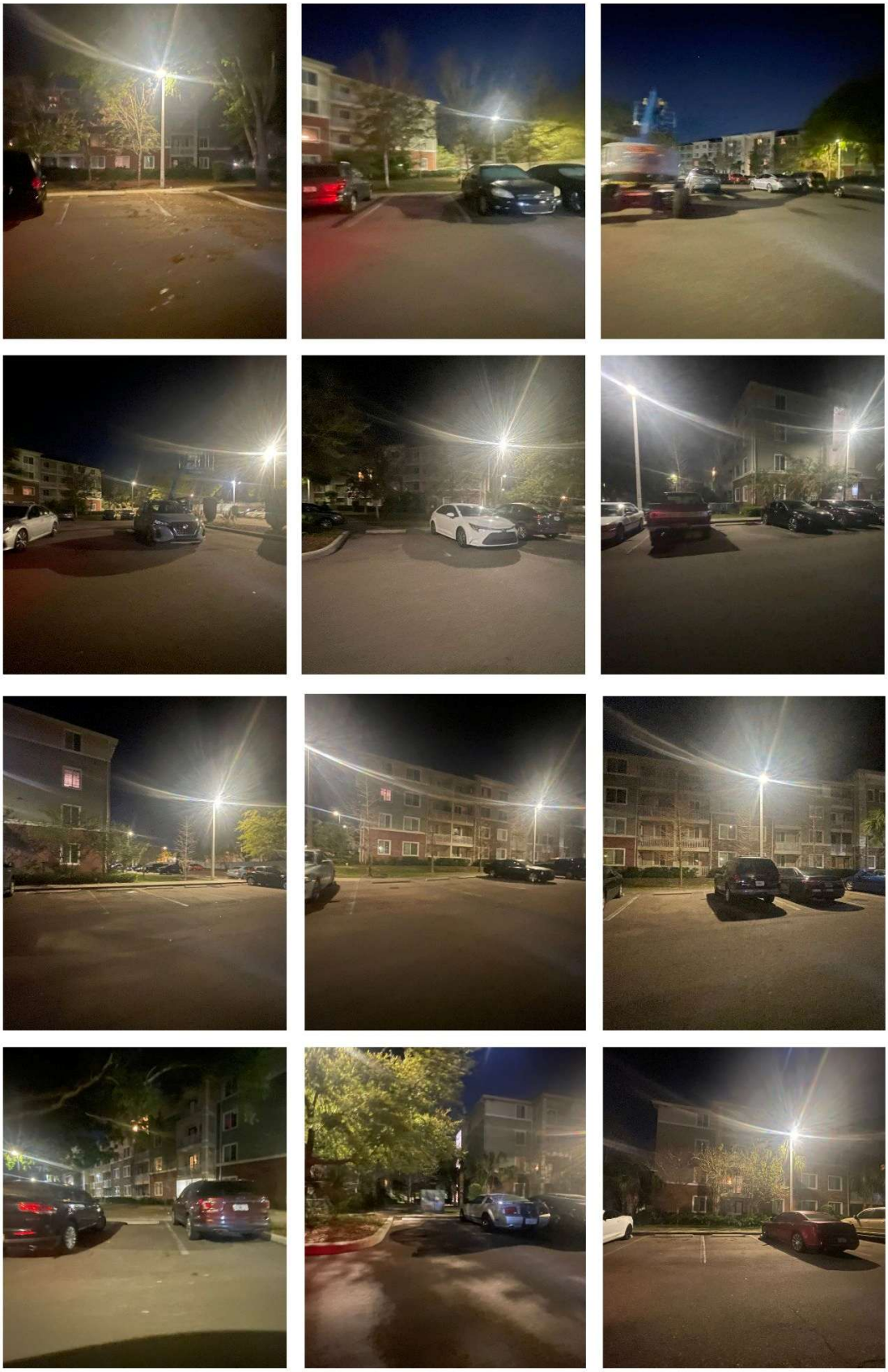
EXHIBIT D

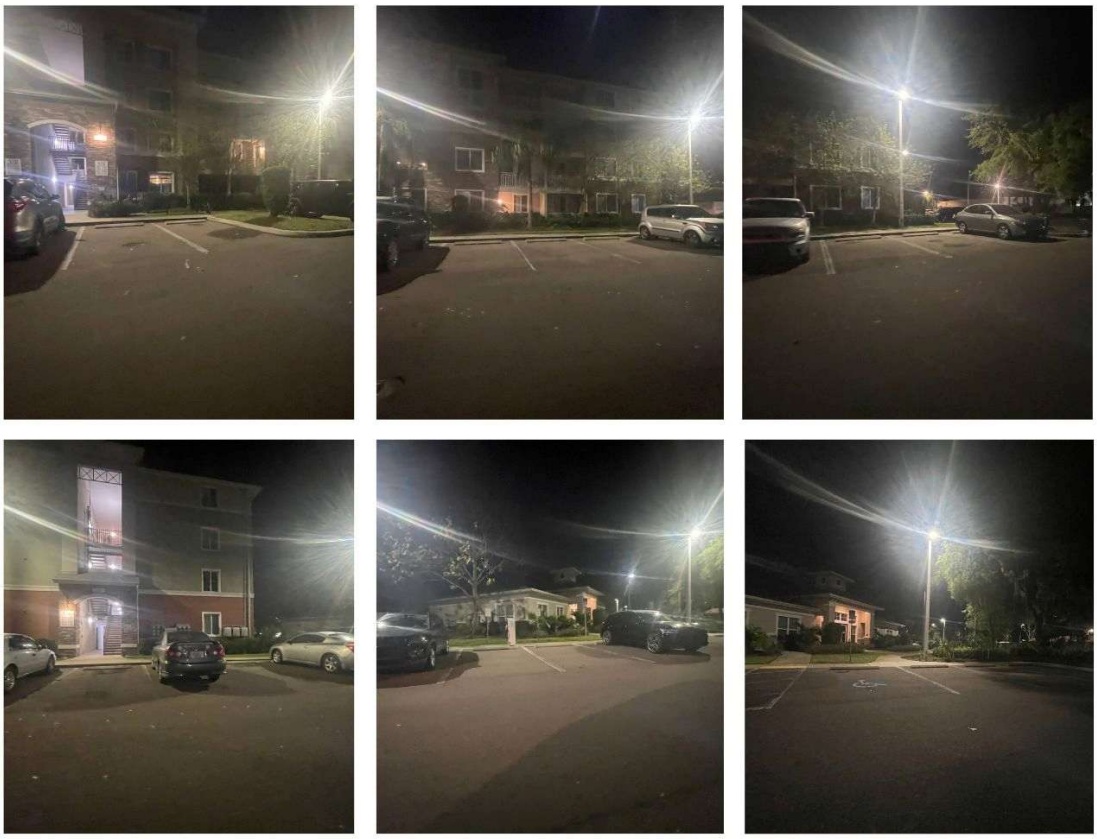
Brandon Palms

A Blue Sky team member drove this property on March 13, 2025 at 11:30 PM.
We found that 94 spaces were available at that time from the 220 parking spaces.









RESOLUTION NO. 2024 – 96

A RESOLUTION OF THE CITY COMMISSION OF DELAND, FLORIDA, DENYING A REQUEST FOR A PARKING REDUCTION AND ALLOWANCE FOR OFF-SITE PARKING FOR APARTMENT BUILDING LOCATED AT 225 WEST NEW YORK AVENUE; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the applicant, Blue Sky Communities, LLC, has submitted a site plan application for an 84-unit apartment building on a 1.63 acre site located at 225 West New York Avenue; and

WHEREAS, the applicant is proposing a total of 66 vehicle parking spaces for a building with 84 apartments, 44 of which are one bedroom and 40 of which have two or more bedrooms; and

WHEREAS, the City's planning staff has advised the applicant since it very first proposed the project that the site does not have sufficient space for parking given the number of units being proposed in the building; and

WHEREAS, the project, as currently proposed, does not comply with the parking requirements of the City's land development regulations; and

WHEREAS, in order to address the insufficient parking, the applicant has requested the City to reduce the amount of parking and to allow the applicant to use parking spaces on an adjacent County owned parking lot, which spaces will only be available on nights and weekends, for the purpose of meeting the parking needs of the proposed building; and

WHEREAS, the City's land development regulations provide that a maximum of 30% of the number of required car parking spaces may be satisfied by providing bicycle parking spaces; and

WHEREAS, the City's land development regulations require a total of 188 parking spaces, 52 of which are proposed to be satisfied with bicycle parking spaces, leaving 136 required car parking spaces – the applicant proposes to provide only 66 car parking spaces, which is less than half of the required number of car parking spaces even after the allowance for bicycle parking spaces; and

WHEREAS, the applicant has requested that the City consider the availability of night and weekend parking on an adjacent County parking lot, but the City Commission finds that the reduction in spaces to less than half of the required spaces, considering that a number of the spaces are also being replaced with bicycle parking spaces, is too significant to meaningfully provide parking to the residents of the proposed building; and

WHERAS, the City has considered all of the information in the detailed staff report that accompanied this request and that information forms a part of the evidence upon which this Resolution is based; and

WHEREAS, the project could comply with the City's parking requirements by reducing the number of units in the building; and

WHEREAS, the City Commission finds that the significant reduction in parking is not compatible with a residential apartment project, that it will adversely affect the residents of the proposed apartment building, and that it will otherwise adversely affect the public interest.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF DELAND, FLORIDA:

Section 1. The foregoing preamble is incorporated herein by reference and forms a part of the basis for the adoption of this Resolution, together with all other information presented to the City Commission at its hearing on this request.

Section 2. The City Commission hereby denies the applicant's request for a reduction in the number of required parking spaces for the proposed apartment project located at 225 West New York Avenue.

Section 3. This Resolution shall become effective immediately upon its adoption.

PASSED AND DULY ADOPTED this 21st day of October, 2024.

Christopher M. Cloudman
Mayor-Commissioner

ATTEST:

Julie A. Hennessy
City Clerk - Auditor

APPROVED AS TO FORM AND LEGALITY:

Darren J. Elkind
City Attorney

RESOLUTION NO. 2025 – 49

A RESOLUTION OF THE CITY COMMISSION OF DELAND, FLORIDA, APPROVING A REQUEST FOR A PARKING REDUCTION AND ALLOWANCE FOR OFF-SITE PARKING FOR APARTMENT BUILDING LOCATED AT 225 WEST NEW YORK AVENUE; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the applicant, Blue Sky Communities, LLC, has submitted a site plan application for an 84-unit apartment building on a 1.63 acre site located at 225 West New York Avenue (the "Project"); and

WHEREAS, the applicant is proposing 94 vehicle on-site vehicle parking spaces and 20 adjacent off-site vehicle parking spaces for a building with 84 apartments, 44 of which are one bedroom and 40 of which have two or more bedrooms; and

WHEREAS, the City's planning staff has advised the applicant since it very first proposed the Project that the site does not have sufficient space for parking given the number of units being proposed in the building; and

WHEREAS, the Project, as currently proposed, does not comply with the parking requirements of the City's land development regulations; and

WHEREAS, in order to address the insufficient parking, the applicant has requested the City to reduce the amount of parking required for the Project and to allow the applicant to use parking spaces on an adjacent County owned parking lot for the purpose of meeting the parking needs of the Project; and

WHEREAS, the City's land development regulations provide that a maximum of 30% of the number of required car parking spaces may be satisfied by providing bicycle parking spaces; and

WHEREAS, the City's land development regulations require a total of 188 parking spaces for the Project, 52 of which are proposed to be satisfied with bicycle parking spaces, leaving 136 required car parking spaces – the applicant proposes to provide only 114 car parking spaces, 20 of which are off-site, which is significantly less than the required number of car parking spaces even after the allowance for bicycle parking spaces; and

WHEREAS, the applicant has requested that the City consider the availability of parking on an adjacent County parking lot, which would be provided pursuant to the agreement between the applicant, or its successors and assigns and Volusia County, a copy of which is attached hereto as Exhibit "A" (the "County Parking Agreement"); and

WHEREAS, the City Commission has considered all of the information in the detailed staff report that accompanied this request and that information forms a part of the evidence upon which this Resolution is based; and

WHEREAS, the City Commission finds that, even with the reduction in parking spaces and the allowance of adjacent but off-site parking spaces pursuant to the County Parking Agreement, there will be sufficient vehicle parking spaces for the Project; and

WHEREAS, the City Commission finds that there is a significant need for affordable housing in the immediate downtown area of the City and that granting the requested parking reduction pursuant to the conditions set forth in this Resolution are in the best interests of the City and serve the health, safety and welfare of the citizens of the City of DeLand.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF DELAND, FLORIDA:

Section 1. The foregoing preamble is incorporated herein by reference and forms a part of the basis for the adoption of this Resolution, together with all other information presented to the City Commission at its hearing on this request.

Section 2. The City Commission hereby approves the applicant's request for a reduction in the number of required parking spaces for the Project located at 225 West New York Avenue, subject to the following conditions:

a. A restrictive covenant or other document will be recorded in the public records of Volusia County which requires that the 84 unit Project shall remain affordable pursuant to Florida law on the basis of thirteen (13) of the units being affordable for families earning 30% of AMI; fifty-two (52) of the units being affordable for families earning 60% of AMI; and nineteen (19) of the units being affordable for families earning 80% of AMI.

b. 13 of the 84 units in the Project will be dedicated to housing persons referred by the Neighborhood Center or any successor organization. Should the Neighborhood Center or any successor organization cease operations or permanently cease referring residents, then this condition in this Section 2.b. shall no longer be a condition of this parking reduction approval.

c. The County Parking Agreement attached hereto as Exhibit "A" must be executed by the County and the entity having control over the Project and owning the property upon which the Project is located.

Should the Project cease to comply with any of the foregoing conditions and not cure such deficiency within ninety (90) days of written notice of such deficiency by the City, then occupancy of the Project shall cease until such time as the deficiency is cured. A deficiency may be cured by reducing the number of occupied units within the Project so that the number of vehicle parking spaces provided meets the number of vehicle parking spaces required based upon the lesser of the parking requirements then in effect or on the date of this Resolution.

Section 3. This Resolution shall become effective immediately upon its adoption.

PASSED AND DULY ADOPTED this 21st day of July, 2025.

Christopher M. Cloudman Mayor-Commissioner

ATTEST:

Julie A. Hennessy
City Clerk - Auditor

APPROVED AS TO FORM AND LEGALITY:

Darren J. Elkind
City Attorney

Prepared by:
Mark Watts
Cobb Cole
231 N. Woodland Blvd.
DeLand, FL 32720

EXHIBIT "A"

PARKING LICENSE AGREEMENT

THIS SHARED PARKING LICENSE AGREEMENT (this "Agreement") is entered into as of the __ day of _____, 2025, by and between **BLUE IAN, LLC**, a Florida limited liability company ("Blue Ian"), and **THE COUNTY OF VOLUSIA**, a political subdivision of the State of Florida (the "County"), mailing address: 123 West Indiana Avenue, DeLand, FL 32720.

RECITALS

WHEREAS, Blue Ian is the owner of that certain real property, located at 225 W. New York Avenue in DeLand, Florida, more particularly described on Exhibit A, attached hereto and incorporated by this reference, and located within the municipal boundaries of the City of DeLand (the "Blue Ian Property"); and

WHEREAS, the County is the owner of certain real properties, located at 235 W. New York Avenue and 136 N. Florida Avenue in DeLand, Florida, more particularly described on Exhibit B, attached hereto and incorporated by this reference, and located within the municipal boundaries of the City of DeLand (collectively, the "County Property"), which property is directly adjacent to the Blue Ian Property; and

WHEREAS, Blue Ian proposes to develop 84 affordable housing units upon the Blue Ian property which such housing shall remain affordable for 50 years; and

WHEREAS, in order to facilitate the creation of such affordable housing, additional parking is required; and

WHEREAS, the County encourages the creation of affordable housing units; and

WHEREAS, the County and Blue Ian desire to and have agreed that the County will provide Blue Ian parking on the County Property during specified hours and subject to the below limitations.

NOW, THEREFORE, the parties hereto agree and bind themselves as follows:

1. Parking for Blue Ian Residents. The County hereby grants to residents of the Blue Ian property, as well as guests, visitors, or employees, the revocable license and right to park at any given time, up to twenty (20) motor vehicles owned or leased by such resident upon the County Property. Such rights shall be subject to the following limitations/reservations:

a. The County reserves the right at any time and from time to time to exclude any person who is not a resident, guest, visitor or employee of the Blue Ian property from County Property;

b. The County reserves the right to make improvements to its property, and to temporarily erect or place barriers in and around areas on its property which are being constructed and/or repaired in order to insure either safety of persons or protection of property, which may temporarily impact or suspend parking. County shall make a reasonable effort to inform Blue Ian 2 days in advance of a suspension that is programmed to last more than 2 days, in order for Blue Ian to identify alternative parking, which may be on another section of County Property at County's discretion; and

c. Vehicles making deliveries to or pickups from a party's property shall not park on the other party's property.

d. The County shall assign 20 spaces for the exclusive use of Blue Ian residents, guests, visitors or employees (the "County Spaces"). From time to time, the County may change the location of the 20 County Spaces, so long as they remain on the County Property.

e. Blue Ian shall provide: (1) lighting and security cameras in order to properly monitor and maintain the spaces assigned to Blue Ian, (2) Signage indicating which spaces are assigned to Blue Ian, (4) other general maintenance for the County Spaces as necessary

f. Blue Ian shall cause all residents to sign a "Parking Rules" substantially in the form attached hereto as Exhibit C, indicating, among other things, that Blue Ian Residents shall only use County Spaces in the event that all spaces on Blue Ian property are occupied.

g. At least quarterly, Blue Ian shall certify to the County the number of occupied spaces on each of the County Spaces and the Blue Ian property. Certification shall be based on 1st person observations late at night, mid-week, not during a holiday.

h. The County reserves the right to trespass any person, including any resident or guest of the Blue Ian property, who violates any county ordinance rule or regulation, or state law, which violation was committed on or within County Property.

i. The County reserves the right to require Blue Ian to repair any portion of the County Property that is damaged by Blue Ian or a resident or guest of Blue Ian. County reserves the right to invoice Blue Ian for any repairs County undertakes to resolve any damage caused by Blue Ian or its residents or guests.

j. The County reserves the right to establish assigned spaces and regulate parking through parking passes or similar systems on the balance of the County Property. The County will notify Blue Ian in advance of establishment of any such system.

k. The County reserves any other right not inconsistent with this license agreement.

2. Nature of License. In no event shall this Agreement constitute a lease or easement or effect the grant to Blue Ian or creation in favor of Blue Ian of any leasehold or easement estate or other estate in the Property. This Agreement is intended and shall be construed as granting a mere revocable license or right of use to Blue Ian in the County Property.

3. Termination. The County may terminate this Agreement only upon the occurrence of any of the following: (a) material breach of any provision of this Agreement that remains uncured after the cure period described below; (b) Blue Ian's failure to maintain the property as affordable housing as required herein; (c) Blue Ian's abandonment of the property; (d) violation of applicable laws or regulations that materially affect the County Property; or (e) Blue Ian's failure to pay the annual fee for more than 90 days after written demand.

Before terminating under any of the above subsections, the County must: (1) provide written notice of the specific breach or violation; (2) allow Blue Ian sixty (60) days to cure such breach (or if the breach cannot reasonably be cured within 60 days, allow Blue Ian to commence cure within 60 days and diligently pursue completion); and (3) if the breach is not cured, provide 30 days written notice of termination. This cure period shall not apply to breaches involving illegal activity or safety violations.

Prior to any termination, the County shall provide written notice to the City of DeLand of the proposed termination and the grounds therefore at least 45 days before the effective termination date. The County shall consider any written response from the City received within 30 days of such notice. In the event this agreement is terminated, Blue Ian will be responsible for identifying replacement off-site parking with the City of DeLand or payment into a managed parking fund created by the City of DeLand in accordance with its site plan approved by the City and the County shall have no further obligation to provide off-site parking.

Beginning five years after full occupancy, the continued need for the County Spaces will be reviewed on an annual basis. If the Blue Ian property is not at full occupancy, then the number of occupied spaces will be adjusted up for this review, to assume full occupancy. Adjustment formula will be: (number of observed occupied spaces) / (occupancy rate) x 100%. If the data reported in Section 1.g. above demonstrates either (a) less than 50% utilization of the County Spaces or (b) less than 82% utilization of the combined parking spaces based on the average utilization of the County Spaces demonstrated by the data reported under Section 1.g., the County may terminate this agreement by providing both Blue Ian and the City of DeLand with 120 days written notice. The County shall consider any written response from the City received within 30 days of such notice. The first annual review will occur on the fifth anniversary of occupancy. Either party may request an official parking study be used in place of the certified quarterly data. Blue Ian will bear the cost of the study(ies), whether Blue Ian or the County requests the study.

4. Consideration. Blue Ian shall pay to the County a Fee in the amount of $30 per space per year, for a total of $600 per year.

5. Miscellaneous Provisions.

a. This Agreement shall be effective as of the date first written above and enforceable against the parties for a period of no less than 30 years. This Agreement may, in writing signed by both parties, be extended for such a period as the parties deem reasonable. In the event that a party chooses to terminate any extensions of this Agreement, notice shall be given to the other party no less than 60 days prior to the termination date of said extension.

b. No modification, waiver or amendment of this Agreement shall be binding upon a party unless in writing and signed by each party.

c. In the event this shared parking arrangement results in minor parking issues/problems for any of the parties, the parties agree to use good faith efforts to resolve any such problems in a timely manner.

d. This agreement may not be transferred to any other party or entity, including successors or assigns, without the prior written approval of the County. So long as a successor assumes all obligations of Blue Ian including operating the Blue Ian property as Affordable Housing as described herein, the County approval shall not be unreasonably withheld.

e. If allowable by applicable laws and regulations, Blue Ian shall incorporate into its selection process, known as the "Resident Selection Plan," a preference for income-qualified Volusia County employees. Blue Sky shall provide the draft Resident Selection Plan to Volusia County Community Services for their review and acceptance. Blue Ian shall certify to the County annually, the number of County employees residing at the Property.

f. In event of any proposed amendment, Blue Ian shall promptly inform the City of DeLand.

6. Public Not a Beneficiary. Nothing in this Agreement shall be construed to dedicate any property or any interest or estate therein to or for any public purpose nor shall any provision herein be construed to create any right in or benefit to the general public. The right and obligations set forth in this Agreement shall be for the benefit of and be restricted solely to the owner or owners from time to time of all or any portion of the properties.

7. Indemnification. Blue Ian and its residents shall indemnify, defend and hold harmless the County including its districts, authorities, separate units of government established by law, ordinance or resolution, partners, elected and non-elected officials, employees, agents, and volunteers from and against all claims, damages, losses, and expenses, including, but not limited to attorney's fees, arising out of, resulting from, or incident to Blue Ian's use of the property unless such injury or damage is occasioned solely by fault, negligence, or willful misconduct of the County.

8. Sovereign Immunity. The County expressly retains all rights, benefits and immunities of sovereign immunity in accordance with Section 768.28, Florida Statutes. Notwithstanding anything set forth in any section of this Agreement to the contrary, nothing in this Agreement shall be deemed as a waiver of the County's immunity or limits of liability beyond

any statutory limited waiver of immunity or limits of liability which may have been or may be adopted by the Florida Legislature, and the cap on the amount and liability of the County for damages, regardless of the number or nature of claims in tort, equity, or contract, shall not exceed the dollar amount set by the legislature for tort. Nothing in this Agreement shall inure to the benefit of any third party for the purpose of allowing any claim against the County, which would otherwise be barred under the doctrine of sovereign immunity or by operation of law.

9. Counterparts. This Agreement may be executed in several counterparts, each of which shall be deemed an original and all of which together shall be deemed to constitute one and the same document.

10. Construction. The rule of strict construction shall not apply to this Agreement. This Agreement shall be given a reasonable construction so that the intention of each of the Parties is carried out.

11. Severability. In case any one or more provisions contained in this Agreement shall, for any reason, be held invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision hereof and this Agreement shall be construed as if such invalid, illegal, or unenforceable provision had not been contained herein.

12. Applicable Law. This Agreement shall be governed by, and construed in accordance with, the laws of the State of Florida, without regard to conflict of law principles. Venue for any legal action shall be in Volusia County, Florida.

13. Waiver. No waiver hereunder of any condition or breach shall be deemed to be a continuing waiver or a waiver of any subsequent breach.

14. Enforcement. The licenses and covenants contained herein shall be enforceable by suit for specific performance and mandatory injunctive relief, in addition to any other remedy provided by law or equity. Any action hereunder shall be brought in Volusia County, Florida.

IN WITNESS WHEREOF, the County and Blue Ian have executed this Agreement on the date first above written.

[SIGNATURES ON FOLLOWING PAGES]

Signed, sealed and delivered in the presence of:

COUNTY OF VOLUSIA, a political subdivision of the State of Florida

_____
Witness 1

_____
Jeff Brower, County Chair

_____
Print Name of Witness 1

Attest
By: _____

_____
Witness 2

_____
George Recktenwald, County Manager

_____
Print Name of Witness 2

STATE OF FLORIDA
COUNTY OF VOLUSIA

The foregoing instrument was acknowledged before me by means of ☐ physical presence or ☐ online notarization, this _____day of _____, 202__ by Jeff Brower, County Chair of the County of Volusia, Florida, a political subdivision of the State of Florida, on behalf of the County. They are personally known to me and did not take an oath.

Notary Public_____

Printed Name: _____

Commission No. _____

Approved as to form by:

_____
Russ Brown, Asst. County Attorney

Blue Ian, LLC, a Florida limited liability company

_____
Attest

By:_____

Name:_____

_____
Name

Title: _____

Date: _____

STATE OF FLORIDA
COUNTY OF VOLUSIA

The foregoing instrument was acknowledged before me this _____ day of _____, 202_, by _____ as _____ of Blue Ian, LLC, a Florida limited liability company. He or she is [_] personally known to me or [_] produced as identification and did not take an oath.

_____
Notary Public

My Commission expires:_____

Exhibit A
Blue Ian Property

Exhibit B
County Property

Exhibit C
Parking Rules

CITY OF DELAND
Request for Commission Action
July 21, 2025

SUBJECT: Resolution Approving or Denying Parking Agreement Related to Off-Site Parking for 84 Affordable Housing Units, Located at 225 West New York Avenue.

DEPARTMENT: Planning

PREPARED BY: Carol Kuhn, Planning Director

ATTACHMENTS: Resolution Granting Putnam Parking Waiver, Resolution Denying Putnam Parking Waiver, DRAFT parking agreement 7.9.25 updated, Staff Report - Parking Reduction Request, TAZ_SHIM_4-10-25, Narrative for Parking Reduction Request, Parking Demand Study (3-10-25) Revised - Submitted 3-25-25, NYA - PARKING DEMAND STUDY SUPPLEMENT - 031825, Revised Site Plan - Parking Reduction Request, Elevations - Revised Submission - Increased Height, PW24-202 New York Avenue Apartments Parking Demand Study (8-22-24) S&S, 2024.12.11 Letter to City of DeLand, 3778538-Putnam FHAA Response, FL Housing Finance Corp Local Govt Verification - Consistent with Zoning & Land Use Regs - signed - May 3, 2023, Elevations - Initial Submittal, Site Plan Sheet - Initial Submittal

APPROVED BY: Michael Pleus, City Manager, July 16, 2025

SUMMARY/HIGHLIGHT:

The City of DeLand welcomes and encourages affordable housing development projects and the staff understands that affordable housing is a priority for the City and the State of Florida. The applicant, Blue Sky Communities, LLC, has submitted a site plan application (SP24-134) for an 84-unit affordable housing development on a 1.63-acre site located at 225 W. New York Avenue. The proposed project will include a mix of affordable housing units (30-60% Area Median Income (AMI); 60-80% AMI, and 80-120% AMI).

On April 21, 2025, the City Commission reviewed the proposal for a parking reduction and conditionally approved the parking reduction request, provided the applicant secure 20 additional off-site parking spaces for the same length of time as the project remains affordable. To address the conditional approval, the applicant submitted a draft parking agreement with Volusia County to utilize parking at the Volusia County records building adjacent to the proposed site. The proposed off-site parking agreement with the County allows the County to terminate the agreement for cause at any time. However, there are no identified locations for replacement parking in the event the agreement is terminated. Staff believes a location and means for providing alternative parking must be provided for in the agreement to comply with the Commission's conditional approval. Staff reviewed the proposed parking agreement and provided comments to the applicant. Based upon staff comments, the applicant has made some revisions to the agreement, but has not addressed the primary concern regarding alternative parking if the County terminates the agreement.

STRATEGIC PLAN FOCUS AREA/ACTION STEP:

As outlined in the City's Strategic Plan under Strategic Focus Area: Institute Smart Growth Principles #9 discusses a desire to decrease parking requirements when a development provides other features that could reduce traffic impacts. The applicant is providing 52 bicycle parking spaces to compensate for 26 of the deficient number of vehicular car spaces provided.

SUSTAINABILITY:

NA

FISCAL IMPACT:

The fiscal impact to the City is currently unknown.

RECOMMENDATION:

Staff recommends denial of the parking waiver for the proposed 84 apartments located at 225 West New York Avenue.

BACKGROUND/DISCUSSION:

In April of 2023, Planning Staff advised the applicant that adequate parking for the proposed 84 units must be provided. The applicant requested Planning sign the Florida Housing Finance Corporation Local Government Verification that Development is Consistent with Zoning and Land Use Regulations. On May 3, 2023, Planning staff signed the requested form, but with stipulations regarding the need for discretionary approvals from City Commission for parking reductions and a statement regarding the limited size of the site (see attachment). The applicant has continued to move the project forward, applying for and receiving funding from the State and Volusia County, despite a parking shortage. For multifamily uses, the code requires 1.5 parking spaces per unit for 1-bedroom units and 2 spaces for 2 or more-bedroom units. An additional 0.5 parking spaces per unit are also required for visitor parking. Per the site plan, there will be (44) 1-bedroom units and (40) 2+ bedroom units. Based on the code calculations, a minimum of 188 parking spaces are required. On April 21, 2025, the City Commission reviewed the proposal for a parking reduction and conditionally approved the parking reduction request, provided the applicant secure 20 additional off-site parking spaces to meet the needs of the proposed development.

Since the site layout depends on the parking reduction, the applicant is requesting approval of the parking reduction, as well as approval to use off-site parking for the residents, before the site plan approval process progresses any further. The site plan is currently under review and must go before the Planning Board for a recommendation, then to the City Commission for approval. Included with the parking reduction request is a request to allow off-site parking for residential purposes.

For multifamily uses, the code requires 1.5 parking spaces per unit for 1-bedroom units and 2 spaces for 2 or more-bedroom units. An additional 0.5 parking spaces per unit are also required for visitor parking. Per the site plan, there will be (44) 1-bedroom units and (40) 2+ bedroom units. Based on the code calculations, a minimum of 188 parking spaces are required. The applicant is requesting an additional 68 space reduction, over and beyond the 30% bicycle parking reduction. The applicant is also requesting City Commission approval for off-site parking for residential uses, where such off-site parking is only permitted for nonresidential uses (33-91.06(a)3).

The applicant is proposing to provide 94 vehicle parking spaces along with 20 off-site parking spaces. The applicant is also including 52 bicycle spaces which could reduce the required 188 vehicle parking by 26 spaces (2 bike parking spaces = 1 car parking space), thereby providing 140 total vehicle parking spaces. This leaves the development deficient by 48 parking spaces. Staff is not supportive of a 48-space reduction, nor does staff support the current request to allow off-site parking as it does not comply with the conditional approval to provide permanent off-site parking. Staff concerns related to the parking reduction include: a lack of public transportation in the area, no grocery stores within walking distance, and the potential impact to surrounding businesses and employers from residents and guests parking off-site. Further, the applicant has made no provisions for guest parking, nor has the applicant proposed parking for the required ground-floor commercial.

The applicant has been unable to provide a permanent off-site parking solution in compliance with the City Commission's requirement.

RESOLUTION NO. 2025 –

A RESOLUTION OF THE CITY COMMISSION OF DELAND, FLORIDA, APPROVING A REQUEST FOR A PARKING REDUCTION AND ALLOWANCE FOR OFF-SITE PARKING FOR APARTMENT BUILDING LOCATED AT 225 WEST NEW YORK AVENUE; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the applicant, Blue Sky Communities, LLC, has submitted a site plan application for an 84-unit apartment building on a 1.63 acre site located at 225 West New York Avenue (the "Project"); and

WHEREAS, the applicant is proposing 94 vehicle on-site vehicle parking spaces and 20 adjacent off-site vehicle parking spaces for a building with 84 apartments, 44 of which are one bedroom and 40 of which have two or more bedrooms; and

WHEREAS, the City's planning staff has advised the applicant since it very first proposed the Project that the site does not have sufficient space for parking given the number of units being proposed in the building; and

WHEREAS, the Project, as currently proposed, does not comply with the parking requirements of the City's land development regulations; and

WHEREAS, in order to address the insufficient parking, the applicant has requested the City to reduce the amount of parking required for the Project and to allow the applicant to use parking spaces on an adjacent County owned parking lot for the purpose of meeting the parking needs of the Project; and

WHEREAS, the City's land development regulations provide that a maximum of 30% of the number of required car parking spaces may be satisfied by providing bicycle parking spaces; and

WHEREAS, the City's land development regulations require a total of 188 parking spaces for the Project, 52 of which are proposed to be satisfied with bicycle parking spaces, leaving 136 required car parking spaces – the applicant proposes to provide only 114 car parking spaces, 20 of which are off-site, which is significantly less than the required number of car parking spaces even after the allowance for bicycle parking spaces; and

WHEREAS, the applicant has requested that the City consider the availability of parking on an adjacent County parking lot, which would be provided pursuant to the agreement between the applicant, or its successors and assigns and Volusia County, a copy of which is attached hereto as Exhibit "A" (the "County Parking Agreement"); and

WHEREAS, the City Commission has considered all of the information in the detailed staff report that accompanied this request and that information forms a part of the evidence upon which this Resolution is based; and

WHEREAS, the City Commission finds that, even with the reduction in parking spaces and the allowance of adjacent but off-site parking spaces pursuant to the County Parking Agreement, there will be sufficient vehicle parking spaces for the Project; and

WHEREAS, the City Commission finds that there is a significant need for affordable housing in the immediate downtown area of the City and that granting the requested parking reduction pursuant to the conditions set forth in this Resolution are in the best interests of the City and serve the health, safety and welfare of the citizens of the City of DeLand.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF DELAND, FLORIDA:

Section 1. The foregoing preamble is incorporated herein by reference and forms a part of the basis for the adoption of this Resolution, together with all other information presented to the City Commission at its hearing on this request.

Section 2. The City Commission hereby approves the applicant's request for a reduction in the number of required parking spaces for the Project located at 225 West New York Avenue, subject to the following conditions:

a. A restrictive covenant or other document will be recorded in the public records of Volusia County which requires that the 84 unit Project shall remain affordable pursuant to Florida law on the basis of 15% of the units being affordable for families earning 30% of AMI; 65% of the units being affordable for families earning 60% of AMI; and 20% of the units being affordable for families earning 30% of AMI.

b. 13 of the 84 units in the Project will be dedicated to housing persons referred by the Neighborhood Center or any successor organization. Should the Neighborhood Center or any successor organization cease operations or permanently cease referring residents, then this condition in this Section 2.b. shall no longer be a condition of this parking reduction approval.

c. The County Parking Agreement attached hereto as Exhibit "A" must be executed by the County and the entity having control over the Project and owning the property upon which the Project is located.

Should the Project cease to comply with any of the foregoing conditions and not cure such deficiency within ninety (90) days of written notice of such deficiency by the City, then occupancy of the Project shall cease until such time as the deficiency is cured. A deficiency may be cured by reducing the number of occupied units within the Project so that the number of vehicle parking spaces provided meets the number of vehicle parking spaces required based upon the lesser of the parking requirements then in effect or on the date of this Resolution.

Section 3. This Resolution shall become effective immediately upon its adoption.

PASSED AND DULY ADOPTED this 21st day of July, 2025.

_____
Christopher M. Cloudman
Mayor-Commissioner

ATTEST:

_____
Julie A. Hennessy
City Clerk - Auditor

APPROVED AS TO FORM AND LEGALITY:

_____
Darren J. Elkind
City Attorney

RESOLUTION NO. 2025 –

A RESOLUTION OF THE CITY COMMISSION OF DELAND, FLORIDA, DENYING A REQUEST FOR A PARKING REDUCTION AND ALLOWANCE FOR OFF-SITE PARKING FOR APARTMENT BUILDING LOCATED AT 225 WEST NEW YORK AVENUE; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the applicant, Blue Sky Communities, LLC, has submitted a site plan application for an 84-unit apartment building on a 1.63 acre site located at 225 West New York Avenue; and

WHEREAS, the applicant is proposing 94 vehicle on-site vehicle parking spaces and 20 adjacent off-site vehicle parking spaces for a building with 84 apartments, 44 of which are one bedroom and 40 of which have two or more bedrooms; and

WHEREAS, the City's planning staff has advised the applicant since it very first proposed the project that the site does not have sufficient space for parking given the number of units being proposed in the building; and

WHEREAS, the project, as currently proposed, does not comply with the parking requirements of the City's land development regulations; and

WHEREAS, in order to address the insufficient parking, the applicant has requested the City to reduce the amount of parking and to allow the applicant to use parking spaces on an adjacent County owned parking lot for the purpose of meeting the parking needs of the proposed building; and

WHEREAS, the City's land development regulations provide that a maximum of 30% of the number of required car parking spaces may be satisfied by providing bicycle parking spaces; and

WHEREAS, the City's land development regulations require a total of 188 parking spaces, 52 of which are proposed to be satisfied with bicycle parking spaces, leaving 136 required car parking spaces – the applicant proposes to provide only 114 car parking spaces, 20 of which are off-site, which is significantly less than the required number of car parking spaces even after the allowance for bicycle parking spaces; and

WHEREAS, the applicant has requested that the City consider the availability of parking on an adjacent County parking lot, but the City Commission finds that the significant reduction in spaces, especially considering that a number of the required spaces are being replaced with bicycle parking spaces, is too significant to meaningfully provide parking to the residents of the proposed building; and

WHEREAS, the City Commission also finds that the proposed agreement with Volusia County is terminable and does not guarantee even the 20 spaces for the life of the project or even the required period of affordability; and

WHERAS, the City has considered all of the information in the detailed staff report that accompanied this request and that information forms a part of the evidence upon which this Resolution is based; and

WHEREAS, the project could comply with the City's parking requirements by reducing the number of units in the building; and

WHEREAS, the City Commission finds that the significant reduction in parking is not compatible with a residential apartment project, that it will adversely affect the residents of the proposed apartment building, and that it will otherwise adversely affect the public interest.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF DELAND, FLORIDA:

Section 1. The foregoing preamble is incorporated herein by reference and forms a part of the basis for the adoption of this Resolution, together with all other information presented to the City Commission at its hearing on this request.

Section 2. The City Commission hereby denies the applicant's request for a reduction in the number of required parking spaces for the proposed apartment project located at 225 West New York Avenue.

Section 3. This Resolution shall become effective immediately upon its adoption.

PASSED AND DULY ADOPTED this 21st day of July, 2025.

_____
Christopher M. Cloudman
Mayor-Commissioner

ATTEST:

_____
Julie A. Hennessy
City Clerk - Auditor

APPROVED AS TO FORM AND LEGALITY:

_____
Darren J. Elkind
City Attorney

Prepared by:
Mark Watts
Cobb Cole
231 N. Woodland Blvd.
DeLand, FL 32720

PARKING LICENSE AGREEMENT

THIS SHARED PARKING LICENSE AGREEMENT (this "Agreement") is entered into as of the __ day of _____, 2025, by and between **BLUE IAN, LLC**, a Florida limited liability company ("Blue Ian"), and **THE COUNTY OF VOLUSIA**, a political subdivision of the State of Florida (the "County"), mailing address: 123 West Indiana Avenue, DeLand, FL 32720.

RECITALS

WHEREAS, Blue Ian is the owner of that certain real property, located at 225 W. New York Avenue in DeLand, Florida, more particularly described on Exhibit A, attached hereto and incorporated by this reference, and located within the municipal boundaries of the City of DeLand (the "Blue Ian Property"); and

WHEREAS, the County is the owner of certain real properties, located at 235 W. New York Avenue and 136 N. Florida Avenue in DeLand, Florida, more particularly described on Exhibit B, attached hereto and incorporated by this reference, and located within the municipal boundaries of the City of DeLand (collectively, the "County Property"), which property is directly adjacent to the Blue Ian Property; and

WHEREAS, Blue Ian proposes to develop 84 affordable housing units upon the Blue Ian property which such housing shall remain affordable for 50 years; and

WHEREAS, in order to facilitate the creation of such affordable housing, additional parking is required; and

WHEREAS, the County encourages the creation of affordable housing units; and

WHEREAS, the County and Blue Ian desire to and have agreed that the County will provide Blue Ian parking on the County Property during specified hours and subject to the below limitations.

NOW, THEREFORE, the parties hereto agree and bind themselves as follows:

1. Parking for Blue Ian Residents. The County hereby grants to residents of the Blue Ian property, as well as guests, visitors, or employees, the revocable license and right to park at any given time, up to twenty (20) motor vehicles owned or leased by such resident upon the County Property. Such rights shall be subject to the following limitations/reservations:

a. The County reserves the right at any time and from time to time to exclude any person who is not a resident, guest, visitor or employee of the Blue Ian property from County Property;

b. The County reserves the right to make improvements to its property, and to temporarily erect or place barriers in and around areas on its property which are being constructed and/or repaired in order to insure either safety of persons or protection of property, which may temporarily impact or suspend parking. County shall make a reasonable effort to inform Blue Ian 2 days in advance of a suspension that is programmed to last more than 2 days, in order for Blue Ian to identify alternative parking, which may be on another section of County Property at County's discretion; and

c. Vehicles making deliveries to or pickups from a party's property shall not park on the other party's property.

d. The County shall assign 20 spaces for the exclusive use of Blue Ian residents, guests, visitors or employees (the "County Spaces"). From time to time, the County may change the location of the 20 County Spaces, so long as they remain on the County Property.

e. Blue Ian shall provide: (1) lighting and security cameras in order to properly monitor and maintain the spaces assigned to Blue Ian, (2) Signage indicating which spaces are assigned to Blue Ian, (4) other general maintenance for the County Spaces as necessary

f. Blue Ian shall cause all residents to sign a "Parking Rules" substantially in the form attached hereto as Exhibit C, indicating, among other things, that Blue Ian Residents shall only use County Spaces in the event that all spaces on Blue Ian property are occupied.

g. At least quarterly, Blue Ian shall certify to the County the number of occupied spaces on each of the County Spaces and the Blue Ian property. Certification shall be based on 1st person observations late at night, mid-week, not during a holiday.

h. The County reserves the right to trespass any person, including any resident or guest of the Blue Ian property, who violates any county ordinance rule or regulation, or state law, which violation was committed on or within County Property.

i. The County reserves the right to require Blue Ian to repair any portion of the County Property that is damaged by Blue Ian or a resident or guest of Blue Ian. County reserves the right to invoice Blue Ian for any repairs County undertakes to resolve any damage caused by Blue Ian or its residents or guests.

j. The County reserves the right to establish assigned spaces and regulate parking through parking passes or similar systems on the balance of the County Property. The County will notify Blue Ian in advance of establishment of any such system.

k. The County reserves any other right not inconsistent with this license agreement.

2. Nature of License. In no event shall this Agreement constitute a lease or easement or effect the grant to Blue Ian or creation in favor of Blue Ian of any leasehold or easement estate or other estate in the Property. This Agreement is intended and shall be construed as granting a mere revocable license or right of use to Blue Ian in the County Property.

3. Termination. The County may terminate this Agreement only upon the occurrence of any of the following: (a) material breach of any provision of this Agreement that remains uncured after the cure period described below; (b) Blue Ian's failure to maintain the property as affordable housing as required herein; (c) Blue Ian's abandonment of the property; (d) violation of applicable laws or regulations that materially affect the County Property; or (e) Blue Ian's failure to pay the annual fee for more than 90 days after written demand.

Before terminating under any of the above subsections, the County must: (1) provide written notice of the specific breach or violation; (2) allow Blue Ian sixty (60) days to cure such breach (or if the breach cannot reasonably be cured within 60 days, allow Blue Ian to commence cure within 60 days and diligently pursue completion); and (3) if the breach is not cured, provide 30 days written notice of termination. This cure period shall not apply to breaches involving illegal activity or safety violations.

Prior to any termination, the County shall provide written notice to the City of DeLand of the proposed termination and the grounds therefore at least 45 days before the effective termination date. The County shall consider any written response from the City received within 30 days of such notice. In the event this agreement is terminated, Blue Ian will be responsible for identifying replacement off-site parking with the City of DeLand or payment into a managed parking fund created by the City of DeLand in accordance with its site plan approved by the City and the County shall have no further obligation to provide off-site parking.

Beginning five years after full occupancy, the continued need for the County Spaces will be reviewed on an annual basis. If the Blue Ian property is not at full occupancy, then the number of occupied spaces will be adjusted up for this review, to assume full occupancy. Adjustment formula will be: (number of observed occupied spaces) / (occupancy rate) x 100%. If the data reported in Section 1.g. above demonstrates either (a) less than 50% utilization of the County Spaces or (b) less than 82% utilization of the combined parking spaces ~~for two consecutive quarters~~based on the average utilization of the County Spaces demonstrated by the data reported under Section 1.g., the County may terminate this agreement by providing both Blue Ian and the City of DeLand with 120 days written notice. The County shall consider any written response from the City received within 30 days of such notice. The first annual review will occur on the fifth anniversary of occupancy. Either party may request an official parking study be used in place of the certified quarterly data. Blue Ian will bear the cost of the study(ies), whether Blue Ian or the County requests the study.

4. Consideration. Blue Ian shall pay to the County a Fee in the amount of $30 per space per year, for a total of $600 per year.

5. Miscellaneous Provisions.

a. This Agreement shall be effective as of the date first written above and enforceable against the parties for a period of no less than 30 years. This Agreement may, in writing signed by both parties, be extended for such a period as the parties deem reasonable. In the event that a party chooses to terminate any extensions of this Agreement, notice shall be given to the other party no less than 60 days prior to the termination date of said extension.

b. No modification, waiver or amendment of this Agreement shall be binding upon a party unless in writing and signed by each party.

c. In the event this shared parking arrangement results in minor parking issues/problems for any of the parties, the parties agree to use good faith efforts to resolve any such problems in a timely manner.

d. This agreement may not be transferred to any other party or entity, including successors or assigns, without the prior written approval of the County. So long as a successor assumes all obligations of Blue Ian including operating the Blue Ian property as Affordable Housing as described herein, the County approval shall not be unreasonably withheld.

e. If allowable by applicable laws and regulations, Blue Ian shall incorporate into its selection process, known as the "Resident Selection Plan," a preference for income-qualified Volusia County employees. Blue Sky shall provide the draft Resident Selection Plan to Volusia County Community Services for their review and acceptance. Blue Ian shall certify to the County annually, the number of County employees residing at the Property.

f. In event of any proposed amendment, Blue Ian shall promptly inform the City of DeLand.

6. Public Not a Beneficiary. Nothing in this Agreement shall be construed to dedicate any property or any interest or estate therein to or for any public purpose nor shall any provision herein be construed to create any right in or benefit to the general public. The right and obligations set forth in this Agreement shall be for the benefit of and be restricted solely to the owner or owners from time to time of all or any portion of the properties.

7. Indemnification. Blue Ian and its residents shall indemnify, defend and hold harmless the County including its districts, authorities, separate units of government established by law, ordinance or resolution, partners, elected and non-elected officials, employees, agents, and volunteers from and against all claims, damages, losses, and expenses, including, but not limited to attorney's fees, arising out of, resulting from, or incident to Blue Ian's use of the property unless such injury or damage is occasioned solely by fault, negligence, or willful misconduct of the County.

8. Sovereign Immunity. The County expressly retains all rights, benefits and immunities of sovereign immunity in accordance with Section 768.28, Florida Statutes. Notwithstanding anything set forth in any section of this Agreement to the contrary, nothing in

this Agreement shall be deemed as a waiver of the County's immunity or limits of liability beyond any statutory limited waiver of immunity or limits of liability which may have been or may be adopted by the Florida Legislature, and the cap on the amount and liability of the County for damages, regardless of the number or nature of claims in tort, equity, or contract, shall not exceed the dollar amount set by the legislature for tort. Nothing in this Agreement shall inure to the benefit of any third party for the purpose of allowing any claim against the County, which would otherwise be barred under the doctrine of sovereign immunity or by operation of law.

9. Counterparts. This Agreement may be executed in several counterparts, each of which shall be deemed an original and all of which together shall be deemed to constitute one and the same document.

10. Construction. The rule of strict construction shall not apply to this Agreement. This Agreement shall be given a reasonable construction so that the intention of each of the Parties is carried out.

11. Severability. In case any one or more provisions contained in this Agreement shall, for any reason, be held invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision hereof and this Agreement shall be construed as if such invalid, illegal, or unenforceable provision had not been contained herein.

12. Applicable Law. This Agreement shall be governed by, and construed in accordance with, the laws of the State of Florida, without regard to conflict of law principles. Venue for any legal action shall be in Volusia County, Florida.

13. Waiver. No waiver hereunder of any condition or breach shall be deemed to be a continuing waiver or a waiver of any subsequent breach.

14. Enforcement. The licenses and covenants contained herein shall be enforceable by suit for specific performance and mandatory injunctive relief, in addition to any other remedy provided by law or equity. Any action hereunder shall be brought in Volusia County, Florida.

IN WITNESS WHEREOF, the County and Blue Ian have executed this Agreement on the date first above written.

[SIGNATURES ON FOLLOWING PAGES]

Signed, sealed and delivered in the presence of:

COUNTY OF VOLUSIA, a political subdivision of the State of Florida

_____
Witness 1

_____
Jeff Brower, County Chair

_____

Print Name of Witness 1

Attest
By: _____

_____
Witness 2

_____

_____
George Recktenwald, County Manager

Print Name of Witness 2

STATE OF FLORIDA
COUNTY OF VOLUSIA

The foregoing instrument was acknowledged before me by means of ☐ physical presence or ☐ online notarization, this _____day of _____, 202__ by Jeff Brower, County Chair of the County of Volusia, Florida, a political subdivision of the State of Florida, on behalf of the County. They are personally known to me and did not take an oath.

Notary Public_____

Printed Name: _____

Commission No. _____

Approved as to form by:

_____
Russ Brown, Asst. County Attorney

Blue Ian, LLC, a Florida limited liability company

_____
Attest

By:_____

Name:_____

_____
Name

Title: _____

Date: _____

STATE OF FLORIDA
COUNTY OF VOLUSIA

The foregoing instrument was acknowledged before me this _____ day of _____, 202_, by _____ as _____ of Blue Ian, LLC, a Florida limited liability company. He or she is [_] personally known to me or [_] produced as identification and did not take an oath.

_____
Notary Public

My Commission expires:_____

Exhibit A
Blue Ian Property

Exhibit B
County Property

Exhibit C
Parking Rules

PLANNING DIVISION STAFF REPORT
TO
CITY COMMISSION

HEARING DATE: April 21, 2025

APPLICATION NO.: PW25-036

STAFF PLANNER: Carol Kuhn, AICP, Planning Director

APPLICANT: Blue Sky Communities, LLC

REPRESENTATIVE: Mark Watts, Cobb Cole

REQUEST: Parking Reduction and Allowance for Off-Site Residential Parking for 84 Affordable Housing Units at 225 West New York Avenue

APPLICABLE REGULATIONS:
Article VIII Development Design & Improvement Standards
Sec. 33-91 – Off-Street Parking & Loading

A. SITE FACTORS:

Location:	225 W. New York Avenue
Parcel Size:	1.63 acres
Land Use:	Downtown Commercial
Existing Zoning:	C-2A
Existing Use:	Vacant

	SURROUNDING USE:	SURROUNDING ZONING:
North:	Downtown Commercial	C-2A (Downtown Commercial)
South:	Downtown Commercial	C-2A & H (Downtown Commercial & Historic)
East:	Downtown Commercial	C-2A & H (Downtown Commercial & Historic)
West:	Downtown Commercial	C-2A (Downtown Commercial)

B. BACKGROUND:

The City of DeLand welcomes and encourages affordable housing development projects. The City's planning staff understands that affordable housing is a priority for the City Commission, the citizens of DeLand and the State of Florida. The applicant, Blue Sky Communities, LLC, has submitted a site plan application (SP24-134) for an 84-unit affordable housing development along with an associated request for a parking reduction and allowance for off-site residential parking at 225 West New York Avenue.

At this time, the City does not have regulations in place specifically related to reducing parking requirements for affordable housing projects. The City planning staff must therefore apply the

parking requirements specified in the City's Land Development Regulations. Section 33-91.03(f) specifies the minimum parking requirements for various uses. Staff has reviewed the applicant's revised parking study, which is intended to support the applicant's request for a reduction in parking for an 84-unit affordable housing development.

The applicant, Blue Sky Communities, LLC, has submitted a site plan application (SP24-134) for an 84-unit affordable housing development on a 1.63-acre site located at 225 W. New York Avenue, with a mix of affordable housing units (30-60% Area Median Income (AMI); 60-80% AMI, and 80-120% AMI). The density for 84 dwelling units on this 1.63-acre site would be 51.53 dwelling units per acre. The maximum density within the city is 20 dwelling units per acre. However, in an effort to increase density in the Downtown, the City's Comprehensive Plan provides that "a residential density within the DeLand Downtown boundary shall be calculated based on gross acreage for the entire district and not on an individual property basis. The total number of dwelling units within the Downtown Commercial area shall not exceed a total of 2,777 units. Within the Downtown Commercial land use designation, retail commercial uses shall be encouraged on the ground floors that front on to streets. Offices and residential should be encouraged to locate above the active ground floor."

Since the site layout depends on the parking reduction, the applicant is requesting approval of the parking reduction, as well as approval to use off-site parking for the residents, before the site plan approval process progresses any further. The site plan is currently under review and must go before the Planning Board for a recommendation, then to the City Commission for approval. Included with the parking reduction request is a request to allow off-site parking for residential purposes.

C. ANALYSIS:

During initial discussions with the applicant prior to a pre-application meeting, staff cited numerous concerns regarding the applicant's request for a significant parking reduction. Staff advised the applicant that the size of the site could not accommodate the necessary site improvements associated with an 84-unit apartment complex. However, the applicant moved forward with the proposed project, submitting for, and receiving funding from, the State of Florida and Volusia County for an affordable housing development, with funding based on 84 units. The applicant submitted a concept plan, site plan, and application for a Certificate of Appropriateness, as well as a separate parking reduction request. City Commission denied the initial Parking Reduction Request on October 21, 2024.

During the October Commission deliberation regarding the initial parking reduction request, one of the Commission members mentioned a possible parking ratio of 1.39 to 1.42 as a possible, acceptable ratio to consider, as this was a ratio used by the DeLand Commons multi-family development on Woodland Boulevard (1.42 ratio at DeLand Commons). The proposed parking ratio with the additional parking proposed with this revised, ground-floor parking option is 1.12 spaces per unit. However, the applicant has suggested that 13 of the proposed units be used exclusively for persons transitioning from the Neighborhood Center. The applicant states that these residents would not need parking and has removed the 13 units from the overall parking count, resulting a proposed parking ratio of 1.32 (based on 71 units). The applicant contends that the 13 units proposed for residents transitioning from the Neighborhood Center will not need a vehicle and therefore believes the 94 parking spaces and the 52 bicycle spaces (2 bike parking spaces = 1 vehicle space) are adequate to serve the residents.

Required Parking

For residential uses, Section 33-91.03 of the Development Regulations require 1.5 spaces per 1 bedroom; 2 spaces per 2 & 3 bedroom PLUS 0.5 spaces per unit for guest parking.

Required parking:
44 – 1.5 bedroom – 66 spaces plus 22 guest spaces
28 – 2 bedroom – 56 spaces plus 14 guest spaces
12 – 3 bedroom – 24 spaces plus 6 guest spaces
Total: 188 spaces

The City Commission may approve off-site parking for **non-residential** uses (33-91.06(a)3), with criteria and standards for approval of non-residential off-street parking. However, off-site parking is not permitted for residential uses. The Regulations do not include a process, standards, or criteria for approving a parking reduction for an affordable housing project within the City.

Bicycle Parking Reduction

Section 33-91.03(l)(3) of the land development regulations allowed up to 30% of the number of overall required off-street parking spaces to be reduced with bicycle parking. Using the allowed 30% reduction for bicycle parking, a maximum of 56 bicycle spaces may be used in lieu of vehicle spaces (fractional units of less than 0.5 are rounded down, per the development code 33-91.01(d)). This code section has been revised to allow for a 5% reduction for additional parking spaces. However, the site plan application (SP24-134) was submitted prior to the Land Development Regulation amendment to reduce the parking reduction for bicycle parking.

The applicant is proposing to provide 94 vehicle parking spaces and 52 bicycle spaces, which could reduce the required vehicle parking by 26 spaces (2 bike parking spaces = 1 car parking space), thereby providing 120 total vehicle parking spaces, where 188 are required. This leaves the development deficient by 68 parking spaces. Staff is not supportive of a 68-space reduction, nor does staff support the request to allow off-site parking to accommodate the parking needs of the residents. Staff concerns related to the parking reduction include: a lack of public transportation in the area, no grocery stores within walking distance, and the potential impact to surrounding businesses and employers from residents and guests parking off-site. Further, the applicant has made no provisions for guest parking, nor has the applicant proposed parking for the required ground-floor commercial space.

Affordable Housing Comparison Sites

A parking study dated March 10, 2025 was submitted that cites two other affordable housing options in DeLand, Taylor Place and the Pines. Taylor Place is located along Woodland Boulevard, which is the VoTran Route 31 bus route along Woodland Boulevard. The Pines is located within 1900 feet of Woodland Boulevard (a little over a quarter of a mile from a bus route). The applicant contends that the Pines and Taylor Place are over-parked (i.e. have more parking spaces than necessary for the number of vehicles) based on the parking counts observed during their study, dated August 22, 2024.

Staff has reviewed the parking study, and finds that the two examples cited differ from the proposed New York Avenue Apartments, due to their proximity to a public transportation route. Both Taylor Place and the Pines have available public transportation options that are not available to the proposed New York Avenue Apartments. On February 22, 2025, VoTran introduced a new fixed-route bus service operating each hour from downtown to the SunRail Station. This limited

bus service may slightly improve transit options. VoTran also operates VoRide, an "on-demand" public transit alternative. However, the average wait-time is 45 minutes, which could impact residents' ability to commute to work or school.

The required parking for **The Pines** (100 dwelling units):
1 bedroom units (24 @ 1.5 spaces per unit) = 36 spaces
2 bedroom units (32 @ 2 spaces per unit) = 64 spaces
3 bedroom units (24 @ 2 spaces per unit) = 48 spaces
4 bedroom units (20 @ 2 spaces per unit) = 40 spaces
Visitor (guest parking) spaces = 100 x 0.5 spaces per unit = 50
Total: 238 spaces required
Provided: 241 spaces provided

The required parking for **Taylor Place** (106 dwelling units):
1 bedroom units (4 @ 1.5 spaces per unit) = 6 spaces
2 bedroom units (12 @ 2 spaces per unit) = 24 spaces
3 bedroom units (71 @ 2 spaces per unit) = 142 spaces
4 bedroom units (19 @ 2 spaces per unit) = 38 spaces
Visitor (guest parking) spaces = 106 x 0.5 spaces per unit = 53
Total: 263 spaces required
Provided: 263 spaces provided

Planning staff visited each of these sites on numerous occasions and found that not all of the parking spaces were utilized by residents.

Taylor Place:

March 11, 2025	6:50 am	113 vehicles (Tuesday)
March 11, 2025	1:00 pm	77 vehicles
March 13, 2025	7:00 am	105 vehicles (Thursday)
March 13, 2025	2:50 pm	71 vehicles
March 23, 2025	11:56 am	103 vehicles (Sunday)

The Pines:

March 11, 2025	6:50 am	88 vehicles (Tuesday)
March 11, 2025	12:50 pm	52 vehicles
March 13, 2025	7:00 am	84 vehicles (Thursday)
March 13, 2025	2:50 pm	45 vehicles
March 23, 2025	12:05 pm	78 vehicles (Sunday)

Planning staff contacted the above-referenced apartment complexes on April 2, 2025 and inquired about the current vacancies. Taylor Place had five (5) vacancies and The Pines had zero (0) vacancies.

The applicant also references a recently-completed multi-family residential development project located within Downtown, DeLand Commons, which was granted a parking reduction, with a parking ratio of 1.42 spaces per unit. To support its request for a reduction in off-street parking, DeLand Commons submitted similar comparison studies of other Atlantic Housing projects. The project also took advantage of the LDR's 30% bicycle parking reduction (which has since been reduced to 5%) The now partially occupied (the residential units are occupied but not the

commercial) mixed-use multi-family development has been experiencing resident parking deficiencies associated with the parking reduction. The City has received complaints about parking shortages and parking issues. Potential residents have contacted City staff before leasing, inquiring if additional parking will be provided in the future. In an attempt to address this parking deficiency, the DeLand Commons developer has met with City and County planning staff regarding potential sites for providing additional parking to meet the demand for the DeLand Commons project.

Additional Research – Transportation Analysis Zones (TAZ)

Planning staff collected additional data from the Transportation Analysis Zones (TAZ). The TAZ data is compiled by census block information and includes population numbers as well as information related to automobile ownership, broken down by single-and multi-family residential uses. A traffic analysis zone or transportation analysis zone (TAZ) is the unit of geography most commonly used in conventional transportation planning models. Most often the critical information is the number of automobiles per household, household income, and employment within these zones. This information helps to further understand the number of vehicle trips within the zone.

- **Taylor Place**
  - TAZ 1661
  - 119 multi-family population
  - 6% zero vehicle households
  - 40% one-vehicle households
  - 54% two-vehicle households
- **The Pines**
  - TAZ 1635
  - 255 multi-family population
  - 14% zero vehicle households
  - 16% one-vehicle households
  - 70% two-vehicle households
- **225 W New York Ave**
  - TAZ 1715
  - 109 multi-family population
  - 8% zero vehicle households
  - 39% one-vehicle households
  - 53% two-vehicle households

This data shows that there are very few households without a vehicle and more than half of the households have two vehicles per household. As such, 1.5 vehicles per household would be a rough average for the number of vehicles per household. Applying this data to the project under consideration shows that, even if you excluded the 13 units designated for the Neighborhood Center, there would be at least 107 resident vehicles, not to mention guest vehicles.

Off-Site Parking for Residential Uses

The applicant is requesting that off-site parking for the multi-family residential be allowed. The applicant has requested that the Volusia County parking lot be used to address the residents' needs from 5 pm to 8 am weekdays and 24/7 on weekends. However, the Land Development Regulations do not allow for off-site parking for residential uses, only nonresidential uses. The Land Development Regulations provide criteria for allowing off-site parking for non-residential use, but

does not provide for residential off-site parking. Additionally, this arrangement simply invites conflict for residents who are unable to move their vehicles at 8:00 am on a weekday for any number of reasons (illness, car malfunction, shift work, etc.).

Previous Parking Reduction Request

On October 21, 2024, the City Commission denied a parking reduction request (previous resolution is attached) for 66 on-site parking spaces along with off-site parking in the adjacent Volusia County lot. Since the October meeting, the applicant has revised the site plan to provide 28 additional on-site parking spaces. In order to accommodate the additional 28 spaces, the applicant is proposing to increase the building height by one story to allow for a ground-floor parking garage along with replacing the retention pond with subsurface stormwater management. A revised Parking Study (dated March 10, 2025) was submitted on March 25, 2025, proposes a total of 94 off-street parking spaces. The revised site layout provides 94 parking spaces, rather than the 188 required spaces.

Other Blue Sky Communities – Parking Ratios

Staff researched two other similarly-sized Blue Sky Communities, one in Clermont (Woodwinds) and one in Sarasota (Arbor Village). These two communities had a similar number of units, but had a much larger parking ratio. Staff found another similarly sized Blue Sky community in Clermont (Clermont Ridge Senior Villas), age restricted community (62+) with a larger parking ratio than what is being proposed in DeLand.

Community	Units	Bedrooms	Parking Spaces	Ratio
Woodwinds	96	24 one bed 48 two bed 24 three bed	202	2.10
Clermont Ridge Senior Villas	70	70 one bed	100	1.43
Arbor Village	80	72 one bed 8 two bed	121	1.51

These communities all exceed the proposed 1.12 parking ratio proposed for the 225 W. New York Avenue Apartments.

Sanford Affordable Housing Development

Staff also contacted the City of Sanford regarding their recently approved Somerset Landings affordable housing project. The project was constructed in 2 phases and includes a total of 144 units, with two parking spaces per unit (288 parking spaces).

Proposed Height Increase

The proposed increase in building height would make this proposed building 6-stories (77 feet in height), which could impact the view corridor in the downtown. During the Historic Preservation Board (HPB) Review of the Certificate of Appropriateness (COA), the HPB cited concerns regarding potential impacts to the view corridor with the proposed (then 5 story building) possibly limited the iconic view of the Court House. Any proposed increase in height would need to be reviewed and approved by HPB.

D. STAFF RECOMMENDATION:

As previously stated, the Land Development Regulations do not have a specific mechanism to reduce parking for affordable housing developments. The applicant has submitted a Parking Study intended to support their parking reduction request from 188 spaces to 120 spaces (94 vehicle spaces and 26-vehicle space reduction for bicycles). This leaves the development deficient by 68 parking spaces. Staff is not supportive of a 68-space reduction, nor does staff support the request to allow off-site parking to accommodate the parking needs of the residents. The applicant's proposed parking ratio of 1.12 is not sufficient; the applicant has not addressed the need for ground-floor commercial and any associated parking; and the applicant has not addressed guest parking.



TAZ	Percent Multi-Family Households with 0 Vehicles	Percent Multi-Family Households with 1 Vehicles	Percent Multi-Family Households with 2+ Vehicles	Multi-Family Population
1715	8	39	53	109
1635	14	16	70	255
1661	6	40	54	119

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Robert A. Merrell III
John P. Ferguson
Mark A. Watts
Heather Bond Vargas
Michael J. Woods
Raymond L. Schumann
Kathleen L. Crotty
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March 11, 2025

Carol Kuhn
Planning Director
City of DeLand
120 S. Florida Ave.
DeLand, Florida 32720

Re: Project Narrative – Parking Waiver application (PW25-036)
New York Ave. Apartments

Dear Carol:

As you know, our firm represents Blue Sky Communities, LLC with their New York Ave. Apartments project. Blue Sky is seeking a parking waiver to reduce the on-site parking for the proposed 84-unit, affordable multi-family development to 94 spaces. Since the last time the required parking was considered by the City, the overall site plan and building were redesigned to increase the parking spaces provided on-site by approximately 28 spaces. The new spaces were created by shifting the design of the project's stormwater system to focus on exfiltration and vault stormwater storage that is located under the expanded parking lot. In addition, the building design was modified to increase the proposed height of the northern portion of the building to six stories in order to accommodate parking under that portion of the building. In addition, Blue Sky still proposes to obtain a non-exclusive parking license agreement with Volusia County to accommodate overnight and guest parking on the County of Volusia's property west of the project site. Blue Sky will also work with the County to provide pedestrian connectivity between the County parking lot to the north and Blue Sky's project.

Please let me know if you have any questions.

Sincerely,

Mark A. Watts, Esq.
Mark.Watts@cobbcole.com

PARKING DEMAND STUDY

For

NEW YORK AVENUE APARTMENTS

225 West New York Avenue
DeLand, Florida 32720

Prepared for:

BLUE SKY COMMUNITIES, LLC
180 Fountain Parkway N, Suite 100
St. Petersburg, Florida 33716

Prepared by:

HIGH POINT ENGINEERING, INC
5005 W. Laurel Street, Suite 201
Tampa, Florida 33607

Date: March 10, 2025

BRAULIO GRAJALES LICENSE No. 58626 STATE OF FLORIDA PROFESSIONAL ENGINEER

Digitally signed by Braulio Grajales
DN: c=US, o=HIGH POINT ENGINEERING INC, dnQualifier=A01410D0000018F9D21E3A2000B37F7, cn=Braulio Grajales
Date: 2025.03.11 16:03:45 -04'00'

PARKING DEMAND STUDY

INTRODUCTION

This report summarizes the results of a parking demand study for the New York Avenue Apartments. The proposed affordable housing development for working families is planned to be constructed on the property located at 225 West New York Avenue in DeLand, Volusia County, Florida. Based on the analysis provided herein, on average, a future resident of this development will possess less than one vehicle per bedroom. This parking demand study has been prepared as technical support for a parking waiver request to approve a total of 94 on-site surface parking spaces, for the proposed 84-dwelling unit multi-family affordable housing project. The referenced property will have full access to and from West New York Avenue through cross access with the neighboring property to the west owned by Volusia County.

BACKGROUND

The project site is located on the north side of West New York Avenue (State Road 44), just west of North Florida Avenue in Section 09, Township 17 South, Range 30 East within the incorporated area of the City of DeLand. The property is comprised of two parcels identified by the Volusia County Property Appraiser's Office with parcel identification numbers 700962000087 and 700962000090. The total site area is approximately 1.61 acres and is bounded by West New York Avenue to the south, and commercial and office properties to the north, east and west. The property was previously developed with a hotel developed in 1924, known as the Putnam Hotel. The structure was recently demolished, and the site is currently vacant and undeveloped.

The proposed New York Avenue Apartments development will consist of one (1) 6-story mid-rise podium building, including 84 dwelling units containing 44 units of 1 bedroom, 28 units of 2 bedrooms, and 12 units of 3 bedrooms for a total of 136 bedrooms (i.e., average unit mix of 1.62 bedrooms per dwelling unit), 94 surface parking spaces (i.e., 0.69 spaces per bedroom), an underground stormwater collection system, sanitary sewer system, potable water service for domestic consumption and fire protection, and Florida native drought tolerant landscape. The project will feature ten long-term restricted special need dwelling units to accommodate families transitioning from homelessness ensuring inclusivity and promoting stability for vulnerable populations. The proposed development is planned in a single phase. The setbacks, drainage, parking, and landscaping are designed to support the proposed development of the property.

The City of DeLand Land Development Code (LDC) Section 33-91 requires the following parking ratios for the multi-family land use: Studio: 1 space/unit, 1 bedroom: 1.5 spaces/unit, 2, 3, or more bedrooms: 2 spaces/unit, visitor parking: 0.5 space/unit. The City of DeLand LDC requirement for the proposed apartment building is 188 parking spaces. The proposed site layout and parking plan prepared by Madden, Moorhead & Stokes, LLC shows a total of 94 on-site parking spaces plus 48 covered bicycle parking spaces. LDC Section 33-91.03.I.3.b allows off-street parking reduction by no more than one space for each bicycle parking space, but by no more than 30 percent of the total required spaces. Based on the Code allowance, a 30 percent off-street parking reduction over 188 parking spaces equals 56 parking spaces. Consequently, when considering both vehicular and bicycle parking, the total parking supply ratio provided by the proposed New York Avenue Apartments is 1.78 parking spaces per dwelling unit, representing a deficit from the Code requirements of 38 parking spaces.

Parking ratios per unit may not accurately reflect the actual parking demand generated by a residential development. This is attributed to the fact that the relation between the number of drivers and the various dwelling unit sizes in any apartment complex cannot be adequately captured by measuring parking ratios per unit. For example, a one-bedroom dwelling might be associated with a single resident driver or a couple of drivers. In contrast, a two-bedroom dwelling or three-bedroom dwelling considers the likelihood of a larger household with one adult driver or multiple drivers and with or without teenage drivers. Therefore, a parking study aligned with the number of bedrooms provides a more accurate representation of the parking demand within a multifamily apartment development.

According to ITE Parking Generation Manual 6th Edition, it is expected that the number of bedrooms and number of residents are likely correlated to the parking demand generated by a residential site. Parking studies of multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).

The City of DeLand LDC currently does not specify parking ratios per bedroom for multi-family land use. Thus, the focus of this parking study was to determine the peak period parking demand per bedroom for an affordable housing development for families in DeLand in support of a request for a reduction in parking. The City of DeLand LDC Section 33-91.01(d) provides guidelines for parking studies when the proposed use is not listed in Section 33-91.03(f) - Minimum Off-Street Parking Requirements. The City of DeLand LDC recommends using estimates of parking requirements based on studies from ULI, ITE, or the Traffic Institute, and based on data collected from uses or combinations of uses which are the same or comparable to the proposed use. Density, scale, bulk, area, type of activity, and location shall determine comparability.

There are two affordable housing projects with similar demographics near the project site. These projects were selected due to their geographic location and similarity to the proposed development to estimate future parking demand for the proposed New York Avenue Apartments development.

See Attached:

- *Site Location (Exhibit A)*
- *Proposed Parking Layout (Exhibit B)*

DATA COLLECTION AND EXISTING CONDITIONS

Parking observations were undertaken at two affordable housing apartment complexes in the City of DeLand: (1) The Pines and (2) Taylor Place. The Pines is located at 310 W. New Hampshire Avenue in DeLand while Taylor Place is located at 1575 S. Woodland Boulevard in DeLand. These two existing developments were used in this parking demand study due to similarities in the geographic area, land use, number of units, and number of bedrooms.

Data Collection at The Pines - DeLand

The Pines is an affordable housing community located on the south side of New Hampshire Avenue between Delaware Avenue and Clara Avenue, within the incorporated area of the City of DeLand. The Pines development is located approximately 1.6 miles south of the proposed New York Avenue Apartments development. The Pines is comprised of six (6) 3-story garden style buildings including 100 dwelling units distributed in 24 units of 1 bedroom, 32 units of 2 bedrooms, 24 units of 3 bedrooms, and 20 units of 4 bedrooms for a total of 240 bedrooms (i.e., average unit mix of 2.40 bedrooms per dwelling unit). At the time of this study, the apartment complex had an occupancy level of 100%. The Pines has a surface parking lot with a total of 241 spaces (i.e., 1.00 parking space per bedroom). Parking observations at this location took place on Monday November 13, 2023, from 4:00 am to 9:00 am and from 7:00 pm to 12:00 am. The observations consisted of identifying the number of parking spaces occupied at 5-minute intervals. The weather conditions during the observations were cloudy with temperatures between 60°F and 70°F.

The observations indicate the highest peak period parking demand ratio occurred between 8:00 pm and 9:00 pm. At 8:40 pm, 108 parking spaces of the 241 parking spaces were occupied and 133 parking spaces were available. The computed Peak Parking Demand Ratio vs Bedrooms was 0.45 spaces per bedroom. At 4:00 am, the apartment complex exhibited a parking demand ratio of 0.44 spaces per bedroom and at 7:00 pm a ratio of 0.38 spaces per bedroom. Furthermore, the observation taken at midnight revealed that The Pines had a parking demand ratio of 0.44 spaces per bedroom.

See Attached:

- *Peak Period Parking Demand Summary Tables for Observation Taken on* Monday November 13, 2023 *(Exhibit C)*
- *Peak Period Parking Demand Ratio vs Bedrooms Graphs for Observation Taken on* Monday November 13, 2023 *(Exhibit D)*

Data Collection at Taylor Place – DeLand

Taylor Place is an affordable housing community located on the east side of Woodland Boulevard (S.R. 15 / US Highway 17) between Chipola Avenue and Taylor Road, within the incorporated area of the City of DeLand. Taylor Place development is located approximately 2.2 miles south of the proposed New York Avenue Apartments development. Taylor Place is comprised of five (5) 3-story garden style buildings including 106 dwelling units distributed in 4 units of 1 bedroom, 12 units of 2 bedrooms, 71 units of 3 bedrooms, and 19 units of 4 bedrooms for a total of 317 bedrooms (i.e., average unit mix of 2.99 bedrooms per dwelling unit). At the time of this study, the apartment complex had an occupancy level of 100%. Taylor Place has a surface parking lot with a total of 263 spaces (i.e., 0.83 parking spaces per bedroom). Parking observations at this location took place on Tuesday November 14, 2023, from 4:00 am to 9:00 am and from 7:00 pm to 12:00 am. The observations consisted of identifying the number of parking spaces occupied at 5-minute intervals. The weather conditions were cloudy with temperatures between 60°F and 70°F.

The observations indicate the highest peak period parking demand ratio occurred between 4:00 am and 5:00 am. At 4:00 am, 147 parking spaces of the 263 parking spaces were occupied and 116 parking spaces available. The computed Peak Parking Demand Ratio vs Bedrooms was 0.46 spaces per bedroom. At 9:00 am, the apartment complex exhibited a parking demand ratio

of 0.15 spaces per bedroom and at 7:00 pm a ratio of 0.27 spaces per bedroom. Additionally, the observation taken at midnight revealed that Taylor Place had a parking demand ratio of 0.46 spaces per bedroom.

See Attached:

- *Peak Period Parking Demand Summary Tables for Observation Taken on* Tuesday November 14, 2023 *(Exhibit E)*
- *Peak Period Parking Demand Ratio vs Bedrooms Graphs for Observation Taken on* Tuesday November 14, 2023 *(Exhibit F)*

PARKING DEMAND ANALYSIS

According to Blue Sky Communities, LLC, the developer of the New York Avenue Apartments, the proposed development is an affordable housing community for families that will consist of 84 dwelling units distributed in one (1) 6-story mid-rise podium building with a total of 136 bedrooms.

Exhibits C and E summarize the Peak Parking Demand Ratio vs Bedrooms measured at the two apartment complexes in the City of DeLand. The Peak Parking Demand Ratio vs Bedrooms measured during the two days of observations was very similar to the proposed onsite parking spaces per bedroom. The Peak Parking Demand Ratio vs Bedrooms measured at the two apartment complexes range between 0.45 and 0.46 spaces per bedroom.

The two apartment complexes serve the same geographic area (i.e., urban setting) as the New York Avenue Apartments. The land use, number of units, mix of units, number of bedrooms, and demographic group (i.e., families) for the two existing apartment complexes are comparable with the same features as the New York Avenue Apartments. All sites are surrounded by the same collector/arterial road (i.e., State Road 15 / US Highway 17) and in proximity of bus transit and public transportation routes. Because of these similarities, the Peak Parking Demand Ratios observed at the two existing apartment complexes are considered adequate technical support to estimate the future peak parking demand of the New York Avenue Apartments.

Further, the proposed residential unit mix for the New York Avenue Apartments is 52% of 1 bedroom, 33% of 2 bedrooms, and 15% of 3 bedrooms. The Pines has a unit mix of 24% of 1 bedroom, 32% of 2 bedrooms, 24% of 3 bedrooms, and 20% of 4 bedrooms. Taylor Place has a residential unit mix of 4% of 1 bedroom, 11% of 2 bedrooms, 67% of 3 bedrooms, and 18% of 4 bedrooms. Accordingly, the New York Avenue Apartments will feature a unit mix of 2 bedrooms and 3 bedrooms aligning with the unit mix in The Pines.

In terms of average dwelling unit size, the New York Avenue Apartments are projected to have 1.62 bedrooms per unit (i.e., 136 bedrooms / 84 dwelling units). This average unit size is 2/3 of the average of 2.40 bedrooms per unit (i.e., 240 bedrooms / 100 dwelling units) for The Pines. Moreover, Taylor Place has an average dwelling unit size of 2.99 bedrooms per unit (i.e., 317 bedrooms / 106 dwelling units), making the average unit size at New York Avenue Apartments half that of Taylor Place.

Site Name	The Pines	Taylor Place
Project Size	**100 Dwelling Units**	**106 Dwelling Units**
Occupancy	**100%**	**100%**
Average Unit Mix	**2.40 Bedrooms per Unit**	**2.99 Bedrooms per Unit**
Parking Facility	**77 Spaces**	**146 Spaces**
Parking Supply	**1.00 Spaces per Bedroom**	**0.83 Spaces per Bedroom**
Observation Day	**Monday (11/13/23)**	**Tuesday (11/14/23)**
4:00 am - 5:00 am	0.44	**0.46**
5:00 am - 6:00 am	0.45	0.45
6:00 am - 7:00 am	0.37	0.41
7:00 am - 8:00 am	0.33	0.33
8:00 am - 9:00 am	0.26	0.22
7:00 pm - 8:00 pm	0.38	0.36
8:00 pm - 9:00 pm	**0.45**	0.38
9:00 pm - 10:00 pm	0.42	0.46
10:00 pm - 11:00 pm	0.44	0.46
11:00 pm - 12:00 pm	0.44	**0.46**
Peak	**0.45**	**0.46**
Mean	**0.40**	**0.40**
Median	**0.43**	**0.43**
Mode	**0.44**	**0.46**
Range	**0.26 – 0.45**	**0.22 – 0.46**

Notes: Ratios rounded to two decimals.
Source: High Point Engineering, November 2023

The table above shows a statistical analysis of the parking demand observations at the two existing apartment complexes in DeLand based on vehicles per bedroom.

Despite the different average dwelling unit sizes at the two study sites, the observed peak parking demand ratios are nearly identical. This suggests that the size of the average dwelling unit does not impact the parking demand per bedroom ratio. In other words, the observations from the two study sites indicate that there is no discernible correlation between the average dwelling unit size and the parking demand per bedroom in DeLand.

Thus, considering that the parking demand per bedroom ratio is not impacted by the average dwelling unit size in DeLand, as well as the relatively short distance between the two study sites and the New York Avenue Apartments site, the observed Peak Parking Demand Ratio vs Bedroom in both, The Pines and Taylor Place, can be effectively extrapolated to forecast the future peak parking demand for the New York Apartments.

However, since the unit mix in New York Avenue Apartments is closer to the unit mix in The Pines, the maximum observed Peak Parking Demand Ratio vs Bedrooms at The Pines is used to estimate the future peak parking demand for the New York Avenue Apartments. Applying The Pines Peak Parking Demand Ratio to the New York Avenue Apartments yields:

0.45 spaces per bedroom x 136 bedrooms = 61.2 spaces.

Rounding to the nearest integer, the estimated parking demand for the New York Avenue Apartments is 61 spaces.

The above computed peak parking demand using the extrapolated Peak Parking Demand ratio from The Pines is equal to the proposed parking supply. The probability that the expected peak parking demand for the New York Avenue Apartments can be accommodated by 94 parking spaces is acceptable.

Furthermore, Average Peak Period Parking Demand data from Institute of Transportation Engineers (ITE) Parking Generation, 6th Edition was also used to estimate the future parking demand for the New York Avenue Apartments as well as to compare the ITE published ratios with the results obtained from the observations taken at the two study sites.

The Institute of Transportation Engineers (ITE) Parking Generation, 6th Edition, offers a land use for affordable housing which is defined as all multifamily housing that is rented at below market rate to households that includes at least one employed member. Eligibility to live in affordable housing can be a function of limited household income and resident age (i.e., senior housing). For most of the study sites in the ITE Parking Generation, 6th Edition, 100 percent of the dwelling units are considered affordable. The ITE Parking Generation, 6th Edition does not provide information for Average Peak Period Parking Demand vs. Dwelling Unit Size (i.e., number of units by number of bedrooms per site) or separate parking rates for percentage of visitor parking.

The Average Peak Period Parking Demand Ratio to Bedrooms recommended by the ITE Parking Generation, 6th Edition, Affordable Housing – Income Limits subset, for estimating the off-street parking per bedroom required for workforce housing are as follows:

Weekday (Monday - Friday) in General Urban / Suburban Location:

Peak Period Parking Demand vs Bedrooms: 0.55 parked vehicles
Range of Rates: 0.29 – 0.85
Standard Deviation: 0.14
Number of Studies: 10
Average number of bedrooms: 101

Saturday in General Urban / Suburban Areas:

Peak Period Parking Demand vs Bedrooms: 0.27 parked vehicles
Range of Rates: 0.27 – 0.27
Standard Deviation: N/A
Number of Studies: 1
Average number of bedrooms: 44

Applying the Average Peak Period Parking Demand Ratio to Bedrooms recommended by the ITE Parking Generation, 6th Edition, Affordable Housing – Income Limits to the New York Avenue Apartments yields:

0.55 spaces per bedroom x 136 bedrooms = 74.8 spaces.

Rounding up, the estimated parking demand for the New York Avenue Apartments is 75 spaces.

The above ITE Parking Generation, 6th Edition Peak Period Parking Demand vs Bedrooms is less than the proposed parking supply rate of 0.69 spaces per bedroom. Notably, the sites included the ITE Parking Generation Manual, 6th Edition spanned locations in Alabama, California, Connecticut, District of Columbia, Maryland, Massachusetts, New Jersey, and Oregon, encompassing survey periods in the 1990s and the 2010s. It's important to highlight that the study in ITE Parking Generation Manual, 6th Edition did not include sites in Florida. Additionally, the ITE Parking Generation Manual, 6th Edition, for Land Use 223 - Affordable Housing – Income Limits, does not provide a 95% Confidence Interval due to the limited number of studies available for inclusion.

The following table taken from ITE Parking Generation Manual, 6th Edition, presents a Time-of-Day distribution of parking demand on a weekday in a general urban/suburban setting for income limits land use category:

Percent of Weekday Peak Parking Demand	
Hour Beginning	**Income Limits**
4:00 a.m.	-
5:00 a.m.	100%
6:00 a.m.	94%
7:00 a.m.	85%
8:00 a.m.	77%
9:00 a.m.	73%
10:00 a.m.	71%
11:00 a.m.	-
5:00 p.m.	-
6:00 p.m.	79%
7:00 p.m.	83%
8:00 p.m.	90%
9:00 p.m.	93%
10:00 p.m.	97%
11:00 p.m.	-

See Attached:

- *Institute of Transportation Engineers (ITE) Parking Generation, 6th Edition Data Summary for Land Use: 223 Affordable Housing – Income Limits (Exhibit I)*

In addition, the following unique circumstances apply to the New York Avenue Apartments site:

- Volusia County has agreed to grant residents of New York Avenue Apartments a revocable license and right to park motor vehicles owned or leased by such resident upon the adjacent County Property. Residents of New York Avenue Apartments may not park on the County Property from 8 a.m. to 5 p.m., Monday through Friday. Overnight and over the weekend parking outside the specified restricted hours will be allowed to all residents, thus compensating for the difference of parking spaces required per Code.

- The project will include 10 long-term restricted special need dwelling units to accommodate families transitioning from homelessness, and these families will almost certainly not own a car. Consequently, it is anticipated that the future residents may not fully occupy the proposed 94 parking spaces.

- The project is being developed with unassigned parking. The entire parking facility will be accessible to all future residents based on the order of their arrival.

- The project site is situated in downtown DeLand, offering all future residents the opportunity to work within walking or biking distance.

- Future residents will have the opportunity to use public transit as an alternative method of transportation. Votran Route 20 runs north-south along Woodland Boulevard, with convenient bus stops located approximately a 5-minute walk to the east of the project site.

- The project will be designed with clearly identified 4 exterior uncovered bicycle parking spaces, 8 exterior covered bicycle parking spaces placed adjacent to the building, and 40 covered and secured interior bicycle parking spaces, exceeding the requirements outlined by the City of DeLand LDC.

- The project site is situated in downtown DeLand, offering all future residents superior walkability typical of an urban area.

- A minimum of four on-street parking spaces along the north side of New York Avenue in front of the property will be available for short-term use.

CONCLUSION

The Peak Parking Demand ratio on a weekday for Affordable Housing – Limited Income in general urban / suburban setting suggested by the ITE Parking Generation, 6th Edition slightly exceeds the Peak Parking Demand ratios measured at the two apartment complexes in the City of DeLand. The two measured Peak Parking Demand ratios in DeLand are within the same order of magnitude indicating there is not a significant difference between the two apartment complexes.

The Peak Parking Demand ratios resulting from observations at the two affordable housing developments in the City of DeLand are considered better suited for projecting the future New York Avenue Apartments Peak Parking Demand compared to the ratio suggested by the ITE Parking Generation, 6th Edition, due to their proximity to the project site.

The planned 94 parking spaces equivalent to 0.69 spaces per bedroom for the proposed 84 dwelling units are anticipated to meet the future parking demand for the New York Avenue Apartments during all periods.

If you have any questions regarding the information contained herein, please do not hesitate to contact me.

Sincerely,
HIGH POINT ENGINEERING, INC.



Braulio Grajales, P.E.
Principal Engineer

EXHIBITS

Exhibit A **Site Location**

Exhibit B **Proposed New York Avenue Apartments Site Layout & Parking Plan**

Exhibit C **Peak Period Parking Demand Summary Table for The Pines on Monday, November 13, 2023, Observations**

Exhibit D **Peak Period Parking Demand Ratio vs Bedrooms Graph for The Pines on Monday, November 13, 2023, Observations**

Exhibit E **Peak Period Parking Demand Summary Table for Taylor Place on Tuesday, November 14, 2023, Observations**

Exhibit F **Peak Period Parking Demand Ratio vs Bedrooms Graph for Taylor Place on Tuesday, November 14, 2023, Observations**

Exhibit G **Institute of Transportation Engineers (ITE) Parking Generation, 6th Edition Data Summary for Land Use: 223 Affordable Housing – Income Limits**

EXHIBIT A


PROJECT SITE LOCATION
225 W New York Ave, DeLand, FL 32720
GLENWOOD
TRAILS WEST
PINELAND HEIGHTS
Reptile Discovery Center
Glenwood Rd
GLENWOOD DELAND FARMS
Mercers Fernery Rd
N Spring Garden Ave
N Woodland Blvd
Deland Municipal Airport
DELAND HIGHLANDS
Mason Rd
CYPRESS LAKE ESTATES
DeLand Naval Air Station Museum
SCARLETT
North Deland
SUMMER WOODS
Jacobs Rd
N Kepler Rd
AdventHealth DeLand
Gillespie Museum
MALLORY SQUARE
N Stone St
Blue Lake
BLUE LAKE TRIANGLE
DAISY LAKE
PELHAM SQUARE
West Deland
SCHUMANS
S Hill Ave
S Blue Lake Ave
WINNEMISSETT
E New York Ave
FLORAL PARK
RIVER FOREST
W New York Ave
County Road 42
W Beresford Ave
HIRAM WATERS GROVE
DeLand Southwest
BERESFORD
W Taylor Rd
THE CROSSROADS
E Taylor Rd
RIVERSIDE
ST JOHN'S RIVER ACRES
Deerfoot Rd
Lake Beresford
McGregor Rd
Orange Camp Rd
Lake Helen
Hontoon Island State Park
FATIO
DELAND HEIGHTS ORANGE CITY
HILLY PINES
State Road 472
CASSADAGA
Mary Ave
Hontoon Island

EXHIBIT B

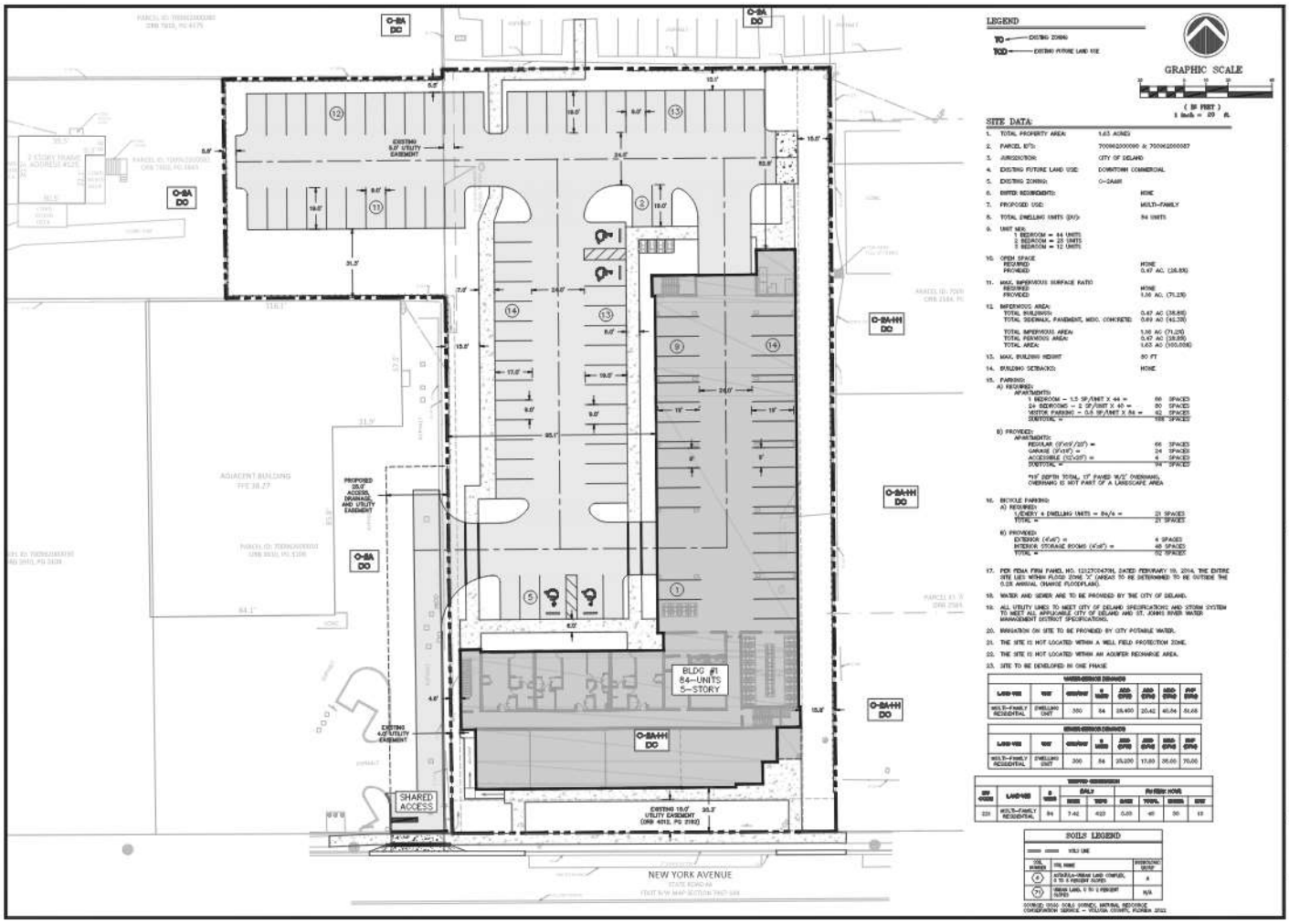

LEGEND
TO — EXISTING ZONING
TOD — EXISTING FUTURE LAND USE
GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.
SITE DATA:
1. TOTAL PROPERTY AREA: 1.63 ACRES
2. PARCEL ID'S: 700062000000 & 700062000087
3. JURISDICTION: CITY OF DELAND
4. EXISTING FUTURE LAND USE: DOWNTOWN COMMERCIAL
5. EXISTING ZONING: C-DAAR
6. UNITED REQUIREMENTS: NONE
7. PROPOSED USE: MULTI-FAMILY
8. TOTAL DWELLING UNITS (DU): 84 UNITS
9. UNIT MIX:
1 BEDROOM = 44 UNITS
2 BEDROOM = 28 UNITS
3 BEDROOM = 12 UNITS
10. OPEN SPACE
REQUIRED NONE
PROVIDED 0.47 AC. (28.85)
11. MAX. IMPERVIOUS SURFACE RATIO
REQUIRED NONE
PROVIDED 1.36 AC. (71.25)
12. IMPERVIOUS AREA:
TOTAL BUILDINGS: 0.47 AC (28.85)
TOTAL SIDEWALK, PAVEMENT, MISC. CONCRETE: 0.89 AC (42.33)
TOTAL IMPERVIOUS AREA: 1.36 AC (71.25)
TOTAL PERVIOUS AREA: 0.47 AC (28.85)
TOTAL AREA: 1.63 AC (100.00%)
13. MAX. BUILDING HEIGHT 80 FT
14. BUILDING SETBACKS: NONE
15. PARKING:
A) REQUIRED:
APARTMENTS:
1 BEDROOM – 1.5 SP/UNIT X 44 = 66 SPACES
2+ BEDROOMS – 2 SP/UNIT X 40 = 80 SPACES
VISITOR PARKING – 0.5 SP/UNIT X 84 = 42 SPACES
SUBTOTAL = 188 SPACES
B) PROVIDED:
APARTMENTS:
REGULAR (9'x19'/20') = 66 SPACES
GARAGE (9'x19') = 24 SPACES
ACCESSIBLE (12'x25') = 4 SPACES
SUBTOTAL = 94 SPACES
*19' DEPTH TOTAL, 17' PAVED W/2' OVERHANG, OVERHANG IS NOT PART OF A LANDSCAPE AREA
16. BICYCLE PARKING:
A) REQUIRED:
1/EVERY 4 DWELLING UNITS = 84/4 = 21 SPACES
TOTAL = 21 SPACES
B) PROVIDED:
EXTERIOR (4'x6') = 4 SPACES
INTERIOR STORAGE ROOMS (4'x6') = 48 SPACES
TOTAL = 52 SPACES
17. PER FEMA FIRM PANEL NO. 12127C0470H, DATED FEBRUARY 19, 2014, THE ENTIRE SITE LIES WITHIN FLOOD ZONE "X" (AREAS TO BE DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN).
18. WATER AND SEWER ARE TO BE PROVIDED BY THE CITY OF DELAND.
19. ALL UTILITY LINES TO MEET CITY OF DELAND SPECIFICATIONS AND STORM SYSTEM TO MEET ALL APPLICABLE CITY OF DELAND AND ST. JOHNS RIVER WATER MANAGEMENT DISTRICT SPECIFICATIONS.
20. IRRIGATION ON SITE TO BE PROVIDED BY CITY POTABLE WATER.
21. THE SITE IS NOT LOCATED WITHIN A WELL FIELD PROTECTION ZONE.
22. THE SITE IS NOT LOCATED WITHIN AN AQUIFER RECHARGE AREA.
23. SITE TO BE DEVELOPED IN ONE PHASE
WATER SERVICE DEMANDS
LAND USE | UNIT | GRAPHIC | # UNITS | ADD GPUS | ADD GPUS | ADD GPUS | PUF GPUS
MULTI-FAMILY RESIDENTIAL | DWELLING UNIT | 300 | 84 | 25,400 | 20.42 | 40.84 | 51.68
WASTE SERVICE DEMANDS
LAND USE | UNIT | GRAPHIC | # UNITS | ADD GPUS | ADD GPUS | ADD GPUS | PUF GPUS
MULTI-FAMILY RESIDENTIAL | DWELLING UNIT | 300 | 84 | 25,200 | 17.80 | 35.00 | 70.00
TRIPPED GENERATION
DU CODE | LAND USE | # UNITS | DAILY | | PM PEAK HOUR | | | |
| | | | ENTER | EXIT | ENTER | TOTAL | ENTER | EXIT
221 | MULTI-FAMILY RESIDENTIAL | 84 | 7.42 | 423 | 0.55 | 40 | 30 | 12
SOILS LEGEND
SOILS LINE
SOIL NUMBER | SOIL NAME | PROBABILITY GROUP
4 | AUTOLIN-URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES | A
71 | URBAN LAND, 0 TO 5 PERCENT SLOPES | N/A
SOURCE: USGS SOILS SURVEY, NATURAL RESOURCE CONSERVATION SERVICE – VOLUSIA COUNTY, FLORIDA 2022
BLDG #1
84-UNITS
5-STORY
SHARED ACCESS
NEW YORK AVENUE
MADDEN
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 429-8330
SITE PLAN
FOR
NEW YORK AVE APARTMENTS
CITY OF DELAND
FLORIDA
BLUE IAN, LLC
DATE
REVISIONS
C100

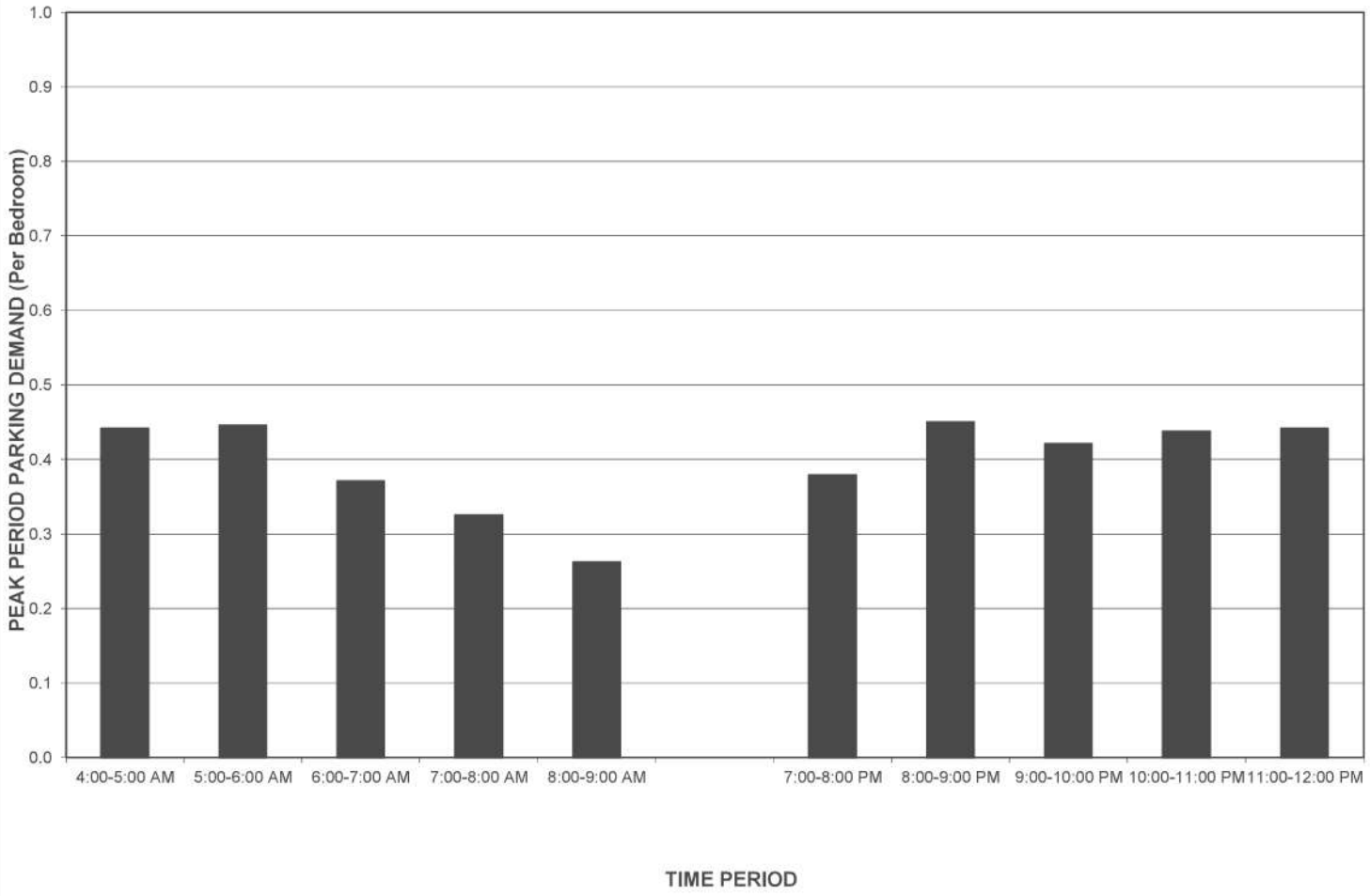
EXHIBIT C

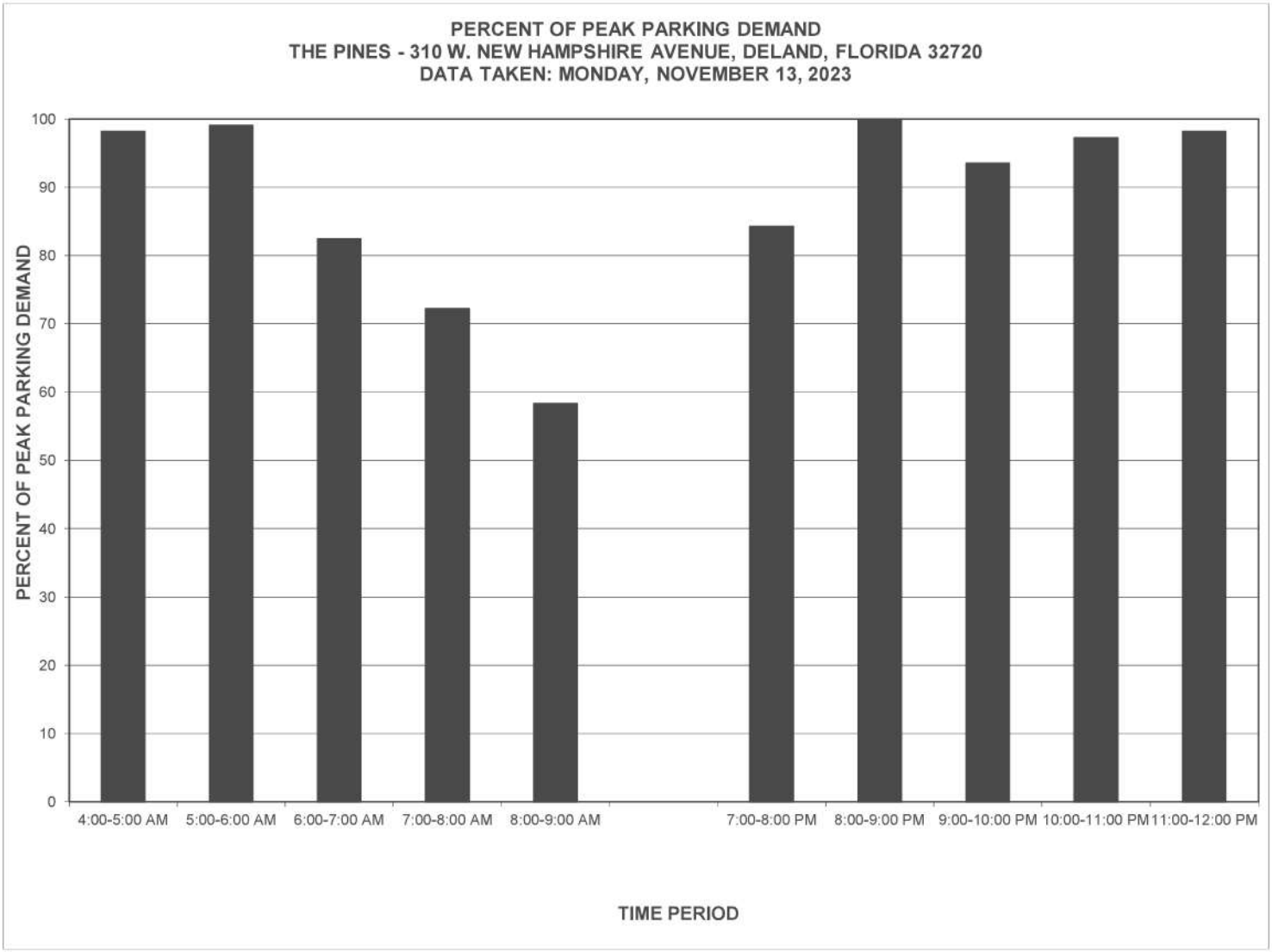
PEAK PERIOD PARKING DEMAND SUMMARY THE PINES - 310 W. NEW HAMPSHIRE AVENUE, FLORIDA 32720 TOTAL DWELLING UNITS = 100, NUMBER OF BEDROOMS = 240 , AVERAGE SIZE OF DWELLING UNITS = 2.40 BEDROOMS TOTAL PARKING SPACES AVAILABLE = 241, PARKING SUPPLY = 1.00 PER BEDROOM					
Observations Taken on Monday, November 13, 2023					
Time Period	Peak Period Parking Spaces Used	Peak Period Unused Parking Spaces	Peak Period Parking Lot Occupancy (%)	Percent of Peak Parking Demand (%)	Peak Period Parking Demand (Per Bedroom)
4:00-5:00 AM	106	135	44	98	0.44
5:00-6:00 AM	107	134	44	99	0.45
6:00-7:00 AM	89	152	37	82	0.37
7:00-8:00 AM	78	163	32	72	0.33
8:00-9:00 AM	63	178	26	58	0.26
	-	-	-	-	-
7:00-8:00 PM	91	150	38	84	0.38
8:00-9:00 PM	108	133	45	100	0.45
9:00-10:00 PM	101	140	42	94	0.42
10:00-11:00 PM	105	136	44	97	0.44
11:00-12:00 PM	106	135	44	98	0.44

THE PINES APARTMENTS			
Address: 310 W. NEW HAMPSHIRE AVENUE, DELAND, FLORIDA 32720			
Date: 11-13-23		Total Parking Spaces Available = 241	
Time Period	Peak Period Parking Spaces Used	Time Period	Peak Period Parking Spaces Used
4:00:00 AM	105	7:00:00 PM	85
4:05:00 AM	105	7:05:00 PM	91
4:10:00 AM	105	7:10:00 PM	83
4:15:00 AM	105	7:15:00 PM	84
4:20:00 AM	104	7:20:00 PM	85
4:25:00 AM	105	7:25:00 PM	84
4:30:00 AM	105	7:30:00 PM	83
4:35:00 AM	105	7:35:00 PM	83
4:40:00 AM	105	7:40:00 PM	86
4:45:00 AM	105	7:45:00 PM	87
4:50:00 AM	106	7:50:00 PM	88
4:55:00 AM	106	7:55:00 PM	91
5:00:00 AM	107	8:00:00 PM	93
5:05:00 AM	102	8:05:00 PM	94
5:10:00 AM	100	8:10:00 PM	99
5:15:00 AM	97	8:15:00 PM	102
5:20:00 AM	96	8:20:00 PM	103
5:25:00 AM	97	8:25:00 PM	101
5:30:00 AM	98	8:30:00 PM	100
5:35:00 AM	97	8:35:00 PM	106
5:40:00 AM	96	8:40:00 PM	108
5:45:00 AM	95	8:45:00 PM	108
5:50:00 AM	91	8:50:00 PM	106
5:55:00 AM	89	8:55:00 PM	101
6:00:00 AM	87	9:00:00 PM	98
6:05:00 AM	89	9:05:00 PM	99
6:10:00 AM	86	9:10:00 PM	95
6:15:00 AM	85	9:15:00 PM	96
6:20:00 AM	86	9:20:00 PM	97
6:25:00 AM	86	9:25:00 PM	94
6:30:00 AM	85	9:30:00 PM	93
6:35:00 AM	85	9:35:00 PM	97
6:40:00 AM	83	9:40:00 PM	99
6:45:00 AM	82	9:45:00 PM	100
6:50:00 AM	81	9:50:00 PM	100
6:55:00 AM	80	9:55:00 PM	101
7:00:00 AM	78	10:00:00 PM	103
7:05:00 AM	78	10:05:00 PM	105
7:10:00 AM	74	10:10:00 PM	103
7:15:00 AM	74	10:15:00 PM	101
7:20:00 AM	69	10:20:00 PM	99
7:25:00 AM	69	10:25:00 PM	98
7:30:00 AM	67	10:30:00 PM	96
7:35:00 AM	67	10:35:00 PM	98
7:40:00 AM	66	10:40:00 PM	99
7:45:00 AM	67	10:45:00 PM	104
7:50:00 AM	66	10:50:00 PM	100
7:55:00 AM	63	10:55:00 PM	100
8:00:00 AM	60	11:00:00 PM	99
8:05:00 AM	62	11:05:00 PM	95
8:10:00 AM	60	11:10:00 PM	103
8:15:00 AM	61	11:15:00 PM	97
8:20:00 AM	63	11:20:00 PM	99
8:25:00 AM	58	11:25:00 PM	103
8:30:00 AM	57	11:30:00 PM	102
8:35:00 AM	53	11:35:00 PM	100
8:40:00 AM	54	11:40:00 PM	101
8:45:00 AM	54	11:45:00 PM	103
8:50:00 AM	56	11:50:00 PM	104
8:55:00 AM	55	11:55:00 PM	106
9:00:00 AM	53	12:00:00 AM	106

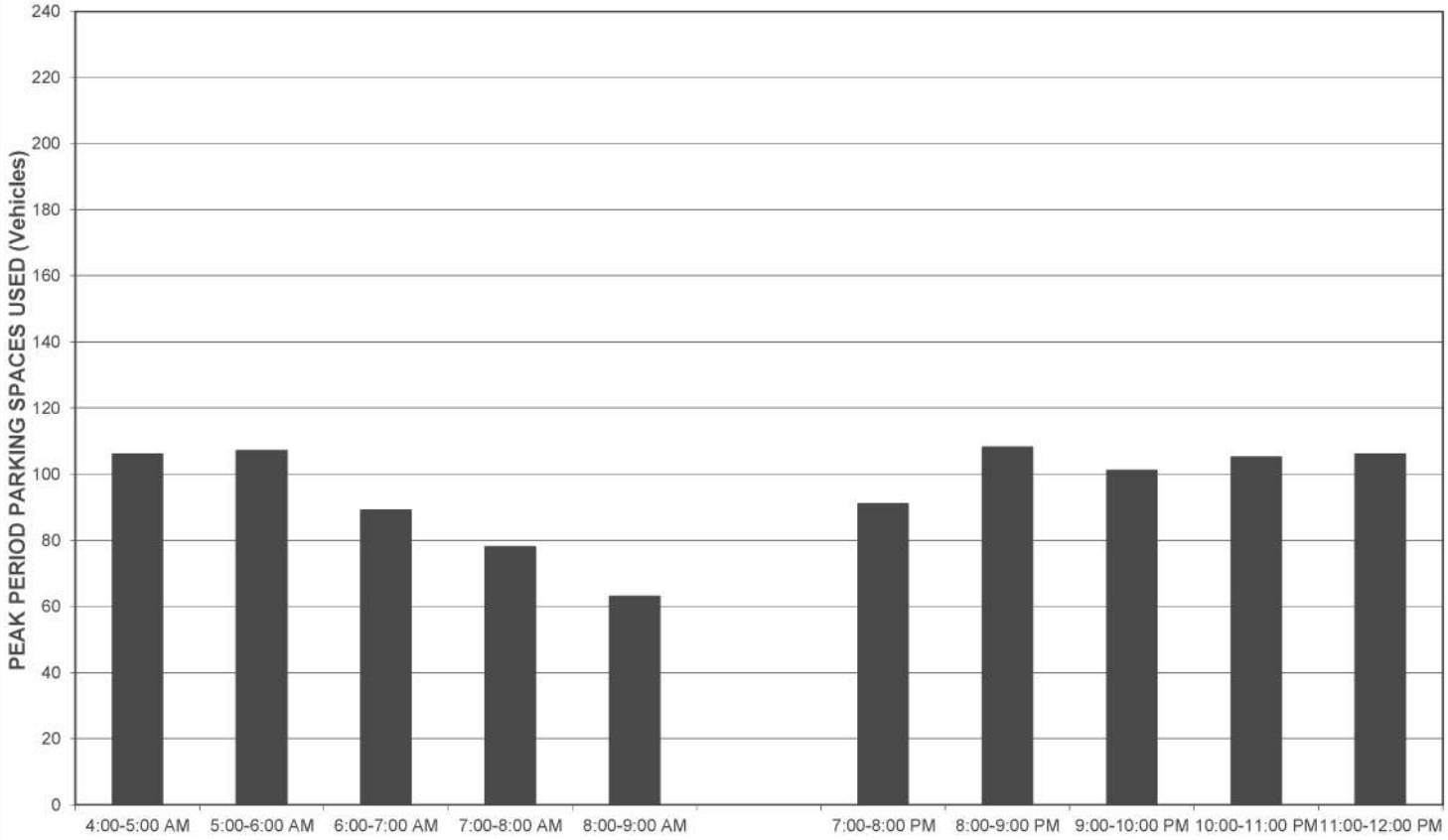
EXHIBIT D

PEAK PERIOD PARKING DEMAND RATIO VS BEDROOMS
THE PINES - 310 W. NEW HAMPSHIRE AVENUE, DELAND, FLORIDA 32720
DATA TAKEN: MONDAY, NOVEMBER 13, 2023




PERCENT OF PEAK PARKING DEMAND
THE PINES - 310 W. NEW HAMPSHIRE AVENUE, DELAND, FLORIDA 32720
DATA TAKEN: MONDAY, NOVEMBER 13, 2023
PERCENT OF PEAK PARKING DEMAND
100
90
80
70
60
50
40
30
20
10
0
4:00-5:00 AM
5:00-6:00 AM
6:00-7:00 AM
7:00-8:00 AM
8:00-9:00 AM
7:00-8:00 PM
8:00-9:00 PM
9:00-10:00 PM
10:00-11:00 PM
11:00-12:00 PM
TIME PERIOD

PEAK PERIOD PARKING SPACES USED
THE PINES - 310 W. NEW HAMPSHIRE AVENUE, DELAND, FLORIDA 32720
DATA TAKEN: MONDAY, NOVEMBER 13, 2023



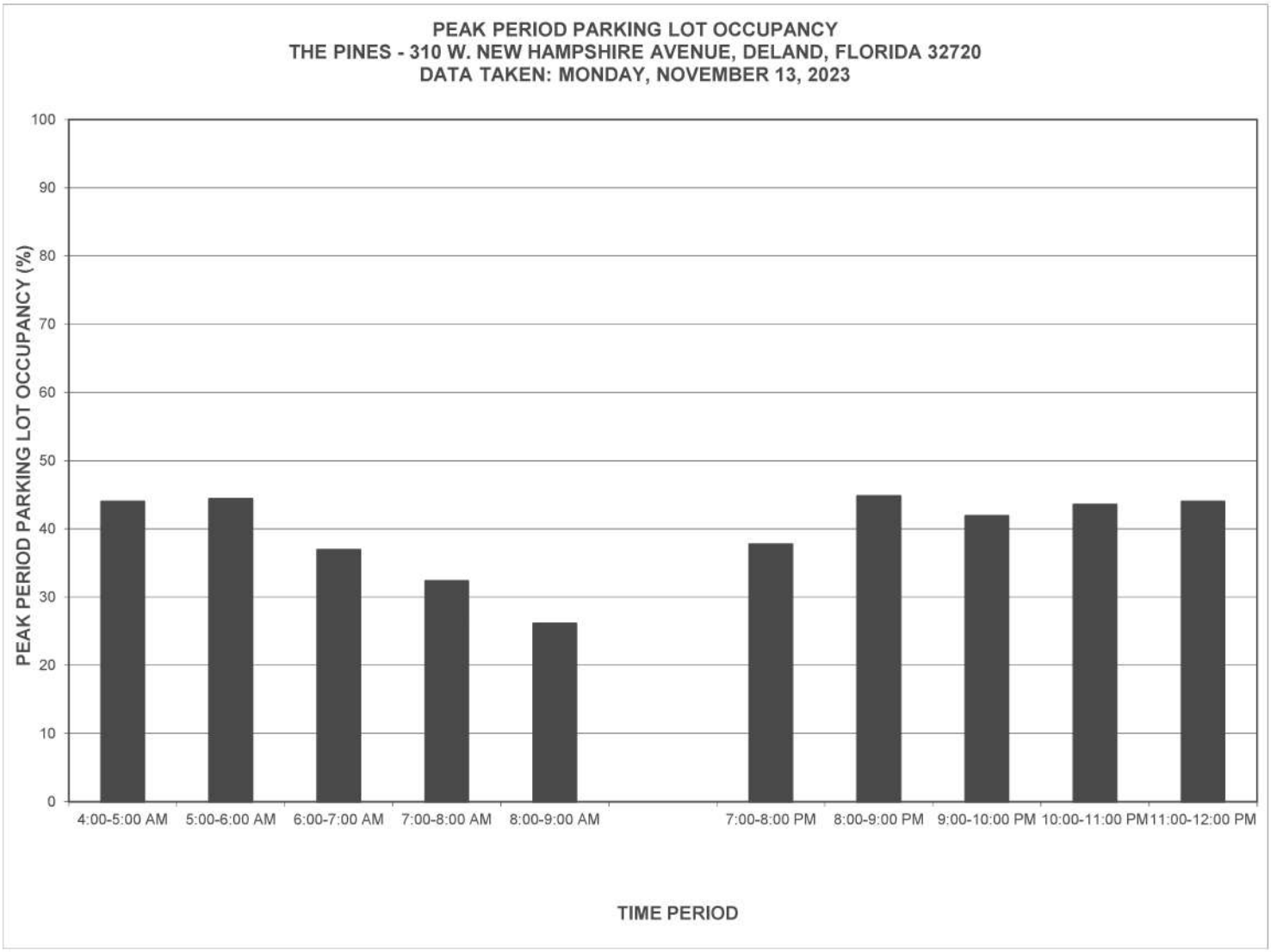
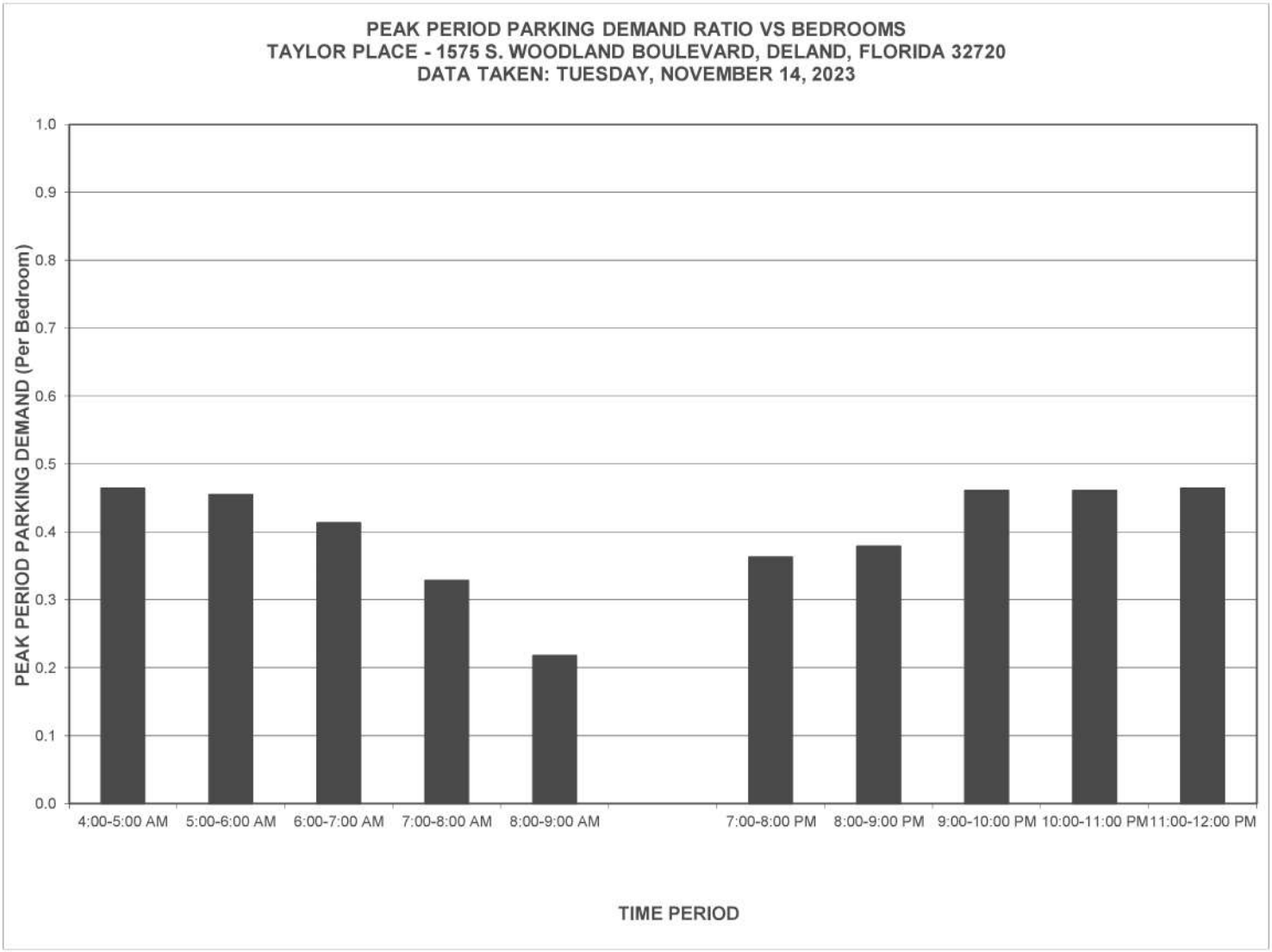

PEAK PERIOD PARKING LOT OCCUPANCY
THE PINES - 310 W. NEW HAMPSHIRE AVENUE, DELAND, FLORIDA 32720
DATA TAKEN: MONDAY, NOVEMBER 13, 2023
PEAK PERIOD PARKING LOT OCCUPANCY (%)
100
90
80
70
60
50
40
30
20
10
0
4:00-5:00 AM
5:00-6:00 AM
6:00-7:00 AM
7:00-8:00 AM
8:00-9:00 AM
7:00-8:00 PM
8:00-9:00 PM
9:00-10:00 PM
10:00-11:00 PM
11:00-12:00 PM
TIME PERIOD

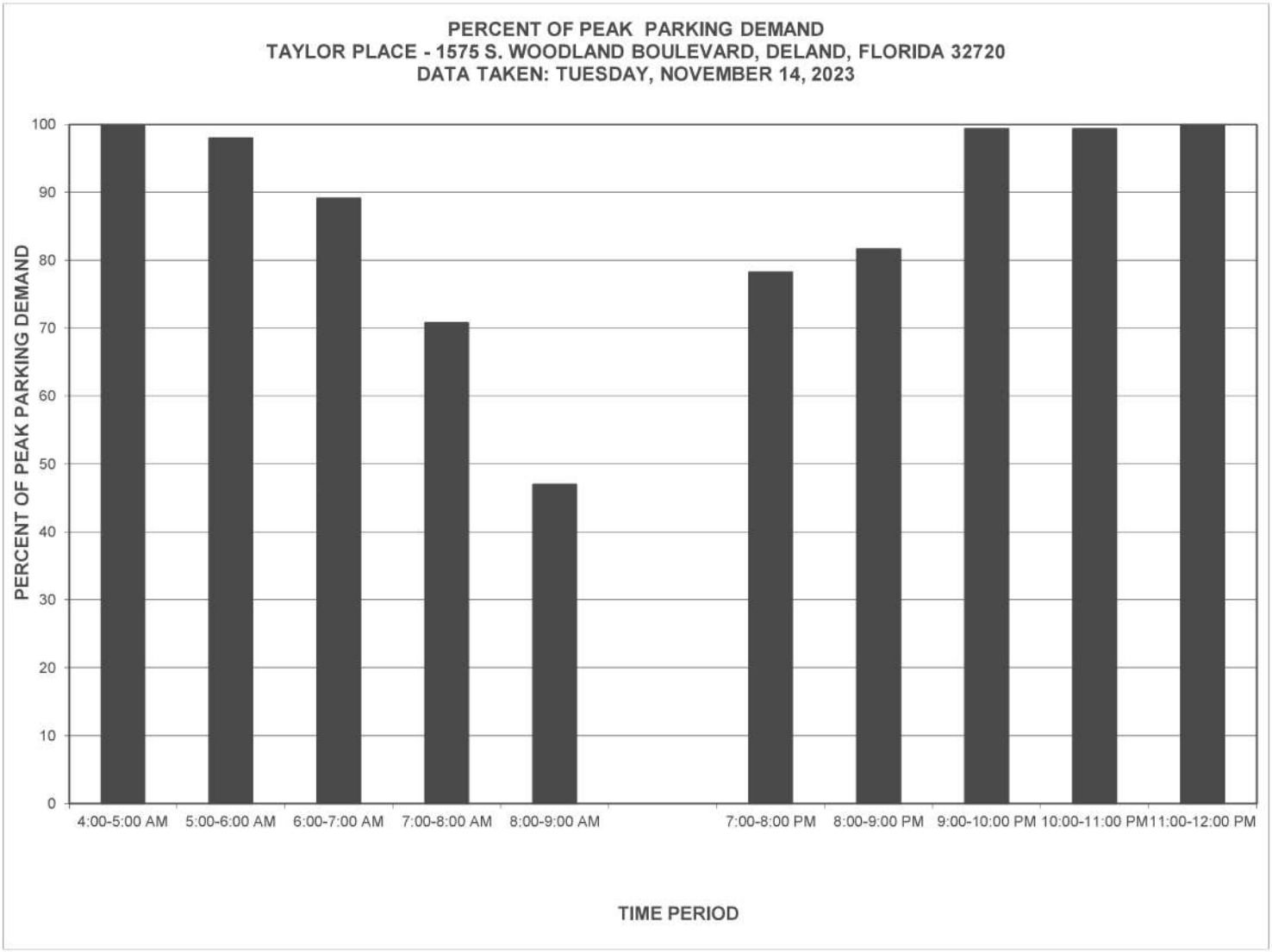
EXHIBIT E

PEAK PERIOD PARKING DEMAND SUMMARY TAYLOR PLACE - 1575 S. WOODLAND BOULEVARD, DELAND, FLORIDA 32720 TOTAL DWELLING UNITS = 106, NUMBER OF BEDROOMS = 317, AVERAGE SIZE OF DWELLING UNITS = 2.99 BEDROOMS TOTAL PARKING SPACES AVAILABLE = 263, PARKING SUPPLY = 0.83 PER BEDROOM					
Observations Taken on Tuesday, November 14, 2023					
Time Period	Peak Period Parking Spaces Used	Peak Period Unused Parking Spaces	Peak Period Parking Lot Occupancy (%)	Percent of Peak Parking Demand (%)	Peak Period Parking Demand (Per Bedroom)
4:00-5:00 AM	147	116	56	100	0.46
5:00-6:00 AM	144	119	55	98	0.45
6:00-7:00 AM	131	132	50	89	0.41
7:00-8:00 AM	104	159	40	71	0.33
8:00-9:00 AM	69	194	26	47	0.22
	-	-	-	-	-
7:00-8:00 PM	115	148	44	78	0.36
8:00-9:00 PM	120	143	46	82	0.38
9:00-10:00 PM	146	117	56	99	0.46
10:00-11:00 PM	146	117	56	99	0.46
11:00-12:00 PM	147	116	56	100	0.46

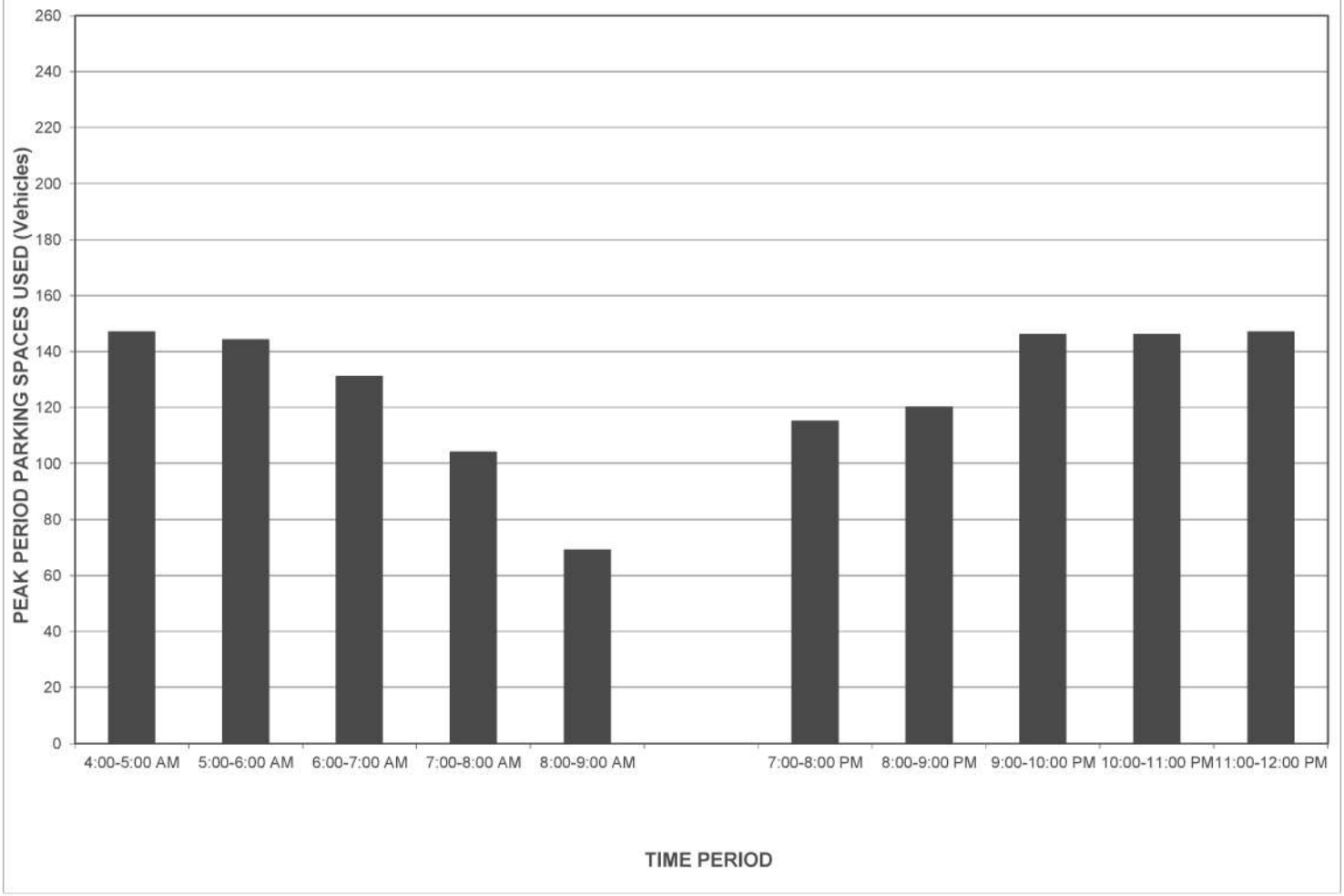
TAYLOR PLACE APARTMENTS			
Address: 1575 S. WOODLAND BOULEVARD, DELAND, FLORIDA 32720			
Date: 11-14-23		Total Parking Spaces Available = 263	
Time Period	Peak Period Parking Spaces Used	Time Period	Peak Period Parking Spaces Used
4:00:00 AM	147	7:00:00 PM	85
4:05:00 AM	147	7:05:00 PM	83
4:10:00 AM	147	7:10:00 PM	87
4:15:00 AM	147	7:15:00 PM	92
4:20:00 AM	147	7:20:00 PM	96
4:25:00 AM	147	7:25:00 PM	97
4:30:00 AM	145	7:30:00 PM	98
4:35:00 AM	145	7:35:00 PM	99
4:40:00 AM	144	7:40:00 PM	101
4:45:00 AM	144	7:45:00 PM	105
4:50:00 AM	144	7:50:00 PM	109
4:55:00 AM	145	7:55:00 PM	115
5:00:00 AM	144	8:00:00 PM	108
5:05:00 AM	143	8:05:00 PM	110
5:10:00 AM	143	8:10:00 PM	113
5:15:00 AM	143	8:15:00 PM	113
5:20:00 AM	142	8:20:00 PM	116
5:25:00 AM	141	8:25:00 PM	120
5:30:00 AM	140	8:30:00 PM	118
5:35:00 AM	138	8:35:00 PM	118
5:40:00 AM	137	8:40:00 PM	118
5:45:00 AM	136	8:45:00 PM	120
5:50:00 AM	134	8:50:00 PM	117
5:55:00 AM	133	8:55:00 PM	117
6:00:00 AM	131	9:00:00 PM	115
6:05:00 AM	128	9:05:00 PM	119
6:10:00 AM	128	9:10:00 PM	120
6:15:00 AM	126	9:15:00 PM	123
6:20:00 AM	125	9:20:00 PM	127
6:25:00 AM	124	9:25:00 PM	131
6:30:00 AM	125	9:30:00 PM	133
6:35:00 AM	119	9:35:00 PM	134
6:40:00 AM	115	9:40:00 PM	138
6:45:00 AM	117	9:45:00 PM	137
6:50:00 AM	111	9:50:00 PM	143
6:55:00 AM	106	9:55:00 PM	146
7:00:00 AM	104	10:00:00 PM	145
7:05:00 AM	101	10:05:00 PM	142
7:10:00 AM	98	10:10:00 PM	140
7:15:00 AM	94	10:15:00 PM	144
7:20:00 AM	91	10:20:00 PM	145
7:25:00 AM	89	10:25:00 PM	143
7:30:00 AM	87	10:30:00 PM	144
7:35:00 AM	84	10:35:00 PM	146
7:40:00 AM	78	10:40:00 PM	145
7:45:00 AM	73	10:45:00 PM	145
7:50:00 AM	71	10:50:00 PM	146
7:55:00 AM	70	10:55:00 PM	143
8:00:00 AM	69	11:00:00 PM	145
8:05:00 AM	67	11:05:00 PM	145
8:10:00 AM	65	11:10:00 PM	146
8:15:00 AM	66	11:15:00 PM	147
8:20:00 AM	66	11:20:00 PM	147
8:25:00 AM	66	11:25:00 PM	142
8:30:00 AM	66	11:30:00 PM	143
8:35:00 AM	60	11:35:00 PM	145
8:40:00 AM	57	11:40:00 PM	145
8:45:00 AM	57	11:45:00 PM	146
8:50:00 AM	51	11:50:00 PM	147
8:55:00 AM	49	11:55:00 PM	147
9:00:00 AM	49	12:00:00 AM	147

EXHIBIT F


PEAK PERIOD PARKING DEMAND RATIO VS BEDROOMS
TAYLOR PLACE - 1575 S. WOODLAND BOULEVARD, DELAND, FLORIDA 32720
DATA TAKEN: TUESDAY, NOVEMBER 14, 2023
PEAK PERIOD PARKING DEMAND (Per Bedroom)
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
4:00-5:00 AM
5:00-6:00 AM
6:00-7:00 AM
7:00-8:00 AM
8:00-9:00 AM
7:00-8:00 PM
8:00-9:00 PM
9:00-10:00 PM
10:00-11:00 PM
11:00-12:00 PM
TIME PERIOD


PERCENT OF PEAK PARKING DEMAND
TAYLOR PLACE - 1575 S. WOODLAND BOULEVARD, DELAND, FLORIDA 32720
DATA TAKEN: TUESDAY, NOVEMBER 14, 2023
PERCENT OF PEAK PARKING DEMAND
100
90
80
70
60
50
40
30
20
10
0
4:00-5:00 AM
5:00-6:00 AM
6:00-7:00 AM
7:00-8:00 AM
8:00-9:00 AM
7:00-8:00 PM
8:00-9:00 PM
9:00-10:00 PM
10:00-11:00 PM
11:00-12:00 PM
TIME PERIOD

PEAK PERIOD PARKING SPACES USED
TAYLOR PLACE - 1575 S. WOODLAND BOULEVARD, DELAND, FLORIDA 32720
DATA TAKEN: TUESDAY, NOVEMBER 14, 2023



PEAK PERIOD PARKING LOT OCCUPANCY
TAYLOR PLACE - 1575 S. WOODLAND BOULEVARD, DELAND, FLORIDA 32720
DATA TAKEN: TUESDAY, NOVEMBER 14, 2023

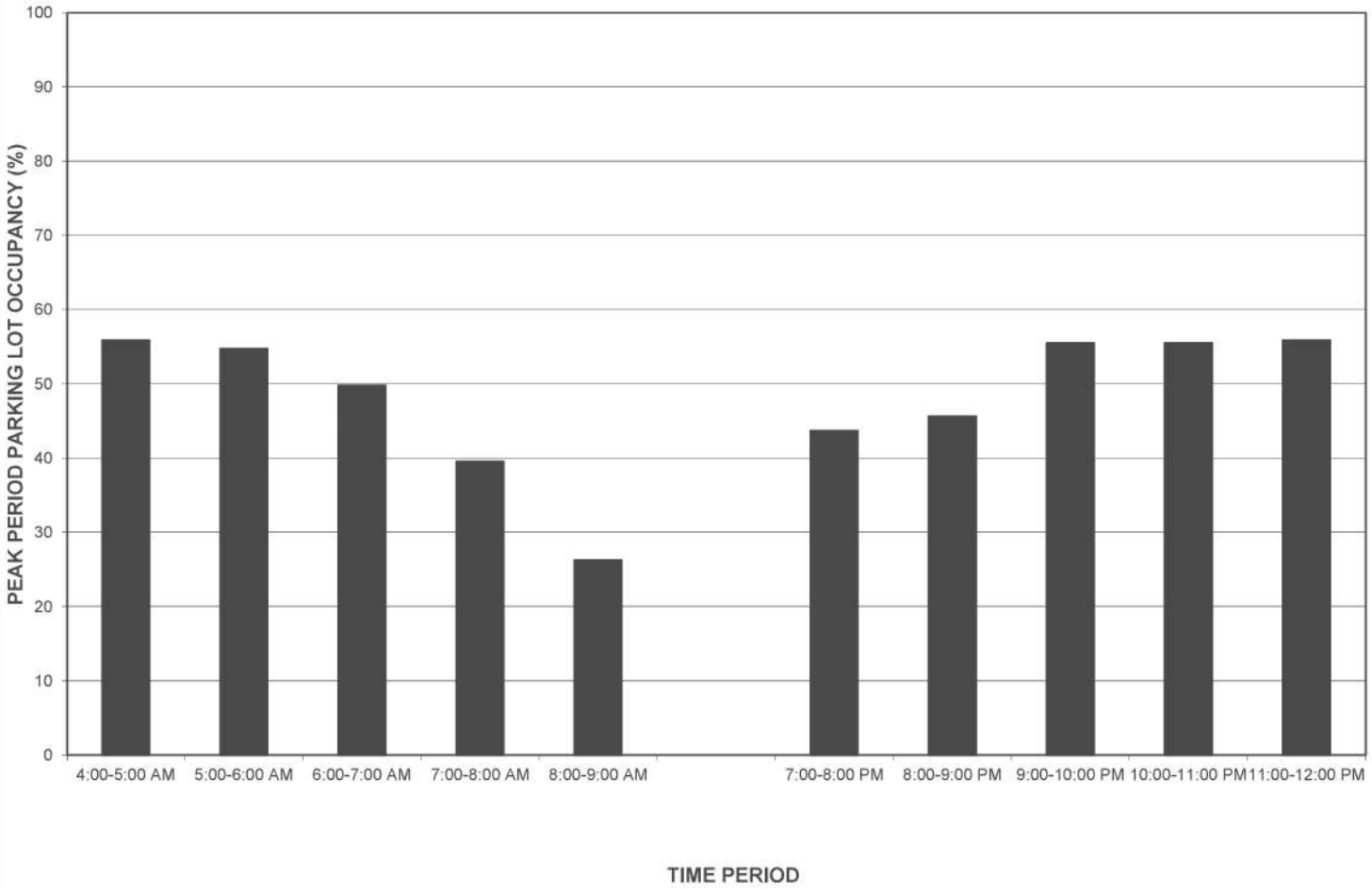


EXHIBIT G

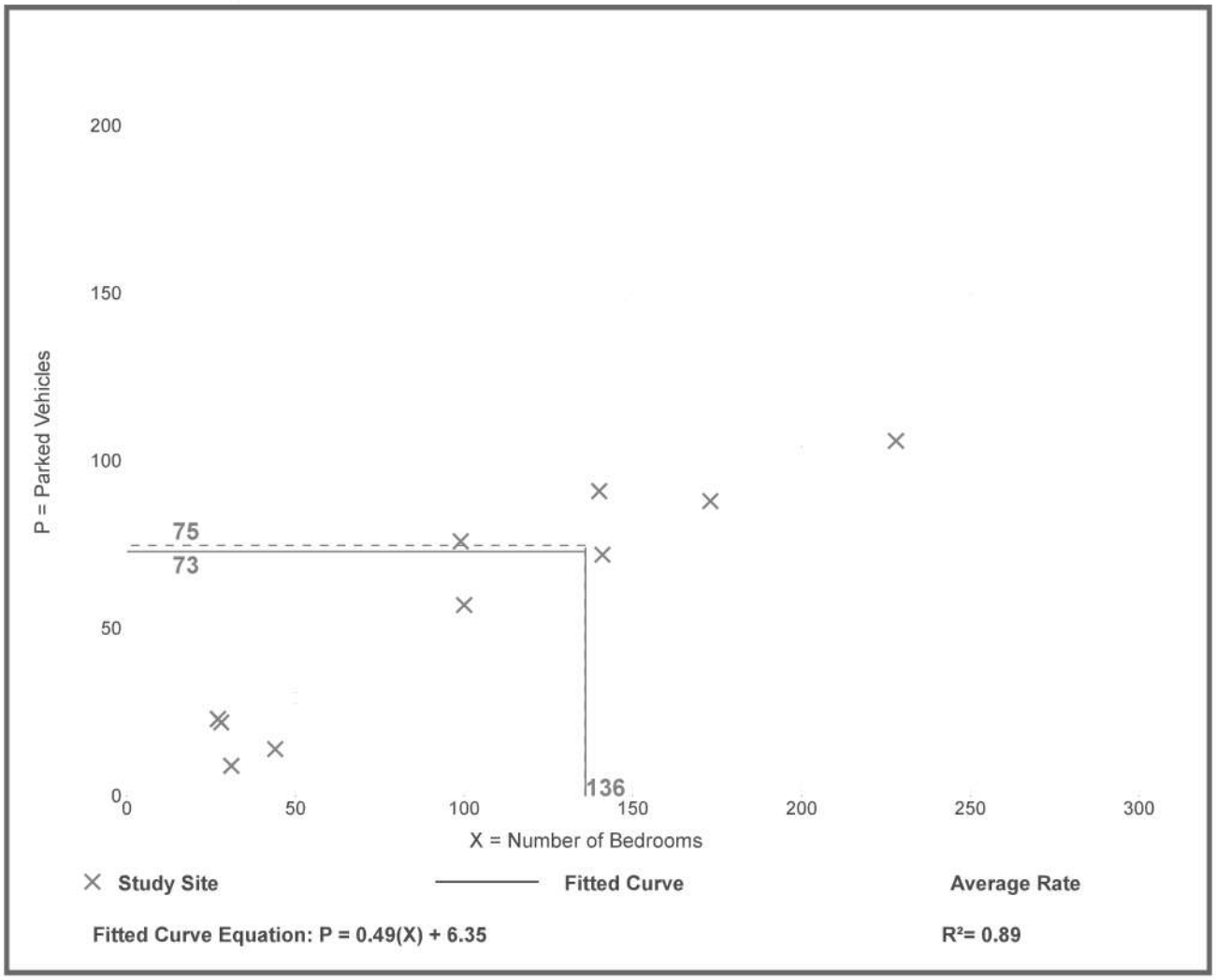
Affordable Housing - Income Limits
(223)

Peak Period Parking Demand vs: **Bedrooms**
On a: **Weekday (Monday - Friday)**
Setting/Location: **General Urban/Suburban**
Number of Studies: 10
Avg. Num. of Bedrooms: 101

Peak Period Parking Demand per Bedroom

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.55	0.29 - 0.85	0.49 / 0.81	***	0.14 (25%)

Data Plot and Equation



Parking Generation Manual, 6th Edition ● Institute of Transportation Engineers

PARKING DEMAND STUDY SUPPLEMENT

For

NEW YORK AVENUE APARTMENTS



225 West New York Avenue
DeLand, Florida 32720

Prepared for:
City of DeLand
Planning Division

Prepared by:
BLUE SKY COMMUNITIES, LLC
180 Fountain Parkway N, Suite 100
St. Petersburg, Florida 33716

ABOUT BLUE SKY COMMUNITIES

Blue Sky is a St. Petersburg-based Real Estate Developer of Affordable and Workforce Housing.

- Experts in Public Funding: 9% Housing Credits, 4% Housing Credits, Tax Exempt Bonds, CDBG, HOME, SHIP, SAIL, and many other incentives.
- A leader across Florida
- Focused on helping Local Governments and Non-Profits achieve their goals.

Formed in 2012, Blue Sky inspires positive change in communities across Florida through high-quality workforce housing development. As a developer and owner of multifamily affordable housing using the Federal Housing Tax Credits program, Blue Sky is a leading advocate for helping nonprofit groups and local governments reach their affordable housing goals by developing state-of-the-art, environmentally sound affordable housing units. Through partnerships, Blue Sky helps these groups by developing neighborhood assets that stakeholders can be proud of for decades. To date, Blue Sky has developed 3,024 units of affordable housing. Additionally, we have 574 units currently under construction and 639 units scheduled to close and start construction in 2025. These units include communities for Families, Elderly, Veterans, and Special Needs.

Blue Sky's principals have been developing and managing affordable housing for 50 years in Florida. Blue Sky understands the importance of development funding being spent locally for the benefit of local businesses and residents. We have the resources and capacity to produce. We align with multiple professional experts to ensure we put together the best team for the delivery of quality housing. Blue Sky has a staff of 19 employees.

Construction and Construction Management

Ever since our first closing in 2014, Blue Sky has managed multiple construction projects simultaneously while also pursuing new opportunities and closing out recently completed projects. We presently have 8 under construction and in the last 36 months, we have completed 14 projects. We presently have 6 in the pipeline that will be starting construction in 2025, including New York Avenue. Blue Sky has a department dedicated to permitting and construction activities.

This department consists of 5 full-time Blue Sky staff members, many of whom are our longest-tenured team members.

Partnering with Neighborhood Groups

Blue Sky has partnered with many neighborhood groups on our developments. At New York Avenue, we have an arrangement with the Neighborhood Center of West Volusia ("NHC") for them to provide referral and support for 13 units. The NHC staff and board are very excited about this development, and we believe this will multiply the overall community benefits of New York Avenue. See attached support letter (Exhibit A).

Service Providers and Supportive and Community Service Programming

Blue Sky has identified a very qualified local service provider who will be responsible for referring and providing wrap-around services to the 13 PSH households. NHC has been providing shelter, housing, and prevention services to the community for over 50 years. Additionally, the property management team works with other local organizations to bring in resources and training to residents, as required by any funding agreements and as is helpful to the community.

Financing

In addition to the government agencies that we work with, Blue Sky has several very strong relationships with private lending institutions including TD Bank, Chase, Truist, Raymond James Bank, Fifth Third Bank, and others. The financing structure on New York Avenue is as follows:

- FHFC Tax-Exempt Bonds
- FHFC RRLP
- FHFC ELI
- Volusia County
- FHFC 4% Tax Credits

State and Local Knowledge and Experience

The Blue Sky Communities' principals are active on the affordable housing advisory committee of our home areas. Shawn Wilson is a former Chairman of the Board of Directors of the Florida Coalition of Providers of Florida, our statewide advocacy organization. Scott Macdonald is a current board member and chairman of the Insurance Committee. This is our first development in the City of Deland, so we have a strong local team including Cobb Cole Law Firm to guide us through any local issues.

THE TEAM

We have the privilege of counting on a high-caliber group of professionals:

Architect

Powell Studio Architecture is based in Clermont. Blue Sky has completed 3 developments and has 2 under construction with Powell.

Civil Engineer

Madden, Moorhead & Stokes is the Civil Engineer for New York Avenue Apartments. The firm is based in Maitland and has worked in the area since 1987. Notably, this firm was the Civil Engineer on a large apartment project currently completed in Downtown DeLand.

Property Manager

Carteret Property Management Corporation is Blue Sky's in-house property manager. Founded in 1971, they are among the best managers in Florida. They have an impeccable reputation with the Compliance agencies. Carteret brings over 50 years of successful compliance/audits. With Carteret's expertise, we ensure our communities are long-term assets for Owners/Investors and the community. Carteret, with over 50 years of multifamily management experience, will be the management agent with legal and fiduciary responsibility to the owner and lenders. They will handle the traditional management functions such as rent collection, maintenance, repairs,

accounting, and regulatory compliance. Carteret is an Accredited Management Organization (AMO), a certified Woman's Business Enterprise (WBE), and an FHFC-approved management agent with a staff of over 160.

Legal Counsel

Cobb Cole Law Firm. Mark A. Watts, Partner

As Managing Partner of Cobb Cole Law Firm, Mark A. Watts continues to build his powerful legacy in the Volusia County community through innovative growth solutions and an intentionally collaborative management style. Mr. Watts is an active member of Cobb Cole's Administrative, Land Use, and Environmental Law Departments. His career is focused on representing landowners and developers in securing entitlements and regulatory approvals for the development of their land. In addition, Mr. Watts is experienced in structuring infrastructure financing using special assessment districts, community development districts, tax increment financing, and other creative financing strategies.

Mr. Watts graduated from Florida State University in 1995 with a degree in International Affairs. He received a Juris Doctor from Stetson University College of Law in 1998. Prior to joining the firm, Mr. Watts served as an Assistant County Attorney in Pinellas County. He is a member of the Florida Bar and the United States District Court for the Middle District of Florida. As a Volusia County native, Mr. Watts has proactively engaged in an extensive variety of leadership opportunities and local board commitments during his time with Cobb Cole. He has dedicated his time and expertise to organizations ranging from the DeLand Breakfast Rotary Club to the Volusia County Association for Responsible Development.

INTRODUCTION

This report is a supplement to the Parking Demand Study for the New York Avenue Apartments revised on 3/10/2025 by High Point Engineering, Inc. This parking demand study has been prepared as technical support for a parking waiver request to approve a total of 94 on-site surface parking spaces, for the proposed 84-dwelling unit multi-family affordable housing project. This supplement was requested by the City of DeLand with the objective of analyzing data from existing similar demographics fully operational affordable housing communities developed by Blue Sky Communities presently managed by our property management partner Carteret Management.

BACKGROUND

New York Ave Apartments' site is located on the north side of West New York Avenue (State Road 44), just west of North Florida Avenue in Section 09, Township 17 South, Range 30 East within the incorporated area of the City of DeLand. The property is comprised of two parcels identified by the Volusia County Property Appraiser's Office with parcel identification numbers 700962000087 and 700962000090. The total site area is approximately 1.61 acres and is bounded by West New York Avenue to the south, and commercial and office properties to the north, east, and west. The property was previously the site of the Putnam Hotel built in 1924. The structure was recently demolished, and the site is currently vacant and undeveloped.

The proposed New York Avenue Apartments development will consist of one (1) 6-story midrise building, including 84 dwelling units containing 44 units of 1 bedroom, 28 units of 2 bedrooms, and 12 units of 3 bedrooms for a total of 136 bedrooms (i.e., average unit mix of 1.62 bedrooms per dwelling unit), 94 on-site surface parking, and 56 bicycle parking spaces (48 interior and 8 exterior spaces); a stormwater collection and exfiltration system, sanitary sewer system, potable water service for domestic consumption and fire protection, plus Florida native drought-tolerant landscape.

The project will feature 13 permanently restricted special needs dwelling units to accommodate families transitioning from homelessness, ensuring inclusivity and promoting stability for vulnerable populations. The proposed development is planned in a single phase. The setbacks, drainage, parking, and landscaping are designed to support the proposed development of the property.

Volusia County has agreed to grant the residents of New York Avenue Apartments a revocable license and right to park motor vehicles owned or leased by such residents in the adjacent County Property's parking lot. Residents of New York Avenue Apartments may not park on the County Property from 8 a.m. to 5 p.m., Monday through Friday. Overnight and over the weekend parking outside the specified restricted hours will be allowed to all residents, thus providing additional spaces to the current surface parking provided on site.

OUR RESIDENTS

Who will live at New York Ave? Most of the units will be occupied by residents earning from 60% to 80% of AMI (Area Median Income). For 2024, Volusia County recorded an AMI of $82,800, which means our residents' income will range from $24,840 to $66,240. It could be a waiter at a restaurant downtown to a teacher, government, or university employee. As was mentioned above, 13 units will be exclusively dedicated to persons transitioning out of homelessness. The non-profit partner, in this case, the Neighborhood Center, and onsite staff will provide the level of services required for all our residents regardless of their income.

DATA COLLECTION AND OBJECTIVE

Parking observations were undertaken at five (4) affordable housing apartment communities in Hillsborough County and St Lucie Counties developed by Blue Sky Communities and managed by Carteret Management: (1) Sweetwater Villas; (2) Uptown Sky; (3) Brandon Palms, and (4) Blue Sky Landing. These existing developments were chosen due to having similar demographics as New York Avenue Apartments. To reiterate, the purpose of this narrative is not, as it is the objective of

the parking study it supports, to analyze developments in close proximity to the subject but to examine similar demographic, affordable housing communities developed by Blue Sky. Our goal is to show real time examples of actual parking usage years after the developments were completed and are fully rented.

(1) Data Collection at Sweetwater Villas – 4131 Sweetwater Villas Ln, Tampa.

The existing Sweetwater Villas is located on the east side of Lois Avenue between Humphrey Street and Waters Avenue, within unincorporated Hillsborough County. Sweetwater Villas is comprised of four (4) 3-story buildings including 56 dwelling units distributed in 36 units of 2 bedrooms, and 20 units of 3 bedrooms for a **total of 132 bedrooms** (i.e., average unit mix of 2.35 bedrooms per dwelling unit). At the time of this study, the apartment complex had an occupancy level of 100%. Sweetwater Villas has a surface parking lot with a **total of 116 spaces** including 14 non-designated spaces for visitors (i.e., 0.77 parking spaces per bedroom). Parking observations at this location took place on Wednesday, December 8, 2021, from 4:00 am to 8:00 am and from 7:00 pm to 12:00 pm. The observations consisted of identifying the number of parking spaces occupied at 10-minute intervals. The weather condition was clear with temperatures between 65°F and 75°F. The observations show the highest peak period parking demand ratio occurred between 4:00 am and 5:00 am. At 4:00 am, 85 parking spaces of the 116 parking spaces were occupied and 31 parking spaces available. The Peak Parking Demand Ratio vs Bedrooms computed was 0.64 spaces per bedroom and at 7:00 pm, the apartment complex had a parking demand ratio of 0.45 spaces per bedroom. Additionally, the observation taken at midnight shows that Sweetwater Villas had a parking demand ratio of 0.62 spaces per bedroom.

Peak Parking Demand Ratio vs Bedrooms: 0.64. Applying this percentage of usage to the 136 bedrooms present at NYA, the development would be required to have 87 parking spaces.

To update above data, a representative of Blue Sky Communities undertook a night visit to the property on March 12, 2025 at 11:05 PM. We found that 34 spaces were available at that time from the 116 parking spaces for a per bedroom ratio of ***0.62*** *(See photo addendum on Exhibit B).*

(2) Data Collection at Uptown Sky – 13635 N 12th St, Temple Terrace.

The existing Uptown Sky is located on the north side of Fletcher Ave between N 12th St and N 15th St., within unincorporated Hillsborough County. Uptown Sky is comprised of one (1) 4-story building including 61 dwelling units distributed in 37 units of 2 bedrooms, 24 units of 3 bedrooms, for a **total of 183 bedrooms** (i.e., average unit mix of 3.00 bedrooms per dwelling unit). At the time of this study, the apartment complex had an occupancy level of 100%. Uptown Sky has a surface parking lot with a **total of 88 spaces** (i.e., 0.48 parking spaces per bedroom). Parking observations at this location took place on Wednesday, February 14, 2024. At 10:00 am there were 27 occupied spaces, a parking demand ratio of 0.15 spaces per bedroom. At 4:00 PM there were 35 occupied spaces, a parking demand ratio of 0.19 spaces per bedroom. At 10:00 pm, 37 occupied spaces, a parking demand ratio of 0.20 spaces per bedroom.

Peak Parking Demand Ratio vs Bedrooms: 0.20. Applying this percentage of usage to the 136 bedrooms present at NYA, the development would be required to have 27 parking spaces.

*To update above data, a representative of Blue Sky Communities undertook a night visit to the property on March 13, 2025 at 11:00 PM. We found that 19 spaces were available at that time from the 84 parking spaces for a per bedroom ratio of **0.38** (See photo addendum on Exhibit C).*

(4) Data Collection at Brandon Palms – 114 N Knights Ave, Brandon.

High Point Engineering conducted a study overnight 9/25 - 9/26/23 at Brandon Palms. This is a 120-unit Affordable Housing complex with many similar demographics as the subject. Brandon Palms has a surface parking lot with a **total of 220 spaces**. They counted the number of occupied parking spaces every ten minutes from 8:00 pm until 8:00 am. The maximum number of observed occupied spaces occurred at 4:00 am, with 142. There are 120 apartments and a **total of 224 bedrooms** at Blue Sky Brandon. The parking demand ratio is 0.64 per bedroom.

Peak Parking Demand Ratio vs Bedrooms: 0.64. Applying this percentage of usage to the 136 bedrooms present at NYA, the development would be required to have 87 parking spaces.

*To update above data, a representative of Blue Sky Communities undertook a night visit to the property on March 13, 2025 at 11:30 PM. We found that 94 spaces were available at that time from the 220 parking spaces for a per bedroom ratio of **0.56** (See photo addendum on Exhibit C).*

(4) Data Collection at Blue Sky Landing – 100 Blue Sky Cir Fort Pierce.

Blue Sky Landing is an affordable housing community located on the north side of Okeechobee Road (State Road 70) on the west side of McNeil Road, within the incorporated area of the City of Fort Pierce. Blue Sky Landing is comprised of four (4) 4-story low-rise buildings including 164 dwelling units distributed in 4 studios, 36 units of 1 bedroom, 96 units of 2 bedrooms, 28 units of 3 bedrooms, for a **total of 316 bedrooms** (i.e., average unit mix of 1.93 bedrooms per dwelling unit). At the time of this study, the apartment complex had an occupancy level of 100%. Blue Sky Landing has a surface parking lot with a **total of 246 spaces** (i.e., 0.78 parking space per bedroom). Parking observations at this location took place on Monday November 18, 2024, from 4:00 am to 8:00 am and from 8:00 pm to 12:00 am. The observations consisted of identifying the number of parking spaces occupied at 5-minute intervals. The observations indicate the highest peak period parking demand ratio occurred between 10:00 pm and 11:00 pm. At 10:25 pm, 163 parking spaces of the 246 parking spaces were occupied and 83 parking spaces were available.

Peak Parking Demand Ratio vs Bedrooms: 0.52. Applying this percentage of usage to the 136 bedrooms present at NYA, the development would be required to have 70 parking spaces.

CONCLUSION

After physical observations in multiple of our fully leased communities, peak parking demand ratios of parking spaces required per number of bedrooms fluctuated from 0.38 to 0.64. Even though this is a wide range of variance, using the highest peak demand (0.64) and multiplying it by the number of bedrooms that will be provided in New York Ave (136 x 0.64), the number of spaces required following this rationale will be **87 spaces**. Our current site plan incorporates **94 surface parking spaces, 56 bike spaces, and a license to park at the adjacent County parking**

lot from 5 PM to 8 PM Monday to Friday and all day Saturday and Sunday. We believe, based on our experience and the professionally certified parking study provided, that the current parking proposal is sufficient to accommodate the residents' and staff's parking needs in our development.

EXHIBITS

EXHIBIT A

March 6, 2025
City of DeLand, Florida

From:
Savannah-Jane Griffin
Chief Executive Officer
(386) 734-8120 EXT 202
Neighborhood Center of West Volusia
savannah.griffin@nhcwv.org

Attn:
Carol Kuhn, AICP
Planning Director
City of DeLand
120 S. Florida Ave
DeLand, FL 32720

Subject: Permanent Supportive Housing Units at New York Ave Apartments.

Dear Carol,

We are delighted to confirm that thanks to a partnership with Blue Sky Communities, the developer for New York Ave Apartments, The Neighborhood Center of West Volusia will have 13 units set aside as Permanent Supportive Housing (PHS) units for the benefit of our clients.

These units are designated for extremely-low-income individuals and families transitioning out of homelessness. In our experience the residents of these units are unlikely to own or afford cars. The set aside will be recorded in a Land Use Restriction Agreement (LURA) that will ensure their permanence for as long as the development exists as an affordable housing community. Typically, the affordability period is at least 50 years.

Sincerely,

Savannah-Jane Griffin
Chief Executive Officer

EXHIBIT B

Sweetwater Villas

A Blue Sky team member drove this property on March 12, 2025 at 11:15 PM.
We found that 34 spaces were available at that time from the 116 parking spaces.



EXHIBIT C

Uptown Sky

A Blue Sky team member drove this property on March 13, 2025 at 11:05 PM.
We found that 19 spaces were available at that time from the 84 parking spaces.



EXHIBIT D

Brandon Palms

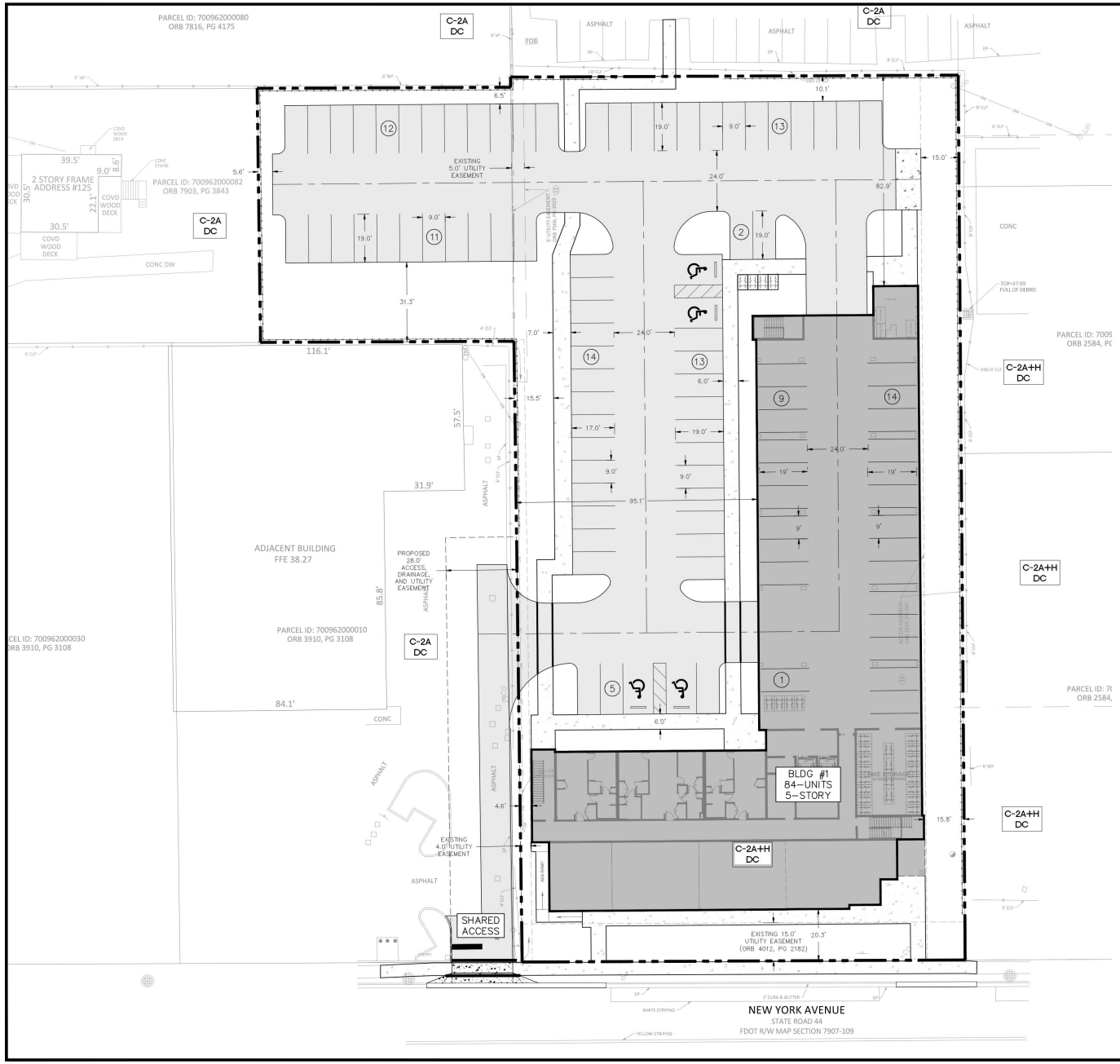
A Blue Sky team member drove this property on March 13, 2025 at 11:30 PM.
We found that 94 spaces were available at that time from the 220 parking spaces.











LEGEND

TC — EXISTING ZONING

TCD — EXISTING FUTURE LAND USE

GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 inch = 20 ft.

SITE DATA:

1.	TOTAL PROPERTY AREA:	1.63 ACRES	
2.	PARCEL ID'S:	700962000090 & 700962000087	
3.	JURISDICTION:	CITY OF DELAND	
4.	EXISTING FUTURE LAND USE:	DOWNTOWN COMMERCIAL	
5.	EXISTING ZONING:	C-2A&H	
6.	BUFFER REQUIREMENTS:		NONE
7.	PROPOSED USE:		MULTI-FAMILY
8.	TOTAL DWELLING UNITS (DU):		84 UNITS
9.	UNIT MIX:	1 BEDROOM = 44 UNITS 2 BEDROOM = 28 UNITS 3 BEDROOM = 12 UNITS	
10.	OPEN SPACE		
	REQUIRED		NONE
	PROVIDED		0.47 AC. (28.8%)
11.	MAX. IMPERVIOUS SURFACE RATIO		
	REQUIRED		NONE
	PROVIDED		1.16 AC. (71.2%)
12.	IMPERVIOUS AREA:		
	TOTAL BUILDINGS:		0.47 AC (38.8%)
	TOTAL SIDEWALK, PAVEMENT, MISC. CONCRETE:		0.69 AC (42.3%)
	TOTAL IMPERVIOUS AREA:		1.16 AC (71.2%)
	TOTAL PERVIOUS AREA:		0.47 AC (28.8%)
	TOTAL AREA:		1.63 AC (100.00%)
13.	MAX. BUILDING HEIGHT		80 FT
14.	BUILDING SETBACKS:		NONE

15. PARKING:

A) REQUIRED:

APARTMENTS:

1 BEDROOM – 1.5 SP/UNIT X 44 =	66	SPACES
2+ BEDROOMS – 2 SP/UNIT X 40 =	80	SPACES
VISITOR PARKING – 0.5 SP/UNIT X 84 =	42	SPACES
SUBTOTAL =	188	SPACES

B) PROVIDED:

APARTMENTS:

REGULAR (9'x19'/20') =	66	SPACES
GARAGE (9'x19') =	24	SPACES
ACCESSIBLE (12'x20') =	4	SPACES
SUBTOTAL =	94	SPACES

*19' DEPTH TOTAL, 17' PAVED W/2' OVERHANG, OVERHANG IS NOT PART OF A LANDSCAPE AREA

16. BICYCLE PARKING:

A) REQUIRED:

1/EVERY 4 DWELLING UNITS = 84/4 =	21	SPACES
TOTAL =	21	SPACES

B) PROVIDED:

EXTERIOR (4'x6') =	4	SPACES
INTERIOR STORAGE ROOMS (4'x6') =	48	SPACES
TOTAL =	52	SPACES

17. PER FEMA FIRM PANEL NO. 12127C0470H, DATED FEBURARY 19, 2014, THE ENTIRE SITE LIES WITHIN FLOOD ZONE 'X' (AREAS TO BE DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN).

18. WATER AND SEWER ARE TO BE PROVIDED BY THE CITY OF DELAND.

19. ALL UTILITY LINES TO MEET CITY OF DELAND SPECIFICATIONS AND STORM SYSTEM TO MEET ALL APPLICABLE CITY OF DELAND AND ST. JOHNS RIVER WATER MANAGEMENT DISTRICT SPECIFICATIONS.

20. IRRIGATION ON SITE TO BE PROVIDED BY CITY POTABLE WATER.

21. THE SITE IS NOT LOCATED WITHIN A WELL FIELD PROTECTION ZONE.

22. THE SITE IS NOT LOCATED WITHIN AN AQUIFER RECHARGE AREA.

23. SITE TO BE DEVELOPED IN ONE PHASE

WATER SERVICE DEMANDS

LAND USE	UNIT	GPD/UNIT	# UNITS	ADD (GPD)	ADD (GPM)	MDD (GPM)	PHF (GPM)
MULTI-FAMILY RESIDENTIAL	DWELLING UNIT	350	84	29,400	20.42	40.84	81.68

SEWER SERVICE DEMANDS

LAND USE	UNIT	GPD/UNIT	# UNITS	ADD (GPD)	ADD (GPM)	MDD (GPM)	PHF (GPM)
MULTI-FAMILY RESIDENTIAL	DWELLING UNIT	300	84	25,200	17.50	35.00	70.00

TRAFFIC GENERATION

ITU CODE	LAND USE	# UNITS	DAILY		PM PEAK HOUR			
			RATE	TRIPS	RATE	TOTAL	ENTER	EXIT
221	MULTI-FAMILY RESIDENTIAL	84	7.42	623	0.53	45	30	15

SOILS LEGEND

SOILS LINE

SOIL NUMBER	SOIL NAME	HYDROLOGIC GROUP
6	ASTATULA–URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	A
71	URBAN LAND, 0 TO 2 PERCENT SLOPES	N/A

SOURCE: USGS SOILS SURVEY, NATURAL RESOURCE CONSERVATION SERVICE – VOLUSIA COUNTY, FLORIDA 2022

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

SITE PLAN
FOR
NEW YORK AVE APARTMENTS
CITY OF DELAND FLORIDA

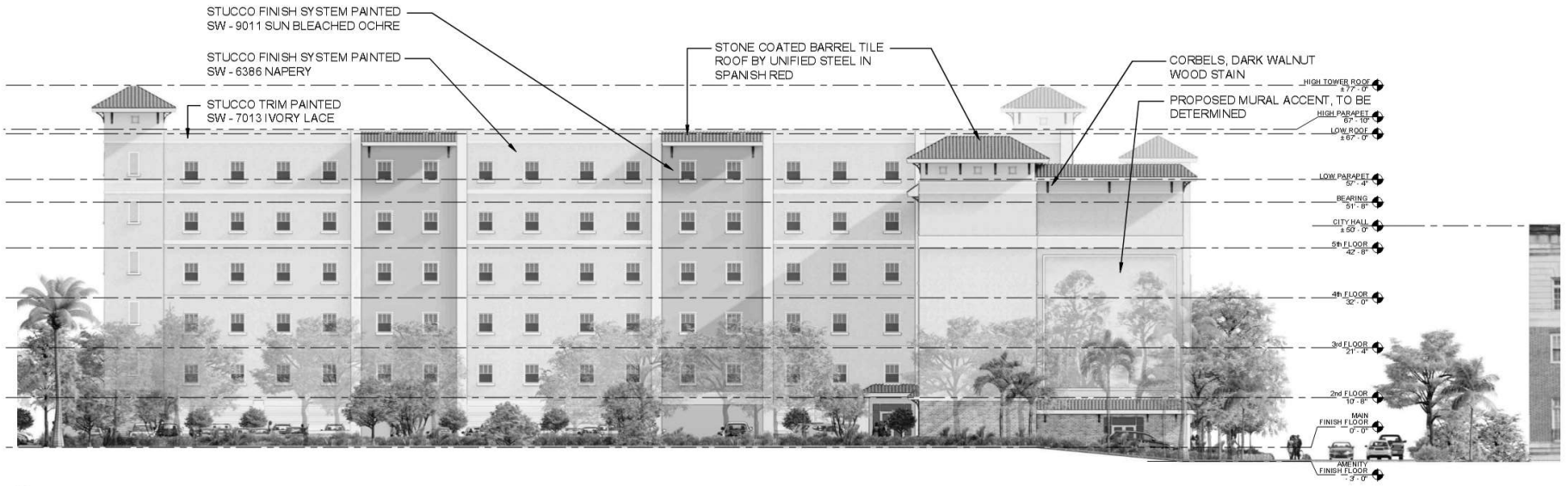
BLUE IAN, LLC
180 FOUNTAIN PKWY N.
ST. PETERSBURG, FL 33716

ENGINEER IN CHARGE:
DAVID A. STOKES, P.E. #65527
February 28, 2025
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

NO.	DATE	REVISIONS
1	08/22/24	REVISED PER CITY AND FDOT COMMENTS
2	09/30/24	REVISED PER CITY COMMENTS
3	02/28/25	REVISED SITE LAYOUT

JOB #: 23201
DATE: 6/20/24
SCALE: 1"=20'
DESIGNED BY: TRF
DRAWN BY: TRF
APPROVED BY: DAS

C100



2 E-01 WEST ELEVATION (PARKING FACADE)
SCALE: 3/32" = 1'-0"



1 E-01 SOUTH ELEVATION (STREET FACADE)
SCALE: 3/32" = 1'-0"

POWELL STUDIO
ARCHITECTURE
ARCHITECTURE | INTERIOR DESIGN
713 W. MONROE STREET • CIE BACKFL TO BIA 34711
PH: (305) 974-2940 • FAX: (307) 488-7113
www.powellstudioarch.com
AAR 26802216

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CONSULTANT:

OWNER / PROJECT:

NEW YORK AVE. APARTMENTS

AN AFFORDABLE HOUSING COMMUNITY
DELAND, FLORIDA

PROFESSIONAL SEAL:

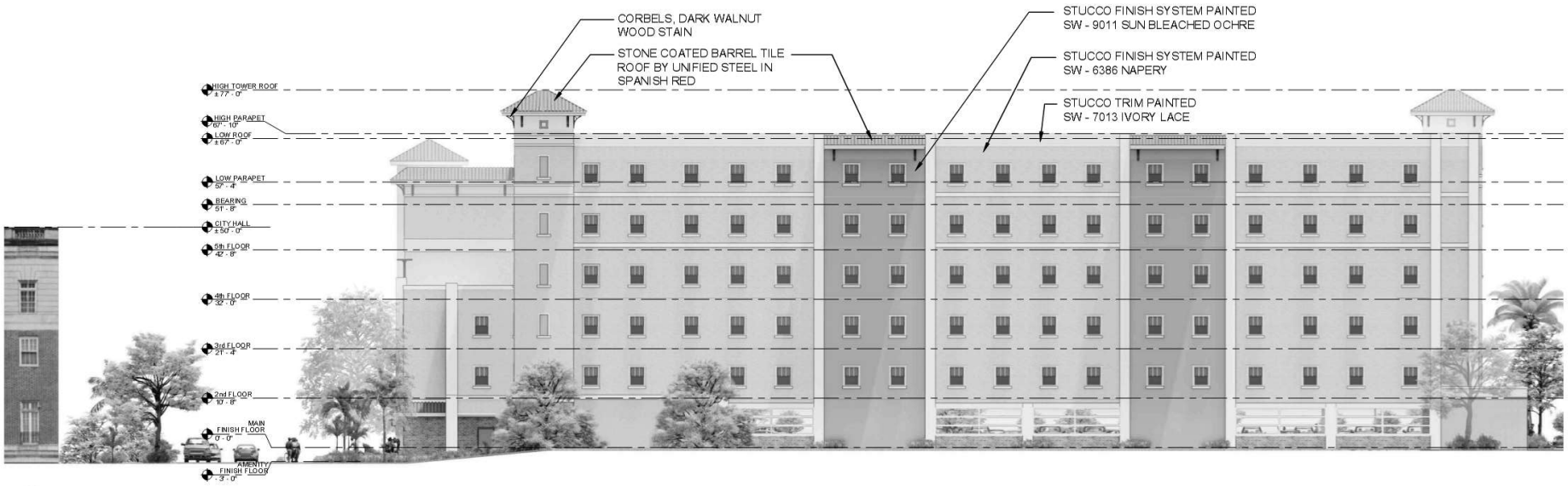
MARK	DATE	DESCRIPTION

ISSUE DATE: FEBRUARY 20, 2025

EXTERIOR ELEVATION

PROJECT NO.	PSA 2024-01.00
DRAWN BY	AP
CHECKED BY	JP

E-01



2 E-02 EAST ELEVATION (EMPTY LOT FACADE)
SCALE: 3/32" = 1'-0"



1 E-02 NORTH ELEVATION (REAR FACADE)
SCALE: 3/32" = 1'-0"

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ARCHITECTURE | INTERIOR DESIGN
713 W. MONROE STREET • CHICAGO, FLORIDA 34711
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CONSULTANT:

OWNER / PROJECT:

NEW YORK AVE. APARTMENTS

AN AFFORDABLE HOUSING COMMUNITY
DELAND, FLORIDA

PROFESSIONAL SEAL:

MARK	DATE	DESCRIPTION

ISSUE DATE: FEBRUARY 20, 2025

EXTERIOR ELEVATION

PROJECT NO.	PSA 2024-01.00
DRAWN BY	AP
CHECKED BY	JP

E-02

PARKING DEMAND STUDY

For

NEW YORK AVENUE APARTMENTS

225 West New York Avenue
DeLand, Florida 32720

Prepared for:

BLUE SKY COMMUNITIES, LLC
180 Fountain Parkway N, Suite 100
St. Petersburg, Florida 33716

Prepared by:

HIGH POINT ENGINEERING, INC
5005 W. Laurel Street, Suite 201
Tampa, Florida 33607

Date: August 22, 2024



Digitally signed by Braulio Grajales
DN: c=US, o=HIGH POINT ENGINEERING INC, dnQualifier=A01410D0000018F9D21E3A2000B37F7, cn=Braulio Grajales
Date: 2024.08.23 14:58:04 -04'00'

PARKING DEMAND STUDY

INTRODUCTION

This report summarizes the results of a parking demand study for the New York Avenue Apartments. The proposed affordable housing development for working families is planned to be constructed on the property located at 225 West New York Avenue in DeLand, Volusia County, Florida. Based on the analysis provided herein, on average, a future resident of this development will possess less than one vehicle per bedroom. This parking demand study has been prepared as technical support for a parking waiver request to approve a total of 62 on-site surface parking spaces, for the proposed 84-dwelling unit multi-family affordable housing project. The referenced property will have full access to and from West New York Avenue through cross access with the neighboring property to the west owned by Volusia County.

BACKGROUND

The project site is located on the north side of West New York Avenue (State Road 44), just west of North Florida Avenue in Section 09, Township 17 South, Range 30 East within the incorporated area of the City of DeLand. The property is comprised of two parcels identified by the Volusia County Property Appraiser's Office with parcel identification numbers 700962000087 and 700962000090. The total site area is approximately 1.61 acres and is bounded by West New York Avenue to the south, and commercial and office properties to the north, east and west. The property was previously developed with a hotel developed in 1924, known as the Putnam Hotel. The structure was recently demolished, and the site is currently vacant and undeveloped.

The proposed New York Avenue Apartments development will consist of one (1) 5-story mid-rise building, including 84 dwelling units containing 44 units of 1 bedroom, 28 units of 2 bedrooms, and 12 units of 3 bedrooms for a total of 136 bedrooms (i.e., average unit mix of 1.62 bedrooms per dwelling unit), 62 surface parking spaces (i.e., 0.46 spaces per bedroom), a stormwater collection system that will discharge stormwater run-off generated within the property to the onsite dry detention pond, sanitary sewer system, potable water service for domestic consumption and fire protection, and Florida native drought tolerant landscape. The project will feature ten long-term restricted special need dwelling units to accommodate families transitioning from homelessness ensuring inclusivity and promoting stability for vulnerable populations. The proposed development is planned in a single phase. The setbacks, drainage, parking, and landscaping are designed to support the proposed development of the property.

The City of DeLand Land Development Code (LDC) Section 33-91 requires the following parking ratios for the multi-family land use: Studio: 1 space/unit, 1 bedroom: 1.5 spaces/unit, 2, 3, or more bedrooms: 2 spaces/unit, visitor parking: 0.5 space/unit. The City of DeLand LDC requirement for the proposed apartment building is 188 parking spaces. The proposed site layout and parking plan prepared by Madden, Moorhead & Stokes, LLC shows a total of 62 on-site parking spaces plus 56 bicycle parking spaces. LDC Section 33-91.03.I.3.b allows off-street parking reduction by no more than one space for each bicycle parking space, but by no more than 30 percent of the total required spaces. Based on the Code allowance, a 30 percent off-street parking reduction over 188 parking spaces equals 57 parking spaces. Consequently, when considering both vehicular and bicycle parking, the total parking supply

ratio provided by the proposed New York Avenue Apartments is 1.42 parking spaces per dwelling unit, representing a deficit from the Code requirements of 69 parking spaces.

Parking ratios per unit may not accurately reflect the actual parking demand generated by a residential development. This is attributed to the fact that the relation between the number of drivers and the various dwelling unit sizes in any apartment complex cannot be adequately captured by measuring parking ratios per unit. For example, a one-bedroom dwelling might be associated with a single resident driver or a couple of drivers. In contrast, a two-bedroom dwelling or three-bedroom dwelling considers the likelihood of a larger household with one adult driver or multiple drivers and with or without teenage drivers. Therefore, a parking study aligned with the number of bedrooms provides a more accurate representation of the parking demand within a multifamily apartment development.

According to ITE Parking Generation Manual 6th Edition, it is expected that the number of bedrooms and number of residents are likely correlated to the parking demand generated by a residential site. Parking studies of multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).

The City of DeLand LDC currently does not specify parking ratios per bedroom for multi-family land use. Thus, the focus of this parking study was to determine the peak period parking demand per bedroom for an affordable housing development for families in DeLand in support of a request for a reduction in parking. The City of DeLand LDC Section 33-91.01(d) provides guidelines for parking studies when the proposed use is not listed in Section 33-91.03(f) - Minimum Off-Street Parking Requirements. The City of DeLand LDC recommends using estimates of parking requirements based on studies from ULI, ITE, or the Traffic Institute, and based on data collected from uses or combinations of uses which are the same or comparable to the proposed use. Density, scale, bulk, area, type of activity, and location shall determine comparability.

There are two affordable housing projects with similar demographics near the project site. These projects were selected due to their geographic location and similarity to the proposed development to estimate future parking demand for the proposed New York Avenue Apartments development.

See Attached:

- *Site Location (Exhibit A)*
- *Proposed Parking Layout (Exhibit B)*

DATA COLLECTION AND EXISTING CONDITIONS

Parking observations were undertaken at two affordable housing apartment complexes in the City of DeLand: (1) The Pines and (2) Taylor Place. The Pines is located at 310 W. New Hampshire Avenue in DeLand while Taylor Place is located at 1575 S. Woodland Boulevard in DeLand. These two existing developments were used in this parking demand study due to similarities in the geographic area, land use, number of units, and number of bedrooms.

Data Collection at The Pines - DeLand

The Pines is an affordable housing community located on the south side of New Hampshire Avenue between Delaware Avenue and Clara Avenue, within the incorporated area of the City of DeLand. The Pines development is located approximately 1.6 miles south of the proposed New York Avenue Apartments development. The Pines is comprised of six (6) 3-story garden style buildings including 100 dwelling units distributed in 24 units of 1 bedroom, 32 units of 2 bedrooms, 24 units of 3 bedrooms, and 20 units of 4 bedrooms for a total of 240 bedrooms (i.e., average unit mix of 2.40 bedrooms per dwelling unit). At the time of this study, the apartment complex had an occupancy level of 100%. The Pines has a surface parking lot with a total of 241 spaces (i.e., 1.00 parking space per bedroom). Parking observations at this location took place on Monday November 13, 2023, from 4:00 am to 9:00 am and from 7:00 pm to 12:00 am. The observations consisted of identifying the number of parking spaces occupied at 5-minute intervals. The weather conditions during the observations were cloudy with temperatures between 60°F and 70°F.

The observations indicate the highest peak period parking demand ratio occurred between 8:00 pm and 9:00 pm. At 8:40 pm, 108 parking spaces of the 241 parking spaces were occupied and 133 parking spaces were available. The computed Peak Parking Demand Ratio vs Bedrooms was 0.45 spaces per bedroom. At 4:00 am, the apartment complex exhibited a parking demand ratio of 0.44 spaces per bedroom and at 7:00 pm a ratio of 0.38 spaces per bedroom. Furthermore, the observation taken at midnight revealed that The Pines had a parking demand ratio of 0.44 spaces per bedroom.

See Attached:

- *Peak Period Parking Demand Summary Tables for Observation Taken on* Monday November 13, 2023 *(Exhibit C)*
- *Peak Period Parking Demand Ratio vs Bedrooms Graphs for Observation Taken on* Monday November 13, 2023 *(Exhibit D)*

Data Collection at Taylor Place – DeLand

Taylor Place is an affordable housing community located on the east side of Woodland Boulevard (S.R. 15 / US Highway 17) between Chipola Avenue and Taylor Road, within the incorporated area of the City of DeLand. Taylor Place development is located approximately 2.2 miles south of the proposed New York Avenue Apartments development. Taylor Place is comprised of five (5) 3-story garden style buildings including 106 dwelling units distributed in 4 units of 1 bedroom, 12 units of 2 bedrooms, 71 units of 3 bedrooms, and 19 units of 4 bedrooms for a total of 317 bedrooms (i.e., average unit mix of 2.99 bedrooms per dwelling unit). At the time of this study, the apartment complex had an occupancy level of 100%. Taylor Place has a surface parking lot with a total of 263 spaces (i.e., 0.83 parking spaces per bedroom). Parking observations at this location took place on Tuesday November 14, 2023, from 4:00 am to 9:00 am and from 7:00 pm to 12:00 am. The observations consisted of identifying the number of parking spaces occupied at 5-minute intervals. The weather conditions were cloudy with temperatures between 60°F and 70°F.

The observations indicate the highest peak period parking demand ratio occurred between 4:00 am and 5:00 am. At 4:00 am, 147 parking spaces of the 263 parking spaces were occupied and 116 parking spaces available. The computed Peak Parking Demand Ratio vs Bedrooms was 0.46 spaces per bedroom. At 9:00 am, the apartment complex exhibited a parking demand ratio

of 0.15 spaces per bedroom and at 7:00 pm a ratio of 0.27 spaces per bedroom. Additionally, the observation taken at midnight revealed that Taylor Place had a parking demand ratio of 0.46 spaces per bedroom.

See Attached:

- *Peak Period Parking Demand Summary Tables for Observation Taken on* Tuesday November 14, 2023 *(Exhibit E)*
- *Peak Period Parking Demand Ratio vs Bedrooms Graphs for Observation Taken on* Tuesday November 14, 2023 *(Exhibit F)*

PARKING DEMAND ANALYSIS

According to Blue Sky Communities, LLC, the developer of the New York Avenue Apartments, the proposed development is an affordable housing community for families that will consist of 84 dwelling units distributed in one (1) 5-story mid-rise building with a total of 136 bedrooms.

Exhibits C and E summarize the Peak Parking Demand Ratio vs Bedrooms measured at the two apartment complexes in the City of DeLand. The Peak Parking Demand Ratio vs Bedrooms measured during the two days of observations was very similar to the proposed onsite parking spaces per bedroom. The Peak Parking Demand Ratio vs Bedrooms measured at the two apartment complexes range between 0.45 and 0.46 spaces per bedroom.

The two apartment complexes serve the same geographic area (i.e., urban setting) as the New York Avenue Apartments. The land use, number of units, mix of units, number of bedrooms, and demographic group (i.e., families) for the two existing apartment complexes are comparable with the same features as the New York Avenue Apartments. All sites are surrounded by the same collector/arterial road (i.e., State Road 15 / US Highway 17) and in proximity of bus transit and public transportation routes. Because of these similarities, the Peak Parking Demand Ratios observed at the two existing apartment complexes are considered adequate technical support to estimate the future peak parking demand of the New York Avenue Apartments.

Further, the proposed residential unit mix for the New York Avenue Apartments is 52% of 1 bedroom, 33% of 2 bedrooms, and 15% of 3 bedrooms. The Pines has a unit mix of 24% of 1 bedroom, 32% of 2 bedrooms, 24% of 3 bedrooms, and 20% of 4 bedrooms. Taylor Place has a residential unit mix of 4% of 1 bedroom, 11% of 2 bedrooms, 67% of 3 bedrooms, and 18% of 4 bedrooms. Accordingly, the New York Avenue Apartments will feature a unit mix of 2 bedrooms and 3 bedrooms aligning with the unit mix in The Pines.

In terms of average dwelling unit size, the New York Avenue Apartments are projected to have 1.62 bedrooms per unit (i.e., 136 bedrooms / 84 dwelling units). This average unit size is 2/3 of the average of 2.40 bedrooms per unit (i.e., 240 bedrooms / 100 dwelling units) for The Pines. Moreover, Taylor Place has an average dwelling unit size of 2.99 bedrooms per unit (i.e., 317 bedrooms / 106 dwelling units), making the average unit size at New York Avenue Apartments half that of Taylor Place.

Site Name	The Pines	Taylor Place
Project Size	**100 Dwelling Units**	**106 Dwelling Units**
Occupancy	**100%**	**100%**
Average Unit Mix	**2.40 Bedrooms per Unit**	**2.99 Bedrooms per Unit**
Parking Facility	**77 Spaces**	**146 Spaces**
Parking Supply	**1.00 Spaces per Bedroom**	**0.83 Spaces per Bedroom**
Observation Day	**Monday (11/13/23)**	**Tuesday (11/14/23)**
4:00 am - 5:00 am	0.44	**0.46**
5:00 am - 6:00 am	0.45	0.45
6:00 am - 7:00 am	0.37	0.41
7:00 am - 8:00 am	0.33	0.33
8:00 am - 9:00 am	0.26	0.22
7:00 pm - 8:00 pm	0.38	0.36
8:00 pm - 9:00 pm	**0.45**	0.38
9:00 pm - 10:00 pm	0.42	0.46
10:00 pm - 11:00 pm	0.44	0.46
11:00 pm - 12:00 pm	0.44	**0.46**
Peak	**0.45**	**0.46**
Mean	**0.40**	**0.40**
Median	**0.43**	**0.43**
Mode	**0.44**	**0.46**
Range	**0.26 – 0.45**	**0.22 – 0.46**

Notes: Ratios rounded to two decimals.
Source: High Point Engineering, November 2023

The table above shows a statistical analysis of the parking demand observations at the two existing apartment complexes in DeLand based on vehicles per bedroom.

Despite the different average dwelling unit sizes at the two study sites, the observed peak parking demand ratios are nearly identical. This suggests that the size of the average dwelling unit does not impact the parking demand per bedroom ratio. In other words, the observations from the two study sites indicate that there is no discernible correlation between the average dwelling unit size and the parking demand per bedroom in DeLand.

Thus, considering that the parking demand per bedroom ratio is not impacted by the average dwelling unit size in DeLand, as well as the relatively short distance between the two study sites and the New York Avenue Apartments site, the observed Peak Parking Demand Ratio vs Bedroom in both, The Pines and Taylor Place, can be effectively extrapolated to forecast the future peak parking demand for the New York Apartments.

However, since the unit mix in New York Avenue Apartments is closer to the unit mix in The Pines, the maximum observed Peak Parking Demand Ratio vs Bedrooms at The Pines is used to estimate the future peak parking demand for the New York Avenue Apartments. Applying The Pines Peak Parking Demand Ratio to the New York Avenue Apartments yields:

0.45 spaces per bedroom x 136 bedrooms = 61.2 spaces.

Rounding to the nearest integer, the estimated parking demand for the New York Avenue Apartments is 61 spaces.

The above computed peak parking demand using the extrapolated Peak Parking Demand ratio from The Pines is equal to the proposed parking supply. The probability that the expected peak parking demand for the New York Avenue Apartments can be accommodated by 62 parking spaces is acceptable.

Furthermore, Average Peak Period Parking Demand data from Institute of Transportation Engineers (ITE) Parking Generation, 6th Edition was also used to estimate the future parking demand for the New York Avenue Apartments as well as to compare the ITE published ratios with the results obtained from the observations taken at the two study sites.

The Institute of Transportation Engineers (ITE) Parking Generation, 6th Edition, offers a land use for affordable housing which is defined as all multifamily housing that is rented at below market rate to households that includes at least one employed member. Eligibility to live in affordable housing can be a function of limited household income and resident age (i.e., senior housing). For most of the study sites in the ITE Parking Generation, 6th Edition, 100 percent of the dwelling units are considered affordable. The ITE Parking Generation, 6th Edition does not provide information for Average Peak Period Parking Demand vs. Dwelling Unit Size (i.e., number of units by number of bedrooms per site) or separate parking rates for percentage of visitor parking.

The Average Peak Period Parking Demand Ratio to Bedrooms recommended by the ITE Parking Generation, 6th Edition, Affordable Housing – Income Limits subset, for estimating the off-street parking per bedroom required for workforce housing are as follows:

Weekday (Monday - Friday) in General Urban / Suburban Location:

Peak Period Parking Demand vs Bedrooms: 0.55 parked vehicles
Range of Rates: 0.29 – 0.85
Standard Deviation: 0.14
Number of Studies: 10
Average number of bedrooms: 101

Saturday in General Urban / Suburban Areas:

Peak Period Parking Demand vs Bedrooms: 0.27 parked vehicles
Range of Rates: 0.27 – 0.27
Standard Deviation: N/A
Number of Studies: 1
Average number of bedrooms: 44

Applying the Average Peak Period Parking Demand Ratio to Bedrooms recommended by the ITE Parking Generation, 6th Edition, Affordable Housing – Income Limits to the New York Avenue Apartments yields:

0.55 spaces per bedroom x 136 bedrooms = 74.8 spaces.

Rounding up, the estimated parking demand for the New York Avenue Apartments is 75 spaces.

The above ITE Parking Generation, 6th Edition Peak Period Parking Demand vs Bedrooms is slightly higher than the proposed parking supply rate of 0.46 spaces per dwelling unit. Notably, the sites included the ITE Parking Generation Manual, 6th Edition spanned locations in Alabama, California, Connecticut, District of Columbia, Maryland, Massachusetts, New Jersey, and Oregon, encompassing survey periods in the 1990s and the 2010s. It's important to highlight that the study in ITE Parking Generation Manual, 6th Edition did not include sites in Florida. Additionally, the ITE Parking Generation Manual, 6th Edition, for Land Use 223 - Affordable Housing – Income Limits, does not provide a 95% Confidence Interval due to the limited number of studies available for inclusion.

The following table taken from ITE Parking Generation Manual, 6th Edition, presents a Time-of-Day distribution of parking demand on a weekday in a general urban/suburban setting for income limits land use category:

Percent of Weekday Peak Parking Demand	
Hour Beginning	**Income Limits**
4:00 a.m.	-
5:00 a.m.	100%
6:00 a.m.	94%
7:00 a.m.	85%
8:00 a.m.	77%
9:00 a.m.	73%
10:00 a.m.	71%
11:00 a.m.	-
5:00 p.m.	-
6:00 p.m.	79%
7:00 p.m.	83%
8:00 p.m.	90%
9:00 p.m.	93%
10:00 p.m.	97%
11:00 p.m.	-

See Attached:

- *Institute of Transportation Engineers (ITE) Parking Generation, 6th Edition Data Summary for Land Use: 223 Affordable Housing – Income Limits (Exhibit I)*

In addition, the following unique circumstances apply to the New York Avenue Apartments site:

- Volusia County has agreed to grant residents of New York Avenue Apartments a revocable license and right to park motor vehicles owned or leased by such resident upon the adjacent County Property. Residents of New York Avenue Apartments may not park on the County Property from 8 a.m. to 5 p.m., Monday through Friday. Overnight and over the weekend parking outside the specified restricted hours will be allowed to all residents, thus compensating for the difference of parking spaces required per code.

- The project will include 10 long-term restricted special need dwelling units to accommodate families transitioning from homelessness, and these families will almost certainly not own a car. Consequently, it is anticipated that the future residents may not fully occupy the proposed 62 parking spaces.

- The project is being developed with unassigned parking. The entire parking facility will be accessible to all future residents based on the order of their arrival.

- The project site is situated in downtown DeLand, offering all future residents the opportunity to work within walking or biking distance.

- Future residents will have the opportunity to use public transit as an alternative method of transportation. Votran Route 20 runs north-south along Woodland Boulevard, with convenient bus stops located approximately a 5-minute walk to the east of the project site.

- The project will be designed with clearly identified 8 exterior uncovered bicycle parking spaces, 16 exterior covered bicycle parking spaces placed adjacent to the building and 44 covered and secured interior bicycle parking spaces, exceeding the requirements outlined by the City of DeLand LDC.

- The project site is situated in downtown DeLand, offering all future residents superior walkability typical of an urban area.

- A minimum of four on-street parking spaces along the north side of New York Avenue in front of the property will be available for short-term use.

CONCLUSION

The Peak Parking Demand ratio on a weekday for Affordable Housing – Limited Income in general urban / suburban setting suggested by the ITE Parking Generation, 6th Edition slightly exceeds the Peak Parking Demand ratios measured at the two apartment complexes in the City of DeLand. The two measured Peak Parking Demand ratios in DeLand are within the same order of magnitude indicating there is not a significant difference between the two apartment complexes.

The Peak Parking Demand ratios resulting from observations at the two affordable housing developments in the City of DeLand are considered better suited for projecting the future New York Avenue Apartments Peak Parking Demand compared to the ratio suggested by the ITE Parking Generation, 6th Edition, due to their proximity to the project site.

The planned 62 parking spaces equivalent to 0.46 spaces per bedroom for the proposed 84 dwelling units are anticipated to meet the future parking demand for the New York Avenue Apartments during all periods.

If you have any questions regarding the information contained herein, please do not hesitate to contact me.

Sincerely,
HIGH POINT ENGINEERING, INC.



Braulio Grajales, P.E.
Principal Engineer

EXHIBITS

Exhibit A **Site Location**

Exhibit B **Proposed New York Avenue Apartments Site Layout & Parking Plan**

Exhibit C **Peak Period Parking Demand Summary Table for The Pines on Monday, November 13, 2023, Observations**

Exhibit D **Peak Period Parking Demand Ratio vs Bedrooms Graph for The Pines on Monday, November 13, 2023, Observations**

Exhibit E **Peak Period Parking Demand Summary Table for Taylor Place on Tuesday, November 14, 2023, Observations**

Exhibit F **Peak Period Parking Demand Ratio vs Bedrooms Graph for Taylor Place on Tuesday, November 14, 2023, Observations**

Exhibit G **Institute of Transportation Engineers (ITE) Parking Generation, 6th Edition Data Summary for Land Use: 223 Affordable Housing – Income Limits**

EXHIBIT A


PROJECT SITE LOCATION
225 W New York Ave, DeLand, FL 32720
GLENWOOD
TRAILS WEST
PINELAND HEIGHTS
Reptile Discovery Center
Glenwood Rd
GLENWOOD DELAND FARMS
N Spring Garden Ave
N Woodland Blvd
Deland Municipal Airport
DELAND HIGHLANDS
Mercers Fernery Rd
DeLand Naval Air Station Museum
CYPRESS LAKE ESTATES
SCARLETT
North Deland
Jacobs Rd
N Kepler Rd
Longleaf Pine
AdventHealth DeLand
SUMMER WOODS
MALLORY SQUARE
N Stone St
Gillespie Museum
Blue Lake
DAISY LAKE
BLUE LAKE TRIANGLE
WINNEMISSETT
FELHAM SQUARE
West Deland
SCHUMANS
S Hill Ave
S Blue Lake Ave
E New York Ave
FLORAL PARK
W New York Ave
RIVER FOREST
W Beresford Ave
HIRAM WATERS GROVE
County Road 42
DeLand Southwest
BERESFORD
W Taylor Rd
THE CROSSROADS
E Taylor Rd
RIVERSIDE
ST JOHN'S RIVER ACRES
Deerfoot Rd
Lake Beresford
Hontoon Island State Park
McGregor Rd
Orange Camp Rd
Lake Helen
FATIO
DELAND HEIGHTS ORANGE CITY
HILLY PINES
State Road 472
Mary Ave
CASSADAGA
Hontoon Island

EXHIBIT B

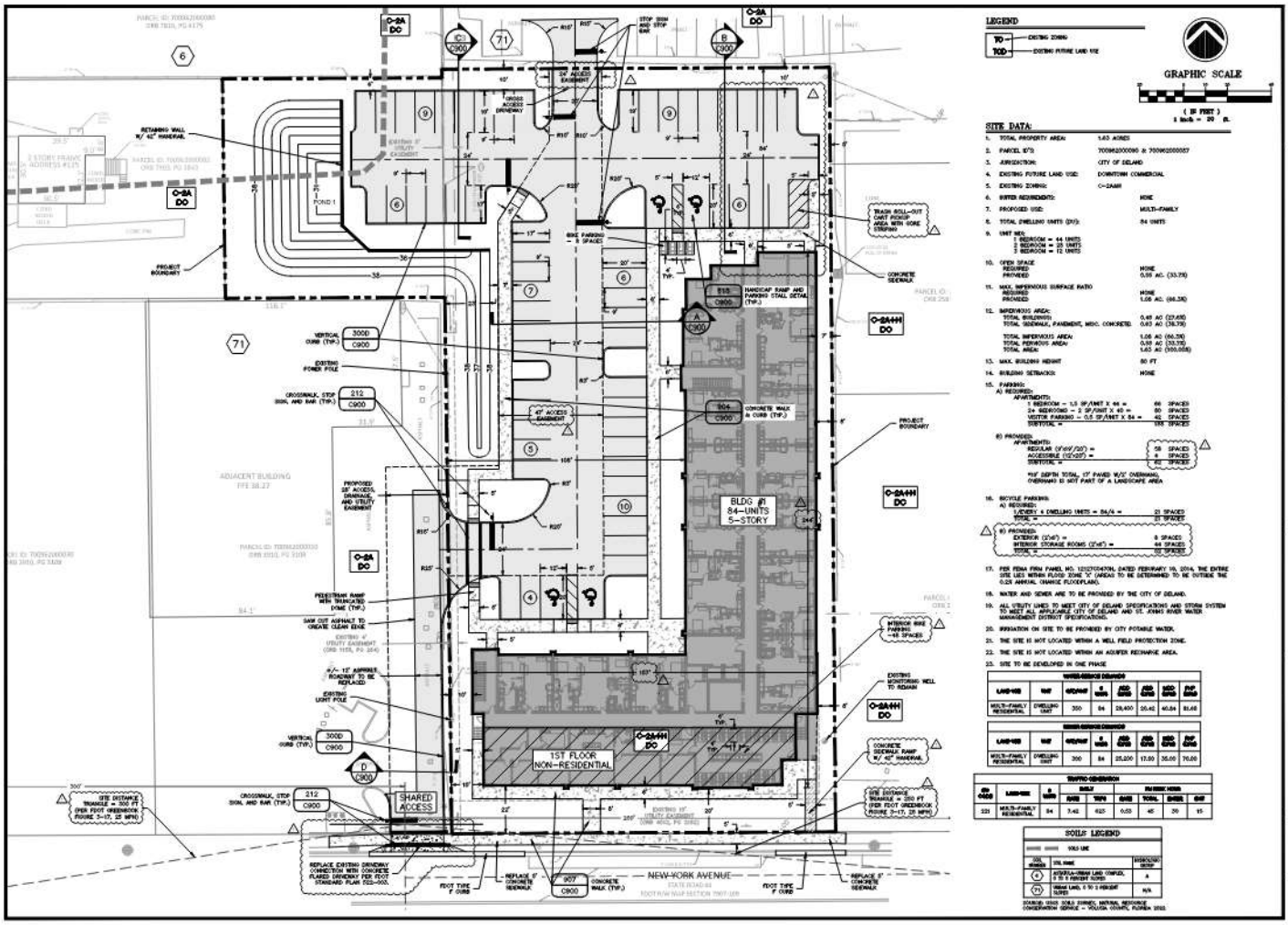
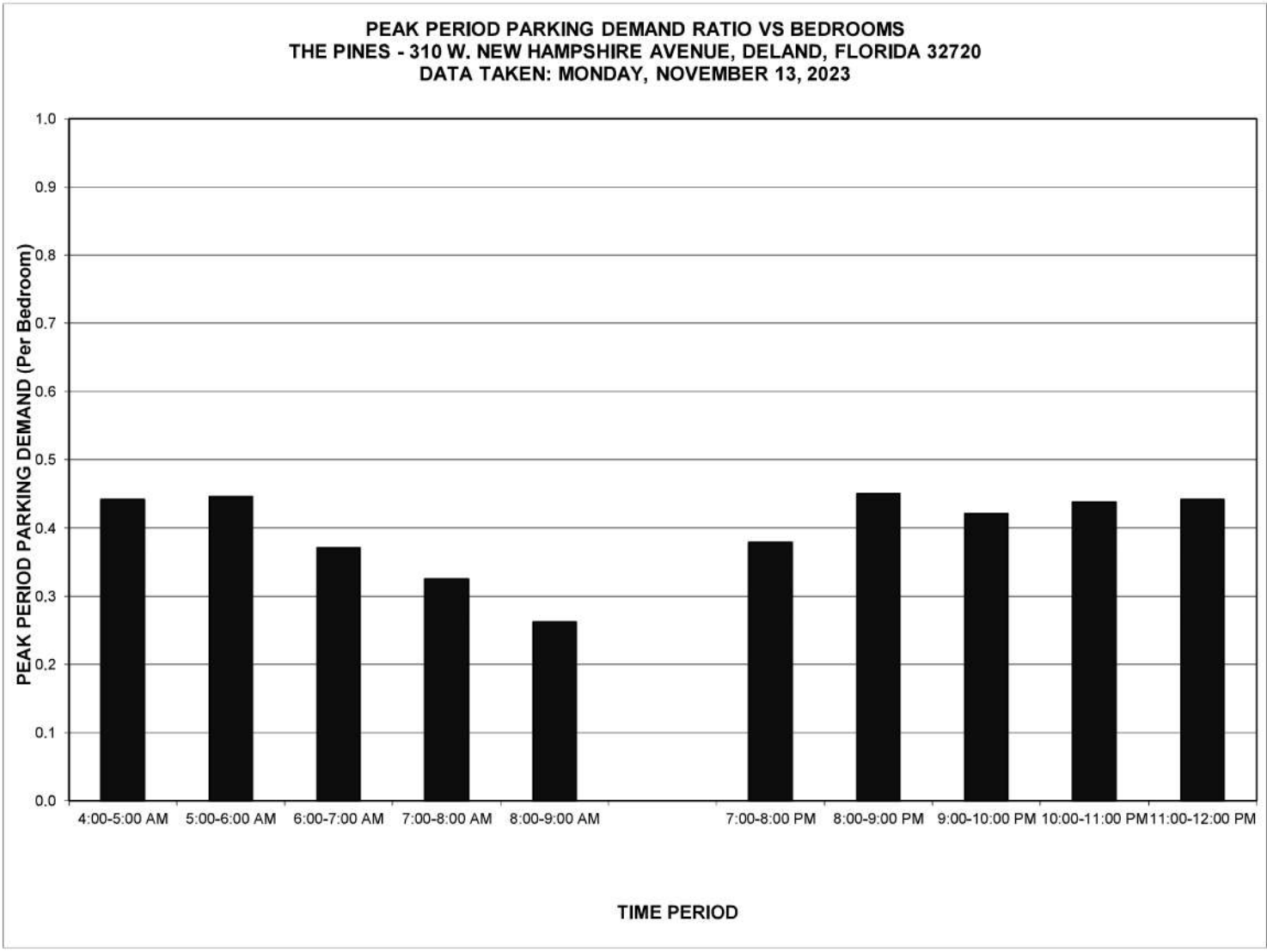

LEGEND
TO — EXISTING ZONING
TOD — EXISTING FUTURE LAND USE
GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.
SITE DATA:
1. TOTAL PROPERTY AREA: 1.63 ACRES
2. PARCEL ID'S: 700962000090 & 700962000057
3. JURISDICTION: CITY OF DELAND
4. EXISTING FUTURE LAND USE: DOWNTOWN COMMERCIAL
5. EXISTING ZONING: C-2A&H
6. RIVER REQUIREMENTS: NONE
7. PROPOSED USE: MULTI-FAMILY
8. TOTAL DWELLING UNITS (DU): 84 UNITS
9. UNIT MIX:
1 BEDROOM = 44 UNITS
2 BEDROOM = 28 UNITS
3 BEDROOM = 12 UNITS
10. OPEN SPACE
REQUIRED NONE
PROVIDED 0.55 AC. (33.7%)
11. MAX. IMPERVIOUS SURFACE RATIO
REQUIRED NONE
PROVIDED 1.06 AC. (66.3%)
12. IMPERVIOUS AREA:
TOTAL BUILDINGS: 0.48 AC (27.6%)
TOTAL SIDEWALK, PAVEMENT, MISC. CONCRETE: 0.63 AC (38.7%)
TOTAL IMPERVIOUS AREA: 1.06 AC (66.3%)
TOTAL PERVIOUS AREA: 0.55 AC (33.7%)
TOTAL AREA: 1.63 AC (100.0%)
13. MAX. BUILDING HEIGHT 80 FT
14. BUILDING SETBACKS: NONE
15. PARKING:
A) REQUIRED:
APARTMENTS:
1 BEDROOM - 1.5 SP/UNIT X 44 = 66 SPACES
24 BEDROOMS - 2 SP/UNIT X 40 = 80 SPACES
VISITOR PARKING - 0.5 SP/UNIT X 84 = 42 SPACES
SUBTOTAL = 188 SPACES
B) PROVIDED:
APARTMENTS:
REGULAR (9'x19'/20') = 58 SPACES
ACCESSIBLE (12'x20') = 4 SPACES
SUBTOTAL = 62 SPACES
*19' DEPTH TOTAL, 17' PAVED W/2' OVERHANG, OVERHANG IS NOT PART OF A LANDSCAPE AREA
16. BICYCLE PARKING:
A) REQUIRED:
1/EVERY 4 DWELLING UNITS = 84/4 = 21 SPACES
TOTAL = 21 SPACES
B) PROVIDED:
EXTERIOR (2'x6') = 8 SPACES
INTERIOR STORAGE ROOMS (2'x6') = 44 SPACES
TOTAL = 52 SPACES
17. PER FEMA FIRM PANEL NO. 12127C0470H, DATED FEBRUARY 19, 2014, THE ENTIRE SITE LIES WITHIN FLOOD ZONE "X" (AREAS TO BE DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN).
18. WATER AND SEWER ARE TO BE PROVIDED BY THE CITY OF DELAND.
19. ALL UTILITY LINES TO MEET CITY OF DELAND SPECIFICATIONS AND STORM SYSTEM TO MEET ALL APPLICABLE CITY OF DELAND AND ST. JOHNS RIVER WATER MANAGEMENT DISTRICT SPECIFICATIONS.
20. IRRIGATION ON SITE TO BE PROVIDED BY CITY POTABLE WATER.
21. THE SITE IS NOT LOCATED WITHIN A WELL FIELD PROTECTION ZONE.
22. THE SITE IS NOT LOCATED WITHIN AN AQUIFER RECHARGE AREA.
23. SITE TO BE DEVELOPED IN ONE PHASE
WATER SERVICE DEMANDS
LAND USE | UNIT | GPD/UNIT | # UNITS | AVG GPD | AVG GPD | MAX GPD | PEF GPD
MULTI-FAMILY RESIDENTIAL | DWELLING UNIT | 350 | 84 | 29,400 | 20.42 | 40.84 | 81.68
SEWER SERVICE DEMANDS
LAND USE | UNIT | GPD/UNIT | # UNITS | AVG GPD | AVG GPD | MAX GPD | PEF GPD
MULTI-FAMILY RESIDENTIAL | DWELLING UNIT | 350 | 84 | 25,200 | 17.50 | 35.00 | 70.00
TRAFFIC GENERATION
ITE CODE | LAND USE | # UNITS | DAILY RATE | DAILY TOTAL | PM PEAK HOUR RATE | PM PEAK HOUR TOTAL | PM PEAK HOUR ENTER | PM PEAK HOUR EXIT
221 | MULTI-FAMILY RESIDENTIAL | 84 | 7.42 | 623 | 0.53 | 45 | 30 | 15
SOILS LEGEND
SOILS LINE
SOIL NUMBER | SOIL NAME | DISTRICT/SOIL GROUP
6 | AUTOTEA-URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES | A
71 | URBAN LAND, 0 TO 5 PERCENT SLOPES | N/A
SOURCE: USGS SOILS SURVEY, NATURAL RESOURCE CONSERVATION SERVICE - VOLUSIA COUNTY, FLORIDA 2002
NEW YORK AVENUE
BLDG #1
84-UNITS
5-STORY
1ST FLOOR
NON-RESIDENTIAL
SHARED ACCESS
ADJACENT BUILDING
PROJECT BOUNDARY
CONCRETE SIDEWALK
HANDICAP RAMP AND PARKING STALL DETAIL (TYP.)
CONCRETE WALK & CURB (TYP.)
CROSSWALK, STOP SIGN, AND BAR (TYP.)
VERTICAL CURB (TYP.)
EXISTING POWER POLE
PEDESTRIAN RAMP WITH TRUNCATED DOME (TYP.)
SAW CUT ASPHALT TO CREATE CLEAN EDGE
EXISTING LIGHT POLE
INTERIOR BIKE PARKING -48 SPACES
EXISTING MONITORING WELL TO REMAIN
CONCRETE SIDEWALK RAMP W/ 42" HANDRAIL
SITE DISTANCE TRIANGLE = 300 FT (PER FDOT GREENBOOK FIGURE 3-17, 25 MPH)
SITE DISTANCE TRIANGLE = 250 FT (PER FDOT GREENBOOK FIGURE 3-17, 25 MPH)
REPLACE EXISTING DRIVEWAY CONNECTION WITH CONCRETE FLARED DRIVEWAY PER FDOT STANDARD PLAN 522-003.
REPLACE 5" CONCRETE SIDEWALK
FDOT TYPE F CURB
CONCRETE WALK (TYP.)
MADDEN
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330
SITE PLAN
FOR
NEW YORK AVE APARTMENTS
CITY OF DELAND
FLORIDA
BLUE IAN, LLC
ENGINEER IN CHARGE:
DATE REVISIONS
JOB # 23201
DATE 6/20/24
SCALE 1"=20'
DESIGNED BY: TRC
DRAWN BY: TRC
APPROVED BY: DGS
C100

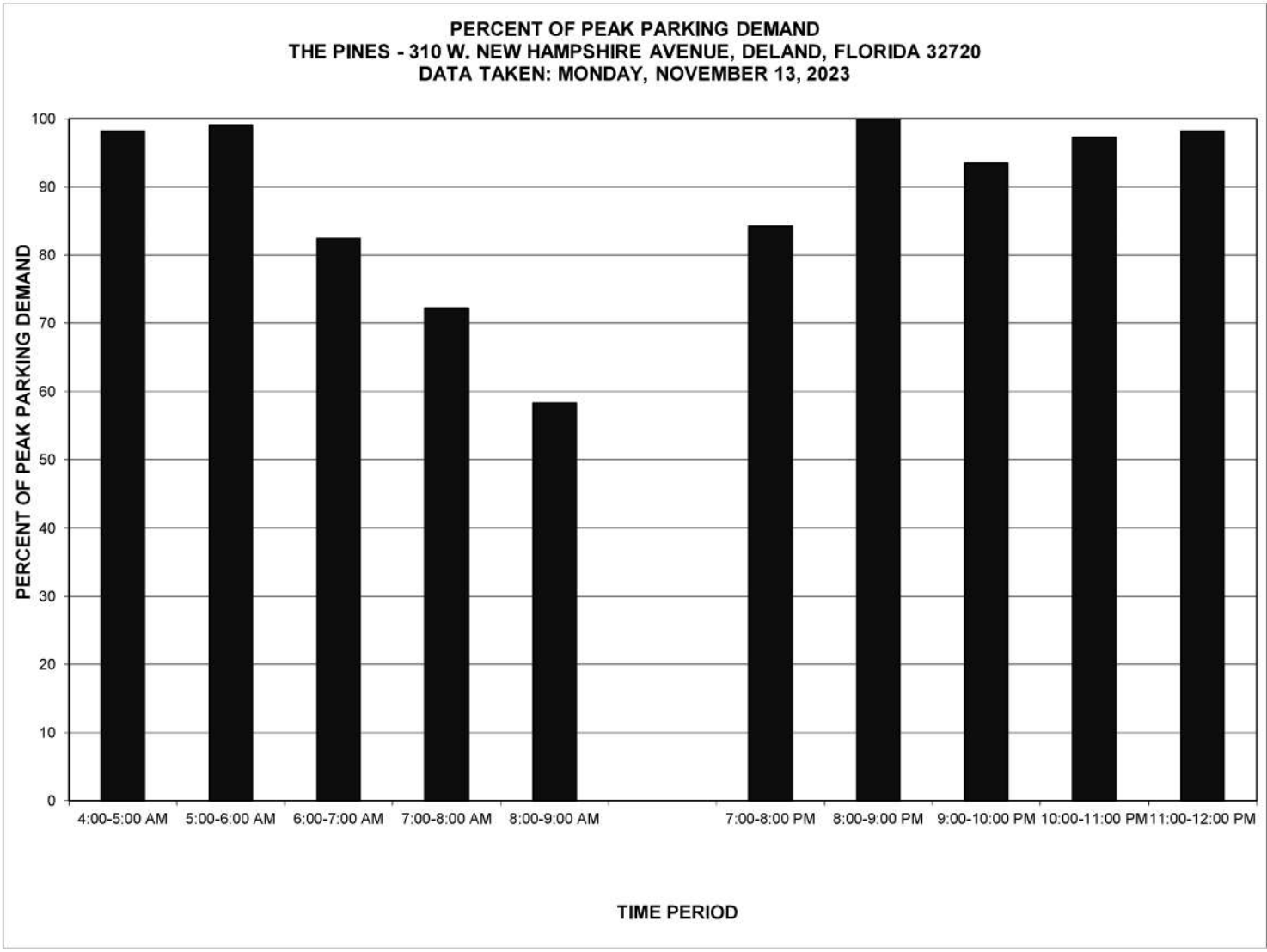
EXHIBIT C

PEAK PERIOD PARKING DEMAND SUMMARY THE PINES - 310 W. NEW HAMPSHIRE AVENUE, FLORIDA 32720 TOTAL DWELLING UNITS = 100, NUMBER OF BEDROOMS = 240 , AVERAGE SIZE OF DWELLING UNITS = 2.40 BEDROOMS TOTAL PARKING SPACES AVAILABLE = 241, PARKING SUPPLY = 1.00 PER BEDROOM					
Observations Taken on Monday, November 13, 2023					
Time Period	**Peak Period Parking Spaces Used**	**Peak Period Unused Parking Spaces**	**Peak Period Parking Lot Occupancy (%)**	**Percent of Peak Parking Demand (%)**	**Peak Period Parking Demand (Per Bedroom)**
4:00-5:00 AM	**106**	135	44	98	0.44
5:00-6:00 AM	**107**	134	44	99	0.45
6:00-7:00 AM	**89**	152	37	82	0.37
7:00-8:00 AM	**78**	163	32	72	0.33
8:00-9:00 AM	**63**	178	26	58	0.26
	-	-	-	-	-
7:00-8:00 PM	**91**	150	38	84	0.38
8:00-9:00 PM	**108**	133	45	100	0.45
9:00-10:00 PM	**101**	140	42	94	0.42
10:00-11:00 PM	**105**	136	44	97	0.44
11:00-12:00 PM	**106**	135	44	98	0.44

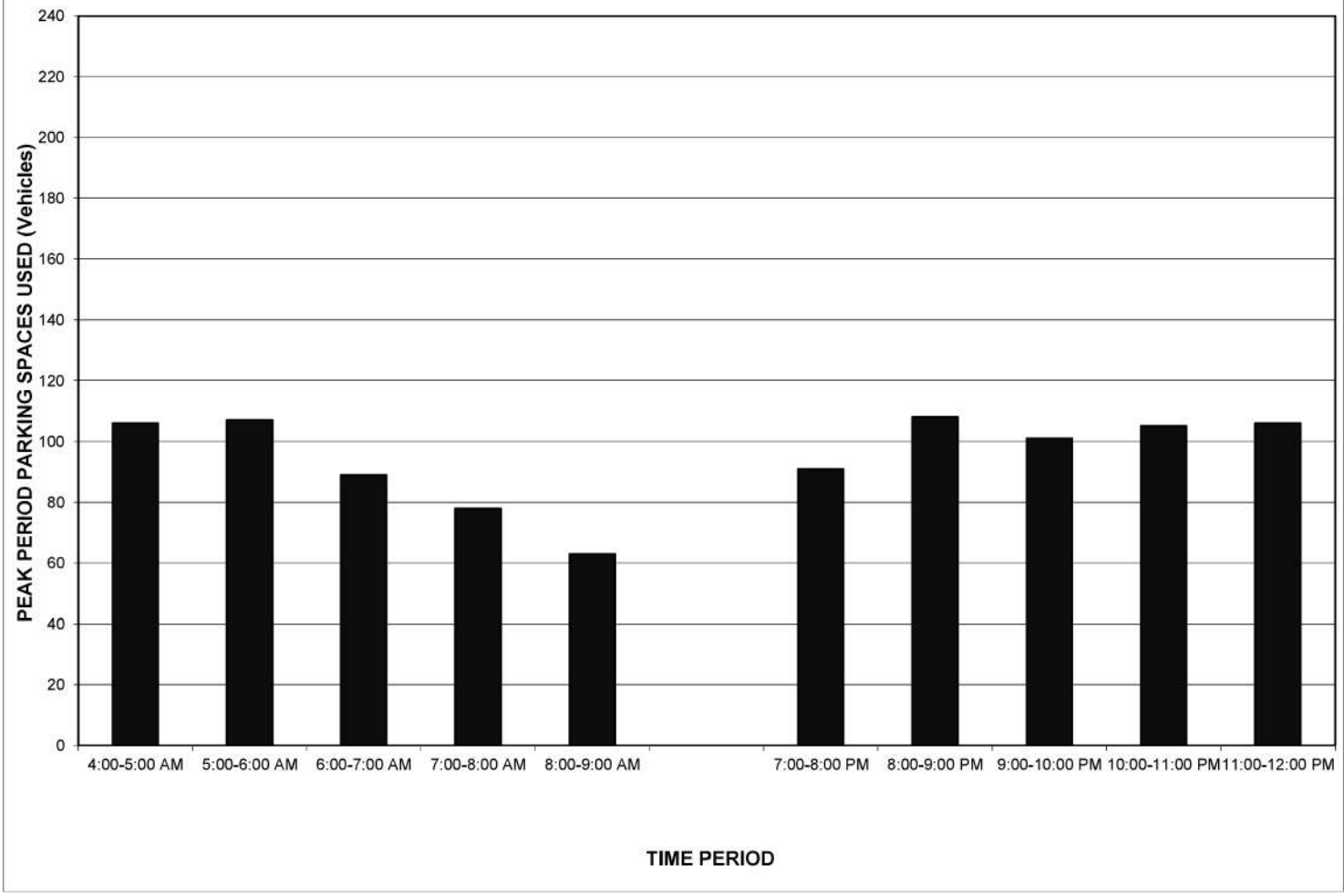
THE PINES APARTMENTS			
Address: 310 W. NEW HAMPSHIRE AVENUE, DELAND, FLORIDA 32720			
Date: 11-13-23		Total Parking Spaces Available = 241	
Time Period	Peak Period Parking Spaces Used	Time Period	Peak Period Parking Spaces Used
4:00:00 AM	105	7:00:00 PM	85
4:05:00 AM	105	7:05:00 PM	91
4:10:00 AM	105	7:10:00 PM	83
4:15:00 AM	105	7:15:00 PM	84
4:20:00 AM	104	7:20:00 PM	85
4:25:00 AM	105	7:25:00 PM	84
4:30:00 AM	105	7:30:00 PM	83
4:35:00 AM	105	7:35:00 PM	83
4:40:00 AM	105	7:40:00 PM	86
4:45:00 AM	105	7:45:00 PM	87
4:50:00 AM	106	7:50:00 PM	88
4:55:00 AM	106	7:55:00 PM	91
5:00:00 AM	107	8:00:00 PM	93
5:05:00 AM	102	8:05:00 PM	94
5:10:00 AM	100	8:10:00 PM	99
5:15:00 AM	97	8:15:00 PM	102
5:20:00 AM	96	8:20:00 PM	103
5:25:00 AM	97	8:25:00 PM	101
5:30:00 AM	98	8:30:00 PM	100
5:35:00 AM	97	8:35:00 PM	106
5:40:00 AM	96	8:40:00 PM	108
5:45:00 AM	95	8:45:00 PM	108
5:50:00 AM	91	8:50:00 PM	106
5:55:00 AM	89	8:55:00 PM	101
6:00:00 AM	87	9:00:00 PM	98
6:05:00 AM	89	9:05:00 PM	99
6:10:00 AM	86	9:10:00 PM	95
6:15:00 AM	85	9:15:00 PM	96
6:20:00 AM	86	9:20:00 PM	97
6:25:00 AM	86	9:25:00 PM	94
6:30:00 AM	85	9:30:00 PM	93
6:35:00 AM	85	9:35:00 PM	97
6:40:00 AM	83	9:40:00 PM	99
6:45:00 AM	82	9:45:00 PM	100
6:50:00 AM	81	9:50:00 PM	100
6:55:00 AM	80	9:55:00 PM	101
7:00:00 AM	78	10:00:00 PM	103
7:05:00 AM	78	10:05:00 PM	105
7:10:00 AM	74	10:10:00 PM	103
7:15:00 AM	74	10:15:00 PM	101
7:20:00 AM	69	10:20:00 PM	99
7:25:00 AM	69	10:25:00 PM	98
7:30:00 AM	67	10:30:00 PM	96
7:35:00 AM	67	10:35:00 PM	98
7:40:00 AM	66	10:40:00 PM	99
7:45:00 AM	67	10:45:00 PM	104
7:50:00 AM	66	10:50:00 PM	100
7:55:00 AM	63	10:55:00 PM	100
8:00:00 AM	60	11:00:00 PM	99
8:05:00 AM	62	11:05:00 PM	95
8:10:00 AM	60	11:10:00 PM	103
8:15:00 AM	61	11:15:00 PM	97
8:20:00 AM	63	11:20:00 PM	99
8:25:00 AM	58	11:25:00 PM	103
8:30:00 AM	57	11:30:00 PM	102
8:35:00 AM	53	11:35:00 PM	100
8:40:00 AM	54	11:40:00 PM	101
8:45:00 AM	54	11:45:00 PM	103
8:50:00 AM	56	11:50:00 PM	104
8:55:00 AM	55	11:55:00 PM	106
9:00:00 AM	53	12:00:00 AM	106

EXHIBIT D


PEAK PERIOD PARKING DEMAND RATIO VS BEDROOMS
THE PINES - 310 W. NEW HAMPSHIRE AVENUE, DELAND, FLORIDA 32720
DATA TAKEN: MONDAY, NOVEMBER 13, 2023
PEAK PERIOD PARKING DEMAND (Per Bedroom)
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
4:00-5:00 AM
5:00-6:00 AM
6:00-7:00 AM
7:00-8:00 AM
8:00-9:00 AM
7:00-8:00 PM
8:00-9:00 PM
9:00-10:00 PM
10:00-11:00 PM
11:00-12:00 PM
TIME PERIOD


PERCENT OF PEAK PARKING DEMAND
THE PINES - 310 W. NEW HAMPSHIRE AVENUE, DELAND, FLORIDA 32720
DATA TAKEN: MONDAY, NOVEMBER 13, 2023
PERCENT OF PEAK PARKING DEMAND
100
90
80
70
60
50
40
30
20
10
0
4:00-5:00 AM
5:00-6:00 AM
6:00-7:00 AM
7:00-8:00 AM
8:00-9:00 AM
7:00-8:00 PM
8:00-9:00 PM
9:00-10:00 PM
10:00-11:00 PM
11:00-12:00 PM
TIME PERIOD

PEAK PERIOD PARKING SPACES USED
THE PINES - 310 W. NEW HAMPSHIRE AVENUE, DELAND, FLORIDA 32720
DATA TAKEN: MONDAY, NOVEMBER 13, 2023



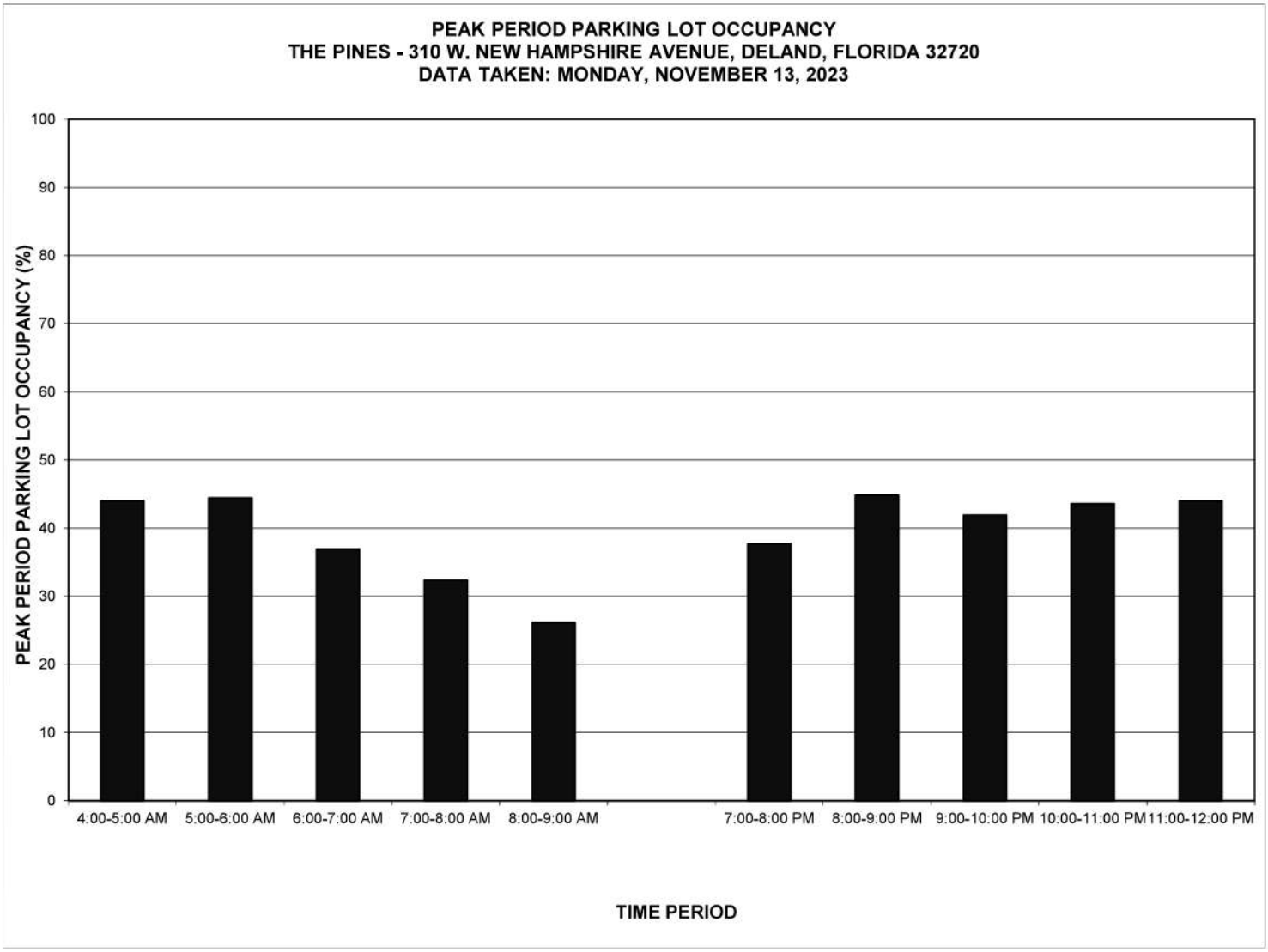

PEAK PERIOD PARKING LOT OCCUPANCY
THE PINES - 310 W. NEW HAMPSHIRE AVENUE, DELAND, FLORIDA 32720
DATA TAKEN: MONDAY, NOVEMBER 13, 2023
PEAK PERIOD PARKING LOT OCCUPANCY (%)
100
90
80
70
60
50
40
30
20
10
0
4:00-5:00 AM
5:00-6:00 AM
6:00-7:00 AM
7:00-8:00 AM
8:00-9:00 AM
7:00-8:00 PM
8:00-9:00 PM
9:00-10:00 PM
10:00-11:00 PM
11:00-12:00 PM
TIME PERIOD

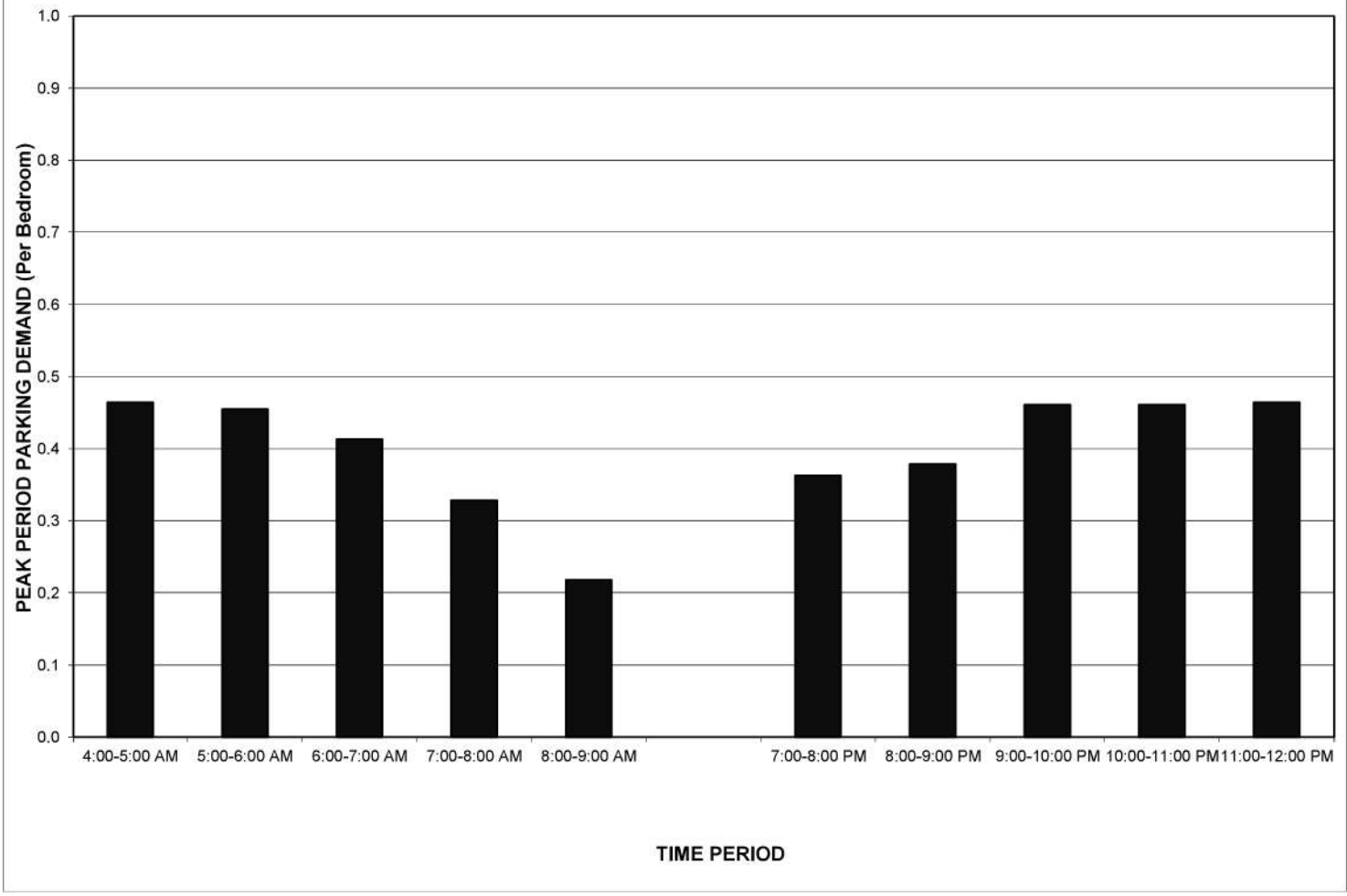
EXHIBIT E

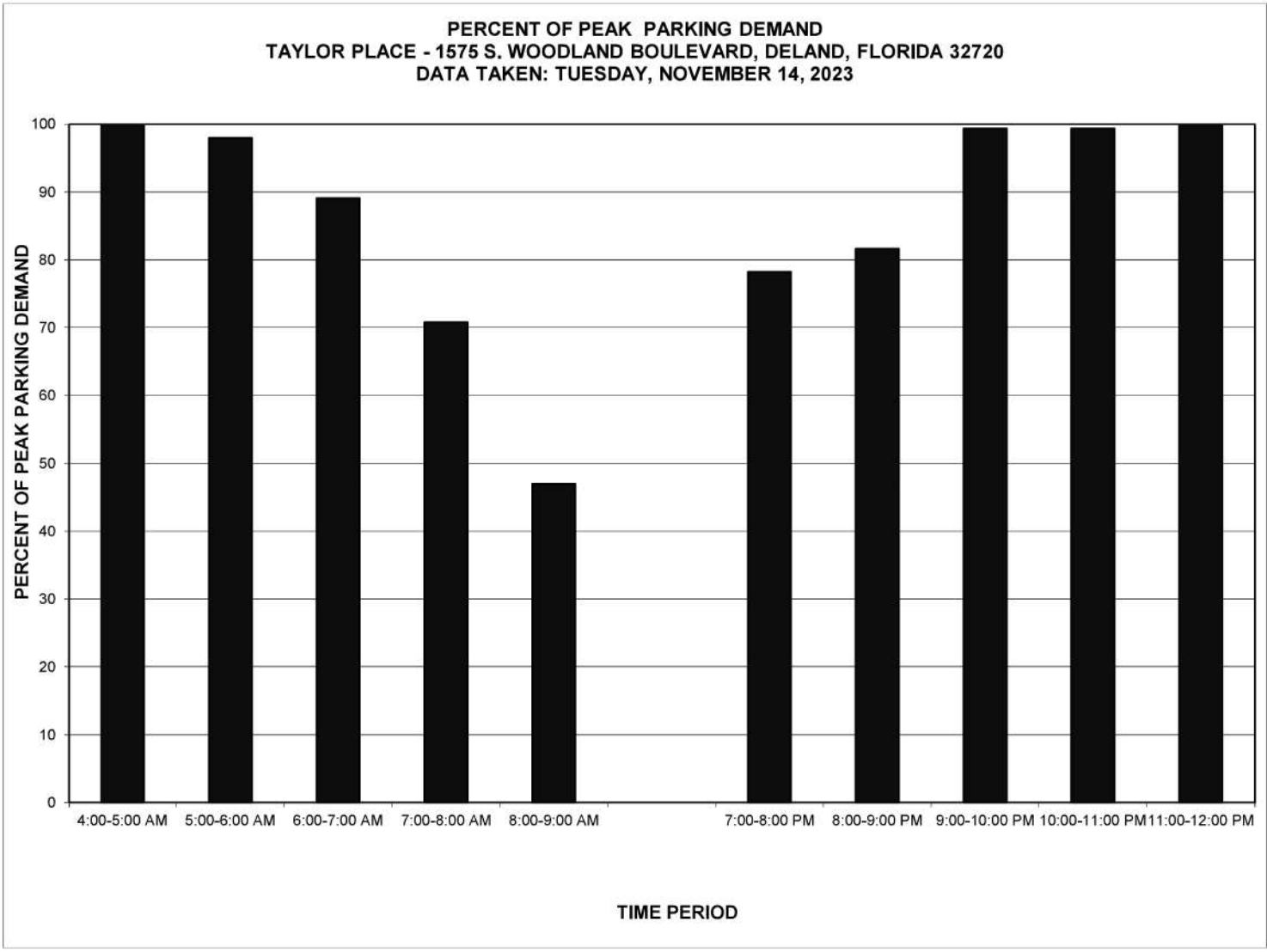
PEAK PERIOD PARKING DEMAND SUMMARY TAYLOR PLACE - 1575 S. WOODLAND BOULEVARD, DELAND, FLORIDA 32720 TOTAL DWELLING UNITS = 106, NUMBER OF BEDROOMS = 317, AVERAGE SIZE OF DWELLING UNITS = 2.99 BEDROOMS TOTAL PARKING SPACES AVAILABLE = 263, PARKING SUPPLY = 0.83 PER BEDROOM					
Observations Taken on Tuesday, November 14, 2023					
Time Period	**Peak Period Parking Spaces Used**	**Peak Period Unused Parking Spaces**	**Peak Period Parking Lot Occupancy (%)**	**Percent of Peak Parking Demand (%)**	**Peak Period Parking Demand (Per Bedroom)**
4:00-5:00 AM	**147**	116	56	100	0.46
5:00-6:00 AM	**144**	119	55	98	0.45
6:00-7:00 AM	**131**	132	50	89	0.41
7:00-8:00 AM	**104**	159	40	71	0.33
8:00-9:00 AM	**69**	194	26	47	0.22
	-	-	-	-	-
7:00-8:00 PM	**115**	148	44	78	0.36
8:00-9:00 PM	**120**	143	46	82	0.38
9:00-10:00 PM	**146**	117	56	99	0.46
10:00-11:00 PM	**146**	117	56	99	0.46
11:00-12:00 PM	**147**	116	56	100	0.46

TAYLOR PLACE APARTMENTS			
Address: 1575 S. WOODLAND BOULEVARD, DELAND, FLORIDA 32720			
Date: 11-14-23		Total Parking Spaces Available = 263	
Time Period	Peak Period Parking Spaces Used	Time Period	Peak Period Parking Spaces Used
4:00:00 AM	147	7:00:00 PM	85
4:05:00 AM	147	7:05:00 PM	83
4:10:00 AM	147	7:10:00 PM	87
4:15:00 AM	147	7:15:00 PM	92
4:20:00 AM	147	7:20:00 PM	96
4:25:00 AM	147	7:25:00 PM	97
4:30:00 AM	145	7:30:00 PM	98
4:35:00 AM	145	7:35:00 PM	99
4:40:00 AM	144	7:40:00 PM	101
4:45:00 AM	144	7:45:00 PM	105
4:50:00 AM	144	7:50:00 PM	109
4:55:00 AM	145	7:55:00 PM	115
5:00:00 AM	144	8:00:00 PM	108
5:05:00 AM	143	8:05:00 PM	110
5:10:00 AM	143	8:10:00 PM	113
5:15:00 AM	143	8:15:00 PM	113
5:20:00 AM	142	8:20:00 PM	116
5:25:00 AM	141	8:25:00 PM	120
5:30:00 AM	140	8:30:00 PM	118
5:35:00 AM	138	8:35:00 PM	118
5:40:00 AM	137	8:40:00 PM	118
5:45:00 AM	136	8:45:00 PM	120
5:50:00 AM	134	8:50:00 PM	117
5:55:00 AM	133	8:55:00 PM	117
6:00:00 AM	131	9:00:00 PM	115
6:05:00 AM	128	9:05:00 PM	119
6:10:00 AM	128	9:10:00 PM	120
6:15:00 AM	126	9:15:00 PM	123
6:20:00 AM	125	9:20:00 PM	127
6:25:00 AM	124	9:25:00 PM	131
6:30:00 AM	125	9:30:00 PM	133
6:35:00 AM	119	9:35:00 PM	134
6:40:00 AM	115	9:40:00 PM	138
6:45:00 AM	117	9:45:00 PM	137
6:50:00 AM	111	9:50:00 PM	143
6:55:00 AM	106	9:55:00 PM	146
7:00:00 AM	104	10:00:00 PM	145
7:05:00 AM	101	10:05:00 PM	142
7:10:00 AM	98	10:10:00 PM	140
7:15:00 AM	94	10:15:00 PM	144
7:20:00 AM	91	10:20:00 PM	145
7:25:00 AM	89	10:25:00 PM	143
7:30:00 AM	87	10:30:00 PM	144
7:35:00 AM	84	10:35:00 PM	146
7:40:00 AM	78	10:40:00 PM	145
7:45:00 AM	73	10:45:00 PM	145
7:50:00 AM	71	10:50:00 PM	146
7:55:00 AM	70	10:55:00 PM	143
8:00:00 AM	69	11:00:00 PM	145
8:05:00 AM	67	11:05:00 PM	145
8:10:00 AM	65	11:10:00 PM	146
8:15:00 AM	66	11:15:00 PM	147
8:20:00 AM	66	11:20:00 PM	147
8:25:00 AM	66	11:25:00 PM	142
8:30:00 AM	66	11:30:00 PM	143
8:35:00 AM	60	11:35:00 PM	145
8:40:00 AM	57	11:40:00 PM	145
8:45:00 AM	57	11:45:00 PM	146
8:50:00 AM	51	11:50:00 PM	147
8:55:00 AM	49	11:55:00 PM	147
9:00:00 AM	49	12:00:00 AM	147

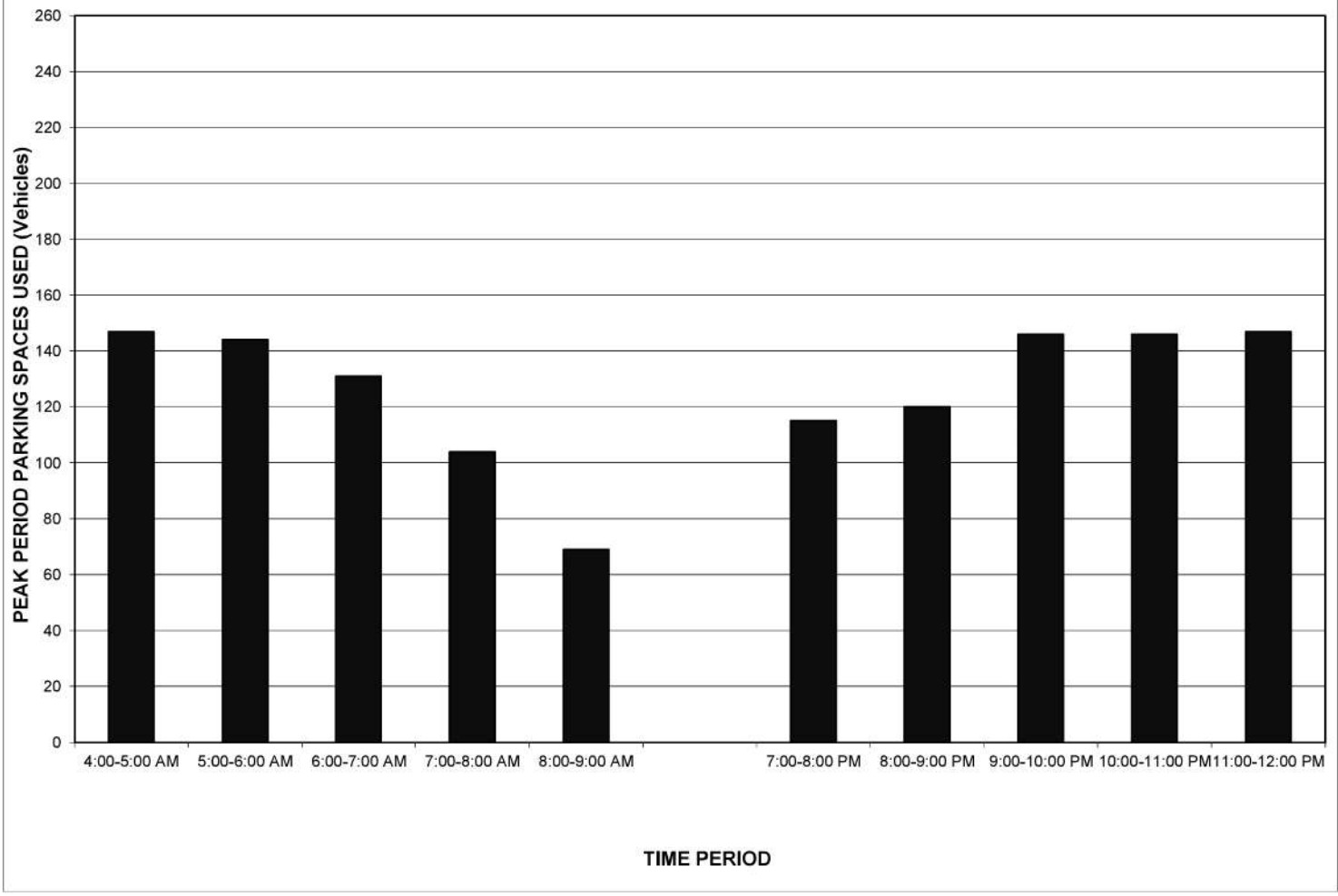
EXHIBIT F

PEAK PERIOD PARKING DEMAND RATIO VS BEDROOMS
TAYLOR PLACE - 1575 S. WOODLAND BOULEVARD, DELAND, FLORIDA 32720
DATA TAKEN: TUESDAY, NOVEMBER 14, 2023




PERCENT OF PEAK PARKING DEMAND
TAYLOR PLACE - 1575 S. WOODLAND BOULEVARD, DELAND, FLORIDA 32720
DATA TAKEN: TUESDAY, NOVEMBER 14, 2023
PERCENT OF PEAK PARKING DEMAND
100
90
80
70
60
50
40
30
20
10
0
4:00-5:00 AM
5:00-6:00 AM
6:00-7:00 AM
7:00-8:00 AM
8:00-9:00 AM
7:00-8:00 PM
8:00-9:00 PM
9:00-10:00 PM
10:00-11:00 PM
11:00-12:00 PM
TIME PERIOD

PEAK PERIOD PARKING SPACES USED
TAYLOR PLACE - 1575 S. WOODLAND BOULEVARD, DELAND, FLORIDA 32720
DATA TAKEN: TUESDAY, NOVEMBER 14, 2023



PEAK PERIOD PARKING LOT OCCUPANCY
TAYLOR PLACE - 1575 S. WOODLAND BOULEVARD, DELAND, FLORIDA 32720
DATA TAKEN: TUESDAY, NOVEMBER 14, 2023

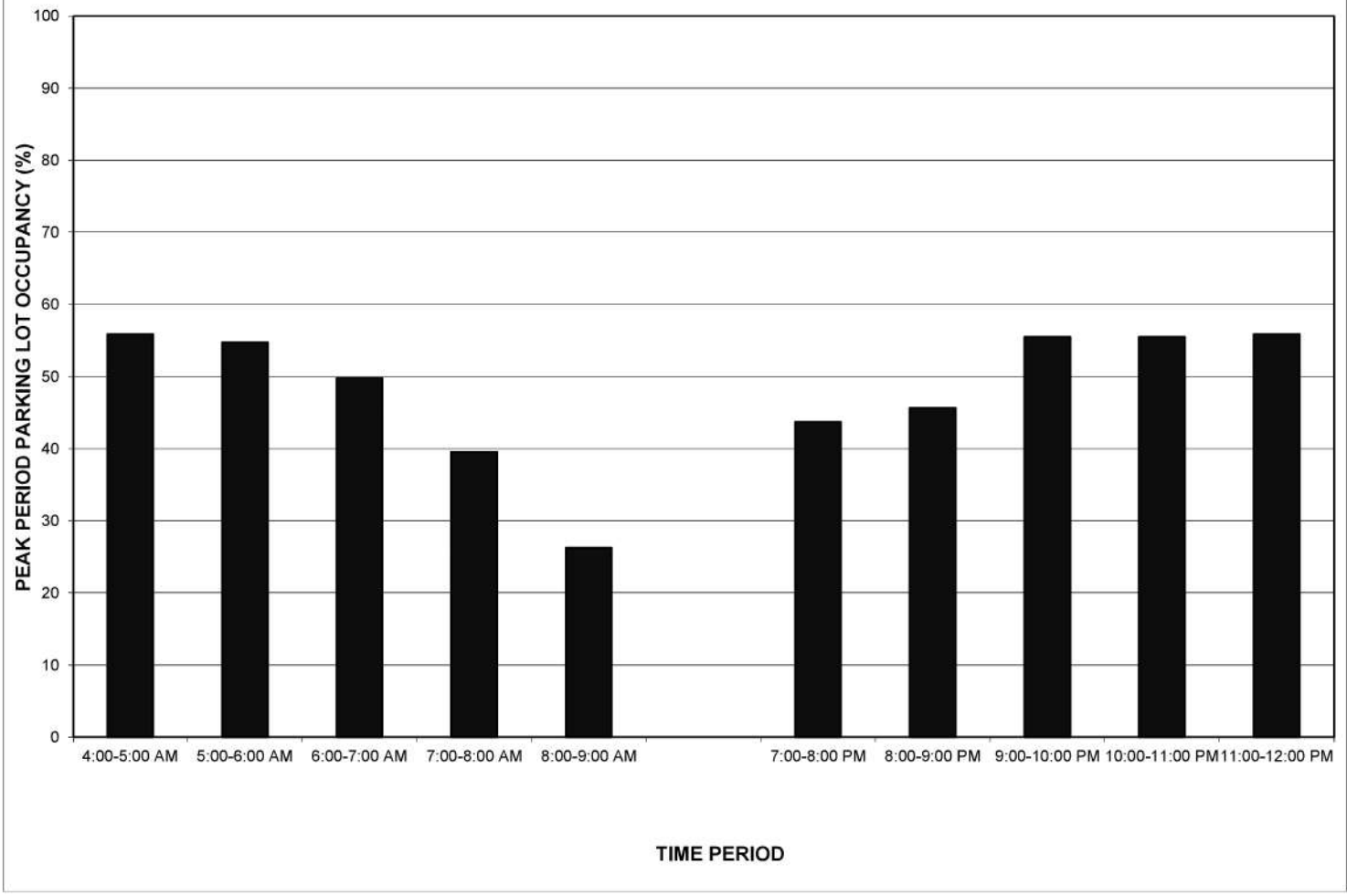


EXHIBIT G

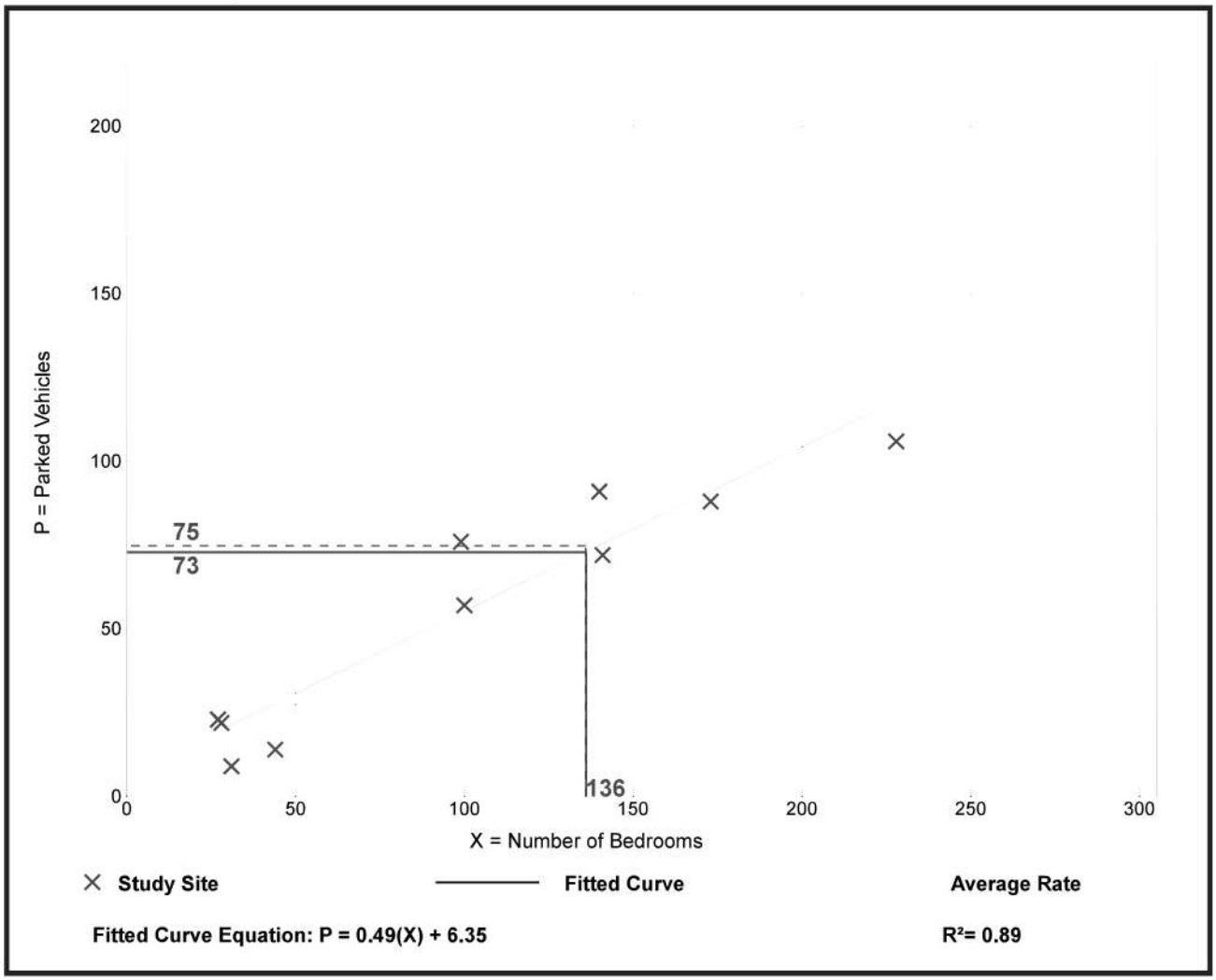
Affordable Housing - Income Limits
(223)

Peak Period Parking Demand vs: **Bedrooms**
On a: **Weekday (Monday - Friday)**
Setting/Location: **General Urban/Suburban**
Number of Studies: 10
Avg. Num. of Bedrooms: 101

Peak Period Parking Demand per Bedroom

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.55	0.29 - 0.85	0.49 / 0.81	***	0.14 (25%)

Data Plot and Equation



Parking Generation Manual, 6th Edition ● Institute of Transportation Engineers

NELSON MULLINS

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December 11, 2024

Via Certified Mail and Email

City of DeLand
c/o Darren J. Elkind, Esq.
City Attorney
Paul, Elkind, Branz & Paul, LLP
142 E. New York Avenue
Deland, FL 32724-5504
delkind@paulandelkind.com

RE: Blue Sky Communities, LLC's development of 225 West New York Avenue, DeLand, Florida

Dear Mr. Elkind:

This firm has the privilege to represent Blue Ian LLC, an affiliate of Blue Sky Communities LLC (either "Blue Sky") in its proposed development of an affordable housing project at 225 W New York Avenue, DeLand, Florida (the "Development"). As you are aware, there is an ongoing issue regarding the number of proposed parking spaces at the Development. As detailed further below, in the absence of an agreement with the City regarding the number of parking spaces for the Development, Blue Sky will have no choice but to pursue litigation over the issue, including, without limitation, asserting claims for violation of the Federal Fair Housing Act.

The Development and Parking

After the Hotel Putnam was demolished in February 2023, Blue Sky began planning the development of the 1.6 acre site into an affordable housing development. The Development will provide housing for low-income families, and for the first time in recent history would allow that group of people to afford housing in the heart of the Downtown Historic District. The Development is currently under contract and has already been approved for affordable housing funding. The Development design provides for 84 residential units with the following distribution of unit sizes:

- 1-bedroom units: 44
- 2-bedroom units: 28
- 3-bedroom units: 12

- Importantly, of the total 84 units, 13 will be reserved as Permanent Supportive Housing and those residents will most likely not own a car.

The applicable City ordinance requires 188 parking spots based on the foregoing size and number of units. However, given the size of the development and the anticipated actual parking needs of future residents, the Development's current plan incorporates 66 on-site car spaces and 56 bicycle parking spaces. This is sufficient to meet the Development's resident's anticipated needs according to a parking study commissioned by Blue Sky.

Moreover, Blue Sky has worked diligently with Volusia County on a creative and mutually beneficial agreement that will provide Blue Sky with plenty of additional car parking spaces at the County surface lots, contiguous to the Development. The Blue Sky site plan includes vehicular and pedestrian connectivity to the additional spaces, which are just a few steps away from the Blue Sky lot.

To date, Blue Sky has submitted requests to the City for parking waivers and reductions. Additionally, Blue Sky has submitted a parking study which supports Blue Sky's request for a reduction in the number of required parking spaces. The parking studies show that the peak ratio of parking spaces being used per bedrooms for two comparable apartment complexes in DeLand was 0.46. Blue Sky's proposal, which calls for 0.46 parking spaces per bedroom falls well within the peak ranges shown in the parking studies and the studies concluded the proposed number of parking spaces for the Development will adequately meet the Development's future parking demands. Nonetheless, the City has denied all of Blue Sky's requests relating to parking. Part of such denials has been a concerted effort to refute the validity of the parking study. We do not believe that such refutations are persuasive.

After a series of meetings with and submissions to City officials, Blue Sky recently proposed the following solution to address the City's ongoing concerns with parking for the Development:

- Blue Sky and Volusia County would enter into Shared Parking Agreement, which would allow residents of the Development to park in the County owned parking lot located at 235 New York Avenue and 136 N. Florida Avenue (across the street from the Development) at any time other than 8am-5pm Monday-Friday.
- Language to the effect of the following would be added to the City Commission's Approval of the parking variance:
    - Four and a half years after the Development is complete Blue Sky shall provide a study showing (number of cars parked in the Development's lot) + (the number of residents of the Development's cars parked in the County lot). From that sum, Blue Sky would subtract the number of on-site spaces and the difference would be the number of "Deficit Units".
    - Blue Sky will put up a bond or LOC with a ten-year term to cover the Deficit under the following terms:

        - The bond or LOC is in favor of the City in the amount of $10,000 per Deficit Unit. The bond or LOC could then be exercised in the event Volusia County terminates the Shared Parking Agreement.
    - In the event Volusia County does in fact terminate the Shared Parking Agreement, then Blue Sky must give the City prompt notice of the termination, Blue Sky must seek alternate spaces to cover the Deficit, and Blue Sky acknowledges that the City will cash in the Bond/LOC described above.
    - Blue Sky will contribute $25,000 to a City-sponsored downtown parking study, if the City so desires.

This proposal creates a framework that should address the City's concerns regarding the number of parking spaces available on site at the Development and would avoid the unreasonable added expenses for the Development that are associated with increasing the number of onsite parking spaces from the currently planned 66 spaces to the 92 spaces (that has been discussed by City officials). Nonetheless, the City has rejected the proposal, citing arbitrary and baseless positions regarding the need for more parking spaces at the Development despite the conclusions drawn from the parking studies. There are other potential frameworks that could be agreed to in a reasonable manner, if the City is willing to make an earnest effort.

Based on comments by City officials, the City's proposed courses of action for Blue Sky are to reduce the number of residential units in the Development or increase the number of parking spaces so there would be enough parking spaces per unit to satisfy the City's requirements. Neither option is practicable. First, reducing the number of units is not allowed. Blue Sky applied for and was awarded approximately $20 million from the Florida Housing Finance Corporation to build 84 units. Additionally, such a reduction would limit the number of low-income families who can access affordable housing in the Downtown Historic District. Increasing the number of on-site parking spaces, from 66 spaces to 92, which would require increasing the height of the Development from five stories to six stories, is similarly impracticable as it would increase the construction cost by roughly $1,368,000, plus the costs associated with the redesign of the plans. Not only would the costs associated with increasing the number of on-site parking spaces be detrimental to Blue Sky's development of the Development, but the City of DeLand has already issued a Certificate of Appropriateness for the proposed 5-story building. Therefore, Blue Sky's recent proposal outlined above presents the best option regarding parking for all parties involved.

We understand that the City of DeLand has granted a parking reduction for a market-rate development called DeLand Commons. We also understand that, prior to its demolition, the Hotel Putnam was going to be approved as a 72-unit Market Rate development with only 72 parking spaces.

The Federal Fair Housing Act

In the absence of a reasonable agreement by the City regarding the number of parking spaces for the Development, as requested herein, Blue Sky will have no choice but to bring a

lawsuit against the City for violation of the Federal Fair Housing Act based on the discriminatory effect the City's policy regarding the number of parking spaces for the Development will cause.

Under the Federal Fair Housing Act, liability may be established based on a practice's discriminatory effect, even if the practice was not motivated by a discriminatory intent. 24 CFR § 100.500. "A practice has a discriminatory effect where it actually or predicably results in a disparate impact on a group of persons or creates, increases, reinforces, or perpetuates segregated housing patterns because of race, color, religion, sex, handicap, familial status, or national origin." The Development, which will provide affordable housing to families, will predictably house a larger percentage of racial minority families than the surrounding housing options in the Downtown Historic District. Therefore, the City's refusal to accept the reasonable alternatives proposed by Blue Sky that would make the development feasible will undeniably have a disparate impact on racial minorities and the thirteen residents who would live in the Permanent Supportive Housing units, who will continue to have limited options, if any, to reside in the Downtown Historic District.

If Blue Sky and the City are unable to come to an agreement on parking and Blue Sky is forced to file a lawsuit, it will be Blue Sky's burden to first establish that the City's practice of not providing reasonable parking concessions in the Downtown Historic District for residential developments is predictably resulting in a disparate impact on racial minorities or perpetuates segregated housing patterns because of race. Given Blue Sky's extensive experience developing affordable housing projects, it is well aware that the percentage of residents that are racial minorities are higher in such developments than they are in the surrounding areas. Therefore, the City's actions which are making the Development unfeasible will clearly have a disparate impact on racial minorities.

Once Blue Sky has shown that the City's practices will predictably result in a disparate impact, the burden will shift to the City to show that the practice is necessary to achieve one or more substantial, legitimate, nondiscriminatory interests of the City. The stated purpose and intent of the City's rules regarding the number of parking spaces is as follows:

> Off-street parking facilities shall be provided to lessen congestion in the streets, while ensuring safe and efficient movement of traffic, allowing flexibility in addressing vehicle parking, and ensuring that parking needs associated with new development and redevelopment are met without adversely affecting other nearby land uses, vehicle and non-vehicle movement, and surrounding neighborhoods. **The purpose is to provide sufficient parking to accommodate the majority of traffic generated by the range of uses which might be located at the site over time.**

City of DeLand Code of Ordinances, Section 33-91.03 (emphasis added). The City's practice of establishing parking requirements based on the number of bedrooms rather than the actual parking needs is not necessary to serve the City's stated purpose for its practice. Specifically, parking needs can be better established through studies demonstrating the actual needs for a particular

development rather than applying the same standards to all developments. Therefore, the City is unlikely to be able to meet its burden of showing its practice relating to the number of parking spaces required for developments is necessary to achieve a substantial, legitimate interest.

Even if the City does meet its burden of showing its practices are necessary to achieve a legitimate interest, the burden will then shift to Blue Sky to show that the City's interest could be served by another practice that has a less discriminatory impact. As already explained, the City's interest could be served by evaluating the actual needs of each project, rather than setting forth requirements that do not account for the specific needs of a project. Here, the City could do just that by accepting Blue Sky's proposal which is supported by the parking study and its supplement. Once Blue Sky meets this burden, it will have established the City's liability under the Fair Housing Act.

The foregoing outlines the likely path to establishing the City's liability for its violation of the Federal Fair Housing Act based on the resulting disparate impact caused by the City's process for establishing the number of parking spaces for the Development. Additionally, although there is no evidence to date, certain City officials have made comments in passing that indicate a general concern about affordable housing being built in the Downtown Historic District. Based on these comments, it is entirely possible that discovery in the litigation process could expose an actual discriminatory intent for the City's decision-making process that makes it impracticable for an affordable housing development to be constructed across the street from City Hall and within the Downtown Historic District. Obviously, if such an intent is uncovered, it will serve as a separate basis for the City's liability.

Based on the foregoing, I implore the City to reconsider Blue Sky's most recent parking proposal, as outlined above. If the parties cannot come to an agreement within fourteen (14) days of the date of this letter that permits Blue Sky to proceed with the Development as planned, we will have no choice but to pursue litigation.

Very truly yours,

Todd K. Norman

Todd K. Norman

TKN:JM

4871-9266-1245

PAUL ELKIND BRANZ PAUL
ATTORNEYS AT LAW

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Aeriel A. McCann
Of counsel: Harlan L. Paul

*Board Certified Specialist – City, County & Local Government Law
‡Board Certified Specialist – Civil Trial Law

January 31, 2025

VIA EMAIL ONLY todd.norman@nelsonmullins.com

Todd K. Norman, Esquire
Nelson Mullins Riley & Scarborough LLP
390 North Orange Avenue
Suite 1400
Orlando, FL 32801-4961

Re: Blue Sky Communities, LLC's development of 225 West New York Avenue
DeLand, Florida

Mr. Norman:

With this letter I am responding to your letter dated December 11, 2024, in which you stated essentially that if the City of DeLand does not accede to your client's demands for significantly reduced parking, your client would proceed to file a disparate impact claim under the Fair Housing Act. At the outset, I would point out that your letter completely ignores the fact that the City has repeatedly notified your client since day one that its proposed project was grossly deficient in the amount of parking proposed for the site – admonitions which your client simply chose to ignore. Please see the first attachment to this letter in which the City notified your client of the parking issue before your client had received funding to develop this site. Even prior to that time, and from your client's initial investigatory meetings with City staff, the insufficiency of the parking has been pointed out to your client and its representatives. The parking problem has been reiterated at every meeting and in every review since.

I would also note that your letter references the parking waiver fairly recently granted to another downtown apartment project. That project contains 1.39 parking spaces per apartment, whereas your client's project has just over half that ratio at 0.78 parking spaces per apartment. Your client has been advised that if it were to provide a parking ratio at close to the 1.39 spaces per unit, it would likely be recommended for approval, but your client refuses to do so. Your client wants to provide approximately one third of the required car parking spaces, with a significant reduction being given for bicycle parking spaces. Your client's proposal to provide the bulk of its required parking in spaces which are only available during nights and weekends in the adjacent County owned lot is not a tenable solution to the parking shortage at this site. Your client's offer to put up a grossly insufficient bond to address the parking shortage does nothing to solve the on-site parking problem. Your client simply chose to ignore the parking shortage which, given what you

refer to in your letter as "Blue Sky's extensive experience developing affordable housing projects," should have been an issue it addressed before proceeding to this point.

Turning to your comments on the disparate impact of requiring your client to provide the residents of the proposed project with sufficient parking, the facts pretty obviously belie any disparate impact on racial minorities. Although not necessarily germane to the disparate impact analysis, I would point out that the 13 units which are reserved for permanent supportive housing units are going to be occupied through an agreement with the Neighborhood Center. The largest and most modern building on the Neighborhood Center's campus, the "Bridge," was constructed by the City and is operated by the Neighborhood Center through a contract with the City. So, the City is intimately familiar with the needs of its residents and in particular the people who will likely occupy those 13 units. Although not all of the residents in these 13 units will come from or through the Bridge, the demographic makeup of the folks that have historically resided at the Bridge is an excellent indicator of the racial makeup of the folks that will live in the 13 permanent supportive housing units in your client's project. 66% of the people that stayed at the Bridge in 2024 identify as white. Moreover, while I have not collected any empirical data for the demographic make-up of the residential population within the vicinity of your client's project, everyone in this community knows that the historic neighborhood to the south of your client's project has a large African American population. The data that we have looked at does not appear to support your hypothesis that providing a reasonable amount of parking for the residents of your client's project will have a disparate impact on the ability of racial minorities to live in this area.

The City's refusal to allow construction of an apartment building without anywhere near the amount of parking required for the building's residents is just good planning which protects the future residents. As the Supreme Court has made clear "[z]oning officials, moreover, must often make decisions based on a mix of factors, both objective (such as cost and traffic patterns) and, at least to some extent, subjective (such as preserving historic architecture). These factors contribute to a community's quality of life and are legitimate concerns." *Texas Dept. of Hous. and Community Affairs v. Inclusive Communities Project, Inc.*, 576 U.S. 519, 542 (2015). The City's decision to take action to ensure a reasonable quality of life for ALL of its residents, to include having a place to park when they come home, is absolutely consistent with the law.

This is the City's position on the matter, as was made clear at the last hearing on this application. However, should you have any additional information or questions you wish to discuss, you are welcome to contact me directly at any time.

Very truly yours,



Darren J. Elkind, Esquire

DJE/cal
Enclosure
#12339

FLORIDA HOUSING FINANCE CORPORATION
LOCAL GOVERNMENT VERIFICATION THAT DEVELOPMENT IS CONSISTENT WITH ZONING AND LAND USE REGULATIONS

Name of Development: New York Avenue Apartments

Development Location: 225 W New York Ave, DeLand

(At a minimum, provide the address number, street name and city, and/or provide the street name, closest designated intersection and either the city (if located within a city) or county (if located in the unincorporated area of the county). The location of all Scattered Sites, if applicable, must also be included.

Number of Units in the Development: 84* (see below)

This number must be equal to or greater than the number of units stated by the Applicant in Exhibit A of the RFA.

The undersigned service provider confirms that, as of the date that this form was signed, the above referenced Development's proposed number of units, density, and intended use are consistent with current land use regulations and zoning designation, or was approved pursuant to sections 125.01055(6) and 166.04151(6), Florida Statutes, or, if the Development consists of rehabilitation, the intended use is allowed as a legally non-conforming use.

CERTIFICATION

I certify that the City/County of DeLand (Name of City/County) has vested in me the authority to verify consistency with local land use regulations and zoning designation or, if the Development consists of rehabilitation, the intended use is allowed as a "legally non-conforming use" and I further certify that the foregoing information is true and correct. In addition, if the proposed Development site is in the Florida Keys Area as defined in Rule Chapter 67-48, F.A.C., I further certify that the Applicant has obtained the necessary Rate of Growth Ordinance (ROGO) allocations from the Local Government.

Carol Kuhn
Signature

Carol Kuhn, AICP
Print or Type Name

Planning Director
Print or Type Title

May 3, 2023
Date Signed

120 South Florida Avenue
Address (street address, city, state)

DeLand, FL 32720
Address (street address, city, state)

(386) 626-7025
Telephone Number (including area code)

*In order to receive approval to construct up to 84 units on this site, discretionary approvals would be required from the City Commission for parking reductions. There may be other discretionary approvals required for other elements of the project due to the limited size of the site.

The site is within a designated historic district and must meet all applicable design requirements and receive a certificate of appropriateness from the City's Historic Preservation Board.

This certification must be signed by the applicable City's or County's Director of Planning and Zoning, appointed official (staff) responsible for determination of issues related to comprehensive planning and zoning, City Manager, or County Manager/Administrator/Coordinator. Signatures from elected local government officials are not acceptable, nor are other signatories. If there are alterations made to this form that change the meaning of the form, the form will not be accepted.

FLORIDA HOUSING FINANCE CORPORATION
LOCAL GOVERNMENT VERIFICATION THAT DEVELOPMENT IS CONSISTENT WITH ZONING AND LAND USE REGULATIONS

Name of Development: New York Avenue Apartments

Development Location: 225 W New York Ave, DeLand

(At a minimum, provide the address number, street name and city, and/or provide the street name, closest designated intersection and either the city (if located within a city) or county (if located in the unincorporated area of the county). The location of all Scattered Sites, if applicable, must also be included.

Number of Units in the Development: 84* (See below)

This number must be equal to or greater than the number of units stated by the Applicant in Exhibit A of the RFA.

The undersigned service provider confirms that, as of the date that this form was signed, the above referenced Development's proposed number of units, density, and intended use are consistent with current land use regulations and zoning designation, or was approved pursuant to sections 125.01055(6) and 166.04151(6), Florida Statutes, or, if the Development consists of rehabilitation, the intended use is allowed as a legally non-conforming use.

CERTIFICATION

I certify* that the City/County of DeLand (Name of City/County) has vested in me the authority to verify consistency with local land use regulations and zoning designation or, if the Development consists of rehabilitation, the intended use is allowed as a "legally non-conforming use" and I further certify that the foregoing information is true and correct. In addition, if the proposed Development site is in the Florida Keys Area as defined in Rule Chapter 67-48, F.A.C., I further certify that the Applicant has obtained the necessary Rate of Growth Ordinance (ROGO) allocations from the Local Government.

Carol Kuhn

Signature

Carol Kuhn, AICP

Print or Type Name

Planning Director

Print or Type Title

May 3, 2023

Date Signed

120 South Florida Avenue

Address (street address, city, state)

DeLand, FL 32720

Address (street address, city, state)

(386) 626-7025

Telephone Number (including area code)

*In order to receive approval to construct up to 84 units on this site, discretionary approvals would be required from the City Commission for parking reductions. There may be other discretionary approvals required for other elements of the project due to the limited size of the site.

The site is within a designated historic district and must meet all applicable design requirements and receive a certificate of appropriateness from the City's Historic Preservation Board.

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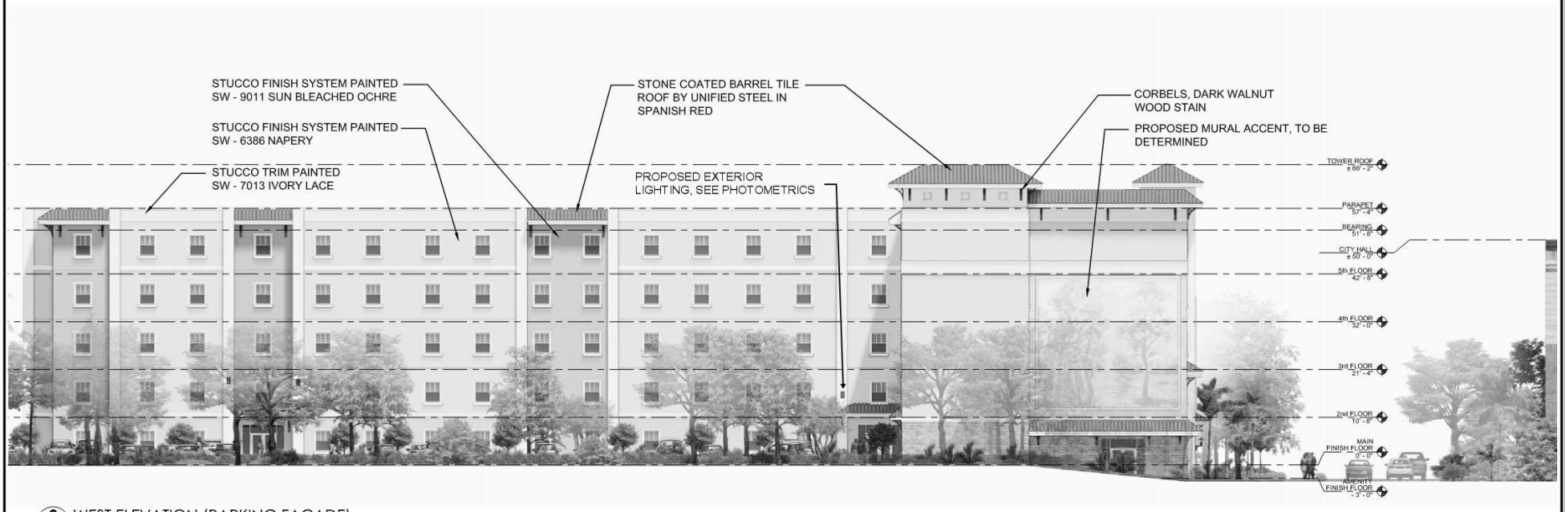
(Form Rev. 07-2022)



2 E-01 WEST ELEVATION (PARKING FACADE)
SCALE: 3/32" = 1'-0"



1 E-01 SOUTH ELEVATION (STREET FACADE)
SCALE: 3/32" = 1'-0"

POWELL STUDIO
ARCHITECTURE
ARCHITECTURE | INTERIOR DESIGN
713 W. MCHENRY STREET • CLERMONT, FLORIDA 34711
PH: (352) 874-2340 • FAX: (877) 680-7180
www.powellstudiocfl.com
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CONSULTANT:

OWNER / PROJECT:

NEW YORK AVE. APARTMENTS

AN AFFORDABLE HOUSING COMMUNITY
DELAND, FLORIDA

PROFESSIONAL SEAL:

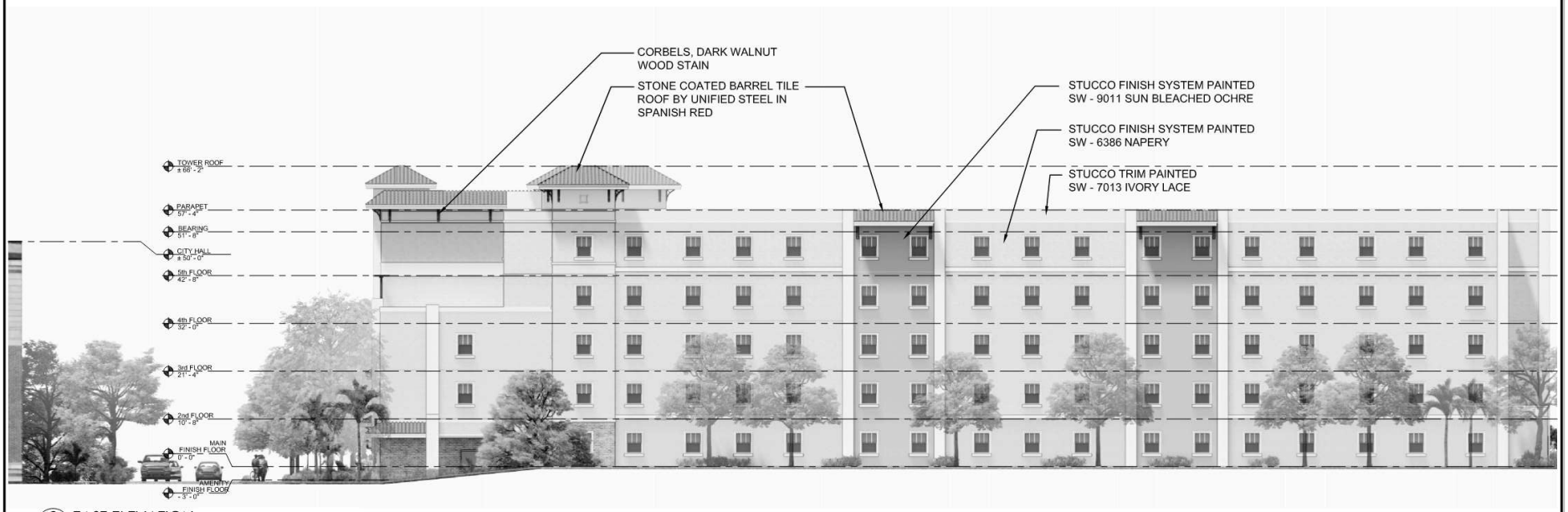
MARK	DATE	DESCRIPTION

ISSUE DATE: AUGUST 23, 2024

EXTERIOR ELEVATION

PROJECT NO.	PSA 2024-01.00
DRAWN BY	AP
CHECKED BY	JP

E-01



2 E-02 EAST ELEVATION
SCALE: 3/32" = 1'-0"



1 E-02 NORTH ELEVATION (REAR FACADE)
SCALE: 3/32" = 1'-0"

POWELL STUDIO
ARCHITECTURE
ARCHITECTURE | INTERIOR DESIGN
713 W. MCINTOSH STREET • CLERMONT, FLORIDA 34711
PH: (352) 874-2340 • FAX: (877) 685-7180
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CONSULTANT:

OWNER / PROJECT:

NEW YORK AVE. APARTMENTS

AN AFFORDABLE HOUSING COMMUNITY
DELAND, FLORIDA

PROFESSIONAL SEAL:

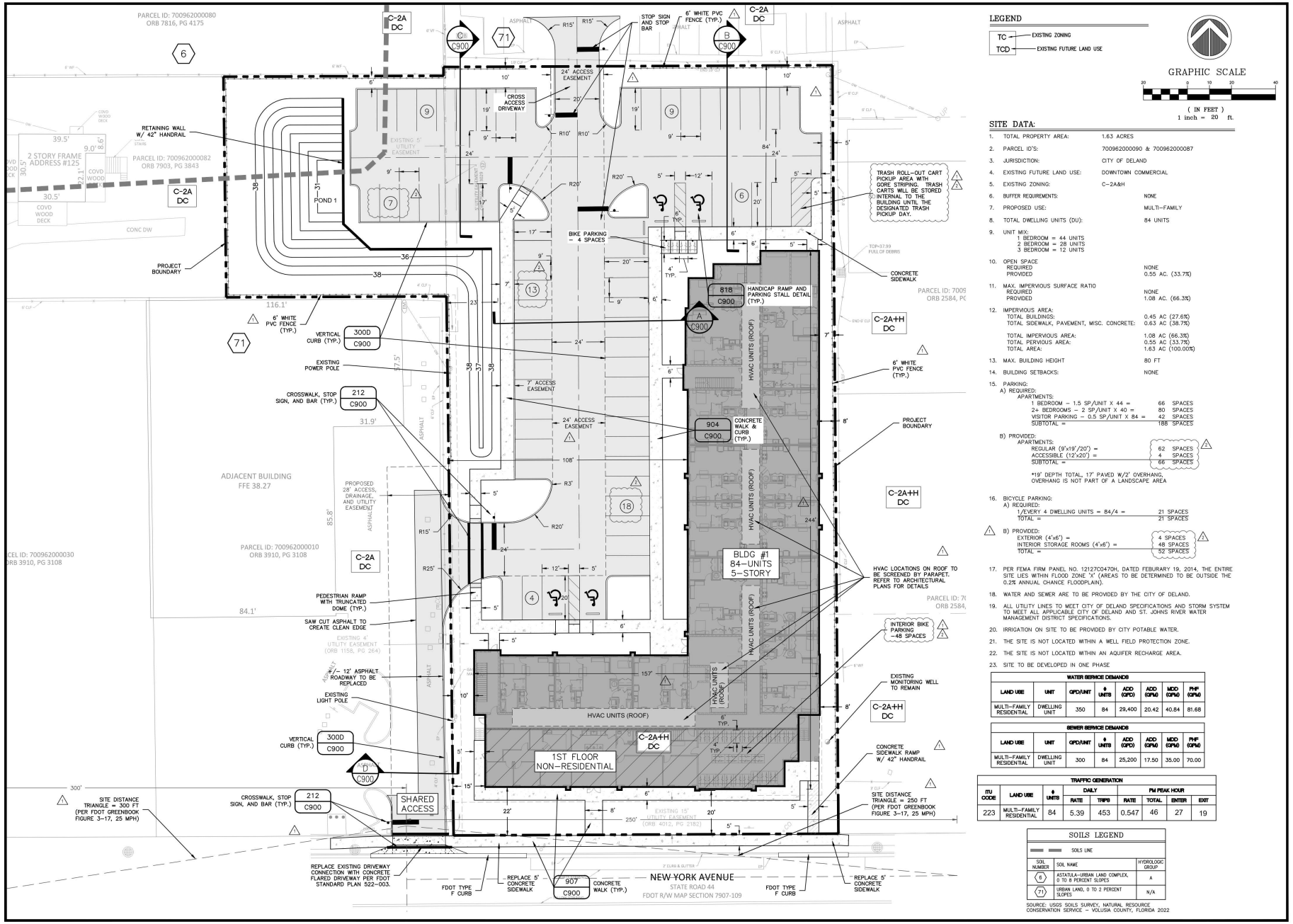
MARK	DATE	DESCRIPTION

ISSUE DATE: AUGUST 23, 2024

EXTERIOR ELEVATION

PROJECT NO.	PSA 2024-01.00
DRAWN BY	AP
CHECKED BY	JP

E-02



LEGEND

TC — EXISTING ZONING

TCD — EXISTING FUTURE LAND USE

GRAPHIC SCALE

30 0 10 20 40

(IN FEET)
1 inch = 20 ft.

SITE DATA:

1.	TOTAL PROPERTY AREA:	1.63 ACRES
2.	PARCEL ID'S:	700962000090 & 700962000087
3.	JURISDICTION:	CITY OF DELAND
4.	EXISTING FUTURE LAND USE:	DOWNTOWN COMMERCIAL
5.	EXISTING ZONING:	C-2A&H
6.	BUFFER REQUIREMENTS:	NONE
7.	PROPOSED USE:	MULTI-FAMILY
8.	TOTAL DWELLING UNITS (DU):	84 UNITS
9.	UNIT MIX: 1 BEDROOM = 44 UNITS; 2 BEDROOM = 28 UNITS; 3 BEDROOM = 12 UNITS	
10.	OPEN SPACE REQUIRED:	NONE
	PROVIDED:	0.55 AC. (33.7%)
11.	MAX. IMPERVIOUS SURFACE RATIO REQUIRED:	NONE
	PROVIDED:	1.08 AC. (66.3%)
12.	IMPERVIOUS AREA: TOTAL BUILDINGS:	0.45 AC (27.6%)
	TOTAL SIDEWALK, PAVEMENT, MISC. CONCRETE:	0.63 AC (38.7%)
	TOTAL IMPERVIOUS AREA:	1.08 AC (66.3%)
	TOTAL PERVIOUS AREA:	0.55 AC (33.7%)
	TOTAL AREA:	1.63 AC (100.00%)
13.	MAX. BUILDING HEIGHT	80 FT
14.	BUILDING SETBACKS:	NONE

15. PARKING:

A) REQUIRED:

APARTMENTS:

1 BEDROOM - 1.5 SP/UNIT X 44 =	66 SPACES
2+ BEDROOMS - 2 SP/UNIT X 40 =	80 SPACES
VISITOR PARKING - 0.5 SP/UNIT X 84 =	42 SPACES
SUBTOTAL =	188 SPACES

B) PROVIDED:

APARTMENTS:

REGULAR (9'x19'/20') =	62 SPACES
ACCESSIBLE (12'x20') =	4 SPACES
SUBTOTAL =	66 SPACES

*19' DEPTH TOTAL, 17' PAVED W/2' OVERHANG, OVERHANG IS NOT PART OF A LANDSCAPE AREA

16. BICYCLE PARKING:

A) REQUIRED:

1/EVERY 4 DWELLING UNITS = 84/4 =	21 SPACES
TOTAL =	21 SPACES

B) PROVIDED:

EXTERIOR (4'x6') =	4 SPACES
INTERIOR STORAGE ROOMS (4'x6') =	48 SPACES
TOTAL =	52 SPACES

17. PER FEMA FIRM PANEL NO. 12127C0470H, DATED FEBURARY 19, 2014, THE ENTIRE SITE LIES WITHIN FLOOD ZONE 'X' (AREAS TO BE DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN).

18. WATER AND SEWER ARE TO BE PROVIDED BY THE CITY OF DELAND.

19. ALL UTILITY LINES TO MEET CITY OF DELAND SPECIFICATIONS AND STORM SYSTEM TO MEET ALL APPLICABLE CITY OF DELAND AND ST. JOHNS RIVER WATER MANAGEMENT DISTRICT SPECIFICATIONS.

20. IRRIGATION ON SITE TO BE PROVIDED BY CITY POTABLE WATER.

21. THE SITE IS NOT LOCATED WITHIN A WELL FIELD PROTECTION ZONE.

22. THE SITE IS NOT LOCATED WITHIN AN AQUIFER RECHARGE AREA.

23. SITE TO BE DEVELOPED IN ONE PHASE

WATER SERVICE DEMANDS

LAND USE	UNIT	GPD/UNIT	# UNITS	ADD (GPD)	ADD (GPM)	MDD (GPM)	PHF (GPM)
MULTI-FAMILY RESIDENTIAL	DWELLING UNIT	350	84	29,400	20.42	40.84	81.68

SEWER SERVICE DEMANDS

LAND USE	UNIT	GPD/UNIT	# UNITS	ADD (GPD)	ADD (GPM)	MDD (GPM)	PHF (GPM)
MULTI-FAMILY RESIDENTIAL	DWELLING UNIT	300	84	25,200	17.50	35.00	70.00

TRAFFIC GENERATION

ITU CODE	LAND USE	# UNITS	DAILY RATE	DAILY TRIPS	PM PEAK HOUR RATE	PM PEAK HOUR TOTAL	PM PEAK HOUR ENTER	PM PEAK HOUR EXIT
223	MULTI-FAMILY RESIDENTIAL	84	5.39	453	0.547	46	27	19

SOILS LEGEND

SOILS LINE

SOIL NUMBER	SOIL NAME	HYDROLOGIC GROUP
6	ASTATULA-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	A
71	URBAN LAND, 0 TO 2 PERCENT SLOPES	N/A

SOURCE: USGS SOILS SURVEY, NATURAL RESOURCE CONSERVATION SERVICE - VOLUSIA COUNTY, FLORIDA 2022

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

SITE PLAN
FOR
NEW YORK AVE APARTMENTS
CITY OF DELAND FLORIDA

BLUE IAN, LLC
180 FOUNTAIN PKWY N.
ST. PETERSBURG, FL 33716

ENGINEER IN CHARGE:
DAVID A. STOKES, P.E. #65527
October 1, 2024
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

NO.	DATE	REVISIONS
1	08/22/24	REVISED PER CITY AND FDOT COMMENTS
2	09/30/24	REVISED PER CITY COMMENTS

JOB # 23201
DATE: 6/20/24
SCALE: 1"=20'
DESIGNED BY: TRF
DRAWN BY: TRF
APPROVED BY: DAS

C100

PLANNING DIVISION STAFF REPORT
TO
CITY COMMISSION

HEARING DATE: April 21, 2025

APPLICATION NO.: PW25-036

STAFF PLANNER: Carol Kuhn, AICP, Planning Director

APPLICANT: Blue Sky Communities, LLC

REPRESENTATIVE: Mark Watts, Cobb Cole

REQUEST: Parking Reduction and Allowance for Off-Site Residential Parking for 84 Affordable Housing Units at 225 West New York Avenue

APPLICABLE REGULATIONS:
Article VIII Development Design & Improvement Standards
Sec. 33-91 – Off-Street Parking & Loading

A. SITE FACTORS:

Location:	225 W. New York Avenue
Parcel Size:	1.63 acres
Land Use:	Downtown Commercial
Existing Zoning:	C-2A
Existing Use:	Vacant

	SURROUNDING USE:	SURROUNDING ZONING:
North:	Downtown Commercial	C-2A (Downtown Commercial)
South:	Downtown Commercial	C-2A & H (Downtown Commercial & Historic)
East:	Downtown Commercial	C-2A & H (Downtown Commercial & Historic)
West:	Downtown Commercial	C-2A (Downtown Commercial)

B. BACKGROUND:

The City of DeLand welcomes and encourages affordable housing development projects. The City's planning staff understands that affordable housing is a priority for the City Commission, the citizens of DeLand and the State of Florida. The applicant, Blue Sky Communities, LLC, has submitted a site plan application (SP24-134) for an 84-unit affordable housing development along with an associated request for a parking reduction and allowance for off-site residential parking at 225 West New York Avenue.

At this time, the City does not have regulations in place specifically related to reducing parking requirements for affordable housing projects. The City planning staff must therefore apply the

parking requirements specified in the City's Land Development Regulations. Section 33-91.03(f) specifies the minimum parking requirements for various uses. Staff has reviewed the applicant's revised parking study, which is intended to support the applicant's request for a reduction in parking for an 84-unit affordable housing development.

The applicant, Blue Sky Communities, LLC, has submitted a site plan application (SP24-134) for an 84-unit affordable housing development on a 1.63-acre site located at 225 W. New York Avenue, with a mix of affordable housing units (30-60% Area Median Income (AMI); 60-80% AMI, and 80-120% AMI). The density for 84 dwelling units on this 1.63-acre site would be 51.53 dwelling units per acre. The maximum density within the city is 20 dwelling units per acre. However, in an effort to increase density in the Downtown, the City's Comprehensive Plan provides that "a residential density within the DeLand Downtown boundary shall be calculated based on gross acreage for the entire district and not on an individual property basis. The total number of dwelling units within the Downtown Commercial area shall not exceed a total of 2,777 units. Within the Downtown Commercial land use designation, retail commercial uses shall be encouraged on the ground floors that front on to streets. Offices and residential should be encouraged to locate above the active ground floor."

Since the site layout depends on the parking reduction, the applicant is requesting approval of the parking reduction, as well as approval to use off-site parking for the residents, before the site plan approval process progresses any further. The site plan is currently under review and must go before the Planning Board for a recommendation, then to the City Commission for approval. Included with the parking reduction request is a request to allow off-site parking for residential purposes.

C. ANALYSIS:

During initial discussions with the applicant prior to a pre-application meeting, staff cited numerous concerns regarding the applicant's request for a significant parking reduction. Staff advised the applicant that the size of the site could not accommodate the necessary site improvements associated with an 84-unit apartment complex. However, the applicant moved forward with the proposed project, submitting for, and receiving funding from, the State of Florida and Volusia County for an affordable housing development, with funding based on 84 units. The applicant submitted a concept plan, site plan, and application for a Certificate of Appropriateness, as well as a separate parking reduction request. City Commission denied the initial Parking Reduction Request on October 21, 2024.

During the October Commission deliberation regarding the initial parking reduction request, one of the Commission members mentioned a possible parking ratio of 1.39 to 1.42 as a possible, acceptable ratio to consider, as this was a ratio used by the DeLand Commons multi-family development on Woodland Boulevard (1.42 ratio at DeLand Commons). The proposed parking ratio with the additional parking proposed with this revised, ground-floor parking option is 1.12 spaces per unit. However, the applicant has suggested that 13 of the proposed units be used exclusively for persons transitioning from the Neighborhood Center. The applicant states that these residents would not need parking and has removed the 13 units from the overall parking count, resulting a proposed parking ratio of 1.32 (based on 71 units). The applicant contends that the 13 units proposed for residents transitioning from the Neighborhood Center will not need a vehicle and therefore believes the 94 parking spaces and the 52 bicycle spaces (2 bike parking spaces = 1 vehicle space) are adequate to serve the residents.

Required Parking

For residential uses, Section 33-91.03 of the Development Regulations require 1.5 spaces per 1 bedroom; 2 spaces per 2 & 3 bedroom PLUS 0.5 spaces per unit for guest parking.

Required parking:
44 – 1.5 bedroom – 66 spaces plus 22 guest spaces
28 – 2 bedroom – 56 spaces plus 14 guest spaces
12 – 3 bedroom – 24 spaces plus 6 guest spaces
Total: 188 spaces

The City Commission may approve off-site parking for **non-residential** uses (33-91.06(a)3), with criteria and standards for approval of non-residential off-street parking. However, off-site parking is not permitted for residential uses. The Regulations do not include a process, standards, or criteria for approving a parking reduction for an affordable housing project within the City.

Bicycle Parking Reduction

Section 33-91.03(l)(3) of the land development regulations allowed up to 30% of the number of overall required off-street parking spaces to be reduced with bicycle parking. Using the allowed 30% reduction for bicycle parking, a maximum of 56 bicycle spaces may be used in lieu of vehicle spaces (fractional units of less than 0.5 are rounded down, per the development code 33-91.01(d)). This code section has been revised to allow for a 5% reduction for additional parking spaces. However, the site plan application (SP24-134) was submitted prior to the Land Development Regulation amendment to reduce the parking reduction for bicycle parking.

The applicant is proposing to provide 94 vehicle parking spaces and 52 bicycle spaces, which could reduce the required vehicle parking by 26 spaces (2 bike parking spaces = 1 car parking space), thereby providing 120 total vehicle parking spaces, where 188 are required. This leaves the development deficient by 68 parking spaces. Staff is not supportive of a 68-space reduction, nor does staff support the request to allow off-site parking to accommodate the parking needs of the residents. Staff concerns related to the parking reduction include: a lack of public transportation in the area, no grocery stores within walking distance, and the potential impact to surrounding businesses and employers from residents and guests parking off-site. Further, the applicant has made no provisions for guest parking, nor has the applicant proposed parking for the required ground-floor commercial space.

Affordable Housing Comparison Sites

A parking study dated March 10, 2025 was submitted that cites two other affordable housing options in DeLand, Taylor Place and the Pines. Taylor Place is located along Woodland Boulevard, which is the VoTran Route 31 bus route along Woodland Boulevard. The Pines is located within 1900 feet of Woodland Boulevard (a little over a quarter of a mile from a bus route). The applicant contends that the Pines and Taylor Place are over-parked (i.e. have more parking spaces than necessary for the number of vehicles) based on the parking counts observed during their study, dated August 22, 2024.

Staff has reviewed the parking study, and finds that the two examples cited differ from the proposed New York Avenue Apartments, due to their proximity to a public transportation route. Both Taylor Place and the Pines have available public transportation options that are not available to the proposed New York Avenue Apartments. On February 22, 2025, VoTran introduced a new fixed-route bus service operating each hour from downtown to the SunRail Station. This limited

bus service may slightly improve transit options. VoTran also operates VoRide, an "on-demand" public transit alternative. However, the average wait-time is 45 minutes, which could impact residents' ability to commute to work or school.

The required parking for **The Pines** (100 dwelling units):
1 bedroom units (24 @ 1.5 spaces per unit) = 36 spaces
2 bedroom units (32 @ 2 spaces per unit) = 64 spaces
3 bedroom units (24 @ 2 spaces per unit) = 48 spaces
4 bedroom units (20 @ 2 spaces per unit) = 40 spaces
Visitor (guest parking) spaces = 100 x 0.5 spaces per unit = 50
Total: 238 spaces required
Provided: 241 spaces provided

The required parking for **Taylor Place** (106 dwelling units):
1 bedroom units (4 @ 1.5 spaces per unit) = 6 spaces
2 bedroom units (12 @ 2 spaces per unit) = 24 spaces
3 bedroom units (71 @ 2 spaces per unit) = 142 spaces
4 bedroom units (19 @ 2 spaces per unit) = 38 spaces
Visitor (guest parking) spaces = 106 x 0.5 spaces per unit = 53
Total: 263 spaces required
Provided: 263 spaces provided

Planning staff visited each of these sites on numerous occasions and found that not all of the parking spaces were utilized by residents.

Taylor Place:

March 11, 2025	6:50 am	113 vehicles (Tuesday)
March 11, 2025	1:00 pm	77 vehicles
March 13, 2025	7:00 am	105 vehicles (Thursday)
March 13, 2025	2:50 pm	71 vehicles
March 23, 2025	11:56 am	103 vehicles (Sunday)

The Pines:

March 11, 2025	6:50 am	88 vehicles (Tuesday)
March 11, 2025	12:50 pm	52 vehicles
March 13, 2025	7:00 am	84 vehicles (Thursday)
March 13, 2025	2:50 pm	45 vehicles
March 23, 2025	12:05 pm	78 vehicles (Sunday)

Planning staff contacted the above-referenced apartment complexes on April 2, 2025 and inquired about the current vacancies. Taylor Place had five (5) vacancies and The Pines had zero (0) vacancies.

The applicant also references a recently-completed multi-family residential development project located within Downtown, DeLand Commons, which was granted a parking reduction, with a parking ratio of 1.42 spaces per unit. To support its request for a reduction in off-street parking, DeLand Commons submitted similar comparison studies of other Atlantic Housing projects. The project also took advantage of the LDR's 30% bicycle parking reduction (which has since been reduced to 5%) The now partially occupied (the residential units are occupied but not the

commercial) mixed-use multi-family development has been experiencing resident parking deficiencies associated with the parking reduction. The City has received complaints about parking shortages and parking issues. Potential residents have contacted City staff before leasing, inquiring if additional parking will be provided in the future. In an attempt to address this parking deficiency, the DeLand Commons developer has met with City and County planning staff regarding potential sites for providing additional parking to meet the demand for the DeLand Commons project.

Additional Research – Transportation Analysis Zones (TAZ)

Planning staff collected additional data from the Transportation Analysis Zones (TAZ). The TAZ data is compiled by census block information and includes population numbers as well as information related to automobile ownership, broken down by single-and multi-family residential uses. A traffic analysis zone or transportation analysis zone (TAZ) is the unit of geography most commonly used in conventional transportation planning models. Most often the critical information is the number of automobiles per household, household income, and employment within these zones. This information helps to further understand the number of vehicle trips within the zone.

- **Taylor Place**
  - TAZ 1661
  - 119 multi-family population
  - 6% zero vehicle households
  - 40% one-vehicle households
  - 54% two-vehicle households
- **The Pines**
  - TAZ 1635
  - 255 multi-family population
  - 14% zero vehicle households
  - 16% one-vehicle households
  - 70% two-vehicle households
- **225 W New York Ave**
  - TAZ 1715
  - 109 multi-family population
  - 8% zero vehicle households
  - 39% one-vehicle households
  - 53% two-vehicle households

This data shows that there are very few households without a vehicle and more than half of the households have two vehicles per household. As such, 1.5 vehicles per household would be a rough average for the number of vehicles per household. Applying this data to the project under consideration shows that, even if you excluded the 13 units designated for the Neighborhood Center, there would be at least 107 resident vehicles, not to mention guest vehicles.

Off-Site Parking for Residential Uses

The applicant is requesting that off-site parking for the multi-family residential be allowed. The applicant has requested that the Volusia County parking lot be used to address the residents' needs from 5 pm to 8 am weekdays and 24/7 on weekends. However, the Land Development Regulations do not allow for off-site parking for residential uses, only nonresidential uses. The Land Development Regulations provide criteria for allowing off-site parking for non-residential use, but

does not provide for residential off-site parking. Additionally, this arrangement simply invites conflict for residents who are unable to move their vehicles at 8:00 am on a weekday for any number of reasons (illness, car malfunction, shift work, etc.).

Previous Parking Reduction Request

On October 21, 2024, the City Commission denied a parking reduction request (previous resolution is attached) for 66 on-site parking spaces along with off-site parking in the adjacent Volusia County lot. Since the October meeting, the applicant has revised the site plan to provide 28 additional on-site parking spaces. In order to accommodate the additional 28 spaces, the applicant is proposing to increase the building height by one story to allow for a ground-floor parking garage along with replacing the retention pond with subsurface stormwater management. A revised Parking Study (dated March 10, 2025) was submitted on March 25, 2025, proposes a total of 94 off-street parking spaces. The revised site layout provides 94 parking spaces, rather than the 188 required spaces.

Other Blue Sky Communities – Parking Ratios

Staff researched two other similarly-sized Blue Sky Communities, one in Clermont (Woodwinds) and one in Sarasota (Arbor Village). These two communities had a similar number of units, but had a much larger parking ratio. Staff found another similarly sized Blue Sky community in Clermont (Clermont Ridge Senior Villas), age restricted community (62+) with a larger parking ratio than what is being proposed in DeLand.

Community	Units	Bedrooms	Parking Spaces	Ratio
Woodwinds	96	24 one bed 48 two bed 24 three bed	202	2.10
Clermont Ridge Senior Villas	70	70 one bed	100	1.43
Arbor Village	80	72 one bed 8 two bed	121	1.51

These communities all exceed the proposed 1.12 parking ratio proposed for the 225 W. New York Avenue Apartments.

Sanford Affordable Housing Development

Staff also contacted the City of Sanford regarding their recently approved Somerset Landings affordable housing project. The project was constructed in 2 phases and includes a total of 144 units, with two parking spaces per unit (288 parking spaces).

Proposed Height Increase

The proposed increase in building height would make this proposed building 6-stories (77 feet in height), which could impact the view corridor in the downtown. During the Historic Preservation Board (HPB) Review of the Certificate of Appropriateness (COA), the HPB cited concerns regarding potential impacts to the view corridor with the proposed (then 5 story building) possibly limited the iconic view of the Court House. Any proposed increase in height would need to be reviewed and approved by HPB.

D. STAFF RECOMMENDATION:

As previously stated, the Land Development Regulations do not have a specific mechanism to reduce parking for affordable housing developments. The applicant has submitted a Parking Study intended to support their parking reduction request from 188 spaces to 120 spaces (94 vehicle spaces and 26-vehicle space reduction for bicycles). This leaves the development deficient by 68 parking spaces. Staff is not supportive of a 68-space reduction, nor does staff support the request to allow off-site parking to accommodate the parking needs of the residents. The applicant's proposed parking ratio of 1.12 is not sufficient; the applicant has not addressed the need for ground-floor commercial and any associated parking; and the applicant has not addressed guest parking.

VOLUSIA COUNTY SCHOOLS

Carmen J. Balgobin, Ed.D
Superintendent of Schools

School Board of Volusia County

Ms. Jamie M. Haynes, Chairman
Mrs. Anita Burnette, Vice Chairman
Mr. Ruben Colón
Mr. Carl Persis
Mrs. Jessie Thompson

School Concurrency Determination
Concurrency Letter

August 19, 2024

Mr. Mark A. Watts, Esq
Cobb Cole
231 N Woodland Blvd
DeLand, FL 32720

RE : New York Ave Apartments – City of DeLand
School Concurrency Case # 24-07-15-001-R

Dear Mr. Watts:

District staff reviewed the information regarding the residential project known as New York Ave Apartments associated with 1.63 +/- acres of property. The property is located at or near the intersection of W New York Ave and N Woodland Blvd within DeLand city limits. Information provided in the school concurrency application indicates the development activity will consist of eighty-four (84) multi-family apartment units.

The district uses a county wide Student Generation Rate (SGR) of (0.137) per multi-family dwelling unit to calculate projected students. By applying the SGR to the use types in Table 1 below, the project could generate twelve (12) full time students.

Table 1

UNIT TYPE	SGR	UNIT COUNT	STUDENTS GENERATED
Single Family Dwelling Unit	0.258	0	0
Multi Family Dwelling Unit	0.137	84	12
Mobile/ Manufactured Home Dwelling Unit	0.052	0	0
	Total	**84**	**12**

The Concurrency Analysis (Table 2, next page) adjusts for impacts to the Concurrency Service Areas (CSAs) by accounting for current school year enrollments, existing reservations at the impacted schools, and the projected students generated by the applicant. These factors give an associated utilization or Level of Service (LOS) percentage for each CSA.

The schools impacted by this development are Woodward Avenue Elementary School, Southwestern Middle School, and DeLand High School.

FACILITIES SERVICES
3750 OLSON DRIVE • DAYTONA BEACH, FL 32124
PHONE: (386) 947-8786 • FAX (386) 506-5056

An Equal Opportunity Employer

Concurrency Analysis

Table 2

Schools	Adopted LOS	SY 2023/24 Enrollment	Active Reservations	Existing LOS w/ Res	Students Generated by Request	Result LOS
Woodward Avenue Elementary	115%	477	271	98%	4	98%
Southwestern Middle	115%	704	50	88%	2	88%
West CSA (DeLand High)	120%	2,874	242	113%	4	113%
Other					2	

The adopted LOS standard for elementary and middle school is (115%) of permanent student stations, and (120%) for high school CSAs. This projected increase in students **will not** exceed the adopted LOS at any school level; therefore, the school district does not have an objection to the proposed site plan. Minimum planning considerations should include pedestrian and vehicular access, safety, connectivity, and buffering.

Please note that the School Board has the right to adjust the attendance boundaries to balance the student enrollment populations at these area schools. Therefore, students generated from this project may not attend the current assigned schools.

Should you need additional information, please contact me at (386) 947-8786, ext. 50806.

Sincerely,

Leineriza V. Divina
Specialist, Planning

CC: Carmen J. Balgobin, Ed.D, Superintendent of Schools
Ron Young, Director of Planning & Construction
Robert J. Voges, Ed.S, Planning Coordinator
Kendall Story, CNU-A, Senior Planner, City of DeLand
James F. Roberts, VCSB Planning Services Project File

VOLUSIA COUNTY SCHOOLS

Certificate of School Concurrency

VOLUSIA COUNTY SCHOOL BOARD

Project Information	
Project Name	New York Ave Apartments
VCSB Project #	**24-07-15-001-R**
Jurisdiction Project #	
Parcel ID Numbers	7009-62-00-0090; 7009-62-00-0087
Project Location	W New York Ave and N Woodland Blvd
# of Residential Units	84
Residential Unit Type	Multi-Family Apartment Units
Property Owners	Axia Putnam, LLC
Applicant/Agent Name	Mark A. Watts, Esq – Cobb Cole

This School Concurrency Certificate shall reserve student stations for the above referenced project and shall confirm that said project meets the School Concurrency requirements of the adopted Interlocal Agreement for Public School Facility Planning.

School Concurrency Analysis					
School Levels	Elementary	Middle	High	Other	Total Student Stations Reserved
Students Generated	**4**	**2**	**4**	2	**12**
Comments: This certificate is required to be included with the building permit submittal(s) as proof of school concurrency.					

This concurrency reservation shall expire two (2) years from the date of issuance of this certificate.

Leimeriza V. Divina
Specialist, Planning

August 19, 2024
Issue Date

Created: 9/2007
Rev: 1/2018
Owner: Facilities Services

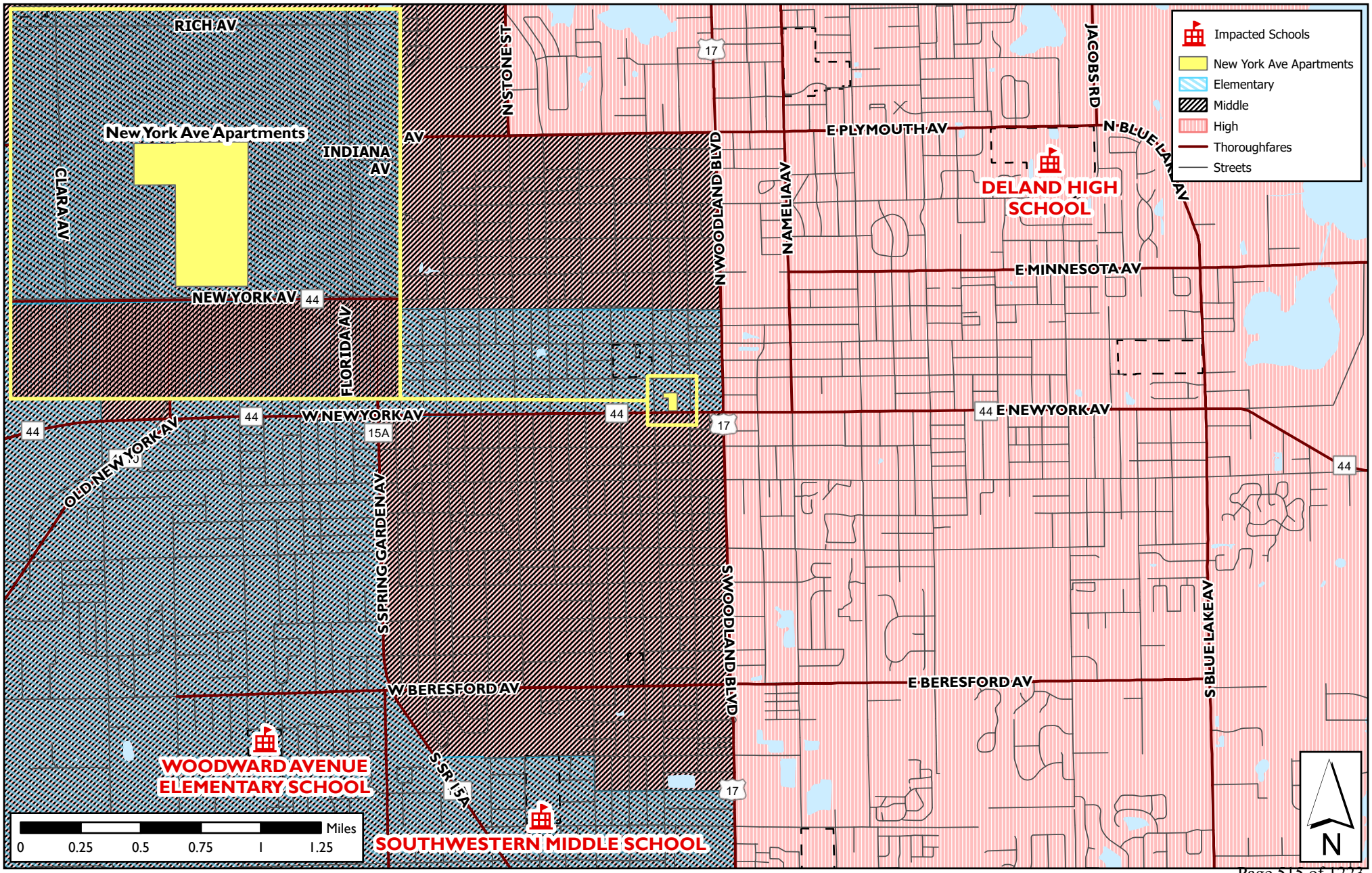
2008-072-VCS
Print Locally

VCSB Schools Impacted by Development

School Concurrency Review - New York Ave Apartments

VOLUSIA COUNTY SCHOOLS

Created by Facilities Services
August 2024



PLANNING DEPARTMENT STAFF REPORT
TO
PLANNING BOARD

September 10, 2025

A. **APPLICATION NO.**: AN25-026
APPLICANT: Mr. Mark Watts, Cobb & Cole, P.A.
OWNER: Pulte Home Company, LLC
STAFF PLANNER: Chris Carson, AICP, Senior Planner
REQUEST: Voluntary Annexation of ± 41.41 acres of property into the City limits of DeLand

B. **SITE FACTORS:**
PARCEL NUMBER: 800100000026
LOCATION: North of SR 472 and east of S. Blue Lake Ave.
SIZE OF PROPERTY: ±41.41 acres

C. **Surrounding Land Use & Zoning:**

Future Land Use: Volusia County: SWAC Community, SWAC Commerce
Existing Zoning: Volusia County: SWR, SWC
Existing Use: Vacant/Undeveloped

	LAND USE	ZONING
North:	New Community Development (NCD), VC: Urban Medium Intensity (UMI)	Victoria Park PD, VC: R-4
South:	VC: SWAC Commerce	VC: RFPUD
East:	VC: SWAC Community, VC: SWAC Commerce	VC: Integra Dunes RPUD
West:	VC: SWAC Community, VC: SWAC Commerce, VC: Industrial	VC: Light Industrial (I-1), VC: SWR, VC: SWC

D. **Background:** The ± 41.41 acre subject property is located in unincorporated Volusia County with Volusia County zoning designations of Southwest Activity Center Community (SWR) and Southwest Activity Center Commerce (SWC). The property's Volusia County future land uses are Southwest Activity Center Community (SWAC Community) and Southwest Activity Center Commerce (SWAC Commerce).

The applicant has been working with the County to construct a subdivision with a combination of single-family homes and townhomes since 2021. The project was initially put on hold because of a conflict between the minimum density requirements of the County's Comprehensive Plan and the dimensional requirements for single-family residences in the Southwest Activity Center zoning designation. The Southwest Activity Center was originally visioned as a major employment and commerce center near the I-4 interchange with a variety of housing choices to support the employment base. To spur economic development, and to resolve the conflicts between the Comprehensive Plan and the Zoning, County staff modified the SWR and SWC zoning designations. The Ordinance was approved in 2023.

After modifications to the zoning were approved, the applicant proceeded with plat and construction plan review for the subdivision. During the review period, the City and County modified the City's Utility Service Area (USA) boundary which placed the subject property within the limits of the City's USA.

The applicant contacted City staff with a desire to incorporate into the City limits for future consistency. To avoid further project delays, the applicant continued with plat approval, while concurrently submitting applications for incorporation into the City. The application for annexation is accompanied by a request for a small-scale future land use map amendment (SMLU25-025) and a request for a Planned Development (PD) rezone (Z25-024).

During the review of those applications, the applicant received County approval to begin site and infrastructure work to service the development. That construction activity is currently ongoing. The property was partially wooded and undeveloped. It did not appear to contain any wetlands and does not lie within the 100-year flood zone.

If the requests are approved, the County will continue to monitor and inspect all improvements required by the development order. Prior to any vertical construction, the City will inspect access and utilities for life safety. A site plan will be required for the community amenity center. Building permits for the individual lots will be administered through the City.

E. Public Services & Utilities: The City's Utilities Department has provided a Utility Service agreement to serve water and sewer. City water is available via a 12" water main on Blue Lake Ave. and City sewer is available via a 8" gravity line along Asterbrooke Dr., just north of the subject property.

F. Growth Management Plan Consistency: The area surrounding the development is a mix of developed and undeveloped properties. To the north is a single-family residential neighborhood, east is a multi-family development, and to the west is some industrial properties. South of the subject property is currently vacant.

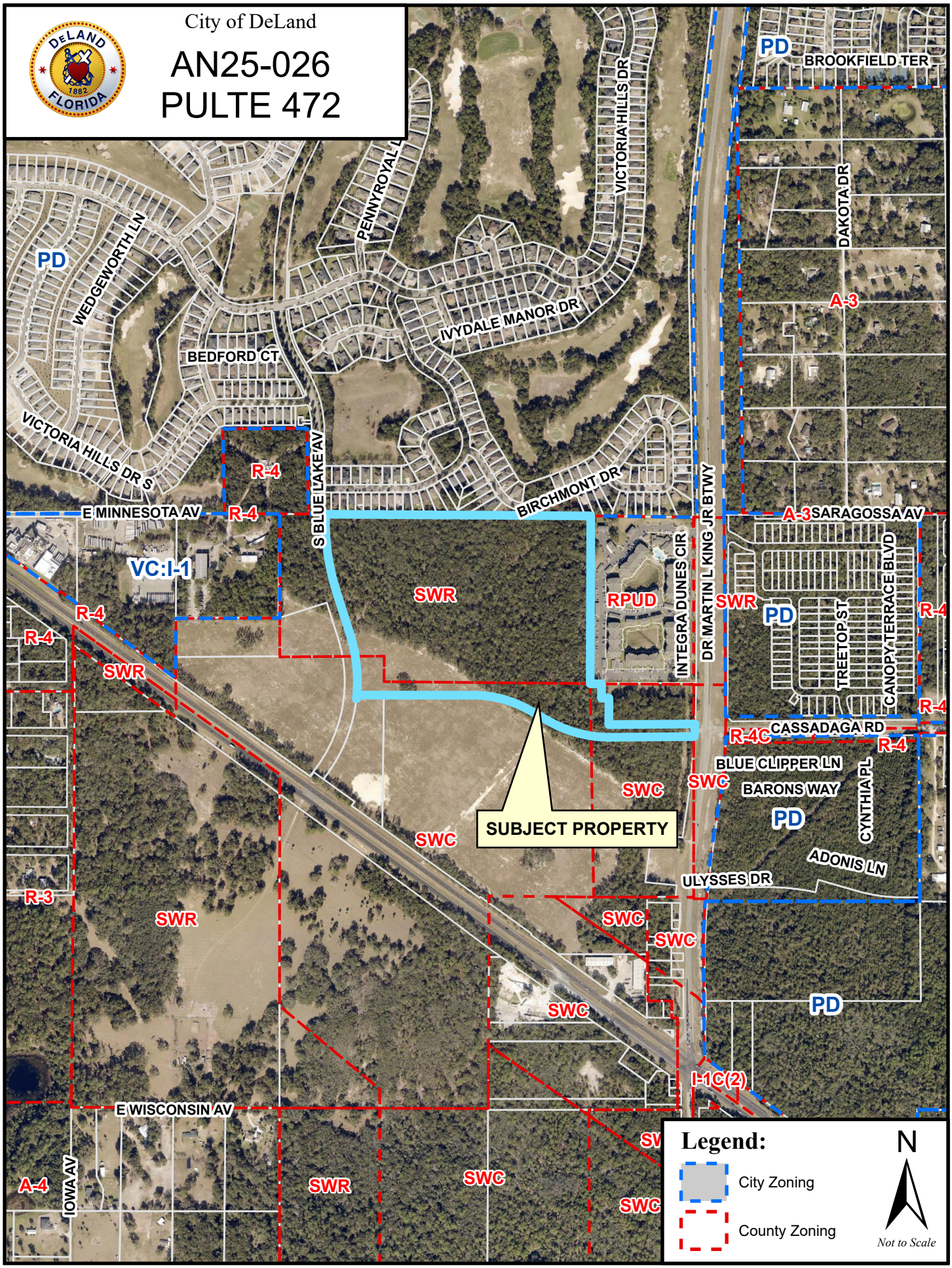
G. Analysis: Chapter 171 of the Florida Statutes sets forth procedures for adjusting municipal boundaries to ensure sound urban development, accommodation for growth, and ensure

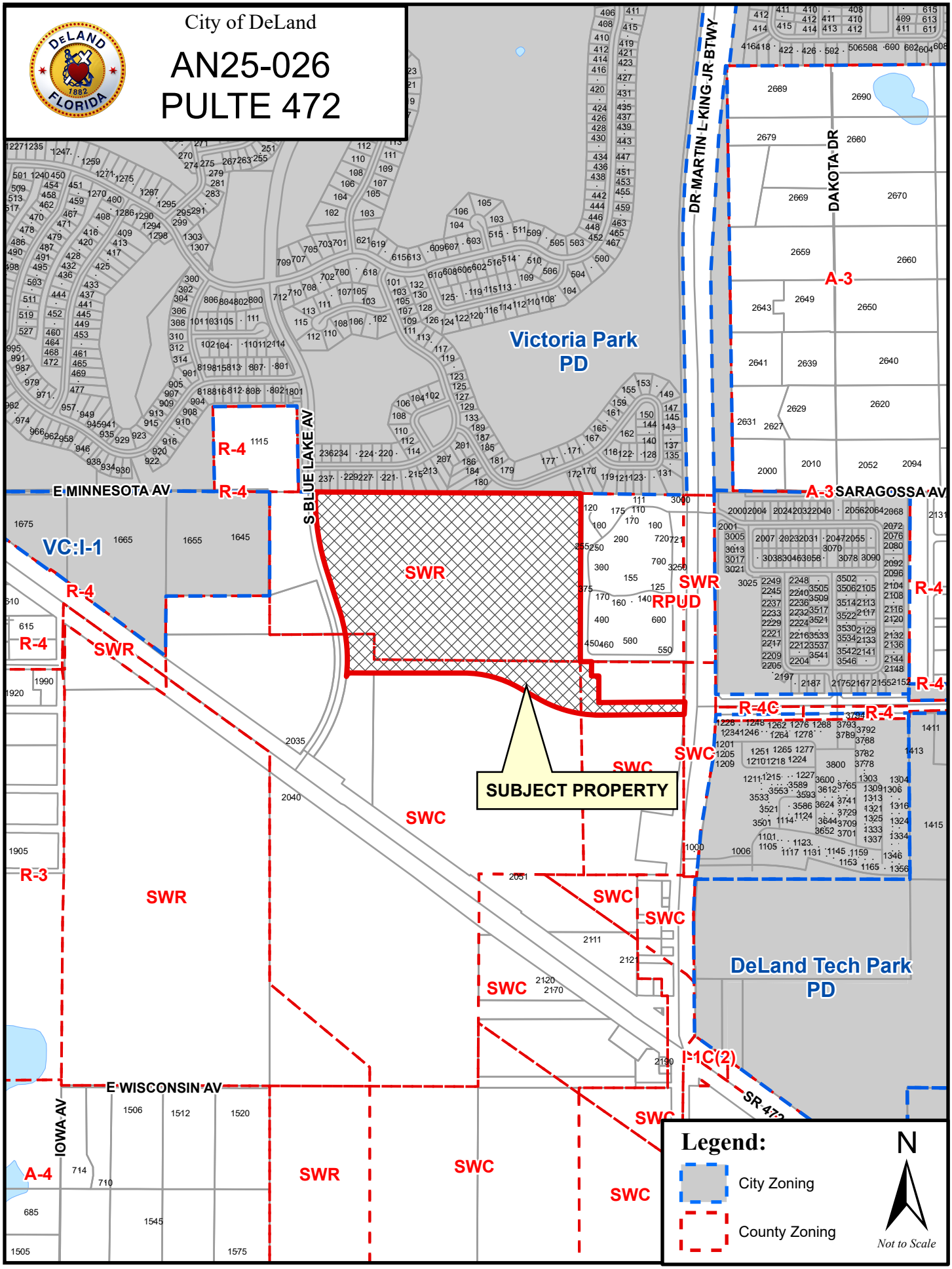
that areas are not annexed unless municipal services can be provided in those areas. These procedures require the development be **reasonably compact**, **not circuitous**, and **does not create an enclave**. In addition, the City's guidelines for annexation require a property be sufficiently **contiguous** to property already within the city limits. The parcel is contiguous to the City's municipal's boundary on the north side and is reasonably compact. Annexation of the property does not create an area that is enclosed and bounded on all sides by the City. Therefore, staff finds the annexation request to be consistent with Chapter 171 of the State Statutes, the City's Comprehensive Plan, and Land Development Regulations.

H. Next Steps: The request for voluntary annexation will go before the City Commission on October 6, 2025 for first reading, followed by Volusia Growth Management Commission Review (VGMC). After VGMC review, the request is anticipated to go before City Commission on November 17, 2025 for second reading.

I. Recommendation: Staff recommends that the Planning Board forward this annexation petition to the City Commission, with a recommendation for approval.

Based upon the concurrency requirements of the State of Florida and the City's concurrency management plan, as adopted in Article 5, Sec. 33-41 of the Land Development Regulations, approval of the proposed annexation does not automatically provide vested development rights. At the time the developer applies for a development permit, adequate infrastructure must exist to support the proposed development. If such infrastructure does not exist, the developer may be required to incur additional expense to ensure that the necessary infrastructure is provided.


City of DeLand
AN25-026
PULTE 472
SUBJECT PROPERTY
PD
BROOKFIELD TER
DAKOTA DR
A-3
VICTORIA HILLS DR
PENNYROYAL L
WEDGEWORTH LN
IVYDALE MANOR DR
BEDFORD CT
VICTORIA HILLS DR S
R-4
E MINNESOTA AV
S BLUE LAKE AV
BIRCHMONT DR
DR MARTIN L KING JR BTWY
A-3 SARAGOSSA AV
VC:I-1
SWR
RPUD
INTEGRA DUNES CIR
TREETOP ST
CANOPY TERRACE BLVD
CASSADAGA RD
R-4C
BLUE CLIPPER LN
BARONS WAY
CYNTHIA PL
ADONIS LN
ULYSSES DR
SWC
R-3
I-1C(2)
E WISCONSIN AV
IOWA AV
A-4
Legend:
City Zoning
County Zoning
N
Not to Scale


City of DeLand
AN25-026
PULTE 472
DR MARTIN L KING JR BTWY
DAKOTA DR
Victoria Park
PD
E MINNESOTA AV
S BLUE LAKE AV
SARAGOSSA AV
A-3
R-4
VC:I-1
SWR
RPUD
R-4C
SUBJECT PROPERTY
SWC
R-3
DeLand Tech Park
PD
I-1C(2)
E WISCONSIN AV
IOWA AV
A-4
SR 472
Legend:
City Zoning
County Zoning
N
Not to Scale

Scott W. Cichon
Robert A. Merrell III
John P. Ferguson
Mark A. Watts
Heather Bond Vargas
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Thomas T. Cobb (1916-2004)
W. Warren Cole, Jr. (1926-2008)

February 26, 2025

Carol Kuhn, AICP
Planning Director
City of DeLand
120 South Florida Avenue
DeLand, FL 32720

Re: Revised Project Narrative – 472 PD, Annexation & Small-Scale CPA
Parcel ID No. 8001-00-00-0020 (northern portion of)

Dear Carol,

Cobb Cole represents Pulte Home Company, LLC, owners of the above-referenced parcel. The property is currently undergoing subdivision review and approval by the County of Volusia for the development of single family and townhome style residential units. The property is subject to an annexation, land use, and rezoning request to locate the property within the municipal boundaries of the City of DeLand.

We are requesting to amend the future land use and zoning designations for the property identified in the application ("Property") from Volusia County SWR (land use and zoning) and SWC (land use and zoning) to the City's Low Density Residential ("LDR") land use classification and PUD zoning. The purpose of the applications is to transition the Property while it is under development from the County to City's jurisdiction as a result of the recent shift in utility service area boundaries in the vicinity of the Martin Luther King, Jr. Beltway and S. R. 472. The Property is currently under development based on an approved preliminary subdivision plat for single family residential and townhome residential units and associated amenities. As the Property is developed, the developer is also obligated to extend Cassadaga Road from its current intersection with the MLK Beltway to the recent southern extension of Blue Lake Road.

As background information, the County's SWR and SWC future land use and zoning were created following the abandonment of the former S.R. 472 Areawide Development of Regional Impact ("472 DRI"). Similar to the City of DeLand, the County incorporated much of the development entitlements from the 472 DRI into the SWR and SWC classifications to continue implementing the overall goals, policies and objectives defined by the 472 DRI. The majority of the Property is included within the SWR classifications, which were designed to

provide residential development areas supporting the overall land use mix outlined in the 472 DRI. The SWC classification is primarily designed to support commercial development, however the only portions of the Property that are currently classified under SWC are the areas that will be improved with the Cassadaga Road extension and associated stormwater infrastructure.

Pulte Homes began working with County staff on subdivision approvals for the Property in 2021. When Pulte submitted initial applications, we determined that the Property could not be developed with the minimum required density of 4 units per acre required by the SWR land use classification based on the minimum dimensional requirements adopted in the SWR zoning classification for single family lots. As a result, we coordinated with County staff and the County Council approved revisions to the minimum single family lot dimensional requirements in order to permit development that would meet the minimum required density. During the time the County was processing administrative amendments to the SWR and SWC zoning classifications, consideration of the pending preliminary plat was put on hold. The subdivision review proceeded following the County's correction of the SWR zoning classification's dimensional criteria.

While the preliminary plat was under review and the SWR zoning classification revisions were being reviewed and approved, the City and County revised the boundaries of the utility service areas for the Property. The result of those revisions added the Property to the City's utility service boundary. Since the preliminary plat review was substantially underway at that point in time, we coordinated with City and County staff to proceed with annexation of the Property into the City once the preliminary plat review was completed.

Based on the approved preliminary plat, the Property is currently under development. Based on our coordination with City and County staff, the proposed applications submitted to the City with this letter will annex the Property, assign a land use classification consistent with the approved residential density and incorporate the development standards outlined in the County's SWR classification into a PUD for the Property. The County will continue to provide permit review and inspections for the subdivision improvements required by the approved preliminary plat development order. The City will inspect and improve all utility improvements included in the preliminary plat development order since it is the utility provider. Our intent is to finalize the PUD rezoning in time to allow vertical permitting for all single family and townhome residential structures through the City. In addition, since the City considers townhomes as a multi-family use and subject to the City's community design standards, review and approval of the proposed architectural design for the townhomes is also proposed as part of the PUD approval.
At completion, the development of the Property will include 112 townhome units and 91 single family units. The resulting density is 5.2 units/acre and complies with the minimum required density of the County's SWR land use classification. It is also consistent with the City's LDR land use classification. As noted above, the development includes construction of

extension of Cassadaga Road, and the provision of supporting open space and stormwater amenities. Site development and permitting of horizontal site improvements will be permitted through the County of Volusia, with vertical building permit review and issuance proposed under the City of DeLand and in accordance with the proposed PUD regulations.

Sincerely,

Mark A. Watts, Esq.
Mark.Watts@cobbcole.com

LEGAL DESCRIPTION

A PARCEL OF LAND COMPRISING A PORTION OF GOVERNMENT LOT 1, LYING IN SECTION 1, TOWNSHIP 18 SOUTH, RANGE 30 EAST, VOLUSIA COUNTY, FLORIDA.

BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

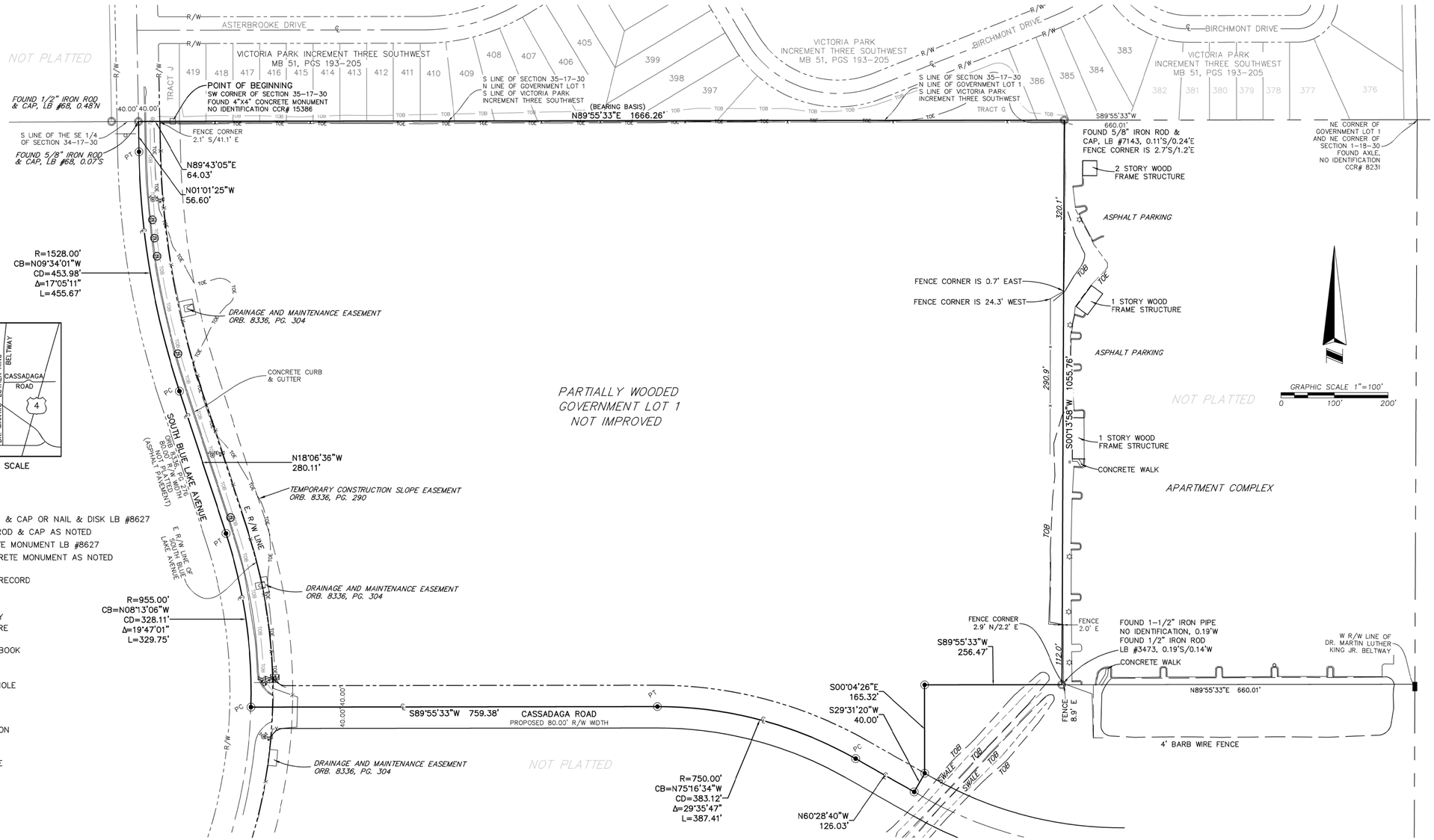
BEGIN AT THE SOUTHWEST CORNER OF SECTION 35, TOWNSHIP 17, RANGE 30 EAST BEING A POINT ON THE NORTH LINE OF AFORESAID GOVERNMENT LOT 1, ALSO BEING A POINT ON THE SOUTH LINE OF VICTORIA PARK INCREMENT THREE SOUTHWEST, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN MAP BOOK 51, PAGES 193 THROUGH 205 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA; THENCE RUN NORTH 89°55'33" EAST ALONG THE SOUTH LINE OF SAID SECTION 35, SAID NORTH LINE OF GOVERNMENT LOT 1 AND SAID SOUTH LINE OF SAID VICTORIA PARK INCREMENT THREE SOUTHWEST FOR A DISTANCE OF 1666.26 FEET; THENCE DEPARTING SAID NORTH LINE AND SAID SOUTH LINES RUN SOUTH 00°13'58" WEST FOR A DISTANCE OF 1055.76 FEET; THENCE RUN SOUTH 89°55'33" WEST FOR A DISTANCE OF 256.47 FEET; THENCE RUN SOUTH 00°04'26" EAST FOR A DISTANCE OF 165.32 FEET; THENCE RUN SOUTH 29°31'20" WEST FOR A DISTANCE OF 40.00 FEET; THENCE RUN NORTH 60°28'40" WEST FOR A DISTANCE OF 126.03 FEET TO THE POINT OF CURVATURE OF A CURVE, CONCAVE SOUTHWESTERLY HAVING A RADIUS OF 750.00 FEET, WITH A CHORD BEARING OF NORTH 75°16'34" WEST, AND A CHORD DISTANCE OF 383.12 FEET; THENCE RUN NORTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 29°35'47" FOR A DISTANCE OF 387.41 FEET TO A POINT OF TANGENCY; THENCE RUN SOUTH 89°55'33" WEST FOR A DISTANCE OF 759.38 FEET TO A POINT ON THE CENTERLINE OF SOUTH BLUE LAKE AVENUE, A 80.00 FOOT WIDE RIGHT OF WAY, ACCORDING TO OFFICIAL RECORDS BOOK 8336, PAGE 276 OF SAID PUBLIC RECORDS; BEING A POINT ON A NON TANGENT CURVE, CONCAVE WESTERLY HAVING A RADIUS OF 955.00 FEET, WITH A CHORD BEARING OF NORTH 08°13'06" WEST, AND A CHORD DISTANCE OF 328.11 FEET; THENCE RUN ALONG SAID CENTERLINE THE FOLLOWING BEARINGS AND DISTANCES THENCE RUN NORTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 19°47'01" FOR A DISTANCE OF 329.75 FEET TO A POINT OF TANGENCY; THENCE RUN NORTH 18°06'36" WEST FOR A DISTANCE OF 280.11 FEET TO THE POINT OF CURVATURE OF A CURVE, CONCAVE EASTERLY HAVING A RADIUS OF 1528.00 FEET, WITH A CHORD BEARING OF NORTH 09°34'01" WEST, AND A CHORD DISTANCE OF 453.98 FEET; THENCE RUN NORTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 17°05'11" FOR A DISTANCE OF 455.67 FEET TO A POINT OF TANGENCY; THENCE RUN NORTH 01°01'25" WEST FOR A DISTANCE OF 56.60 FEET TO A POINT ON THE SOUTH LINE OF THE SOUTHEAST 1/4 OF SECTION 34, TOWNSHIP 17 SOUTH, RANGE 30 EAST, ALSO BEING AFORESAID NORTH LINE OF GOVERNMENT LOT 1 AND SAID SOUTH LINE OF SAID VICTORIA PARK INCREMENT THREE SOUTHWEST; THENCE RUN NORTH 89°43'05" EAST ALONG SAID SOUTH LINES AND SAID NORTH LINE FOR A DISTANCE OF 64.03 FEET TO THE **POINT OF BEGINNING.**

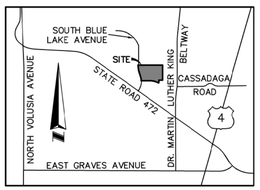
CONTAINS 41.41 ACRES MORE OR LESS.

SURVEYOR'S NOTES:

1. BEARINGS SHOWN HEREON ARE ASSUMED AND BASED ON THE NORTH LINE OF GOVERNMENT LOT 1 AS BEING NORTH 89°55'33" EAST FOR ANGULAR DESIGNATION ONLY.
2. THE LEGAL DESCRIPTION HEREON WAS PREPARED BY THIS FIRM AS THE CLIENT'S REQUEST.
3. THERE MAY BE EASEMENTS AND RESTRICTIONS OF RECORD AND/OR PRIVATE AGREEMENTS NOT FURNISHED TO THIS SURVEYOR OR SHOWN ON THIS BOUNDARY SURVEY THAT MAY AFFECT PROPERTY RIGHTS AND/OR LAND USE RIGHTS OF THE SUBJECT PROPERTY.
4. THERE MAY BE ENVIRONMENTAL ISSUES AND/OR OTHER MATTERS REGULATED BY VARIOUS DEPARTMENTS OF FEDERAL, STATE OR LOCAL GOVERNMENTS AFFECTING THE SUBJECT PROPERTY NOT SHOWN ON THIS SURVEY.
5. THIS SURVEY WAS PERFORMED FOR THE SOLE AND EXCLUSIVE BENEFIT OF THE ENTITIES LISTED HEREON AND SHALL NOT BE RELIED UPON BY ANY OTHER ENTITY OR INDIVIDUAL WHOMSOEVER.
6. THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER OR AN ELECTRONIC SIGNATURE THAT IS IN COMPLIANCE WITH FLORIDA ADMINISTRATIVE CODE 5J-17.062.
7. UNLESS OTHERWISE NOTED OR SHOWN HEREON, APPARENT AND/OR VISIBLE, UNOBSTRUCTED, ABOVE GROUND IMPROVEMENTS WERE LOCATED. UNLESS NOTED OTHERWISE UNDERGROUND IMPROVEMENTS, SUCH AS FOUNDATIONS AND UTILITIES, WERE NOT LOCATED.
8. UNLESS OTHERWISE NOTED OR SHOWN HEREON, THERE ARE NO APPARENT AND/OR UNOBSTRUCTED, ABOVE GROUND ENCROACHMENTS. THE DISPOSITION OF ANY POTENTIAL ENCROACHING IMPROVEMENTS SHOWN IS BEYOND THE PROFESSIONAL PURVIEW OF THE SURVEYOR AND SUBJECT TO LEGAL INTERPRETATION.
9. SUBJECT PROPERTY SHOWN HEREON IS IN ZONE X, AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, ACCORDING TO FLOOD INSURANCE RATE MAP PANEL NUMBER 12127C0610J, MAP REVISED FEBRUARY 19, 2014.

   THE ABOVE STATEMENT IS FOR INFORMATION ONLY AND THIS SURVEYOR ASSUMES NO LIABILITY FOR THE CORRECTNESS OF THE CITED MAP(S). IN ADDITION, THE ABOVE STATEMENT DOES NOT REPRESENT THIS SURVEYOR'S OPINION OF THE PROBABILITY OF FLOODING.
10. THE ACCURACY OF THE SURVEY MEASUREMENTS USED FOR THIS SURVEY MEETS OR EXCEEDS THE EXPECTED USE OF THE PROPERTY DESCRIBED HEREON. (SUBURBAN) 1 FOOT IN 7,500 FEET.
11. THE DELINEATION OF THE LANDS SHOWN HEREON ARE AS PER THE CLIENT'S INSTRUCTIONS.





LOCATION MAP NOT TO SCALE

LEGEND

◉	SET 1/2" IRON ROD & CAP OR NAIL & DISK LB #8627
○	FOUND 1/2" IRON ROD & CAP AS NOTED
■	SET 4"x4" CONCRETE MONUMENT LB #8627
⊡	FOUND 4"x4" CONCRETE MONUMENT AS NOTED
LB	LICENSED BUSINESS
CCR	CERTIFIED CORNER RECORD
℄	CENTERLINE
R/W	RIGHT OF WAY
PT	POINT OF TANGENCY
PC	POINT OF CURVATURE
NT	NON TANGENCY
ORB	OFFICIAL RECORDS BOOK
PG(S)	PAGE(S)
MB	MAP BOOK
	STORM DRAIN MANHOLE
WM	WATER METER
	WATER MARKER
	SIGN
	MITERED END SECTION
	WATER VALVE
	FIRE HYDRANT
	WOODEN LIGHT POLE
TOB	TOP OF BANK
TOE	TOE OF SLOPE
-x-	BARB WIRE FENCE

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GEOSPATIAL SERVICES
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WINTER GARDEN, FLORIDA 34787
(407) 654-5355 LB#8627

BOUNDARY SURVEY OF FORD 472 DELAND

SECTION 1, TOWNSHIP 18 SOUTH, RANGE 30 EAST
VOLUSIA COUNTY, FLORIDA

FOR: PULTE GROUP

FOR THE LICENSED BUSINESS #8627 BY:

JAMES L. RICKMAN, PSM #5633

JAMES LOUIS RICKMAN LICENSED NUMBER LS5633 STATE OF FLORIDA PROFESSIONAL SURVEYOR AND MAPPER

This item has been electronically signed and Sealed by James L. Rickman, P.S.M. using A Digital Signature.

Printed Copies of this document are not considered signed and sealed and the signature Must be verified on any electronic copies.

Digitally signed by: James L Rickman
Date: 2025.08.08 08:19:08 -04'00'

DATE	REVISIONS
8-7-25	revision to legal desc.

JOB #:	20200713
DATE:	12/11/2024
SCALE:	1" = 100'
CALC BY:	SEJ
FIELD BY:	DB
DRAWN BY:	SEJ/KS
CHECKED BY:	SEJ

SHEET 1 OF 1

Drawing name: L:\Data\20200713\dwg\20200713 Ford 472 Bndy +-Annex 1

PLANNING DEPARTMENT STAFF REPORT
TO
THE CITY OF DELAND PLANNING BOARD

September 10, 2025

A. **APPLICATION NO.**: SMLU25-025
APPLICANT: Mr. Mark Watts, Cobb & Cole, P.A.
STAFF PLANNER: Chris Carson, AICP, Senior Planner
REQUEST: To amend the future land use designation from Volusia County Southwest Activity Center Community (SWAC Community) and Volusia County Southwest Activity Center Commerce (SWAC Commerce) to City of DeLand Low Density Residential (LDR)

B. **SITE FACTORS:**

Location: North of SR 472 and east of S. Blue Lake Ave.
Parcel ID #: 800100000026
Parcel Size: ± 39.24 acres
Land Use: Volusia County Southwest Activity Center Community & Volusia County Southwest Activity Center Commerce
Existing Use: Vacant, undeveloped

	SURROUNDING USE:
North:	New Community Development (NCD), VC: Urban Medium Intensity (UMI)
South:	VC: SWAC Commerce
East:	VC: SWAC Community, VC: SWAC Commerce
West:	VC: SWAC Community, VC: SWAC Commerce, VC: Industrial

C. **REQUESTED ACTION & HISTORY:**

1. REQUEST: The applicant is requesting to amend the future land use designation of a ±39.24-acre parcel located on the east side of S. Blue Lake Ave., north of SR 472 from Volusia County's Southwest Activity Center Community (SWAC Community) and Volusia County Southwest Activity Center Commerce (SWAC Commerce) to the City of DeLand's Low Density Residential (LDR) land use designation.

2. History: The applicant has been working with the County to construct a subdivision with a combination of single-family homes and townhomes since 2021. The project was initially put on hold because of a conflict between the minimum density requirements of the County's Comprehensive Plan and the dimensional requirements for single-family residences in the Southwest Activity Center zoning designation.

The Southwest Activity Center was originally visioned as a major employment and commerce center near the I-4 interchange with a variety of housing choices to support the employment base. To spur economic development, and to resolve the conflicts between the Comprehensive Plan and Zoning, County staff modified the SWR and SWC zoning designations. The Ordinance was approved in 2023.

After modifications to the zoning were approved, the applicant proceeded with plat and construction plan review for the subdivision. During the review period, the City and County modified the City's Utility Service Area (USA) boundary which placed the subject property within the limits of the City's USA.

The applicant contacted City staff with a desire to incorporate into the City limits for future consistency. To avoid further project delays, the applicant continued with plat approval, while concurrently submitting applications for incorporation into the City. The application for a small-scale future land use map amendment is accompanied by a request for annexation (AN25-026) and a request for a Planned Development (PD) rezone (Z25-024).

During the review of those applications, the applicant received County approval to begin site and infrastructure work to service the development. That construction activity is currently ongoing. The property was partially wooded and undeveloped. It did not appear to contain any wetlands and does not lie within the 100-year flood zone.

If the requests are approved, the County will continue to monitor and inspect all improvements required by the development order. Prior to any vertical construction, the City will inspect access and utilities for life safety. A site plan will be required for the community amenity center. Building permits for the individual lots will be administered through the City.

D. ANALYSIS:

The purpose of this section is to analyze the reasonableness of the applicant's request for a small-scale Future Land Use Map amendment. Florida Statute 163.3187 allows for an small scale Future Land Use Map amendment when: the proposed amendment involves 50 acres or less, the proposed amendment does not invovle a text change to the goals, policies, and objectives of the Comprehensive Plan, and the property is not located within an area of critical state concern.

1. Availability of Public Facilities (water, sewer, drainage, traffic, and schools if residential):

The City's Utilities Department has provided a Utility Service Agreement (USA) to serve water and sewer. Water is available via a 12" water main on S. Blue Lake Ave. and sewer is available via a 8" gravity line along Asterbrooke Dr., just north of the subject property.

A Traffic Impact Analysis (TIA) was reviewed and approved by Volusia County during the preliminary plat review. During the review it was determined that the project would generate 1,728 new average daily trips, 121 AM peak hour trips, and 154 PM peak hour trips. A number of improvements were recommended based on the project's impacts within the study area, including the extension of Cassadaga Road and a number of turn lane improvements. The impacts are being mitigated through the applicant's dedication of the right of way required to extend Cassadaga Road from MLK Boulevard to S. Blue Lake Avenue and the construction of the Cassadaga Roadway and intersection improvements.

In a memo dated May 20, 2025, the Volusia County School Board issued a capacity determination letter which found no objection for the proposed project.

2. **Compatibility with Land Use and Other Elements:** The Future Land Use element requires that the subject property be consistent with surrounding development. The Comprehensive Plan describes the Low Density Residential land use designation as being typified by detached single-family housing types with a maximum density of 5.8 dwelling units per acre, serving in areas where more intense residential densities would cause environmental problems or would be incompatible with surrounding uses. Cluster housing may be permitted to provide common open space and conservation areas.

   To the north of the property is the Victoria Park PD, with a maximum density of 2.5 dwelling units per acre. To the east is the Integra Dunes RPUD, with a maximum density of 18 dwelling units per acre. South of the property is currently undeveloped, with a minimum density of 8 dwelling units per acre and a maximum density of 22 dwelling units per acre. West of the property is a combination of industrial and undeveloped land. The undeveloped land has a maximum density of 8 dwelling units per acre to the north and 22 dwelling units per acre to the south.

   The proposed maximum density of 5.8 dwelling units per acre provides a transition from the lower density residential to the higher density residential and nonresidential uses. Therefore, the request is compatible with the Comprehensive Plan.

3. **Future Land Use Map:** The proposed change in the land use designation to Low Density Residential (LDR) will be shown on the revised Future Land Use Map.

4. **Location of Lakes, Floodplains, and Wetlands:** The property does not contain bodies of water, nor is it located within a floodplain.

5. **Analysis of Natural Resources:**
   a. *Soil types:* Apopka fine sand, Astatula fine sand, Tavares fine sand

   b. *Presence of Endangered Species*: During the County's plat review, it was determined that eight (8) gopher tortoises were present on site. The applicant received Florida Fish and Wildlife Conservation Commission (FWCCC) approval prior to construction.

6. **Existing and Future Impact upon Infrastructure Capacity:**

   a. *Water and Sewer* – Since the project area is within the City's Utility Service Area, the applicant coordinated with the City's Utility Department during preliminary plat review. It was determined there is sufficient water and sewer supply available and a Utility Service Agreement was issued. There are no changes to the water demand resulting from the future land use map amendment.

   b. *Drainage* – Drainage was reviewed during plat review. The approved plat meets the County's stormwater requirement to retain the 100-year frequency, 24-hour storm event. There are no impacts from the future land use change to the City's stormwater capacity.

   c. *Solid Waste* – Solid waste services are available for the property. The County has landfill capacity available to receive waste projected to be generated from the

development. The Volusia County Waste Management Facility has capacity for the next twenty-seven (27) years.

d. *Transportation* – In order to estimate traffic generation by development on the subject property, Staff must make projections for the most intense type of development allowed under the existing and proposed land use designations. Development under the most intensive of the uses allowed under the current land use designation of Volusia County Southwest Activity Center Community (SWAC Community) and Southwest Activity Center Commerce (SWAC Commerce) must be compared with the most intensive use proposed under the City's Low Density Residential (LDR) designation.

The Volusia County Southwest Activity Center Community land use designation allows a maximum density of 8 dwelling unit per acre; and with the most-intense allowable residential use, the property would currently be permitted to yield up to 313.9 units and would generate **2,292** trips per day according to the Institute of Transportation Engineers Trip Generation Manual. (11th ed.)

DeLand's Low Density Residential land use designation allows for a maximum density up to 5.8 dwelling units per acre. If the land use amendment is approved, the 39.24 acres of property could yield as many as 227 units with **1,661** trips per day, resulting in a net decrease of 631 average daily trips.

7. **Impact upon Recreation and Open Space:** The development includes 0.46 acres of park space to serve residents within the development. All residents will have access to recreational opportunities; therefore, the future land use amendment should not have an impact to the existing level of service.

8. **New Public Facilities Needed to Serve Land Use:** Per the feasibility analysis completed by staff, no need for new public facilities is anticipated.

9. **Impact upon Ability of the City to Fund Capital Improvements:** The development should not create an additional impact upon the City's ability to fund the projects listed in the adopted Five-Year Capital Improvement Program and will not require revision to the City's adopted Five-Year Capital Improvement Program.

10. **Compatibility with Existing Zoning Classification:** The proposed Canopy Preserve PD zoning designation is compatible with the Low Density Residential land use designation.

11. **Will the proposed land use change impact schools?** A school concurrency letter dated May 20, 2025, was provided, stating that the Volusia County School District has no objection to the proposed development plan.

12. **How does this proposal fit with the guidelines developed for DeLand 2050 Vision and the City's Strategic Plan?**

a. According to the City's 2050 Vision Plan, the proposal is located in the Urban Core (Category 2), which is where the majority of new growth will take place. It is also located within the City's Utility Service Area boundary. Therefore, the proposal is consistent with the DeLand 2050 Vision.

b. According to the City's Strategic Plan, to manage growth, the city will institute a number of smart growth principles. For reasons of both community identity and governmental efficiency, an annexation strategy is required which will square off the city's boundaries. The urban core is the key area to focus development, maintaining a strong job base and taking advantage of existing infrastructure. Locating higher intensity along select corridors or major centers will encourage transit and lessen traffic congestion.

The subject property is located within the Urban Core, as shown on the DeLand 2050 Land Use Map. The land use proposed is appropriate for the location as it is located along a collector road with existing infrastructure, and serving as a transition between lower density residential and higher density residential, and near employment areas and future commercial development.

E. **CONCLUSION:** The facility analysis presented in the above sections suggests the proposed land use should not cause any of the City's facilities to degrade below the adopted or current operational level of service (LOS). The proposed land use designation, Low Density Residential, is consistent with the surrounding area, and is not expected to create any land use incompatibilities.

F. **Next Steps:** The request for a small-scale future land use map amendment will go before the City Commission on October 6, 2025 for first reading, followed by Volusia Growth Management Commission Review (VGMC). After VGMC review, the request is anticipated to go before City Commission on November 17, 2025 for second reading.

G. **STAFF RECOMMENDATION:** Staff recommends that the Planning Board forward the request to the City Commission with a recommendation of approval of the proposed future land use map amendment from Volusia County's Southwest Activity Center Community (SWAC Community) and Volusia County Southwest Activity Center Commerce (SWAC Commerce) to the City of DeLand's Low Density Residential (LDR).

G. **VGMC INFRASTRUCTURE IMPACT ASSESSMENT:**

In accordance with standard practice from the Florida Department of Economic Opportunity (DEO) and other review agencies, an impact comparison analysis of the proposed amendment has been completed based upon the theoretical maximum development potential under the currently adopted future land use designation versus the proposed designation.

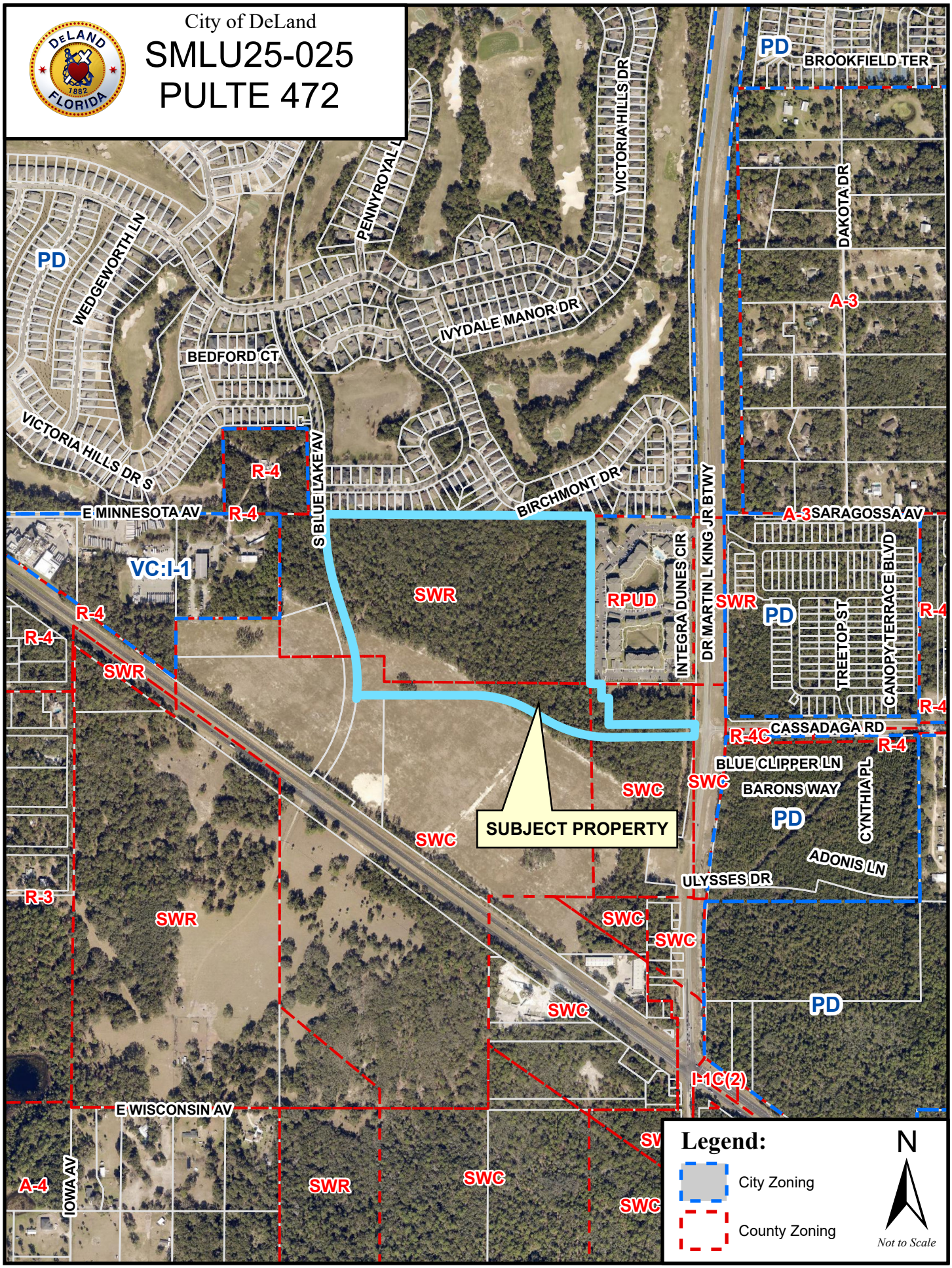
The following seven public facilities and services were examined: (Table 4)

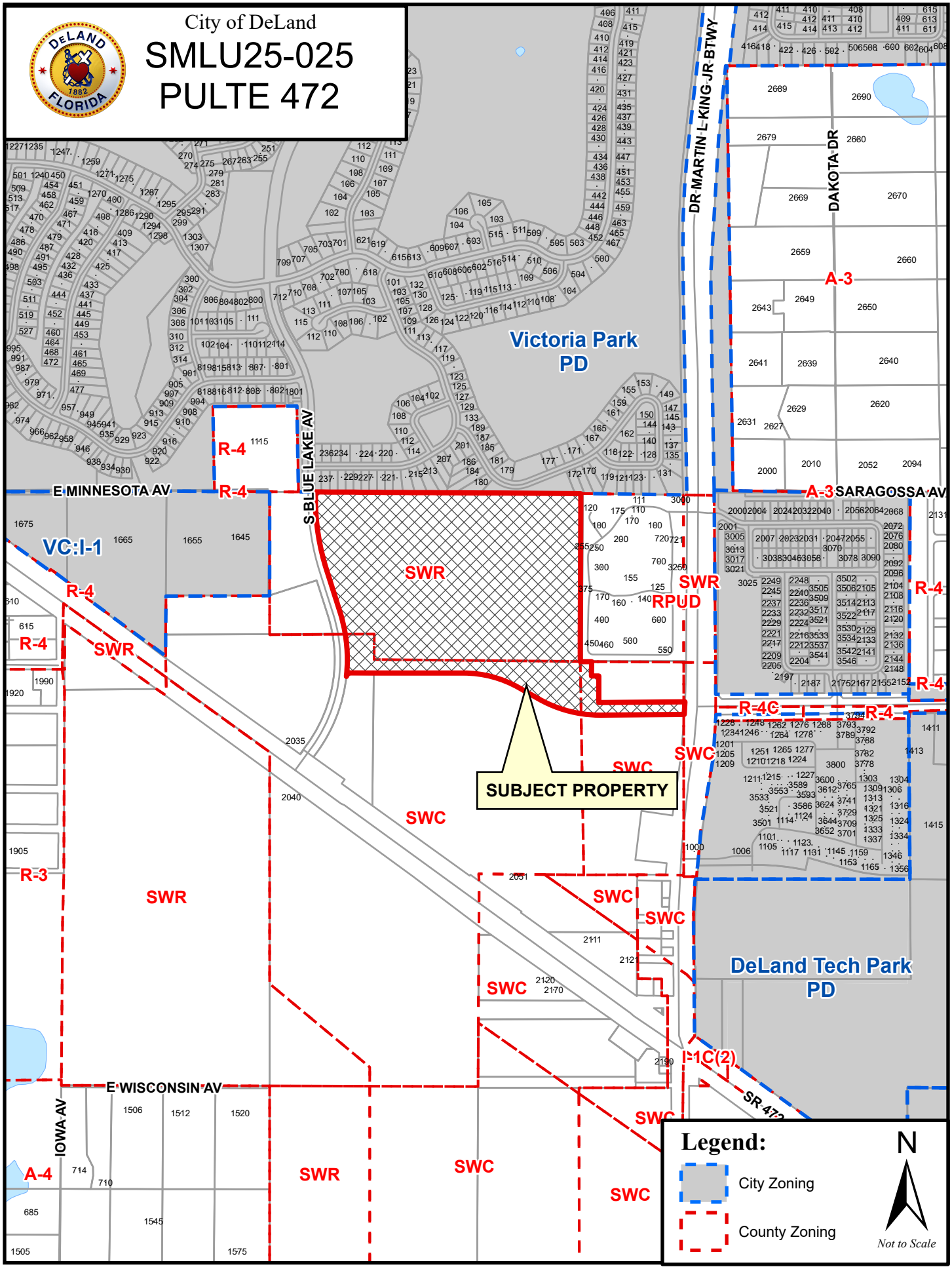
1. Transportation
2. Sanitary Sewer
3. Potable Water
4. Solid Waste
5. Stormwater Drainage
6. Recreation
7. Schools

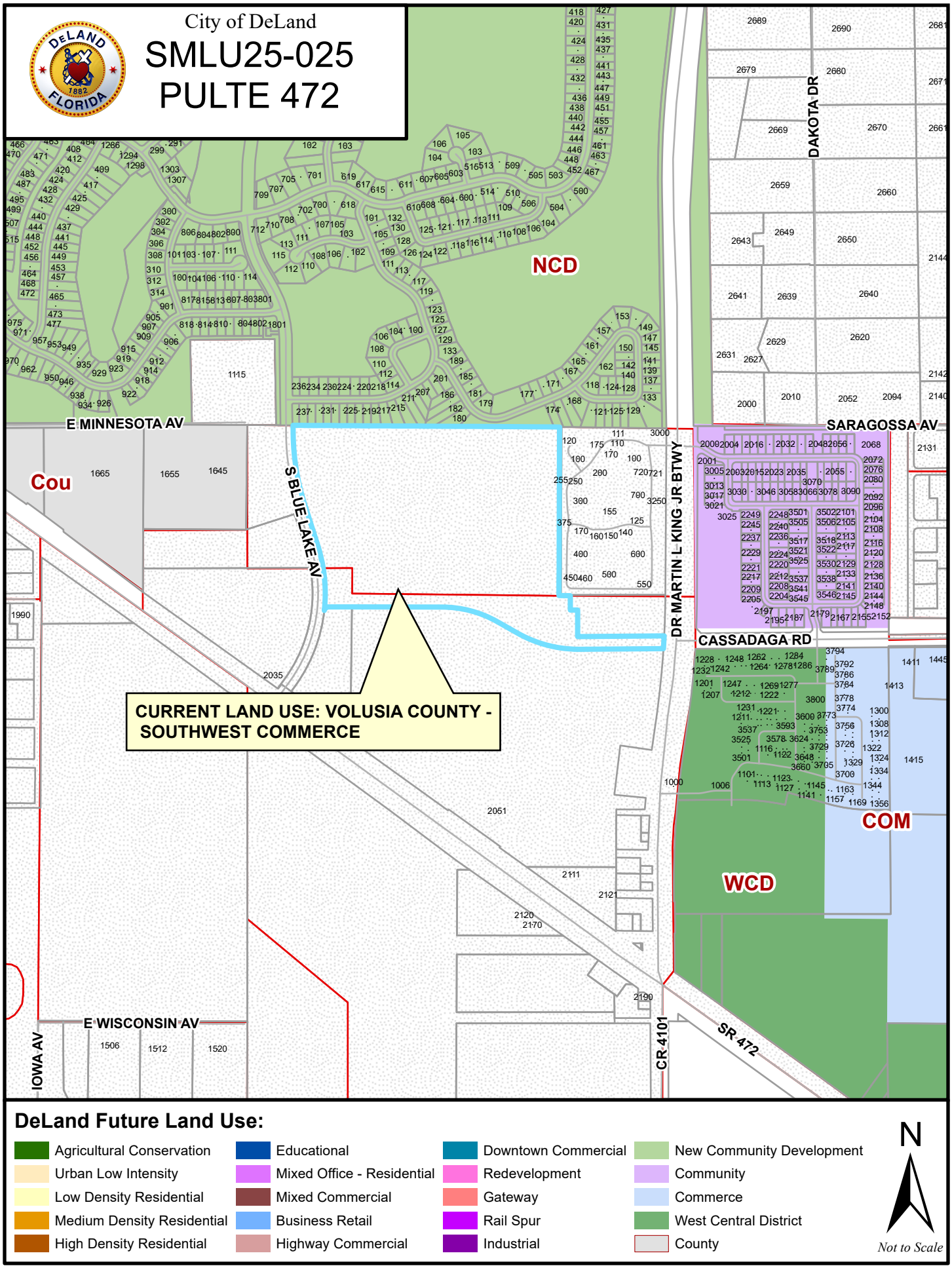
Table 4. Impact Analysis (Theoretical Max.)

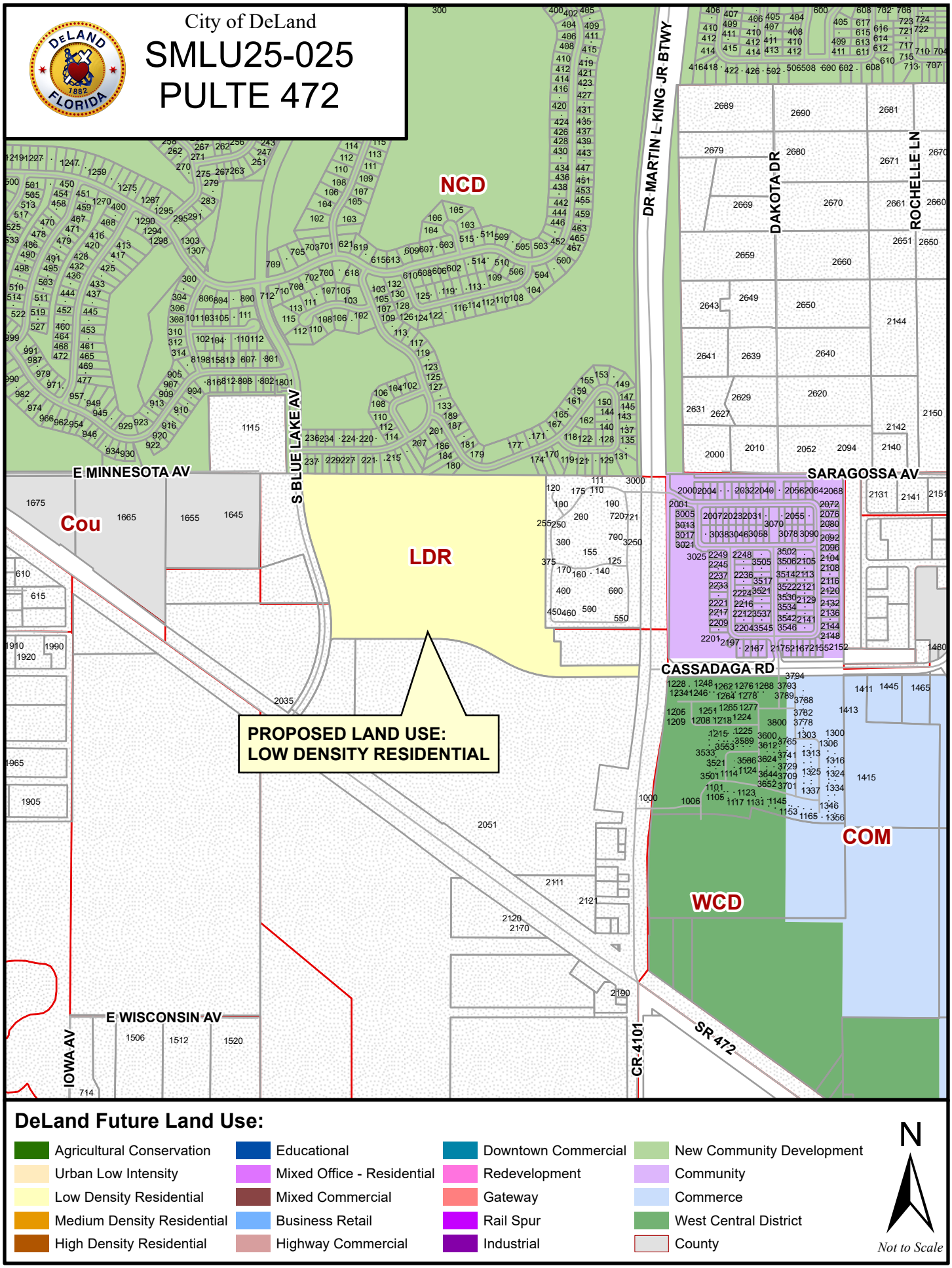
Development Variable	Theoretical Maximums		
	EXISTING	PROPOSED	Net Change
Permitted Density/Intensity	8 du/acre	5.8 du/acre	-2.2 du/acre
Dwelling Units	313.92	227.59	-86
Non-residential Sq. Ft.	Not Applicable		
Population *2.44 persons per household (per 2020 Census)*	766	555	-211
Transportation ***(PM Peak Hr. Trips/Daily Trips)*** *(ITE Trip Generation Manual, 11th Edition): PM PEAK HR rate (215): 0.58 trips per unit; ADT rate RM (215): 7.30 trips per day per unit*	182 peak/2,292 ADT	132 peak/1,661 ADT	-50 peak/-631 ADT
Sanitary Sewer ***(gallons/day)*** *225 GPD per Equivalent Residential Unit (ERU)*	70,632	51,208	-19,424
Potable Water ***(gallons/day)*** *255 GPD per Equivalent Residential Unit (ERU)*	80,050	58,035	-22,015
Solid Waste ***(pounds/day)*** *8.6 pounds per person per day*	6,587.6	4,773	-1,814.6
Stormwater Drainage *LOS Standard 100-yr/24-hr event. Drainage system to be designed to meet the req. of the LDR during subdivision or site plan review.*	No Change		
Recreation/Open Space *4.6 parkland acres/1,000 persons (0.0046 acres/person)*	3.52	2.55	-0.97

The proposed amendment results in decreased impacts to all public infrastructure and services based on the theoretical maximum impact analysis.


City of DeLand
SMLU25-025
PULTE 472
PD
BROOKFIELD TER
VICTORIA HILLS DR
PENNYROYAL L
DAKOTA DR
A-3
WEDGEWORTH LN
IVYDALE MANOR DR
BEDFORD CT
VICTORIA HILLS DR S
R-4
S BLUE LAKE AV
BIRCHMONT DR
E MINNESOTA AV
A-3
SARAGOSSA AV
VC:I-1
SWR
RPUD
INTEGRA DUNES CIR
DR MARTIN L KING JR BTWY
TREETOP ST
CANOPY TERRACE BLVD
CASSADAGA RD
R-4C
BLUE CLIPPER LN
BARONS WAY
CYNTHIA PL
SUBJECT PROPERTY
SWC
ADONIS LN
ULYSSES DR
R-3
I-1C(2)
E WISCONSIN AV
A-4
IOWA AV
Legend:
City Zoning
County Zoning
N
Not to Scale


City of DeLand
SMLU25-025
PULTE 472
Victoria Park PD
DeLand Tech Park PD
SUBJECT PROPERTY
E MINNESOTA AV
S BLUE LAKE AV
DR MARTIN L KING JR BTWY
DAKOTA DR
SARAGOSSA AV
E WISCONSIN AV
IOWA AV
SR 472
VC:I-1
R-4
R-3
A-3
A-4
R-4C
I-1C(2)
SWR
SWC
RPUD
Legend:
City Zoning
County Zoning
N
Not to Scale


City of DeLand
SMLU25-025
PULTE 472
NCD
DAKOTA DR
E MINNESOTA AV
SARAGOSSA AV
S BLUE LAKE AV
DR MARTIN L KING JR BTWY
CASSADAGA RD
CURRENT LAND USE: VOLUSIA COUNTY - SOUTHWEST COMMERCE
COM
WCD
E WISCONSIN AV
IOWA AV
CR 4101
SR 472
DeLand Future Land Use:
Agricultural Conservation
Urban Low Intensity
Low Density Residential
Medium Density Residential
High Density Residential
Educational
Mixed Office - Residential
Mixed Commercial
Business Retail
Highway Commercial
Downtown Commercial
Redevelopment
Gateway
Rail Spur
Industrial
New Community Development
Community
Commerce
West Central District
County
N
Not to Scale


City of DeLand
SMLU25-025
PULTE 472
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PROPOSED LAND USE:
LOW DENSITY RESIDENTIAL
DR MARTIN L KING JR BTWY
DAKOTA DR
ROCHELLE LN
S BLUE LAKE AV
E MINNESOTA AV
SARAGOSSA AV
CASSADAGA RD
E WISCONSIN AV
IOWA AV
CR 4101
SR 472
DeLand Future Land Use:
Agricultural Conservation
Urban Low Intensity
Low Density Residential
Medium Density Residential
High Density Residential
Educational
Mixed Office - Residential
Mixed Commercial
Business Retail
Highway Commercial
Downtown Commercial
Redevelopment
Gateway
Rail Spur
Industrial
New Community Development
Community
Commerce
West Central District
County
N
Not to Scale

VOLUSIA COUNTY SCHOOLS

Carmen J. Balgobin, Ed.D
Superintendent of Schools

School Board of Volusia County

Ms. Jamie M. Haynes, Chair
Mr. Ruben Colón, Vice Chair
Ms. Krista Goodrich
Mrs. Jessie Thompson
Ms. Donna Brosemer

School Concurrency Determination
Concurrency Letter

May 20, 2025

Mr. Mark A. Watts, Esq.
Cobb Cole
231 N. Woodland Blvd
DeLand, FL 32720

RE : Ford 472 – County of Volusia
School Concurrency Case # 25-02-25-001-R

Mr. Watts:

District staff has reviewed the school concurrency application for the residential project known as Ford 472, associated with 39.24 +/- acres of property. The property is located at or near the intersection of State Road 472 and Dr. Martin L King Jr. Blvd within an unincorporated area of Volusia county. Information provided in the application indicates the development activity will consist of ninety-one (91) single family units and one hundred twelve (112) multi-family.

The district uses a county wide Student Generation Rate (SGR) of (0.258) per single family and 0.137 per multi-family dwelling unit to calculate projected students. By applying the SGR to the use types in Table 1 below, the project could generate Thirty-Five (35) full time students.

Table 1

UNIT TYPE	SGR	UNIT COUNT	STUDENTS GENERATED
Single Family Dwelling Unit	0.258	91	14
Multi Family Dwelling Unit	0.137	112	21
Mobile/ Manufactured Home Dwelling Unit	0.052	0	0
	Total	**203**	**35**

The Concurrency Analysis (Table 2, next page) adjusts for impacts to the Concurrency Service Areas (CSAs) by accounting for current school year enrollments, existing reservations at the impacted schools, and the projected students generated by the applicant. These factors give an associated utilization or Level of Service (LOS) percentage for each CSA.

The schools impacted by this development are Orange City Elementary School, Deland Middle School, and University High School.

Concurrency Analysis

Table 2

Schools	Adopted LOS	SY 2024/25 Enrollment	Active Reservations	Existing LOS w/ Res	Students Generated by Request	Result LOS
Orange City Elementary	115%	595	17	119%	15	122%
Deland Middle	115%	1067	85	100%	8	104%
<Planning Area> CSA (University High)	120%	2881	80	114%	13	115%
Other					35	

The adopted LOS standard for elementary and middle school is (115%) of permanent student stations, and (120%) for high school CSAs. This projected increase in students **will** exceed the adopted LOS at the elementary level. However, the classroom addition at Orange City elementary is projected to be completed within the coming school year, therefore the school district has no objection to this proposed residential development. Minimum planning considerations should include pedestrian and vehicular access, safety, connectivity, and buffering.

Please note that the School Board has the right to adjust the attendance boundaries to balance the student enrollment populations at these area schools. Therefore, students generated from this project may not attend the current assigned schools.

Should you need additional information, please contact me at (386) 947-8786, ext. 50754.

Sincerely,

Cody F. Shepard

Cody F. Shepard
Specialist, Planning & GIS

CC: Carmen J. Balgobin, Ed.D, Superintendent of Schools
Ron Young, Director of Planning & Construction
Robert J. Voges, Ed.S, Planning Coordinator
Kimberly Reading, Land Development Manager, County of Volusia

VOLUSIA COUNTY SCHOOLS

Certificate of School Concurrency

VOLUSIA COUNTY SCHOOL BOARD

Project Information

Project Name	Ford 472
VCSB Project #	25-02-25-001-R
Jurisdiction Project #	
Parcel ID Numbers	8001-00-00-0020
Project Location	State Road 472 and Dr. Martin L King Jr. Blvd
# of Residential Units	203
Residential Unit Type	91 Single Family Homes 112 Multi-Family Townhomes
Property Owners	Pulte Home Company, LLC
Applicant/Agent Name	Mark A. Watts Esp., Cobb Cole

This School Concurrency Certificate shall reserve student stations for the above referenced project and shall confirm that said project meets the School Concurrency requirements of the adopted Interlocal Agreement for Public School Facility Planning.

School Concurrency Analysis

School Levels	Elementary	Middle	High	Other	Total Student Stations Reserved
Students Generated	**15**	**8**	**5**	0	**35**

Comments: This certificate is required to be included with the building permit submittal(s) as proof of school concurrency.

This concurrency reservation shall expire two (2) years from the date of issuance of this certificate.

Cody F. Shepard

Cody F. Shepard
Specialist, Planning & GIS

May 20, 2025
Issue Date

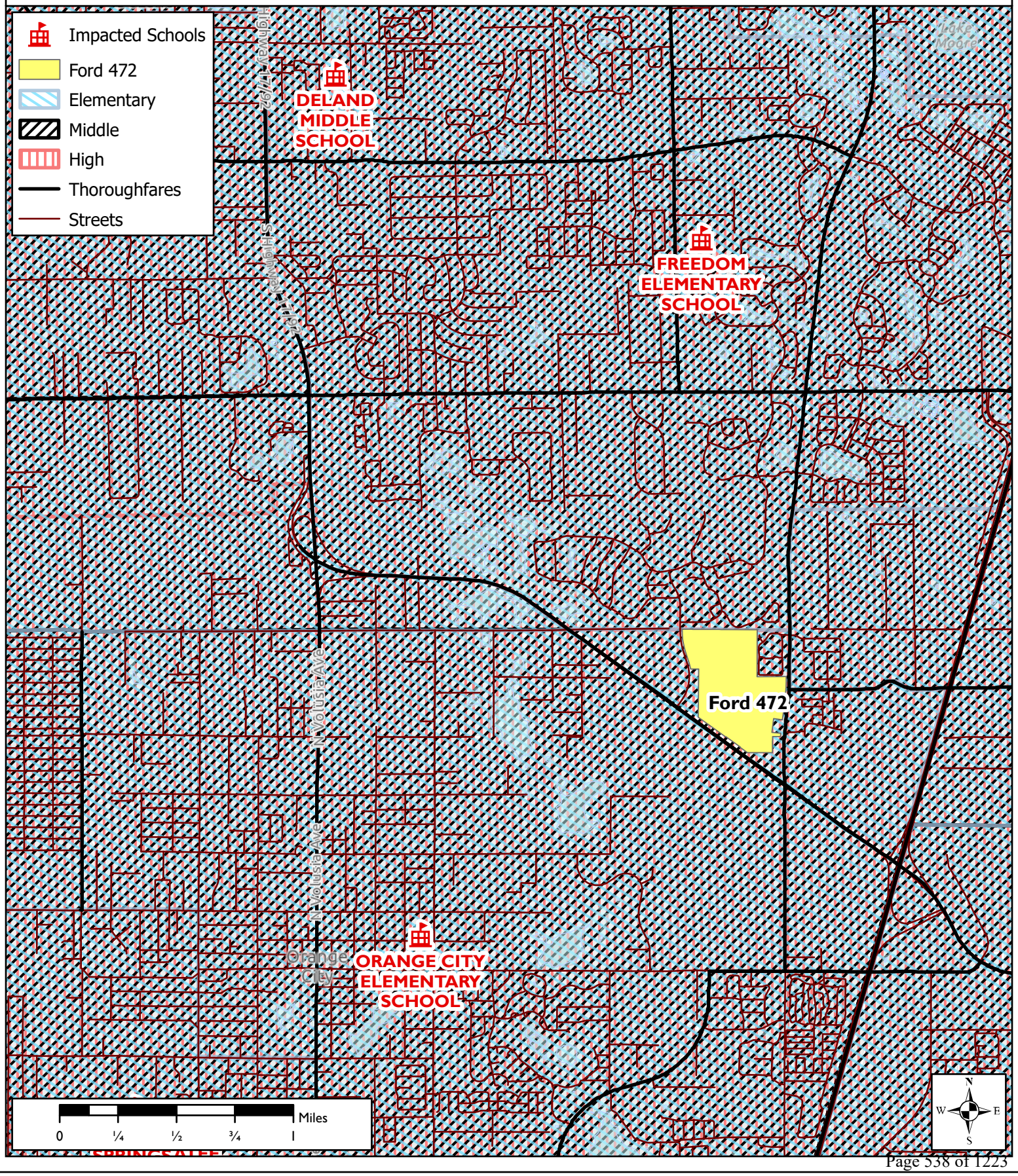
Created: 9/2007
Rev: 1/2018
Owner: Facilities Services

2008-072-VCS
Print Locally

VCSB Schools Impacted by Development

School Concurrency Review - Ford 472

VOLUSIA COUNTY SCHOOLS
Planning & Business Services
May 2025



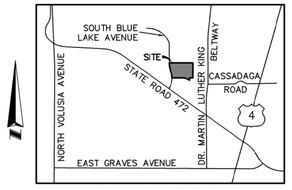
LEGAL DESCRIPTION

A PARCEL OF LAND COMPRISING A PORTION OF GOVERNMENT LOT 1, LYING IN SECTION 1, TOWNSHIP 18 SOUTH, RANGE 30 EAST, VOLUSIA COUNTY, FLORIDA.

BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE SOUTHWEST CORNER OF SECTION 35, TOWNSHIP 17 SOUTH, RANGE 30 EAST BEING A POINT ON THE NORTH LINE OF AFORESAID GOVERNMENT LOT 1, ALSO BEING A POINT ON THE SOUTH LINE OF VICTORIA PARK INCREMENT THREE SOUTHWEST AS RECORDED IN MAP BOOK 51, PAGES 193 THROUGH 205 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA; THENCE RUN NORTH 89°55'33" EAST ALONG THE SOUTH LINE OF SAID SECTION 35, SAID NORTH LINE OF GOVERNMENT LOT 1 AND SAID SOUTH LINE OF SAID VICTORIA PARK INCREMENT THREE SOUTHWEST FOR A DISTANCE OF 1666.26 FEET; THENCE DEPARTING SAID NORTH LINE AND SAID SOUTH LINES RUN SOUTH 00°13'58" WEST FOR A DISTANCE OF 1055.76 FEET; THENCE RUN SOUTH 89°55'33" WEST FOR A DISTANCE OF 256.47 FEET; THENCE RUN SOUTH 00°04'26" EAST FOR A DISTANCE OF 165.32 FEET; THENCE RUN NORTH 60°28'40" WEST FOR A DISTANCE OF 126.03 FEET TO THE POINT OF CURVATURE OF A CURVE, CONCAVE SOUTHWESTERLY HAVING A RADIUS OF 790.00 FEET, WITH A CHORD BEARING OF NORTH 75°16'34" WEST, AND A CHORD DISTANCE OF 403.56 FEET; THENCE RUN NORTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 29°35'47" FOR A DISTANCE OF 408.08 FEET TO THE POINT OF TANGENCY; THENCE RUN SOUTH 89°55'33" WEST FOR A DISTANCE OF 694.57 FEET TO THE POINT OF CURVATURE OF A CURVE, CONCAVE NORTHEASTERLY HAVING A RADIUS OF 25.00 FEET, WITH A CHORD BEARING OF NORTH 46°04'55" WEST, AND A CHORD DISTANCE OF 34.73 FEET; THENCE RUN NORTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 87°59'04" FOR A DISTANCE OF 38.39 FEET TO A POINT ON THE EAST RIGHT-OF-WAY LINE OF SOUTH BLUE LAKE AVENUE ACCORDING TO OFFICIAL RECORDS BOOK 8336, PAGE 276 OF AFORESAID PUBLIC RECORDS, ALSO BEING A POINT OF REVERSE CURVATURE OF A CURVE CONCAVE WESTERLY HAVING A RADIUS OF 995.00 FEET, WITH A CHORD BEARING OF NORTH 10°06'00" WEST, AND A CHORD DISTANCE OF 277.30 FEET; THENCE RUN THE FOLLOWING BEARING AND DISTANCES ALONG SAID EASTERLY RIGHT-OF-WAY LINE: NORTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 16°01'13" FOR A DISTANCE OF 278.21 FEET TO A POINT OF TANGENCY; THENCE RUN NORTH 18°06'36" WEST FOR A DISTANCE OF 280.11 FEET TO THE POINT OF CURVATURE OF A CURVE, CONCAVE EASTERLY HAVING A RADIUS OF 1488.00 FEET, WITH A CHORD BEARING OF NORTH 09°34'01" WEST, AND A CHORD DISTANCE OF 442.10 FEET; THENCE RUN NORTHERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 17°05'11" FOR A DISTANCE OF 443.74 FEET TO THE POINT OF TANGENCY; THENCE RUN NORTH 01°01'25" WEST A DISTANCE OF 56.09 FEET TO A POINT ON THE SOUTH LINE OF THE SOUTHEAST 1/4 OF SECTION 34, TOWNSHIP 17 SOUTH, RANGE 30 EAST, ALSO BEING AFORESAID NORTH LINE OF GOVERNMENT LOT 1 AND SAID SOUTH LINE OF SAID VICTORIA PARK INCREMENT THREE SOUTHWEST; THENCE RUN NORTH 89°43'05" EAST ALONG SAID SOUTH LINES AND SAID NORTH LINE FOR A DISTANCE OF 24.02 FEET TO THE POINT OF BEGINNING.

CONTAINS 39.24 ACRES MORE OR LESS.



LOCATION MAP NOT TO SCALE

SURVEYOR'S NOTES:

1. BEARINGS SHOWN HEREON ARE ASSUMED AND RELATIVE TO THE NORTH LINE OF GOVERNMENT LOT 1, SECTION 1, TOWNSHIP 18 SOUTH, RANGE 30 EAST, BEING NORTH 89°55'33" EAST.
2. THERE MAY BE ENVIRONMENTAL ISSUES AND/OR OTHER MATTERS REGULATED BY VARIOUS DEPARTMENTS OF FEDERAL, STATE OR LOCAL GOVERNMENTS AFFECTING THE SUBJECT PROPERTY NOT SHOWN ON THIS SURVEY.
3. THIS SURVEY WAS PERFORMED FOR THE SOLE AND EXCLUSIVE BENEFIT OF THE ENTITIES LISTED HEREON AND SHALL NOT BE RELIED UPON BY ANY OTHER ENTITY OR INDIVIDUAL WHOMSOEVER.
4. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A COMMITMENT TO INSURE TITLE.
5. THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
6. UNLESS OTHERWISE NOTED OR SHOWN HEREON, APPARENT AND/OR VISIBLE, UNOBSTRUCTED, ABOVE GROUND IMPROVEMENTS WERE LOCATED. UNDERGROUND UTILITIES, FOUNDATIONS AND IMPROVEMENTS WERE NOT LOCATED, UNLESS SHOWN HEREON.
7. UNLESS OTHERWISE NOTED OR SHOWN HEREON, THERE ARE NO APPARENT AND/OR UNOBSTRUCTED, ABOVE GROUND ENCROACHMENTS. THE DISPOSITION OF ANY POTENTIAL ENCROACHING IMPROVEMENTS SHOWN IS BEYOND PROFESSIONAL PURVIEW AND SUBJECT TO LEGAL INTERPRETATION.
8. THE LANDS SHOWN HEREON LIE IN ZONE "X", DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN ACCORDING TO FLOOD INSURANCE RATE MAP (FIRM) COMMUNITY PANEL NO. 1251550610J, MAP NO. 12127C610J, MAP REVISED FEBRUARY 19, 2014. THE ABOVE STATEMENT IS FOR INFORMATION ONLY AND THIS SURVEYOR ASSUMES NO LIABILITY FOR THE CORRECTNESS OF THE CITED MAP(S). IN ADDITION, THE ABOVE STATEMENT DOES NOT REPRESENT THIS SURVEYOR'S OPINION OF THE PROBABILITY OF FLOODING.
9. THERE WAS VISUAL EVIDENCE OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION, OR BUILDING ADDITIONS OBSERVED IN THE PROCESS OF CONDUCTING THE FIELD WITHIN THE SURVEYED LANDS.
10. WHILE CONDUCTING THE SURVEY, THERE WAS NO OBSERVED EVIDENCE OF WETLANDS WITHIN THE SURVEYED LANDS.
11. ADJOINING PARCEL OWNER AND RECORDING INFORMATION DELINEATED HEREON WAS OBTAINED FROM THE VOLUSIA COUNTY PROPERTY APPRAISER'S PUBLIC ACCESS SYSTEM.
12. THE SUBJECT PROPERTY IS UNIMPROVED, NO BUILDINGS AND IS PARTIALLY WOODED
13. THERE WAS NO VISUAL EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS OBSERVED IN THE PROCESS OF CONDUCTING THE FIELD WITHIN THE SURVEYED LANDS. THE SURVEYOR IS UNAWARE OF ANY PROPOSED CHANGES IN THE RIGHT-OF-WAY.
14. THE SUBJECT PROPERTY HAS ACCESS TO PUBLIC UTILITIES FROM THE PUBLIC STREETS ADJACENT TO THE SUBJECT PROPERTY.
15. THE SUBJECT PROPERTY ABUTS, WITHOUT GAPS GORES OR STRIPS, AND HAS VEHICULAR AND PEDESTRIAN INGRESS TO AND EGRESS FROM SOUTH BLUE LAKE AVENUE, WHICH IS COMPLETED, DEDICATED AND ACCEPTED PUBLIC RIGHT OF WAY.
16. EXCEPT AS SHOWN ON THE SURVEY, THE SUBJECT PROPERTY DOES NOT APPEAR TO SERVE ANY ADJOINING PROPERTY FOR UTILITIES, DRAINAGE, STRUCTURAL SUPPORT OR INGRESS OR EGRESS.
17. THE LEGAL DESCRIPTION SHOWN HEREON WAS PREPARED BY THE SURVEYOR AT THE CLIENT'S REQUEST.
18. THERE IS NO OBSERVED EVIDENCE OF THE SITE BEING USED AS A SOLID WASTE DUMP, SUMP OR SANITARY LANDFILL.
19. THIS SURVEY IS CERTIFIED TO: LANDIS GRAHAM FRENCH, P.A.; OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY; PULTE HOME COMPANY, LLC; FRANK A. FORD, INDIVIDUALLY AND AS TRUSTEE; RAY F. VEECH, AS TRUSTEE OF THE ALEX B. VEECH TRUST AND INDIVIDUALLY; KIRTLEY PENROD AS PERSONAL REPRESENTATIVE OF THE ESTATE OF JEAN FORD PENROD AND AS TRUSTEE OF THE JOHN PENROD TESTAMENTARY TRUST; SARAH R. FORD; FRANK A. FORD, JR.; ELIZABETH F. WILLIAMS; COURTNEY F. HAMIL; ATTORNEY'S TITLE FUND SERVICES

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BOUNDARY SURVEY OF FORD 472

SECTION 1, TOWNSHIP 18 SOUTH, RANGE 30 EAST
CITY OF DELAND, VOLUSIA COUNTY, FLORIDA

FOR: PULTE HOMES

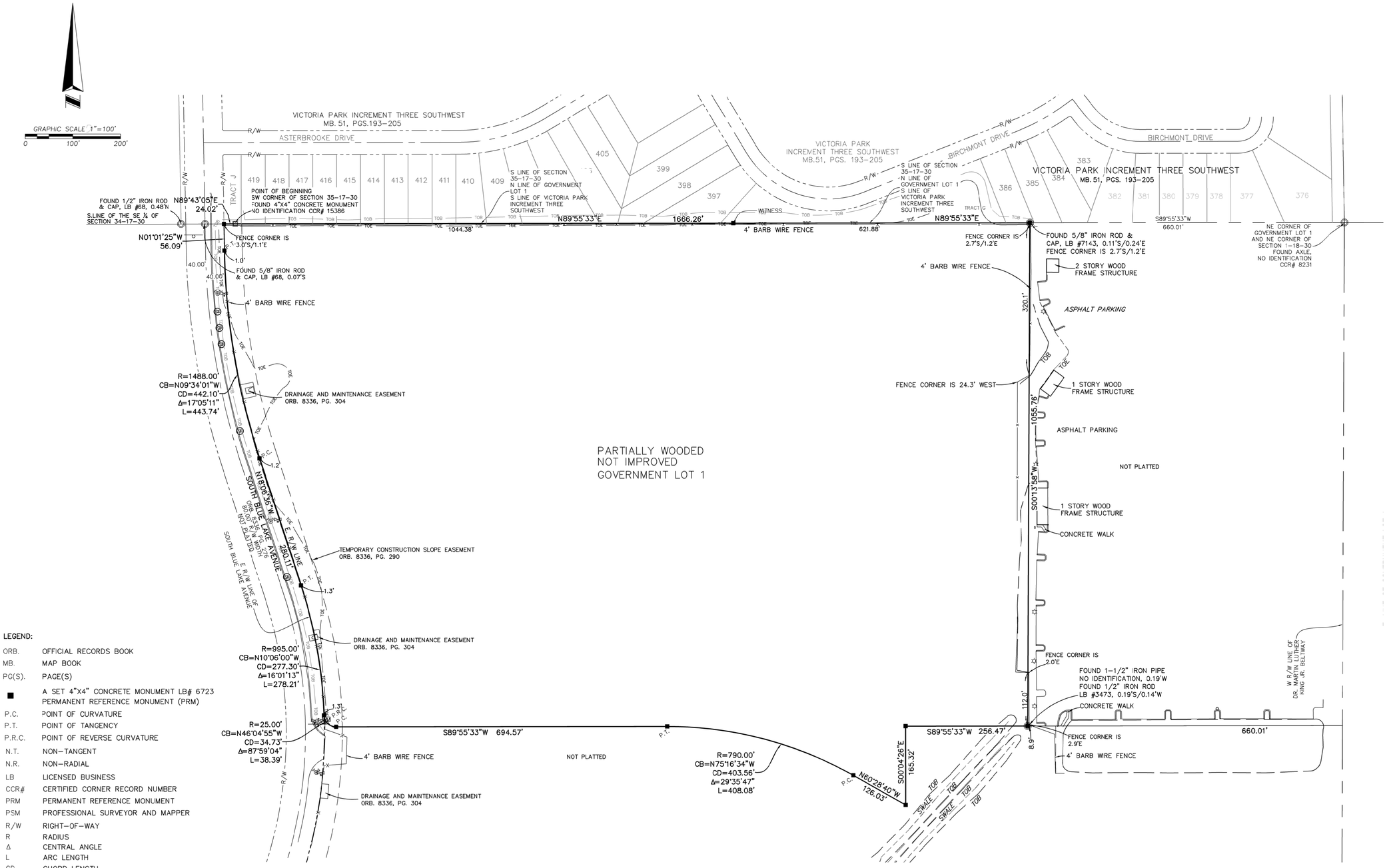
JAMES L. RICKMAN, PSM #5633
FOR THE LICENSED BUSINESS #8627 BY:
JAMES LOUIS RICKMAN LICENSED SURVEYOR STATE OF FLORIDA
LS5633 STATE OF FLORIDA
This item has been electronically signed and Sealed by James L. Rickman, P.S.M. using A Digital Signature.
Printed Copies of this document are not considered signed and sealed and the signature Must be verified on any electronic copies.
Digitally signed by: James L Rickman
Date: 2025.05.22 16:09:12 -04'00'

DATE	REVISIONS
1-17-25	REVISE ACREAGE ADD CERTIFICATIONS

JOB #: 20200713
DATE: 12-16-24
SCALE: 1"=100'
CALC BY: SEJ
FIELD BY: JDS
DRAWN BY: SEJ
CHECKED BY: MR

SHEET 1 OF 2

Drawing name: L:\Data\20200713\Plat\plat boundary 24x36-Brdy Sheet-1



LEGEND:

ORB.	OFFICIAL RECORDS BOOK
MB.	MAP BOOK
PG(S).	PAGE(S)
■	A SET 4"X4" CONCRETE MONUMENT LB# 6723 PERMANENT REFERENCE MONUMENT (PRM)
P.C.	POINT OF CURVATURE
P.T.	POINT OF TANGENCY
P.R.C.	POINT OF REVERSE CURVATURE
N.T.	NON–TANGENT
N.R.	NON–RADIAL
LB	LICENSED BUSINESS
CCR#	CERTIFIED CORNER RECORD NUMBER
PRM	PERMANENT REFERENCE MONUMENT
PSM	PROFESSIONAL SURVEYOR AND MAPPER
R/W	RIGHT–OF–WAY
R	RADIUS
Δ	CENTRAL ANGLE
L	ARC LENGTH
CD	CHORD LENGTH
CB	CHORD BEARING
TOB	TOP OF BANK
TOE	TOE OF SLOPE
☼	LIGHT POLE
S	STORM DRAINAGE MANHOLE
	FIRE HYDRANT
	MITERED END SECTION
W	WATER VALVE
	SINGLE STAND SIGN
WM	WATER METER
	WATERLINE MARKER

Drawing name: L:\Data\20200713\Plat\plat boundary 24x36-Body Sheet-2

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BOUNDARY SURVEY OF FORD 472

SECTION 1, TOWNSHIP 18 SOUTH, RANGE 30 EAST
CITY OF DELAND, VOLUSIA COUNTY, FLORIDA

FOR: PULTE HOMES

JAMES LOUIS RICKMAN LICENSE NUMBER LS5633 STATE OF FLORIDA PROFESSIONAL SURVEYOR AND MAPPER

This item has been electronically signed and Sealed by James L. Rickman, P.S.M. using A Digital Signature.

Printed Copies of this document are not considered signed and sealed and the signature Must be verified on any electronic copies.

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DATE	REVISIONS

JOB #: 20200713
DATE: 12–16–24
SCALE: 1"=100'
CALC BY: SEJ
FIELD BY: FORD 472
DRAWN BY: SEJ
CHECKED BY: MR

SHEET 2 OF 2

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John P. Ferguson
Mark A. Watts
Heather Bond Vargas
Michael J. Woods
Raymond L. Schumann
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William M. Cobb (1881-1939)
Thomas T. Cobb (1916-2004)
W. Warren Cole, Jr. (1926-2008)

February 26, 2025

Carol Kuhn, AICP
Planning Director
City of DeLand
120 South Florida Avenue
DeLand, FL 32720

Re: Revised Project Narrative – 472 PD, Annexation & Small-Scale CPA
Parcel ID No. 8001-00-00-0020 (northern portion of)

Dear Carol,

Cobb Cole represents Pulte Home Company, LLC, owners of the above-referenced parcel. The property is currently undergoing subdivision review and approval by the County of Volusia for the development of single family and townhome style residential units. The property is subject to an annexation, land use, and rezoning request to locate the property within the municipal boundaries of the City of DeLand.

We are requesting to amend the future land use and zoning designations for the property identified in the application ("Property") from Volusia County SWR (land use and zoning) and SWC (land use and zoning) to the City's Low Density Residential ("LDR") land use classification and PUD zoning. The purpose of the applications is to transition the Property while it is under development from the County to City's jurisdiction as a result of the recent shift in utility service area boundaries in the vicinity of the Martin Luther King, Jr. Beltway and S. R. 472. The Property is currently under development based on an approved preliminary subdivision plat for single family residential and townhome residential units and associated amenities. As the Property is developed, the developer is also obligated to extend Cassadaga Road from its current intersection with the MLK Beltway to the recent southern extension of Blue Lake Road.

As background information, the County's SWR and SWC future land use and zoning were created following the abandonment of the former S.R. 472 Areawide Development of Regional Impact ("472 DRI"). Similar to the City of DeLand, the County incorporated much of the development entitlements from the 472 DRI into the SWR and SWC classifications to continue implementing the overall goals, policies and objectives defined by the 472 DRI. The majority of the Property is included within the SWR classifications, which were designed to

provide residential development areas supporting the overall land use mix outlined in the 472 DRI. The SWC classification is primarily designed to support commercial development, however the only portions of the Property that are currently classified under SWC are the areas that will be improved with the Cassadaga Road extension and associated stormwater infrastructure.

Pulte Homes began working with County staff on subdivision approvals for the Property in 2021. When Pulte submitted initial applications, we determined that the Property could not be developed with the minimum required density of 4 units per acre required by the SWR land use classification based on the minimum dimensional requirements adopted in the SWR zoning classification for single family lots. As a result, we coordinated with County staff and the County Council approved revisions to the minimum single family lot dimensional requirements in order to permit development that would meet the minimum required density. During the time the County was processing administrative amendments to the SWR and SWC zoning classifications, consideration of the pending preliminary plat was put on hold. The subdivision review proceeded following the County's correction of the SWR zoning classification's dimensional criteria.

While the preliminary plat was under review and the SWR zoning classification revisions were being reviewed and approved, the City and County revised the boundaries of the utility service areas for the Property. The result of those revisions added the Property to the City's utility service boundary. Since the preliminary plat review was substantially underway at that point in time, we coordinated with City and County staff to proceed with annexation of the Property into the City once the preliminary plat review was completed.

Based on the approved preliminary plat, the Property is currently under development. Based on our coordination with City and County staff, the proposed applications submitted to the City with this letter will annex the Property, assign a land use classification consistent with the approved residential density and incorporate the development standards outlined in the County's SWR classification into a PUD for the Property. The County will continue to provide permit review and inspections for the subdivision improvements required by the approved preliminary plat development order. The City will inspect and improve all utility improvements included in the preliminary plat development order since it is the utility provider. Our intent is to finalize the PUD rezoning in time to allow vertical permitting for all single family and townhome residential structures through the City. In addition, since the City considers townhomes as a multi-family use and subject to the City's community design standards, review and approval of the proposed architectural design for the townhomes is also proposed as part of the PUD approval.
At completion, the development of the Property will include 112 townhome units and 91 single family units. The resulting density is 5.2 units/acre and complies with the minimum required density of the County's SWR land use classification. It is also consistent with the City's LDR land use classification. As noted above, the development includes construction of

extension of Cassadaga Road, and the provision of supporting open space and stormwater amenities. Site development and permitting of horizontal site improvements will be permitted through the County of Volusia, with vertical building permit review and issuance proposed under the City of DeLand and in accordance with the proposed PUD regulations.

Sincerely,

Mark A. Watts, Esq.
Mark.Watts@cobbcole.com

Ford 472
Project № 21145, v1.3
February 2025

Traffic Impact Analysis
City of Deland
Florida

Prepared for:

Pulte Group
4901 Vineland Road, Suite 460
Orando, Florida 32811

Prepared by:

3101 Maguire Boulevard, Suite 265
Orlando, Florida 32803
www.trafficmobility.com
(407) 531-5332

EXECUTIVE SUMMARY

Project Information

Name:	Ford 472
Location:	West of Dr. Martin Luther King Jr. Beltway (MLK) and north of State Road 472 (SR 472)
Jurisdiction	City of Deland, Florida
Description:	91 single family dwelling units and 112 townhomes

Findings

Trip Generation: 1,728 Net New External ADT / 121 AM Peak / 154 PM Peak

Adverse Impacts: The proposed development impacts the following adverse roadways:

- Graves Avenue from Veterans Memorial Parkway to Normandy Boulevard
- Howland Boulevard from I-4/SR 472 to Wolf Pack Run
- Orange Camp Road from US 17/92 to Princeton Road
- West Volusia Beltway from Harley Strickland Boulevard to Rhode Island Avenue

SR 472 and MLK Beltway is currently experiencing delays and is projected to continue to do so at project buildout. However, with background improvements submitted by other projects, the intersection is expected to operate at an overall adequate LOS. The development adds approximately 1% to the total projected traffic.

Recommendations

Access Road Improvements:

<u>MLK Beltway and Cassadaga Road</u>
Install a 455-foot-long northbound left turn lane on MLK Beltway.
Install a 455-foot-long southbound right turn lane on MLK Beltway.
Install a 145-foot-long eastbound left turn lane and a shared right turn/thru lane on Cassadaga Road.

<u>Cassadaga Road Extension and Access I</u>
Install a 145-foot-long westbound left turn lane on Cassadaga Road.
Provide a 145-foot-long southbound egress lane for the left turn movement.

Off-Site Mitigation: The project's proportionate share mitigation is $234,281.24, which shall be paid in accordance with a mitigation agreement with Volusia County.

PROFESSIONAL ENGINEERING CERTIFICATION

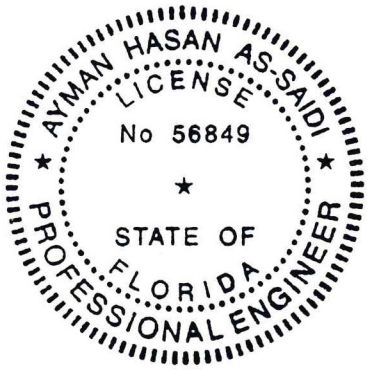
I hereby certify that I am a Professional Engineer properly registered in the State of Florida practicing with Traffic & Mobility Consultants LLC, a corporation authorized to operate as an engineering business, CA-30024, by the State of Florida Department of Professional Regulation, Board of Professional Engineers, and that I have prepared or approved the evaluations, findings, opinions, conclusions, or technical advice attached hereto for:

PROJECT: Ford 472

LOCATION: City of Deland, Florida

CLIENT: Pulte Group

I hereby acknowledge that the procedures and references used to develop the results contained in these computations are standard to the professional practice of Transportation Engineering as applied through professional judgment and experience.



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY

AYMAN H AS-SAIDI

Digitally signed by AYMAN H AS-SAIDI
Date: 2025.02.13 15:18:53 -05'00'

ON THE DATE ADJACENT TO THE SEAL

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TRAFFIC & MOBILITY CONSULTANTS LLC
3101 MAGUIRE BOULEVARD, SUITE 265
ORLANDO, FLORIDA 32803

CERTIFICATE OF AUTHORIZATION CA-30024

AYMAN H. AS-SAIDI, P.E. № 56849

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1.0 INTRODUCTION

This analysis was prepared in support of a development application for the Ford 472 project. The project is a residential development that includes the land uses and quantities presented in **Table 1**. The project's anticipated buildout date is 2028. This analysis has been updated to address the comments received from Volusia County. The response to the comments letter is provided in **Appendix A**, along with the comment letter from Volusia County.

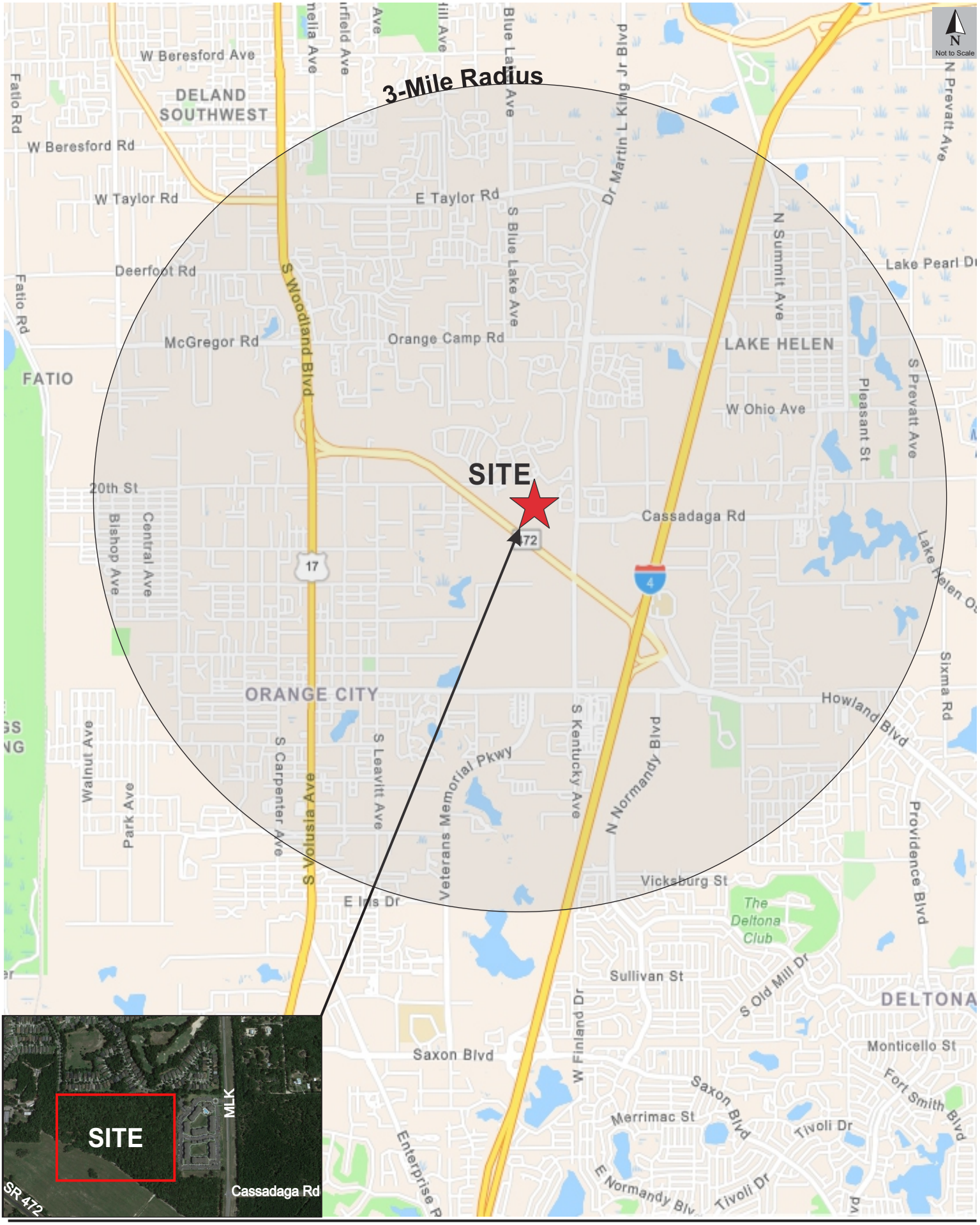
Table 1
Development Plan

Land Use	Size	ITE Code
Single Family Residential	91 DU	210
Townhomes	112 DU	215

The site is located west of Dr. Martin Luther King Jr. Beltway (MLK) and north of State Road 472 (SR 472) in the City of Deland, Florida. **Figure 1** depicts the site location and the surrounding transportation network. Cassadaga Road and Blue Lake Avenue are planned to be extended to facilitate access to the project site. Access will be provided via two driveways: one (1) full access driveway on the Cassadaga Road extension and one (1) full access driveway on the Blue Lake Avenue extension. The proposed access plan is illustrated in **Figure 2**. A conceptual site plan depicting the site layout, land uses, and access points is provided in **Appendix B**. The conceptual layout of the intersections along the Cassadaga Road extension and Blue Lake Avenue Extension along with the approved development plan are also provided in **Appendix B**.

The analysis was conducted in accordance with the methodology approved by Volusia County, which is provided along with the approval letter in **Appendix C**.

Information used in this analysis includes data collected by Traffic & Mobility Consultants, information provided by the project team, and/or other data and information obtained from Volusia County, the Institute of Transportation Engineers (ITE), and the Florida Department of Transportation (FDOT).



TMC Traffic & Mobility CONSULTANTS

21145 Ford 472, v1.3

Site Location Map **Figure 1**


N
Not to Scale
MLK
Proposed
Full Access
Proposed S.Blue Lake Ave Extension
Proposed Cassadaga Rd Extension
Proposed
Full Access
Existing Signal
Existing Median
Opening
SR 472
MLK

2.0 PROJECT TRAFFIC

2.1 Trip Generation

The trips generated by the proposed development were projected using data published in the ITE *Trip Generation Manual, 11th Edition*. Trip generation rates and/or equations published for the land uses were applied to the proposed development program to determine the total trips generated by the project.

The trip generation calculations are summarized in **Table 2** and detailed information is included in **Appendix D.**

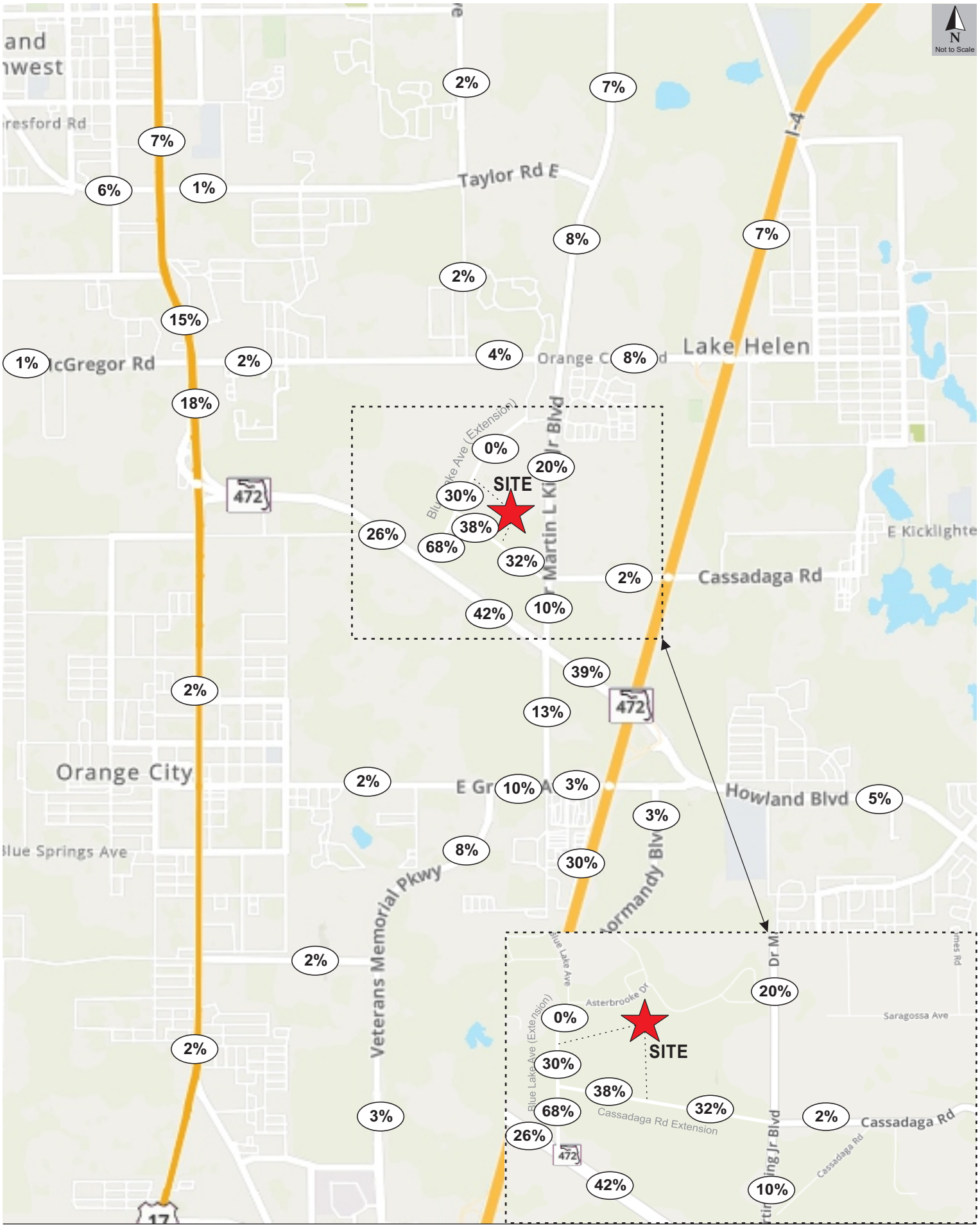
Table 2
Trip Generation Summary

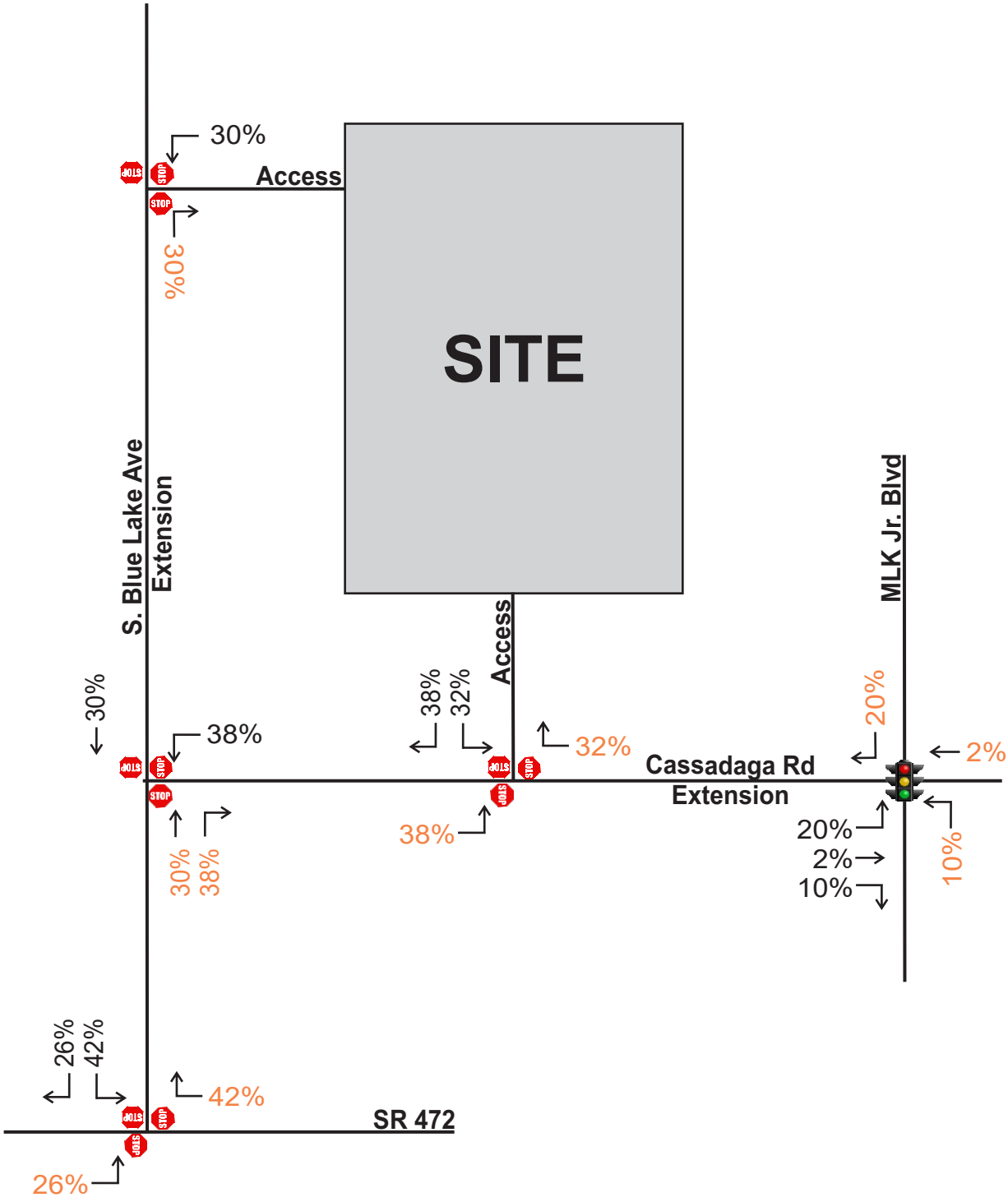
ITE Code	Land Use	Size	Daily		AM Peak Hour				PM Peak Hour			
			Rate	Trips	Rate	Total	Enter	Exit	Rate	Total	Enter	Exit
210	Single Family Residential	91 DU	10.17	925	0.75	68	17	51	1.00	91	57	34
215	Single Family Attached (Townhomes)	112 DU	7.17	803	0.47	53	13	40	0.56	63	37	26
Total Trip Generation				**1,728**		**121**	**30**	**91**		**154**	**94**	**60**

Trip generation analysis based on ITE Trip Generation Manual, 11th Edition

2.2 Trip Distribution

A preliminary trip distribution pattern was developed using the *Central Florida Regional Planning Model (CFRPMv7)*. The adopted model was modified to include project specific Traffic Analysis Zones with the corresponding socio-economic data to reflect the proposed development. A Select Zone Analysis was executed to obtain a model-generated trip distribution pattern on the surrounding transportation network. Minor manual adjustments were applied to the model generated distribution pattern to better reflect the local transportation network and prevailing travel patterns. The final trip distribution pattern is illustrated in **Figure 3** and the model output plots are included **Appendix E**. The trip assignment at the project driveways was determined based on the relative trip generation of the different components of the site and their proximity to the driveways. The driveway trip assignment is illustrated in **Figure 4**.


N
Not to Scale
2%
7%
7%
6%
1%
Taylor Rd E
I-4
8%
7%
2%
15%
1%
2%
4%
8%
Lake Helen
18%
0%
20%
SITE
30%
38%
26%
68%
32%
2%
Cassadaga Rd
42%
10%
39%
2%
13%
472
Orange City
2%
10%
3%
Howland Blvd
5%
3%
8%
30%
2%
Veterans Memorial Pkwy
2%
20%
0%
SITE
30%
38%
68%
32%
2%
Cassadaga Rd
26%
3%
42%
10%
Asterbrooke Dr
Saragossa Ave
Blue Lake Ave (Extension)
Cassadaga Rd Extension



LEGEND

Entering

Exiting

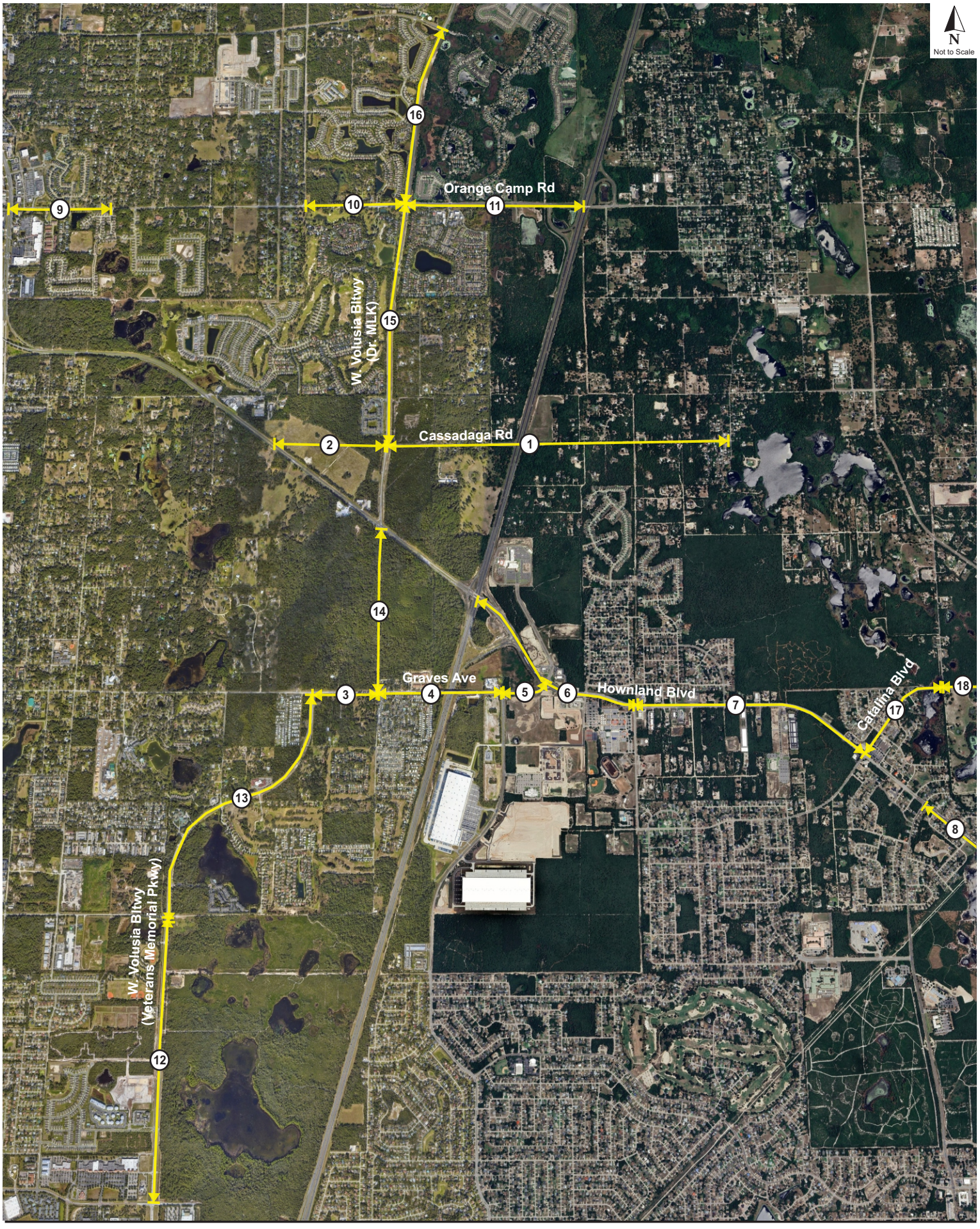
3.0 STUDY AREA

3.1 Study Roadways

The study area was established in accordance with the requirements of Volusia County and the TIA methodology. The impact area includes roadway segments where project trips are equivalent to 3% or more of the roadway segment's capacity and roadway segments within 3 miles that are designated as Critical/Near Critical and Vested Critical/Near Vested Critical (C/NC/VC/NVC) facilities. The project's study roadway segments are listed in **Table 3** and displayed in **Figure 4.** The roadway segment information and characteristics were obtained from the 2021 Volusia County *Annual Average Daily Traffic (AADT) and Historical Counts*, which is included in **Appendix F.**

Table 3
Study Roadway Segments

Seg #	Segment Information		
	Roadway	From	To
1	Cassadaga Rd	W. Volusia Bltwy (Dr. MLK Bltwy)	Macy Ave
2	Cassadaga Rd	W. Volusia Bltwy (Dr. MLK Bltwy)	SR 472
3	Graves Ave	Veterans Memorial Pkwy	Kentucky Ave
4	Graves Ave	Kentucky Ave	Normandy Blvd
5	Graves Ave	Normandy Blvd	Howland Blvd
6	Howland Blvd	I-4/SR 472	Wolf Pack Run
7	Howland Blvd	Wolf Pack Run	Catalina Blvd
8	Howland Blvd	Providence Blvd	Elkcam Blvd
9	Orange Camp Rd	US 17/92	Princeton Rd
10	Orange Camp Rd	Blue Lake Ave	W. Volusia Bltwy (Dr. MLK Bltwy)
11	Orange Camp Rd	W. Volusia Bltwy (Dr. MLK Bltwy)	I-4
12	W. Volusia Bltwy (Veterans Memorial Pkwy)	Harley Strickland Blvd	Rhode Island Ave
13	W. Volusia Bltwy (Veterans Memorial Pkwy)	Rhode Island Ave	Graves Ave
14	W. Volusia Bltwy (Veterans Memorial Pkwy)	Graves Ave	SR 472
15	W. Volusia Bltwy (Dr. MLK Bltwy)	Cassadaga Rd	Orange Camp Rd
16	W. Volusia Bltwy (Dr. MLK Bltwy)	Orange Camp Rd	Taylor Rd
17	Catalina Blvd	Howland Blvd	Sixma Rd
18	Catalina Blvd	Sixma Rd	Lake Helen Osteen


N
Not to Scale
Orange Camp Rd
Cassadaga Rd
Graves Ave
Hownland Blvd
Catalina Blvd
W Volusia Bltwy (Dr. MLK)
W Volusia Bltwy (Veterans Memorial Pkwy)
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18

3.2 Study Intersections

The study area encompasses major intersections that were identified in the methodology, which also include the two access points planned on the extensions of Blue Lake Avenue and Cassadaga Road. These two access points include one (1) full access driveway on Cassadaga Road Extension and one (1) full access driveway on Blue Lake Avenue Extension. The study intersections and access points are presented in **Table 4** and illustrated in **Figure 5**.

Table 4
Study Intersections

Int #	Intersection		Traffic Control
	Major Road	Minor Road	
1	Dr. MLK Bltwy	Orange Camp Rd	Roundabout
2	Dr. MLK Bltwy	Cassadaga Rd	Signal
3	Dr. MLK Bltwy / Kentucky Ave	SR 472	Signal
4	SR 472	Blue Lake Ave (Ext.)	Two-Way Stop
5	SR 472	Minnesota Ave	Two-Way Stop
6	Cassadaga Rd (Ext.)	Access I	Two-Way Stop
7	Blue Lake Ave (Ext.)	Access II	Two-Way Stop
8	Blue Lake Ave (Ext.)	Cassadaga Rd (Ext.)	Two-Way Stop


N
Not to Scale
Orange Camp Rd
1
Dr. MLK Bltwy
Minnesota Ave
5
7
Blue Lake Ave Extension
SR 472
8
6
Cassadaga Road Extension
2
Cassadaga Rd
4
3
Kentucky Ave

4.0 TRANSPORTATION IMPROVEMENTS

Transportation improvement programs published by Volusia County and the FDOT work program were reviewed to assess any planned or ongoing projects within the next few years that could impact the study area of the project. Improvements that are funded for construction within three (3) years were considered programmed and were incorporated in the analysis. The planned and programmed improvements are listed in **Table 5**.

Table 5
Planned and Programmed Improvements

Roadway	From	To	Improvement	Status
Howland Blvd	Providence Blvd	Elkcam Blvd	Widen From 2 to 4 Lanes	Under Construction
Orange Camp Rd	Dr. MLK Bltwy	I-4	Widen From 2 to 4 Lanes	Under Construction
Cassadaga Rd	Dr. MLK Bltwy	Blue Lake Ave (Ext)	Extension	Planned by Developer
Blue Lake Ave	SR 472	Asterbrooke Dr	Extension	Planned by Developer

Source: 2021-22 Volusia County Road Program & Development Plan

Two (2) improvements currently under construction were identified, each set to positively influence the area. Howland Boulevard is currently undergoing expansion from two (2) lanes to four (4) lanes between Providence Boulevard and Elkcam Boulevard. Additionally, Orange Camp Road is being widened from two (2) to four (4) lanes, stretching from Dr. MLK Beltway to I-4. Details from the *Volusia County Road Program 2021-22*, which illustrate these developments, are included in **Appendix G** for reference.

Furthermore, the developer has outlined plans to extend Cassadaga Road and Blue Lake Avenue to enhance access to the Project Site. These proposed extensions are depicted in the concept plan for the site, provided in **Appendix B**.

5.0 IMPROVEMENTS AT THE INTERSECTION OF SR 472 AND MLK BELTWAY

Following the county's directive to obtain City confirmation on whether additional projects should be included in the vested trip calculation, the City of DeLand was consulted, and they identified two approved projects near the Ford 472 site - Deland Tech Park and TM BTR (Yardley). These approved developments are located across from the Ford 472 site but are not listed in the Volusia County Database. These developments are anticipated to significantly impact traffic patterns near the Ford 472 project. To account for these influences, the traffic volumes from both Deland Tech Park and TM BTR have been included in the background traffic analysis as vested trips.

Previous studies have indicated that the intersection of SR 472 and MLK Beltway is currently experiencing and is projected to continue experiencing delays. Given that Deland Tech Park is a major development expected to substantially increase traffic at this intersection, several improvements were recommended in the traffic impact study. These recommendations include:

- Constructing a westbound left turn lane
- Constructing a northbound left turn lane and an additional through lane
- Constructing a southbound left turn lane and an additional through lane
- Optimizing signal timing to improve traffic flow

These recommended improvements from the Deland Tech Park study were also integrated into the TM BTR analysis. The queue evaluation and proportionate share calculations have been carried out based on the findings and recommendations in the Traffic Impact Analyses (TIAs). For further details, excerpts from the TIAs for these projects are provided in **Appendix H**. The proportionate share of this development reflecting those improvements have been calculated in accordance with the requirements of Volusia County using the *Master Proportionate Fair Share Table,* which is detailed in Section 11 of the report.

6.0 TRAFFIC PROJECTIONS

6.1 Projected Roadway Volumes

Existing roadway information was obtained from the 2022 Volusia County *AADT and Historical Counts.* The information includes roadway segment data, existing traffic volumes, and capacities.

Projected background traffic in the buildout year 2028 was derived by comparing historical growth rate trends and vested trips and applying the appropriate resulting background volume in accordance with the Volusia County *Segment Growth Rates and Vested Trips Instruction Policy*. Historical traffic count data was obtained from the 2022 Volusia County *AADT and Historical Counts* and the vested trips were obtained from the Volusia County *Vested Trip Database*. As noted in previous section, the two nearby developments, Deland Tech Park and TM BTR, were not included in the County database. Thus, trips from these projects were added to the vested trip calculation, along with those already listed in the database.

The historical growth trend analysis worksheets, vested trip information, and the *Segment Growth Rates and Vested Trips Instruction Policy* are included in **Appendix I**. The applicable growth rate calculations are summarized in **Table 6**. The total projected volumes on the roadway segments include background traffic and project trips, which were calculated based on the project's trip generation and distribution pattern.

Table 6
Growth Projection Methods

Segment Information			5 Years		10 Years		Applied	Exist	2028	Vested		Growth Calculation		Background +
Roadway	From	To	R^2	GR	R^2	GR	GR	Vol	Growth	Trips	VCTE Growth Rate Policy	Method	Growth	Vested Traffic
Cassadaga Rd	W. Volusia Bltwy (Dr. MLK Bltwy)	Macy Ave	33.33%	3.21%	61.71%	2.56%	2.56%	210	32	120	GR + Vested Trips	GR + Vested Trips	152	362
Cassadaga Rd*	W. Volusia Bltwy (Dr. MLK Bltwy)	Blue Lake Ave (Extension)	--	--	--	--	--	--	--	--	--	--	--	0
Graves Ave	Veterans Memorial Pkwy	Kentucky Ave	3.40%	-0.59%	54.65%	1.69%	3.52%	1,635	345	573	Highest of GR or Vested Trips	Vested Trips	573	2208
Graves Ave	Kentucky Ave	Normandy Blvd	64.59%	5.20%	79.70%	3.52%	3.52%	1,675	354	931	Highest of GR or Vested Trips	Vested Trips	931	2,606
Graves Ave	Normandy Blvd	Howland Blvd	25.13%	2.13%	76.75%	3.02%	3.02%	1,340	243	997	Highest of GR or Vested Trips	Vested Trips	997	2,337
Howland Blvd	I-4/SR 472	Wolf Pack Run	77.13%	-5.22%	0.21%	0.15%	1.00%	2,410	145	1,054	GR + Vested Trips	GR + Vested Trips	1,199	3,609
Howland Blvd	Wolf Pack Run	Catalina Blvd	57.09%	-4.07%	0.10%	-0.12%	1.00%	1,460	88	925	GR + Vested Trips	GR + Vested Trips	1,013	2,473
Howland Blvd	Providence Blvd	Elkcam Blvd	76.18%	-10.47%	16.72%	-1.78%	1.00%	1,020	61	289	GR + Vested Trips	GR + Vested Trips	350	1,370
Orange Camp Rd	US 17/92	Princeton Rd	5.36%	-0.37%	77.38%	3.56%	3.56%	1,160	248	172	Highest of GR or Vested Trips	GR	248	1,408
Orange Camp Rd	Blue Lake Ave	W. Volusia Bltwy (Dr. MLK Bltwy)	27.91%	-2.02%	80.82%	1.14%	1.14%	1,075	74	262	GR + Vested Trips	GR + Vested Trips	336	1,411
Orange Camp Rd	W. Volusia Bltwy (Dr. MLK Bltwy)	I-4	55.67%	-2.76%	59.37%	2.51%	1.14%	1,170	80	361	GR + Vested Trips	GR + Vested Trips	441	1,611
W. Volusia Bltwy (Veterans Memorial Pkwy)	Harley Strickland Blvd	Rhode Island Ave	24.78%	-1.58%	17.34%	0.67%	1.00%	1,480	89	403	GR + Vested Trips	GR + Vested Trips	492	1,972
W. Volusia Bltwy (Veterans Memorial Pkwy)	Rhode Island Ave	Graves Ave	0.02%	-0.11%	24.60%	-1.76%	1.00%	1,100	66	400	Highest of GR or Vested Trips	Vested Trips	400	1,500
W. Volusia Bltwy (Kentucky Ave)	Graves Ave	SR 472	2.86%	0.62%	36.04%	1.22%	2.00%	910	109	381	GR + Vested Trips	GR + Vested Trips	490	1,400
W. Volusia Bltwy (Dr. MLK Bltwy)	Cassadaga Rd	Orange Camp Rd	74.00%	-7.48%	1.76%	-0.45%	1.00%	755	45	642	GR + Vested Trips	GR + Vested Trips	687	1,442
W. Volusia Bltwy (Dr. MLK Bltwy)	Orange Camp Rd	Taylor Rd	70.70%	-2.00%	3.62%	-0.67%	1.00%	910	55	437	GR + Vested Trips	GR + Vested Trips	492	1,402
Catalina Blvd**	Howland Blvd	Sixma Rd	69.89%	-35.96%	43.83%	-12.19%	1.00%	155	8	126	GR + Vested Trips	GR + Vested Trips	134	289
Catalina Blvd**	Sixma Rd	Lake Helen Osteen	69.89%	-35.96%	43.83%	-12.19%	1.00%	155	8	110	GR + Vested Trips	GR + Vested Trips	118	273

Vested trips obtained from *Volusia County Vested Trip Database* and also include trips from Deland Tech Park and TM BTR (Yardley)

*This segments is an extension and do not currently exist.

**No data in *Volusia County 2022 AADT*. Historical AADT obtained from *Florida Traffic Online (FTO) 2023*. Existing PM Peak Hour Volume estimated using AADT, K factor and D Factor

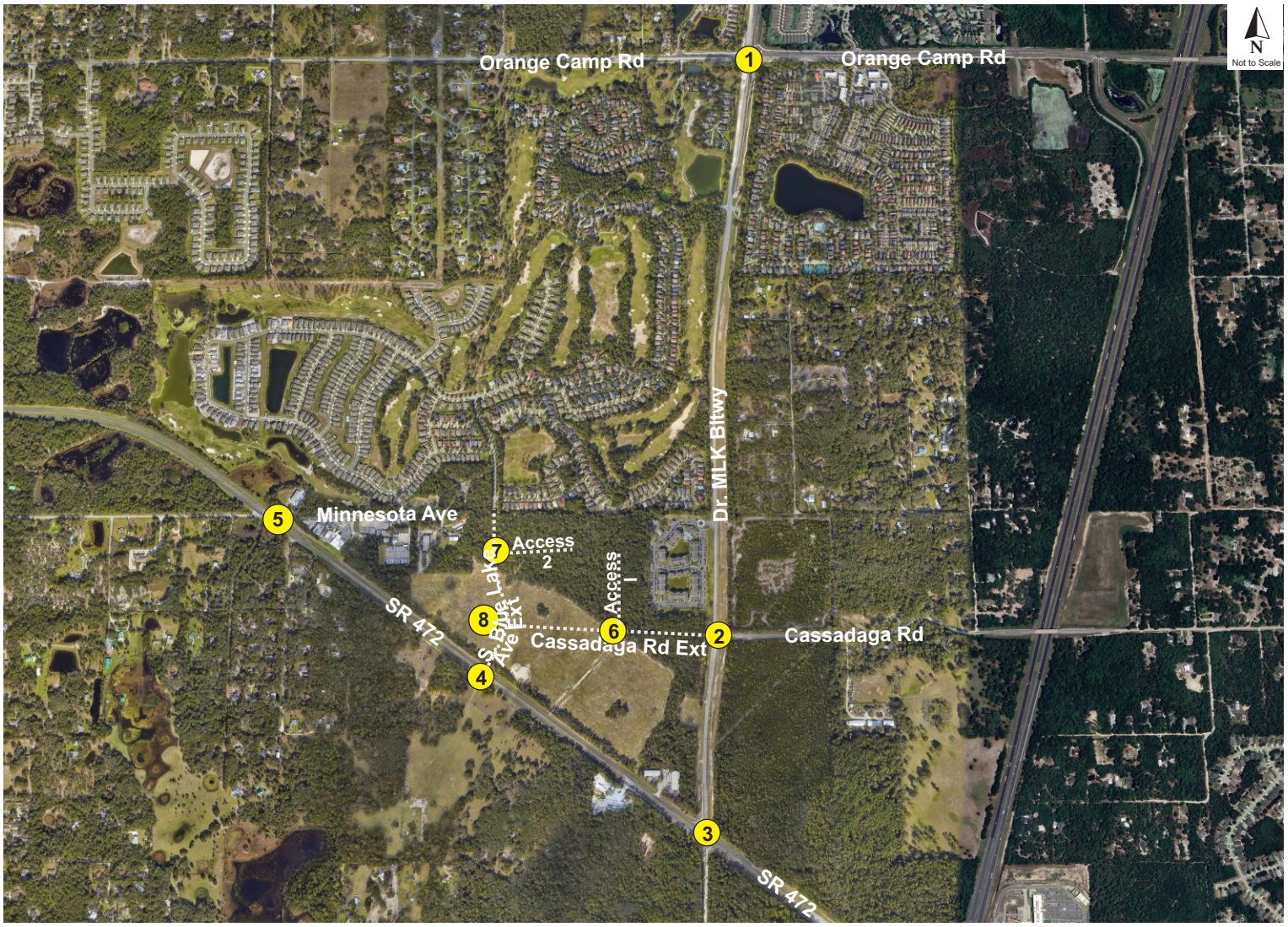
6.2 Projected Intersection Volumes

Existing AM and PM peak hour turning movement volumes were obtained at the study intersections on June 12, 2024. The counts were seasonally adjusted using the applicable seasonal factor obtained from the FDOT *Traffic Online Peak Season Factor Category Report*. The raw turning movement volumes and supporting information are provided in **Appendix J**.

The two developments, Deland Tech Park and TM BTR, located across from the Ford 472 project, are expected to significantly impact traffic patterns in the area. Therefore, trips from these developments have been included in the background traffic analysis as vested trips. Excerpts from the TIA detailing the vested trips added to the intersection volume for our project are provided in **Appendix K**. Projected background intersection volumes for the buildout year 2030 were estimated using the annual growth rates determined for the respective segment provided in **Table 6**, then adding the vested trips from Deland Tech Park and TM BTR.

There is no existing traffic volume data for the Blue Lake Avenue Extension and Cassadaga Road Extension as these segments do not currently exist. There are approximately 50 single family units close to the planned extension of Blue Lake Avenue Extension. It is assumed that 25 of these homes will use the Blue Lake Ave Extension to access SR 472 and 10 of these homes will use Cassadaga Road Extension to access MLK Beltway. To estimate the background traffic volume at the intersection of Blue Lake Avenue Extension and Access II, peak hour volumes were derived using the *ITE Trip Generation Manual, 11th edition* (using trips of both 25 units and 10 residential units). Additionally, the background traffic volume at the intersection of SR 472 and Blue Lake Avenue was divided into eastbound and westbound directions according to the existing split ratio at that intersection. It was done in a similar manner at Cassadaga Road Extension.

The total projected intersection volumes include background traffic and project trips, which were calculated based on the project's trip generation and assignment at each intersection. Detailed intersection volume calculations are provided in **Appendix L** and the resulting existing, background (including vested trips), and buildout volumes are illustrated in **Figure 7** and **Figure 8** for the AM peak hour and **Figure 9** and **Figure 10** for the PM peak hour.



1. Dr. MLK Bltwy & Orange Camp Rd

NB	L	173 + {14} + [4] + (4) = 195
	T	468 + {20} + [7] + (7) = 502
	R	54 + {25} + [4] + (7) = 90
SB	L	269
	T	250 + {51} + [2] + (2) = 305
	R	38
EB	L	51
	T	425
	R	54 + {38} + [1] + (2) = 95
WB	L	44 + {70} + [1] + (2) = 117
	T	328
	R	128

				38	305	269	BO	
				38	303	269	BK	
				37	240	259	EX	
				0	2	0		
BO	BK	EX						
51	51	49	0				0	122	128	128
425	425	406	2				2	314	328	328
95	93	52	1				0	42	115	117
							EX	BK	BO	
				0	2	0		
			EX	166	450	52		
			BK	191	495	83		
			BO	195	502	90		

2. Dr. MLK Bltwy & Cassadaga Rd

NB	L	1 + (3) = 4
	T	330 + {38} + [14] = 382
	R	228 + {14} + [2] = 242
SB	L	66 + {70} + [6] = 142
	T	387 + {143} = 530
	R	1 + (6) = 7
EB	L	2 + (18) = 20
	T	2 + (2) = 4
	R	3 + (9) = 12
WB	L	227 + {12} + [50] = 289
	T	(1)
	R	61 + {39} + [4] = 104

				7	530	142	BO	
				1	530	142	BK	
				0	372	63	EX	
				0	1	1	LN	
BO	BK	EX	LN					
20	2	0	1				0	55	104	104
4	2	0	1				1	0	0	1
12	3	0	0				1	206	289	289
							LN	EX	BK	BO
			LN	0	1	1		
			EX	0	317	219		
			BK	1	382	242		
			BO	4	382	242		

3. Dr. MLK Bltwy / Kentucky Ave & SR 472

NB	L	144 + (1) = 145
	T	255 + {9} + [5] + (3) = 272
	R	62 + {56} = 118
SB	L	212 + {116} + [25] = 353
	T	349 + {3} + [14] + (9) = 375
	R	64 + {5} + [11] = 80
EB	L	64 + {21} + [3] = 88
	T	965 + {82} + (35) = 1082
	R	106 + (3) = 109
WB	L	105 + {19} = 124
	T	901 + {34} + (11) = 946
	R	250 + {23} + [8] = 281

				80	375	353	BO	
				80	366	353	BK	
				59	323	196	EX	
				1	1	1		
BO	BK	EX						
88	88	62	1				1	240	281	281
1,082	1,047	928	2				2	866	935	946
109	106	102	1				1	101	124	124
							EX	BK	BO	
				0	1	1		
			EX	133	236	57		
			BK	144	269	118		
			BO	145	272	118		

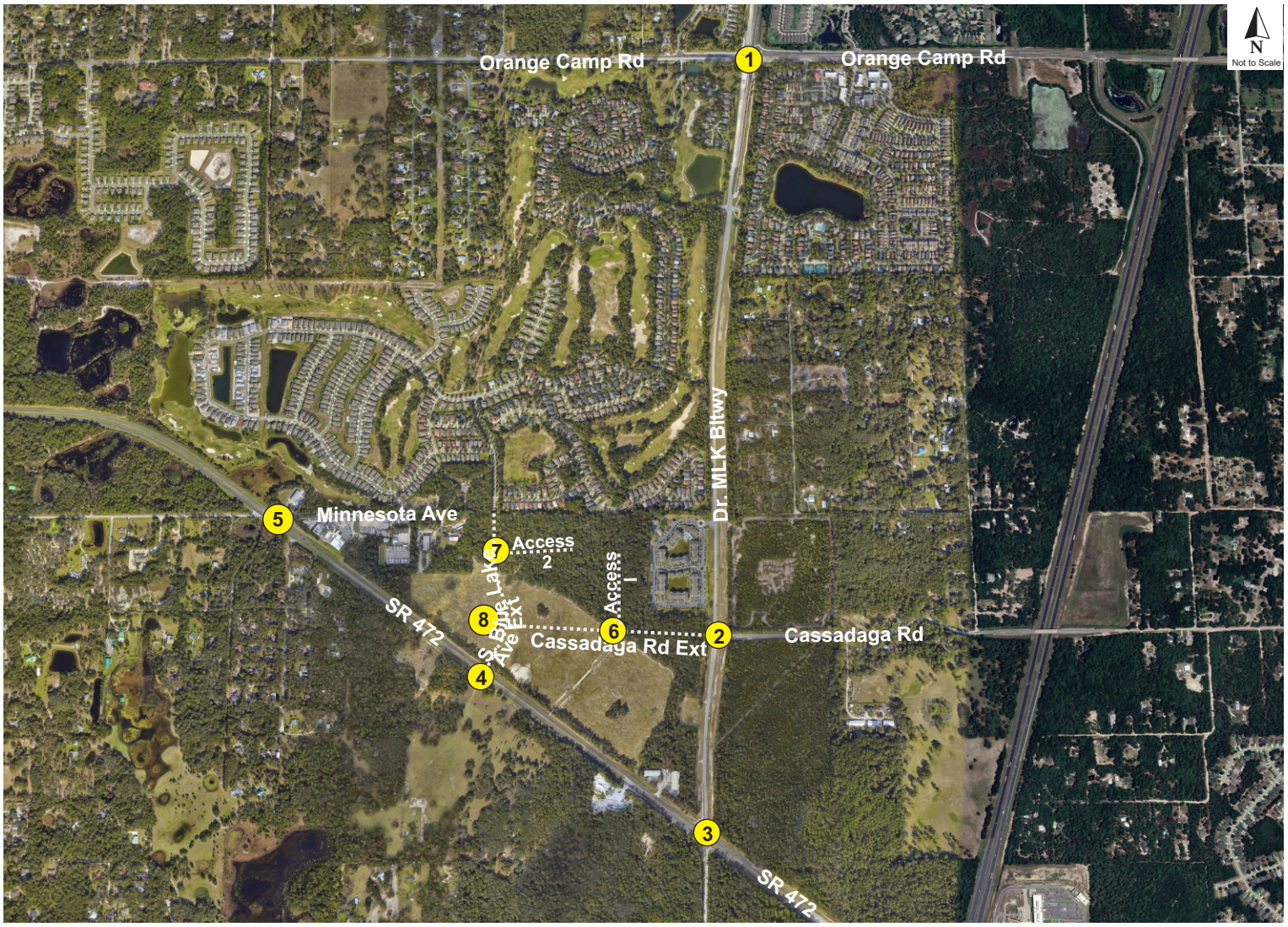
4. SR 472 & Blue Lake Ave (Ext.)

NB	L	
	T	
	R	
SB	L	8 + (38) = 46
	T	
	R	8 + (24) = 32
EB	L	3 + (8) = 11
	T	1136 + {103} + [3] = 1242
	R	
WB	L	
	T	1101 + {39} + [11] = 1151
	R	2 + (12) = 14

				32	0	46	BO	
				8	0	8	BK	
				0	0	0	EX	
				1	1	0	LN	
BO	BK	EX	LN					
11	3	0	1				1	0	2	14
1,242	1,242	1,092	2				2	1,059	1,151	1,151
0	0	0	0				0	0	0	0
							LN	EX	BK	BO
			LN	0	0	0		
			EX	0	0	0		
			BK	0	0	0		
			BO	0	0	0		

Legend: Background + {Tech Park} + [TM BTR] + (Project) = Total

BO = Buildout; BK = Background + Vested; EX = Existing
1 Lanes by movement



5. SR 472 & Minnesota Ave

NB	L	4
	T	
	R	7
SB	L	5
	T	
	R	3
EB	L	3
	T	1123 + {103} + [3] + (8) = 1237
	R	4
WB	L	4
	T	1092 + {39} + [11] + (24) = 1166
	R	4

	BO	BK	EX	LN
BO	3	0	5	
BK	3	0	5	
EX	3	0	5	
LN	0	1	0	

	BO	BK	EX	LN
BO	3	3	3	1
BK	1,237	1,229	1,080	2
EX	4	4	4	1
LN	0	4	4	4
EX	2	1,050	1,142	1,166
BK	0	4	4	4
BO	0	4	4	4

	LN	EX	BK	BO
LN	0	1	0	
EX	4	0	7	
BK	4	0	7	
BO	4	0	7	

6. Cassadaga Rd (Ext.) & Access I

NB	L	
	T	
	R	
SB	L	(29)
	T	
	R	(35)
EB	L	(11)
	T	7
	R	
WB	L	
	T	2
	R	(10)

	BO	BK	EX	LN
BO	35	0	29	
BK	0	0	0	
EX	0	0	0	
LN	0	0	1	

	BO	BK	EX	LN
BO	11	0	0	1
BK	7	7	0	1
EX	0	0	0	0
LN	1	0	0	10
EX	1	0	2	2
BK	0	0	0	0
BO	0	0	0	0

	LN	EX	BK	BO
LN	0	0	0	
EX	0	0	0	
BK	0	0	0	
BO	0	0	0	

7. Blue Lake Ave (Ext.) & Access II

NB	L	
	T	7
	R	(9)
SB	L	
	T	23
	R	
EB	L	
	T	
	R	
WB	L	(27)
	T	
	R	

	BO	BK	EX	LN
BO	0	23	0	
BK	0	23	0	
EX	0	0	0	
LN	0	1	0	

	BO	BK	EX	LN
BO	0	0	0	0
BK	0	0	0	0
EX	0	0	0	0
LN	0	0	0	0
EX	0	0	0	0
BK	0	0	0	0
BO	0	0	0	27

	LN	EX	BK	BO
LN	0	1	1	
EX	0	0	0	
BK	0	7	0	
BO	0	7	9	

8. Blue Lake Ave (Ext.) & Cassadaga Rd (Ext.)

NB	L	
	T	5 + (9) = 14
	R	(11)
SB	L	7
	T	16 + (27) = 43
	R	
EB	L	
	T	
	R	
WB	L	(35)
	T	
	R	2

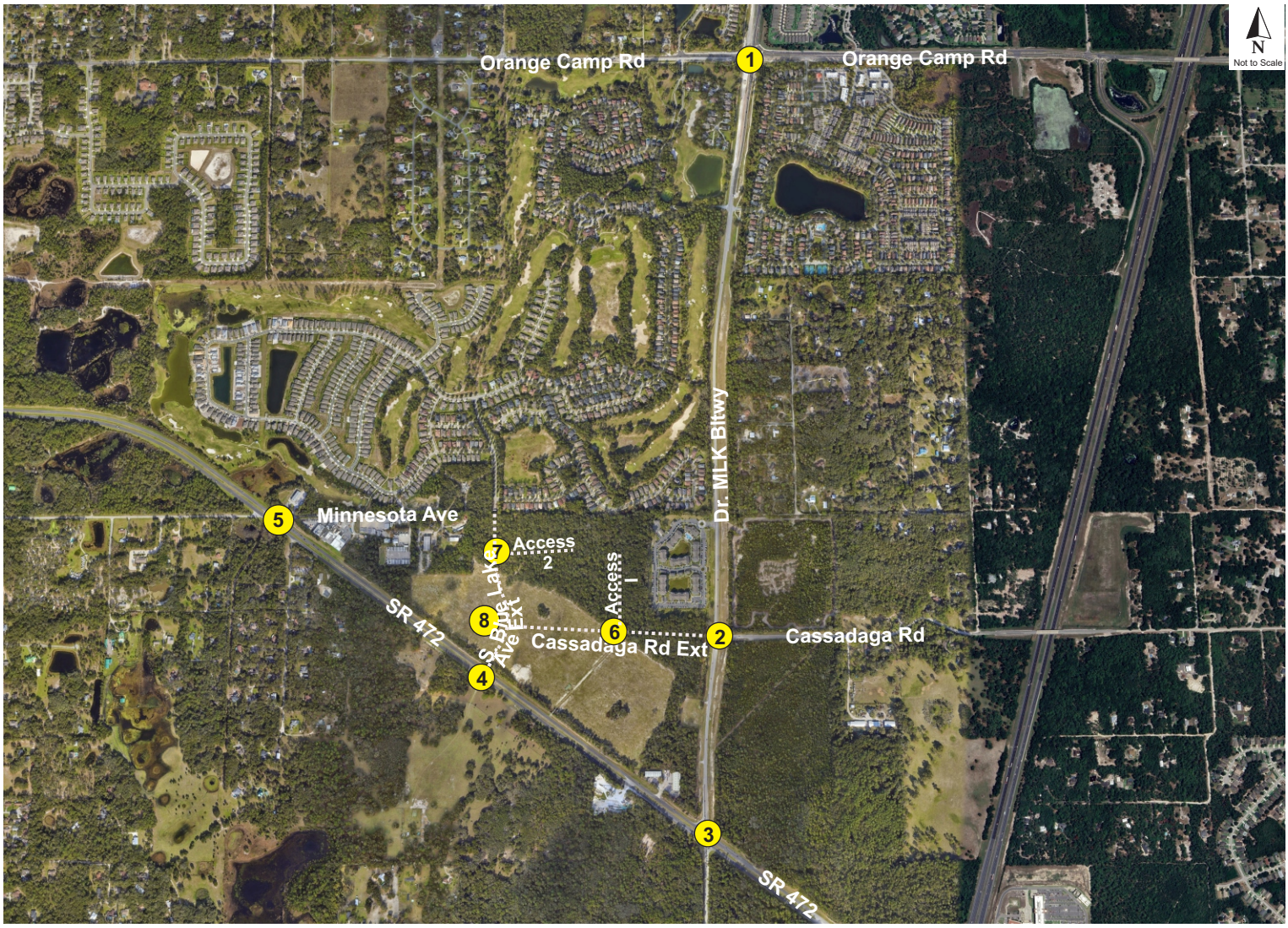
	BO	BK	EX	LN
BO	0	43	7	
BK	0	16	7	
EX	0	0	0	
LN	0	1	0	

	BO	BK	EX	LN
BO	0	0	0	0
BK	0	0	0	1
EX	0	0	0	1
LN	0	0	2	2
EX	1	0	0	0
BK	1	0	0	35
BO	1	0	0	35

	LN	EX	BK	BO
LN	0	1	0	
EX	0	0	0	
BK	0	5	0	
BO	0	14	11	

Legend: Background + {Tech Park} + [TM BTR] + (Project) = Total

BO = Buildout; BK = Background + Vested; EX = Existing
[1] Lanes by movement



1. Dr. MLK Bltwy & Orange Camp Rd

NB	L	202 + {54} + [2] + (2) = 260
	T	487 + {73} + [5] + (5) = 570
	R	52 + {92} + [2] + (5) = 151
SB	L	271
	T	379 + {44} + [8] + (8) = 439
	R	48
EB	L	54
	T	405
	R	110 + {33} + [4] + (3) = 150
WB	L	58 + {60} + [4] + (8) = 130
	T	514
	R	175

				48	439	271	BO		
				48	431	271	BK		
				46	364	261	EX		
				0	2	0			
BO	BK	EX						0	167	175	175
54	54	52	0					2	492	514	514
405	405	387	2					0	55	122	130
150	147	105	1						EX	BK	BO
				0	2	0					
			EX	194	468	50					
			BK	258	565	146					
			BO	260	570	151					

2. Dr. MLK Bltwy & Cassadaga Rd

NB	L	3 + (9) = 12
	T	485 + {142} + [9] = 636
	R	181 + {51} = 232
SB	L	63 + {60} + [19] = 142
	T	579 + {123} = 702
	R	3 + (19) = 22
EB	L	2 + (12) = 14
	T	(1)
	R	2 + (6) = 8
WB	L	134 + {46} + [32] = 212
	T	1 + (2) = 3
	R	42 + {145} + [2] = 189

				22	702	142	BO		
				3	702	142	BK		
				0	557	61	EX		
				0	1	1	LN		
BO	BK	EX	LN						
14	2	0	1					0	38	189	189
1	0	0	1					1	0	1	3
8	2	0	0					1	122	212	212
								LN	EX	BK	BO
			LN	0	1	1					
			EX	0	466	174					
			BK	3	636	232					
			BO	12	636	232					

3. Dr. MLK Bltwy / Kentucky Ave & SR 472

NB	L	116 + (3) = 119
	T	287 + {8} + [15] + (9) = 319
	R	75 + {48} = 123
SB	L	254 + {100} + [16] = 370
	T	399 + {13} + [9] + (6) = 427
	R	81 + {20} + [7] = 108
EB	L	87 + {18} + [11] = 116
	T	1101 + {71} + (23) = 1195
	R	138 + (2) = 140
WB	L	171 + {70} = 241
	T	888 + {127} + (37) = 1052
	R	301 + {106} + [27] = 434

				108	427	370	BO		
				108	421	370	BK		
				75	369	235	EX		
				1	1	1			
BO	BK	EX						1	289	434	434
116	116	84	1					2	854	1,015	1,052
1,195	1,172	1,059	2					1	164	241	241
140	138	133	1						EX	BK	BO
				0	1	1					
			EX	107	266	69					
			BK	116	310	123					
			BO	119	319	123					

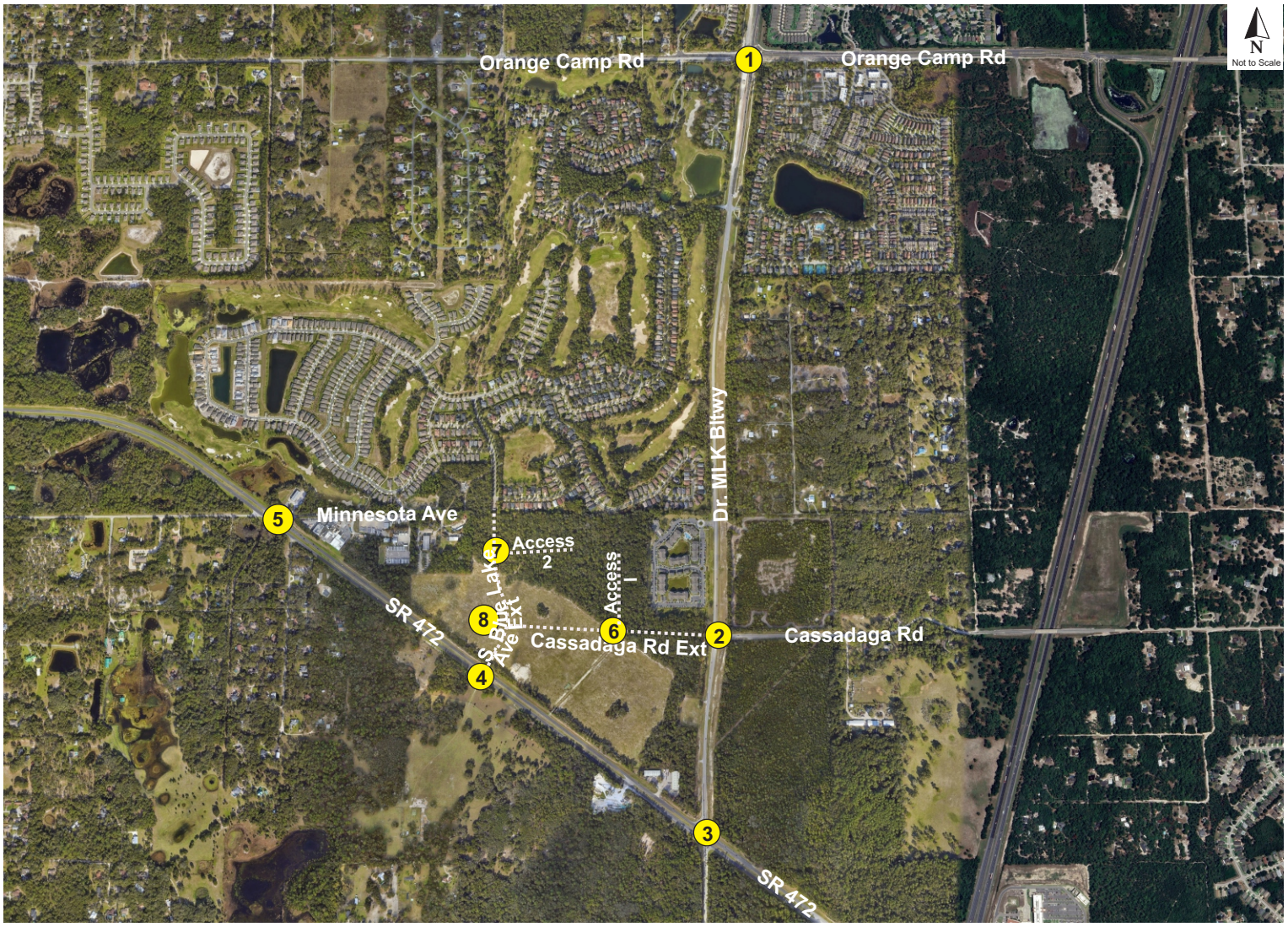
4. SR 472 & Blue Lake Ave (Ext.)

NB	L	
	T	
	R	
SB	L	6 + (25) = 31
	T	
	R	4 + (16) = 20
EB	L	10 + (24) = 34
	T	1363 + {89} + [11] = 1463
	R	
WB	L	
	T	1077 + {147} + [7] = 1231
	R	7 + (40) = 47

				20	0	31	BO		
				4	0	6	BK		
				0	0	0	EX		
				1	1	0	LN		
BO	BK	EX	LN						
34	10	0	1					1	0	7	47
1,463	1,463	1,311	2					2	1,036	1,231	1,231
0	0	0	0					0	0	0	0
								LN	EX	BK	BO
			LN	0	0	0					
			EX	0	0	0					
			BK	0	0	0					
			BO	0	0	0					

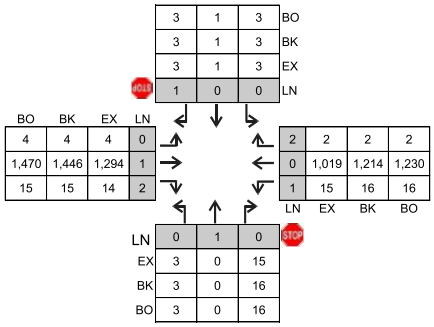
Legend: Background + {Tech Park} + [TM BTR] + (Project) = Total

BO = Buildout; BK = Background + Vested; EX = Existing
1 Lanes by movement



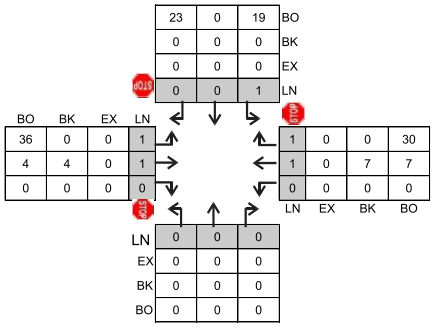
5. SR 472 & Minnesota Ave

NB	L	3
	T	
	R	16
SB	L	3
	T	1
	R	3
EB	L	4
	T	1346 + {89} + [11] + (24) = 1470
	R	15
WB	L	16
	T	1060 + {147} + [7] + (16) = 1230
	R	2



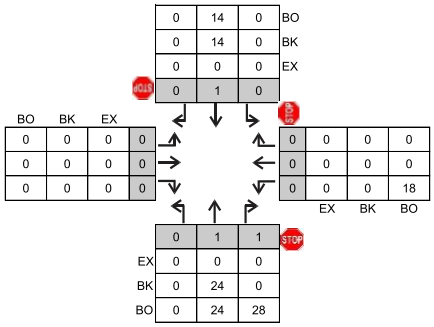
6. Cassadaga Rd (Ext.) & Access I

NB	L	
	T	
	R	
SB	L	(19)
	T	
	R	(23)
EB	L	(36)
	T	4
	R	
WB	L	
	T	7
	R	(30)



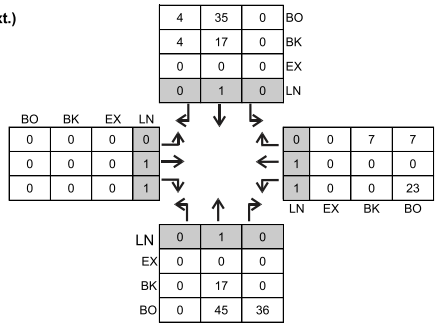
7. Blue Lake Ave (Ext.) & Access II

NB	L	
	T	24
	R	(28)
SB	L	
	T	14
	R	
EB	L	
	T	
	R	
WB	L	(18)
	T	
	R	



8. Blue Lake Ave (Ext.) & Cassadaga Rd (Ext.)

NB	L	
	T	17 + (28) = 45
	R	(36)
SB	L	
	T	17 + (18) = 35
	R	4
EB	L	
	T	
	R	
WB	L	(23)
	T	
	R	7



Legend: Background + {Tech Park} + [TM BTR] + (Project) = Total

BO = Buildout; BK = Background + Vested; EX = Existing
[1] Lanes by movement

7.0 CAPACITY ANALYSIS

7.1 Roadway Segments

Roadway segment capacity was analyzed based on the adopted capacities and the corresponding traffic volumes, as summarized in **Table 7**. The results of the capacity analysis reveal the following:

- The following roadway segments are projected to exceed their adopted capacity due to existing or background traffic. Project trips do not have a significant impact on these segments.
    - Graves Avenue from Veterans Memorial Parkway to Kentucky Avenue
    - Graves Avenue from Kentucky Avenue to Normandy Boulevard
    - Howland Boulevard from I-4/SR 472 to Wolf Pack Run
    - Orange Camp Road from US 17/92 to Princeton Road
    - West Volusia Beltway (Veterans Memorial Parkway) from Harley Strickland Boulevard to Rhode Island Avenue

- All remaining segments are projected to operate within their adopted capacity at the project buildout.

Table 7
Segment Analysis

Seg #	Segment Information			Exist Lns	Imp Lns	Exist 2W PM Cap	Imp 2W PM Cap	2022 Existing Conditions PM Peak			Background Conditions PM Peak			Project		Buildout Conditions PM Peak			Trips % of Cap
	Roadway	From	To					Vol	V/C	Adeq?	Vol	V/C	Adeq?	Dist %	Trips	Vol	V/C	Adeq?	
1	Cassadaga Rd	W. Volusia Bltwy (Dr. MLK Bltwy)	Macy Ave	2	2	1,020	1,020	210	0.21	YES	362	0.35	YES	2%	3	365	0.36	YES	0.3%
2	Cassadaga Rd*	W. Volusia Bltwy (Dr. MLK Bltwy)	Blue Lake Ave (Extension)	2	2	1,020	1,020	--	--	--	0	--	YES	38%	59	59	0.06	YES	5.8%
3	Graves Ave	Veterans Memorial Pkwy	Kentucky Ave	2	2	1,620	1,620	1,635	1.01	**NO**	2,208	1.36	**NO**	10%	15	2,223	1.37	**NO**	0.9%
4	Graves Ave	Kentucky Ave	Normandy Blvd	2	2	1,620	1,620	1,675	1.03	**NO**	2,606	1.61	**NO**	3%	5	2,611	1.61	**NO**	0.3%
5	Graves Ave	Normandy Blvd	Howland Blvd	4	4	2,740	2,740	1,340	0.49	YES	2,337	0.85	YES	3%	5	2,342	0.85	YES	0.2%
6	Howland Blvd	I-4/SR 472	Wolf Pack Run	4	4	3,410	3,410	2,410	0.71	YES	3,609	1.06	**NO**	39%	60	3,669	1.08	**NO**	1.8%
7	Howland Blvd	Wolf Pack Run	Catalina Blvd	4	4	3,410	3,410	1,460	0.43	YES	2,473	0.73	YES	5%	8	2,481	0.73	YES	0.2%
8	Howland Blvd	Providence Blvd	Elkcam Blvd	2	4	1,230	3,410	1,020	0.83	YES	1,370	0.40	YES	2%	3	1,373	0.40	YES	0.1%
9	Orange Camp Rd	US 17/92	Princeton Rd	2	2	1,270	1,270	1,160	0.91	YES	1,408	1.11	**NO**	2%	3	1,411	1.11	**NO**	0.2%
10	Orange Camp Rd	Blue Lake Ave	W. Volusia Bltwy (Dr. MLK Bltwy)	2	2	1,540	1,540	1,075	0.70	YES	1,411	0.92	YES	4%	6	1,417	0.92	YES	0.4%
11	Orange Camp Rd	W. Volusia Bltwy (Dr. MLK Bltwy)	I-4	2	4	1,540	3,410	1,170	0.76	YES	1,611	0.47	YES	8%	12	1,623	0.48	YES	0.4%
12	W. Volusia Bltwy (Veterans Memorial Pkwy)	Harley Strickland Blvd	Rhode Island Ave	2	2	1,540	1,540	1,480	0.96	YES	1,972	1.28	**NO**	3%	5	1,977	1.28	**NO**	0.3%
13	W. Volusia Bltwy (Veterans Memorial Pkwy)	Rhode Island Ave	Graves Ave	2	2	1,620	1,620	1,100	0.68	YES	1,500	0.93	YES	8%	12	1,512	0.93	YES	0.7%
14	W. Volusia Bltwy (Kentucky Ave)	Graves Ave	SR 472	2	2	1,540	1,540	910	0.59	YES	1,400	0.91	YES	13%	20	1,420	0.92	YES	1.3%
15	W. Volusia Bltwy (Dr. MLK Bltwy)	Cassadaga Rd	Orange Camp Rd	2	2	1,540	1,540	755	0.49	YES	1,442	0.94	YES	20%	31	1,473	0.96	YES	2.0%
16	W. Volusia Bltwy (Dr. MLK Bltwy)	Orange Camp Rd	Taylor Rd	2	2	1,540	1,540	910	0.59	YES	1,402	0.91	YES	8%	12	1,414	0.92	YES	0.8%
17	Catalina Blvd**	Howland Blvd	Sixma Rd	2	2	960	960	155	0.16	YES	289	0.30	YES	0%	0	289	0.30	YES	0.0%
18	Catalina Blvd**	Sixma Rd	Lake Helen Osteen	2	2	960	960	155	0.16	YES	273	0.28	YES	0%	0	273	0.28	YES	0.0%

Source: *Volusia County 2022 AADT*

*This segments is an extension and do not currently exist. Peak Capacity assumed same as the adjacent segment of same road.

**No data in *Volusia County 2022 AADT*. Existing PM Peak Volume is of 2023 obtained from Florida Traffic Online. Existing Peak Capacity assumed same as in 2019 and obtained from Volusia County 2019 AADT

7.2 Intersections

The study intersections were analyzed in accordance with the methods of the *Highway Capacity Manual (HCM)* as applied in the *Synchro* analytical tool. The detailed *HCM* analysis sheets are provided in **Appendix M**. The analysis results for existing, background, and buildout conditions are summarized in **Table 8**, which reveals the following:

- The intersection of SR 472 and Dr. Martin Luther King Jr Beltway is projected to operate at an inadequate LOS, due to the existing and background traffic.
- All remaining intersections are projected to operate at adequate LOS at the project buildout.

7.3 Intersection Improvements

The following improvements were recommended for the intersection of SR 472 and MLK Beltway by other developments as reflected in their TIAs:

- Construct a westbound left turn lane
- Construct a northbound left turn lane and a through lane
- Construct a southbound left turn lane and a through lane
- Optimize the signal timing

With the recommended improvements, the intersection is projected to operate at an overall adequate LOS. The results of the analysis are summarized in **Table 9** for the background and buildout scenarios. The adjusted analysis worksheets are included in **Appendix N.**

Table 8
Intersection Analysis

Int	Intersection		Control	Time	Scenario	EB		WB		NB		SB		Overall	
#	Major Road	Minor Road		Period		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	Dr. MLK Bltwy	Orange Camp Rd	RAB	AM	Existing	8.7	A	9.9	A	14.0	B	8.6	A	10.6	B
					Backg'd+Vested	11.8	B	12.7	B	17.7	C	11.2	B	13.7	B
					Buildout	11.9	B	12.9	B	18.4	C	11.3	B	14.0	B
				PM	Existing	10.2	B	13.2	B	12.7	B	12.7	B	12.3	B
					Backg'd+Vested	13.7	B	21.3	C	20.3	C	19.0	C	19.0	C
					Buildout	14.2	B	22.0	C	20.9	C	19.7	C	19.6	C
2	Dr. MLK Bltwy	Cassadaga Rd	Signal	AM	Existing	--	--	22.9	C	13.9	B	7.3	A	13.4	B
					Backg'd+Vested	32.1	C	25.6	C	28.4	C	25.7	C	26.7	C
					Buildout	31.7	C	25.8	C	28.4	C	26.1	C	27.0	C
				PM	Existing	--	--	21.4	C	14.7	B	7.2	A	12.0	B
					Backg'd+Vested	39.1	D	37.7	D	28.7	C	25.6	C	29.2	C
					Buildout	39.0	D	37.9	D	28.6	C	26.5	C	29.6	C
3	Dr. MLK Bltwy / Kentucky Ave	SR 472	Signal	AM	Existing	55.6	E	50.6	D	153.8	F	92.6	F	71.8	E
					Backg'd+Vested	67.8	E	62.0	E	207.3	F	151.2	F	98.5	F
					Buildout	73.5	E	62.5	E	212.0	F	157.2	F	102.2	F
				PM	Existing	66.6	E	70.0	E	161.9	F	154.4	F	93.6	F
					Backg'd+Vested	93.0	F	119.5	F	226.9	F	248.9	F	145.9	F
					Buildout	98.9	F	120.9	F	242.9	F	253.2	F	150.7	F
4	SR 472	Blue Lake Ave (Ext.)	TWSC	AM	Buildout	11.8	B	27.8	D	--	--	--	--	--	--
				PM	Buildout	13.0	B	31.3	D	--	--	--	--	--	--
5	SR 472	Minnesota Ave	TWSC	AM	Existing	10.9	B	11.1	B	19.4	C	23.4	C	--	--
					Backg'd+Vested	11.5	B	12.0	B	22.5	C	26.4	D	--	--
					Buildout	11.6	B	12.1	B	22.7	C	27.1	D	--	--
				PM	Existing	10.8	B	12.9	B	19.6	C	25.1	D	--	--
					Backg'd+Vested	12.0	B	14.2	B	22.5	C	31.4	D	--	--
					Buildout	12.1	B	14.4	B	23.0	C	32.2	D	--	--
					Buildout		A		A		A		A	--	--
6	Cassadaga Rd (Ext)	Access I	TWSC	AM	Buildout	7.3	A	0.0	A	--	--	8.8	A	--	--
				PM	Buildout	7.4	A	0.0	A	--	--	8.9	A	--	--
7	Blue Lake Ave (Ext.)	Access II	TWSC	AM	Buildout	--	--	8.8	A	0.0	A	0.0	A	--	--
				PM	Buildout	--	--	8.8	A	0.0	A	0.0	A	--	--
8	Blue Lake Ave (Ext.)	Cassadaga Rd (Ext.)	TWSC	AM	Buildout	--	--	9.1	A	0.0	A	7.3	A	--	--
				PM	Buildout	--	--	9.1	A	0.0	A	7.4	A	--	--

Average delay expressed in seconds/vehicle

**These intersections will only exist at buildout so they do not have existing and background conditions.*

Table 9
Intersection Analysis with Improvements

Int #	Intersection		Control	Time Period	Scenario	EB		WB		NB		SB		Overall	
	Major Road	Minor Road				Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	Dr. MLK Bltwy	Orange Camp Rd	RAB	AM	Backg'd+Vested	11.8	B	12.7	B	17.7	C	11.2	B	13.7	B
					Buildout	11.9	B	12.9	B	18.4	C	11.3	B	14.0	B
				PM	Backg'd+Vested	13.7	B	21.3	C	20.3	C	19.0	C	19.0	C
					Buildout	14.2	B	22.0	C	20.9	C	19.7	C	19.6	C
2	Dr. MLK Bltwy	Cassadaga Rd	Signal	AM	Backg'd+Vested	32.1	C	25.6	C	28.4	C	25.7	C	26.7	C
					Buildout	31.7	C	25.8	C	28.4	C	26.1	C	27.0	C
				PM	Backg'd+Vested	39.1	D	37.7	D	28.7	C	25.6	C	29.2	C
					Buildout	39.0	D	37.9	D	28.6	C	26.5	C	29.6	C
3	Dr. MLK Bltwy / Kentucky Ave	SR 472	Signal	AM	Backg'd+Vested	43.6	D	37.4	D	48.5	D	48.6	D	43.0	D
					Buildout	46.0	D	38.1	D	48.5	D	48.5	D	44.0	D
				PM	Backg'd+Vested	51.2	D	46.6	D	60.3	E	66.5	E	53.2	D
					Buildout	53.3	D	49.0	D	60.6	E	67.2	E	55.0	D
4	SR 472	Blue Lake Ave (Ext.)	TWSC	AM	Buildout	11.8	B	27.8	D	--	--	--	--	--	--
				PM	Buildout	13.0	B	31.3	D	--	--	--	--	--	--
5	SR 472	Minnesota Ave	TWSC	AM	Backg'd+Vested	11.5	B	12.0	B	22.5	C	26.4	D	--	--
					Buildout	11.6	B	12.1	B	22.7	C	27.1	D	--	--
				PM	Backg'd+Vested	12.0	B	14.2	B	22.5	C	31.4	D	--	--
					Buildout	12.1	B	14.4	B	23.0	C	32.2	D	--	--
6*	Cassadaga Rd (Ext)	Access I	TWSC	AM	Buildout	7.3	A	0.0	A	--	--	8.8	A	--	--
				PM	Buildout	7.4	A	0.0	A	--	--	8.9	A	--	--
7*	Blue Lake Ave (Ext.)	Access II	TWSC	AM	Buildout	--	--	8.8	A	0.0	A	0.0	A	--	--
				PM	Buildout	--	--	8.8	A	0.0	A	0.0	A	--	--
8*	Blue Lake Ave (Ext.)	Cassadaga Rd (Ext.)	TWSC	AM	Buildout	--	--	9.1	A	0.0	A	7.3	A	--	--
				PM	Buildout	--	--	9.1	A	0.0	A	7.4	A	--	--

Average delay expressed in seconds/vehicle

**These intersections will only exist at buildout so they do not have background conditions.*

7.4 Queue Evaluation

An evaluation was conducted to determine whether the existing turn lane lengths at the signalized study intersections are adequate to accommodate projected traffic at project buildout. The two signalized study intersections are MLK Beltway and Cassadaga Road, and SR 472 and MLK Beltway. The turn lanes that are projected to receive project trips at the MLK Beltway and Cassadaga Road intersection are not currently in place. These turn lanes are necessary for accessing the project site and are evaluated in the Access Review section.

This section focuses on the SR 472 and MLK Beltway intersection. As previously noted, this intersection is significantly impacted by new developments, particularly Deland Tech Park Queue lengths were obtained from the HCM analysis worksheets, which are included in **Appendix M** and **Appendix N**. Specifically:

- Existing condition queue lengths were derived from the HCM worksheets in **Appendix M**.
- Background and projected condition queue lengths were obtained from the HCM worksheets in **Appendix N**, which accounts for improvements recommended by Deland Tech Park.

The required deceleration lengths are based on the FDOT *Design Manual (FDM) Exhibit 212-1,* provided in **Appendix O**.

Total turn lane length was calculated as the sum of the deceleration length and projected queue length. The results of the evaluation, summarized in **Table 10**, show that the northbound left turn lane and the eastbound right turn lane planned for the SR 472 and MLK Beltway intersection should be approx. 550 feet and 530 feet long respectively in the background condition to accommodate traffic from the background condition and the traffic from the approved projects. The length of northbound left-turn lane required is determined by the AM peak hour, while the length of eastbound right-turn lane is determined by the PM peak hour, as the 95th percentile queue lengths are higher during these respective periods. The analysis indicated that the turn lanes required to accommodate background and vested trips will be sufficient to handle the additional project trips.

Table 10
Queue Evaluation

Intersection	Turn Lane	Posted Speed Limit	Existing Lane Length	Required Deceleration	Existing					Background + Vested w Improvements					Buildout w Improvements						Adequate?
					# of LNS	95th Percentile Queue		Length Needed	Length Deficiency	# of LNS	95th Percentile Queue		Length Needed	Length Deficiency	# of LNS	95th Percentile Queue		Length Needed	Length Deficiency	Project Trips	
						Vehicle	Length				Vehicle	Length				Vehicle	Length				
AM PEAK																					
SR 472 & MLK Beltway	NBL*	55	0'	350'	0	32	800'	1,150'	1,150'	1	8	200'	550'	550'	1	8	200'	550'	0'	1	YES
	EBR	60	540'	405'	1	4	100'	505'	0	1	3	75'	480'	0	1	3	75'	480'	0	3	YES
PM PEAK																					
SR 472 & MLK Beltway	NBL*	55	0'	350'	0	33	825'	1,175'	1,175'	1	7	175'	525'	525'	1	7	175'	525'	0'	3	YES
	EBR	60	540'	405'	1	6	150'	555'	15'	1	5	125'	530'	0	1	5	125'	530'	0	2	YES

95th percentile queue vehicle was rounded to whole number
*95th percentile queue length = vehicle * 25 ft*
**Length deficiency at buildout calculated compared to background condition considering improvements at the intersection of SR 472 and MLK Boulevard, as recommended by previous TIAs, are implemented.*
**Adequate or Not Based on Background Condition with Improvements*

8.0 ACCESS REVIEW

The development proposes to connect to the transportation network by extending Cassadaga Road and Blue Lake Avenue to intersect SR 472 at an existing full median opening and connect with MLK at Cassadaga Road. Access to the site will be provided via two full-access driveways: one (1) on the Cassadaga Road extension and one (1) on the Blue Lake Avenue extension.

SR 472 is a 4-lane divided roadway with a posted speed limit of 60 miles per hour (mph) near the access driveway at Blue Lake Avenue Extension. MLK Beltway is a 2-lane undivided roadway with a posted speed limit of 55 mph. The Blue Lake Avenue Extension is proposed to connect SR 472 to residential developments north of SR 472, while the Cassadaga Road Extension will connect to Blue Lake Avenue Extension to provide access to the site. Since both roadway extensions will lead to residential areas, it is expected that the speed limit for these roads will be 25 mph.

8.1 Access Road Improvements

Road improvements were evaluated to determine the need for deceleration lanes and egress lanes at the project driveways and the deceleration lanes at the nearby intersections. The need for deceleration lanes and the turn lane dimensions were evaluated based on the guidelines of the Volusia County *Land Development Code (LDC)*, provided in **Appendix P**. While these guidelines provided a framework, engineering judgment and planning considerations were also applied to ensure the most effective treatment. Consequently, the following turn lanes are recommended based on a combination of regulatory guidelines and professional assessment.

- Intersection #2 – MLK Beltway and Cassadaga Road
    - Northbound left turn lane
    - Southbound right turn lane

- Intersection # 4 – SR 472 and Blue Lake Avenue Extension
    - Westbound right turn lane

- Intersection #6 – Cassadaga Rd Extension and Access I
    - Eastbound left turn lane

Intersection #2 – MLK Beltway and Cassadaga Road

Deceleration Lanes

The intersection at MLK Beltway and Cassadaga Road is currently a signalized, 3-legged intersection. With the planned extension of Cassadaga Road, it will be reconfigured into a 4-legged intersection. To accommodate this change, it is recommended to add a northbound left turn deceleration lane and a southbound right turn deceleration lane. The eastbound approach is expected to function adequately with a two-lane configuration: one lane dedicated to left turns and the other shared between right turns and through movements.

- Northbound Left Turn Deceleration Lane
  Design Speed = 55 mph
  Recommended Lane Length = 455 feet (Incl. 50-foot taper) (per Volusia County *LDC*)

- Southbound Right Turn Deceleration Lane
  Design Speed = 55 mph
  Recommended Lane Length = 455 feet (Incl. 50-foot taper) (per Volusia County *LDC*)

- Eastbound Left Turn Deceleration Lane
  Assumed Design Speed = 25 mph
  A deceleration lane length of 145 feet is projected to sufficiently accommodate the left turn movement.

Intersection #4 – SR 472 and Blue Lake Avenue Extension

Deceleration Lanes

The intersection at SR 472 and Blue Lake Avenue Extension currently have approximately:

- 510-foot-long Westbound Right Turn Deceleration Lane
- 500-foot-long Eastbound Left Turn Deceleration Lane
- 440-foot-long Southbound Left Turn Deceleration Lane

The recommendations for turn lanes are as follows:

- Westbound Right Turn Deceleration Lane
  Design Speed = 60 mph
  Recommended Lane Length = 455 feet (Incl. 50-foot taper) (There is no turn lane length recommended in *LDC* for speed > 55 mph, thus a turn lane length of 455 feet is recommended)

- Eastbound Left Turn Deceleration Lane
  Design Speed = 60 mph
  Recommended Lane Length = 455 feet (Incl. 50-foot taper) (There is no turn lane length recommended in *LDC* for speed > 55 mph, thus a turn lane length of 455 feet is recommended)

- Southbound Left Turn Deceleration Lane
  Assumed Design Speed = 25 mph
  A deceleration lane length of 145 feet is projected to sufficiently accommodate the left turn movement.

The existing deceleration lanes at the intersection of SR 472 and Blue Lake Avenue Extension are longer than the recommended values. Thus, the intersection is not recommended for any improvements.

Intersection #6 – Cassadaga Road Extension and Access I

Deceleration Lanes

The full access driveway at Cassadaga Road is recommended to be improved with an eastbound left turn lane. This lane will primarily provide separation for left turn movements from through traffic while also offering some deceleration.

With an assumed speed limit of 25 mph for this segment, a conservative length of 145 feet (Incl. 50-foot taper) is recommended for the eastbound left turn lane.

Egress Lanes

The driveway is projected to operate adequately with the following egress lane configuration:

- One (1) southbound lane for the right turn movement
- One (1) southbound lane for the left turn movement - A deceleration lane length of 145 feet is projected to sufficiently accommodate the left turn movement.

Intersection #7 – Blue Lake Avenue Extension and Access II

Deceleration Lanes

Based on *Volusia County LDC* and engineering judgement, a deceleration lane is not necessary at this entrance.

Egress Lanes

The driveway is projected to operate adequately with the following egress lane configuration:

- One (1) westbound lane for the right turn and left turn movements

9.0 ALTERNATIVE TRANSPORTATION MODES

A review of pedestrian, bicycle, and transit facilities was conducted. This review consists of a visual inventory of available facilities to determine the context of alternative transportation modes in the vicinity of the proposed development.

9.1 Pedestrian and Bicycle Facilities

Google Earth maps and field observations indicate that the surrounding area in vicinity of the project site is generally undeveloped. TM BTR at Deland Crossings will construct sidewalks on the perimeter of the development.

There are no sidewalks on MLK Beltway or on SR 472 adjacent to the site. MLK Beltway and SR 472 are both equipped with bike lanes on both sides of the street, adjacent to the site.

9.2 Transit Facilities

The West Volusia transit route map was reviewed from *Volusia County's Public Transit System* website to determine the available transit route near the proposed development. Currently, there is not a transit route on MLK Beltway or Cassadaga Road, or SR 472 near the proposed development. The closest route (Route 20) is located on US 17/92, approximately 2.2-miles from the proposed development. The West Volusia bus service map is included in **Appendix Q**.

9.3 Proximity to Nearby Schools

A review of existing schools within a 2-mile radius of the project site was conducted to identify student walking routes from/to school. No school was identified within a 2-mile radius. The closest public school (Deltona High School) is located approximately 2.5-miles from the project site. As mentioned in the previous section, the area is not improved with pedestrian and bicyclist facilities. Therefore, it is likely that students will use buses to/from schools.

10.0 SAFETY ASSESSMENT

A safety assessment was performed for the intersections at MLK Beltway and Cassadaga Road and at SR 472 and Blue Lake Avenue. For the purpose of this assessment, five (5) years of historical crash data was obtained from *Signal 4 Analytics*. The study period for the assessment spans from 2019 to 2023 and the crash data is provided in **Appendix R**.

MLK Beltway and Cassadaga Road

Based on the crash data, five (5) crashes were reported in the vicinity of the access point at MLK Beltway and Cassadaga Road within the last five (5) years. All of these crashes were rear-end collisions. Of these, three (3) occurred in 2019, which may have been influenced by the intersection's previous stop-controlled configuration. The intersection has since been signalized, which may have contributed to the reduction in crashes. There has been only one (1) crash in 2022 and one (1) crash in 2023. None of the crashes resulted in fatalities. Out of the five (5) crashes, two (2) had no injuries, while three (3) involved possible or non-incapacitating injuries. A map of the crashes at this location is provided in **Figure 11**.

SR 472 and Blue Lake Avenue Extension

Based on the crash data, there have been no crashes reported directly at the SR 472 and proposed Blue Lake Avenue Extension intersection. However, two (2) crashes occurred in close proximity. One (1) of these was a rear-end collision, and the other (1) was a sideswipe collision. The rear-end crash, which resulted in a serious injury, occurred in 2019 and happened during daylight conditions. The sideswipe crash, which resulted in no injury, occurred in 2022 under clear day conditions. A map of the crashes at this location is provided in **Figure 12**.

Overall, the number of crashes at both intersections is relatively low, indicating that there is not a safety issue. The data suggests that the current conditions at these intersections are generally safe, with no significant patterns of frequent or severe crashes.


N
Not to Scale
Proposed Cassadaga Road Extension
LEGEND
Angle
Animal
Left Turn
Right Turn
Sidewsipe
Rear End
Other/Unkown



Traffic & Mobility CONSULTANTS

21145 Ford 472, v1.3

SR 472 and Blue Lake Avenue Crash Map **Figure 12**

11.0 PROPORTIONATE SHARE CALCULATION

The project's impacts on the adverse transportation facilities within the study area are proposed to be mitigated through a payment of the project's proportionate share of the cost to make the planned or identified mitigating improvements.

The proportionate share calculations for adopted roadway widening projects were prepared in accordance with the requirements of Volusia County using the *Master Proportionate Fair Share (PFS) Table*, provided in **Appendix S**.

For segments not available in the *Master PFS Table*, the cost of improving the same roadway and the length difference were used to calculate the proportionate share (PropShare). For example, the segment of Howland Boulevard from Forest Edge to Wolf Pack Run was available in the table. This segment was 0.25 miles long, with a total improvement cost of $2,021,542.48. The segment from I-4/SR 472 to Wolf Pack Run was 0.4 miles long. Therefore, the total cost of improving Howland Boulevard from I-4/SR 472 to Wolf Pack Run was calculated as:

$$\$2,021,542.48 \times (0.4/0.25) = \$3,234,467.96$$

This total cost was then multiplied by the project percentage to determine the PropShare Cost. A similar method was applied to calculate the PropShare Cost for Orange Camp Road (from US-17-92 to Princeton) and Veterans Memorial Parkway (from Harley Strickland Boulevard to Rhode Island Avenue).

The project's roadway segment proportionate share mitigation was calculated to be $142,189.78, as summarized in **Table 11**.

Table 11
Roadway Segments Proportionate Share Calculation

Roadway Segment	Roadway Improvement	Capacity			Project Trips	Prop Share %	Improvement Cost	Prop Share
		Base	Improved	Increase				
Graves Ave								
Veterans Memorial Pkwy to Kentucky Ave	Widen 2 to 4 Lanes	1,620	3,410	1,790	15	0.84%	$2,534,673.55	$21,240.28
Kentucky Ave to Normandy Blvd	Widen 2 to 4 Lanes	1,620	3,410	1,790	5	0.28%	$18,134,221.59	$50,654.25
Howland Blvd								
I-4/SR 472 to Wolf Pack Run	Widen 4 to 6 Lanes	3,410	5,120	1,710	14	0.82%	$3,234,467.96*	$26,481.02
Orange Camp Rd								
US 17-92 to Princeton	Widen 2 to 4 Lanes	1,270	3,410	2,140	3	0.14%	$5,329,975.45	$7,471.93
W. Volusia Bltwy (Veterans Memorial Pkwy)								
Harley Strickland Blvd to Rhode Island Ave	Widen 2 to 4 Lanes	1,540	3,410	1,870	5	0.27%	$13,592,020.00*	$36,342.30
							Total Roadway Segment Proportionate Share	**$142,189.78**

Volusia County Master Prop Fair Share Table
**Not listed in Master Table, improvement cost estimated using the portion of this segment listed in Master table taking into consideration the length difference*

The proportionate share calculations for improvements at the intersection of SR 472 and MLK Beltway were also carried out in accordance with the requirements of Volusia County using the Master Proportionate Fair Share Table. The Fair Share Table and other relevant information are provided in **Appendix S**. The project's total proportionate share mitigation was calculated to be $92,019.46, as summarized in calculations shown in **Table 12**.

Table 12
Proportionate Share Calculation of Improvements at SR 472 and MLK Beltway

Roadway Segment	Roadway Improvement	Capacity			Project Trips	Prop Share %	Improvement Cost	Prop Share
		Base	Improved	Increase				
West Volusia Beltway (MLK)								
Cassadaga Rd to SR 472	Widen 2 to 4 Lanes	1,540	3,410	1,870	15	0.80%	$2,707,186.81	$21,715.40
Kentucky Ave								
Graves Ave to SR 472	Widen 2 to 4 Lanes	1,540	3,410	1,870	20	1.07%	$5,890,388.87	$62,998.81
							Roadway Segment Proportionate Share	**$84,714.21**

Volusia County Master Prop Fair Share Table

Improvement	Capacity			Project Trips	Prop Share %	Improvement Cost	Prop Share
	Base	Improved	Increase				
Adding a WBL Turn Lane							
No project Trips in this approach so not responsible for PropShare							$0
Adding a NBL Turn Lane							
Add a 550' turn lane	119	203	84	1	1.19%	$619,688.72	$7,377.25
Adding a SBL Turn Lane							
No project Trips in this approach so not responsible for PropShare							$0
						Turn Lane Proportionate Share	**$7,377.25**

Improvement Cost Based on FDOT Generic Cost + 25% for Design/Consultant
Base and Improved Capacity for NBL Turn Lane Obtained from Synchro Analysis of Projected AM Peak Before and After Improvements

Thus, the project's total proportionate share cost was calculated to be $234,281.24. The applicant intends to enter into a proportionate share mitigation agreement with Volusia County to establish the payment of the mitigation funds, the allocation of impact fee credits, and any other applicable terms.

12.0 STUDY CONCLUSIONS

This traffic analysis was conducted to evaluate the impacts of Ford 472, a residential development. The site is located west of MLK Beltway and north of State Road 472 (SR 472) in the City of Deland, Florida.

The analysis included a determination of trip generation, a review of transportation capacity and operations, a review of the proposed site access plan, a review of alternative modes of transportation, and a safety assessment. The results of the traffic analysis are summarized as follows:

Summary of Findings

- The proposed development is projected to generate 1,728 net new external daily trips, of which 121 trips occur during the AM peak hour and 154 trips occur during the PM peak hour.

- A review of roadway capacity conditions indicates that the following adverse roadway segments are projected to be impacted by the proposed development:
    - Graves Avenue
        - Veterans Memorial Parkway to Kentucky Avenue
        - Kentucky Avenue to Normandy Boulevard
    - Howland Boulevard
        - I-4/SR 472 to Wolf Pack Run
    - Orange Camp Road
        - US 17/92 to Princeton
    - West Volusia Beltway
        - Harley Strickland Boulevard to Rhode Island Avenue

- A review of intersection operations indicates that the intersection of SR 472 and MLK Beltway is projected to operate below the adopted LOS due to existing and background traffic. However, with the improvements recommended by the previously approved projects, the intersection is projected to operate adequately.

Summary of Recommendations

- The recommended access improvements are:
    - MLK Beltway and Cassadaga Road
      Install a 455-foot-long northbound left turn deceleration lane on MLK Beltway
      Install a 455-foot-long southbound right turn deceleration lane on MLK Beltway
      Provide an eastbound shared lane for right turn and through movements
      Provide a 145-foot-long eastbound lane for the left turn movement

    - Cassadaga Road Extension and Access I
      Install a 145-foot-long eastbound left turn deceleration lane on Cassadaga Road
      Provide one (1) southbound egress lane for the right turn movement
      Provide a 145-foot-long southbound egress lane for the left turn movement

    - Blue Lake Avenue Extension and Access II
      Deceleration lane is not necessary
      Provide one (1) westbound shared lane for right turn and left turn movements

- The project's proportionate share mitigation is $234,281.24 which shall be paid in accordance with a mitigation agreement with Volusia County.

APPENDICES

Appendix A
Comment Letter and Response to Comment Letter

February 13, 2025

Mr. William White
Engineering Assistant II
Volusia County Traffic Engineering
123 West India Avenue
Deland, Florida 32720
WDWhite@volusia.org

Re: Ford 472
Response to TIA Comments
TMC Project № 21145, v1.2
Volusia County, Florida

Dear Mr. White,

Please find below our responses to the review comments prepared by Volusia County Traffic Engineering dated January 8, 2025, regarding the above referenced Traffic Impact Analysis dated December 2024. The comments are listed in **bold** typeface and the TMC responses follow in *italic* typeface. Additionally, a revised TIA is provided under separate cover reflecting the changes resulting from these comments.

1. **Synchro files are missing throughout document. Example missing existing, background, or projected (varies at a.m. & p.m. as well). Please provide all relevant output reports.**

   *TMC Response: Printouts of all HCM output are provided in **Appendices M** and **N** of the revised report (as included in version 1.2). The Synchro files will be provided to the County via electronic file.*

2. **Peak hour factors vary throughout TIA, please provide reasoning.**

   *TMC Response: Peak hour factors for the intersections are based on the Turning Movement Counts observed at each intersection. Some discrepancies in the Synchro sheets have been identified and corrected accordingly. The revised **Appendices M** and **N** now reflect the updated values.*

3. **There appears to be a significant amount of traffic that exits the network between intersection 4 and intersection 3 EB during peak hours, please review & explain.**

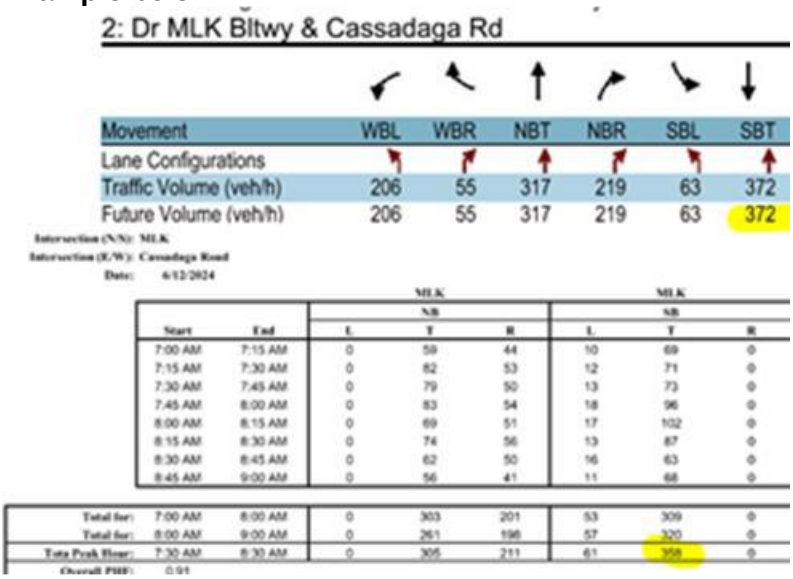
   TMC Response: The traffic exiting from intersection 4 towards intersection 3 eastbound follows the network and exits through intersection 3, rather than between the two intersections. As an example, during the AM peak hour:
   - *Project trips exiting from intersection 4 towards intersection 3 eastbound: 42% (38 trips) via southbound left movement*
   - *Project trips exiting from intersection 3 eastbound:*
     - *Eastbound through movement: 39% (35 trips)*
     - *Eastbound right movement: 3% (3 trips)*

- *Total: 42% (38 trips), which aligns with the trips exiting from intersection 4.*

Similarly, for vested trips during the AM peak hour, 103 trips exit intersection 4 eastbound through and continue through intersection 3 as:

- *82 trips via eastbound through movement*
- *21 trips via eastbound left movement*
- *Total: 103 trips, confirming that traffic follows the expected path through the network.*

4. There are differences in the existing data in synchro and the TMC, please clarify. Example below:



2: Dr MLK Bltwy & Cassadaga Rd

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	206	55	317	219	63	372
Future Volume (veh/h)	206	55	317	219	63	372

Intersection (N/S): MLK
Intersection (E/W): Cassadaga Road
Date: 6/12/2024

		MLK NB			MLK NB		
Start	End	L	T	R	L	T	R
7:00 AM	7:15 AM	0	59	44	10	69	0
7:15 AM	7:30 AM	0	82	53	12	71	0
7:30 AM	7:45 AM	0	79	50	13	73	0
7:45 AM	8:00 AM	0	83	54	18	96	0
8:00 AM	8:15 AM	0	69	51	17	102	0
8:15 AM	8:30 AM	0	74	56	13	87	0
8:30 AM	8:45 AM	0	62	50	16	63	0
8:45 AM	9:00 AM	0	56	41	11	68	0
Total for:	7:00 AM	8:00 AM	0	303	201	53	309	0
Total for:	8:00 AM	9:00 AM	0	261	196	57	320	0
Tota Peak Hour:	7:30 AM	8:30 AM	0	305	211	61	358	0
Overall PHF:	0.91							

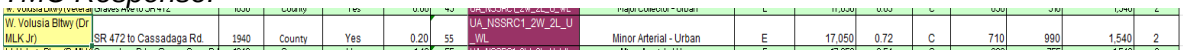
TMC Response: As explained in Section 6.2, the raw counts were adjusted by a seasonal factor of 1.04. The existing count data (358) was multiplied by 1.04 to total 372, the adjusted southbound through volume, as shown in the Volume Projections worksheet provided in ***Appendix L,*** *an excerpt of which follows:*

Intersection:		Dr. MLK Bltwy & Cassadaga Rd				
Appr	Mvmt	Lns	Raw	SF	Adjusted	GF
NB	L	0	0	1.04	0	1.0
	T	1	305	1.04	317	1.0
	R	1	211	1.04	219	1.0
SB	L	1	61	1.04	63	1.0
	T	1	358	1.04	372	1.0
	R	0	0	1.04	0	1.0
EB	L	1	0	1.04	0	1.1
	T	1	0	1.04	0	1.1
	R	0	0	1.04	0	1.1
WB	L	1	198	1.04	206	1.1
	T	1	0	1.04	0	1.1
	R	0	53	1.04	55	1.1

*Background Volumes Estimated using *ITE Trip Generation Manu*

5. The county has 2023 count data midblock on MLK between Cassadaga Rd and SR-472. The TIA 2024 existing count is significantly higher, please review & verify.

TMC Response:



W. Volusia Bltwy (Dr MLK Jr)	SR 472 to Cassadaga Rd.	1940	County	Yes	0.20	55	UA_NSSRC1_2W_2L_UWL	Minor Arterial - Urban	E	17,050	0.72	C	710	990	1,540	2

The AADT count data publicly available from Volusia County is from 2022. According to this data, the total count recorded was 710 during AM peak hours and 990 during PM peak hours as shown in the figure above. However, the Turning Movement Count (TMC) conducted in 2024 as part of this TIA recorded the following counts:

- *AM Peak Hour:*
  - *Southbound (SB): 358 + 198 = 556*
  - *Northbound (NB): 305 + 211 = 516*
  - *Total AM Peak: 1,072*
- *PM Peak Hour:*
  - *Southbound (SB): 536 + 117 = 653*
  - *Northbound (NB): 448 + 167 = 615*
  - *Total PM Peak: 1,268*

While it is true that the 2024 existing count is significantly higher than the 2022 count, the traffic count survey was conducted in accordance with standard procedures. The increase in traffic volumes could be attributed to ongoing developments in the area, which may have led to a growth in vehicular flow between 2022 and 2024.

6. Please show how annual growth rates were accounted for in the roadway segments and intersection analyses

*TMC Response: The methodology used for incorporating annual growth rates in roadway segments is detailed in Section 6.1 and further outlined in Table 6 of the revised report (as included in version 1.2). The approach for intersection analyses is explained in Section 6.2, with detailed calculations provided in **Appendix L** of the revised report (as included in version 1.2).*

7. Please show how seasonal factors were accounted for in the roadway segments and intersection analyses

*TMC Response: Seasonal factors were applied only to turning movement counts and are not applicable to roadway segments. The methodology for incorporating seasonal factors into intersection analyses is explained in Section 6.2, with detailed calculations provided in **Appendix L** of the revised report (as included in version 1.2).*

8. For Synchro analyses, please include the output reports that show the Q-length to verify against table 10 values.

*TMC Response: The queue lengths for turn lanes summarized in Table 10 are based on the Synchro worksheets were provided in **Appendix N** (as included in version 1.2). However,*

*the queue lengths for the existing condition are derived from the Synchro worksheets in **Appendix M** (as included in version 1.2). To avoid confusion, Section 7.4 has been updated to clarify this distinction. Please see TIA v1.3 attached.*

9. Please improve the intersection LOS E result at MLK Blvd & SR-472 analysis / PM Peak Hour (Buildout W Improvements) condition which is not in line with adopted LOS requirement.

TMC Response: As explained in Section 7.3, several improvements were previously recommended for the MLK Blvd and SR 472 intersection by other developments. With these improvements in place, the intersection operates in an adequate condition and is capable of accommodating project trips. Additionally, as per Volusia County's comment on September 16, 2024, a proportionate share cost for these improvements was requested to be calculated, as these improvements exceeded concurrency requirements. Consequently, this calculation was incorporated into the revised report (as included in version 1.2).

The allowable Level of Service (LOS) at MLK Blvd and SR 472 is LOS E, which aligns with the adopted LOS requirement. Therefore, the intersection's LOS at PM Peak Hour (Buildout with Improvements) condition remains in compliance with this standard. However, please note that with the revision of Synchro analysis, the overall LOS at MLK Blvd and SR 472 is improved to D.

10. Background traffic volumes (including vested trips) were adjusted manually in some cases. Appendix I and L should clearly justify these adjustments and match the volumes shown in Figures 7–10 (intersection volumes).

*TMC Response: Background traffic volumes (including vested trips) were not adjusted manually. Background traffic volumes were estimated by applying appropriate seasonal factors and growth factors to existing traffic counts and then adding vested trips from Deland Tech Park and TM BTR, as explained in Section 6.2 of the report. The vested trip data was obtained from the TIA of TM BTR and is highlighted in **Appendix K** of the revised report (as included in version 1.2)*.

11. Traffic counts from June 2024 might not fully reflect peak seasonal conditions despite adjustments using FDOT seasonal factors. Ensure accuracy of adjustment factors in Appendix J.

TMC Response: Per County guidelines, traffic counts must be no more than two years old and should be adjusted using FDOT seasonal factors. The traffic counts used in this analysis were collected less than a year ago, and the appropriate seasonal adjustment factor was applied to reflect peak seasonal conditions. This methodology is consistent with Volusia County's standard practice, aligns with procedures followed in other jurisdictions, and is considered an industry-standard practice. If an alternative method is preferred, we are open to incorporating it for this and future analysis.

12. For the intersection of SR 472 and MLK Beltway, Intersection delays and LOS under "Buildout with Improvements" conditions were marginally better than "Background with

Vested" conditions (Tables 8 and 9), Please clarify the improvement effectiveness from Appendix N.

TMC Response: The LOS and delay under the Buildout with Improvements condition are not significantly better because these improvements were already accounted for in the Background with Vested condition. The improvements included in this analysis were recommended in previous projects and were therefore factored into the background conditions of this project.

13. Queue lengths for turn lanes are summarized in Table 10, but discrepancies exist with Appendix M worksheets regarding 95th percentile values (e.g., SR 472 eastbound right-turn queue).

*TMC Response: The queue lengths for turn lanes summarized in Table 10 are based on the Synchro worksheets provided in **Appendix N**. However, the queue lengths for the existing condition are derived from the Synchro worksheets in **Appendix M**. To avoid confusion, Section 7.4 has been updated to clarify this distinction. Please see TIA v1.3 attached.*

14. For deceleration lanes at MLK and Cassadaga Road, ensure that lane lengths are consistent with Land Development Code values. Appendix O calculations occasionally deviate by ~5%.

TMC Response: Deceleration lanes at MLK and Cassadaga Road were previously recommended based on FDM Exhibit 212-2. In response to this comment, the deceleration lanes at MLK and Cassadaga Road have now been recommended in accordance with the Volusia County Land Development Code (LDC).

15. Westbound right-turn lane at SR 472 and Blue Lake Ave Extension recommended at 455 feet, but queue analysis (Table 10) suggests this length might be underestimated.

TMC Response: T The westbound right-turn lane at SR 472 and Blue Lake Ave Extension was originally recommended at 455 feet based on FDM Exhibit 212-1. However, there is currently an approximately 510-foot-long westbound right-turn lane at this location. The existing turn lane was initially overlooked, as it was recently installed as part of the Blue Lake Ave Extension. Analysis indicates that a 510-foot-long turn lane can adequately accommodate project trips, and thus, no improvements are required at SR 472 and Blue Lake Ave Extension. The TIA has been updated accordingly to include this information. Please see TIA v1.3 attached.

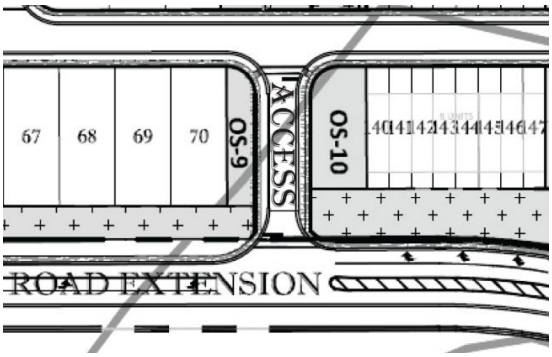
Also, it is important to note that the queue analysis in Table 10 reflects storage needs at SR 472 and MLK Beltway, a higher-volume intersection. In contrast, SR 472 and Blue Lake Ave Extension serves lower traffic volumes and does not require extensive queue storage. Thus, Table 10's analysis does not directly apply as the operational characteristics of these intersections differ.

16. Within Table 12, the total proportionate share ($233,945.91) includes estimated improvement costs. Check alignment of project share percentages with Appendix S, particularly for improvements not listed in the Master PFS Table.

*TMC Response: Table 12 only accounts for the total proportionate share cost of the improvements at the intersection of SR 472 and MLK Beltway. These improvements were recommended by previous developments and based on the comments from the County on September 16, 2024, the proportionate share was calculated and included in this project's proportionate share cost. The total cost of $233,945.91 included this amount as well as the proportionate share cost of improving roadway segments impacted by this project. Please note that because of Synchro revision the new cost is updated to $234,281.24. The project share percentages have been verified against **Appendix S**, and adjustments have been made where necessary to ensure consistency (as included in version 1.2). Additionally, for improvements not listed in the Master Proportionate Fair Share (PFS) Table, the cost allocation methodology was applied in accordance with County guidelines and has been explained in section 11.0 and also reflected in **Appendix S** (as included in version 1.2).*

17. Within Appendix B Intersections layouts should match operational assumptions in LOS analysis (e.g., shared lanes at Cassadaga Road). Potential conflicts observed for eastbound left turn at Access I.

TMC Response: The intersection layouts in Appendix B have been reviewed and confirmed to match the operational assumptions used in the LOS analysis. An example of Cassadaga Road and Access I have been provided with in the figure below for reference.



HCM 7th TWSC
6: Cassadaga Rd Ext & Access I

Intersection						
Int Delay, s/veh	6.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	7	2	10	29	35
Future Vol, veh/h	11	7	2	10	29	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	275	-	-	275	0	-
Veh in Median Storage, #	-	0	0	-	0	-

HCM 7th TWSC
6: Cassadaga Rd Ext & Access I

Intersection						
Int Delay, s/veh	5.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	36	4	7	30	19	23
Future Vol, veh/h	36	4	7	30	19	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	275	-	-	275	0	-
Veh in Median Storage, #	-	0	0	-	0	-

18. Please submit soft copy of the Synchro files used.

TMC Response: A soft copy of the Synchro file has been submitted along with the revised TIA, as requested.

19. Please submit a soft copy of the excel spreadsheet used for your PFS calculation.

TMC Response: A soft copy of the PFS spreadsheet has been submitted along with the revised TIA, as requested.

20. Present traffic count results to account for all modes of movements and provide soft copy of all count survey data using the following file types:

- **Intersection data - .txt export from PetraPro; .txt export from Traffic Data Online.**
- **Midblock data: .prn export from TraxPro/StarNEXT; .csv export from VIAS; .prn export from TrafficViewerPro**

TMC Response: The raw counts collected by the field technician have been submitted along with the revised TIA, as requested.

END OF COMMENTS

We trust these responses and the revised Traffic Impact Analysis adequately address the review comments. We remain available to discuss this matter further or to answer any questions you may have.

Kind regards,

TRAFFIC & MOBILITY CONSULTANTS LLC



Ayman H. As-Saidi, PE
VP of Engineering

Volusia County
Traffic Engineering

Project Name: **Ford 472**
Subject: **TIA Comments**
Date: **1/8/2025**

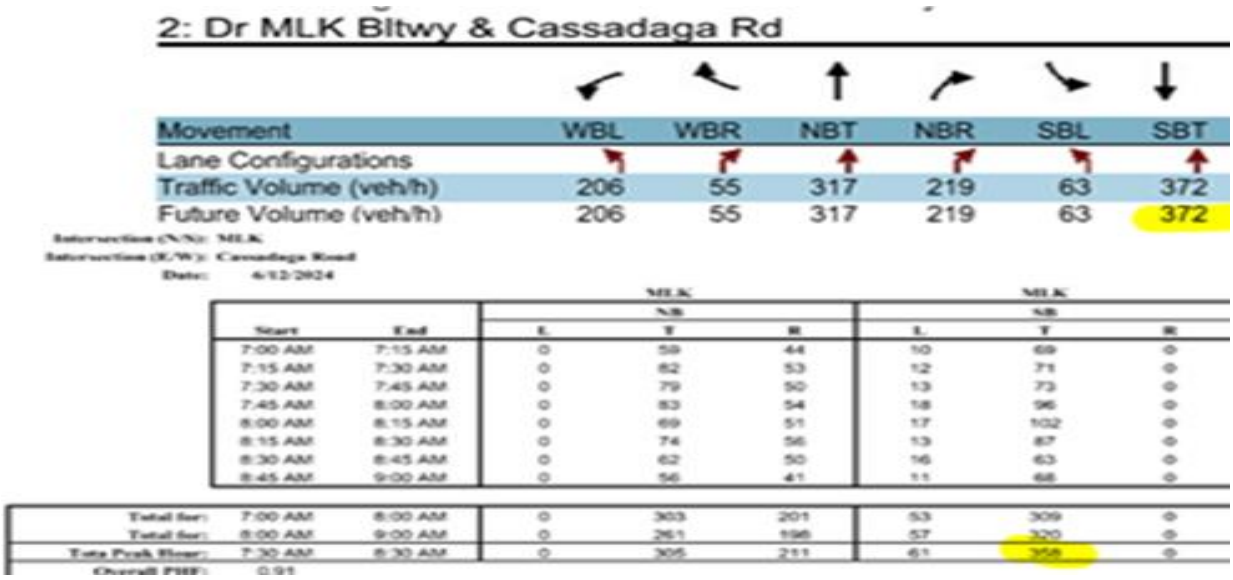
TIA Comments

1. Synchro files are missing throughout document. Example missing existing, background, or projected (varies at a.m. & p.m. as well). Please provide all relevant output reports.

2. Peak hour factors vary throughout TIA, please provide reasoning.

3. There appears to be a significant amount of traffic that exits the network between intersection 4 and intersection 3 EB during peak hours, please review & explain.

4. There are differences in the existing data in synchro and the TMC, please clarify. Example below:



2: Dr MLK Bltwy & Cassadaga Rd

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	206	55	317	219	63	372
Future Volume (veh/h)	206	55	317	219	63	372

Intersection (N/S): MLK
Intersection (E/W): Cassadaga Road
Date: 4/12/2024

		MLK NB			MLK NB		
Start	End	L	T	R	L	T	R
7:00 AM	7:15 AM	0	59	44	10	69	0
7:15 AM	7:30 AM	0	62	53	12	71	0
7:30 AM	7:45 AM	0	79	50	13	73	0
7:45 AM	8:00 AM	0	83	54	18	96	0
8:00 AM	8:15 AM	0	69	51	17	102	0
8:15 AM	8:30 AM	0	74	56	13	87	0
8:30 AM	8:45 AM	0	62	50	16	63	0
8:45 AM	9:00 AM	0	56	41	11	68	0
Total for:	7:00 AM	8:00 AM	0	303	201	53	309	0
Total for:	8:00 AM	9:00 AM	0	261	196	57	320	0
Tote Peak Hour:	7:30 AM	8:30 AM	0	305	211	61	358	0
Overall PHF:	0.91							

5. The county has 2023 count data midblock on MLK between Cassadaga Rd and SR-472. The TIA 2024 existing count is significantly higher, please review & verify.

6. Please show how annual growth rate were accounted for in the roadway segments and intersection analyses

7. Please show how seasonal factors were accounted for in the roadway segments and intersection analyses

8. For Synchro analyses, please include the output reports that show the Q-length to verify against table 10 values.

9. Please improve the intersection LOS E result at MLK Blvd & SR-472 analysis / PM Peak Hour (Buildout W Improvements) condition which is not in line with adopted LOS requirement.

10. Background traffic volumes (including vested trips) were adjusted manually in some cases. Appendix I and L should clearly justify these adjustments and match the volumes shown in Figures 7–10 (intersection volumes).

11. Traffic counts from June 2024 might not fully reflect peak seasonal conditions despite adjustments using FDOT seasonal factors. Ensure accuracy of adjustment factors in Appendix J.

12. For the intersection of SR 472 and MLK Beltway, Intersection delays and LOS under "Buildout with Improvements" conditions were marginally better than "Background with Vested" conditions(Tables 8 and 9), Please clarify the improvement effectiveness from Appendix N.

13. Queue lengths for turn lanes are summarized in Table 10, but discrepancies exist with Appendix M worksheets regarding 95th percentile values (e.g., SR 472 eastbound right-turn queue).

14. For deceleration lanes at MLK and Cassadaga Road, ensure that lane lengths are consistent with Land Development Code values. Appendix O calculations occasionally deviate by ~5%.

15. Westbound right-turn lane at SR 472 and Blue Lake Ave Extension recommended at 455 feet, but queue analysis (Table 10) suggests this length might be underestimated.\

16. Within Table 12, the total proportionate share ($233,945.91) includes estimated improvement costs. Check alignment of project share percentages with Appendix S, particularly for improvements not listed in the Master PFS Table.

17. Within Appendix B Intersections layouts should match operational assumptions in LOS analysis (e.g., shared lanes at Cassadaga Road). Potential conflicts observed for eastbound left turn at Access I.

18. Please submit soft copy of the Synchro files used.

19. Please submit a soft copy of the excel spreadsheet used for your PFS calculation.

20. Present traffic count results to account for all modes of movements and provide soft copy of all count survey data using the following file types:

    - Intersection data - .txt export from PetraPro; .txt export from Traffic Data Online.
    - Midblock data: .prn export from TraxPro/StarNEXT; .csv export from VIAS; .prn export from TrafficViewerPro

December 10, 2024

Mr. William White
Engineering Assistant II
Volusia County Traffic Engineering
123 West India Avenue
Deland, Florida 32720
WDWhite@volusia.org

Re: Ford 472
Response to TIA Comments
TMC Project № 21145, v1.1
Volusia County, Florida

Dear Mr. White,

Please find below our responses to the review comments prepared by the Volusia County Traffic Engineering dated December 9, 2024, regarding the above referenced Traffic Impact Analysis dated October 2024. The comments are listed in **bold** typeface and the TMC responses follow in *italic* typeface. The **bold** typeface in **red** are the edits made by Volusia County to the comments provided on December 3, 2024. Additionally, a revised TIA is provided under cover reflecting the changes resulting from these comments.

1. **Please revise table 10 to include all study intersections to confirm the development buildout 2028- year and corresponding Development Buildout LOS using the following format, noting the referenced vested project in appendix H&N reflects a buildout Yr 2027. Provide in a tabulated format the results of all studied signalized intersections to include current / Projected plus vested / Projected plus vested plus development to include the following parameters:**
    1. **Intersection delay (sec/veh)** **Shown on tables 8 & 9**
    2. **Movement delay (sec/veh)** **Shown on tables 8 & 9**
    3. **Intersection LOS** **Shown on tables 8 & 9**
    4. **Movement LOS** **Shown on tables 8 & 9**
    5. **Back of queue Ft/ln (95th percentile)** **Update Table 10 to include all study intersections with project trips, separated by AM and PM as shown in the attached Queue Length Analysis.**

    Confirmation of sufficient storage length left/right turn movement(s) if turning lanes are available.

Intersection	Turn Lane	Posted Speed Limit (mph)	Existing Lane Length (ft)	Required Deceleration (ft)	Current Yr. Traffic				Future Yr. Traffic + Vested				Development Build-Out					
					# of Lanes	95th Percentile Queue Length (veh x 25 ft)	Total Required Turn Lane Length (ft)	Lane Length Deficiency (ft)	# of Lanes	95th Percentile Queue Length (veh x 25 ft)	Total Required Turn Lane Length (ft)	Lane Length Deficiency (ft)	# of Lanes	95th Percentile Queue Length (veh x 25 ft)	Total Required Turn Lane Length (ft)	Lane Length Deficiency (ft)	Lane Length Deficiency Difference from Future & Vested to Build-Out (ft)	Project Trips
AM PEAK																		
Name	NBL																	
	NBR																	
	SBL																	
PM PEAK																		
Name	NBL																	
	NBR																	
	SBL																	

TMC Response: Table 10 has been revised to include the study intersection with project trips for both AM and PM periods, consistent with the provided Queue Length Analysis. Please refer to Table 10 in the revised TIA v1.2 attached.

2. Please use the updated PFS spreadsheet dated July 2024 and forward a soft copy of your PFS spreadsheet.

TMC Response: The TIA has been updated in accordance with the PFS spreadsheet dated July 2024, provided by the County. Please see Section 11 in the revised TIA v1.2 attached. Additionally, a soft copy of the updated PFS spreadsheet has been submitted along with the revised TIA, as requested.

.

END OF COMMENTS

We trust these responses and the revised Traffic Impact Analysis adequately address the review comments. We remain available to discuss this matter further or to answer any questions you may have.

Kind regards,

TRAFFIC & MOBILITY CONSULTANTS LLC



Ayman H. As-Saidi, PE
VP of Engineering

Nikesh Poudel

From: William White <WDWhite@volusia.org>
Sent: Monday, December 9, 2024 2:23 PM
To: Nikesh Poudel
Cc: Jay I Williams; Omar Atallah; Ayman As-Saidi; 21145 FORD 472
Subject: Fw: Follow-Up on Revised TIA for Ford 472 Project – October 2024
Attachments: TIA Comment Letter Dec 2024.pdf; Queue Length Analysis Table.docx; Master PFS table 2024-01 TWK - July 2024.xlsx

Nikesh,

1. Please revise table 10 to include all study intersections to confirm the development buildout 2028-year and corresponding Development Buildout LOS using the following format, noting the referenced vested project in appendix H&N reflects a buildout Yr 2027
   Provide in a tabulated format the results of all studied signalized intersections to include current / Projected plus vested / Projected plus vested plus development to include the following parameters:
   1. ~~Intersection delay (sec/veh)~~ **Shown on tables 8 & 9**
   2. ~~Movement delay (sec/veh)~~ **Shown on tables 8 & 9**
   3. ~~Intersection LOS~~ **Shown on tables 8 & 9**
   4. ~~Movement LOS~~ **Shown on tables 8 & 9**
   5. Back of queue Ft/ln (95TH percentile) **Update Table 10 to include all study intersections with project trips, separated by AM and PM as shown in the attached Queue Length Analysis.**

   Confirmation of sufficient storage length left/right turn movement(s) if turning lanes are available.

6. Please use the updated PFS spreadsheet dated July 2024 and forward a soft copy of your PFS spreadsheet.

October 23, 2024

Mr. William White
Engineering Assistant II
Volusia County Traffic Engineering
123 West India Avenue
Deland, Florida 32720
WDWhite@volusia.org

Re: Ford 472
Response to TIA Comments
TMC Project № 21145
Volusia County, Florida

Dear Mr. White,

Please find below our responses to the review comments prepared by the Volusia County Traffic Engineering dated September 16, 2024, regarding the above referenced Traffic Impact Analysis dated September 2024. The comments are listed in **bold** typeface and the TMC responses follow in *italic* typeface. Additionally, a revised TIA is provided under cover reflecting the changes resulting from these comments.

1. **Refer to the attached traffic growth policy for compliance.**

   TMC Response: The attached traffic growth policy has been adhered to in the Traffic Impact Analysis v1.0.

2. **Referencing TIA report page 12 section 5 Improvement at intersection of SR 472 & MLK, recommendation of improvements by other vested project shall be considered but also confirmed in line with the concurrency laws requirement that developments maintain the adopted LOS standards to ensure that growth does not outpace infrastructure capacity. The TIA's proposed improvements to deficient intersections not only meet these standards but exceed them, potentially resulting in a higher LOS than required. Given that these improvements offer benefits that surpass the basic concurrency requirements, it is equitable that the costs associated with these enhancements be allocated proportionately to the developments that generate the additional traffic demand. The Proportionate Fair Share (PFS) mechanism is designed to ensure that developments contribute fairly to the costs of necessary infrastructure improvements. When improvements elevate an intersection's LOS beyond the adopted standard, the additional capacity created is primarily intended to accommodate the increased traffic generated by the development. Therefore, it is appropriate for the development to bear the cost of this additional capacity in proportion to its usage of the intersection. This approach ensures that existing residents and businesses are not subsidizing infrastructure improvements that disproportionately benefit new developments. By tying the PFS costs directly to the proportion of trips generated by the development, we ensure a fair and transparent distribution of costs. The improvements beyond the adopted LOS represent an added**

benefit to the transportation network, and it is logical that the entities creating the need for these improvements should fund them accordingly.

TMC Response: Acknowledged. The Proportionate Fair Share for all improvements listed in the TIAs of previous developments have been evaluated. The report has been updated to reflect the Proportionate Fair Share costs that Ford 472 is responsible for at the intersection of SR 472 and MLK. Please refer to Table 12 in the revised TIA v1.1 attached.

3. **Please provide for all studied intersections in tabulated format the LOS of: Existing AM/PM Peak Hour, Projected background + vested AM/PM Peak Hour, Projected background + vested with improvement AM/PM Peak Hour, & Buildout AM/PM Peak Hour.**

TMC Response: The report has been updated to include the requested LOS information in a tabulated format for all studied intersections under all conditions: Existing AM/PM Peak Hour, Projected background + vested AM/PM Peak Hour, Projected background + vested with improvement AM/PM Peak Hour, & Buildout AM/PM Peak Hour. Please refer to Table 8 and Table 9 in the revised TIA v1.1 attached.

4. **To verify proper connectivity, provide intersections concept layouts that correspond to LOS analysis for the new roadway intersections along S Blue Lake Ave. & Cassadaga Rd.**

TMC Response: The TIA report has been updated to include the LOS analysis and concept layouts for the new roadway intersections along S Blue Lake Ave. & Cassadaga Rd. Please refer to Appendix B for the concept layout and Table 8 and Table 9 for the updated LOS analysis in the revised TIA v1.1 attached.

5. **CTE confirmation with your listed proposed improvement(s) would be in line with County improvement strategy ahead of being assumed as acceptable improvement(s) as stated in the TIA guideline.**

Access Rd Improvement(s)	Valid Assumption	Invalid Assumption	Alternative Improvement to be considered	Comment
Intersection #2 – MLK Beltway and Cassadaga Road				
Northbound left turn lane	X			
Southbound right turn lane	X			
Intersection # 4 – SR 472 and Blue Lake Avenue Extension				
Westbound right turn lane	X			
Intersection #6 – Cassadaga Rd Extension and Access I				
Eastbound left turn lane	X			

TMC Response: The confirmation of the assumptions by the County has been acknowledged.

6. **Please include the following statement if applicable**
   Given the staged nature of the development and recognizing the potential evolution of traffic patterns over time, the developer is required to conduct a comprehensive reevaluation of the access control type in conjunction with each stage of development. This process is essential to ensure that access control measures align with the changing transportation needs and conditions associated with the different phases of the project. The developer must collaborate closely with the CTE to assess and adjust the access control type based on the specific requirements and challenges presented by each stage. This reevaluation should consider factors such as the increasing population density, changing land use patterns, and corresponding shifts in traffic volumes. For each stage, the developer is expected to submit a revised access control proposal that reflects the current and anticipated traffic conditions. This proposal should outline any necessary modifications to the initially proposed access control type, taking into account factors such as peak traffic periods, pedestrian movements, and the integration of alternative transportation modes. The CTE will review each stage's access control proposal, ensuring that it complies with established standards and guidelines. The goal is to adapt the access control type to the evolving demands of the development, promoting an efficient and safe transportation network throughout the different phases. This staged approach to access control evaluation aims to create a flexible and responsive framework that accommodates the dynamic nature of the development. It is imperative that the developer remains proactive in reassessing and refining access control measures to uphold the highest standards of transportation planning and engineering throughout the entire staged development process.

   TMC Response: Please note that this project will be developed in one (1) phase/stage; therefore, the proposed access driveway points have been analyzed for the full buildout of the project and access management has been evaluated accordingly, and the above statement is not applicable.

END OF COMMENTS

We trust these responses and the revised Traffic Impact Analysis adequately address the review comments. We remain available to discuss this matter further or to answer any questions you may have.

Kind regards,

TRAFFIC & MOBILITY CONSULTANTS LLC



Ayman H. As-Saidi, PE
VP of Engineering

Volusia County
Traffic Engineering

Project Name: **Ford 472**
Subject: **TIA Comments**
Date: **9-16-24**

TIA Comments

1. Refer to the attached traffic growth policy for compliance.

2. Referencing TIA report page 12 section 5 Improvement at intersection of SR 472 & MLK, recommendation of improvements by other vested project shall be considered but also confirmed in line with the concurrency laws requirement that developments maintain the adopted LOS standards to ensure that growth does not outpace infrastructure capacity. The TIA's proposed improvements to deficient intersections not only meet these standards but exceed them, potentially resulting in a higher LOS than required. Given that these improvements offer benefits that surpass the basic concurrency requirements, it is equitable that the costs associated with these enhancements be allocated proportionately to the developments that generate the additional traffic demand. The Proportionate Fair Share (PFS) mechanism is designed to ensure that developments contribute fairly to the costs of necessary infrastructure improvements. When improvements elevate an intersection's LOS beyond the adopted standard, the additional capacity created is primarily intended to accommodate the increased traffic generated by the development. Therefore, it is appropriate for the development to bear the cost of this additional capacity in proportion to its usage of the intersection. This approach ensures that existing residents and businesses are not subsidizing infrastructure improvements that disproportionately benefit new developments. By tying the PFS costs directly to the proportion of trips generated by the development, we ensure a fair and transparent distribution of costs. The improvements beyond the adopted LOS represent an added benefit to the transportation network, and it is logical that the entities creating the need for these improvements should fund them accordingly.

Background Conditions									
Intersection	Adopted LOS	AM Peak Hour				PM Peak Hour			
		Delay (sec.)	LOS	Overall Highest V/C	Movement(s) with V/C > 1	Delay (sec.)	LOS	Overall Highest V/C	Movement(s) with V/C > 1

3. Please provide for all studied intersections in tabulated format the LOS of: Existing AM/PM Peak Hour, Projected background + vested AM/PM Peak Hour, Projected

background + vested with improvement AM/PM Peak Hour, & Buildout AM/PM Peak Hour,

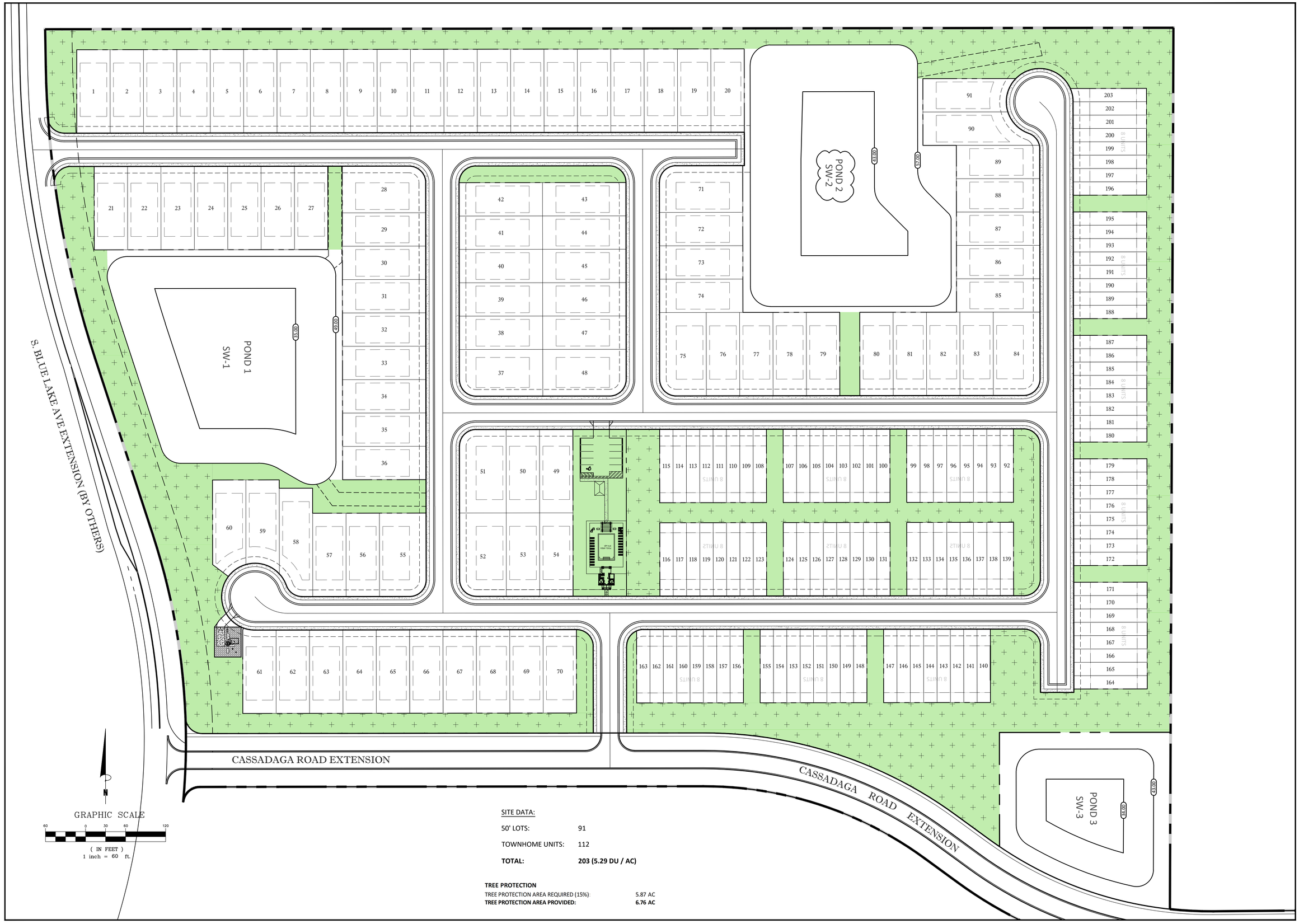
4. To verify proper connectivity, provide intersections concept layouts that correspond to LOS analysis for the new roadway intersections along S Blue Lake Ave. & Cassadaga Rd.

5. CTE confirmation with your listed proposed improvement(s) would be in line with County improvement strategy ahead of being assumed as acceptable improvement(s) as stated in the TIA guideline

Access Rd Improvement(s)	Valid Assumption	Invalid Assumption	Alternative Improvement to be considered	Comment
Intersection #2 – MLK Beltway and Cassadaga Road				
Northbound left turn lane	X			
Southbound right turn lane	X			
Intersection # 4 – SR 472 and Blue Lake Avenue Extension				
Westbound right turn lane	X			
Intersection #6 – Cassadaga Rd Extension and Access I				
Eastbound left turn lane	X			

6. Please include the following statement (if applicable)
Given the staged nature of the development and recognizing the potential evolution of traffic patterns over time, the developer is required to conduct a comprehensive reevaluation of the access control type in conjunction with each stage of development. This process is essential to ensure that access control measures align with the changing transportation needs and conditions associated with the different phases of the project. The developer must collaborate closely with the CTE to assess and adjust the access control type based on the specific requirements and challenges presented by each stage. This reevaluation should consider factors such as the increasing population density, changing land use patterns, and corresponding shifts in traffic volumes. For each stage, the developer is expected to submit a revised access control proposal that reflects the current and anticipated traffic conditions. This proposal should outline any necessary modifications to the initially proposed access control type, taking into account factors such as peak traffic periods, pedestrian movements, and the integration of alternative transportation modes. The CTE will review each stage's access control proposal, ensuring that it complies with established standards and guidelines. The goal is to adapt the access control type to the evolving demands of the development, promoting an efficient and safe transportation network throughout the different phases. This staged approach to access control evaluation aims to create a flexible and responsive framework that accommodates the dynamic nature of the development. It is imperative that the developer remains proactive in reassessing and refining access control measures to uphold the highest standards of transportation planning and engineering throughout the entire staged development process.

Appendix B
Site Information



SITE DATA:

50' LOTS:	91
TOWNHOME UNITS:	112
TOTAL:	**203 (5.29 DU / AC)**

TREE PROTECTION

TREE PROTECTION AREA REQUIRED (15%):	5.87 AC
TREE PROTECTION AREA PROVIDED:	**6.76 AC**

KELLY, COLLINS & GENTRY, INC.
KCG
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 898-7858 FAX (407) 898-1488

DATE	REVISION

PREPARED FOR:
PULTE GROUP

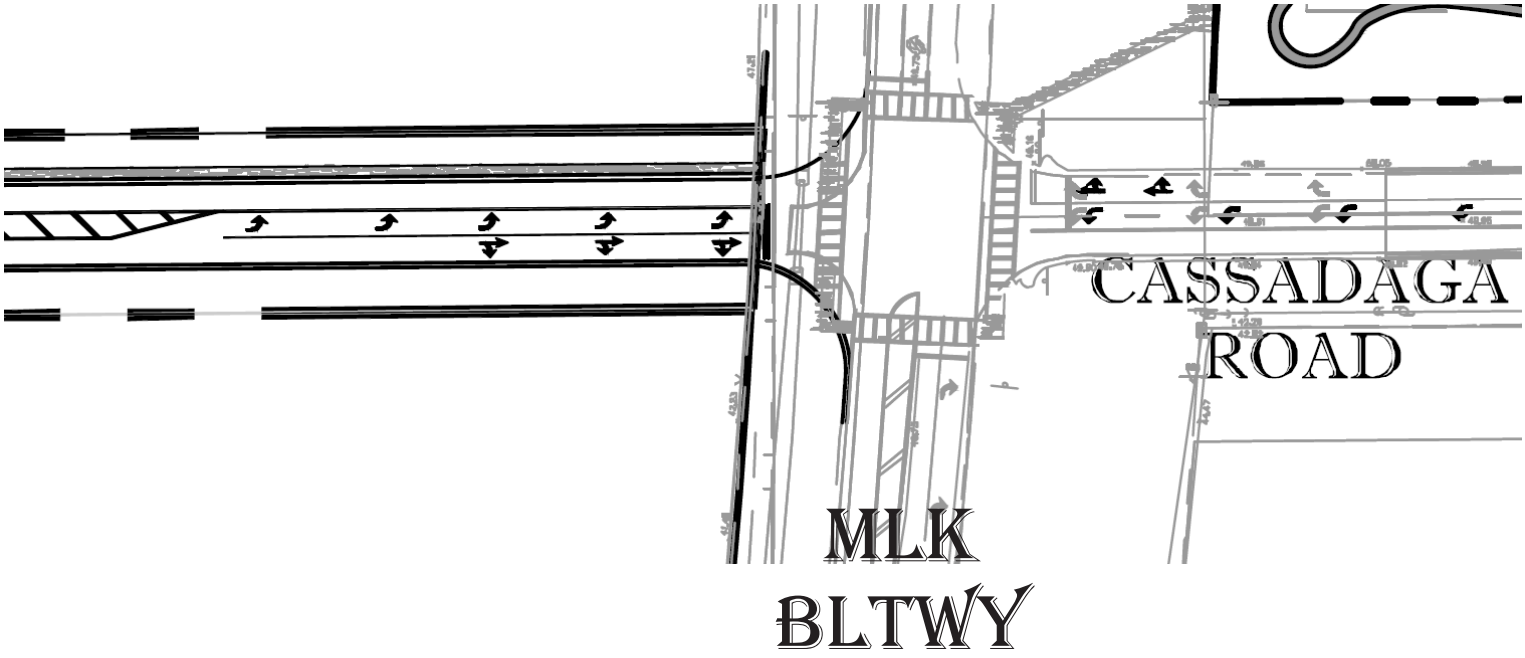
FORD 472
SUBDIVISION

CONCEPT PLAN

DRAWN:	GPR
DESIGN:	GPR
CHECKED:	SCF
JOB NO.:	1496.000
DATE:	07/25/2023

SHEET
1 OF 1

N
Not to Scale



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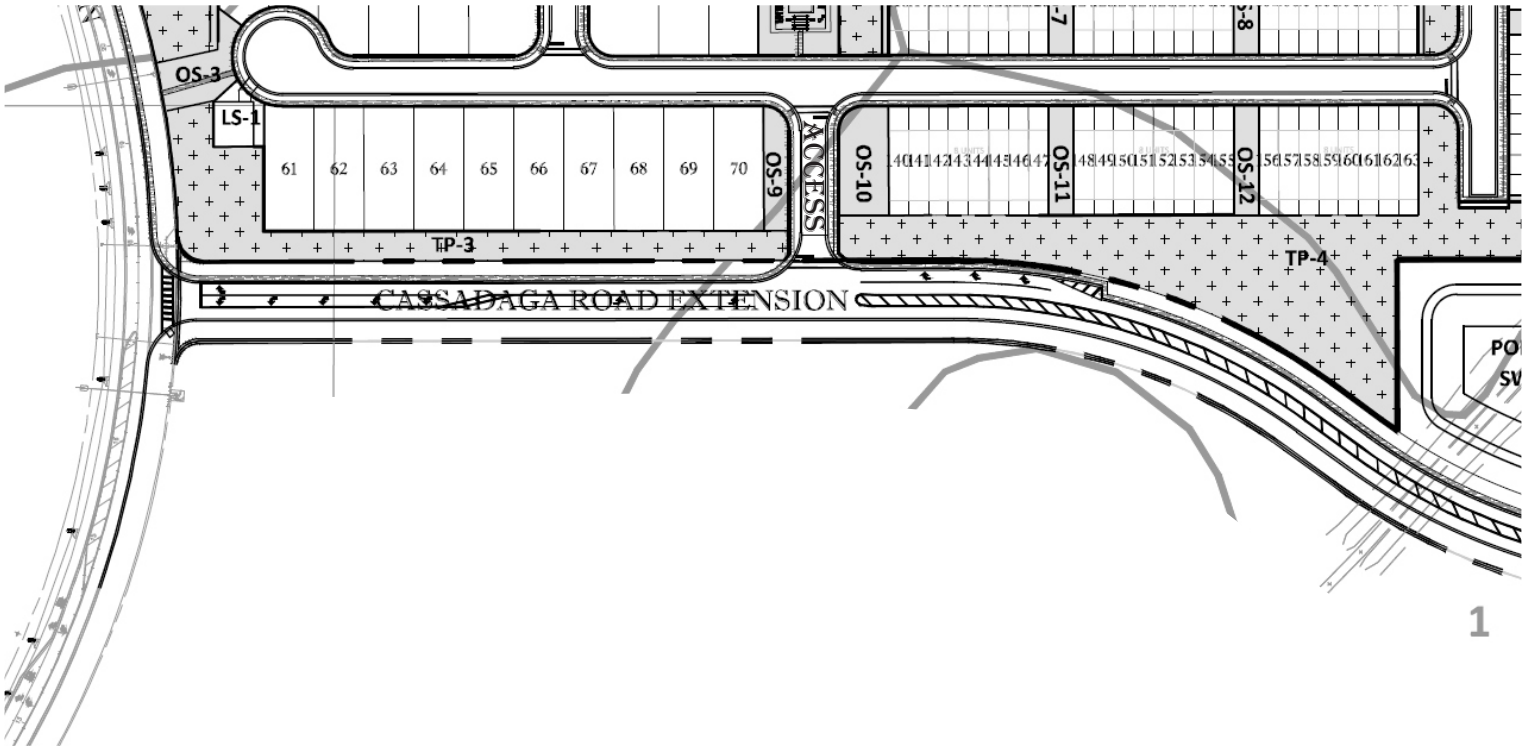

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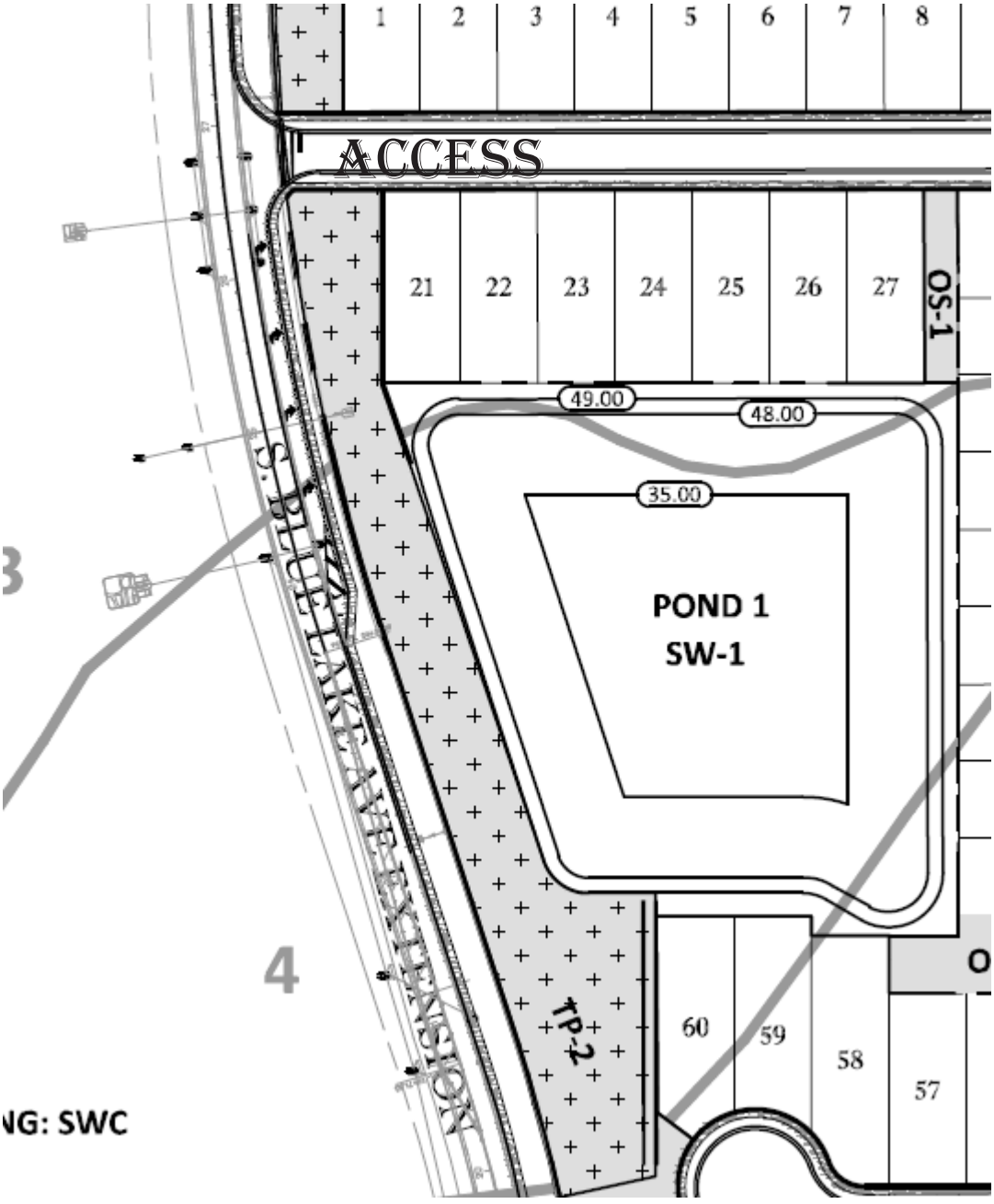

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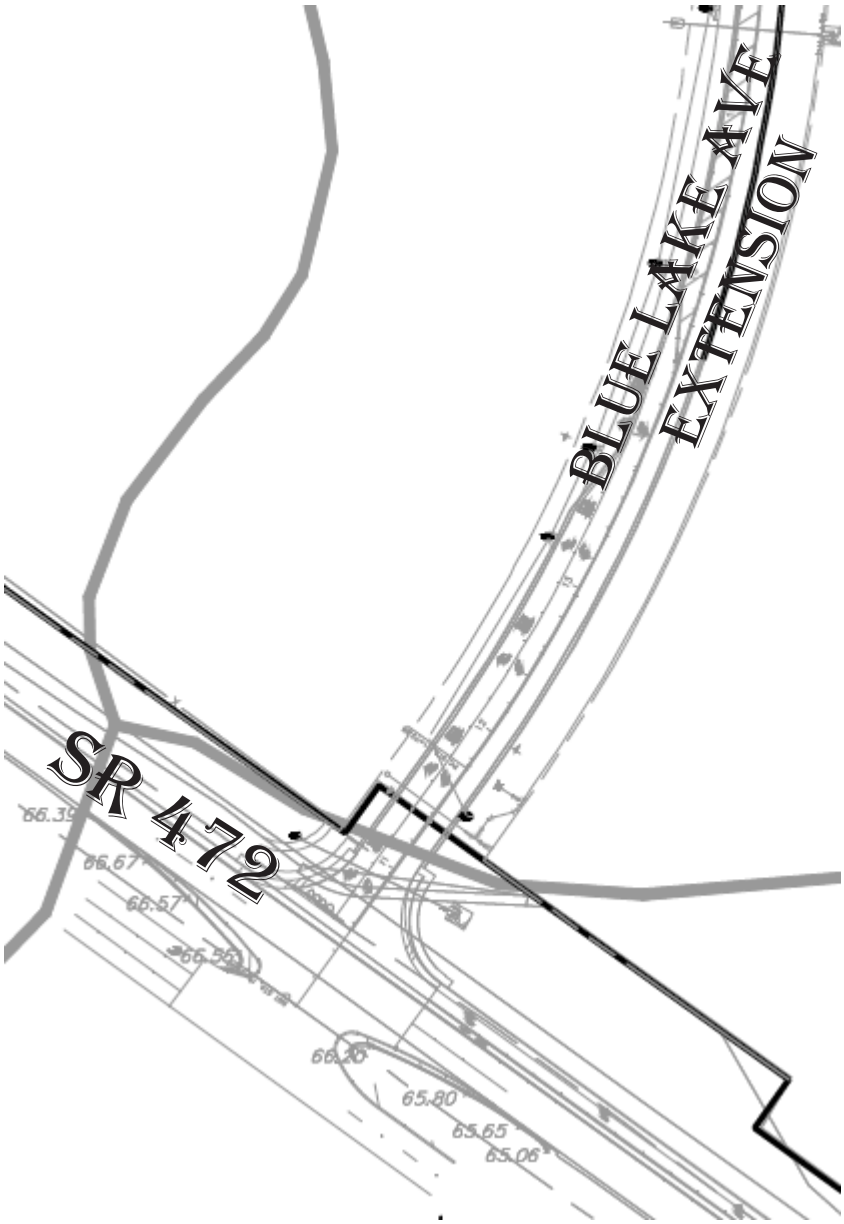


Volusia County
FLORIDA

Growth & Resource Management
Land Development

November 27, 2023

Christopher Wrenn
PulteGroup, Inc.
4901 Vineland Rd
Orlando, FL 32811

Re: Subdivision Overall Development Plan Preliminary Development Order
2022-S-ODP-0353 / 1072480
Ford 472 Subdivision

Dear Mr. Wrenn:

This letter is the Subdivision Overall Preliminary Development Order for the above-referenced development. Pursuant to the following findings, the DRC has approved the application:

1. The application was accepted on May 15, 2023, and discussed at the June 14, 2023, Technical Staff Review Meeting.

2. The DRC considered the application at their regularly scheduled meeting of October 10, 2023, and approved the Overall Development Plan application 2022-S-ODP-0353, subject to the submittal of revised plans to the satisfactory resolution of staff comments.

3. Revised plans were accepted on October 26, 2023.

A copy of the approved version of the plan, last revision dated October 18, 2023, by Sean Fortier, is enclosed.

Based on this letter you may submit an application for a Preliminary Plat Development Order. A blank application form and a checklist of exhibits and procedures are attached. A fee, as outlined in the attached fee schedule, must be paid at the time of application submittal. The Preliminary Plat application must be consistent with the approved Overall Development Plan and any remaining conditions imposed by the DRC.

Section 72-536(b) of the LDC states, “It is a violation of this division for anyone who is the owner or agent of the owner of any land to transfer, sell, agree to sell, or negotiate to sell such land by reference to, exhibition of, or other use of a plat of a subdivision of such land without having the plat approved as required by this division.”

Pursuant to Section 125.022(5), F.S., issuance of this development order by the county does not in any way create any rights on the part of the applicant to obtain a permit from a state or federal agency and does not create any liability on the part of the county for issuance of the permit if the applicant fails to obtain requisite approvals or fulfill the obligations imposed by a state or federal agency or undertakes actions that result in a violation of state or federal law. All other applicable state or federal permits shall be obtained before commencement of this development.

Pursuant to Section 72-502(g) of Article III Land Development, Chapter 72 Code of Ordinances (LDC), any person claiming to be aggrieved by a decision of the Enforcement Official or the DRC may file a written appeal within thirty (30) days after said decision with the Land Development Manager to have the decision reviewed by the Volusia County Council. The appeal shall state fully the specific grounds for the appeal and all of the facts relied upon by the petitioner. The County Council shall consider only those items specified in this petition.

Please feel free to contact the Land Development office if you have any questions. The project name and number must be referenced on all inquiries.

Sincerely,



Carol McFarlane, AICP
Planning and Land Development Director
cmcfarlane@volusia.org

CRM/rc
Enclosures

c: James L Rickman, Allen & Company, 16 E Plant St, Winter Garden, FL 34787
Ford Frank A, Group 7 87 5 / Group 4 12 5, Po Box 457, Deland Fl 32721
Sean Fortier, Kelly, Collins & Gentry, Inc, 1700 N Orange Av, Orlando, FL 32804
Todd Bonnett, Bonnett Design Group, LLC, 400 S Orlando Av Suite 201, Maitland, FL 32751
David Romero (via e-mail)

PARCEL DESCRIPTION

PARCEL 1
GOVERNMENT LOT 2, EXCEPT THE W 1/4 THEREOF LYING NORTH OF S.R. 15A, AND LYING SOUTH OF A LINE PARALLEL TO AND 900 FEET SOUTH OF THE NORTH LINE OF SAID GOV'T LOT 2, AND EXCEPT THE EAST 660 FEET OF THE NORTH 1056 FEET, LYING IN SECTION 1, TOWNSHIP 18 SOUTH, RANGE 30 EAST, VOLUSIA COUNTY, FLORIDA.

AND
THE NORTH 900 FEET OF THE EAST 1/4 OF GOVERNMENT LOT 2, LYING NORTH OF S.R. 15A, EXCEPT THE NORTH 660 FEET THEREOF, LYING IN SECTION 1, TOWNSHIP 18 SOUTH, RANGE 30 EAST, VOLUSIA COUNTY, FLORIDA.

PARCEL2
THE EAST 1/4 OF GOVERNMENT LOT 2, LYING NORTH OF STATE ROAD 15-A, EXCEPT THE NORTH 900 FEET THEREOF, AND THE WEST 1/4 OF GOVERNMENT LOT 1, LYING NORTH OF STATE ROAD 15-A, EXCEPT THE NORTH 900 FEET, LYING IN SECTION 1, TOWNSHIP 18 SOUTH, RANGE 30 EAST, VOLUSIA COUNTY, FLORIDA.

NOTE:

PARCEL DESCRIPTION PROVIDED BY ALLEN & COMPANY, DATED 06/08/2021.

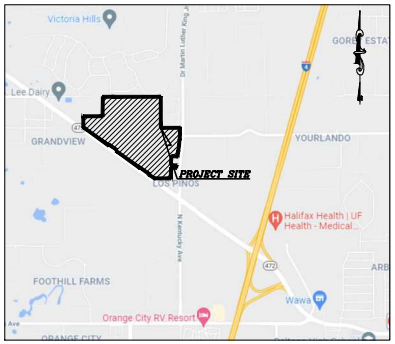
OVERALL DEVELOPMENT PLAN

FOR:

FORD 472 SUBDIVISION

NORTH OF SR 472 & WEST OF DR MARTIN LUTHER KING JR BELTWAY VOLUSIA COUNTY, FLORIDA

VICINITY MAP



SCALE: 1"=2000'

LAND DEVELOPMENT
Approved Overall Development Plan
Land Development Code of Volusia County, Florida
Project Number: 2022-S-ODP-0353

11/27/2023
Planning & Land Development Director

PARCEL ID #:
800100000020

PREPARED FOR:

PULTE GROUP

4901 VINELAND ROAD SUITE 460
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DELAND, FLORIDA 32724
PHONE: (386) 626-7250

RECLAIM WATER
VOLUSIA COUNTY UTILITIES
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PHONE: (386) 736-2700

PREPARED BY:

KELLY, COLLINS & GENTRY, INC.
ENGINEERING • PLANNING

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SECTION 01 TOWNSHIP 18, RANGE 30, VOLUSIA COUNTY, FLORIDA

SHEET INDEX

SHEET TITLE	SHEET NO.
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PAVING, GRADING, & DRAINAGE PLAN	C-4.0 TO C-4.2
UTILITY PLAN	C-5.0 TO C-5.2

Sean Fortier
2023.10.18
13:29:01-04'00'

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY SEAN C. FORTIER, P.E. ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

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SEAN C. FORTIER, P.E.
FLORIDA REGISTRATION NO.
NOT VALID FOR CONSTRUCTION UNLESS SIGNED BY THIS BLOCK

REVISIONS:

DATE	DESCRIPTION

DRAWN: GPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

SHEET
C-1.0

FORD 472 SUBDIVISION VOLUSIA COUNTY, FL

EROSION CONTROL:

1. GENERAL: CONTRACTOR SHALL INSTALL ANY ADDITIONAL EROSION CONTROL WHEN NECESSARY IN ORDER TO MEET STATE AND LOCAL STANDARDS.
2. EXISTING SYSTEMS: CONTRACTOR SHALL PROTECT ALL EXISTING STORMWATER COLLECTION SYSTEMS FROM DAMAGE BY SEDIMENT OR OTHER CONSTRUCTION RELATED CAUSES.
3. CONFLICTS: CONTRACTOR SHALL COORDINATE ALL UTILITY CROSSINGS AND ADDRESS CONFLICTS PRIOR TO BEGINNING WORK IN A GIVEN AREA(S).
4. STABILIZATION:
   A. EROSION CONTROL SHALL BE MAINTAINED WITHIN CONSTRUCTION AREAS BY QUICKLY STABILIZING DISTURBED AREAS TO PREVENT THE RELEASE OF SEDIMENT. THIS SHALL BE ACCOMPLISHED USING SOD, TURBIDITY FENCES, AND OTHER MEANS ACCEPTABLE TO OWNER, ENGINEER, AND REGULATORY AGENCIES.
   B. AREAS DISTURBED THAT WILL NOT BE IMPROVED FOR A PERIOD OF 30 DAYS OR MORE SHALL RECEIVE TEMPORARY STABILIZATION AS DEEMED NECESSARY BY THE MUNICIPAL INSPECTOR.
5. BMPs:
   A. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, CONTRACTOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES BMP TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
   B. WITH UTILIZING CONSTRUCTION PHASES, CONTRACTOR SHALL BE RESPONSIBLE FOR ADDITIONAL ON-SITE BMPs AS DEEMED NECESSARY AND SHALL BE APPROVED BY JURISDICTIONAL AUTHORITIES.
   C. ALL BMPs SHALL BE CLEANED OF SEDIMENT WHEN 50% OR LESS OF BMP IS REACHED.
   D. ALL BMPs SHALL REMAIN IN PLACE UNTIL SUCH TIME THAT THE MUNICIPAL INSPECTOR ALLOWS REMOVAL.
   E. APPROPRIATE BMPs MUST BE IMPLEMENTED TO ENSURE THAT DISCHARGES DO NOT EXCEED SURFACE WATER QUALITY STANDARDS PER THE FDEP CONSTRUCTION GENERIC PERMIT (CGP). IF DEWATERING DEPOSITS OR INTO A COUNTY MS4, TURBIDITY MUST BE MONITORED TO ENSURE THAT DISCHARGES DO NOT EXCEED 29 NTU OVER BACKGROUND PER 62-302.530 FAC. REFER TO THE DEWATERING REQUIREMENTS IN 62-621.300(4)(a) CONSTRUCTION GENERIC PERMIT OR 62-621.300(2)(a) DEWATERING GENERIC PERMIT AS APPLICABLE.
   F. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPs SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROL BMPs AFTER EACH RAIN EVENT OF 1/2" AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, REVEGETATING, AND REMETTING, MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs, OR MODIFICATIONS OF THOSE INSTALLED SHALL BE REQUIRED.
   G. CONTRACTOR SHALL INSPECT BMPs AT END OF EACH WORKING DAY.
   H. SEDIMENT REMOVED FROM BMPs SHALL BE DISPOSED OF IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS, OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED OR PLACED IN TOPSOIL STOCKPILES.
   I. BMPs USED ON SITE MUST MEET THE MINIMUM SPECIFICATIONS IN THE 2013 STATE OF FLORIDA E&SC DESIGNER AND REVIEWER MANUAL.
6. MULCH:
   A. MULCH WITH MULCH CONTROL NETTING OR EROSION CONTROL BLANKETS SHALL BE INSTALLED ON ALL SLOPES 3:1 AND STEEPER.
   B. STRAW MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN.
7. ENTRANCE/EXIT:
   A. CONSTRUCTION ENTRANCE SHALL BE GRADED SO THAT NO SEDIMENTS LEAVE THE SITE.
   B. ALL EMPLOYEES, SUBCONTRACTORS, AND SUPPLIERS SHALL UTILIZE CONSTRUCTION ACCESS.
   C. CONSTRUCTION VEHICLES SHALL ENTER AND EXIT THE SITE AT ONE LOCATION.
   D. ALL EXIT LOCATIONS INTENDED SHALL BE USED CONTINUOUSLY AND FOR A PERIOD OF TIME SHALL HAVE STABILIZED CONSTRUCTION ENTRANCE/EXIT BMPs (TC-1 "STABILIZED CONSTRUCTION ENTRANCE/EXIT" OR TC-2 "ENTRANCE/OUTLET TIRE WASH").
   E. INSPECT ROUTINELY FOR DAMAGE AND ASSESS EFFECTIVENESS OF THE BMP. REMOVE AGGREGATE, SEPARATE AND DISPOSE OF SEDIMENT IF CONSTRUCTION ENTRANCE/EXIT IS CLOGGED NO MORE THAN 50% WITH SEDIMENT.
   F. IF APPLICABLE, ROUTE RUNOFF FROM STABILIZED ENTRANCES THROUGH A SEDIMENT TRAPPING DEVICE BEFORE DISCHARGE.
8. INLETS:
   G. ALL EXISTING AND PROPOSED STORM DRAINAGE INLETS AND PIPES SHALL BE PROTECTED FROM SILT, SAND, AND DEBRIS DURING CONSTRUCTION. ANY ACCUMULATION OF DEBRIS WITHIN THE STORM DRAINAGE PIPE SYSTEM SHALL BE REMOVED BY CONTRACTOR.
   H. PROVIDE GEOHAY HAY BALES IN FRONT OF ALL DRAINAGE CURB INLETS AND PROVIDE FILTER FABRIC UNDER THE GRATE OF ALL DITCH BOTTOM INLETS AFTER INITIAL COMPLETION OF THE DRAINAGE STRUCTURES. MAINTAIN THESE MEASURES DAILY.
9. DAILY:
   A. CONSTRUCTION SITE SHALL BE INSPECTED FOR EROSION PROBLEMS DAILY AND AFTER EACH RAINFALL GREATER THAN 0.5". A RAIN GAUGE SHALL BE ON SITE TO MEASURE THE FALL AMOUNTS.
   B. THE ADJACENT STREETS SHALL BE SWEPT AT THE END OF EACH DAY OF DIRT FROM THE CONSTRUCTION SITE. CONTRACTOR SHALL IMPLEMENT STREET SWEEPING AND VACUUMING AS NEEDED. CLEAN DIRT FROM ROADWAYS DAILY.
   C. CONSTRUCTION SITE SHALL BE CLEANED OF LITTER AND TRASH EACH DAY AND DISPOSED OF OFF-SITE.
   D. INSPECT ALL SEDIMENT CONTROL DEVICES FOR DAMAGE DAILY AND REPAIRS AS NEEDED.
   E. CONTRACTOR SHALL EMPLOY SAFETY AND ROADWAY ENTRY AND EXIT PLANS ON A DAILY/WEEKLY BASIS.
   F. HUMAN WASTEWATER SHALL BE COLLECTED ON-SITE BY THE USE OF TEMPORARY SANITARY SERVICE.
10. SILT FENCE:
   A. SILT FENCE SHALL BE IN PLACE AS SHOWN PRIOR TO CONSTRUCTION.
   B. PRIOR TO CONSTRUCTION, SILT FENCE SHALL BE INSTALLED AT THE LIMITS OF CONSTRUCTION AS DEFINED THROUGHOUT THIS PLAN SET. SEE DETAIL SHEETS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION ON EROSION CONTROL.
   C. SILT FENCE SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
11. SOD: ALL DISTURBED AREAS SHALL BE SODDED EXCEPT AS SHOWN ON PLAN. ALL SOD IN RIGHT OF WAY SHALL BE ARGENTINE BAHIA. ALL SLOPES 4:1 OR GREATER SHALL BE SODDED.
12. STOCKPILES: SHALL BE ENCOMPASSED WITH SILT FENCE, SHALL NOT EXCEED 35' IN HEIGHT, AND SHALL NOT BE LOCATED NEAR SITE PERIMETER. LOCATION AND SLOPE SHALL BE APPROVED BY MUNICIPAL INSPECTOR AND OTHER JURISDICTIONAL AUTHORITIES AS REQUIRED.
13. TOXIC SUBSTANCES: ALL TOXIC SUBSTANCES (IF ANY) BROUGHT ON-SITE SHALL BE HANDLED AND STORED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND STANDARDS. ALL SUBSTANCES THAT MAY BE CONSIDERED TOXIC SHALL ALSO BE HANDLED AND STORED ACCORDING TO FEDERAL, STATE, AND LOCAL LAWS AND STANDARDS.
14. DRAINAGE/GRADE: THE CONTRACTOR SHALL PROPERLY GRADE ALL EXCAVATED SURFACES TO PROVIDE POSITIVE DRAINAGE AND PREVENT PONDING OF WATER; FINAL CONTROL OF SURFACE WATER TO AVOID DAMAGE TO ADJOINING PROPERTIES OR TO FINISHED WORK ON THE SITE; AND SHALL TAKE REMEDIAL MEASURES TO PREVENT EROSION OF FRESHLY GRADED AREAS UNTIL SUCH TIME AS PERMANENT DRAINAGE AND EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
15. GRAVEL LAYER: GRAVEL LAYER SHALL BE 12" MIN THICK AND PLACED OVER GEOTEXTILE MAT.
16. SPEED: TRUCK SPEED TO BE REDUCED TO CONTROL DUST.
17. DITCHES: KEEP ALL TEMPORARY ROADWAY DITCHES CLEAR.
18. WATER DOWN: CONTRACTOR TO WATER DOWN AREAS WHEN AND WHERE DISTURBED SOIL IS RAISING AND BECOMING AIRBORNE IN ORDER TO SETTLE IT. REPEAT AS NEEDED.
19. SEDIMENT BASIN: LARGE SITES MAY REQUIRE A TEMPORARY SEDIMENT BASIN. CONTRACTOR SHALL DETERMINE LOCATION. TEMPORARY SEDIMENT BASIN SHALL BE APPROVED BY JURISDICTIONAL AUTHORITIES.
20. STORMWATER DISCHARGE: CONTRACTOR TO ABIDE BY ALL PROVISIONS OF THE FDEP GENERAL PERMIT FOR STORM WATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES.
21. DUST ABATEMENT: CONTRACTOR TO PROVIDE A DUST ABATEMENT PLAN INCLUDING A 6-FOOT HIGH SCREEN FENCE ALONG ALL PROPERTY LINES.

DEMOLITION NOTES:

1. DEMOLISH AS REQUIRED TO ACCOMPLISH WORK INDICATED IN THESE DOCUMENTS. ALL REQUIRED DEMOLITION WORK SHALL BE INCLUDED IN THE BASE BID PACKAGE SUBMITTED BY THE CONTRACTOR.
2. DO NOT ALLOW MATERIALS AND DEBRIS GENERATED BY DEMOLITION ACTIVITIES TO ACCUMULATE ON THE JOB SITE. REMOVE DAILY AND DISPOSE OF IN A LEGAL MANNER. NO ON SITE SALE OR BURNING OF REMOVED ITEMS IS PERMITTED.
3. THIS PLAN IS TO BE USED IN CONJUNCTION WITH THE ENTIRE SET OF CONSTRUCTION DRAWINGS. DO NOT REMOVE ANY ITEMS WITHOUT VERIFYING AND COORDINATING WITH ALL GENERAL TRADES AS TO HOW THEY RELATE TO THE OVERALL PROJECT.
4. THE CONTRACTOR MUST TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THE SAFETY OF THE PUBLIC AND/OR WORKMEN ON THE SITE TO PREVENT ACCIDENTS OR INJURY TO ANY PERSON ON, ABOUT OR ADJACENT TO THE PREMISES. THE CONTRACTOR SHALL COMPLY WITH ALL LAWS, ORDINANCES, CODES AND REGULATIONS PERTAINING TO SAFETY AND THE PREVENTIONS OF ACCIDENTS.
5. THE CONTRACTOR MUST MAINTAIN ADEQUATE SUPPORTS, INSULATIONS, WATERPROOFING, EMERGENCY LIGHTING, SECURITY, ALARMS, ETC. FOR ALL OR PART OF ITEMS WHICH ARE TO REMAIN.

CONTRACTOR CERTIFICATION:

" I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND, AND SHALL COMPLY WITH THE TERMS AND CONDITIONS OF THE STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES AND THIS STORMWATER POLLUTION PLAN THEREUNDER."

NAME: _____ TITLE: _____

CONTRACTING FIRM: _____ ADDRESS: _____

TELEPHONE #: _____ DATE: _____

THIS SOIL EROSION/SEDIMENT CONTROL & DUST ABATEMENT PLAN IS FOR THE PURPOSE OF SHOWING INTENTION OF METHOD TO CONTROL STORM WATER RUNOFF & DUST DISTURBANCE CAUSED BY CONSTRUCTION ACTIVITY. CONTRACTOR SHALL ADJUST AND/OR ADD BMP'S BASED ON SPECIFIC SITE CONDITIONS & CONSTRUCTION ACTIVITY SATISFYING NPDES REQUIREMENTS. CONTRACTOR TO OBTAIN GENERAL PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES (RULE 62-621.300(4), F.A.C.)



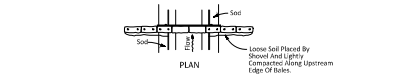
BARRIERS FOR FILL SLOPES



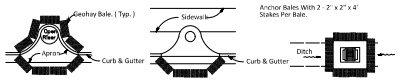
BARRIER FOR UNPAVED DITCHES



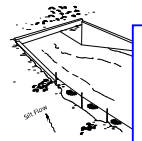
BALES BACKED BY FENCE



BARRIER FOR PAVED DITCH

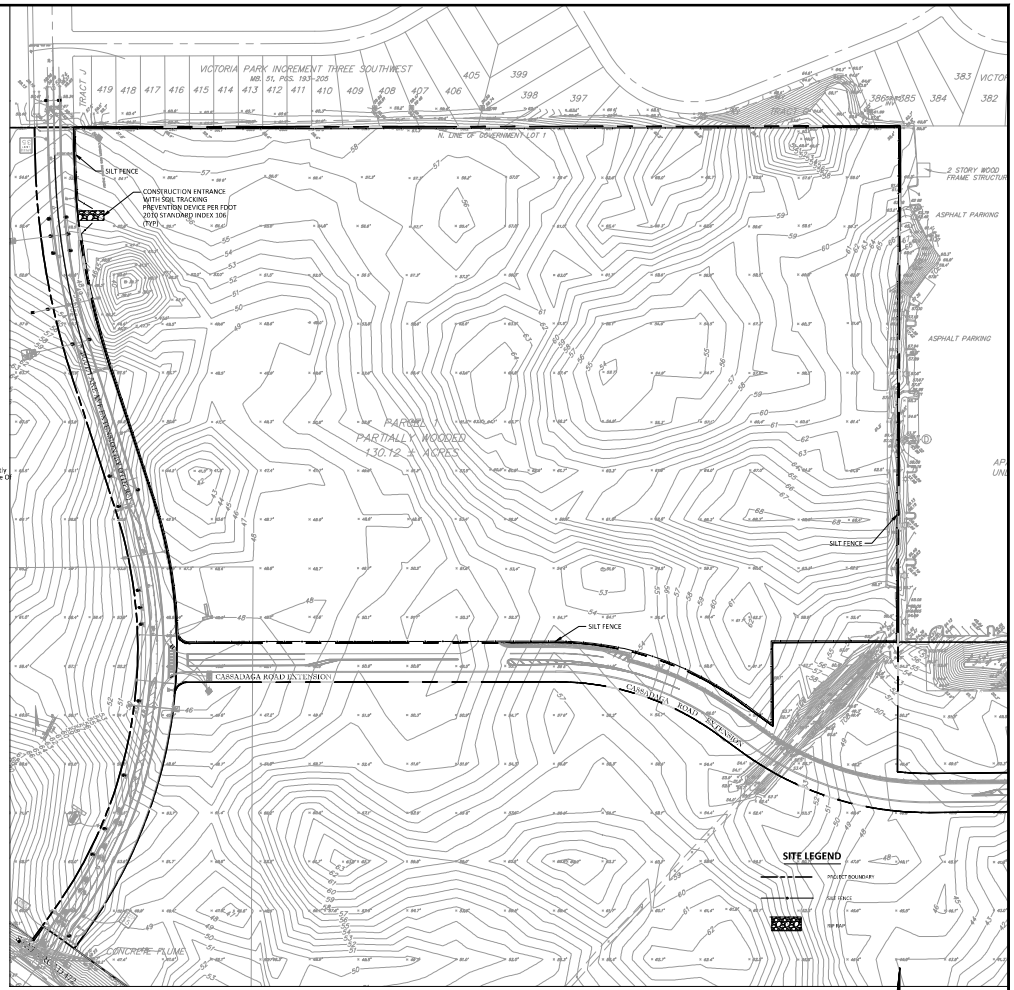


PROTECTION AROUND INLETS OR SIMILAR STRUCTURES

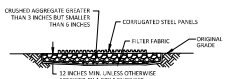


LAND DEVELOPMENT
Approved Overall Development Plan
Land Development Code of Volusia County, Florida
Project Number: 2022-S-ODP-0353

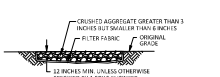
11/27/2023
Planning & Land Development Director



NOTE:
SILT FENCE SHOWN FOR SCHEMATIC PURPOSES ONLY. SILT FENCE SHOULD BE INSTALLED AT THE LIMITS OF CONSTRUCTION AS DEFINED THROUGHOUT THIS PLAN SET.

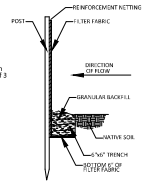


SECTION A-A
NTS

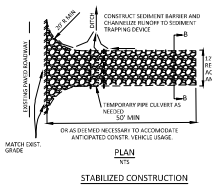


SECTION B-B
NTS

GRAPHIC SCALE
150 0 75 150 300
(IN FEET)
1 inch = 150 ft.

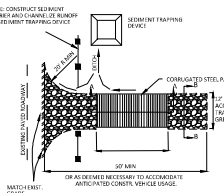


SILT BARRIER DETAIL
N.T.S.



PLAN
NTS

STABILIZED CONSTRUCTION ENTRANCE/EXIT (TYPE 1)



PLAN
NTS

STABILIZED CONSTRUCTION ENTRANCE/EXIT (TYPE 2)

FOR REVIEW ONLY
CIVIL DISCIPLINE ONLY
CERTIFICATE OF AUTHORIZATION NUMBER 30008
LICENSED PROFESSIONAL ENGINEER
SEAN C. FORTIER, P.E.
FLORIDA REGISTRATION #69936
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

KELLY, COLLINS & GENTRY, INC.
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NO.	REVISION	DATE

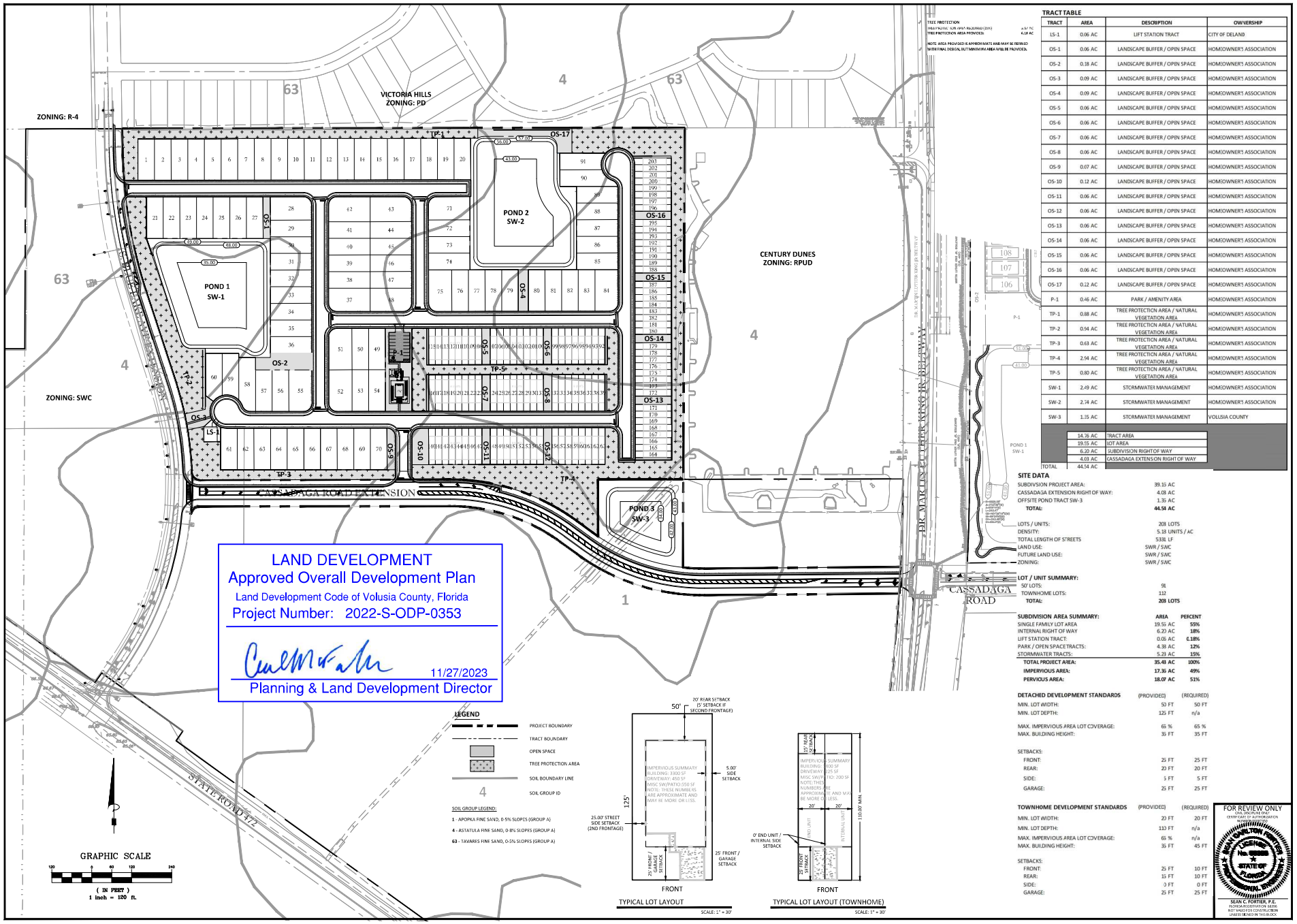
PREPARED FOR:
PULTE GROUP

FORD 472
SUBDIVISION

EROSION CONTROL & TREE REMOVAL-PROTECTION PLAN

DRAWN: CPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

SHEET
EC-1.0



TRACT TABLE

TRACT	AREA	DESCRIPTION	OWNERSHIP
LS-1	0.06 AC	LIFT STATION TRACT	CITY OF DELAND
OS-1	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-2	0.18 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-3	0.09 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-4	0.09 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-5	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-6	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-7	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-8	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-9	0.07 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-10	0.12 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-11	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-12	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-13	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-14	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-15	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-16	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-17	0.22 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
P-1	0.46 AC	PARK / AMENITY AREA	HOMEOWNER'S ASSOCIATION
TP-1	0.88 AC	TREE PROTECTION AREA / NATURAL VEGETATION AREA	HOMEOWNER'S ASSOCIATION
TP-2	0.94 AC	TREE PROTECTION AREA / NATURAL VEGETATION AREA	HOMEOWNER'S ASSOCIATION
TP-3	0.63 AC	TREE PROTECTION AREA / NATURAL VEGETATION AREA	HOMEOWNER'S ASSOCIATION
TP-4	2.94 AC	TREE PROTECTION AREA / NATURAL VEGETATION AREA	HOMEOWNER'S ASSOCIATION
TP-5	0.80 AC	TREE PROTECTION AREA / NATURAL VEGETATION AREA	HOMEOWNER'S ASSOCIATION
SW-1	2.49 AC	STORMWATER MANAGEMENT	HOMEOWNER'S ASSOCIATION
SW-2	2.74 AC	STORMWATER MANAGEMENT	HOMEOWNER'S ASSOCIATION
SW-3	1.35 AC	STORMWATER MANAGEMENT	VOLUSIA COUNTY

14.76 AC	TRACT AREA
19.55 AC	LOT AREA
6.20 AC	SUBDIVISION RIGHT OF WAY
4.03 AC	CASSADAGA EXTENSION RIGHT OF WAY
TOTAL 44.54 AC	

SITE DATA

SUBDIVISION PROJECT AREA:	39.15 AC
CASSADAGA EXTENSION RIGHT OF WAY:	4.03 AC
OFFSITE POND TRACT SW-3	1.35 AC
TOTAL:	**44.53 AC**
LOTS / UNITS:	208 LOTS
DENSITY:	5.18 UNITS / AC
TOTAL LENGTH OF STREETS	5331 LF
LAND USE:	SWR / SWC
FUTURE LAND USE:	SWR / SWC
ZONING:	SWR / SWC

LOT / UNIT SUMMARY:

50' LOTS:	96
TOWNHOME LOTS:	112
TOTAL:	**208 LOTS**

SUBDIVISION AREA SUMMARY:	AREA	PERCENT
SINGLE FAMILY LOT AREA	19.55 AC	55%
INTERNAL RIGHT OF WAY	6.20 AC	18%
LIFT STATION TRACT:	0.06 AC	0.18%
PARK / OPEN SPACE TRACTS:	4.38 AC	12%
STORMWATER TRACTS:	5.23 AC	15%
TOTAL PROJECT AREA:	**35.43 AC**	**100%**
IMPERVIOUS AREA:	**17.35 AC**	**49%**
PERVIOUS AREA:	**18.07 AC**	**51%**

DETACHED DEVELOPMENT STANDARDS	(PROVIDED)	(REQUIRED)
MIN. LOT WIDTH:	50 FT	50 FT
MIN. LOT DEPTH:	125 FT	n/a
MAX. IMPERVIOUS AREA LOT COVERAGE:	65 %	65 %
MAX. BUILDING HEIGHT:	35 FT	35 FT
SETBACKS:		
FRONT:	25 FT	25 FT
REAR:	20 FT	20 FT
SIDE:	5 FT	5 FT
GARAGE:	25 FT	25 FT

TOWNHOME DEVELOPMENT STANDARDS	(PROVIDED)	(REQUIRED)
MIN. LOT WIDTH:	20 FT	20 FT
MIN. LOT DEPTH:	110 FT	n/a
MAX. IMPERVIOUS AREA LOT COVERAGE:	65 %	n/a
MAX. BUILDING HEIGHT:	35 FT	45 FT
SETBACKS:		
FRONT:	25 FT	10 FT
REAR:	15 FT	10 FT
SIDE:	0 FT	0 FT
GARAGE:	25 FT	25 FT

FOR REVIEW ONLY
CIVIL DISCIPLINE ONLY
CERTIFICATE OF AUTHORIZATION
NUMBER 29

SEAN C. FORTIER, P.E.
FLORIDA REGISTRATION #65936
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REVISION
DATE

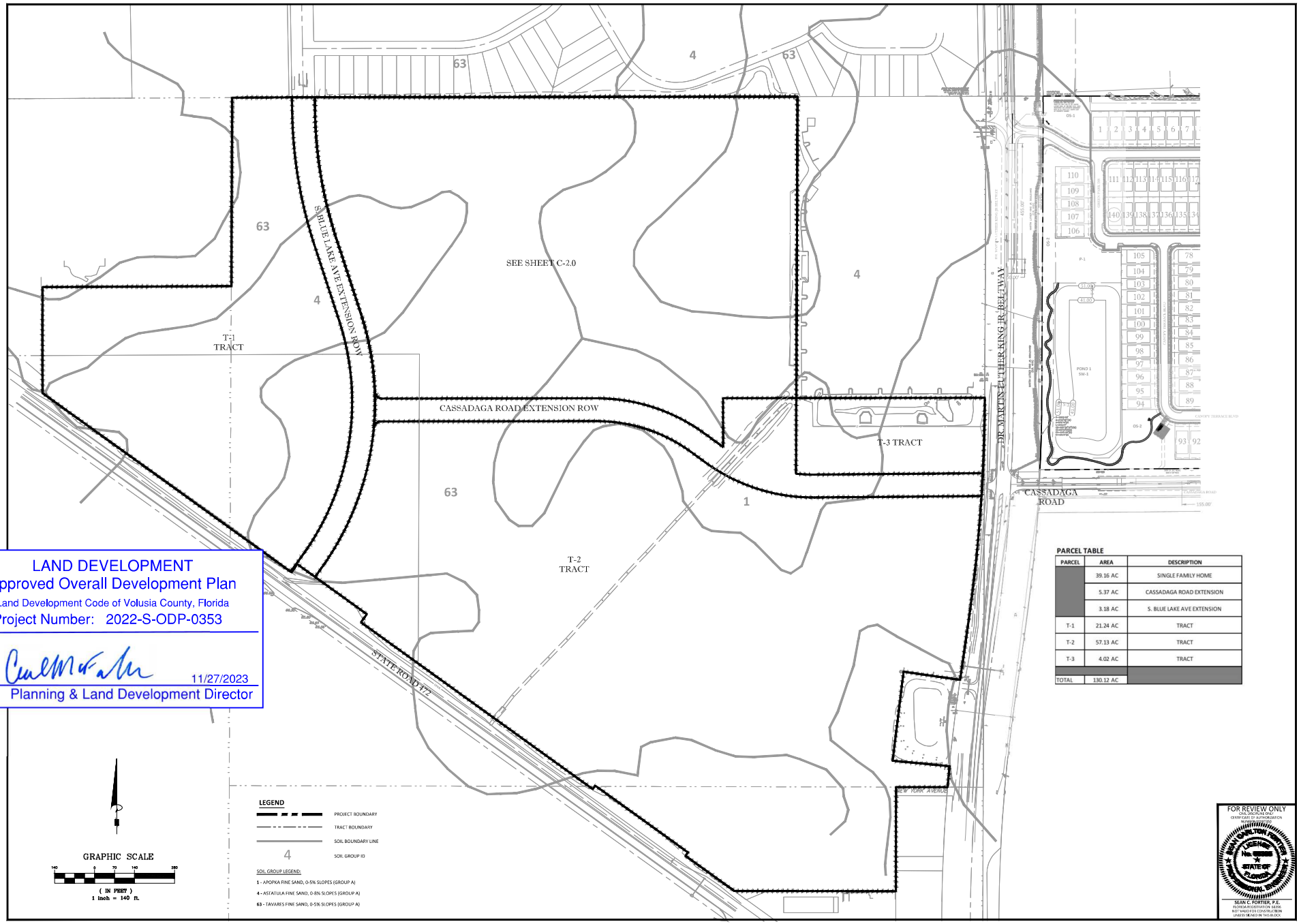
PREPARED FOR:
PULTE GROUP

FORD 472 SUBDIVISION

OVERALL PLAN

DRAWN: CPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

SHEET
C-2.0



PARCEL TABLE

PARCEL	AREA	DESCRIPTION
	39.16 AC	SINGLE FAMILY HOME
	5.37 AC	CASSADAGA ROAD EXTENSION
	3.18 AC	S. BLUE LAKE AVE EXTENSION
T-1	21.24 AC	TRACT
T-2	57.13 AC	TRACT
T-3	4.02 AC	TRACT
TOTAL	130.12 AC	

LAND DEVELOPMENT
Approved Overall Development Plan
Land Development Code of Volusia County, Florida
Project Number: 2022-S-ODP-0353

11/27/2023
Planning & Land Development Director

FOR REVIEW ONLY
ONLY, DISCIPLINE ONLY
CERTIFICATE OF AUTHORIZATION
NOT FOR CONSTRUCTION

SEAN C. FORTIER, P.E.
FLORIDA REGISTRATION 68356
NOT VALID FOR CONSTRUCTION
UNLESS SIGNED IN THIS BLOCK

KELLY, COLLINS & GENTRY, INC.
KCG
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 898-7858 FAX (407) 898-1488

DATE	REVISION

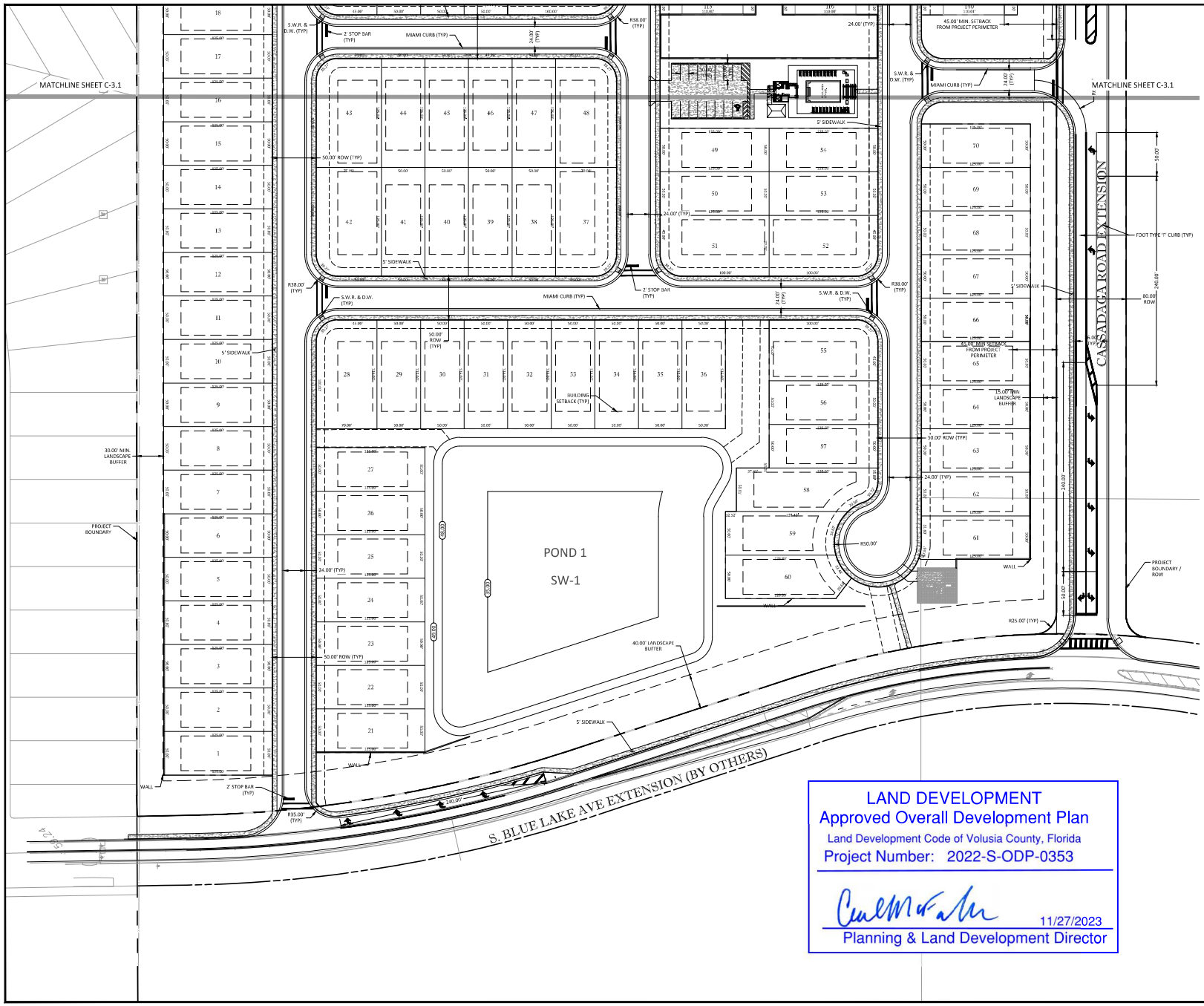
PREPARED FOR:
PULTE GROUP

FORD 472 SUBDIVISION

OVERALL PLAN

DRAWN: GPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

SHEET
C-2.1



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REVISION | DATE

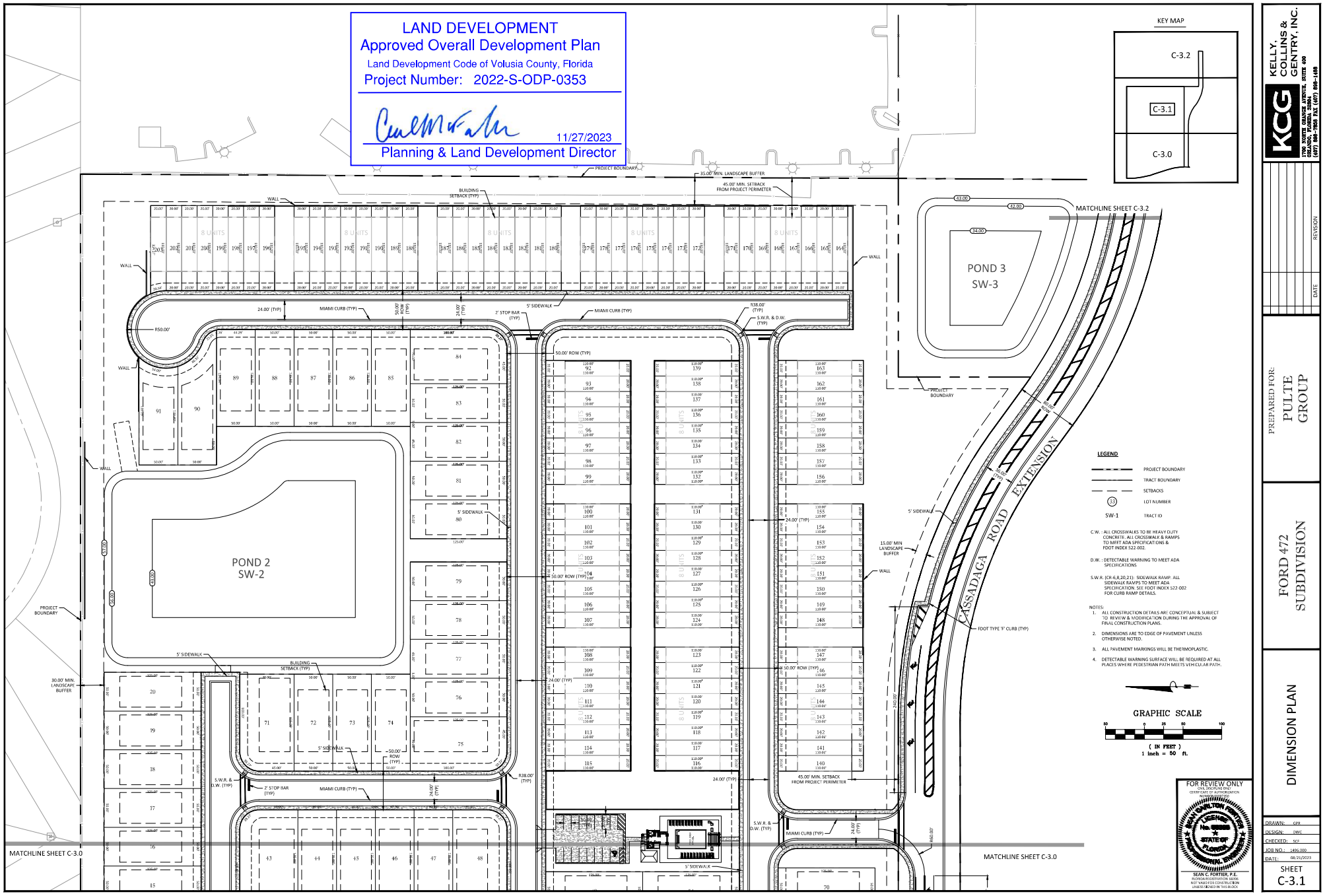
PREPARED FOR:
PULTE GROUP

FORD 472
SUBDIVISION

DIMENSION PLAN

DRAWN: CPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

SHEET
C-3.0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KEY MAP
C-3.2
C-3.1
C-3.0
POND 2
SW-2
POND 3
SW-3
CASSADAGA ROAD EXTENSION
MATCHLINE SHEET C-3.2
MATCHLINE SHEET C-3.0
LEGEND
PROJECT BOUNDARY
TRACT BOUNDARY
SETBACKS
LOT NUMBER
SW-1 TRACT ID
C.W. : ALL CROSSWALKS TO BE HEAVY DUTY CONCRETE. ALL CROSSWALK & RAMPS TO MEET ADA SPECIFICATIONS & FDOT INDEX 522.002.
D.W. : DETECTABLE WARNING TO MEET ADA SPECIFICATIONS
S.W.R. (CR-6,8,20,21): SIDEWALK RAMP. ALL SIDEWALK RAMPS TO MEET ADA SPECIFICATION. SEE FDOT INDEX 522.002 FOR CURB RAMP DETAILS.
NOTES:
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2. DIMENSIONS ARE TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
3. ALL PAVEMENT MARKINGS WILL BE THERMOPLASTIC.
4. DETECTABLE WARNING SURFACE WILL BE REQUIRED AT ALL PLACES WHERE PEDESTRIAN PATH MEETS VEHICULAR PATH.
GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft.
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FORD 472 SUBDIVISION
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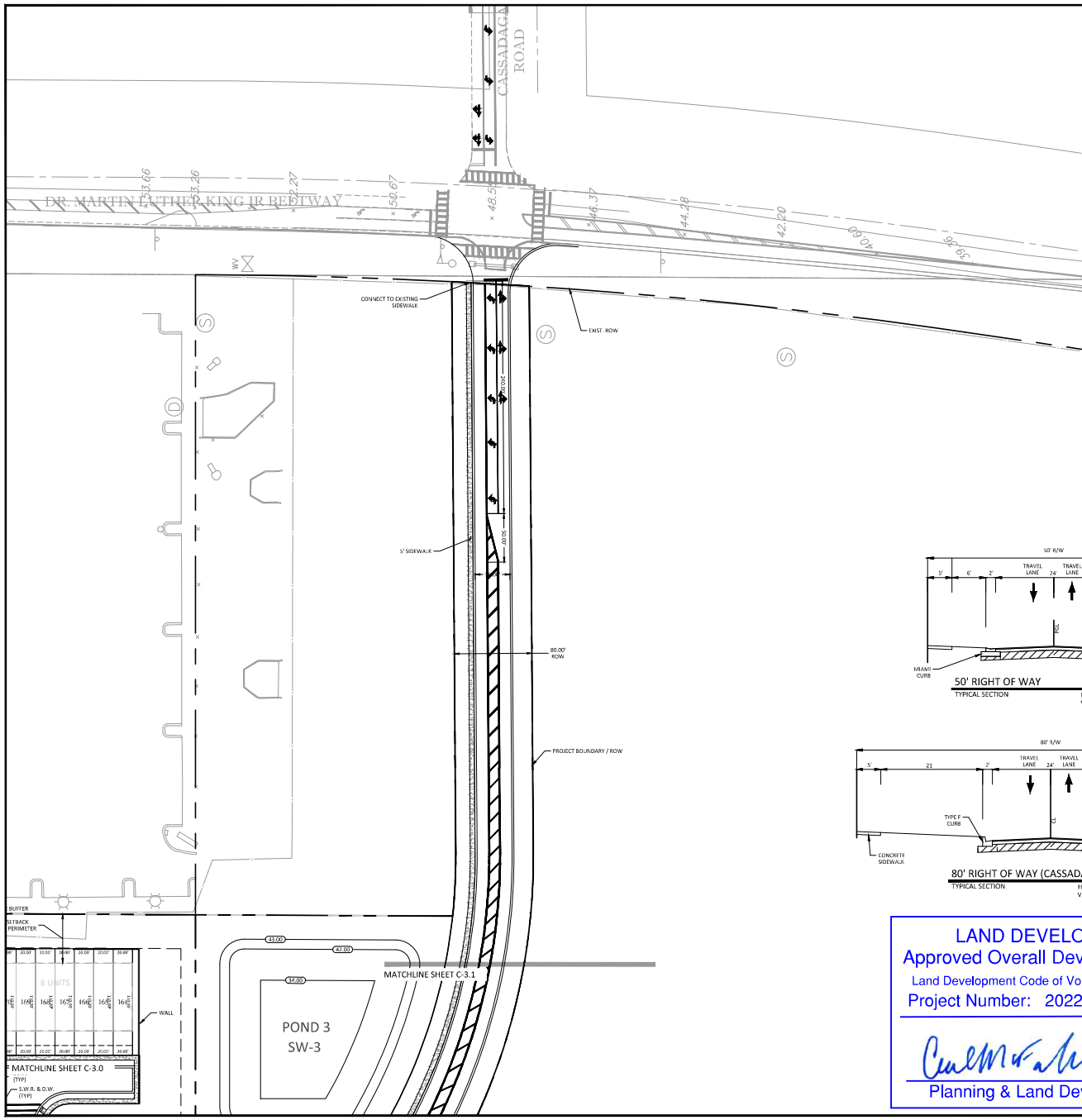
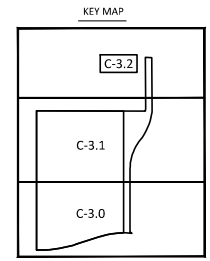
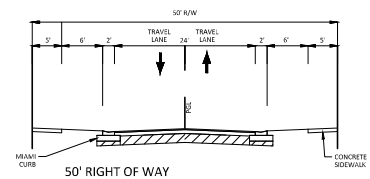
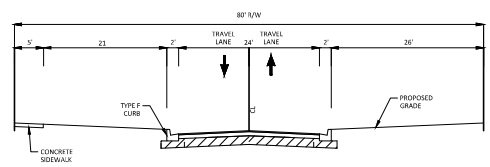
SHEET
C-3.1







50' RIGHT OF WAY
TYPICAL SECTION
HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 5'



80' RIGHT OF WAY (CASSADAGA EXTENSION)
TYPICAL SECTION
HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 5'

LEGEND

- PROJECT BOUNDARY
- TRACT BOUNDARY
- SETBACKS
- 33 LOT NUMBER
- SW-1 TRACT ID

C.W. : ALL CROSSWALKS TO BE HEAVY DUTY CONCRETE. ALL CROSSWALK & RAMPS TO MEET ADA SPECIFICATIONS & FDOT INDEX 522-002.

D.W. : DETECTABLE WARNING TO MEET ADA SPECIFICATIONS

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GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

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NO. 00000000

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DATE	REVISION

PREPARED FOR:
PULTE GROUP

FORD 472 SUBDIVISION

DIMENSION PLAN

DRAWN: GPR
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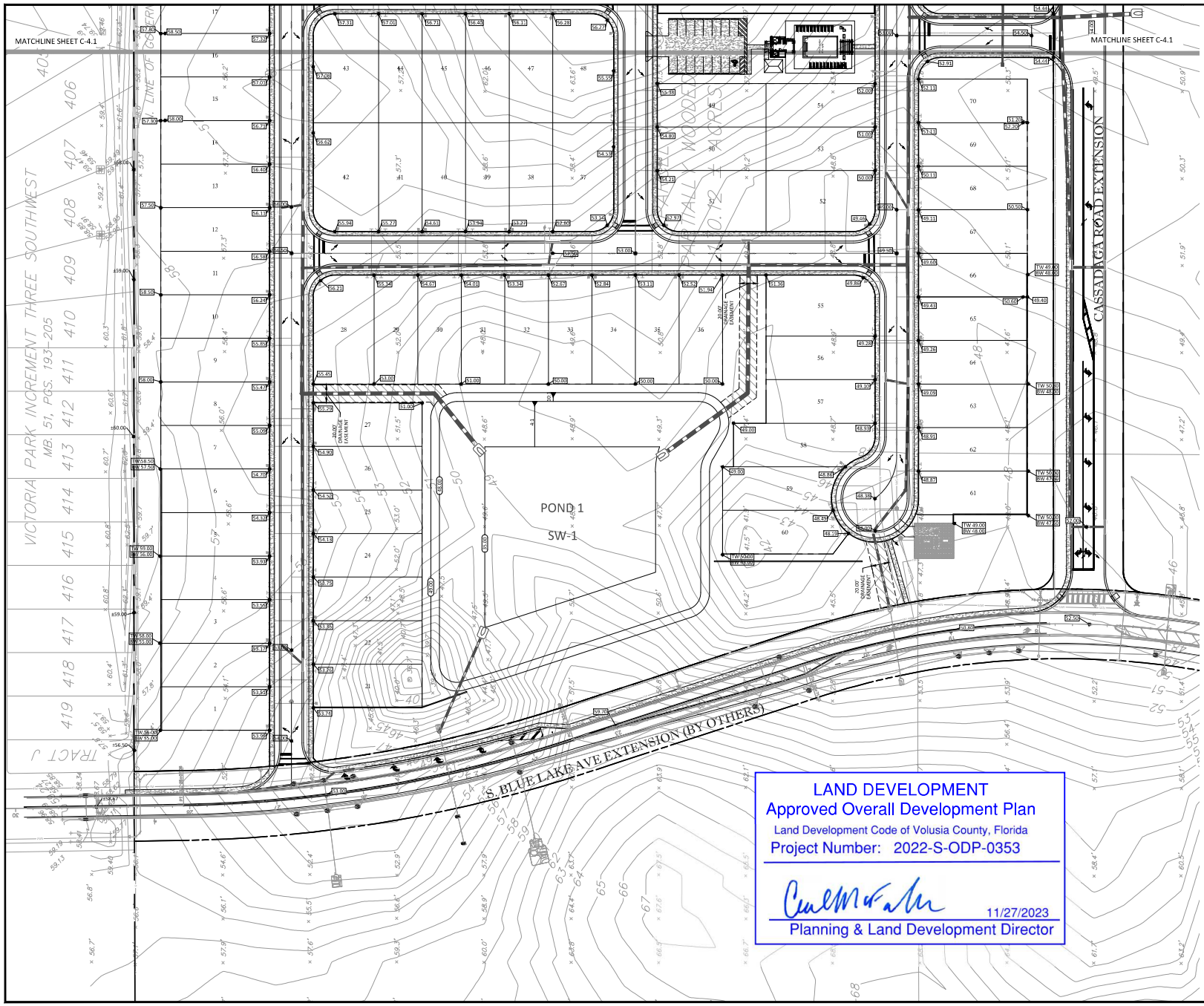
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

SHEET
C-3.2



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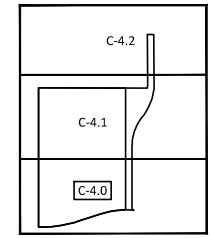
KEY MAP



LEGEND

- PROJECT BOUNDARY
- UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- STORM PIPES
- STORM INLET
- STORM MANHOLE
- BORING LOCATION
- 71 PROPOSED CONTOUR
- EXISTING STORM PIPES

NOTES:
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GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1 inch = 50 ft.

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CERTIFICATE OF AUTHORIZATION
NO. 00000 0000 0000

SEAN CARLTON FORTIER
LICENSE No. 00000
STATE OF FLORIDA
PROFESSIONAL ENGINEER

SEAN C. FORTIER, P.E.
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DATE	REVISION

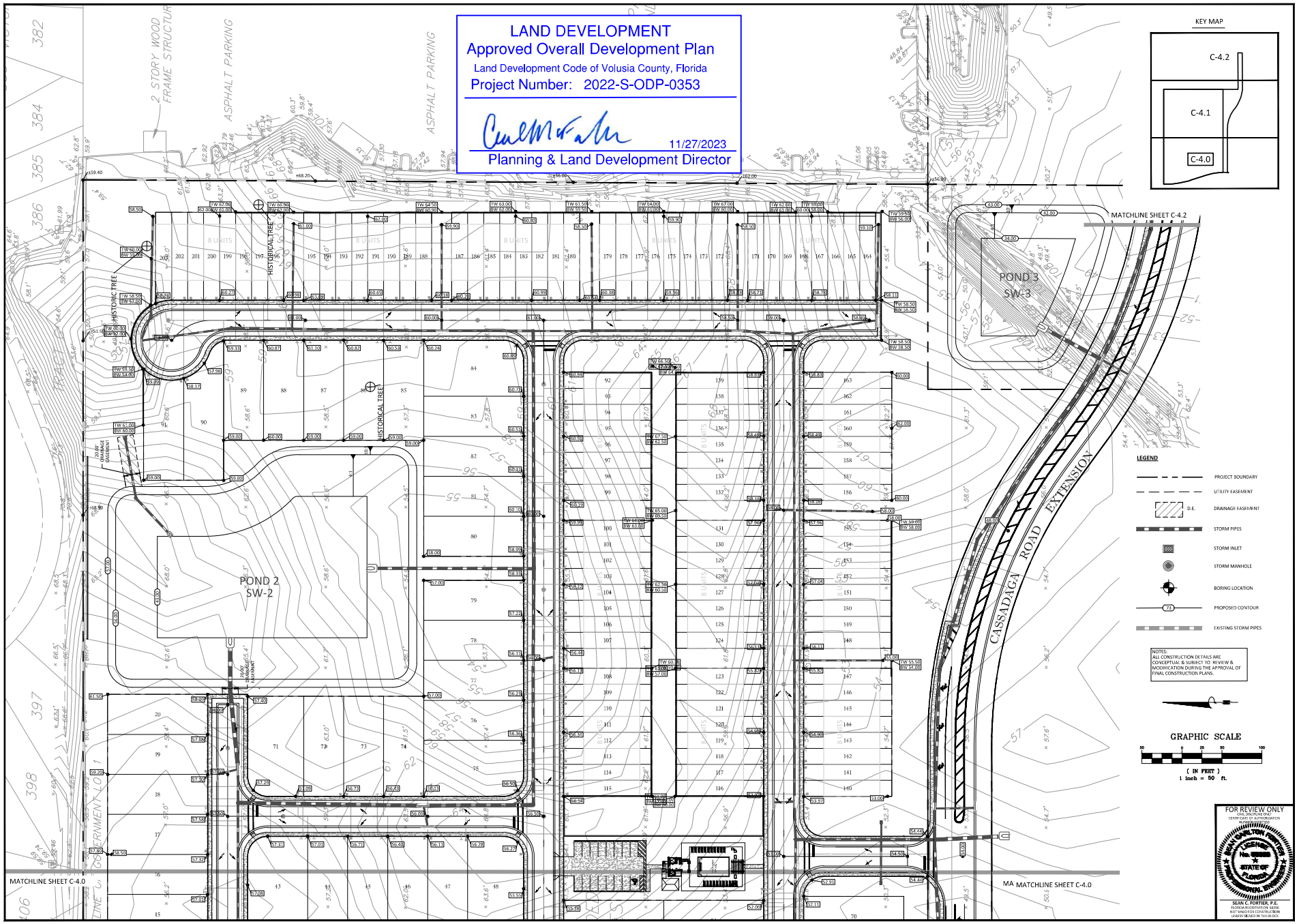
PREPARED FOR:
PULTE GROUP

FORD 472 SUBDIVISION

PAVING, GRADING, & DRAINAGE PLAN

DRAWN: CPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

SHEET
C-4.0



KELLY, COLLINS & GENTRY, INC.
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ORLANDO, FLORIDA 32804
(407) 586-7800 FAX (407) 896-1486

REVISION | DATE

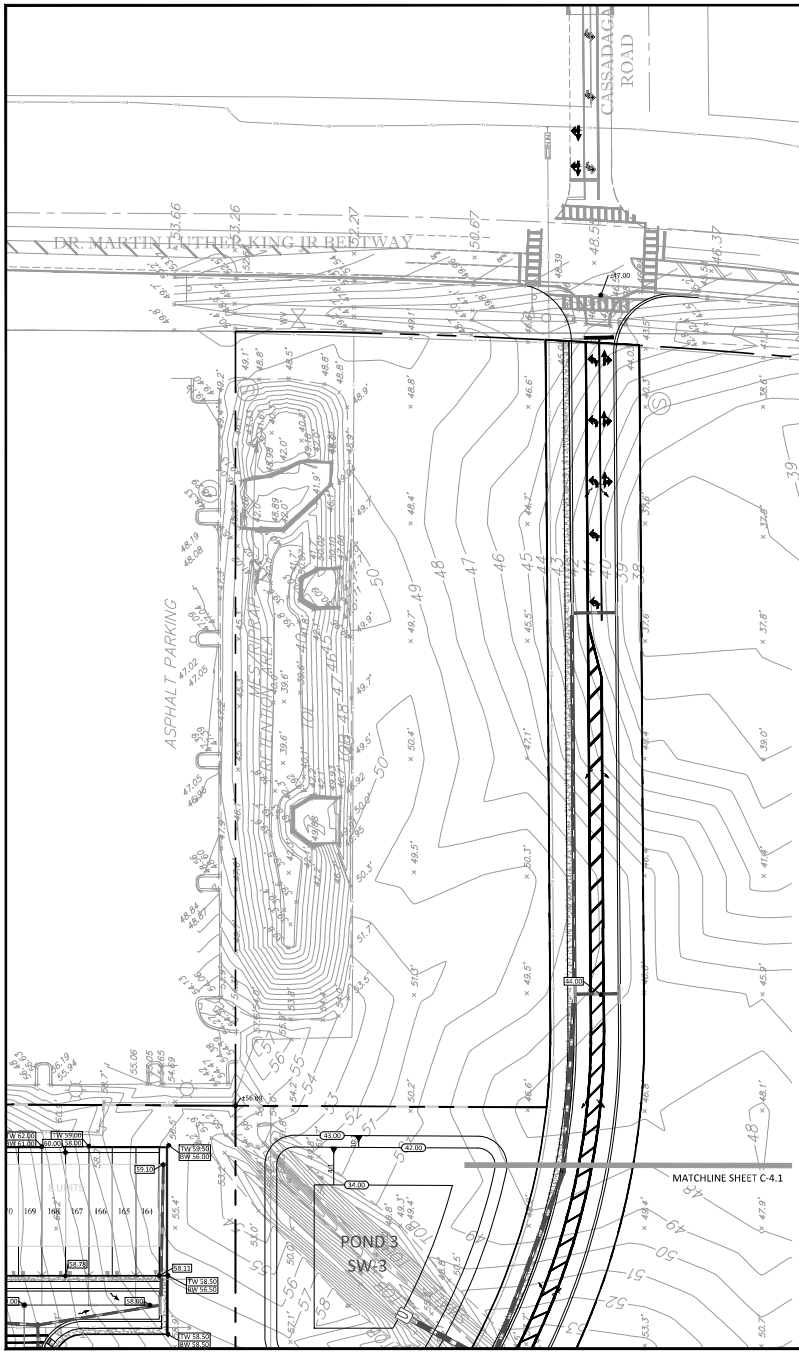
PREPARED FOR:
PULTE GROUP

FORD 472
SUBDIVISION

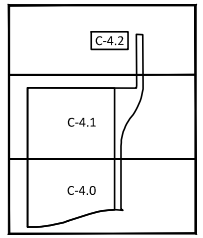
PAVING, GRADING, & DRAINAGE PLAN

DRAWN: CPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1486.000
DATE: 08/21/2023

SHEET
C-4.1



KEY MAP



LEGEND

- PROJECT BOUNDARY
- UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- STORM PIPES
- STORM INLET
- STORM MANHOLE
- BORING LOCATION
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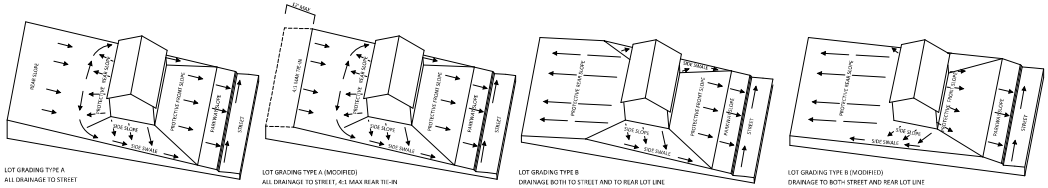

NOTE: REAR YARDS TO BE GRADED AT 10:1 MAX. A STEEPER TIE-IN SLOPE OF 4:1 MAY BE USED WITHIN 12' OF REAR PROPERTY LINE ONLY.

LOT GRADING DETAILS

NTS

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GRAPHIC SCALE

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(IN FEET)
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NUMBER 29000

SEAN C. FORTIER, P.E.
FLORIDA REGISTRATION #82696
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REVISION | DATE

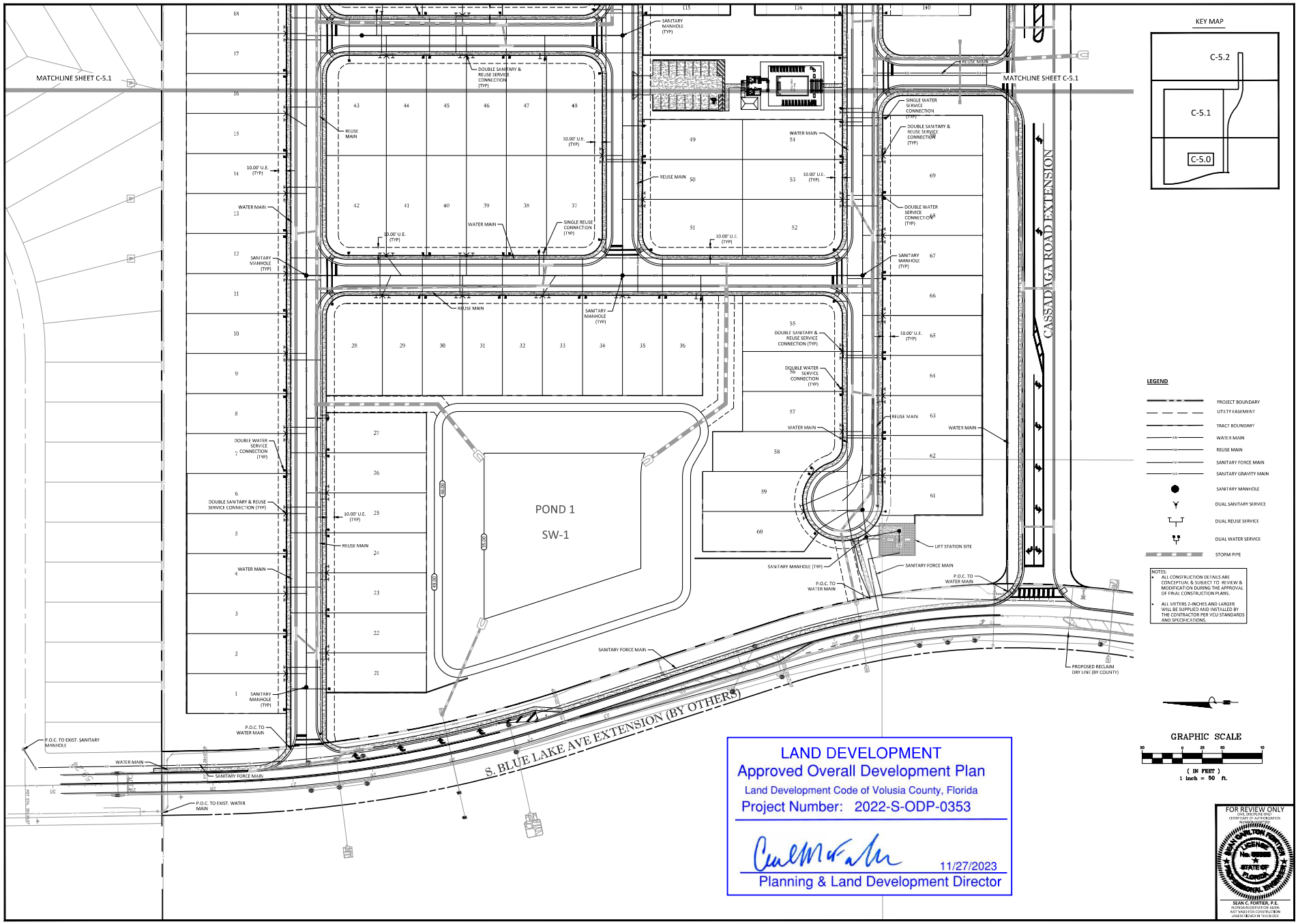
PREPARED FOR:
PULTE GROUP

FORD 472
SUBDIVISION

PAVING, GRADING & DRAINAGE PLAN

DRAWN: CPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

SHEET
C-4.2



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REVISION
DATE

PREPARED FOR:
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DESIGN: DWC
CHECKED: SCF
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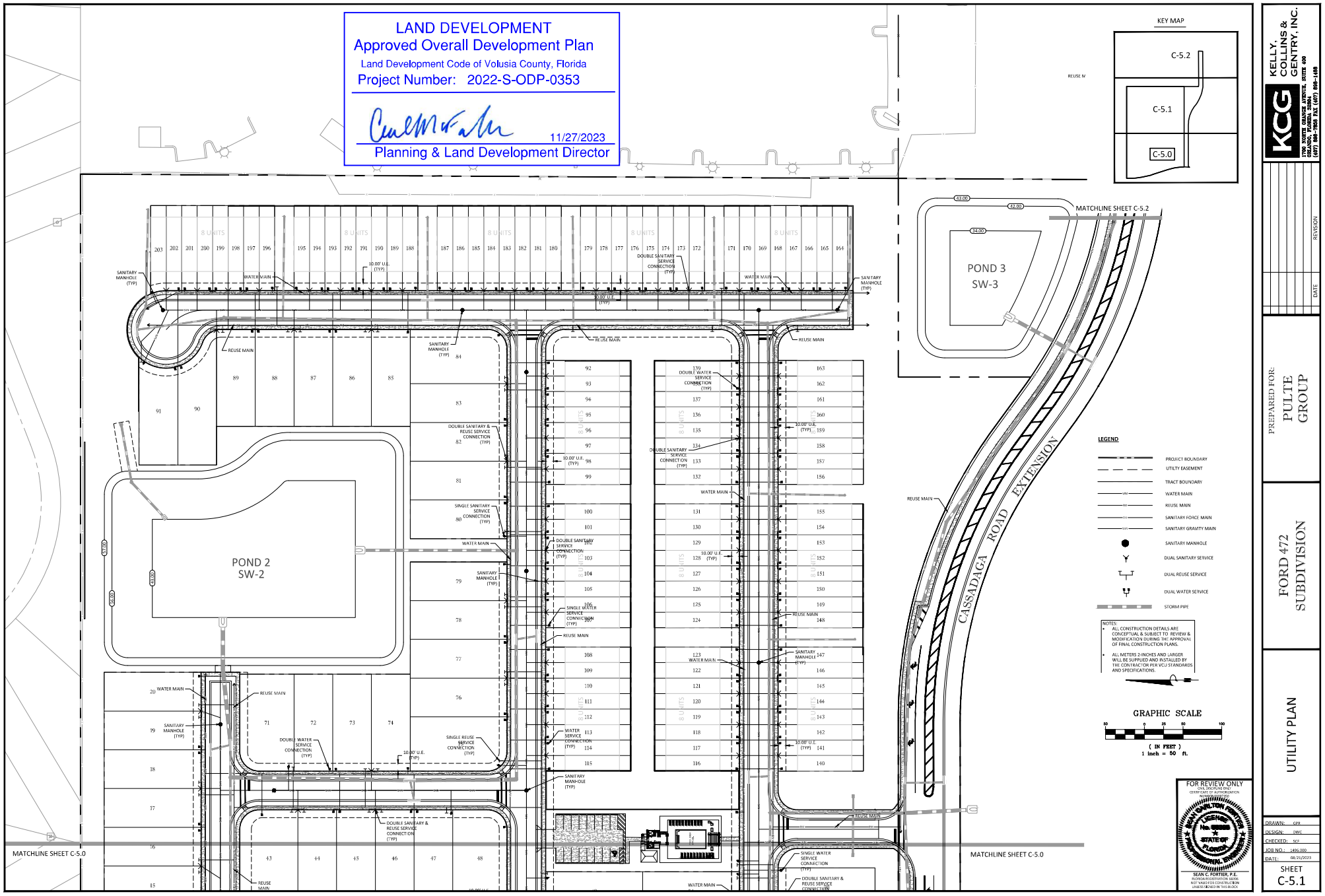
DATE: 08/21/2023

SHEET
C-5.0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C-5.2
C-5.1
C-5.0
POND 3
SW-3
POND 2
SW-2
CASSADAGA ROAD EXTENSION
MATCHLINE SHEET C-5.2
MATCHLINE SHEET C-5.0
LEGEND
PROJECT BOUNDARY
UTILTY EASEMENT
TRACT BOUNDARY
WATER MAIN
REUSE MAIN
SANITARY FORCE MAIN
SANITARY GRAVITY MAIN
SANITARY MANHOLE
DUAL SANITARY SERVICE
DUAL REUSE SERVICE
DUAL WATER SERVICE
STORM PIPE
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GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft.
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FORD 472 SUBDIVISION
UTILITY PLAN
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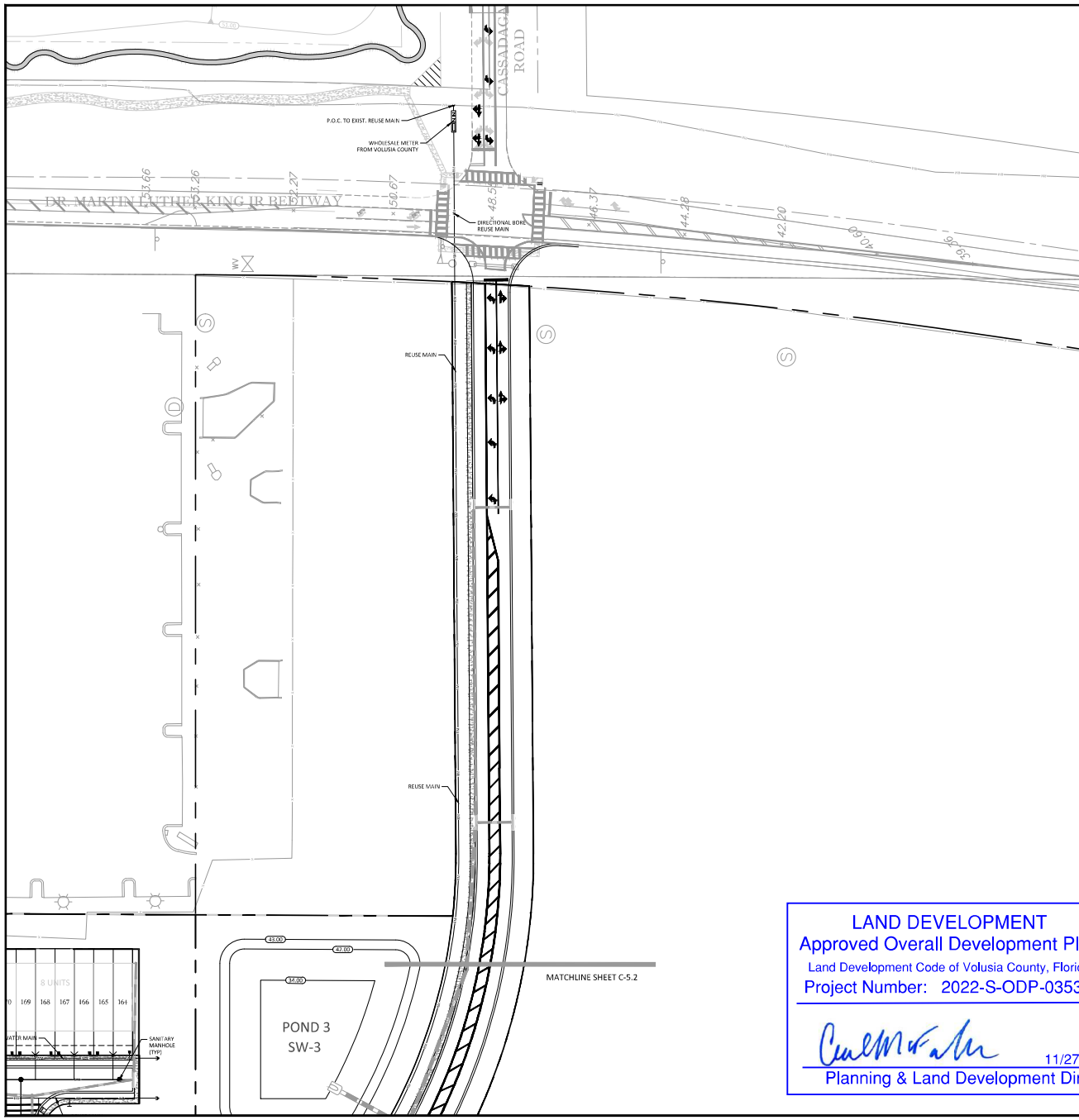
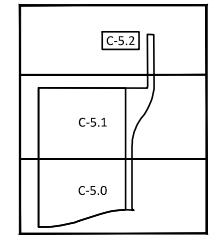
SHEET
C-5.1



KEY MAP



LEGEND

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- UTILTY EASEMENT
- TRACT BOUNDARY
- WATER MAIN
- REUSE MAIN
- SANITARY FORCE MAIN
- SANITARY GRAVITY MAIN
- SANITARY MANHOLE
- DUAL SANITARY SERVICE
- DUAL REUSE SERVICE
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KCG
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(407) 898-7858 FAX (407) 898-1488

DATE	REVISION

PREPARED FOR:
PULTE GROUP

FORD 472 SUBDIVISION

UTILITY PLAN

DRAWN: GPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

SHEET
C-5.2

Appendix C
Study Methodology and Approval

Volusia County
Traffic Engineering

The following proposed development project has an *APPROVED TIA METHODOLOGY:*

Project: **Ford 472**

Date of Approval: **July 18, 2024**

Date of Expiration*: **January 18, 2025**

TIA Approval Required By*: **July 18, 2025**

Conditions:

The respective TIA can now be accepted for review by the county. TIAs must be completed per the River-to-Sea TPO TIA Guidelines, which can be found on the R2CTPO.org website.

Approval Signature: _____

TIA SUBMISSION TO COUNTY:

Two steps are required:

1) Submit the following items through email to Omar Atallah (Oatallah@volusia.org) and William White (Wdwhite@volusia.org)
- *PDF copy of the complete TIA (TIA needs to include completed TIA checklist)*
- *Response to Comments (if resubmitted)*

2) Due size limitations and computer input file incompatibility issues, send the following directly to VCTE by Mail or Delivery:
- *CD or USB drive containing all computer input files*

***REMINDERS:**

- TIA approval needs to be obtained within a year of the approved methodology based on the interpretation of the TPO TIA Guidelines, which state that an approved methodology is valid for up to 6 months and a TIA is valid for up to a year..
- The TIA submitted to support a development plan or use permit cannot be older than one year.
- Advisory: If the applicant waits to submit the TIA or TIA revisions, requested updates to vested trip data, growth rates, traffic count data, etc. are likely to occur. (Example: Applicant submits TIA, receives comments, but doesn't update the TIA and respond to comments until 10 months later.)

Questions about TIAs and TIA methodologies should be addressed to Omar Atallah at Oatallah@volusia.org

MEMORANDUM

June 5, 2024

Re: Ford 472 Subdivision
Traffic Impact Analysis Methodology
City of DeLand, Florida
Project № 21145, v2.1

The following is an outline of the Traffic Impact Analysis (TIA) methodology for the above referenced project. In general, the TIA will conform to the methodology requirements and guidelines documented by the River to Sea Transportation Planning Organization (R2CTPO). The memorandum also addresses Volusia County comments, as detailed in the response to comment letters provided in the **Attachments.**

Project

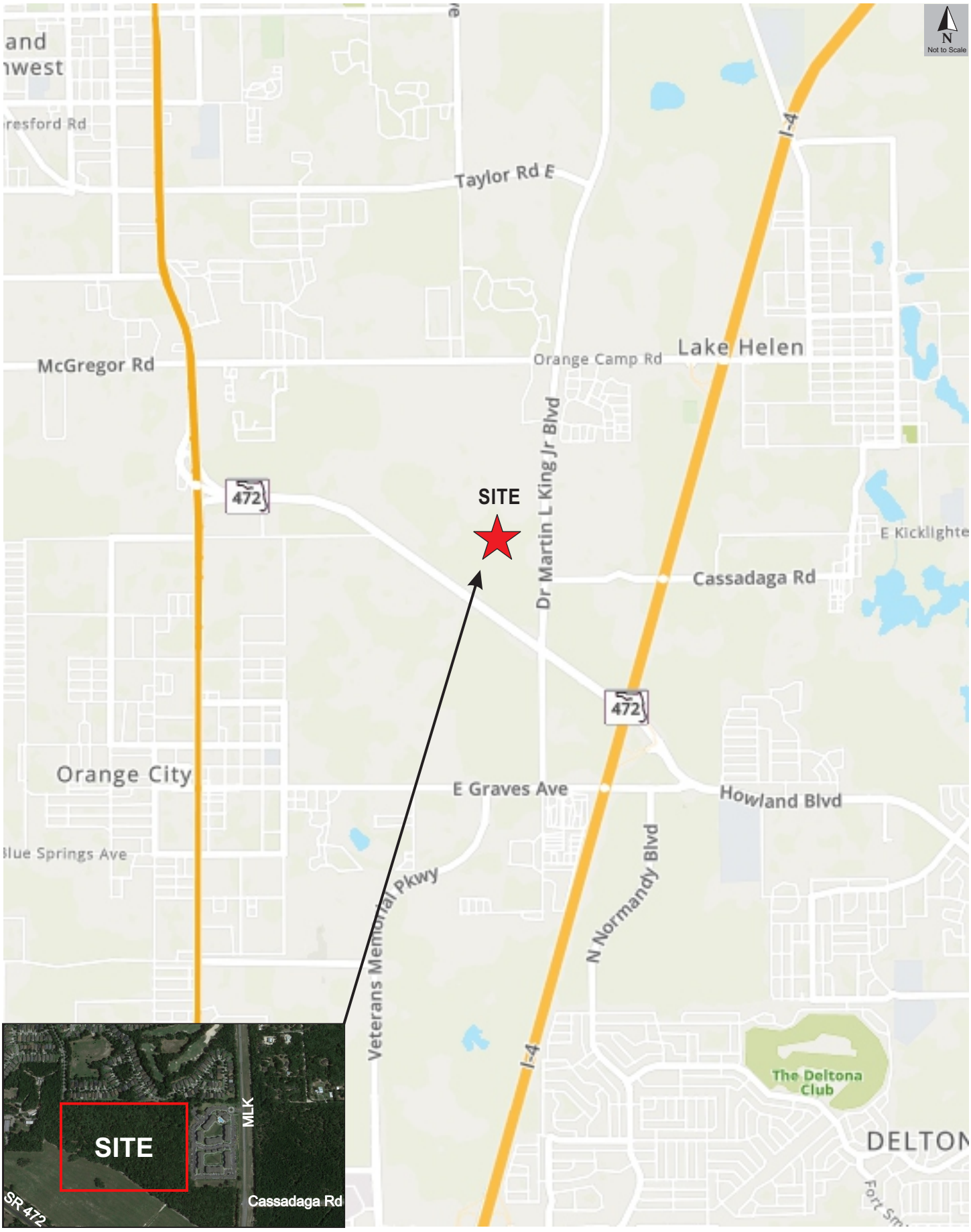
The proposed development consists of 91 single family dwelling units and 112 townhomes with an anticipated buildout year of 2028. The proposed conceptual site plan along with the approved development plan is provided in the **Attachments**. An excerpt of the contract depicting the right to create an easement for Cassadaga Road extension is also provided in the **Attachments**.

Project Location

The site is located west of Dr. Martin Luther King Jr. Beltway (MLK) and north of State Road 472 (SR 472) in the City of DeLand, Florida, as shown in **Figure 1**.

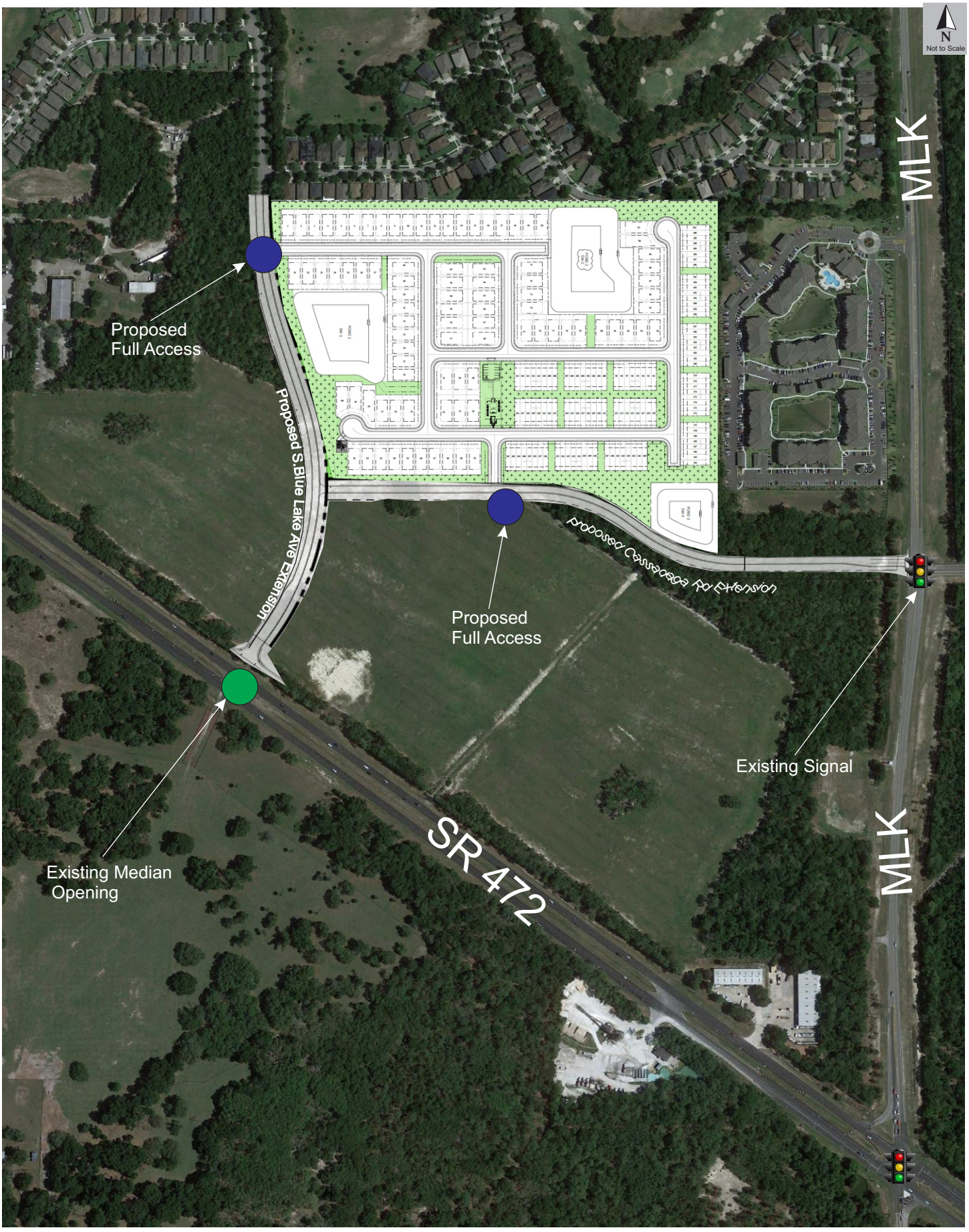
Project Access

The development is proposing to connect to the transportation network by extending Cassadaga Road and South Blue Lake Avenue to connect at SR 472 at an existing full median opening and to MLK at Cassadaga Road. Access to the site is proposed via two (2) full access driveways, one (1) each on Cassadaga Road extension and one (1) on Blue Lake Avenue Extension. The proposed access plan is shown in **Figure 2.**



Site Location Map
Ford 472
21145, v2.1

Figure 1



Proposed Access Plan
Ford 472
21145, v2.1

Figure
2

Trip Generation

The trip generation analysis for the proposed development was conducted using the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, *11th Edition*. The trip generation calculation for the project is summarized in **Table 1** and detailed trip generation sheets are provided in **Attachments**. **Table 1** summarizes the resulting trip generation analysis.

Table 1

Trip Generation Calculation

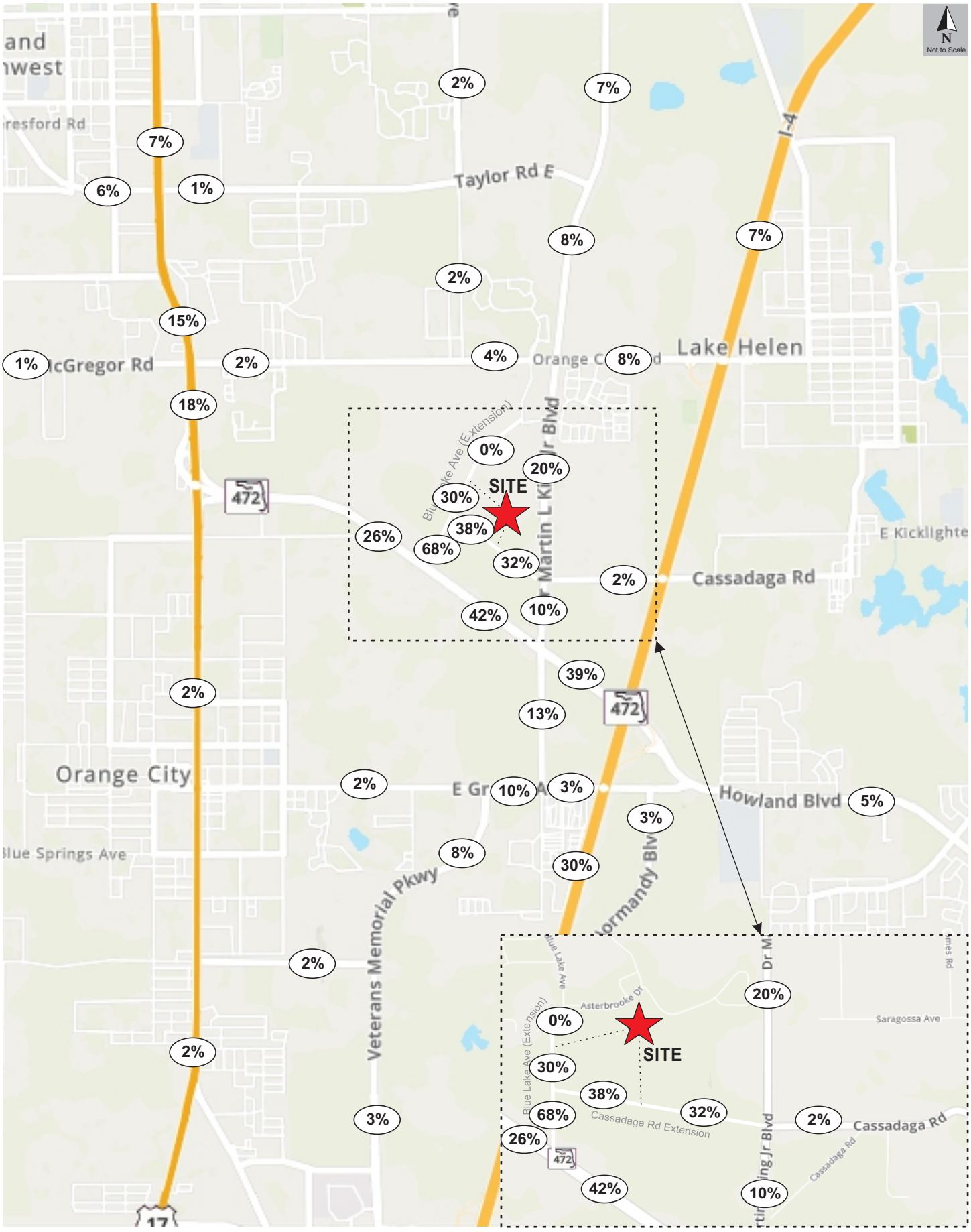
ITE			Daily		AM Peak Hour				PM Peak Hour			
Code	Land Use	Size	Rate	Trips	Rate	Total	Enter	Exit	Rate	Total	Enter	Exit
210	Single Family Residential	91 DU	10.17	925	0.75	68	17	51	1.00	91	57	34
215	Single Family Attached (Townhomes)	112 DU	7.17	803	0.47	53	13	40	0.56	63	37	26
Net Trip Generation				1,728		121	30	91		154	94	60

ITE Trip Generation Manual, 11th Edition

The proposed development is projected to generate 1,728 new daily trips, of which 121 trips occur during the AM peak hour and 154 trips occur during the PM peak hour. Per the River to Sea Transportation Planning (R2CTPO) traffic study guidelines, the development requires a traffic impact analysis as it generates more than 1,000 daily new trips.

Trip Distribution

A trip distribution pattern was estimated using the *Central Florida Regional Planning Model (CFRPM v7.0).* The model highway network was modified to add the proposed Cassadaga Road extension and S. Blue Lake Avenue connection to SR 472. The distribution was slightly adjusted to reflect modification to the local network as well as prevailing traffic flow patterns in the general area. The raw model output is included in the **Attachments.** The adjusted trip distribution is shown in **Figure 3.**

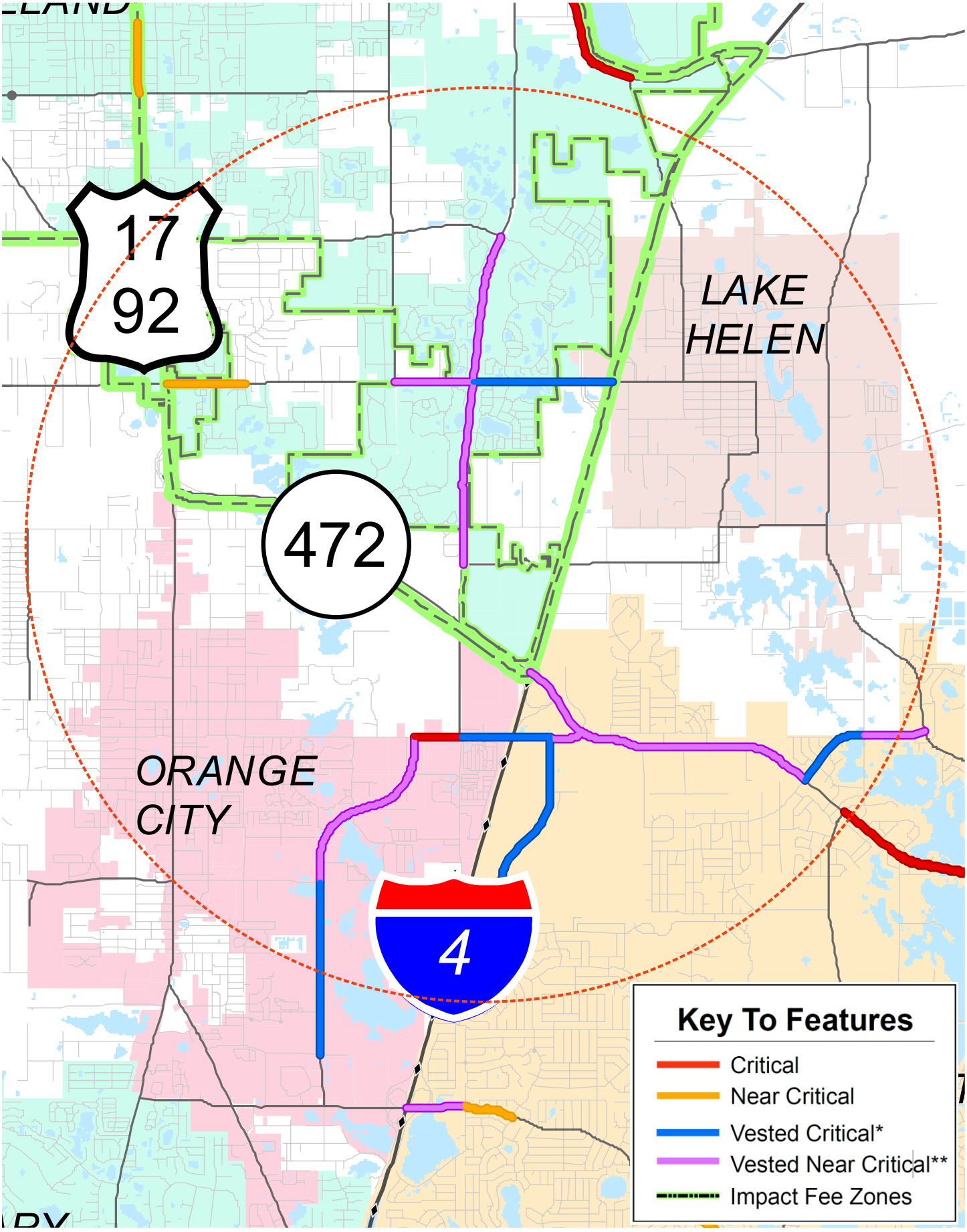


Project Trip Distribution
Ford 472
21145, v2.1

Figure 3

Study Area

Per the TIA requirements, if a project generates between 100 and 300 2-way peak hour external trips, the study area will encompass roadways with direct connection to the site or where the project's peak hour trips consume three percent (3%) or more of the 2-way peak hour generalized service volume based on the adopted level of service (LOS). In addition, the study will include Critical/Near Critical and Vested Critical/Near Vested Critical (C/NC/VC/NVC) roadway segments within a 3-mile radius. A map of the C/NC/VC/NVC segments is shown in **Figure 4**. Roadway segments, daily volumes and 2-way peak hour capacities were obtained from the *Volusia County 2021 AADT & Historical Counts*, included in the **Attachments**. The significance test for roadway segments within the 3-mile radius is provided in **Table 2.**



TMC Traffic & Mobility CONSULTANTS

3-Mile Critical/Near Critical Roadway Map
Ford 472
21145, v2.1

Figure 4

Table 2
Significance Test

Road	Segment	Sta ID	Lns	LOS Std	PK 2W Cap	C/ NC?	Project Trips				
							Dist	Volume	Signif	y/n?	Study
US 17/92	Rhode Island Ave. to Graves Ave.	5165	4	D	3,580		2%	3	0.08%	NO	NO
US 17/92	Graves Ave. to New York Ave.	5166	4	D	3,580		2%	3	0.08%	NO	NO
US 17/92	New York Ave to SR 472	445	4	D	3,580		2%	3	0.08%	NO	NO
US 17/92	SR 472 to SR 15A/Taylor Rd.	1004	6	D	5,390		18%	28	0.52%	NO	NO
US 17/92	SR 15A/Taylor Rd. to Beresford Ave.	1006	4	E	3,790		7%	11	0.29%	NO	NO
I-4	Saxon Blvd. to SR 472	1003	6	D	10,510		30%	46	0.44%	NO	NO
I-4	SR 472 to Orange Camp Rd.	485	6	D	10,510		7%	11	0.10%	NO	NO
I-4	Orange Camp Rd. to SR 44	497	6	D	10,510		7%	11	0.10%	NO	NO
SR 472	US 17/92 to CR 4101/MLK Blvd	472	4	D	5,960		42%	65	1.09%	NO	NO
SR 472	CR 4101/MLK Blvd to I-4 (end of state road)	535	4	D	3,580		39%	60	1.68%	NO	NO
Blue Lake Ave.	Orange Camp Rd. to Taylor Rd.	231	2	E	1,540		2%	3	0.19%	NO	NO
Cassadaga Rd.	W. Volusia Bltwy. to Macy Ave.	280	2	E	1,020		2%	3	0.29%	NO	**YES**
Graves Av/CR 4145	Veteran's Memorial Pkwy. to Kentucky Ave.	775	2	E	1,620	C	10%	15	0.93%	NO	**YES**
Graves Av/CR 4145	Kentucky Ave. to Normandy Blvd.	900a	2	E	1,620	VC	3%	5	0.31%	NO	**YES**
Graves Av/CR 4145	Normandy Blvd. to Howland Blvd.	900b	4	E	2,740	VNC	3%	5	0.18%	NO	**YES**
Hill Ave.	Taylor Rd. to Beresford Ave.	878	2	E	1,020		1%	2	0.20%	NO	NO
Howland Blvd.	I-4/SR 472 to Wolf Pack Run	901	4	E	3,410	VNC	39%	60	1.76%	NO	**YES**
Howland Blvd.	Wolf Pack Run to Catalina Blvd.	903	4	E	3,410	VNC	5%	8	0.23%	NO	**YES**
Howland Blvd.	Catalina Blvd. to Providence Blvd.	905	4	E	3,410		3%	5	0.15%	NO	NO
Howland Blvd.	Providence Blvd. to Elkcam Blvd.	906	2	E	1,230	C	2%	3	0.24%	NO	**YES**
Macy Ave.	Ohio St. to Cassadaga Rd.	1150	2	C	1,020		2%	3	0.29%	NO	NO
McGregor Rd.	Spring Garden Ave. to US17/92	1211	2	E	1,230		1%	2	0.16%	NO	NO
Orange Camp Rd.	US 17/92 to Princeton	1380	2	E	1,270	NC	2%	3	0.24%	NO	**YES**
Orange Camp Rd.	Princeton. to Blue Lake Ave.	1382	2	E	1,540		2%	3	0.19%	NO	NO
Orange Camp Rd.	Blue Lake Ave. to W Volusia Bltwy. (Dr MLK	1384	2	E	1,540	VNC	4%	6	0.39%	NO	**YES**
Orange Camp Rd.	W Volusia Bltwy. (Dr MLK Jr) to I-4	1385	2	E	1,540	VC	8%	12	0.78%	NO	**YES**
Summit Ave.	SR 44 to Main St.	1791	2	E	1,230		1%	2	0.16%	NO	NO
Taylor Rd. (DL)	Stratford Dr. to Blue Lake Ave.	1818	2	E	1,540		1%	2	0.13%	NO	NO
Taylor Rd. (DL)	Blue Lake Ave. to Martin Luther King Bltwy.	1819	2	E	1,230		1%	2	0.16%	NO	NO
W. Volusia Bltwy (Vetera	Harley Strickland Blvd. to Rhode Island Ave.	1901	2	E	1,540	VC	3%	5	0.32%	NO	**YES**
W. Volusia Bltwy (Vetera	Rhode Island Ave. to Graves Ave.	1902	2	E	1,620	VNC	8%	12	0.74%	NO	**YES**
W. Volusia Bltwy (Vetera	Graves Ave to SR 472	1030	2	E	1,540		13%	20	1.30%	NO	NO
W. Volusia Bltwy (Dr MLK	SR 472 to Cassadaga Rd.	1940	2	E	1,540		10%	15	0.97%	NO	NO
W. Volusia Bltwy (Dr MLK	Cassadaga Rd. to Orange Camp Rd.	1942	2	E	1,540	VNC	20%	31	2.01%	NO	**YES**
W. Volusia Bltwy (Dr MLK	Orange Camp Rd. to Taylor Rd.	1943	2	E	1,540	VNC	8%	12	0.78%	NO	**YES**
W. Volusia Bltwy (Dr MLK	Taylor Rd. to Beresford Ave. Ext.	1945	2	E	1,540		7%	11	0.71%	NO	NO
Normandy Blvd	Graves Ave to Rhode Island	DLT-105.000	2	D	1,150	VC	3%	5	0.43%	NO	**YES**
Catalina Blvd	Howland Blvd to Sixma Road	DLT-20.020	2	D	960	VC	0%	0	0.00%	NO	**YES**
Catalina Blvd	Sixma Road to Lake Helen Osteen	DLT-20.030	2	D	960	VNC	0%	0	0.00%	NO	**YES**

NOTE: The segment **W. Volusia Bltwy.** to **Macy Ave** in **Cassadaga Rd.** requires study because it has direct connection to the site.

Based on the significance test above, the study roadway segments are as follows:

- Cassadaga Road/Cassadaga Road Extension
  - West Volusia Beltway (MLK) to Macy Avenue
  - West Volusia Beltway (MLK) to SR 472 (Proposed)
- Graves Avenue/CR 4145
  - Veterans Memorial Parkway to Kentucky Avenue
  - Kentucky Avenue to Normandy Boulevard
  - Normandy Boulevard to Howland Boulevard
- Howland Boulevard
  - I-4/SR 472 to Wolf Pack Run
  - Wolf Pack Run to Catalina Boulevard
  - Providence Boulevard to Elkcam Boulevard
- Orange Camp Road
  - US 17/92 to Princeton Road
  - Blue Lake Avenue to W. Volusia Beltway (Dr. MLK Jr)
  - W. Volusia Beltway (Dr. MLK Jr) to I-4
- W. Volusia Beltway/MLK
  - Harley Strickland to Rhode Island Avenue
  - Rhode Island Avenue to Graves Avenue
  - Graves Avenue to SR 472 (Normandy Boulevard)
  - Cassadaga Road to Orange Camp Road
  - Orange Camp Road to Taylor Road
- Catalina Boulevard
  - Howland Boulevard to Sixma Road
  - Sixma Road to Lake Helen Osteen

The study intersections are as follows:

- MLK & Orange Camp Road (roundabout)
- MLK & Cassadaga Road (unsignalized/future signal)
- MLK/Kentucky Avenue & SR 472 (signalized)
- SR 472 & Blue Lake Avenue Extension (unsignalized)
- Howland Boulevard and Minnesota Avenue (unsignalized)
- Project Access driveway on Cassadaga Road Extension (unsignalized)
- Project Access driveway on Blue Lake Avenue Extension (unsignalized)

Roadway Segment and Intersection Analysis

The traffic analysis will include existing and 2028 buildout conditions for both roadway segment and intersection capacity analysis. Roadway segments will be analyzed for the PM peak 2-way volumes. The analysis will be based on existing and service volumes as obtained from the most recent *Volusia County Average Annual Daily Traffic & Historical Counts,* included in the **Attachments***.* The intersection analysis will be conducted for the PM peak hours based on field counts, projected movements, *Synchro* software and the methods of the *Highway Capacity Manual, 7th edition (HCM)*.

Background and Buildout Traffic

Background traffic will be projected to the buildout year 2028 based on *Volusia County's Segment Growth Rates and Vested Trips Instruction Policy,* included in the **Attachments**. Buildout conditions will be analyzed by comparing the total projected traffic volumes to their service volumes at the adopted level of service LOS standard for the roadway segments and intersections. Total projected traffic volumes at buildout year 2028 will be calculated as the sum of background traffic and project trips.

Intersections volumes at buildout will be computed by adjusting the raw field counts based on the appropriate seasonal factor obtained from *FDOT Traffic Online*, then adding it to the projected traffic growth and trips generated by the development. An intersection analysis will be conducted for the AM and PM peak hour conditions, based on field counts, buildout traffic, *Synchro* software and the methods of *HCM, 7th edition*.

Planned and Programmed Improvements

The Transportation Improvements Programs for the City, County, and FDOT were reviewed to determine if any roadway or intersection improvements were funded for construction within the next few years. **Table 3** summarizes the list of roadway segments programmed for improvement as obtained from the Volusia County Road Program 2021-22, excerpts of which are included in the **Attachments.** The first two rows listed in the table below will be considered in the buildout condition analysis for this project.

Table 3

Planned & Programmed Improvements

Roadway	From	To	Improvement	Status
Howland Boulevard	Providence Blvd	Elkcam Boulevard	Widen From 2 to 4 Lanes	Under Construction
Orange Camp Road	MLK Jr. Beltway	I-4	Widen From 2 to 4 Lanes	Under Construction
Graves Avenue	Veterans Memorial Parkway	Kentucky Avenue	Widen From 2 to 3 Lanes	Design Underway
Veterans Memorial Parkway	Current limit of 4 lanes	Rhode Island Avenue	Widen From 2 to 4 Lanes	Design Underway
Beresford Road	Blue Lake Avenue	Kepler Road/MLK Jr Beltway	Extension	Design and Row Acquisition Underway
Blue Lake Avenue	Victoria Park	SR 472	Extension	Conceptual Preparation Underway

Source: 2021-22 Volusia County Road Program

Proportionate Share

If the development results in offsite impacts, the development will mitigate its impact to the deficient facilities by contributing a proportionate share. The proportionate share calculation will be based on costs approved by Volusia County Engineering and Construction Division. All proposed mitigation improvements will be consistent with the appropriate City and County comprehensive plans' transportation elements. In particular, if a proposed mitigation improvement is to widen a county roadway beyond that which is indicated on the County's adopted *Future Number of Lanes Map* (or allowed by the County Transportation Engineering since a county map amendment is pending), an alternative mitigation improvement project must be proposed.

Alternative Mode Analysis

A review of transit, pedestrian and bicycle facilities will be conducted in accordance with the R2CTPO and Volusia County requirements.

Report

A report detailing the methods, findings, and recommendations of the traffic analysis will be prepared for submittal to the City and County.

ATTACHMENTS

June 5, 2024

Mr. William White
Engineering Assistant II
Volusia County Traffic Engineering
123 West India Avenue
Deland, Florida 32720
WDWhite@volusia.org

Re: Ford 472
Response to TIA Methodology Comments
TMC Project № 21145
Volusia County, Florida

Dear Mr. White,

Please find below our responses to the review comments prepared by the Volusia County Traffic Engineering dated April 15, 2024, regarding the above referenced Methodology dated November 23, 2023. The comments are listed in **bold** typeface and the TMC responses follow in *italic* typeface. Additionally, a revised Methodology is provided under cover reflecting the changes resulting from these comments.

1. **Traffic study will require concept plans for the development as part of the review and approval.**
   Refer to the municode code Sec. 72-577. - Conceptual or final site plan review. Conceptual site plan application.
   a) **Current zoning classification(s);**
   b) **Schematic representation of proposed use, including building size, shape and location on the site;**
   c) **Schematic representation of vehicular circulation within the site, including driveways, parking areas and loading areas;**
   d) **Schematic representation of points of connection to the public right-of-way.**

   TMC Response: Approved Overall Development Plan is provided in the Attachments.

2. **The proposed build-out as stated is year 2026. Please confirm that this is realistic build-out date.**

   TMC Response: Buildout Year is now anticipated for 2028. Relevant changes have been made in the revised Methodology.

3. **Land use used in table 2 project trip generation shall replicate the project Concept layout proposed uses and building sizes data.**

   TMC Response: The land use data in the Trip Generation table (Table 2) has been updated to reflect the concept layout proposed uses and building sizes data.

4. **Confirm if there are any planned phases for the development and full development buildout year.**

   TMC Response: The development is planned to be built in a single phase with the buildout year 2028.

5. **Refer to the attached traffic growth policy for compliance.**

   TMC Response: Noted. The traffic policy provided will be referred to for the Traffic Impact Analysis Report.

6. **Please state any planned or programmed improvements that will be assumed for future conditions.**

   TMC Response: Improvements that will be assumed for buildout condition are updated and stated in the revised Methodology.

7. **For vested Trip Database, please confirm with relevant agency/city for their updated list of vested developments.**

   TMC Response: Most recent vested trip database from Volusia County will be obtained and used in the final TIA report.

8. **Submit a recorded right-of-way / easement agreement for Cassadaga Rd extension.**

   TMC Response: We do not yet have an easement for the roadway extension, but the client is working on it. However, please see the Attachments regarding the rights to create an easement.

9. **Intersection analyses the use of latest version "HCM 7th Edition" for TIAs.**

   TMC Response: HCM 7th Edition will be used in the TIA and has been updated in the Methodology.

10. **Signal warrant analysis will be required for the signalized intersection at MLK & proposed Cassadaga Rd extension.**

    TMC Response: There is an existing traffic signal at the MLK & Cassadaga Road intersection.

11. **Please include the following statement if applicable**
    Given the staged nature of the development and recognizing the potential evolution of traffic patterns over time, the developer is required to conduct a comprehensive reevaluation of the access control type in conjunction with each stage of development. This process is essential to ensure that access control measures align with the changing transportation needs and conditions associated with the different phases of the project. The developer must collaborate closely with the CTE to assess and adjust

the access control type based on the specific requirements and challenges presented by each stage. This reevaluation should consider factors such as the increasing population density, changing land use patterns, and corresponding shifts in traffic volumes. For each stage, the developer is expected to submit a revised access control proposal that reflects the current and anticipated traffic conditions. This proposal should outline any necessary modifications to the initially proposed access control type, taking into account factors such as peak traffic periods, pedestrian movements, and the integration of alternative transportation modes. The CTE will review each stage's access control proposal, ensuring that it complies with established standards and guidelines. The goal is to adapt the access control type to the evolving demands of the development, promoting an efficient and safe transportation network throughout the different phases. This staged approach to access control evaluation aims to create a flexible and responsive framework that accommodates the dynamic nature of the development. It is imperative that the developer remains proactive in reassessing and refining access control measures to uphold the highest standards of transportation planning and engineering throughout the entire staged development process.

TMC Response: Please note that this project will be developed in one (1) phase/stage; therefore, the proposed access driveway points will be analyzed for the full buildout of the project and access management will be evaluated accordingly.

12. **Refer to TIA guideline section 7 (though an analysis of safety and access management issues may still need to be completed) and provide documentation that support this requirement. A crash diagram with georeferenced crash locations highlighting crash trends based on 5yrs period. The crash analysis is to include all listed study intersection(s) /segment(s) adjoining the development and intersection(s)/segment(s) with mitigated development measure(s).**

TMC Response: Acknowledged. The TIA will include a section for crash analysis to include study intersections and roadway segments adjoining the development and intersection(s)/segment(s) with mitigated development measures.

END OF COMMENTS

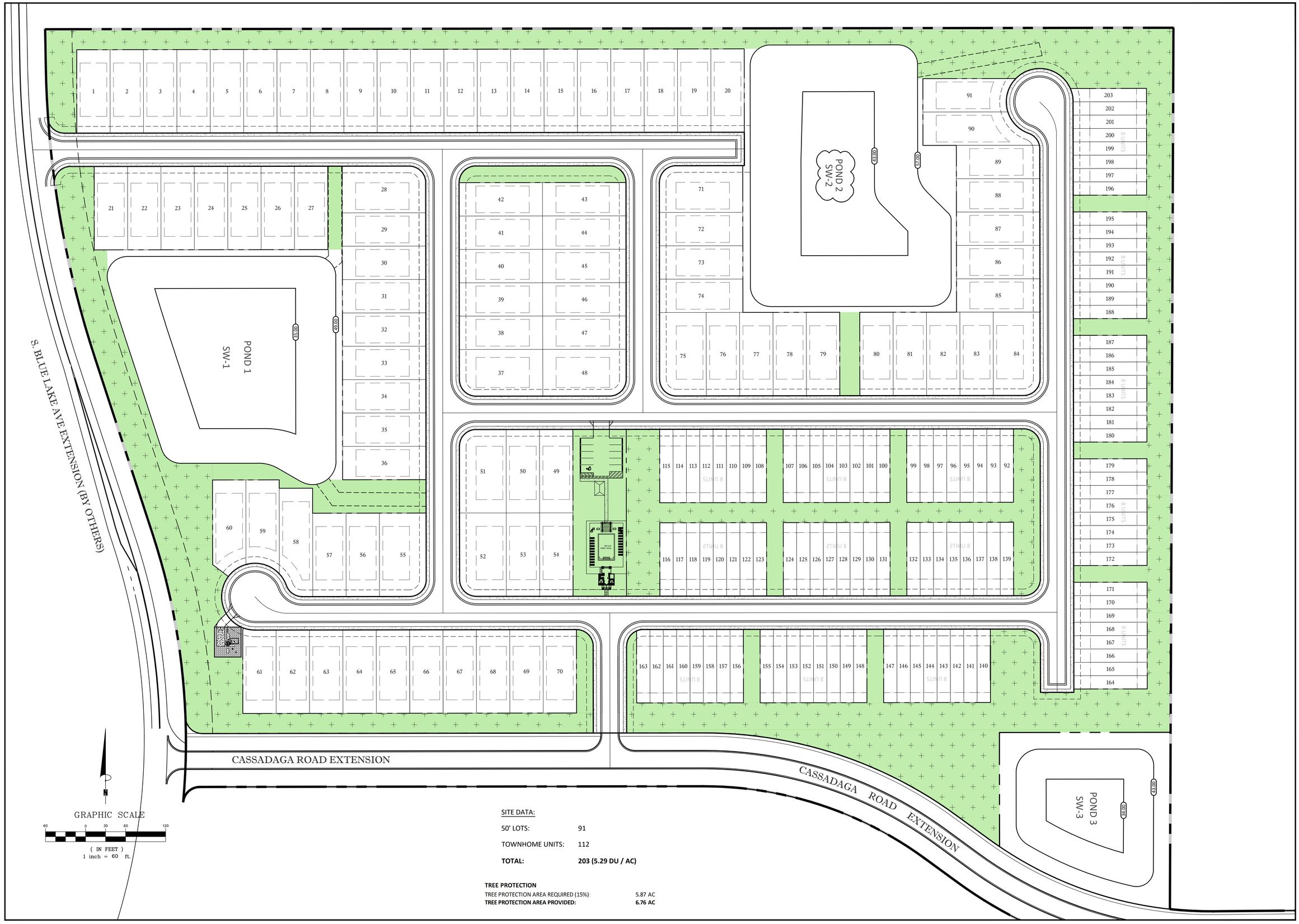
We trust these responses and the revised Methodology adequately address the review comments. We remain available to discuss this matter further or to answer any questions you may have.

Kind regards,

TRAFFIC & MOBILITY CONSULTANTS LLC



Ayman As-Saidi, PE
VP of Engineering



SITE DATA:

50' LOTS:	91
TOWNHOME UNITS:	112
TOTAL:	**203 (5.29 DU / AC)**

TREE PROTECTION

TREE PROTECTION AREA REQUIRED (15%):	5.87 AC
TREE PROTECTION AREA PROVIDED:	**6.76 AC**

KELLY, COLLINS & GENTRY, INC.
KCG
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 898-7858 FAX (407) 898-1488

DATE	REVISION

PREPARED FOR:
PULTE GROUP

FORD 472
SUBDIVISION

CONCEPT PLAN

DRAWN:	GPR
DESIGN:	GPR
CHECKED:	SCF
JOB NO.:	1496.000
DATE:	07/25/2023

SHEET
1 OF 1

Volusia County
FLORIDA

Growth & Resource Management
Land Development

November 27, 2023

Christopher Wrenn
PulteGroup, Inc.
4901 Vineland Rd
Orlando, FL 32811

Re: Subdivision Overall Development Plan Preliminary Development Order
2022-S-ODP-0353 / 1072480
Ford 472 Subdivision

Dear Mr. Wrenn:

This letter is the Subdivision Overall Preliminary Development Order for the above-referenced development. Pursuant to the following findings, the DRC has approved the application:

1. The application was accepted on May 15, 2023, and discussed at the June 14, 2023, Technical Staff Review Meeting.

2. The DRC considered the application at their regularly scheduled meeting of October 10, 2023, and approved the Overall Development Plan application 2022-S-ODP-0353, subject to the submittal of revised plans to the satisfactory resolution of staff comments.

3. Revised plans were accepted on October 26, 2023.

A copy of the approved version of the plan, last revision dated October 18, 2023, by Sean Fortier, is enclosed.

Based on this letter you may submit an application for a Preliminary Plat Development Order. A blank application form and a checklist of exhibits and procedures are attached. A fee, as outlined in the attached fee schedule, must be paid at the time of application submittal. The Preliminary Plat application must be consistent with the approved Overall Development Plan and any remaining conditions imposed by the DRC.

Section 72-536(b) of the LDC states, “It is a violation of this division for anyone who is the owner or agent of the owner of any land to transfer, sell, agree to sell, or negotiate to sell such land by reference to, exhibition of, or other use of a plat of a subdivision of such land without having the plat approved as required by this division.”

Pursuant to Section 125.022(5), F.S., issuance of this development order by the county does not in any way create any rights on the part of the applicant to obtain a permit from a state or federal agency and does not create any liability on the part of the county for issuance of the permit if the applicant fails to obtain requisite approvals or fulfill the obligations imposed by a state or federal agency or undertakes actions that result in a violation of state or federal law. All other applicable state or federal permits shall be obtained before commencement of this development.

Pursuant to Section 72-502(g) of Article III Land Development, Chapter 72 Code of Ordinances (LDC), any person claiming to be aggrieved by a decision of the Enforcement Official or the DRC may file a written appeal within thirty (30) days after said decision with the Land Development Manager to have the decision reviewed by the Volusia County Council. The appeal shall state fully the specific grounds for the appeal and all of the facts relied upon by the petitioner. The County Council shall consider only those items specified in this petition.

Please feel free to contact the Land Development office if you have any questions. The project name and number must be referenced on all inquiries.

Sincerely,



Carol McFarlane, AICP
Planning and Land Development Director
cmcfarlane@volusia.org

CRM/rc
Enclosures

c: James L Rickman, Allen & Company, 16 E Plant St, Winter Garden, FL 34787
Ford Frank A, Group 7 87 5 / Group 4 12 5, Po Box 457, Deland Fl 32721
Sean Fortier, Kelly, Collins & Gentry, Inc, 1700 N Orange Av, Orlando, FL 32804
Todd Bonnett, Bonnett Design Group, LLC, 400 S Orlando Av Suite 201, Maitland, FL 32751
David Romero (via e-mail)

PARCEL DESCRIPTION

PARCEL 1
GOVERNMENT LOT 2, EXCEPT THE W 1/4 THEREOF LYING NORTH OF S.R. 15A, AND LYING SOUTH OF A LINE PARALLEL TO AND 900 FEET SOUTH OF THE NORTH LINE OF SAID GOV'T LOT 2, AND EXCEPT THE EAST 660 FEET OF THE NORTH 1056 FEET, LYING IN SECTION 1, TOWNSHIP 18 SOUTH, RANGE 30 EAST, VOLUSIA COUNTY, FLORIDA.

AND
THE NORTH 900 FEET OF THE EAST 1/4 OF GOVERNMENT LOT 2, LYING NORTH OF S.R. 15A, EXCEPT THE NORTH 660 FEET THEREOF, LYING IN SECTION 1, TOWNSHIP 18 SOUTH, RANGE 30 EAST, VOLUSIA COUNTY, FLORIDA.

PARCEL2
THE EAST 1/4 OF GOVERNMENT LOT 2, LYING NORTH OF STATE ROAD 15-A, EXCEPT THE NORTH 900 FEET THEREOF, AND THE WEST 1/4 OF GOVERNMENT LOT 1, LYING NORTH OF STATE ROAD 15-A, EXCEPT THE NORTH 900 FEET, LYING IN SECTION 1, TOWNSHIP 18 SOUTH, RANGE 30 EAST, VOLUSIA COUNTY, FLORIDA.

NOTE:

PARCEL DESCRIPTION PROVIDED BY ALLEN & COMPANY, DATED 06/08/2021.

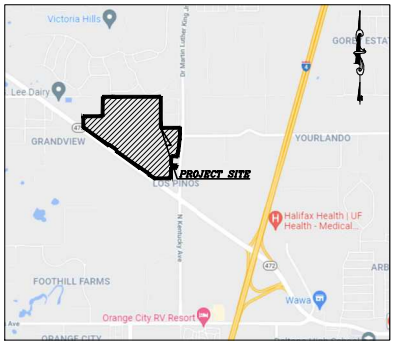
OVERALL DEVELOPMENT PLAN

FOR:

FORD 472 SUBDIVISION

NORTH OF SR 472 & WEST OF DR MARTIN LUTHER KING JR BELTWAY VOLUSIA COUNTY, FLORIDA

VICINITY MAP



SCALE: 1"=2000'

LAND DEVELOPMENT
Approved Overall Development Plan
Land Development Code of Volusia County, Florida
Project Number: 2022-S-ODP-0353

11/27/2023
Planning & Land Development Director

FORD 472 SUBDIVISION VOLUSIA COUNTY, FL

PARCEL ID #:
800100000020

PREPARED FOR:

PULTE GROUP

4901 VINELAND ROAD SUITE 460
ORLANDO, FLORIDA 32811
PHONE: (407) 661 2152

DEVELOPMENT TEAM:

DEVELOPER
PULTE GROUP
4901 VINELAND ROAD SUITE 460
ORLANDO, FLORIDA 32811
PHONE: (407) 661 2152

ENGINEER
KELLY, COLLINS & GENTRY, INC.
1700 NORTH ORANGE AVENUE,
SUITE 400
ORLANDO, FLORIDA 32804
PHONE: (407) 898-7858
FAX: (407) 898-1488

SURVEYOR
ALLEN & COMPANY
16 EAST PLANT STREET
WINTER GARDEN, FLORIDA 34787
PHONE: (407) 654-5355

LANDSCAPE ARCHITECT
BONNET DESIGN GROUP, LLC
PHONE: (407) 463-0136

UTILITIES:

WATER & SEWER
CITY OF DELAND
1101 SOUTH AMELIA AVENUE,
DELAND, FLORIDA 32724
PHONE: (386) 626-7250

RECLAIM WATER
VOLUSIA COUNTY UTILITIES
123 W INDIANA AVE, DELAND, FLORIDA 32720
PHONE: (386) 736-2700

PREPARED BY:

KELLY, COLLINS & GENTRY, INC.
ENGINEERING • PLANNING

1700 NORTH ORANGE AVENUE
SUITE 400
ORLANDO, FLORIDA 32804
PHONE (407) 898-7858
FAX (407) 898-1488

SECTION 01 TOWNSHIP 18, RANGE 30, VOLUSIA COUNTY, FLORIDA

SHEET INDEX

SHEET TITLE	SHEET NO.
COVER SHEET	C-1.0
EROSION CONTROL & TREE PROTECTION	EC-1.0
OVERALL PLAN	C-2.0 TO C-2.1
DIMENSION PLAN	C-3.0 TO C-3.2
PAVING, GRADING, & DRAINAGE PLAN	C-4.0 TO C-4.2
UTILITY PLAN	C-5.0 TO C-5.2

Sean Fortier
2023.10.18
13:29:01-04'00'

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY SEAN C. FORTIER, P.E. ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

FOR REVIEW ONLY
NOT TO BE USED FOR CONSTRUCTION UNLESS SIGNED BY THIS BLOCK

SEAN C. FORTIER, P.E.
FLORIDA REGISTRATION NO.
NOT VALID FOR CONSTRUCTION UNLESS SIGNED BY THIS BLOCK

REVISIONS:

DATE	DESCRIPTION

DRAWN: GPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

SHEET
C-1.0

EROSION CONTROL:

1. GENERAL: CONTRACTOR SHALL INSTALL ANY ADDITIONAL EROSION CONTROL WHEN NECESSARY IN ORDER TO MEET STATE AND LOCAL STANDARDS.
2. EXISTING SYSTEMS: CONTRACTOR SHALL PROTECT ALL EXISTING STORMWATER COLLECTION SYSTEMS FROM DAMAGE BY SEDIMENT OR OTHER CONSTRUCTION RELATED CAUSES.
3. CONFLICTS: CONTRACTOR SHALL COORDINATE ALL UTILITY CROSSINGS AND ADDRESS CONFLICTS PRIOR TO BEGINNING WORK IN A GIVEN AREA(S).
4. STABILIZATION:
   A. EROSION CONTROL SHALL BE MAINTAINED WITHIN CONSTRUCTION AREAS BY QUICKLY STABILIZING DISTURBED AREAS TO PREVENT THE RELEASE OF SEDIMENT. THIS SHALL BE ACCOMPLISHED USING SOD, TURBIDITY FENCES, AND OTHER MEANS ACCEPTABLE TO OWNER, ENGINEER, AND REGULATORY AGENCIES.
   B. AREAS DISTURBED THAT WILL NOT BE IMPROVED FOR A PERIOD OF 30 DAYS OR MORE SHALL RECEIVE TEMPORARY STABILIZATION AS DEEMED NECESSARY BY THE MUNICIPAL INSPECTOR.
5. BMPs:
   A. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, CONTRACTOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES BMP TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
   B. WITH UTILIZING CONSTRUCTION PHASES, CONTRACTOR SHALL BE RESPONSIBLE FOR ADDITIONAL ON-SITE BMPs AS DEEMED NECESSARY AND SHALL BE APPROVED BY JURISDICTIONAL AUTHORITIES.
   C. ALL BMPs SHALL BE CLEANED OF SEDIMENT WHEN 50% OR LESS OF BMP IS REACHED.
   D. ALL BMPs SHALL REMAIN IN PLACE UNTIL SUCH TIME THAT THE MUNICIPAL INSPECTOR ALLOWS REMOVAL.
   E. APPROPRIATE BMPs MUST BE IMPLEMENTED TO ENSURE THAT DISCHARGES DO NOT EXCEED SURFACE WATER QUALITY STANDARDS PER THE FDEP CONSTRUCTION GENERIC PERMIT (CGP). IF DEWATERING OFFSITE OR INTO A COUNTY MS4, TURBIDITY MUST BE MONITORED TO ENSURE THAT DISCHARGES DO NOT EXCEED 29 NTU OVER BACKGROUND PER 62-302.530 FAC. REFER TO THE DEWATERING REQUIREMENTS IN 62-621.300(4)(a) CONSTRUCTION GENERIC PERMIT OR 62-621.300(2)(a) DEWATERING GENERIC PERMIT AS APPLICABLE.
   F. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPs SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROL BMPs AFTER EACH RAIN EVENT OF 1/2" AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, REVEGETATING, AND RENETTING, MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs, OR MODIFICATIONS OF THOSE INSTALLED SHALL BE REQUIRED.
   G. CONTRACTOR SHALL INSPECT BMPs AT END OF EACH WORKING DAY.
   H. SEDIMENT REMOVED FROM BMPs SHALL BE DISPOSED OF IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS, OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED OR PLACED IN TOPSOIL STOCKPILES.
   I. BMPs USED ON SITE MUST MEET THE MINIMUM SPECIFICATIONS IN THE 2013 STATE OF FLORIDA E&SC DESIGNER AND REVIEWER MANUAL.
6. MULCH:
   A. MULCH WITH MULCH CONTROL NETTING OR EROSION CONTROL BLANKETS SHALL BE INSTALLED ON ALL SLOPES 3:1 AND STEEPER.
   B. STRAW MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN.
7. ENTRANCE/EXIT:
   A. CONSTRUCTION ENTRANCE SHALL BE GRADED SO THAT NO SEDIMENTS LEAVE THE SITE.
   B. ALL EMPLOYEES, SUBCONTRACTORS, AND SUPPLIERS SHALL UTILIZE CONSTRUCTION ACCESS.
   C. CONSTRUCTION VEHICLES SHALL ENTER AND EXIT THE SITE AT ONE LOCATION.
   D. ALL EXIT LOCATIONS INTENDED SHALL BE USED CONTINUOUSLY AND FOR A PERIOD OF TIME SHALL HAVE STABILIZED CONSTRUCTION ENTRANCE/EXIT BMPs (FC 1 "STABILIZED CONSTRUCTION ENTRANCE/EXIT" OR FC 2 "ENTRANCE/OUTLET TIRE WASH").
   E. INSPECT ROUTINELY FOR DAMAGE AND ASSESS EFFECTIVENESS OF THE BMP. REMOVE AGGREGATE, SEPARATE AND DISPOSE OF SEDIMENT IF CONSTRUCTION ENTRANCE/EXIT IS CLOGGED SO MORE THAN 50% WITH SEDIMENT.
   F. IF APPLICABLE, ROUTE RUNOFF FROM STABILIZED ENTRANCES THROUGH A SEDIMENT TRAPPING DEVICE BEFORE DISCHARGE.
8. INLETS:
   G. ALL EXISTING AND PROPOSED STORM DRAINAGE INLETS AND PIPES SHALL BE PROTECTED FROM SILT, SAND, AND DEBRIS DURING CONSTRUCTION. ANY ACCUMULATION OF DEBRIS WITHIN THE STORM DRAINAGE PIPE SYSTEM SHALL BE REMOVED BY CONTRACTOR.
   H. PROVIDE GEOHAY HAY BALES IN FRONT OF ALL DRAINAGE CURB INLETS AND PROVIDE FILTER FABRIC UNDER THE GRATE OF ALL DITCH BOTTOM INLETS AFTER INITIAL COMPLETION OF THE DRAINAGE STRUCTURES. MAINTAIN THESE MEASURES DAILY.
9. DAILY:
   A. CONSTRUCTION SITE SHALL BE INSPECTED FOR EROSION PROBLEMS DAILY AND AFTER EACH RAINFALL GREATER THAN 0.5". A RAIN GAUGE SHALL BE ON SITE TO MEASURE THE FALL AMOUNTS.
   B. THE ADJACENT STREETS SHALL BE SWEPT AT THE END OF EACH DAY OF DIRT FROM THE CONSTRUCTION SITE. CONTRACTOR SHALL IMPLEMENT STREET SWEEPING AND VACUUMING AS NEEDED. CLEAN DIRT FROM ROADWAYS DAILY.
   C. CONSTRUCTION SITE SHALL BE CLEANED OF LITTER AND TRASH EACH DAY AND DISPOSED OF OFF-SITE.
   D. INSPECT ALL SEDIMENT CONTROL DEVICES FOR DAMAGE DAILY AND REPAIRS AS NEEDED.
   E. CONTRACTOR SHALL EMPLOY SAFETY AND ROADWAY ENTRY AND EXIT PLANS ON A DAILY/WEEKLY BASIS.
   F. HUMAN WASTEWATER SHALL BE COLLECTED ON-SITE BY THE USE OF TEMPORARY SANITARY SERVICE.
10. SILT FENCE:
   A. SILT FENCE SHALL BE IN PLACE AS SHOWN PRIOR TO CONSTRUCTION.
   B. PRIOR TO CONSTRUCTION, SILT FENCE SHALL BE INSTALLED AT THE LIMITS OF CONSTRUCTION AS DEFINED THROUGHOUT THIS PLAN SET. SEE DETAIL SHEETS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION ON EROSION CONTROL.
   C. SILT FENCE SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
11. SOD: ALL DISTURBED AREAS SHALL BE SODDED EXCEPT AS SHOWN ON PLAN. ALL SOD IN RIGHT OF WAY SHALL BE ARGENTINE BAHIA. ALL SLOPES 4:1 OR GREATER SHALL BE SODDED.
12. STOCKPILES: SHALL BE ENCOMPASSED WITH SILT FENCE, SHALL NOT EXCEED 35' IN HEIGHT, AND SHALL NOT BE LOCATED NEAR SITE PERIMETER. LOCATION AND SIZE SHALL BE APPROVED BY MUNICIPAL INSPECTOR AND OTHER JURISDICTIONAL AUTHORITIES AS REQUIRED.
13. TOXIC SUBSTANCES: ALL TOXIC SUBSTANCES (IF ANY) BROUGHT ON-SITE SHALL BE HANDLED AND STORED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND STANDARDS. ALL SUBSTANCES THAT MAY BE CONSIDERED TOXIC SHALL ALSO BE HANDLED AND STORED ACCORDING TO FEDERAL, STATE, AND LOCAL LAWS AND STANDARDS.
14. DRAINAGE/GRADE: THE CONTRACTOR SHALL PROPERLY GRADE ALL EXCAVATED SURFACES TO PROVIDE POSITIVE DRAINAGE AND PREVENT PONDING OF WATER; EFFECT CONTROL OF SURFACE WATER TO AVOID DAMAGE TO ADJOINING PROPERTIES OR TO FINISHED WORK ON THE SITE; AND SHALL TAKE REMEDIAL MEASURES TO PREVENT EROSION OF FRESHLY GRADED AREAS UNTIL SUCH TIME AS PERMANENT DRAINAGE AND EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
15. GRAVEL LAYER: GRAVEL LAYER SHALL BE 12" MIN THICK AND PLACED OVER GEOTEXTILE MAT.
16. SPEED: TRUCK SPEED TO BE REDUCED TO CONTROL DUST.
17. DITCHES: KEEP ALL TEMPORARY ROADWAY DITCHES CLEAR.
18. WATER DOWN: CONTRACTOR TO WATER DOWN AREAS WHEN AND WHERE DISTURBED SOIL IS RAISING AND BECOMING AIRBORNE IN ORDER TO SETTLE IT. PERMIT AS NEEDED.
19. SEDIMENT BASIN: LARGE SITES MAY REQUIRE A TEMPORARY SEDIMENT BASIN. CONTRACTOR SHALL DETERMINE LOCATION. TEMPORARY SEDIMENT BASIN SHALL BE APPROVED BY JURISDICTIONAL AUTHORITIES.
20. STORMWATER DISCHARGE: CONTRACTOR TO ABIDE BY ALL PROVISIONS OF THE FDEP GENERAL PERMIT FOR STORM WATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES.
21. DUST ABATEMENT: CONTRACTOR TO PROVIDE A DUST ABATEMENT PLAN INCLUDING A 6-FOOT HIGH SCREEN FENCE ALONG ALL PROPERTY LINES.

DEMOLITION NOTES:

1. DEMOLISH AS REQUIRED TO ACCOMPLISH WORK INDICATED IN THESE DOCUMENTS. ALL REQUIRED DEMOLITION WORK SHALL BE INCLUDED IN THE BASE BID PACKAGE SUBMITTED BY THE CONTRACTOR.
2. DO NOT ALLOW MATERIALS AND DEBRIS GENERATED BY DEMOLITION ACTIVITIES TO ACCUMULATE ON THE JOB SITE. REMOVE DAILY AND DISPOSE OF IN A LEGAL MANNER. NO ON SITE SALE OR BURNING OF REMOVED ITEMS IS PERMITTED.
3. THIS PLAN IS TO BE USED IN CONJUNCTION WITH THE ENTIRE SET OF CONSTRUCTION DRAWINGS. DO NOT REMOVE ANY ITEMS WITHOUT VERIFYING AND COORDINATING WITH ALL GENERAL TRADES AS TO HOW THEY RELATE TO THE OVERALL PROJECT.
4. THE CONTRACTOR MUST TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THE SAFETY OF THE PUBLIC AND/OR WORKMEN ON THE SITE TO PREVENT ACCIDENTS OR INJURY TO ANY PERSON ON, ABOUT OR ADJACENT TO THE PREMISES. THE CONTRACTOR SHALL COMPLY WITH ALL LAWS, ORDINANCES, CODES AND REGULATIONS PERTAINING TO SAFETY AND THE PREVENTIONS OF ACCIDENTS.
5. THE CONTRACTOR MUST MAINTAIN ADEQUATE SUPPORTS, INSULATIONS, WATERPROOFING, EMERGENCY LIGHTING, SECURITY, ALARMS, ETC. FOR ALL OR PART OF ITEMS WHICH ARE TO REMAIN.

CONTRACTOR CERTIFICATION:

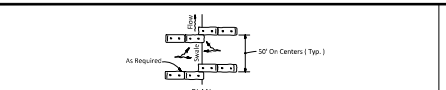
" I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND, AND SHALL COMPLY WITH THE TERMS AND CONDITIONS OF THE STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES AND THIS STORMWATER POLLUTION PLAN THEREUNDER."

NAME: TITLE:

CONTRACTING FIRM: ADDRESS:

TELEPHONE #: DATE:

THIS SOIL EROSION/SEDIMENT CONTROL & DUST ABATEMENT PLAN IS FOR THE PURPOSE OF SHOWING INTENTION OF METHOD TO CONTROL STORM WATER RUNOFF & DUST DISTURBANCE CAUSED BY CONSTRUCTION ACTIVITY. CONTRACTOR SHALL ADJUST AND/OR ADD BMP'S BASED ON SPECIFIC SITE CONDITIONS & CONSTRUCTION ACTIVITY SATISFYING NPDES REQUIREMENTS. CONTRACTOR TO OBTAIN GENERAL PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES (RULE 62-621.300(4), F.A.C.)



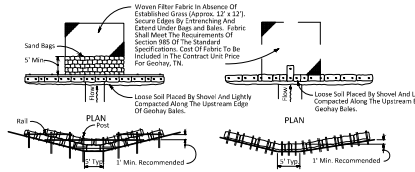
TO BE USED AT SELECTED SITES WHERE THE NATURAL GROUND SLOPES TOWARD THE TOE OF SLOPE



ELEVATION

TO BE USED AT SELECTED SITES WHERE THE NATURAL GROUND SLOPES AWAY FROM THE TOE OF SLOPE

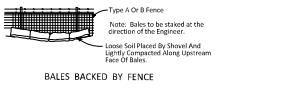
BARRIERS FOR FILL SLOPES



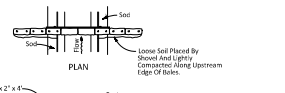
Application and Spacing: The use of Types I & II Geohay bale barriers should be limited to the conditions outlined in Chart1, Sheet 1 of 3, Index No. 102

TYPE II TYPE I

BARRIER FOR UNPAVED DITCHES

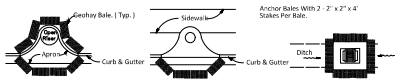


BALES BACKED BY FENCE



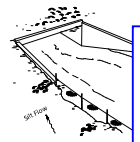
Spacing: Bale barriers for paved ditches should be spaced in accordance with Chart1, Sheet 1 of 3, Index No. 102

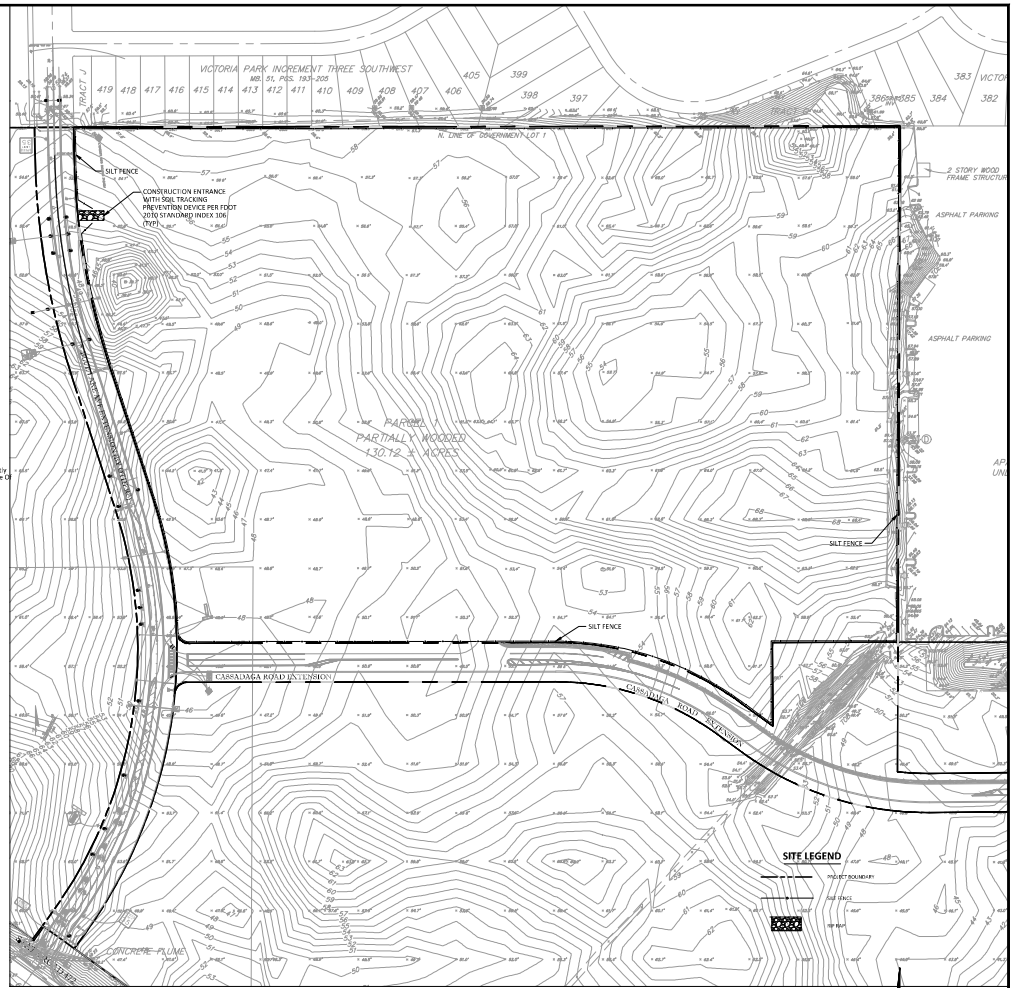
BARRIER FOR PAVED DITCH



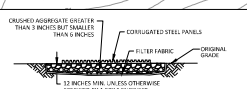
PARTIAL INLET COMPLETED INLET DITCH BOTTOM INLET

PROTECTION AROUND INLETS OR SIMILAR STRUCTURES

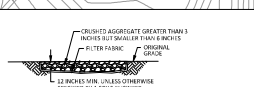




NOTE:
SILT FENCE SHOWN FOR SCHEMATIC PURPOSES ONLY. SILT FENCE SHOULD BE INSTALLED AT THE LIMITS OF CONSTRUCTION AS DEFINED THROUGHOUT THIS PLAN SET.



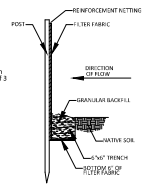
SECTION A-A
NTS



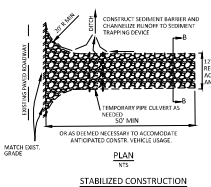
SECTION B-B
NTS

GRAPHIC SCALE

(IN FEET)
1 inch = 150 ft.

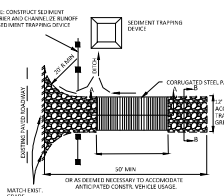


SILT BARRIER DETAIL
N.T.S.



PLAN
NTS

STABILIZED CONSTRUCTION ENTRANCE/EXIT (TYPE 1)



PLAN
NTS

STABILIZED CONSTRUCTION ENTRANCE/EXIT (TYPE 2)

LAND DEVELOPMENT
Approved Overall Development Plan
Land Development Code of Volusia County, Florida
Project Number: 2022-S-ODP-0353

11/27/2023
Planning & Land Development Director

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CERTIFICATE OF AUTHORIZATION NUMBER 28868
THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY SEAN C. FORTIER, P.E. ON THE DATE ADJACENT TO THE SEAL
PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SHA AUTHENTICATION CODE MUST BE VERIFIED ON ANY ELECTRONIC COPIES
SEAN C. FORTIER, P.E.
FLORIDA REGISTRATION #68306
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KELLY, COLLINS & GENTRY, INC.
KCG
1776 NORTH GRANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 586-7800 FAX (407) 896-1488

REVISION | DATE

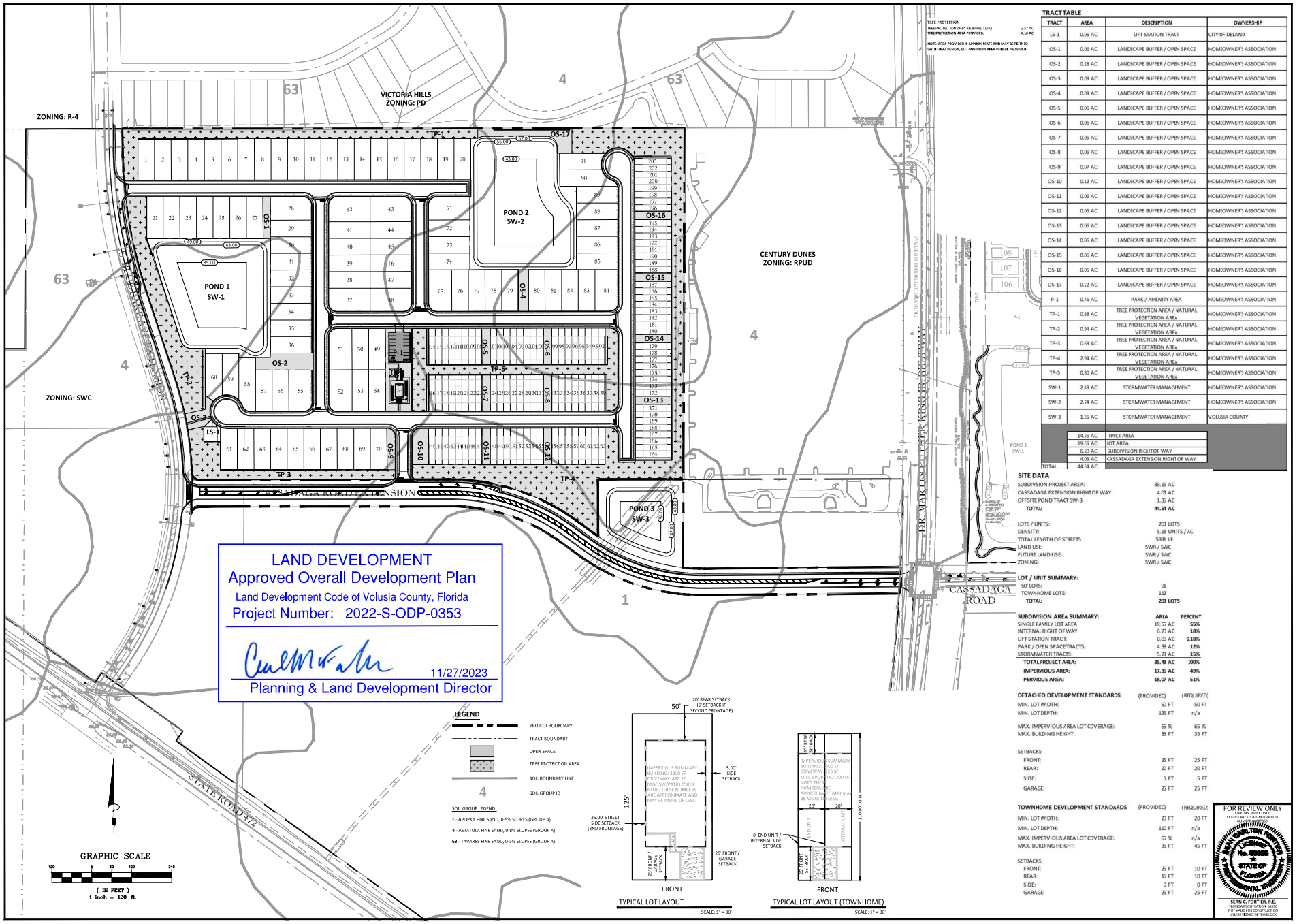
PREPARED FOR:
PULTE GROUP

FORD 472
SUBDIVISION

EROSION CONTROL & TREE REMOVAL-PROTECTION PLAN

DRAWN: CPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

SHEET
EC-1.0



TRACT TABLE

TRACT	AREA	DESCRIPTION	OWNERSHIP
LS-1	0.06 AC	LIFT STATION TRACT	CITY OF DELAND
OS-1	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-2	0.18 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-3	0.09 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-4	0.09 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-5	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-6	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-7	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-8	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-9	0.07 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-10	0.12 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-11	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-12	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-13	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-14	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-15	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-16	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-17	0.22 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
P-1	0.46 AC	PARK / AMENITY AREA	HOMEOWNER'S ASSOCIATION
TP-1	0.88 AC	TREE PROTECTION AREA / NATURAL VEGETATION AREA	HOMEOWNER'S ASSOCIATION
TP-2	0.94 AC	TREE PROTECTION AREA / NATURAL VEGETATION AREA	HOMEOWNER'S ASSOCIATION
TP-3	0.63 AC	TREE PROTECTION AREA / NATURAL VEGETATION AREA	HOMEOWNER'S ASSOCIATION
TP-4	2.94 AC	TREE PROTECTION AREA / NATURAL VEGETATION AREA	HOMEOWNER'S ASSOCIATION
TP-5	0.80 AC	TREE PROTECTION AREA / NATURAL VEGETATION AREA	HOMEOWNER'S ASSOCIATION
SW-1	2.49 AC	STORMWATER MANAGEMENT	HOMEOWNER'S ASSOCIATION
SW-2	2.74 AC	STORMWATER MANAGEMENT	HOMEOWNER'S ASSOCIATION
SW-3	1.35 AC	STORMWATER MANAGEMENT	VOLUSIA COUNTY

	14.76 AC	TRACT AREA
	19.55 AC	LOT AREA
	6.20 AC	SUBDIVISION RIGHT OF WAY
	4.03 AC	CASSADAGA EXTENSION RIGHT OF WAY
TOTAL	44.54 AC	

SITE DATA

SUBDIVISION PROJECT AREA:	39.15 AC
CASSADAGA EXTENSION RIGHT OF WAY:	4.03 AC
OFFSITE POND TRACT SW-3	1.35 AC
TOTAL:	**44.53 AC**
LOTS / UNITS:	208 LOTS
DENSITY:	5.18 UNITS / AC
TOTAL LENGTH OF STREETS	5331 LF
LAND USE:	SWR / SWC
FUTURE LAND USE:	SWR / SWC
ZONING:	SWR / SWC

LOT / UNIT SUMMARY:

50' LOTS:	96
TOWNHOME LOTS:	112
TOTAL:	**208 LOTS**

SUBDIVISION AREA SUMMARY:

	AREA	PERCENT
SINGLE FAMILY LOT AREA	19.55 AC	55%
INTERNAL RIGHT OF WAY	6.20 AC	18%
LIFT STATION TRACT:	0.06 AC	0.18%
PARK / OPEN SPACE TRACTS:	4.38 AC	12%
STORMWATER TRACTS:	5.23 AC	15%
TOTAL PROJECT AREA:	**35.43 AC**	**100%**
IMPERVIOUS AREA:	**17.35 AC**	**49%**
PERVIOUS AREA:	**18.07 AC**	**51%**

DETACHED DEVELOPMENT STANDARDS	(PROVIDED)	(REQUIRED)
MIN. LOT WIDTH:	50 FT	50 FT
MIN. LOT DEPTH:	125 FT	n/a
MAX. IMPERVIOUS AREA LOT COVERAGE:	65 %	65 %
MAX. BUILDING HEIGHT:	35 FT	35 FT
SETBACKS:		
FRONT:	25 FT	25 FT
REAR:	20 FT	20 FT
SIDE:	5 FT	5 FT
GARAGE:	25 FT	25 FT

TOWNHOME DEVELOPMENT STANDARDS	(PROVIDED)	(REQUIRED)
MIN. LOT WIDTH:	20 FT	20 FT
MIN. LOT DEPTH:	110 FT	n/a
MAX. IMPERVIOUS AREA LOT COVERAGE:	65 %	n/a
MAX. BUILDING HEIGHT:	35 FT	45 FT
SETBACKS:		
FRONT:	25 FT	10 FT
REAR:	15 FT	10 FT
SIDE:	0 FT	0 FT
GARAGE:	25 FT	25 FT

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NUMBER 30013
SEAN C. FORTIER, P.E.
FLORIDA REGISTRATION #65936
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REVISION
DATE

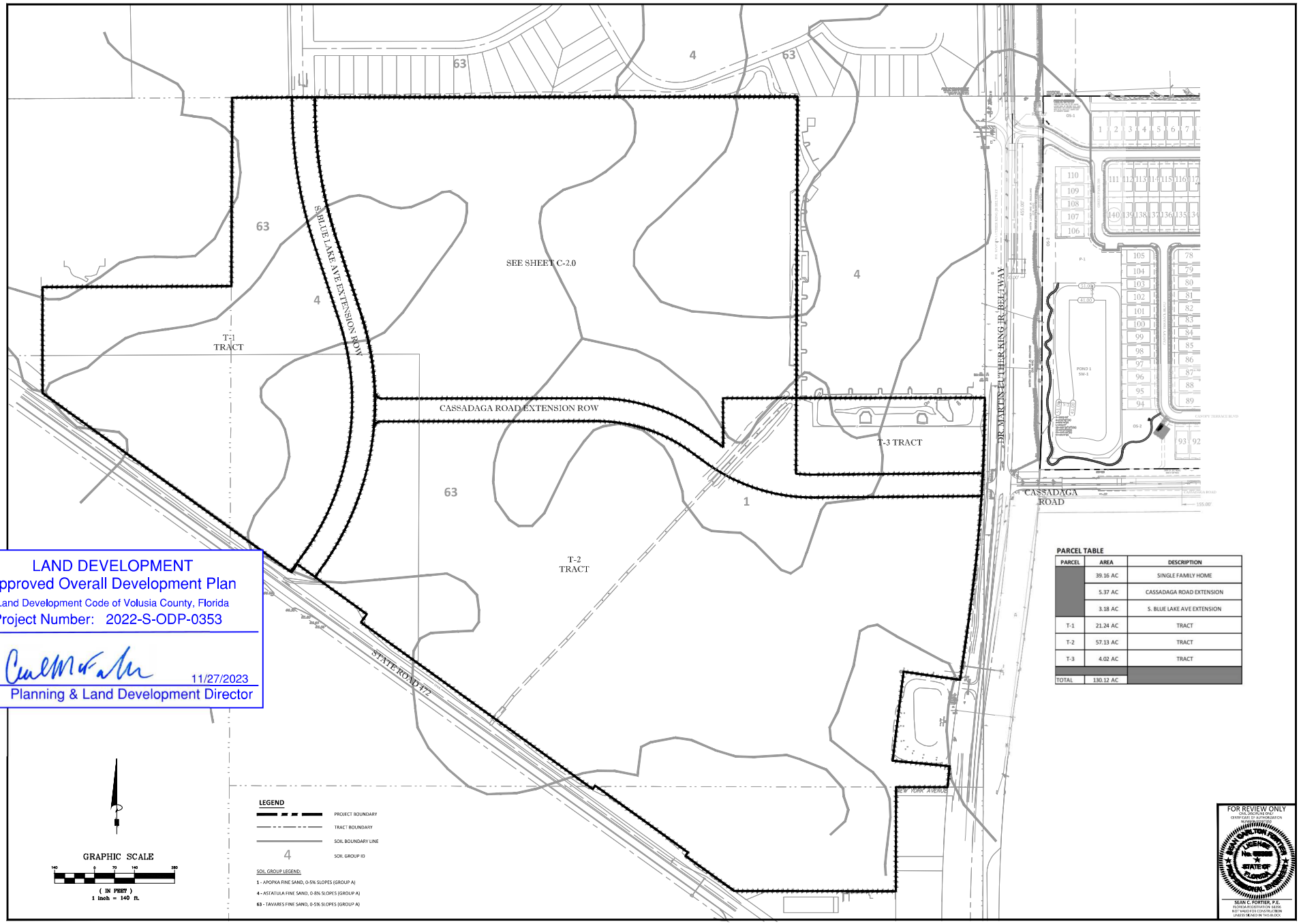
PREPARED FOR:
PULTE GROUP

FORD 472
SUBDIVISION

OVERALL PLAN

DRAWN: CPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

SHEET
C-2.0



LAND DEVELOPMENT
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Land Development Code of Volusia County, Florida
Project Number: 2022-S-ODP-0353

11/27/2023
Planning & Land Development Director

PARCEL TABLE

PARCEL	AREA	DESCRIPTION
	39.16 AC	SINGLE FAMILY HOME
	5.37 AC	CASSADAGA ROAD EXTENSION
	3.18 AC	S. BLUE LAKE AVE EXTENSION
T-1	21.24 AC	TRACT
T-2	57.13 AC	TRACT
T-3	4.02 AC	TRACT
TOTAL	130.12 AC	

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NUMBER 35000
SEAN C. FORTIER
No. 93000
STATE OF FLORIDA
PROFESSIONAL ENGINEER
SEAN C. FORTIER, P.E.
FLORIDA REGISTRATION #93000
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KELLY, COLLINS & GENTRY, INC.
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1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 540-7800 FAX (407) 896-1468

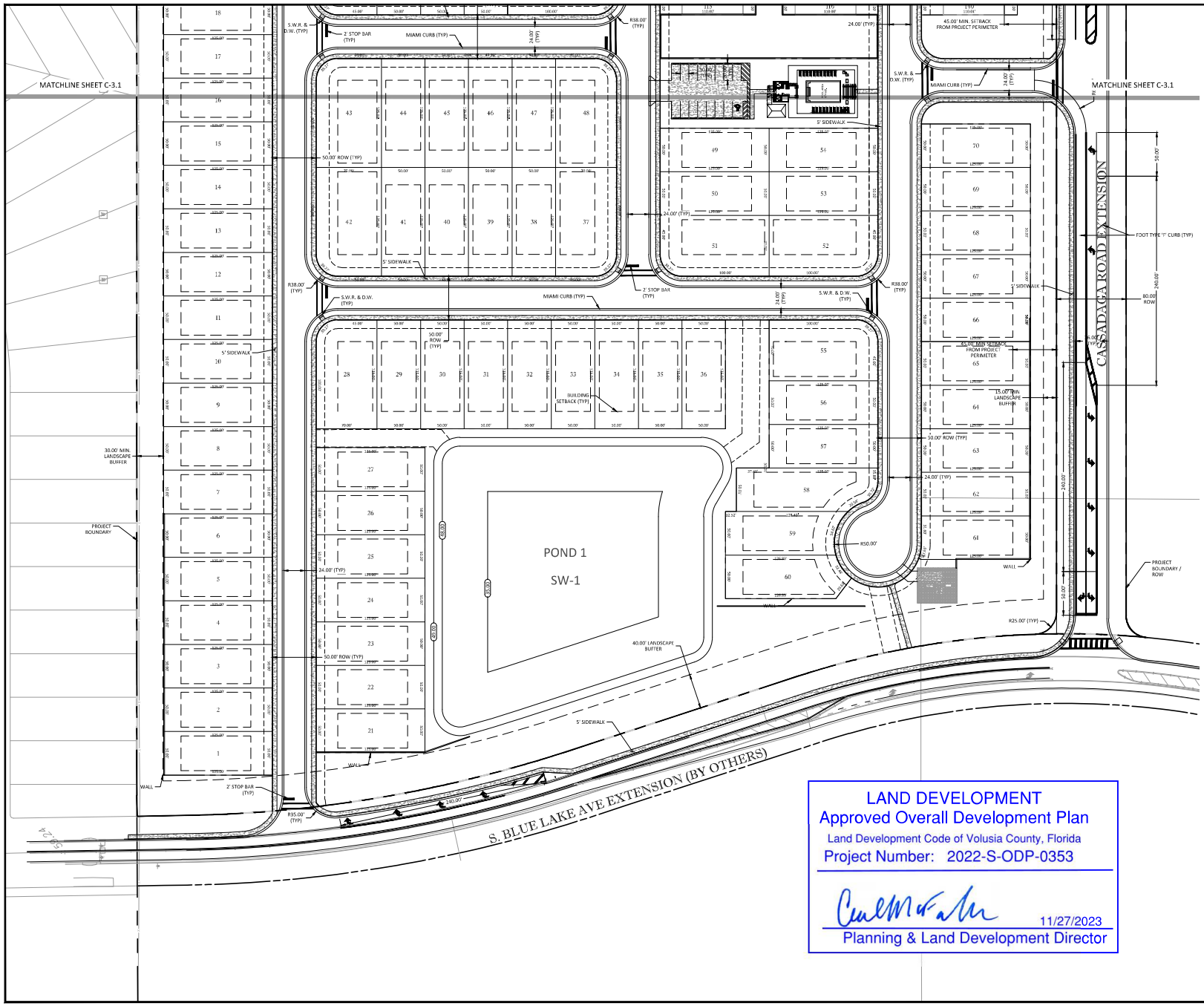
REVISION
DATE

PREPARED FOR:
PULTE GROUP

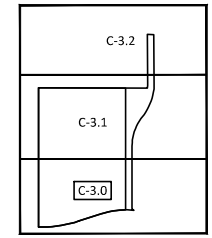
FORD 472
SUBDIVISION

OVERALL PLAN

DRAWN: CPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023
SHEET
C-2.1



KEY MAP



LEGEND

- PROJECT BOUNDARY
- TRACT BOUNDARY
- SETBACKS
- 33 LOT NUMBER
- SW-1 TRACT ID

C.W. : ALL CROSSWALKS TO BE HEAVY DUTY CONCRETE. ALL CROSSWALK & RAMPS TO MEET ADA SPECIFICATIONS & FOOT INDEX 522-002.

D.W. : DETECTABLE WARNING TO MEET ADA SPECIFICATIONS

S.W.R. (CR 6,8,20,21): SIDEWALK RAMP. ALL SIDEWALK RAMPS TO MEET ADA SPECIFICATION. SEE FOOT INDEX 522-002 FOR CURB RAMP DETAILS.

NOTES:

1. ALL CONSTRUCTION DETAILS ARE CONCEPTUAL & SUBJECT TO REVIEW & MODIFICATION DURING THE APPROVAL OF FINAL CONSTRUCTION PLANS.
2. DIMENSIONS ARE TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
3. ALL PAVEMENT MARKINGS WILL BE THERMOPLASTIC.
4. DETECTABLE WARNING SURFACE WILL BE REQUIRED AT ALL PLACES WHERE PEDESTRIAN PATH MEETS VEHICULAR PATH.

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

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CIVIL DISCIPLINE ONLY
CERTIFICATE OF AUTHORIZATION
#4799 (CIVIL)

SEAN C. FORTIER, P.E.
FLORIDA REGISTRATION 68395
NOT VALID FOR CONSTRUCTION
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KELLY, COLLINS & GENTRY, INC.
KCG
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 898-7858 FAX (407) 898-1488

DATE	REVISION

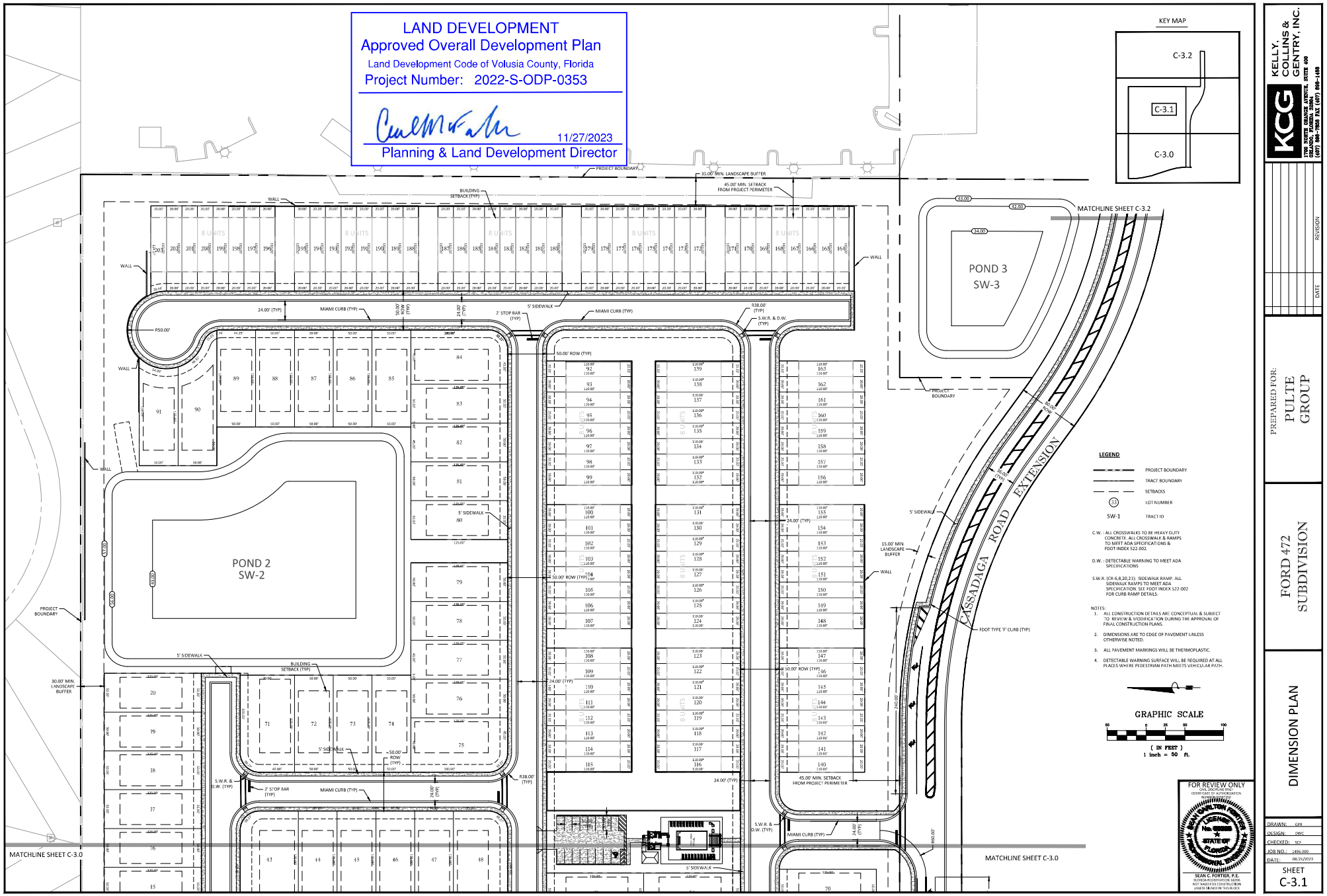
PREPARED FOR:
PULTE GROUP

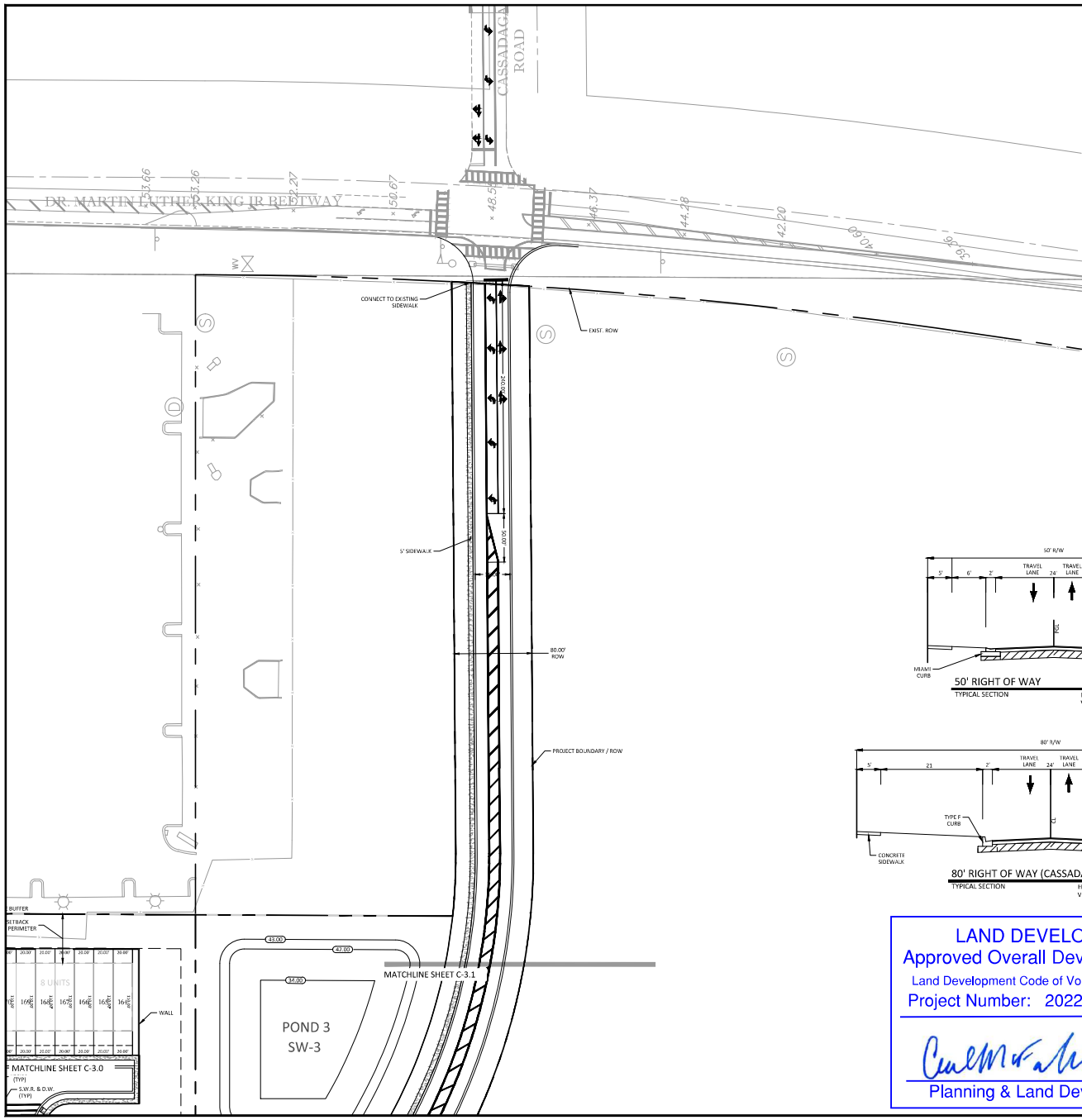
FORD 472 SUBDIVISION

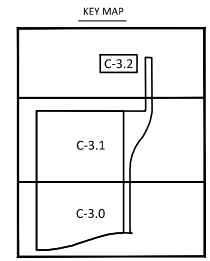
DIMENSION PLAN

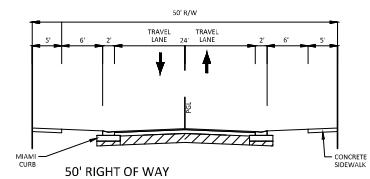
DRAWN: GPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

SHEET
C-3.0

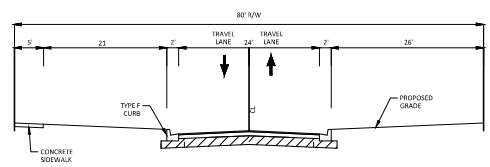

LAND DEVELOPMENT
Approved Overall Development Plan
Land Development Code of Volusia County, Florida
Project Number: 2022-S-ODP-0353
11/27/2023
Planning & Land Development Director
KEY MAP
C-3.2
C-3.1
C-3.0
POND 2
SW-2
POND 3
SW-3
CASSADAGA ROAD EXTENSION
MATCHLINE SHEET C-3.2
MATCHLINE SHEET C-3.0
LEGEND
PROJECT BOUNDARY
TRACT BOUNDARY
SETBACKS
LOT NUMBER
SW-1 TRACT ID
C.W. : ALL CROSSWALKS TO BE HEAVY DUTY CONCRETE. ALL CROSSWALK & RAMPS TO MEET ADA SPECIFICATIONS & FDOT INDEX 522.002.
D.W. : DETECTABLE WARNING TO MEET ADA SPECIFICATIONS
S.W.R. (CR-6,8,20,21): SIDEWALK RAMP. ALL SIDEWALK RAMPS TO MEET ADA SPECIFICATION. SEE FDOT INDEX 522.002 FOR CURB RAMP DETAILS.
NOTES:
1. ALL CONSTRUCTION DETAILS ARE CONCEPTUAL & SUBJECT TO REVIEW & MODIFICATION DURING THE APPROVAL OF FINAL CONSTRUCTION PLANS.
2. DIMENSIONS ARE TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
3. ALL PAVEMENT MARKINGS WILL BE THERMOPLASTIC.
4. DETECTABLE WARNING SURFACE WILL BE REQUIRED AT ALL PLACES WHERE PEDESTRIAN PATH MEETS VEHICULAR PATH.
GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft.
FOR REVIEW ONLY
SEAN C. FORTIER, P.E.
KELLY, COLLINS & GENTRY, INC.
PREPARED FOR:
PULTE GROUP
FORD 472 SUBDIVISION
DIMENSION PLAN
DRAWN: GPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023
SHEET
C-3.1







50' RIGHT OF WAY
TYPICAL SECTION
HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 5'



80' RIGHT OF WAY (CASSADAGA EXTENSION)
TYPICAL SECTION
HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 5'

LEGEND

- PROJECT BOUNDARY
- TRACT BOUNDARY
- SETBACKS
- 33 LOT NUMBER
- SW-1 TRACT ID

C.W. : ALL CROSSWALKS TO BE HEAVY DUTY CONCRETE. ALL CROSSWALK & RAMPS TO MEET ADA SPECIFICATIONS & FDOT INDEX 522-002.

D.W. : DETECTABLE WARNING TO MEET ADA SPECIFICATIONS

S.W.R. (CR 6,8,20,21): SIDEWALK RAMP. ALL SIDEWALK RAMPS TO MEET ADA SPECIFICATION. SEE FDOT INDEX 522-002 FOR CURB RAMP DETAILS.

NOTES:

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3. ALL PAVEMENT MARKINGS WILL BE THERMOPLASTIC.
4. DETECTABLE WARNING SURFACE WILL BE REQUIRED AT ALL PLACES WHERE PEDESTRIAN PATH MEETS VEHICULAR PATH.

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

LAND DEVELOPMENT
Approved Overall Development Plan
Land Development Code of Volusia County, Florida
Project Number: 2022-S-ODP-0353

11/27/2023
Planning & Land Development Director

FOR REVIEW ONLY
ONE DISCIPLINE ONLY
CERTIFICATE OF AUTHORIZATION
#0000030

SEAN C. FORTIER, P.E.
FLORIDA REGISTRATION 68356
NOT VALID FOR CONSTRUCTION
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KELLY, COLLINS & GENTRY, INC.
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 898-7858 FAX (407) 898-1488

DATE	REVISION

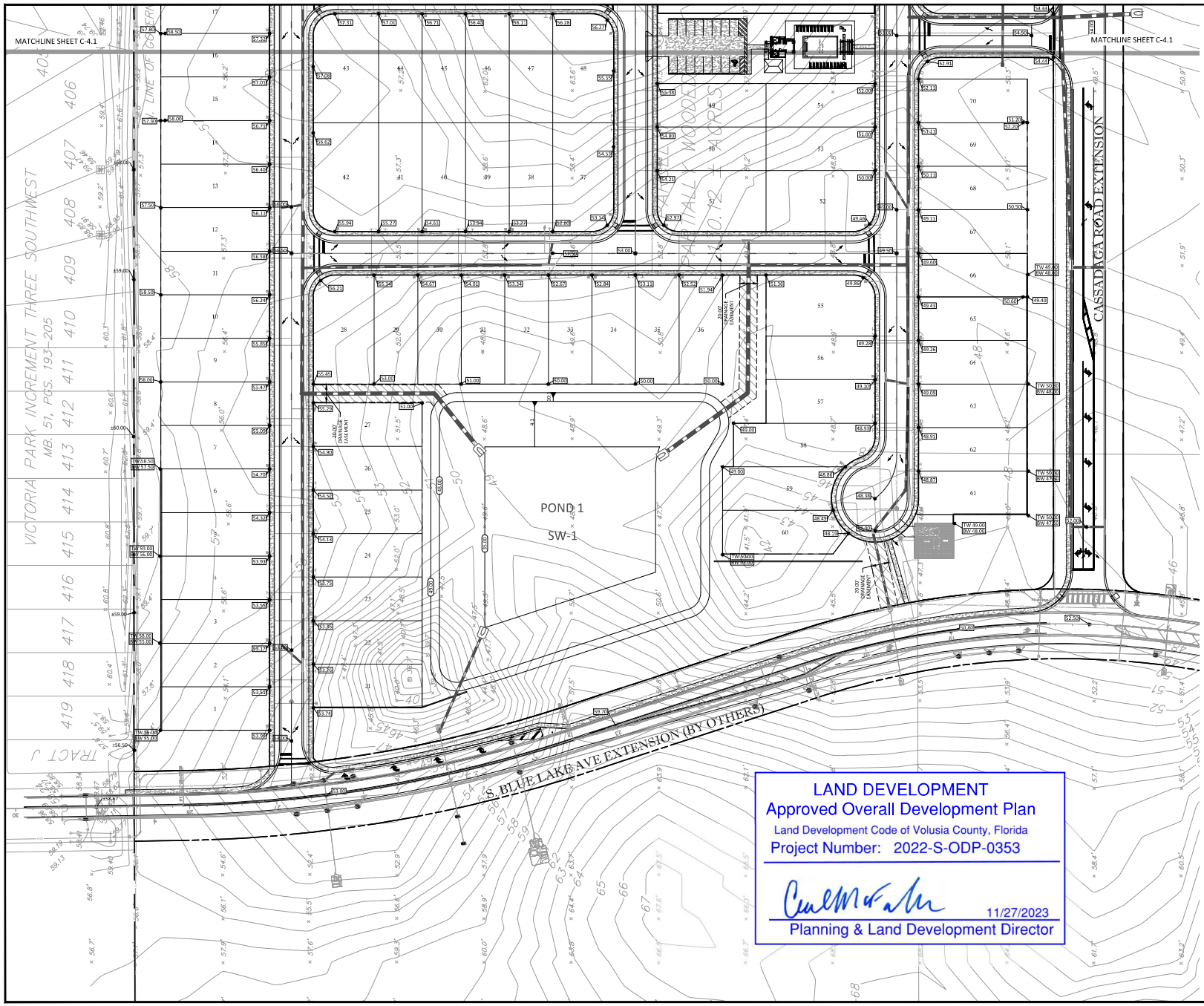
PREPARED FOR:
PULTE GROUP

FORD 472 SUBDIVISION

DIMENSION PLAN

DRAWN: GPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

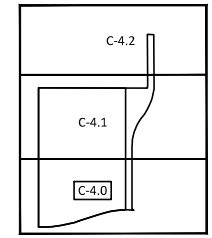
SHEET
C-3.2



LAND DEVELOPMENT
Approved Overall Development Plan
Land Development Code of Volusia County, Florida
Project Number: 2022-S-ODP-0353

11/27/2023
Planning & Land Development Director

KEY MAP



LEGEND

- PROJECT BOUNDARY
- UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- STORM PIPES
- STORM INLET
- STORM MANHOLE
- BORING LOCATION
- 71 PROPOSED CONTOUR
- EXISTING STORM PIPES

NOTES:
ALL CONSTRUCTION DETAILS ARE CONCEPTUAL & SUBJECT TO REVIEW & MODIFICATION DURING THE APPROVAL OF FINAL CONSTRUCTION PLANS.

GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1 inch = 50 ft.

FOR REVIEW ONLY
ONLY DISCIPLINE ONLY
CERTIFICATE OF AUTHORIZATION
NO. 00000000

SEAN CARLTON FORTIER
LICENSE No. 65355
STATE OF FLORIDA
PROFESSIONAL ENGINEER

SEAN C. FORTIER, P.E.
FLORIDA REGISTRATION 65355
NOT VALID FOR CONSTRUCTION
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KELLY, COLLINS & GENTRY, INC.
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 898-7858 FAX (407) 898-1488

DATE	REVISION

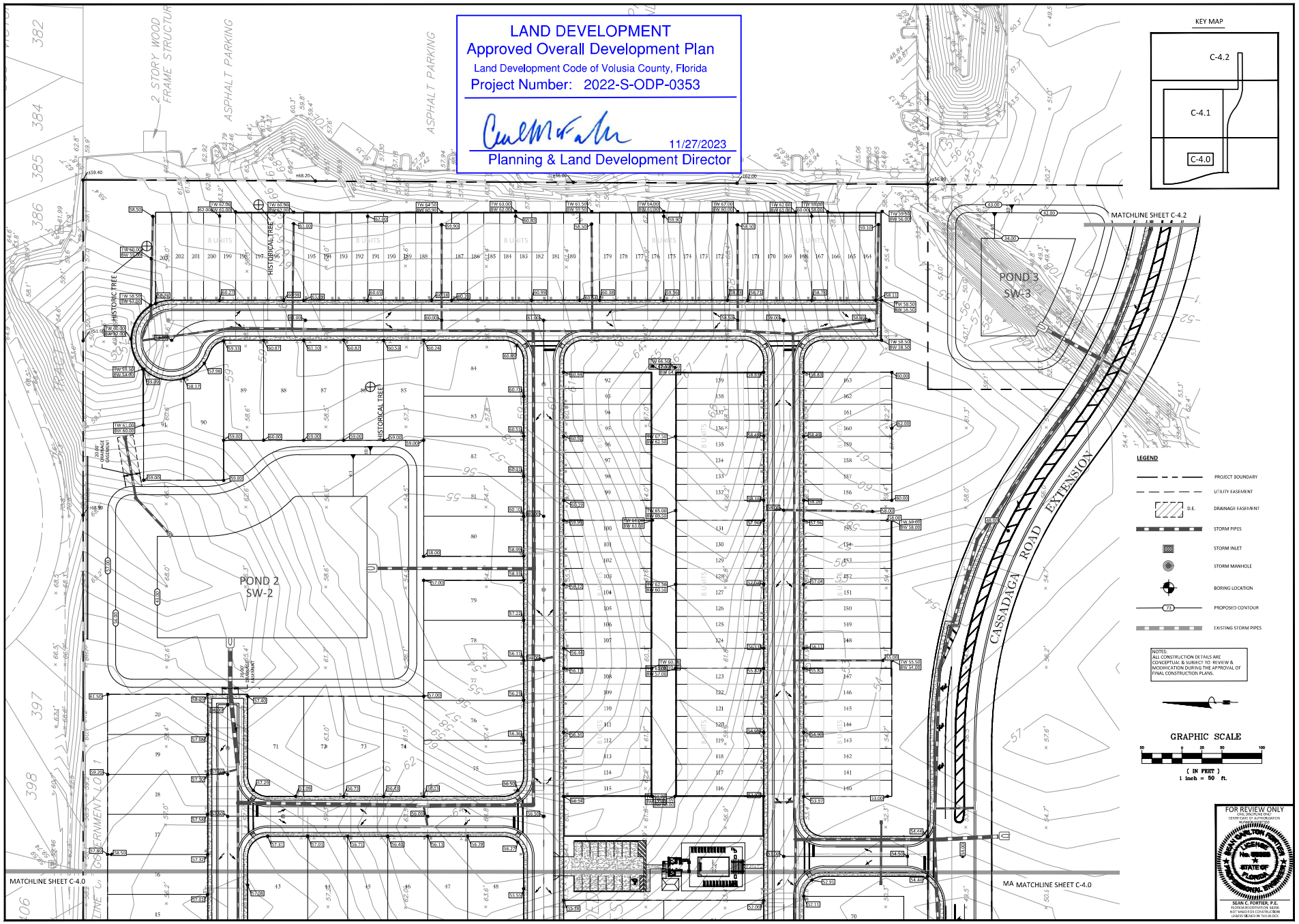
PREPARED FOR:
PULTE GROUP

FORD 472 SUBDIVISION

PAVING, GRADING, & DRAINAGE PLAN

DRAWN: CPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

SHEET
C-4.0



KELLY, COLLINS & GENTRY, INC.
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 586-7800 FAX (407) 896-1486

REVISION | DATE

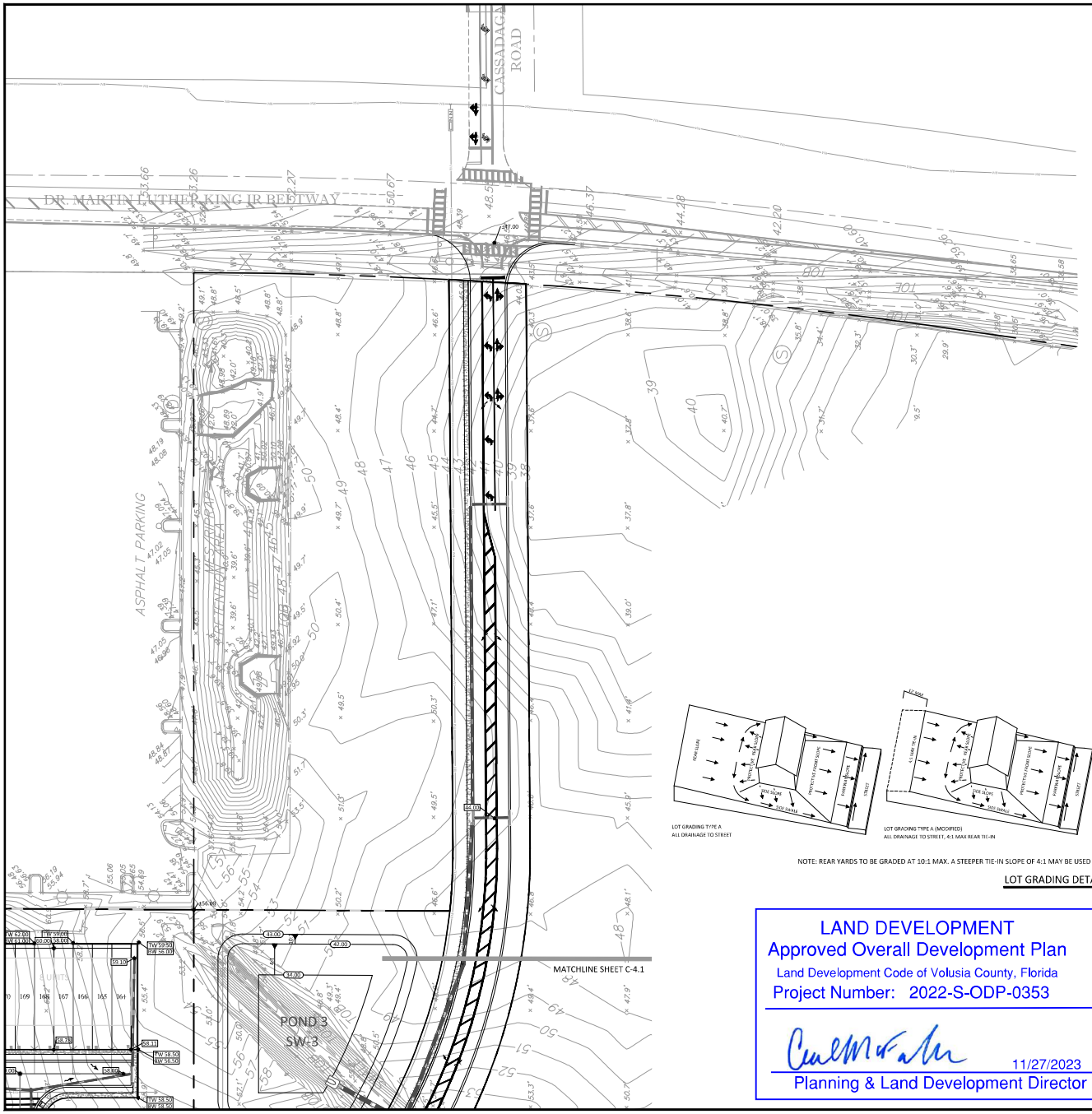
PREPARED FOR:
PULTE GROUP

FORD 472
SUBDIVISION

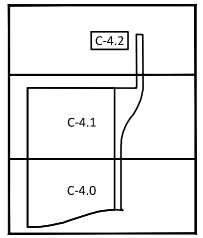
PAVING, GRADING, & DRAINAGE PLAN

DRAWN: CPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1486.000
DATE: 08/21/2023

SHEET
C-4.1



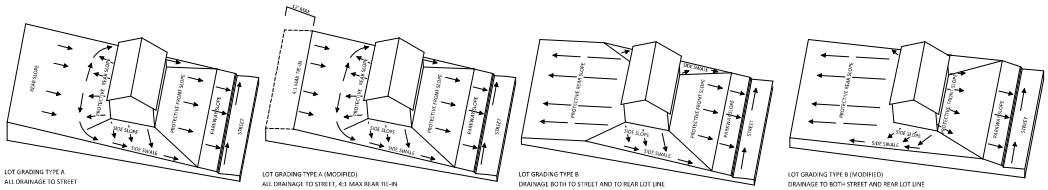
KEY MAP



LEGEND

- PROJECT BOUNDARY
- UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- STORM PIPES
- STORM INLET
- STORM MANHOLE
- BORING LOCATION
- 71 PROPOSED CONTOUR
- EXISTING STORM PIPES

NOTES:
ALL CONSTRUCTION DETAILS ARE CONCEPTUAL & SUBJECT TO REVIEW & MODIFICATION DURING THE APPROVAL OF FINAL CONSTRUCTION PLANS.



NOTE: REAR YARDS TO BE GRADED AT 10:1 MAX. A STEEPER TIE-IN SLOPE OF 4:1 MAY BE USED WITHIN 12' OF REAR PROPERTY LINE ONLY.

LOT GRADING DETAILS

NTS

LAND DEVELOPMENT
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Project Number: 2022-S-ODP-0353

11/27/2023
Planning & Land Development Director

GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1 inch = 50 ft.

FOR REVIEW ONLY
CIVIL DISCIPLINE ONLY
CERTIFICATE OF AUTHORIZATION
NUMBER 29000
LICENSED
No. 57559
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
SEAN C. FORTIER, P.E.
FLORIDA REGISTRATION #57559
NOT VALID FOR CONSTRUCTION
UNLESS SIGNED IN THIS BLOCK

KELLY, COLLINS & GENTRY, INC.
KCG
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 586-1700 FAX (407) 896-1468

REVISION
DATE

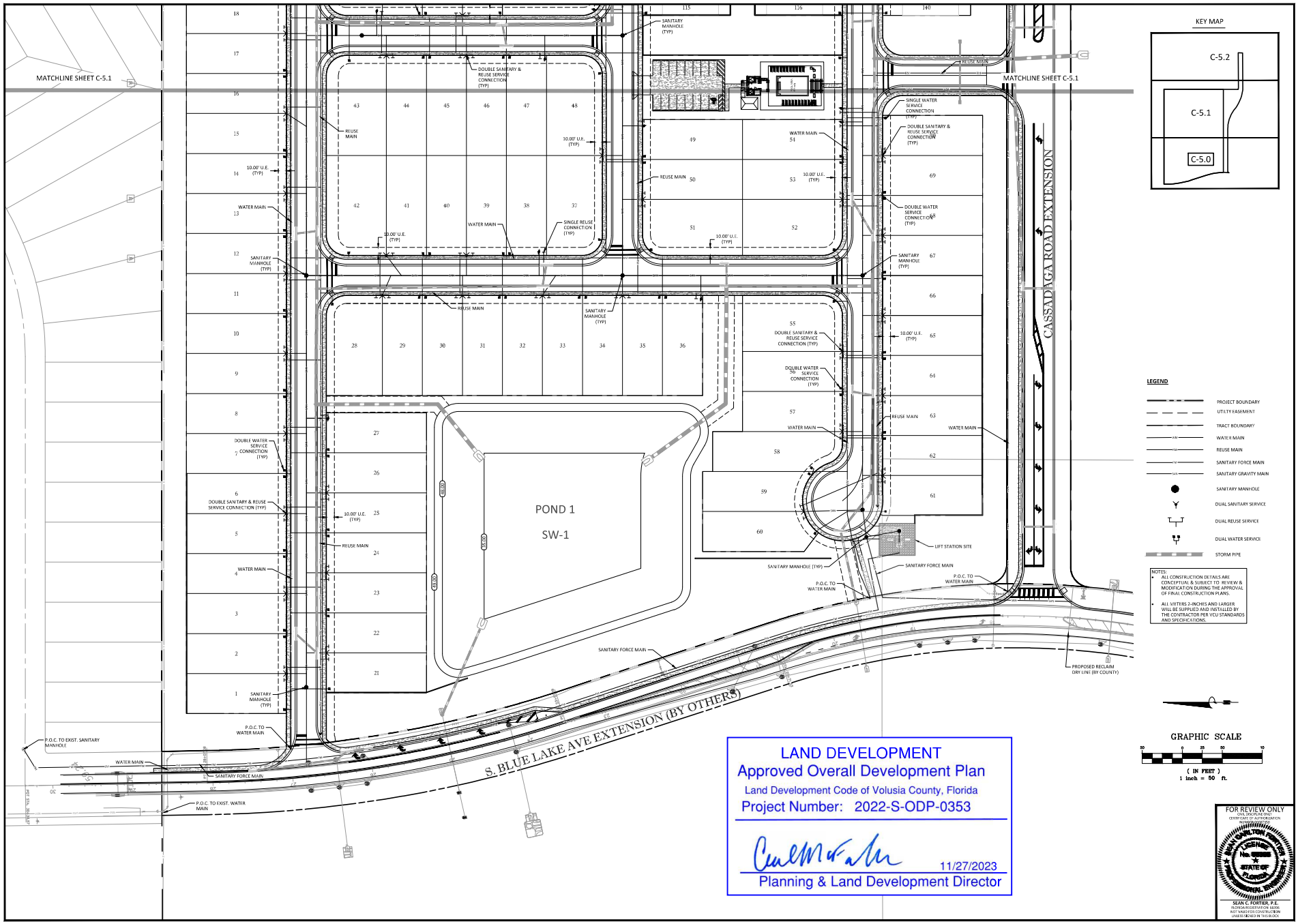
PREPARED FOR:
PULTE GROUP

FORD 472
SUBDIVISION

PAVING, GRADING & DRAINAGE PLAN

DRAWN: CPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1490.000
DATE: 08/21/2023

SHEET
C-4.2


MATCHLINE SHEET C-5.1
MATCHLINE SHEET C-5.1
CASSADAGA ROAD EXTENSION
POND 1
SW-1
S. BLUE LAKE AVE EXTENSION (BY OTHERS)
KEY MAP
C-5.2
C-5.1
C-5.0
LEGEND
PROJECT BOUNDARY
UTILITY EASEMENT
TRACT BOUNDARY
WATER MAIN
REUSE MAIN
SANITARY FORCE MAIN
SANITARY GRAVITY MAIN
SANITARY MANHOLE
DUAL SANITARY SERVICE
DUAL REUSE SERVICE
DUAL WATER SERVICE
STORM PIPE
NOTES:
ALL CONSTRUCTION DETAILS ARE CONCEPTUAL & SUBJECT TO REVIEW & MODIFICATION DURING THE APPROVAL OF FINAL CONSTRUCTION PLANS.
ALL 4"WTERS 2-INCHES AND LARGER WILL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR PER VCU STANDARDS AND SPECIFICATIONS.
GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft.
LAND DEVELOPMENT
Approved Overall Development Plan
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Project Number: 2022-S-ODP-0353
11/27/2023
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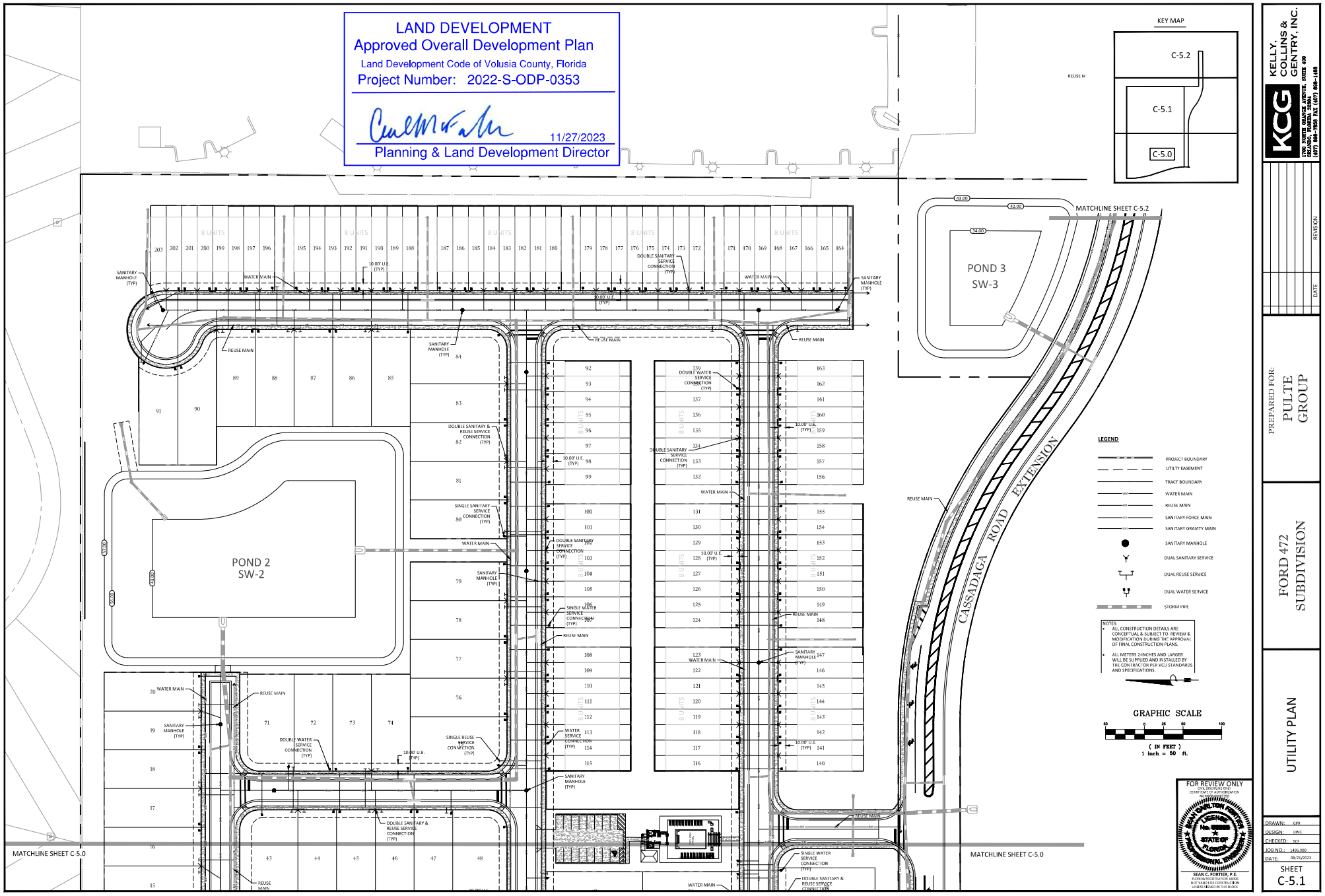
SEAN C. FORTIER, P.E.
PREPARED FOR:
PULTE GROUP
FORD 472 SUBDIVISION
UTILITY PLAN
DRAWN: CPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023
SHEET
C-5.0


LAND DEVELOPMENT
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Project Number: 2022-S-ODP-0353
11/27/2023
Planning & Land Development Director
KEY MAP
C-5.2
C-5.1
C-5.0
POND 3
SW-3
POND 2
SW-2
CASSADAGA ROAD EXTENSION
MATCHLINE SHEET C-5.2
MATCHLINE SHEET C-5.0
LEGEND
PROJECT BOUNDARY
UTILITY EASEMENT
TRACT BOUNDARY
WATER MAIN
REUSE MAIN
SANITARY FORCE MAIN
SANITARY GRAVITY MAIN
SANITARY MANHOLE
DUAL SANITARY SERVICE
DUAL REUSE SERVICE
DUAL WATER SERVICE
STORM PIPE
NOTES:
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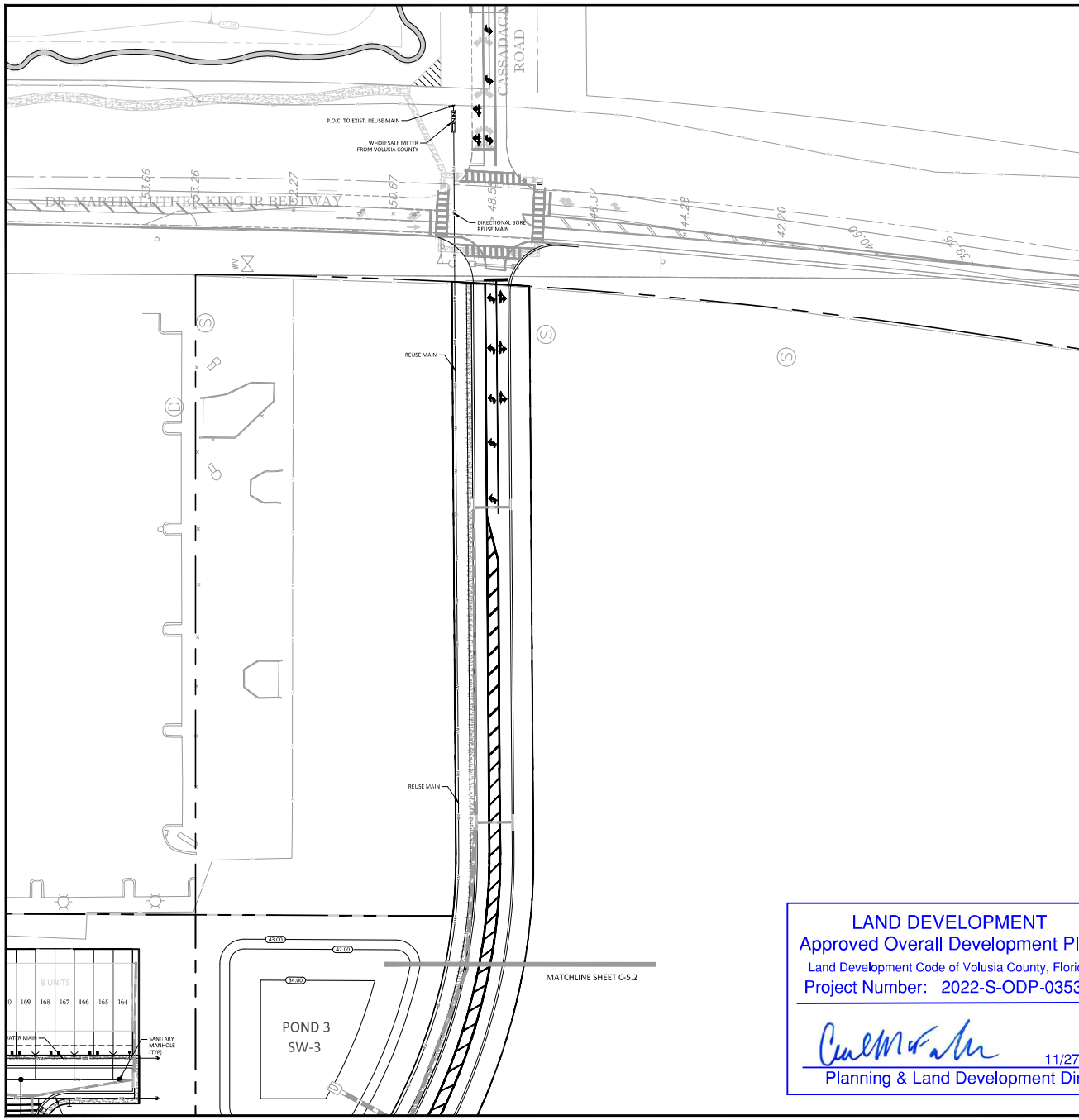
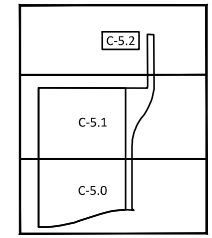
ALL METERS 2-INCHES AND LARGER WILL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR PER VCU STANDARDS AND SPECIFICATIONS.
GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft.
FOR REVIEW ONLY
SEAN C. FORTIER, P.E.
KELLY, COLLINS & GENTRY, INC.
PREPARED FOR:
PULTE GROUP
FORD 472 SUBDIVISION
UTILITY PLAN
DRAWN:
DESIGN:
CHECKED:
JOB NO.:
DATE:
SHEET
C-5.1



KEY MAP



LEGEND

- PROJECT BOUNDARY
- UTILTY EASEMENT
- TRACT BOUNDARY
- WATER MAIN
- REUSE MAIN
- SANITARY FORCE MAIN
- SANITARY GRAVITY MAIN
- SANITARY MANHOLE
- DUAL SANITARY SERVICE
- DUAL REUSE SERVICE
- DUAL WATER SERVICE
- STORM PIPE

NOTES:
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GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

LAND DEVELOPMENT
Approved Overall Development Plan
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11/27/2023
Planning & Land Development Director

FOR REVIEW ONLY
ONE DISCIPLINE ONLY
CERTIFICATE OF AUTHORIZATION
#0000[illegible]

SEAN C. FORTIER, P.E.
FLORIDA REGISTRATION 68395
NOT VALID FOR CONSTRUCTION
UNLESS SIGNED IN THIS BLOCK

KCG
KELLY, COLLINS & GENTRY, INC.
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 898-7858 FAX (407) 898-1488

DATE	REVISION

PREPARED FOR:
PULTE GROUP

FORD 472 SUBDIVISION

UTILITY PLAN

DRAWN: GPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

SHEET
C-5.2

6.3. Access Road. In the event a governmental authority requires, or Buyer desires, an access road (the "**Access Road**") connecting the Property to Dr. Martin Luther King, Jr. Boulevard, Seller agrees to dedicate or (at Seller's option) grant the easement or right of way necessary to satisfy such requirements across property Seller owns or controls, located to the east of the Property. Seller agrees to provide the easement or right of way at no additional cost to Buyer, and Buyer agrees to design, permit

and construct, at Buyer's expense, the necessary road, utilities and improvements related to the Access Road as provided in the Development Permits. Buyer and Seller will work together in good faith to determine the exact location, dimensions, terms and conditions of the Access Road to be documented by written agreement of the parties prior to the expiration of the Inspection Period, to the extent it is a requirement. Seller's obligation under this section are conditioned upon the parties agreeing to and entering into such written agreement and agreeing upon the design, plans and specifications of the Access Road.

Single-Family Detached Housing
(210)

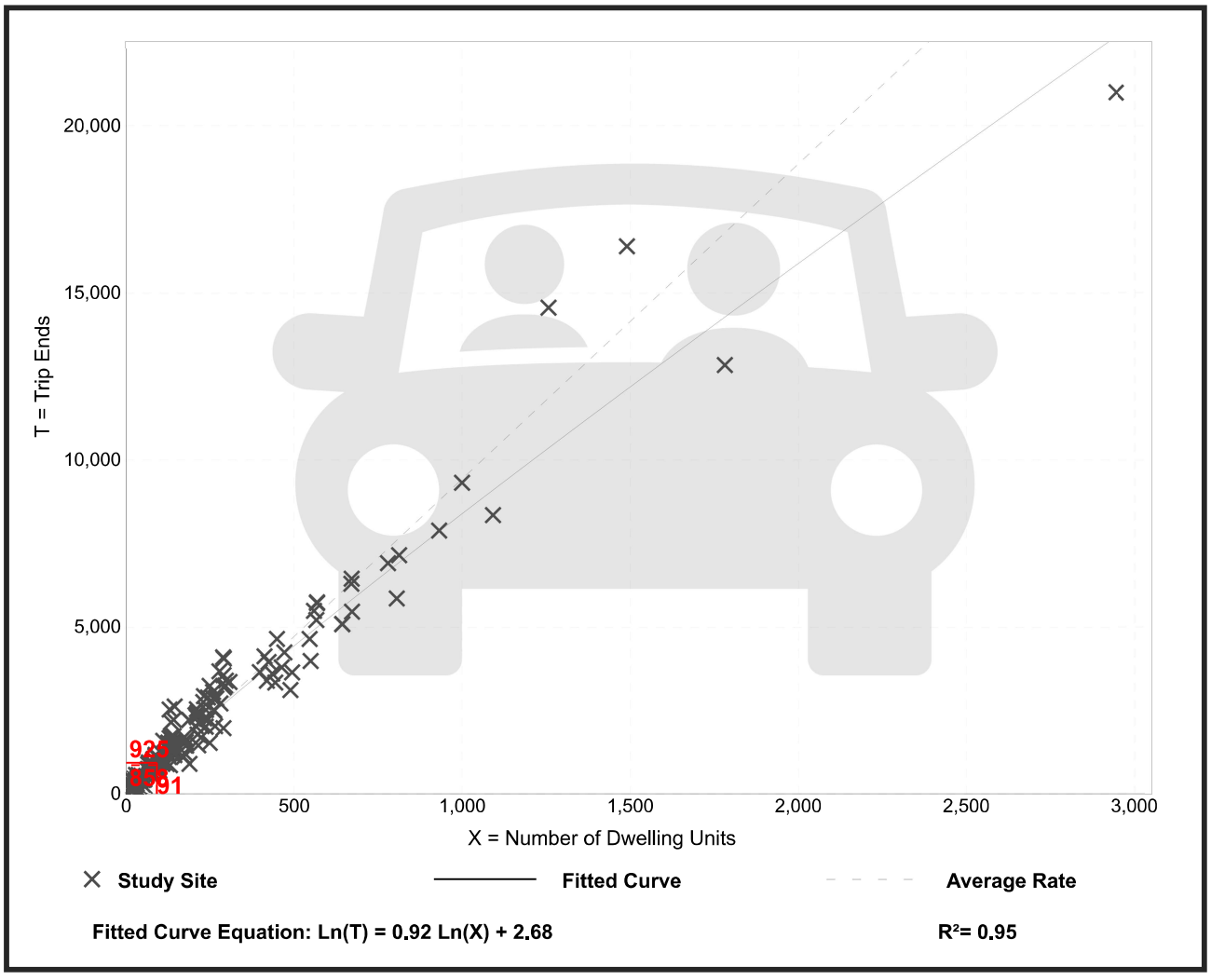
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 174
Avg. Num. of Dwelling Units: 246
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.43	4.45 - 22.61	2.13

Data Plot and Equation



Trip Gen Manual, 11th Edition • Institute of Transportation Engineers

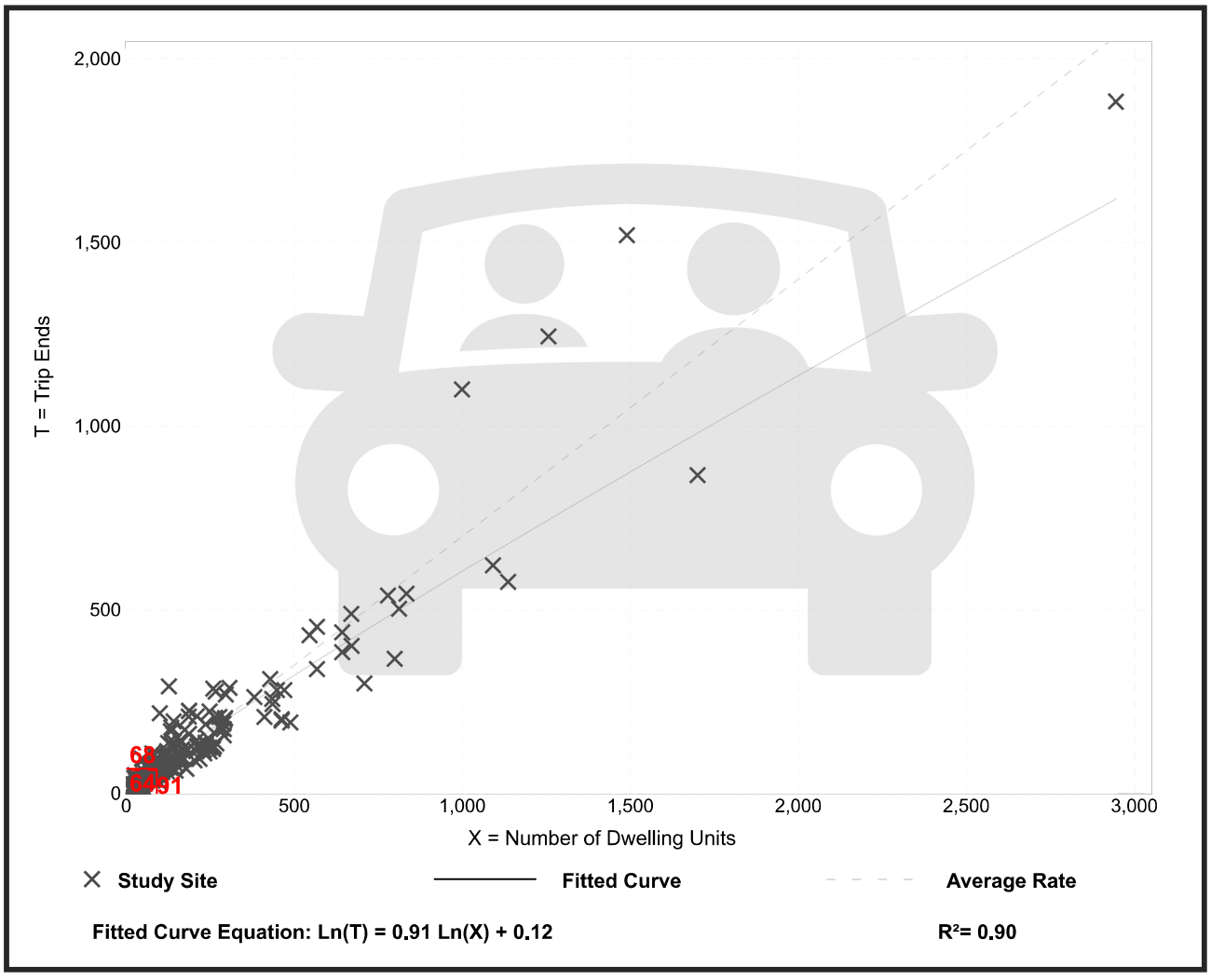
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	192
Avg. Num. of Dwelling Units:	226
Directional Distribution:	25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.70	0.27 - 2.27	0.24

Data Plot and Equation



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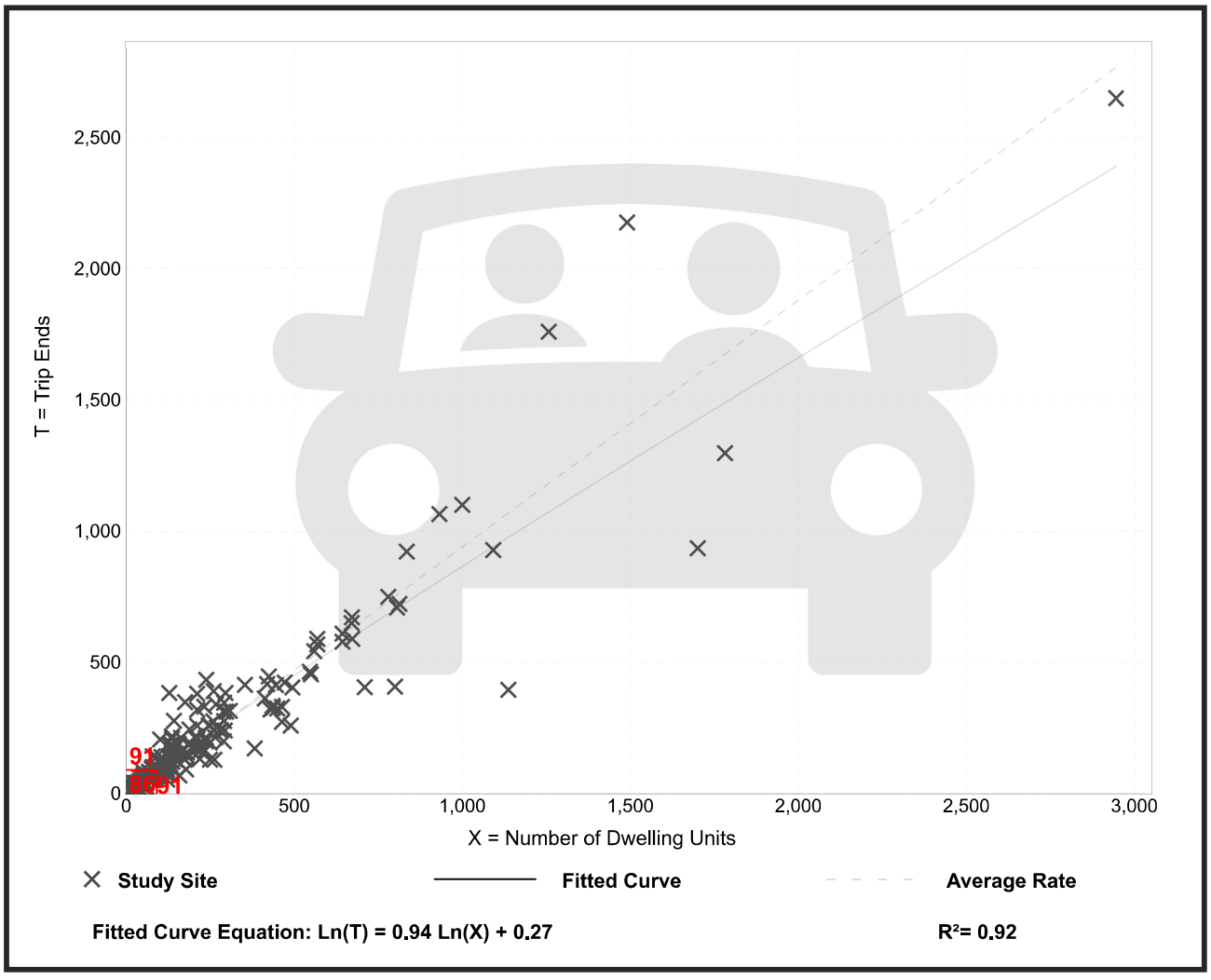
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	208
Avg. Num. of Dwelling Units:	248
Directional Distribution:	63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.94	0.35 - 2.98	0.31

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Single-Family Attached Housing
(215)

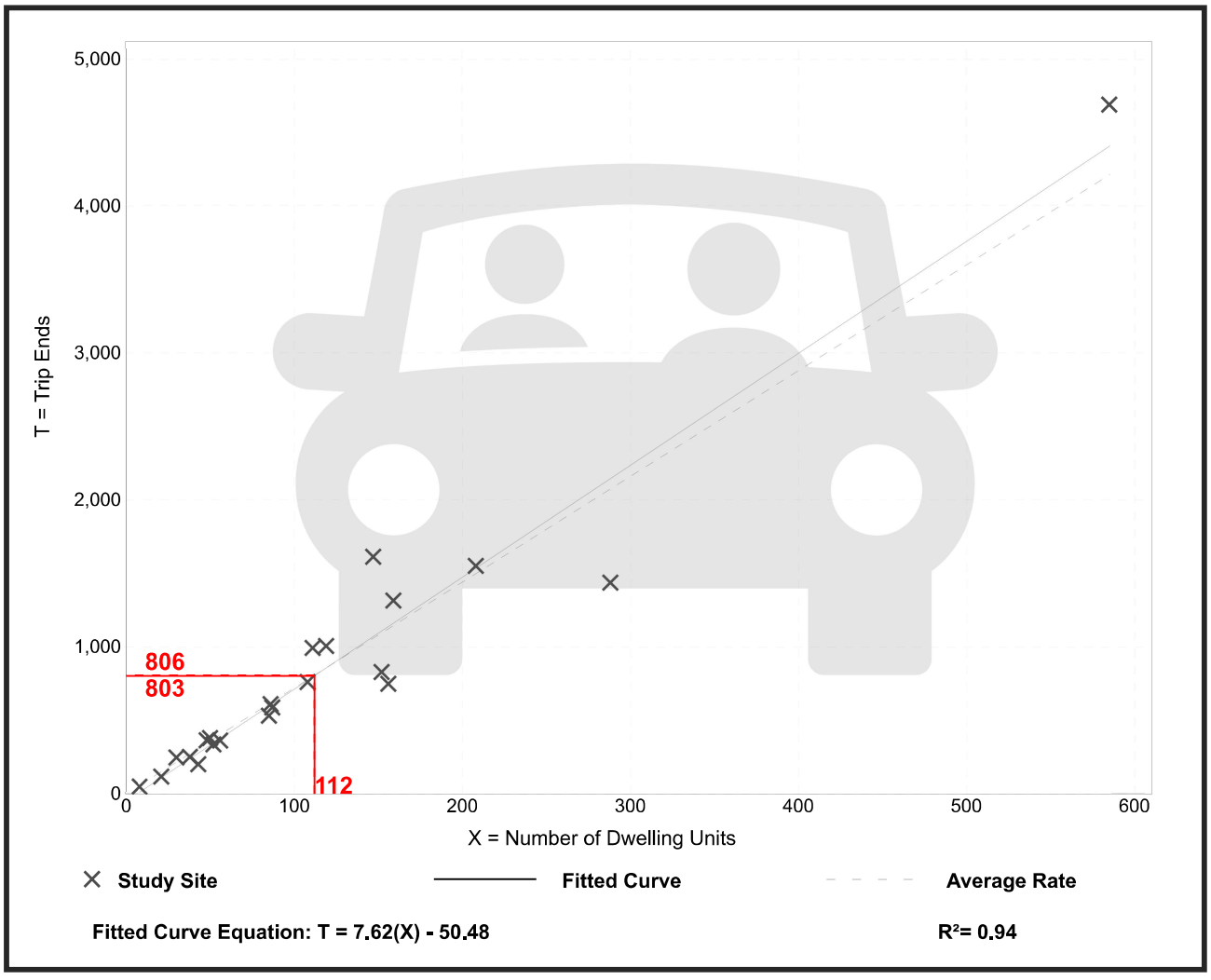
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 22
Avg. Num. of Dwelling Units: 120
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
7.20	4.70 - 10.97	1.61

Data Plot and Equation



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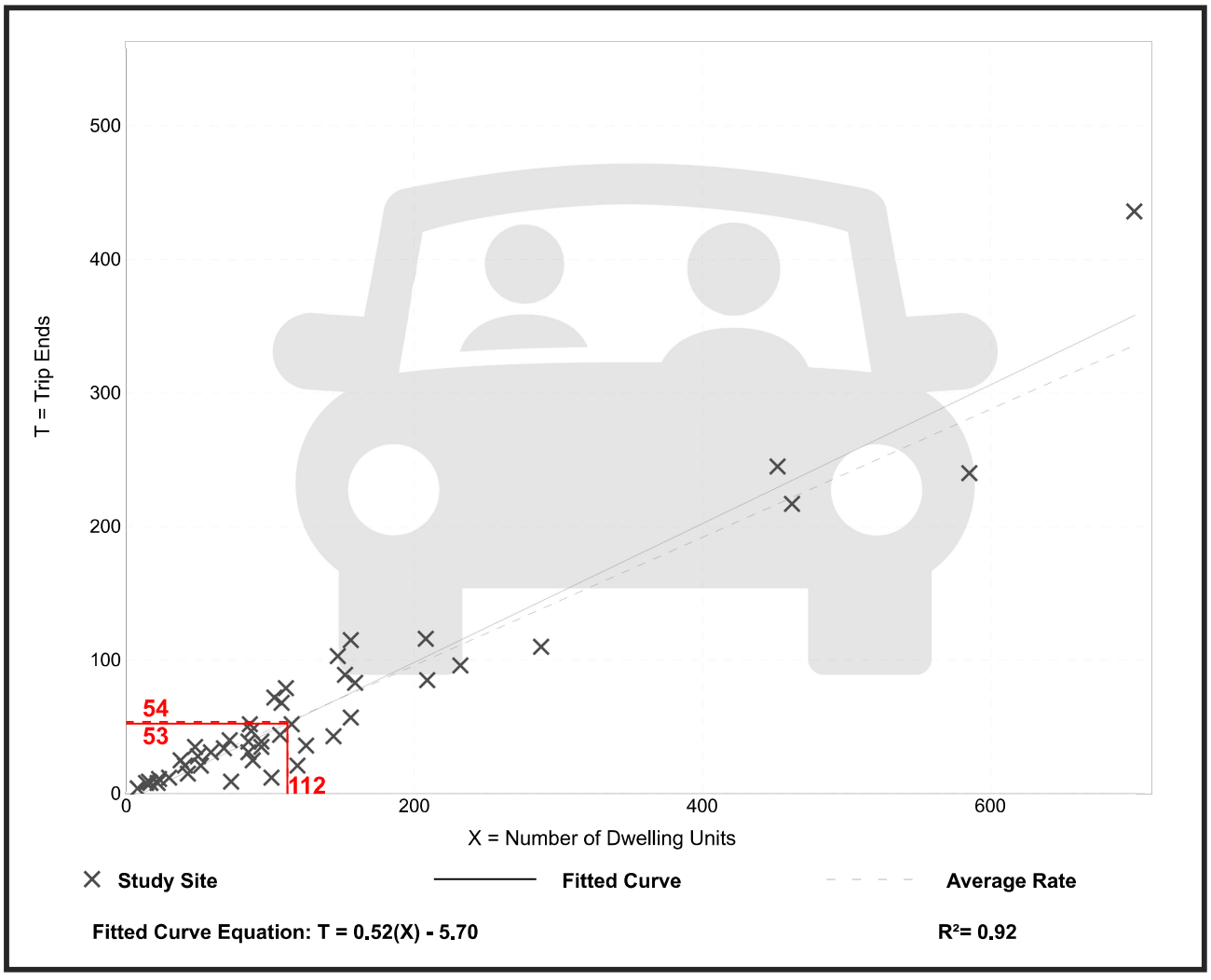
Single-Family Attached Housing
(215)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 46
Avg. Num. of Dwelling Units: 135
Directional Distribution: 25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.48	0.12 - 0.74	0.14

Data Plot and Equation



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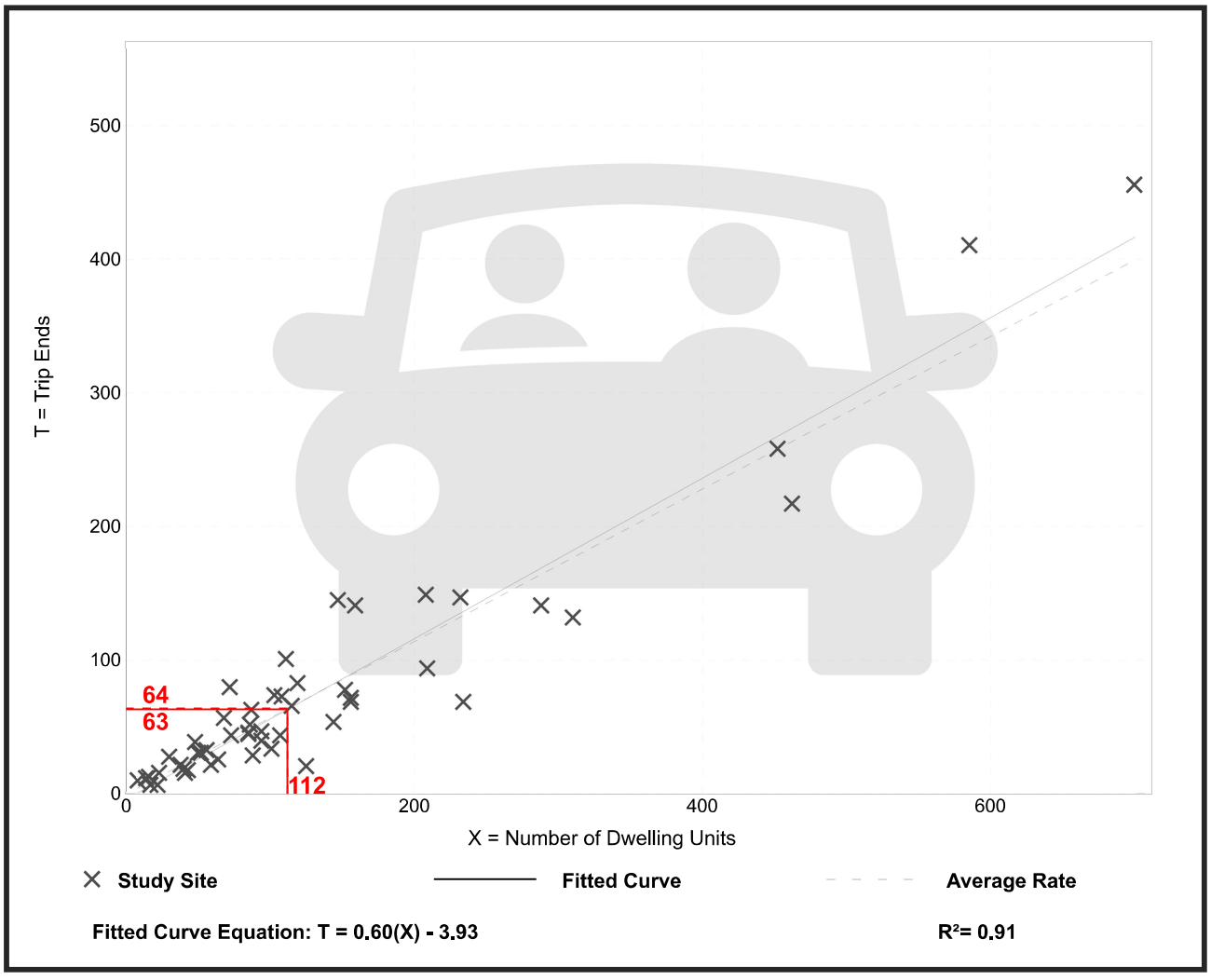
Single-Family Attached Housing
(215)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	51
Avg. Num. of Dwelling Units:	136
Directional Distribution:	59% entering, 41% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.57	0.17 - 1.25	0.18

Data Plot and Equation



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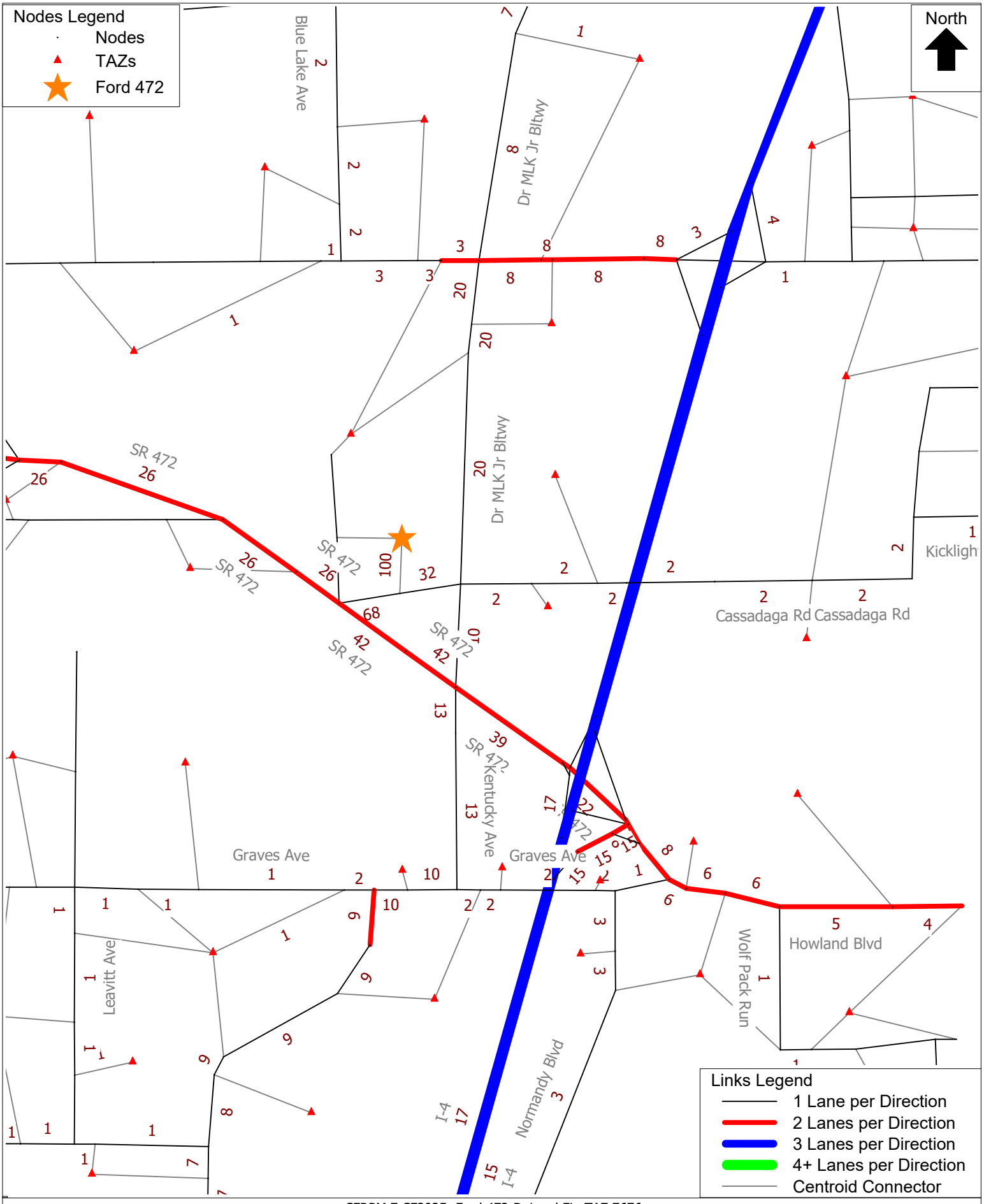

CFRPM 7 CF2025 -Ford 472-DeLand FL. TAZ 7676
Project Distribution
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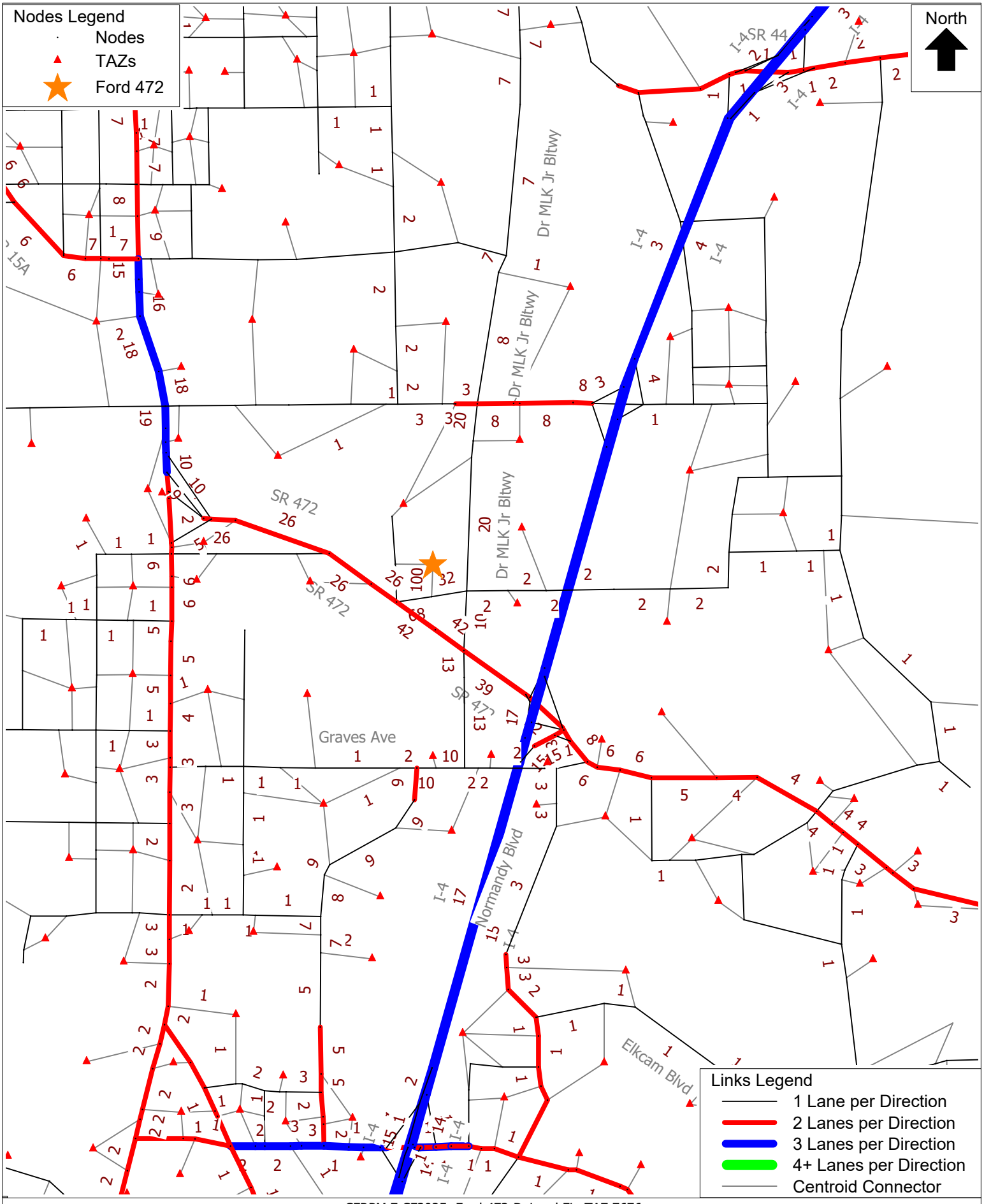

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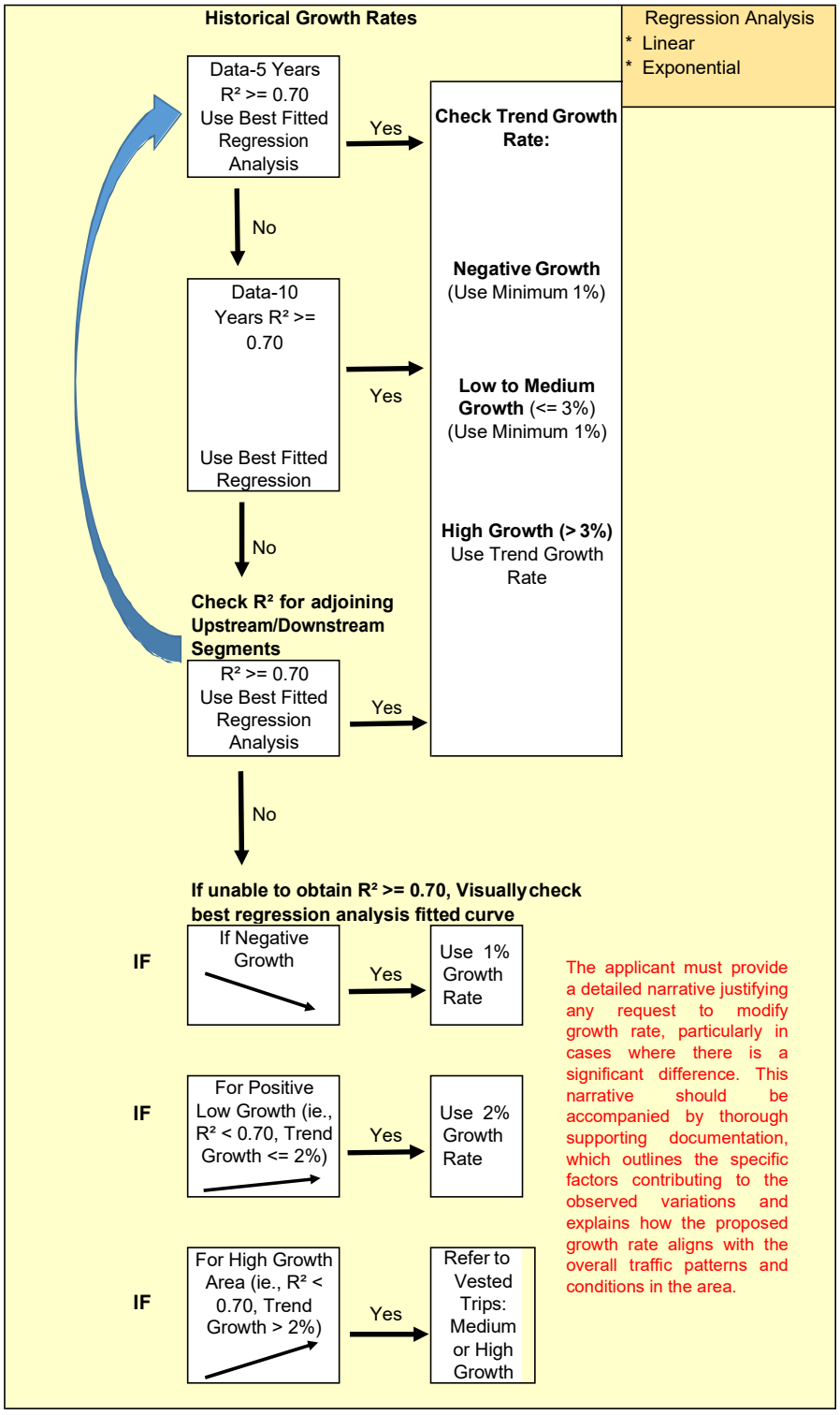
Road Name	Limits (From - To)	Count Station Number	Roadway Maintaining Agency	2021 Roadway on County's Thoroughfare	Distance (in miles)	Posted Speed	2020 QLOS Facility Type	2010 Federal Functional Classification	2011 AADT	2012 AADT	2013 AADT	2014 AADT	2015 AADT	2016 AADT	2017 AADT	2018 AADT	2019 AADT	2020 AADT	EST 2021 AADT	VC 2021 Allowable LOS	DAILY 2021 LOS Capacity	DAILY V/C Ratio	DAILY LOS	EST 2021 AM Peak	EST 2021 PM Peak	PEAK 2Way 2021 LOS Capacity	2021 No. of Lanes
Rd_Name	Limits	Cnt_Sta	MainRes	Tfare21	Distance	SPD2013	F_Type_20	Fun_Class_2010	AADT_11	AADT_12	AADT_13	AADT_14	AADT_15	AADT_16	AADT_17	AADT_18	AADT_19	AADT_20	AADT_21	VCA_LOS_21	Cap_21	VCRatio_20	LOS_20	AMPKHR_2	PMPKHR_2	2W_Cap_21	Lanes_20
I-4	Seminole Co. to Dirksen Dr.	484	FDOT	Yes	3.58	65	UA_FWIS_6L	Principal Arterial - Interstate - Urban	102,500	106,500	108,000	110,000	113,000	110,000	112,000	114,000	111,000	104,000		D	113,600	0.92	D			10,510	6
I-4	Dirksen Dr. to Saxon Blvd.	484	FDOT	Yes	2.79	70	UA_FWIS_6L	Principal Arterial - Interstate - Urban	93,600	93,900	96,400	99,800	106,510	108,000	-	112,700	111,000	104,000		D	113,600	0.92	D			10,510	6
I-4	Saxon Blvd. to SR 472	1003	FDOT	Yes	3.15	70	UA_FWIS_6L	Principal Arterial - Interstate - Urban	79,500	88,000	88,500	89,500	92,500	90,000	92,000	94,000	99,000	93,000		D	113,600	0.82	C			10,510	6
I-4	SR 472 to Orange Camp Rd.	485	FDOT	Yes	2.12	70	UA_FWIS_6L	Principal Arterial - Interstate - Urban	70,500	77,500	77,000	78,000	80,500	71,000	72,500	74,000	82,000	77,000		D	113,600	0.68	C			10,510	6
I-4	Orange Camp Rd. to SR 44	497	FDOT	Yes	2.56	70	UA_FWIS_6L	Principal Arterial - Interstate - Urban	62,000	55,500	60,500	65,500	71,500	74,500	77,000	79,000	80,000	78,000		D	113,600	0.69	C			10,510	6
I-4	SR 44 to US 92 Connector	486	FDOT	Yes	10.31	70	UA_FWIS_6L	Principal Arterial - Interstate - Rural	54,000	55,000	55,000	56,000	57,000	58,000	65,500	65,500	66,500	59,500		C	93,900	0.63	B			8,450	6
I-4	US 92 Connector to I-95	491	FDOT	Yes	3.52	70	UA_FWIS_6L	Principal Arterial - Interstate - Urban	43,000	40,000	40,000	41,000	41,500	42,000	46,000	47,000	48,000	51,000		D	113,600	0.45	B			10,510	6
I-95	Brevard Co. to SR 442/Indian River Blvd.	0436-B	FDOT	Yes	11.45	70	RUA_FW_6L	Principal Arterial - Interstate - Urban/Rural	30,500	30,000	26,500	27,500	36,000	29,000	29,000	30,500	33,000	32,000		C	69,000	0.46	B			7,250	6
I-95	SR 442/Indian River Blvd. to SR 44	503	FDOT	Yes	4.84	70	UA_FWIS_6L	Principal Arterial - Interstate - Urban	31,000	31,000	32,500	35,000	36,000	46,500	41,500	42,500	47,000	46,000		D	113,600	0.40	B			10,510	6
I-95	SR 44 to SR 421/Dunlawton Ave.	133	FDOT	Yes	6.99	70	UA_FWIS_6L	Principal Arterial - Interstate - Urban	36,600	36,900	36,600	37,700	37,000	40,700	-	-	24,000	43,000		D	113,600	0.38	B			10,510	6
I-95	SR 421/Dunlawton Ave. to I-4/SR 400/Beville	494	FDOT	Yes	4.57	70	UA_FWIS_6L	Principal Arterial - Interstate - Urban	44,500	42,500	45,000	46,500	47,500	49,500	51,500	-	68,000	74,500		D	113,600	0.66	C			10,510	6
I-95	I-4/SR 400/Beville Rd. to US 92/ISB	494	FDOT	Yes	1.26	65	UA_FWIS_6L + AUX	Principal Arterial - Interstate - Urban	74,500	71,500	71,500	75,500	77,000	66,500	62,500	66,500	68,000	74,500		D	113,600	0.66	C			10,510	6
I-95	US 92/ISB to LPGA Blvd.	494	FDOT	Yes	3.56	65	UA_FWIS_6L	Principal Arterial - Interstate - Urban	74,500	71,500	71,500	75,500	77,000	66,500	62,500	66,500	68,000	74,500		D	113,600	0.66	C			10,510	6
I-95	LPGA Blvd. to SR 40/Granada Blvd	534	FDOT	Yes	2.64	70	UA_FWIS_6L + AUX	Principal Arterial - Interstate - Urban	76,000	69,500	70,000	74,000	77,000	85,000	87,000	78,500	85,500	83,000		D	133,600	0.62	B			12,310	6
I-95	SR 40/Granada Blvd to US 1	495	FDOT	Yes	5.55	70	UA_FWIS_6L	Principal Arterial - Interstate - Urban	62,500	66,500	63,500	64,500	66,000	50,500	47,500	50,500	53,000	58,000		D	113,600	0.51	B			10,510	6
I-95	US 1 to Flagler Co. Line/Old Dixie	496	FDOT	Yes	5.00	70	UA_FWIS_6L	Principal Arterial - Interstate - Urban	60,500	64,500	69,500	70,500	72,500	66,000	62,000	65,500	67,000	73,500		D	113,600	0.65	C			10,510	6
US 1	Brevard Co. to Kennedy Pkwy.	531	FDOT	Yes	3.97	55	RUA_UFH_2W_4L	Principal Arterial - Other - Rural	3,400	3,100	3,100	3,200	3,400	3,600	3,400	3,400	4,200	4,000		C	31,200	0.13	B			4,270	4
US 1	Kennedy Pkwy. to Putnam Grove Rd.	531	FDOT	Yes	1.63	65	RDA_UFH_2W_4L	Principal Arterial - Other - Rural	3,400	3,100	3,100	3,200	3,400	3,600	3,400	3,400	4,200	4,000		C	42,300	0.09	B			4,020	4
US 1	Putnam Grove Rd. to Halifax Ave.	531	FDOT	Yes	0.57	65	RDA_UFH_2W_4L	Principal Arterial - Other - Rural	3,400	3,100	3,100	3,200	3,400	3,600	3,400	3,400	4,200	4,000		C	42,300	0.09	B			4,020	4
US 1	Halifax Ave. to H.H. Birch Rd.	9929	FDOT	Yes	2.05	45	RDA_UFH_2W_4L	Principal Arterial - Other - Rural	11,000	11,100	11,100	11,400	12,400	13,300	13,600	14,100	14,300	13,400		C	42,300	0.32	B			4,020	4
US 1	H.H. Birch Rd. to Volco Rd.	9929	FDOT	Yes	3.70	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	11,000	11,100	11,100	11,400	12,400	13,300	13,600	14,100	14,300	13,400		D	39,800	0.34	C			3,580	4
US 1	Volco Rd. to SR 442/Indian River Blvd.	27	FDOT	Yes	2.26	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	18,900	19,000	18,800	18,200	20,400	21,500	21,500	22,500	23,500	22,500		D	39,800	0.57	C			3,580	4
US 1	SR 442/Indian River Blvd. to Park Ave.	5170	FDOT	Yes	1.49	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	26,500	25,500	25,000	24,500	25,500	27,500	28,500	29,500	25,500	24,500		D	39,800	0.62	C			3,580	4
US 1	Park Ave. to 10th Ave.	5168	FDOT	Yes	1.00	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	27,000	25,500	25,000	25,000	26,000	26,000	26,000	27,000	26,000	25,000		D	39,800	0.63	C			3,580	4
US 1	10th Ave. to Canal St./Bus. SR 44	5154	FDOT	Yes	1.52	35	UA_SSAC2_2W_4L	Principal Arterial - Other - Urban	22,000	21,500	18,600	18,700	19,500	24,000	22,500	22,000	22,000	22,000		D	32,400	0.68	D			2,920	4
US 1	Canal St./Bus. SR 44 to Turnbull Bay Rd.	5155	FDOT	Yes	1.34	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	22,500	24,500	22,000	23,000	24,000	26,500	24,500	25,500	26,500	24,000		D	39,800	0.60	C			3,580	4
US 1	Turnbull Bay Rd. to Art Center Ave.	5159	FDOT	Yes	2.24	55	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	23,500	22,500	23,500	24,500	25,500	26,500	27,500	26,000	26,000	25,000		D	39,800	0.63	C			3,580	4
US 1	Art Center Ave. to SR 5A/Nova Rd.	13	FDOT	Yes	3.19	45	UA_UFH_2W_4L_D	Principal Arterial - Other - Urban	19,400	19,600	20,500	21,500	21,500	25,000	26,000	25,500	24,500	23,500		D	66,200	0.35	B			5,960	4
US 1	SR 5A/Nova Rd. to Commonwealth	152	FDOT	Yes	1.23	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	14,100	13,800	13,900	13,200	13,800	15,400	15,700	15,700	15,900	15,500		D	39,800	0.39	C			3,580	4
US 1	Commonweath to SR 421/Dunlawton Ave.	5057	FDOT	Yes	1.37	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	20,500	19,600	20,300	20,500	21,500	20,500	20,400	21,000	21,000	20,200		D	39,800	0.51	C			3,580	4
US 1	SR 421/Dunlawton Ave. to Reed Canal Rd.	213	FDOT	Yes	1.18	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	24,500	24,500	24,500	26,500	25,000	28,500	25,500	26,500	25,000	24,000		D	39,800	0.60	C			3,580	4
US 1	Reed Canal Rd. to Big Tree Rd.	5061	FDOT	Yes	1.17	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	27,500	25,000	26,500	27,500	28,500	27,000	28,000	27,500	27,500	23,000		D	39,800	0.58	C			3,580	4
US 1	Big Tree Rd. to Bellewood Ave.	5063	FDOT	Yes	0.45	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	26,500	24,500	27,000	29,000	30,000	-	-	-	24,500	23,500		D	39,800	0.59	C			3,580	4
US 1	Bellewood Ave. to SR 400/Beville Rd	5063	FDOT	Yes	0.27	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	28,000	27,500	26,000	29,000	30,000	26,500	26,000	27,000	24,500	23,500		D	39,800	0.59	C			3,580	4
US 1	SR 400/Beville Rd to Bellevue Ave.	452	FDOT	Yes	1.05	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	32,500	30,000	29,500	33,000	32,000	34,000	30,500	33,000	33,000	32,000		D	39,800	0.80	C			3,580	4
US 1	Bellevue Ave. to Orange Ave.	5066	FDOT	Yes	0.72	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	28,000	29,500	28,000	29,500	30,500	28,500	29,000	30,000	30,500	29,500		D	39,800	0.74	C			3,580	4
US 1	Orange Ave. to US 92/ISB	5070	FDOT	Yes	0.30	35	UA_SSAC2_2W_4L	Principal Arterial - Other - Urban	28,000	26,000	29,000	26,500	27,500	31,000	28,500	29,500	31,000	30,000		D	32,400	0.93	D			2,920	4
US 1	US 92/ISB to Fairview/Main St.	5074	FDOT	Yes	0.66	35	UA_SSAC2_2W_4L	Principal Arterial - Other - Urban	24,000	23,500	26,000	30,500	31,500	-	-	-	28,000	27,000		D	32,400	0.83	D			2,920	4
US 1	Fairview/Main St. to SR 430/Mason Ave.	5074	FDOT	Yes	0.54	35	UA_SSAC2_2W_4L	Principal Arterial - Other - Urban	27,000	27,000	27,500	27,000	28,000	27,000	27,000	26,000	28,000	27,000		D	32,400	0.83	D			2,920	4
US 1	SR 430/Mason Ave. to LPGA Blvd.	1018	FDOT	Yes	1.47	35	UA_SSAC2_2W_4L	Principal Arterial - Other - Urban	26,000	21,500	24,000	24,500	23,500	24,500	24,000	25,500	25,500	24,000		D	32,400	0.74	D			2,920	4
US 1	LPGA Blvd. to Hand Ave.	1018	FDOT	Yes	2.00	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	26,000	21,500	24,000	24,500	23,500	24,500	24,000	25,500	25,500	24,000		D	39,800	0.60	C			3,580	4
US 1	Hand Ave. to SR 40/Granada Blvd.	5142	FDOT	Yes	0.84	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	21,500	19,000	20,300	20,800	21,500	22,000	23,000	23,500	24,000	23,000		D	39,800	0.58	C			3,580	4
US 1	SR 40/Granada Blvd. to SR 5A/Nova Rd.	1019	FDOT	Yes	1.83	55	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	16,300	16,400	16,600	17,500	18,100	19,300	20,000	19,100	19,300	19,500		D	39,800	0.49	C			3,580	4
US 1	SR 5A/Nova Rd. to Airport Rd.	100	FDOT	Yes	1.13	55	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	26,000	22,500	25,500	26,500	26,000	28,500	29,500	30,500	32,000	31,000		D	39,800	0.78	C			3,580	4
US 1	Airport Rd. to I-95	351	FDOT	Yes	2.81	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	20,500	19,400	20,200	21,000	22,500	23,000	24,500	23,500	23,500	22,500		D	39,800	0.57	C			3,580	4
US 1	I-95. to Flagler Co Line	536	FDOT	Yes	1.53	60	UA_UFH_2W_4L_D	Principal Arterial - Other - Urban	15,100	13,400	14,300	14,200	14,800	16,000	16,800	17,200	18,200	17,600		D	66,200	0.27	B			5,960	4
US 17/92	Seminole Co. to Barwick Rd.	0040-S	FDOT	Yes	0.52	50	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	19,800	19,300	22,000	22,500	26,500	27,500	29,500	31,000	33,000	32,000		D	39,800	0.80	C			3,580	4
US 17/92	Barwick Rd to Ft. Florida Rd.	0040-S	FDOT	Yes	0.76	50	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	19,800	19,300	22,000	22,500	26,500	27,500	29,500	31,000	33,000	32,000		D	39,800	0.80	C			3,580	4
US 17/92	Ft. Florida Rd. to Dirksen Dr.	101	FDOT	Yes	0.72	50	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	19,800	19,300	23,000	24,000	23,000	28,500	28,000	30,000	30,000	29,000		D	39,800	0.73	C			3,580	4
US 17/92	Dirksen Dr. to Valencia Rd.	479.1	FDOT	Yes	1.05	50	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	21,000	21,500	21,500	21,000	22,500	22,000	24,000	25,000	24,500	23,500		D	39,800	0.59	C			3,580	4
US 17/92	Valencia Rd to Highbanks Rd.	7	FDOT	Yes	0.74	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	21,000	21,500	21,500	21,500	24,000	24,500	25,500	25,500	25,500	24,500		D	39,800	0.62	C			3,580	4
US 17/92	Highbanks Rd. to DeBary Plantation Blvd	8	FDOT	Yes	0.92	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	27,500	26,000	22,000	23,000	24,500	25,500	25,000	25,000	25,000	24,000		D	39,800	0.60	C			3,580	4
US 17/92	DeBary Plantation Blvd to Saxon Blvd.	509	FDOT	Yes	0.61	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	27,500	26,000	26,000	25,500	27,500	30,500	29,500	32,000	31,500	30,500		D	39,800	0.77	C			3,580	4
US 17/92	Saxon Blvd. to Enterprise Rd.	539	FDOT	Yes	0.80	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	27,500	26,000	17,600	18,600	19,400	21,000	22,000	23,000	24,000	23,000		D	39,800	0.58	C			3,580	4
US 17/92	Enterprise Rd. to Rhode Island Ave.	444	FDOT	Yes	0.75	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	32,500	29,500	30,500	29,000	32,000	31,500	31,000	33,000	32,000	31,000		D	39,800	0.78	C			3,580	4
US 17/92	Rhode Island Ave. to Graves Ave.	5165	FDOT	Yes	1.01	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	29,000	26,500	29,000	27,500	28,500	31,000	32,000	32,000	32,000	31,000		D	39,800	0.78	C			3,580	4
US 17/92	Graves Ave. to New York Ave.	5166	FDOT	Yes	1.00	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	29,000	27,500	26,500	27,500	28,500	29,500	29,500	30,500	31,000	30,000		D	39,800	0.75	C			3,580	4
US 17/92	New York Ave to SR 472	445	FDOT	Yes	0.75	55	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	27,000	26,000	27,000	25,000	28,000	29,000	30,000	30,000	30,000	29,000		D	39,800	0.73	C			3,580	4
US 17/92	SR 472 to SR 15A/Taylor Rd.	1004	FDOT	Yes	1.75	45	UA_SSAC1_2W_6L	Principal Arterial - Other - Urban	44,000	41,000	45,000	42,000	47,000	47,000	47,500	55,500	54,500	52,500		D	59,900	0.88	C			5,390	6
US 17/92	SR 15A/Taylor Rd. to Beresford Ave.	1006	FDOT	Yes	1.02	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	27,500	27,000	27,000	27,500	23,500	33,500	30,000	31,000	32,000	31,000		E	42,190	0.73	C			3,790	4
US 17/92	Beresford Ave. to Euclid Ave.	5173	FDOT	Yes	0.49	35	UA_SSAC2_2W_2L	Principal Arterial - Other - Urban	18,000	16,800	16,600	16,400	17,000	16,300	18,500	19,300	19,400	18,700		E	16,380	1.14	F			1,480	2
US 17/92	Euclid Ave. to SR 44/New York Ave.	5004	FDOT	Yes	0.49	30	UA_SSAC2_2W_2L	Principal Arterial - Other - Urban	16,600	15,100	16,300	14,800	15,400	17,200	17,800	13,000	13,200	12,800		E	15,600	0.82	D			1,410	2
US 17/92	SR 44/New York Ave. to Plymouth Ave.	5008	FDOT	Yes	1.01	30	UA_SSAC2_2W_2L	Principal Arterial - Other - Urban	16,400	16,000	16,300	15,500	16,100	18,200	16,200	19,100	19,300	18,700		DeLand	19,150	0.98	DeLand			1,410	2
US 17/92	Plymouth Ave. to US 92/ISB	66	FDOT	Yes	0.83	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	21,500	22,500	20,500	21,000	22,000	23,000	21,500	22,500	23,000	22,000		E	42,190	0.52	C			3,790	4
US 17	US 92 to Mercers Fernery Rd.	1000	FDOT	Yes	0.68	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	30,000	27,500	29,000	29,000	30,000	33,500	29,000	37,500	33,000	32,000		E	42,190	0.76	C			3,790	4
US 17	Mercers Fernery Rd. to Glenwood Rd.	69	FDOT	Yes	0.51	55	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	21,000	20,500	20,500	19,500	21,000	24,500	25,500	26,000	26,000	25,000		D	39,800	0.63	C			3,580	4
US 17	Glenwood Rd. to SR 15A/CR 15A	236	FDOT	Yes	1.64	55	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	14,500	13,700	13,500	13,500	14,800	14,800	17,300	15,200	15,000	14,600		D	39,800	0.37	C			3,580	4
US 17	SR 15A/CR 15A to Reynolds Rd	476	FDOT	Yes	2.76	45	UA_UFH_2W_4L_D	Principal Arterial - Other - Urban	16,400	16,000	15,800	16,200	17,200	17,200	18,500	18,100	18,300	17,700		D	66,200	0.27	B			5,960	4
US 17	Reynolds Rd to Spring Garden Ranch Rd.	519	FDOT	Yes	1.09	55	UA_UFH_2W_2L_U	Principal Arterial - Other - Urban	10,100	10,200	10,100	10,000	10,400	11,400	11,600	12,000	11,600	11,200		D	24,200	0.46	B			2,180	2
US 17	Spring Garden Ranch Rd. to Lake Winona Rd	104	FDOT	Yes	0.56	45	UA_UFH_2W_2L_U	Principal Arterial - Other - Urban	7,500	7,400	7,300	7,400	8,100	8,400	8,600	9,000	9,600	9,400		D	24,200	0.39	B			2,180	2
US 17	Lake Winona Rd. to SR 40	104	FDOT	Yes	4.93	45	RUA_UFH_2W_2L_	Principal Arterial - Other - Rural	7,500	7,400	7,300	7,400	8,100	8,400	8,600	9,000	9,600	9,400		C	18,000	0.52	B			1,620	2
US 17	SR 40 to Washington Ave.	448	FDOT	Yes	5.02	45	RDA_UFH_2W_2L_	Principal Arterial - Other - Rural	6,300	5,700	6,200	5,500	6,100	6,200	6,600	7,400	7,600	7,400		C	15,700	0.47	B			1,490	2
US 17	Washington Ave. to CR 305/Lk George Rd	46	FDOT	Yes	5.28	55	RDA_UFH_2W_2L_	Principal Arterial - Other - Rural	4,600	4,300	4,500	4,400	4,900	5,000	5,400	5,300	6,100	5,900		C	15,700	0.38	B			1,490	2
US 17	CR 305/Lk George Rd to Putnam County	280	FDOT	Yes	3.41	60	RUA_UFH_2W_2L_	Principal Arterial - Other - Rural	4,400	4,400	4,400	4,200	4,800	5,200	5,400	5,900	5,900	5,700		C	18,000	0.32	B			1,620	2
US 92	US 17 to Jacobs Rd.	1001	FDOT	Yes	1.41	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	25,000	24,500	25,500	24,500	25,500	28,000	28,500	28,500	24,500	26,500		D	39,800	0.67	C			3,580	4
US 92	Jacobs Rd. to Kepler Rd.	5	FDOT	Yes	1.23	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	25,000	22,500	22,500	22,500	26,000	26,000	25,000	25,000	25,000	24,000		D	39,800	0.60	C			3,580	4
US 92	Kepler Rd. to Old Daytona Rd.	9925	FDOT	Yes	1.32	65	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	13,400	13,000	13,000	14,100	15,100	16,400	16,200	16,200	16,200	14,200		D	39,800	0.36	C			3,580	4
US 92	Old Daytona Rd. to Red John Dr.	9925	FDOT	Yes	7.20	55	RUA_UFH_2W_4L	Principal Arterial - Other - Urban/Rural	13,400	13,000	13,000	14,100	15,100	16,400	16,200	16,200	16,200	14,200		C	44,900	0.32	B			4,270	4
US 92	Red John Dr. to I-4 EB Ramp	478.2	FDOT	Yes	2.26	55	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	20,000	19,800	19,800	16,400	17,600	18,600	19,100	18,400	19,500	18,900		D	39,800	0.47	C			3,580	4
US 92	I-4 EB Ramp to LPGA Blvd.	478.1	FDOT	Yes	0.58	55	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	20,000	19,800	25,200	16,400	17,600	18,600	19,100	18,400	19,500	18,900		D	39,800	0.47	C			3,580	4
US 92	LPGA Blvd. to I-95	532	FDOT	Yes	2.03	55	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	27,000	24,500	25,000	26,500	27,000	32,000	30,000	29,500	31,000	30,000		D	39,800	0.75	C			3,580	4
US 92	I-95 to Williamson Blvd.	508	FDOT	Yes	0.71	50	UA_SSAC1_2W_8L	Principal Arterial - Other - Urban	40,500	40,500	37,500	43,000	45,000	39,000	39,000	46,500	47,500	46,500		C	78,800	0.59	C			7,090	8
US 92	Williamson Blvd. to Bill France Blvd.	5172	FDOT	Yes	1.13	50	UA_SSAC1_2W_8L	Principal Arterial - Other - Urban	43,000	41,500	42,000	43,500	41,000	50,500	40,500	41,500	46,000	45,000		C	78,800	0.57	C			7,090	8
US 92	Bill France Blvd. to SR 483/Clyde Morris Blvd.	5094	FDOT	Yes	0.86	50	UA_SSAC1_2W_8L	Principal Arterial - Other - Urban	39,500	35,500	36,000	35,500	36,500	37,500	38,500	38,000	39,000	38,000		D	78,800	0.48	C			7,210	8
US 92	SR 483/Clyde Morris Blvd. to SR 5A/Nova Rd.	5096	FDOT	Yes	0.93	45	UA_SSAC1_2W_6L	Principal Arterial - Other - Urban	43,000	39,000	36,000	36,500	37,500	44,500	41,500	40,000	41,000	40,000		D	59,900	0.67	C			5,390	6
US 92	SR 5A/Nova Rd. to Martin Luther King Blvd.	5099	FDOT	Yes	0.78	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	25,500	27,500	26,000	28,500	29,500	28,000	27,500	28,500	29,000	28,000		D	39,800	0.70	C			3,580	4
US 92	Martin Luther King Blvd. to US 1	5104	FDOT	Yes	0.38	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	25,500	26,000	22,000	24,500	25,500	26,000	27,000	-	23,500	22,500		D	39,800	0.57	C			3,580	4
US 92	US 1 to Beach St.	5105	FDOT	Yes	0.23	30	UA_SSAC2_2W_4L	Principal Arterial - Other - Urban	17,500	17,300	15,200	18,100	18,800	23,500	22,500	23,000	23,000	15,000		D	32,400	0.46	D			2,920	4
US 92	Beach St. to SR 441/Peninsula Dr.	337	FDOT	Yes	0.88	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	13,500	18,100	13,200	14,300	16,100	22,300	27,000	25,000	23,000	22,000		D	39,800	0.55	C			3,580	4
US 92	SR 441/Peninsula Dr. to SR A1A/Atlantic	5109	FDOT	Yes	0.30	30	UA_SSAC2_2W_4L	Principal Arterial - Other - Urban	8,900	9,900	8,200	7,900	8,200	11,700	12,400	14,300	14,500	14,100		D	32,400	0.44	C			2,920	4
SR A1A - Dunlawton Ave.	US 1 to SR A1A/Atlantic Ave.	427	FDOT	Yes	1.25	35	UA_SSAC2_2W_4L	Principal Arterial - Other - Urban	27,000	26,000	26,000	28,000	30,000	30,500	22,500	23,500	25,500	24,

SR A1A - Atlantic Ave. North	Harvard Dr. to SR 40/Granada Blvd.	5124	FDOT		Yes	1.70	35	UA_SSAC2_2W_4L	Principal Arterial - Other - Urban	16,600	17,600	16,400	15,600	16,200	17,200	17,800	19,400	19,500	18,900		D	32,400	0.58	D			2,920	4
SR A1A - Ocean Shore Blvd.	SR 40/Granada Blvd. to Neptune Ave	5125	FDOT		Yes	0.70	35	UA_UFH_2W_2L_U	Principal Arterial - Other - Urban	15,600	12,300	14,000	16,600	17,200	16,200	17,000	17,400	15,900	15,500		D	24,200	0.64	C			2,180	2
SR A1A - Ocean Shore Blvd.	Neptune Ave to Ormond Mall	174	FDOT		Yes	1.69	40	UA_UFH_2W_2L_U	Principal Arterial - Other - Urban	18,500	15,100	15,400	15,700	16,000	15,800	16,400	15,000	15,200	14,700		D	24,200	0.61	C			2,180	2
SR A1A - Ocean Shore Blvd.	Ormond Mall to High Bridge Rd	368	FDOT		Yes	6.42	55	UA_UFH_2W_2L_U	Principal Arterial - Other - Urban	15,500	15,300	15,800	15,500	16,100	15,500	16,200	16,600	16,700	16,300		D	24,200	0.67	C			2,180	2
SR A1A - Ocean Shore Blvd.	High Bridge Rd toFlagler Co Line	368	FDOT		Yes	1.26	55	UA_UFH_2W_2L_U	Principal Arterial - Other - Urban	15,500	15,300	15,800	15,500	16,100	15,500	16,200	16,600	16,700	16,300		D	24,200	0.67	C			2,180	2
SR 5A - Nova Rd.	US 1. to Spruce Creek Rd	458	FDOT		Yes	1.44	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	16,800	16,300	16,800	17,900	17,200	17,800	19,100	18,800	21,500	20,500		D	39,800	0.52	C			3,580	4
SR 5A - Nova Rd.	Spruce Creek Rd. to SR 421/Dunlawton Ave.	1016	FDOT		Yes	1.08	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	23,500	25,000	24,500	26,000	27,000	26,000	29,500	25,000	28,000	27,000		D	39,800	0.68	C			3,580	4
SR 5A - Nova Rd.	SR 421/Dunlawton Ave. to Madeline Ave	1017.2	FDOT		Yes	1.30	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	26,500	25,500	26,000	27,000	28,000	26,500	27,500	27,000	27,000	18,000		D	39,800	0.45	C			3,580	4
SR 5A - Nova Rd.	Madeline Ave. to Big Tree	363.2	FDOT		Yes	1.61	50	UA_SSAC1_2W_6L	Principal Arterial - Other - Urban	27,000	25,500	26,500	26,500	26,500	27,000	26,000	27,000	29,500	28,500		D	49,850	0.57	C			4,490	5
SR 5A - Nova Rd.	Big Tree to SR 400/Beville Rd.	363.1	FDOT		Yes	0.70	50	UA_SSAC1_2W_6L	Principal Arterial - Other - Urban	27,000	25,500	26,500	26,500	26,500	27,000	26,000	27,000	29,500	28,500		D	59,900	0.48	C			5,390	6
SR 5A - Nova Rd.	SR 400/Beville Rd. to Bellevue Ave.	348	FDOT		Yes	1.00	50	UA_SSAC1_2W_6L	Principal Arterial - Other - Urban	34,000	33,000	33,000	34,500	35,500	37,000	36,500	37,500	36,000	35,000		D	59,900	0.58	C			5,390	6
SR 5A - Nova Rd.	Bellevue Ave. to US 92/ISB	5090	FDOT		Yes	1.07	45	UA_SSAC1_2W_6L	Principal Arterial - Other - Urban	32,500	32,000	33,000	32,500	34,500	36,000	35,000	36,000	37,000	35,000		D	59,900	0.58	C			5,390	6
SR 5A - Nova Rd.	US 92/ISB to SR 430/Mason Ave.	5088	FDOT		Yes	1.22	45	UA_SSAC1_2W_6L	Principal Arterial - Other - Urban	30,000	30,000	31,000	31,500	31,000	32,000	36,000	31,500	35,500	34,500		D	59,900	0.58	C			5,390	6
SR 5A - Nova Rd.	SR 430/Mason Blvd to LPGA Blvd.	366	FDOT		Yes	1.47	45	UA_SSAC1_2W_6L	Principal Arterial - Other - Urban	27,500	27,000	25,500	26,500	28,500	29,000	34,500	35,500	32,500	31,500		D	59,900	0.53	C			5,390	6
SR 5A - Nova Rd.	LPGA Blvd. to Hand Ave.	528	FDOT		Yes	2.06	45	UA_SSAC1_2W_6L	Principal Arterial - Other - Urban	28,000	28,500	26,000	26,500	27,500	29,000	34,000	26,500	29,000	28,000		D	59,900	0.47	C			5,390	6
SR 5A - Nova Rd.	Hand Ave. to SR 40/Granada Ave	510	FDOT		Yes	1.15	45	UA_SSAC1_2W_6L	Principal Arterial - Other - Urban	24,000	28,500	27,500	25,500	26,500	27,500	28,000	29,000	28,500	27,500		D	59,900	0.46	C			5,390	6
SR 5A - Nova Rd.	SR 40/Granada Ave to Wilmette Ave.	518	FDOT		Yes	0.51	45	UA_SSAC1_2W_6L	Principal Arterial - Other - Urban	24,000	23,500	23,500	23,500	24,500	24,000	25,500	25,500	25,500	21,500		D	59,900	0.36	C			5,390	6
SR 5A - Nova Rd.	Wilmette Ave. to US 1	459	FDOT		Yes	1.00	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	12,800	12,300	12,400	13,100	13,600	14,000	13,600	14,300	14,800	14,400		D	39,800	0.36	C			3,580	4
SR 11	US 17 to CR 15A	4	FDOT		Yes	2.45	55	UA_UFH_2W_2L_U	Principal Arterial - Other - Urban	6,100	6,000	6,300	6,200	6,400	7,700	6,900	7,100	6,700	6,500		D	24,200	0.27	B			2,180	2
SR 11	CR 15A to SR 40	527	FDOT		Yes	9.19	60	RUA_UFH_2W_2L	Principal Arterial - Other - Rural	2,700	2,700	2,800	2,900	3,100	3,400	3,700	3,900	3,900	3,900		C	6,450	0.60	C			620	2
SR 11	SR 40 to Flagler Co. Line	0009-F	FDOT		Yes	2.42	60	RUA_UFH_2W_2L	Principal Arterial - Other - Rural	2,000	2,200	2,100	2,400	2,400	2,800	2,800	2,700	2,700	3,500		C	6,450	0.54	C			620	2
SR 15A	US 17/92/Taylor to New Hampshire Ave.	1005	FDOT		Yes	1.17	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	19,700	19,000	20,500	21,000	21,900	22,500	25,000	26,000	26,000	25,000		D	39,800	0.63	C			3,580	4
SR 15A	New Hampshire Ave. to Beresford Ave.	6	FDOT		Yes	0.59	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	21,000	20,500	21,000	20,100	23,000	23,500	24,000	26,000	26,000	25,000		D	39,800	0.63	C			3,580	4
SR 15A	Beresford Ave. to SR 44/New York Ave.	474	FDOT		Yes	1.00	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	21,500	21,000	22,000	22,000	24,000	25,000	25,500	26,500	27,000	26,000		D	39,800	0.65	C			3,580	4
SR 15A	SR 44/New York Ave. to Plymouth Ave.	463	FDOT		Yes	1.01	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	21,900	23,000	23,000	25,000	25,000	26,000	27,000	28,000	28,000	27,000		D	39,800	0.68	C			3,580	4
SR 15A	Plymouth Ave. to CR 92	537	FDOT		Yes	0.83	50	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	22,500	18,900	21,500	20,800	21,500	21,800	25,500	24,000	25,000	24,000		D	39,800	0.60	C			3,580	4
SR 15A	CR 92 to Glenwood Rd.	465	FDOT		Yes	1.20	50	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	13,800	13,100	13,600	13,400	14,000	14,700	15,600	17,400	17,600	13,600		D	39,800	0.34	C			3,580	4
SR 15A	Glenwood Rd. to US 17	466	FDOT		Yes	1.11	50	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	10,300	10,200	10,600	10,500	10,900	10,900	12,200	12,600	12,600	12,200		D	39,800	0.31	C			3,580	4
SR 40	Lake County to Emporia Rd.	533	FDOT		Yes	0.86	55	RDA_UFH_2W_2L	Principal Arterial - Other - Rural	7,000	6,800	6,300	6,800	7,000	8,700	8,500	9,800	8,700	8,500		C	15,700	0.54	B			1,490	2
SR 40	Emporia Rd. to US 17	344	FDOT		Yes	5.58	55	RDA_UFH_2W_2L	Principal Arterial - Other - Rural	6,500	6,600	5,900	6,200	7,600	8,500	8,000	8,200	8,400	8,200		C	15,700	0.52	B			1,490	2
SR 40	US 17 to SR 11	530	FDOT		Yes	6.69	60	RUA_UFH_2W_2L	Principal Arterial - Other - Rural	4,800	5,400	5,500	5,600	5,800	6,900	6,800	7,200	6,900	6,700		C	8,600	0.78	C			820	2
SR 40	SR 11 to Pinto Lane	530	FDOT		Yes	6.83	60	RUA_UFH_2W_2L	Principal Arterial - Other - Rural	4,800	5,400	5,500	5,600	5,800	6,900	6,800	7,200	6,900	6,700		C	8,600	0.78	C			820	2
SR 40	Pinto Lane to Rima Ridge Rd (urban boundar	523	FDOT		Yes	1.25	60	RDA_UFH_2W_4L	Principal Arterial - Other - Urban/Rural	10,600	9,400	9,400	10,000	10,400	11,100	11,800	11,600	13,700	13,300		C	#REF!	#REF!	B			4,020	4
SR 40	Rima Ridge Rd to Tymber Creek Rd.	499	FDOT		Yes	4.36	60	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	27,000	26,500	27,000	27,000	28,000	30,500	35,000	31,500	31,500	26,500		D	39,800	0.67	C			3,580	4
SR 40	Tymber Creek Rd. to I-95	499	FDOT		Yes	0.79	50	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	27,000	26,500	27,000	27,000	28,000	30,500	35,000	31,500	31,500	26,500		D	39,800	0.67	C			3,580	4
SR 40	I-95 to Clyde Morris Blvd.	522	FDOT		Yes	1.58	50	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	36,000	33,000	33,500	34,500	35,500	35,500	38,000	34,500	35,500	36,000		D	39,800	0.90	C			3,580	4
SR 40	Clyde Morris Blvd. to SR 5A/Nova Rd.	489	FDOT		Yes	1.06	50	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	33,000	33,000	32,000	33,000	33,000	32,000	34,000	34,500	36,500	35,500		D	39,800	0.89	C			3,580	4
SR 40	SR5A/Nova Rd. to US 1	1020	FDOT		Yes	1.33	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	30,000	30,000	30,000	30,000	31,000	31,000	32,000	33,500	34,000	31,000		D	39,800	0.78	C			3,580	4
SR 40	US 1 to Halifax Ave.	171	FDOT		Yes	1.11	35	UA_SSAC2_2W_4L	Principal Arterial - Other - Urban	34,000	33,500	34,000	31,500	31,000	34,500	38,500	39,500	39,500	38,500		D	32,400	1.19	F			2,920	4
SR 40	Halifax Ave. to SR A1A	5128	FDOT		Yes	0.37	35	UA_SSAC2_2W_4L	Principal Arterial - Other - Urban	20,500	18,000	18,900	19,500	20,400	20,200	21,000	21,000	19,200	18,500		D	32,400	0.57	D			2,920	4
SR 44	Lake Co. to Shell Rd.	1007	FDOT		Yes	1.19	55	RDA_UFH_2W_2L	Principal Arterial - Other - Rural	9,000	9,400	9,200	9,600	10,000	12,900	11,000	12,200	12,300	11,900		C	15,700	0.76	C			1,490	2
SR 44	Shell Rd. to Grand Ave.	1007	FDOT		Yes	1.26	45	UA_UFH_2W_2L_U	Principal Arterial - Other - Urban	9,000	9,400	9,200	9,600	10,000	12,900	11,000	12,200	12,300	11,900		D	24,200	0.49	C			2,180	2
SR 44	Grand Ave. to Old New York/Hazen Rd.	290	FDOT		Yes	0.70	55	UA_UFH_2W_2L_U	Principal Arterial - Other - Urban	9,700	9,300	9,700	9,800	10,100	10,800	11,200	12,400	12,600	12,200		D	24,200	0.50	C			2,180	2
SR 44	Old New York/Hazen Rd. to SR 15A/Spring G	274	FDOT		Yes	0.71	40	UA_UFH_2W_2L_U	Principal Arterial - Other - Urban	11,800	11,500	11,700	11,600	11,900	12,800	13,200	13,900	14,100	13,700		D	24,200	0.57	C			2,180	2
SR 44	SR 15A/Spring Garden Ave. to Stone St.	447	FDOT		Yes	0.50	40	UA_SSAC1_2W_2L	Principal Arterial - Other - Urban	11,300	11,300	10,600	10,800	11,500	11,700	11,500	11,700	10,500	10,100		E	18,939	0.53	C			1,712	2
SR 44	Stone St. to Clara Ave.	5012	FDOT		Yes	0.51	35-40	UA_SSAC1_2W_2L	Principal Arterial - Other - Urban	11,100	10,900	10,600	10,300	10,700	10,800	11,200	11,000	11,200	10,800		E	18,939	0.57	C			1,712	2
SR 44	Clara Ave. to Amelia Ave.	5015	FDOT		Yes	0.50	25-35	UA_SSAC1_2W_2L	Principal Arterial - Other - Urban	9,200	8,600	8,700	8,600	9,000	9,300	9,700	9,900	7,700	7,500		E	14,800	0.51	D			1,410	2
SR 44	Amelia Ave. to Hill Ave.	80	FDOT		Yes	1.00	35/40/45	UA_SSAC1_2W_2L	Principal Arterial - Other - Urban	13,300	13,000	14,100	12,200	12,600	13,100	13,500 -		12,300	11,900		E	18,939	0.63	C			1,712	2
SR 44	Hill Ave. to Blue Lake Ave.	80	FDOT		Yes	0.51	45	UA_SSAC1_2W_2L	Principal Arterial - Other - Urban	13,300	13,000	12,600	11,900	14,000	12,600	12,500	12,900	12,300	11,900		DeLand	19,800	0.60				1,712	2
SR 44	Blue Lake Ave. to Kepler Rd.	19	FDOT		Yes	0.94	45	UA_SSAC1_2W_2L	Principal Arterial - Other - Urban	16,400	15,600	15,900	14,300	16,900	15,700	17,500	17,300	17,300	16,700		DeLand	20,800	0.80				1,712	2
SR 44	Kepler Rd. to Summit Ave.	259	FDOT		Yes	1.18	45-50	UA_SSAC1_2W_2L	Principal Arterial - Other - Urban	18,300	17,800	18,000	16,700	17,200	20,200	19,400	21,500	19,800	19,200		DeLand	19,800	0.97				1,712	2
SR 44	Summit Ave. to I-4	538	FDOT		Yes	0.98	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	16,800	17,500	17,000	15,200	15,800	18,100	21,500	20,500	22,000	21,000		D	39,800	0.53	C			3,580	4
SR 44	I-4 to Prevatt Ave.	480	FDOT		Yes	0.74	55	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	16,400	17,200	19,900	18,700	20,500	21,500	21,500	21,500	22,500	21,500		D	39,800	0.54	C			3,580	4
SR 44	Prevatt Ave. to Pioneer Tr.	41	FDOT		Yes	5.93	65	RUA_UFH_2W_4L	Principal Arterial - Other - Rural	13,600	14,900	16,700	16,400	17,600	19,500	13,900	14,300	15,800	15,400		C	44,900	0.34	B			4,270	4
SR 44	Pioneer Tr. to SR 415/CR 415	1011	FDOT		Yes	3.56	65	RUA_UFH_2W_4L	Principal Arterial - Other - Rural	10,500	9,900	12,200	12,500	12,900	14,500	15,600	15,700	15,200	14,800		C	44,900	0.33	B			4,270	4
SR 44	SR 415/CR 415 to Samsula Dr.	1012	FDOT		Yes	1.14	65	RDA_UFH_2W_4L	Principal Arterial - Other - Rural	15,800	13,500	15,700	17,000	17,600	20,500	22,000	21,500	22,000	21,000		C	42,300	0.50	B			4,020	4
SR 44	Samsula Dr. to Airport Rd	423	FDOT		Yes	1.70	65	RDA_UFH_2W_4L	Principal Arterial - Other - Urban/Rural	16,200	14,400	18,300	17,400	19,200	20,000	22,000	15,600	15,800	15,400		C	42,300	0.36	B			4,020	4
SR 44	Airport Rd. to I-95	423	FDOT		Yes	2.05	65	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	16,200	14,400	18,300	17,400	19,200	20,000	22,000	15,600	15,800	15,400		D	39,800	0.39	C			3,580	4
SR 44	I-95 to Mission Dr	515	FDOT		Yes	2.83	55	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	25,000	27,500	30,000	27,500	28,500	35,000	31,500	35,500	34,500	33,500		D	39,800	0.84	C			3,580	4
SR 44	Mission Dr. to Live Oak	514	FDOT		Yes	1.35	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	17,800	18,700	19,600	18,300	19,000	19,500	18,000	23,500	20,500	19,700		D	39,800	0.49	C			3,580	4
SR 44/SR A1A/S Causeway	Live Oak to Peninsula Ave.	207	FDOT		Yes	1.30	50	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	24,000	26,500	26,500	27,000	29,500	30,000	23,500	32,500	27,500	26,500		D	39,800	0.67	C			3,580	4
SR 44/SR A1A/S Causeway	Peninsula Ave. to Saxon Dr.	5180	FDOT		Yes	0.35	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	21,000	22,500	23,000	22,000	23,000	24,500	25,500	28,000	28,000	22,000		D	39,800	0.55	C			3,580	4
SR 44/SR A1A/3rd Ave/Atlantic	Saxon Dr. to 6th Ave	5043	FDOT		Yes	0.50	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	14,000	15,300	14,200	14,000	14,600	12,700	17,500	17,900	13,300	12,900		D	39,800	0.32	C			3,580	4
SR 44 (Business) - Canal St.	SR 44/Lytle St to Pioneer Trail	516	FDOT		Yes	0.17	40	UA_SSAC1_2W_2L	Minor Arterial - Urban	11,400	10,800	11,300	10,500	10,900	9,500	9,800	10,000	10,200	9,900		D	17,700	0.56	C			1,600	2
SR 44 (Business) - Canal St.	Pioneer Tr. to US 1	111	FDOT		Yes	0.76	40	UA_SSAC1_2W_2L	Minor Arterial - Urban	11,700	11,100	11,600	11,500	12,500	11,500	11,900	12,600	12,800	12,400		D	17,700	0.70	C			1,600	2
SR 46	Seminole Co. to Brevard Co.	0416-B			Yes	5.44	55	RUA_UFH_2W_2L	Principal Arterial - Other - Rural	5,600	6,000	5,600	5,300	7,100	5,900	7,400	7,600	8,100	7,900		C	18,000	0.44	B			1,620	2
SR 400 - Beville Rd.	I-95 to Williamson Blvd.	501	FDOT		Yes	0.28	55	UA_SSAC1_2W_6L	Principal Arterial - Other - Urban	24,000	24,000	26,500	28,000	29,000	26,000	28,500	29,000	31,500	30,500		D	59,900	0.51	C			5,390	6
SR 400 - Beville Rd.	Williamson Blvd. to SR 483/Clyde Morris Blvc	5189	FDOT		Yes	1.91	55	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	27,000	26,500	28,500	31,000	32,000	30,500	30,500	31,500	30,500	29,500		D	39,800	0.74	C			3,580	4
SR 400 - Beville Rd.	SR 483/Clyde Morris Blvd. to SR 5A/Nova Rd.	511	FDOT		Yes	0.68	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	32,000	33,000	33,000	33,000	34,000	32,000	33,000	33,500	35,500	34,500		D	39,800	0.87	C			3,580	4
SR 400 - Beville Rd.	SR 5A/Nova Rd. to US 1	502	FDOT		Yes	1.34	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	23,000	24,000	24,500	25,500	26,500	27,000	26,500	26,000	24,500	23,500		D	39,800	0.59	C			3,580	4
SR 415	Seminole Co. to Enterprise-Osteen Rd.	25	FDOT		Yes	4.39	55	UA_UFH_2W_4L_D	Minor Arterial - Urban/Rural	16,800	16,800	16,800	17,000	17,500	18,300	21,500	23,000	24,000	23,000		D	66,200	0.35	D			5,960	4
SR 415	Enterprise-Osteen Rd. to Howland Blvd.	437	FDOT		Yes	1.83	45	UA_SSAC1_2W_4L	Minor Arterial - Urban	15,100	15,200	15,200	15,400	15,500	17,300	17,700	19,800	19,900	19,300		D	39,800	0.48	C			3,580	4
SR 415	Howland Blvd. to Acorn Lake Rd	321	FDOT		Yes	0.88	45	UA_SSAC1_2W_4L	Minor Arterial - Urban	5,900	6,500	6,500	6,600	7,300	8,600	7,900	8,100	8,600	8,400		D	39,800	0.21	C			3,580	4
SR 415	Acorn Lake Rd to SR 44	1009	FDOT		Yes	10.49	55	RUA_UFH_2W_2L	Minor Arterial - Rural	8,300	7,700	9,000	9,000	9,400	11,700	12,700	13,200	12,200	11,400		C	18,000	0.63	C			1,620	2
SR 421 - Dunlawton Ave.	Williamson to Clyde Morris Blvd.	517	FDOT		Yes	1.07	45	UA_SSAC1_2W_6L	Principal Arterial - Other - Urban	39,500	38,500	45,500	48,000	46,000	47,500	49,000	52,500	53,500	52,000		D	59,900	0.87	C			5,390	6
SR 421 - Dunlawton Ave.	Clyde Morris Blvd. to SR 5A/Nova Rd.	1014	FDOT		Yes	1.31	50	UA_SSAC1_2W_6L	Principal Arterial - Other - Urban	28,500	26,500	28,500	29,000	38,500	41,500	42,500	41,000	40,000	39,000		D	59,900	0.65	C			5,390	6
SR 421 - Dunlawton Ave.	SR5A/Nova Rd. to Spruce Creek Rd.	1015	FDOT		Yes	0.91	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	27,000	28,000	27,500	29,500	30,500	31,500	33,000	32,000	33,000	32,000		D	39,800	0.80	C			3,580	4
SR 421 - Dunlawton Ave.	Spruce Creek Rd. to US 1	5181	FDOT		Yes	0.71	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	25,000	25,500	25,000	26,000	27,000	27,500	28,500	28,500	26,500	25,500		D	39,800	0.64	C			3,580	4
SR 430 - Mason Ave.	SR 483/Clyde Morris Blvd. to SR 5A/Nova Rd.	5197	FDOT		Yes	0.99	35	UA_SSAC2_2W_4L	Minor Arterial - Urban	18,200	17,800	18,200	18,500	19,000	20,600	22,000	21,500	21,500	20,700		D	24,300	0.85	D			2,190	4
SR 430 - Mason Ave.	SR 5A/Nova Rd. to US 1	5197	FDOT		Yes	1.08	35	UA_SSAC2_2W_4L	Minor Arterial - Urban	18,200	17,800	18,200	18,500	19,000	20,600	22,000	21,500	21,500	20,700		D	24,300	0.85	D			2,190	4
SR 430 - Mason Ave.	US 1 to Beach St.	5197	FDOT		Yes	0.30	35	UA_SSAC2_2W_4L	Minor Arterial - Urban	18,200	17,800	18,200	18,500	19,000	20,600	22,000	21,500	21,500	20,700		D	32,400	0.64	D			2,920	4
SR 430 - Oakridge Blvd. - EB	Beach St. to Peninsula Dr	5196E	FDOT		Yes	0.70	40	UA_SSAC1_1W_2L	Minor Arterial - Urban	5,500	5,300	5,600	5,900	6,400	7,200	6,500	7,500	11,000	9,200		D	23,880	0.39	C			2,150	2
SR 430 - Oakridge Blvd. - EB	Peninsula Dr to SR A1A/Atlantic	5195	FDOT		Yes	0.28	40	UA_SSAC1_1W_2L	Minor Arterial - Urban	4,700	3,600	4,100	4,200	4,400	4,600	5,400	6,000	4,900	4,800		D	23,880	0.20	C			2,150	2
SR 430 - Seabreeze Bridge - WB	Beach St. to Peninsula Dr	5196W	FDOT		Yes	1.01	40	UA_SSAC1_1W_2L	Minor Arterial - Urban	8,100	7,100	7,200	6,400	6,600 -	-	-		11,500	9,900		D	23,880	0.41	C			2,150	2
SR 430 - Seabreeze Bridge - WB	Peninsula Dr to SR A1A/Atlantic	5191	FDOT		Yes	0.29	30	UA_SSAC2_1W_2L	Minor Arterial - Urban	5,300	4,300	4,900	4,900	5,100	5,800	6,400	7,000	6,000	5,800		D	19,440	0.30	C			1,750	2
SR 441 - Peninsula Dr.	SR A1A/Dunlawton to Florida Shores	5188	FDOT		Yes	2.42	40	UA_SSAC1_2W_2L	Minor Arterial - Urban	5,600	5,300	5,400	5,600	5,400	5,600	5,900	5,700	6,000	5,800		D	17,700	0.33	C			1,600	2
SR 441 - Peninsula Dr.	Florida Shores to Silver Beach Ave.	5187	FDOT		Yes	2.34	35	UA_SSAC1_2W_2L	Minor Arterial - Urban	8,700	9,400	9,300	8,300	8,700	9,000	8,800	8,800	9,000	8,400		D	17,700	0.47	C			1,600	2
SR 441 - Peninsula Dr.	Silver Beach Ave. to US 92/ISB	5187	FDOT		Yes	0.65	35	UA_SSAC1_2W_2L	Minor Arterial - Urban	8,700	9,400	9,300	8,300	8,700	9,000	8,800	8,800	9,000	8,400		D	17,700	0.47	C			1,600	2
SR 442 - Indian River Blvd.	I-95 to Air Park Rd.	170	FDOT		Yes	2.09	55	UA_SSAC1_2W_4L	Minor Arterial - Urban	8,900	9,500	9,920	10,200	10,800	11,400	12,100	12,600	13,200	12,300		D	39,800	0.31	C			3,580	4
SR 442 - Indian River Blvd.	Air Park Rd. to US 1	5190	FDOT		Yes	1.69	45	UA_SSAC1_2W_4L	Minor Arterial - Urban	16,400	16,100	16,800	16,400	17,000	17,600	17,000	16,500	18,000	17,500		D	39,800	0.44	C			3,580	4
SR 472	US 17/92 to CR 4101/MLK Blvd	472	FDOT		Yes	2.31	60	UA_UFH_2W_4L_D	Principal Arterial - Other - Urban	19,700	20,100	21,000	21,400	23,000	24,000	24,000	29,000	29,000	24,000		D	66,200	0.36	B			5,960	4
SR 472	CR 4101/MLK Blvd to I-4 (end of state road)	535

Airport Rd. (PO)	Williamson Blvd to Pioneer Tr.	64	County		Yes	2.50	45	UA_UFH_2W_2L_U	Major Collector - Urban	6,000	6,160	6,040	6,120	7,690	8,430	7,590	7,170	6,600	6,260	7,380	E	32,600	0.23	B	520	630	2,930	2
Airport Rd. (NSB)	Pioneer Tr. to Luna Bella Ln	67	County		Yes	1.60	45	UA_UFH_2W_2L_D	Major Collector - Urban	3,110	3,300	3,320	3,550	3,930	4,570	7,590	4,180	4,320	4,540	5,020	E	34,230	0.15	B	320	420	3,080	2
Airport Rd. (NSB)	Luna Bella Ln to SR 44	68	County		Yes	1.80	45	UA_UFH_2W_2L_D	Major Collector - Urban	2,250	2,610	2,770	3,270	3,760	4,780	7,590	5,150	5,470	6,160	6,860	E	34,230	0.20	B	490	530	3,080	2
Amelia Ave.	SR 44 to Ohio Ave.	73	County		Yes	0.15	30	UA_NSSRC2_2W_4	Major Collector - Urban	10,380	10,580	10,650	10,430	9,410	10,990	11,250	11,780	14,830	8,480	8,530	E	22,820	0.37	C	510	760	2,060	4
Amelia Ave.	Ohio Ave. to Minnesota Ave.	74	County		Yes	0.15	30	UA_NSSRC2_2W_2	Major Collector - Urban	10,310	10,260	10,380	10,320	9,310	11,630	11,140	12,110	12,230	8,650	9,470	E	13,640	0.69	D	530	730	1,020	2
Amelia Ave.	Minnesota Ave. to Plymouth Ave.	75	County		Yes	0.50	30	UA_NSSRC2_2W_2	Major Collector - Urban	10,610	10,230	10,590	10,630	9,170	11,890	11,500	12,840	11,030	8,720	9,850	E	14,040	0.70	D	550	800	1,270	2
Amelia Ave.	Plymouth Ave. to US 92	77	County		Yes	0.85	35	UA_NSSRC2_2W_2	Major Collector - Urban	6,610	6,080	6,700	6,980	6,050	7,430	7,050	6,870	6,360	5,040	5,530	E	14,040	0.39	C	280	500	1,270	2
Ariel Rd.	Beacon Light Rd. to US 1	91	County			1.20	35	RUA_UFH_2W_2L_	Local	560	540	540	540	640	670	550	690	590	590	660	C	6,450	0.10	B	50	70	620	2
Arredondo Grant Rd.	Spring Garden Ranch Rd. to James St.	100	County		Yes	0.60	30	RUA_UFH_2W_2L_	Major Collector - Urban/Rural	1,100	1,140	1,020	1,000	-	1,030	1,150	1,230	1,240	1,120	1,260	C	6,450	0.20	B	110	130	620	2
Arredondo Grant Rd.	James St. to SR 11	101	County		Yes	2.00	35	RUA_UFH_2W_2L_	Major Collector - Rural	510	580	600	610	-	700	780	810	860	850	880	C	6,450	0.14	B	70	100	620	2
Atlantic Ave. (PI)	Beach St. to Major St	110	County		Yes	2.80	35	UA_NSSRC2_2W_2	Minor Collector - Urban	1,760	2,930	2,910	2,630	8,840	3,310	3,420	3,000	2,740	2,390	4,030	E	13,640	0.30	C	210	370	1,020	2
Atlantic Ave. (DBS)	Major St to Marcelle Ave.	111	County		Yes	1.30	35	UA_NSSRC2_2W_2	Minor Collector - Urban	6,780	9,420	9,420	9,260	9,600	9,670	9,720	7,680	11,050	9,940	11,030	E	13,640	0.81	D	660	890	1,020	2
Atlantic Ave. (DBS)	Marcelle Ave. to Phillis Ave.	113	County		Yes	0.75	35	UA_NSSRC2_2W_2	Minor Collector - Urban	8,250	11,990	11,760	11,450	11,850	12,920	12,330	9,970	12,090	11,040	12,890	E	14,740	0.87	D	710	1,040	1,330	2
Atlantic Ave. (DBS)	Phillis Ave. to SR A1A/Dunlawton Ave	115	County		Yes	0.40	35	UA_NSSRC2_2W_2	Minor Collector - Urban	9,170	13,680	13,050	12,920	14,770	15,190	13,540	12,970	15,730	11,290	11,850	E	14,740	0.80	D	740	960	1,330	4
Atlantic Ave/Turtle Mound Rd.	Canaveral Nat'l Park to Turtle Mound Rd.	1872	County		Yes	7.65	45	UA_NSSRC2_2W_2	Principal Arterial - Other - Urban	2,230	2,610	2,450	2,180	2,960	3,050	1,770	2,170	3,140	3,440	3,260	E	13,640	0.24	C	180	300	1,020	2
Atlantic Ave/Turtle Mound Rd.	Turtle Mound Rd. to Saxon Dr.	116	County		Yes	1.60	45	UA_NSSRC1_2W_2	Principal Arterial - Other - Urban	5,580	6,560	6,390	5,520	4,190	6,690	4,850	5,000	7,370	7,030	6,780	E	17,050	0.40	C	430	570	1,540	2
Atlantic Ave/Turtle Mound Rd.	Saxon Dr to Hiles Blvd.	118	County		Yes	0.45	45	UA_NSSRC1_2W_2	Principal Arterial - Other - Urban	5,650	6,530	6,370	5,450	7,470	7,300	5,380	5,000	7,310	7,560	7,100	E	17,050	0.42	C	450	560	1,540	2
Atlantic Ave/Turtle Mound Rd.	Hiles Blvd. to 27th Ave.	120	County		Yes	1.55	45	UA_NSSRC1_2W_2	Principal Arterial - Other - Urban	9,900	11,900	11,400	9,650	8,370	11,630	9,600	9,600	13,370	12,250	13,440	E	17,050	0.79	C	740	1,030	1,540	2
Atlantic Ave/Turtle Mound Rd.	27th Ave. to 6th Ave.	122	County		Yes	1.45	45	UA_NSSRC1_2W_4	Principal Arterial - Other - Urban	13,430	16,510	14,560	12,960	14,450	12,070	15,900	12,720	11,630	18,120	15,010	E	37,970	0.40	C	1,120	1,140	3,410	4
Beach/Riverside/Beach (OB)	Division Ave. to SR 40	131	County		Yes	0.60	35	UA_NSSRC2_2W_2	Major Collector - Urban	6,860	6,800	6,620	7,280	6,700	8,530	6,940	8,090	7,480	6,610	7,490	E	13,640	0.55	D	520	650	1,020	2
Beach/Riverside/Beach (OB)	SR 40 to Wilmette Ave.	132	County		Yes	0.70	35	UA_NSSRC2_2W_2	Major Collector - Urban	8,780	8,780	8,070	8,950	8,610	9,310	7,800	9,700	8,870	9,580	9,180	E	16,000	0.57	D	700	790	1,440	2
Beach/Riverside/Beach (OB)	Wilmette Ave. to Inglesa Ave.	135	County		Yes	2.55	35	UA_NSSRC2_2W_2	Major Collector - Urban	5,660	5,740	5,300	5,410	7,390	6,250	5,410	6,930	6,330	7,250	6,490	E	16,000	0.41	D	470	630	1,440	2
Beach/Riverside/Beach (OB)	Inglesa Ave to Pine Tree Dr.	137	County		Yes	1.10	35	UA_NSSRC2_2W_2	Major Collector - Urban	2,000	1,950	1,830	1,840	2,010	2,160	2,140	2,650	2,500	3,570	2,860	E	16,000	0.18	C	180	290	1,440	2
Beacon Light Rd.	Halifax Ave. to Ariel Rd.	140	County		Yes	2.75	35	RUA_UFH_2W_2L_	Minor Collector - Rural	190	210	170	180	190	240	250	240	280	290	300	C	6,450	0.05	B	20	30	620	2
Beacon Light Rd.	Ariel Rd. to Volco Rd.	141	County		Yes	1.25	35	RUA_UFH_2W_2L_	Minor Collector - Rural	430	370	380	410	390	500	520	460	400	470	600	C	6,450	0.09	B	40	60	620	2
Bellevue Ave. Extension	CR 415/Tomoka Farms Rd to Williamson Blv	151	County		Yes	0.50	35	UA_NSSRC2_2W_2	Minor Collector - Urban	4,970	5,010	5,290	5,290	6,210	5,520	6,100	7,310	6,940	5,880	6,260	E	13,640	0.46	D	440	550	1,020	2
Bellevue Ave. Extension	Williamson Blvd to SR 483/Clyde Morris Blvd	153	County		Yes	2.50	45	UA_NSSRC1_2W_2	Minor Collector - Urban	2,760	2,410	2,570	2,880	2,540	3,250	3,160	4,350	4,060	3,430	3,130	E	13,640	0.23	C	230	310	1,230	2
Beresford Ave.	Beresford Rd. to Fatio Rd	161	County		Yes	0.70	35	UA_NSSRC1_2W_2	Major Collector - Urban	1,280	1,340	1,340	820	1,320	1,560	2,110	1,810	2,100	2,180	2,310	E	13,640	0.17	C	190	220	1,020	2
Beresford Ave.	Fatio Rd. to SR 15A	162	County		Yes	1.30	30	UA_NSSRC2_2W_2	Major Collector - Urban	3,590	3,720	3,540	3,750	3,240	3,440	4,160	4,320	4,650	4,100	4,490	E	13,640	0.33	C	370	400	1,020	2
Beresford Ave.	SR 15A to US 17/92	164	County		Yes	1.75	30	UA_NSSRC2_2W_2	Major Collector - Urban	4,810	4,760	4,740	4,130	-	4,780	5,210	5,070	5,010	5,050	5,170	E	13,640	0.38	C	260	440	1,020	2
Beresford Ave.	US 17/92 to Amelia Ave	165	County		Yes	0.25	35	UA_NSSRC2_2W_2	Major Collector - Urban	9,700	9,520	9,750	9,520	9,490	10,410	10,480	12,250	11,380	10,310	10,530	E	14,740	0.71	D	600	900	1,330	2
Beresford Ave.	Amelia Ave. to Hill Ave.	167	County		Yes	1.00	40	UA_NSSRC1_2W_2	Major Collector - Urban	5,600	5,970	6,070	5,710	5,280	5,710	7,090	7,930	6,570	6,610	7,320	E	17,900	0.41	C	550	690	1,620	2
Beresford Ave.	Hill Ave. to Blue Lake Ave.	169	County		Yes	1.35	40	UA_NSSRC1_2W_2	Future - Major Collector - Urban	2,980	3,300	3,460	3,240	-	3,780	4,440	5,170	4,380	4,300	3,950	E	13,640	0.29	C	300	370	1,230	2
Beresford Ave.	Blue Lake Ave. to MLK (Kepler Rd.)	Future Rd	County		Yes	0.80	40	UA_NSSRC1_2W_2	Future - Major Collector - Urban	-	-	-	-	-	-	-	-	-	-	-	E	13,640	-	-	-	-	1,230	0
Beresford Ave.	MLK (Kepler Rd.) to SR 44	Future Rd	County		Yes	0.75	40	UA_NSSRC1_2W_2	Future - Major Collector - Urban	-	-	-	-	-	-	-	-	-	-	-	E	13,640	-	-	-	-	1,230	0
Beresford Rd.	SR 15A to Spring Garden Ave.	180	County			0.40	30	UA_NSSRC2_2W_2	Major Collector - Urban	470	940	890	860	-	3,520	1,000	5,270	620	480	530	E	13,640	0.04	C	40	50	1,020	2
Beresford Rd.	Spring Garden Ave. to Fatio Rd.	181	County			0.75	30	UA_NSSRC2_2W_2	Major Collector - Urban	670	710	630	670	-	850	780	690	850	550	840	E	13,640	0.06	C	60	80	1,020	2
Beresford Rd.	Fatio Rd. to Beresford Ave	182	County			1.30	30	UA_NSSRC2_2W_2	Major Collector - Urban	1,050	1,060	950	1,120	1,150	1,370	1,370	1,630	1,700	1,740	1,930	E	13,640	0.14	C	160	200	1,020	2
Beresford Rd.	Beresford Ave. to Old New York Ave.	183	County			0.30	35	UA_NSSRC2_2W_2	Major Collector - Urban	1,990	2,050	1,980	2,100	2,130	2,640	2,620	2,980	2,970	3,420	3,640	E	13,640	0.27	C	280	360	1,020	2
Big Tree Rd.	Clyde Morris Blvd. to Nova Rd.	192	County		Yes	1.10	35	UA_NSSRC2_2W_2	Minor Collector - Urban	7,700	8,080	7,200	7,670	5,680	8,750	5,850	6,520	6,920	6,040	6,550	E	13,640	0.48	D	420	570	1,020	2
Big Tree Rd.	Nova Rd. to Magnolia Ave.	193	County		Yes	0.40	35	UA_NSSRC2_2W_2	Minor Collector - Urban	12,230	11,460	11,040	11,350	11,820	13,740	13,190	13,990	12,950	11,220	12,370	E	14,740	0.84	D	830	1,030	1,330	2
Big Tree Rd.	Magnolia Ave. to Kenilworth Ave.	195	County		Yes	0.45	35	UA_NSSRC2_2W_2	Minor Collector - Urban	10,850	10,160	9,290	10,010	9,970	12,190	11,380	11,860	10,810	9,690	10,670	E	14,740	0.72	D	750	720	1,330	3
Big Tree Rd.	Kenilworth Ave. to US 1	196	County		Yes	0.55	35	UA_NSSRC2_2W_2	Minor Collector - Urban	7,270	6,790	6,570	6,970	8,930	8,880	8,110	8,640	8,180	7,200	7,770	E	14,740	0.53	D	470	620	1,330	3
Blackburn Rd.	CR 3 to Emporia Rd	211	County			1.25	35	RUA_UFH_2W_2L_	Minor Collector - Rural	550	550	550	560	640	650	580	590	610	640	730	C	6,450	0.11	B	60	70	620	2
Blackwelder Rd.	Lake Winona Rd. to SR 11	221	County			3.25	35	RUA_UFH_2W_2L_	Local	180	180	170	170	220	210	150	210	200	210	210	C	6,450	0.03	B	20	20	620	2
Blue Lake Ave.	SR 472 to Orange Camp Rd	Future Rd	County		Yes	1.05	45	UA_NSSRC1_2W_2	Major Collector - Urban	-	-	-	-	-	-	-	-	-	-	-	E	17,050	-	-	-	-	1,540	2
Blue Lake Ave.	Orange Camp Rd. to Taylor Rd.	231	County		Yes	1.05	45	UA_NSSRC1_2W_2	Major Collector - Urban	4,110	4,250	3,980	4,180	-	4,660	5,140	4,750	6,480	5,470	5,480	E	17,050	0.32	C	620	530	1,540	2
Blue Lake Ave.	Taylor Rd. to Beresford Ave.	232	County		Yes	1.05	45	UA_NSSRC1_2W_2	Major Collector - Urban	5,200	5,730	5,440	5,820	5,080	5,770	6,910	8,240	8,800	7,460	7,580	E	13,640	0.56	C	600	730	1,230	2
Blue Lake Ave.	Beresford Ave. to Voorhis Ave.	234	County		Yes	0.75	30	UA_NSSRC1_2W_2	Major Collector - Urban	4,180	4,310	4,010	3,750	4,480	4,420	4,610	5,290	4,950	4,970	5,270	E	13,640	0.39	C	410	530	1,020	2
Blue Lake Ave.	Voorhis Ave. to SR 44	235	County		Yes	0.25	30	UA_NSSRC2_2W_2	Major Collector - Urban	3,480	3,520	3,370	3,520	3,550	3,570	3,900	4,560	3,640	3,890	4,140	E	13,640	0.30	C	330	400	1,020	2
Blue Lake Ave.	SR 44 to Minnesota Ave.	236	County		Yes	0.55	30	UA_NSSRC2_2W_2	Major Collector - Urban	4,330	4,190	4,060	4,500	3,880	4,200	5,380	4,920	6,290	5,390	5,720	E	13,640	0.42	D	430	520	1,020	2
Blue Lake Ave.	Minnesota Ave. to Plymouth Ave.	237	County		Yes	1.00	40	UA_NSSRC1_2W_2	Major Collector - Urban	5,780	5,380	5,200	5,670	5,680	5,790	6,750	7,750	7,950	7,040	7,250	E	13,640	0.53	C	560	670	1,230	2
Blue Springs Av (West)	Sparkman Dr to Lawton Dr	239	County			0.60	35	UA_NSSRC2_2W_2	Minor Collector - Urban	5,830	5,410	5,080	5,460	4,020	4,200	5,920	5,600	5,920	5,140	5,090	E	13,640	0.37	C	470	450	1,020	2
Brownlee Rd.	Raulerson Rd. #1 to Raulerson Rd.	240	County			1.70	35	RUA_UFH_2W_2L_	Local	140	180	180	190	160	180	170	190	160	140	200	C	6,450	0.03	B	10	20	620	2
Cardinal Blvd.	SR 421/Dunlawton Ave. to Demotte Ave	245	County			0.15	30	UA_NSSRC2_2W_2	Minor Collector - Urban					1,280	1,690	1,110	1,110	1,080	1,450	1,440	E	13,640	0.11	C	70	130	1,020	2
Cardinal Blvd.	Demotte Ave. to Marcelle Ave	260	County			0.90	30	UA_NSSRC2_2W_2	Minor Collector - Urban	5,090	5,160	4,740	4,740	5,230	7,190	5,030	5,190	5,780	5,380	5,650	E	13,640	0.41	D	350	470	1,020	2
Cardinal Blvd.	Marcelle Ave to Major St.	261	County			1.00	30	UA_NSSRC2_2W_2	Local	790	870	730	820	880	1,330	810	690	780	810	910	E	13,640	0.07	C	50	80	1,020	2
Carter Rd.	SR 11 to Marsh Rd.	270	County			1.75	40	UA_NSSRC1_2W_2	Local	1,400	1,460	1,420	1,520	-	1,700	1,700	1,800	1,860	1,750	1,830	E	13,640	0.13	C	120	160	1,230	2
Cassadaga Rd.	W. Volusia Bltwy. to Macy Ave.	280	County		Yes	1.80	30	UA_NSSRC2_2W_2	Major Collector - Urban	1,970	2,190	2,010	1,900	2,260	2,200	2,500	2,400	2,220	2,380	2,720	E	13,640	0.20	C	350	250	1,020	2
Clara Ave.	SR 15A to New Hampshire Ave.	301	County			0.50	30	UA_NSSRC2_2W_2	Major Collector - Urban	1,640	1,640	1,850	1,870	-	1,820	2,100	2,050	2,080	1,780	1,820	E	13,640	0.13	C	120	160	1,020	2
Clara Ave.	New Hampshire Ave. to Beresford Ave.	303	County			0.50	30	UA_NSSRC2_2W_2	Major Collector - Urban	2,070	2,040	2,270	2,200	-	2,350	3,050	2,860	2,710	2,660	2,770	E	13,640	0.20	C	170	270	1,020	2
Clifton Rd.	Lake Winona Rd. to SR 11	311	County			1.70	30	RUA_UFH_2W_2L_	Local	190	160	170	160	170	230	170	210	180	210	190	C	6,450	0.03	B	20	20	620	2
Clyde Morris Blvd.	Taylor Rd. to SR 421/Dunlawton Ave	330	County		Yes	0.95	40	UA_NSSRC1_2W_2	Minor Arterial - Urban	10,060	9,900	9,190	9,390	8,810	11,220	10,440	10,520	9,910	8,210	9,520	E	17,050	0.56	C	1,010	930	1,540	2
Clyde Morris Blvd.	SR 421/Dunlawton Ave. to Willow Run Blvd.	332	County		Yes	0.65	45	UA_NSSRC1_2W_4	Principal Arterial - Other - Urban	21,310	19,060	18,420	19,280	21,080	21,990	20,230	21,070	18,660	16,850	19,850	E	37,970	0.52	C	1,210	1,560	3,410	4
Clyde Morris Blvd.	Willow Run Blvd. to Madeline Ave.	333	County		Yes	1.30	45	UA_NSSRC1_2W_4	Principal Arterial - Other - Urban	22,750	21,460	20,000	21,710	20,770	22,480	23,240	24,390	21,430	18,820	23,970	E	37,970	0.63	C	1,440	1,950	3,410	4
Clyde Morris Blvd.	Madeline Ave. to Big Tree Rd.	335	County		Yes	1.00	45	UA_NSSRC1_2W_4	Principal Arterial - Other - Urban	24,200	22,260	20,800	22,910	25,110	20,770	24,230	21,490	20,350	21,160	22,050	E	37,970	0.58	C	1,280	1,860	3,410	4
Clyde Morris Blvd.	Big Tree Rd. to SR 400/Beville Rd.	337	County		Yes	0.90	45	UA_NSSRC1_2W_4	Principal Arterial - Other - Urban	24,600	22,880	21,790	23,460	21,760	23,500	24,140	24,280	23,720	19,700	20,620	E	36,070	0.57	C	1,240	1,700	3,240	4
Clyde Morris Blvd.	SR 430/Mason Ave. to Bill France Blvd.	338	County		Yes	0.60	45	UA_NSSRC1_2W_4	Principal Arterial - Other - Urban	13,140	12,310	11,990	12,960	13,930	14,960	14,750	17,520	15,440	13,530	14,860	E	37,970	0.39	C	970	1,170	3,410	4
Clyde Morris Blvd.	Bill France Blvd. to LPGA Blvd.	341	County		Yes	1.25	50	UA_NSSRC1_2W_4	Principal Arterial - Other - Urban	13,450	12,880	12,290	13,370	14,540	13,480	15,910	16,280	15,950	13,940	15,900	E	37,970	0.42	C	1,090	1,330	3,410	4
Clyde Morris Blvd.	LPGA Blvd. to Hand Ave.	343	County		Yes	1.50	50	UA_NSSRC1_2W_4	Principal Arterial - Other - Urban	14,070	13,560	12,280	13,520	13,440	15,250	15,620	15,440	14,640	13,350	17,350	E	37,970	0.46	C	1,240	1,470	3,410	4
Clyde Morris Blvd.	Hand Ave to SR 40/Granada Blvd.	348	County		Yes	0.80	35	UA_NSSRC2_2W_4	Principal Arterial - Other - Urban	12,340	11,940	11,230	11,670	12,230	12,130	12,460	14,400	12,900	11,980	12,700	E	30,420	0.42	C	880	1,030	2,740	4
Commonwealth Blvd.	Spruce Creek Rd. to Orange Ave.	360	County			0.55	30	UA_NSSRC2_2W_2	Minor Collector - Urban	5,250	5,450	5,220	5,180	5,460	5,450	5,530	5,430	5,540	5,260	5,570	E	13,640	0.41	C	350	470	1,020	2
Commonwealth Blvd.	Orange Ave. to US 1	361	County			0.35	30	UA_NSSRC2_2W_2	Minor Collector - Urban	3,670	3,540	3,530	3,620	3,890	3,920	3,840	3,680	3,870	3,850	3,870	E	13,640	0.28	C	230	330	1,020	2
CR 3	Ponce DeLeon Blvd. to Lake Winona Rd.	380	County		Yes	0.45	45	UA_NSSRC1_2W_2	Local	670	610	690	680	-	870	850	910	940	960	1,180	E	13,640	0.09	C	70	110	1,230	2
CR 3	Lake Winona Rd. to SR 40	380	County		Yes	5.04	35	RDA_UFH_2W_2L_	Local	670	610	680	680	-	870	850	910	940	960	1,180	C	11,775	0.10	B	70	110	1,230	2
CR 3	SR 40 to Emporia Rd	382	County		Yes	3.40	45	RDA_UFH_2W_2L_	Minor Collector - Rural	700	680	720	690	-	890	1,030	1,060	910	1,310	1,490	C	11,775	0.13	B	100	120	1,230	2
CR 3	Emporia Rd to Washington Ave.	384	County		Yes	1.20	30	RDA_UFH_2W_2L_	Minor Collector - Rural	1,650	1,680	1,660	1,580	1,750	2,190	2,300	2,130	2,130	1,780	1,890	C	11,775	0.16	B	130	200	1,230	2
CR 3	Washington Ave. to 'US 17	386	County		Yes	2.20	35	RDA_UFH_2W_2L_	Minor Collector - Rural	1,040	1,100	1,060	1,250	1,160	1,330	1,100	1,140	1,140	1,240	1,230	C	11,775	0.10	B	70	100	1,230	2
CR 15A	US 17 to Airport Rd.	440	County		Yes	0.90	50	UA_UFH_2W_2L_U	Minor Arterial - Urban	4,220	4,060	3,980	4,120	-	4,770	4,810	4,720	4,390	5,420	5,230	E	24,450	0.21	B	330	480	2,200	2
CR 15A	Airport Rd. to SR 11	441	County		Yes	1.25	40	UA_UFH_2W_2L_U	Minor Arterial - Urban	2,190	2,060	2,070	2,130	-	2,680	2,610	2,480	2,780	3,070	2,940	E	24,450	0.12	B	200	280	2,200	2
CR 92 (Intn'l Spdwy Blvd.)	SR 15A to Stone St.	450	County		Yes	0.25	45	UA_NSSRC1_2W_4	Principal Arterial - Other - Urban	11,970	11,770	12,070	11,940	13,310	14,620	14,060	13,620	15,300	14,360	13,780	E	37,970	0.36	C	780	1,100	3,410	4
CR 92 (Intn'l Spdwy Blvd.)	Stone St. to US 17/92	452	County		Yes	0.75	45	UA_NSSRC1_2W_4	Principal Arterial - Other - Urban	14,370	14,000	14,510	13,800	15,230	16,440	15,250	13,230	14,530	13,960	14,720	E	37,970	0.39	C	790	1,220	3,410	4
CR 305 (Bunnell Rd.)	US 17 to Cowart Rd.	460	County		Yes	1.50	50	RUA_UFH_2W_2L_	Major Collector - Rural	1,490	1,420	1,360	1,460	1,560	1,790	1,750	1,850	1,900	1,780	2,110	C	6,450	0.33	B	200	210	620	2
CR 305 (Bunnell Rd.)	Cowart Rd. to Flagler Co.	461	County		Yes	3.00	50	RUA_UFH_2W_2L_	Major Collector - Rural	990	890	910	990	-	1,370	1,270	1,360	1,390	1,330	1,600	C	6,450	0.25	B	160	170	620	2
Cow Creek Rd.	SR 442 to Volco Rd.	420	County		Yes	3.50	50	RUA_UFH_2W_2L_	Local	750	740	760	850	840	860	800	900	1,050	750	990	C	6,450	0.15	B	70	90	620	2
Cowart Rd.	Bunnell Rd to Little Brown Church Rd.	430	County			2.05	40	RUA_UFH_2W_2L_	Local	260	230	220	250	230	250	290	320	230	240	280	C	6,450	0.04	B	20	20	620	2
Daugharty Rd. (S. End)	Marsh Rd. to SR 11	470	County		Yes	0.80	35	RUA_UFH_2W_2L_	Local	510	510	490	520	-	560	500	520	530	520	520	C	6,450	0.08	B	30	50	620	2
Daugharty Rd.	SR 11 to Marsh Rd.	472	County			0.95	35	RUA_UFH_2W_2L_	Minor Collector - Rural	550	550	510	580	-	760	720	700	800	830	860	C	6,450	0.13	B	70	80	620	2
Demotte Ave.	Peninsula Dr. to Cardinal Blvd	500	County			0.20	35	UA_NSSRC2_2W_2	Minor Collector - Urban	3,940	4,480	4,050	4,120	4,690	6,270	4,610	4,740	5,190	5,060	5,090	E	13,640	0.47	C	340	490	1,020	2
Derbyshire Rd.	SR 430/Mason Ave. to LPGA Blvd.	511	County			1.45	30	UA_NSSRC2_2W_2	Major Collector - Urban	5,950	5,980	5,870	6,130	6,330	6,590	6,410	8,230	7,940	7,310	8,000	E	13,640	0.59	D	480	650	1,020	2
Derbyshire Rd.	LPGA Blvd. to Flomich St.	512	County	Yes		0.75	30	UA_NSSRC2_2W_2	Major Collector - Urban	7,930	7,470	7,320	7,280	6,040	8,020	7,300	8,790	8,890	8,010	7,900	E	13,640	0.58	D	460	650	1,020	2
Dirksen/DeBary/Doyle	US 17/92 to Sunrise Blvd.	520	County	Yes		1.75	45	UA_NSSRC1_2W_2	Minor Arterial - Urban	6,910	6,230	6,190	6,680	7,780	10,270	8,050	8,290	8,360	7,400	8,470	E	13,640	0.62	C	590	930	1,230	2
Dirksen/DeBary/Doyle	Sunrise Blvd to WB I-4 Ram

Dunn/George Engram/Fairview/Main	Bill France Blvd. to Clyde Morris Blvd.	718	County		Yes	0.85	35	UA_NSSRC2_2W_2	Minor Arterial - Urban	10,550	10,400	10,150	10,730	#REF!	12,880	10,510	14,510	14,390	11,550	11,600	E	14,740	0.79	D	730	960	1,330	2
Dunn/George Engram/Fairview/Main	Clyde Morris Blvd. to SR 5A/Nova Rd.	719	County		Yes	1.00	40	UA_NSSRC1_2W_4	Minor Arterial - Urban	10,430	10,310	10,230	10,830	10,640	10,870	10,800	11,500	11,760	8,360	9,330	E	37,970	0.25	C	600	770	3,410	4
Dunn/George Engram/Fairview/Main	SR 5A/Nova Rd. to US 1	720	County		Yes	1.20	35	UA_NSSRC2_2W_4	Minor Arterial - Urban	5,570	5,060	5,380	4,990	9,640	10,550	10,750	11,790	11,040	8,950	9,260	E	30,420	0.30	C	550	770	2,740	4
Dunn/George Engram/Fairview/Main	US 1 to Beach St	631	County		Yes	0.40	30	UA_NSSRC2_2W_2	Minor Arterial - Urban	6,980	6,330	6,560	6,190	5,880	5,350	5,620	6,080	6,290	4,870	5,710	E	14,040	0.41	C	300	490	1,270	2
Dunn/George Engram/Fairview/Main	Beach St. to Peninsula Dr.	1170	County		Yes	0.60	30	UA_NSSRC2_2W_2	Minor Arterial - Urban	6,010	5,700	5,540	5,210	8,020	7,190	7,440	8,410	8,470	5,280	6,330	E	14,040	0.45	C	330	540	1,270	2
Emporia Rd.	SR 40 to Peterson/Blackburn	560	County		Yes	3.00	40	RUA_UFH_2W_2L	Minor Collector - Rural	690	720	690	660	-	910	860	850	920	920	1,090	C	6,450	0.17	B	70	100	620	2
Emporia Rd.	Peterson/Blackburn to US 17	564	County		Yes	1.45	40	RUA_UFH_2W_2L	Minor Collector - Rural	1,280	1,230	1,320	1,060	-	1,250	1,220	1,110	1,100	1,290	1,700	C	6,450	0.26	B	150	130	620	2
Enterprise Ave. (NSB)	Pioneer Tr. to Halleck St.	570	County			0.10	35	UA_NSSRC2_2W_2	Major Collector - Urban	7,460	7,000	7,740	7,900	8,210	8,550	9,760	9,230	9,530	9,080	9,800	E	13,640	0.72	D	630	830	1,020	2
Enterprise Rd.	DeBary Ave. to Deltona Blvd.	581	County		Yes	1.10	35	UA_NSSRC2_2W_2	Minor Arterial - Urban	7,800	7,150	7,270	7,390	7,050	8,300	8,660	9,320	7,630	7,680	8,520	E	14,040	0.61	D	640	720	1,270	2
Enterprise Rd.	Deltona Blvd. to Highbanks Rd.	582	County		Yes	0.50	35	UA_NSSRC2_2W_4	Minor Arterial - Urban	15,330	14,620	14,110	15,010	15,820	14,130	16,650	16,720	17,920	15,730	16,690	E	30,420	0.55	D	1,010	1,370	2,740	4
Enterprise Rd.	Highbanks Rd. to Saxon Blvd.	584	County		Yes	1.55	45	UA_NSSRC1_2W_4	Minor Arterial - Urban	23,460	23,750	21,590	23,790	20,550	20,510	25,710	19,820	25,290	19,830	20,900	E	37,970	0.55	C	1,270	1,740	3,410	4
Enterprise Rd.	Saxon Blvd. to Harley Strickland Blvd.	585	County		Yes	0.50	45	UA_NSSRC1_2W_4	Minor Arterial - Urban	23,670	22,790	20,710	22,110	23,120	23,900	23,240	19,220	23,680	22,540	23,370	E	37,970	0.62	C	1,370	1,940	3,410	4
Enterprise Rd.	Harley Strickland Blvd. to US 17/92	586	County		Yes	0.50	35	UA_NSSRC2_2W_4	Minor Arterial - Urban	22,090	20,900	19,330	20,650	20,860	21,370	21,970	23,760	20,970	24,510	25,680	E	30,420	0.84	D	1,500	2,070	2,740	4
Enterprise-Osteen Rd.	Providence to Garfield Rd	600	County		Yes	1.50	30	UA_NSSRC2_2W_2	Minor Collector - Urban	2,690	2,470	2,470	2,490	2,630	3,110	3,360	3,350	3,920	3,490	3,500	E	13,640	0.26	C	240	370	1,020	2
Enterprise-Osteen Rd.	Garfield Rd to Reed Ellis Rd.	601	County		Yes	1.70	35	UA_NSSRC2_2W_2	Minor Collector - Urban	1,850	1,690	1,690	1,760	1,960	2,400	2,930	2,860	3,100	2,900	2,970	E	13,640	0.22	C	220	330	1,020	2
Enterprise-Osteen Rd.	Reed Ellis Rd. to SR 415	602	County		Yes	2.50	35	UA_NSSRC2_2W_2	Minor Collector - Urban	1,160	1,080	1,160	1,140	1,250	1,480	1,360	1,250	1,250	1,310	1,280	E	13,640	0.09	C	70	120	1,020	2
Euclid Ave.	Grand to Fatio Rd.	610	County			0.25	35	UA_NSSRC2_2W_2	Minor Collector - Urban	1,190	1,080	1,150	1,030	1,130	1,190	1,310	1,300	1,420	1,220	1,390	E	13,640	0.10	C	90	120	1,020	2
Euclid Ave.	Fatio Rd. to Woodward Ave.	611	County			0.25	30	UA_NSSRC2_2W_2	Minor Collector - Urban	1,360	1,270	1,330	1,220	1,360	1,390	1,460	1,570	1,590	1,490	1,620	E	13,640	0.12	C	110	140	1,020	2
Euclid Ave.	Woodward Ave. to SR 15A	612	County			0.50	30	UA_NSSRC2_2W_2	Minor Collector - Urban	2,310	2,300	2,290	2,140	2,280	2,320	2,440	2,640	2,570	2,530	2,650	E	13,640	0.19	C	200	240	1,020	2
Euclid Ave.	SR 15A to Adelle Ave.	613	County			0.75	30	UA_NSSRC2_2W_2	Minor Collector - Urban	2,440	2,510	2,430	2,380	2,450	2,830	2,790	3,130	2,970	2,880	2,960	E	13,640	0.22	C	200	270	1,020	2
Euclid Ave.	Adelle Ave. to US 17/92	614	County			0.50	30	UA_NSSRC2_2W_2	Minor Collector - Urban	2,150	2,200	2,150	2,210	-	2,260	2,190	2,330	2,060	2,100	2,260	E	13,640	0.17	C	130	200	1,020	2
Flomich St.	Derbyshire Rd. to SR 5A/Nova Rd.	650	County		Yes	0.30	30	UA_NSSRC2_2W_2	Major Collector - Urban	5,450	5,570	5,430	5,140	4,900	5,300	5,470	5,540	5,510	4,820	5,100	E	13,640	0.37	C	280	440	1,020	2
French Ave.	Beginning of road to Blue Springs Park	690	County			1.00	30	UA_NSSRC2_2W_2	Minor Collector - Urban	140	180	130	270	-	200	-	160	150	150	230	E	13,640	0.02	C	10	30	1,020	2
French Ave.	Blue Springs Park to Lawton Ave./Hamilton	691	County			1.25	35	UA_NSSRC2_2W_2	Minor Collector - Urban	520	670	480	1,260	-	710	-	1,000	1,040	1,100	1,090	E	13,640	0.08	C	40	130	1,020	2
Garfield Ave.	SR 44 to Plymouth Ave.	700	County			1.00	30	UA_NSSRC2_2W_2	Local	2,350	2,280	1,980	1,910	-	2,430	2,270	2,400	2,070	1,920	2,130	E	13,640	0.16	C	140	180	1,020	2
Garfield Ave.	Plymouth Ave. to US 92	702	County			0.85	30	UA_NSSRC2_2W_2	Local	2,310	2,220	2,100	2,280	-	2,390	2,760	3,100	2,830	2,370	2,510	E	13,640	0.18	C	160	210	1,020	2
Garfield Rd.	Doyle Rd. to Enterprise-Osteen Rd	711	County			0.90	40	UA_NSSRC1_2W_2	Minor Collector - Urban	1,860	1,680	1,530	1,550	1,670	1,900	2,130	1,850	2,220	1,920	2,020	E	13,640	0.15	C	140	200	1,230	2
Glencoe Rd.	Taylor Rd. to Paige Ave.	730	County			1.50	40	UA_NSSRC1_2W_2	Minor Collector - Urban	1,310	1,300	1,410	1,510	1,660	1,740	1,810	2,040	2,110	2,260	2,540	E	13,640	0.19	C	190	250	1,230	2
Glencoe Rd.	Paige Ave. to SR 44	731	County			1.10	35	UA_NSSRC2_2W_2	Minor Collector - Urban	3,710	3,780	3,820	3,720	4,030	4,280	-	-		4,500	5,360	E	13,640	0.39	C	380	460	1,020	2
Glencoe Rd.	SR 44 to Pioneer Tr.	732	County			0.85	35	UA_NSSRC2_2W_2	Minor Collector - Urban	1,670	1,820	1,930	1,870	1,570	1,500	1,590	1,770	1,800	1,850	2,080	E	13,640	0.15	C	140	190	1,020	2
Glenwood Rd.	Grand Ave. to SR 15A	741	County			1.60	35	UA_NSSRC2_2W_2	Major Collector - Urban	4,210	4,170	4,030	4,040	-	4,360	4,120	4,380	4,500	4,360	4,210	E	13,640	0.31	C	250	370	1,020	2
Glenwood Rd.	SR 15A to US 17	743	County			1.25	35	UA_NSSRC2_2W_2	Major Collector - Urban	2,140	2,140	2,050	2,000	-	2,400	2,260	2,340	2,390	2,110	1,750	E	13,640	0.13	C	120	200	1,020	2
Grand Av/CR 4053	Old New York Ave. to SR 44	748	County		Yes	0.60	30	UA_NSSRC2_2W_2	Major Collector - Urban	810	860	830	940	970	-	-	1,230	1,550	1,870	1,980	2,290	E	13,640	0.17	C	170	250	1,020	2
Grand Av/CR 4053	SR 44 to Minnesota Ave.	750	County		Yes	0.90	35	UA_NSSRC2_2W_2	Major Collector - Urban	2,250	1,820	2,190	2,280	2,570	3,090	3,010	3,630	4,090	3,860	4,440	E	13,640	0.33	C	310	470	1,020	2
Grand Av/CR 4053	Minnesota Ave. to Plymouth Ave.	751	County		Yes	0.50	40	UA_NSSRC1_2W_2	Major Collector - Urban	1,240	1,270	1,260	1,240	1,410	1,760	1,530	1,680	1,900	1,780	1,880	E	13,640	0.14	C	130	180	1,230	2
Grand Av/CR 4053	Plymouth Ave. to Glenwood Rd.	752	County		Yes	2.10	40	UA_NSSRC1_2W_2	Major Collector - Urban	1,910	2,010	2,080	1,990	2,330	2,680	2,310	2,570	2,650	2,570	2,800	E	13,640	0.21	C	200	250	1,230	2
Grand Av/CR 4053	Glenwood Rd. to Lemon St.	754	County		Yes	1.30	35	UA_NSSRC2_2W_2	Major Collector - Urban	3,700	3,630	3,550	3,550	3,860	4,010	4,020	4,200	4,270	3,950	4,070	E	14,740	0.28	C	270	370	1,330	2
Grand Av/CR 4053	Lemon St. to Retta St.	756	County		Yes	1.80	40	UA_NSSRC1_2W_2	Major Collector - Urban	1,740	1,720	1,700	1,740	1,990	2,100	1,860	2,190	2,200	2,280	2,300	E	13,640	0.17	C	160	210	1,230	2
Graves Av/CR 4145	Veteran's Memorial Pkwy. to Kentucky Ave.	775	County		Yes	0.30	45	UA_NSSRC1_2W_2	Minor Arterial - Urban	17,570	17,140	16,750	17,160	18,780	19,180	19,190	19,590	21,760	19,090	19,750	E	17,900	1.10	F	1,180	1,640	1,620	2
Graves Av/CR 4145	Kentucky Ave. to Normandy Blvd.	900a	County		Yes	0.60	45	UA_NSSRC1_2W_2	Minor Arterial - Urban	13,790	11,840	12,970	13,640	14,510	15,310	14,060	15,520	16,040	15,580	16,370	E	17,900	0.91	C	1,000	1,420	1,620	2
Graves Av/CR 4145	Normandy Blvd. to Howland Blvd.	900b	County		Yes	0.25	35	UA_NSSRC2_2W_4	Minor Arterial - Urban	13,790	11,840	12,970	13,640	14,510	15,310	14,060	15,520	16,040	16,310	19,290	E	30,420	0.63	D	1,290	1,650	2,740	4
Greens Dairy Rd.	SR 15A to Stone St.	780	County			0.50	30	UA_NSSRC2_2W_2	Local	120	90	100	120	-	150	200	210	230	200	160	E	13,640	0.01	C	10	20	1,020	2
Halleck St. (NSB)	Wayne Ave. to Enterprise Ave.	810	County		Yes	0.20	30	UA_NSSRC2_2W_2	Major Collector - Urban	6,170	5,780	5,890	6,450	6,530	6,410	6,940	7,200	6,940	6,830	7,390	E	13,640	0.54	D	110	180	1,020	2
Hand Ave.	Williamson Blvd. to Clyde Morris Blvd.	830	County		Yes	1.25	50	UA_NSSRC1_2W_2	Major Collector - Urban	7,660	7,900	6,750	8,330	9,520	8,720	6,880	9,860	9,590		9,480	E	17,050	0.56	A	640	770	1,540	2
Hand Ave.	Clyde Morris Blvd. to Shangri La Dr.	832	County		Yes	0.75	50	UA_NSSRC1_2W_2	Major Collector - Urban	13,220	13,090	10,230	13,950	14,870	15,370	16,690	17,010	16,350	14,340	15,180	E	17,050	0.89	C	1,050	1,230	1,540	2
Hand Ave.	Shangri La Dr. to SR 5A/Nova Rd.	833	County		Yes	0.25	45	UA_NSSRC1_2W_4	Major Collector - Urban	14,880	14,320	13,350	14,950	16,320	15,820	17,270	18,250	17,000	13,370	16,410	E	37,970	0.43	C	1,090	1,360	3,410	4
Hazen Rd.	SR 44 to Plymouth Ave.	850	County		Yes	1.00	40	UA_NSSRC1_2W_2	Major Collector - Urban	1,050	1,240	1,250	1,400	1,480	1,680	1,680	1,980	1,650	1,440	1,790	E	13,640	0.13	C	140	180	1,230	2
Hazen Rd.	Plymouth Ave. to Mercers Fernery Rd.	852	County			1.50	35	UA_NSSRC2_2W_2	Major Collector - Urban	720	700	800	820	680	850	910	1,020	1,380	840	910	E	13,640	0.07	C	130	80	1,020	2
Highbridge Rd.	Walter Boardman Ln. to John Anderson Dr.	871	County		Yes	1.60	30	RDA_UFH_2W_2L	Major Collector - Rural	1,830	2,100	1,750	2,020	2,480	2,770	2,210	2,570	3,160		3,390	C	11,775	0.29	A	200	290	1,120	2
Highbridge Rd.	John Anderson Dr. to SR A1A	872	County		Yes	0.20	30	UA_NSSRC2_2W_2	Major Collector - Urban	1,520	1,780	1,490	1,660	2,170	2,380	2,120	2,110	2,680	2,490	2,940	E	13,640	0.22	C	170	240	1,020	2
Hill Ave.	Taylor Rd. to Beresford Ave.	878	County			1.00	30	UA_NSSRC2_2W_2	Local	430	480	550	820	-	1,070	1,030	1,260	1,140	1,060	1,080	E	13,640	0.08	C	80	110	1,020	2
Hill Ave.	Beresford Ave. to Voorhis Ave.	881	County			0.75	30	UA_NSSRC2_2W_2	Major Collector - Urban	2,310	2,370	2,200	2,510	-	2,680	2,780	2,840	2,980	2,430	2,450	E	13,640	0.18	C	230	240	1,020	2
Hill Ave.	Voorhis Ave. to SR 44	882	County			0.25	30	UA_NSSRC2_2W_2	Major Collector - Urban	2,530	2,780	2,540	2,760	-	3,220	3,150	3,710	3,590	3,060	3,130	E	13,640	0.23	C	270	280	1,020	2
Hill Ave./Jacobs Rd.	Plymouth Ave. to US 92	950	County		Yes	0.85	40	UA_NSSRC1_2W_2	Major Collector - Urban	5,870	5,190	5,820	5,900	6,170	7,590	7,510	8,420	8,270	7,230	7,390	E	13,640	0.54	C	600	560	1,230	2
Hontoon Rd.	end of road to Botts Landing Rd.	890	County			2.00	35	UA_NSSRC2_2W_2	Minor Collector - Urban	870	790	840	880	1,000	1,090	1,040	930	970	970	1,120	C	5,260	0.21	C	80	100	1,020	2
Hontoon Rd.	Botts Landing Rd. to Old New York Ave.	891	County			1.15	40	UA_NSSRC1_2W_2	Minor Collector - Urban	3,050	2,840	2,820	2,990	3,180	3,450	3,240	3,020	3,190	2,950	3,540	C	12,100	0.29	C	240	290	1,230	2
Howland Blvd.	I-4/SR 472 to Wolf Pack Run	901	FDOT		Yes	0.40	45	UA_NSSRC1_2W_4	Minor Arterial - Urban	30,490	29,890	27,480	30,590	36,570	32,320	38,300	36,990	34,320	30,660	31,360	E	37,970	0.83	C	2,080	2,530	3,410	4
Howland Blvd.	Wolf Pack Run to Catalina Blvd.	903	County		Yes	1.15	45	UA_NSSRC1_2W_4	Minor Arterial - Urban	28,010	27,440	25,280	27,770	31,520	30,270	30,040	31,480	30,520	26,130	28,510	E	37,970	0.75	C	1,860	2,310	3,410	4
Howland Blvd.	Catalina Blvd. to Providence Blvd.	905	County		Yes	0.35	45	UA_NSSRC1_2W_4	Minor Arterial - Urban	22,110	21,930	20,070	22,700	23,710	23,950	25,520	23,110	23,670	19,360	20,570	E	37,970	0.54	C	1,360	1,670	3,410	4
Howland Blvd.	Providence Blvd. to Elkcam Blvd.	906	County		Yes	2.10	45	UA_NSSRC1_2W_2	Minor Arterial - Urban	16,890	14,140	15,150	16,430	16,780	17,220	18,800	18,930	17,430	13,580	14,120	E	13,640	1.04	E	970	1,110	1,230	2
Howland Blvd.	Elkcam Blvd. to Lake Helen-Osteen Rd.	908	County		Yes	0.30	45/40	UA_NSSRC1_2W_4	Minor Arterial - Urban	15,300	15,620	14,220	15,090	16,530	15,940	18,760	18,190	17,500	13,670	16,110	E	37,970	0.42	C	950	1,260	3,410	4
Howland Blvd.	Lake Helen-Osteen Rd. to Newmark Dr.	909	County		Yes	0.70	40	UA_NSSRC1_2W_4	Minor Arterial - Urban	20,350	20,990	19,330	19,900	19,690	21,360	25,290	23,160	21,860	19,970	22,640	E	37,970	0.60	C	1,470	1,890	3,410	4
Howland Blvd.	Newmark Dr. to Courtland Blvd.	911	County		Yes	1.15	45	UA_NSSRC1_2W_4	Minor Arterial - Urban	16,640	16,990	15,600	15,490	16,060	17,440	20,200	18,130	20,630	16,480	19,260	E	37,970	0.51	C	1,310	1,640	3,410	4
Howland Blvd.	Courtland Blvd. to Ft Smith Blvd.	913	County		Yes	1.80	45	UA_NSSRC1_2W_4	Minor Arterial - Urban	13,280	12,920	11,770	11,240	10,990	12,000	16,230	14,620	14,080	12,970	15,700	E	37,970	0.41	C	1,280	1,360	3,410	4
Howland Blvd.	Ft Smith Blvd. to SR 415	915	County		Yes	0.65	45	UA_NSSRC1_2W_4	Minor Arterial - Urban	12,650	12,180	12,530	12,960	14,030	13,600	18,230	16,400	17,200	15,690	17,850	E	37,970	0.47	C	1,230	1,590	3,410	4
I-4 Frontage Rd.	Summit Ave. to Orange Camp Rd.	Future Ro	County		Yes	2.00	45	UA_NSSRC1_2W_2	n/c	-	-	-	-	-	-	-	-	-	-	-		12,100	-	-	-	-	1,230	0
I-4 Frontage Rd.	Orange Campe Rd. to Cassadaga Rd.	Future Ro	County		Yes	1.35	45	UA_NSSRC1_2W_4	n/c	-	-	-	-	-	-	-	-	-	-	-	E	37,970	-	-	-	-	3,410	0
I-4 Frontage Rd.	Cassadaga Rd. to SR 472	Future Ro	County		Yes	0.70	45	UA_NSSRC1_2W_4	n/c	-	-	-	-	-	-	-	-	-	-	-	E	37,970	-	-	-	-	3,410	0
Indian Lake Rd.	Tiger Bay Rd. to US 92	935	County			0.80	40	UA_NSSRC1_2W_2	Local	6,090	5,550	5,180	5,150	5,870	6,660	6,590	6,370	6,470	4,710	5,250	E	13,640	0.38	C	490	490	1,230	2
John Anderson Dr.	Halifax Dr to Lynnhurst	972	County		Yes	0.85	30	UA_NSSRC2_2W_2	Major Collector - Urban	5,390	5,520	6,730	4,370	5,180	5,790	5,520	5,200	5,570	5,060	3,590	E	13,640	0.26	C	280	290	1,020	2
John Anderson Dr.	Lynnhurst to Highbridge Rd.	974	County		Yes	7.40	35	UA_NSSRC2_2W_2	Major Collector - Urban	3,590	3,960	4,570	3,240	3,700	4,190	4,080	3,870	3,940	3,670	3,890	E	13,640	0.29	C	290	340	1,020	2
John Anderson Hwy.	Walter Boardman Lane to Flagler Co.	990	County		Yes	1.00	5 NB / 30 S	RDA_UFH_2W_2L	Minor Collector - Rural	1,000	1,140	900	950	1,150	1,190	1,170	1,200	1,180	1,230	1,420	C	11,775	0.12	B	90	130	1,120	2
Josephine St./10th St.	Old Mission Rd. to Tatum Blvd.	1000	County		Yes	0.30	30	UA_NSSRC2_2W_2	Major Collector - Urban	5,810	5,860	5,910	5,820	4,830	6,650	6,230	5,590	7,020	5,840	6,010	E	13,640	0.44	D	610	530	1,020	2
Josephine St./10th St. (NSB)	Tatum Blvd. to US 1	1002	County		Yes	1.80	35	UA_NSSRC2_2W_2	Major Collector - Urban	7,350	7,140	-	-	4,940	6,990	-	-	-	-	-	E	14,040		A	30	40	1,270	2
Kathy Dr. (N. Penin.)	John Anderson Dr. to SR A1A	1011	County			0.44	30	UA_NSSRC2_2W_2	Local	420	460	470	460	410	500	410	440	430	430	470	E	13,640	0.03	C	690	910	1,020	2
Kennedy Pkwy (Old SR 3)	US 1 to Park Entrance	1020	Federal			4.00	55	RUA_UFH_2W_2L	Major Collector - Rural	700	660	-	-	-	-	-	850	850	850		C	6,450		B	120	140	620	2
Kicklighter Rd.	Macy Ave. to Lake Helen-Osteen/Prevatt	1051	County		Yes	0.75	30	UA_NSSRC2_2W_2	Minor Collector - Urban	2,080	1,810	1,690	1,680	1,820	2,020	2,100	2,190	2,110	1,880	1,950	E	13,640	0.14	C	410	200	1,020	2
Lake George Rd.	Bream Dr. to US 17	1062	County			3.90	30	RUA_UFH_2W_2L	Local	860	820	740	780	810	810	850	880	790	710	730	C	6,450	0.11	B	50	60	620	2
Lake Helen-Osteen Rd.	Howland Blvd. to Elkcam Blvd.	1070	County		Yes	0.40	35	UA_NSSRC2_2W_2	Minor Arterial - Urban	6,140	6,050	6,060	5,920	6,140	6,360	7,430	7,800	6,910	6,710	7,970	E	13,640	0.58	D	570	730	1,020	2
Lake Helen-Osteen Rd.	Elkcam Blvd. to Haulover Blvd.	1071	County		Yes	1.75	45	UA_NSSRC1_2W_2	Minor Arterial - Urban	7,690	7,540	7,220	6,920	5,440	5,680	5,490	9,500	8,270	8,160	9,470	E	13,640	0.69	C	690	820	1,230	2
Lake Helen-Osteen Rd.	Haulover Blvd. to Catalina Blvd.	1072	County		Yes	0.50	45	UA_NSSRC1_2W_2	Minor Arterial - Urban	10,320	9,740	9,570	9,850	10,510	11,000	11,260	12,610	11,300	11,210	12,740	E	13,640	0.93	C	1,040	1,090	1,230	2
Lake Helen-Osteen Rd.	Catalina Blvd. to Captain Dr	1073	County		Yes	0.40	45	UA_NSSRC1_2W_2	Minor Arterial - Urban	7,410	7,090	6,840	7,110	7,420	7,700	7,830	8,560	7,580	7,650	8,480	E	13,640	0.62	C	700	750	1,230	2
Lake Helen-Osteen Rd.	Captain Dr. to Kicklighter Rd.	1076	County		Yes	1.40	40	UA_NSSRC1_2W_2	Minor Arterial - Urban	7,030	6,570	6,750	6,760	6,990	7,280	7,910	7,590	8,260	7,750	8,940	E	13,640	0.66	C	1,050	840	1,230	2
Prevatt Ave.	Kicklighter Rd to Lake Pearl Dr.	1520	County		Yes	1.50	40	UA_NSSRC1_2W_2	Minor Arterial - Urban	4,800	4,390	4,570	3,910	-	4,640	5,070	5,220	4,600	4,540	6,080	C	15,120	0.40	C	590	530	1,540	2
Prevatt Ave.	Lake Pearl Dr. to SR 44	1523	County		Yes	1.80	55	UA_NSSRC1_2W_2	Minor Arterial - Urban	4,630	4,230	4,470	4,200	4,570	5,680	5,510	4,800	4,700	5,710	7,210	E	17,050	0.42	C	650	560	1,540	2
Lake Winona Rd.	CR 3 to US 17	1080	County		Yes	0.15	35	RUA_UFH_2W_2L	Local	160	170	170	220	-	350	290	260	200	220	280	C	6,450	0.04	B	20	30	620	2
Lake Winona Rd.	US 17 to Blackwelder Rd.	1081	County		Yes	2.25	35	RUA_UFH_2W_2L	Minor Collector - Rural	880	800	800	980	-	1,030	980	1,110	1,130	1,070	1,050	C	6,450	0.16	B	80	90	620	2
Lake Winona Rd.	Blackwelder Rd. to SR 40	1082	County		Yes	3.70	35	RUA_UFH_2W_2L	Minor Collector - Rural	150	120	140	160	-	200	170	190	200	130	190	C	6,450	0.03	B	20	20	620	2
Children's Way/Lakeshore Dr.	Main St. to Providence Blvd.	1090	County		Yes	0.70	30	UA_NSSRC2_2W_2	Local	1,000	960	900	870	940	1,000	1,000	840	830	1,500	940	E	13,640	0.07	C	60	110	1,020	2
Lakeshore Dr.	Providence Blvd. to Garfield Rd	1092	County		Yes	0.45	30	UA_NSSRC2_2W_2	Minor Collector - Urban	2,590	2,610	2,520	2,570	2,820	3,170	3,180	2,970	3,120	1,770	3,130	E	13,640	0.23	C	180	300	1,020	2
Lakeview Dr. (LH)	Ohio Ave. to Main St.	1100	County		Yes	0.50	30	UA_NSSRC2_2W_2	Minor Collector - Urban	2,600	2,790	2,740	3,280	3,690	3,280	4,330	4,390	3,890	3,420	3,830	C	5,260	0.73	C	440	390	1,020	2
Lakeview Dr. (LH)	Main St. to New York Ave.	1101	County			0.25	30	UA_NSSRC2_2W_2	Minor Collector - Urban	1,130	1,190	1,110	1,140	1,250	1,150	1,420	1,170	1,120	1,230	1,330	C	5,260	0.25	C	130	130	1,020

Volusia County's Segment Growth Rates and Vested Trips Instructions Policy



The applicant must provide a detailed narrative justifying any request to modify growth rate, particularly in cases where there is a significant difference. This narrative should be accompanied by thorough supporting documentation, which outlines the specific factors contributing to the observed variations and explains how the proposed growth rate aligns with the overall traffic patterns and conditions in the area.

AND

IF there are - Vested Trips

Negative Growth (Use Minimum 1%):

\+ Vested Trips

Low to Medium Growth (<= 3%)(Use Minimum 1%):

\+ Vested Trips

High Growth (> 3%):

Use the Highest # of the two (growth rate or vested trips). Need to submit supporting documentation & justification.

HIGH GROWTH & HIGH VESTED TRIPS

If there are Vested Trips from multiple approved projects on segment.
And, Vested Trips comprise of multiple uses that would normally have significant interaction (residential, retail, office, restaurant, etc…).

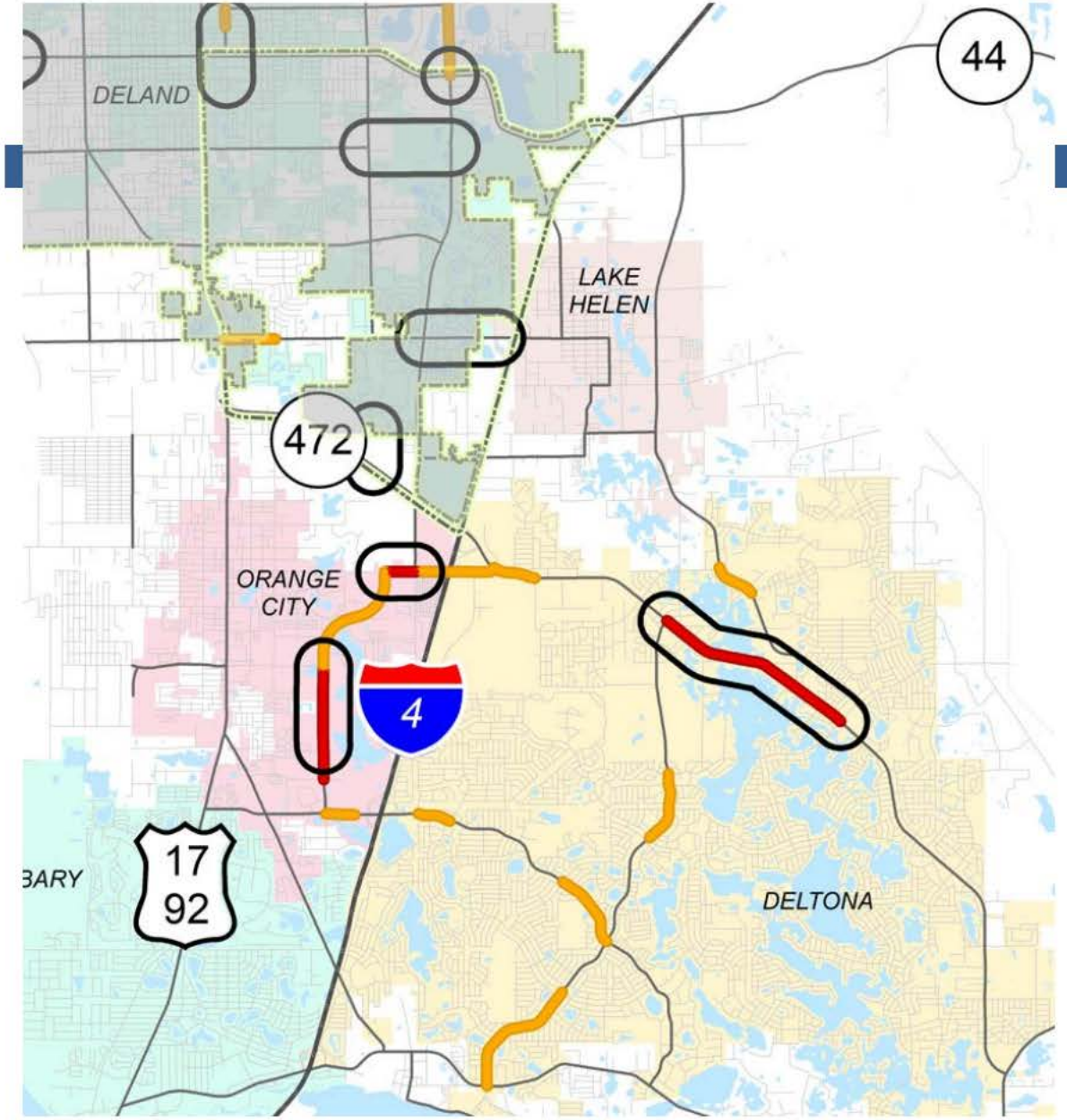
And, Vested Trips make up more than 30% of the total future background traffic.

Then, Vested Trips can be reduced by 30% upon request by the Applicant

Signed:_____ Date:_____

Jay Williams, PE, PTOE

ZONE 3



Deltona

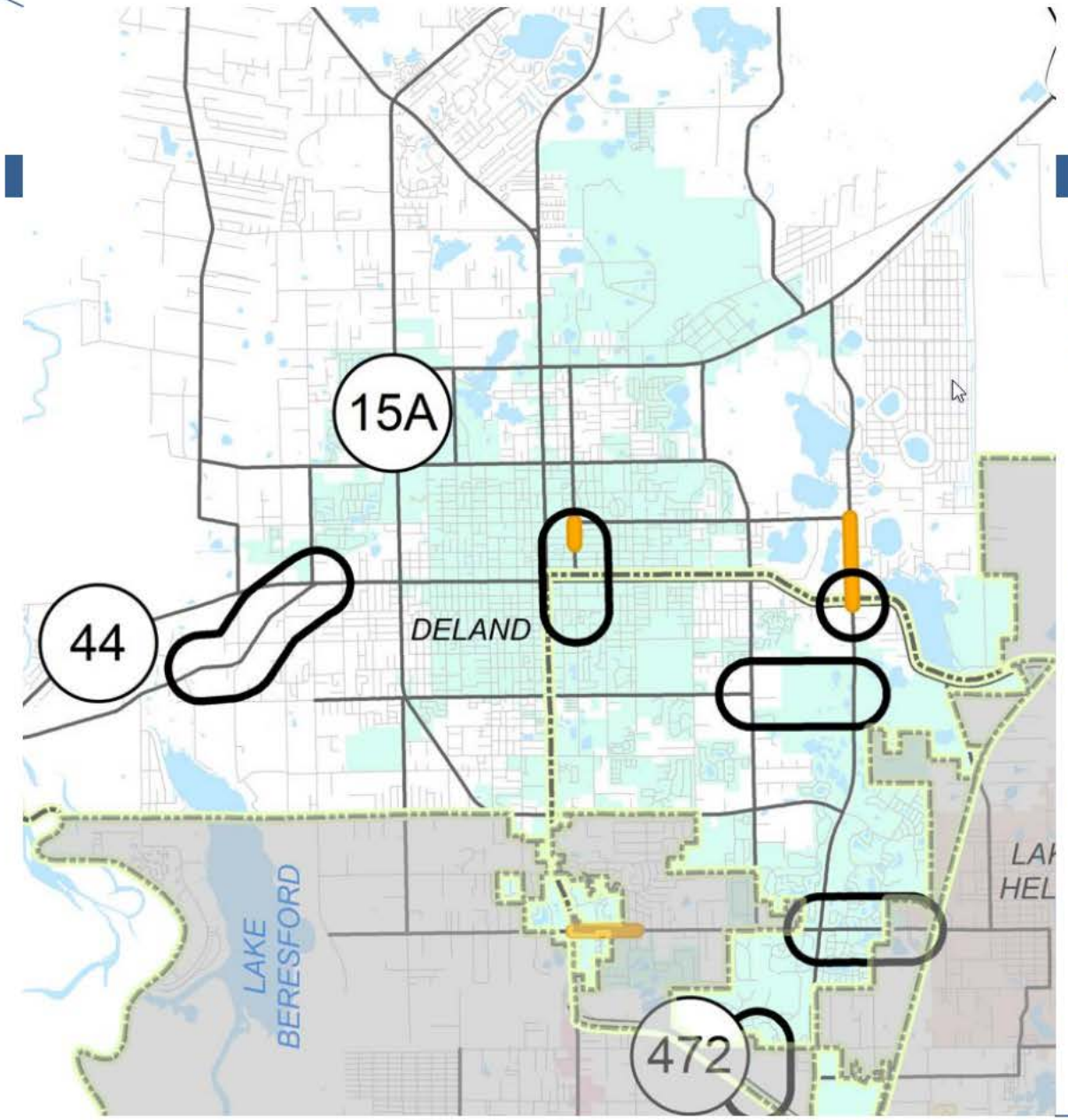
- Howland Blvd widening from Providence Blvd to Elkcam Blvd
  (Construction Underway)

Orange City

- Graves Ave widening from 2 Lanes to 3 Lanes Veterans Memorial Pkwy to Kentucky Av
  (Design Underway)

- Veterans Memorial Pkwy widening from current limits of 4 Lanes to Rhode Island Av
  (Design Underway)

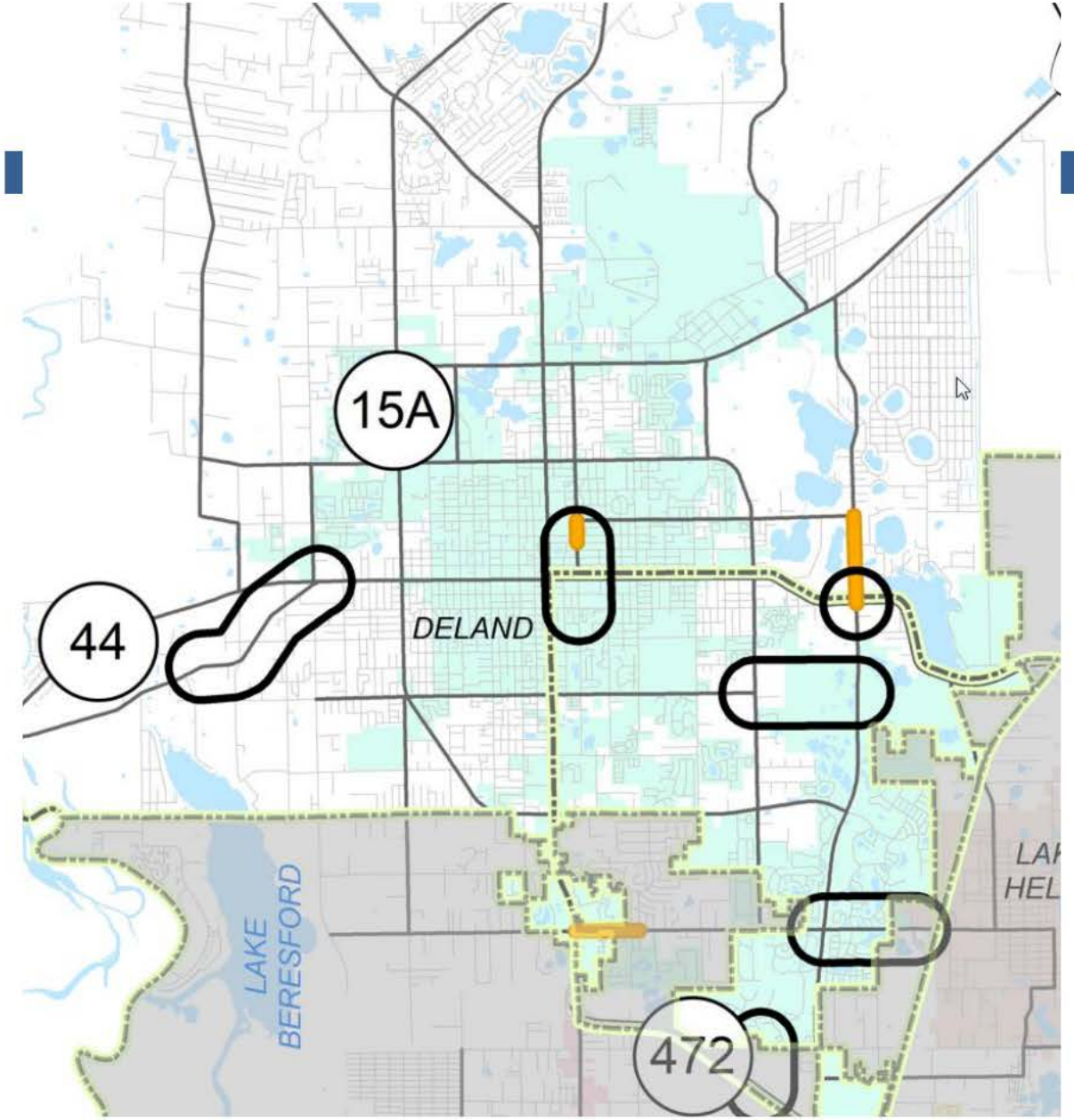
ZONE 4



DeLand

- **Orange Camp Rd widening from Martin Luther King Jr. Btwy to I-4**
  (Construction Underway)
- **Old New York Av Add Paved Shoulders SR 44 to Shell Rd**
  (Design Underway)
- **Beresford Rd Extension from Blue Lake Av to Kepler Rd/Martin Luther King Jr. Btwy**
  (Design & ROW Acquisition Underway)

ZONE 4



- **Amelia Av Lane Reduction from Voorhis Ave to Ohio Ave**
  (Design & ROW Acquisition Underway)
- **Blue Lake Av Extension from Blue Lake Av in Victoria Park to SR 472**
  (Design & ROW Acquisition Underway)

Appendix D
ITE Trip Generation Sheets

Single-Family Detached Housing
(210)

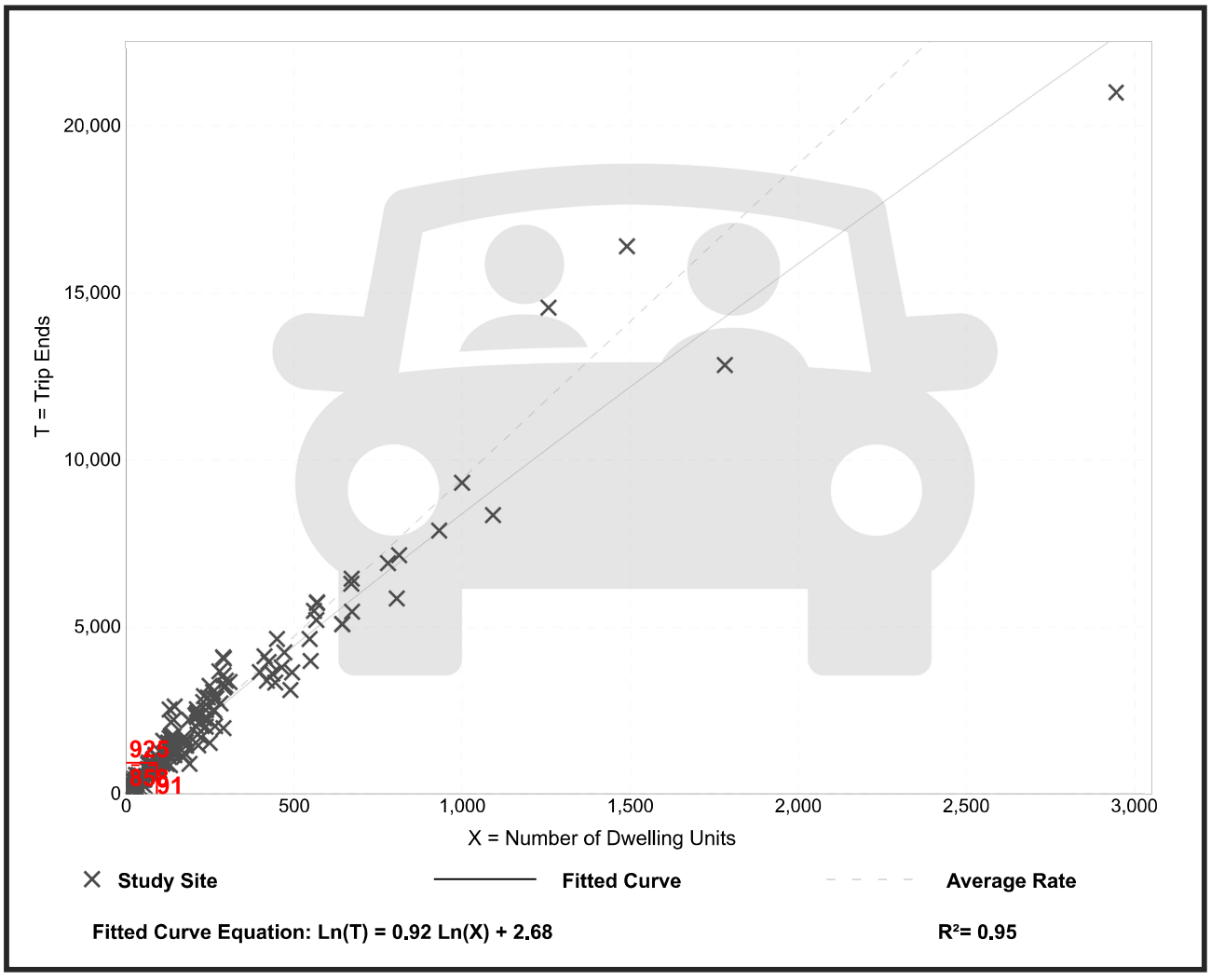
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 174
Avg. Num. of Dwelling Units: 246
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.43	4.45 - 22.61	2.13

Data Plot and Equation



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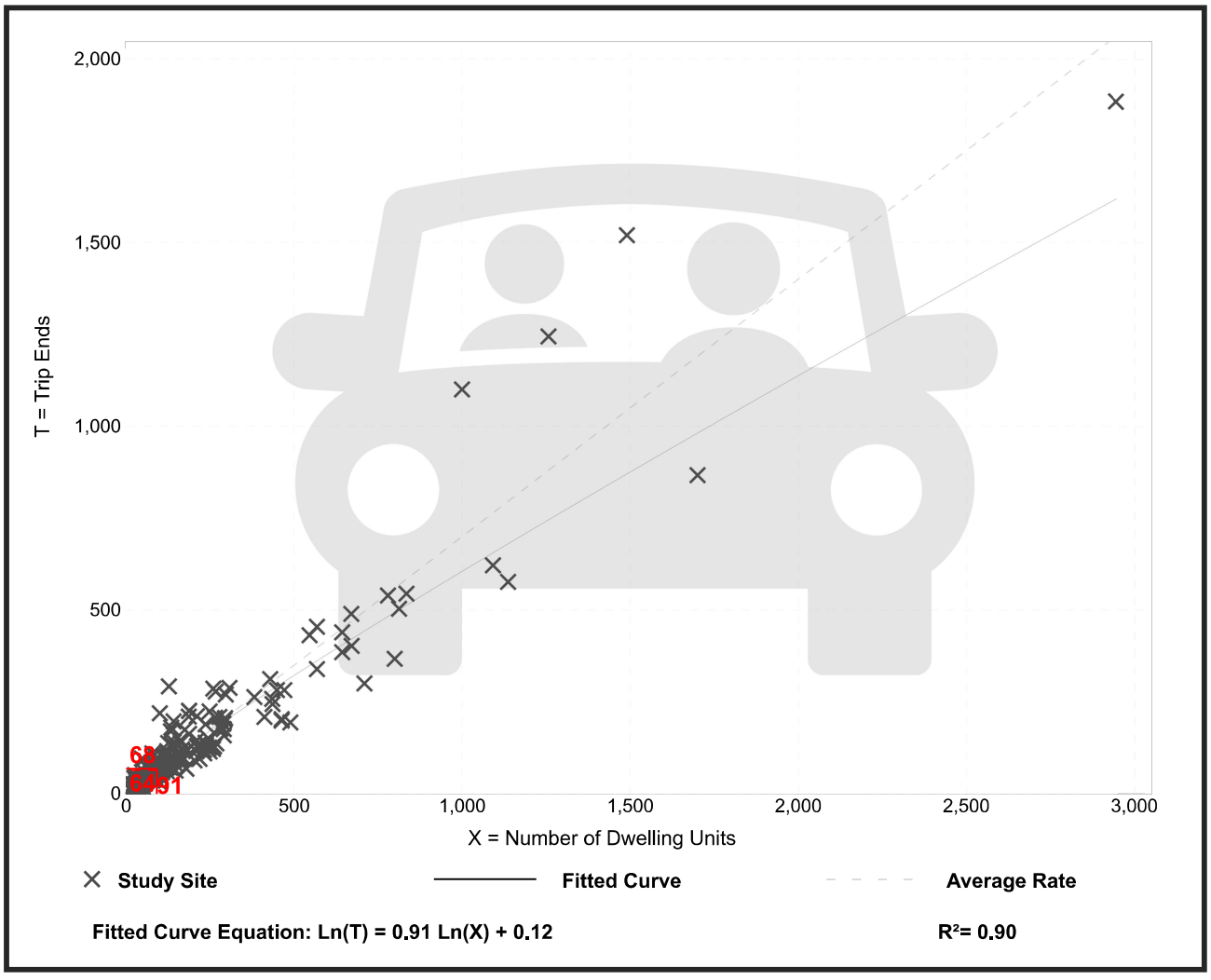
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 192
Avg. Num. of Dwelling Units: 226
Directional Distribution: 25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.70	0.27 - 2.27	0.24

Data Plot and Equation



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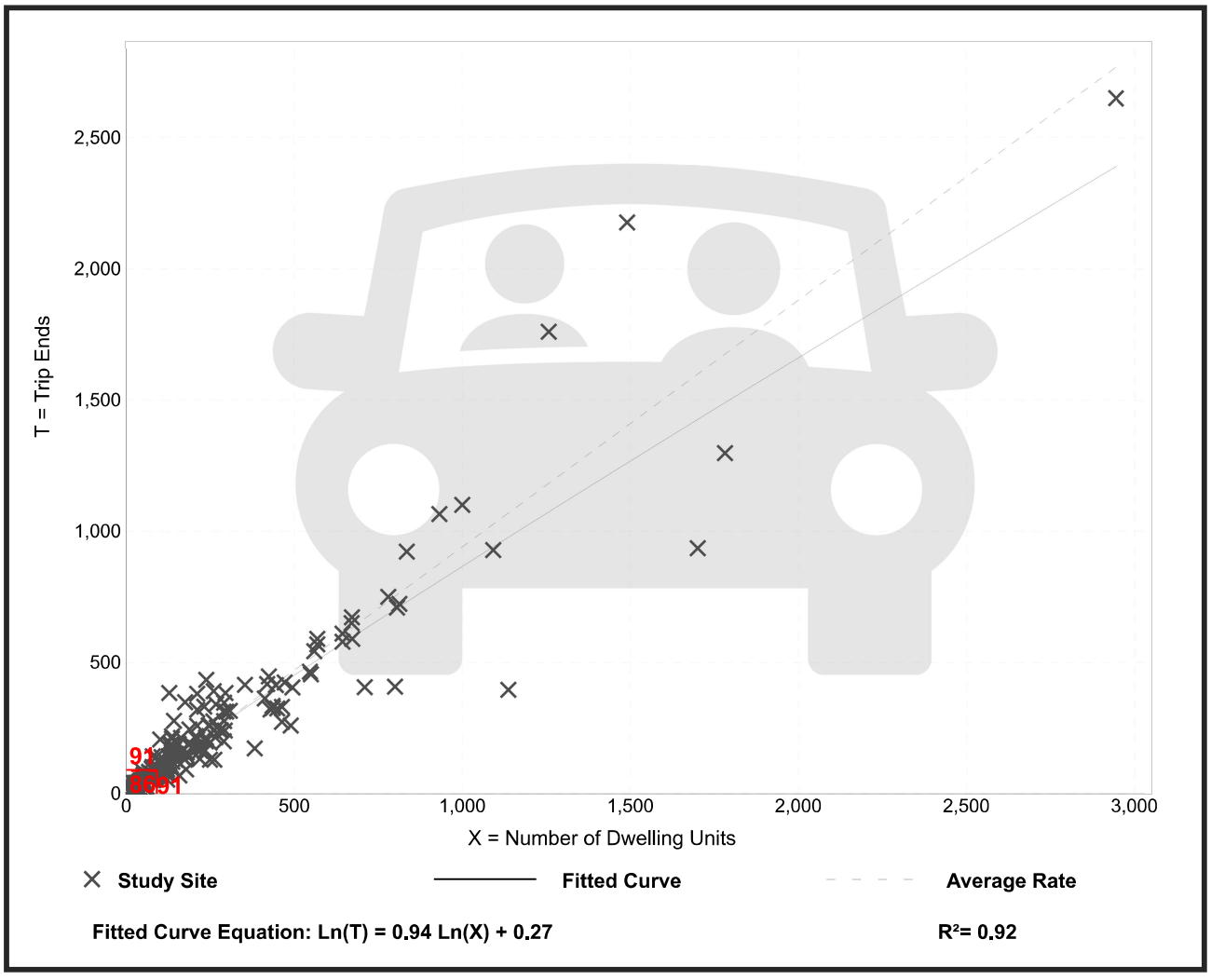
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	208
Avg. Num. of Dwelling Units:	248
Directional Distribution:	63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.94	0.35 - 2.98	0.31

Data Plot and Equation



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Single-Family Attached Housing
(215)

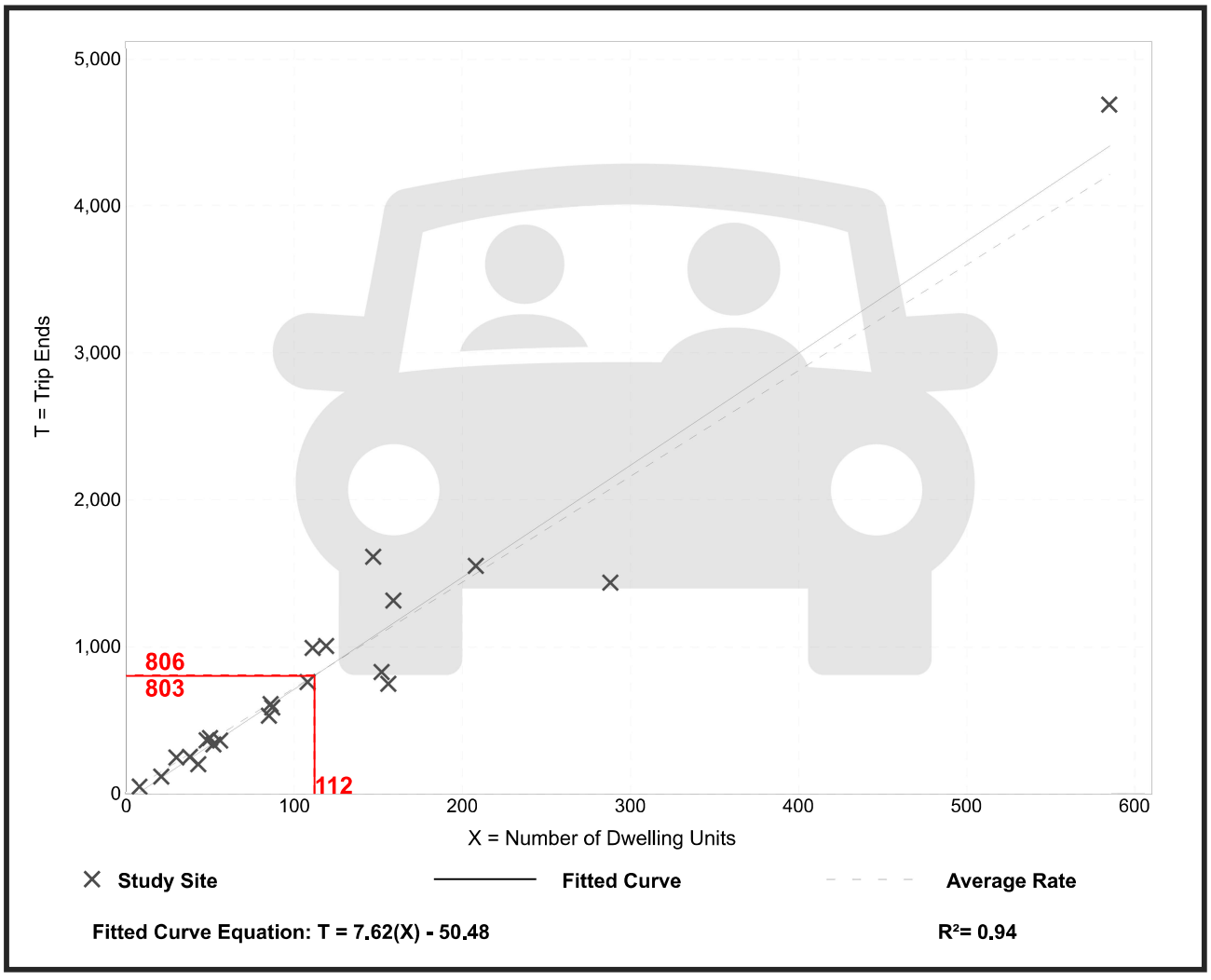
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 22
Avg. Num. of Dwelling Units: 120
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
7.20	4.70 - 10.97	1.61

Data Plot and Equation



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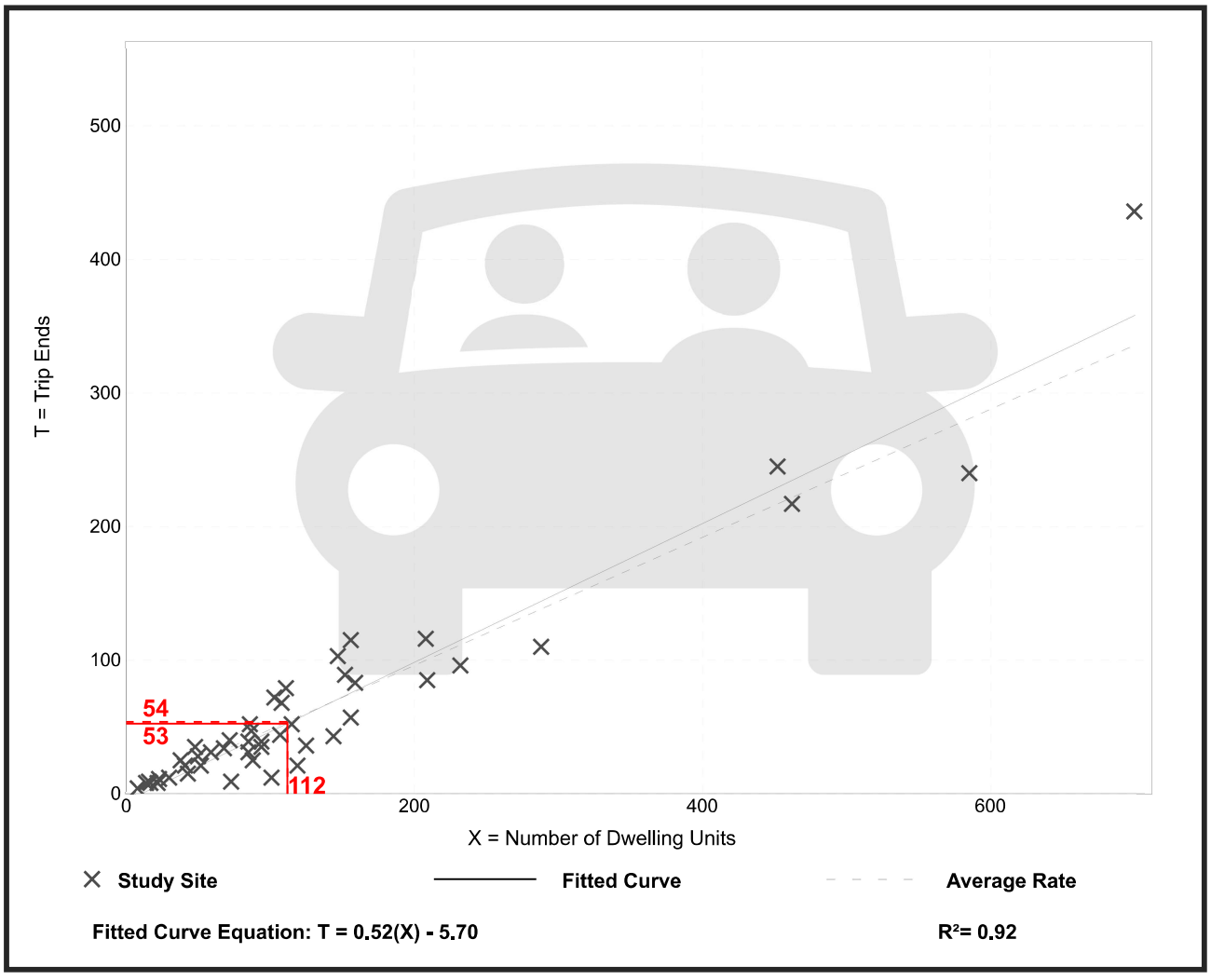
Single-Family Attached Housing
(215)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 46
Avg. Num. of Dwelling Units: 135
Directional Distribution: 25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.48	0.12 - 0.74	0.14

Data Plot and Equation



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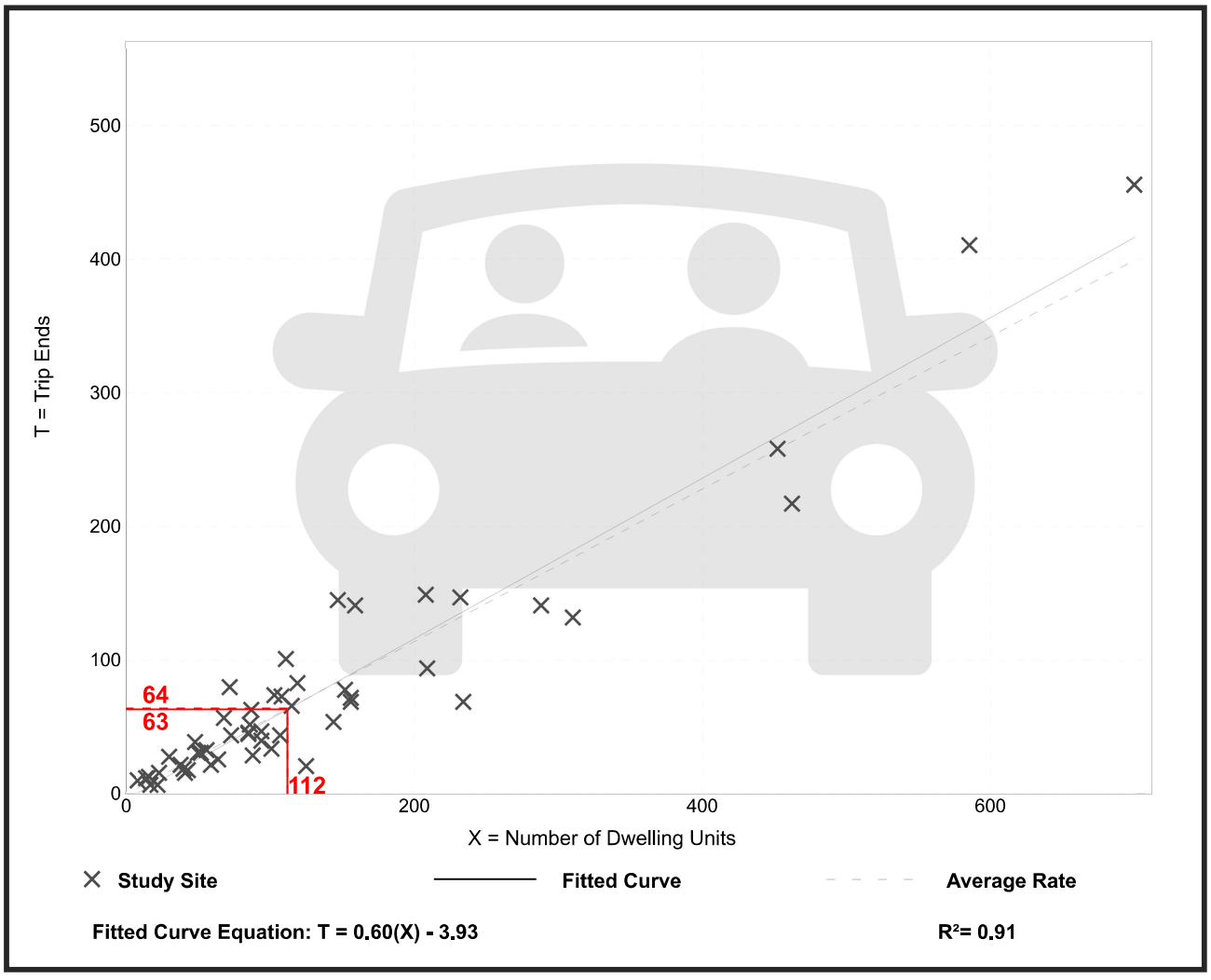
Single-Family Attached Housing
(215)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	51
Avg. Num. of Dwelling Units:	136
Directional Distribution:	59% entering, 41% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.57	0.17 - 1.25	0.18

Data Plot and Equation



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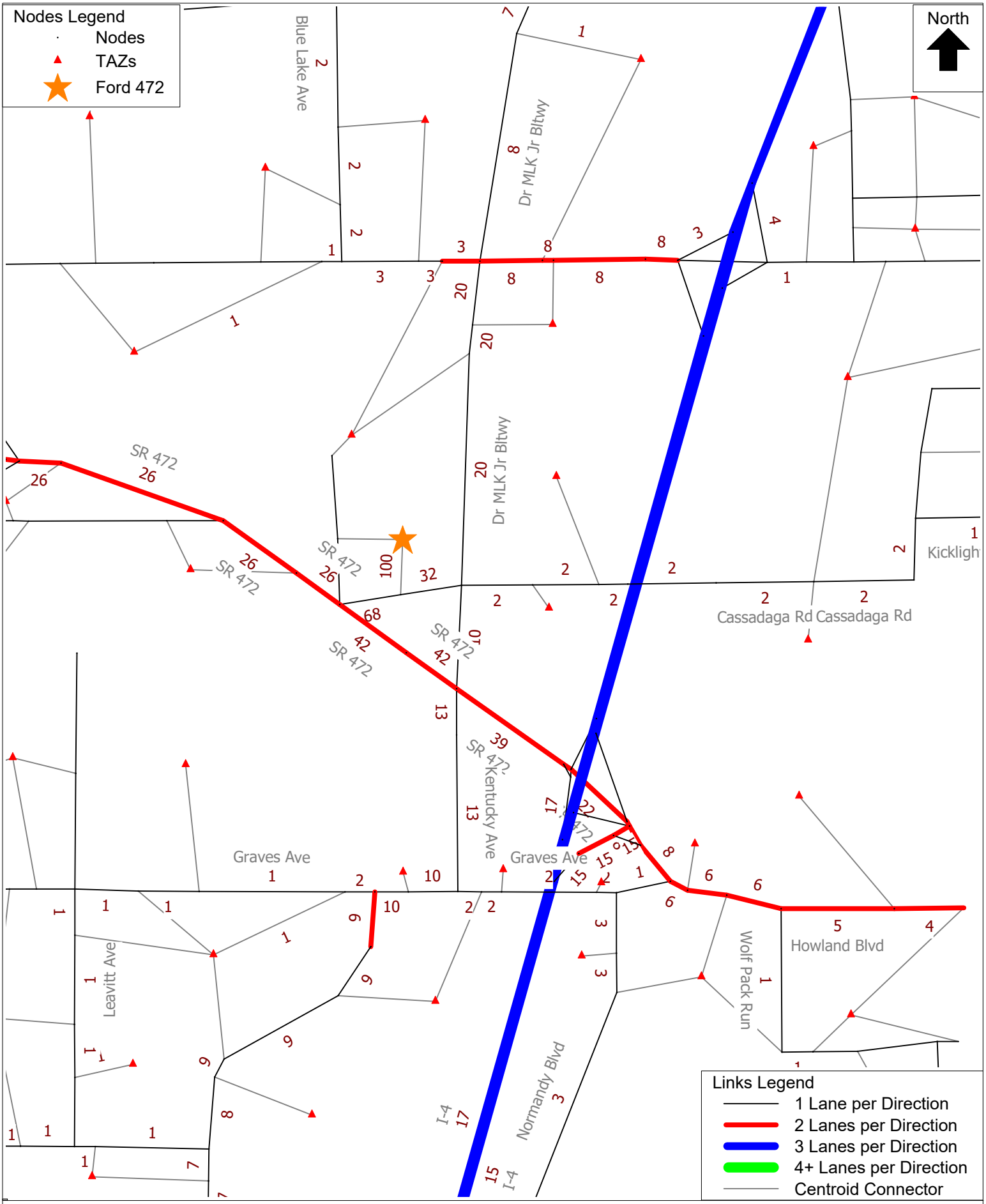
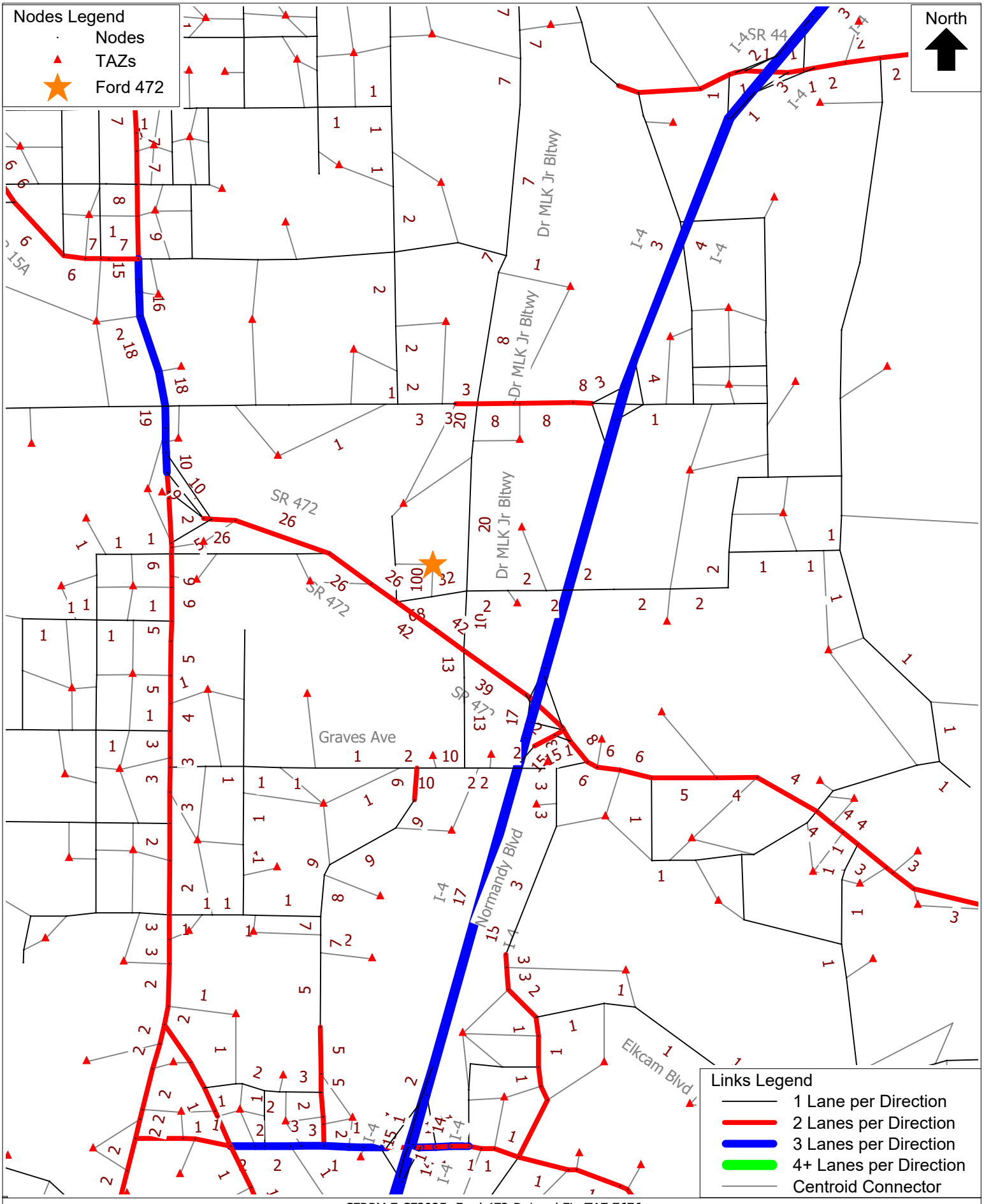
Appendix E
Model Distribution Plots


Nodes Legend
Nodes
TAZs
Ford 472
North
Blue Lake Ave
Dr MLK Jr Bltwy
SR 472
Cassadaga Rd
Graves Ave
Kentucky Ave
Leavitt Ave
Howland Blvd
Wolf Pack Run
Normandy Blvd
I-4
Links Legend
1 Lane per Direction
2 Lanes per Direction
3 Lanes per Direction
4+ Lanes per Direction
Centroid Connector



CFRPM 7 CF2025 -Ford 472-DeLand FL. TAZ 7676
Project Distribution
C:\FSUTMS\D5\CFRPM7\Base\CF_2025\P21145\OUTPUT\HWYLOAD_SL_AllDay_A25.NET Fri 20 Aug 2021

cube

(Licensed to)

Appendix F
2022 Volusia County AADT and Historical Counts

Road Name	Limits (From - To)	Count Station Number	Roadway Maintaining Agency	2021 Roadway on County's Thoroughfare	Distance (in miles)	Posted Speed	2021 QLOS Facility Type	2010 Federal Functional Classification	2011 AADT	2012 AADT	2013 AADT	2014 AADT	2015 AADT	2016 AADT	2017 AADT	2018 AADT	2019 AADT	2020 AADT	2021 AADT	2022 AADT	VC 2022 Allowable LOS	DAILY 2022 LOS Capacity	DAILY 2021 V/C Ratio	DAILY 2022 LOS	2022 AM Peak	2022 PM Peak	PEAK 2Way 2022 LOS Capacity	2021 No. of Lanes
Rd_Name	Limits	Cnt_Sta	MainRes	Tfare21	Distance	SPD2013	F_Type_21	Fun_Class_2010	AADT_11	AADT_12	AADT_13	AADT_14	AADT_15	AADT_16	AADT_17	AADT_18	AADT_19	AADT_20	AADT_21	AADT_22	VCA_LOS_22	Cap_22	VCRatio_22	LOS_22	AMPKHR_22	PMPKHR_22	2W_Cap_22	Lanes_20
Cassadaga Rd.	W. Volusia Bltwy. to Macy Ave.	280	County	Yes	1.80	30	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	1,970	2,190	2,010	1,900	2,260	2,200	2,500	2,400	2,220	2,380	2,750	2,500	E	13,640	0.18	C	140	210	1,020	2
Graves Av/CR 4145	Veteran's Memorial Pkwy. to Kentuck	775	County	Yes	0.30	45	UA_NSSRC1_2W_2L_D_WL	Minor Arterial - Urban	**17,570**	17,140	16,750	17,160	18,780	19,180	19,190	19,590	**21,760**	19,090	19,750	20,000	E	17,900	1.12	F	1,230	1,635	1,620	2
Graves Av/CR 4145	Kentucky Ave. to Normandy Blvd.	900a	County	Yes	0.60	45	UA_NSSRC1_2W_2L_D_WL	Minor Arterial - Urban	13,790	11,840	12,970	13,640	14,510	15,310	14,060	15,520	16,040	15,580	16,370	19,700	E	17,900	1.10	C	1,420	1,675	1,620	2
Graves Av/CR 4145	Normandy Blvd. to Howland Blvd.	900b	County	Yes	0.25	35	UA_NSSRC2_2W_4L_D_WL	Minor Arterial - Urban	13,790	11,840	12,970	13,640	14,510	15,310	14,060	15,520	16,040	16,310	18,540	16,100	E	30,420	0.53	D	1,140	1,340	2,740	4
Howland Blvd.	I-4/SR 472 to Wolf Pack Run	901	FDOT	Yes	0.40	45	UA_NSSRC1_2W_4L_D_WL	Minor Arterial - Urban	30,490	29,890	27,480	30,590	36,570	32,320	38,300	36,990	34,320	30,660	31,040	30,900	E	37,970	0.81	C	2,185	2,410	3,410	4
Howland Blvd.	Wolf Pack Run to Catalina Blvd.	903	County	Yes	1.15	45	UA_NSSRC1_2W_4L_D_WL	Minor Arterial - Urban	28,010	27,440	25,280	27,770	31,520	30,270	30,040	31,480	30,520	26,130	28,510	27,100	E	37,970	0.71	C	1,975	2,125	3,410	4
Howland Blvd.	Providence Blvd. to Elkcam Blvd.	906	County	Yes	2.10	45	UA_NSSRC1_2W_2L_U_0L	Minor Arterial - Urban	16,890	14,140	15,150	16,430	16,780	17,220	18,800	18,930	**17,430**	13,580	13,980	13,900	E	13,640	1.02	E	945	1,020	1,230	2
Orange Camp Rd.	US 17/92 to Princeton	1380	County	Yes	0.75	35	UA_NSSRC2_2W_2L_U_WL	Minor Arterial - Urban	9,020	9,640	9,080	9,320	11,480	11,800	12,370	13,170	14,220	13,570	13,600	13,200	E	14,040	0.94	E	840	1,160	1,270	2
Orange Camp Rd.	Blue Lake Ave. to W Volusia Bltwy. (I	1384	County	Yes	0.55	50	UA_NSSRC1_2W_2L_U_WL	Minor Arterial - Urban	8,880	9,600	9,330	9,980	11,700	12,110	12,650	13,910	14,220	13,660	14,510	12,400	E	17,050	0.73	C	845	1,075	1,540	2
Orange Camp Rd.	W Volusia Bltwy. (Dr MLK Jr) to I-4	1385	County	Yes	1.00	50	UA_NSSRC1_2W_2L_U_WL	Minor Arterial - Urban	10,910	11,300	10,870	10,700	12,020	12,050	13,080	15,040	14,430	13,230	14,200	13,300	E	17,050	0.78	C	1,310	1,170	1,540	2
W. Volusia Bltwy (Veteran	Harley Strickland Blvd. to Rhode Islan	1901	County	Yes	1.22	55	UA_NSSRC1_2W_2L_U_WL	Minor Arterial - Urban	13,810	15,170	18,000	17,750	**18,830**	**20,170**	**19,290**	**19,420**	**21,190**	**19,030**	**19,440**	**18,800**	E	**17,050**	**1.10**	F	**1,030**	**1,480**	**1,540**	2
W. Volusia Bltwy (Veteran	Rhode Island Ave. to Graves Ave.	1902	County	Yes	1.50	45	UA_NSSRC1_2W_2L_D_WL	Minor Arterial - Urban	14,100	14,830	15,510	15,510	18,510	16,430	14,420	13,400	16,420	13,800	14,870	14,100	E	17,900	0.79	C	850	1,100	1,620	2
W. Volusia Bltwy (Veteran	Graves Ave to SR 472	1030	County	Yes	0.80	45	UA_NSSRC1_2W_2L_U_WL	Major Collector - Urban	7,970	9,010	9,050	9,320	10,380	10,670	10,350	10,570	10,900	9,420	10,830	11,000	E	17,050	0.65	C	690	910	1,540	2
W. Volusia Bltwy (Dr MLK	Cassadaga Rd. to Orange Camp Rd.	1942	County	Yes	1.40	55	UA_NSSRC1_2W_2L_U_WL	Minor Arterial - Urban	9,940	10,280	10,320	10,840	11,860	12,050	11,130	12,540	12,370	10,760	11,570	9,150	E	17,050	0.54	C	620	755	1,540	2
W. Volusia Bltwy (Dr MLK	Orange Camp Rd. to Taylor Rd.	1943	County	Yes	1.00	55	UA_NSSRC1_2W_2L_U_WL	Minor Arterial - Urban	11,240	11,850	11,440	12,050	14,330	13,800	12,670	14,480	12,240	12,210	12,840	11,000	E	17,050	0.65	C	845	910	1,540	2

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2023 HISTORICAL AADT REPORT

COUNTY: 79 - VOLUSIA

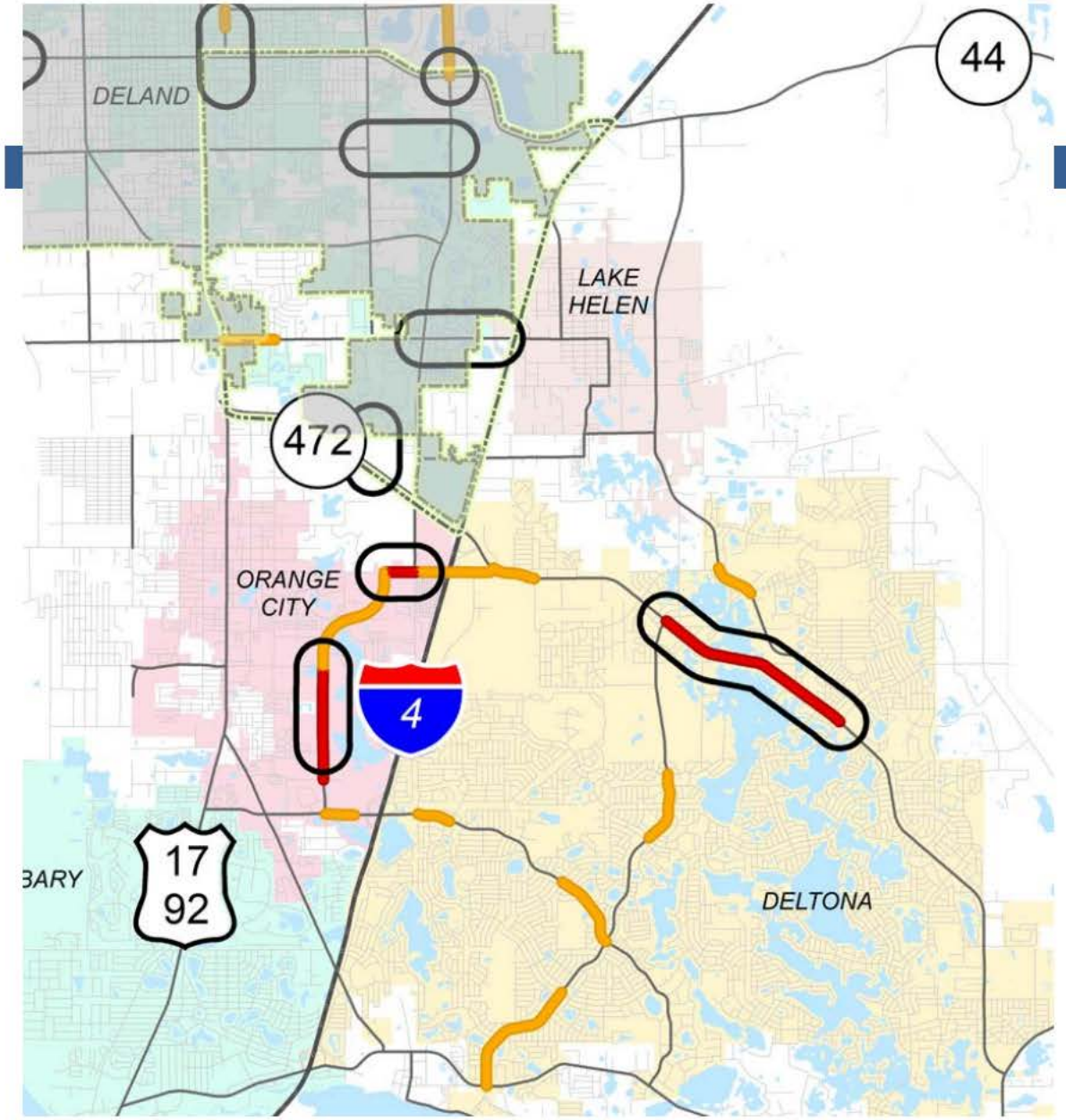
SITE: 8193 - CATALINA BLVD, 800' N OF HOWLAND BLVD - OFF SYSTEM HPMS 21

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2023	2900 F	N 1400	S 1500	9.00	59.10	9.80
2022	2700 C	N 1300	S 1400	9.00	58.80	3.50
2021	12500 C	N 6100	S 6400	9.00	58.20	10.90
2020	10900 S	N 5200	S 5700	9.00	58.70	4.00
2019	11300 F	N 5400	S 5900	9.00	59.00	6.70
2018	11100 C	N 5300	S 5800	9.00	60.00	5.10
2017	12000 T	N 6000	S 6000	9.00	60.90	3.10
2016	11600 S	N 5800	S 5800	9.00	61.40	2.40
2015	11000 F	N 5500	S 5500	9.00	60.20	2.90
2014	10600 C	N 5300	S 5300	9.00	59.20	3.60

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Appendix G
Planned and Programmed Improvements

ZONE 3



Deltona

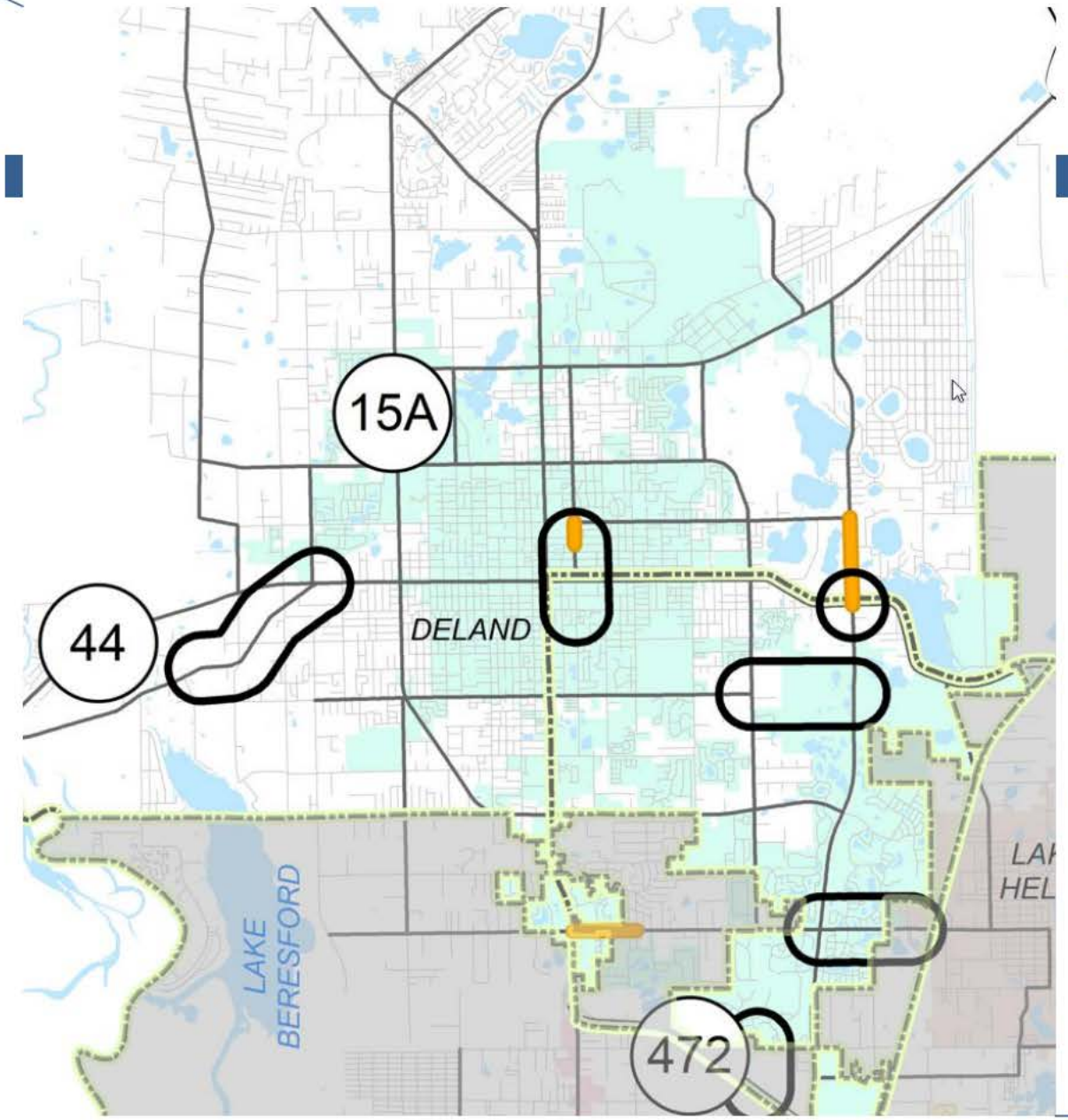
- Howland Blvd widening from Providence Blvd to Elkcam Blvd
  (Construction Underway)

Orange City

- Graves Ave widening from 2 Lanes to 3 Lanes Veterans Memorial Pkwy to Kentucky Av
  (Design Underway)

- Veterans Memorial Pkwy widening from current limits of 4 Lanes to Rhode Island Av
  (Design Underway)

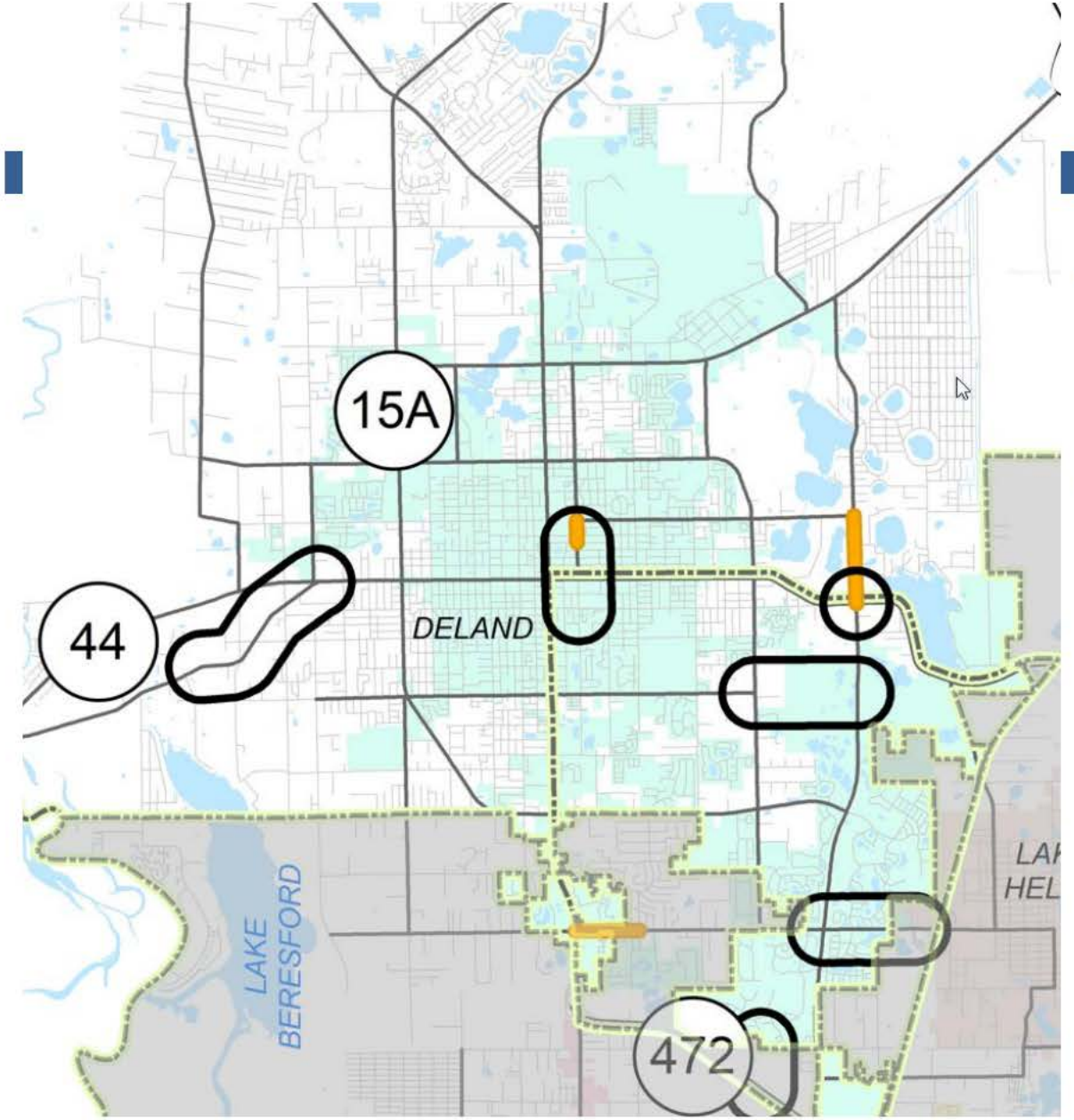
ZONE 4



DeLand

- **Orange Camp Rd widening from Martin Luther King Jr. Btwy to I-4**
  (Construction Underway)
- **Old New York Av Add Paved Shoulders SR 44 to Shell Rd**
  (Design Underway)
- **Beresford Rd Extension from Blue Lake Av to Kepler Rd/Martin Luther King Jr. Btwy**
  (Design & ROW Acquisition Underway)

ZONE 4



- **Amelia Av Lane Reduction from Voorhis Ave to Ohio Ave**
  (Design & ROW Acquisition Underway)
- **Blue Lake Av Extension from Blue Lake Av in Victoria Park to SR 472**
  (Design & ROW Acquisition Underway)

Appendix H
Recommended Improvements in Previous TIAs

TM BTR AT DELAND CROSSINGS
Project № 22012, v1.1
December 2022

TRAFFIC IMPACT ANALYSIS
CITY OF DELAND
FLORIDA

Prepared by:

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Prepared for:

Taylor Morrison of Florida Inc
2600 Lake Lucien Drive, Suite 350
Maitland, Florida 32751

3.6 Intersection Improvements

The following improvements are recommended at the intersection of SR 472 and Dr. Martin Luther King Jr Beltway and should be incorporated at project buildout:

- SR 472 and Dr. Martin Luther King Jr Beltway –
  - Construct a westbound left turn lane
  - Construct a northbound left turn lane and a through lane
  - Construct a southbound left turn lane and a through lane
  - Optimize the signal timing

With the recommended improvements, the intersection is projected to operate at an overall adequate LOS. The results of the analysis are summarized in **Table 8** for the background and buildout scenarios**.**

Table 8
Improved Intersection Capacity Analysis Summary

Intersection	Traffic Control	Time Period	Scenario	EB			WB			NB			SB			Overall	
				Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS
SR 472 & Dr. MLK Jr Bltwy	Signal	AM	Background	42.3	D	0.97	37.2	D	0.76	72.7	E	0.87	68.6	E	0.86	48.9	D
			Buildout	43.4	D	0.99	37.5	D	0.76	71.8	E	0.87	70.7	E	0.87	49.7	D
		PM	Background	52.9	D	1.14	49.0	D	1.03	71.9	E	0.86	65.6	E	0.86	55.7	E
			Buildout	58.7	E	1.23	49.6	D	1.03	65.9	E	0.86	66.7	E	0.86	57.4	E

Average delay is expressed in seconds/vehicle

The analysis indicates that the intersection of SR 472 and Dr. Martin Luther King Jr Beltway is projected to operate at adequate LOS due to the improvements. The adjusted analysis worksheets are included in **Appendix L**.

KITTELSON & ASSOCIATES

DELAND TECH PARK TRAFFIC IMPACT ANALYSIS

DELAND, FLORIDA

July 2023



YEAR 2027 FUTURE BACKGROUND INTERSECTION CAPACITY ANALYSIS (WITH BACKGROUND RELATED IMPROVMENTS)

The background intersection lane configurations are shown in **Figure 12**. To help improve operations at the intersections showing an overall LOS F or overcapacity movements under the year 2027 PM peak hour future background conditions, the following background related improvements are recommended:

- SR 472 at Kentucky Avenue/Dr Martin Luther King Jr Beltway
  - Add one additional eastbound through lane (v/c ratio is 0.97 on east leg of intersection)
  - Add one additional westbound through lane (v/c ratio is 0.97 on east leg of intersection)
  - Add exclusive northbound left turn lane
  - Use protected/permitted phasing for northbound/southbound left turn movements
  - Optimize signal timings/splits (eliminate the split phase operation)
- Kentucky Avenue at Graves Avenue
  - Add one additional eastbound through lane (v/c ratio is 1.36 on west leg of intersection in background condition)
  - Add one additional southbound left turn lane
  - Add overlap phasing on the southbound right turn movement
  - Optimize signal timings/splits)
- Veteran's Memorial Parkway at Rhode Island Avenue
  - Add southbound shared through-right lane and remove exclusive southbound right turn lane. There is an acceleration lane on the south leg of this intersection that can be converted to a second receiving lane.
- Howland Boulevard at Graves Avenue/Halifax Crossing Boulevard
  - Add one additional eastbound through lane (v/c ratio is 1.05 on both legs of intersection)
  - Add one additional westbound through lane (v/c ratio is 1.05 on both legs of intersection)

With the above recommended improvements, these intersections are expected to operate at an overall LOS E or better and no overcapacity movements. The results of the improved background conditions are presented in **Table 9** and the Synchro intersection report printouts are provided in **Appendix M**.

Table 9: Year 2027 Future Background Intersection Capacity Analysis (With Background Improvements)

Intersection	Intersection Control Type	PM Peak Hour		
		v/c	Delay	LOS
SR 472 at Kentucky Ave./Dr Martin Luther King Jr Bltwy.	Signalized	0.98	58.2	E
Kentucky Ave. at Graves Ave.	Signalized	0.93	42.0	D
Veteran's Memorial Pkwy. at Rhode Island Ave.	Signalized	0.92	38.2	D
Howland Blvd. at Graves Ave./Halifax Crossing Blvd.	Signalized	0.94	39.6	D

Note: The operational results presented for each intersection represent the worst movement v/c ratio and overall intersection delay and LOS.

Appendix I

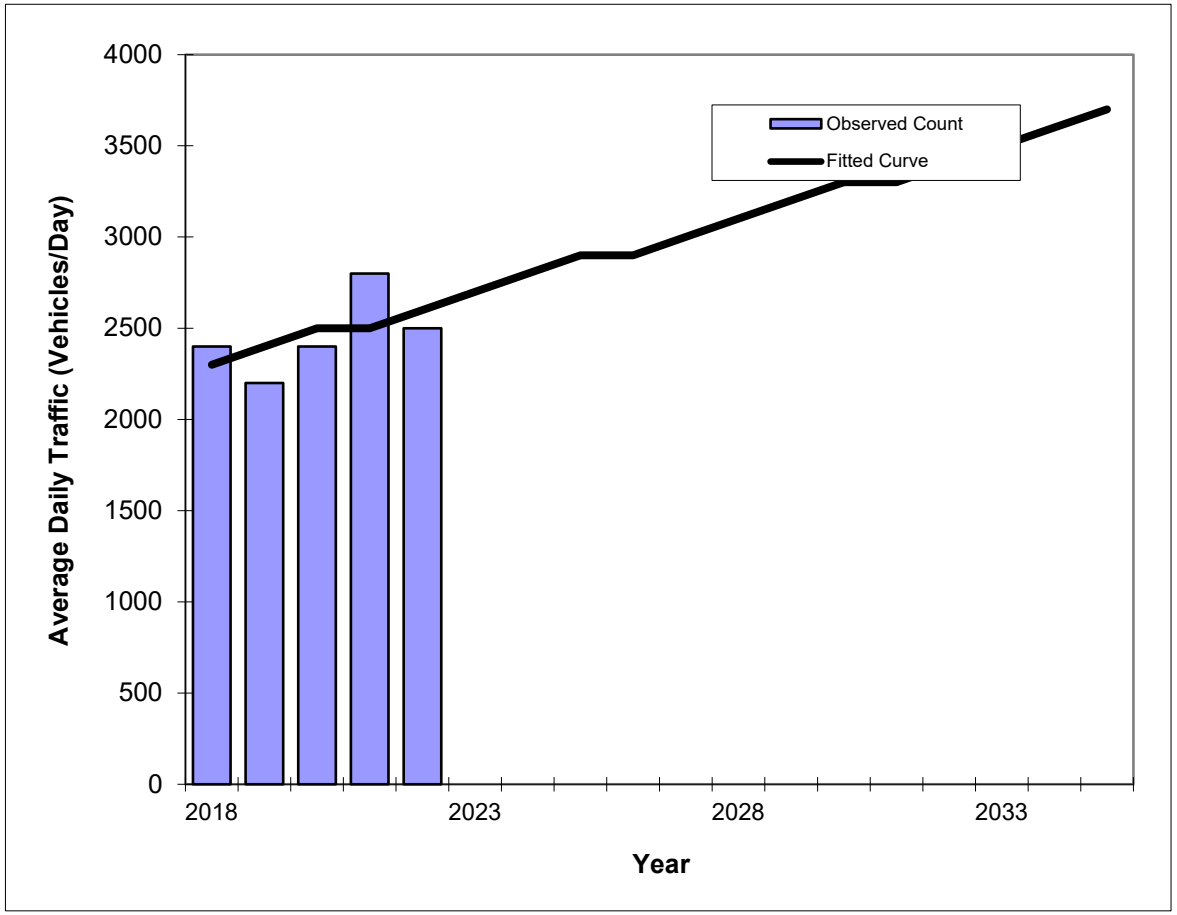
Historical Growth trend Analysis Worksheets, Vested Trip Information and Segment Growh Rates and Vested Trips Instruction Policy

Traffic Trends - V03.a

CASSADAGA RD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	280
Highway:	CASSADAGA RD



Year	Traffic (ADT/AADT) Count*	Trend**
2018	2400	2300
2019	2200	2400
2020	2400	2500
2021	2800	2500
2022	2500	2600
2026 Opening Year Trend		
2026	N/A	2900
2027 Mid-Year Trend		
2027	N/A	3000
2028 Design Year Trend		
2028	N/A	3100
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	80
Trend R-squared:	33.33%
Trend Annual Historic Growth Rate:	3.26%
Trend Growth Rate (2022 to Design Year):	3.21%
Printed:	6-Aug-24

Straight Line Growth Option

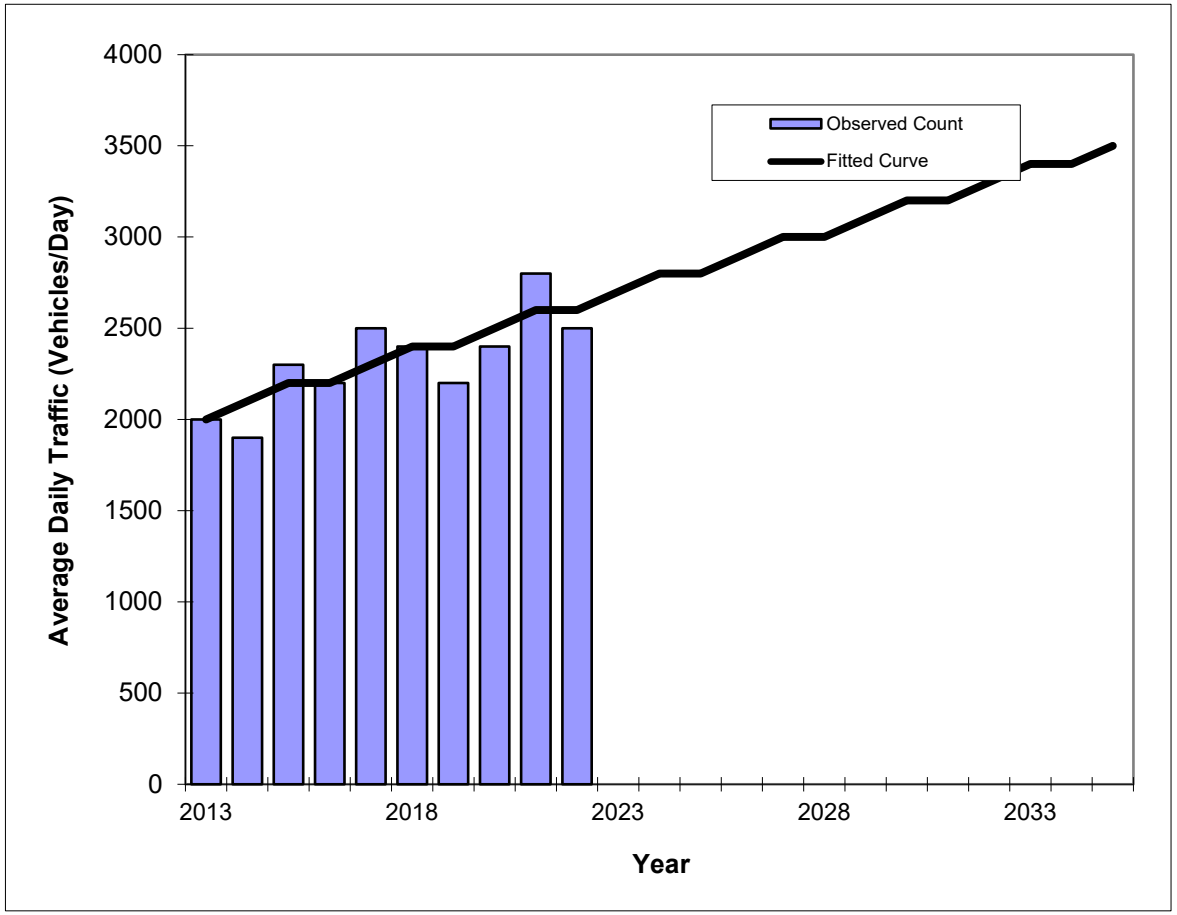
***Axle-Adjusted**

Traffic Trends - V03.a

CASSADAGA RD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	280
Highway:	CASSADAGA RD



Year	Traffic (ADT/AADT) Count*	Trend**
2013	2000	2000
2014	1900	2100
2015	2300	2200
2016	2200	2200
2017	2500	2300
2018	2400	2400
2019	2200	2400
2020	2400	2500
2021	2800	2600
2022	2500	2600
2026 Opening Year Trend		
2026	N/A	2900
2027 Mid-Year Trend		
2027	N/A	3000
2028 Design Year Trend		
2028	N/A	3000
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	68
Trend R-squared:	61.71%
Trend Annual Historic Growth Rate:	3.33%
Trend Growth Rate (2022 to Design Year):	2.56%
Printed:	6-Aug-24

Straight Line Growth Option

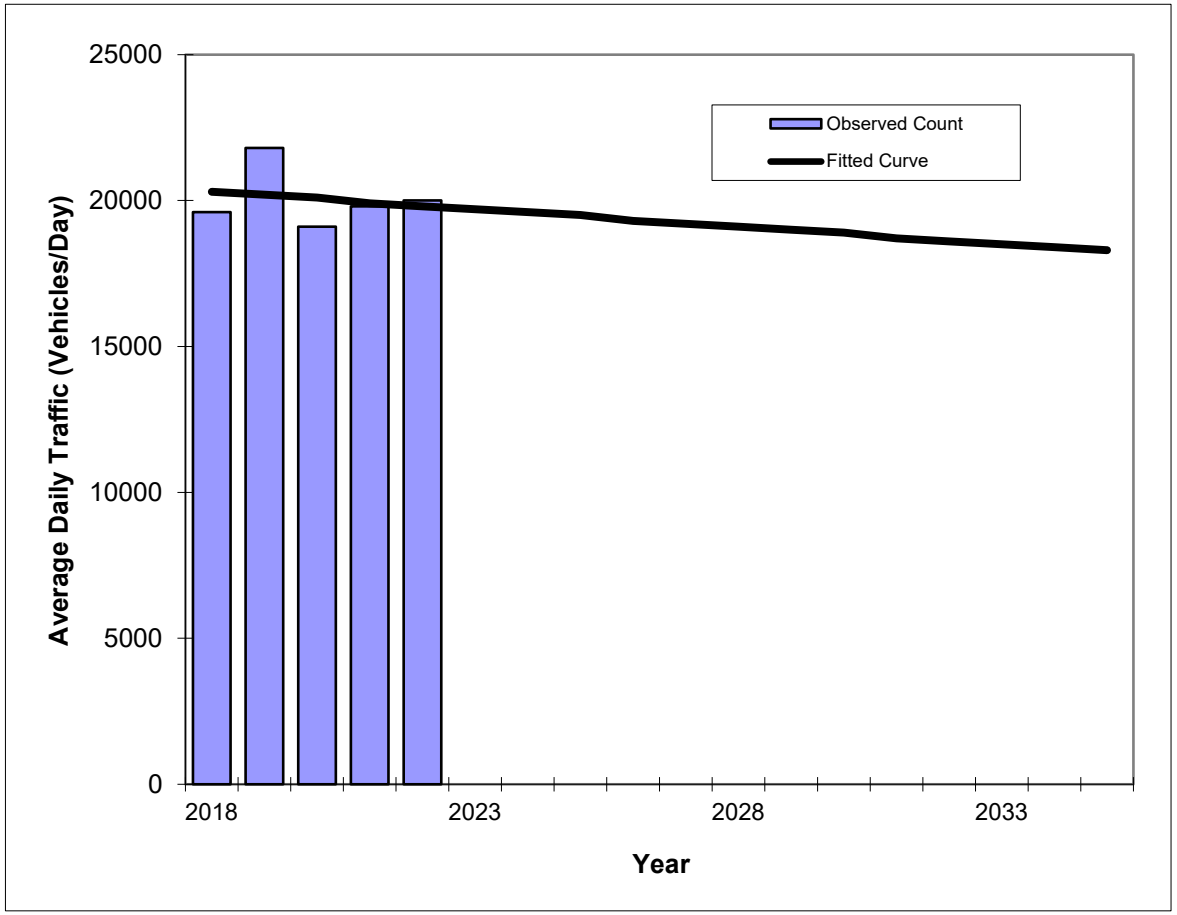
***Axle-Adjusted**

Traffic Trends - V03.a

GRAVES AVE --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	775
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2018	19600	20300
2019	21800	20200
2020	19100	20100
2021	19800	19900
2022	20000	19800
2026 Opening Year Trend		
2026	N/A	19300
2027 Mid-Year Trend		
2027	N/A	19200
2028 Design Year Trend		
2028	N/A	19100
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-120
Trend R-squared:	3.40%
Trend Annual Historic Growth Rate:	-0.62%
Trend Growth Rate (2022 to Design Year):	-0.59%
Printed:	6-Aug-24

Straight Line Growth Option

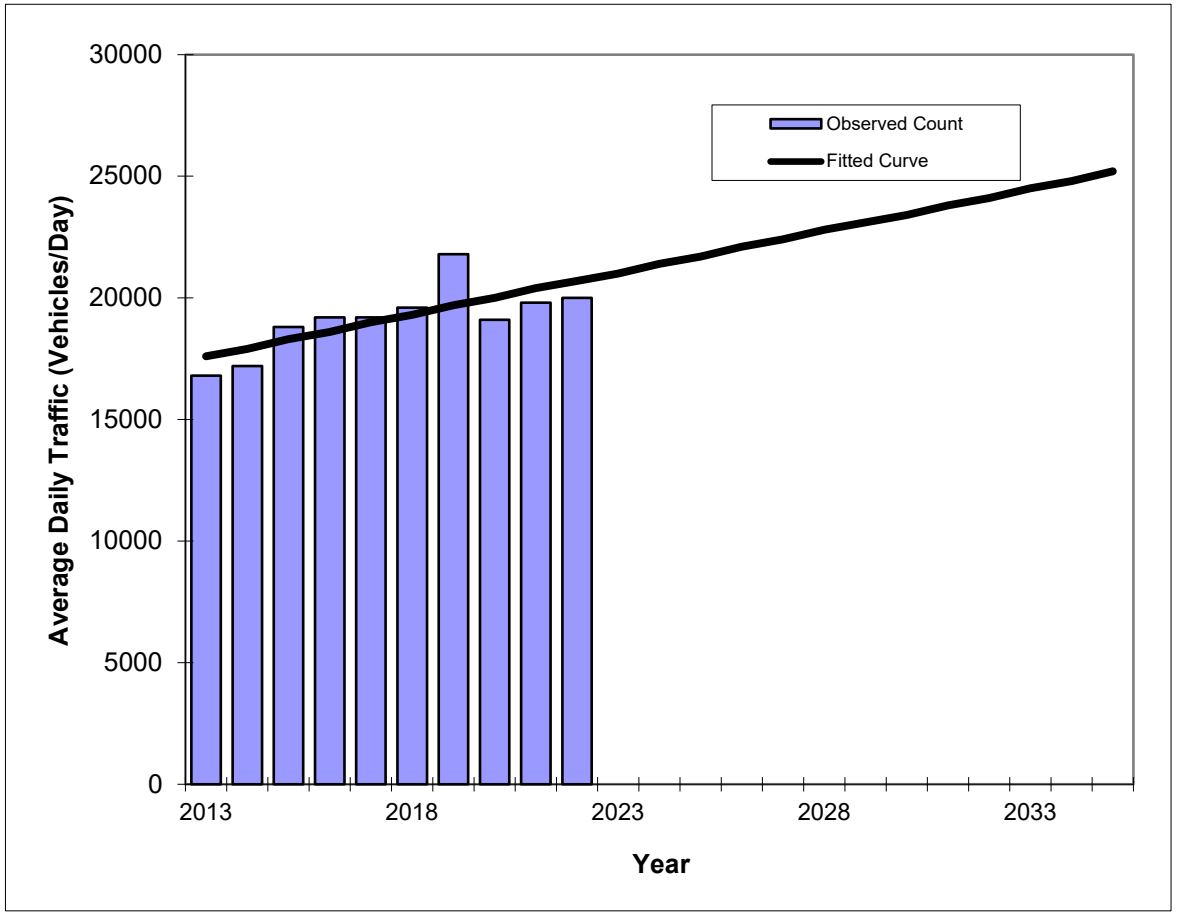
***Axle-Adjusted**

Traffic Trends - V03.a

GRAVES AVE --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	775
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2013	16800	17600
2014	17200	17900
2015	18800	18300
2016	19200	18600
2017	19200	19000
2018	19600	19300
2019	21800	19700
2020	19100	20000
2021	19800	20400
2022	20000	20700
2026 Opening Year Trend		
2026	N/A	22100
2027 Mid-Year Trend		
2027	N/A	22400
2028 Design Year Trend		
2028	N/A	22800
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	344
Trend R-squared:	54.65%
Trend Annual Historic Growth Rate:	1.96%
Trend Growth Rate (2022 to Design Year):	1.69%
Printed:	6-Aug-24

Straight Line Growth Option

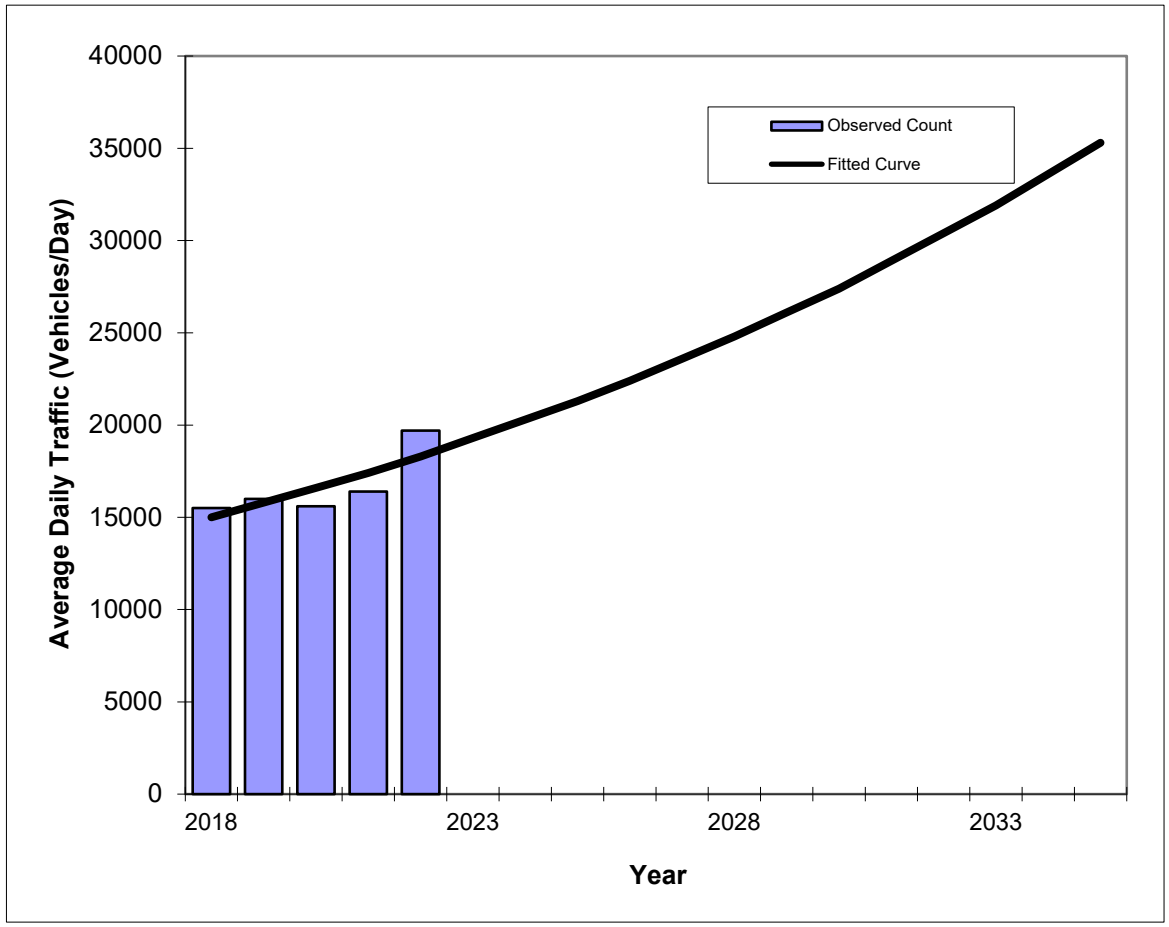
***Axle-Adjusted**

Traffic Trends - V03.a

GRAVES AVE --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	900a
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2018	15500	15000
2019	16000	15800
2020	15600	16600
2021	16400	17400
2022	19700	18300
2026 Opening Year Trend		
2026	N/A	22400
2027 Mid-Year Trend		
2027	N/A	23600
2028 Design Year Trend		
2028	N/A	24800
TRANPLAN Forecasts/Trends		

Trend R-squared:	64.59%
Compounded Annual Historic Growth Rate:	5.10%
Compounded Growth Rate (2022 to Design Year):	5.20%
Printed:	20-Aug-24

Exponential Growth Option

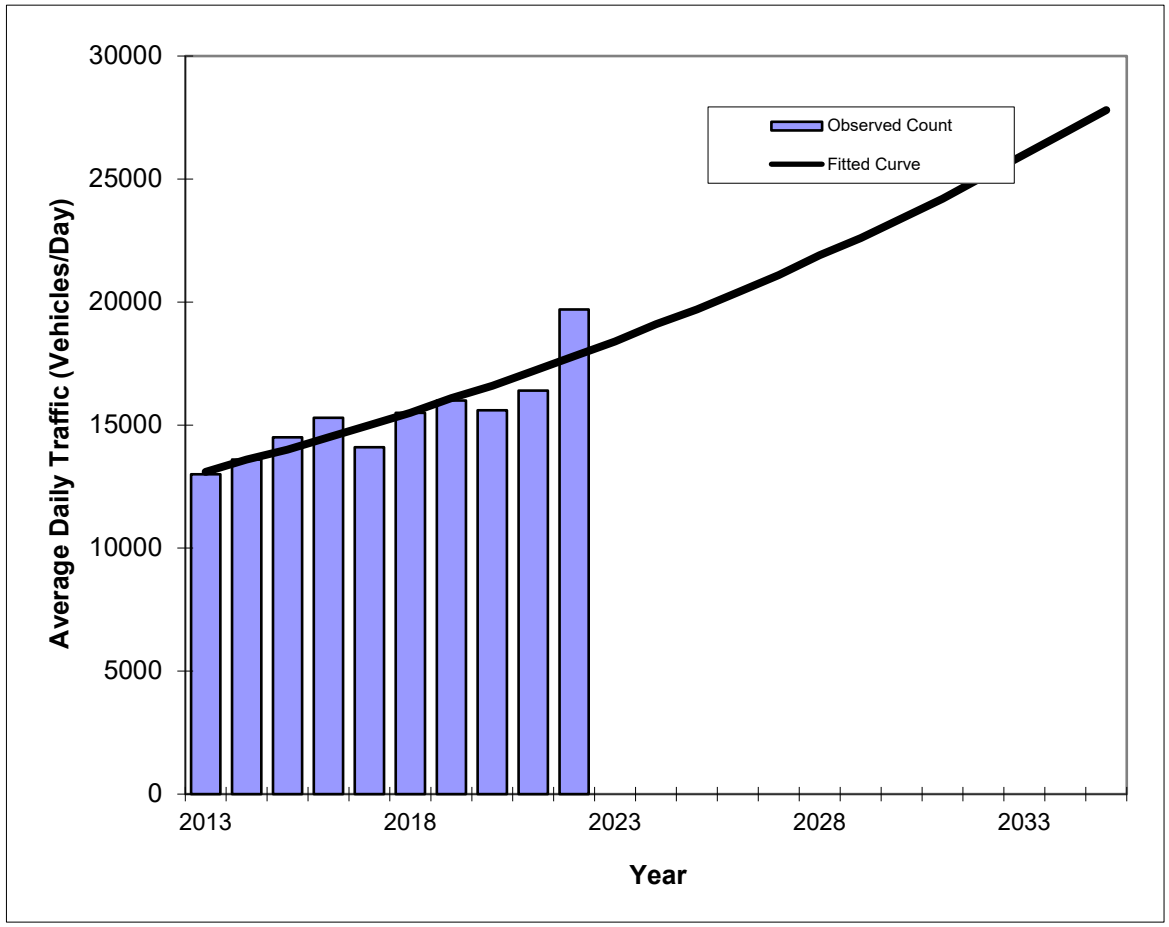
***Axle-Adjusted**

Traffic Trends - V03.a

GRAVES AVE --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	900a
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2013	13000	13100
2014	13600	13600
2015	14500	14000
2016	15300	14500
2017	14100	15000
2018	15500	15500
2019	16000	16100
2020	15600	16600
2021	16400	17200
2022	19700	17800
2026 Opening Year Trend		
2026	N/A	20400
2027 Mid-Year Trend		
2027	N/A	21100
2028 Design Year Trend		
2028	N/A	21900
TRANPLAN Forecasts/Trends		

Trend R-squared:	79.70%
Compounded Annual Historic Growth Rate:	3.47%
Compounded Growth Rate (2022 to Design Year):	3.52%
Printed:	20-Aug-24

Exponential Growth Option

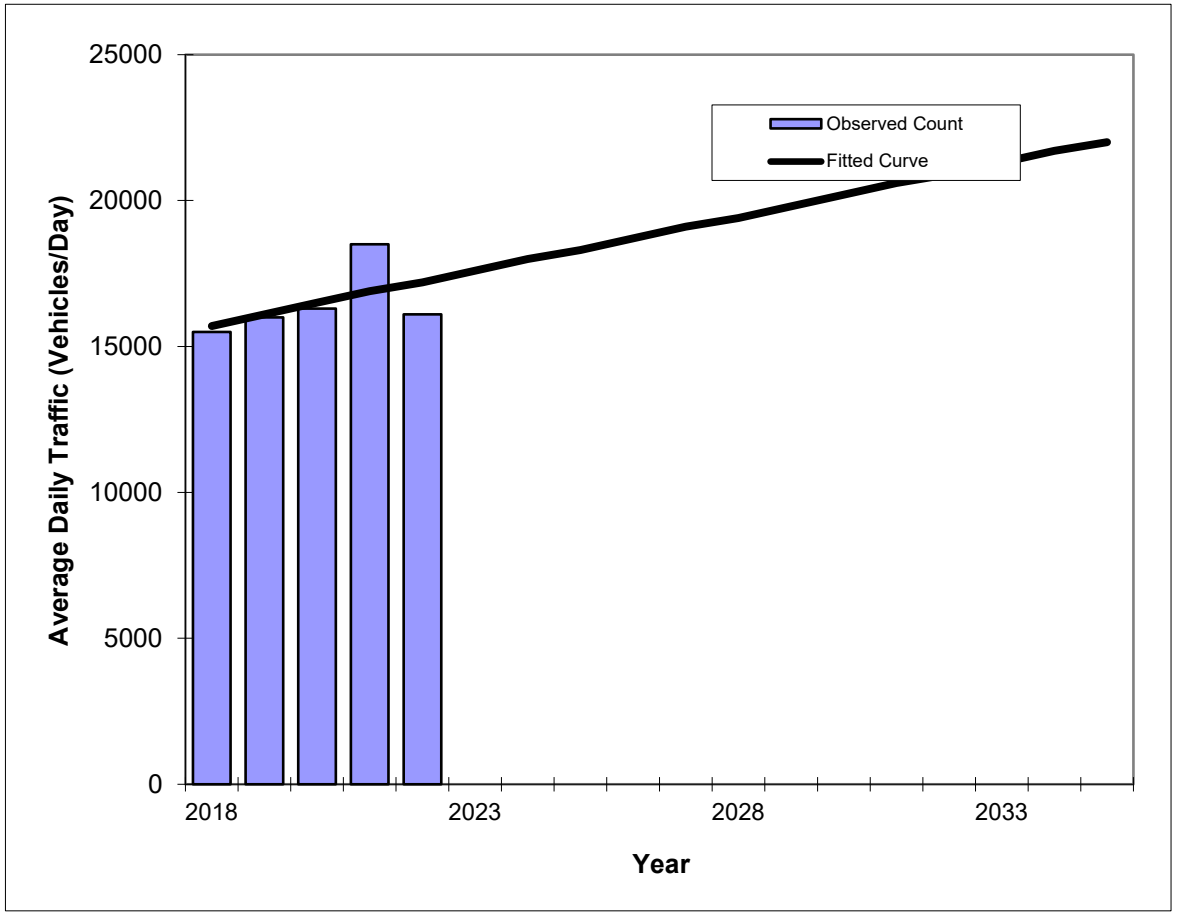
***Axle-Adjusted**

Traffic Trends - V03.a

GRAVES AVE --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	900b
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2018	15500	15700
2019	16000	16100
2020	16300	16500
2021	18500	16900
2022	16100	17200
2026 Opening Year Trend		
2026	N/A	18700
2027 Mid-Year Trend		
2027	N/A	19100
2028 Design Year Trend		
2028	N/A	19400
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	370
Trend R-squared:	25.13%
Trend Annual Historic Growth Rate:	2.39%
Trend Growth Rate (2022 to Design Year):	2.13%
Printed:	6-Aug-24

Straight Line Growth Option

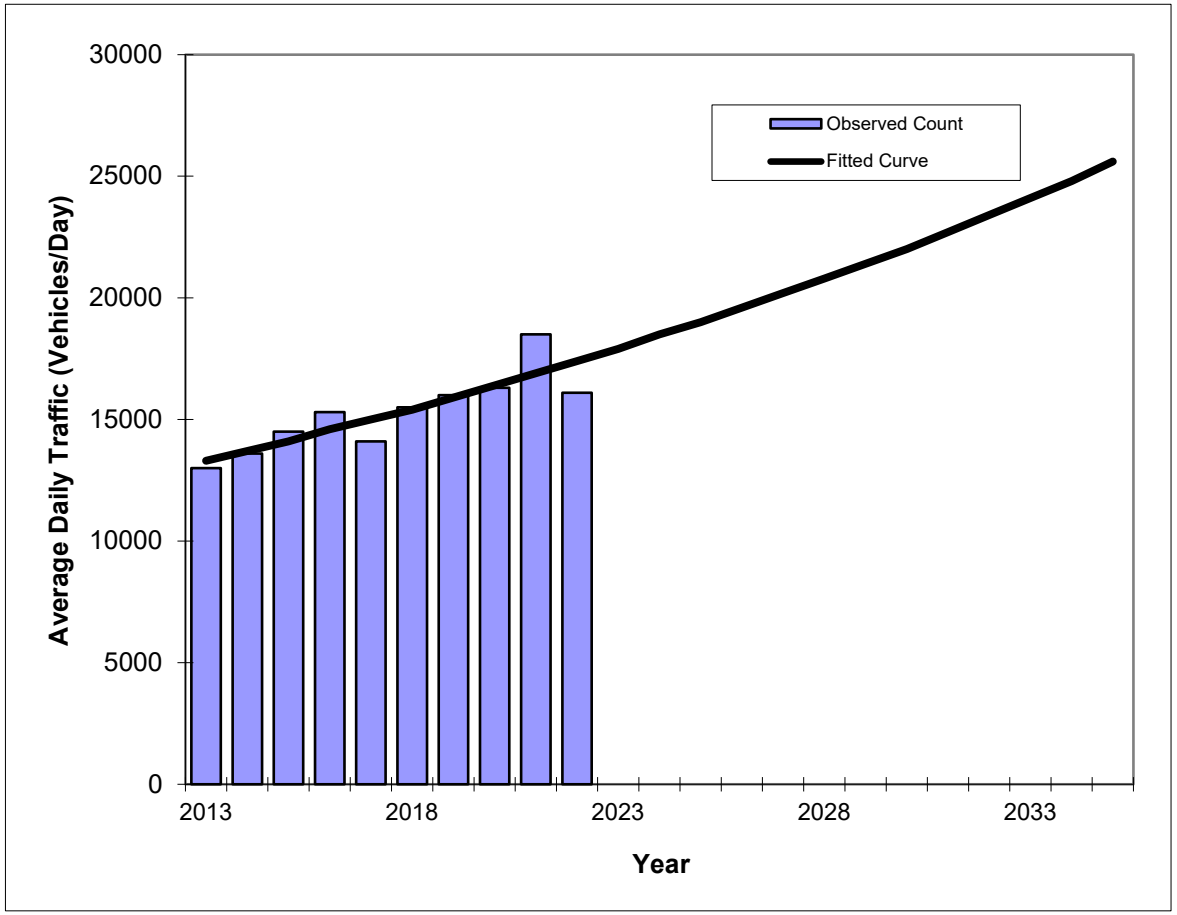
***Axle-Adjusted**

Traffic Trends - V03.a

GRAVES AVE --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	900b
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2013	13000	13300
2014	13600	13700
2015	14500	14100
2016	15300	14600
2017	14100	15000
2018	15500	15400
2019	16000	15900
2020	16300	16400
2021	18500	16900
2022	16100	17400
2026 Opening Year Trend		
2026	N/A	19600
2027 Mid-Year Trend		
2027	N/A	20200
2028 Design Year Trend		
2028	N/A	20800
TRANPLAN Forecasts/Trends		

Trend R-squared:	76.75%
Compounded Annual Historic Growth Rate:	3.03%
Compounded Growth Rate (2022 to Design Year):	3.02%
Printed:	6-Aug-24

Exponential Growth Option

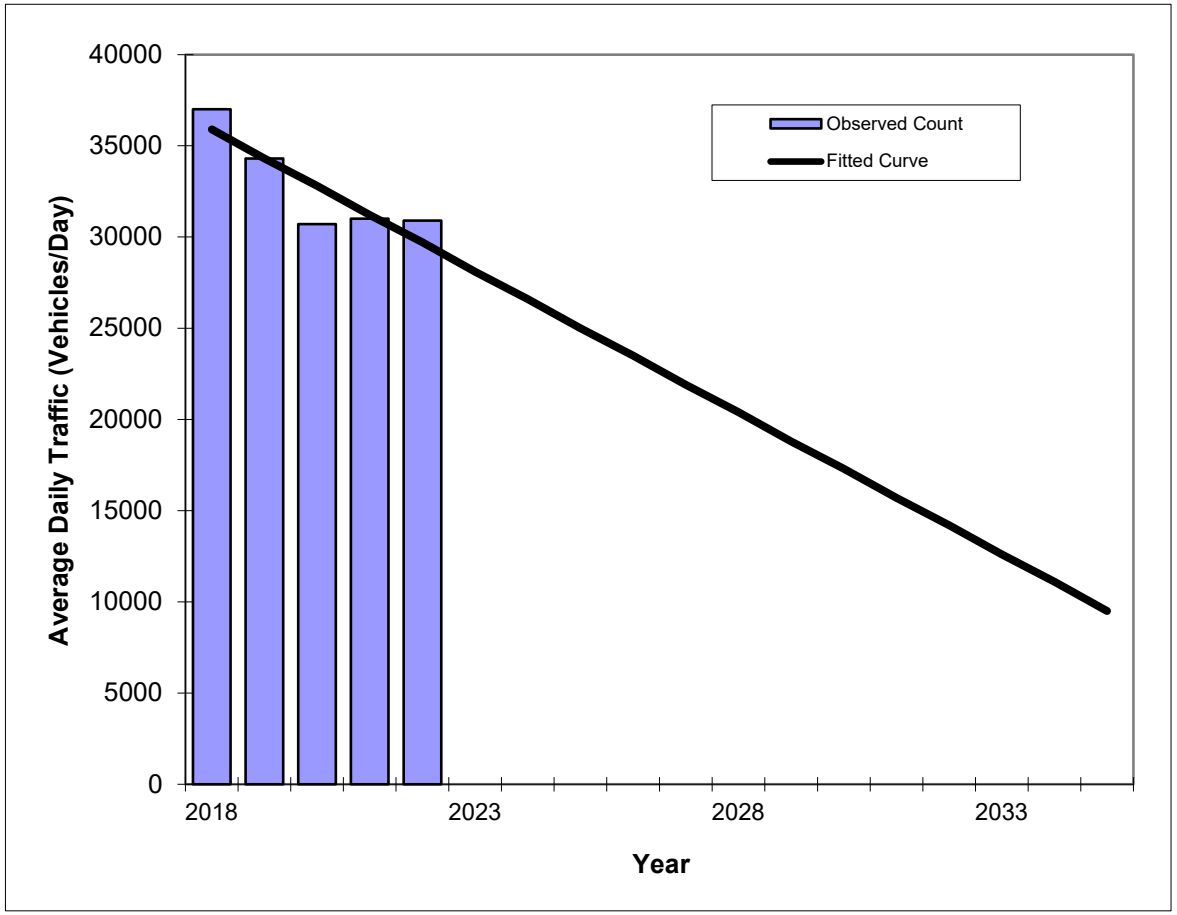
***Axle-Adjusted**

Traffic Trends - V03.a

HOWLAND BOULEVARD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	901
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2018	37000	35900
2019	34300	34300
2020	30700	32800
2021	31000	31200
2022	30900	29700
2026 Opening Year Trend		
2026	N/A	23500
2027 Mid-Year Trend		
2027	N/A	21900
2028 Design Year Trend		
2028	N/A	20400
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-1,550
Trend R-squared:	77.13%
Trend Annual Historic Growth Rate:	-4.32%
Trend Growth Rate (2022 to Design Year):	-5.22%
Printed:	6-Aug-24

Straight Line Growth Option

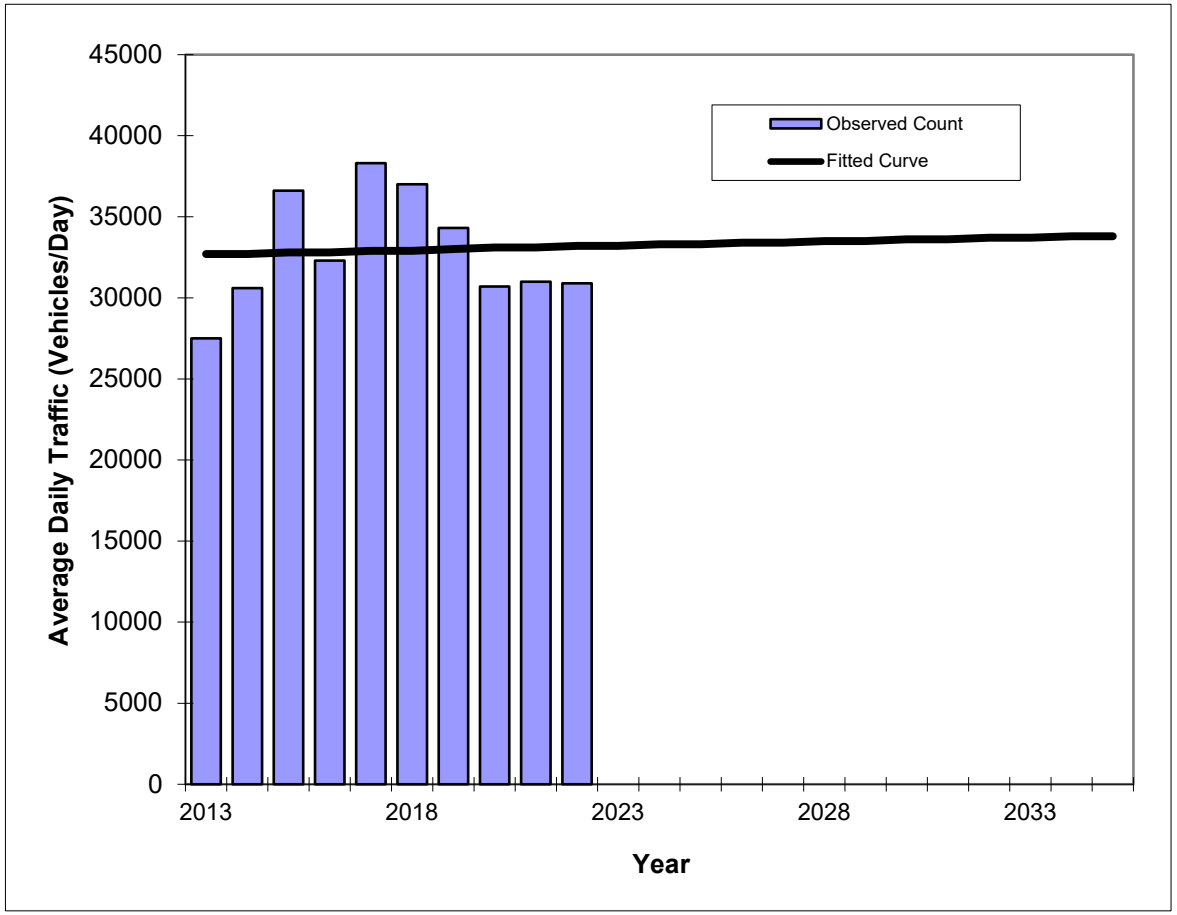
***Axle-Adjusted**

Traffic Trends - V03.a

HOWLAND BOULEVARD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	901
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2013	27500	32700
2014	30600	32700
2015	36600	32800
2016	32300	32800
2017	38300	32900
2018	37000	32900
2019	34300	33000
2020	30700	33100
2021	31000	33100
2022	30900	33200
2026 Opening Year Trend		
2026	N/A	33400
2027 Mid-Year Trend		
2027	N/A	33400
2028 Design Year Trend		
2028	N/A	33500
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

**** Annual Trend Increase:**	52
Trend R-squared:	0.21%
Trend Annual Historic Growth Rate:	0.17%
Trend Growth Rate (2022 to Design Year):	0.15%
Printed:	6-Aug-24

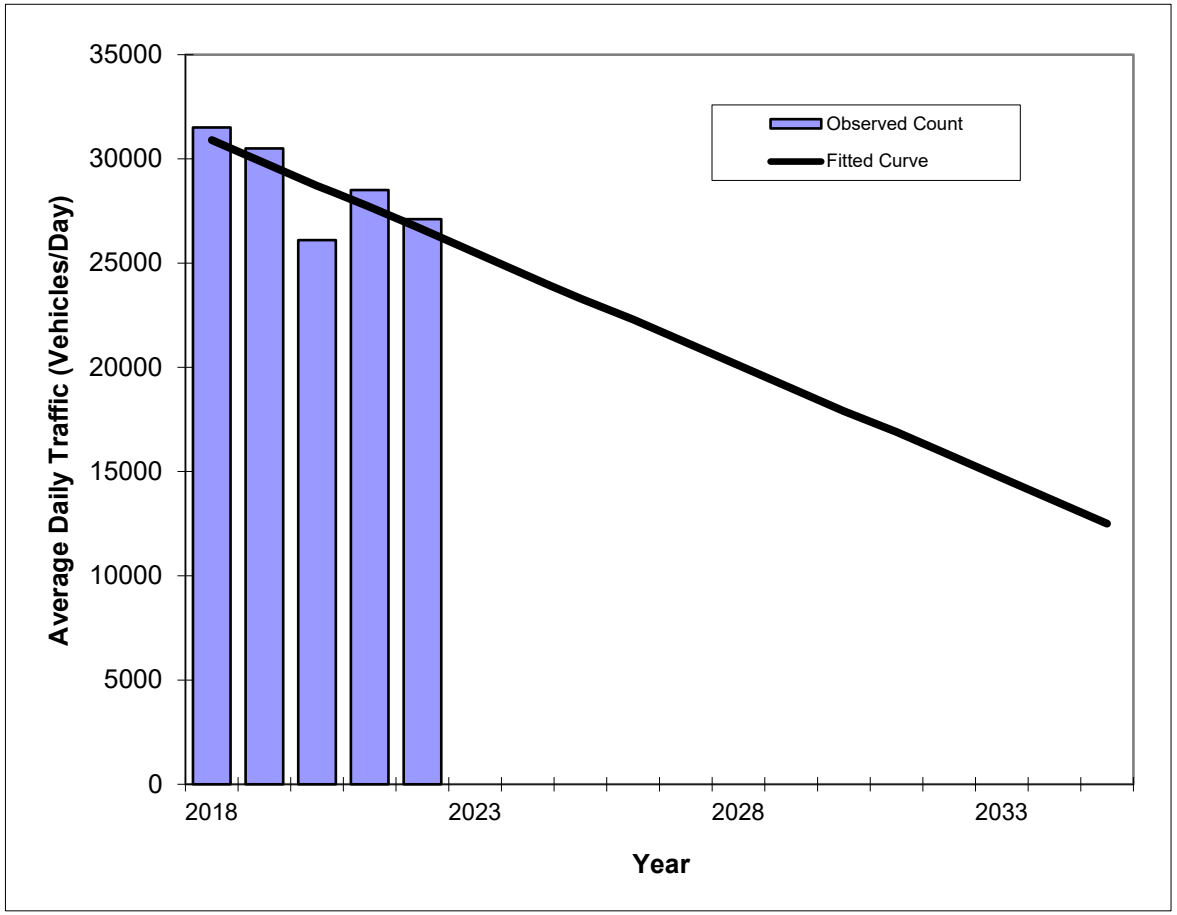
Straight Line Growth Option

Traffic Trends - V03.a

HOWLAND BOULEVARD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	903
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2018	31500	30900
2019	30500	29800
2020	26100	28700
2021	28500	27700
2022	27100	26600
2026 Opening Year Trend		
2026	N/A	22300
2027 Mid-Year Trend		
2027	N/A	21200
2028 Design Year Trend		
2028	N/A	20100
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-1,080
Trend R-squared:	57.09%
Trend Annual Historic Growth Rate:	-3.48%
Trend Growth Rate (2022 to Design Year):	-4.07%
Printed:	6-Aug-24

Straight Line Growth Option

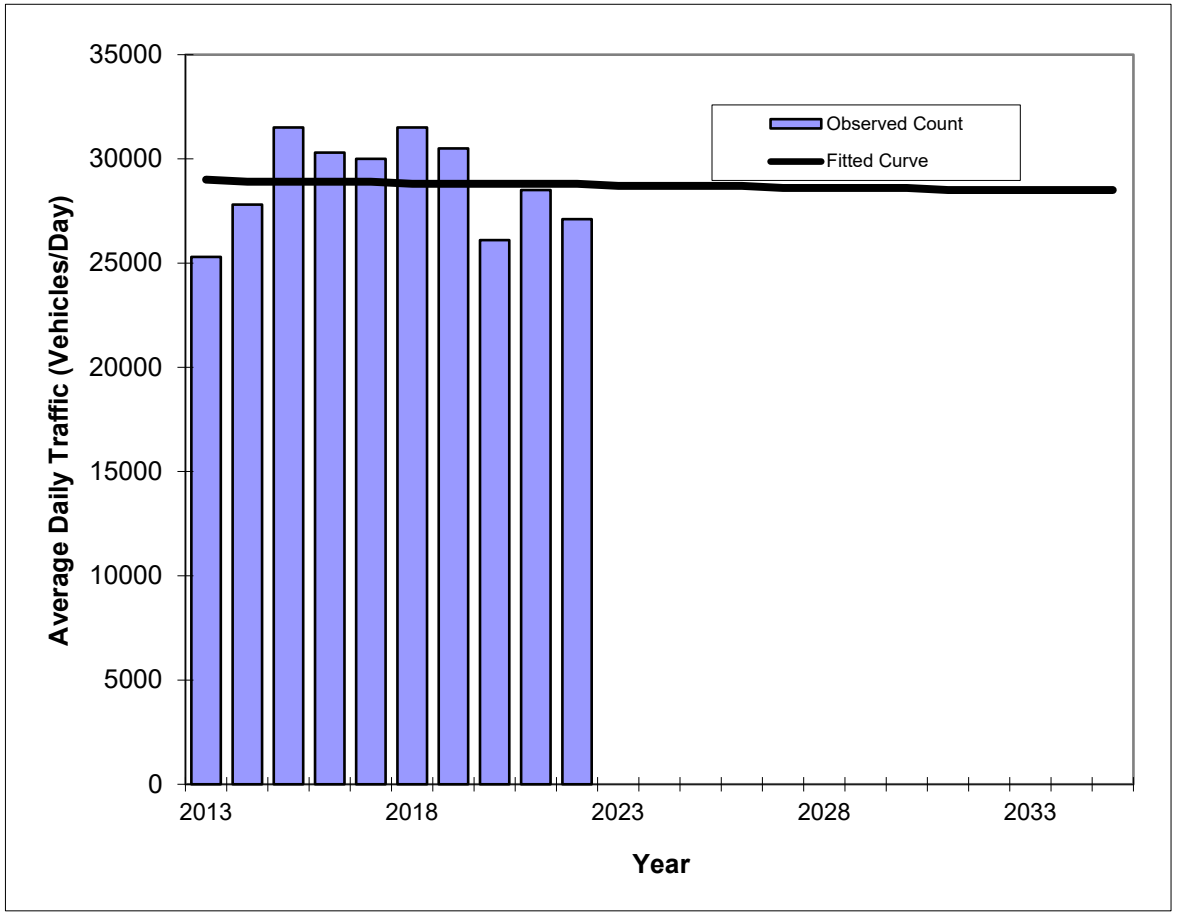
***Axle-Adjusted**

Traffic Trends - V03.a

HOWLAND BOULEVARD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	903
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2013	25300	29000
2014	27800	28900
2015	31500	28900
2016	30300	28900
2017	30000	28900
2018	31500	28800
2019	30500	28800
2020	26100	28800
2021	28500	28800
2022	27100	28800
2026 Opening Year Trend		
2026	N/A	28700
2027 Mid-Year Trend		
2027	N/A	28600
2028 Design Year Trend		
2028	N/A	28600
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-23
Trend R-squared:	0.10%
Trend Annual Historic Growth Rate:	-0.08%
Trend Growth Rate (2022 to Design Year):	-0.12%
Printed:	6-Aug-24

Straight Line Growth Option

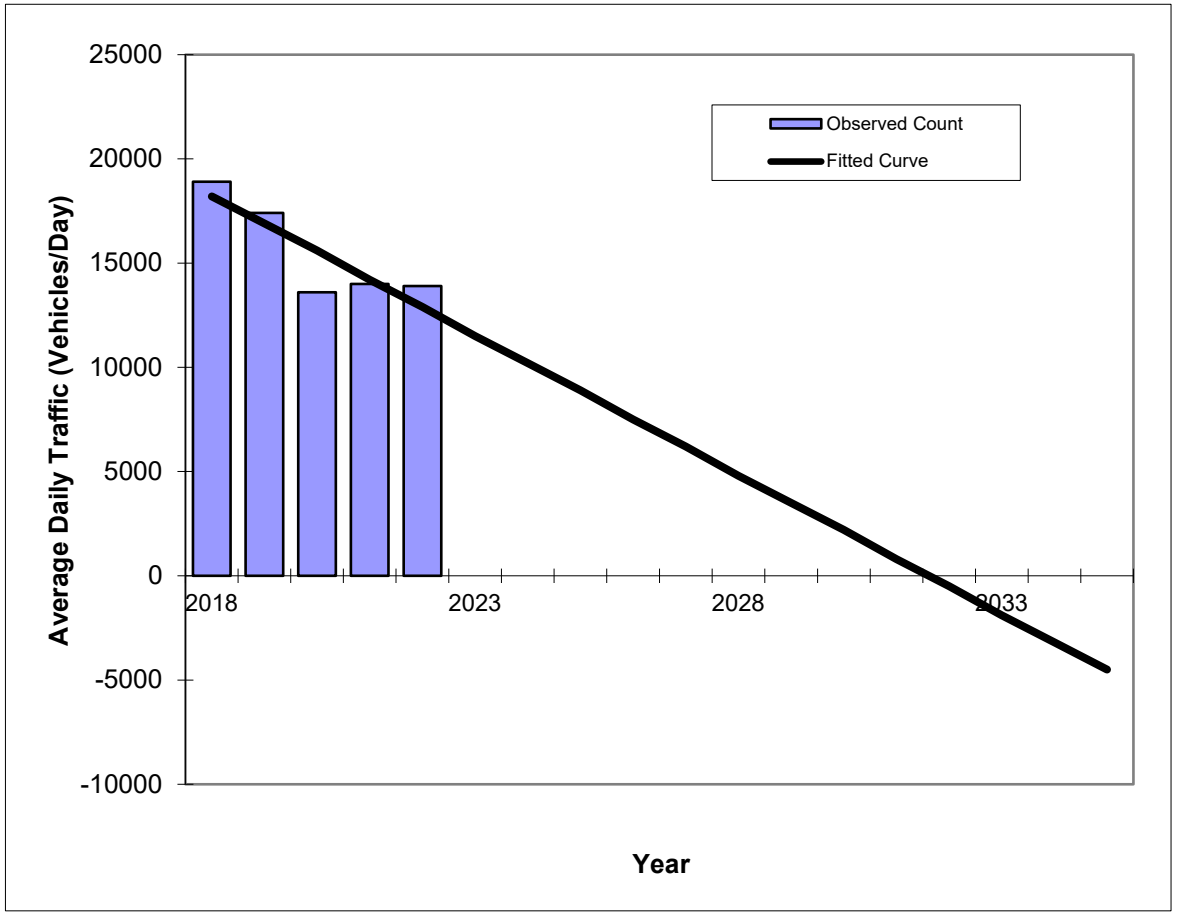
***Axle-Adjusted**

Traffic Trends - V03.a

HOWLAND BOULEVARD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	906
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2018	18900	18200
2019	17400	16900
2020	13600	15600
2021	14000	14200
2022	13900	12900
2026 Opening Year Trend		
2026	N/A	7500
2027 Mid-Year Trend		
2027	N/A	6200
2028 Design Year Trend		
2028	N/A	4800
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-1,340
Trend R-squared:	76.18%
Trend Annual Historic Growth Rate:	-7.28%
Trend Growth Rate (2022 to Design Year):	-10.47%
Printed:	6-Aug-24

Straight Line Growth Option

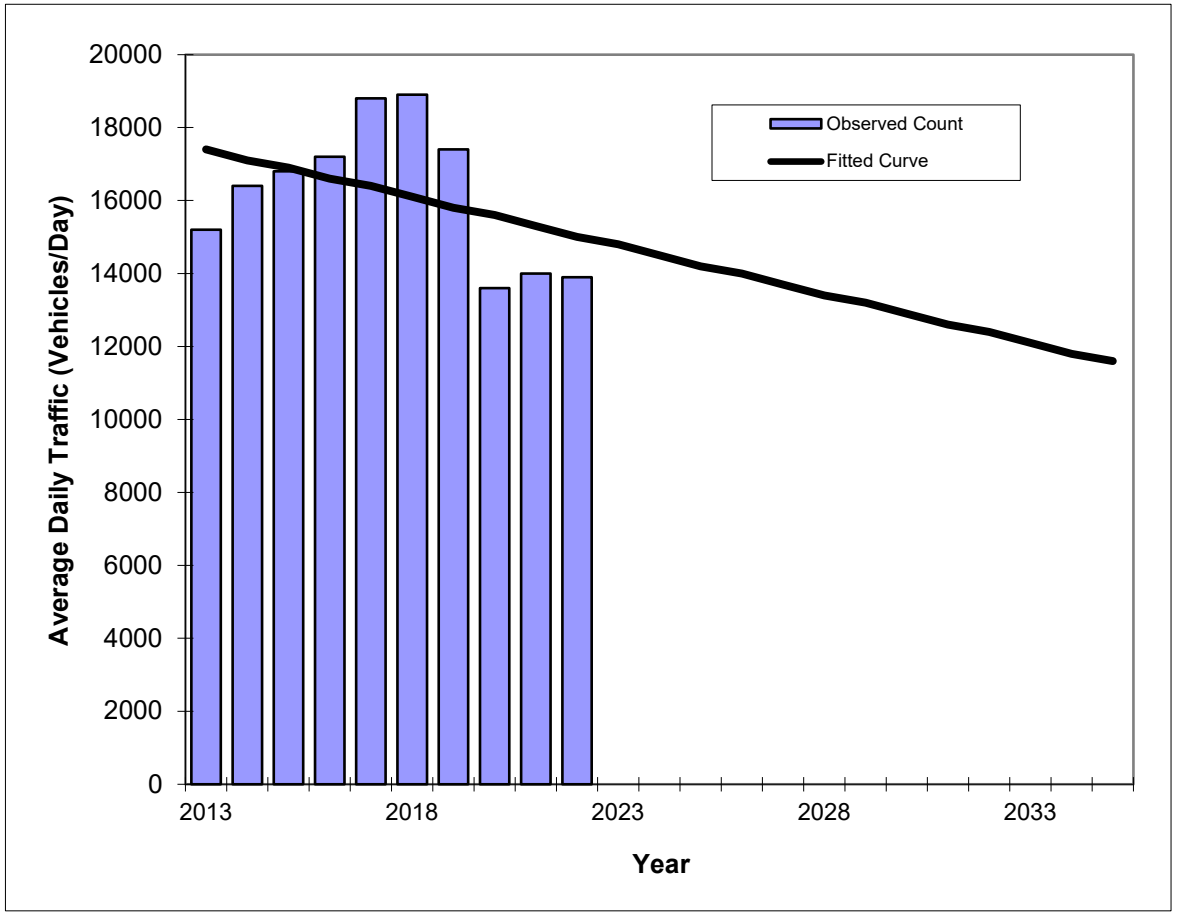
***Axle-Adjusted**

Traffic Trends - V03.a

HOWLAND BOULEVARD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	906
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2013	15200	17400
2014	16400	17100
2015	16800	16900
2016	17200	16600
2017	18800	16400
2018	18900	16100
2019	17400	15800
2020	13600	15600
2021	14000	15300
2022	13900	15000
2026 Opening Year Trend		
2026	N/A	14000
2027 Mid-Year Trend		
2027	N/A	13700
2028 Design Year Trend		
2028	N/A	13400
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-265
Trend R-squared:	16.72%
Trend Annual Historic Growth Rate:	-1.53%
Trend Growth Rate (2022 to Design Year):	-1.78%
Printed:	6-Aug-24

Straight Line Growth Option

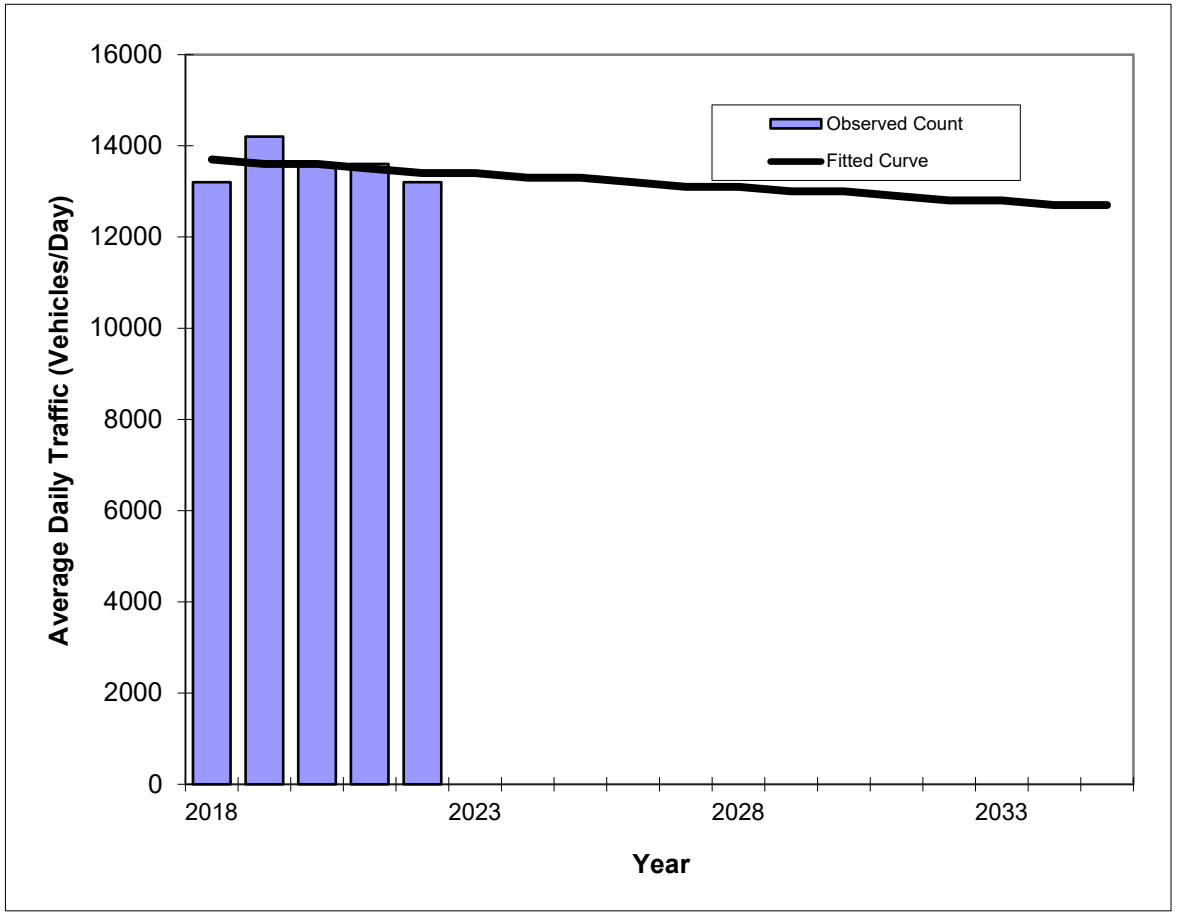
***Axle-Adjusted**

Traffic Trends - V03.a

ORANGE CAMP RD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1380
Highway:	ORANGE CAMP RD



Year	Traffic (ADT/AADT) Count*	Trend**
2018	13200	13700
2019	14200	13600
2020	13600	13600
2021	13600	13500
2022	13200	13400
2026 Opening Year Trend		
2026	N/A	13200
2027 Mid-Year Trend		
2027	N/A	13100
2028 Design Year Trend		
2028	N/A	13100
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-60
Trend R-squared:	5.36%
Trend Annual Historic Growth Rate:	-0.55%
Trend Growth Rate (2022 to Design Year):	-0.37%
Printed:	6-Aug-24

Straight Line Growth Option

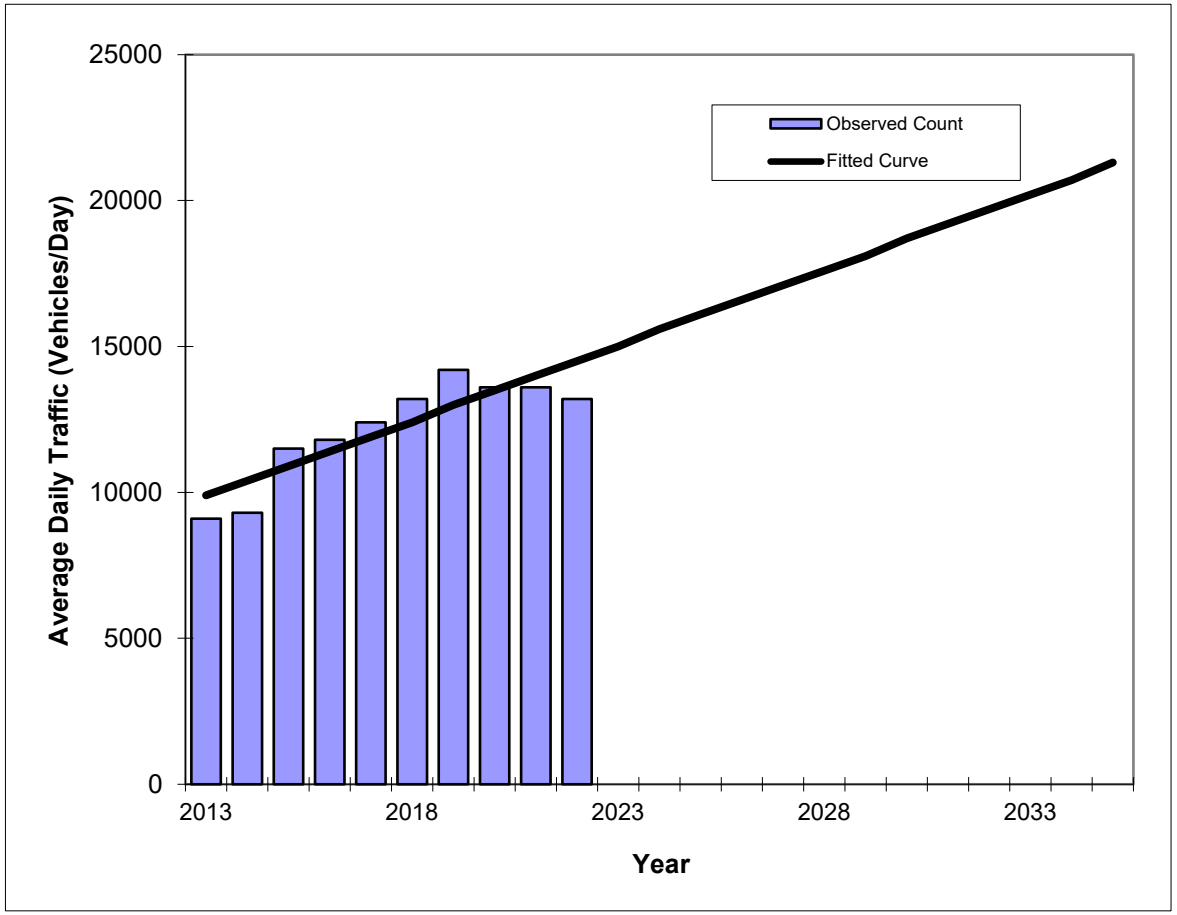
***Axle-Adjusted**

Traffic Trends - V03.a

ORANGE CAMP RD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1380
Highway:	ORANGE CAMP RD



Year	Traffic (ADT/AADT) Count*	Trend**
2013	9100	9900
2014	9300	10400
2015	11500	10900
2016	11800	11400
2017	12400	11900
2018	13200	12400
2019	14200	13000
2020	13600	13500
2021	13600	14000
2022	13200	14500
2026 Opening Year Trend		
2026	N/A	16600
2027 Mid-Year Trend		
2027	N/A	17100
2028 Design Year Trend		
2028	N/A	17600
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	518
Trend R-squared:	77.38%
Trend Annual Historic Growth Rate:	5.16%
Trend Growth Rate (2022 to Design Year):	3.56%
Printed:	6-Aug-24

Straight Line Growth Option

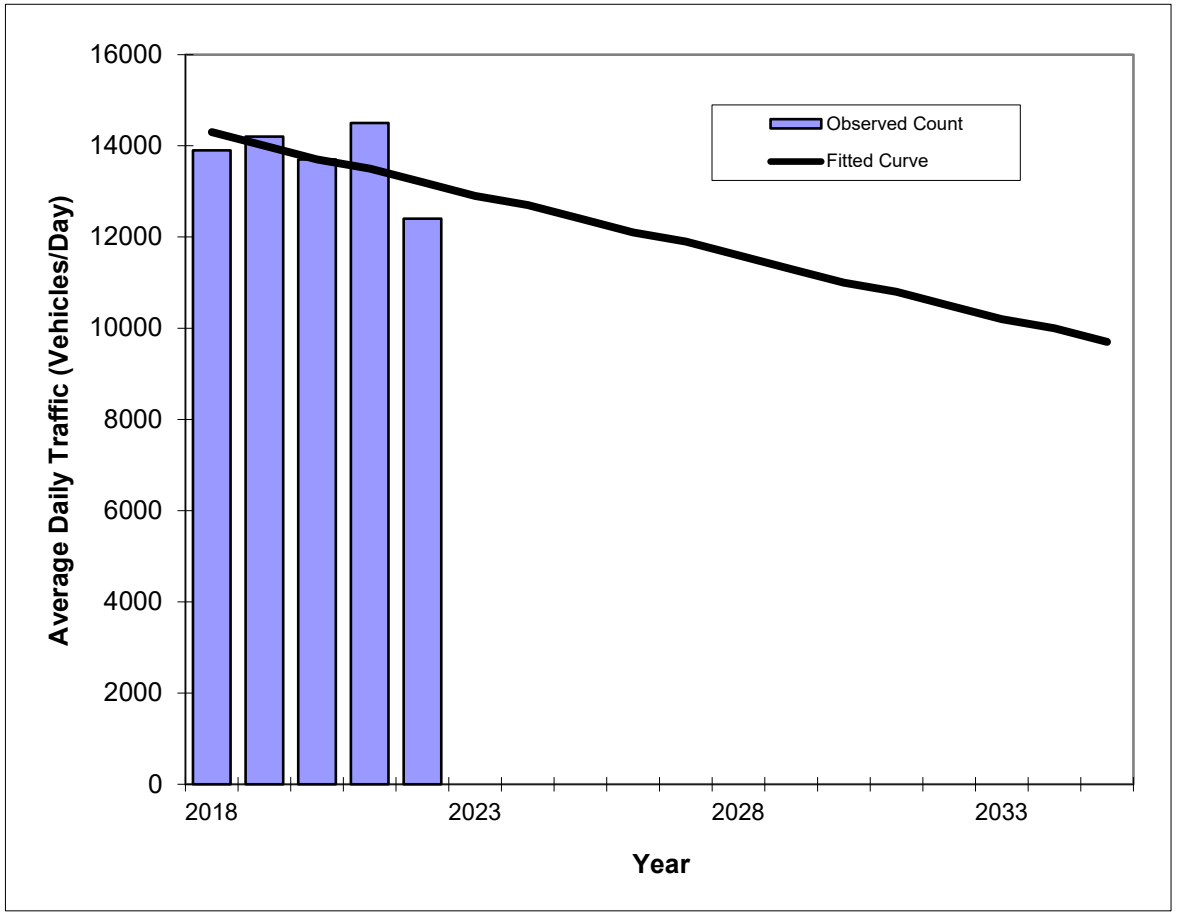
*Axle-Adjusted

Traffic Trends - V03.a

ORANGE CAMP RD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1384
Highway:	ORANGE CAMP RD



Year	Traffic (ADT/AADT) Count*	Trend**
2018	13900	14300
2019	14200	14000
2020	13700	13700
2021	14500	13500
2022	12400	13200
2026 Opening Year Trend		
2026	N/A	12100
2027 Mid-Year Trend		
2027	N/A	11900
2028 Design Year Trend		
2028	N/A	11600
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-270
Trend R-squared:	27.91%
Trend Annual Historic Growth Rate:	-1.92%
Trend Growth Rate (2022 to Design Year):	-2.02%
Printed:	6-Aug-24

Straight Line Growth Option

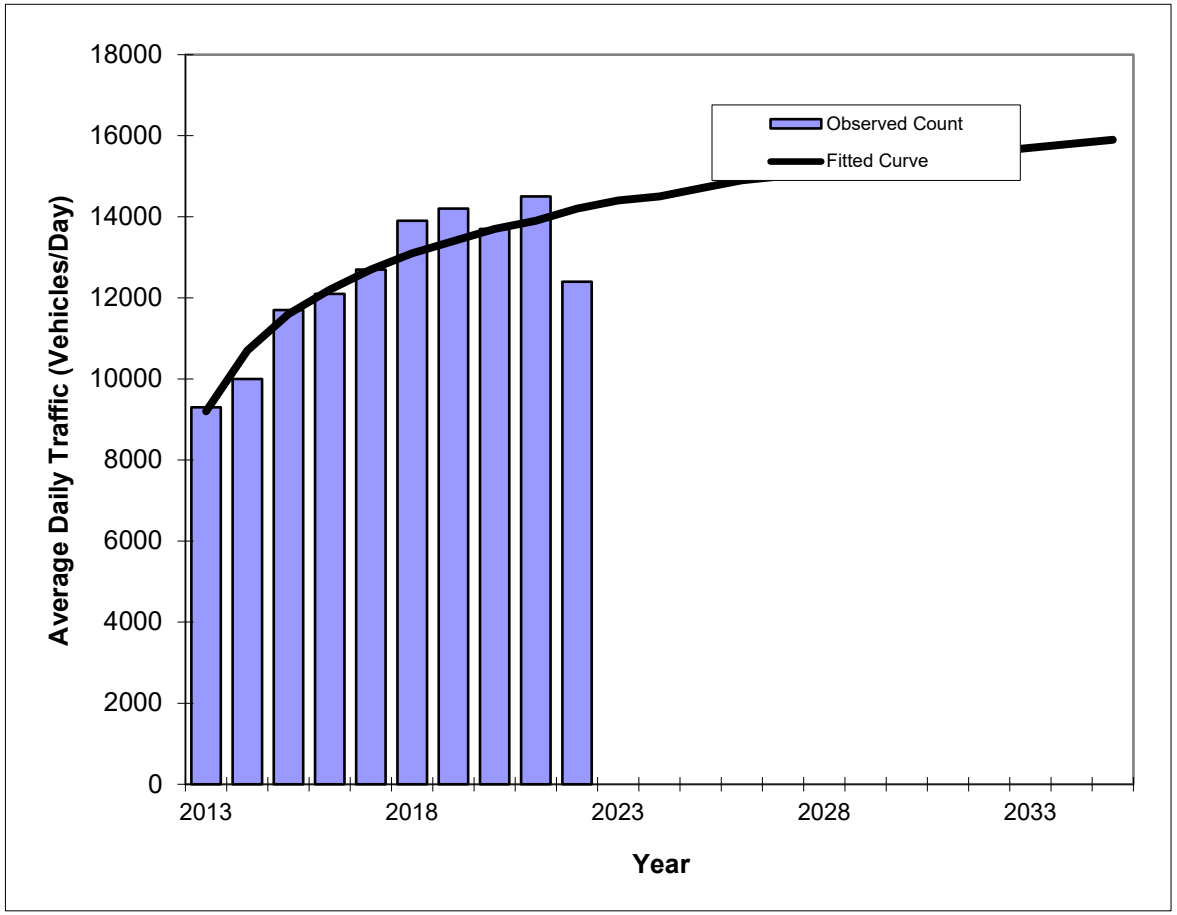
***Axle-Adjusted**

Traffic Trends - V03.a

ORANGE CAMP RD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1384
Highway:	ORANGE CAMP RD



Year	Traffic (ADT/AADT) Count*	Trend**
2013	9300	9200
2014	10000	10700
2015	11700	11600
2016	12100	12200
2017	12700	12700
2018	13900	13100
2019	14200	13400
2020	13700	13700
2021	14500	13900
2022	12400	14200
2026 Opening Year Trend		
2026	N/A	14900
2027 Mid-Year Trend		
2027	N/A	15000
2028 Design Year Trend		
2028	N/A	15200
TRANPLAN Forecasts/Trends		

Trend R-squared:	80.82%
Compounded Annual Historic Growth Rate:	4.94%
Compounded Growth Rate (2022 to Design Year):	1.14%
Printed:	6-Aug-24

Decaying Exponential Growth Option

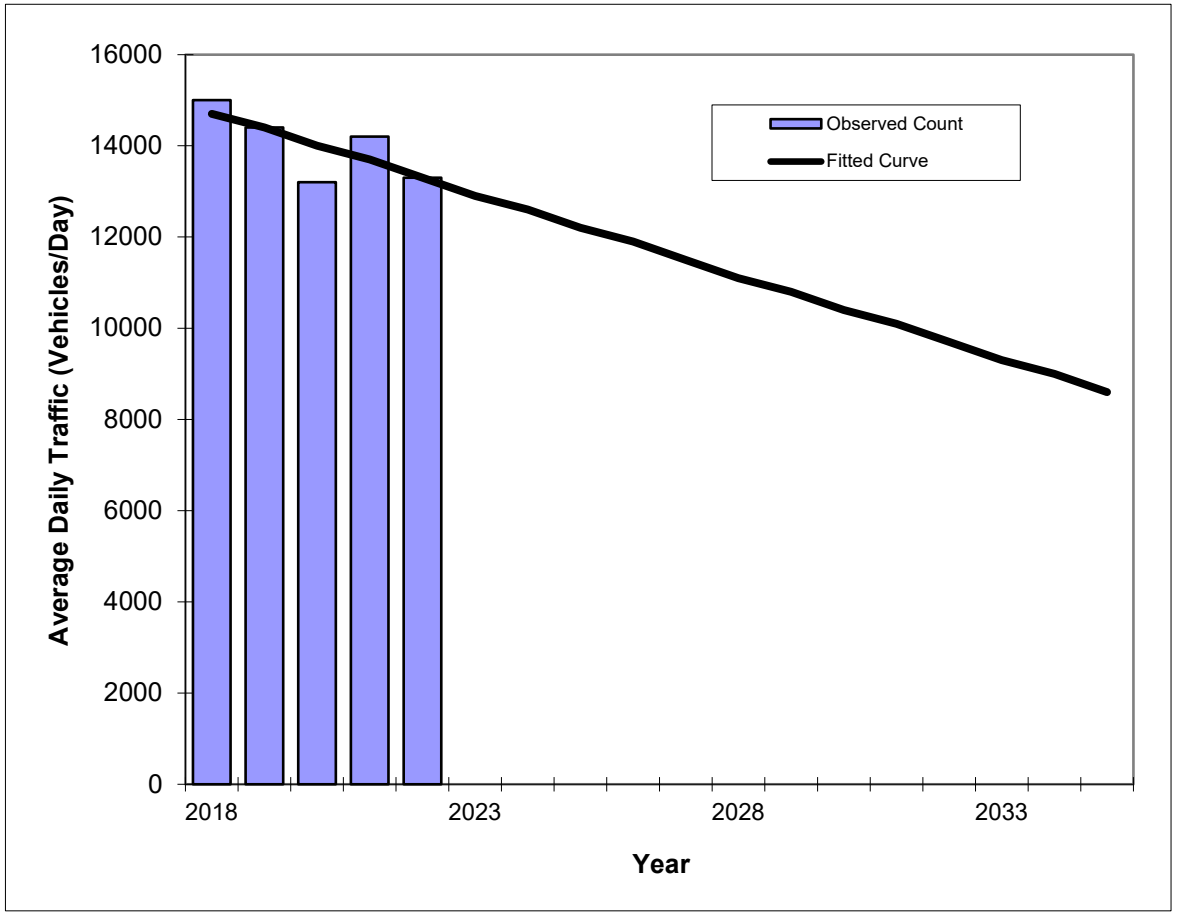
***Axle-Adjusted**

Traffic Trends - V03.a

ORANGE CAMP RD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1385
Highway:	ORANGE CAMP RD



Year	Traffic (ADT/AADT) Count*	Trend**
2018	15000	14700
2019	14400	14400
2020	13200	14000
2021	14200	13700
2022	13300	13300
2026 Opening Year Trend		
2026	N/A	11900
2027 Mid-Year Trend		
2027	N/A	11500
2028 Design Year Trend		
2028	N/A	11100
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-360
Trend R-squared:	55.67%
Trend Annual Historic Growth Rate:	-2.38%
Trend Growth Rate (2022 to Design Year):	-2.76%
Printed:	6-Aug-24

Straight Line Growth Option

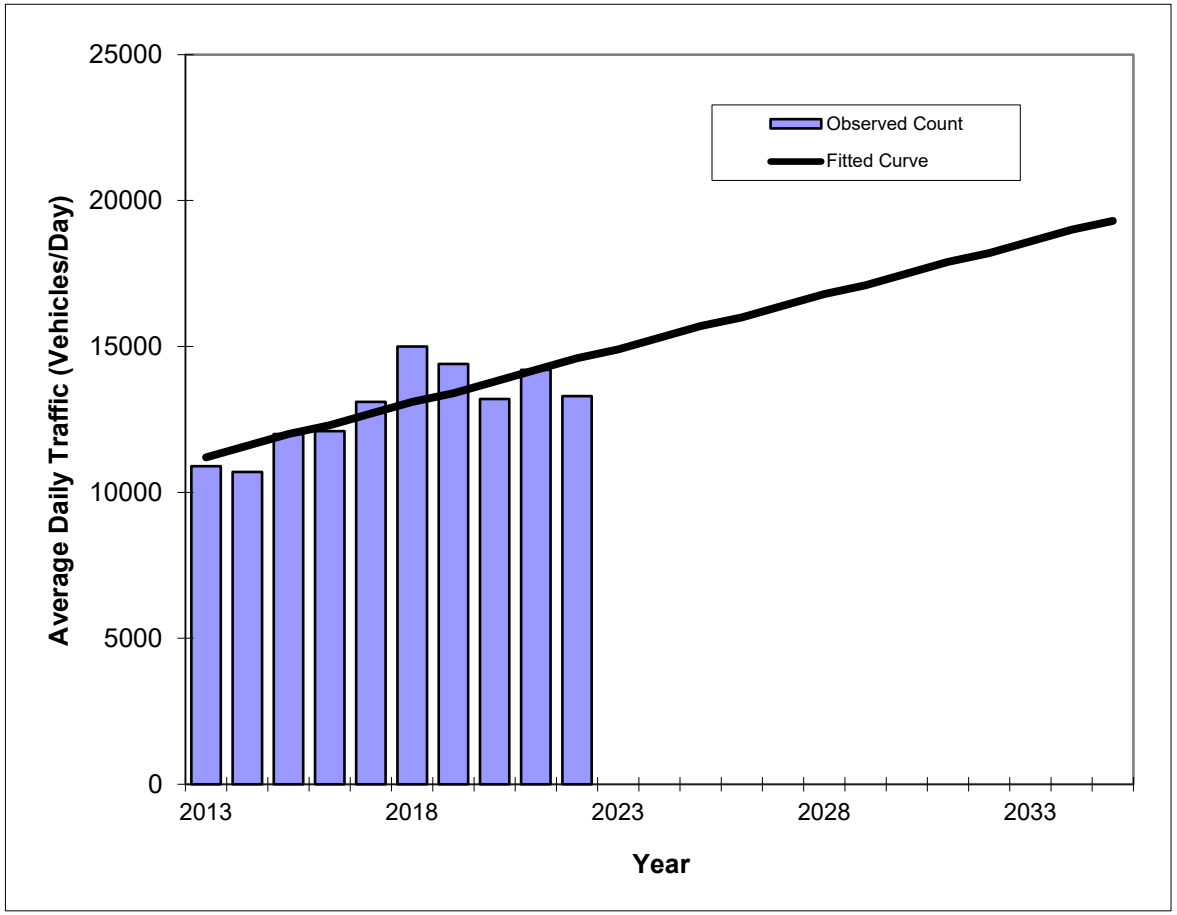
***Axle-Adjusted**

Traffic Trends - V03.a

ORANGE CAMP RD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1385
Highway:	ORANGE CAMP RD



Year	Traffic (ADT/AADT) Count*	Trend**
2013	10900	11200
2014	10700	11600
2015	12000	12000
2016	12100	12300
2017	13100	12700
2018	15000	13100
2019	14400	13400
2020	13200	13800
2021	14200	14200
2022	13300	14600
2026 Opening Year Trend		
2026	N/A	16000
2027 Mid-Year Trend		
2027	N/A	16400
2028 Design Year Trend		
2028	N/A	16800
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	369
Trend R-squared:	59.37%
Trend Annual Historic Growth Rate:	3.37%
Trend Growth Rate (2022 to Design Year):	2.51%
Printed:	6-Aug-24

Straight Line Growth Option

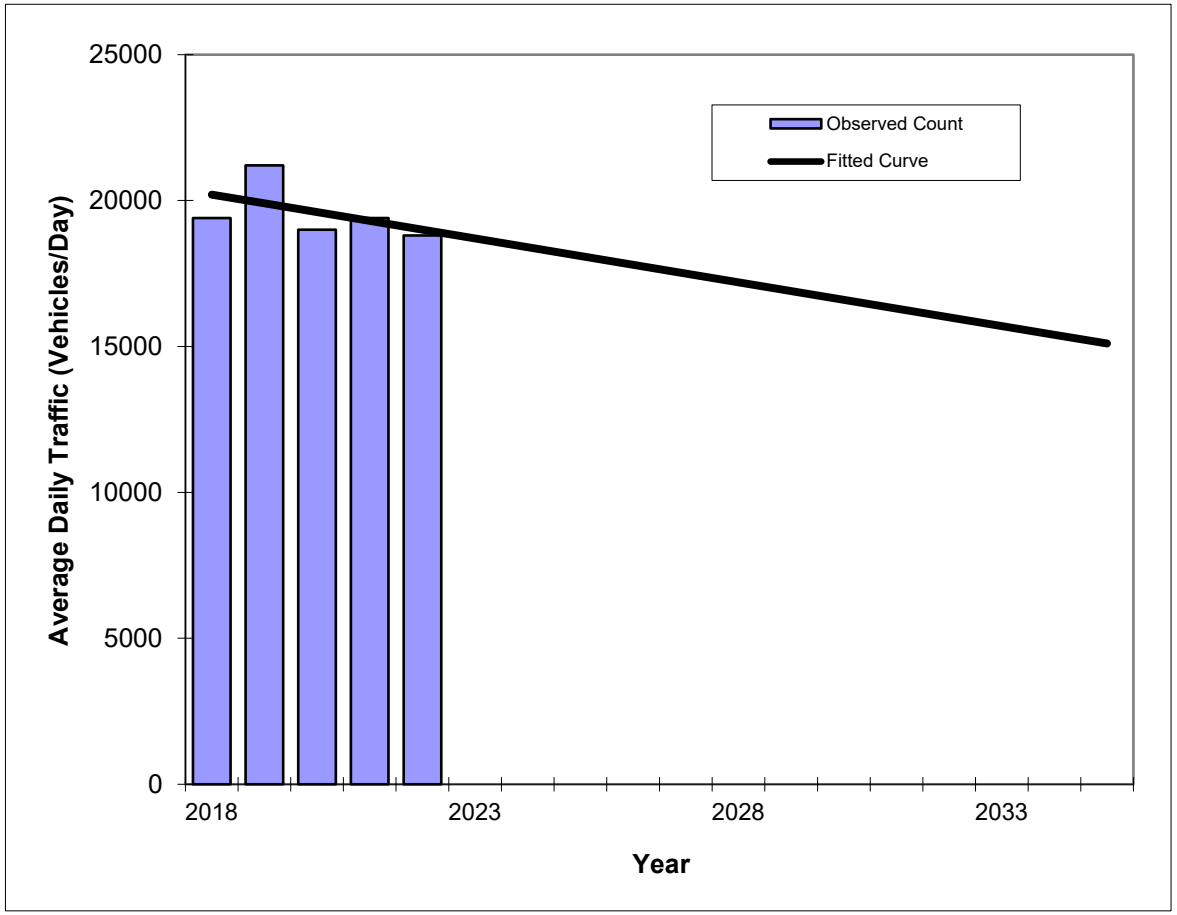
***Axle-Adjusted**

Traffic Trends - V03.a

W Volusia Beltway --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1901
Highway:	W Volusia Beltway



Year	Traffic (ADT/AADT) Count*	Trend**
2018	19400	20200
2019	21200	19900
2020	19000	19600
2021	19400	19300
2022	18800	19000
2026 Opening Year Trend		
2026	N/A	17800
2027 Mid-Year Trend		
2027	N/A	17500
2028 Design Year Trend		
2028	N/A	17200
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	-300
Trend R-squared:	24.78%
Trend Annual Historic Growth Rate:	-1.49%
Trend Growth Rate (2022 to Design Year):	-1.58%
Printed:	6-Aug-24

Straight Line Growth Option

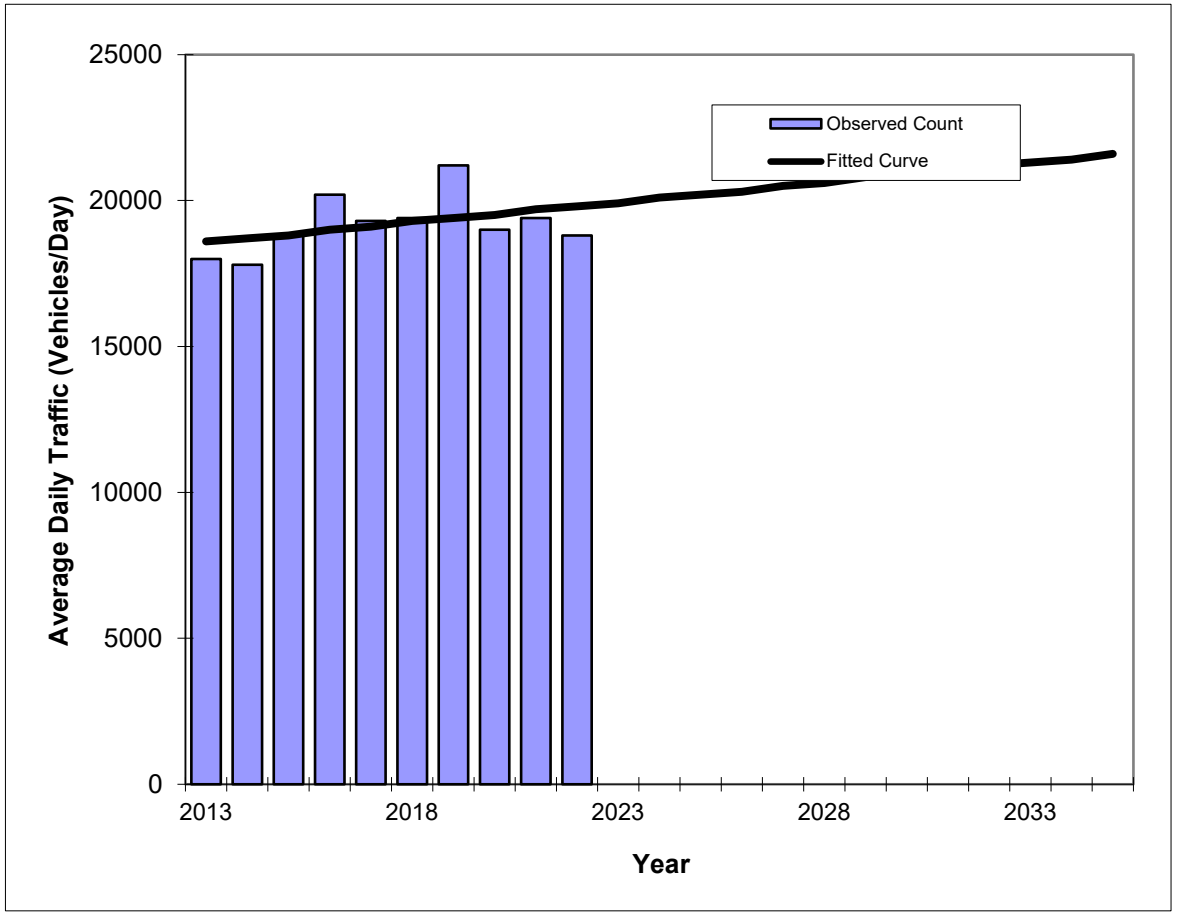
*Axle-Adjusted

Traffic Trends - V03.a

W Volusia Beltway --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1901
Highway:	W Volusia Beltway



Year	Traffic (ADT/AADT) Count*	Trend**
2013	18000	18600
2014	17800	18700
2015	18800	18800
2016	20200	19000
2017	19300	19100
2018	19400	19300
2019	21200	19400
2020	19000	19500
2021	19400	19700
2022	18800	19800
2026 Opening Year Trend		
2026	N/A	20300
2027 Mid-Year Trend		
2027	N/A	20500
2028 Design Year Trend		
2028	N/A	20600
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	136
Trend R-squared:	17.34%
Trend Annual Historic Growth Rate:	0.72%
Trend Growth Rate (2022 to Design Year):	0.67%
Printed:	6-Aug-24

Straight Line Growth Option

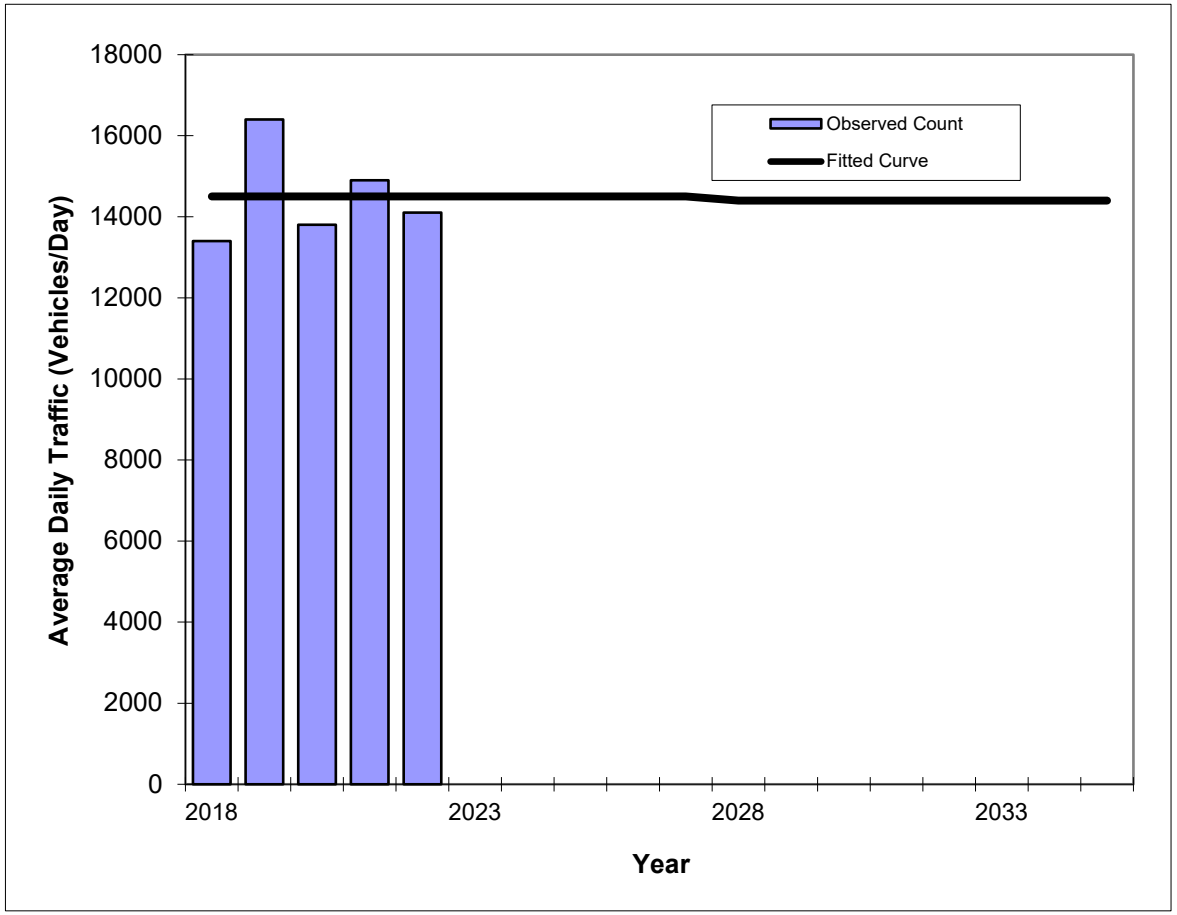
***Axle-Adjusted**

Traffic Trends - V03.a

W Volusia Beltway --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1902
Highway:	W Volusia Beltway



Year	Traffic (ADT/AADT) Count*	Trend**
2018	13400	14500
2019	16400	14500
2020	13800	14500
2021	14900	14500
2022	14100	14500
2026 Opening Year Trend		
2026	N/A	14500
2027 Mid-Year Trend		
2027	N/A	14500
2028 Design Year Trend		
2028	N/A	14400
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-10
Trend R-squared:	0.02%
Trend Annual Historic Growth Rate:	0.00%
Trend Growth Rate (2022 to Design Year):	-0.11%
Printed:	6-Aug-24

Straight Line Growth Option

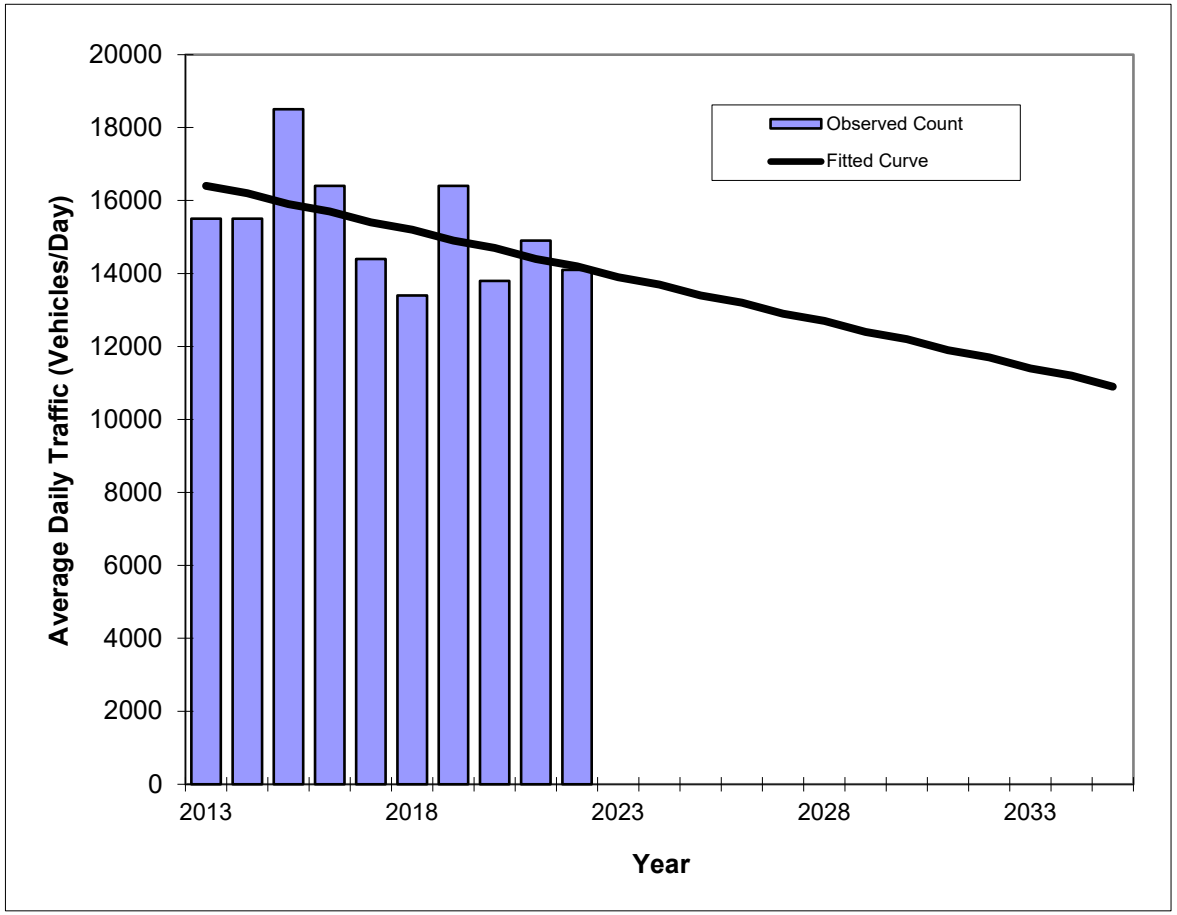
***Axle-Adjusted**

Traffic Trends - V03.a

W Volusia Beltway --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1902
Highway:	W Volusia Beltway



Year	Traffic (ADT/AADT) Count*	Trend**
2013	15500	16400
2014	15500	16200
2015	18500	15900
2016	16400	15700
2017	14400	15400
2018	13400	15200
2019	16400	14900
2020	13800	14700
2021	14900	14400
2022	14100	14200
2026 Opening Year Trend		
2026	N/A	13200
2027 Mid-Year Trend		
2027	N/A	12900
2028 Design Year Trend		
2028	N/A	12700
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-250
Trend R-squared:	24.60%
Trend Annual Historic Growth Rate:	-1.49%
Trend Growth Rate (2022 to Design Year):	-1.76%
Printed:	6-Aug-24

Straight Line Growth Option

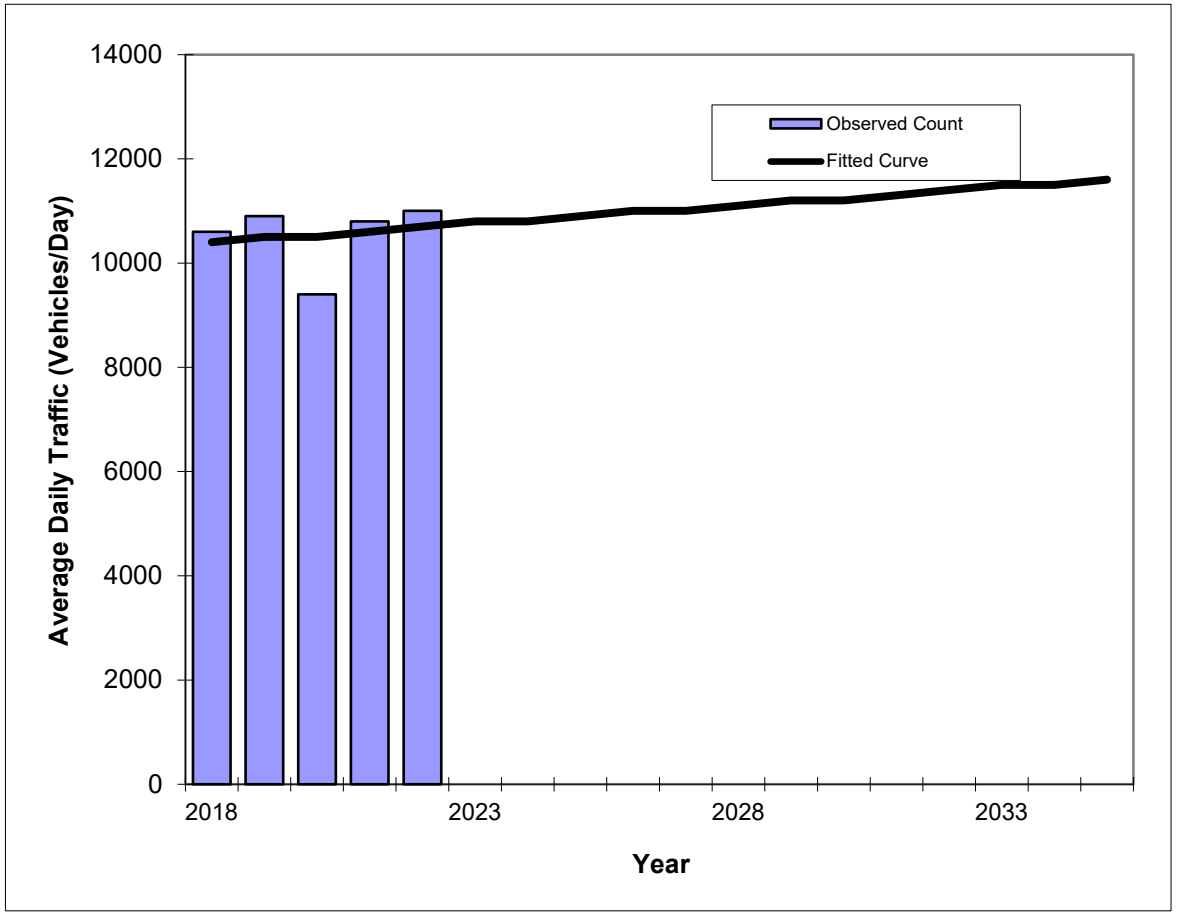
***Axle-Adjusted**

Traffic Trends - V03.a

W Volusia Beltway --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1030
Highway:	W Volusia Beltway



Year	Traffic (ADT/AADT) Count*	Trend**
2018	10600	10400
2019	10900	10500
2020	9400	10500
2021	10800	10600
2022	11000	10700
2026 Opening Year Trend		
2026	N/A	11000
2027 Mid-Year Trend		
2027	N/A	11000
2028 Design Year Trend		
2028	N/A	11100
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	70
Trend R-squared:	2.86%
Trend Annual Historic Growth Rate:	0.72%
Trend Growth Rate (2022 to Design Year):	0.62%
Printed:	6-Aug-24

Straight Line Growth Option

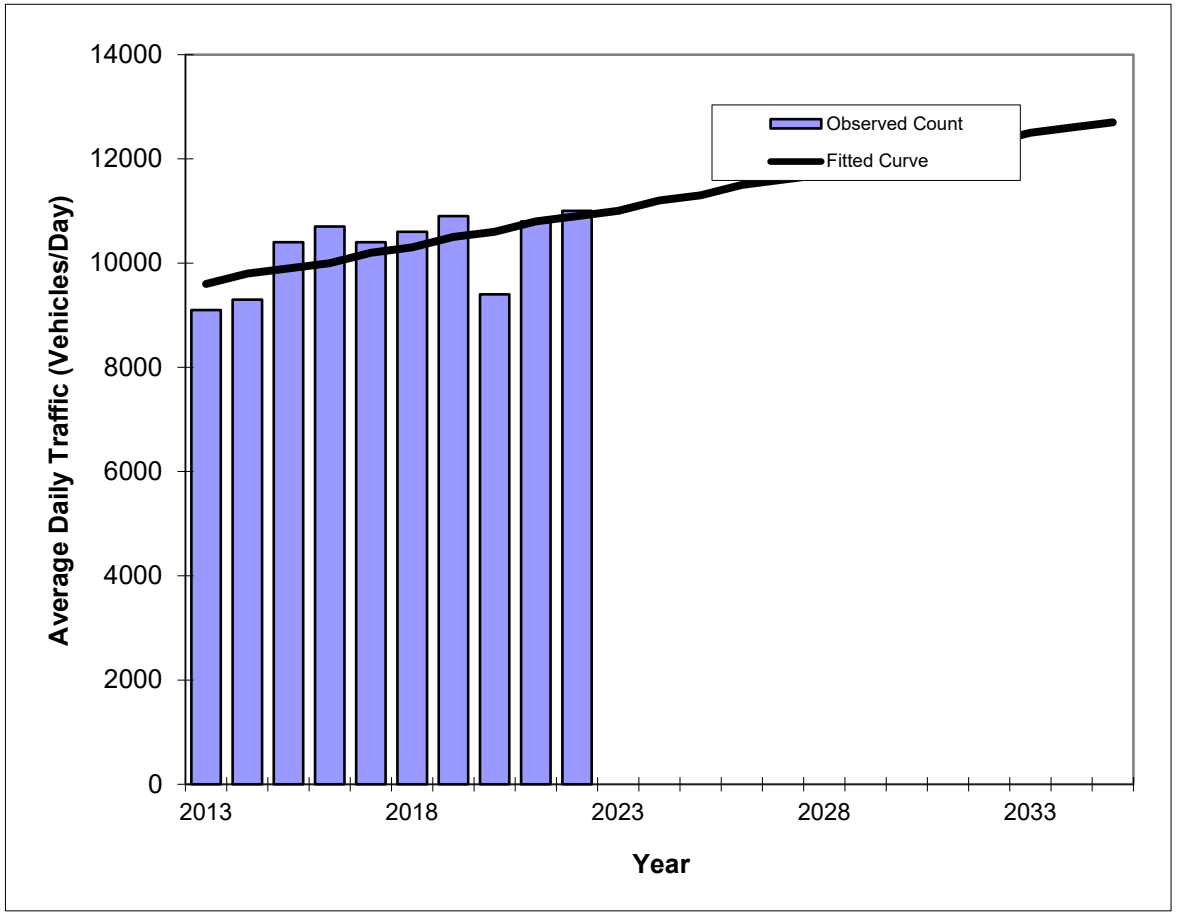
***Axle-Adjusted**

Traffic Trends - V03.a

W Volusia Beltway --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1030
Highway:	W Volusia Beltway



Year	Traffic (ADT/AADT) Count*	Trend**
2013	9100	9600
2014	9300	9800
2015	10400	9900
2016	10700	10000
2017	10400	10200
2018	10600	10300
2019	10900	10500
2020	9400	10600
2021	10800	10800
2022	11000	10900
2026 Opening Year Trend		
2026	N/A	11500
2027 Mid-Year Trend		
2027	N/A	11600
2028 Design Year Trend		
2028	N/A	11700
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	142
Trend R-squared:	36.04%
Trend Annual Historic Growth Rate:	1.50%
Trend Growth Rate (2022 to Design Year):	1.22%
Printed:	6-Aug-24

Straight Line Growth Option

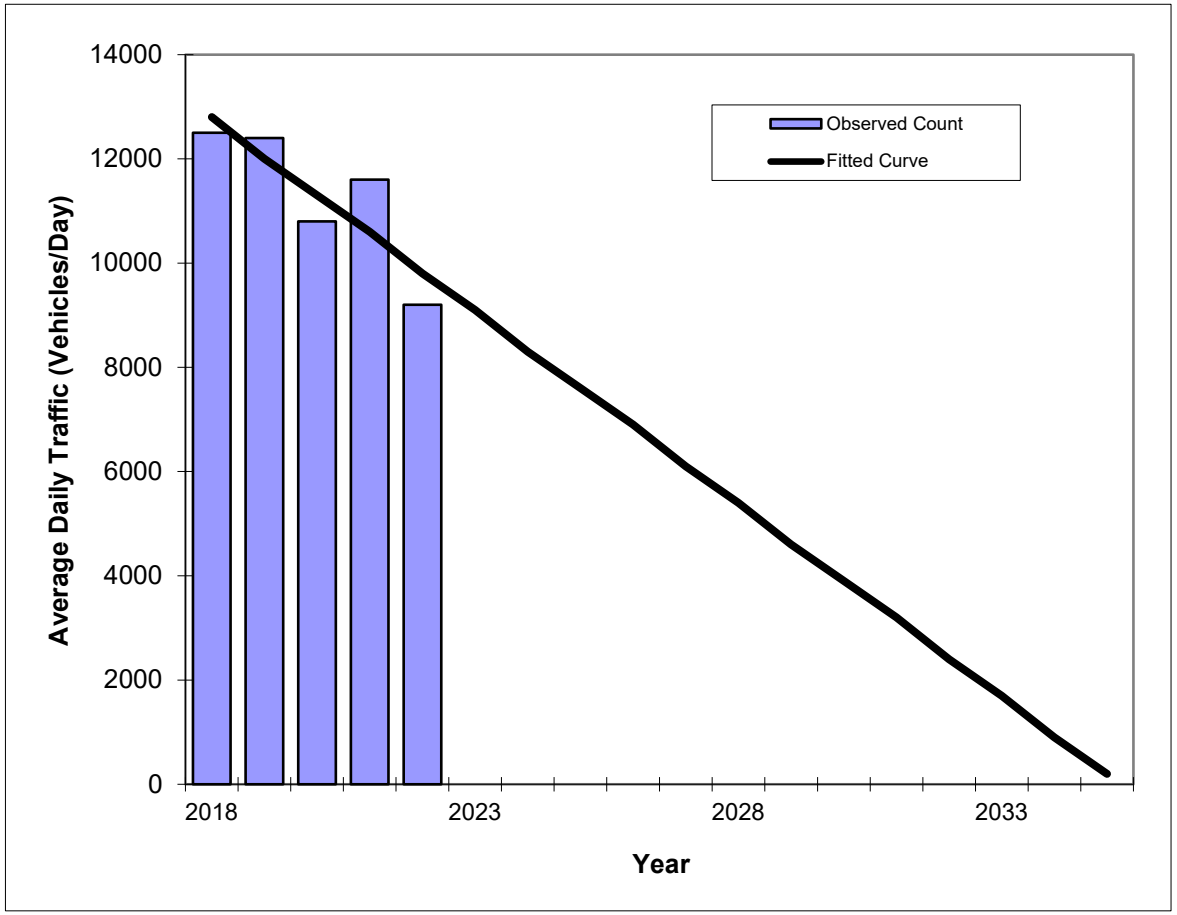
***Axle-Adjusted**

Traffic Trends - V03.a

W Volusia Beltway --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1942
Highway:	W Volusia Beltway



Year	Traffic (ADT/AADT) Count*	Trend**
2018	12500	12800
2019	12400	12000
2020	10800	11300
2021	11600	10600
2022	9200	9800
2026 Opening Year Trend		
2026	N/A	6900
2027 Mid-Year Trend		
2027	N/A	6100
2028 Design Year Trend		
2028	N/A	5400
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-740
Trend R-squared:	74.00%
Trend Annual Historic Growth Rate:	-5.86%
Trend Growth Rate (2022 to Design Year):	-7.48%
Printed:	6-Aug-24

Straight Line Growth Option

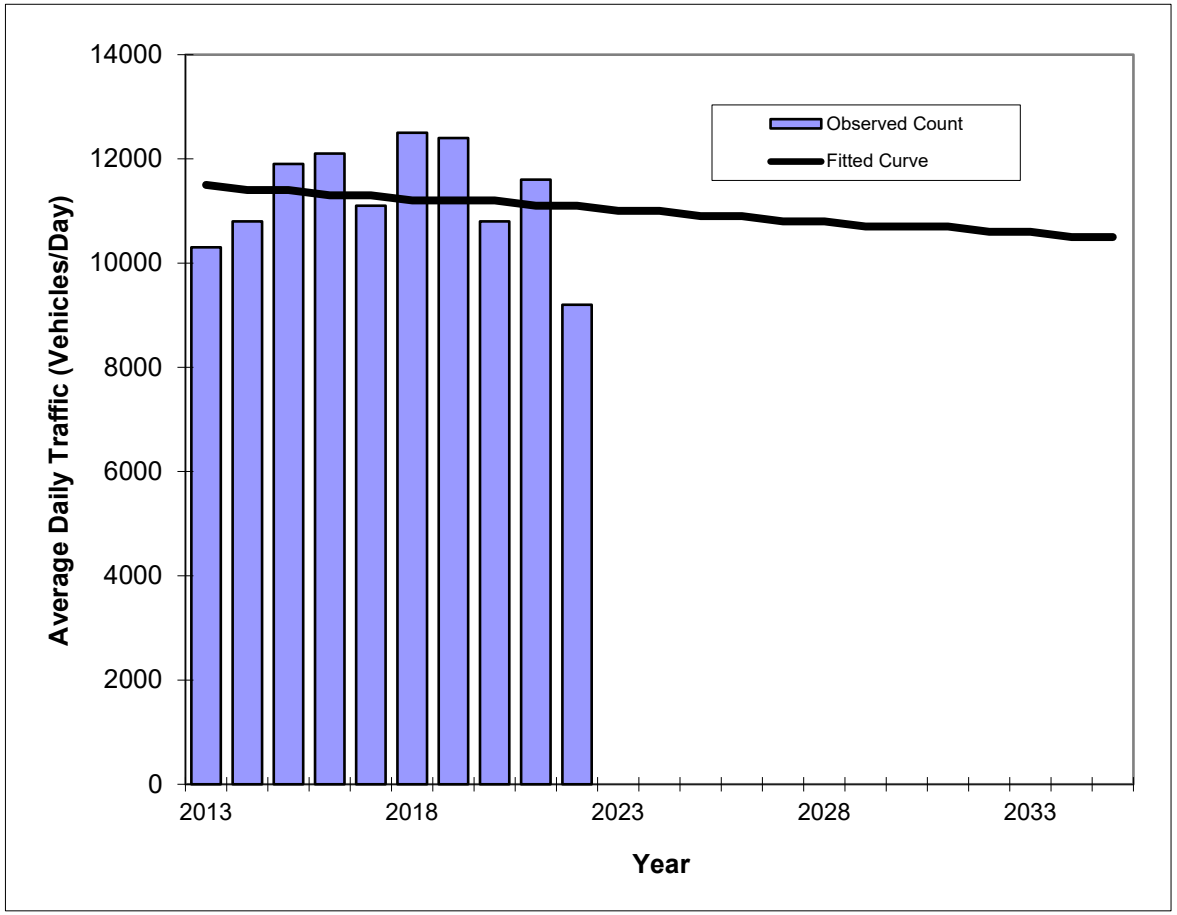
***Axle-Adjusted**

Traffic Trends - V03.a

W Volusia Beltway --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1942
Highway:	W Volusia Beltway



Year	Traffic (ADT/AADT) Count*	Trend**
2013	10300	11500
2014	10800	11400
2015	11900	11400
2016	12100	11300
2017	11100	11300
2018	12500	11200
2019	12400	11200
2020	10800	11200
2021	11600	11100
2022	9200	11100
2026 Opening Year Trend		
2026	N/A	10900
2027 Mid-Year Trend		
2027	N/A	10800
2028 Design Year Trend		
2028	N/A	10800
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-45
Trend R-squared:	1.76%
Trend Annual Historic Growth Rate:	-0.39%
Trend Growth Rate (2022 to Design Year):	-0.45%
Printed:	6-Aug-24

Straight Line Growth Option

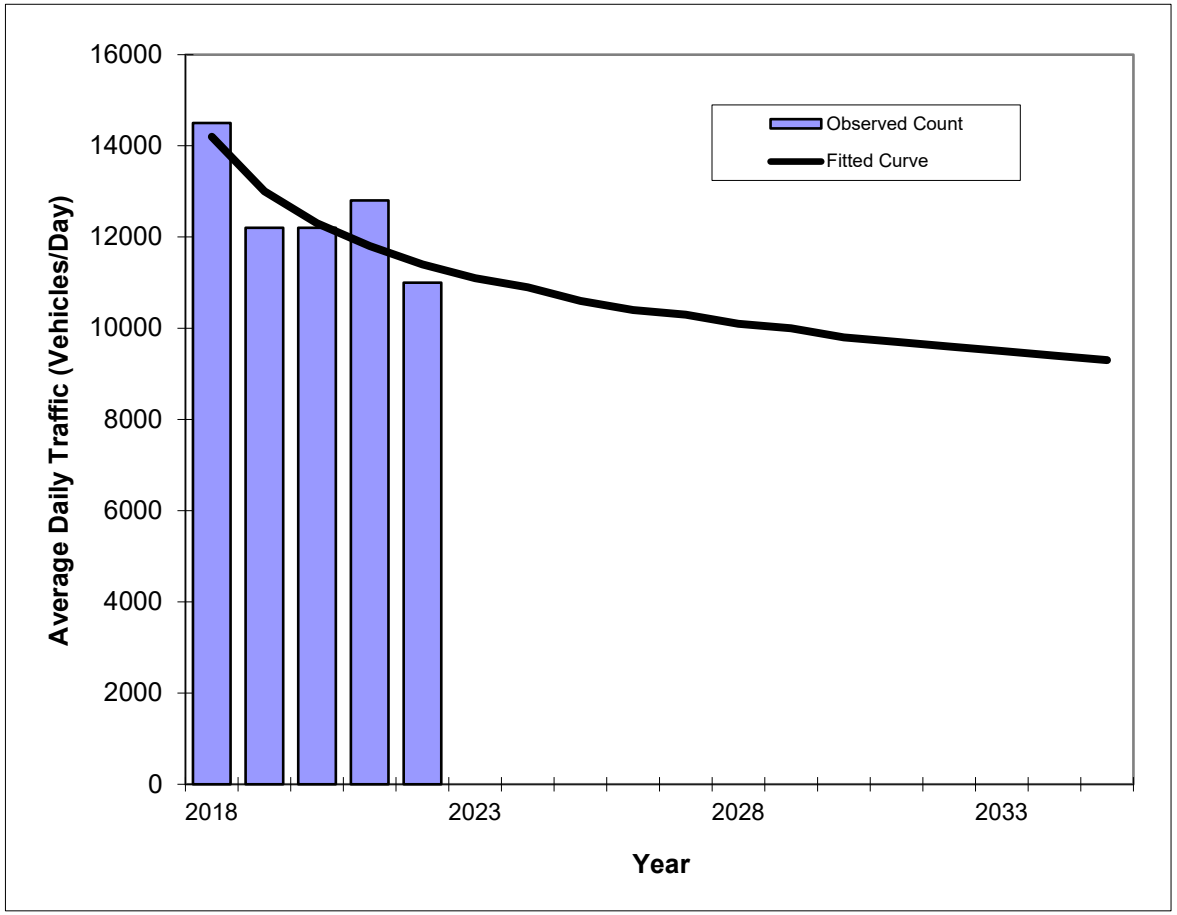
***Axle-Adjusted**

Traffic Trends - V03.a

W Volusia Beltway --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1943
Highway:	W Volusia Beltway



Year	Traffic (ADT/AADT) Count*	Trend**
2018	14500	14200
2019	12200	13000
2020	12200	12300
2021	12800	11800
2022	11000	11400
2026 Opening Year Trend		
2026	N/A	10400
2027 Mid-Year Trend		
2027	N/A	10300
2028 Design Year Trend		
2028	N/A	10100
TRANPLAN Forecasts/Trends		

Trend R-squared:	70.70%
Compounded Annual Historic Growth Rate:	-5.34%
Compounded Growth Rate (2022 to Design Year):	-2.00%
Printed:	6-Aug-24

Decaying Exponential Growth Option

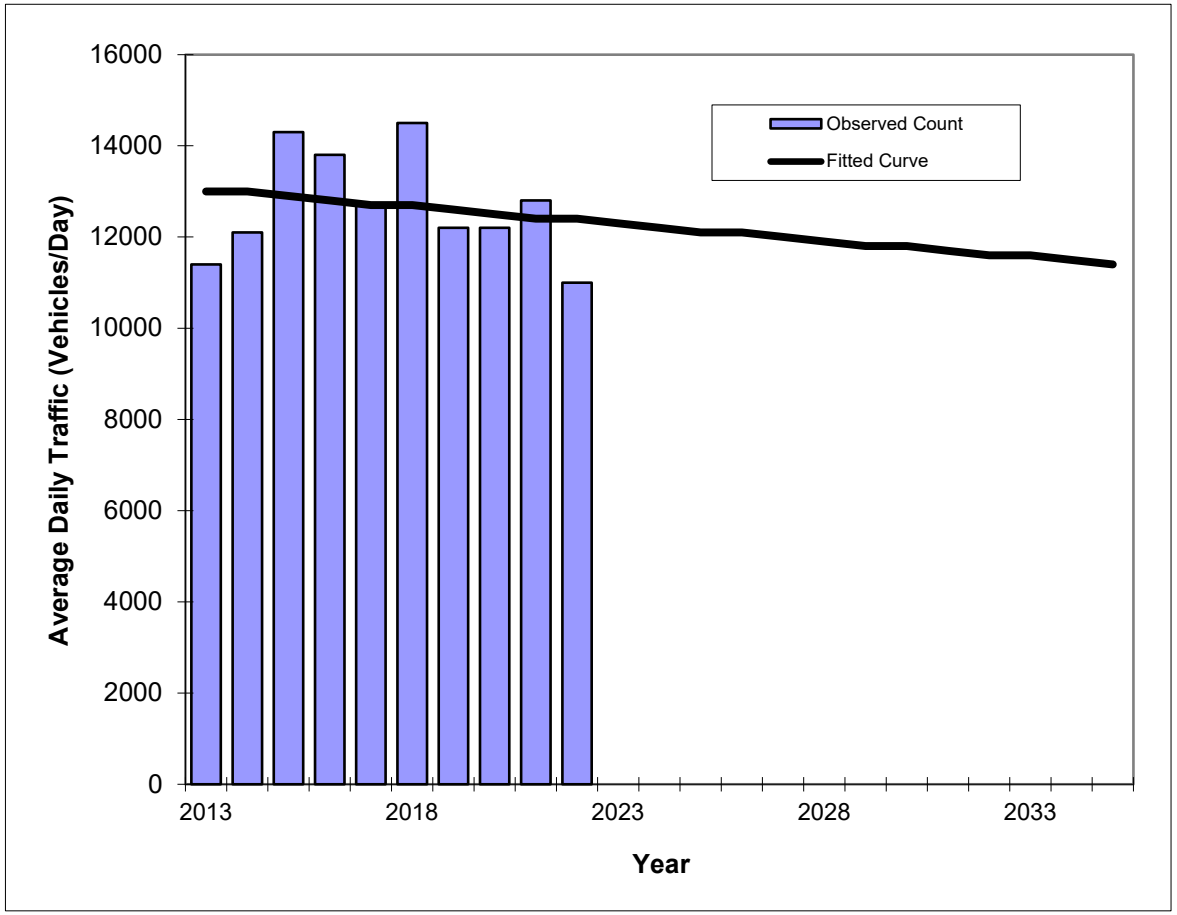
***Axle-Adjusted**

Traffic Trends - V03.a

W Volusia Beltway --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1943
Highway:	W Volusia Beltway



Year	Traffic (ADT/AADT) Count*	Trend**
2013	11400	13000
2014	12100	13000
2015	14300	12900
2016	13800	12800
2017	12700	12700
2018	14500	12700
2019	12200	12600
2020	12200	12500
2021	12800	12400
2022	11000	12400
2026 Opening Year Trend		
2026	N/A	12100
2027 Mid-Year Trend		
2027	N/A	12000
2028 Design Year Trend		
2028	N/A	11900
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-74
Trend R-squared:	3.62%
Trend Annual Historic Growth Rate:	-0.51%
Trend Growth Rate (2022 to Design Year):	-0.67%
Printed:	6-Aug-24

Straight Line Growth Option

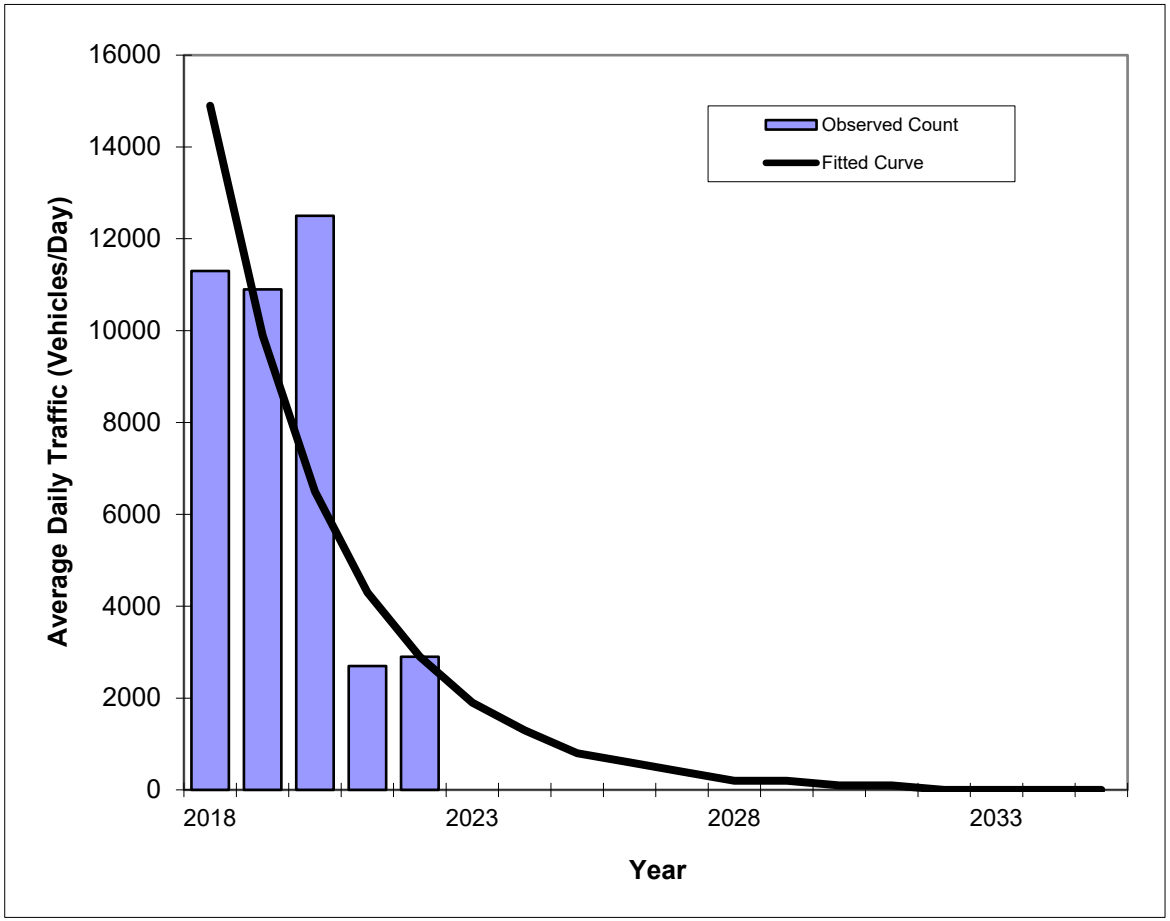
***Axle-Adjusted**

Traffic Trends - V03.a

CATALINA BLVD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	8193
Highway:	CATALINA BLVD



Year	Traffic (ADT/AADT) Count*	Trend**
2018	11300	14900
2019	10900	9900
2020	12500	6500
2021	2700	4300
2022	2900	2900
2026 Opening Year Trend		
2026	N/A	600
2027 Mid-Year Trend		
2027	N/A	400
2028 Design Year Trend		
2028	N/A	200
TRANPLAN Forecasts/Trends		

Trend R-squared:	69.89%
Compounded Annual Historic Growth Rate:	-33.58%
Compounded Growth Rate (2022 to Design Year):	-35.96%
Printed:	6-Aug-24

Exponential Growth Option

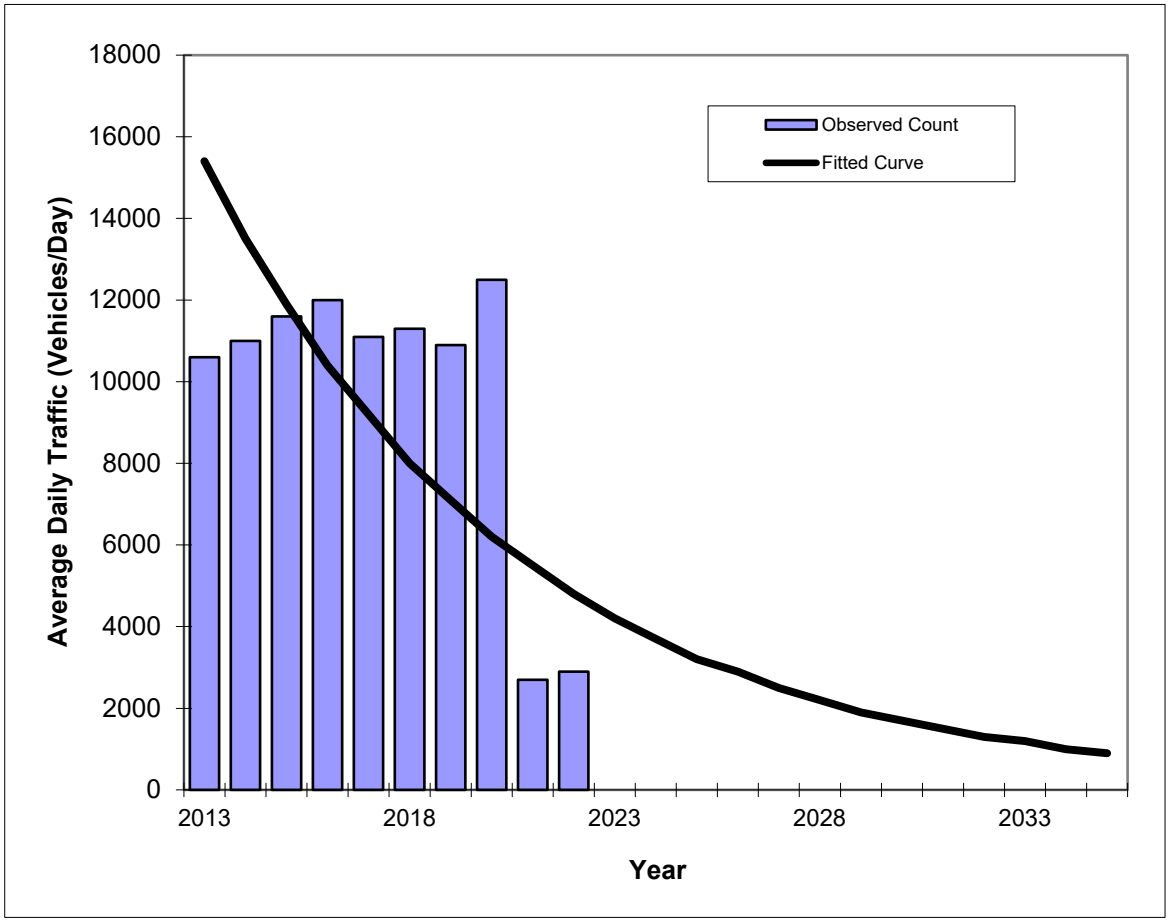
***Axle-Adjusted**

Traffic Trends - V03.a

CATALINA BLVD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	8193
Highway:	CATALINA BLVD



Year	Traffic (ADT/AADT) Count*	Trend**
2013	10600	15400
2014	11000	13500
2015	11600	11900
2016	12000	10400
2017	11100	9200
2018	11300	8000
2019	10900	7100
2020	12500	6200
2021	2700	5500
2022	2900	4800
2026 Opening Year Trend		
2026	N/A	2900
2027 Mid-Year Trend		
2027	N/A	2500
2028 Design Year Trend		
2028	N/A	2200
TRANPLAN Forecasts/Trends		

Trend R-squared:	43.83%
Compounded Annual Historic Growth Rate:	-12.15%
Compounded Growth Rate (2022 to Design Year):	-12.19%
Printed:	6-Aug-24

Exponential Growth Option

***Axle-Adjusted**

Volusia County Vested Trip Database on Critical/Non-Critical Roads - By Critical Area, PM Peak

Approved Devts and Devts under Review

Developments not considered vested

Parent Tract trips - should not be included in overall, only for informational purposes

****ALWAYS REFER TO THE VC AADT SPREADSHEET FOR COUNT AND CAPACITY INFO. (Not this spreadsheet)****

Updated #######

****ALWAYS REFER TO THE VC AADT SPREADSHEET FOR COUNT AND CAPACITY INFO. (Not this spreadsheet)****

Roadway	Segment	2021PM Pk Hr (VCTE) (VCTE Staff note. RED font = FDOT pk volumes based on daily V/C proportion.)	Capacity	2020 Parc Hill (50% Removed)	SWAC Phase IA Trips 11,444 (removed 13% Integra Daws)	Victoria Park Ph 2 Remaining Trips per city (reduced by 75%)	Victoria Park Ph 3 trips per city (0% removed)	Halifax Crossing s BPUD (37% Removed)	Hawthorne Landing	Rivera Bella East Unit 8&9 REMOVED 50%	Ft Florida Commons	Riverbend 2008	Springview Unit 8 REMOVED 90%	Canterwood ALF	Vineland Reserve	Fernanda Place (85% removed)	Enterprise Osteen (Reflects only 189 units as woods)	Enterprise Osteen East	Lincoln Oaks 2019	133 S. Courtland Blvd	Doyle Road Tract	Reserve at Victoria 2019	Park Lake Estates 2020	Crosswinds 2020	Beresford Woods 2019	DeBary Town Center	T.11 Kepler at SR 44 2019	Azalea Walk 2019 (20% removed)	Estates at Pelham Square 2019	Animal ER Critical Care 2019	Liberty Station, Orange City 2019	The Crossings, Orange City 2020	Eloah Estates 2022	Deltona Village PUD 2010 (see PUD trip tracker) 375 remaining not reflected on network	Deltona Village 2020/Mango Street	Portland Industrial 2020	Orange City Oncology 2025	Canopy Terrace/Kirk Subdivision	Grandview Gardens	Three Island Lake South	Villages at Pelham Square	Oak Hammock Reserve	Dean River Estates	Circle K at SR 40/US 17	Total Vested Trips	Lastest AADT plus Vested trips	V/C with Vested trips	V/C without Vested Trips	
I-4 Segments based on AADT V/C																																															
Graves Ave	VMP to Kentucky Ave	1640	1620	38	40	1	9	111																						13	141	44		94											479	2116	1.30	1.01	Critical
Graves Ave	Kentucky to Normandy	1420	1620		80	1	9	352																							311	44	19	109											925	2345	1.45	0.88	Vested Critical
Graves Ave	Normandy Blvd to Howland Blvd	1590	2740		80	1	9	352																							311	44	19	175											991	2581	0.94	0.58	Vested Near Critical
Howland Blvd	I-4 to Wolf Pack Run	2530	3410		130	15		254							9														10	187	82	57	116						8					868	3398	1.00	0.74	Vested Near Critical
Howland Blvd	Wolf Pack Run to Catalina Blvd	2310	3410		119			238							10																152	133	25	98						8					783	3093	0.91	0.68	Vested Near Critical
Howland Blvd	Providence Blvd to Elkcam	1110	1080					89							16																63	82		58						8					299	1389	1.14	0.90	Critical
Orange Camp Rd=B14	I-7/32 to Princeton	1,150	1270	0	20	8	57															19	16		11					3	20			14											168	1318	1.04	0.91	Near Critical
Orange Camp Rd	Blue Lake Ave to MLK	1,210	1540	0	20	11	80															22	16	4						3	20	2		21											197	1407	0.91	0.75	Vested Near Critical
Orange Camp Rd	MLK to I-4	1,170	1540		40	17	111															59	49	9						3	10	3		54											353	1523	0.99	0.78	Vested Critical
MLK	Taylor to Orange Camp	1030	1540			8	59															123	101	0										54											345	1375	0.89	0.67	Vested Near Critical
MLK	Orange Camp to Cassadaga Rd	990	1540	0	90	12	83															54	44	3						14	51	10		21											382	1372	0.89	0.64	Vested Near Critical
Kentucky	SR 472 to Graves	910	1540																											67	162	10		31											270	1180	0.77	0.59	
VMP	Graves Ave to Rhode Island	1200	1620	49	90	1	10																							48	91	8		35											332	1532	0.95	0.74	Vested Near Critical
VMP	Rhode Island to Harley Strickland	1490	1620	235	80	1	3																											23											397	1887	1.16	0.92	Vested Critical
Catalina Blvd	Howland Blvd to Sixma Road	1002	960																												123									3					*126*	1128	1.18	1.04	Vested Critical
Catalina Blvd	Sixma Rd to Lake Helen Osteen	856	960																												110														*110*	966	1.01	0.89	Vested Near Critical

Table 5: Future Buildout Roadway Volumes

Roadway	Segment	2027 2-Way PM Background Volume	Model Distribution	Buildout Trips	2027 2-Way PM Buildout Volume
Dr Martin Luther King Jr Beltway	SR 472 to Cassadaga Rd.	1,524	16.25%	198	1,722
	Cassadaga Rd. to Orange Camp Rd.	1,685	21.30%	260	1,945
	Orange Camp Rd. to Taylor Rd.	1,634	7.50%	92	1,726
	Taylor Rd. to Beresford Ave.	1,425	6.60%	81	1,506
Kentucky Avenue	Graves Ave. to SR 472	1,489	9.10%	111	1,600
Veteran's Memorial Parkway	Rhode Island Ave. to Graves Ave.	1,566	4.60%	56	1,622
Cassadaga Road	Dr. Martin Luther King Jr Bltwy. to Macy Ave.	308	9.80%	120	428
Orange Camp Road	Blue Lake Ave. to Dr Martin Luther King Jr Bltwy.	1,670	4.80%	59	1,729
Graves Avenue	Veteran's Memorial Pkwy. to Kentucky Ave.	2,203	7.00%	85	2,288
Howland Boulevard	I-4/SR 472 to Wolf Pack Rn.	3,580	15.28%	186	3,766
	Wolf Pack Rn. to Catalina Blvd.	3,307	11.60%	142	3,449
	Catalina Blvd. to Providence Blvd.	2,336	10.07%	123	2,459
SR 472	US 17/92 to Martin Luther King Jr Bltwy.	3,193	16.74%	204	3,397
	Martin Luther King Jr Bltwy. to I-4	3,466	26.40%	322	3,788
Macy Avenue	Ohio St. to Cassadaga Rd.	193	6.60%	81	274
Kicklighter Road	Macy Ave. to Lake Helen-Osteen Rd./Prevatt Ave.	270	5.60%	68	338
Normandy Blvd.	Graves Ave. to Rhode Island Ave.	1,547	5.65%	69	1,616

3.3 Roadway Segment Analysis

Roadway segment capacity was analyzed based on the adopted peak hour capacities, as obtained from the *Volusia County 2021 AADT & Historical Counts*. The analysis compares the roadway PM peak traffic to the segment capacity to determine if the segment's LOS operation is adequate. The analysis was conducted for the existing, projected background, and projected buildout traffic. **Table 4** summarizes the roadway capacity analysis.

Table 4
Roadway Capacity Analysis

Roadway Segment	Seg ID	# of Lns	2Way Cap	Existing		Background		Project Total			
				Vol	Adeq?	Vol	Adeq?	Dist	Trips	Vol	Adeq?
US 17 / 92											
SR 472 to SR 15A / Taylor Rd*	1,004	6	5,390	1,027	YES	1,190	YES	10%	12	1,202	YES
Graves Ave / CR 4145											
Veteran's Memorial Pkwy to Kentucky Ave	775	2	1,620	1,640	**NO**	1,905	**NO**	15%	18	1,923	**NO**
Kentucky Ave to Normandy Blvd	900a	2	1,620	1,420	YES	1,880	**NO**	5%	6	1,886	**NO**
Normandy Blvd to Howland Blvd	900b	4	2,740	1,590	YES	2,050	YES	5%	6	2,056	YES
Orange Camp Rd											
US 17 / 92 to Princeton Rd	1,380	2	1,270	1,160	YES	1,364	**NO**	3%	4	1,368	**NO**
Princeton Rd to Blue Lake Ave	1,382	2	1,540	1,170	YES	1,402	YES	4%	5	1,407	YES
Blue Lake Ave to W Volusia Bltwy (Dr. MLK Jr)	1,384	2	1,540	1,220	YES	1,531	YES	5%	6	1,537	YES
W Volusia Bltwy (Dr. MLK Jr) to I-4	1,385	2	1,540	1,920	**NO**	2,409	**NO**	5%	6	2,415	**NO**
W. Volusia Bltwy											
Saxon Blvd to Harley Strickland Blvd	1,900	4	3,410	1,280	YES	1,527	YES	5%	6	1,533	YES
Harley Strickland Blvd to Rhode Island Ave	1,901	2	1,540	1,490	YES	1,748	**NO**	5%	6	1,754	**NO**
Rhode Island Ave to Graves Ave	1,902	2	1,620	1,200	YES	1,408	YES	10%	12	1,420	YES
SR 472 to Cassadaga Rd	1,940	2	1,540	1,050	YES	1,232	YES	70%	85	1,317	YES

** 2021 volume obtained from FDOT's Florida Traffic Online*

The following roadway segments are projected to operate above their adopted capacities due to existing traffic volumes or projected background growth:

- Graves Avenue / CR 4145 from Veteran's Memorial Parkway to Normandy Boulevard
- Orange Camp Road from US 17/92 to Princeton Road
- Orange Camp Road from W Volusia Beltway to I-4
- W Volusia Beltway from Harley Strickland Boulevard to Rhode Island Avenue

It is recommended that the four (4) roadway segments be widened from 2-lanes to 4-lanes, and it should also be noted that the proposed development does not cause any roadway segments to become deficient.

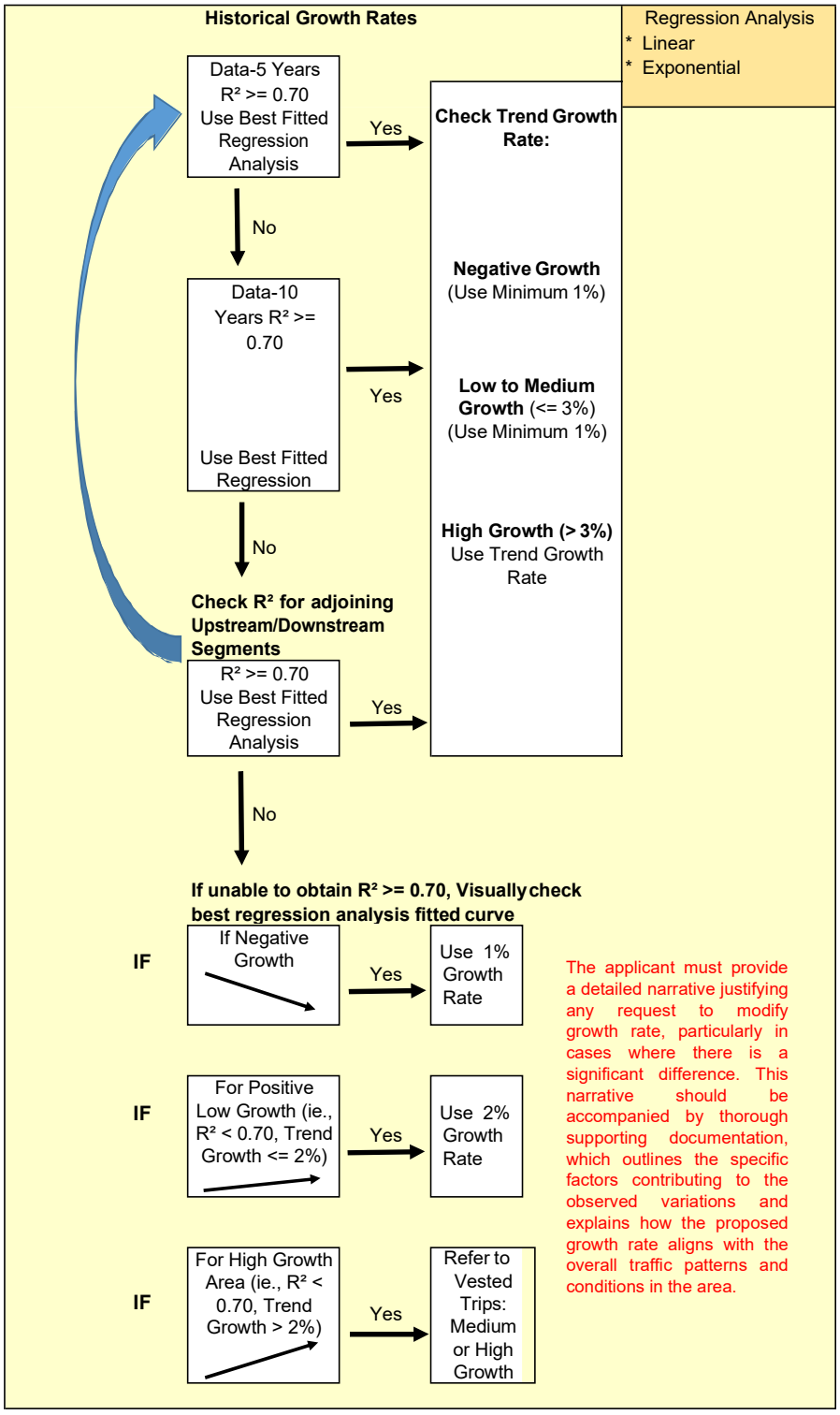
Segment Information			Deland Tech Park	TM BTR	Vested Trip Database
Roadway	From	To			
Cassadaga Rd	W. Volusia Bltwy (Dr. MLK Bltwy)	Macy Ave	120	0	0
Cassadaga Rd*	W. Volusia Bltwy (Dr. MLK Bltwy)	Blue Lake Ave (Extension)	0	0	0
Graves Ave	Veterans Memorial Pkwy	Kentucky Ave	85	18	470
Graves Ave	Kentucky Ave	Normandy Blvd	0	6	925
Graves Ave	Normandy Blvd	Howland Blvd	0	6	991
Howland Blvd	I-4/SR 472	Wolf Pack Run	186	0	868
Howland Blvd	Wolf Pack Run	Catalina Blvd	142	0	783
Howland Blvd	Providence Blvd	Elkcam Blvd	0	0	289
Orange Camp Rd	US 17/92	Princeton Rd	0	4	168
Orange Camp Rd	Blue Lake Ave	W. Volusia Bltwy (Dr. MLK Bltwy)	59	6	197
Orange Camp Rd	W. Volusia Bltwy (Dr. MLK Bltwy)	I-4	0	6	355
W. Volusia Bltwy (Veterans Memorial Pkwy)	Harley Strickland Blvd	Rhode Island Ave	0	6	397
W. Volusia Bltwy (Veterans Memorial Pkwy)	Rhode Island Ave	Graves Ave	56	12	332
W. Volusia Bltwy (Kentucky Ave)	Graves Ave	SR 472	111	0	270
W. Volusia Bltwy (Dr. MLK Bltwy)	Cassadaga Rd	Orange Camp Rd	260	0	382
W. Volusia Bltwy (Dr. MLK Bltwy)	Orange Camp Rd	Taylor Rd	92	0	345
Catalina Blvd**	Howland Blvd	Sixma Rd	0	0	126
Catalina Blvd**	Sixma Rd	Lake Helen Osteen	0	0	110

Vested trips obtained from *Volusia County Vested Trip Database* and also include trips from Deland Tech Park and TM BTR (Yardley)

*This segments is an extension and do not currently exist. The only trips that will be using this segment would be the project trips.

**No data in *Volusia County 2022 AADT* . Historical AADT obtained from *Florida Traffic Online (FTO) 2023* . Existing PM Peak Hour Volume estimated using AADT, K factor and D Factor

Volusia County's Segment Growth Rates and Vested Trips Instructions Policy



The applicant must provide a detailed narrative justifying any request to modify growth rate, particularly in cases where there is a significant difference. This narrative should be accompanied by thorough supporting documentation, which outlines the specific factors contributing to the observed variations and explains how the proposed growth rate aligns with the overall traffic patterns and conditions in the area.

AND

IF there are - Vested Trips

Negative Growth (Use Minimum 1%):

\+ Vested Trips

Low to Medium Growth (<= 3%)(Use Minimum 1%):

\+ Vested Trips

High Growth (> 3%):

Use the Highest # of the two (growth rate or vested trips). Need to submit supporting documentation & justification.

HIGH GROWTH & HIGH VESTED TRIPS

If there are Vested Trips from multiple approved projects on segment.
And, Vested Trips comprise of multiple uses that would normally have significant interaction (residential, retail, office, restaurant, etc…).

And, Vested Trips make up more than 30% of the total future background traffic.

Then, Vested Trips can be reduced by 30% upon request by the Applicant

Signed:_____ Date:_____

Jay Williams, PE, PTOE

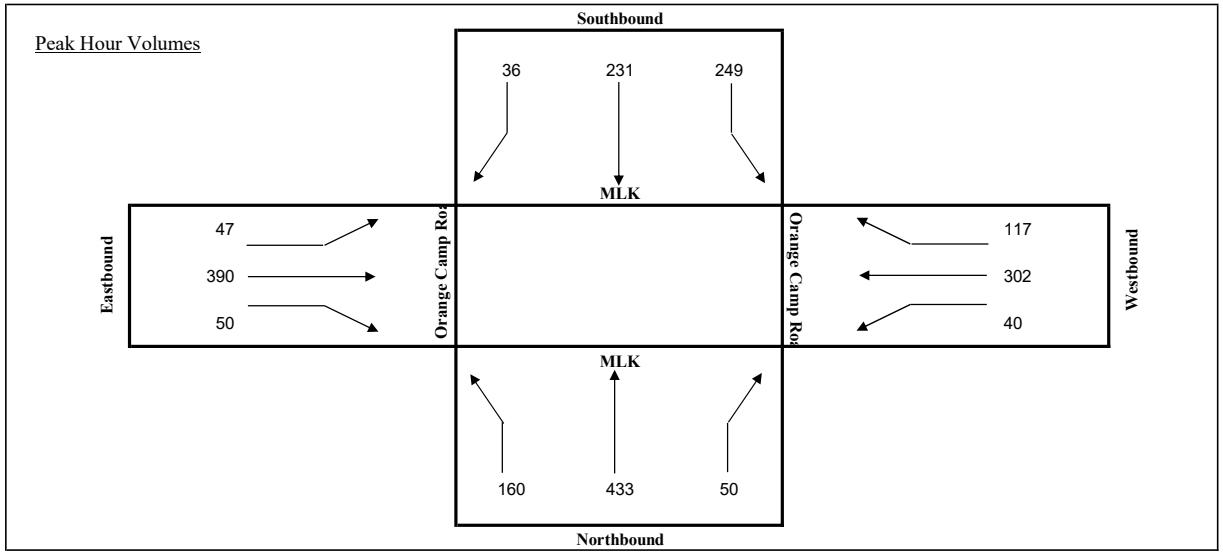
Appendix J
Turning Movement Counts, Seasonal Factor Report and Signal Timing

TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): MLK
Intersection (E/W): Orange Camp Road
Date: 6/12/2024

			MLK			MLK			Orange Camp Road			Orange Camp Road			
			NB			SB			EB			WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 AM	7:15 AM	21	56	8	44	49	6	10	90	10	5	59	14	372
7:15 AM	7:30 AM	25	64	13	62	65	7	7	110	11	6	67	17	454
7:30 AM	7:45 AM	40	88	10	74	66	10	12	116	14	6	69	28	533
7:45 AM	8:00 AM	41	127	14	69	53	12	14	103	11	11	77	31	563
8:00 AM	8:15 AM	35	111	12	56	59	5	10	92	9	10	86	30	515
8:15 AM	8:30 AM	44	107	14	50	53	9	11	79	16	13	70	28	494
8:30 AM	8:45 AM	40	85	10	66	60	4	13	89	11	9	58	30	475
8:45 AM	9:00 AM	31	77	14	58	50	7	9	75	12	8	65	22	428
Total for:	7:00 AM	8:00 AM	127	335	45	249	233	35	43	419	46	28	272	90	1922
Total for:	8:00 AM	9:00 AM	150	380	50	230	222	25	43	335	48	40	279	110	1912
Tota Peak Hour:	7:30 AM	8:30 AM	160	433	50	249	231	36	47	390	50	40	302	117	2105
Overall PHF:	0.93														

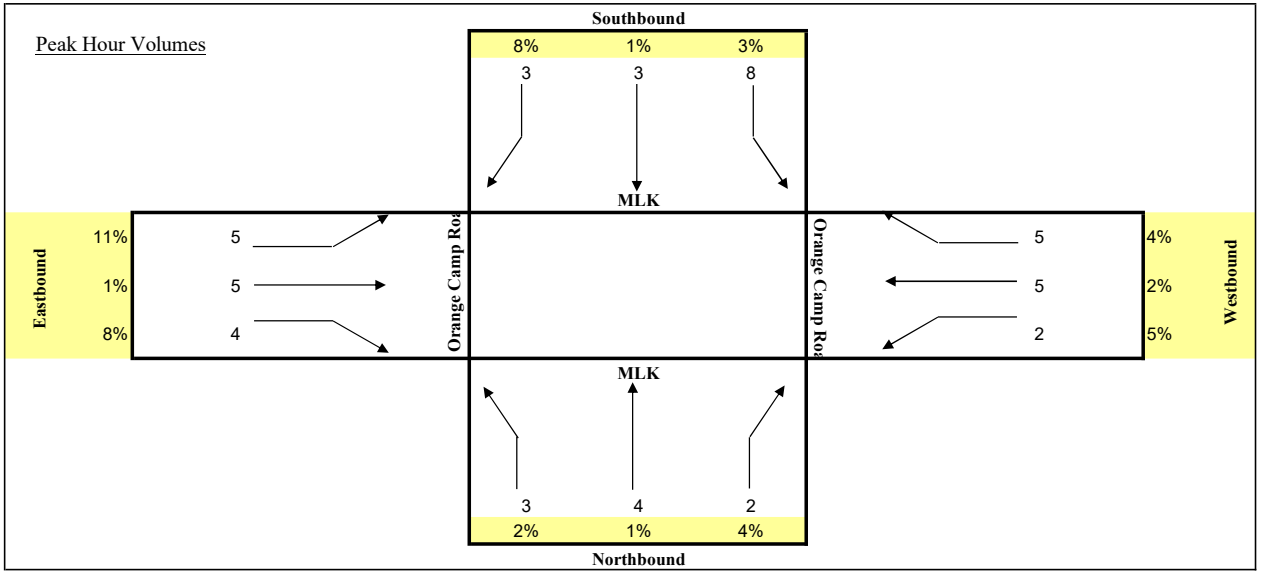


TURNING MOVEMENT COUNT ANALYSIS

TRUCKS

Intersection (N/S): MLK
Intersection (E/W): Orange Camp Road
Date: 6/12/2024

		MLK NB			MLK SB			Orange Camp Road EB			Orange Camp Road WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 AM	7:15 AM	2	2	1	0	1	1	3	1	1	0	2	2	16
7:15 AM	7:30 AM	0	1	1	2	1	0	0	2	0	0	1	1	9
7:30 AM	7:45 AM	1	0	0	1	0	1	1	0	0	2	0	0	6
7:45 AM	8:00 AM	1	1	0	4	0	1	2	1	1	1	3	1	16
8:00 AM	8:15 AM	1	0	1	1	2	0	0	1	0	0	1	1	8
8:15 AM	8:30 AM	0	0	1	0	1	1	2	0	2	0	1	3	11
8:30 AM	8:45 AM	1	3	0	3	0	1	1	3	1	1	0	0	14
8:45 AM	9:00 AM	0	0	0	1	1	0	1	0	0	0	2	1	6
Total for:	7:00 AM	8:00 AM	4	4	2	7	2	3	6	4	2	3	6	4	47
Total for:	8:00 AM	9:00 AM	2	3	2	5	4	2	4	4	3	1	4	5	39
Tota Peak Hour:	7:45 AM	8:45 AM	3	4	2	8	3	3	5	5	4	2	5	5	49
Overall PHF:	0.77														

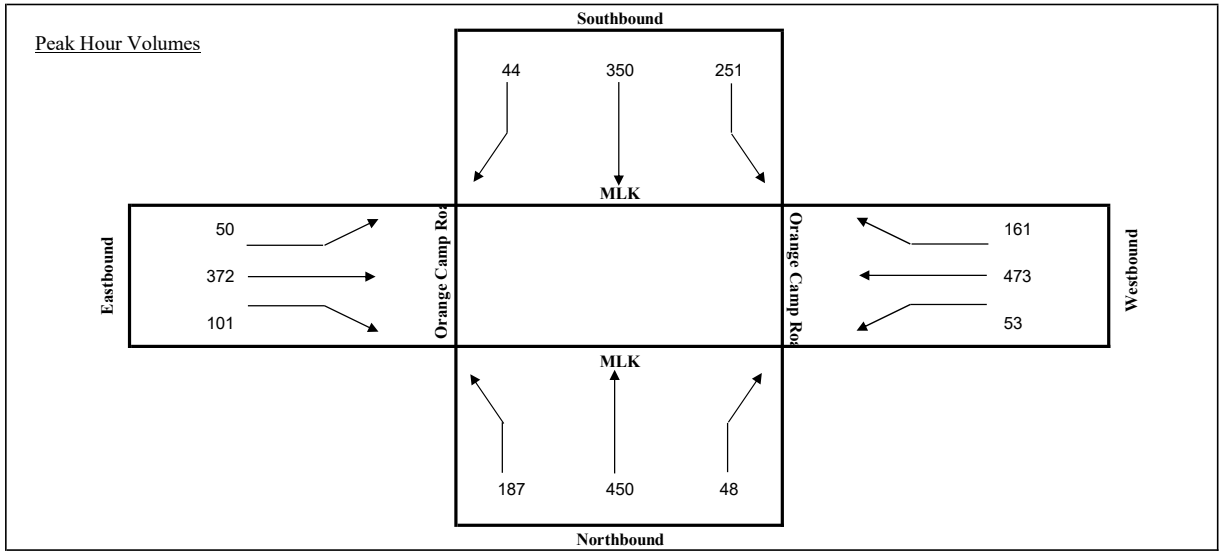


TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): MLK
Intersection (E/W): Orange Camp Road
Date: 6/12/2024

			MLK			MLK			Orange Camp Road			Orange Camp Road			
			NB			SB			EB			WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 PM	4:15 PM	31	131	6	49	67	8	12	86	22	7	110	36	565
4:15 PM	4:30 PM	35	132	11	61	70	11	16	96	20	12	125	42	631
4:30 PM	4:45 PM	49	115	11	66	88	9	11	89	28	15	111	41	633
4:45 PM	5:00 PM	53	98	15	59	92	14	9	102	24	16	117	37	636
5:00 PM	5:15 PM	50	105	11	65	100	10	14	85	29	10	120	41	640
5:15 PM	5:30 PM	62	113	14	62	84	10	10	79	24	17	111	40	626
5:30 PM	5:45 PM	52	94	8	55	74	14	15	91	30	21	99	35	588
5:45 PM	6:00 PM	49	102	11	60	80	10	13	82	26	16	102	34	585
Total for:	4:00 PM	5:00 PM	168	476	43	235	317	42	48	373	94	50	463	156	2465
Total for:	5:00 PM	6:00 PM	213	414	44	242	338	44	52	337	109	64	432	150	2439
Tota Peak Hour:	4:15 PM	5:15 PM	187	450	48	251	350	44	50	372	101	53	473	161	2540
Overall PHF:	0.99														

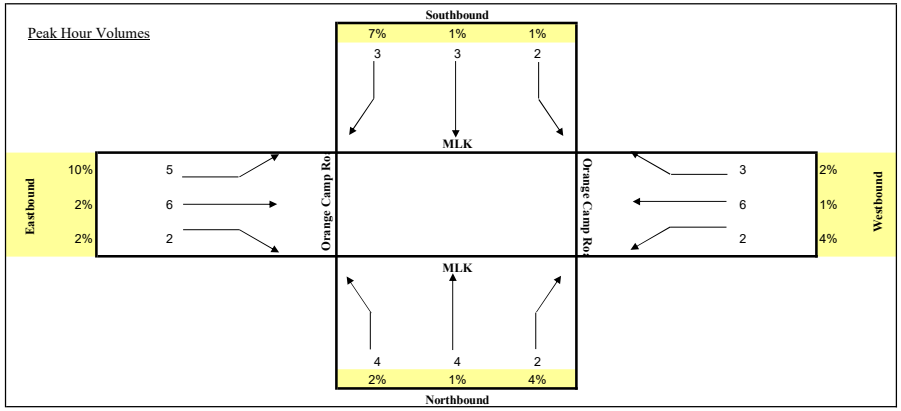


TURNING MOVEMENT COUNT ANALYSIS

TRUCKS

Intersection (N/S): MLK
Intersection (E/W): Orange Camp Road
Date: 6/12/2024

		MLK NB			MLK SB			Orange Camp Road EB			Orange Camp Road WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 PM	4:15 PM	1	2	0	0	2	1	3	2	0	0	1	1	13
4:15 PM	4:30 PM	0	2	1	1	0	0	1	3	0	1	2	0	11
4:30 PM	4:45 PM	2	0	1	1	0	0	0	1	1	1	3	1	11
4:45 PM	5:00 PM	1	0	0	0	1	2	1	0	1	0	0	1	7
5:00 PM	5:15 PM	0	1	0	1	1	0	1	1	0	0	0	0	5
5:15 PM	5:30 PM	1	0	1	2	0	1	0	0	0	0	2	0	7
5:30 PM	5:45 PM	0	0	0	0	1	0	0	1	0	1	2	0	5
5:45 PM	6:00 PM	1	1	0	1	0	0	1	1	1	0	1	1	8
Total for:	4:00 PM	5:00 PM	4	4	2	2	3	3	5	6	2	2	6	3	42
Total for:	5:00 PM	6:00 PM	2	2	1	4	2	1	2	3	1	1	5	1	25
Tota Peak Hour:	4:00 PM	5:00 PM	4	4	2	2	3	3	5	6	2	2	6	3	42
Overall PHF:	0.81														

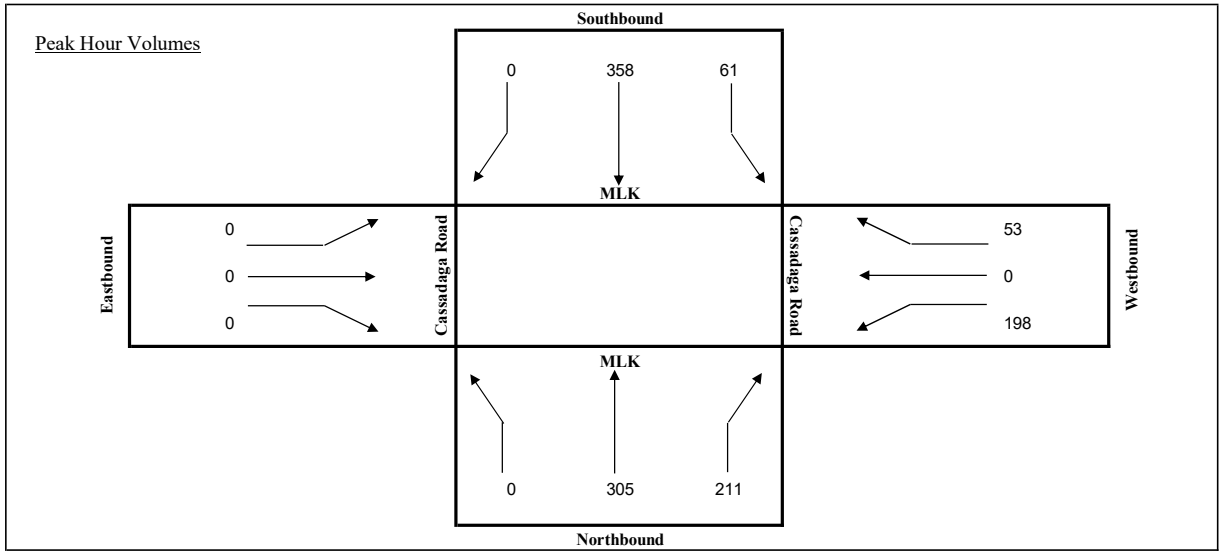


TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): MLK
Intersection (E/W): Cassadaga Road
Date: 6/12/2024

			MLK NB			MLK SB			Cassadaga Road EB			Cassadaga Road WB			
Start	End		L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 AM	7:15 AM		0	59	44	10	69	0	0	0	0	27	0	7	216
7:15 AM	7:30 AM		0	82	53	12	71	0	0	0	0	35	0	8	261
7:30 AM	7:45 AM		0	79	50	13	73	0	0	0	0	47	0	12	274
7:45 AM	8:00 AM		0	83	54	18	96	0	0	0	0	58	0	16	325
8:00 AM	8:15 AM		0	69	51	17	102	0	0	0	0	51	0	11	301
8:15 AM	8:30 AM		0	74	56	13	87	0	0	0	0	42	0	14	286
8:30 AM	8:45 AM		0	62	50	16	63	0	0	0	0	37	0	10	238
8:45 AM	9:00 AM		0	56	41	11	68	0	0	0	0	34	0	12	222
Total for:	7:00 AM	8:00 AM	0	303	201	53	309	0	0	0	0	167	0	43	1076
Total for:	8:00 AM	9:00 AM	0	261	198	57	320	0	0	0	0	164	0	47	1047
Tota Peak Hour:	7:30 AM	8:30 AM	0	305	211	61	358	0	0	0	0	198	0	53	1186
Overall PHF:	0.91														

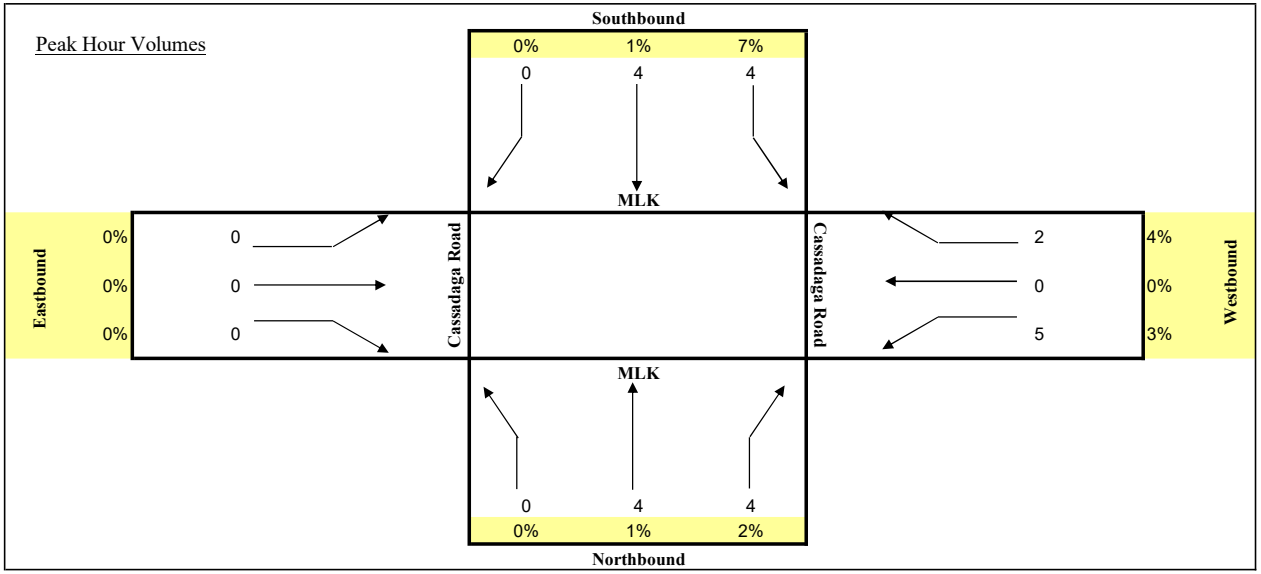


TURNING MOVEMENT COUNT ANALYSIS

TRUCKS

Intersection (N/S): MLK
Intersection (E/W): Cassadaga Road
Date: 6/12/2024

		MLK NB			MLK SB			Cassadaga Road EB			Cassadaga Road WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 AM	7:15 AM	0	2	0	1	2	0	0	0	0	2	0	1	8
7:15 AM	7:30 AM	0	1	2	1	1	0	0	0	0	1	0	0	6
7:30 AM	7:45 AM	0	0	1	0	0	0	0	0	0	0	0	1	2
7:45 AM	8:00 AM	0	1	0	1	1	0	0	0	0	3	0	0	6
8:00 AM	8:15 AM	0	2	1	2	2	0	0	0	0	1	0	1	9
8:15 AM	8:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	8:45 AM	0	0	2	2	0	0	0	0	0	1	0	1	6
8:45 AM	9:00 AM	0	2	0	1	1	0	0	0	0	2	0	1	7
Total for:	7:00 AM	8:00 AM	0	4	3	3	4	0	0	0	0	6	0	2	22
Total for:	8:00 AM	9:00 AM	0	5	3	5	3	0	0	0	0	4	0	3	23
Tota Peak Hour:	7:15 AM	8:15 AM	0	4	4	4	4	0	0	0	0	5	0	2	23
Overall PHF:	0.64														

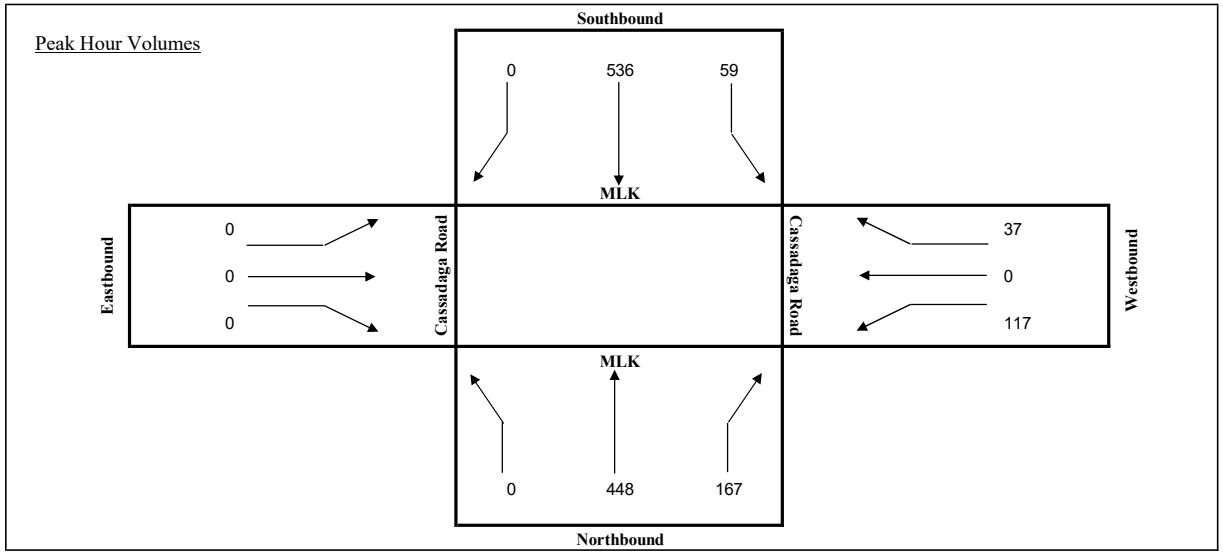


TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): MLK
Intersection (E/W): Cassadaga Road
Date: 6/12/2024

			MLK NB			MLK SB			Cassadaga Road EB			Cassadaga Road WB			
Start	End		L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 PM	4:15 PM		0	101	24	11	111	0	0	0	0	17	0	11	275
4:15 PM	4:30 PM		0	101	33	13	112	0	0	0	0	26	0	7	292
4:30 PM	4:45 PM		0	100	39	22	136	0	0	0	0	36	0	13	346
4:45 PM	5:00 PM		0	116	45	16	131	0	0	0	0	32	0	9	349
5:00 PM	5:15 PM		0	107	41	12	115	0	0	0	0	21	0	7	303
5:15 PM	5:30 PM		0	125	42	9	154	0	0	0	0	28	0	8	366
5:30 PM	5:45 PM		0	116	37	17	128	0	0	0	0	35	0	3	336
5:45 PM	6:00 PM		0	96	30	13	118	0	0	0	0	30	0	7	294
Total for:	4:00 PM	5:00 PM	0	418	141	62	490	0	0	0	0	111	0	40	1262
Total for:	5:00 PM	6:00 PM	0	444	150	51	515	0	0	0	0	114	0	25	1299
Tota Peak Hour:	4:30 PM	5:30 PM	0	448	167	59	536	0	0	0	0	117	0	37	1364
Overall PHF:	0.93														

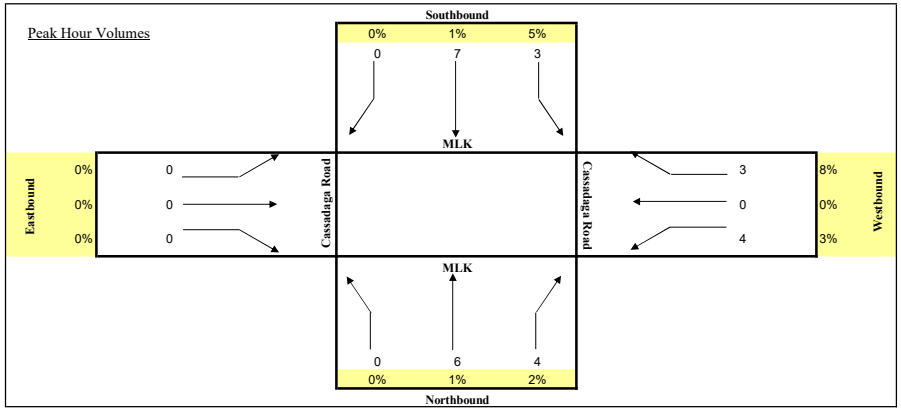


TURNING MOVEMENT COUNT ANALYSIS

TRUCKS

Intersection (N/S): MLK
Intersection (E/W): Cassadaga Road
Date: 6/12/2024

		MLK NB			MLK SB			Cassadaga Road EB			Cassadaga Road WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 PM	4:15 PM	0	3	0	1	2	0	0	0	0	0	0	1	7
4:15 PM	4:30 PM	0	0	0	0	1	0	0	0	0	1	0	1	3
4:30 PM	4:45 PM	0	3	3	2	0	0	0	0	0	0	0	0	8
4:45 PM	5:00 PM	0	1	0	0	2	0	0	0	0	2	0	0	5
5:00 PM	5:15 PM	0	0	1	1	1	0	0	0	0	0	0	2	5
5:15 PM	5:30 PM	0	2	0	0	4	0	0	0	0	2	0	1	9
5:30 PM	5:45 PM	0	0	1	0	0	0	0	0	0	2	0	0	3
5:45 PM	6:00 PM	0	1	0	1	1	0	0	0	0	0	0	1	4
Total for:	4:00 PM	5:00 PM	0	7	3	3	5	0	0	0	0	3	0	2	23
Total for:	5:00 PM	6:00 PM	0	3	2	2	6	0	0	0	0	4	0	4	21
Tota Peak Hour:	4:30 PM	5:30 PM	0	6	4	3	7	0	0	0	0	4	0	3	27
Overall PHF:	0.75														

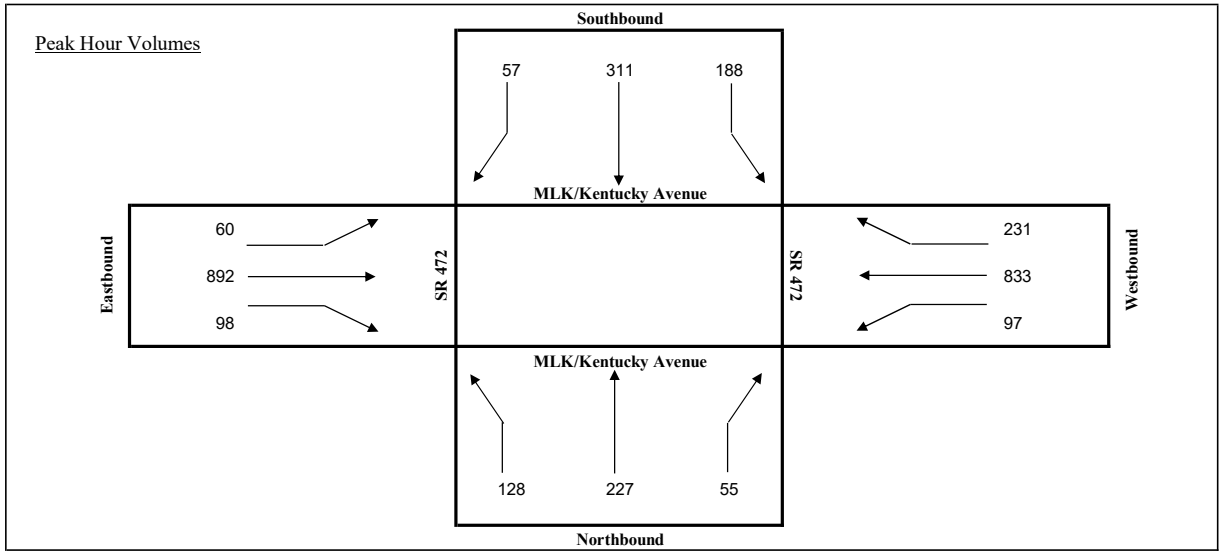


TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): MLK/Kentucky Avenue
Intersection (E/W): SR 472
Date: 6/12/2024

		MLK/Kentucky Avenue			MLK/Kentucky Avenue			SR 472			SR 472			
		NB			SB			EB			WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 AM	7:15 AM	27	51	6	29	53	13	10	209	11	17	187	43	656
7:15 AM	7:30 AM	30	62	11	36	60	10	16	209	11	11	199	57	712
7:30 AM	7:45 AM	25	67	12	44	67	9	12	210	19	20	212	50	747
7:45 AM	8:00 AM	35	59	17	52	86	16	11	237	21	22	214	67	837
8:00 AM	8:15 AM	37	50	12	51	81	21	17	240	33	30	210	54	836
8:15 AM	8:30 AM	31	51	14	41	77	11	20	205	25	25	197	60	757
8:30 AM	8:45 AM	23	42	11	37	57	6	15	217	31	19	191	55	704
8:45 AM	9:00 AM	21	52	12	29	62	10	12	180	24	17	169	33	621
Total for:	7:00 AM	8:00 AM	117	239	46	161	266	48	49	865	62	70	812	217	2952
Total for:	8:00 AM	9:00 AM	112	195	49	158	277	48	64	842	113	91	767	202	2918
Tota Peak Hour:	7:30 AM	8:30 AM	128	227	55	188	311	57	60	892	98	97	833	231	3177
Overall PHF:	0.95														

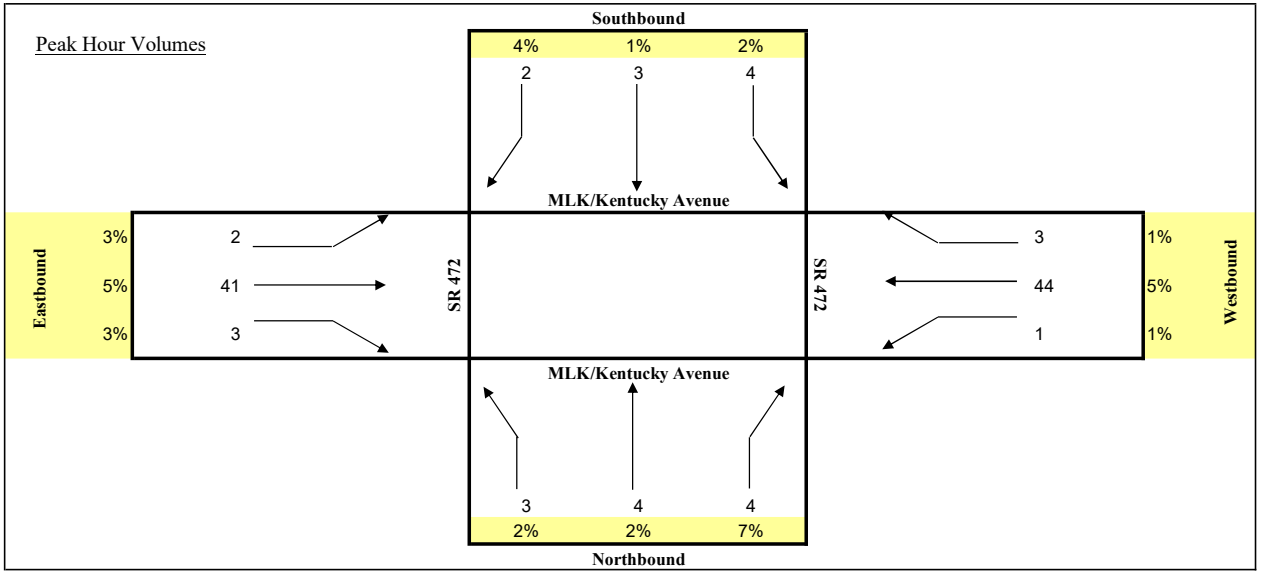


TURNING MOVEMENT COUNT ANALYSIS

TRUCKS

Intersection (N/S): MLK/Kentucky Avenue
Intersection (E/W): SR 472
Date: 6/12/2024

		MLK/Kentucky Avenue			MLK/Kentucky Avenue			SR 472			SR 472			
		NB			SB			EB			WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 AM	7:15 AM	1	2	1	1	2	1	0	8	2	2	10	1	31
7:15 AM	7:30 AM	0	1	2	0	2	0	1	11	0	0	9	1	27
7:30 AM	7:45 AM	0	1	1	0	0	0	0	7	0	1	13	0	23
7:45 AM	8:00 AM	2	1	1	3	0	1	0	13	1	0	10	0	32
8:00 AM	8:15 AM	1	1	0	1	1	1	1	10	2	0	12	2	32
8:15 AM	8:30 AM	0	1	0	0	0	0	0	9	0	1	8	1	20
8:30 AM	8:45 AM	0	0	1	1	0	0	1	9	1	1	11	1	26
8:45 AM	9:00 AM	1	2	0	0	1	1	0	5	0	0	6	0	16
Total for:	7:00 AM	8:00 AM	3	5	5	4	4	2	1	39	3	3	42	2	113
Total for:	8:00 AM	9:00 AM	2	4	1	2	2	2	2	33	3	2	37	4	94
Tota Peak Hour:	7:15 AM	8:15 AM	3	4	4	4	3	2	2	41	3	1	44	3	114
Overall PHF:	0.89														

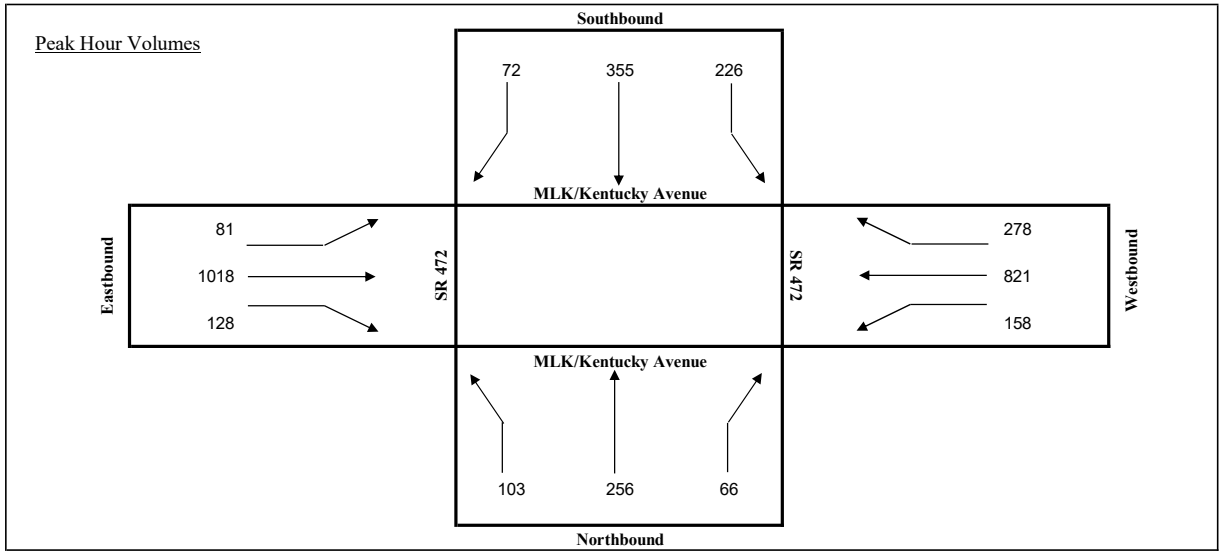


TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): MLK/Kentucky Avenue
Intersection (E/W): SR 472
Date: 6/12/2024

			MLK/Kentucky Avenue			MLK/Kentucky Avenue			SR 472			SR 472			
			NB			SB			EB			WB			
Start	End		L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 PM	4:15 PM		25	53	22	51	63	14	21	205	30	34	193	50	761
4:15 PM	4:30 PM		30	59	19	48	71	19	21	247	36	31	202	54	837
4:30 PM	4:45 PM		28	64	21	58	95	19	20	296	42	37	212	55	947
4:45 PM	5:00 PM		25	65	13	56	92	15	22	257	28	41	224	74	912
5:00 PM	5:15 PM		25	60	16	49	70	17	21	242	26	43	181	67	817
5:15 PM	5:30 PM		25	67	16	63	98	21	18	223	32	37	204	82	886
5:30 PM	5:45 PM		18	58	16	52	99	19	16	242	26	35	193	79	853
5:45 PM	6:00 PM		20	44	11	53	86	15	14	212	22	37	185	68	767
Total for:	4:00 PM	5:00 PM	108	241	75	213	321	67	84	1005	136	143	831	233	3457
Total for:	5:00 PM	6:00 PM	88	229	59	217	353	72	69	919	106	152	763	296	3323
Tota Peak Hour:	4:30 PM	5:30 PM	103	256	66	226	355	72	81	1018	128	158	821	278	3562
Overall PHF:	0.94														

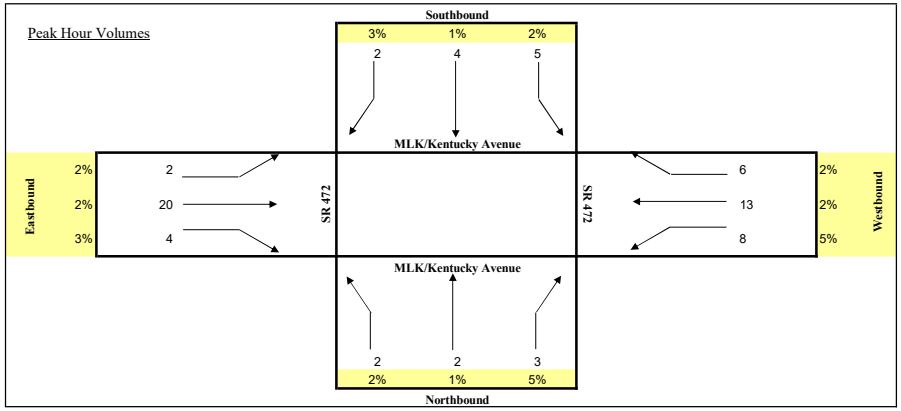


TURNING MOVEMENT COUNT ANALYSIS

TRUCKS

Intersection (N/S): MLK/Kentucky Avenue
Intersection (E/W): SR 472
Date: 6/12/2024

		MLK/Kentucky Avenue			MLK/Kentucky Avenue			SR 472			SR 472			
		NB			SB			EB			WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 PM	4:15 PM	1	0	2	1	1	0	1	2	0	1	5	2	16
4:15 PM	4:30 PM	0	0	0	1	0	1	0	1	1	1	6	0	11
4:30 PM	4:45 PM	0	1	0	0	0	0	2	5	2	3	5	3	21
4:45 PM	5:00 PM	1	0	0	2	1	1	0	3	2	2	4	1	17
5:00 PM	5:15 PM	1	0	1	0	1	0	0	6	0	1	2	1	13
5:15 PM	5:30 PM	0	1	2	3	2	1	0	6	0	2	2	1	20
5:30 PM	5:45 PM	0	0	0	0	2	0	0	2	1	2	4	1	12
5:45 PM	6:00 PM	0	0	1	1	0	0	1	4	0	1	3	0	11
Total for:	4:00 PM	5:00 PM	2	1	2	4	2	2	3	11	5	7	20	6	65
Total for:	5:00 PM	6:00 PM	1	1	4	4	5	1	1	18	1	6	11	3	56
Tota Peak Hour:	4:30 PM	5:30 PM	2	2	3	5	4	2	2	20	4	8	13	6	71
Overall PHF:	0.85														

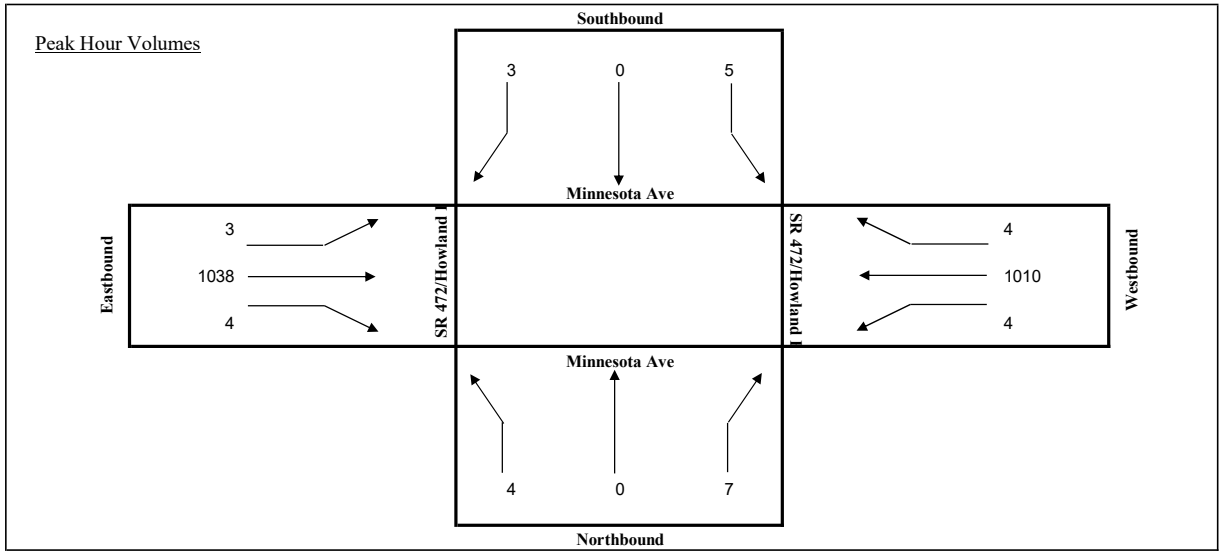


TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): Minnesota Ave
Intersection (E/W): SR 472/Howland Blvd
Date: 6/12/2024

		Minnesota Ave			Minnesota Ave			SR 472/Howland Blvd			SR 472/Howland Blvd			
		NB			SB			EB			WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 AM	7:15 AM	1	0	3	1	0	0	2	226	0	0	223	4	460
7:15 AM	7:30 AM	1	0	2	1	0	0	2	232	0	2	234	2	476
7:30 AM	7:45 AM	1	0	0	0	0	1	2	240	1	1	243	1	490
7:45 AM	8:00 AM	0	0	1	1	0	0	1	269	0	1	263	1	537
8:00 AM	8:15 AM	3	0	5	1	0	1	0	281	2	1	266	2	562
8:15 AM	8:30 AM	0	0	1	3	0	1	0	248	1	1	238	0	493
8:30 AM	8:45 AM	1	0	1	0	0	0	2	261	1	0	219	2	487
8:45 AM	9:00 AM	1	0	1	2	0	0	0	217	3	2	197	0	423
Total for:	7:00 AM	8:00 AM	3	0	6	3	0	1	7	967	1	4	963	8	1963
Total for:	8:00 AM	9:00 AM	5	0	8	6	0	2	2	1007	7	4	920	4	1965
Tota Peak Hour:	7:30 AM	8:30 AM	4	0	7	5	0	3	3	1038	4	4	1010	4	2082
Overall PHF:	0.93														

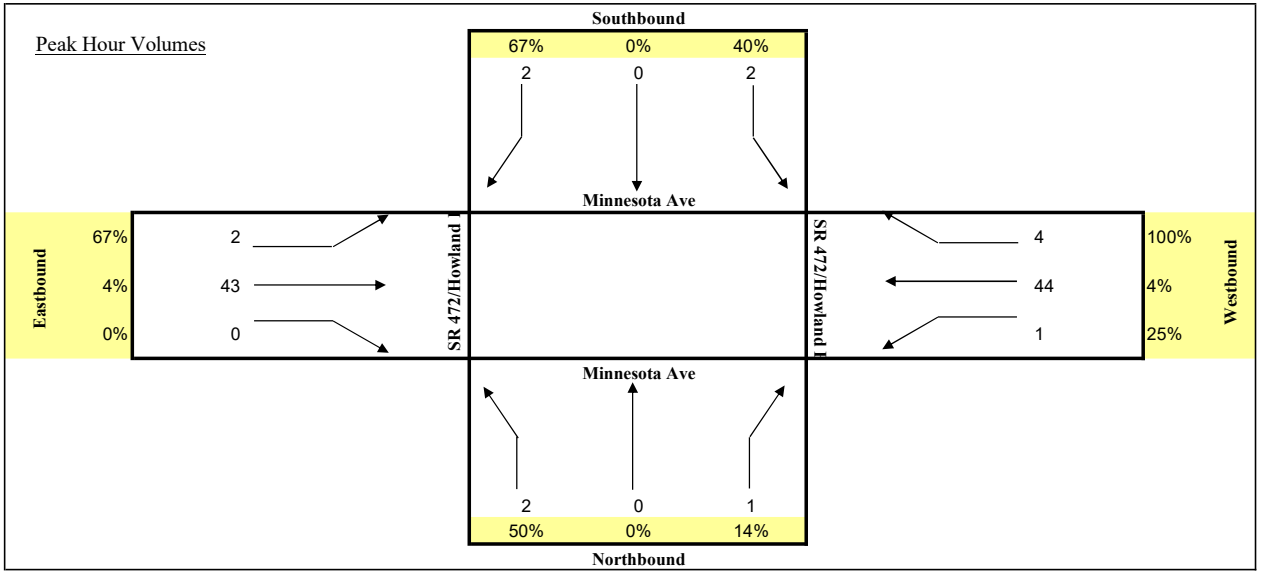


TURNING MOVEMENT COUNT ANALYSIS

TRUCKS

Intersection (N/S): Minnesota Ave
Intersection (E/W): SR 472/Howland Blvd
Date: 6/12/2024

		Minnesota Ave			Minnesota Ave			SR 472/Howland Blvd			SR 472/Howland Blvd			
		NB			SB			EB			WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 AM	7:15 AM	0	0	0	1	0	0	2	9	0	0	10	2	24
7:15 AM	7:30 AM	1	0	0	1	0	0	1	11	0	0	8	1	23
7:30 AM	7:45 AM	0	0	0	0	0	1	0	7	0	0	13	0	21
7:45 AM	8:00 AM	0	0	0	0	0	0	1	14	0	1	11	1	28
8:00 AM	8:15 AM	1	0	1	1	0	1	0	11	0	0	12	2	29
8:15 AM	8:30 AM	0	0	0	2	0	0	0	7	0	0	8	0	17
8:30 AM	8:45 AM	1	0	0	0	0	0	1	11	1	0	10	1	25
8:45 AM	9:00 AM	0	0	1	1	0	0	0	6	1	1	7	0	17
Total for:	7:00 AM	8:00 AM	1	0	0	2	0	1	4	41	0	1	42	4	96
Total for:	8:00 AM	9:00 AM	2	0	2	4	0	1	1	35	2	1	37	3	88
Tota Peak Hour:	7:15 AM	8:15 AM	2	0	1	2	0	2	2	43	0	1	44	4	101
Overall PHF:	0.87														

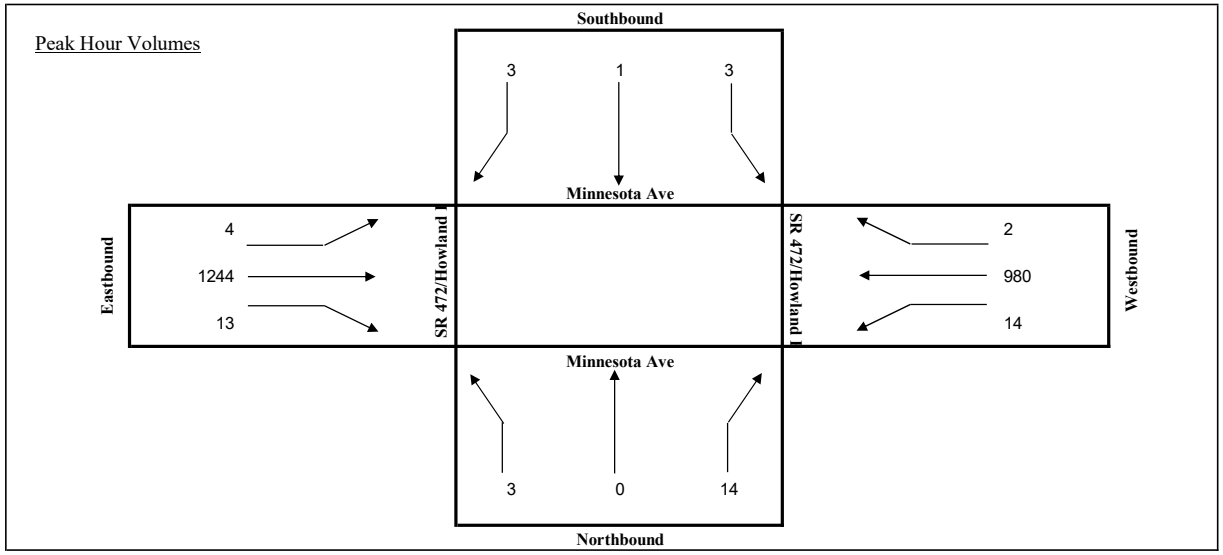


TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): Minnesota Ave
Intersection (E/W): SR 472/Howland Blvd
Date: 6/12/2024

		Minnesota Ave			Minnesota Ave			SR 472/Howland Blvd			SR 472/Howland Blvd			
		NB			SB			EB			WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 PM	4:15 PM	2	0	6	0	0	3	1	250	7	3	227	2	501
4:15 PM	4:30 PM	0	0	4	2	0	1	0	300	3	6	244	1	561
4:30 PM	4:45 PM	1	0	5	0	0	0	0	354	5	2	256	0	623
4:45 PM	5:00 PM	2	0	2	1	0	1	1	305	3	5	258	0	578
5:00 PM	5:15 PM	0	0	3	0	1	1	3	285	2	1	222	1	519
5:15 PM	5:30 PM	0	1	2	1	0	0	3	271	7	4	253	2	544
5:30 PM	5:45 PM	1	0	2	2	0	1	0	279	5	4	225	0	519
5:45 PM	6:00 PM	0	0	4	1	0	0	1	245	7	5	213	1	477
Total for:	4:00 PM	5:00 PM	5	0	17	3	0	5	2	1209	18	16	985	3	2263
Total for:	5:00 PM	6:00 PM	1	1	11	4	1	2	7	1080	21	14	913	4	2059
Tota Peak Hour:	4:15 PM	5:15 PM	3	0	14	3	1	3	4	1244	13	14	980	2	2281
Overall PHF:	0.92														

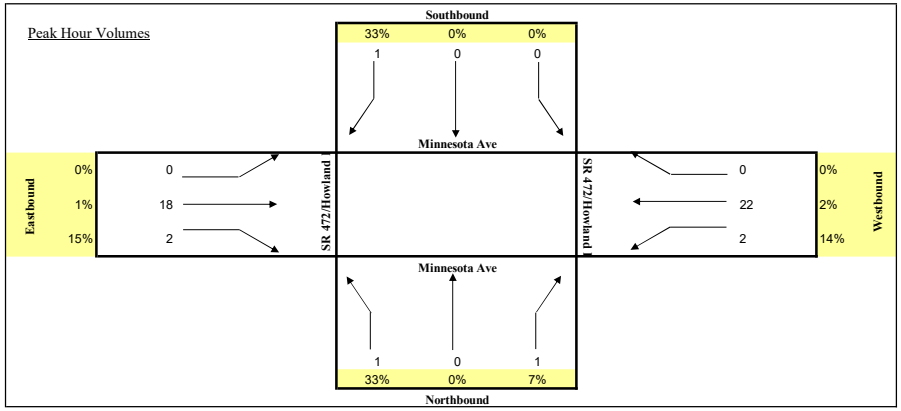


TURNING MOVEMENT COUNT ANALYSIS

TRUCKS

Intersection (N/S): Minnesota Ave
Intersection (E/W): SR 472/Howland Blvd
Date: 6/12/2024

		Minnesota Ave			Minnesota Ave			SR 472/Howland Blvd			SR 472/Howland Blvd			
		NB			SB			EB			WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 PM	4:15 PM	1	0	0	0	0	1	0	3	1	0	6	0	12
4:15 PM	4:30 PM	0	0	1	0	0	0	0	1	0	1	6	0	9
4:30 PM	4:45 PM	0	0	0	0	0	0	0	9	0	0	5	0	14
4:45 PM	5:00 PM	0	0	0	0	0	0	0	5	1	1	5	0	12
5:00 PM	5:15 PM	0	0	1	0	0	1	0	5	0	0	3	0	10
5:15 PM	5:30 PM	0	0	0	0	0	0	0	6	0	0	3	0	9
5:30 PM	5:45 PM	0	0	0	0	0	0	0	3	0	0	4	0	7
5:45 PM	6:00 PM	0	0	0	0	0	0	0	5	0	0	3	0	8
Total for:	4:00 PM	5:00 PM	1	0	1	0	0	1	0	18	2	2	22	0	47
Total for:	5:00 PM	6:00 PM	0	0	1	0	0	1	0	19	0	0	13	0	34
Tota Peak Hour:	4:00 PM	5:00 PM	1	0	1	0	0	1	0	18	2	2	22	0	47
Overall PHF:	0.84														



2023 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 7900 VOLUSIA COUNTYWIDE

MOCF: 0.95

WEEK	DATES	SF	PSCF
1	01/01/2023 - 01/07/2023	1.01	1.06
2	01/08/2023 - 01/14/2023	1.01	1.06
3	01/15/2023 - 01/21/2023	1.01	1.06
4	01/22/2023 - 01/28/2023	0.99	1.04
5	01/29/2023 - 02/04/2023	0.98	1.03
* 6	02/05/2023 - 02/11/2023	0.96	1.01
* 7	02/12/2023 - 02/18/2023	0.95	1.00
* 8	02/19/2023 - 02/25/2023	0.94	0.99
* 9	02/26/2023 - 03/04/2023	0.93	0.98
*10	03/05/2023 - 03/11/2023	0.92	0.97
*11	03/12/2023 - 03/18/2023	0.92	0.97
*12	03/19/2023 - 03/25/2023	0.93	0.98
*13	03/26/2023 - 04/01/2023	0.94	0.99
*14	04/02/2023 - 04/08/2023	0.95	1.00
*15	04/09/2023 - 04/15/2023	0.97	1.02
*16	04/16/2023 - 04/22/2023	0.97	1.02
*17	04/23/2023 - 04/29/2023	0.98	1.03
*18	04/30/2023 - 05/06/2023	0.98	1.03
19	05/07/2023 - 05/13/2023	0.99	1.04
20	05/14/2023 - 05/20/2023	1.00	1.05
21	05/21/2023 - 05/27/2023	1.01	1.06
22	05/28/2023 - 06/03/2023	1.02	1.07
23	06/04/2023 - 06/10/2023	1.03	1.08
24	06/11/2023 - 06/17/2023	1.04	1.09
25	06/18/2023 - 06/24/2023	1.04	1.09
26	06/25/2023 - 07/01/2023	1.05	1.11
27	07/02/2023 - 07/08/2023	1.06	1.12
28	07/09/2023 - 07/15/2023	1.06	1.12
29	07/16/2023 - 07/22/2023	1.06	1.12
30	07/23/2023 - 07/29/2023	1.06	1.12
31	07/30/2023 - 08/05/2023	1.06	1.12
32	08/06/2023 - 08/12/2023	1.06	1.12
33	08/13/2023 - 08/19/2023	1.06	1.12
34	08/20/2023 - 08/26/2023	1.05	1.11
35	08/27/2023 - 09/02/2023	1.05	1.11
36	09/03/2023 - 09/09/2023	1.04	1.09
37	09/10/2023 - 09/16/2023	1.04	1.09
38	09/17/2023 - 09/23/2023	1.03	1.08
39	09/24/2023 - 09/30/2023	1.02	1.07
40	10/01/2023 - 10/07/2023	1.01	1.06
41	10/08/2023 - 10/14/2023	1.00	1.05
42	10/15/2023 - 10/21/2023	0.99	1.04
43	10/22/2023 - 10/28/2023	0.99	1.04
44	10/29/2023 - 11/04/2023	0.99	1.04
45	11/05/2023 - 11/11/2023	0.99	1.04
46	11/12/2023 - 11/18/2023	1.00	1.05
47	11/19/2023 - 11/25/2023	1.00	1.05
48	11/26/2023 - 12/02/2023	1.00	1.05
49	12/03/2023 - 12/09/2023	1.00	1.05
50	12/10/2023 - 12/16/2023	1.01	1.06
51	12/17/2023 - 12/23/2023	1.01	1.06
52	12/24/2023 - 12/30/2023	1.01	1.06
53	12/31/2023 - 12/31/2023	1.01	1.06

* PEAK SEASON

09-MAR-2024 18:41:41 830UPD 5_7900_PKSEASON.TXT

COUNTY OF VOLUSIA TRAFFIC SIGNAL TIMING SHEET

LOCATION: Sig #471, CR 4101 (MLK Beltway) @ Cassadaga Rd.
Orange City

FREE: X

DATE: 10/24/2022

SIGNAL #: 471

CO-ORD:

Design By: Sean Castello

NETWORK #:

Volusia County
FLORIDA

Controller Timing Chart

PHASE	1	2	3	4	5	6	7	8	
DIRECTION		SB		WB	SBL	NB			
TURN TYPE		-		SPLIT LAG	PROT	-			
MIN GREEN		17		7	5	17			
EXTENSION		3		3	3	3			
YELLOW		5.5		4.0	5.5	5.5			
RED CLR		2.0		2.8	2.0	2.0			
WALK									
PED CLR									
MAX 1		70		50	30	70			
MAX 2									
MAX 3		-		-		-			
DYM MAX									
DYM STP									
RECALL		MIN		-		MIN			
DETECTOR		LOCK		NON-LOCK	NON-LOCK	LOCK			
FLASH		YELLOW		RED	RED	YELLOW			

COORDINATION TIMINGS

PATTERN	1	2	3	4	5	6	7	8	
CYCLE				-	-	-	-	-	
OFFSET				-	-	-	-	-	

PHASE	1	2	3	4	5	6	7	8	
PATTERN 1									
PATTERN 2									
PATTERN 3									
PATTERN 4	-	-	-	-	-	-	-	-	
PATTERN 5	-	-	-	-	-	-	-	-	
PATTERN 6	-	-	-	-	-	-	-	-	
PATTERN 7	-	-	-	-	-	-	-	-	

Controller IP		Switch IP		Camera IP	
Controller Gateway		Switch Gateway		Camera Gateway	

REMARKS:

COUNTY OF VOLUSIA TRAFFIC SIGNAL TIMING SHEET

LOCATION: I71, CR 4101 (MLK Beltway) @ Cassada
Orange City

FREE: X

DATE: 10/24/2022

SIGNAL #: 471

CO-ORD:

Design By: Sean Castello

NETWORK #:

Volusia County
FLORIDA

TIME OF DAY SCHEDULE

BASE DAY		1	2	3	4	5	6	7	Crosswalk Length
	TIME	00:00-00:00							
MON #1	PATTERN	FREE							P2
	TIME	00:00-00:00							
TUES #1	PATTERN	FREE							
	TIME	00:00-00:00							
WED #1	PATTERN	FREE							P4
	TIME	00:00-00:00							
THU #1	PATTERN	FREE							
	TIME	00:00-00:00							
FRI #1	PATTERN	FREE							P6
	TIME	00:00-00:00							
SAT #1	PATTERN	FREE							
	TIME	00:00-00:00							
SUN #1	PATTERN	FREE							P8

CONTROLLER TYPE		CONDITION OF OVERHEAD	GOOD	PROGRAM NUMBER	
Econolite ASC/3		OVERHEAD STREET NAMES	NO		
PHASES:	8Φ	ILLUMINATED STREET NAMES	YES		SIGNAL OWNER
CABINET TYPE	V	PRE-EMPTION	YES	Controller IP Address	FDOT
CABINET DATE		PRE-EMPTION TYPE	INFRARED	0	LED YES

REMARKS:

Seq #4	2	1	4	3	Seq #5	1	2	3	4	Seq #7	1	2	4	3	
	5	6				6	5				6	5			

COUNTY OF VOLUSIA TRAFFIC SIGNAL TIMING SHEET

LOCATION: SR 472 @ CR 4101 (MLK Beltway)
Orange City

FREE: [ ]

DATE: 5/16/2022

SIGNAL #: 222

CO-ORD: [X]

Design By: Sean Castello

NETWORK #: OC/Deltona Area Network # 90

Controller Timing Chart

PHASE	1	2	3	4	5	6	7	8	
DIRECTION	EBL	WB	SB	NB	WBL	EB			
TURN TYPE	PROT	-	SPLIT LEAD	SPLIT LAG	PROT	-			
MIN GREEN	5	17	7	7	5	17			
EXTENSION	3	4	4	4	3	4			
YELLOW	5.5	5.5	5.6	5.5	5.5	5.5			
RED CLR	2.8	2.8	3.8	3.3	2.8	2.8			
WALK									
PED CLR									
MAX 1	25	60	35	35	35	60			
MAX 2									
MAX 3		-		-		-			
DYM MAX		90		35		90			
DYM STP		10		10		10			
RECALL		MIN		-		MIN			
DETECTOR	NON-LOCK	LOCK	NON-LOCK	NON-LOCK	NON-LOCK	LOCK			
FLASH	RED	YELLOW	RED	RED	RED	YELLOW			

COORDINATION TIMINGS

PATTERN	1	2	3	4	5	6	7	8	
CYCLE	150	130	150	-	-	-	-	-	
OFFSET	93	99	0	-	-	-	-	-	

PHASE	1	2	3	4	5	6	7	8	
PATTERN 1	19	57	37	37	19	57			
PATTERN 2	19	43	31	37	19	43			
PATTERN 3	19	59	35	37	20	58			
PATTERN 4	-	-	-	-	-	-	-	-	
PATTERN 5	-	-	-	-	-	-	-	-	
PATTERN 6	-	-	-	-	-	-	-	-	
PATTERN 7	-	-	-	-	-	-	-	-	

Controller IP	10.40.91.25	Switch IP	10.40.90.25	Camera IP	10.40.92.25
Controller Gateway	10.40.91.1	Switch Gateway	10.40.90.1	Camera Gateway	10.40.92.1

REMARKS:

Pattern #1		2	1		4	3	Pat #2		1	2		3	4	Pat #3		1	2		4	3
Seq #4		5	6				Seq #5		6	5				Seq #7		6	5			

COUNTY OF VOLUSIA TRAFFIC SIGNAL TIMING SHEET

LOCATION: SR 472 @ CR 4101 (MLK Beltway)
Orange City

FREE: [ ]

DATE: 5/16/2022

SIGNAL #: 222

CO-ORD: [X]

Design By: Sean Castello

NETWORK #: OC/Deltona Area Network # 90

TIME OF DAY SCHEDULE

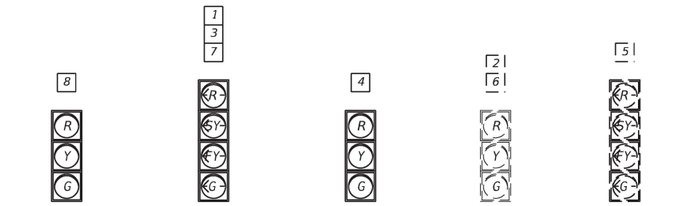
BASE DAY		1	2	3	4	5	6	7	Crosswalk Length
	TIME	06:30-09:00	09:00-16:00	16:00-18:15	18:15-00:00				
MON #1	PATTERN	PATTERN #1	PATTERN #2	PATTERN #3	FREE				P2
	TIME	06:30-09:00	09:00-16:00	16:00-18:15	18:15-00:00				
TUES #1	PATTERN	PATTERN #1	PATTERN #2	PATTERN #3	FREE				
	TIME	06:30-09:00	09:00-16:00	16:00-18:15	18:15-00:00				
WED #1	PATTERN	PATTERN #1	PATTERN #2	PATTERN #3	FREE				P4
	TIME	06:30-09:00	09:00-16:00	16:00-18:15	18:15-00:00				
THU #1	PATTERN	PATTERN #1	PATTERN #2	PATTERN #3	FREE				
	TIME	06:30-09:00	09:00-16:00	16:00-18:15	18:15-00:00				
FRI #1	PATTERN	PATTERN #1	PATTERN #2	PATTERN #3	FREE				P6
	TIME	00:00-00:00							
SAT #2	PATTERN	FREE							
	TIME	00:00-00:00							
SUN #2	PATTERN	FREE							P8

CONTROLLER TYPE		CONDITION OF OVERHEAD	GOOD	PROGRAM NUMBER	
Econolite ASC/3		OVERHEAD STREET NAMES	NO		
PHASES:	8Φ	ILLUMINATED STREET NAMES	YES	02.62.00	SIGNAL OWNER
CABINET TYPE	V	PRE-EMPTION	YES	Controller IP Address	FDOT
CABINET DATE	03/2008	PRE-EMPTION TYPE	INFRARED	10.40.91.25	LED YES

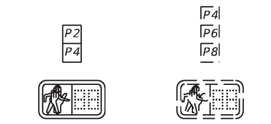
REMARKS:

Seq #4					Seq #5					Seq #7				
	2	1	4	3		1	2	3	4		1	2	4	3
	5	6				6	5				6	5		

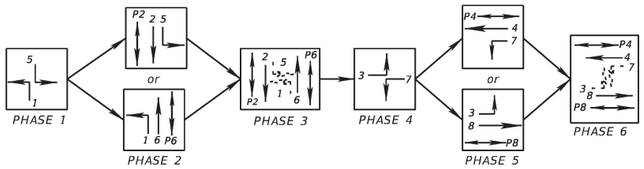
TRAFFIC SIGNAL HEAD DETAILS



PEDESTRIAN SIGNAL HEAD DETAILS



S.O.P. 10 (MOD)



EXISTING RADAR DETECTION

(R2) (R4)

(SEE VEHICLE DETECTION NOTES)

RADAR DETECTION PAY ITEMS

(R1) (R5) (R6) (R7) (R8)

660-3-12	2 EA
660-3-52	2 EA
660-3-62	1 EA

CABINET PAY ITEMS

632-7-1	1 PI
660-3-51	1 EA
671-2-40	1 EA

LEGEND:

- EXISTING SIGNAL HEAD
- RELOCATED SIGNAL HEAD
- PROPOSED SIGNAL HEAD
- EXISTING VEHICLE DETECTOR
- MODIFIED VEHICLE DETECTOR
- PROPOSED VEHICLE DETECTOR

RADAR DETECTION CONNECTION CHART

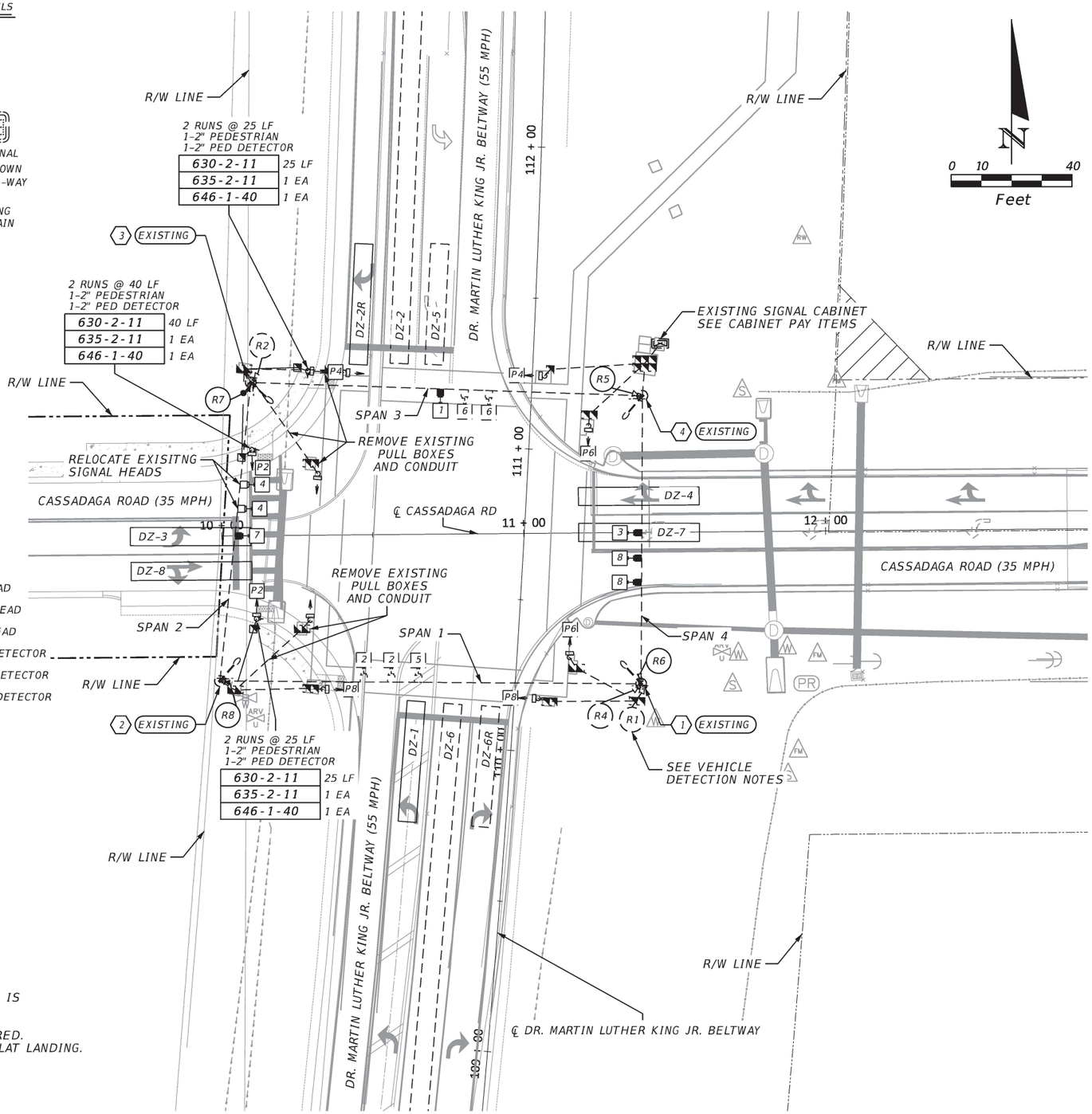
DETECTOR ID	DETECTION ZONE	DELAY TIME (SEC)	DETECTION ZONE DIMENSION	DETECTOR TYPE
R2	DZ-2	-	EXISTING	ADVANCE
R4	DZ-6	-	EXISTING	ADVANCE
R5	DZ-5	-	EXISTING	PRESENCE
	DZ-2R	10	6' X 40'	PRESENCE
R6	DZ-4	-	6' X 40'	PRESENCE
	DZ-7	-	6' X 40'	PRESENCE
R7	DZ-3	-	6' X 40'	PRESENCE
	DZ-8	-	6' X 40'	PRESENCE
R8	DZ-1	-	6' X 40'	PRESENCE
	DZ-6R	10	EXISTING	PRESENCE

SIZE AND PLACEMENT OF RADAR DETECTION ZONES ARE INITIAL AND MAY REQUIRE FIELD ADJUSTING AS DIRECTED BY PROJECT ENGINEER.

INITIAL CONTROLLER TIMINGS

	PHASE	NBL	SBT	EBL	WBT	SBL	NBT	WBL	EBT
	TIMING FUNCTION								
	MOVEMENT NUMBER	1	2	3	4	5	6	7	8
TIMING FUNCTION	MINIMUM GREEN	5.0	10.0	5.0	7.0	5.0	10.0	5.0	7.0
	EXTENSION	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	MAXIMUM GREEN 1	30.0	70.0	30.0	60.0	30.0	70.0	30.0	60.0
	MAXIMUM GREEN 2	--	--	--	--	--	--	--	--
	YELLOW CLEARANCE	5.5	5.5	4.0	4.0	5.5	5.5	4.0	4.0
	ALL RED	3.0	2.0	3.0	2.1	3.0	2.0	3.0	2.1
	PEDESTRIAN WALK	--	7.0	--	7.0	--	7.0	--	7.0
	PED. CLEARANCE	--	13.0	--	18.0	--	19.0	--	18.0
	RECALL	--	MIN	--	--	--	MIN	--	--
	FLASH	R	Y	R	R	R	Y	R	R

SIGNAL TIMINGS TO BE ADJUSTED BY VOLUSIA COUNTY BASED ON THE OBSERVED TRAFFIC FLOW WITHIN TWO WEEKS AFTER INSTALLATION.



SIGNALIZATION NOTES:

1. THE MAJOR STREET IS DR. MARTIN LUTHER KING JR. BELTWAY (SPEED LIMIT 55 MPH) AND THE MINOR STREET IS CASSADAGA ROAD (SPEED LIMIT 35 MPH).
2. THE MAJOR STREET MOVEMENTS ARE 1,2,5&6, AND THE MINOR STREET MOVEMENTS ARE 3,4,7&8.
3. DURING FLASH OPERATION, MOVEMENTS 2&6 SHALL FLASH YELLOW, AND MOVEMENT 1,3,4,5,7&8 SHALL FLASH RED.
4. CONTRACTOR TO ENSURE ALL PEDESTRIAN DETECTORS ARE IMMEDIATELY ADJACENT TO A MINIMUM 48" X 48" FLAT LANDING.
5. CONTRACTOR SHALL USE EXISITNG CONDUIT UNLESS OTHERWISE NOTED ON THE PLANS.

VEHICLE DETECTION NOTES:

1. REMOVE DETECTOR R1. EXISTING CABLE TO REMAIN.
2. RELOCATE DETECTOR R5 FROM POLE 3 TO POLE 4. UTILIZE CABLE FROM REMOVED DETECTOR R3.
3. RELOCATE DETECTOR R6 FROM POLE 3 TO POLE 1. UTILIZE CABLE FROM REMOVED DETECTOR R1.
4. DETECTOR R7 TO UTILIZE CABLE FROM RELOCATED DETECTOR R5.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

TRAFFIC & MOBILITY CONSULTANTS LLC
3101 MAGUIRE BLVD, SUITE 265
ORLANDO, FL 32803
OFFICE: (407) 531-5332
FAX: (407) 531-5331
JEREMY M. CROWE, P.E. 77064
CERTIFICATE OF AUTHORIZATION NO.:30024

Volusia County FLORIDA

SIGNALIZATION PLAN SIGNAL NO. 471

SHEET NO. T-5

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

4/24/2024 3:07:31 PM kv
P:\21145.1 Cassadaga Rd & Dr Martin Luther King Jr Beltway SIG DES\300 - CADD\Signalization\PLANS601.dgn

Appendix K
Excerpts of TM BTR TIAs

Project No. 22012 TM BTR Deland, v1.1

Intersection Volumes

Period	Tgen	Enter	Exit	DR MLK	SF	AGR	Years	Legend
AM Peak		23	72	4.30%	0.00	2.00%	3	Backg'd + (Project) = Total

Intersection= Orange Camp Rd & Dr. MLK Jr Bltwy — 1

Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	Vested	Tech Park	%Proj Ent	%Proj Ext	Project	Total	Formula
	L	46	1.00	46	1.06		49	0				0	49	49
EB	T	463	1.00	463	1.06		491	0				0	491	491
	R	55	1.00	55	1.06		58	0	38	5%		1	97	58 + [38] + (1) = 97
	L	42	1.00	42	1.06		45	0	70	5%		1	116	45 + [70] + (1) = 116
WB	T	343	1.00	343	1.06		364	0				0	364	364
	R	136	1.00	136	1.06		144	0				0	144	144
	L	158	1.00	158	1.13		178	0	14		5%	4	196	178 + [14] + (4) = 196
NB	T	369	1.00	369	1.13		417	0	20		10%	7	444	417 + [20] + (7) = 444
	R	42	1.00	42	1.13		47	0	25		5%	4	76	47 + [25] + (4) = 76
	L	331	1.00	331	1.13		374	0				0	374	374
SB	T	248	1.00	248	1.13		280	0	51	10%		2	333	280 + [51] + (2) = 333
	R	41	1.00	41	1.13		46	0				0	46	46

Intersection= Cassadaga Rd & Dr. MLK Jr Bltwy — 2

Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	Vested	Tech Park	%Proj Ent	%Proj Ext	Project	Total	Formula
	L	0	1.00	0	1.06		0	0				0	0	
EB	T	0	1.00	0	1.06		0	0				0	0	
	R	0	1.00	0	1.06		0	0				0	0	
	L	227	1.00	227	1.06		241	0	12		70%	50	303	241 + [12] + (50) = 303
WB	T	0	1.00	0	1.06		0	0				0	0	
	R	54	1.00	54	1.06		57	0	39		5%	4	100	57 + [39] + (4) = 100
	L	0	1.00	0	1.13		0	0				0	0	
NB	T	343	1.00	343	1.13		387	0	38		20%	14	439	387 + [38] + (14) = 439
	R	240	1.00	240	1.13		271	0	14			0	285	271 + [14] = 285
	L	77	1.00	77	1.13		87	0	70	25%		6	163	87 + [70] + (6) = 163
SB	T	360	1.00	360	1.13		406	0	143			0	549	406 + [143] = 549
	R	0	1.00	0	1.13		0	0				0	0	

Intersection= SR 472 & Dr. MLK Jr Bltwy — 3

Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	Vested	Tech Park	%Proj Ent	%Proj Ext	Project	Total	Formula
	L	88	1.00	88	1.06		93	0	21	15%		3	117	93 + [21] + (3) = 117
EB	T	915	1.00	915	1.06		970	0	82			0	1052	970 + [82] + = 1052
	R	103	1.00	103	1.06		109	0				0	109	109
	L	106	1.00	106	1.06		112	0	19			0	131	112 + [19] = 131
WB	T	864	1.00	864	1.06		916	0	34			0	950	916 + [34] = 950
	R	289	1.00	289	1.06		306	0	23	35%		8	337	306 + [23] + (8) = 337
	L	138	1.00	138	1.13		156	0				0	156	156
NB	T	185	1.00	185	1.13		209	0	9	20%		5	223	209 + [9] + (5) = 223
	R	56	1.00	56	1.13		63	0	56			0	119	63 + [56] = 119
	L	212	1.00	212	1.13		239	0	116		35%	25	380	239 + [116] + (25) = 380
SB	T	320	1.00	320	1.13		361	0	3		20%	14	378	361 + [3] + (14) = 378
	R	57	1.00	57	1.13		64	0	5		15%	11	80	64 + [5] + (11) = 80

Intersection= Kentucky Ave & Graves Ave — 4

Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	Vested	Tech Park	%Proj Ent	%Proj Ext	Project	Total	Formula
	L	159	1.00	159	1.00		159	0	46	15%		3	208	159 + [46] + (3) = 208
EB	T	359	1.00	359	1.00		359	119				0	478	359 + {119} = 478
	R	4	1.00	4	1.00		4	0				0	4	4
	L	2	1.00	2	1.00		2	0				0	2	2
WB	T	598	1.00	598	1.00		598	146				0	744	598 + {146} = 744
	R	204	1.00	204	1.00		204	0	13	5%		2	219	204 + [13] + (2) = 219
	L	6	1.00	6	1.13		7	0				0	7	7
NB	T	10	1.00	10	1.13		11	0				0	11	11
	R	9	1.00	9	1.13		10	0				0	10	10
	L	163	1.00	163	1.13		184	0	5		5%	4	193	184 + [5] + (4) = 193
SB	T	7	1.00	7	1.13		8	0				0	8	8
	R	361	1.00	361	1.13		408	0	18		15%	11	437	408 + [18] + (11) = 437

Project No. 22012 TM BTR Deland, v1.1

Intersection Volumes

Period	Tgen	Enter	Exit	DR MLK	SF	AGR	Years	Legend
PM Peak		76	45	4.30%	0.00	2.00%	3	Backg'd

Intersection= Orange Camp Rd & Dr. MLK Jr Bltwy — 1

Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	Vested	Tech Park	%Proj Ent	%Proj Ext	Project	Total	Formula
	L	53	1.00	53	1.06		56	0				0	56	56
EB	T	341	1.00	341	1.06		361	0				0	361	361
	R	103	1.00	103	1.06		109	0	33	5%		4	146	109 + [33] + (4) = 146
	L	68	1.00	68	1.06		72	0	60	5%		4	136	72 + [60] + (4) = 136
WB	T	454	1.00	454	1.06		481	0				0	481	481
	R	172	1.00	172	1.06		182	0				0	182	182
	L	256	1.00	256	1.13		289	0	54		5%	2	345	289 + [54] + (2) = 345
NB	T	355	1.00	355	1.13		401	0	73		10%	5	479	401 + [73] + (5) = 479
	R	40	1.00	40	1.13		45	0	92		5%	2	139	45 + [92] + (2) = 139
	L	244	1.00	244	1.13		275	0				0	275	275
SB	T	354	1.00	354	1.13		400	0	44	10%		8	452	400 + [44] + (8) = 452
	R	55	1.00	55	1.13		62	0				0	62	62

Intersection= Cassadaga Rd & Dr. MLK Jr Bltwy — 2

Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	Vested	Tech Park	%Proj Ent	%Proj Ext	Project	Total	Formula
	L	0	1.00	0	1.06		0	0				0	0	
EB	T	0	1.00	0	1.06		0	0				0	0	
	R	0	1.00	0	1.06		0	0				0	0	
	L	116	1.00	116	1.06		123	0	46		70%	32	201	123 + [46] + (32) = 201
WB	T	0	1.00	0	1.06		0	0				0	0	
	R	28	1.00	28	1.06		30	0	145		5%	2	177	30 + [145] + (2) = 177
	L	0	1.00	0	1.13		0	0				0	0	
NB	T	482	1.00	482	1.13		544	0	142		20%	9	695	544 + [142] + (9) = 695
	R	167	1.00	167	1.13		189	0	51			0	240	189 + [51] = 240
	L	59	1.00	59	1.13		67	0	60	25%		19	146	67 + [60] + (19) = 146
SB	T	570	1.00	570	1.13		644	0	123			0	767	644 + [123] = 767
	R	0	1.00	0	1.13		0	0				0	0	

Intersection= SR 472 & Dr. MLK Jr Bltwy — 3

Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	Vested	Tech Park	%Proj Ent	%Proj Ext	Project	Total	Formula
	L	109	1.00	109	1.06		116	0	18	15%		11	145	116 + [18] + (11) = 145
EB	T	1113	1.00	1,113	1.06		1180	0	71			0	1251	1180 + [71] = 1251
	R	137	1.00	137	1.06		145	0				0	145	145
	L	156	1.00	156	1.06		165	0	70			0	235	165 + [70] = 235
WB	T	844	1.00	844	1.06		895	0	127			0	1022	895 + [127] = 1022
	R	278	1.00	278	1.06		295	0	106	35%		27	428	295 + [106] + (27) = 428
	L	123	1.00	123	1.13		139	0				0	139	139
NB	T	271	1.00	271	1.13		306	0	8	20%		15	329	306 + [8] + (15) = 329
	R	83	1.00	83	1.13		94	0	48			0	142	94 + [48] = 142
	L	210	1.00	210	1.13		237	0	100		35%	16	353	237 + [100] + (16) = 353
SB	T	291	1.00	291	1.13		329	0	13		20%	9	351	329 + [13] + (9) = 351
	R	69	1.00	69	1.13		78	0	20		15%	7	105	78 + [20] + (7) = 105

Intersection= Kentucky Ave & Graves Ave — 4

Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	Vested	Tech Park	%Proj Ent	%Proj Ext	Project	Total	Formula
	L	336	1.00	336	1.00		336	0	40	15%		11	387	336 + [40] + (11) = 387
EB	T	677	1.00	677	1.00		677	146				0	823	677 + {146} = 823
	R	10	1.00	10	1.00		10	0				0	10	10
	L	13	1.00	13	1.00		13	0				0	13	13
WB	T	514	1.00	514	1.00		514	119				0	633	514 + {119} = 633
	R	139	1.00	139	1.00		139	0	11	5%		4	154	139 + [11] + (4) = 154
	L	17	1.00	17	1.13		19	0				0	19	19
NB	T	10	1.00	10	1.13		11	0				0	11	11
	R	9	1.00	9	1.13		10	0				0	10	10
	L	223	1.00	223	1.13		252	0	17		5%	2	271	252 + [17] + (2) = 271
SB	T	8	1.00	8	1.13		9	0				0	9	9
	R	350	1.00	350	1.13		395	0	66		15%	7	468	395 + [66] + (7) = 468

Appendix L
Projected Intersection Volume Calculation

Project No. 21145 Ford 472
Intersection Volumes

Analysis Period	Factors SF	AGR	Years	Tgen Enter	Exit	Legend
AM Peak	1.04	1.00%	4	30	91	Backg'd + (Tech Park) + [TM BTR] + (Project) = Total

Intersection: Dr. MLK Bltwy & Orange Camp Rd — 1

App	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Volumes
	L	0	160	1.04	**166**	1.04	**173**	14	4	**191**	0%	4%	**4**	**195**	173 + {14} + [4] + (4) = 195
NB	T	2	433	1.04	**450**	1.04	**468**	20	7	**495**	0%	8%	**7**	**502**	468 + {20} + [7] + (7) = 502
	R	0	50	1.04	**52**	1.04	**54**	25	4	**83**	0%	8%	**7**	**90**	54 + {25} + [4] + (7) = 90
	L	0	249	1.04	**259**	1.04	**269**			**269**	0%	0%	**0**	**269**	269
SB	T	2	231	1.04	**240**	1.04	**250**	51	2	**303**	8%	0%	**2**	**305**	250 + {51} + [2] + (2) = 305
	R	0	36	1.04	**37**	1.04	**38**			**38**	0%	0%	**0**	**38**	38
	L	0	47	1.04	**49**	1.05	**51**			**51**	0%	0%	**0**	**51**	51
EB	T	2	390	1.04	**406**	1.05	**425**			**425**	0%	0%	**0**	**425**	425
	R	1	50	1.04	**52**	1.05	**54**	38	1	**93**	4%	0%	**2**	**95**	54 + {38} + [1] + (2) = 95
	L	0	40	1.04	**42**	1.05	**44**	70	1	**115**	8%	0%	**2**	**117**	44 + {70} + [1] + (2) = 117
WB	T	2	302	1.04	**314**	1.05	**328**			**328**	0%	0%	**0**	**328**	328
	R	0	117	1.04	**122**	1.05	**128**			**128**	0%	0%	**0**	**128**	128

Intersection: Dr. MLK Bltwy & Cassadaga Rd — 2

Appr	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Formula
	L	0	0	1.04	0	1.04	**1***			**1**	10%	0%	**3**	**4**	1 + (3) = 4
NB	T	1	305	1.04	317	1.04	**330**	38	14	**382**	0%	0%	**0**	**382**	330 + {38} + [14] = 382
	R	1	211	1.04	219	1.04	**228**	14		**242**	0%	0%	**0**	**242**	228 + {14} = 242
	L	1	61	1.04	63	1.04	**66**	70	6	**142**	0%	0%	**0**	**142**	66 + {70} + [6] = 142
SB	T	1	358	1.04	372	1.04	**387**	143		**530**	0%	0%	**0**	**530**	387 + {143} = 530
	R	0	0	1.04	0	1.04	**1***			**1**	20%	0%	**6**	**7**	1 + (6) = 7
	L	1	0	1.04	0	1.10	**2***			**2**	0%	20%	**18**	**20**	2 + {18} = 20
EB	T	1	0	1.04	0	1.10	**2***			**2**	0%	2%	**2**	**4**	2 + (2) = 4
	R	0	0	1.04	0	1.10	**3***			**3**	0%	10%	**9**	**12**	3 + {9} = 12
	L	1	198	1.04	206	1.10	**227**	12	50	**289**	0%	0%	**0**	**289**	227 + {12} + [50] = 289
WB	T	1	0	1.04	0	1.10	**0**			**0**	2%	0%	**1**	**1**	(1)
	R	0	53	1.04	55	1.10	**61**	39	4	**104**	0%	0%	**0**	**104**	61 + {39} + [4] = 104

*Background Volumes Estimated using *ITE Trip Generation Manual 11th Edition*.

Intersection: Dr. MLK Bltwy / Kentucky Ave & SR 472 — 3

Appr	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Formula
	L	0	128	1.04	133	1.08	**144**			**144**	3%	0%	**1**	**145**	144 + (1) = 145
NB	T	1	227	1.04	236	1.08	**255**	9	5	**269**	10%	0%	**3**	**272**	255 + {9} + [5] + (3) = 272
	R	1	55	1.04	57	1.08	**62**	56		**118**	0%	0%	**0**	**118**	62 + {56} = 118
	L	1	188	1.04	196	1.08	**212**	116	25	**353**	0%	0%	**0**	**353**	212 + {116} + [25] = 353
SB	T	1	311	1.04	323	1.08	**349**	3	14	**366**	0%	10%	**9**	**375**	349 + {3} + [14] + (9) = 375
	R	1	57	1.04	59	1.08	**64**	5	11	**80**	0%	0%	**0**	**80**	64 + {5} + [11] = 80
	L	1	60	1.04	62	1.04	**64**	21	3	**88**	0%	0%	**0**	**88**	64 + {21} + [3] = 88
EB	T	2	892	1.04	928	1.04	**965**	82		**1047**	0%	39%	**35**	**1082**	965 + {82} + (35) = 1082
	R	1	98	1.04	102	1.04	**106**			**106**	0%	3%	**3**	**109**	106 + (3) = 109
	L	1	97	1.04	101	1.04	**105**	19		**124**	0%	0%	**0**	**124**	105 + {19} = 124
WB	T	2	833	1.04	866	1.04	**901**	34		**935**	39%	0%	**11**	**946**	901 + {34} + (11) = 946
	R	1	231	1.04	240	1.04	**250**	23	8	**281**	0%	0%	**0**	**281**	250 + {23} + [8] = 281

Intersection: SR 472 & Blue Lake Ave (Ext.) — 4

Appr	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Formula
	L	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
NB	T	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	L	0	0	1.04	0	1.04	**8***			**8**	0%	42%	**38**	**46**	8 + (38) = 46
SB	T	1	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	1	0	1.04	0	1.04	**8***			**8**	0%	26%	**24**	**32**	8 + (24) = 32
	L	1	0	1.04	0	1.04	**3***			**3**	26%	0%	**8**	**11**	3 + (8) = 11
EB	T	2	1050	1.04	1,092	1.04	**1136**	103	3	**1242**	0%	0%	**0**	**1242**	1136 + {103} + [3] = 1242
	R	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	L	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
WB	T	2	1018	1.04	1,059	1.04	**1101**	39	11	**1151**	0%	0%	**0**	**1151**	1101 + {39} + [11] = 1151
	R	1	0	1.04	0	1.04	**2***			**2**	42%	0%	**12**	**14**	2 + (12) = 14

EBT obtained adding EBT, SBL and NBR at the intersection of Howland Blvd (SR 472) and Minnesota Ave.
WBT obtained adding WBT, SBR and NBL at the intersection of MLK and SR 472.
Vested Trips from Tech Park and TM BTR estimated using vested trips from MLK and SR 472.
*Background Volumes Estimated using *ITE Trip Generation Manual 11th Edition*.

Intersection: SR 472 & Minnesota Ave — 5

Appr	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Formula
	L	0	4	1.04	4	1.04	**4**			**4**	0%	0%	**0**	**4**	4
NB	T	1	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	0	7	1.04	7	1.04	**7**			**7**	0%	0%	**0**	**7**	7
	L	0	5	1.04	5	1.04	**5**			**5**	0%	0%	**0**	**5**	5
SB	T	1	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	0	3	1.04	3	1.04	**3**			**3**	0%	0%	**0**	**3**	3
	L	1	3	1.04	3	1.04	**3**			**3**	0%	0%	**0**	**3**	3
EB	T	2	1038	1.04	1,080	1.04	**1123**	103	3	**1229**	26%	0%	**8**	**1237**	1123 + {103} + [3] + (8) = 1237
	R	1	4	1.04	4	1.04	**4**			**4**	0%	0%	**0**	**4**	4
	L	0	4	1.04	4	1.04	**4**			**4**	0%	0%	**0**	**4**	4
WB	T	2	1010	1.04	1,050	1.04	**1092**	39	11	**1142**	0%	26%	**24**	**1166**	1092 + {39} + [11] + (24) = 1166
	R	0	4	1.04	4	1.04	**4**			**4**	0%	0%	**0**	**4**	4

Intersection: Cassadaga Rd (Ext.) & Access I — 6

Appr	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Formula
	L	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
NB	T	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	L	1	0	1.04	0	1.04	**0**			**0**	0%	32%	**29**	**29**	(29)
SB	T	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	0	0	1.04	0	1.04	**0**			**0**	0%	38%	**35**	**35**	(35)
	L	1	0	1.04	0	1.04	**0**			**0**	38%	0%	**11**	**11**	(11)
EB	T	1	0	1.04	0	1.04	**7***			**7**	0%	0%	**0**	**7**	7
	R	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	L	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
WB	T	1	0	1.04	0	1.04	**2***			**2**	0%	0%	**0**	**2**	2
	R	1	0	1.04	0	1.04	**0**			**0**	32%	0%	**10**	**10**	(10)

*Background Volumes Estimated using *ITE Trip Generation Manual 11th Edition*.

Intersection: Blue Lake Ave (Ext.) & Access II — 7

Appr	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Formula
	L	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
NB	T	1	0	1.04	0	1.04	**7***			**7**	0%	0%	**0**	**7**	7
	R	1	0	1.04	0	1.04	**0**			**0**	30%	0%	**9**	**9**	(9)
	L	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
SB	T	1	0	1.04	0	1.04	**23***			**23**	0%	0%	**0**	**23**	23
	R	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	L	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
EB	T	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	L	0	0	1.04	0	1.04	**0**			**0**	0%	30%	**27**	**27**	(27)
WB	T	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	

*Background Volumes Estimated using *ITE Trip Generation Manual 11th Edition*.

Intersection: Blue Lake Ave (Ext.) & Cassadaga Rd (Ext.) — 8

Appr	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Formula
	L	0		1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
NB	T	1		1.04	0	1.04	**5***			**5**	30%	0%	**9**	**14**	5 + (9) = 14
	R	0		1.04	0	1.04	**0**			**0**	38%	0%	**11**	**11**	(11)
	L	0		1.04	0	1.04	**7***			**7**	0%	0%	**0**	**7**	7
SB	T	1		1.04	0	1.04	**16***			**16**	0%	30%	**27**	**43**	16 + (27) = 43
	R	0		1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	L	0		1.04	0	1.21	**0**			**0**	0%	0%	**0**	**0**	
EB	T	1		1.04	0	1.21	**0**			**0**	0%	0%	**0**	**0**	
	R	1		1.04	0	1.21	**0**			**0**	0%	0%	**0**	**0**	
	L	1		1.04	0	1.21	**0**			**0**	0%	38%	**35**	**35**	(35)
WB	T	1		1.04	0	1.21	**0**			**0**	0%	0%	**0**	**0**	
	R	0		1.04	0	1.21	**2**			**2**	0%	0%	**0**	**2**	2

*Background Volumes Estimated using ITE Trip Generation Manual 11th Edition.

Project No. 21145 Ford 472
Intersection Volumes

Analysis Period	Factors SF	AGR	Years	Tgen Enter	Exit	Legend
PM Peak	1.04	1.00%	4	94	60	Backg'd + {Tech Park} + [TM BTR] + (Project) = Total

Intersection: Dr. MLK Bltwy & Orange Camp Rd — 1

App	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Volumes
	L	0	187	1.04	**194**	1.04	**202**	54	2	**258**	0%	4%	**2**	**260**	202 + {54} + [2] + (2) = 260
NB	T	2	450	1.04	**468**	1.04	**487**	73	5	**565**	0%	8%	**5**	**570**	487 + {73} + [5] + (5) = 570
	R	0	48	1.04	**50**	1.04	**52**	92	2	**146**	0%	8%	**5**	**151**	52 + {92} + [2] + (5) = 151
	L	0	251	1.04	**261**	1.04	**271**			**271**	0%	0%	**0**	**271**	271
SB	T	2	350	1.04	**364**	1.04	**379**	44	8	**431**	8%	0%	**8**	**439**	379 + {44} + [8] + (8) = 439
	R	0	44	1.04	**46**	1.04	**48**			**48**	0%	0%	**0**	**48**	48
	L	0	50	1.04	**52**	1.05	**54**			**54**	0%	0%	**0**	**54**	54
EB	T	2	372	1.04	**387**	1.05	**405**			**405**	0%	0%	**0**	**405**	405
	R	1	101	1.04	**105**	1.05	**110**	33	4	**147**	4%	0%	**3**	**150**	110 + {33} + [4] + (3) = 150
	L	0	53	1.04	**55**	1.05	**58**	60	4	**122**	8%	0%	**8**	**130**	58 + {60} + [4] + (8) = 130
WB	T	2	473	1.04	**492**	1.05	**514**			**514**	0%	0%	**0**	**514**	514
	R	0	161	1.04	**167**	1.05	**175**			**175**	0%	0%	**0**	**175**	175

Intersection: Dr. MLK Bltwy & Cassadaga Rd — 2

Appr	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Formula
	L	0	0	1.04	0	1.04	**3***			**3**	10%	0%	**9**	**12**	3 + (9) = 12
NB	T	1	448	1.04	466	1.04	**485**	142	9	**636**	0%	0%	**0**	**636**	485 + {142} + [9] = 636
	R	1	167	1.04	174	1.04	**181**	51		**232**	0%	0%	**0**	**232**	181 + {51} = 232
	L	1	59	1.04	61	1.04	**63**	60	19	**142**	0%	0%	**0**	**142**	63 + {60} + [19] = 142
SB	T	1	536	1.04	557	1.04	**579**	123		**702**	0%	0%	**0**	**702**	579 + {123} = 702
	R	0	0	1.04	0	1.04	**3***			**3**	20%	0%	**19**	**22**	3 + (19) = 22
	L	1	0	1.04	0	1.10	**2***			**2**	0%	20%	**12**	**14**	2 + (12) = 14
EB	T	1	0	1.04	0	1.10	**0**			**0**	0%	2%	**1**	**1**	(1)
	R	0	0	1.04	0	1.10	**2***			**2**	0%	10%	**6**	**8**	2 + (6) = 8
	L	1	117	1.04	122	1.10	**134**	46	32	**212**	0%	0%	**0**	**212**	134 + {46} + [32] = 212
WB	T	1	0	1.04	0	1.10	**1***			**1**	2%	0%	**2**	**3**	1 + (2) = 3
	R	0	37	1.04	38	1.10	**42**	145	2	**189**	0%	0%	**0**	**189**	42 + {145} + [2] = 189

*Background Volumes Estimated using *ITE Trip Generation Manual 11th Edition*.

Intersection: Dr. MLK Bltwy / Kentucky Ave & SR 472 — 3

Appr	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Formula
	L	0	103	1.04	107	1.08	**116**			**116**	3%	0%	**3**	**119**	116 + (3) = 119
NB	T	1	256	1.04	266	1.08	**287**	8	15	**310**	10%	0%	**9**	**319**	287 + {8} + [15] + (9) = 319
	R	1	66	1.04	69	1.08	**75**	48		**123**	0%	0%	**0**	**123**	75 + {48} = 123
	L	1	226	1.04	235	1.08	**254**	100	16	**370**	0%	0%	**0**	**370**	254 + {100} + [16] = 370
SB	T	1	355	1.04	369	1.08	**399**	13	9	**421**	0%	10%	**6**	**427**	399 + {13} + [9] + (6) = 427
	R	1	72	1.04	75	1.08	**81**	20	7	**108**	0%	0%	**0**	**108**	81 + {20} + [7] = 108
	L	1	81	1.04	84	1.04	**87**	18	11	**116**	0%	0%	**0**	**116**	87 + {18} + [11] = 116
EB	T	2	1018	1.04	1,059	1.04	**1101**	71		**1172**	0%	39%	**23**	**1195**	1101 + {71} + (23) = 1195
	R	1	128	1.04	133	1.04	**138**			**138**	0%	3%	**2**	**140**	138 + {2} = 140
	L	1	158	1.04	164	1.04	**171**	70		**241**	0%	0%	**0**	**241**	171 + {70} = 241
WB	T	2	821	1.04	854	1.04	**888**	127		**1015**	39%	0%	**37**	**1052**	888 + {127} + (37) = 1052
	R	1	278	1.04	289	1.04	**301**	106	27	**434**	0%	0%	**0**	**434**	301 + {106} + [27] = 434

Intersection: SR 472 & Blue Lake Ave (Ext.) — 4

Appr	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Formula
	L	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
NB	T	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	L	0	0	1.04	0	1.04	**6***			**6**	0%	42%	**25**	**31**	6 + (25) = 31
SB	T	1	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	1	0	1.04	0	1.04	**4***			**4**	0%	26%	**16**	**20**	4 + (16) = 20
	L	1	0	1.04	0	1.04	**10***			**10**	26%	0%	**24**	**34**	10 + (24) = 34
EB	T	2	1261	1.04	1,311	1.04	**1363**	89	11	**1463**	0%	0%	**0**	**1463**	1363 + {89} + [11] = 1463
	R	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	L	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
WB	T	2	996	1.04	1,036	1.04	**1077**	147	7	**1231**	0%	0%	**0**	**1231**	1077 + {147} + [7] = 1231
	R	1	0	1.04	0	1.04	**7***			**7**	42%	0%	**40**	**47**	7 + (40) = 47

EBT obtained addnq EBT, SBL and NBR at the intersection of Howland Blvd (SR 472) and Minnesota Ave.
WBT obtained addnq WBT, SBR and NBL at the intersection of MLK and SR 472.
Vested Trips from Tech Park and TM BTR estimated using vested trips from MLK and SR 472.
*Background Volumes Estimated using *ITE Trip Generation Manual 11th Edition*.

Intersection: SR 472 & Minnesota Ave — 5

Appr	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Formula
	L	0	3	1.04	3	1.04	**3**			**3**	0%	0%	**0**	**3**	3
NB	T	1	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	0	14	1.04	15	1.04	**16**			**16**	0%	0%	**0**	**16**	16
	L	0	3	1.04	3	1.04	**3**			**3**	0%	0%	**0**	**3**	3
SB	T	1	1	1.04	1	1.04	**1**			**1**	0%	0%	**0**	**1**	1
	R	0	3	1.04	3	1.04	**3**			**3**	0%	0%	**0**	**3**	3
	L	1	4	1.04	4	1.04	**4**			**4**	0%	0%	**0**	**4**	4
EB	T	2	1244	1.04	1,294	1.04	**1346**	89	11	**1446**	26%	0%	**24**	**1470**	1346 + {89} + [11] + (24) = 1470
	R	1	13	1.04	14	1.04	**15**			**15**	0%	0%	**0**	**15**	15
	L	0	14	1.04	15	1.04	**16**			**16**	0%	0%	**0**	**16**	16
WB	T	2	980	1.04	1,019	1.04	**1060**	147	7	**1214**	0%	26%	**16**	**1230**	1060 + {147} + [7] + (16) = 1230
	R	0	2	1.04	2	1.04	**2**			**2**	0%	0%	**0**	**2**	2

Intersection: Cassadaga Rd (Ext.) & Access I — 6

Appr	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Formula
	L	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
NB	T	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	L	1	0	1.04	0	1.04	**0**			**0**	0%	32%	**19**	**19**	(19)
SB	T	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	0	0	1.04	0	1.04	**0**			**0**	0%	38%	**23**	**23**	(23)
	L	1	0	1.04	0	1.04	**0**			**0**	38%	0%	**36**	**36**	(36)
EB	T	1	0	1.04	0	1.04	**4***			**4**	0%	0%	**0**	**4**	4
	R	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	L	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
WB	T	1	0	1.04	0	1.04	**7***			**7**	0%	0%	**0**	**7**	7
	R	1	0	1.04	0	1.04	**0**			**0**	32%	0%	**30**	**30**	(30)

*Background Volumes Estimated using *ITE Trip Generation Manual 11th Edition*.

Intersection: Blue Lake Ave (Ext.) & Access II — 7

Appr	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Formula
	L	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
NB	T	1	0	1.04	0	1.04	**24***			**24**	0%	0%	**0**	**24**	24
	R	1	0	1.04	0	1.04	**0**			**0**	30%	0%	**28**	**28**	(28)
	L	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
SB	T	1	0	1.04	0	1.04	**14***			**14**	0%	0%	**0**	**14**	14
	R	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	L	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
EB	T	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	L	0	0	1.04	0	1.04	**0**			**0**	0%	30%	**18**	**18**	(18)
WB	T	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	

*Background Volumes Estimated using *ITE Trip Generation Manual 11th Edition*.

Intersection: Blue Lake Ave (Ext.) & Cassadaga Rd (Ext.) — 8

Appr	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Redirect	Vested	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Formula
	L	0		1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
NB	T	1		1.04	0	1.04	**17***			**17**	30%	0%	**28**	**45**	17 + (28) = 45
	R	0		1.04	0	1.04	**0**			**0**	38%	0%	**36**	**36**	(36)
	L	0		1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
SB	T	1		1.04	0	1.04	**17***			**17**	0%	30%	**18**	**35**	17 + (18) = 35
	R	0		1.04	0	1.04	**4***			**4**	0%	0%	**4**	**4**	4
	L	0		1.04	0	1.21	**0**			**0**	0%	0%	**0**	**0**	
EB	T	1		1.04	0	1.21	**0**			**0**	0%	0%	**0**	**0**	
	R	1		1.04	0	1.21	**0**			**0**	0%	0%	**0**	**0**	
	L	1		1.04	0	1.21	**0**			**0**	0%	38%	**23**	**23**	(23)
WB	T	1		1.04	0	1.21	**0**			**0**	0%	0%	**0**	**0**	
	R	0		1.04	0	1.21	**7***			**7**	0%	0%	**0**	**7**	7

*Background Volumes Estimated using *ITE Trip Generation Manual 11th Edition*.

Appendix M
HCM Analysis Worksheets

Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	546	514	718	576
Demand Flow Rate, veh/h	568	530	734	591
Vehicles Circulating, veh/h	595	737	793	573
Vehicles Exiting, veh/h	569	790	370	694
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	8.7	9.9	14.0	8.6
Approach LOS	A	A	B	A

Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR
Assumed Moves	LT	TR	LT	TR	LT	TR	LT	TR
RT Channelized								
Lane Util	0.470	0.530	0.470	0.530	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328
A (Intercept)	1350	1420	1350	1420	1350	1420	1350	1420
B (Slope)	9.199e-4	8.501e-4	9.199e-4	8.501e-4	9.199e-4	8.501e-4	9.199e-4	8.501e-4
Entry Flow, veh/h	267	301	249	281	345	389	278	313
Cap Entry Lane, veh/h	781	856	685	759	651	724	797	873
Entry HV Adj Factor	0.962	0.962	0.971	0.970	0.979	0.979	0.974	0.975
Flow Entry, veh/h	257	290	242	273	338	381	271	305
Cap Entry, veh/h	751	824	665	736	637	708	776	851
V/C Ratio	0.342	0.351	0.363	0.370	0.530	0.538	0.349	0.359
Control Delay, s/veh	9.0	8.5	10.3	9.6	14.5	13.5	8.9	8.4
LOS	A	A	B	A	B	B	A	A
95th %tile Queue, veh	2	2	2	2	3	3	2	2

Intersection	
Intersection Delay, s/veh	13.7
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	612	615	826	656
Demand Flow Rate, veh/h	639	634	844	674
Vehicles Circulating, veh/h	759	816	828	697
Vehicles Exiting, veh/h	612	856	570	753
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	11.8	12.7	17.7	11.2
Approach LOS	B	B	C	B

Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR
Assumed Moves	LT	TR	LT	TR	LT	TR	LT	TR
RT Channelized								
Lane Util	0.469	0.531	0.470	0.530	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328
A (Intercept)	1350	1420	1350	1420	1350	1420	1350	1420
B (Slope)	9.199e-4	8.501e-4	9.199e-4	8.501e-4	9.199e-4	8.501e-4	9.199e-4	8.501e-4
Entry Flow, veh/h	300	339	298	336	397	447	317	357
Cap Entry Lane, veh/h	672	745	637	710	630	702	711	785
Entry HV Adj Factor	0.959	0.957	0.970	0.970	0.978	0.980	0.973	0.975
Flow Entry, veh/h	288	324	289	326	388	438	309	348
Cap Entry, veh/h	644	713	618	688	617	688	692	765
V/C Ratio	0.447	0.455	0.468	0.473	0.630	0.636	0.446	0.455
Control Delay, s/veh	12.3	11.5	13.2	12.2	18.4	17.1	11.6	10.8
LOS	B	B	B	B	C	C	B	B
95th %tile Queue, veh	2	2	2	3	4	5	2	2

Intersection	
Intersection Delay, s/veh	14.0
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	614	617	847	658
Demand Flow Rate, veh/h	641	636	865	676
Vehicles Circulating, veh/h	763	829	828	704
Vehicles Exiting, veh/h	617	864	576	761
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	11.9	12.9	18.4	11.3
Approach LOS	B	B	C	B

Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR
Assumed Moves	LT	TR	LT	TR	LT	TR	LT	TR
RT Channelized								
Lane Util	0.470	0.530	0.470	0.530	0.471	0.529	0.470	0.530
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328
A (Intercept)	1350	1420	1350	1420	1350	1420	1350	1420
B (Slope)	9.199e-4	8.501e-4	9.199e-4	8.501e-4	9.199e-4	8.501e-4	9.199e-4	8.501e-4
Entry Flow, veh/h	301	340	299	337	407	458	318	358
Cap Entry Lane, veh/h	669	742	630	702	630	702	706	781
Entry HV Adj Factor	0.959	0.957	0.970	0.970	0.978	0.980	0.973	0.975
Flow Entry, veh/h	289	325	290	327	398	449	309	349
Cap Entry, veh/h	641	710	611	681	617	689	687	761
V/C Ratio	0.450	0.458	0.475	0.480	0.646	0.652	0.450	0.459
Control Delay, s/veh	12.4	11.6	13.5	12.5	19.1	17.7	11.7	11.0
LOS	B	B	B	B	C	C	B	B
95th %tile Queue, veh	2	2	3	3	5	5	2	2

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	550	722	720	678
Demand Flow Rate, veh/h	576	744	735	696
Vehicles Circulating, veh/h	705	743	732	765
Vehicles Exiting, veh/h	756	724	549	722
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	10.2	13.2	12.7	12.7
Approach LOS	B	B	B	B

Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR
Assumed Moves	LT	TR	LT	TR	LT	TR	LT	TR
RT Channelized								
Lane Util	0.470	0.530	0.470	0.530	0.469	0.531	0.470	0.530
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328
A (Intercept)	1350	1420	1350	1420	1350	1420	1350	1420
B (Slope)	9.199e-4	8.501e-4	9.199e-4	8.501e-4	9.199e-4	8.501e-4	9.199e-4	8.501e-4
Entry Flow, veh/h	271	305	350	394	345	390	327	369
Cap Entry Lane, veh/h	706	780	681	755	688	762	668	741
Entry HV Adj Factor	0.954	0.956	0.970	0.971	0.980	0.978	0.974	0.973
Flow Entry, veh/h	259	292	339	383	338	381	318	359
Cap Entry, veh/h	673	746	661	733	675	745	650	721
V/C Ratio	0.384	0.391	0.514	0.522	0.501	0.512	0.490	0.498
Control Delay, s/veh	10.6	9.9	13.6	12.7	13.1	12.3	13.2	12.3
LOS	B	A	B	B	B	B	B	B
95th %tile Queue, veh	2	2	3	3	3	3	3	3

Intersection	
Intersection Delay, s/veh	19.0
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	612	819	979	757
Demand Flow Rate, veh/h	642	844	999	777
Vehicles Circulating, veh/h	853	912	763	922
Vehicles Exiting, veh/h	846	850	732	834
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	13.7	21.3	20.3	19.0
Approach LOS	B	C	C	C

Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR
Assumed Moves	LT	TR	LT	TR	LT	TR	LT	TR
RT Channelized								
Lane Util	0.470	0.530	0.470	0.530	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328
A (Intercept)	1350	1420	1350	1420	1350	1420	1350	1420
B (Slope)	9.199e-4	8.501e-4	9.199e-4	8.501e-4	9.199e-4	8.501e-4	9.199e-4	8.501e-4
Entry Flow, veh/h	302	340	397	447	470	529	365	412
Cap Entry Lane, veh/h	616	688	583	654	669	742	578	649
Entry HV Adj Factor	0.952	0.954	0.969	0.971	0.979	0.980	0.975	0.974
Flow Entry, veh/h	288	324	385	434	460	519	356	401
Cap Entry, veh/h	586	656	565	635	655	728	564	632
V/C Ratio	0.490	0.494	0.681	0.683	0.702	0.713	0.631	0.635
Control Delay, s/veh	14.4	13.2	22.3	20.4	20.9	19.8	19.8	18.3
LOS	B	B	C	C	C	C	C	C
95th %tile Queue, veh	3	3	5	5	6	6	4	5

Intersection	
Intersection Delay, s/veh	19.6
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	617	827	992	765
Demand Flow Rate, veh/h	648	852	1014	785
Vehicles Circulating, veh/h	869	920	763	932
Vehicles Exiting, veh/h	848	857	754	840
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	14.2	22.0	20.9	19.7
Approach LOS	B	C	C	C

Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR
Assumed Moves	LT	TR	LT	TR	LT	TR	LT	TR
RT Channelized								
Lane Util	0.471	0.529	0.469	0.531	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328
A (Intercept)	1350	1420	1350	1420	1350	1420	1350	1420
B (Slope)	9.199e-4	8.501e-4	9.199e-4	8.501e-4	9.199e-4	8.501e-4	9.199e-4	8.501e-4
Entry Flow, veh/h	305	343	400	452	477	537	369	416
Cap Entry Lane, veh/h	607	678	579	650	669	742	573	643
Entry HV Adj Factor	0.951	0.953	0.971	0.969	0.978	0.980	0.975	0.975
Flow Entry, veh/h	290	327	389	438	466	526	360	406
Cap Entry, veh/h	577	647	562	630	654	727	558	627
V/C Ratio	0.503	0.506	0.691	0.696	0.713	0.723	0.644	0.647
Control Delay, s/veh	14.9	13.7	22.9	21.2	21.5	20.4	20.6	18.9
LOS	B	B	C	C	C	C	C	C
95th %tile Queue, veh	3	3	5	6	6	6	5	5

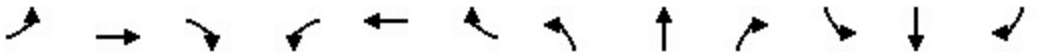


Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	206	55	317	219	63	372
Future Volume (veh/h)	206	55	317	219	63	372
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1841	1841	1870	1870	1841	1870
Adj Flow Rate, veh/h	226	48	348	188	69	409
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	4	4	2	2	4	2
Cap, veh/h	298	265	630	534	409	1023
Arrive On Green	0.17	0.17	0.34	0.34	0.06	0.55
Sat Flow, veh/h	1753	1560	1870	1585	1753	1870
Grp Volume(v), veh/h	226	48	348	188	69	409
Grp Sat Flow(s),veh/h/ln	1753	1560	1870	1585	1753	1870
Q Serve(g_s), s	6.2	1.3	7.7	4.5	1.2	6.4
Cycle Q Clear(g_c), s	6.2	1.3	7.7	4.5	1.2	6.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	298	265	630	534	409	1023
V/C Ratio(X)	0.76	0.18	0.55	0.35	0.17	0.40
Avail Cap(c_a), veh/h	632	562	908	769	666	1575
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.0	17.9	13.6	12.6	9.3	6.6
Incr Delay (d2), s/veh	4.0	0.3	0.8	0.4	0.2	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.6	2.3	4.3	7.9	0.5	2.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	23.9	18.3	14.4	13.0	9.5	6.9
LnGrp LOS	C	B	B	B	A	A
Approach Vol, veh/h	274		536			478
Approach Delay, s/veh	22.9		13.9			7.3
Approach LOS	C		B			A

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		35.1		15.4	10.6	24.5
Change Period (Y+Rc), s		7.5		6.8	7.5	7.5
Max Green Setting (Gmax), s		42.5		18.2	10.5	24.5
Max Q Clear Time (g_c+I1), s		8.4		8.2	3.2	9.7
Green Ext Time (p_c), s		2.2		0.6	0.1	2.1

Intersection Summary	
HCM 7th Control Delay, s/veh	13.4
HCM 7th LOS	B

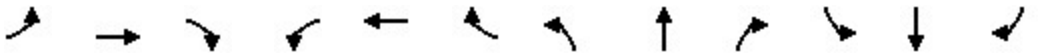
HCM 7th Signalized Intersection Summary
2: Dr MLK Bltwy & Cassadaga Rd Ext/Cassadaga Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	2	3	289	0	104	1	382	242	142	530	1
Future Volume (veh/h)	2	2	3	289	0	104	1	382	242	142	530	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1841	1870	1841	1870	1870	1870	1841	1870	1870
Adj Flow Rate, veh/h	2	2	2	318	0	102	1	420	213	156	582	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	4	2	4	2	2	2	4	2	2
Cap, veh/h	307	69	69	532	0	328	153	512	434	295	673	1
Arrive On Green	0.06	0.08	0.08	0.19	0.00	0.21	0.00	0.27	0.27	0.09	0.36	0.36
Sat Flow, veh/h	1781	858	858	1753	0	1585	1781	1870	1585	1753	1867	3
Grp Volume(v), veh/h	2	0	4	318	0	102	1	420	213	156	0	583
Grp Sat Flow(s),veh/h/ln	1781	0	1716	1753	0	1585	1781	1870	1585	1753	0	1870
Q Serve(g_s), s	0.1	0.0	0.2	12.3	0.0	4.3	0.0	16.6	8.9	4.9	0.0	22.9
Cycle Q Clear(g_c), s	0.1	0.0	0.2	12.3	0.0	4.3	0.0	16.6	8.9	4.9	0.0	22.9
Prop In Lane	1.00		0.50	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	307	0	138	532	0	328	153	512	434	295	0	674
V/C Ratio(X)	0.01	0.00	0.03	0.60	0.00	0.31	0.01	0.82	0.49	0.53	0.00	0.86
Avail Cap(c_a), veh/h	713	0	1170	710	0	1081	635	1479	1253	618	0	1478
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.0	0.0	33.5	24.0	0.0	26.6	22.4	26.9	24.1	19.7	0.0	23.5
Incr Delay (d2), s/veh	0.0	0.0	0.1	1.1	0.0	0.5	0.0	3.3	0.9	1.5	0.0	3.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	0.1	8.6	0.0	2.9	0.0	11.2	6.0	3.3	0.0	14.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.0	0.0	33.6	25.1	0.0	27.1	22.4	30.2	24.9	21.2	0.0	27.0
LnGrp LOS	C		C	C		C	C	C	C	C		C
Approach Vol, veh/h		6			420			634			739	
Approach Delay, s/veh		32.1			25.6			28.4			25.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.6	36.0	12.0	22.4	15.5	29.1	22.0	12.4
Change Period (Y+Rc), s	8.5	7.5	7.0	6.1	8.5	7.5	7.0	6.1
Max Green Setting (Gmax), s	21.5	62.5	23.0	53.9	21.5	62.5	23.0	53.9
Max Q Clear Time (g_c+I1), s	2.0	24.9	2.1	6.3	6.9	18.6	14.3	2.2
Green Ext Time (p_c), s	0.0	3.5	0.0	0.6	0.3	3.0	0.6	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	26.7
HCM 7th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	4	12	289	1	104	4	382	242	142	530	7
Future Volume (veh/h)	20	4	12	289	1	104	4	382	242	142	530	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1841	1870	1841	1870	1870	1870	1841	1870	1870
Adj Flow Rate, veh/h	22	4	13	318	1	102	4	420	213	156	582	8
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	4	2	4	2	2	2	4	2	2
Cap, veh/h	309	32	105	523	3	330	156	516	437	296	671	568
Arrive On Green	0.06	0.08	0.08	0.19	0.21	0.21	0.01	0.28	0.28	0.09	0.36	0.36
Sat Flow, veh/h	1781	387	1257	1753	15	1572	1781	1870	1585	1753	1870	1585
Grp Volume(v), veh/h	22	0	17	318	0	103	4	420	213	156	582	8
Grp Sat Flow(s),veh/h/ln	1781	0	1644	1753	0	1587	1781	1870	1585	1753	1870	1585
Q Serve(g_s), s	0.9	0.0	0.8	12.5	0.0	4.4	0.1	16.8	9.0	5.0	23.2	0.3
Cycle Q Clear(g_c), s	0.9	0.0	0.8	12.5	0.0	4.4	0.1	16.8	9.0	5.0	23.2	0.3
Prop In Lane	1.00		0.76	1.00		0.99	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	309	0	138	523	0	333	156	516	437	296	671	568
V/C Ratio(X)	0.07	0.00	0.12	0.61	0.00	0.31	0.03	0.81	0.49	0.53	0.87	0.01
Avail Cap(c_a), veh/h	710	0	1108	696	0	1069	626	1461	1238	613	1461	1238
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.5	0.0	33.9	24.2	0.0	26.7	22.4	27.0	24.2	19.9	23.9	16.5
Incr Delay (d2), s/veh	0.1	0.0	0.4	1.1	0.0	0.5	0.1	3.2	0.8	1.5	3.6	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	0.0	0.6	8.7	0.0	3.0	0.1	11.3	6.0	3.3	14.3	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.6	0.0	34.3	25.3	0.0	27.2	22.5	30.2	25.1	21.4	27.5	16.6
LnGrp LOS	C		C	C		C	C	C	C	C	C	B
Approach Vol, veh/h		39			421			637			746	
Approach Delay, s/veh		31.7			25.8			28.4			26.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	36.2	12.0	22.9	15.5	29.6	22.1	12.8
Change Period (Y+Rc), s	8.5	7.5	7.0	6.1	8.5	7.5	7.0	6.1
Max Green Setting (Gmax), s	21.5	62.5	23.0	53.9	21.5	62.5	23.0	53.9
Max Q Clear Time (g_c+I1), s	2.1	25.2	2.9	6.4	7.0	18.8	14.5	2.8
Green Ext Time (p_c), s	0.0	3.5	0.0	0.7	0.3	3.0	0.6	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	27.0
HCM 7th LOS	C

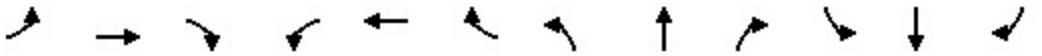


Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	122	38	466	174	61	557
Future Volume (veh/h)	122	38	466	174	61	557
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1841	1841	1870	1870	1841	1870
Adj Flow Rate, veh/h	131	29	501	135	66	599
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	2	2	4	2
Cap, veh/h	226	201	664	563	350	1071
Arrive On Green	0.13	0.13	0.35	0.35	0.06	0.57
Sat Flow, veh/h	1753	1560	1870	1585	1753	1870
Grp Volume(v), veh/h	131	29	501	135	66	599
Grp Sat Flow(s),veh/h/ln	1753	1560	1870	1585	1753	1870
Q Serve(g_s), s	3.4	0.8	11.3	2.9	1.0	9.6
Cycle Q Clear(g_c), s	3.4	0.8	11.3	2.9	1.0	9.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	226	201	664	563	350	1071
V/C Ratio(X)	0.58	0.14	0.75	0.24	0.19	0.56
Avail Cap(c_a), veh/h	666	593	957	811	627	1660
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.6	18.5	13.6	10.9	9.3	6.4
Incr Delay (d2), s/veh	2.4	0.3	2.1	0.2	0.3	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.4	1.3	6.3	5.4	0.4	2.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	22.0	18.8	15.7	11.1	9.6	6.9
LnGrp LOS	C	B	B	B	A	A
Approach Vol, veh/h	160		636			665
Approach Delay, s/veh	21.4		14.7			7.2
Approach LOS	C		B			A

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		34.9		13.0	10.4	24.5
Change Period (Y+Rc), s		7.5		6.8	7.5	7.5
Max Green Setting (Gmax), s		42.5		18.2	10.5	24.5
Max Q Clear Time (g_c+I1), s		11.6		5.4	3.0	13.3
Green Ext Time (p_c), s		3.6		0.3	0.1	2.4

Intersection Summary	
HCM 7th Control Delay, s/veh	12.0
HCM 7th LOS	B

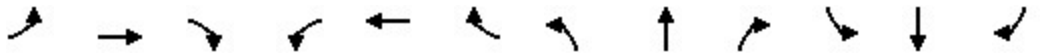
HCM 7th Signalized Intersection Summary
2: Dr MLK Bltwy & Cassadaga Rd Ext/Cassadaga Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	0	2	212	0	189	3	636	232	142	702	3
Future Volume (veh/h)	2	0	2	212	0	189	3	636	232	142	702	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1841	1870	1841	1870	1870	1870	1841	1870	1870
Adj Flow Rate, veh/h	2	0	2	228	0	191	3	684	197	153	755	3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	4	2	4	2	2	2	4	2	2
Cap, veh/h	222	0	115	420	0	255	170	770	652	246	893	4
Arrive On Green	0.05	0.00	0.07	0.14	0.00	0.16	0.00	0.41	0.41	0.07	0.48	0.48
Sat Flow, veh/h	1781	0	1585	1753	0	1585	1781	1870	1585	1753	1862	7
Grp Volume(v), veh/h	2	0	2	228	0	191	3	684	197	153	0	758
Grp Sat Flow(s),veh/h/ln	1781	0	1585	1753	0	1585	1781	1870	1585	1753	0	1869
Q Serve(g_s), s	0.1	0.0	0.1	11.0	0.0	11.0	0.1	32.5	8.0	4.7	0.0	34.0
Cycle Q Clear(g_c), s	0.1	0.0	0.1	11.0	0.0	11.0	0.1	32.5	8.0	4.7	0.0	34.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	222	0	115	420	0	255	170	770	652	246	0	897
V/C Ratio(X)	0.01	0.00	0.02	0.54	0.00	0.75	0.02	0.89	0.30	0.62	0.00	0.85
Avail Cap(c_a), veh/h	557	0	891	595	0	891	563	1220	1034	513	0	1219
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.8	0.0	41.3	32.4	0.0	38.4	20.4	26.2	18.9	21.1	0.0	21.8
Incr Delay (d2), s/veh	0.0	0.0	0.1	1.1	0.0	4.4	0.0	5.3	0.3	2.5	0.0	4.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	0.1	8.2	0.0	8.0	0.1	19.8	5.3	3.2	0.0	19.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.8	0.0	41.3	33.5	0.0	42.8	20.4	31.4	19.2	23.6	0.0	26.0
LnGrp LOS	D		D	C		D	C	C	B	C		C
Approach Vol, veh/h		4			419			884			911	
Approach Delay, s/veh		39.1			37.7			28.7			25.6	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	53.5	12.0	21.5	15.4	47.0	20.4	13.1
Change Period (Y+Rc), s	8.5	7.5	7.0	6.1	8.5	7.5	7.0	6.1
Max Green Setting (Gmax), s	21.5	62.5	23.0	53.9	21.5	62.5	23.0	53.9
Max Q Clear Time (g_c+I1), s	2.1	36.0	2.1	13.0	6.7	34.5	13.0	2.1
Green Ext Time (p_c), s	0.0	4.9	0.0	1.3	0.3	4.9	0.4	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	29.2
HCM 7th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	1	8	212	3	189	12	636	232	142	702	22
Future Volume (veh/h)	14	1	8	212	3	189	12	636	232	142	702	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1841	1870	1841	1870	1870	1870	1841	1870	1870
Adj Flow Rate, veh/h	15	1	9	228	3	191	13	684	197	153	755	24
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	4	2	4	2	2	2	4	2	2
Cap, veh/h	220	12	105	413	4	251	178	770	652	246	876	742
Arrive On Green	0.05	0.07	0.07	0.14	0.16	0.16	0.02	0.41	0.41	0.07	0.47	0.47
Sat Flow, veh/h	1781	161	1449	1753	25	1564	1781	1870	1585	1753	1870	1585
Grp Volume(v), veh/h	15	0	10	228	0	194	13	684	197	153	755	24
Grp Sat Flow(s),veh/h/ln	1781	0	1610	1753	0	1589	1781	1870	1585	1753	1870	1585
Q Serve(g_s), s	0.7	0.0	0.6	11.0	0.0	11.2	0.4	32.5	8.0	4.7	34.5	0.8
Cycle Q Clear(g_c), s	0.7	0.0	0.6	11.0	0.0	11.2	0.4	32.5	8.0	4.7	34.5	0.8
Prop In Lane	1.00		0.90	1.00		0.98	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	220	0	117	413	0	255	178	770	652	246	876	742
V/C Ratio(X)	0.07	0.00	0.09	0.55	0.00	0.76	0.07	0.89	0.30	0.62	0.86	0.03
Avail Cap(c_a), veh/h	555	0	905	588	0	893	550	1219	1033	513	1219	1033
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.1	0.0	41.5	32.4	0.0	38.5	20.4	26.2	19.0	21.1	22.7	13.8
Incr Delay (d2), s/veh	0.1	0.0	0.3	1.2	0.0	4.6	0.2	5.3	0.3	2.5	4.8	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	0.0	0.4	8.2	0.0	8.1	0.3	19.8	5.3	3.2	20.2	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.2	0.0	41.8	33.6	0.0	43.1	20.5	31.4	19.2	23.7	27.5	13.8
LnGrp LOS	D		D	C		D	C	C	B	C	C	B
Approach Vol, veh/h		25			422			894			932	
Approach Delay, s/veh		39.0			37.9			28.6			26.5	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	52.4	12.0	21.5	15.4	47.0	20.4	13.1
Change Period (Y+Rc), s	8.5	7.5	7.0	6.1	8.5	7.5	7.0	6.1
Max Green Setting (Gmax), s	21.5	62.5	23.0	53.9	21.5	62.5	23.0	53.9
Max Q Clear Time (g_c+I1), s	2.4	36.5	2.7	13.2	6.7	34.5	13.0	2.6
Green Ext Time (p_c), s	0.0	4.9	0.0	1.3	0.3	4.9	0.4	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	29.6
HCM 7th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	928	102	101	866	240	133	236	57	196	323	59
Future Volume (veh/h)	62	928	102	101	866	240	133	236	57	196	323	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1870	1856	1841	1870	1841	1856	1870	1826	1870
Adj Flow Rate, veh/h	65	977	74	106	912	161	140	248	0	206	340	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	7	2	3	4	2	4	3	2	5	2
Cap, veh/h	83	1154	494	127	1233	545	123	217		325	334	
Arrive On Green	0.05	0.32	0.32	0.07	0.35	0.35	0.19	0.19	0.00	0.18	0.18	0.00
Sat Flow, veh/h	1781	3554	1522	1781	3526	1560	652	1156	1572	1781	1826	1585
Grp Volume(v), veh/h	65	977	74	106	912	161	388	0	0	206	340	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1522	1781	1763	1560	1808	0	1572	1781	1826	1585
Q Serve(g_s), s	5.4	38.4	5.2	8.8	34.0	11.2	28.2	0.0	0.0	16.0	27.4	0.0
Cycle Q Clear(g_c), s	5.4	38.4	5.2	8.8	34.0	11.2	28.2	0.0	0.0	16.0	27.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.36		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	83	1154	494	127	1233	545	340	0		325	334	
V/C Ratio(X)	0.79	0.85	0.15	0.84	0.74	0.30	1.14	0.00		0.63	1.02	
Avail Cap(c_a), veh/h	127	1154	494	127	1233	545	340	0		325	334	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.87	0.87	0.00
Uniform Delay (d), s/veh	70.8	47.2	35.9	68.8	42.8	35.4	60.9	0.0	0.0	56.7	61.3	0.0
Incr Delay (d2), s/veh	16.2	7.7	0.6	35.9	4.0	1.4	92.9	0.0	0.0	3.5	51.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.0	24.4	3.5	8.9	21.2	7.8	31.1	0.0	0.0	11.6	23.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	87.0	54.9	36.6	104.7	46.8	36.7	153.8	0.0	0.0	60.1	112.3	0.0
LnGrp LOS	F	D	D	F	D	D	F			E	F	
Approach Vol, veh/h		1116			1179			388			546	
Approach Delay, s/veh		55.6			50.6			153.8			92.6	
Approach LOS		E			D			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.2	60.8		37.0	19.0	57.0		37.0				
Change Period (Y+Rc), s	8.3	8.3		8.8	8.3	8.3		9.6				
Max Green Setting (Gmax), s	10.7	48.7		28.2	10.7	48.7		27.4				
Max Q Clear Time (g_c+I1), s	7.4	36.0		30.2	10.8	40.4		29.4				
Green Ext Time (p_c), s	0.0	4.9		0.0	0.0	3.8		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh		71.8
HCM 7th LOS		E

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 7th Signalized Intersection Summary
3: Dr MLK Bltwy & SR 472

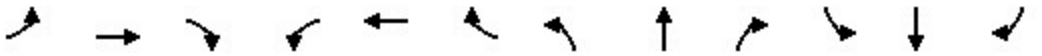
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	1047	106	124	935	281	144	269	118	353	366	80
Future Volume (veh/h)	88	1047	106	124	935	281	144	269	118	353	366	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1870	1856	1841	1870	1841	1856	1870	1826	1870
Adj Flow Rate, veh/h	93	1102	79	131	984	204	152	283	0	372	385	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	7	2	3	4	2	4	3	2	5	2
Cap, veh/h	113	1154	494	127	1172	518	119	221		325	334	
Arrive On Green	0.06	0.32	0.32	0.07	0.33	0.33	0.19	0.19	0.00	0.18	0.18	0.00
Sat Flow, veh/h	1781	3554	1522	1781	3526	1560	632	1177	1572	1781	1826	1585
Grp Volume(v), veh/h	93	1102	79	131	984	204	435	0	0	372	385	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1522	1781	1763	1560	1809	0	1572	1781	1826	1585
Q Serve(g_s), s	7.7	45.5	5.5	10.7	38.8	15.1	28.2	0.0	0.0	27.4	27.4	0.0
Cycle Q Clear(g_c), s	7.7	45.5	5.5	10.7	38.8	15.1	28.2	0.0	0.0	27.4	27.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.35		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	113	1154	494	127	1172	518	340	0		325	334	
V/C Ratio(X)	0.82	0.96	0.16	1.03	0.84	0.39	1.28	0.00		1.14	1.15	
Avail Cap(c_a), veh/h	127	1154	494	127	1172	518	340	0		325	334	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.73	0.73	0.00
Uniform Delay (d), s/veh	69.4	49.6	36.1	69.6	46.4	38.5	60.9	0.0	0.0	61.3	61.3	0.0
Incr Delay (d2), s/veh	30.5	17.7	0.7	88.3	7.3	2.2	146.4	0.0	0.0	88.1	91.7	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.8	29.8	3.8	12.6	24.3	9.9	39.4	0.0	0.0	28.3	29.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	99.8	67.3	36.8	158.0	53.7	40.7	207.3	0.0	0.0	149.4	153.0	0.0
LnGrp LOS	F	E	D	F	D	D	F			F	F	
Approach Vol, veh/h		1274			1319			435			757	
Approach Delay, s/veh		67.8			62.0			207.3			151.2	
Approach LOS		E			E			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.8	58.2		37.0	19.0	57.0		37.0				
Change Period (Y+Rc), s	8.3	8.3		8.8	8.3	8.3		9.6				
Max Green Setting (Gmax), s	10.7	48.7		28.2	10.7	48.7		27.4				
Max Q Clear Time (g_c+I1), s	9.7	40.8		30.2	12.7	47.5		29.4				
Green Ext Time (p_c), s	0.0	4.0		0.0	0.0	0.8		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	98.5
HCM 7th LOS	F

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	1082	109	124	947	281	145	272	118	353	375	80
Future Volume (veh/h)	88	1082	109	124	947	281	145	272	118	353	375	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1870	1856	1841	1870	1841	1856	1870	1826	1870
Adj Flow Rate, veh/h	93	1139	82	131	997	204	153	286	0	372	395	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	7	2	3	4	2	4	3	2	5	2
Cap, veh/h	113	1154	494	127	1172	518	119	222		325	334	
Arrive On Green	0.06	0.32	0.32	0.07	0.33	0.33	0.19	0.19	0.00	0.18	0.18	0.00
Sat Flow, veh/h	1781	3554	1522	1781	3526	1560	631	1179	1572	1781	1826	1585
Grp Volume(v), veh/h	93	1139	82	131	997	204	439	0	0	372	395	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1522	1781	1763	1560	1809	0	1572	1781	1826	1585
Q Serve(g_s), s	7.7	47.8	5.8	10.7	39.5	15.1	28.2	0.0	0.0	27.4	27.4	0.0
Cycle Q Clear(g_c), s	7.7	47.8	5.8	10.7	39.5	15.1	28.2	0.0	0.0	27.4	27.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.35		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	113	1154	494	127	1172	518	340	0		325	334	
V/C Ratio(X)	0.82	0.99	0.17	1.03	0.85	0.39	1.29	0.00		1.14	1.18	
Avail Cap(c_a), veh/h	127	1154	494	127	1172	518	340	0		325	334	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.73	0.73	0.00
Uniform Delay (d), s/veh	69.4	50.3	36.2	69.6	46.6	38.5	60.9	0.0	0.0	61.3	61.3	0.0
Incr Delay (d2), s/veh	30.5	23.6	0.7	88.3	7.9	2.2	151.1	0.0	0.0	88.1	103.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.8	32.0	3.9	12.6	24.8	9.9	40.1	0.0	0.0	28.3	31.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	99.8	73.9	36.9	158.0	54.5	40.7	212.0	0.0	0.0	149.4	164.6	0.0
LnGrp LOS	F	E	D	F	D	D	F			F	F	
Approach Vol, veh/h		1314			1332			439			767	
Approach Delay, s/veh		73.5			62.5			212.0			157.2	
Approach LOS		E			E			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.8	58.2		37.0	19.0	57.0		37.0				
Change Period (Y+Rc), s	8.3	8.3		8.8	8.3	8.3		9.6				
Max Green Setting (Gmax), s	10.7	48.7		28.2	10.7	48.7		27.4				
Max Q Clear Time (g_c+I1), s	9.7	41.5		30.2	12.7	49.8		29.4				
Green Ext Time (p_c), s	0.0	3.8		0.0	0.0	0.0		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh		102.2
HCM 7th LOS		F

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 7th Signalized Intersection Summary
3: Dr MLK Bltwy & SR 472

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	1059	133	164	854	289	107	266	69	235	369	75
Future Volume (veh/h)	84	1059	133	164	854	289	107	266	69	235	369	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1870	1856	1841	1870	1841	1856	1870	1826	1870
Adj Flow Rate, veh/h	89	1127	108	174	909	214	114	283	0	250	393	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	7	2	3	4	2	4	3	2	5	2
Cap, veh/h	109	1177	504	139	1227	543	98	243		302	309	
Arrive On Green	0.06	0.33	0.33	0.08	0.35	0.35	0.19	0.19	0.00	0.17	0.17	0.00
Sat Flow, veh/h	1781	3554	1522	1781	3526	1560	521	1294	1572	1781	1826	1585
Grp Volume(v), veh/h	89	1127	108	174	909	214	397	0	0	250	393	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1522	1781	1763	1560	1815	0	1572	1781	1826	1585
Q Serve(g_s), s	7.4	46.6	7.7	11.7	34.0	15.5	28.2	0.0	0.0	20.3	25.4	0.0
Cycle Q Clear(g_c), s	7.4	46.6	7.7	11.7	34.0	15.5	28.2	0.0	0.0	20.3	25.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.29		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	109	1177	504	139	1227	543	341	0		302	309	
V/C Ratio(X)	0.82	0.96	0.21	1.25	0.74	0.39	1.16	0.00		0.83	1.27	
Avail Cap(c_a), veh/h	127	1177	504	139	1227	543	341	0		302	309	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.87	0.87	0.00
Uniform Delay (d), s/veh	69.6	49.1	36.1	69.2	43.0	36.9	60.9	0.0	0.0	60.2	62.3	0.0
Incr Delay (d2), s/veh	28.7	17.8	1.0	159.4	4.1	2.1	101.0	0.0	0.0	15.3	142.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.5	30.4	5.2	18.2	21.2	10.1	32.5	0.0	0.0	15.2	35.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	98.2	66.9	37.1	228.5	47.0	39.1	161.9	0.0	0.0	75.5	204.6	0.0
LnGrp LOS	F	E	D	F	D	D	F			E	F	
Approach Vol, veh/h		1324			1297			397			643	
Approach Delay, s/veh		66.6			70.0			161.9			154.4	
Approach LOS		E			E			F			F	

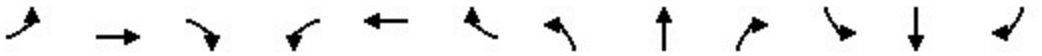
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.5	60.5		37.0	20.0	58.0		35.0				
Change Period (Y+Rc), s	8.3	8.3		8.8	8.3	8.3		9.6				
Max Green Setting (Gmax), s	10.7	50.7		28.2	11.7	49.7		25.4				
Max Q Clear Time (g_c+I1), s	9.4	36.0		30.2	13.7	48.6		27.4				
Green Ext Time (p_c), s	0.0	5.4		0.0	0.0	0.8		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	93.6
HCM 7th LOS	F

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 7th Signalized Intersection Summary
3: Dr MLK Bltwy & SR 472



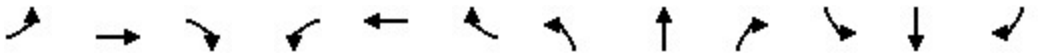
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	1172	138	241	1015	434	116	310	123	370	421	108
Future Volume (veh/h)	116	1172	138	241	1015	434	116	310	123	370	421	108
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1870	1856	1841	1870	1841	1856	1870	1826	1870
Adj Flow Rate, veh/h	123	1247	114	256	1080	369	123	330	0	394	448	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	7	2	3	4	2	4	3	2	5	2
Cap, veh/h	127	1177	504	139	1192	527	93	249		302	309	
Arrive On Green	0.07	0.33	0.33	0.08	0.34	0.34	0.19	0.19	0.00	0.17	0.17	0.00
Sat Flow, veh/h	1781	3554	1522	1781	3526	1560	493	1323	1572	1781	1826	1585
Grp Volume(v), veh/h	123	1247	114	256	1080	369	453	0	0	394	448	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1522	1781	1763	1560	1816	0	1572	1781	1826	1585
Q Serve(g_s), s	10.3	49.7	8.1	11.7	43.9	30.8	28.2	0.0	0.0	25.4	25.4	0.0
Cycle Q Clear(g_c), s	10.3	49.7	8.1	11.7	43.9	30.8	28.2	0.0	0.0	25.4	25.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.27		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	127	1177	504	139	1192	527	341	0		302	309	
V/C Ratio(X)	0.97	1.06	0.23	1.84	0.91	0.70	1.33	0.00		1.31	1.45	
Avail Cap(c_a), veh/h	127	1177	504	139	1192	527	341	0		302	309	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.73	0.73	0.00
Uniform Delay (d), s/veh	69.5	50.1	36.2	69.2	47.4	43.1	60.9	0.0	0.0	62.3	62.3	0.0
Incr Delay (d2), s/veh	69.7	43.4	1.0	405.6	11.5	7.5	166.0	0.0	0.0	154.4	214.9	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.4	38.3	5.6	33.3	27.6	18.3	42.5	0.0	0.0	35.3	44.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	139.2	93.5	37.3	474.8	58.9	50.6	226.9	0.0	0.0	216.7	277.2	0.0
LnGrp LOS	F	F	D	F	E	D	F			F	F	
Approach Vol, veh/h		1484			1705			453			842	
Approach Delay, s/veh		93.0			119.5			226.9			248.9	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.0	59.0		37.0	20.0	58.0		35.0				
Change Period (Y+Rc), s	8.3	8.3		8.8	8.3	8.3		9.6				
Max Green Setting (Gmax), s	10.7	50.7		28.2	11.7	49.7		25.4				
Max Q Clear Time (g_c+I1), s	12.3	45.9		30.2	13.7	51.7		27.4				
Green Ext Time (p_c), s	0.0	3.1		0.0	0.0	0.0		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	145.9
HCM 7th LOS	F

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	1195	140	241	1052	434	119	319	123	370	427	108
Future Volume (veh/h)	116	1195	140	241	1052	434	119	319	123	370	427	108
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1870	1856	1841	1870	1841	1856	1870	1826	1870
Adj Flow Rate, veh/h	123	1271	116	256	1119	369	127	339	0	394	454	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	7	2	3	4	2	4	3	2	5	2
Cap, veh/h	127	1177	504	139	1192	527	93	248		302	309	
Arrive On Green	0.07	0.33	0.33	0.08	0.34	0.34	0.19	0.19	0.00	0.17	0.17	0.00
Sat Flow, veh/h	1781	3554	1522	1781	3526	1560	495	1321	1572	1781	1826	1585
Grp Volume(v), veh/h	123	1271	116	256	1119	369	466	0	0	394	454	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1522	1781	1763	1560	1816	0	1572	1781	1826	1585
Q Serve(g_s), s	10.3	49.7	8.3	11.7	46.2	30.8	28.2	0.0	0.0	25.4	25.4	0.0
Cycle Q Clear(g_c), s	10.3	49.7	8.3	11.7	46.2	30.8	28.2	0.0	0.0	25.4	25.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.27		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	127	1177	504	139	1192	527	341	0		302	309	
V/C Ratio(X)	0.97	1.08	0.23	1.84	0.94	0.70	1.36	0.00		1.31	1.47	
Avail Cap(c_a), veh/h	127	1177	504	139	1192	527	341	0		302	309	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.71	0.71	0.00
Uniform Delay (d), s/veh	69.5	50.1	36.3	69.2	48.2	43.1	60.9	0.0	0.0	62.3	62.3	0.0
Incr Delay (d2), s/veh	69.7	50.5	1.1	405.6	15.0	7.5	182.0	0.0	0.0	154.0	223.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.4	40.1	5.7	33.3	29.4	18.3	45.0	0.0	0.0	35.1	45.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	139.2	100.6	37.4	474.8	63.2	50.6	242.9	0.0	0.0	216.3	285.3	0.0
LnGrp LOS	F	F	D	F	E	D	F			F	F	
Approach Vol, veh/h		1510			1744			466			848	
Approach Delay, s/veh		98.9			120.9			242.9			253.2	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.0	59.0		37.0	20.0	58.0		35.0				
Change Period (Y+Rc), s	8.3	8.3		8.8	8.3	8.3		9.6				
Max Green Setting (Gmax), s	10.7	50.7		28.2	11.7	49.7		25.4				
Max Q Clear Time (g_c+I1), s	12.3	48.2		30.2	13.7	51.7		27.4				
Green Ext Time (p_c), s	0.0	1.8		0.0	0.0	0.0		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	150.7	
HCM 7th LOS	F	

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	1242	1151	14	46	32
Future Vol, veh/h	11	1242	1151	14	46	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	515	-	-	275	275	0
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	1350	1251	15	50	35

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1266	0	-	0	1950	626
Stage 1	-	-	-	-	1251	-
Stage 2	-	-	-	-	699	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	545	-	-	-	56	427
Stage 1	-	-	-	-	233	-
Stage 2	-	-	-	-	454	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	545	-	-	-	55	427
Mov Cap-2 Maneuver	-	-	-	-	160	-
Stage 1	-	-	-	-	228	-
Stage 2	-	-	-	-	454	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.1	0	27.82
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	545	-	-	-	160	427
HCM Lane V/C Ratio	0.022	-	-	-	0.312	0.081
HCM Control Delay (s/veh)	11.8	-	-	-	37.3	14.2
HCM Lane LOS	B	-	-	-	E	B
HCM 95th %tile Q(veh)	0.1	-	-	-	1.2	0.3

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	34	1463	1231	47	31	20
Future Vol, veh/h	34	1463	1231	47	31	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	515	-	-	275	275	0
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	37	1590	1338	51	34	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1389	0	-	0	2207	669
Stage 1	-	-	-	-	1338	-
Stage 2	-	-	-	-	869	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	489	-	-	-	38	400
Stage 1	-	-	-	-	209	-
Stage 2	-	-	-	-	371	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	489	-	-	-	35	400
Mov Cap-2 Maneuver	-	-	-	-	130	-
Stage 1	-	-	-	-	193	-
Stage 2	-	-	-	-	371	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.29	0	31.27
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	489	-	-	-	130	400
HCM Lane V/C Ratio	0.076	-	-	-	0.259	0.054
HCM Control Delay (s/veh)	13	-	-	-	42.1	14.5
HCM Lane LOS	B	-	-	-	E	B
HCM 95th %tile Q(veh)	0.2	-	-	-	1	0.2

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1080	4	4	1050	4	4	0	7	5	0	3
Future Vol, veh/h	3	1080	4	4	1050	4	4	0	7	5	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	520	-	-	520	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	1161	4	4	1129	4	4	0	8	5	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1133	0	0	1166	0	0	1743	2312	583	1727	2312	567
Stage 1	-	-	-	-	-	-	1170	1170	-	1140	1140	-
Stage 2	-	-	-	-	-	-	573	1142	-	587	1172	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	612	-	-	595	-	-	55	38	456	57	38	467
Stage 1	-	-	-	-	-	-	205	265	-	214	274	-
Stage 2	-	-	-	-	-	-	472	273	-	463	264	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	612	-	-	595	-	-	54	37	456	55	37	467
Mov Cap-2 Maneuver	-	-	-	-	-	-	149	138	-	153	138	-
Stage 1	-	-	-	-	-	-	204	264	-	212	272	-
Stage 2	-	-	-	-	-	-	465	271	-	453	263	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.03	0.04	19.44	23.38
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	261	612	-	-	595	-	-	204
HCM Lane V/C Ratio	0.045	0.005	-	-	0.007	-	-	0.042
HCM Control Delay (s/veh)	19.4	10.9	-	-	11.1	-	-	23.4
HCM Lane LOS	C	B	-	-	B	-	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1229	4	4	1142	4	4	0	7	5	0	3
Future Vol, veh/h	3	1229	4	4	1142	4	4	0	7	5	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	520	-	-	520	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	1322	4	4	1228	4	4	0	8	5	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1232	0	0	1326	0	0	1953	2571	663	1906	2571	616
Stage 1	-	-	-	-	-	-	1330	1330	-	1239	1239	-
Stage 2	-	-	-	-	-	-	623	1241	-	667	1332	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	561	-	-	517	-	-	38	26	404	42	26	433
Stage 1	-	-	-	-	-	-	163	222	-	186	246	-
Stage 2	-	-	-	-	-	-	441	245	-	414	222	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	561	-	-	517	-	-	38	25	404	40	25	433
Mov Cap-2 Maneuver	-	-	-	-	-	-	121	116	-	131	116	-
Stage 1	-	-	-	-	-	-	162	221	-	184	244	-
Stage 2	-	-	-	-	-	-	434	243	-	404	220	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.03	0.04	22.47	26.37
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	218	561	-	-	517	-	-	177
HCM Lane V/C Ratio	0.054	0.006	-	-	0.008	-	-	0.049
HCM Control Delay (s/veh)	22.5	11.5	-	-	12	-	-	26.4
HCM Lane LOS	C	B	-	-	B	-	-	D
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1237	4	4	1166	4	4	0	7	5	0	3
Future Vol, veh/h	3	1237	4	4	1166	4	4	0	7	5	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	520	-	-	520	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	1330	4	4	1254	4	4	0	8	5	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1258	0	0	1334	0	0	1974	2605	667	1936	2605	629
Stage 1	-	-	-	-	-	-	1339	1339	-	1265	1265	-
Stage 2	-	-	-	-	-	-	635	1267	-	672	1341	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	549	-	-	513	-	-	37	24	401	40	24	425
Stage 1	-	-	-	-	-	-	161	220	-	179	239	-
Stage 2	-	-	-	-	-	-	433	238	-	412	219	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	549	-	-	513	-	-	36	24	401	38	24	425
Mov Cap-2 Maneuver	-	-	-	-	-	-	119	114	-	127	113	-
Stage 1	-	-	-	-	-	-	160	219	-	178	237	-
Stage 2	-	-	-	-	-	-	426	236	-	402	218	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.03	0.04	22.71	27.05
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	215	549	-	-	513	-	-	172
HCM Lane V/C Ratio	0.055	0.006	-	-	0.008	-	-	0.05
HCM Control Delay (s/veh)	22.7	11.6	-	-	12.1	-	-	27.1
HCM Lane LOS	C	B	-	-	B	-	-	D
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1294	14	15	1019	2	3	0	15	3	1	3
Future Vol, veh/h	4	1294	14	15	1019	2	3	0	15	3	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	520	-	-	520	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	1407	15	16	1108	2	3	0	16	3	1	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1110	0	0	1422	0	0	2010	2565	711	1853	2572	555
Stage 1	-	-	-	-	-	-	1423	1423	-	1141	1141	-
Stage 2	-	-	-	-	-	-	587	1142	-	712	1430	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	625	-	-	475	-	-	35	26	376	46	25	475
Stage 1	-	-	-	-	-	-	143	200	-	213	274	-
Stage 2	-	-	-	-	-	-	463	273	-	389	198	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	625	-	-	475	-	-	33	25	376	42	24	475
Mov Cap-2 Maneuver	-	-	-	-	-	-	108	114	-	136	109	-
Stage 1	-	-	-	-	-	-	142	199	-	206	264	-
Stage 2	-	-	-	-	-	-	442	264	-	370	197	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.03	0.19	19.6	25.1
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	266	625	-	-	475	-	-	187
HCM Lane V/C Ratio	0.074	0.007	-	-	0.034	-	-	0.041
HCM Control Delay (s/veh)	19.6	10.8	-	-	12.9	-	-	25.1
HCM Lane LOS	C	B	-	-	B	-	-	D
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.1

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1446	15	16	1214	2	3	0	16	3	1	3
Future Vol, veh/h	4	1446	15	16	1214	2	3	0	16	3	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	520	-	-	520	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	1572	16	17	1320	2	3	0	17	3	1	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1322	0	0	1588	0	0	2284	2945	794	2150	2952	661
Stage 1	-	-	-	-	-	-	1589	1589	-	1355	1355	-
Stage 2	-	-	-	-	-	-	695	1357	-	795	1597	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	519	-	-	409	-	-	21	15	331	27	14	405
Stage 1	-	-	-	-	-	-	112	166	-	157	216	-
Stage 2	-	-	-	-	-	-	399	216	-	347	164	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	519	-	-	409	-	-	20	14	331	24	14	405
Mov Cap-2 Maneuver	-	-	-	-	-	-	85	89	-	102	84	-
Stage 1	-	-	-	-	-	-	111	165	-	151	207	-
Stage 2	-	-	-	-	-	-	377	206	-	326	163	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.03	0.18	22.47	31.44
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	227	519	-	-	409	-	-	144
HCM Lane V/C Ratio	0.091	0.008	-	-	0.042	-	-	0.053
HCM Control Delay (s/veh)	22.5	12	-	-	14.2	-	-	31.4
HCM Lane LOS	C	B	-	-	B	-	-	D
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.2

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1470	15	16	1230	2	3	0	16	3	1	3
Future Vol, veh/h	4	1470	15	16	1230	2	3	0	16	3	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	520	-	-	520	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	1598	16	17	1337	2	3	0	17	3	1	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1339	0	0	1614	0	0	2318	2989	807	2180	2996	670
Stage 1	-	-	-	-	-	-	1615	1615	-	1373	1373	-
Stage 2	-	-	-	-	-	-	704	1374	-	808	1623	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	511	-	-	400	-	-	20	14	324	26	13	400
Stage 1	-	-	-	-	-	-	108	161	-	153	212	-
Stage 2	-	-	-	-	-	-	394	211	-	341	160	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	511	-	-	400	-	-	19	13	324	23	13	400
Mov Cap-2 Maneuver	-	-	-	-	-	-	82	86	-	99	81	-
Stage 1	-	-	-	-	-	-	107	160	-	147	203	-
Stage 2	-	-	-	-	-	-	372	202	-	320	158	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.03	0.18	22.99	32.18
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	221	511	-	-	400	-	-	140
HCM Lane V/C Ratio	0.094	0.009	-	-	0.043	-	-	0.054
HCM Control Delay (s/veh)	23	12.1	-	-	14.4	-	-	32.2
HCM Lane LOS	C	B	-	-	B	-	-	D
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.2

Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	7	2	10	29	35
Future Vol, veh/h	11	7	2	10	29	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	275	-	-	275	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	8	2	11	32	38

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	13	0	-	0	34	2
Stage 1	-	-	-	-	2	-
Stage 2	-	-	-	-	32	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1605	-	-	-	980	1082
Stage 1	-	-	-	-	1021	-
Stage 2	-	-	-	-	991	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1605	-	-	-	972	1082
Mov Cap-2 Maneuver	-	-	-	-	972	-
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	991	-

Approach	EB	WB	SB
HCM Control Delay, s/v	4.44	0	8.75
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1605	-	-	-	1029
HCM Lane V/C Ratio	0.007	-	-	-	0.068
HCM Control Delay (s/veh)	7.3	-	-	-	8.8
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	36	4	7	30	19	23
Future Vol, veh/h	36	4	7	30	19	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	275	-	-	275	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	4	8	33	21	25

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	40	0	-	0	90	8
Stage 1	-	-	-	-	8	-
Stage 2	-	-	-	-	83	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1569	-	-	-	910	1075
Stage 1	-	-	-	-	1015	-
Stage 2	-	-	-	-	941	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1569	-	-	-	888	1075
Mov Cap-2 Maneuver	-	-	-	-	888	-
Stage 1	-	-	-	-	990	-
Stage 2	-	-	-	-	941	-

Approach	EB	WB	SB
HCM Control Delay, s/v	6.62	0	8.85
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1569	-	-	-	981
HCM Lane V/C Ratio	0.025	-	-	-	0.047
HCM Control Delay (s/veh)	7.4	-	-	-	8.8
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Intersection	
Int Delay, s/veh	3.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	0	7	9	0	23
Future Vol, veh/h	27	0	7	9	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	275	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	0	8	10	0	25

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	33	8	0	0	-	-
Stage 1	8	-	-	-	-	-
Stage 2	25	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	981	1075	-	-	0	-
Stage 1	1015	-	-	-	0	-
Stage 2	998	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	981	1075	-	-	-	-
Mov Cap-2 Maneuver	981	-	-	-	-	-
Stage 1	1015	-	-	-	-	-
Stage 2	998	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.78	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	981	-
HCM Lane V/C Ratio	-	-	0.03	-
HCM Control Delay (s/veh)	-	-	8.8	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	0.1	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	18	0	0	28	0	0
Future Vol, veh/h	18	0	0	28	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	275	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	0	0	30	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1	0	0	0	-	-
Stage 1	0	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	1022	-	-	-	0	-
Stage 1	-	-	-	-	0	-
Stage 2	1022	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1022	-	-	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v		0	0
HCM LOS	-		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s/veh)	-	-	-	-
HCM Lane LOS	-	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-

Intersection	
Int Delay, s/veh	3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	35	2	14	11	7	43
Future Vol, veh/h	35	2	14	11	7	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	2	15	12	8	47

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	83	21	0	0	27	0
Stage 1	21	-	-	-	-	-
Stage 2	62	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	919	1056	-	-	1587	-
Stage 1	1001	-	-	-	-	-
Stage 2	961	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	914	1056	-	-	1587	-
Mov Cap-2 Maneuver	914	-	-	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	956	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.07	0	1.02
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	914	1056	252	-
HCM Lane V/C Ratio	-	-	0.042	0.002	0.005	-
HCM Control Delay (s/veh)	-	-	9.1	8.4	7.3	0
HCM Lane LOS	-	-	A	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	0	-

Intersection	
Int Delay, s/veh	2.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	7	45	36	4	28
Future Vol, veh/h	23	7	45	36	4	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	8	49	39	4	30

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	108	68	0	0	88	0
Stage 1	68	-	-	-	-	-
Stage 2	39	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	890	995	-	-	1508	-
Stage 1	954	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	887	995	-	-	1508	-
Mov Cap-2 Maneuver	887	-	-	-	-	-
Stage 1	954	-	-	-	-	-
Stage 2	980	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.05	0	0.92
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	887	995	225	-
HCM Lane V/C Ratio	-	-	0.028	0.008	0.003	-
HCM Control Delay (s/veh)	-	-	9.2	8.6	7.4	0
HCM Lane LOS	-	-	A	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	0	-

Appendix N
HCM Analysis Worksheets-Improved

HCM 7th Signalized Intersection Summary
3: Dr MLK Bltwy & SR 472

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	1047	106	124	935	281	144	269	118	353	366	80
Future Volume (veh/h)	88	1047	106	124	935	281	144	269	118	353	366	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1870	1856	1841	1870	1841	1856	1870	1826	1870
Adj Flow Rate, veh/h	93	1102	79	131	984	204	152	283	0	372	385	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	7	2	3	4	2	4	3	2	5	2
Cap, veh/h	97	1294	554	165	1260	558	202	396		489	491	
Arrive On Green	0.05	0.36	0.36	0.05	0.36	0.36	0.11	0.11	0.00	0.14	0.14	0.00
Sat Flow, veh/h	1781	3554	1522	3456	3526	1560	1781	3497	1572	3456	3469	1585
Grp Volume(v), veh/h	93	1102	79	131	984	204	152	283	0	372	385	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1522	1728	1763	1560	1781	1749	1572	1728	1735	1585
Q Serve(g_s), s	5.5	30.0	3.7	3.9	26.1	10.2	8.7	8.2	0.0	10.9	11.3	0.0
Cycle Q Clear(g_c), s	5.5	30.0	3.7	3.9	26.1	10.2	8.7	8.2	0.0	10.9	11.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	97	1294	554	165	1260	558	202	396		489	491	
V/C Ratio(X)	0.96	0.85	0.14	0.80	0.78	0.37	0.75	0.71		0.76	0.78	
Avail Cap(c_a), veh/h	97	1294	554	165	1260	558	305	600		592	595	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	49.5	30.8	22.4	49.5	30.1	24.9	45.1	44.9	0.0	43.3	43.5	0.0
Incr Delay (d2), s/veh	78.8	7.2	0.5	23.2	4.9	1.9	5.6	2.4	0.0	4.7	5.6	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.9	18.8	2.3	3.9	16.3	6.7	7.2	6.4	0.0	8.4	8.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	128.4	38.0	22.9	72.7	34.9	26.8	50.7	47.3	0.0	48.0	49.1	0.0
LnGrp LOS	F	D	C	E	C	C	D	D		D	D	
Approach Vol, veh/h		1274			1319			435			757	
Approach Delay, s/veh		43.6			37.4			48.5			48.6	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.0	45.8		20.7	13.3	46.5		24.5				
Change Period (Y+Rc), s	8.3	8.3		8.8	8.3	8.3		9.6				
Max Green Setting (Gmax), s	5.7	28.3		18.0	5.0	29.0		18.0				
Max Q Clear Time (g_c+I1), s	7.5	28.1		10.7	5.9	32.0		13.3				
Green Ext Time (p_c), s	0.0	0.1		1.2	0.0	0.0		1.6				

Intersection Summary	
HCM 7th Control Delay, s/veh	43.0
HCM 7th LOS	D

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	1082	109	124	946	281	145	272	118	353	375	80
Future Volume (veh/h)	88	1082	109	124	946	281	145	272	118	353	375	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1870	1856	1841	1870	1841	1856	1870	1826	1870
Adj Flow Rate, veh/h	93	1139	82	131	996	204	153	286	0	372	395	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	7	2	3	4	2	4	3	2	5	2
Cap, veh/h	97	1283	550	165	1250	553	203	398		498	499	
Arrive On Green	0.05	0.36	0.36	0.05	0.35	0.35	0.11	0.11	0.00	0.14	0.14	0.00
Sat Flow, veh/h	1781	3554	1522	3456	3526	1560	1781	3497	1572	3456	3469	1585
Grp Volume(v), veh/h	93	1139	82	131	996	204	153	286	0	372	395	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1522	1728	1763	1560	1781	1749	1572	1728	1735	1585
Q Serve(g_s), s	5.5	31.6	3.8	3.9	26.7	10.2	8.7	8.3	0.0	10.8	11.5	0.0
Cycle Q Clear(g_c), s	5.5	31.6	3.8	3.9	26.7	10.2	8.7	8.3	0.0	10.8	11.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	97	1283	550	165	1250	553	203	398		498	499	
V/C Ratio(X)	0.96	0.89	0.15	0.80	0.80	0.37	0.75	0.72		0.75	0.79	
Avail Cap(c_a), veh/h	97	1283	550	165	1250	553	305	600		592	595	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	49.5	31.5	22.6	49.5	30.5	25.2	45.1	44.9	0.0	43.1	43.4	0.0
Incr Delay (d2), s/veh	78.8	9.3	0.6	23.2	5.3	1.9	5.6	2.4	0.0	4.3	6.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.9	20.0	2.4	3.9	16.7	6.8	7.3	6.5	0.0	8.3	8.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	128.4	40.9	23.2	72.7	35.8	27.1	50.7	47.3	0.0	47.4	49.5	0.0
LnGrp LOS	F	D	C	E	D	C	D	D		D	D	
Approach Vol, veh/h		1314			1331			439			767	
Approach Delay, s/veh		46.0			38.1			48.5			48.5	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.0	45.5		20.8	13.3	46.2		24.7				
Change Period (Y+Rc), s	8.3	8.3		8.8	8.3	8.3		9.6				
Max Green Setting (Gmax), s	5.7	28.3		18.0	5.0	29.0		18.0				
Max Q Clear Time (g_c+I1), s	7.5	28.7		10.7	5.9	33.6		13.5				
Green Ext Time (p_c), s	0.0	0.0		1.2	0.0	0.0		1.6				

Intersection Summary	
HCM 7th Control Delay, s/veh	44.0
HCM 7th LOS	D

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

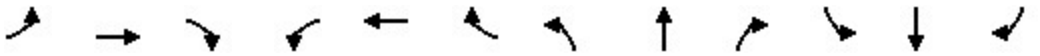
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	1172	138	241	1015	434	116	310	123	370	421	108
Future Volume (veh/h)	116	1172	138	241	1015	434	116	310	123	370	421	108
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1870	1856	1841	1870	1841	1856	1870	1826	1870
Adj Flow Rate, veh/h	123	1247	114	256	1080	369	123	330	0	394	448	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	7	2	3	4	2	4	3	2	5	2
Cap, veh/h	140	1354	580	276	1348	597	206	404		496	498	
Arrive On Green	0.08	0.38	0.38	0.08	0.38	0.38	0.12	0.12	0.00	0.14	0.14	0.00
Sat Flow, veh/h	1781	3554	1522	3456	3526	1560	1781	3497	1572	3456	3469	1585
Grp Volume(v), veh/h	123	1247	114	256	1080	369	123	330	0	394	448	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1522	1728	1763	1560	1781	1749	1572	1728	1735	1585
Q Serve(g_s), s	8.5	41.8	6.3	9.2	34.1	23.9	8.2	11.5	0.0	13.8	15.9	0.0
Cycle Q Clear(g_c), s	8.5	41.8	6.3	9.2	34.1	23.9	8.2	11.5	0.0	13.8	15.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	140	1354	580	276	1348	597	206	404		496	498	
V/C Ratio(X)	0.88	0.92	0.20	0.93	0.80	0.62	0.60	0.82		0.79	0.90	
Avail Cap(c_a), veh/h	140	1354	580	276	1348	597	257	504		498	500	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	57.0	36.9	25.9	57.1	34.4	31.2	52.5	54.0	0.0	51.8	52.6	0.0
Incr Delay (d2), s/veh	43.0	11.7	0.8	35.1	5.1	4.8	2.8	8.3	0.0	8.6	19.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.2	26.1	4.1	9.0	20.8	14.2	6.7	9.2	0.0	10.6	12.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	100.0	48.6	26.7	92.2	39.4	36.0	55.3	62.2	0.0	60.4	71.8	0.0
LnGrp LOS	F	D	C	F	D	D	E	E		E	E	
Approach Vol, veh/h		1484			1705			453			842	
Approach Delay, s/veh		51.2			46.6			60.3			66.5	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.1	56.1		23.3	18.3	55.9		27.5				
Change Period (Y+Rc), s	8.3	8.3		8.8	8.3	8.3		9.6				
Max Green Setting (Gmax), s	9.8	44.2		18.0	10.0	44.0		18.0				
Max Q Clear Time (g_c+I1), s	10.5	36.1		13.5	11.2	43.8		17.9				
Green Ext Time (p_c), s	0.0	4.7		0.9	0.0	0.1		0.1				

Intersection Summary	
HCM 7th Control Delay, s/veh	53.2
HCM 7th LOS	D

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	1195	140	241	1052	434	119	319	123	370	427	108
Future Volume (veh/h)	116	1195	140	241	1052	434	119	319	123	370	427	108
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1870	1856	1841	1870	1841	1856	1870	1826	1870
Adj Flow Rate, veh/h	123	1271	116	256	1119	369	127	339	0	394	454	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	7	2	3	4	2	4	3	2	5	2
Cap, veh/h	140	1352	579	268	1338	592	210	413		498	500	
Arrive On Green	0.08	0.38	0.38	0.08	0.38	0.38	0.12	0.12	0.00	0.14	0.14	0.00
Sat Flow, veh/h	1781	3554	1522	3456	3526	1560	1781	3497	1572	3456	3469	1585
Grp Volume(v), veh/h	123	1271	116	256	1119	369	127	339	0	394	454	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1522	1728	1763	1560	1781	1749	1572	1728	1735	1585
Q Serve(g_s), s	8.5	43.1	6.4	9.2	36.1	24.0	8.5	11.8	0.0	13.8	16.1	0.0
Cycle Q Clear(g_c), s	8.5	43.1	6.4	9.2	36.1	24.0	8.5	11.8	0.0	13.8	16.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	140	1352	579	268	1338	592	210	413		498	500	
V/C Ratio(X)	0.88	0.94	0.20	0.95	0.84	0.62	0.60	0.82		0.79	0.91	
Avail Cap(c_a), veh/h	140	1352	579	268	1338	592	257	504		498	500	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	57.0	37.4	26.0	57.4	35.2	31.5	52.4	53.8	0.0	51.7	52.7	0.0
Incr Delay (d2), s/veh	43.0	13.8	0.8	42.5	6.3	4.9	2.8	8.8	0.0	8.5	20.5	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.2	27.2	4.2	9.3	22.0	14.3	7.0	9.5	0.0	10.5	13.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	100.0	51.2	26.7	100.0	41.6	36.4	55.1	62.7	0.0	60.2	73.2	0.0
LnGrp LOS	F	D	C	F	D	D	E	E		E	E	
Approach Vol, veh/h		1510			1744			466			848	
Approach Delay, s/veh		53.3			49.0			60.6			67.2	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.1	55.8		23.5	18.0	55.9		27.6				
Change Period (Y+Rc), s	8.3	8.3		8.8	8.3	8.3		9.6				
Max Green Setting (Gmax), s	9.8	44.2		18.0	9.7	44.3		18.0				
Max Q Clear Time (g_c+I1), s	10.5	38.1		13.8	11.2	45.1		18.1				
Green Ext Time (p_c), s	0.0	3.9		0.9	0.0	0.0		0.0				

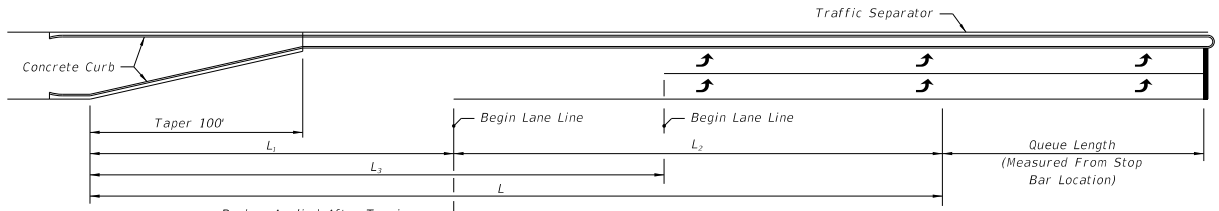
Intersection Summary	
HCM 7th Control Delay, s/veh	55.0
HCM 7th LOS	D

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

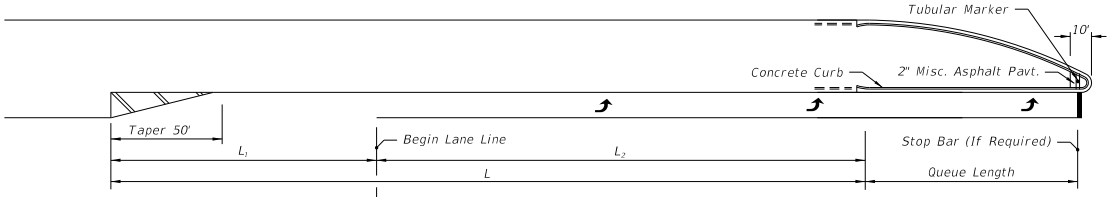
Appendix O
FDM Exhibit 212-1

MEDIAN TURN LANES
MINIMUM DECELERATION LENGTHS



Brakes Applied After Turning
Vehicle Clears Through Lane;
Entry Speed:
10 mph Below Design Speed
For Low Speed Roadways
Average Running Speed For
High Speed Roadways

DOUBLE LEFT TURN



Brakes Applied After Turning
Vehicle Clears Through Lane;
Entry Speed:
10 mph Below Design Speed
For Low Speed Roadways
Average Running Speed For
High Speed Roadways

SINGLE LEFT TURN

MEDIAN TURN LANES					
Design Speed (mph)	Entry Speed (mph)	Clearance Distance L_1 (ft.)	Brake To Stop Distance L_2 (ft.)	Total Decel. Distance L (ft.)	Clearance Distance L_3 (ft.)
25	15	70	25	95	90
30	20	70	50	120	100
35	25	70	75	145	110
40	30	80	75	155	120
45	35	85	100	185	135
50	44	105	185	290	160
55	48	125	225	350	195
60	52	145	260	405	230
65	55	170	290	460	270
70	58	200	325	525	300

NOTE:
1) For C3 Context Classification roadways with Design Speeds of 50 mph, the following values may be used under constrained conditions:
   - Entry Speed of 40 mph
   - Brake to stop distance (L_2) of 135 ft.
   - Total deceleration distance (L) of 240 ft.

2) For RRR Projects with Design Speeds of 50 mph and Entry Speeds of 40 mph, existing brake to stop distances (L_2) of 135 ft. and total deceleration distances (L) of 240 ft. may be retained.

NOT TO SCALE

EXHIBIT 212-1
01/01/2024

Appendix P
Volusia County Land Development Code Turn Lane Guidelines

Major DW	355	365	370	385
Signalized, 4 lanes or more	370	380	385	1320*

DW = Driveway

Minor DW = Maximum ADT of 500 or a maximum peak hour volume of 50

Intermediate DW = Maximum ADT of 1,500 or maximum peak hour volume of 150

Major DW = Maximum ADT of 5,000 or maximum peak hour volume of 500

*Desirable spacing.

Driveway centerline spacing may be increased if the required turn lane storage or transition is increased by any governmental agency. Minimum driveway centerline spacing may be decreased if one-way driveways are utilized and accepted by the DRC.

(4) *Special driveway requirements.* In the case of a land use with special driveway needs, an applicant may submit a traffic engineering study requesting deviations from the requirements of this section. If deviations from driveway requirements are permitted, substitute requirements which deviate no more than necessary to serve the special land use needs may be applied to the development in order to minimize the impact on the adjacent street.

(5) *Turn lanes requirements.*

a. *Turn lane requirements immediately adjacent to the development.*

1. A left-turn lane of 12 feet in width, conforming to Table VI, shall be provided at each driveway when the average daily trip ends of the driveway is 1,000 vehicles or more and/or the average peak hour inbound left-turn volume is 25 vehicles or more. Increased queue lengths (waiting vehicle storage) may be required by the CTE to provide for additional storage, based upon a peak hour entering volume greater than 75 vehicles in the peak hour. No queue length is required if the peak hour entering volume is 75 vehicles in the peak hour or less.
2. A right-turn lane of 12 feet in width, conforming to Table VI shall be provided at each driveway when the speed limit equals or exceeds 35 miles per hour or if the development will generate 100 or more right-turn movements during the peak hour. Increased storage and transition queue lengths (waiting vehicle storage) may be

required by the CTE to provide for additional storage, based upon a peak hour entering volume greater than 150 vehicles in the peak hour. No queue length is required if the peak hour entering volume is 150 vehicles in the peak hour or less.

b. *Additional improvements immediately adjacent to the development.* At intersections, with a thoroughfare which abut the development, the following improvements shall be provided:

1. A right-turn lane of 12 feet in width, conforming to subsection (e)(5) and Table VI, shall be provided if the development will generate 100 or more right turns during the peak hour.
2. A left-turn lane of 12 feet in width conforming to subsection (e)(5) and Table VI, shall be provided if the street's speed limit is 35 miles per hour or greater and if the development will generate 25 or more left turns during the peak hour.

c. *Through lane pavement transition tapers.* A through lane pavement transition taper shall be provided on all streets and roadways where the through lane is offset to provide for right turn lanes, left turn lanes, lane width changes and an increase or reduction in the number of through lanes. The through lane pavement transition taper length shall be based upon FDOT Standard Index #526 and 17346, and calculated using the following formulas:

For design speeds less than or equal to 40 m.p.h. use:

$$L = \frac{WS^2}{60}$$

For design speeds greater than or equal to 45 m.p.h. use:

L	=	WS
L	=	the pavement transition taper length in feet.
W	=	the width of the through lane lateral transition in feet (offset).

TABLE VI. TURN LANE DIMENSIONAL REQUIREMENTS

EXPAND

Speed Limit (mph)	Urban Section Deceleration Length (feet)*	Rural Section Deceleration Length (feet)*
30	145	145
35	155	155
40	185	185
45	240	320
50	N/A**	385
55	N/A**	455

Appendix Q
VOTRAN Bus Route Information

We drive a great bargain

WEST VOLUSIA COUNTY

Area Bus Service Guide

For DeLand, Deltona, Orange City, and DeBary

English/Español January 2024





VO to GO

Text VO and your bus stop ID to 321123 to receive a real-time update of the next bus to arrive at your stop.

Download the free myStop app

myStop brings rider information to your mobile devices. Plan trips, track buses in real time or setup rider alerts to receive up-to-date notifications about possible delays, detours or schedule changes to each route.

How to contact us

Votran, 950 Big Tree Road, South Daytona, FL 32119

Telephone **386-756-7496** Fax **386-756-7487**

website **www.votran.org**

FOR INFORMATION:

Greater Daytona Beach Area **386-761-7700**

West Volusia **386-943-7033**

Buses displaying "Out of Service" do not stop for passengers.

Votran

We drive a great bargain

A service of Volusia County Government

Welcome



Thank you for choosing Votran, a service of Volusia County Government. Votran is a safe, affordable and convenient option. We hope you'll continue to ride Votran every day...to work, to school, to shop, and to play.

How to use the bus map and timetables

System map

Find your street or the street nearest to you on the map. Note the name, number and color of the route nearest you. Bus departure times can be found on the timetable for this route.

Find your destination on the map. Look for the nearest bus route to this location. If this route is different from the first route you have selected, look at the second timetable and map and check where a transfer may be made. Most transfers are made at **Market Place, Providence/Fort Smith Boulevards and Amelia SuperStop at Northgate Plaza.**

> "Votran's mission is to identify and safely meet the mobility needs of Volusia County. This mission will be accomplished through a courteous, dependable and environmentally-sound team committment to quality service."

Timetable

Check the timetable on the schedule under your route number and look for the time point (cross streets) closest to where you would like to board the bus. Follow the column down the timetable and find a departure time convenient for your trip. Read across the line to the time point closest to your destination transfer point to find your arrival time.

If your boarding or destination point is between two timepoints, the bus will arrive at your destination at a time between the time the bus passes the first timepoint and arrives at the second timepoint. If your trip appears difficult to plan or you have questions, please call **386-943-7033** for assistance. We will help you plan your trip.

Fares - exact fare only

(Subject to change without notice)

Votran does not issue transfers. We recommend that you purchase an all day pass.

ADULT	**$1.75**
SENIOR CITIZENS (65 OR OLDER)	**$0.85**
DISABLED	**$0.85**
YOUTHS (AGES 7-18)	**$0.85**
CHILDREN (under age 7)	**FREE**

Children must be accompanied by a fare-paying adult passenger. Limited to three children.

Passengers must show valid proof of status when paying a reduced fare or showing a reduced fare pass.

SENIOR CITIZENS (65 AND OLDER):
Government ID or license, U.S. Medicare card (red, white and blue), passport, etc.

DISABLED:
Valid agency ID: Conklin Center, ACT, WORC, Medicare card (red, white and blue), passport, (Not Medicaid Gold Card) or Votran ID card indicating "disabled."

YOUTH (AGES 7-18):
Government ID or license showing valid proof of age, school ID (not college ID)

SAVE MONEY WITH VALUE PASSES

Value passes offer convenience and cost-savings for frequent riders. There are multiple options to suit your travel need.

1-DAY PASS	**$3.75**
3-DAY PASS	**$7.50**
7-DAY PASS	**$13.00**
31-DAY PASS	**$46.00**

SENIOR CITIZENS/DISABLED/YOUTH

1-DAY PASS	**$1.85**
3-DAY PASS	**$3.75**
7-DAY PASS	**$6.50**
31-DAY PASS	**$23.00**

- Passes offer unlimited rides for the duration of the pass.
- Fares can be paid with cash, tokens or passes.
- One-day passes are available on-board all fixed route buses.
- Other value passes are available for purchase at the following locations:

VOTRAN OFFICE:	Weekdays, 8:00 a.m. – 5:00 p.m.
TRANSFER PLAZA:	Monday – Saturday, 7:30 a.m. – 5:00 p.m.
DELTONA REGIONAL PUBLIC LIBRARY:	2150 Eustace Ave, Deltona Call (386) 289-7207 Cash only.
HISTORIC COURTHOUSE	Treasury and Billing Office 125 W. New York Ave, Room 120 DeLand, FL 32720 Monday – Friday, 8:00 a.m. – 4:30 p.m.

Purchase Fare Passes online at votran.org.

Travel tips

1. **EXACT FARE**
When boarding always have exact change ready with proper ID card. Operators are not allowed to make change, handle or deposit fares.

2. **REDUCED FARE**
If you qualify for reduced fares, have your U.S. Medicare, proof of age or Votran ID card ready.

3. **SMOKING, EATING AND DRINKING**
Extinguish your cigarettes and finish your food and soft drink before boarding. All are prohibited. This includes electronic smoking devices.

4. **GETTING ON BUS**
When you have arrived at the street location where you need to catch the bus, stand near a designated stop or where there is no sign, stand at the far side of the intersection, not the near side. The bus will not stop in midblock. Watch for your bus to determine the correct route number before signaling the operator to stop. Signal the bus operator by raising your hand.

5. **GETTING OFF BUS**
When you get within a block of your destination, signal the operator to stop by pushing the yellow strip next to the window or by pulling the cord. Stay seated until the bus comes to a complete stop, then move to the rear of the bus to exit. Wait until the green light above the door signals you to push the vertical bars.

6. **PET CARRIERS ON BUS**
Small dogs or cats may ride Votran provided they are in a pet carrier. Pet carriers will need to fit between the riders feet or in the riders lap. Pet carriers may not block the aisle nor be placed in a seat. Small dogs that exhibit excessive barking or aggression will be asked to leave the bus.

7. **BAGGAGE AND STROLLERS**
You may carry on items that can be safely stowed on board once you are seated. Due to safety regulations Votran is unable to permit items such as bicycles, surf boards, or any article that will block the aisles. Bike racks are provided on the exterior of all buses. Strollers must be folded prior to boarding the bus.

8. **NO SHOES, NO SHIRT, NO SERVICE!**

9. **HOLIDAYS**
Votran routes operate on a limited schedule for New Years Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day and Christmas Day. Log into our website at **www.votran.org** for more details.

10. **HAVE A COMMENT, MISUNDERSTANDING OR COMMENDATION?**
Should you wish to make a comment, outline a misunderstanding or commendation of an employee, please contact our office at **386-943-7033**. Please note the bus route, bus number, time of day and location involved in the matter. You also may describe it in writing and mail it to Votran, 950 Big Tree Rd., South Daytona, FL 32119, or report it through our website **www.votran.org**.

11. **UNFORSEEN EVENTS WILL DELAY BUSES.**

SCHEDULE IS SUBJECT TO CHANGE WITHOUT NOTICE

Points of interest served by Votran

Point of Interest	See Map	Grid Ref	Votran Routes
ATTRACTION/RECREATION			
Dupont Lakes	West Volusia	I6	21, 22
GOVERNMENT/SOCIAL SERVICE			
DeLand City Hall/Government Center	West Volusia	E3	20, VoRide
Deltona City Hall	West Volusia	I6	21, 22, 23
Deltona Library	West Volusia	I5	21, 22, 23
DeBary City Hall	West Volusia	K3	20, 23, 31, 33
Methodist Children's Home	West Volusia	K4	21, 22
Orange City City Hall	West Volusia	H3	20, 31
Thomas C. Kelly County Admin Center	West Volusia	E3	20, 31, VoRide
HOSPITALS/MEDICAL CENTERS			
AdventHealth - DeLand	West Volusia	D2	20, VoRide
AdventHealth - Orange City	West Volusia	I3	23, 33
Ambulatory Surgical Ctr of Central FL	West Volusia	E2	20, VoRide
Deltona Healthcare Rehab Cntr	West Volusia	I6	21, 22
V.A. Clinic Deltona	West Volusia	J4	21, 22
V.C. Health Department	West Volusia	I3	23, 33
SCHOOLS/COLLEGES/UNIVERSITIES			
BCU - Deltona Campus	West Volusia	J5	23, 33
DeLand Middle School	West Volusia	F3	20, 31, VoRide
DeLand High School	West Volusia	E3	VoRide
Daytona State College - DeLand	West Volusia	F5	VoRide
Daytona State College - Deltona	West Volusia	I6	21, 22, 23
Deltona Christian School	West Volusia	K5	21, 22
Deltona Middle School	West Volusia	K4	21, 22
Discovery Elementary School	West Volusia	J4	21, 22
Friendship Elementary School	West Volusia	I7	21, 22
Galaxy Middle School	West Volusia	I5	21, 22
Heritage Middle School	West Volusia	J7	21, 22
Orange City Elementary School	West Volusia	H3	20, 31
Pine Ridge High School	West Volusia	J7	21, 22
Southwestern Middle School	West Volusia	F2	20, 31, VoRide
Spirit Elementary School	West Volusia	J5	23, 33
Starke Elementary School	West Volusia	F3	20, 31, VoRide
Stetson University	West Volusia	E3	20, 31, VoRide
Sunrise Elementary School	West Volusia	K7	21, 22
Timbercrest Elementary School	West Volusia	I5	21, 22
SHOPPING CENTERS			
Breezewood Plaza	West Volusia	I3	20, 31
Country Club Corners - Publix	West Volusia	G3	20, 31, VoRide
Crowne Centre Plaza	West Volusia	J3	20, 21, 22, 23, 33
DeBary Commons Shopping Ctr	West Volusia	J3	20, 23, 31, 33
DeLand Plaza	West Volusia	E3	20, VoRide
Deltona Plaza	West Volusia	J4	21, 22
Dogwood Plaza	West Volusia	I3	20, 31
Dupont Lakes Shopping Center	West Volusia	I7	21, 22, 23
Four Townes Shopping Center	West Volusia	I3	20, 31
Marketplace Shopping Center	West Volusia	J3	20, 21, 22, 23, 33
Northgate Shopping Center	West Volusia	D3	20, 31, 60, VoRide
Oakbrook Professional Center	West Volusia	E2	20, VoRide
Orange City Plaza	West Volusia	I3	20, 31
Saxon Plaza Shopping Center	West Volusia	J4	23, 33
Three Seasons Plaza	West Volusia	I3	20, 31
Village Marketplace	West Volusia	I3	20
Walmart - DeLand	West Volusia	D3	20, VoRide
Walmart - Osteen	West Volusia	K7	21, 22
Walmart - South DeLand	West Volusia	F3	20, 31, VoRide
West Volusia Shopping Center	West Volusia	G3	20, 31
Whispering Pines Plaza	West Volusia	I3	20, 31
Woodland Plaza	West Volusia	F3	20, 31, VoRide
TRANSPORTATION			
Amelia SuperStop	West Volusia	D3	20, 31, 60, VoRide
DeLand Municipal Airport	West Volusia	D3	60
Market Place Transfer Center	West Volusia	J3	20, 21, 22, 23, 33
DeLand Intermodal Transfer Facility	West Volusia	E3	20, 31, VoRide
Saxon Park and Ride	West Volusia	J4	23, 33
SunRail - Debary	West Volusia	F5	31, 33
DeLand Amtrak	West Volusia	E1	VoRide

Other services

PERSONS WITH DISABILITIES
All regular fixed buses are equipped for wheelchair accessibility. Votran's Gold service provides door-to-door transportation to persons unable to use the regular fixed bus service. Transportation is provided daily between 6 a.m. – 6 p.m. with a charge of **$3.00** per trip. Applications for Gold service can be obtained from **votran.org** or by request by calling **386-322-5100**. All applicants must be certified by their doctors.

Greater Daytona Beach Area **386-761-7700**

West Volusia **386-943-7033**

COMMUTER ASSISTANCE SERVICES
If bus services are unable to meet your needs, please consider car or van pooling to reach your destination. Votran offers a variety of commuter assistance services to persons who travel to work within Volusia County or to neighboring areas. To learn more please visit our web site or reach us toll-free at **866-610-RIDE**.

BIKES STOW AND GO
All Votran fixed route buses are equipped with bicycle racks that accommodate up to two bicycles. Racks are available on a first-come, first-served basis, so be prepared to secure your bicycle if the positions are full.

LOST AND FOUND
If you've lost something on the bus, please call **386-756-7496** between 8 a.m. – 5 p.m., Monday – Friday.

Bienvenidos



Muchas gracias por elegir Votran, un servicio del Gobierno del Condado de Volusia. Votran es la opción de transporte segura, al alcance y más conveniente. Esperamos continúe usted viajando con Votran todos los días...al trabajo, la escuela, las tiendas, y a jugar.

Como usar el Horario y el Mapa de las rutas Votran

El Mapa Del Sistema Votran

Encuentre la calle donde usted está ubicado o la calle más cerca de usted en el mapa. Fíjese en el nombre, el número, y el color de la ruta más cerca. La hora de salida del autobús se puede ver en el horario de esta ruta.

Encuentre la localización del lugar adonde usted quiere ir en el mapa. Busque la ruta del autobús más cerca a esta localidad. Si esta ruta es diferente a la primera ruta que usted escogió, mire a la segunda ruta y su horario y busque en donde usted puede hacer un transbordo. El transbordo se puede hacer en **'Market Place', 'Providence/Fort Smith' bulevares y Amelia Super Stop en Northgate Plaza.**

> "La misión de Votran es identificar y satisfacer las necesidades de mobilidad en forma segura por el condado de Volusia. Esta misión se logrará a través de un cortés, confiable y un equipo ecológico compromiso a servicio de calidad."

Horario

Revíse la parte que indica el horario del autobús debajo del número de la ruta que usted ha determinado como la mejor para su viaje, y busque la calle o el punto de embarcar que está más cerca a donde usted quiere tomar el autobús. Siga la columna a través del horario hasta que usted encuentre una hora de salida conveniente para su viaje. Lea hacía abajo de esta linea hasta la hora y lugar más cerca de donde usted quiere ir para estimar su hora de llegada.

Si su calle o punto de embarcar o desembarcar el autobús está en el medio de dos paradas, usted puede calcular su llegada con la hora de llegada de la parada antes y de la parada después de la suya. Su autobús llegará a una hora entre estos dos horarios. Si su viaje le parece difícil de planear, o si usted tiene preguntas o necesita ayuda, por favor de llamar este número, **386-943-7033.**

Tarifa - Exacta Solamente

(Conforme a cambio sin aviso)

Votran no emite traslados. Le recomendamos que compre un pase de día entero.

ADULTOS	**$1.75**
CIUDADANOS MAYORES (DE 65 AÑOS)	**$0.85**
PERSONAS INCAPACITADAS	**$0.85**
JOVENES (ENTRE LAS EDADES DE 7 A 18 AÑOS)	**$0.85**
NIÑOS (menores de 7 años de edad)	**GRATIS**

Todo niño debe de ser acompañado por un pasajero adulto con tarifa pagada. Limitado a tres (3) niños.

Todo pasajero debe de mostrar la prueba válida de su estado personal al pagar el precio reducido del pase, o demostrar su pase reducido.

CIUDADANOS JUBILADOS (DESDE 65 AÑOS Y MÁS DE EDAD):
Identificación del gobierno o licencia, tarjeta de Medicare de los EEUU. (rojo, blanco y azul), pasaporte, etc.

INCAPACITADOS:
Identificación valida de la agencia emisora: Conklin Center, ACT, WORC, Tarjeta de Medicare (rojo, blanco y azul), pasaporte, (No se acepta la tarjeta de oro de Medicaid) o tarjeta de identificación de Votran indicando la palabra "disabled."

JÓVENES (DESDE LAS EDADES DE 7 A 18 AÑOS):
Identificación del gobierno o licencia que demuestra la prueba válida de la edad, identificación escolar (no se acepta tarjeta de identificación universitaria).

AHORE SU DINERO COMPRANDO LOS PASES DE TRANSPORTACIÓN

Los pasos del valor ofrecen la conveniencia y los coste-ahorros para los jinetes frecuentes. Hay opciones múltiples para satisfacer su necesidad del recorrido.

PASE DE UN DÍA	**$3.75**
PASE DE 3 DÍAS	**$7.50**
PASE DE 7 DÍAS	**$13.00**
PASE DE 31 DÍA	**$46.00**

PERSONAS JUBILADAS/INCAPACITADOS/JÓVENES

PASE DE UN DÍA	**$1.85**
PASE DE 3 DÍAS	**$3.75**
PASE DE 7 DÍAS	**$6.50**
PASE DE 31 DÍA	**$23.00**

- Los pases ofrecen paseos ilimitados para la duración del paseo.
- Las tarifas se pueden pagar con dinero en efectivo, fichas, o pases.
- Pases de un día están disponibles a bordo todos los autobuses con rutas fijas.
- Otros pases están disponibles para la venta en las siguientes localizaciones:

OFICINA DE VOTRAN:	días laborales, 8:00 a.m. – 5:00 p.m.
PLAZA DE TRANSFERENCIA:	lunes a sábado, 7:30 a.m. – 5:00 p.m.
DELTONA REGIONAL PUBLIC LIBRARY (BIBLIOTECA REGIONAL):	2150 Eustace Ave, Deltona Llame al (386) 289-7207 Únicamente efectivo.
HISTORIC COURTHOUSE	Treasury and Billing Office 125 W. New York Ave, Room 120 DeLand, FL 32720 lunes a viernes, 8:00 a.m. – 5:00 p.m.

Compra de una tarifa pasa en línea en votran.org.

Lo que necesita para el recorrido

1. **TARIFA EXACTA**
Al abordar siempre tenga listo el cambio exacto con la tarjeta apropiada de identificación. No se permite a los operadores a hacer cambio, manejar o depositar el dinero.

2. **PRECIOS REDUCIDOS**
Si usted califica a recibir precios reducidos, tenga listo su tarjeta de Medicare de los EEUU, prueba de su edad, o tarjeta de identificación de Votran.

3. **EL FUMAR, COMER, Y CONSUMIR BEBIDA**
Extinga sus cigarrillos y acabe de alimentarse con comida y refrescos antes de subir. Se prohíben todos. Esto incluye dispositivos electronicós fumadores.

4. **SUBIRSE EN EL AUTOBUS**
Cuando usted ha llegado a la localización en la calle donde usted necesita tomar el autobús, debe de pararse cerca de una parada designada o donde no hay una señal, debe de pararse a los mas lejano de la intersección, no al lado cercano. El autobús no se parará en medio bloque de la calle. Asómese a su autobús para determinar el número correcto de la ruta antes que le señale al operador que se pare. Señale al operador del autobús levantando su mano.

5. **BAJAR DEL AUTOBUS**
Cuando usted ya llegue dentro un bloque de su destinación, señale al operador para que se pare oprimiendo la tira amarilla al lado de la ventana o jalando la cuerda. Permanezca sentado hasta que el autobús se pare completamente. Después muévase a la parte trasera del autobús para salir. Espere hasta que la luz verde sobre la puerta le señale que empuje las barras verticales.

6. **PORTADORES DE MASCOTAS EN EL AUTOBUS**
Perros o gatos pequeños pueden montar Votran siempre que estén en unportador de mascotas. Los portadores deben caber entre sus pies orencima de sus piernas. Los portadores no pueden bloquear el pasillo oser colocados en un asiento. Los perros pequeños que exhiben excesivosladridos o agresión se les pedirá que bajen el autobús.

7. **MALETAS Y COCHES**
Usted puede cargar adentro artículos que se puedan guardar con seguridad a bordo una vez que esté sentado. Debido a las normas de seguridad, Votran no puede permitir artículos tales como bicicletas, tablas de surfear, o cualquier artículo que bloquee los pasillos. Los estantes de bicicletas se proveen en el exterior de todos los autobuses. Cochecitos debe doblarse antes de abordar el autobus.

8. **¡NO ZAPATOS, NO CAMISA, NO SERVICIO!**

9. **DIAS FERIADOS**
Las Rutas de Votran operan en un horario limitado para el Día de Año Nuevo, Memorial Day, el 4 de julio, Labor Day, Thanksgiving Day y el Dia de Navidad. Inicie sesión en nuestro sitio web en **www.votran.org** para más detalles.

10. **¿TIENE ALGUN COMENTARIO, UN MALENTENDIDO, O UNA RECOMENDACION?**
Si usted desea hacer un comentario, dar un resumen sobre un malentendido o elogiar un empleado, por favor comuníquese con nuestra oficina llamando al **386-943-7033**. Favor de anotar la ruta del autobús, número del autobús, la hora del día y la localización implicada en el caso. Usted también puede describir en detalle por escrito y enviarlo por correo postal a Votran, 950 Big Tree Rd., South Daytona, FL 32119, informe a través de nuestro sitio web **www.votran.org**.

11. **EVENTOS IMPREVISTOS RETRASARAN LOS AUTOBUSES**

ESTE HORARIO PUEDE CAMBIAR SIN AVISO

WEST VOLUSIA BUS SERVICE

- All times shown in **bold** are p.m. trips.
- All trips shown in ▭ do not operate on Saturdays.
- All trips shown in ▭ operate on Saturdays only.

Schedule is subject to change without notice

20 DeLand/Orange City

MON-SAT: ***Northbound from Market Place to Deland***

Charles Beall/ Angeles	Market Place *(Arrive)*	Market Place *(Depart)*	Volusia/ Rhode Island	Volusia/ French	Woodland/ Orange Camp	DeLand ITF Gate 2	Thomas C. Kelly County Adm.Ctr	AdventHealth DeLand	Int'l Speedway/ S.R. 15-A	Amelia SuperStop
-:-	-:-	-:-	5:45	5:49	5:55	6:03	-:-	-:-	-:-	6:13
-:-	-:-	6:16	6:24	6:29	6:37	6:47	6:52	6:59	7:04	7:10
-:-	-:-	-:-	6:38	6:43	6:50	-:-	-:-	-:-	-:-	7:10
-:-	-:-	7:25	7:31	7:36	7:42	7:53	8:00	8:08	8:13	8:19
-:-	-:-	8:25	8:31	8:36	8:42	8:53	9:00	9:08	9:13	9:19
9:03	9:13	9:25	9:31	9:36	9:42	9:53	10:00	10:08	10:13	10:19
9:55	10:05	10:25	10:31	10:36	10:42	10:53	11:00	11:08	11:13	11:19
10:55	11:05	11:25	11:31	11:36	11:42	11:53	**12:00**	**12:08**	**12:13**	**12:19**
11:55	**12:05**	**12:25**	**12:31**	**12:36**	**12:42**	**12:53**	**1:00**	**1:08**	**1:13**	**1:19**
12:55	**1:05**	**1:25**	**1:31**	**1:36**	**1:42**	**1:53**	**2:00**	**2:08**	**2:13**	**2:19**
1:55	**2:05**	**2:25**	**2:31**	**2:36**	**2:42**	**2:53**	**3:00**	**3:08**	**3:13**	**3:19**
2:55	**3:05**	**3:25**	**3:31**	**3:36**	**3:42**	**3:53**	**4:00**	**4:08**	**4:13**	**4:19**
3:55	**4:05**	**4:25**	**4:31**	**4:36**	**4:42**	**4:53**	**5:00**	**5:08**	**5:13**	**5:19**
4:55	**5:05**	**5:25**	**5:31**	**5:36**	**5:42**	**5:53**	**6:00**	**6:08**	**6:13**	**6:19**
5:55	**6:05**	**6:25**	**6:31**	**6:36**	**6:42**	**6:53**	**7:00**	**7:08**	**7:13**	**7:19**

MON-SAT ***Southbound from Deland to Market Place***

Amelia SuperStop	Walmart Deland	Amelia SuperStop	Int'l Speedway/ S.R. 15-A	AdventHealth DeLand	Thomas C. Kelly Co. Admin. Ctr	DeLand ITF Gate 1 *(Depart)*	Woodland/ McGregor	Volusia/ French	Volusia/ Rhode Island	Market Place	Charles Beall/ Angeles
6:14	6:23	6:28	6:35	6:39	6:45	6:50	7:00	7:07	7:11	7:20	-:-
7:14	7:19	7:26	7:33	7:37	7:43	7:50	8:00	8:07	8:11	8:20	-:-
8:14	-:-	-:-	-:-	-:-	-:-	8:24	8:34	8:40	8:44	8:53	9:03
8:29	8:34	8:41	8:49	8:54	9:01	9:15	9:24	9:30	9:34	9:45	9:55
9:29	9:34	9:41	9:49	9:54	10:01	10:15	10:24	10:30	10:34	10:45	10:55
10:29	10:34	10:41	10:49	10:54	11:01	11:15	11:24	11:30	11:34	11:45	11:55
11:29	11:34	11:41	11:49	11:54	**12:01**	**12:15**	**12:24**	**12:30**	**12:34**	**12:45**	**12:55**
12:29	**12:34**	**12:41**	**12:49**	**12:54**	**1:01**	**1:15**	**1:24**	**1:30**	**1:34**	**1:45**	**1:55**
1:29	**1:34**	**1:41**	**1:49**	**1:54**	**2:01**	**2:15**	**2:24**	**2:30**	**2:34**	**2:45**	**2:55**
2:29	**2:34**	**2:41**	**2:49**	**2:54**	**3:01**	**3:15**	**3:24**	**3:30**	**3:34**	**3:45**	**3:55**
3:29	**3:34**	**3:41**	**3:49**	**3:54**	**4:01**	**4:15**	**4:24**	**4:30**	**4:34**	**4:45**	**4:55**
4:29	**4:34**	**4:41**	**4:49**	**4:54**	**5:01**	**5:15**	**5:24**	**5:30**	**5:34**	**5:45**	**5:55**
5:29	**5:34**	**5:41**	**5:49**	**5:54**	**6:01**	**6:15**	**6:24**	**6:30**	**6:34**	**6:45**	-:-
6:20	**6:29**	-:-	-:-	-:-	-:-	**6:40**	**6:50**	**6:57**	-:-	-:-	-:-
6:24	**6:29**	**6:36**	**6:44**	**6:49**	**6:56**	**7:10**	**7:19**	**7:25**	**7:29**	**7:38**	-:-
7:20	**7:29**	-:-	-:-	-:-	-:-	**7:40**	**7:50**	**7:57**	**8:01**	-:-	-:-

21 Deltona

MON-SAT: ***Outbound from Market Place to Walmart/Osteen via Providence/Ft. Smith***

Market Place	Deltona Plaza	Providence/ Normandy	Methodist Children's Home	Providence/ Normandy	Providence/ Tivoli	Walmart/ Osteen
-:-	-:-	-:-	-:-	-:-	5:08	5:20
6:25	6:33	6:40	6:46	6:52	6:57	7:11
-:-	-:-	-:-	-:-	-:-	7:04	7:18
8:25	8:33	8:40	8:46	8:52	8:57	9:11
10:25	10:33	10:40	10:46	10:52	10:57	11:11
12:25	**12:33**	**12:40**	**12:46**	**12:52**	**12:57**	**1:11**
2:25	**2:33**	**2:40**	**2:46**	**2:52**	**2:57**	**3:11**
4:25	**4:33**	**4:40**	**4:46**	**4:52**	**4:57**	**5:11**
6:25	**6:33**	**6:40**	**6:46**	**6:52**	**6:57**	**7:11**

MON-SAT: ***Inbound Walmart/Osteen to Market Place via Elkcam/Providence***

Walmart/ Osteen	Pine Ridge High School	Howland/ Elkcam	Newmark/ Montecito	Providence/ Ft. Smith	Deltona City Hall	Deltona Library	Providence/ Tivoli	Providence/ Normandy	Deltona Plaza	Market Place
5:21	5:24	5:31	5:36	5:40	-:-	5:46	5:52	5:56	6:03	6:15
7:19	7:22	7:29	7:34	7:38		7:44	7:50	7:54	8:01	8:13
7:22	7:25	7:32	7:37	7:41	7:45	7:47	7:53	7:57	8:04	8:19
9:22	9:25	9:32	9:37	9:41	9:45	9:47	9:53	9:57	10:04	10:19
11:22	11:25	11:32	11:37	11:41	11:45	11:47	11:53	11:57	**12:04**	**12:19**
1:22	**1:25**	**1:32**	**1:37**	**1:41**	**1:45**	**1:47**	**1:53**	**1:57**	**2:04**	**2:19**
3:22	**3:25**	**3:32**	**3:37**	**3:41**	**3:45**	**3:47**	**3:53**	**3:57**	**4:04**	**4:19**
5:22	**5:25**	**5:32**	**5:37**	**5:41**	**5:45**	**5:47**	**5:53**	**5:57**	**6:04**	**6:19**
7:19	**7:22**	**7:29**	-:-	-:-	-:-	-:-	-:-	-:-	-:-	-:-

22 Deltona

MON-SAT: ***Outbound from Market Place to Walmart/Osteen via Elkcam/Providence***

Market Place	Deltona Plaza	Providence/ Normandy	Providence/ Tivoli	Deltona City Hall	Deltona Library	Elkcam/ Howland	Pine Ridge High School	Walmart/ Osteen
-:-	-:-	5:52	5:57	-:-	6:03	6:11	6:18	6:22
7:25	7:33	7:40	7:45	7:51	7:54	8:03	8:10	8:15
9:25	9:33	9:40	9:45	9:51	9:54	10:03	10:10	10:15
11:25	11:33	11:40	11:45	11:51	11:54	**12:03**	**12:10**	**12:15**
1:25	**1:33**	**1:40**	**1:45**	**1:51**	**1:54**	**2:03**	**2:10**	**2:15**
3:25	**3:33**	**3:40**	**3:45**	**3:51**	**3:54**	**4:03**	**4:10**	**4:15**
5:25	**5:33**	**5:40**	**5:45**	**5:51**	**5:54**	**6:03**	**6:10**	**6:15**

MON-SAT: ***Inbound from Walmart/Osteen to Market Place via Ft. Smith/Providence***

Walmart/ Osteen	Providence/ Tivoli	Providence/ Normandy	Methodist Children's Home	Providence/ Normandy	Deltona Plaza	Market Place
6:24	6:37	6:41	6:47	6:54	7:01	7:18
8:24	8:37	8:41	8:47	8:54	9:01	9:18
10:24	10:37	10:41	10:47	10:54	11:01	11:18
12:24	**12:37**	**12:41**	**12:47**	**12:54**	**1:01**	**1:18**
2:24	**2:37**	**2:41**	**2:47**	**2:54**	**3:01**	**3:18**
4:24	**4:37**	**4:41**	**4:47**	**4:54**	**5:01**	**5:18**
6:20	**6:33**	**6:37**	**6:43**	**6:50**	**6:57**	**7:14**

ROUTE 22 DOES NOT OPERATE ON HOLIDAYS
LA RUTA 22, NO TRABAJA EN LOS DIAS DE FIESTA

23 Orange City

MON-FRI: ***Eastbound from Market Place to Ft. Smith/Providence***

Market Place	Charles Beall/ Angeles	Saxon Blvd Market Place	AdventHealth Orange City	Saxon/Tivoli	Providence/ Ft. Smith
-:-	5:24	5:31	5:35	5:45	5:49
6:20	6:28	6:35	6:39	6:49	6:53
7:20	7:28	7:35	7:39	7:49	7:53
8:20	8:28	8:35	8:39	8:49	8:53
9:20	9:28	9:35	9:39	9:49	9:53
10:20	10:28	10:35	10:39	10:49	10:53
11:20	11:28	11:35	11:39	11:49	11:53
12:20	**12:28**	**12:35**	**12:39**	**12:49**	**12:53**
1:20	**1:28**	**1:35**	**1:39**	**1:49**	**1:53**
2:25	-:-	-:-	**2:31**	**2:41**	**2:45**
3:25	-:-	-:-	**3:31**	**3:41**	**3:45**
4:25	-:-	-:-	**4:31**	**4:41**	**4:45**
5:25	-:-	-:-	**5:31**	**5:41**	**5:45**

MON-FRI: ***Westbound from Providence/Ft. Smith to Market Place***

Providence/ Ft. Smith	Saxon Blvd Park & Ride	Market Place
5:49	6:01	6:16
6:53	7:05	7:20
7:53	8:05	8:20
8:53	9:05	9:20
9:53	10:05	10:20
10:53	11:05	11:20
11:53	**12:05**	**12:20**
12:53	**1:05**	**1:20**
1:53	**2:05**	**2:20**
2:45	**2:57**	**3:12**
3:45	**3:57**	**4:12**
4:45	**4:57**	**5:12**
5:45	**5:57**	**6:12**

SAT ONLY: ***Eastbound from Market Place to Ft. Smith/Providence***

Market Place	Charles Beall/ Angeles	Saxon Blvd Market Place	AdventHealth Orange City	Saxon/Tivoli	Providence/ Ft. Smith
-:-	-:-	-:-	6:39	6:49	6:53
7:20	7:28	7:35	7:39	7:49	7:53
8:20	8:28	8:35	8:39	8:49	8:53
9:20	9:28	9:35	9:39	9:49	9:53
10:20	10:28	10:35	10:39	10:49	10:53
11:20	11:28	11:35	11:39	11:49	11:53
12:20	**12:28**	**12:35**	**12:39**	**12:49**	**12:53**
1:20	**1:28**	**1:35**	**1:39**	**1:49**	**1:53**
2:20	**2:28**	**2:35**	**2:39**	**2:49**	**2:53**
3:20	**3:28**	**3:35**	**3:39**	**3:49**	**3:53**
4:20	**4:28**	**4:35**	**4:39**	**4:49**	**4:53**
5:20	**5:28**	**5:35**	**5:39**	**5:49**	**5:53**

SAT ONLY: ***Westbound from Providence/Ft. Smith to Market Place***

Providence/ Ft. Smith	Saxon Blvd Park & Ride	Market Place
6:53	7:05	7:20
7:53	8:05	8:20
8:53	9:05	9:20
9:53	10:05	10:20
10:53	11:05	11:20
11:53	**12:05**	**12:20**
12:53	**1:05**	**1:20**
1:53	**2:05**	**2:20**
2:53	**3:05**	**3:20**
3:53	**4:05**	**4:20**
4:53	**5:05**	**5:20**
5:53	**6:05**	**6:20**

31 SunRail - US 17-92

MON-FRI ONLY: ***Southbound to SunRail DeBary Station***

Amelia Super Stop	DeLand ITF *(Departs)*	Woodland/ McGreggor	Volusia/ Graves	Charles Beall/ Saxon	Charles Beall/ Highbanks	DeBary SunRail Station	SunRail Departs
4:43	4:53	5:00	5:05	5:12	5:16	5:20	5:30
5:13	5:23	5:30	5:35	5:42	5:46	5:50	6:00
5:43	5:53	6:00	6:05	6:12	6:16	6:20	6:30
6:13	6:23	6:30	6:35	6:42	6:46	6:50	7:00
6:43	6:53	7:00	7:05	7:12	7:16	7:20	7:30
7:08	7:18	7:25	7:30	7:37	7:41	7:45	8:00
7:43	7:53	8:00	8:05	8:12	8:16	8:20	9:00
3:15	**3:31**	**3:40**	**3:47**	**3:56**	**4:02**	**4:08**	**4:30**
3:45	**4:01**	**4:10**	**4:17**	**4:26**	**4:32**	**4:38**	**5:00**
4:15	**4:31**	**4:40**	**4:47**	**4:56**	**5:02**	**5:08**	**5:30**
4:45	**5:01**	**5:10**	**5:17**	**5:26**	**5:32**	**5:38**	-:-
5:15	**5:31**	**5:40**	**5:47**	**5:56**	**6:02**	**6:08**	-:-
5:45	**6:01**	**6:10**	**6:17**	**6:26**	**6:32**	**6:38**	**6:50**
6:18	**6:34**	**6:43**	**6:50**	**6:59**	**7:05**	**7:11**	-:-
6:48	**7:04**	**7:13**	**7:20**	**7:29**	**7:35**	**7:41**	**8:10**

MON-FRI ONLY: ***Northbound to Amelia Super Stop***

SunRail Arrives	DeBary SunRail Station	Charles Beall/ Highbanks	Saxon/ Charles Beall	Volusia/ Graves	Woodland/ McGreggor	DeLand ITF *(departs)*	Amelia Super Stop
-:-	5:25	5:30	5:33	5:39	5:44	5:57	6:06
-:-	5:55	6:00	6:03	6:09	6:14	6:27	6:36
-:-	6:25	6:30	6:33	6:39	6:44	6:52	7:01
-:-	6:55	7:00	7:03	7:09	7:14	7:27	7:36
7:18	7:25	7:30	7:33	7:39	7:44	7:57	8:06
7:48	7:55	8:00	8:03	8:09	8:14	8:27	8:36
2:43	**3:25**	**3:30**	**3:33**	**3:39**	**3:44**	**4:00**	**4:09**
3:48	**3:55**	**4:00**	**4:03**	**4:09**	**4:14**	**4:30**	**4:39**
-:-	**4:25**	**4:30**	**4:33**	**4:39**	**4:44**	**5:00**	**5:09**
4:48	**4:55**	**5:00**	**5:03**	**5:09**	**5:14**	**5:30**	**5:39**
5:18	**5:25**	**5:30**	**5:33**	**5:39**	**5:44**	**6:00**	**6:09**
5:48	**5:55**	**6:00**	**6:03**	**6:09**	**6:14**	**6:30**	**6:39**
6:18	**6:25**	**6:30**	**6:33**	**6:39**	**6:44**	**7:00**	**7:09**
6:53	**7:05**	**7:10**	**7:13**	**7:19**	**7:24**	**7:40**	**7:49**
7:23	**7:35**	**7:40**	**7:43**	**7:49**	**7:54**	**8:10**	**8:19**
7:53	**8:05**	**8:10**	**8:13**	**8:19**	**8:24**	**8:40**	**8:49**

33 SunRail - Dupont Lakes

MON-FRI ONLY: ***Westbound to SunRail DeBary Station***

Dupont Lakes Shopping Ctr	Deltona City Hall	Saxon Blvd Park & Ride*	Saxon Blvd Market Place*	AdventHealth Orange City	DeBary SunRail Station	SunRail Departs
4:25	4:35	4:50	4:58	5:15		5:30
5:25	5:35	5:50	5:58	6:15		6:30
6:25	6:35	6:50	6:58	7:15		7:30
2:25	**2:35**	**2:50**	**2:58**	**3:15**		**3:30**
4:25	**4:35**	**4:50**	**4:58**	**5:15**		**5:30**
-:-	-:-	-:-	**6:25**	**6:42**		**6:50**

MON-FRI ONLY: ***Eastbound to Dupont Lakes***

SunRail Arrives	DeBary SunRail Station	Saxon Blvd Market Place*	AdventHealth Orange City	Saxon Blvd Park & Ride*	Deltona City Hall	Dupont Lakes Shopping Ctr
7:18	7:28	7:40	7:44	7:48	8:06	8:20
8:18	8:28	8:40	8:44	8:48	9:06	9:20
2:43	**3:20**	**3:32**	**3:36**	**3:40**	**3:58**	**4:12**
5:18	**5:28**	**5:40**	**5:44**	**5:48**	**6:06**	**6:20**
6:53	**6:58**	**7:07**	**7:11**	**7:14**	**7:24**	**7:37**

* Buses do not enter Deltona City Hall, Park & Ride, or Market Place. Bus stops are located on the main road.
** Los autobuses no entran en el Ayuntamiento de Deltona, Park & Ride o Market Place. Las paradas de autobús se encuentran en la carretera principal.*

60 East/West Connector

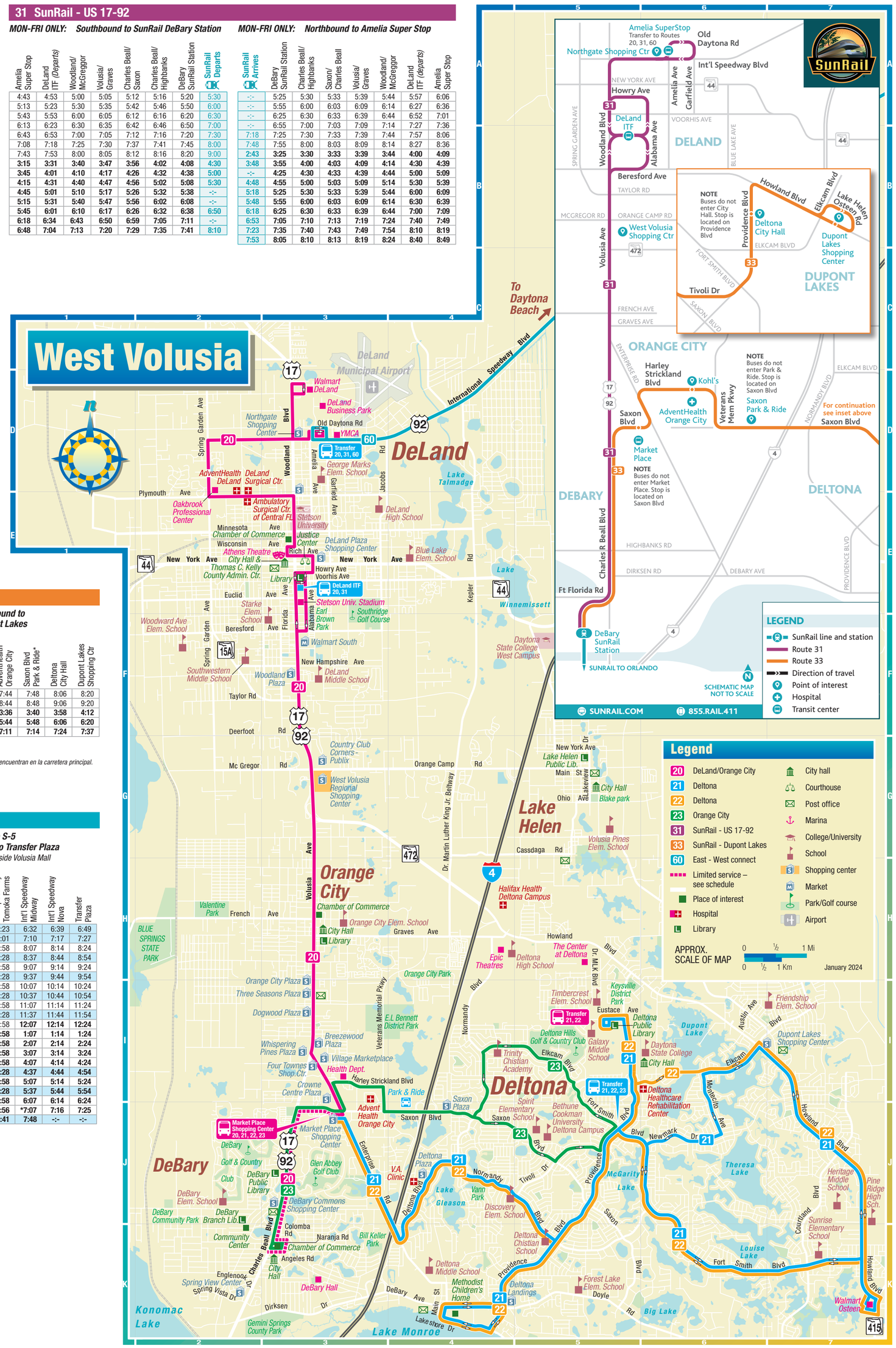
MON-SAT: ***Departs Gate S-5 Westbound to Amelia Superstop***
Does not go inside Volusia Mall

Transfer Plaza	Int'l Speedway Nova	Int'l Speedway Midway	Int'l Speedway Tomoka Farms	Branch Jail	Int'l Speedway Kepler Rd	Amelia Super Stop
-:-	-:-	5:15	5:20	-:-	5:36	5:40
-:-	-:-	*5:57	6:03	-:-	6:19	6:23
6:32	6:40	6:45	6:53	7:01	7:13	7:19
-:-	-:-	6:56	7:01	-:-	7:13	7:19
7:02	7:10	7:15	7:23	7:31	7:43	7:49
7:32	7:40	7:45	7:53	8:01	8:13	8:19
8:02	8:10	8:15	8:23	8:31	8:43	8:49
8:32	8:40	8:45	8:53	9:01	9:13	9:19
9:02	9:10	9:15	9:23	9:31	9:43	9:49
9:32	9:40	9:45	9:53	10:01	10:13	10:19
10:02	10:10	10:15	10:23	10:31	10:43	10:49
10:32	10:40	10:45	10:53	11:01	11:13	11:19
11:32	11:40	11:45	11:53	**12:01**	**12:13**	**12:19**
12:32	**12:40**	**12:45**	**12:53**	**1:01**	**1:13**	**1:19**
1:32	**1:40**	**1:45**	**1:53**	**2:01**	**2:13**	**2:19**
2:32	**2:40**	**2:45**	**2:53**	**3:01**	**3:13**	**3:19**
3:02	**3:10**	**3:15**	**3:23**	**3:31**	**3:43**	**3:49**
3:32	**3:40**	**3:45**	**3:53**	**4:01**	**4:13**	**4:19**
4:02	**4:10**	**4:15**	**4:23**	**4:31**	**4:43**	**4:49**
4:32	**4:40**	**4:45**	**4:53**	**5:01**	**5:13**	**5:19**
5:32	**5:40**	**5:45**	**5:53**	**6:01**	**6:13**	**6:19**
6:32	**6:40**	**6:45**	**6:53**	**7:01**	**7:13**	**7:19**

MON-SAT: ***Arrives Gate S-5 Eastbound to Transfer Plaza***
Does not go inside Volusia Mall

Amelia Super Stop	Int'l Speedway Kepler Rd	Branch Jail	Int'l Speedway Tomoka Farms	Int'l Speedway Midway	Int'l Speedway Nova	Transfer Plaza
5:51	5:56	6:12	6:23	6:32	6:39	6:49
6:29	6:34	6:50	7:01	7:10	7:17	7:27
7:26	7:31	7:47	7:58	8:07	8:14	8:24
7:56	8:01	8:17	8:28	8:37	8:44	8:54
8:26	8:31	8:47	8:58	9:07	9:14	9:24
8:56	9:01	9:17	9:28	9:37	9:44	9:54
9:26	9:31	9:47	9:58	10:07	10:14	10:24
9:56	10:01	10:17	10:28	10:37	10:44	10:54
10:26	10:31	10:47	10:58	11:07	11:14	11:24
10:56	11:01	11:17	11:28	11:37	11:44	11:54
11:26	11:31	11:47	11:58	**12:07**	**12:14**	**12:24**
12:26	**12:31**	**12:47**	**12:58**	**1:07**	**1:14**	**1:24**
1:26	**1:31**	**1:47**	**1:58**	**2:07**	**2:14**	**2:24**
2:26	**2:31**	**2:47**	**2:58**	**3:07**	**3:14**	**3:24**
3:26	**3:31**	**3:47**	**3:58**	**4:07**	**4:14**	**4:24**
3:56	**4:01**	**4:17**	**4:28**	**4:37**	**4:44**	**4:54**
4:26	**4:31**	**4:47**	**4:58**	**5:07**	**5:14**	**5:24**
4:56	**5:01**	**5:17**	**5:28**	**5:37**	**5:44**	**5:54**
5:26	**5:31**	**5:47**	**5:58**	**6:07**	**6:14**	**6:24**
6:24	**6:29**	**6:45**	**6:56**	***7:07**	**7:16**	**7:25**
*****7:23**	**7:27**	-:-	**7:41**	**7:48**	-:-	-:-

* Serves the Daytona Airport at 5:55 a.m. Westbound and 7:05 p.m. Eastbound.
** Sirve al aeropuerto de Daytona a las 5:55 a.m. en dirección oeste y a las 7:05 p.m. hacia el este.*
***The last eastbound trip ends at Clyde Morris. Passengers may deboard at Midway and take Route 10. Night Service at :31 past the hour to go to the Intermodal Transit Facility at Earl St. and A1A.
****El último viaje en dirección este termina en Clyde Morris. Los pasajeros pueden desembarcar en Midway y tomar el servicio nocturno de la ruta 10 a las: 31 después de la hora para ir a la instalación de tránsito intermodal en Earl St. y A1A.*



Appendix R
Signal Four Analytics Crash Data

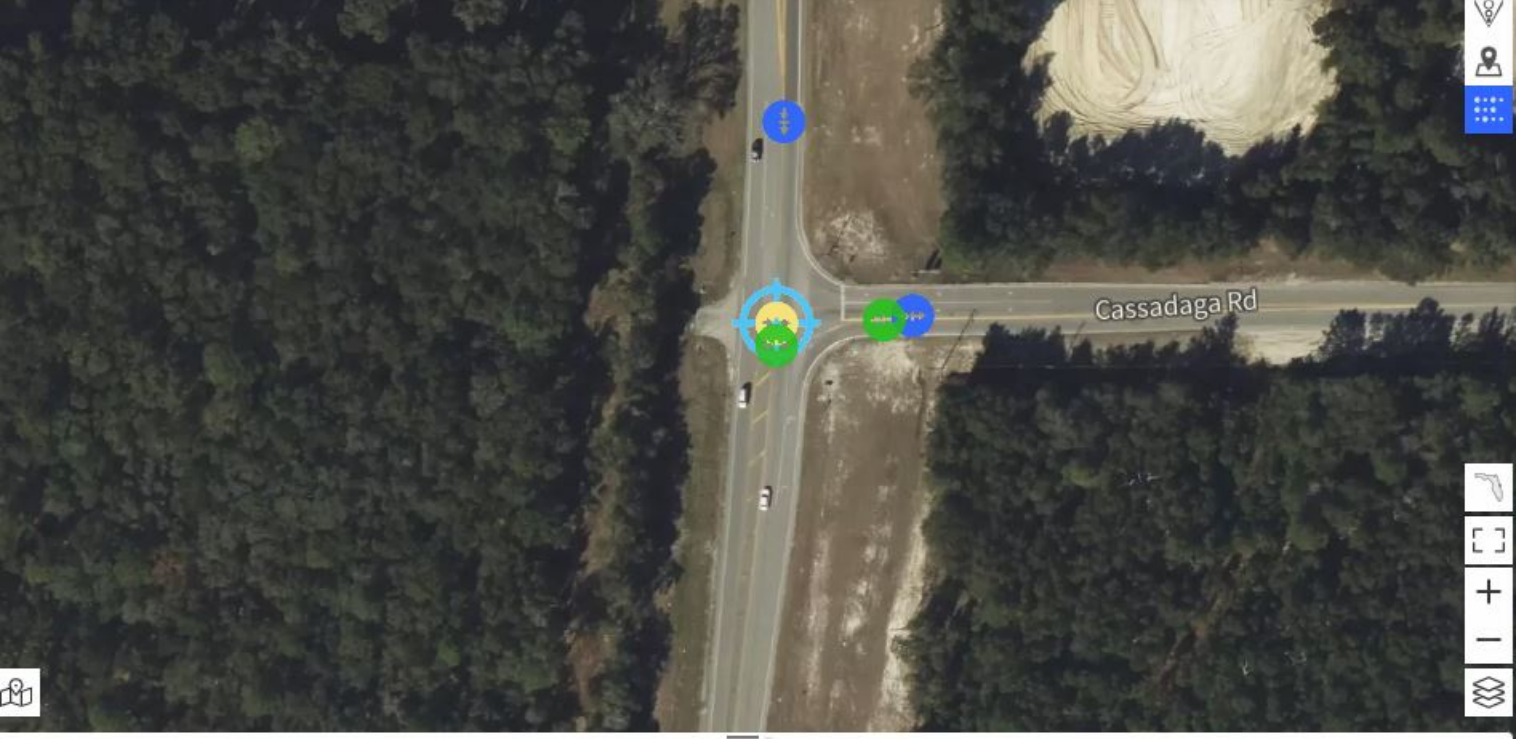
MLK Beltway and Cassadaga Road

REPORT_NUMBER	CRASH_YEAR	TOTAL_NUMBER_OF_VEHICLES	TOTAL_NUMBER_OF_PERSONS	COUNTY_CODE	CITY_CODE	COUNTY_NAME	CITY_NAME	RURAL_OR_URBAN	ON_STREET_ROAD_HIGHWAY	DIRECTION_FROM_INTERSECTION	FROM_INTERSECTION_OF	TYPE_OF_INTERSECTION	PHOTOS_TAKEN	LIGHT_CONDITION	WEATHER_CONDITION	ROAD_SURFACE_CONDITION	SCHOOL_BUS_RELATED_CODE	TYPE_OF_IMPACT	FIRST_HARMFUL_EVENT	LOCATION	INTERCHANGE_FLAG	JUNCTION_FLAG	ROAD_CIRCUMSTANCES_1	ROAD_CIRCUMSTANCES_2	ROAD_CIRCUMSTANCES_3	ENVIRONMENT_CIRCUMSTANCES_1	ENVIRONMENT_CIRCUMSTANCES_2
88074562	2019	2	1	8	36	Volusia	Deland	Urban	CASSADAGA ROAD	East	COUNTY ROAD 4101	T-Intersect	N	Daylight	Clear	Dry	N	Front to Rear	Motor Vehicle in Transport	On Roadwa	N	Intersectio	None			None	
88074557	2019	2	2	8	36	Volusia	Deland	Urban	CASSADAGA ROAD	East	COUNTY ROAD 4101	T-Intersect	N	Daylight	Clear	Dry	N	Front to Rear	Motor Vehicle in Transport	On Roadwa	N	Intersectio	None			None	
87240604	2019	3	3	8	48	Volusia	Orange Cit	Rural	COUNTY ROAD 4101 (	North	CASSADAGA RD	Not at Inte	N	Daylight	Clear	Dry	N	Front to Rear	Motor Vehicle in Transport	On Roadwa	N	Non-Juncti	None			None	
24974479	2022	2	2	8	36	Volusia	Deland	Rural	COUNTY ROAD 4101 (DR. MLK BE		CASSADAGA ROAD	Not at Inte	N	Daylight	Clear	Dry	N	Front to Rear	Motor Vehicle in Transport	On Roadwa	N	Non-Juncti	Work Zone			None	
25074130	2023	2	4	8	0	Volusia	Unincorpo	Rural	COUNTY ROAD 4101	South	CASSADAGA ROAD	Not at Inte	N	Dark - Ligh	Clear	Wet	N	Front to Rear	Motor Vehicle in Transport	On Roadwa	N	Non-Juncti	None			None	

ENVIRONMENT_CIRCUMSTANCES_3	WORK_ZONE_RELATED_FLAG	CRASH_IN_WORK_ZONE	TYPE_OF_WORK_ZONE	WORKERS_PRESENT	LAW_ENFORCEMENT_PRESENT	INVESTIGATOR_RANK	INVESTIGATING_AGENCY_NAME	INVESTIGATING_AGENCY_TYPE	LOAD_DATE	CODEABLE	S4_CRASH_TYPE	S4_CRASH_TYPE_SIMPLIFIED	S4_CRASH_SEVERITY_DETAIL	S4_DAY_OR_NIGHT	S4_IS_AGGRESSIVE_DRIVING	S4_IS_ALCOHOL_RELATED	S4_IS_CMV_INVOLVED	S4_IS_DISTRACTED	S4_IS_DRUG_RELATED	S4_IS_HIT_AND_RUN	S4_IS_INTERSECTION_RELATED	S4_IS_LANE_DEPARTURE_RELATED	S4_IS_SPEEDING_RELATED	S4_NONE_INJURY_COUNT	S4_INJURY_COUNT	S4_POSSIBLE_INJURY_COUNT	S4_NON_INCAPACITATING_INJURY_COUNT	S4_INCAPACITATING_INJURY_COUNT	S4_FATALITY_COUNT	S4_FATALITY_WITHIN_30_DAYS_COUNT
	N					TROOPER	Florida Hig	Florida Hig	########	Y	Rear End	Rear End	No Injury	DAY	N	N	N	N	N	Y	Y	N	N	1	0	0	0	0	0	0
	N					TROOPER	Florida Hig	Florida Hig	########	Y	Rear End	Rear End	Possible Injury	DAY	N	N	N	Y	N	N	Y	N	N	1	1	1	0	0	0	0
	N					SERGEANT	Florida Hig	Florida Hig	########	Y	Rear End	Rear End	Possible Injury	DAY	N	N	N	N	N	N	N	N	N	1	2	2	0	0	0	0
	Y	Activity Are	Work on Sh	Y	N	TPR	Florida Hig	Florida Hig	########	Y	Rear End	Rear End	Non-Incapacitating I	DAY	N	N	N	N	N	N	N	N	N	1	1	0	1	0	0	0
	N					TPR	Florida Hig	Florida Hig	########	Y	Rear End	Rear End	No Injury	NIGHT	N	N	N	Y	N	N	N	N	N	4	0	0	0	0	0	0

S4_NON_TRAFFIC_FATALITY_COUNT	S4_TRAILER_COUNT	S4_MOTORCYCLE_COUNT	S4_MOPED_COUNT	S4_NON_MOTORIST_COUNT	S4_BICYCLIST_COUNT	S4_PEDESTRIAN_COUNT	S4_DRIVER_COUNT	S4_AGING_DRIVER_COUNT	S4_TEENAGER_DRIVER_COUNT	S4_PASSENGER_COUNT	S4_UNRESTRAINED_COUNT	S4_UNRESTRAINED_INJURY_COUNT	S4_UNRESTRAINED_INCAPACITATING_INJURY_COUNT	S4_UNRESTRAINED_FATALITY_COUNT	S4_MOTORCYCLIST_COUNT	S4_MOTORCYCLIST_INCAPACITATING_INJURY_COUNT	S4_MOTORCYCLIST_FATALITY_COUNT	S4_IS_PEDESTRIAN_INVOLVED	S4_PEDESTRIAN_INCAPACITATING_INJURY_COUNT	S4_PEDESTRIAN_FATALITY_COUNT	S4_IS_BICYCLIST_INVOLVED	S4_BICYCLIST_INCAPACITATING_INJURY_COUNT	S4_BICYCLIST_FATALITY_COUNT	S4_CITATION_COUNT	S4_CITATION_AMOUNT	S4_PROPERTY_DAMAGE_COUNT	S4_PROPERTY_DAMAGE_AMOUNT	S4_VEHICLE_DAMAGE_COUNT	S4_VEHICLE_DAMAGE_AMOUNT	S4_TOTAL_DAMAGE_AMOUNT	S4_TRANSPORT_BY_EMS_COUNT
0	0	0	0	0	0	0	1	0	0	0	0	0	0	0				N	0	0	N	0	0	0	0	0	0	1	1000	1000	0
0	0	0	0	0	0	0	2	1	0	0	0	0	0	0				N	0	0	N	0	0	1	0	0	0	2	8000	8000	0
0	0	0	0	0	0	0	3	0	0	0	0	0	0	0				N	0	0	N	0	0	1	0	0	0	3	21500	21500	0
0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	N	0	0	N	0	0	2	0	0	0	2	2000	2000	1
0	0	0	0	0	0	0	2	0	1	2	0	0	0	0	0	0	0	N	0	0	N	0	0	1	0	0	0	2	15000	15000	0

S4_TRANSPORT_BY_LAW_ENFORCEMENT_COUNT	S4_TRANSPORT_BY_OTHER_COUNT	S4_GEOLOCATION_STATUS	S4_PRELIMINARY_GEOLOCATION_STATUS	S4_X	S4_Y	S4_LATITUDE	S4_LONGITUDE
0	0	Preliminary	Editor Map	474153.9	3204263	28.96614	-81.2653
0	0	Preliminary	Editor Map	474160.4	3204264	28.96615	-81.2652
0	0	Preliminary	Editor Map	474131	3204309	28.96655	-81.2655
0	0	Preliminary	Computer	474129.2	3204263	28.96613	-81.2655
0	0	Preliminary	Editor Map	474129.2	3204258	28.96609	-81.2655



Injury Summary | Common Attributes | FDOT Attributes

	Total	Fatal Crashes	Serious Injury Cras...	Injury Crashes	Property Damage ...
Crashes	5	0	0	3	2
Fatalities (within 30 Days)	0	0	0	0	0
Incapacitating Injuries	0	0	0	0	0
Non-Incapacitating Injuries	1	0	0	1	0
Possible Injuries	3	0	0	3	0
No Injuries	8	0	0	3	5
Non-Traffic Fatalities	0	0	0	0	0

SR 472 & S Blue Lake Avenue

REPORT_NUMBER	CRASH_YEAR	LIGHT_CONDITION	WEATHER_CONDITION	ROAD_SURFACE_CONDITION	S4_CRASH_TYPE_SIMPLIFIED	S4_CRASH_SEVERITY_DETAIL	S4_DAY_OR_NIGHT	
88091687	2019	Daylight	Clear	Dry	Rear End	Incapacitating Injury	DAY	
24654910	2022	Dark - Not Lighted	Clear	Dry	Sideswipe	No Injury	NIGHT	



Appendix S
Volusia County Master Proportionate Share Table and Relevant Information

Master Prop Fair Share approved costs & formulas

12/10/2024

Updated 10/23. FDOT Cost Per Mile Reports were calculated 10-22 therefore the 9-23 CPI for Transportation Services of 9.1% is applied. If there is already a county project with estimates based on itemized estimated costs then those amounts are used. Bridge estimates are $300/sf.

Roadway/ Intersection	Segment	Length	Improvement	Cost per Lane Mile (FDOT 11/22)	Additional Cost	Improvement Cost	Design + CEI (25%)	ROW/Mitigation/ Other Costs	2022 Total Improvement Cost	CPI - Trans Svcs (9.2%)	2023-24 Total Improvement Cost	Existing Capacity	Improved Capacity	Capacity Increase	Project Trips	Project Percentage	Prop Share	Prop Share
Graves Ave	Leavitt Ave to VMP	1.18	Widen 2 to 4 lanes, urban	$4,717,890		$5,567,110	$1,391,778		$6,958,888	$640,218	$7,599,105.42	1,620	3,410	1,790		0.00%	$0.00	updated LREs in PFS spreadsheet
	VMP to Kentucky Ave	0.33	Widen 2 to 4 lanes, urban	$4,717,890	$300,000	$1,856,904	$464,226		$2,321,130	$213,544	$2,534,673.55	1,620	3,410	1,790	15	0.84%	$21,240.28	updated LREs in PFS spreadsheet
	Kentucky Ave to 4L at overpass	0.38	Widen 2 to 4 lanes, rural	$3,250,379	$12,050,000	$13,285,144	$3,321,286		$16,606,430	$1,527,792	$18,134,221.59	1,620	3,410	1,790	5	0.28%	$50,654.25	detailed est
Howland Blvd	Forest Edge to Wolf Pack Run	0.25	Widen 4 to 6 lanes, urban	$4,723,934	$300,000	$1,480,984	$370,246		$1,851,229	$170,313	$2,021,542.48	3,410	5,120	1,710		0.00%	$0.00	detailed est
	I-4/SR 472 to Wolf Pack Run	0.40	Widen 4 to 6 lanes, urban	$4,723,934	$480,000	$2,369,574	$592,393		$2,961,967	$272,501	$3,234,467.96	3,410	5,120	1,710	14	0.82%	$26,481.02	detailed est
	Wolf Pack Run to Catalina Blvd	1.20	Widen 4 to 6 lanes, urban	$4,723,934	$1,870,000	$7,538,721	$1,884,680		$9,423,401	$866,953	$10,290,353.89	3,410	5,120	1,710		0.00%	$0.00	detailed est
Kentucky Ave	Graves Ave to SR 472	0.80	Widen 2 to 4 lanes, rural	$3,250,379	$1,715,000	$4,315,303	$1,078,826		$5,394,129	$496,260	$5,890,388.87	1,540	3,410	1,870	20	1.07%	$62,998.81	detailed est
Orange Camp Road	US 17-92 to MLK	2.15	Widen 2 to 4 lanes, urban	Sales Surtax					$19,080,000	$1,755,360	$20,835,360.00							Sales Surtax
Broken out	US 17-92 to Princeton	0.55	Widen 2 to 4 lanes, urban	$8,874,418					$4,880,930	$449,046	$5,329,975.81	1,270	3,410	2,140	3	0.14%	$7,471.93	Sales Surtax
Broken out	Princeton to Blue Lake	1.05	Widen 2 to 4 lanes, urban	$8,874,418					$0	$0	$0.00	1,540	3,410	1,870		0.00%		Sales Surtax
Broken out	Blue Lake to MLK	0.55	Widen 2 to 4 lanes, urban	$8,874,418					$4,880,930	$449,046	$5,329,975.45	1,540	3,410	1,870		0.00%	$0.00	Sales Surtax
Veterans Memorial Pkwy	SR 472 to Graves Ave	1.00	Widen 2 to 4 lanes, rural	Sales Surtax					$15,000,000	$1,380,000	$16,380,000.00	1,620	3,410	1,790		0.00%	$0.00	Sales Surtax
	Graves Ave to Harley Strickland	2.62	Widen 2 to 4 lanes, rural	Sales Surtax					$9,800,000	$901,600	$10,701,600.00							Sales Surtax
Broken out	Parc Hill Driveway to Rhode Island	0.42	Widen 2 to 4 lanes, rural	ARPA					$4,285,000	$394,220	$4,679,220.00	1,540	3,410	1,870		0.00%	$0.00	Aug 2021 ARPA Presentation to CC
Broken out	Harley Strickland Blvd to Rhode Island	1.22	Widen 2 to 4 lanes, rural	ARPA					$12,446,905	$1,145,115	$13,592,020.00	1,540	3,410	1,870	5	0.27%	$36,342.30	Aug 2021 ARPA Presentation to CC
	Rhode Island to Graves Avenue	1.40	Widen 2 to 4 lanes, rural	ARPA					$7,358,000	$676,936	$8,034,936.00	1,620	3,410	1,790		0.00%	$0.00	Aug 2021 ARPA Presentation to CC
West Volusia Beltway (Kepler Road/MLK)	SR 472 to US 92	7.93	Widen 2 to 4 lanes, rural	Sales Surtax					$44,550,000	$4,098,600	$48,648,600.00							Sales Surtax
Broken out	US 92 to Minnesota Ave	1.90	Widen 2 to 4 lanes, rural	$6,197,772		$11,775,767			$11,775,767	$1,083,371	$12,859,137.35	1,540	3,410	1,870		0.00%	$0.00	Sales Surtax
Broken out	Minnesota Ave to SR 44	0.76	Widen 2 to 4 lanes, rural	$6,197,772		$4,710,307			$4,710,307	$433,348	$5,143,654.94	1,540	3,410	1,870		0.00%	$0.00	Sales Surtax
Broken out	SR 44 to E Euclid Ave	0.75	Widen 2 to 4 lanes, rural	$6,197,772		$1,375.53			$1,376	$127	$1,502.08	1,540	3,410	1,870		0.00%	$0.00	Sales Surtax
Broken out	E Euclid Ave to Beresford Ave	0.75	Widen 2 to 4 lanes, rural	$6,197,772		$3,272.80			$3,273	$301	$3,573.90	1,540	3,410	1,870		0.00%	$0.00	Sales Surtax
Broken out	Beresford Ave to Taylor Rd	1.05	Widen 2 to 4 lanes, rural	$6,197,772		$6,507,661			$6,507,661	$598,705	$7,106,365.38	1,540	3,410	1,870		0.00%	$0.00	Sales Surtax
Broken out	Taylor Rd to Orange Camp Rd	1.04	Widen 2 to 4 lanes, rural	$6,197,772		$6,445,683			$6,445,683	$593,003	$7,038,685.70	1,540	3,410	1,870		0.00%	$0.00	Sales Surtax
Broken out	Orange Camp Rd to Cassadaga Rd	1.28	Widen 2 to 4 lanes, rural	$6,197,772		$7,933,148			$7,933,148	$729,850	$8,662,997.79	1,540	3,410	1,870		0.00%	$0.00	Sales Surtax
Broken out	Cassadaga Rd to SR 472	0.40	Widen 2 to 4 lanes, rural	$6,197,772		$2,479,109			$2,479,109	$228,078	$2,707,186.81	1,540	3,410	1,870	15	0.80%	$21,715.40	Sales Surtax

Segment

	Yellow highlighted segments were available in the Master PropShare and used directly for PropShare calculations.
	Orange highlighted segments were estimated based on data from similar road segments, adjusted for length differences, for PropShare calculations.
	Gray Highlights represent the segments whose data were used to estimate Orange Highlight segments.

Model	Cost Per Mile	Report
Rural		
New Construction Undivided 2 Lane Rural Road with 5' Paved Shoulders: R01	$4,054,799.93	Report
New Construction Undivided 3 Lane Rural Road with 5' Paved Shoulders, Center Turn Lane: R02	$4,864,537.52	Report
New Construction Undivided 4 Lane Rural Road with 5' Paved Shoulders: R03	$5,706,368.51	Report
New Construction Divided 4 Lane Rural Road with 2' Paved Shoulders Inside and 5' Paved Shoulders Outside: R04	$7,951,226.49	Report
New Construction Divided 4 Lane Rural Interstate with Paved Shoulders 10' Outside and 4' Inside: R05	$10,097,170.21	Report
New Construction Undivided 5 Lane Rural Road with 5' Paved Shoulders, Center Turn Lane: R06	$6,767,484.45	Report
New Construction Divided 6 Lane Rural Road with 5' Paved Shoulders Inside and Out: R07	$9,608,322.81	Report
New Construction Divided 6 Lane Rural Interstate with 10' Paved Shoulders Inside and Out: R08	$11,768,829.26	Report
New Construction Extra Cost for 1 Single Additional Lane on Rural Arterial: R09	$869,856.58	Report
New Construction Extra Cost for 1 Single Additional Lane on a Rural Interstate: R10	$1,017,259.79	Report
Mill and Resurface 2 Lane Rural Road with 5' Paved Shoulders: R11	$725,185.30	Report
Mill and Resurface 3 Lane Rural Road with 5' Paved Shoulders and Center Turn Lane: R12	$1,006,207.20	Report
Mill and Resurface 4 Lane Rural Road with 5' Paved Shoulders: R13	$1,564,875.63	Report
Mill and Resurface 4 Lane Divided Rural Arterial with 5' Outside Shoulders and 2' Inside: R14	$1,650,420.86	Report
Mill and Resurface 4 Lane Divided Rural Interstate with Paved Shoulders 10' Outside and 4' Inside: R15	$1,900,930.32	Report
Mill and Resurface 5 Lane Rural Road with 5' Paved Shoulders and Center Turn Lane: R16	$1,888,819.25	Report
Mill and Resurface 6 Lane Divided Rural Arterial with 5' Paved Shoulders Inside and Out: R17	$2,353,319.54	Report
Mill and Resurface 6 Lane Divided Rural Interstate with 10' Paved Shoulders Inside and Out: R18	$2,712,032.04	Report
Mill and Resurface 1 Additional Lane Rural Interstate: R19	$446,396.49	Report
Mill and Resurface 1 Additional Lane Rural Arterial: R20	$373,714.37	Report
Widen Existing 2 Lane Arterial to 4 Lanes Undivided; Add 1 Lane to Each Side; 5' Paved Shoulders: R21	$4,225,423.96	Report
Widen Existing 2 Lane Arterial to 4 Lane Divided; Resurface Existing 2 Lanes; 5' Paved Shoulders Inside and Out: R22	$5,088,776.22	Report
Widen Existing 4 Lane Divided Arterial to 6 Lane Divided; Resurface Existing 4 Lanes; 5' Paved Shoulders Inside and Out: R23	$4,836,960.89	Report
Widen 4 Lane Interstate to 6 Lanes (In Median); Mill and Resurface Existing; 10' Paved Shoulders Inside and Out: R24	$7,113,435.51	Report
Widen 4 Lane Interstate to 6 Lanes (Outside); Mill and Resurface Existing; 10' Shoulders Outside; Widen Existing 4' Inside Shoulders to 10': R25	$6,668,747.14	Report
Widen Existing 6 Lane Divided Arterial to 8 Lane Divided; Resurface Existing 6 Lanes; 5' Paved Shoulders Inside and Out: R26	$5,295,850.61	Report
Widen 6 Lane Interstate to 8 Lanes (in Median); Mill and Resurface Existing; 10' Paved Shoulders Inside and Out: R27	$7,831,556.14	Report
Widen Divided Rural 4-Lane to Allow for Left Turn Lane, 300': R28	$270,409.62	Report
Widen Divided Rural 4-Lane for Right Turn Lane, 300': R29	$266,903.26	Report

PLANNING DIVISION STAFF REPORT
TO
THE CITY OF DELAND PLANNING BOARD

September 10, 2025

A. **APPLICATION NO.:** Z25-024 (Canopy Preserve Rezoning)
APPLICANT: Mr. Mark Watts, Cobb & Cole, P.A.
OWNER: Pulte Home Company, LLC
STAFF PLANNER: Chris Carson, AICP, Senior Planner
REQUEST: Change of zoning for ±39.24 acres from Volusia County Southwest Activity Center Community (SWR) and Volusia County Southwest Activity Center Commerce (SWC) to Canopy Preserve PD (Planned Development)

B. **APPLICABLE REGULATIONS:**

Article IV **OVERLAY AND FLOATING ZONES**
Sec. 33-32 – Planned Development District.

Article XII **ADMINISTRATION AND ENFORCEMENT**
Sec. 33-135 – Procedure for text amendments & rezoning.

C. **SITE FACTORS:**

PARCEL NUMBER: 800100000026
LOCATION: North of SR 472 and east of S. Blue Lake Ave.
SIZE OF PROPERTY: ±39.24 acres

D. **LAND USE DESIGNATION & ZONING OF SUBJECT PROPERTY:**

Future Land Use: Volusia County: Southwest Activity Center Community (SWAC Community), Southwest Activity Center Commerce (SWAC Commerce)
Existing Zoning: Volusia County: Southwest Activity Center Community (SWR), Southwest Activity Center Commerce (SWC)
Existing Use: Vacant/ Undeveloped

E. **SURROUNDING LAND USE & ZONING:**

	LAND USE	ZONING
North:	New Community Development (NCD), VC: Urban Medium Intensity (UMI)	Victoria Park PD, VC: R-4
South:	VC: SWAC Commerce	VC: RFPUD
East:	VC: SWAC Community, VC: SWAC Commerce	VC: Integra Dunes RPUD
West:	VC: SWAC Community, VC: SWAC Commerce, VC: Industrial	VC: I-1 Light Industrial, VC: SWR, VC: SWC

F. **BACKGROUND:** The ± 39.24 acre subject property is located in unincorporated Volusia County with Volusia County zoning designations of Southwest Activity Center Community (SWR) and Southwest Activity Center Commerce (SWC).

The property's Volusia County future land uses are Southwest Activity Center Community (SWAC Community) and Southwest Activity Center Commerce (SWAC Commerce).

The applicant has been working with the County to construct a subdivision with a combination of single-family homes and townhomes since 2021. The project was initially put on hold because of a conflict between the minimum density requirements of the County's Comprehensive Plan and the dimensional requirements for single-family residences in the Southwest Activity Center zoning designation. The Southwest Activity Center was originally visioned as a major employment and commerce center near the I-4 interchange with a variety of housing choices to support the employment base. To spur economic development, and to resolve the conflicts between the Comprehensive Plan and the Zoning, County staff modified the SWR and SWC zoning designations. The Ordinance was approved in 2023.

After modifications to the zoning were approved, the applicant proceeded with plat and construction plan review for the subdivision. During the review period, the City and County modified the City's Utility Service Area (USA) boundary which placed the subject property within the limits of the City's USA.

The applicant contacted City staff with a desire to incorporate into the City limits for future consistency. To avoid further project delays, the applicant continued with plat approval, while concurrently submitting applications for incorporation into the City. The application for rezoning is accompanied by a request for annexation (AN25-026) and a request for a small-scale future land use map amendment (SMLU25-025).

During the review of those applications, the applicant received County approval to begin site and infrastructure work to service the development. That construction activity is currently ongoing. The property was partially wooded and undeveloped. It did not appear to contain any wetlands and does not lie within the 100-year flood zone.

If the requests are approved, the County will continue to monitor and inspect all improvements required by the development order. Prior to any vertical construction, the City will inspect access and utilities for life safety. A site plan will be required for the community amenity center. Building permits for the individual lots will be administered through the City.

G. **ANALYSIS:** Per Sec. 33-32 of the Land Development Regulations (LDR), the Planned Development (PD) District is intended to provide unique zoning districts which are not provided for or allowed in conventional zoning districts. In return for flexibility in site design and development, PDs are expected to include exceptional design that preserves critical environmental resources; provides above-average open space and recreational amenities, and ensures compatibility with surrounding land uses.

The proposed PD includes a mixture of housing types with a maximum of 91 single family units and 112 townhome (multi-family) units. The low density residential future land use allows a maximum density of 5.8 dwelling units per acre. The PD meets the density allowed by the future land use by proposing 5.17 dwelling units per acre. The project includes 21 % common open space and park amenities by grouping housing types. Development for the property shall rely upon the standards set forth below as identified on the Planned Development Plan.

SITE DATA	R-1B	SINGLE-FAMILY	TOWNHOMES
Unit count (max)		91	112
Overall size		±39.24 ACRES	
Density	5.81	5.17 DU/ACRE	
Maximum Height	35 ft.	35 ft.	35 ft.
Maximum impervious	45 %	65 %	70 % Overall, 85 % per lot
Maximum building length			160 ft.
Minimum lot width	75 ft.	50 ft.	20 ft.
Minimum floor area	900 sq. ft.	1,662 sq. ft.	1,552 sq. ft.
Minimum lot area	7,500 sq. ft.	6,250 sq. ft.	2,200 sq. ft.
Setbacks	Front: 30 ft. Rear: 25 ft. Side yard: 10 ft.	Front: 25 ft. Garage: 25 ft. Rear: 20 ft. Side yard: 5 ft.	Front: 25 ft. Garage: 25 ft. Street: 10 ft. Rear: 15 ft. Side yard: 0 ft.
Minimum building separation		10 ft.	50 ft. between any combination of fronts or rears of adjacent buildings. 25 ft. between any other combinations.

The development includes landscape designs that will serve environmentally friendly functions including, but not limited to, cooling, privacy screening, shade, aesthetics, wildlife habitat, runoff pollution prevention, and directing traffic flow onto and within the community, such as low impact development standards.

As required by Section 33-57.07(b) of the LDRs, a minimum of 15% or 5.94 acres of the subject property will be dedicated as Tree Protection Area (TPA). Additionally, ten percent of the property, or four acres is being reserved as natural vegetation retention areas, where all existing vegetation will remain on that area of the site.

The perimeter landscape buffers are outlined in the table below which compares the required buffers as required by Section 33-92 of the LDR, to what the applicant is providing in the PD. As seen in the chart, the buffer widths provided are consistent with the minimum width requirements. The PD proposes that each buffer will provide 4 canopy trees, 4 understory trees, and 27 shrubs per 100 linear feet, regardless of width.

LANDSCAPE BUFFERS		
	REQUIRED	**PROVIDED**
NORTH*	25’ TYPE B	25’ MODIFIED TYPE B
EAST	N/A	N/A
SOUTH (SINGLE FAMILY)	30’ TYPE D	30’ MODIFIED TYPE B
SOUTH (TOWNHOMES)	15’ TYPE B	15’ MODIFIED Type
WEST	30’ TYPE D	30’ TYPE D
	*25’ BETWEEN SUBDIVISIONS	

According to the approved plat, the project is exceeding the proposed PD requirements by providing a 30' landscape buffer to the north, a 35' landscape buffer to the east, a landscape buffer that varies between 30' to over 100' to the south, and a 40' landscape buffer to the west. The buffers meet the code intent of serving as a buffer between the existing neighborhood to the north, industrial uses to the west, and multi-family to the east.

The proposal complies with the city's Land Development Regulations as well as International Dark Sky standards, designed to reduce light pollution by restricting upward-directed light and avoiding glare.

Each parcel is designed to accommodate no less than two (2) parking spaces via use of two (2) on-parcel driveway and two (2) spaces in an internal garage. The proposal includes an interconnected internal sidewalk system, that connect with sidewalks along S. Blue Lake Ave. and the Cassadaga Road extension.

School Concurrency: A school concurrency letter dated May 20, 2025, was provided, stating that the Volusia County School District has no objections to the proposed development plan.

Traffic Analysis: A Traffic Impact Analysis from Traffic & Mobility Consultants (TMC) dated October 23, 2024, states that the proposed development is projected to generate 1,728 new daily trips of which 121 trips occur during the AM peak hour and 154 trips occur during the PM peak hour. A number of improvements were identified based on the project's impacts within the study area, including the extension of Cassadaga Road and a number of turn lane improvements. The impacts are being mitigated through the applicant's dedication of the right of way required to extend Cassadaga Road from MLK Boulevard to S. Blue Lake Avenue and the construction of the Cassadaga Roadway and intersection improvements.

Stormwater: Per the proposed PD Agreement, the stormwater system was designed to meet the 100-year, 24-hour storm event which will be retained on site. Additionally, the project includes bioswales for stormwater conveyance and native plantings.

H. LAND DEVELOPMENT REGULATIONS:

Sec. 33-32 – Planned Development District of the Land Development Regulations is intended to provide a method for consideration and approval of unique zoning districts for individual Planned Developments (PD) which are not provided for or allowed in the zoning districts otherwise established by this chapter.

The criteria and standards to be met for approval have been reviewed and staff finds the outlined consistencies as outlined below.
The proposed Planned Development rezoning will allow for a mixture of single-family residential and multi-family (townhomes) to be developed, which will promote home ownership opportunities for all residents. Reduced lot sizes promote the utilization of existing natural features and existing landscaping.

Sec. 33-135 – Procedure for text amendments & rezoning of the Land Development Regulations provides the following factors to consider during the review of each application for rezoning or for changes in permitted uses, among the factors to be considered are the following:

1. **Is the proposed rezoning consistent with the Comprehensive Land Use Plan, the land use, zoning pattern and character of the surrounding area?**
   Per the Comprehensive Plan, the PD zoning district is compatible with the LDR future land use designation.

   To the north of the property is the Victoria Park PD, with a maximum density of 2.5 dwelling units per acre. To the east is the Integra Dunes RPUD, with a maximum density of 18 dwelling units per acre. South of the property is currently undeveloped land, which is zoned for a minimum density of 8 dwelling units per acre and a maximum density of 22 dwelling units per acre. West of the property is a combination of industrial and undeveloped land. The undeveloped land has a maximum density of 8 dwelling units per acre to the north and 22 dwelling units per acre to the south.

   The proposed density of 5.17 dwelling units per acre will provide a transition from the lower density residential to the higher density residential and nonresidential uses.

   According to the City's 2050 Vision Plan, the proposal is located in the Urban Core (Category 2), which is where the majority of new growth will take place. It is also located within the City's Utility Service Area boundary. The proposed rezoning is appropriate for the location as it is located along a collector road with existing infrastructure, and serving as a transition between lower density residential and higher density residential, and near employment areas and future commercial development.

   For all of these reasons, the request is consistent and compatible with the Comprehensive Plan, zoning pattern, and character of the surrounding area.

2. **Will the proposed rezoning have an impact upon the environment or natural resources?**
   The project is currently under construction in Volusia County, regardless of the rezoning, therefore the rezoning will not have an impact upon the environment or natural resources. The applicant did minimize environmental or natural resource impacts by providing Low Impact Development (LID) such as all Florida native plantings, runoff pollution prevention, bioswales, and enhanced buffering and natural vegetation retention areas. Additionally, the project went through all proper Florida Fish and Wildlife Conservation Commission (FFWCC) permitting and practices prior to construction.
3. **Will the proposed rezoning have an impact upon the economy of the affected area?**
   The site is currently undeveloped; therefore, the development should have a positive economic impact on the city and the surrounding area. This development could potentially raise overall home values, and support further development of the surrounding area creating additional jobs, shopping, and convenience.
4. **Will the proposed rezoning have an impact upon governmental services?**
   Governmental services such as potable water, reclaimed water, sewer, code enforcement, police, and fire will be provided by the City. The City's Utilities Department provided a Utility Service Agreement (USA) during the preliminary plat review to serve water and sewer. Additionally, the Technical Advisory Committee (TRC) has indicated that there is adequate infrastructure and facilities to service the development, therefore there will be no impact to the level of governmental services.

5. **Are there changes in the circumstances or conditions affecting the area since the original assignment of zoning that will support the proposed zoning?**
   The Southwest Activity Center at the SR 472 interchange was conceived by Volusia County in 1995 as a mixed-use development. The County and the City of Deltona initiated the Areawide Development of Regional Impact (DRI) as an attempt to implement the vision. The City of DeLand later joined this effort after a large area was annexed into the City. After the adoption of the DRI, the City adopted the Southwest Activity Center Local Plan into the Comprehensive Plan. The DRI was abandoned in 2018, however, the City of DeLand adopted goals, objectives, and policies into the Comprehensive Plan to direct future development to meet the intent and vision of the original DRI.

6. **Was there a mistake in the original classification?**
   There were no mistakes in the original classification.

7. **Will the proposed rezoning have any effect upon the use or value of the affected area?**
   The proposed rezoning could have a positive impact upon the surrounding area, as the property would no longer be undeveloped and vacant, and the infusion of new homes could provide additional housing options.

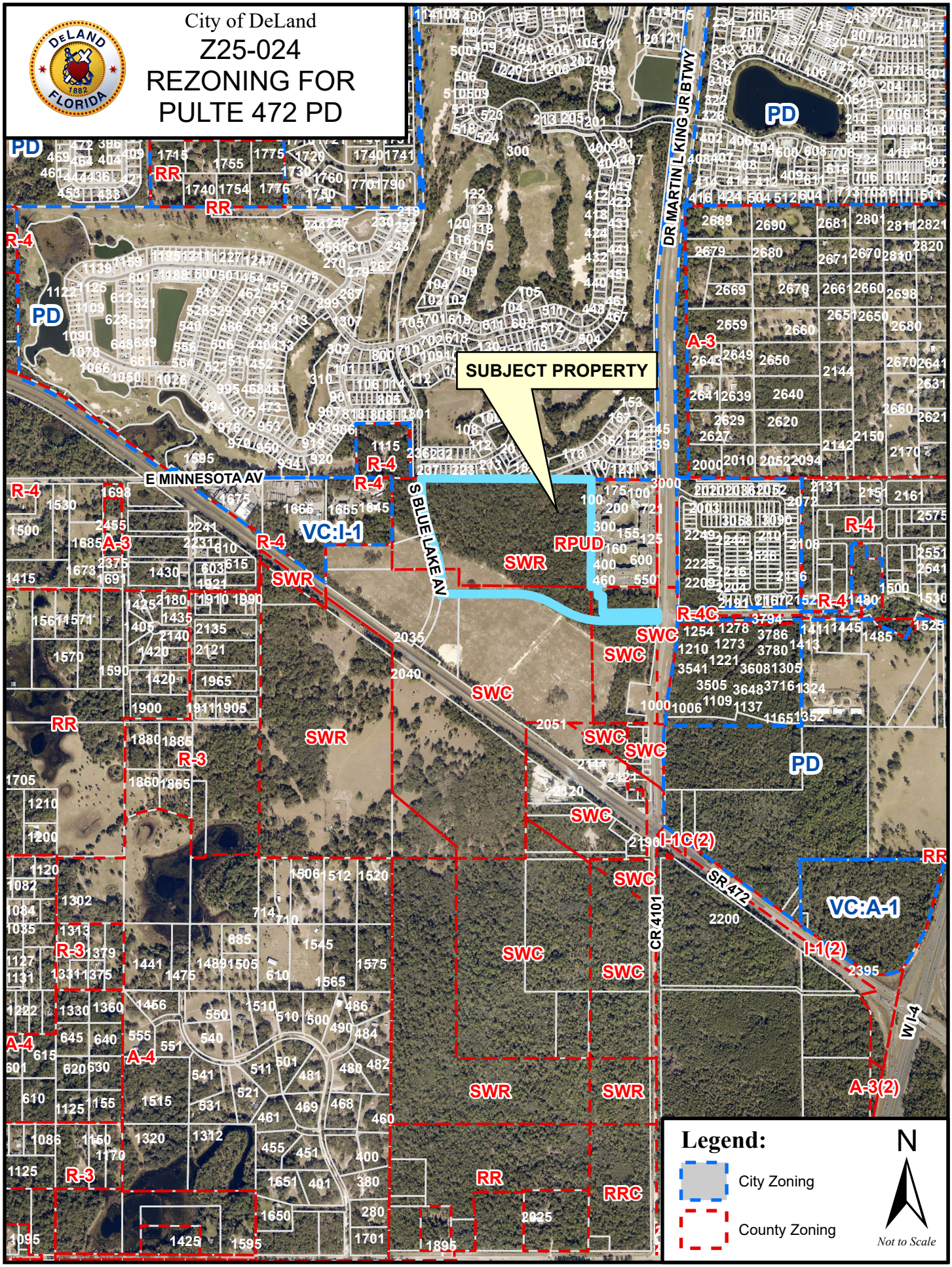
8. **Will the proposed rezoning have an impact upon public health, safety and welfare?**
   There is no indication at this time that the new proposal will create additional impacts upon public health, safety or welfare, as all provided public services have the capacity needed to accommodate the proposed development. This rezoning would be consistent and compatible with the uses of the surrounding area.

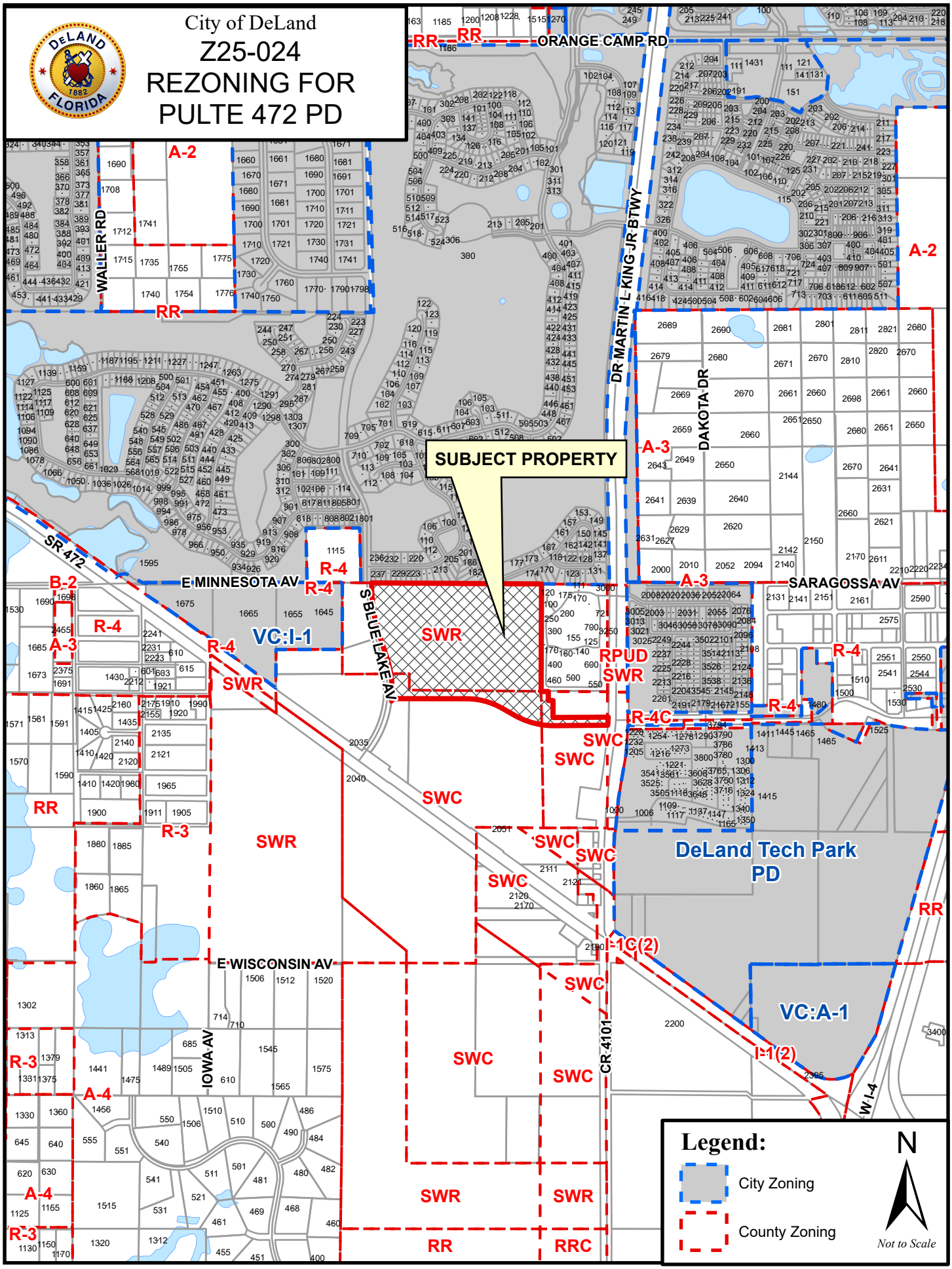
Based on all the findings outlined above, staff finds that proposal meets all criteria and standards for approval of a PD rezoning.

I. **Next Steps:** The request for a rezoning will go before the City Commission on October 6, 2025 for first reading, followed by Volusia Growth Management Commission Review (VGMC). After VGMC review, the request is anticipated to go before City Commission on November 17, 2025 for second reading.

J. **STAFF RECOMMENDATION**: Staff recommends that the Planning Board forward the application to the City Commission with a recommendation of approval for the request to rezone from Volusia County Southwest Activity Center Community (SWR) and Volusia County Southwest Activity Center Commerce (SWC) to Canopy Preserve PD (Planned Development) with one condition of approval as follows:

- The applicant correct the open space area summary of Exhibit B and Exhibit G prior to first reading of the item at City Commission.


City of DeLand
Z25-024
REZONING FOR
PULTE 472 PD
SUBJECT PROPERTY
E MINNESOTA AV
S BLUE LAKE AV
DR MARTIN L KING JR BTWY
SR 472
CR 4101
I-4
PD
RR
R-4
R-3
A-3
A-4
A-3(2)
VC:I-1
VC:A-1
RPUD
R-4C
I-1C(2)
I-1(2)
SWR
SWC
RRC
Legend:
City Zoning
County Zoning
N
Not to Scale


City of DeLand
Z25-024
REZONING FOR
PULTE 472 PD
SUBJECT PROPERTY
ORANGE CAMP RD
WALLER RD
DR MARTIN L KING JR BTWY
DAKOTA DR
SR 472
E MINNESOTA AV
SARAGOSSA AV
S BLUE LAKE AV
E WISCONSIN AV
IOWA AV
CR 4101
I-4
DeLand Tech Park
PD
A-2
A-3
A-4
B-2
R-3
R-4
RR
RRC
VC:I-1
VC:A-1
I-1(2)
I-1C(2)
R-4C
RPUD
SWR
SWC
Legend:
City Zoning
County Zoning
N
Not to Scale

PLANNED DEVELOPMENT AGREEMENT

THE CITY COMMISSION OF THE

CITY OF DELAND, FLORIDA

Case # Z25-024

Application of

PULTE HOME COMPANY, LLC

ORDINANCE # 2025-____

ORDER AND RESOLUTION

GRANTING A REQUEST FOR CHANGE OF ZONING

FROM VOLUSIA COUNTY SWR AND SWC TO CANOPY PRESERVE PD

The application of Pulte Home Company, LLC, hereinafter, "Applicant", for rezoning was heard by and before the City Commission, DeLand Florida, on _____, 2025, based upon the verified Application and other supporting documents, maps, charts, overlays, other evidence and instruments; the advice, report, and recommendations of the Community Development Department and other Departments and agencies of the City of DeLand, Florida; and the testimony adduced and evidence received at the Public Hearing on this Application by the Planning Board on _____, and otherwise being fully advised, the City Commission does hereby find and determine as follows:

GENERAL FINDINGS

A. That the application of Pulte Home Company, LLC was duly and properly filed herein on February 12, 2025 as required by law.

B. That all fees and costs which are by law, regulation, or Ordinance required to be borne and paid by the applicant have been paid.

C. That the Applicant is the owner of a 39.24 +/- acre parcel of land which is the subject of this Development Agreement and which land is situated in DeLand, Florida and more particularly described in the attached Exhibit "A" (hereinafter sometimes referred to as the "Property").

D. That the Applicant has complied with the Planned Development Plan provision as required by Land Development Regulations of the Code of Ordinances of the City of DeLand.

E. That the Applicant has complied with the "Due Public Notice" requirements of the City Commission, Land Development Regulations of the Code of Ordinances of the City of DeLand.

F. That the legal owner of the property, Pulte Home Company, LLC, agrees with the provisions of the Development Agreement, agrees to be bound by the terms hereof and is a party to this Development Agreement.

FINDINGS REGARDING REZONING

A. That the Applicant has applied for a change of zoning from the present zoning classification of the parcels described in Exhibit "A" from Volusia County Southwest Activity Center Community (SWR) AND Southwest Activity Center Commerce (SWC) to City of DeLand CANOPY PRESERVE Planned Development (PD). The Property has a future land use designation of Low Density Residential.

B. That the said rezoning to a PD is consistent with both the City of DeLand Comprehensive Plan and the intent and purpose of the City of DeLand Development Regulations contained in Chapter 33 of the Code of Ordinances of the City of DeLand (the "LDR") and does promote the public health, safety, morals, general welfare and orderly growth of the area affected by the rezoning request.

NOW, THEREFORE, BE IT RESOLVED AND ORDERED BY THE CITY OF DELAND, FLORIDA, IN OPEN MEETING DULY ASSEMBLED IN THE CITY COMMISSION CHAMBERS, 120 SOUTH FLORIDA AVENUE, DELAND, FLORIDA, THIS _____ DAY OF _____, 2025, AS FOLLOWS:

A. That the Application of Pulte Home Company, LLC, a Florida limited liability company, for the rezoning of the subject parcel is hereby granted.

B. That the zoning classification of the subject parcels described in Exhibit "A" attached hereto is hereby amended to CANOPY PRESERVE PD as described in the Land Development Regulations.

C. That the Official Zoning Map of the City of DeLand, is hereby amended to show the rezoning of said parcels to CANOPY PRESERVE PD.

D. That the provisions of the "Development Agreement" as hereinafter set forth is consistent with the LDR and with respect to any conflict between the LDR and the Development Agreement, the provisions of the Development Agreement shall govern. The LDR shall govern with respect to any matter not covered by the Development Agreement. The City of DeLand will ensure overall compliance with the Development Agreement.

E. Unless otherwise provided for herein the Development Agreement, the Land Development Regulations shall apply to the PD.

F. Except as otherwise stated herein, nothing in the Development Agreement is intended to abridge the requirements of the Land Development Regulations and any other City Ordinances.

DEVELOPMENT AGREEMENT

A. Development Concept. The intent of this Development Agreement is to allow for the continued development of the Property as a residential subdivision according to that certain Ford 472 Preliminary Plat approved by the County of Volusia under application number 2024-S-PPL-0145 prior to the Property being annexed into the City of DeLand. At the time of this Agreement, development of the Property is in process pursuant to the Ford 472 Preliminary Plat approved by the County of Volusia, and the City acknowledges that permitting, inspections and review of the public infrastructure within the Ford 472 Preliminary Plat approved by the County of Volusia is being undertaken by the County of Volusia. The City of DeLand shall be responsible for permitting, inspection and review of vertical construction within the Property in compliance with this Agreement. In addition, the City of DeLand will be responsible for all permitting, inspection and review for any portion of the Property that requires site development and has not received a final development order from the County of Volusia prior to the date on which annexation of the Property into the City is effective.

B. Planned Development Plan. The Planned Development Plan shall consist of this Development Agreement and the Overall Plan prepared by Kelly, Collins & Gentry, Inc. dated August 28, 2025. The Overall Plan is hereby approved and incorporated in this Ordinance by reference as Exhibit "B". The Planned Development Plan shall be filed and retained for public inspection in the Planning Department and it shall constitute a supplement to the Official Zoning Map of the City of DeLand.

C. Amendments. All amendments of the Planned Development Plan shall require the review and recommendation of the Planning Board and action by the City

Commission in the same manner as a rezoning of the Property. No administrative amendments may be authorized.

D. Subdivision Approval. After the Planned Development Plan is recorded, and prior to any vertical construction, except as permitted by Fla. Stat. § 177.073, the Ford 472 Preliminary Plat approved by the County of Volusia plat shall be recorded in the manner required in the City of DeLand Land Development Regulations.

E. Site Plan Approval. Any improvements to a portion of the property other than construction of single-family residences or townhomes, such as amenity center, shall require the review and approval of a final site plan as required by the Land Development Regulations.

F. Unified Ownership. The owner of the Property or its successors or assigns shall maintain unified ownership of all portions of the Property that have not been subjected to a recorded final subdivision plat.

G. Phases of Development. The project will be developed in one phase in accordance with the Ford 472 Preliminary Plat approved by the County of Volusia. Mass-graded areas shall be stabilized with vegetative cover. No open burning shall be permitted. Construction materials and dumpsters shall not be stored on the paved portion of the roadway. No vertical construction materials or combustibles may be stored onsite until the utilities and roads have been inspected and approved by the County of Volusia and such inspections and approvals are reviewed and accepted by the City of DeLand utilities/engineering and fire prevention. No certificate of occupancy may be issued until after recording of the Final Plat and the necessary infrastructure serving the development is installed, approved by the County of Volusia and/or the City, as applicable, and otherwise placed into service.

H. Model Homes and Temporary Sales Offices. A model center consisting of one (1) single-family model home and one (1) townhome building and up to nine (9) single-family units and twenty-four (24) townhome units of the approved lots are authorized to receive building permits and commence construction prior to recording the final plat, and once the annexation, land use, and rezoning applications have been reviewed and approved by the City Commission. Model lot locations are shown on Exhibit "F". Building permits may be issued and construction can commence once the City of DeLand Utilities and Fire Prevention Departments have accepted all County inspections of the utilities infrastructure, roads and that water service sufficient to meet required fire flow is available to the site and site access is available to support emergency vehicles.

I. Land Uses Within the PD. The approximate location and size of land use areas are shown on the Overall Plan, attached hereto as Exhibit "B". The following land uses shall be allowed as permitted principal uses and structures along with their customary accessory uses and structures:

Permitted Uses:

Single-family dwellings

Multiple-family dwellings (townhomes)

Any customary accessory uses or structures associated with single family and multifamily (townhome) dwellings

Clubhouses, parks, walking trails and other neighborhood amenities

Prohibited Uses:

Any use or structure not otherwise permitted herein

J. Development Standards. All development for the property shall rely upon the standards set forth below – to the extent that a provision herein conflicts with the

Approved Subdivision Plat, and the provisions of the City Land Development Regulations zoning classification shall control. The gross maximum density for the Property shall not exceed 5.2 units/acre.

1. Single Family Residential:

a) Minimum Lot Area: 6,250 sq. ft.

b) Minimum Floor Area: 1,662 sq. ft. (under heat & air)

c) Minimum Lot Width: 50 ft.

d) Maximum Building Height: 35 ft.

e) Minimum Building Separation: 10 ft

f) Minimum Setbacks:

i. Side: 5 ft.

ii. Front: 25 ft.

iii. Rear: 20 ft.

iv. Garage: 25 ft.

g) Maximum Impervious Surface Area: 65%

h) Maximum number of single-family units: 91 units

2. Multiple Family (Townhouse) Residential:

a) Minimum Lot Area: 2,200 sq. ft.

b) Minimum Floor Area: 1,552 sq. ft (under heat & air)

c) Minimum Lot Width: 20 ft.

d) Maximum Building Height: 35 ft.

e) Maximum Townhouse Building Length: 160 ft.

f) Minimum Building Separation: 50 feet between fronts or rears of principal buildings and 25 feet between any other combinations of

principal building arrangements.

i. Front: 25 ft.

ii. Rear: 15 ft.

iii. Garage: 25 ft.

g) Maximum Impervious Surface Area: 70% Overall Townhome area
85% Per Townhome lot

h) Maximum number of townhome units: 112 units

3. Accessory Structures. Unless otherwise stated herein, all accessory structures shall meet the development standards of the City of DeLand Land Development Regulations

4. Parking Standards.

1. The Ford 472 Preliminary Plat approved by the County of Volusia shall provide parking at a rate of 2 spaces per SFR unit and 2 spaces per Townhome unit in accordance with the requirements of Sec. 72-286 of the Volusia County Land Development Code. Any future final site plan development order issued after the date on which annexation is effective shall meet the parking requirements of the Land Development Regulations. Default standards requiring ten feet of vehicle separation from any property line shall not apply to internal lot lines. Each parcel shall be designed to accommodate no less than two (2) parking spaces via use of on-lot driveway, which shall be a minimum of eighteen feet (18') wide and two (2) spaces in an internal garage.

2. Parking shown for the amenity center may be modified to provide additional amenity space for residents, so long as pedestrian access is provided, and bicycle parking/bike rack facilities are available for residents.

5. Buffer Standards. The purpose of the buffers is to provide enhanced screening to soften the views from adjacent right of ways and provide an element of privacy for residents. Except as otherwise specifically provided for in this Development Agreement, the perimeter buffers of the development shall at a minimum comply with the landscape buffer width and planting requirements provided for in the City of DeLand Land Development Regulations. As shown on Exhibit "G", the buffers shall be as follows:

LOCATION	TYPE
NORTH	25' Landscape Buffer with: 4 canopy trees per 100 linear feet 4 understory per 100 linear feet 27 shrubs per 100 linear feet
SOUTH	SFR – 30' min. Landscape Buffer MF – 15' min. Landscape Buffer with: 4 canopy trees per 100 linear feet 4 understory per 100 linear feet 27 shrubs per 100 linear feet
EAST	N/A
WEST	30' min. Landscape Buffer with: 4 canopy trees per 100 linear feet 4 understory per 100 linear feet 27 shrubs per 100 linear feet

A six-foot-high continuous visual screen shall also be provided. The screen shall be comprised of tree protection area and landscaping. The approved landscape plans for the Property are attached as Exhibit "C" ("Landscape Plan").

6. Internal Boundaries:

Landscape buffers shall not be required between residential lots and common areas or amenities within the Property.

7. Signage:

a) General Terms: Monument signs shall have a decorative cap, a complimentary masonry base and shall be internally or externally lit. The signage installed for the project will be consistent with the elevations attached as Exhibit "D". The location of the monument signs are generally depicted on the Landscape Plan. Signs may be permitted within the landscape buffers, but not within Tree Protection Areas. Building signs are permitted within amenity areas and shall comply the Land Development Regulations.

8. Open Space. Open space and/or common area shall meet the requirements of the City of DeLand Land Development Regulations except as otherwise expressly provided for in this Development Agreement or depicted on the PD Overall Plan.

9. Tree Protection Area. 15% of the property's total square footage has been designated for tree protection area, compliant with Volusia County's Land Development Regulations and approved by the County. Any future redevelopment shall meet the requirement of the City's LDR's. All planted

trees shall be owned and maintained by the homeowners' association established for the Property and shall be consistent with the approved Landscape Plan. Any damage to infrastructure (streets, sidewalks, driveways, etc.) due to trees shall be the responsibility of the HOA.

10. Compliance. In the event that future development cannot comply with the standards set forth herein, then said entitlements shall be processed through an amendment to this Development Agreement.

11. Architecture. Building architecture shall endeavor to achieve general compatibility with surrounding properties and shall meet the requirements of City of DeLand Land Development Regulations. Architectural elevations for the multifamily (townhome) dwellings include elements to provide for varying roof styles, varying materials and color finishes for the horizontal surfaces, articulation and fenestration. The architectural elevations are and a map showing the building location within the Property by style and color are attached hereto as Exhibit "E" and are hereby approved. The architectural style will include a mixed theme of farmhouse, traditional, Florida mediterranean and coastal styles.

12. Dark Sky Lighting Standards. All lighting shall be downward and of the full cut-off shield variety in which the light source is recessed and shielded in a manner which prohibits upward light overspill into the night sky, except as otherwise permitted by the Land Development Regulations.

K. Environmental Considerations. The development shall comply with the requirements for preservation of environmental resources as set forth in the Land Development Regulations. The development has been laid out in a manner to best

accommodate the existing topography and drainage conditions identified on the Property. All landscaping, including buffers, will comply with the Ford 472 Preliminary Plat approved by the County of Volusia.

L. Sewage Disposal, Potable Water and Reclaimed Water. Provision for sewage disposal, potable and reclaimed water needs of the PD will be provided in accordance with the Comprehensive Plan, the Land Development Regulations and State of Florida Administrative Code 64E-6.

M. Stormwater Drainage. Provision for stormwater retention shall be in accordance with the Ford 472 Preliminary Plat approved by the County of Volusia and to meet all other applicable City of DeLand regulations. Specifically, the stormwater retention was designed to accommodate a 100-year, 24-hour storm event, which shall be retained onsite.

N. Low Impact Development Standards. All mulching will be conducted in accordance with the most current version of the Florida Green Industries Best Management Practices (BMPs) handbook guidelines. Mowing in common areas shall be done in accordance with the most current version of the Florida Green Industries BMPs handbook and by certified landscaping contractors. Mowing adjacent to swales shall be performed such that no clippings are deposited into any swales or water bodies. All clippings that may have been deposited on impervious surfaces will be swept back into the vegetated area. All pesticide applications in common areas shall be done by a certified professional in accordance with the most current version of the Florida Green Industries BMPs handbook.

O. Access and Transportation System Improvements. All access and transportation system improvements were approved as part of the Ford 472 Preliminary

Plat approved by the County of Volusia. Site access improvements shall include the construction of an extension of Cassadaga Road from its existing intersection with Martin Luther King, Jr. Boulevard west to a new intersection with Blue Lake Avenue. The Applicant shall construct the Cassadaga Road extension and dedicate the roadway, once completed, to the County of Volusia.

P. Maintenance Association. The applicant shall provide for a centrally managed maintenance entity to serve the parcels and common areas/shared use facilities in the development, if any, including, but not limited to shared stormwater facilities, non-publicly maintained roadways, sidewalks, or common areas, and perform the ongoing duties set forth herein.

With respect to the enforcement of said agreements, covenants, easements or restrictions entered into between the Applicant and the owners or occupiers of property within the CANOPY PRESERVE PD, the City of DeLand shall only enforce the provisions of the "Development Agreement" and City of DeLand Land Development Regulations, whichever is applicable, and not the private agreements entered into between the aforementioned parties.

Q. Reverter Provision: The terms of this Development Agreement shall be vested upon recordation of the Approved Subdivision Plat, which shall occur within five (5) years from the effective date of this ordinance. If not vested within said time frame, this Development Agreement shall automatically terminate and be of no further force or effect, unless the City Commission, for good cause shown, shall extend the time period indicated in this paragraph. Thereafter, the City Commission may rezone the Property as may be necessary or appropriate to protect adjoining properties or the public health, safety and welfare.

R. Binding Effect of Plans; Recording; and Effective Date. The Planned Development Plan, including any and all amendments shall bind and inure to the benefit of the owner of the Property and its successors in title or interest. The CANOPY PRESERVE PD zoning, provisions of the "Development Agreement," and all approved plans shall run with the land and shall be administered in a manner consistent with the City of DeLand Land Development Regulations.

This Ordinance and all subsequent amendments shall be filed with the Clerk of the Court and recorded within forty-five (45) days following execution of the document by the City Commission, in the Official Records of Volusia County, Florida. One copy of the document, bearing the book and page number of the Official Record in which the document was recorded, shall be submitted to the City of DeLand Planning Division for placement in the public file. The date of recording of this document shall constitute the effective date of the CANOPY PRESERVE PD or its subsequent amendments. The applicant shall pay all filing costs for recording documents.

DONE and ORDERED by the City Commission, City of DeLand, Florida, this ____ day of _____, 2025.

ATTEST: City Commission of DeLand Florida

_____ _____

Michael P. Pleus
City Manager

Christopher M. Cloudman
Mayor

STATE OF FLORIDA
CITY OF DELAND

The foregoing instrument was acknowledged before me by means of ☐ physical presence or ☐ online notarization this ____ day of _____, 202__, by Michael P. Pleus and Christopher M. Cloudman, as City Manager and Mayor of the City of DeLand, respectively, on behalf of the City of DeLand, and who are personally known to me.

NOTARY PUBLIC, STATE OF FLORIDA
Type or Print Name:
_____
Commission No.:_____
My Commission Expires:_____

WITNESSES:

APPLICANT/OWNER:
PULTE HOME COMPANY, LLC
a Florida limited liability company

_____

By:_____
_____, Manager

_____
Printed Name

_____

_____
Printed Name

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me by means of ☐ physical presence or ☐ online notarization this ____ day of _____, 202__, by _____ as _____ of PULTE HOME COMPANY, LLC, who is personally known to me or who has produced _____ as identification.

NOTARY PUBLIC, STATE OF FLORIDA

Type or Print Name:

_____

Commission No.:_____

My Commission Expires:_____

EXHIBIT "A"
LEGAL DESCRIPTION

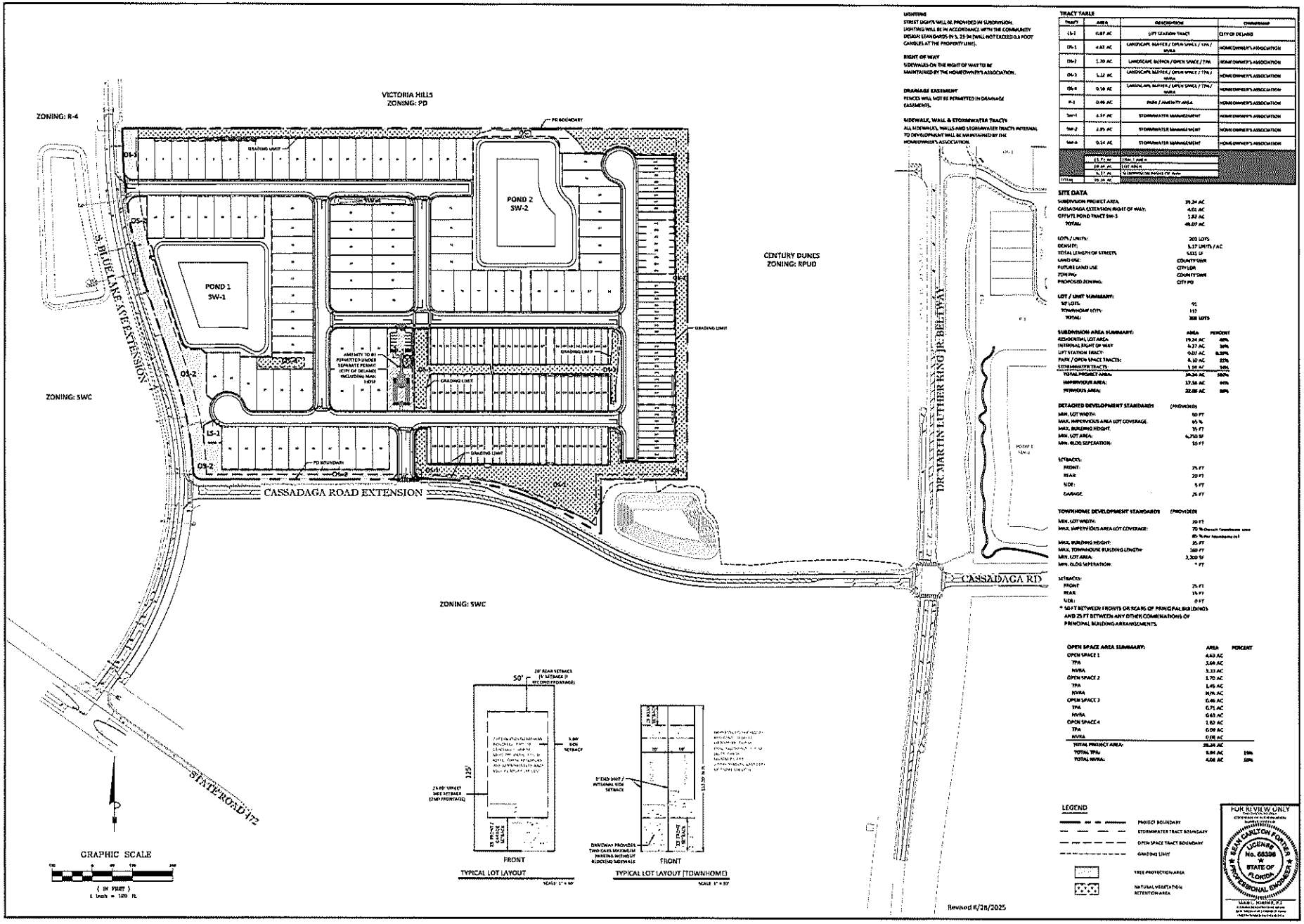
A PARCEL OF LAND COMPRISING A PORTION OF GOVERNMENT LOT 1, LYING IN SECTION 1, TOWNSHIP 18 SOUTH, RANGE 30 EAST, VOLUSIA COUNTY, FLORIDA.

BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE SOUTHWEST CORNER OF SECTION 35, TOWNSHIP 17 SOUTH, RANGE 30 EAST BEING A POINT ON THE NORTH LINE OF AFORESAID GOVERNMENT LOT 1, ALSO BEING A POINT ON THE SOUTH LINE OF VICTORIA PARK INCREMENT THREE SOUTHWEST AS RECORDED IN MAP BOOK 51, PAGES 193 THROUGH 205 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA; THENCE RUN NORTH 89°55'33" EAST ALONG THE SOUTH LINE OF SAID SECTION 35, SAID NORTH LINE OF GOVERNMENT LOT 1 AND SAID SOUTH LINE OF SAID VICTORIA PARK INCREMENT THREE SOUTHWEST FOR A DISTANCE OF 1666.26 FEET; THENCE DEPARTING SAID NORTH LINE AND SAID SOUTH LINES RUN SOUTH 00°13'58" WEST FOR A DISTANCE OF 1055.76 FEET; THENCE RUN SOUTH 89°55'33" WEST FOR A DISTANCE OF 256.47 FEET; THENCE RUN SOUTH 00°04'26" EAST FOR A DISTANCE OF 165.32 FEET; THENCE RUN NORTH 60°28'40" WEST FOR A DISTANCE OF 126.03 FEET TO THE POINT OF CURVATURE OF A CURVE, CONCAVE SOUTHWESTERLY HAVING A RADIUS OF 790.00 FEET, WITH A CHORD BEARING OF NORTH 75°16'34" WEST, AND A CHORD DISTANCE OF 403.56 FEET; THENCE RUN NORTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 29°35'47" FOR A DISTANCE OF 408.08 FEET TO THE POINT OF TANGENCY; THENCE RUN SOUTH 89°55'33" WEST FOR A DISTANCE OF 694.57 FEET TO THE POINT OF CURVATURE OF A CURVE, CONCAVE NORTHEASTERLY HAVING A RADIUS OF 25.00 FEET, WITH A CHORD BEARING OF NORTH 46°04'55" WEST, AND A CHORD DISTANCE OF 34.73 FEET; THENCE RUN NORTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 87°59'04" FOR A DISTANCE OF 38.39 FEET TO A POINT ON THE EAST RIGHT-OF-WAY LINE OF SOUTH BLUE LAKE AVENUE ACCORDING TO OFFICIAL RECORDS BOOK 8336, PAGE 276 OF AFORESAID PUBLIC RECORDS. ALSO BEING A POINT OF REVERSE CURVATURE OF A CURVE CONCAVE WESTERLY HAVING A RADIUS OF 995.00 FEET. WITH A CHORD BEARING OF NORTH 10°06'00" WEST, AND A CHORD DISTANCE OF 277.30 FEET; THENCE RUN THE FOLLOWING BEARING AND DISTANCES ALONG SAID EASTERLY RIGHT-OF-WAY LINE: NORTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 16°01'13" FOR A DISTANCE OF 278.21 FEET TO A POINT OF TANGENCY; THENCE RUN NORTH 18°06'36" WEST FOR A DISTANCE OF 280.11 FEET TO THE POINT OF CURVATURE OF A CURVE, CONCAVE EASTERLY HAVING A RADIUS OF 1488.00 FEET, WITH A CHORD BEARING OF NORTH 09°34'01" WEST, AND A CHORD DISTANCE OF 442.10 FEET; THENCE RUN NORTHERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 17°05'11" FOR A DISTANCE OF 443.74 FEET TO THE POINT OF TANGENCY; THENCE RUN NORTH 01°01'25" WEST A DISTANCE OF 56.09 FEET TO A POINT ON THE SOUTH LINE OF THE SOUTHEAST 1/4 OF SECTION 34, TOWNSHIP 17 SOUTH, RANGE 30 EAST, ALSO BEING AFORESAID NORTH LINE OF GOVERNMENT LOT 1 AND SAID SOUTH LINE OF SAID VICTORIA PARK INCREMENT THREE SOUTHWEST; THENCE RUN NORTH 89°43'05" EAST ALONG SAID SOUTH LINES AND SAID NORTH LINE FOR A DISTANCE OF 24.02 FEET TO THE POINT OF BEGINNING.

CONTAINS 39.24 ACRES MORE OR LESS.

EXHIBIT "B"
OVERALL PLAN



LIGHTING
STREET LIGHTS WILL BE PROVIDED IN SUBDIVISION. LIGHTING WILL BE IN ACCORDANCE WITH THE COMMUNITY DESIGN STANDARDS IN S. 23-34 [WILL NOT EXCEED 0.6 FOOT CANDLES AT THE PROPERTY LINE].

RIGHT OF WAY
SIDEWALKS ON THE RIGHT OF WAY TO BE MAINTAINED BY THE HOMEOWNER'S ASSOCIATION.

DRAINAGE EASEMENT
FENCES WILL NOT BE PERMITTED IN DRAINAGE EASEMENTS.

SIDEWALK, WALL & STORMWATER TRACTS
ALL SIDEWALKS, WALLS AND STORMWATER TRACTS INTERNAL TO DEVELOPMENT WILL BE MAINTAINED BY THE HOMEOWNER'S ASSOCIATION.

TRACT TABLE

TRACT	AREA	DESCRIPTION	OWNERSHIP
LS-1	0.87 AC	LIFT STATION TRACT	CITY OF DELAND
OS-1	4.63 AC	LANDSCAPE BUFFER / OPEN SPACE / TPA / NVRA	HOMEOWNER'S ASSOCIATION
OS-2	1.70 AC	LANDSCAPE BUFFER / OPEN SPACE / TPA	HOMEOWNER'S ASSOCIATION
OS-3	5.12 AC	LANDSCAPE BUFFER / OPEN SPACE / TPA / NVRA	HOMEOWNER'S ASSOCIATION
OS-4	0.10 AC	LANDSCAPE BUFFER / OPEN SPACE / TPA / NVRA	HOMEOWNER'S ASSOCIATION
P-1	0.46 AC	PARK / AMENITY AREA	HOMEOWNER'S ASSOCIATION
SW-1	6.57 AC	STORMWATER MANAGEMENT	HOMEOWNER'S ASSOCIATION
SW-2	2.85 AC	STORMWATER MANAGEMENT	HOMEOWNER'S ASSOCIATION
SW-3	0.54 AC	STORMWATER MANAGEMENT	HOMEOWNER'S ASSOCIATION
	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]
TOTAL	[illegible]		

SITE DATA

SUBDIVISION PROJECT AREA:	39.34 AC
CASSADAGA EXTENSION RIGHT OF WAY:	4.01 AC
OFFSITE POND TRACT SW-3	1.82 AC
TOTAL:	45.07 AC
LOTS / UNITS:	305 LOTS
DENSITY:	6.17 UNITS / AC
TOTAL LENGTH OF STREETS	9,531 LF
LAND USE:	COUNTY SWR
FUTURE LAND USE	CITY LDR
ZONING:	COUNTY SWR
PROPOSED ZONING:	CITY PD

LOT / UNIT SUMMARY:

50' LOTS:	91
TOWNHOME LOTS:	117
TOTAL:	308 LOTS

SUBDIVISION AREA SUMMARY:	AREA	PERCENT
RESIDENTIAL LOT AREA:	19.34 AC	48%
INTERNAL RIGHT OF WAY	6.27 AC	16%
LIFT STATION TRACT:	0.87 AC	0.59%
PARK / OPEN SPACE TRACTS:	8.10 AC	21%
STORMWATER TRACTS	3.56 AC	9%
TOTAL PROJECT AREA:	39.34 AC	100%
IMPERVIOUS AREA:	17.56 AC	44%
PERVIOUS AREA:	22.05 AC	56%

DETACHED DEVELOPMENT STANDARDS	(PROVIDED)
MIN. LOT WIDTH:	50 FT
MAX. IMPERVIOUS AREA LOT COVERAGE:	65 %
MAX. BUILDING HEIGHT:	35 FT
MIN. LOT AREA:	6,750 SF
MIN. BLDG SEPERATION:	10 FT
SETBACKS:	
FRONT:	25 FT
REAR:	20 FT
SIDE:	5 FT
GARAGE	25 FT

TOWNHOME DEVELOPMENT STANDARDS	(PROVIDED)
MIN. LOT WIDTH:	20 FT
MAX. IMPERVIOUS AREA LOT COVERAGE:	70 % Overall Townhouse area 85 % Per Townhouse Lot
MAX. BUILDING HEIGHT:	35 FT
MAX. TOWNHOUSE BUILDING LENGTH:	160 FT
MIN. LOT AREA:	2,200 SF
MIN. BLDG SEPERATION:	* FT
SETBACKS:	
FRONT	25 FT
REAR:	15 FT
SIDE:	0 FT

* 50 FT BETWEEN FRONTS OR REARS OF PRINCIPAL BUILDINGS AND 25 FT BETWEEN ANY OTHER COMBINATIONS OF PRINCIPAL BUILDING ARRANGEMENTS.

OPEN SPACE AREA SUMMARY:	AREA	PERCENT
OPEN SPACE 1	4.63 AC	
TPA	3.64 AC	
NVRA	1.33 AC	
OPEN SPACE 2	1.70 AC	
TPA	1.45 AC	
NVRA	N/A AC	
OPEN SPACE 3	0.46 AC	
TPA	0.71 AC	
NVRA	0.63 AC	
OPEN SPACE 4	1.82 AC	
TPA	0.09 AC	
NVRA	0.08 AC	
TOTAL PROJECT AREA:	39.34 AC	
TOTAL TPA:	8.94 AC	19%
TOTAL NVRA:	4.06 AC	10%

LEGEND
- PROJECT BOUNDARY
- STORMWATER TRACT BOUNDARY
- OPEN SPACE TRACT BOUNDARY
- GRADING LIMIT
- TREE PROTECTION AREA
- NATURAL VEGETATION RETENTION AREA

FOR REVIEW ONLY
THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF SEAN CARLTON FOSTER, LICENSE No. 68306, STATE OF FLORIDA, PROFESSIONAL ENGINEER. IT IS NOT TO BE USED FOR BIDDING OR CONSTRUCTION PURPOSES.

Revised 8/28/2025

KCG KELLY, COLLINS & GENTRY, INC.
1776 NORTH PINE ISLAND ROAD, SUITE 409, PLANTATION, FLORIDA 33322 (954) 889-7068 FAX (407) 896-1626

NO.	DATE	REVISION

PREPARED FOR: PULTE GROUP

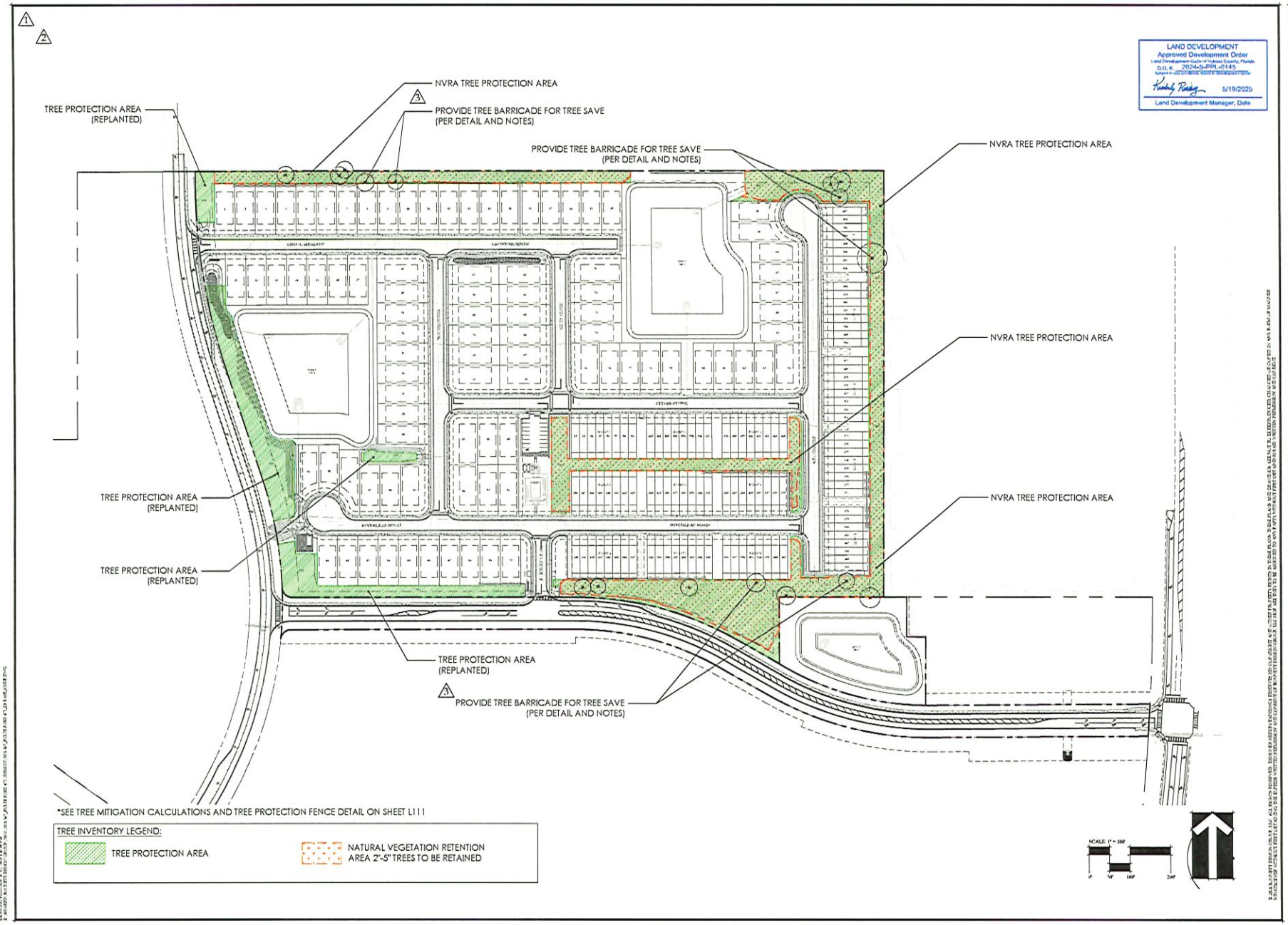
FORD 472 SUBDIVISION

PD OVERALL PLAN

DRAWN: DRS
DESIGN: DRS
CHECKED: SCF
JOB NO.: 1.20.039
DATE: 06/09/2025

SHEET PD-1

EXHIBIT "C"
APPROVED LANDSCAPE PLAN



BONNETT design group, llc
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community planning
FL #LA0001718
400 South Orlando Ave. Suite 201
Maitland, FL 32751
407.622.1588

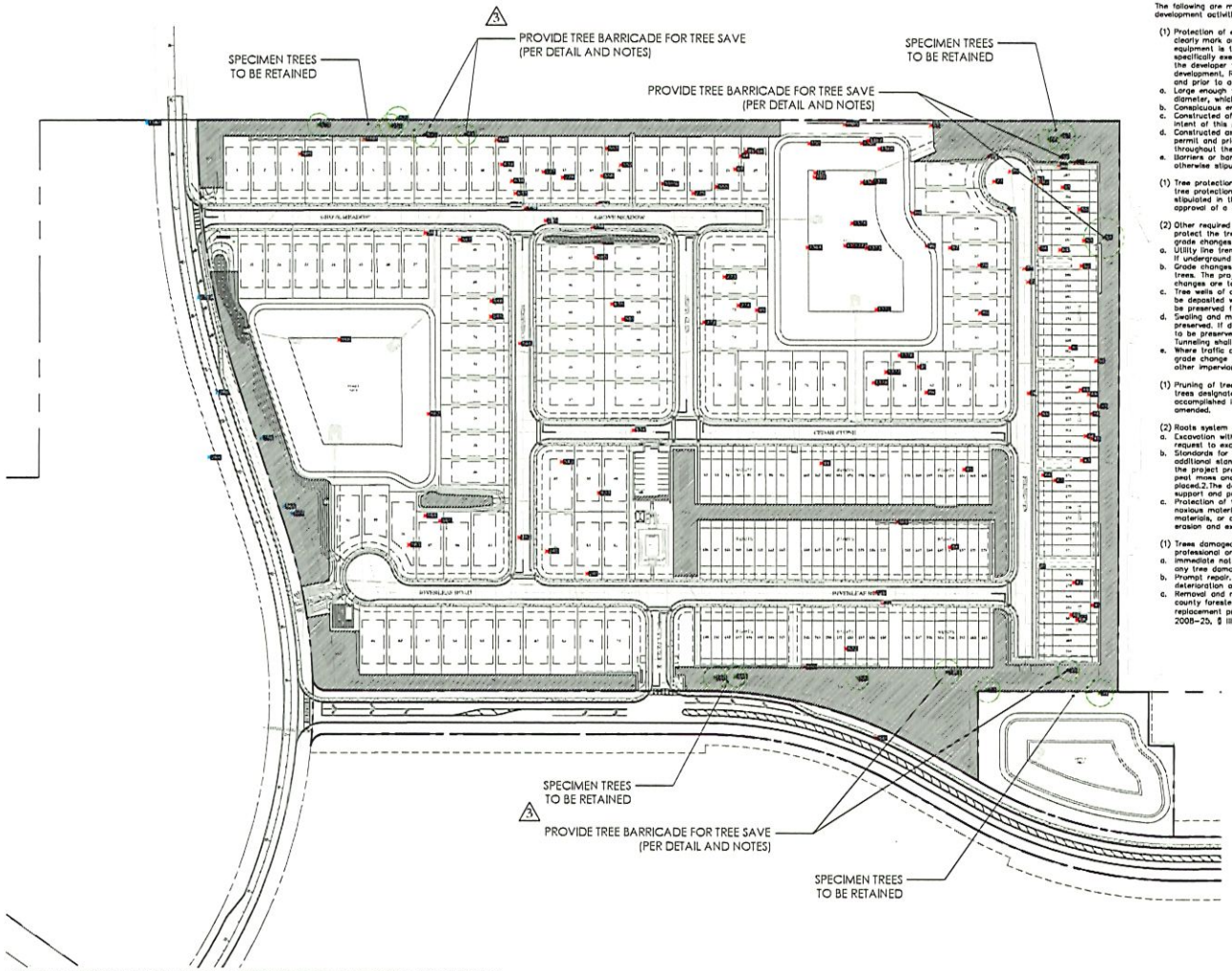
Ford 472
Landscape Architecture
Pulte Group
Volusia County, Florida
OVERALL TREE MITIGATION PLAN

DATE: January 26, 2024
DRAWN BY: BRL/JAM
CHECKED BY: TWB
JOB NUMBER: 2021.167
FILE NAME: 2021.167_PULTE FORD 472_LA BASE_CODE

REVISIONS:
1 County Comments 09-31-2024
2 County Comments 08-26-2024
3 DRC Comments 11-08-2024
4 DRC Revisions 03-12-2025

L100

COUNTY SUBMITTTAL - 2024-01-26



*SEE TREE MITIGATION CALCULATIONS AND TREE PROTECTION FENCE DETAIL ON SHEET L111

TREE INVENTORY LEGEND:

SPECIMEN TREES REMOVED | SPECIMEN TREES REMOVED BY COUNTY | SPECIMEN TREES SAVED

VOLUSIA COUNTY LDC REFERENCES:

LAND DEVELOPMENT
Approved Development Order
Land Development Code of Volusia County, Florida
D.O. #: 2024-DP-PPL-0141
Subject to all Land Development Code & Development Order requirements
Land Development Manager, Date 5/19/2025

SEC. 72-844 - STANDARDS FOR TREE PROTECTION DURING DEVELOPMENT ACTIVITIES

The following are minimum standards necessary to protect trees designated for preservation from damage during development activities after a permit has been approved:

(1) Protection of existing trees. Prior to the commencement of construction of a development, the applicant shall clearly mark any tree or tree groups to be maintained in the proximity of any area where land clearing equipment is to be operated. In addition, prior to any clearing of improved, vacant or unimproved land unless specifically exempted from this article, trees to be preserved, shall have barriers constructed around them by the developer to prevent physical damage from heavy equipment and other activities incidental to development. Required barriers shall be subject to inspection by the county as a condition of permit approval and prior to any clearing. The barriers shall be:
a. Large enough to include the entire area inside the drip line of the tree or one foot of radius per inch of the diameter, whichever is greater;
b. Conspicuous enough and high enough to be easily seen by operators of trucks and other equipment;
c. Constructed of sturdy material as approved by the county forester based on professional judgment that the intent of this provision shall be met; and
d. Constructed as a condition of the issuance of any tree permit, building permit, and any other development permit and prior to any construction or other development activities and require to remain in place throughout the construction.
e. Barriers or barricades shall be completely removed from the site at the end of the construction, unless otherwise stipulated on the approved tree preservation plan.

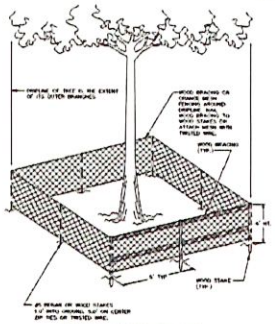
(1) Tree protection zones. The area within the drip line of trees designated for preservation is considered the tree protection zone. Only hand clearing is permittable within the tree protection zone, unless otherwise stipulated in the approved tree permit. Encroachments into the tree protection zone will require submittal and approval of a drip line encroachment plan outlining tree protection measures to be utilized.

(2) Other required protection of trees and understory. Developers shall, as required by the approved tree permit, protect the trees and understory plants designated for preservation from chemical poison, excavation, and grade changes to at least the following minimum standards:
a. Utility line trenches. Utility line trenches shall be routed away from trees to an area outside of the drip line. If underground utilities must be routed through a tree protection barrier zone, tunneling will be required.
b. Grade changes. The site shall be utilized as to require the smallest possible grade change around existing trees. The project shall be designed to utilize site topography to the greatest extent possible. No grade changes are to be allowed within the drip line of existing trees unless approved by the county forester.
c. Tree wells of an approved design shall be constructed around all trees to be preserved when fill material will be deposited within the drip line of protected trees. Utilize retaining walls and drywells to protect any tree to be preserved from severe grade changes.
d. Swales and minor negative grade changes shall be designed outside the drip line of the area of trees to be preserved. If ditches, swales, or other significant grade changes are required near a tree that is designated to be preserved, piping shall be used. Trenching within the drip line of trees to remain shall be avoided. Tunneling shall be used in lieu of trenching within the drip line of trees to remain;
e. Where traffic areas are proposed within the drip line of trees to be preserved, and less than two inches of grade change is proposed, surfaces that allow air and water in the soil shall be used in lieu of asphalt or other impervious surfaces.

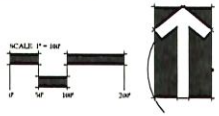
(1) Pruning of trees and vegetation. The developer is permitted to properly cut or prune branches and roots of trees designated for preservation under the supervision of the county forester. However, tree pruning shall be accomplished in accordance with the procedures set forth by the American National Standard Institute, as amended.

(2) Roots system protection. The root systems of trees shall be protected as follows:
a. Excavation within a drip line. County forester may approve a drip line encroachment plan upon the applicant's request to excavate within the drip line of a tree as part of a clearing permit.
b. Standards for root protection. The following standards shall apply and the county forester may establish additional standards for root protection consistent with this section if deemed warranted by site conditions or the project proposal:1.If roots are exposed, the developer shall provide temporary earth cover, mixed with peat moss and wrapped with burlap, to prevent exposure from drying out before permanent back fill is placed.2.The developer shall also fertilize, water and maintain in a moist condition, and otherwise temporarily support and protect the tree root from damage until the tree root is permanently covered with earth.
c. Protection of the tree root system. The developer shall protect tree root systems from damage due to noxious material in solution caused by runoff, or spillage during mixing and placement of construction materials, or drainage from storage materials. Developer shall also protect the root systems from flooding, erosion and excessive wetting resulting from dewatering or grading operations.

(1) Trees damaged during construction. The developer shall have trees damaged by construction repaired by a professional or arborist in a manner acceptable to the county forester as follows:
a. Immediate notification to the county. The county forester must be notified immediately after any damage to any tree damaged by construction operations.
b. Prompt repair. Repairs shall be made promptly, as necessary, after damage occurs to prevent progressive deterioration of damaged trees.
c. Removal and replacement of damaged trees. The developer shall remove trees which are determined by the county forester as being incapable of resuming the normal growth pattern. Such trees shall be subject to replacement pursuant to subsection 72-832(b) of this article.(Ord.No. 02-13, § III, 7-18-02; Ord. No. 2008-25, § III, 12-4-08)



TREE PROTECTION BARRICADE



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FL #LA0001718
400 South Orlando Ave. Suite 201
Maitland, FL 32751
407.622.2588

Ford 472
Landscape Architecture
Pulte Group
Volusia County, Florida
SPECIMEN TREE MITIGATION PLAN

DATE: January 29, 2024
DRAWN BY: BRL/JAM
CHECKED BY: TWB
JOB NUMBER: 2021.167
FILE NAME: 2021.167_PULTE FORD 472_LA BASE_CODE

REVISIONS
1 County Comments 05-31-2024
2 County Comments 08-26-2024
3 DRC Comments 11-08-2024
4 DRC Revisions 01-12-2025

L101

COUNTY SUBMITTTAL - 2024-01-26



*SEE TREE MITIGATION CALCULATIONS AND TREE PROTECTION FENCE DETAIL ON SHEET L111

TREE INVENTORY LEGEND:

2'-5" TREES TO BE RETAINED

VOLUSIA COUNTY LDC REFERENCES:

SEC. 72-844 - STANDARDS FOR TREE PROTECTION DURING DEVELOPMENT ACTIVITIES

The following are minimum standards necessary to protect trees designated for preservation from damage during development activities after a permit has been approved:

(1) Protection of existing trees. Prior to the commencement of construction of a development, the applicant shall clearly mark any tree or tree groups to be maintained in the proximity of any area where land clearing equipment is to be operated. In addition, prior to any clearing of improved, vacant or unimproved land unless specifically exempted from this article, trees to be preserved, shall have barriers constructed around them by the developer to prevent physical damage from heavy equipment and other activities incidental to development. Required barriers shall be subject to inspection by the county as a condition of permit approval and prior to any clearing. The barriers shall be:

a. Large enough to include the entire area inside the drip line of the tree or one foot of radius per inch of the diameter, whichever is greater;
b. Conspicuous enough and high enough to be easily seen by operators of trucks and other equipment;
c. Constructed of sturdy material as approved by the county forester based on professional judgment that the intent of this provision shall be met; and
d. Constructed as a condition of the issuance of any tree permit, building permit, and any other development permit and prior to any construction or other development activities and require to remain in place throughout the construction.
e. Barriers or barricades shall be completely removed from the site at the end of the construction, unless otherwise stipulated on the approved tree preservation plan.

Tree protection zones. The area within the drip line of trees designated for preservation is considered the tree protection zone. Only hand clearing is permittable within the tree protection zone, unless otherwise stipulated in the approved tree permit. Encroachments into the tree protection zone will require submittal and approval of a drip line encroachment plan outlining tree protection measures to be utilized.

(2) Other required protection of trees and understory. Developers shall, as required by the approved tree permit, protect the trees and understory plants designated for preservation from chemical poison, excavation, and grade changes to at least the following minimum standards.

a. Utility line trenches. Utility line trenches shall be routed away from trees to an area outside of the drip line. If underground utilities must be routed through a tree protection barrier zone, tunneling will be required.
b. Grade changes. The site shall be utilized as to require the smallest possible grade change around existing trees. The project shall be designed to utilize site topography to the greatest extent possible. No grade changes are to be allowed within the drip line of existing trees unless approved by the county forester.
c. Tree wells of an approved design shall be constructed around all trees to be preserved when fill material will be deposited within the drip line of protected trees. Utilize retaining walls and drywells to protect any tree to be preserved from severe grade changes.
d. Swales and minor negative grade changes shall be designed outside the drip line of the area of trees to be preserved. If ditches, swales, or other significant grade changes are required near a tree that is designated to be preserved, piping shall be used. Trenching within the drip line of trees to remain shall be avoided. Tunneling shall be used in lieu of trenching within the drip line of trees to remain.
e. Where traffic areas are proposed within the drip line of trees to be preserved, and less than two inches of grade change is proposed, surfaces that allow air and water in the soil shall be used in lieu of asphalt or other impervious surfaces.

(1) Pruning of trees and vegetation. The developer is permitted to properly cut or prune branches and roots of trees designated for preservation under the supervision of the county forester. However, tree pruning shall be accomplished in accordance with the procedures set forth by the American National Standard Institute, as amended.

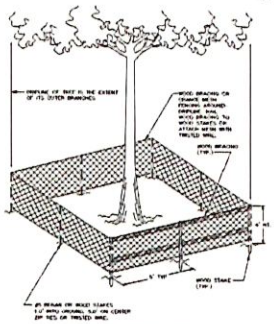
(2) Roots system protection. The root systems of trees shall be protected as follows:

a. Excavation within a drip line. County forester may approve a drip line encroachment plan upon the applicant's request to excavate within the drip line of a tree as part of a clearing permit.
b. Standards for root protection. The following standards shall apply and the county forester may establish additional standards for root protection consistent with this section if deemed warranted by site conditions or the project proposal:1.If roots are exposed, the developer shall provide temporary earth cover, mixed with peat moss and wrapped with burlap, to prevent exposure from drying out before permanent back fill is placed.2.The developer shall also fertilize, water and maintain in a moist condition, and otherwise temporarily support and protect the tree root from damage until the tree root is permanently covered with earth.
c. Protection of the tree root system. The developer shall protect tree root systems from damage due to noxious material in solution caused by runoff, or spillage during mixing and placement of construction materials, or drainage from storage materials. Developer shall also protect the root systems from flooding, erosion and excessive wetting resulting from dewatering or grading operations.

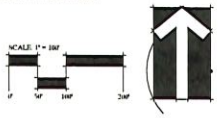
(1) Trees damaged during construction. The developer shall have trees damaged by construction repaired by a professional or arborist in a manner acceptable to the county forester as follows:

a. Immediate notification to the county. The county forester must be notified immediately after any damage to any tree damaged by construction operations.
b. Prompt repair. Repairs shall be made promptly, as necessary, after damage occurs to prevent progressive deterioration of damaged trees.
c. Removal and replacement of damaged trees. The developer shall remove trees which are determined by the county forester as being incapable of restoration of normal growth pattern. Such trees shall be subject to replacement pursuant to subsection 72-832(b) of this article.(Ord.No. 02-13, § III, 7-18-02; Ord. No. 2008-25, § III, 12-4-08)

LAND DEVELOPMENT
Approved Development Order
Land Development Code of Volusia County, Florida
D.O. #: 2024-5-PPL-01146
5/19/2025
Land Development Manager, Date



TREE PROTECTION BARRICADE



BONNETT design group, llc
landscape architecture
community planning
FL #LA0001718
400 South Orlando Ave. Suite 201
Maitland, FL 32751
407.622.1508

Ford 472
Landscape Architecture
Pulte Group
Volusia County, Florida

NATURAL VEGETATION RETENTION AREA PLAN

DATE: January 29, 2024
DRAWN BY: BRL/JAM
CHECKED BY: TWB
JOB NUMBER: 2021.167
FILE NAME: 2021.167_PULTE FORD 472_Le Basil_CODE

REVISIONS
1 County Comments 05-31-2024
2 County Comments 08-26-2024
3 DRC Comments 11-08-2024
4 DRC Revisions 03-12-2025

2

L102

COUNTY SUBMITTTAL - 2024-01-26

SPECIMEN TREE SURVEY:

Specimen Trees											
TAG	TYPE	WHERE	LATITUDE	LONGITUDE	SLOPE	DBH	DBH2	SPECIES	DATE	TIME	
1	TREE	SPECIMEN	29.196067	-81.267902	0.0	21		Oak Species	2022/06/07	10:40:20	SAVED
2	TREE	SPECIMEN	29.195753	-81.268126	0.0	22		Oak Species	2022/06/07	10:43:17	
3	TREE	SPECIMEN	29.195782	-81.267945	0.0	22		Oak Species	2022/06/07	10:45:32	
4	TREE	SPECIMEN	29.195775	-81.268267	0.0	36		Oak Species	2022/06/07	10:48:21	
5	TREE	SPECIMEN	29.196033	-81.268337	0.0	23		Oak Species	2022/06/07	10:51:55	
6	TREE	SPECIMEN	29.196042	-81.268588	0.0	30		Oak Species	2022/06/07	10:56:56	
7	TREE	SPECIMEN	29.196226	-81.267953	0.0	39		Oak Species	2022/06/07	10:58:01	
8	TREE	SPECIMEN	29.196397	-81.267954	0.0	31		Oak Species	2022/06/07	11:01:36	
9	TREE	SPECIMEN	29.196561	-81.267951	0.0	21		Oak Species	2022/06/07	11:05:17	
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139	TREE	SPECIMEN	29.196578	-81.269991	0.0	21		Oak Species	2022/06/07	15:40:19	
140	TREE	SPECIMEN	29.196578	-81.270003	0.0	21		Oak Species	2022/06/07	15:41:39	
141	TREE	SPECIMEN	29.196578	-81.270019	0.0	21		Oak Species	2022/06/07	15:42:59	
142	TREE	SPECIMEN	29.196578	-81.270031	0.0	21		Oak Species	2022/06/07	15:44:19	
143	TREE	SPECIMEN	29.196578	-81.270047	0.0	21		Oak Species	2022/06/07	15:45:39	
144	TREE	SPECIMEN	29.196578	-81.270059	0.0	21		Oak Species	2022/06/07	15:46:59	
145	TREE	SPECIMEN	29.196578	-81.270075	0.0	21		Oak Species	2022/06/07	15:48:19	
146	TREE	SPECIMEN	29.196578	-81.270087	0.0	21		Oak Species	2022/06/07	15:49:39	
147	TREE	SPECIMEN	29.196578	-81.270103	0.0	21		Oak Species	2022/06/07	15:50:59	
148	TREE	SPECIMEN	29.196578	-81.270115	0.0	21		Oak Species	2022/06/07	15:52:19	
149	TREE	SPECIMEN	29.196578	-81.270131	0.0	21		Oak Species	2022/06/07	15:53:39	
150	TREE	SPECIMEN	29.196578	-81.270143	0.0	21		Oak Species	2022/06/07	15:54:59	
151	TREE	SPECIMEN	29.196578	-81.270159	0.0	21		Oak Species	2022/06/07	15:56:19	
152	TREE	SPECIMEN	29.196578	-81.270171	0.0	21		Oak Species	2022/06/07	15:57:39	
153	TREE	SPECIMEN	29.196578	-81.270187	0.0	21		Oak Species	2022/06/07	15:58:59	
154	TREE	SPECIMEN	29.196578	-81.270199	0.0	21		Oak Species	2022/06/07	16:00:19	
155	TREE	SPECIMEN	29.196578	-81.270215	0.0	21		Oak Species	2022/06/07	16:01:39	
156	TREE	SPECIMEN	29.196578	-81.270227	0.0	21		Oak Species	2022/06/07	16:02:59	
157	TREE	SPECIMEN	29.196578	-81.270243	0.0	21		Oak Species	2022/06/07	16:04:19	
158	TREE	SPECIMEN	29.196578	-81.270255	0.0	21		Oak Species	2022/06/07	16:05:39	
159	TREE	SPECIMEN	29.196578	-81.270271	0.0	21		Oak Species	2022/06/07	16:06:59	
160	TREE	SPECIMEN	29.196578	-81.270283	0.0	21		Oak Species	2022/06/07	16:08:19	
161	TREE	SPECIMEN	29.196578	-81.270299	0.0	21		Oak Species	2022/06/07	16:09:39	
162	TREE	SPECIMEN	29.196578	-81.270311	0.0	21		Oak Species	2022/06/07	16:10:59	
163	TREE	SPECIMEN	29.196578	-81.270327	0.0	21		Oak Species	2022/06/07	16:12:19	
164	TREE	SPECIMEN	29.196578	-81.270339	0.0	21		Oak Species	2022/06/07	16:13:39	
165	TREE	SPECIMEN	29.196578	-81.270355	0.0	21		Oak Species	2022/06/07	16:14:59	
166	TREE	SPECIMEN	29.196578	-81.270367	0.0	21		Oak Species	2022/06/07	16:16:19	
167	TREE	SPECIMEN	29.196578	-81.270383	0.0	21		Oak Species	2022/06/07	16:17:39	
168	TREE	SPECIMEN	29.196578	-81.270395	0.0	21		Oak Species	2022/06/07	16:18:59	
169	TREE	SPECIMEN	29.196578	-81.270411	0.0	21		Oak Species	2022/06/07	16:20:19	
170	TREE	SPECIMEN	29.196578	-81.270423	0.0	21		Oak Species	2022/06/07	16:21:39	
171	TREE	SPECIMEN	29.196578	-81.270439	0.0	21		Oak Species	2022/06/07	16:22:59	
172	TREE	SPECIMEN	29.196578	-81.270451	0.0	21		Oak Species	2022/06/07	16:24:19	
173	TREE	SPECIMEN	29.196578	-81.270467	0.0	21		Oak Species	2022/06/07	16:25:39	
174	TREE	SPECIMEN	29.196578	-81.270479	0.0	21		Oak Species	2022/06/07	16:26:59	
175	TREE	SPECIMEN	29.196578	-81.270495	0.0	21		Oak Species	2022/06/07	16:28:19	
176	TREE	SPECIMEN	29.196578	-81.270507	0.0	21		Oak Species	2022/06/07	16:29:39	
177	TREE	SPECIMEN	29.196578	-81.270523	0.0	21		Oak Species	2022/06/07	16:30:59	
178	TREE	SPECIMEN	29.196578	-81.270535	0.0	21		Oak Species	2022/06/07	16:32:19	
179	TREE	SPECIMEN	29.196578	-81.270551	0.0	21		Oak Species	2022/06/07	16:33:39	
180	TREE	SPECIMEN	29.196578	-81.270563	0.0	21		Oak Species	2022/06/07	16:34:59	
181	TREE	SPECIMEN	29.196578	-81.270579	0.0	21		Oak Species	2022/06/07	16:36:19	
182	TREE	SPECIMEN	29.196578	-81.270591	0.0	21		Oak Species	2022/06/07	16:37:39	
183	TREE	SPECIMEN	29.196578	-81.270607	0.0	21		Oak Species	2022/06/07	16:38:59	
184	TREE	SPECIMEN	29.196578	-81.270619	0.0	21		Oak Species	2022/06/07	16:40:19	
185	TREE	SPECIMEN	29.196578	-81.270635	0.0	21		Oak Species	2022/06/07	16:41:39	
186	TREE	SPECIMEN	29.196578	-81.270647	0.0	21		Oak Species	2022/06/07	16:42:59	
187	TREE	SPECIMEN	29.196578	-81.270663	0.0	21		Oak Species	2022/06/07	16:44:19	
188	TREE	SPECIMEN	29.196578	-81.270675	0.0	21		Oak Species	2022/06/07	16:45:39	
189	TREE	SPECIMEN	29.196578	-81.270691	0.0	21		Oak Species	2022/06/07	16:46:59	
190	TREE	SPECIMEN	29.196578	-81.270703	0.0	21		Oak Species	2022/06/07	16:48:19	
191	TREE	SPECIMEN	29.196578	-81.270719	0.0	21		Oak Species	2022/06/07	16:49:39	
192	TREE	SPECIMEN	29.196578	-81.270731	0.0	21		Oak Species	2022/06/07	16:50:59	
193	TREE	SPECIMEN	29.196578	-81.270747	0.0	21		Oak Species	2022/06/07	16:52:19	
194	TREE	SPECIMEN	29.196578	-81.270759	0.0	21		Oak Species	2022/06/07	16:53:39	
195	TREE	SPECIMEN	29.196578	-81.270775	0.0	21		Oak Species	2022/06/07	16:54:59	
196	TREE	SPECIMEN	29.196578	-81.270787	0.0	21		Oak Species	2022/06/07	16:56:19	
197	TREE	SPECIMEN	29.196578	-81.270803	0.0	21		Oak Species	2022/06/07	16:57:39	
198	TREE	SPECIMEN	29.196578	-81.270815	0.0	21		Oak Species	2022/06/07	16:58:59	
199	TREE	SPECIMEN	29.196578	-81.270831	0.0	21		Oak Species	2022/06/07	17:00:19	
200	TREE	SPECIMEN	29.196578	-81.270843	0.0	21		Oak Species	2022/06/07	17:01:39	
201	TREE	SPECIMEN	29.196578	-81.270859	0.0	21		Oak Species	2022/06/07	17:02:59	
202	TREE	SPECIMEN	29.196578	-81.270871	0.0	21		Oak Species	2022/06/07	17:04:19	
203	TREE	SPECIMEN	29.196578	-81.270887	0.0	21		Oak Species	2022/06/07	17:05:39	
204	TREE	SPECIMEN	29.196578	-81.270899	0.0	21		Oak Species	2022/06/07	17:06:59	
205	TREE	SPECIMEN	29.196578	-81.270915	0.0	21		Oak Species	2022/06/07	17:08:19	
206	TREE	SPECIMEN	29.196578	-81.270927	0.0	21		Oak Species	2022/06/07	17:09:39	
207	TREE	SPECIMEN	29.196578	-81.270943	0.0	21		Oak Species	2022/06/07	17:10:59	
208	TREE	SPECIMEN	29.196578	-81.270955	0.0	21		Oak Species	2022/06/07	17:12:19	
209	TREE	SPECIMEN	29.196578	-81.270971	0.0	21		Oak Species	2022/06/07	17:13:39	
210	TREE	SPECIMEN	29.196578	-81.270983	0.0	21		Oak Species	2022/06/07	17:14:59	
211	TREE	SPECIMEN	29.196578	-81.270999	0.0	21		Oak Species	2022/06/07	17:16:19	
212	TREE	SPECIMEN	29.196578	-81.271011	0.0	21		Oak Species	2022/06/07	17:17:39	
213	TREE	SPECIMEN	29.196578	-81.271027	0.0	21		Oak Species	2022/06/07	17:18:59	
214	TREE	SPECIMEN	29.196578	-81.271039	0.0	21		Oak Species	2022/06/07	17:20:19	
215	TREE	SPECIMEN	29.196578	-81.271055	0.0	21		Oak Species	2022/06/07	17:21:39	
216	TREE	SPECIMEN	29.196578	-81.271067	0.0	21		Oak Species	2022/06/07	17:22:59	
217	TREE	SPECIMEN	29.196578	-81.271083	0.0	21		Oak Species	2022/06/07	17:24:19	
218	TREE	SPECIMEN	29.196578	-81.271095	0.0	21		Oak Species	2022/06/07	17:25:39	
219	TREE	SPECIMEN	29.196578	-81.271111	0.0	21		Oak Species	2022/06/07	17:26:59	
220	TREE	SPECIMEN	29.196578	-81.271123	0.0	21		Oak Species	2022/06/07	17:28:19	
221	TREE	SPECIMEN	29.196578	-81.271139	0.0	21		Oak Species	2022/06/07	17:29:39	
222	TREE	SPECIMEN	29.196578	-81.271151	0.0	21		Oak Species	2022/06/07	17:30:59	
223	TREE	SPECIMEN	29.196578	-81.271167	0.0	21		Oak Species	2022/06/07	17:32:19	
224	TREE	SPECIMEN	29.196578	-81.271179	0.0	21		Oak Species	2022/06/07	17:33:39	
225	TREE	SPECIMEN	29.196578	-81.271195	0.0	21		Oak Species	2022/06/07	17:34:59	
226	TREE	SPECIMEN	29.196578	-81.271207	0.0	21		Oak Species	2022/06/07	17:36:19	
227	TREE	SPECIMEN	29.196578	-81.271223	0.0	21		Oak Species	2022/06/07	17:37:39	
228	TREE	SPECIMEN	29.196578	-81.271235	0.0	21		Oak Species	2022/06/07	17:38:59	
229	TREE	SPECIMEN	29.196578	-81.271251	0.0	21		Oak Species	2022/06/07	17:40:19	
230	TREE	SPECIMEN	29.196578	-81.271263	0.0	21		Oak Species	2022/06/07	17:41:39	
231	TREE	SPECIMEN	29.196578	-81.271279	0.0	21		Oak Species	2022/06/07	17:42:59	
232	TREE	SPECIMEN	29.196578	-81.271291	0.0	21		Oak Species	2022/06/07	17:44:19	
233	TREE	SPECIMEN	29.196578	-81.271307	0.0	21		Oak Species	2022/06/07	17:45:39	
234	TREE	SPECIMEN	29.196578	-81.271319	0.0	21		Oak Species	2022/06/07	17:46:59	
235	TREE	SPECIMEN	29.196578	-81.271335	0.0	21		Oak Species	2022/06/07	17:48:19	
236	TREE	SPECIMEN	29.196578	-81.271347	0.0	21		Oak Species	2022/

OVERALL TREE CALCULATIONS:

Tree Protection Table (Per Civil Plans)		
Gross Land Area	45.07	AC
Single Family Lot Area	19.24	AC
Internal Right of Way	6.27	AC
Cassadaga Extension Right of Way	4.01	AC
Lift Station Tract	0.07	AC
Open Space	8.09	AC
Net Developable Area	39.24	AC
Stormwater Tracts	5.57	AC
Minimum Tree Preservation Area	5.89	AC
Tree Protection Area Provided	5.94	AC
Natural Vegetation Retention Area Provided	4.00	AC

*REFER TO CIVIL PLANS

Tree Coverage Table		
Net Developable Area	39.24	AC
Minimum Coverage Trees (1,709.295 / 2,500)	684	Trees
Total Trees Retained on site	656	Trees
Minimum DBH Coverage (684 x 6")	4,102	DBH
Specimen Inches Retained	407	DBH
Non Specimen Inches Retained	5,758	DBH
Total Inches Retained on site	6,165	DBH
Overage Inches	5,510	DBH

Common Area Tree Replacement Table				
Total Trees in Common Areas	336	Trees	672	Inches
Total Palms in Common Areas	50	12" dbh Trees	200	1/3 Inches Credit
Total Common Area Plantings	386	Trees	872	Inches

Lot Trees Replacement Table				
Total 50' (14" DBH / Lot)	91	Lots	1,274	Inches
Total Townhome (5.25" DBH / Unit)	112	Lots	588	Inches
Total Lot Tree Replacement	203	Lots	1,862	Inches

Tree Replacement Table		
Historic Trees to be Removed	1	Trees
Specimen Trees to be Removed	120	Trees
Other Trees to be Removed	2597	Trees
Total Number of Tree Replacement Required	36764	CSA
Total Trees to be Planted on Lots, Streets, & Common	10699	CSA
Total Trees Removed by County, voided mitigation	2068	CSA
Net Mitigation Required	23997	CSA

Replacement Summary		
Total Common Area Plantings	872	Inches
Total Lot Trees Planting	1862	Inches
Grand Total	2734	Inches

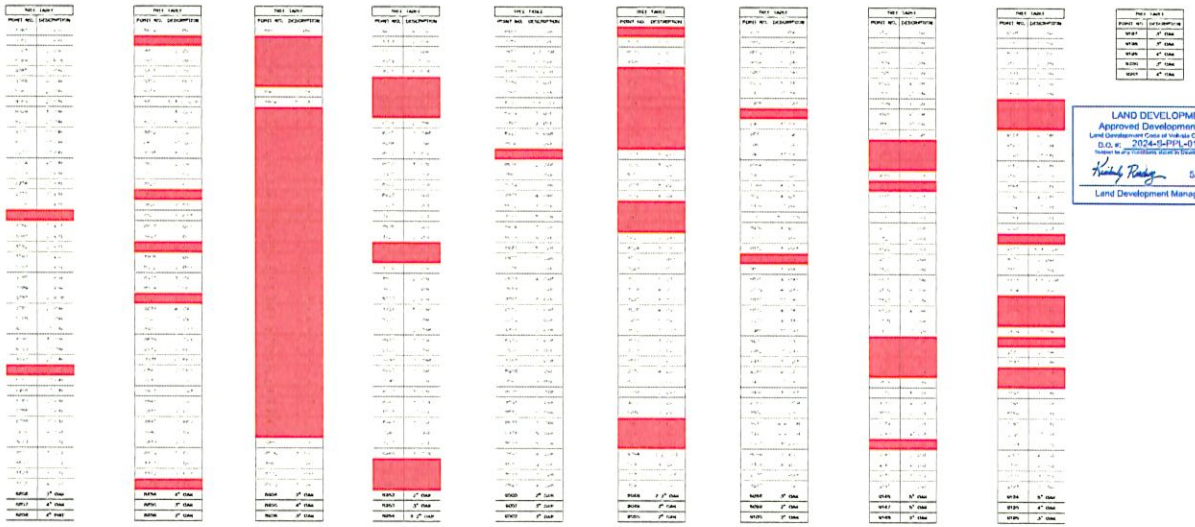
Palm Tree Summary		
Palm Tree credits for Common Areas	628	Inches
Palm Tree credits for Lots	3519	Inches
Total Credits for Palm Trees	4147	Inches
Maximum Palm Credits per Code (25%)	9191	Inches

Specimen Tree		
Total Specimen Trees on Site	146.0	Trees
Specimen Trees per Acre (Total Trees /39.24)	3.7	Trees
Per Code Specimen Trees to be retained	65.0	%
Minimum Number of Specimen Trees to be Retained (.65 times 146)	94.9	Trees
Total Specimen Trees to be Protected / Retained	18.0	Trees

* COUNTY REMOVED 7 SPECIMEN TREES ALONG BLUE LAKE AVE

total contribution is Csi deficit multiplied by SR. (1 = 558)	$1,391,818.24

SMALL TREE (NVRA) SURVEY:



LAND DEVELOPMENT
Approved Development Order
Land Development Code of Volusia County, Florida
D.O. #: 2024-54-PPL-47145
Kristy Reding 5/19/2025
Land Development Manager, Date

TREE MITIGATIONCALCULATIONS:

*REFER TO L420 FOR VOLUSIA COUNTY LAND DEVELOPMENT CODE REFERENCES.

PROPOSED TREES

72-842 TREES REPLACEMENT

TREE	QUANTITY	DBH	Cross Sectional Area	Subtotal CSA
LO TREE	182	3	7	1286
LO PALM	182	4	13	2387
TOWNHOME LOT TREE	84	3	7	594
TOWNHOME LOT PALM	98	4	13	1793
BUFFER TREES	179	2	3	542
COMMON TREES	336	3	3	1036
COMMON PALMS	50	4	13	628
NVRA SAVED 2"	133	2	3	418
NVRA SAVED 3"	105	3	7	742
NVRA SAVED 4"	71	4	13	892
NVRA SAVED 5"	51	5	20	1001
		Subtotal		10699

REMOVED TREE CHARTS

72-842 TREES REPLACEMENT REQUIREMENTS (SPECIMEN)

OAK, PINE, CEDAR, PALM	QUANTITY	DBH	Cross Sectional Area	Subtotal CSA
	2	19	113	226
	6	18	254	1527
	12	19	284	3407
	15	20	314	4712
	18	21	346	6234
	12	22	380	4562
	11	23	415	4570
	10	24	452	4524
	11	25	491	5400
	6	26	531	3186
	4	27	573	2290
	2	28	616	1847
	2	29	661	1321
	3	30	707	2121
	2	31	755	1510
	1	32	804	804
	1	35	962	962
	119	Subtotal		49198
		15% of Total		7380

72-842 TREES REPLACEMENT REQUIREMENTS (PROTECTED)

OAK, PINE, CEDAR, PALM	QUANTITY	DBH	Cross Sectional Area	Subtotal CSA
	600	6	28	16965
	466	7	38	17921
	403	8	50	20159
	233	9	64	14820
	188	10	79	14775
	134	11	95	12768
	152	12	113	17231
	125	13	133	16656
	89	14	154	13774
	107	15	177	18993
	36	16	201	7185
	54	17	227	12198
	0	18	254	0
	9	19	284	2514
	2597	Subtotal		186056
		15% of Total		27908

72-842 TREES REPLACEMENT REQUIREMENTS (PROTECTED)

SAND PINE	QUANTITY	DBH	Cross Sectional Area	Subtotal CSA
	46	6	28	1292
	81	7	38	3102
	89	8	50	4457
	46	9	64	2906
	19	10	79	1477
	19	11	95	1787
	19	12	113	2127
	8	13	133	1391
	8	14	154	1741
	8	16	201	1621
	341	Subtotal		21888
		7% of Total		1476

SAVED TREE CHARTS

72-842 TREES SAVED (SPECIMEN)

OAK, PINE, CEDAR, PALM	QUANTITY	DBH	Total DBH
	3	19	57
	1	20	20
	3	21	103
	2	22	44
	2	23	46
	2	24	48
	2	25	50
	1	37	37
	18	Subtotal	407

72-842 TREES SAVED (PROTECTED)

OAK, PINE, CEDAR, PALM	QUANTITY	DBH	Total DBH
	141	6	846
	119	7	832
	101	8	808
	61	9	552
	46	10	456
	34	11	370
	38	12	451
	30	13	386
	22	14	305
	24	15	324
	10	16	159
	12	17	202
	0	18	0
	2	19	37
	638	Subtotal	5758

REMOVED BY COUNTY (VOIDED MITIGATION):

*BASED ON 0.9 ACRES REMOVED BY COUNTY

72-842 TREES REPLACEMENT REQUIREMENTS (REMOVED BY COUNTY)

OAK, PINE, CEDAR, PALM	QUANTITY	DBH	Cross Sectional Area	Subtotal CSA
	20	6	28	566
	16	7	38	600
	14	8	50	679
	8	9	64	498
	6	10	79	495
	5	11	95	428
	5	12	113	577
	4	13	133	558
	3	14	154	461
	4	15	177	636
	1	16	201	241
	2	17	227	409
	0	18	254	0
	0	19	284	84
	87	Subtotal		6233
		15% of Total		935

72-842 TREES REPLACEMENT REQUIREMENTS (REMOVED BY COUNTY)

SAND PINE	QUANTITY	DBH	Cross Sectional Area	Subtotal CSA
	2	6	28	63
	3	7	38	104
	3	8	50	149
	2	9	64	97
	1	10	79	49
	1	11	95	82
	1	12	113	7
	0	13	133	36
	0	14	154	42
	0	16	201	54
	11	Subtotal		706
		7% of Total		49

72-842 TREES REPLACEMENT (REMOVED BY COUNTY)

TREE	QUANTITY	DBH	Cross Sectional Area	Subtotal CSA
NVRA SAVED 2"	69	2	3	150
NVRA SAVED 3"	26	3	7	187
NVRA SAVED 4"	29	4	13	371
NVRA SAVED 5"	24	5	20	471
		Subtotal		1084

BONNETT design group, llc
landscape architecture
community planning
FL #LA0001718
190 South Orlando Ave. Suite 201
Maitland, FL 32751
407.622.3588

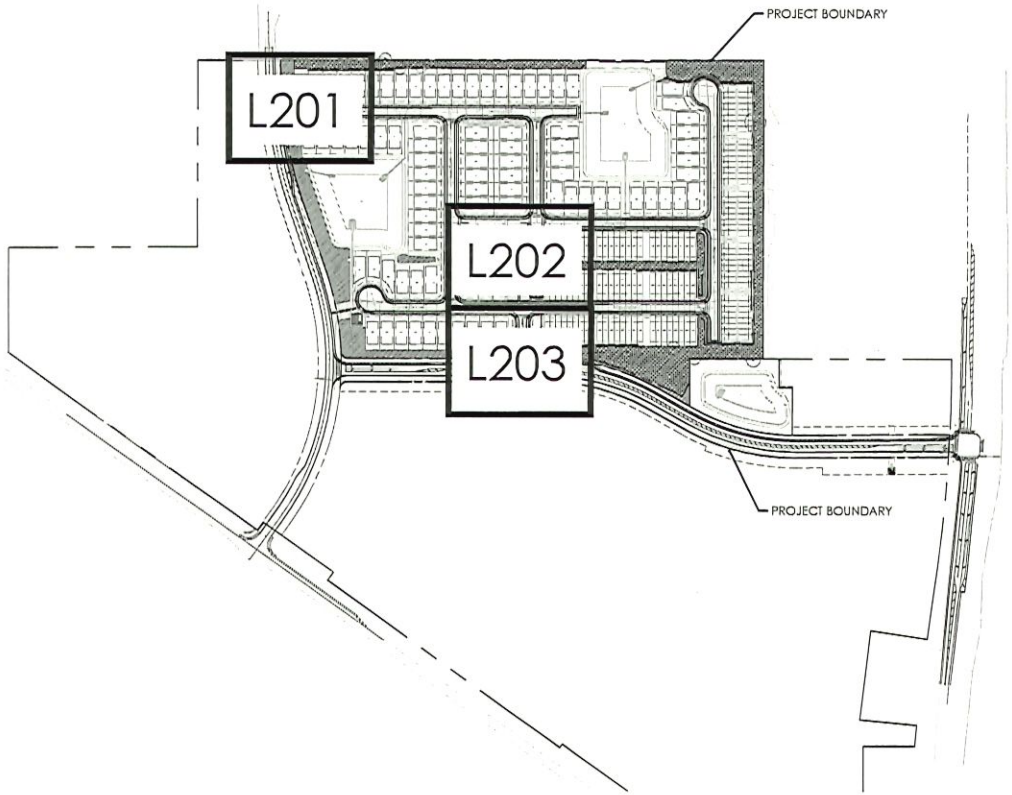
Ford 472
Landscape Architecture
Pulte Group
Volusia County, Florida
TREE MITIGATION CALCULATIONS

DATE: January 29, 2024
DRAWN BY: BRL/JAM
CHECKED BY: TWB
JOB NUMBER: 2021.167
FILE NAME: 2021.167_PULTE FORD 472_L6 BASE_CODE

REVISIONS
1 County Comments 05-31-2024
2 County Comments 08-26-2024
3 DRC Comments 11-08-2024
4 DRC Revisions 01-12-2025

L111

LAND DEVELOPMENT
Approved Development Order
Land Development Code of Volusia County, Florida
DLO, #: 2024-S-PPL-0145
Subject to any conditions stated in Development Order
5/19/2025
Land Development Manager, Date



SCALE: 1" = 200'

BONNETT design group, llc
landscape architecture
community planning
FL #LA0001718
400 South Orlando Ave. Suite 201
Maitland, FL 32751
407.622.1588

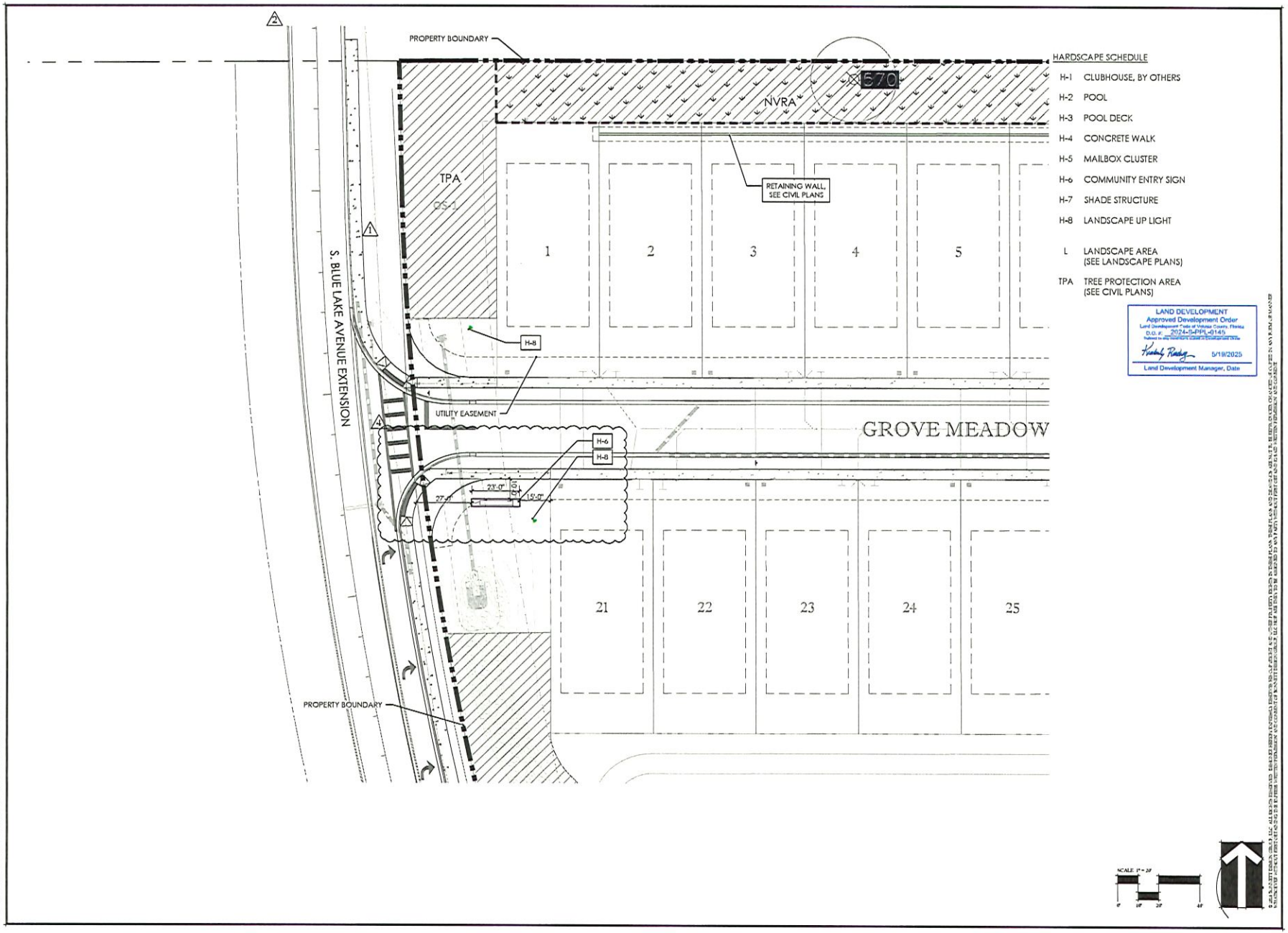
Ford 472
Landscape Architecture
Pulte Group
Volusia County, Florida
OVERALL LAYOUT PLAN

DATE: January 26, 2024
DRAWN BY: BRL/JAM
CHECKED BY: TWB
JOB NUMBER: 2021.167
FILE NAME: 2021.167_PULTE FORD 472_LANDSCAPE_CODE

REVISIONS:
1 County Comments 05-31-2024
2 County Comments 08-26-2024
3 DRC Comments 11-08-2024
4 DRC Revisions 03-12-2025

L200

COUNTY SUBMITTTAL - 2024-01-26



BONNETT design group, llc
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community planning
FL #LA0001718

400 South Orlando Ave. Suite 201
Maitland, FL 32751
407.622.1588

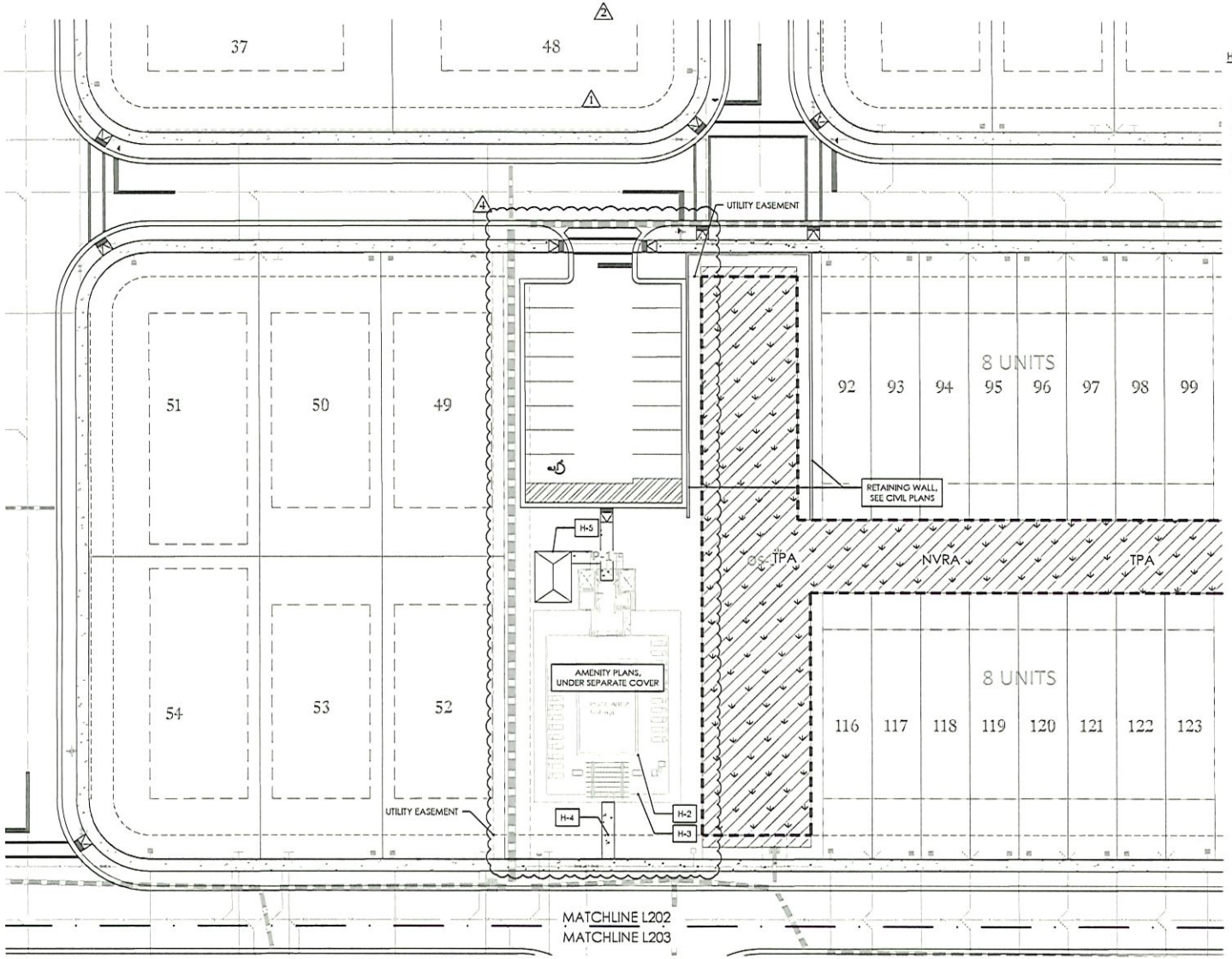
Ford 472
Landscape Architecture
Pulte Group
Volusia County, Florida
LAYOUT PLAN

DATE	January 26, 2024
DRAWN BY:	BRL/JAM
CHECKED BY:	TWB
JOB NUMBER:	2021.167
FILE NAME:	2021.167_PULTE FORD 472_Lo BAR_CODE

REVISIONS
1 County Comments 05-31-2024
2 County Comments 08-26-2024
3 DRC Comments 11-08-2024
4 DRC Revisions 03-13-2025

L201

SIGN PERMIT - 2025-02-18



HARDSCAPE SCHEDULE

H-1	CLUBHOUSE, BY OTHERS
H-2	POOL
H-3	POOL DECK
H-4	CONCRETE WALK
H-5	MAILBOX CLUSTER
H-6	COMMUNITY ENTRY SIGN
H-7	SHADE STRUCTURE
H-8	LANDSCAPE UP LIGHT
L	LANDSCAPE AREA (SEE LANDSCAPE PLANS)
TPA	TREE PROTECTION AREA (SEE CIVIL PLANS)

LAND DEVELOPMENT
Approved Development Order
Land Development Code of Volusia County, Florida
D.O. #: 2024-5-PPL-0145
Subject to any conditions stated in Development Order
5/19/2025
Land Development Manager, Date

SCALE: 1" = 20'

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407.622.1588

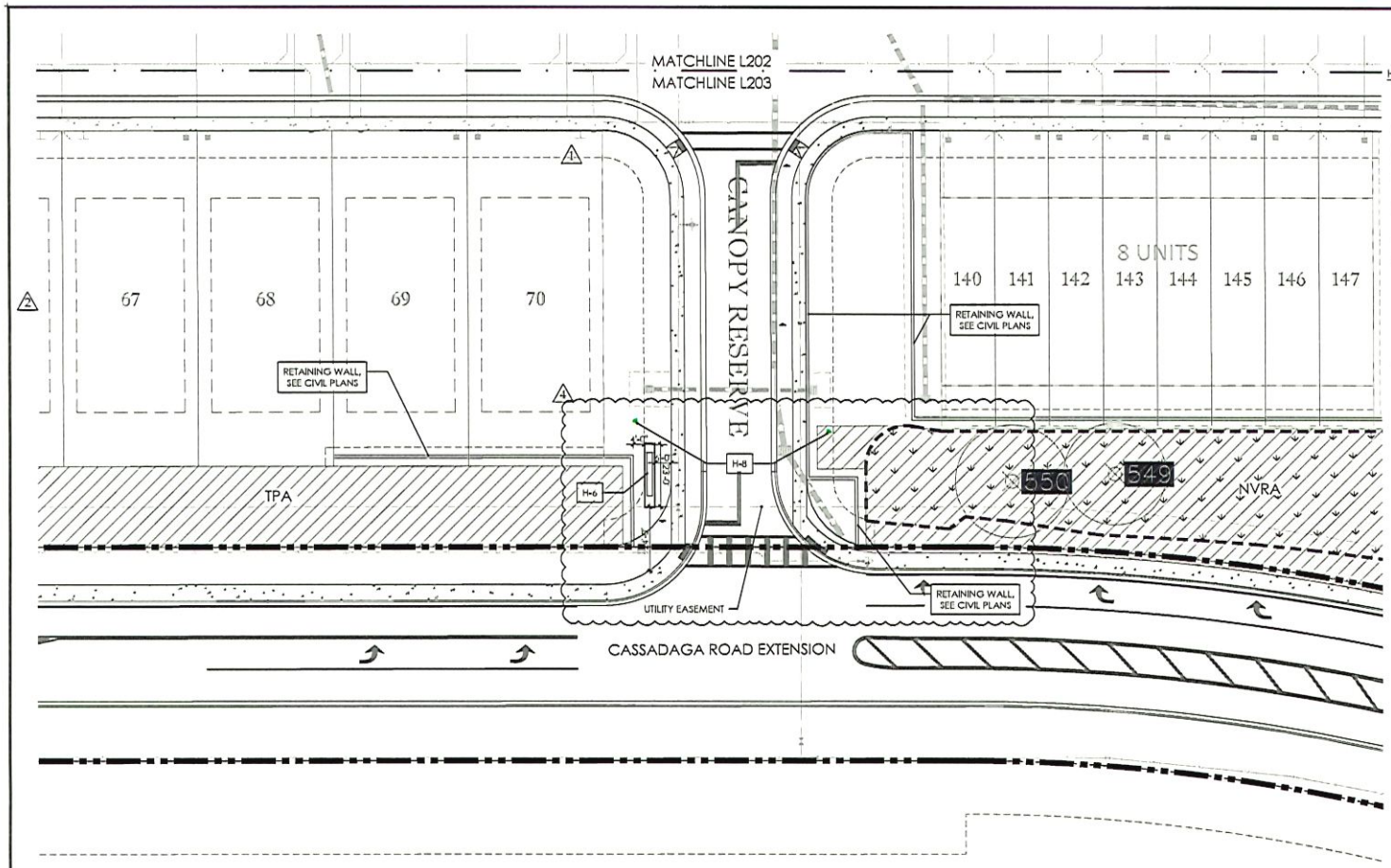
Ford 472
Landscape Architecture
Pulte Group
Volusia County, Florida
LAYOUT PLAN

DATE: January 26, 2024
DRAWN BY: BRL/JAM
CHECKED BY: TWB
JOB NUMBER: 2021.167
FILE NAME: 2021.167_PULTE FORD 472_LA BASE_CODE

REVISIONS
1 County Comments 05-31-2024
2 County Comments 08-26-2024
3 DRC Comments 11-08-2024
4 DRC Revisions 03-12-2025

L202

COUNTY SUBMITTTAL - 2024-01-26



HARDSCAPE SCHEDULE

H-1	CLUBHOUSE, BY OTHERS
H-2	POOL
H-3	POOL DECK
H-4	CONCRETE WALK
H-5	MAILBOX CLUSTER
H-6	COMMUNITY ENTRY SIGN
H-7	SHADE STRUCTURE
H-8	LANDSCAPE UP LIGHT
L	LANDSCAPE AREA (SEE LANDSCAPE PLANS)
TPA	TREE PROTECTION AREA (SEE CIVIL PLANS)

LAND DEVELOPMENT
Approved Development Order
Land Development Code of Volusia County, Florida
D.O. #: 2024-S-PPL-0145
Subject to any Landscape Waiver in the Approved Order
5/19/2025
Land Development Manager, Date

SCALE: 1" = 20'

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landscape architecture
community planning
FL #LA0001718
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407.622.1588

Ford 472
Landscape Architecture
Pulte Group
Volusia County, Florida
LAYOUT PLAN

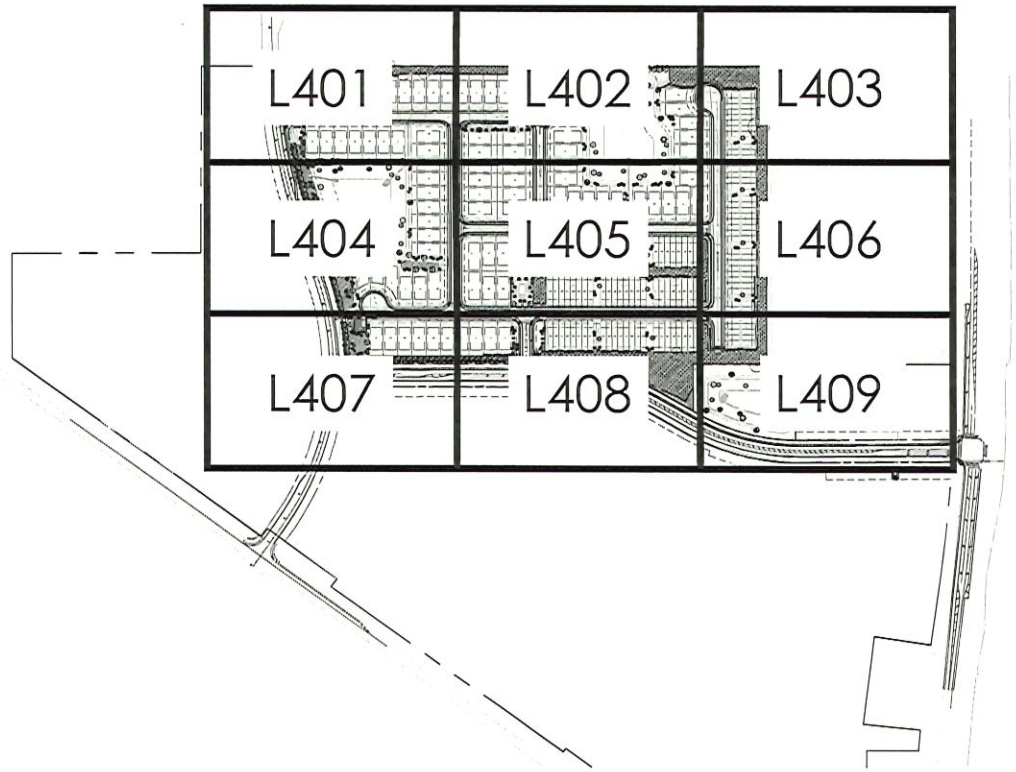
DATE: January 29, 2024
DRAWN BY: BRL/JAM
CHECKED BY: TWB
JOB NUMBER: 2021.167
FILE NAME: 2021.167_PULTE FORD 472_LaBASE_CODE

REVISIONS
1 County Comments 05-31-2024
2 County Comments 08-26-2024
3 DRC Comments 11-08-2024
4 DRC Revisions 03-12-2025

L203

SIGN PERMIT - 2025-02-18

LAND DEVELOPMENT
Approved Development Order
Land Development Code of Volusia County, Florida
D.O. #: 2024-5-PPL-0145
Reviewed by and in conformance with the Development Order
5/19/2025
Land Development Manager, Date



SCALE: 1" = 200'

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Maitland, FL 32751
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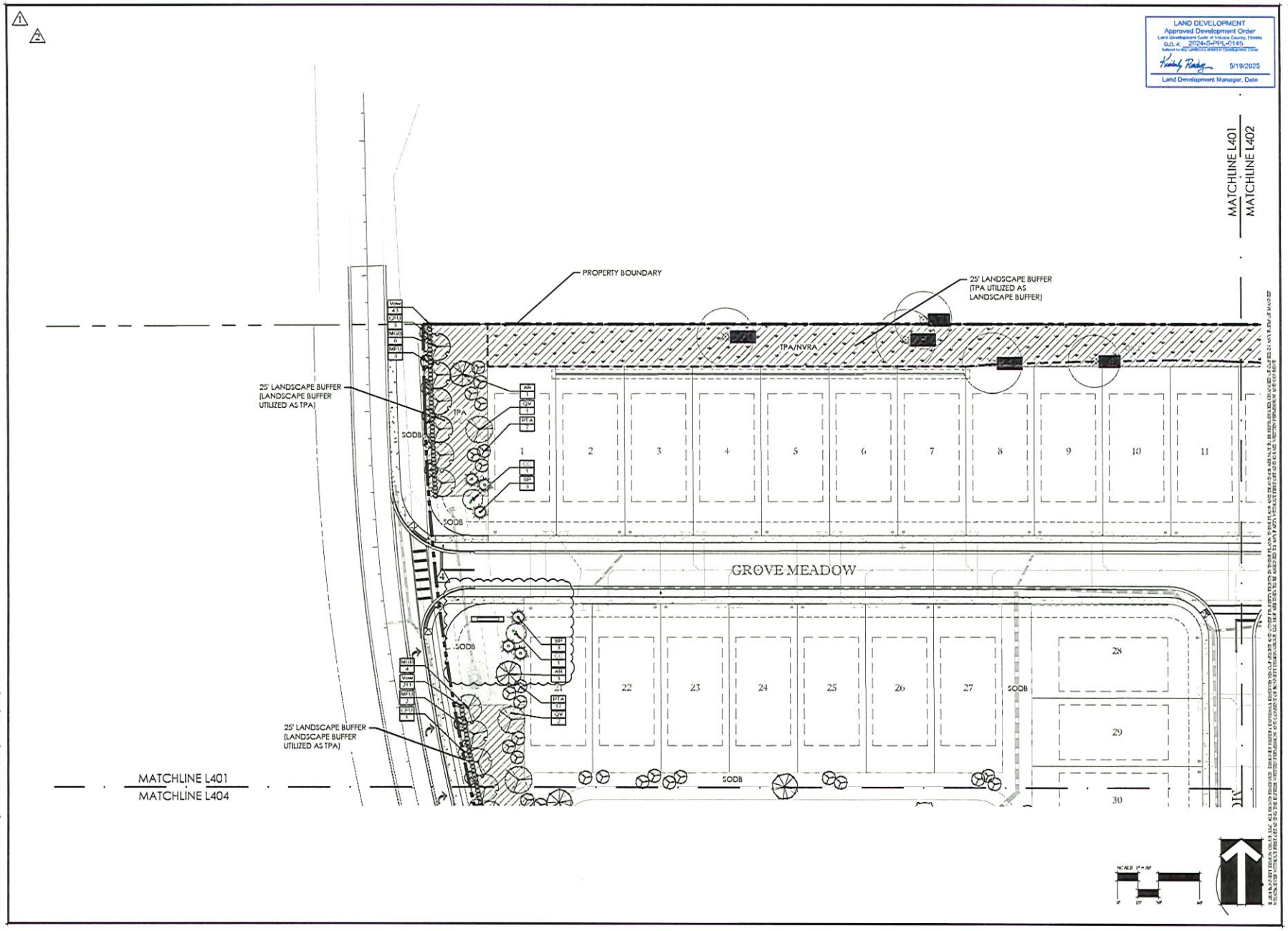
Ford 472
Landscape Architecture
Pulte Group
Volusia County, Florida
OVERALL LANDSCAPE PLAN

DATE: January 26, 2024
DRAWN BY: BRL/JAM
CHECKED BY: TWB
JOB NUMBER: 2021.167
FILE NAME: 2021.167_PULTE FORD 472_LA BASE_CODE

REVISIONS:
1. County Comments 05-31-2024
2. County Comments 08-26-2024
3. DRC Comments 11-08-2024
4. DRC Revisions 03-12-2025

L400

COUNTY SUBMITTTAL - 2024-01-26



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400 South Orlando Ave. Suite 201
Maitland, FL 32751
407.622.2368

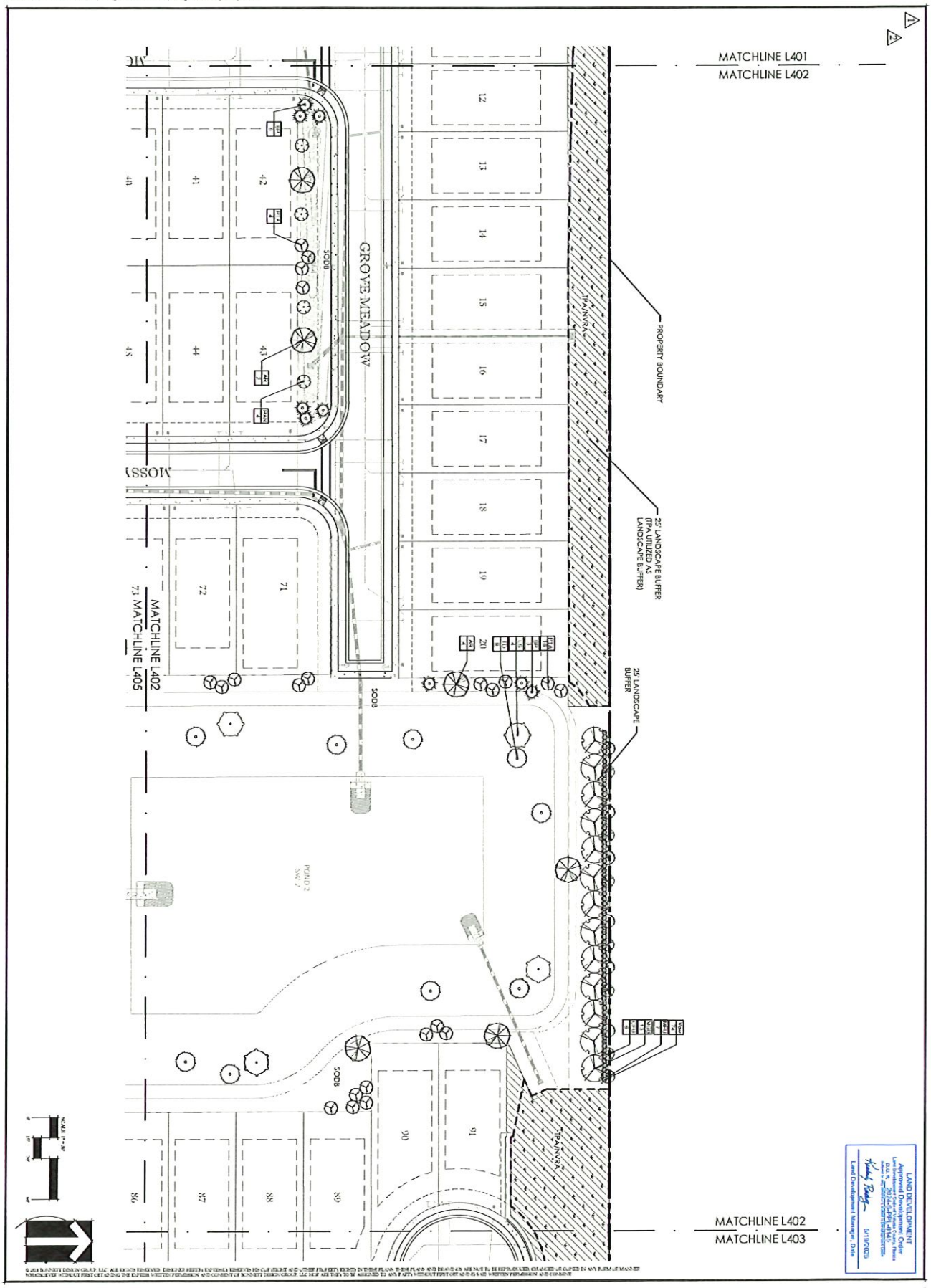
Ford 472
Landscape Architecture
Pulte Group
Volusia County, Florida
LANDSCAPE PLAN

DATE: January 29, 2024
DRAWN BY: BRL/JAM
CHECKED BY: TWB
JOB NUMBER: 2023.16*
FILE NAME: 2023.16*_PULTE FORD 472_La BASE_CODE

REVISIONS:
1. County Comments 05-31-2024
2. County Comments 08-26-2024
3. DRC Comments 11-08-2024
4. DRC Persons 01-12-2025

L401

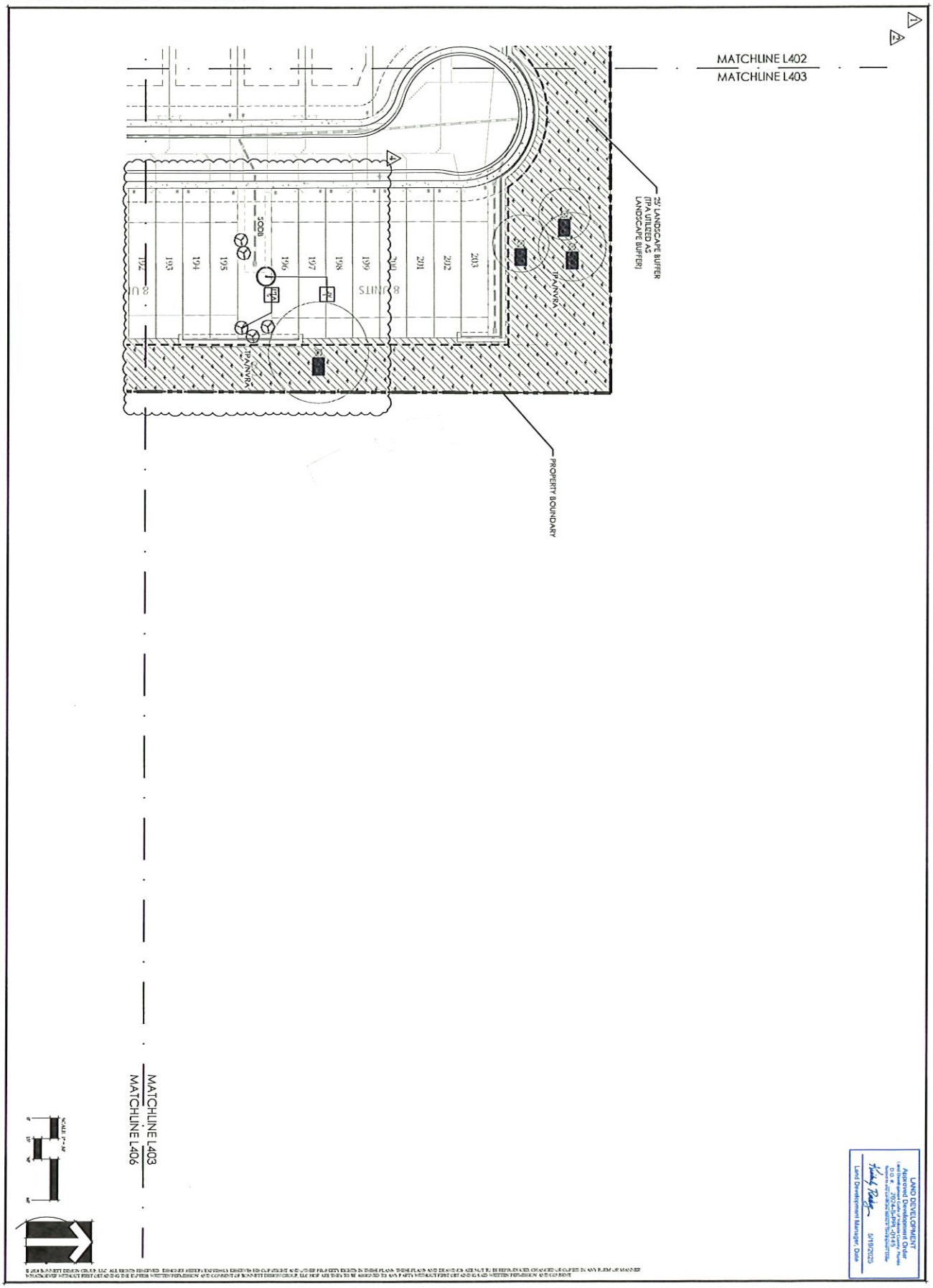
COUNTY SUBMITTTAL - 2024-01-26



COUNTY SUBMITTTAL - 2024-01-26

L402

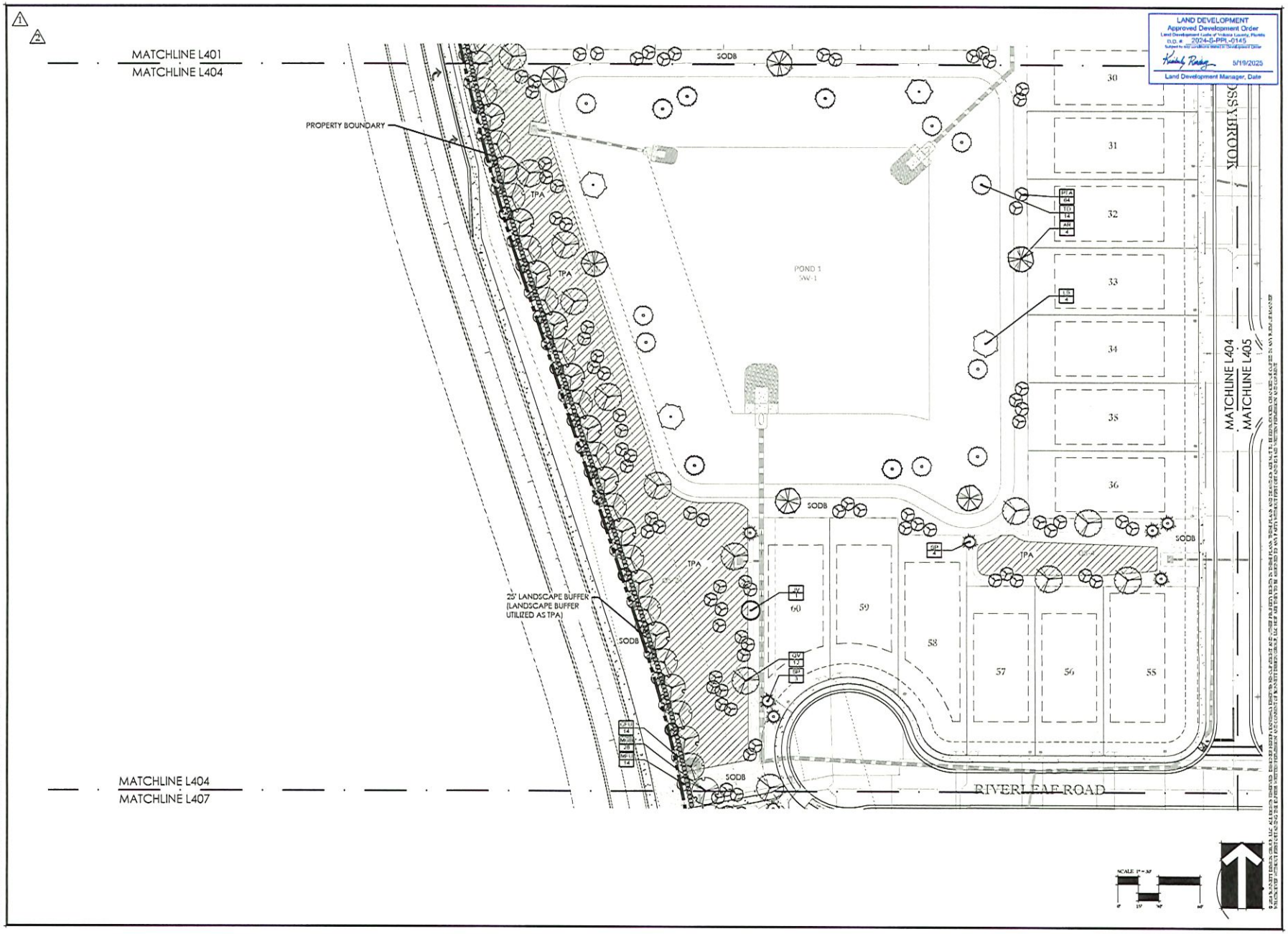
Ford 472
Landscape Architecture
Pulte Group
Volusia County, Florida
LANDSCAPE PLAN



COUNTY SUBMITTTAL - 2024-01-26

L403

Ford 472
Landscape Architecture
Pulte Group
Volusia County, Florida
LANDSCAPE PLAN



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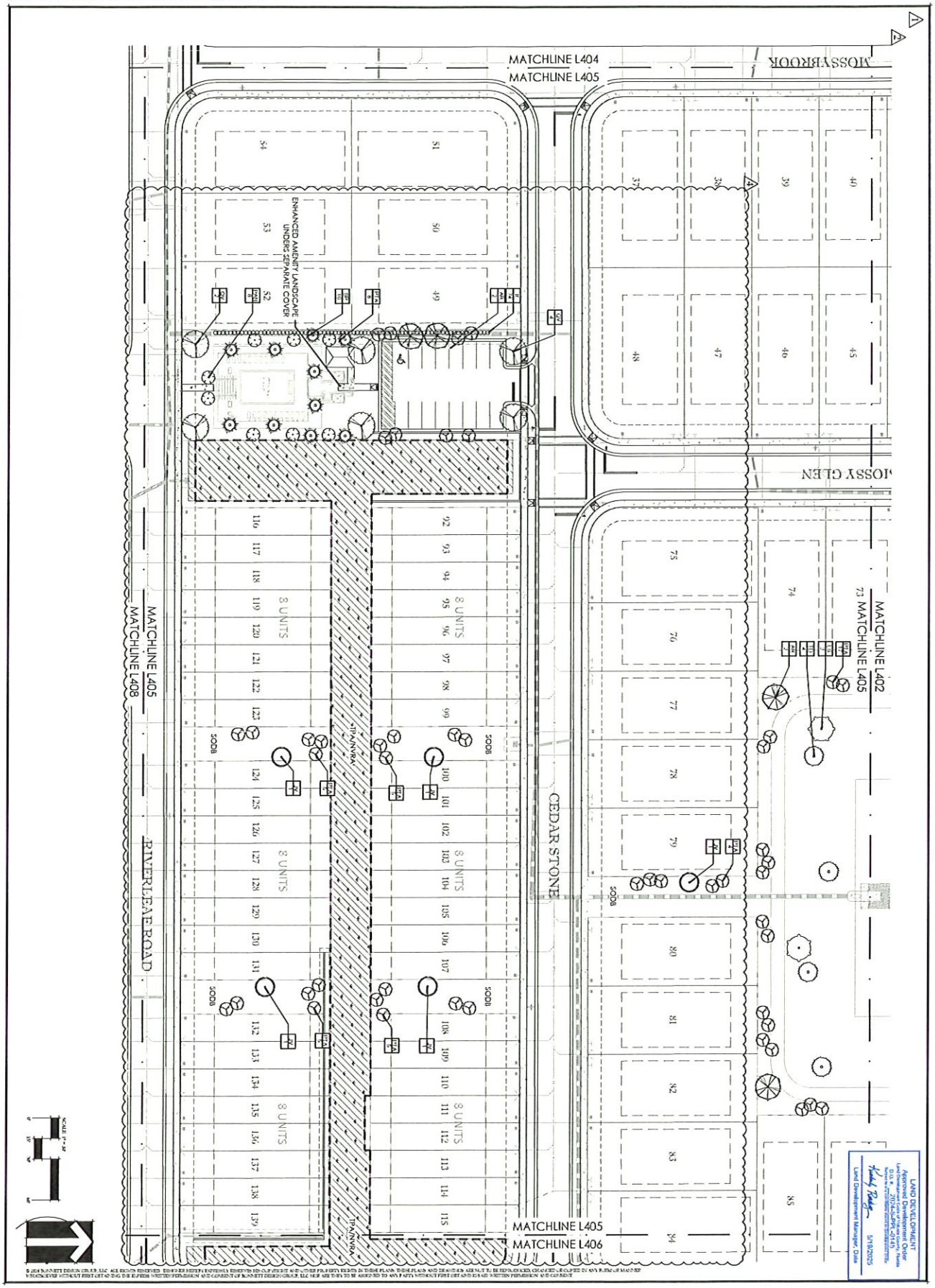
Ford 472
Landscape Architecture
Pulte Group
Volusia County, Florida
LANDSCAPE PLAN

DATE: January 29, 2024
DRAWN BY: BRL/JAM
CHECKED BY: TWB
JOB NUMBER: 2021.167
FILE NAME: 2021.167_PULTE FORD 472_La BASE_CODE

REVISIONS
1 County Comments 05-31-2024
2 County Comments 08-26-2024
3 DRC Comments 11-08-2024
4 DRC Revisions 01-12-2025

L404

COUNTY SUBMITTTAL - 2024-01-26



COUNTY SUBMITTAL - 2024-01-26

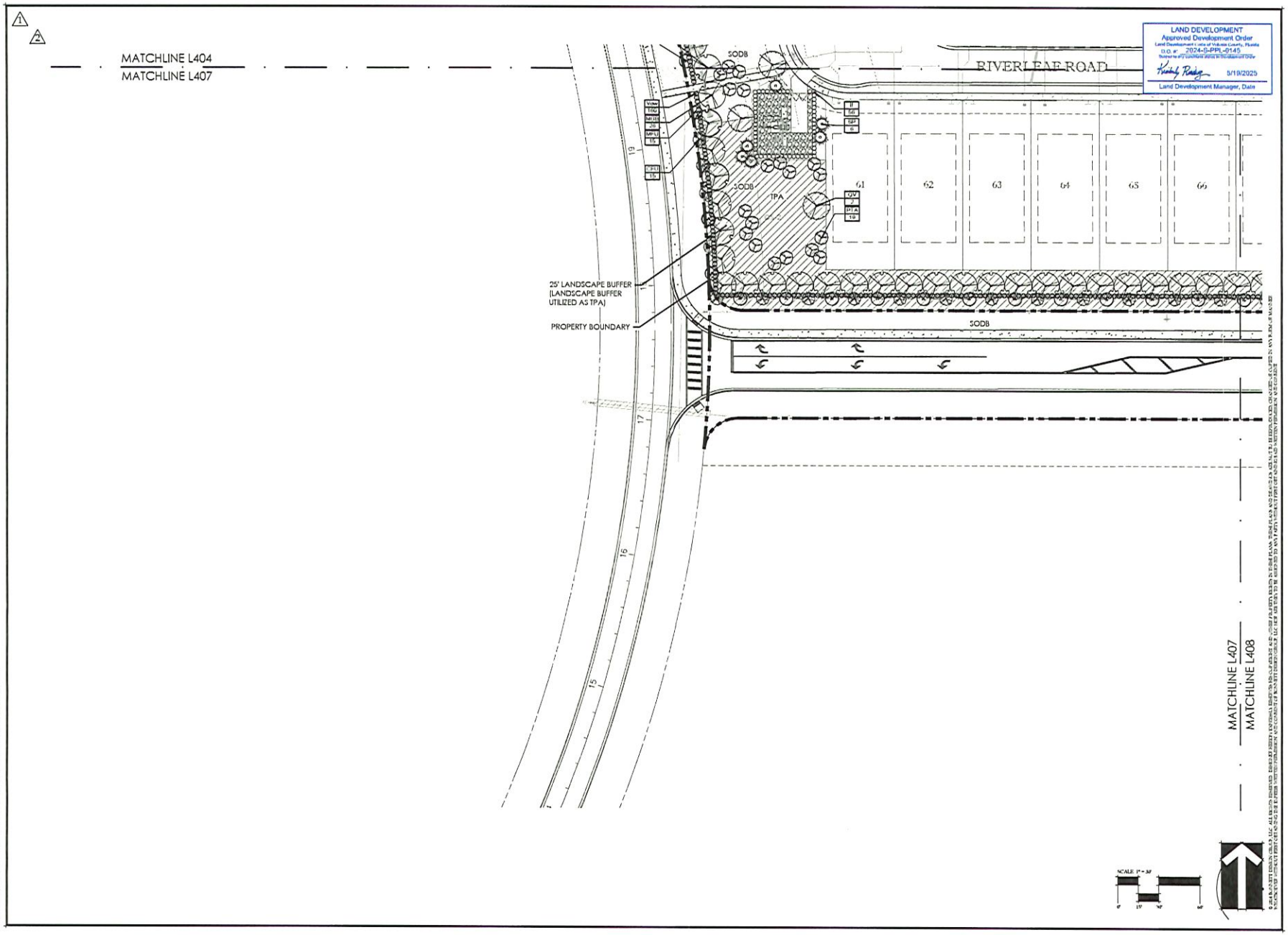
L405

Ford 472
Landscape Architecture
Pulte Group
Volusia County, Florida
LANDSCAPE PLAN

Ford 472
Landscape Architecture
Pulte Group
Volusia County, Florida
LANDSCAPE PLAN

L406

COUNTY SUBMITTAL - 2024-01-26



BONNETT design group, llc
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Ford 472
Landscape Architecture
Pulte Group
Volusia County, Florida
LANDSCAPE PLAN

DATE: January 26, 2024
DRAWN BY: BRL/JAM
CHECKED BY: TWB
JOB NUMBER: 2021.167
FILE NAME: 2021.167_PULTE/FORD 472_La Basil_CODE

REVISIONS
1 County Comments 05-31-2024
2 County Comments 08-26-2024
3 DRC Comments 11-08-2024
4 DRC Revisions 03-12-2025

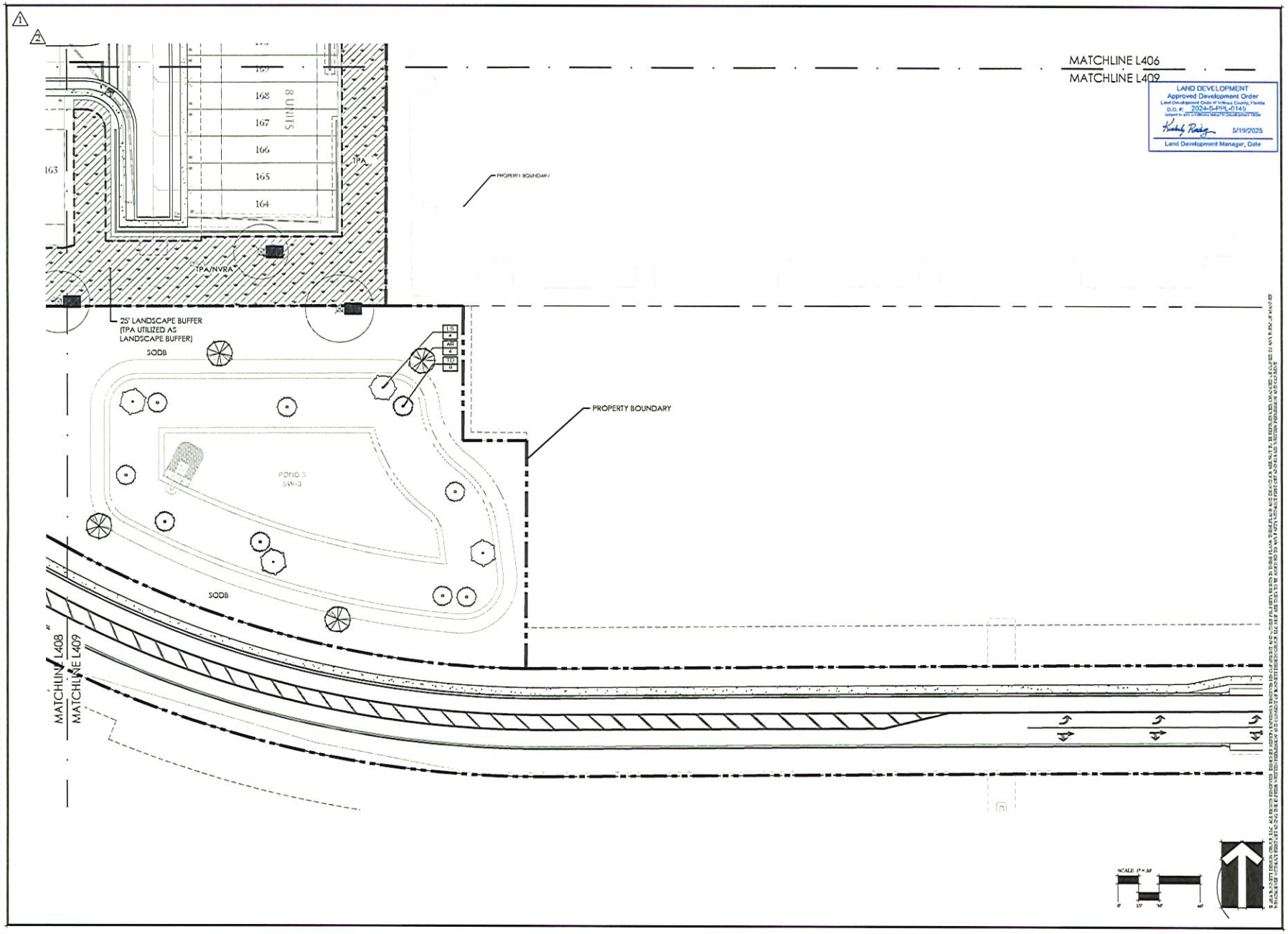
L407

COUNTY SUBMITTTAL - 2024-01-26

Ford 472
Landscape Architecture
Pulte Group
Volusia County, Florida
LANDSCAPE PLAN

L408

COUNTY SUBMITTAL - 2024-01-26



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Ford 472
Landscape Architecture
Pulte Group
Volusia County, Florida
LANDSCAPE PLAN

DATE:	January 29, 2024
DRAWN BY:	BRL/JAM
CHECKED BY:	TWB
JOB NUMBER:	2021.167
FILE NAME:	2021.167_PULTE FORD 472_LA BASE_CODE

REVISIONS
1 County Comments 05-31-2024
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3 DRC Comments 11-08-2024
4 DRC Revisions 05-12-2025

L409

COUNTY SUBMITTTAL - 2024-01-26

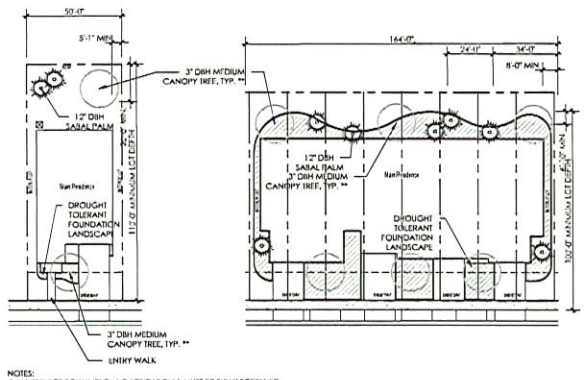
CODE PLANT SCHEDULE - CANOPY PRESERVE

CODE	QTY	BOTANICAL NAME	COMMON NAME	SPECIFICATION	NATIVE	WATER USE ZONE	SPACING
TREES							
AR	22	Acer rubrum	Red Maple	2.5" Cal. Min. 10' ht.	YES	HIGH	As Shown
CC	4	Cercis canadensis	Eastern Redbud	2.5" cal., Min 8' ht.	YES	LOW	As Shown
JV	12	Juniperus virginiana `Silicola`	Southern Red Cedar	2.5" cal., Min 8' ht.	YES	LOW	As Shown
LS	14	Liquidambar styraciflua	American Sweet Gum	2.5" Cal. Min. 10' ht.	YES	LOW	As Shown
PTA	214	Pinus palustris	Long-leaf Pine	2.5" cal., 8' ht. Min.	YES	HIGH	As Shown
QV	23	Quercus virginiana	Live Oak	2.5" Cal. Min. 10' ht.	YES	LOW	As Shown
TD	36	Taxodium distichum	Bald Cypress	2.5" cal., Min 8' ht.	YES	LOW	As Shown
BUFFER YARD CANOPY TREES							
MGB	87	Magnolia grandiflora `Brackens Brown Beauty`	Bracken's Southern Magnolia	2.5" Cal. Min. 10' ht.	YES	MEDIUM	As Shown
BUFFER YARD UNDERSTORY TREES							
CFU	45	Chionanthus virginicus	Fringe Tree	2.5" cal., Min 8' ht.	YES	MEDIUM	As Shown
MFU	47	Myrcianthes fragrans	Simpson's Stopper	2.5" cal., Min 8' ht.	YES	LOW	As Shown
PALM TREES							
SP	50	Sabal palmetto	Sabal Palm	8'-14' CT, mixed	YES	HIGH	As Shown
UNDERSTORY							
PAN	18	Prunus angustifolia	Chickasaw Plum	2.5" cal., Min 8' ht.	YES	LOW	As Shown
BUFFERYARD SHRUBS							
If	130	Illicium floridanum	Florida Anise	3 gal., 30" ht. min.	YES	MEDIUM	30" o.c.
Vow	547	Viburnum obovatum	Walter's Viburnum	7 Gal. 36" Ht. Minimum.	YES	LOW	42" o.c.

VOLUSIA COUNTY LDC REFERENCES:

SEC. 72-838. - MINIMUM TREE COVERAGE REQUIREMENTS.

Each lot shall contain a minimum of one tree for each 2,100 square feet of lot area, rounded up to nearest whole number). If the lot contains an insufficient number of existing trees to meet this requirement, or if the lot has no existing trees, replacement trees shall be provided in accordance with section 72-842 of this division.



NOTES:
1. ALL SERVICE EQUIPMENT AND UTILITY BOXES MUST BE FULLY SCREENED.
2. ALL LOT TREES SHALL BE A MINIMUM 3" DBH.

TYPICAL LOT LANDSCAPE PLAN

SCALE: 1" = 20'

NOTE:
TYPICAL LOT LAYOUT IS FOR DESIGN INTENT ONLY AND SHOULD NOT BE USED FOR CONSTRUCTION DOCUMENTATION.

*LARGE CANOPY TREES INCLUDE:

Acer barbatum	Florida Maple
Acer rubrum	Red Maple
Quercus shumardii	Shumard Oak
Quercus virginiana	Live Oak
Ulmus alata	Winged Elm

**MEDIUM CANOPY TREES INCLUDE:

Cercis canadensis	Redbud
Ilex x East Palatka	East Palatka Holly
Ilex cassine	Dahoon Holly
Ilex opaca	American Holly

* EXISTING TREES TO BE INCLUDED INTO PROVIDED LOT TREES

** LOT TREES TO BE INSTALLED BY HOME BUILDER AT TIME OF CONSTRUCTION. SEE TYPICAL LOT LAYOUT ON SHEET L430.

*** UNDERSTORY AND SHRUB PLANTING TO BE SUPPLEMENTED AS NEEDED TO COMPLIMENT PROPOSED LOT DESIGN

VOLUSIA COUNTY LDC REFERENCES:

SEC. 72-284. - MINIMUM LANDSCAPE REQUIREMENTS.

The purpose and intent of this section is to encourage the preservation of existing trees and vegetation, to identify landscape standards and plant classifications, to reduce radiant heat from surfaces and conserve energy, to provide shade, to reduce wind and air turbulence, to minimize potential nuisances such as the transmission of noise, dust, odor, litter and glare of automobile headlights, to provide visual buffering and for the separation of spaces, to enhance the beautification of the county, to reduce the amount of impervious surface and stormwater runoff, to safeguard and enhance property values and protect public and private investment, and to protect the public health, safety and general welfare.

The following regulations shall apply where landscaped buffer or off-street parking areas are required:

(1) All plant materials shall be Florida No. 1 or better grade, according to the current Grades and Standards for Nursery Plants, State of Florida, Florida Department of Agriculture and Consumer Services, and selected from the "Plant Material List" available from the growth and resource management department. All plant materials shall be chosen, spaced and planted according to the current Grades and Standards for Nursery Plants, Florida-friendly best management practices, the Volusia County Environmental Management Division's Habitat Planting Guidelines, and "right plant, right place" principles, to protect and preserve Volusia County's water resources, at least 10 percent of the required landscaping specified in subsections a and b, shall be a drought tolerant species chosen from the plant material list. The Zoning Enforcement Official (ZEO) has the authority to allow existing native vegetation to provide the necessary visual screening. Existing upland native vegetation shall be incorporated, where appropriate, into off-street parking areas and landscape buffers of a proposed development.

a. Specific requirements.

1. Canopy trees (Group A). Canopy tree species shall be a minimum of 1½-inch caliper and six feet in overall height immediately after planting. Trees required along county thoroughfares shall be a minimum of two-inch caliper and eight feet in overall height immediately after planting, and planted a minimum of ten feet back from the right-of-way line.

2. Mid-story trees (Group B). Mid-story tree species shall be a minimum of 1½-inch caliper and six feet in overall height immediately after planting. Trees required along county thoroughfares shall be a minimum of two-inch caliper and eight feet in overall height immediately after planting, and planted along a line ten feet back from the right-of-way line.

3. Understory trees and shrubs (Group C). Understory trees shall be a minimum 1½-inch caliper and four feet in overall height and shrubs shall be a minimum of two feet in overall height, immediately after planting.

4. Groundcovers, large grasses and wildflowers (Group D). Large grasses shall be a minimum of 18 inches in overall height immediately after planting. Ground covers and wildflowers do not have a minimum height requirement, as maximum height is dependent upon the specific plant species. At least 2/3 percent of the prepared area outside of any landscape buffers, off-street parking areas, and stormwater management areas, shall be planted and maintained with a drought tolerant ground cover(s). Ground covers must present a finished appearance and provide reasonably complete coverage at time of planting.

b. Additional requirements.

1. Palms. Palms shall constitute no more than 2½ percent of the required canopy trees, and shall have a minimum of six feet of clear wood at planting.

2. Lawn grass. Grassed areas shall be planted with any species of grass common to Central Florida; they may be sodded, plugged, sprigged (stolons), or seed that sod is required in swales or other areas subject to soil erosion. Unless sod or grass seed is used, nurse grass seed shall be sown for immediate effect and protection until coverage is otherwise achieved. Grass sod shall be clean and shall be reasonably free of weeds, noxious pests or diseases.

(2) Landscaped buffer area. Where a landscaped buffer area is required, the following regulations shall apply:

a. A landscaped buffer area complying with the requirements of the landscape buffer tables (Table I, Table II, Table III, and Table IV), shall be established along the entire length of, and contiguous to, any property line. The width of the area, plant and tree quantities, and type of plant materials shall be determined from the landscape buffer requirements within Table I, Table II and Table III, and landscaped with the required mix of plant species, as determined in Table IV. A driveway or entranceway shall not be considered part of the landscape buffer for the purpose of calculating the required amount of plant material. Landscape buffer widths may be increased to include existing native trees and their associated drip line, and to provide aesthetically pleasing façades to proposed establishments. Compliance with tables I through IV is achieved through the following steps:

1. Determine the zoning classification of the premises and the adjoining properties.

2. Utilize Table I to determine which landscape buffer zoning classification or special exception use group the zoning classification or use of the premises and the adjoining properties falls into.

3. Determine the buffer type and screening requirements required between the subject group (subject premises) and adjoining groups (adjoining properties) in Table II. Required screen types are listed immediately after Table II.

4. Determine the specific requirements (i.e. width and required plantings) for each buffer type in Table III by corresponding the required buffer types required by Table II.

5. Determine the required number of plant species by utilizing Table IV.

A. Example: The subject premises is within the B-4 General Commercial zoning classification, abuts a property within the R-4 single-family residential zoning classification along its JKD limited-lot boundary. Pursuant to Table I, the subject premises is within the commercial group and the abutting property is within the one and two-family residential group. Table II states that a subject group of commercial adjoining the One and two-family residential group require Buffer Type 4 and Screen Type 7. Screen Type 7 is listed immediately after Table II, with additional screening requirements referenced in subsection 72-284(2)d. Table III states that Buffer Type 4 has a minimum 25-foot width and requires 3 Group A canopy trees, 3 Group B mid-story trees and 2% Group C understory trees/shrubs per 100 linear feet. A 330 linear foot buffer length would then require a minimum of 6 Group A canopy trees, 10 Group B mid-story trees and 10 Group C understory trees/shrubs. Table IV would determine that 2 species are required for Group A plantings, 2 species are required for Group B plantings, and 1 species are required for Group C plantings.

b. The landscaped buffer area shall contain existing native vegetation, which is not dependent on irrigation because of the possibility of water use restrictions, which could adversely affect the survival of introduced or exotic plant species. Existing native trees that are situated within the required buffer can be used to satisfy the perimeter tree requirement. The area(s) within the dripline(s) of the existing native trees must be included within the landscaped buffer area.

c. New trees in required landscape buffers do not have to be equally spaced, but may be grouped to provide areas of visibility from the proposed site to an abutting road and shall be located out of the dripline of existing specimen and mature trees. Trees already in required landscape buffers shall also be located to minimize root zone encroachment, if applicable visual screening requirements of subsection 72-284(2)(d) are met.

d. Required screening specified by Table III shall comply with the following standards:

1. Brick or masonry walls and vinyl or wood fences utilized as visual screens must be opaque and finished to enhance site aesthetics.

2. Wood fences shall meet the following requirements: Minimum 5/8-inch thick pressure treated boards, minimum three 2-inch by 4-inch pressure treated horizontal stringers, and minimum 4-inch by 4-inch by 8-foot thick pressure treated support posts at eight-foot maximum spacing. Alternate fence materials may be used with the approval of the ZEO.

3. Hedges, utilized as visual screens, shall be planted at a minimum four feet in overall height and separated at a distance of 30 inches or less. These hedges shall be planted and maintained to provide a 6-foot high continuous, unbroken, solid, visual screen within a maximum of one year after date of planting.

4. A new landscaped earthen berm may only be used in landscaped buffers 50 feet wide or larger. These berms shall be planted in accordance with the requirements of landscape buffer tables I through IV. Landscaped earthen berms shall have a maximum slope of four feet horizontal to one-foot vertical (4:1) and shall include natural ground covers that provide at least 90 percent coverage of the entire berm area.

5. When a wall, fence, or hedge is used for screening, existing native vegetation should be retained, or planted in accordance with the requirements of the landscape buffer tables (Table I, II, III and IV). At least 50 percent of the required plant materials shall be planted along the exterior side of the screen. The screen shall include an opaque maintenance gate every 100 linear feet or half the length of the screen, whichever is less. The remaining plant materials shall be planted on the interior side of the screen to enhance the site's interior.

e. A minimum of 50 percent of the required landscape buffer shall remain at natural grade or a 1 slope, while the remaining buffer area shall not exceed a 4:1 slope.

f. When a recorded subdivision consists of ten lots or more, the required landscape buffer area shall be platted as a separate tract of land and maintained by a homeowners or property owners association to ensure adequate maintenance of the buffer.

g. Where canopy trees are required in a coastal environment, but appropriate salt tolerant species are not available, the required canopy trees can be substituted with mid-story trees at a ratio of two mid-story trees for every canopy tree, with approval of the zoning enforcement official (ZEO).

h. Removal of vegetation categorized as an invasive exotic in the Florida Exotic Pest Plant Council's List of Invasive Species and dead is required within all landscaped buffers. Care shall be taken not to damage, destroy, or otherwise remove healthy, beneficial, native vegetation within these areas.

i. The ZEO or the county council may require a greater buffer area than those listed in tables II and III for a permitted principal or special exception use, due to specific site conditions in conjunction with the existing character of the surrounding area. The ZEO or county council shall determine the appropriate buffer width, required plantings and screening requirements, if applicable, for special exception uses not listed in the aforementioned tables. In no case shall the required landscaped buffer be less than 25 feet between a nonresidential and residential use.

j. The ZEO may waive or modify the requirements of subsection 72-284(2), in order to facilitate the redevelopment of existing sites or where environmental constraints (i.e. preservation of existing wetlands, trees or topography) limit the available area to reasonably develop, or if literal interpretation of subsection 72-284(2) creates a hardship. The following items are prohibited within the required perimeter landscaped buffers:

1. A public or private right-of-way, easement, structure, or impervious surface other than a sign, an entrance or a driveway, or a site specific water or sanitary sewer service line which traverses the landscaped buffer.

2. Stormwater management areas, and any associated easements and appurtenances. 3. Private or public utility easements, structures or above-ground and underground improvements, except as stated above.

1. NEWLY INSTALLED "SHADE" TREES SHALL HAVE THEIR CALIPER MEASURED 6" ABOVE THE TOP OF THE ROOT BALL. ALL NEWLY INSTALLED "UNDERSTORY" TREES SHALL HAVE THEIR CALIPER AT ASURED 6" ABOVE THE TOP OF THE ROOT BALL.

2. ALL PLANT MATERIAL SHALL MEET OR EXCEED THE STANDARDS OF FLORIDA NO. 1 AS GRATED BY GRADES AND STANDARDS FOR NURSERY PLANTS, 2018 STATE OF FLORIDA, DEPARTMENT OF AGRICULTURE, TALLAHASSEE, AS D ANY AMENDMENTS THERETO.

3. THE LANDSCAPE ARCHITECT MAY REJECT ANY PLANT MATERIAL BROUGHT TO THE SITE WHICH HE DETERMINES TO BE OF INFERIOR QUALITY OR APPEARANCE.

4. ALL PLANT BEDS SHALL BE TOP DRESSED WITH A MINIMUM OF 3" DEPTH PINE BARK MULCH, MAINTAINED A 4" CLEAR SPACE BETWEEN MULCH AND THE PLANT STEM.

5. ALL TREES SHALL HAVE ALL SYNTHETIC BURLAP REMOVED FROM THE ENTIRE ROOT BALL. JUTE BURLAP SHALL BE PENETRATED FROM THE TOP OF AT LEAST HALF OF THE ROOT BALL. THE TOP THREE ROWS OF SQUARES OF ALL CAGES AROUND THE ROOT BALLS SHALL BE CLIPPED OFF AND REMOVED.

6. THE CONTRACTOR SHALL READ AND ADHERE TO ALL WRITTEN SPECIFICATIONS.

7. THE CONTRACTOR SHALL VISUALLY INSPECT THE SOILS CONDITION OF THE SITE. HE SHALL DIG A MINIMUM OF 1" TEST HOLES 3 FOOT DEEP RANDOMLY AROUND THE SITE. HE SHALL PERFORM PERCOLATION TESTS IN THESE HOLES FOR A PERIOD OF ONE HOUR EACH. THE HOLES SHALL BE FILLED WITH WATER AND IF THE HOLES HOLD MORE THAN ½" OF WATER AFTER ONE HOUR, THE LANDSCAPE ARCHITECT SHOULD BE INFORMED OF THE PROBLEM. THE CONTRACTOR SHALL RECOMMEND SUBSTITUTION OF PLANT MATERIAL AND PLANTING INSTALLATION TO ACCOMMODATE POOR DRAINING SOILS. ANY SUBSTITUTIONS MUST BE SUBMITTED TO THE COUNTY FORESTER IN WRITING FOR APPROVAL.

8. THE CONTRACTOR SHALL PROVIDE A SOIL TEST IN FOUR LOCATIONS, AND PROVIDE RECOMMENDATIONS FOR AMENDMENTS BASED ON THE RESULTS. IMPROPER SOIL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL RECTIFY ALL INCURRED DEFICIENCIES AT NO ADDITIONAL COST TO THE OWNER.

9. THE CONTRACTOR SHALL REVIEW THE SOILS REPORT ON FILE WITH THE OWNER.

10. THE INSTALLATION OF PLANT MATERIAL SHALL BE VIEWED AS ACCEPTANCE BY THE CONTRACTOR OF EXISTING GRADES AS GIVEN TO HIM. THE CONTRACTOR SHALL PROVIDE TO THE LANDSCAPE ARCHITECT A WRITTEN LETTER OF ACCEPTABILITY OF GRADES. FAILURE TO DO SO WILL BE VIEWED AS AN ACCEPTANCE OF EXISTING GRADES BY THE CONTRACTOR.

11. THE CONTRACTOR SHALL BERM ALL PARKING LOT ISLANDS 12" ABOVE TOP OF CURB ELEVATION WITHOUT EXCEEDING A 4:1 SLOPE (IF PITCAL).

12. WHERE LIGHT POLES AND TREES BOTH OCCUPY A PARKING LOT ISLAND, THE TREE SHALL BE SPACED AN ADEQUATE DISTANCE FROM THE POLE.

13. THE CONTRACTOR WILL BE REQUIRED TO SAND AREAS OF SOD THAT ARE NOT SMOOTHLY APPLIED TO ELIMINATE SMALL IRREGULARITIES IN GRADES. LARGE IRREGULARITIES IN GRADE WILL REQUIRE REGRADING & RESODDING.

14. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF THE SITE INCLUDING ALL MOWING, EDGING, TRIMMING, PRUNING & SPRAYING OF PESTICIDES & HERBICIDES UNTIL THE TIME OF FINAL ACCEPTANCE BY THE OWNER.

15. ALL NEWLY PLANTED STREET TREES SHALL BE PLACED ALONG AN ALIGNMENT LINE, GENERALLY 2.5 TO 2.5' FROM THE BACK OF CURB.

16. ALL PLANTING TREES SHALL BE AT GRADE OR NOT LESS THAN THREE (3) INCHES IN HEIGHT ABOVE THE FINISH GRADE.

LAND DEVELOPMENT
Approved Development Order
Land Development Code of Volusia County, Florida
D.O. # 2024-5-PPP-01415
Pursuant to the Land Development Code of Volusia County, Florida
5/19/2025
Land Development Manager, Date

Bdg
BONNETT design group, llc
landscape architecture
community planning
FL #LA0001718
400 South Orlando Ave. Suite 201
Maitland, FL 32751
407.622.2500

Ford 472
Landscape Architecture
Pulte Group
Volusia County, Florida
LANDSCAPE SCHEDULE & NOTES

DATE: January 29, 2024
DRAWN BY: BRL/JAM
CHECKED BY: TWB
JOB NUMBER: 2021.167
FILE NAME: 2021.167_PULTE FORD 472_LA BASE_CODE

REVISIONS
1 County Comments 05-31-2024
2 County Comments 08-26-2024
3 DRC Comments 11-08-2024
4 DRC Persons 01-12-2025

L420

COUNTY SUBMITTTAL - 2024-01-26

GENERAL REQUIREMENTS

The Landscape Contractor shall be responsible for all materials and all work as called for on the landscape plans. The list of plant quantities accompanying the plans shall be used as guide only. If a discrepancy occurs between the plans and the plant list, the plans shall control.

The Landscape Contractor shall warranty all trees for a period of one (1) year and shrubs and ground covers for a period of six (6) months from the time of final acceptance by Owner and Landscape Architect.

The Landscape Contractor shall be wholly responsible for the stability and plumb condition of all trees and shall be legally liable for any damage caused by the instability of any plant material. Staking of trees and palms, if required, shall be done utilizing a method agreed upon by the Landscape Architect.

The Landscape Contractor shall research plans and contact appropriate agencies to determine the location of any utilities and obstructions prior to commencing work. Any utilities or unanticipated obstructions shall be reported to Landscape Architect or Owner immediately.

All plant material and sodded areas shall have an automatic underground irrigation system providing 100% coverage.

Positive drainage shall be maintained away from all structures on the site.

PLANT SPECIFICATIONS

All nursery stock plant material shall be Florida #1 or better in accordance with Grades and Standards for Nursery Plants Parts I & II, latest edition as published by the Florida Department of Agriculture and Consumer Services- Division of Plant Industry.

All plant material shall be planted, fertilized and mulched as per the plant details and planting specifications noted on the plans.

All container grown material shall be healthy, vigorous, well rooted plants, and established in the container in which they are delivered to the site. The plants shall have tops which are good quality and in a healthy growing condition. Established container grown plant material shall be grown in that container sufficiently long enough for the new fibrous roots to have developed enabling the root mass to retain it's shape when removed the container. Plants which have become root bound in the container are unacceptable.

All plant material that is not container grown shall be freshly dug, sound, healthy, vigorous, well branched, and free of disease and insect eggs and larvae, and shall have adequate root systems. Where any requirements are omitted from the plant list, the plants furnished shall be normal for the variety. Plants may be pruned prior to delivery only upon the approval of the Landscape Architect.

FERTILIZER

Two fertilizers shall be used on all types of plantings, except palms. Granular fertilizer shall be uniform in composition, dry and free flowing. This fertilizer shall be delivered to the site in the original unopened bags bearing the manufacturer's statement of analysis. Granular fertilizer shall be a controlled release variety meeting the following requirements: sixteen percent (16%) nitrogen, four percent (4%) phosphorus, eight percent (8%) potassium, plus iron. tablet fertilizer ("Agriform" or approved equal) in 21 gram size shall meet the following requirements: twenty percent (20%) nitrogen, ten percent (10%) phosphorus, five percent (5%) potassium.

Application Rates:

Plant size	16-4-8	"Agriform" tablet (21 grams)
1 gallon	1/4 lb.	1 tablet
3 gallon	1/3 lb.	2 tablets
7-15 gallon	1/2 lb.	4 tablets
1" - 6" caliper	2 lbs. per 1" caliper	2 tablets per 1" caliper
6" + caliper	3 lbs. per 1" caliper	2 tablets per 1" caliper

Sodded areas shall receive an application of the granular fertilizer (16-4-8) at a rate of 1/2 lb. of Nitrogen per 1,000 square feet of sod area.

"Palm Special" fertilizer shall be applied to all palms at installation at a rate of 1 1/2 lbs. per 100 square feet of canopy area. Palm fertilizer shall be a controlled release variety containing chelated micro nutrients and a ratio of N-P-K-Mg of 2:1:3:1.

SOIL

Planting soil for use in preparing the backfill material for planting pits shall be added a rate of fifty percent (50%) planting soil to fifty percent (50%) existing soil. This soil mix shall be used in all plant pits except Sabal Palms which shall be backfilled with clean sand. Planting soil shall be a fertile, friable natural topsoil of loamy character. It shall contain forty (40) to fifty (50) percent decomposed organic matter and be free of heavy clay, stones larger than 1" in diameter, noxious weeds and plants, sod, partially disintegrated debris, insects or any other undesirable material, plants or seeds that would be toxic or harmful to plant growth.

MULCH

All plant beds and tree watering basins shall be top dressed with three inches (3") of pine bark mini-nuggets mulch.

SOD

Refer to Landscape Plan for limits of sod.

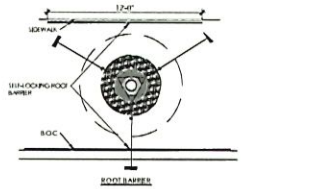
All areas disturbed by construction (including material staging, equipment storage, temporary facilities, site access, construction staff parking, etc.) beyond the minimum limits of sod as shown on the Landscape Plan shall be sodded as needed.

All lawn areas to receive sod shall be disked four (4) to six (6) inches and graded to establish a level finished grade ensuring positive drainage from all structures. All debris shall be removed from the site.

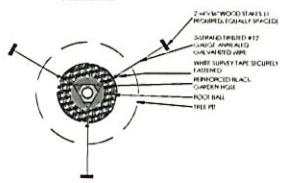
Sod shall be free of weeds and pests. It shall be laid evenly with tight fitting joints and rolled. The sod shall contain moist soil which does not fall apart or tear when lifted.

See plant list for specific sod species and locations.

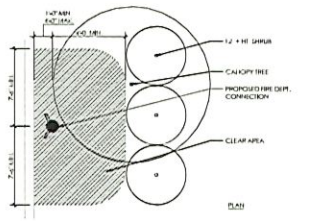
See 'Fertilizer' for requirements of all sodded areas.

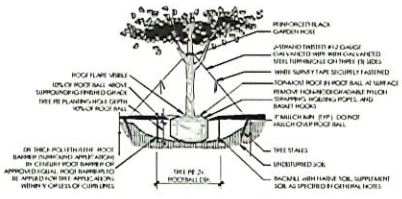


ROOT BARRIER



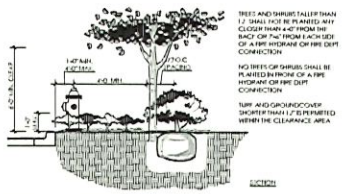
LARGE CANOPY TREE STAKING PLAN





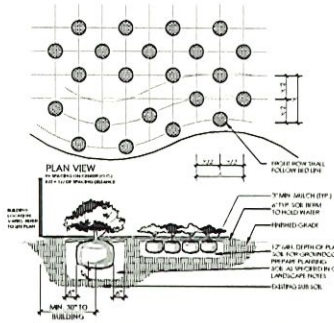
LARGE CANOPY TREE PLANTING DETAIL

N.T.S.



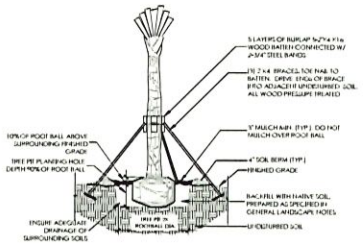
TYPICAL PLANTING AT FIRE HYDRANT

N.T.S.



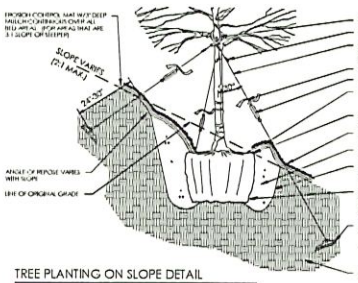
SHRUB AND GROUNDCOVER PLANTING DETAIL

N.T.S.



HURRICANE CUT PALM PLANTING DETAIL

N.T.S.



TREE PLANTING ON SLOPE DETAIL

N.T.S.

LIGHT TREE SUPPORT MATERIALS SHALL BE REMOVED FROM EACH TREE ONCE IT IS ESTABLISHED. THIS IS USUALLY DONE AFTER A MOWING FOR SHADE TREES AND 1 YEAR FOR PALM TREES.

LAND DEVELOPMENT
Approved Development Order
Land Development Code of Volusia County, Florida
D.O.#: 2024-Sub-PPL-41545
Subject to and limited by terms of Development Order
Kimberly Rodney 5/19/2025
Land Development Manager, Date

BONNETT design group, llc
landscape architecture
community planning
FL #LA0001718
400 South Orlando Ave. Suite 201
Maitland, FL 32751
407.622.2368

Ford 472
Landscape Architecture
Pulte Group
Volusia County, Florida
LANDSCAPE SCHEDULE & NOTES

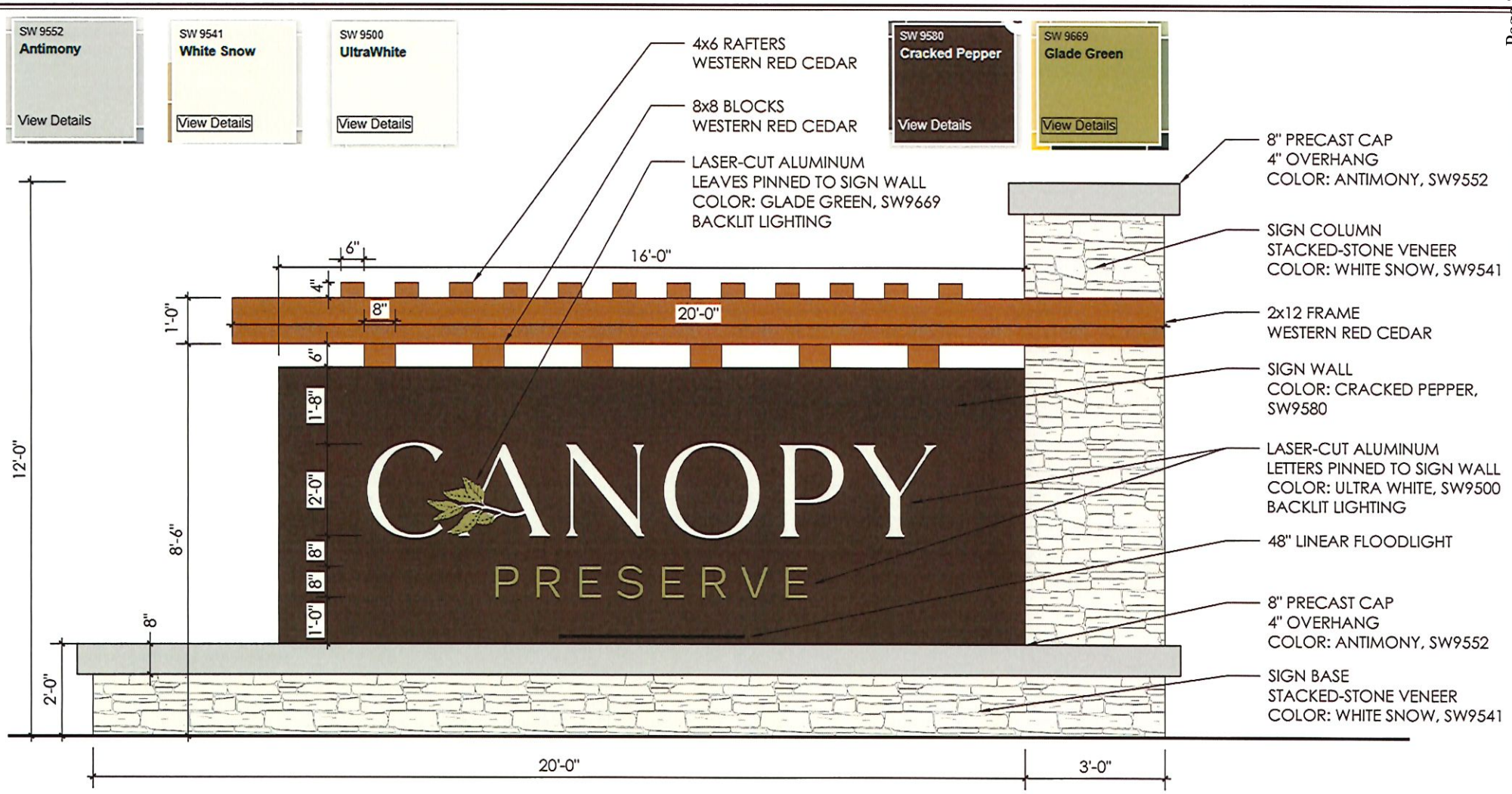
DATE: January 26, 2024
DRAWN BY: BRL/JAM
CHECKED BY: TWB
JOB NUMBER: 2021.167
FILE NAME: 2021.167_PULTE-SPD-472_LA BASE_CODE

REVISIONS
1 County Comments 05-31-2024
2 County Comments 08-26-2024
3 DRC Comments 11-08-2024
4 DRC Persons 01-13-2025

L421

EXHIBIT "D"

APPROVED SUBDIVISION SIGNAGE



CANOPY PRESERVE - ENTRY SIGN

VOLUSIA COUNTY, FLORIDA

PREPARED FOR:

PULTE GROUP, NORTH FLORIDA DIVISION

2021.167 February 05, 2025

BONNETT design group, llc
landscape architecture . community planning
FL #LA0001718
400 South Orlando Ave, Suite 201 . Maitland, FL 32751
407.622.1588 voice
www.BonnettDesignGroup.com

SCALE 1/2" = 1' - 0"

0' 1' 2'

EXHIBIT "E"

APPROVED TOWNHOME ELEVATIONS AND LAYOUT MAP



FORD PROPERTY

SITE PLAN

Deland, FL

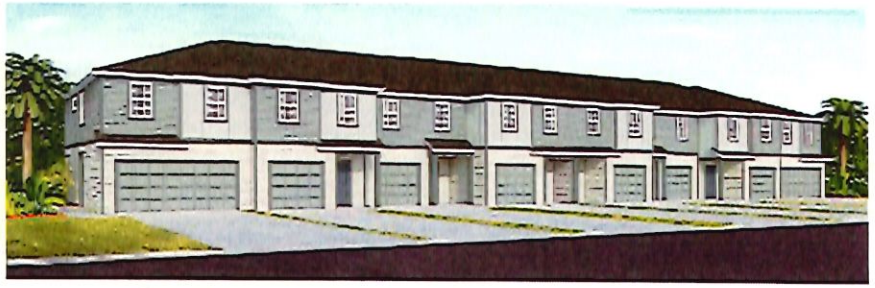
Pulte HOMES

Due to Pulte's ongoing commitment to customer satisfaction, these plans may be amended without prior notice. Artist's renderingonly. Prices, plans and features subject to change without notice. CGC1515415 ©2020 Pulte Homes, INC.

Canopy Preserve Townhomes
Color Schemes



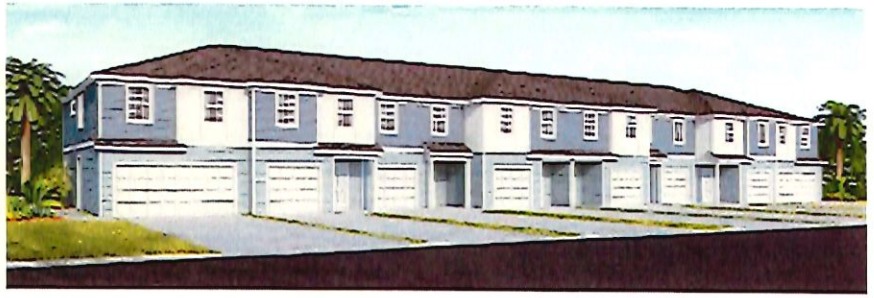
Configuration A - Farmhouse Lullaby



Configuration B - Traditional Modern White



Configuration A - Farmhouse Alabaster



Configuration B - FL Med Krypton

PULTE GROUP

EXHIBIT "F"

MODEL HOME LOCATION PLAN



CANOPY PRESERVE

SITE PLAN

Deland, FL

Pulte HOMES

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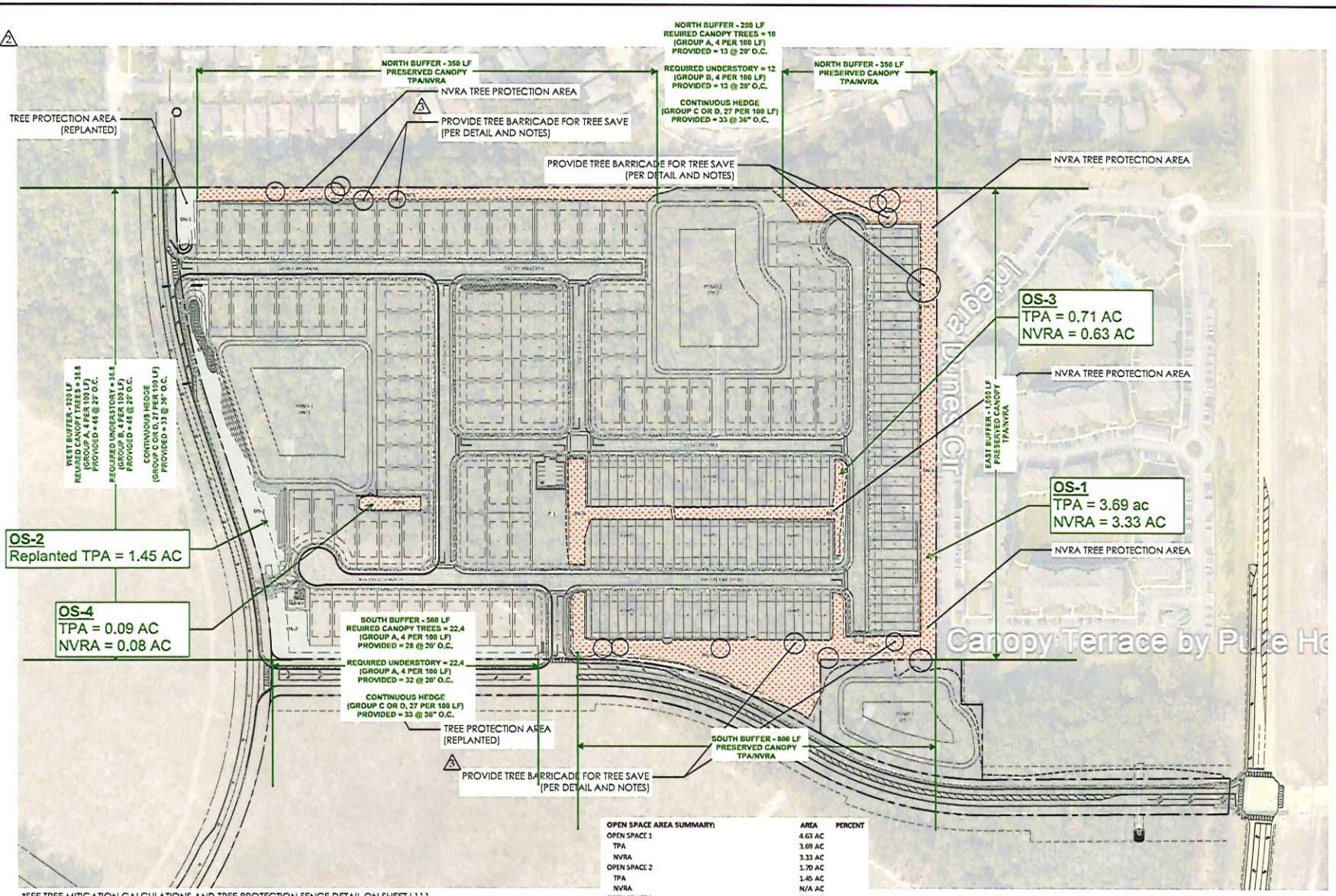
EXHIBIT "G"

LANDSCAPE BUFFER PLAN



OPEN SPACE AREA SUMMARY:	AREA	PERCENT
OPEN SPACE 1	4.63 AC	
TPA	3.69 AC	
NVRA	3.33 AC	
OPEN SPACE 2	1.70 AC	
TPA	1.45 AC	
NVRA	N/A AC	
OPEN SPACE 3	0.46 AC	
TPA	0.71 AC	
NVRA	0.63 AC	
OPEN SPACE 4	1.82 AC	
TPA	0.09 AC	
NVRA	0.08 AC	
TOTAL PROJECT AREA:	39.24 AC	
TOTAL TPA:	5.94 AC	15%
TOTAL NVRA:	4.03 AC	10%

BONNETT design group, llc
landscape architecture
community planning
FL #LA0001718
400 South Orlando Ave, Suite 201
Maitland, FL 32751
407.622.1388

Ford 472
Landscape Architecture
Pulte Group
Volusia County, Florida
OVERALL TREE MITIGATION PLAN

DATE: January 26, 2024
DRAWN BY: BKL/JAM
CHECKED BY: TWB
JOB NUMBER: 2023.167
FILE NAME: 2023.167_PULTE/FORD 472_LS BASE_COUNTY

REVISIONS:
1 County Comments 05-31-2024
2 County Comments 09-26-2024
3 DRC Comments 11-08-2024
4 DRC Revisions 03-12-2025

L100

COUNTY SUBMITTTAL - 2024-01-26

VOLUSIA COUNTY SCHOOLS

Carmen J. Balgobin, Ed.D
Superintendent of Schools

School Board of Volusia County

Ms. Jamie M. Haynes, Chair
Mr. Ruben Colón, Vice Chair
Ms. Krista Goodrich
Mrs. Jessie Thompson
Ms. Donna Brosemer

School Concurrency Determination
Concurrency Letter

May 20, 2025

Mr. Mark A. Watts, Esq.
Cobb Cole
231 N. Woodland Blvd
DeLand, FL 32720

RE : Ford 472 – County of Volusia
School Concurrency Case # 25-02-25-001-R

Mr. Watts:

District staff has reviewed the school concurrency application for the residential project known as Ford 472, associated with 39.24 +/- acres of property. The property is located at or near the intersection of State Road 472 and Dr. Martin L King Jr. Blvd within an unincorporated area of Volusia county. Information provided in the application indicates the development activity will consist of ninety-one (91) single family units and one hundred twelve (112) multi-family.

The district uses a county wide Student Generation Rate (SGR) of (0.258) per single family and 0.137 per multi-family dwelling unit to calculate projected students. By applying the SGR to the use types in Table 1 below, the project could generate Thirty-Five (35) full time students.

Table 1

UNIT TYPE	SGR	UNIT COUNT	STUDENTS GENERATED
Single Family Dwelling Unit	0.258	91	14
Multi Family Dwelling Unit	0.137	112	21
Mobile/ Manufactured Home Dwelling Unit	0.052	0	0
	Total	**203**	**35**

The Concurrency Analysis (Table 2, next page) adjusts for impacts to the Concurrency Service Areas (CSAs) by accounting for current school year enrollments, existing reservations at the impacted schools, and the projected students generated by the applicant. These factors give an associated utilization or Level of Service (LOS) percentage for each CSA.

The schools impacted by this development are Orange City Elementary School, Deland Middle School, and University High School.

Concurrency Analysis

Table 2

Schools	Adopted LOS	SY 2024/25 Enrollment	Active Reservations	Existing LOS w/ Res	Students Generated by Request	Result LOS
Orange City Elementary	115%	595	17	119%	15	122%
Deland Middle	115%	1067	85	100%	8	104%
<Planning Area> CSA (University High)	120%	2881	80	114%	13	115%
Other					35	

The adopted LOS standard for elementary and middle school is (115%) of permanent student stations, and (120%) for high school CSAs. This projected increase in students **will** exceed the adopted LOS at the elementary level. However, the classroom addition at Orange City elementary is projected to be completed within the coming school year, therefore the school district has no objection to this proposed residential development. Minimum planning considerations should include pedestrian and vehicular access, safety, connectivity, and buffering.

Please note that the School Board has the right to adjust the attendance boundaries to balance the student enrollment populations at these area schools. Therefore, students generated from this project may not attend the current assigned schools.

Should you need additional information, please contact me at (386) 947-8786, ext. 50754.

Sincerely,

Cody F. Shepard

Cody F. Shepard
Specialist, Planning & GIS

CC: Carmen J. Balgobin, Ed.D, Superintendent of Schools
Ron Young, Director of Planning & Construction
Robert J. Voges, Ed.S, Planning Coordinator
Kimberly Reading, Land Development Manager, County of Volusia

VOLUSIA COUNTY SCHOOLS

Certificate of School Concurrency

VOLUSIA COUNTY SCHOOL BOARD

Project Information

Project Name	Ford 472
VCSB Project #	25-02-25-001-R
Jurisdiction Project #	
Parcel ID Numbers	8001-00-00-0020
Project Location	State Road 472 and Dr. Martin L King Jr. Blvd
# of Residential Units	203
Residential Unit Type	91 Single Family Homes 112 Multi-Family Townhomes
Property Owners	Pulte Home Company, LLC
Applicant/Agent Name	Mark A. Watts Esp., Cobb Cole

This School Concurrency Certificate shall reserve student stations for the above referenced project and shall confirm that said project meets the School Concurrency requirements of the adopted Interlocal Agreement for Public School Facility Planning.

School Concurrency Analysis

School Levels	Elementary	Middle	High	Other	Total Student Stations Reserved
Students Generated	**15**	**8**	**5**	0	**35**

Comments: This certificate is required to be included with the building permit submittal(s) as proof of school concurrency.

This concurrency reservation shall expire two (2) years from the date of issuance of this certificate.

Cody F. Shepard

Cody F. Shepard
Specialist, Planning & GIS

May 20, 2025
Issue Date

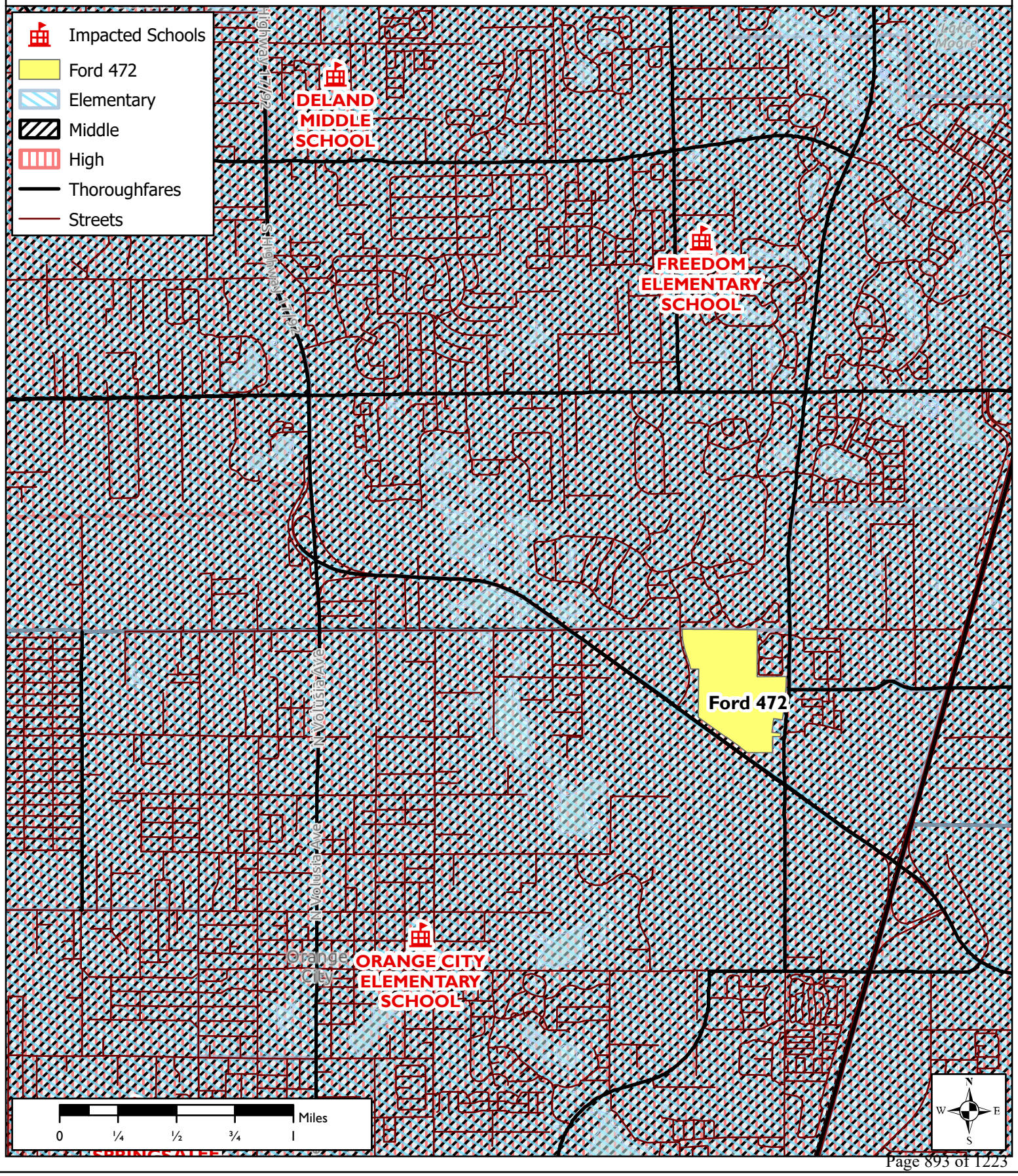
Created: 9/2007
Rev: 1/2018
Owner: Facilities Services

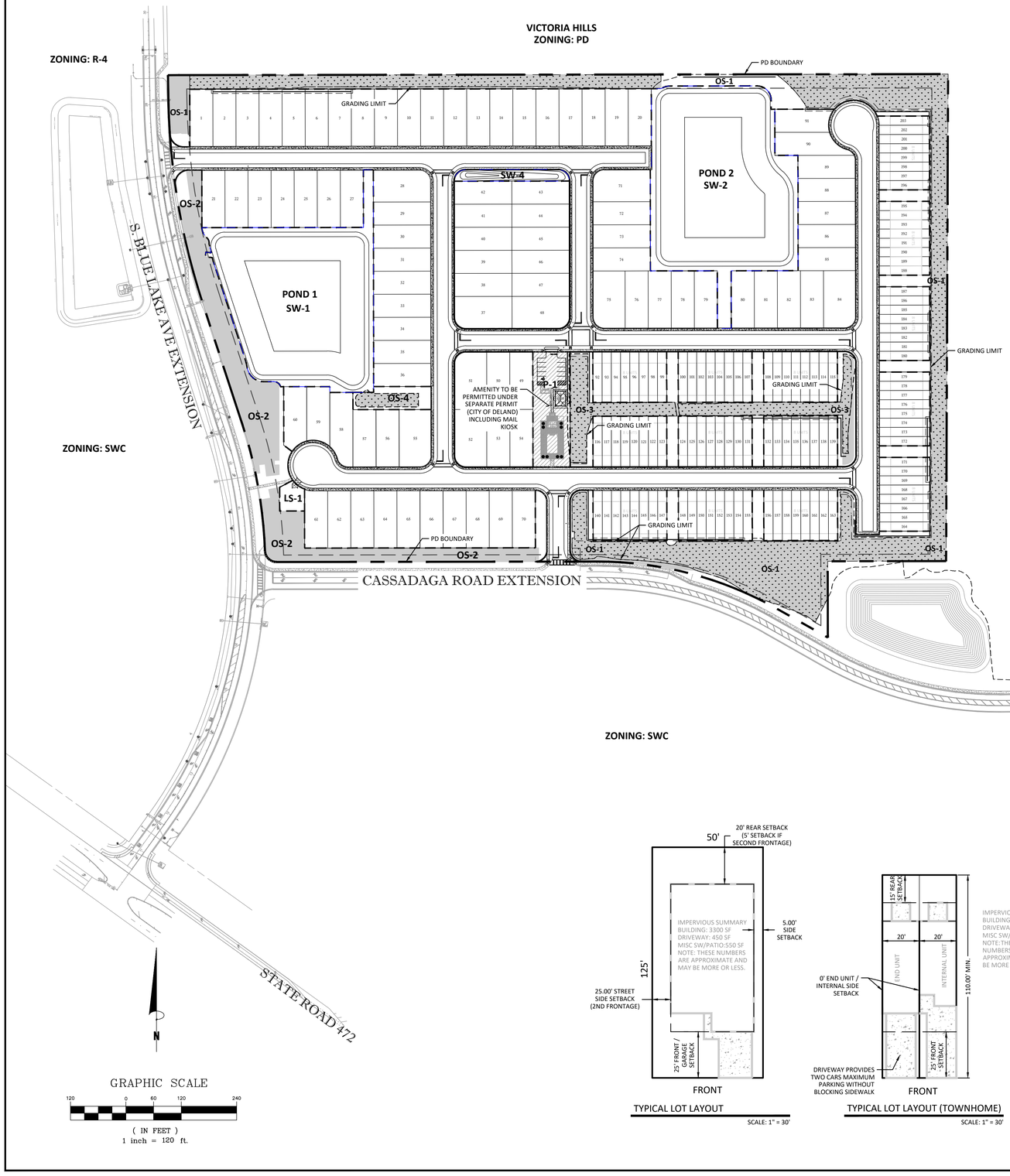
2008-072-VCS
Print Locally

VCSB Schools Impacted by Development

School Concurrency Review - Ford 472

VOLUSIA COUNTY SCHOOLS
Planning & Business Services
May 2025



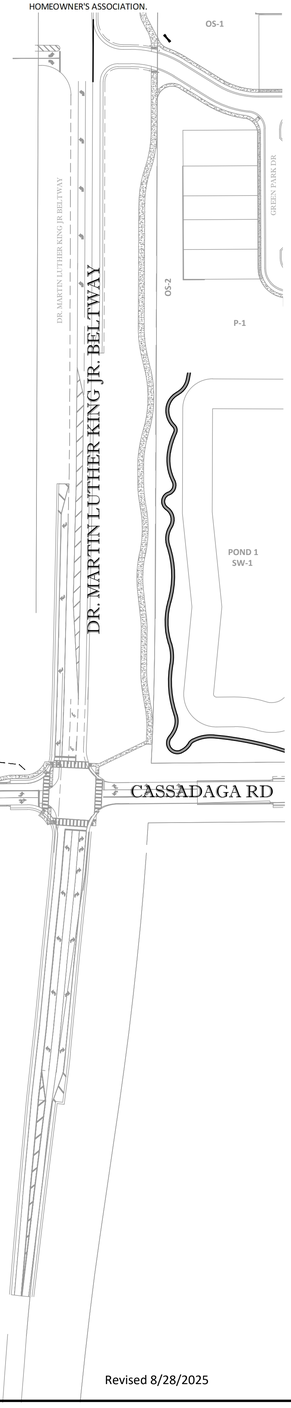


LIGHTING
STREET LIGHTS WILL BE PROVIDED IN SUBDIVISION. LIGHTING WILL BE IN ACCORDANCE WITH THE COMMUNITY DESIGN STANDARDS IN S. 33-94 (WILL NOT EXCEED 0.5 FOOT CANDLES AT THE PROPERTY LINE).

RIGHT OF WAY
SIDEWALKS ON THE RIGHT OF WAY TO BE MAINTAINED BY THE HOMEOWNER'S ASSOCIATION.

DRAINAGE EASEMENT
FENCES WILL NOT BE PERMITTED IN DRAINAGE EASEMENTS.

SIDEWALK, WALL & STORMWATER TRACTS
ALL SIDEWALKS, WALLS AND STORMWATER TRACTS INTERNAL TO DEVELOPMENT WILL BE MAINTAINED BY THE HOMEOWNER'S ASSOCIATION.



TRACT TABLE

TRACT	AREA	DESCRIPTION	OWNERSHIP
LS-1	0.07 AC	LIFT STATION TRACT	CITY OF DELAND
OS-1	4.63 AC	LANDSCAPE BUFFER / OPEN SPACE / TPA / NVRA	HOMEOWNER'S ASSOCIATION
OS-2	1.70 AC	LANDSCAPE BUFFER / OPEN SPACE / TPA	HOMEOWNER'S ASSOCIATION
OS-3	1.12 AC	LANDSCAPE BUFFER / OPEN SPACE / TPA / NVRA	HOMEOWNER'S ASSOCIATION
OS-4	0.18 AC	LANDSCAPE BUFFER / OPEN SPACE / TPA / NVRA	HOMEOWNER'S ASSOCIATION
P-1	0.46 AC	PARK / AMENITY AREA	HOMEOWNER'S ASSOCIATION
SW-1	2.57 AC	STORMWATER MANAGEMENT	HOMEOWNER'S ASSOCIATION
SW-2	2.85 AC	STORMWATER MANAGEMENT	HOMEOWNER'S ASSOCIATION
SW-4	0.14 AC	STORMWATER MANAGEMENT	HOMEOWNER'S ASSOCIATION
	13.73 AC	TRACT AREA	
	19.24 AC	LOT AREA	
	6.27 AC	SUBDIVISION RIGHT OF WAY	
TOTAL	39.24 AC		

SITE DATA

SUBDIVSION PROJECT AREA:	39.24 AC
CASSADAGA EXTENSION RIGHT OF WAY:	4.01 AC
OFFSITE POND TRACT SW-3	1.82 AC
TOTAL:	**45.07 AC**
LOTS / UNITS:	203 LOTS
DENSITY:	5.17 UNITS / AC
TOTAL LENGTH OF STREETS	5331 LF
LAND USE:	COUNTY SWR
FUTURE LAND USE:	CITY LDR
ZONING:	COUNTY SWR
PROPOSED ZONING:	CITY PD

LOT / UNIT SUMMARY:

50' LOTS:	91
TOWNHOME LOTS:	112
TOTAL:	**203 LOTS**

SUBDIVISION AREA SUMMARY:	**AREA**	**PERCENT**
RESIDENTIAL LOT AREA	19.24 AC	**49%**
INTERNAL RIGHT OF WAY	6.27 AC	**16%**
LIFT STATION TRACT:	0.07 AC	**0.19%**
PARK / OPEN SPACE TRACTS:	8.10 AC	**21%**
STORMWATER TRACTS:	5.56 AC	**14%**
TOTAL PROJECT AREA:	**39.24 AC**	**100%**
IMPERVIOUS AREA:	**17.16 AC**	**44%**
PERVIOUS AREA:	**22.08 AC**	**56%**

DETACHED DEVELOPMENT STANDARDS	(PROVIDED)
MIN. LOT WIDTH:	50 FT
MAX. IMPERVIOUS AREA LOT COVERAGE:	65 %
MAX. BUILDING HEIGHT:	35 FT
MIN. LOT AREA:	6,250 SF
MIN. BLDG SEPERATION:	10 FT
SETBACKS:	
FRONT:	25 FT
REAR:	20 FT
SIDE:	5 FT
GARAGE:	25 FT

TOWNHOME DEVELOPMENT STANDARDS	(PROVIDED)
MIN. LOT WIDTH:	20 FT
MAX. IMPERVIOUS AREA LOT COVERAGE:	70 % Overall Townhome area 85 % Per Townhome lot
MAX. BUILDING HEIGHT:	35 FT
MAX. TOWNHOUSE BUILDING LENGTH:	160 FT
MIN. LOT AREA:	2,200 SF
MIN. BLDG SEPERATION:	* FT
SETBACKS:	
FRONT:	25 FT
REAR:	15 FT
SIDE:	0 FT

* 50 FT BETWEEN FRONTS OR REARS OF PRINCIPAL BUILDINGS AND 25 FT BETWEEN ANY OTHER COMBINATIONS OF PRINCIPAL BUILDING ARRANGEMENTS.

OPEN SPACE AREA SUMMARY:	**AREA**	**PERCENT**
OPEN SPACE 1	4.63 AC	
TPA	3.69 AC	
NVRA	3.33 AC	
OPEN SPACE 2	1.70 AC	
TPA	1.45 AC	
NVRA	N/A AC	
OPEN SPACE 3	0.46 AC	
TPA	0.71 AC	
NVRA	0.63 AC	
OPEN SPACE 4	1.82 AC	
TPA	0.09 AC	
NVRA	0.08 AC	
TOTAL PROJECT AREA:	**39.24 AC**	
TOTAL TPA:	**5.94 AC**	**15%**
TOTAL NVRA:	**4.03 AC**	**10%**

LEGEND
- PROJECT BOUNDARY
- STORMWATER TRACT BOUNDARY
- OPEN SPACE TRACT BOUNDARY
- GRADING LIMIT
- TREE PROTECTION AREA
- NATURAL VEGETATION RETENTION AREA

Revised 8/28/2025

FOR REVIEW ONLY
CIVIL DISCIPLINE ONLY
CERTIFICATE OF AUTHORIZATION NUMBER:EB007550

SEAN CARLTON FORTIER LICENSE No. 68396 STATE OF FLORIDA PROFESSIONAL ENGINEER

SEAN C. FORTIER, P.E.
FLORIDA REGISTRATION 68396
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

KELLY, COLLINS & GENTRY, INC.
KCG
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 898-7858 FAX (407) 898-1488

REVISION
DATE

PREPARED FOR:
PULTE GROUP

FORD 472
SUBDIVISION

PD OVERALL PLAN

DRAWN: LHG
DESIGN: DSR
CHECKED: SCF
JOB NO.: 1496.000
DATE: 06/30/2025

SHEET
PD-1

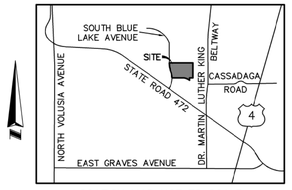
LEGAL DESCRIPTION

A PARCEL OF LAND COMPRISING A PORTION OF GOVERNMENT LOT 1, LYING IN SECTION 1, TOWNSHIP 18 SOUTH, RANGE 30 EAST, VOLUSIA COUNTY, FLORIDA.

BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE SOUTHWEST CORNER OF SECTION 35, TOWNSHIP 17 SOUTH, RANGE 30 EAST BEING A POINT ON THE NORTH LINE OF AFORESAID GOVERNMENT LOT 1, ALSO BEING A POINT ON THE SOUTH LINE OF VICTORIA PARK INCREMENT THREE SOUTHWEST AS RECORDED IN MAP BOOK 51, PAGES 193 THROUGH 205 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA; THENCE RUN NORTH 89°55'33" EAST ALONG THE SOUTH LINE OF SAID SECTION 35, SAID NORTH LINE OF GOVERNMENT LOT 1 AND SAID SOUTH LINE OF SAID VICTORIA PARK INCREMENT THREE SOUTHWEST FOR A DISTANCE OF 1666.26 FEET; THENCE DEPARTING SAID NORTH LINE AND SAID SOUTH LINES RUN SOUTH 00°13'58" WEST FOR A DISTANCE OF 1055.76 FEET; THENCE RUN SOUTH 89°55'33" WEST FOR A DISTANCE OF 256.47 FEET; THENCE RUN SOUTH 00°04'26" EAST FOR A DISTANCE OF 165.32 FEET; THENCE RUN NORTH 60°28'40" WEST FOR A DISTANCE OF 126.03 FEET TO THE POINT OF CURVATURE OF A CURVE, CONCAVE SOUTHWESTERLY HAVING A RADIUS OF 790.00 FEET, WITH A CHORD BEARING OF NORTH 75°16'34" WEST, AND A CHORD DISTANCE OF 403.56 FEET; THENCE RUN NORTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 29°35'47" FOR A DISTANCE OF 408.08 FEET TO THE POINT OF TANGENCY; THENCE RUN SOUTH 89°55'33" WEST FOR A DISTANCE OF 694.57 FEET TO THE POINT OF CURVATURE OF A CURVE, CONCAVE NORTHEASTERLY HAVING A RADIUS OF 25.00 FEET, WITH A CHORD BEARING OF NORTH 46°04'55" WEST, AND A CHORD DISTANCE OF 34.73 FEET; THENCE RUN NORTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 87°59'04" FOR A DISTANCE OF 38.39 FEET TO A POINT ON THE EAST RIGHT-OF-WAY LINE OF SOUTH BLUE LAKE AVENUE ACCORDING TO OFFICIAL RECORDS BOOK 8336, PAGE 276 OF AFORESAID PUBLIC RECORDS, ALSO BEING A POINT OF REVERSE CURVATURE OF A CURVE CONCAVE WESTERLY HAVING A RADIUS OF 995.00 FEET, WITH A CHORD BEARING OF NORTH 10°06'00" WEST, AND A CHORD DISTANCE OF 277.30 FEET; THENCE RUN THE FOLLOWING BEARING AND DISTANCES ALONG SAID EASTERLY RIGHT-OF-WAY LINE: NORTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 16°01'13" FOR A DISTANCE OF 278.21 FEET TO A POINT OF TANGENCY; THENCE RUN NORTH 18°06'36" WEST FOR A DISTANCE OF 280.11 FEET TO THE POINT OF CURVATURE OF A CURVE, CONCAVE EASTERLY HAVING A RADIUS OF 1488.00 FEET, WITH A CHORD BEARING OF NORTH 09°34'01" WEST, AND A CHORD DISTANCE OF 442.10 FEET; THENCE RUN NORTHERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 17°05'11" FOR A DISTANCE OF 443.74 FEET TO THE POINT OF TANGENCY; THENCE RUN NORTH 01°01'25" WEST A DISTANCE OF 56.09 FEET TO A POINT ON THE SOUTH LINE OF THE SOUTHEAST 1/4 OF SECTION 34, TOWNSHIP 17 SOUTH, RANGE 30 EAST, ALSO BEING AFORESAID NORTH LINE OF GOVERNMENT LOT 1 AND SAID SOUTH LINE OF SAID VICTORIA PARK INCREMENT THREE SOUTHWEST; THENCE RUN NORTH 89°43'05" EAST ALONG SAID SOUTH LINES AND SAID NORTH LINE FOR A DISTANCE OF 24.02 FEET TO THE POINT OF BEGINNING.

CONTAINS 39.24 ACRES MORE OR LESS.



LOCATION MAP NOT TO SCALE

SURVEYOR'S NOTES:

1. BEARINGS SHOWN HEREON ARE ASSUMED AND RELATIVE TO THE NORTH LINE OF GOVERNMENT LOT 1, SECTION 1, TOWNSHIP 18 SOUTH, RANGE 30 EAST, BEING NORTH 89°55'33" EAST.
2. THERE MAY BE ENVIRONMENTAL ISSUES AND/OR OTHER MATTERS REGULATED BY VARIOUS DEPARTMENTS OF FEDERAL, STATE OR LOCAL GOVERNMENTS AFFECTING THE SUBJECT PROPERTY NOT SHOWN ON THIS SURVEY.
3. THIS SURVEY WAS PERFORMED FOR THE SOLE AND EXCLUSIVE BENEFIT OF THE ENTITIES LISTED HEREON AND SHALL NOT BE RELIED UPON BY ANY OTHER ENTITY OR INDIVIDUAL WHOMSOEVER.
4. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A COMMITMENT TO INSURE TITLE.
5. THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
6. UNLESS OTHERWISE NOTED OR SHOWN HEREON, APPARENT AND/OR VISIBLE, UNOBSTRUCTED, ABOVE GROUND IMPROVEMENTS WERE LOCATED. UNDERGROUND UTILITIES, FOUNDATIONS AND IMPROVEMENTS WERE NOT LOCATED, UNLESS SHOWN HEREON.
7. UNLESS OTHERWISE NOTED OR SHOWN HEREON, THERE ARE NO APPARENT AND/OR UNOBSTRUCTED, ABOVE GROUND ENCROACHMENTS. THE DISPOSITION OF ANY POTENTIAL ENCROACHING IMPROVEMENTS SHOWN IS BEYOND PROFESSIONAL PURVIEW AND SUBJECT TO LEGAL INTERPRETATION.
8. THE LANDS SHOWN HEREON LIE IN ZONE "X", DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN ACCORDING TO FLOOD INSURANCE RATE MAP (FIRM) COMMUNITY PANEL NO. 1251550610J, MAP NO. 12127C610J, MAP REVISED FEBRUARY 19, 2014. THE ABOVE STATEMENT IS FOR INFORMATION ONLY AND THIS SURVEYOR ASSUMES NO LIABILITY FOR THE CORRECTNESS OF THE CITED MAP(S). IN ADDITION, THE ABOVE STATEMENT DOES NOT REPRESENT THIS SURVEYOR'S OPINION OF THE PROBABILITY OF FLOODING.
9. THERE WAS VISUAL EVIDENCE OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION, OR BUILDING ADDITIONS OBSERVED IN THE PROCESS OF CONDUCTING THE FIELD WITHIN THE SURVEYED LANDS.
10. WHILE CONDUCTING THE SURVEY, THERE WAS NO OBSERVED EVIDENCE OF WETLANDS WITHIN THE SURVEYED LANDS.
11. ADJOINING PARCEL OWNER AND RECORDING INFORMATION DELINEATED HEREON WAS OBTAINED FROM THE VOLUSIA COUNTY PROPERTY APPRAISER'S PUBLIC ACCESS SYSTEM.
12. THE SUBJECT PROPERTY IS UNIMPROVED, NO BUILDINGS AND IS PARTIALLY WOODED
13. THERE WAS NO VISUAL EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS OBSERVED IN THE PROCESS OF CONDUCTING THE FIELD WITHIN THE SURVEYED LANDS. THE SURVEYOR IS UNAWARE OF ANY PROPOSED CHANGES IN THE RIGHT-OF-WAY.
14. THE SUBJECT PROPERTY HAS ACCESS TO PUBLIC UTILITIES FROM THE PUBLIC STREETS ADJACENT TO THE SUBJECT PROPERTY.
15. THE SUBJECT PROPERTY ABUTS, WITHOUT GAPS GORES OR STRIPS, AND HAS VEHICULAR AND PEDESTRIAN INGRESS TO AND EGRESS FROM SOUTH BLUE LAKE AVENUE, WHICH IS COMPLETED, DEDICATED AND ACCEPTED PUBLIC RIGHT OF WAY.
16. EXCEPT AS SHOWN ON THE SURVEY, THE SUBJECT PROPERTY DOES NOT APPEAR TO SERVE ANY ADJOINING PROPERTY FOR UTILITIES, DRAINAGE, STRUCTURAL SUPPORT OR INGRESS OR EGRESS.
17. THE LEGAL DESCRIPTION SHOWN HEREON WAS PREPARED BY THE SURVEYOR AT THE CLIENT'S REQUEST.
18. THERE IS NO OBSERVED EVIDENCE OF THE SITE BEING USED AS A SOLID WASTE DUMP, SUMP OR SANITARY LANDFILL.
19. THIS SURVEY IS CERTIFIED TO: LANDIS GRAHAM FRENCH, P.A.; OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY; PULTE HOME COMPANY, LLC; FRANK A. FORD, INDIVIDUALLY AND AS TRUSTEE; RAY F. VEECH, AS TRUSTEE OF THE ALEX B. VEECH TRUST AND INDIVIDUALLY; KIRTLEY PENROD AS PERSONAL REPRESENTATIVE OF THE ESTATE OF JEAN FORD PENROD AND AS TRUSTEE OF THE JOHN PENROD TESTAMENTARY TRUST; SARAH R. FORD; FRANK A. FORD, JR.; ELIZABETH F. WILLIAMS; COURTNEY F. HAMIL; ATTORNEY'S TITLE FUND SERVICES

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BOUNDARY SURVEY OF FORD 472

SECTION 1, TOWNSHIP 18 SOUTH, RANGE 30 EAST
CITY OF DELAND, VOLUSIA COUNTY, FLORIDA

FOR: PULTE HOMES

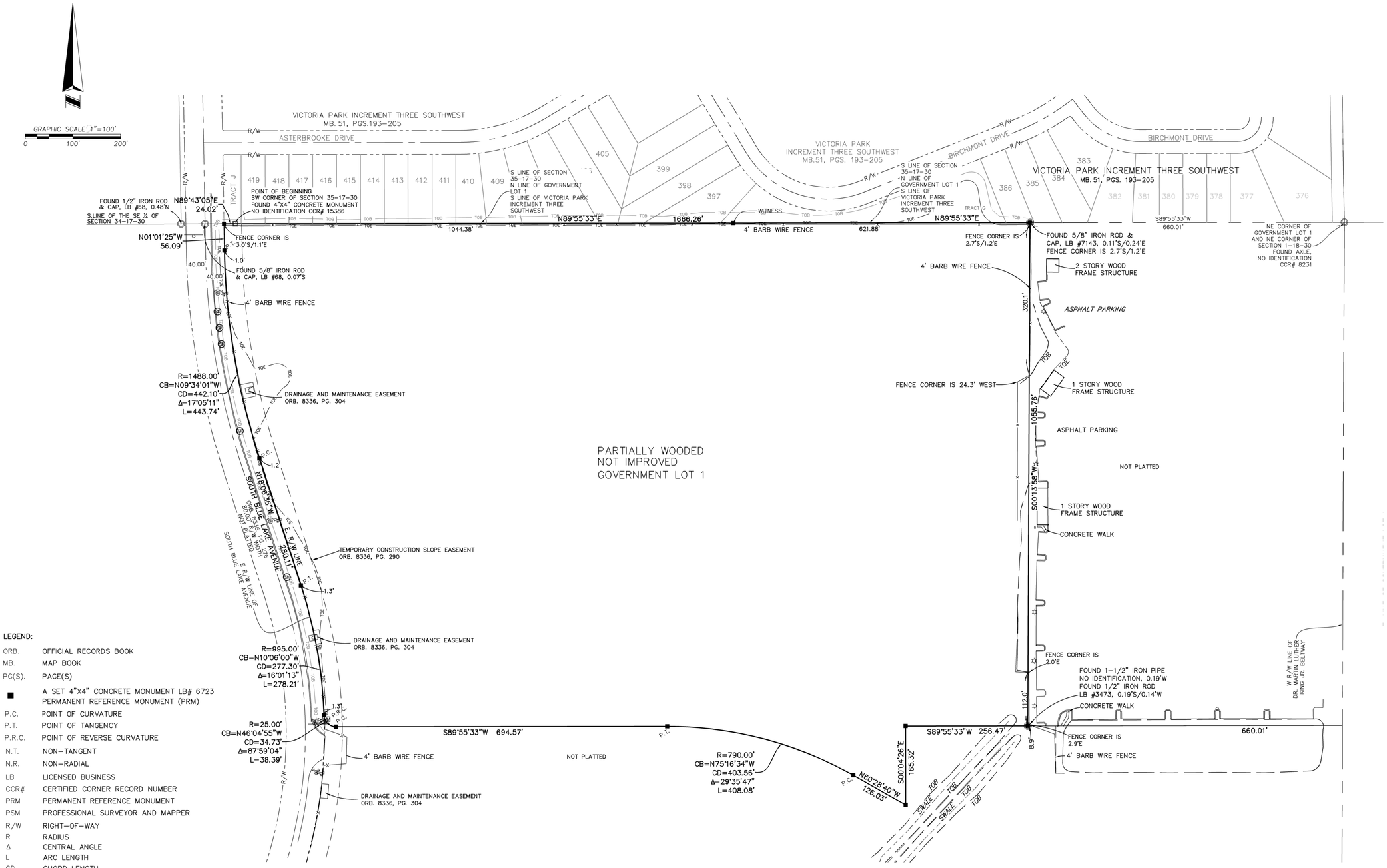
JAMES L. RICKMAN, PSM #5633
FOR THE LICENSED BUSINESS #8627 BY:
JAMES LOUIS RICKMAN LICENSED SURVEYOR AND MAPPER
LS5633 STATE OF FLORIDA
This item has been electronically signed and Sealed by James L. Rickman, P.S.M. using A Digital Signature.
Printed Copies of this document are not considered signed and sealed and the signature Must be verified on any electronic copies.
Digitally signed by: James L Rickman
Date: 2025.05.22 16:09:12 -04'00'

DATE	REVISIONS
1-17-25	REVISE ACREAGE ADD CERTIFICATIONS

JOB #: 20200713
DATE: 12-16-24
SCALE: 1"=100'
CALC BY: SEJ
FIELD BY: JDS
DRAWN BY: SEJ
CHECKED BY: MR

SHEET 1 OF 2

Drawing name: L:\Data\20200713\Plat\plat boundary 24x36-Brdy Sheet-1



LEGEND:

ORB.	OFFICIAL RECORDS BOOK
MB.	MAP BOOK
PG(S).	PAGE(S)
■	A SET 4"X4" CONCRETE MONUMENT LB# 6723 PERMANENT REFERENCE MONUMENT (PRM)
P.C.	POINT OF CURVATURE
P.T.	POINT OF TANGENCY
P.R.C.	POINT OF REVERSE CURVATURE
N.T.	NON–TANGENT
N.R.	NON–RADIAL
LB	LICENSED BUSINESS
CCR#	CERTIFIED CORNER RECORD NUMBER
PRM	PERMANENT REFERENCE MONUMENT
PSM	PROFESSIONAL SURVEYOR AND MAPPER
R/W	RIGHT–OF–WAY
R	RADIUS
Δ	CENTRAL ANGLE
L	ARC LENGTH
CD	CHORD LENGTH
CB	CHORD BEARING
TOB	TOP OF BANK
TOE	TOE OF SLOPE
☼	LIGHT POLE
S	STORM DRAINAGE MANHOLE
	FIRE HYDRANT
	MITERED END SECTION
W	WATER VALVE
	SINGLE STAND SIGN
WM	WATER METER
	WATERLINE MARKER

Drawing name: L:\Data\20200713\Plat\plat boundary 24x36–Body Sheet–2

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BOUNDARY SURVEY OF FORD 472

SECTION 1, TOWNSHIP 18 SOUTH, RANGE 30 EAST
CITY OF DELAND, VOLUSIA COUNTY, FLORIDA

FOR: PULTE HOMES

JAMES LOUIS RICKMAN LICENSE NUMBER PROFESSIONAL SURVEYOR AND MAPPER
LS5633
STATE OF FLORIDA

This item has been electronically signed and Sealed by James L. Rickman, P.S.M. using A Digital Signature.

Printed Copies of this document are not considered signed and sealed and the signature Must be verified on any electronic copies.

Digitally signed by: James L Rickman
Date: 2025.05.22 16:09:54 -04'00'

DATE	REVISIONS

JOB #:	20200713
DATE:	12–16–24
SCALE:	1"=100'
CALC BY:	SEJ
FIELD BY:	FORD 472
DRAWN BY:	SEJ
CHECKED BY:	MR

SHEET 2 OF 2

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John P. Ferguson
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Heather Bond Vargas
Michael J. Woods
Raymond L. Schumann
Kathleen L. Crotty
Michael O. Sznapstajler
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William M. Cobb (1881-1939)
Thomas T. Cobb (1916-2004)
W. Warren Cole, Jr. (1926-2008)

February 26, 2025

Carol Kuhn, AICP
Planning Director
City of DeLand
120 South Florida Avenue
DeLand, FL 32720

Re: Revised Project Narrative – 472 PD, Annexation & Small-Scale CPA
Parcel ID No. 8001-00-00-0020 (northern portion of)

Dear Carol,

Cobb Cole represents Pulte Home Company, LLC, owners of the above-referenced parcel. The property is currently undergoing subdivision review and approval by the County of Volusia for the development of single family and townhome style residential units. The property is subject to an annexation, land use, and rezoning request to locate the property within the municipal boundaries of the City of DeLand.

We are requesting to amend the future land use and zoning designations for the property identified in the application ("Property") from Volusia County SWR (land use and zoning) and SWC (land use and zoning) to the City's Low Density Residential ("LDR") land use classification and PUD zoning. The purpose of the applications is to transition the Property while it is under development from the County to City's jurisdiction as a result of the recent shift in utility service area boundaries in the vicinity of the Martin Luther King, Jr. Beltway and S. R. 472. The Property is currently under development based on an approved preliminary subdivision plat for single family residential and townhome residential units and associated amenities. As the Property is developed, the developer is also obligated to extend Cassadaga Road from its current intersection with the MLK Beltway to the recent southern extension of Blue Lake Road.

As background information, the County's SWR and SWC future land use and zoning were created following the abandonment of the former S.R. 472 Areawide Development of Regional Impact ("472 DRI"). Similar to the City of DeLand, the County incorporated much of the development entitlements from the 472 DRI into the SWR and SWC classifications to continue implementing the overall goals, policies and objectives defined by the 472 DRI. The majority of the Property is included within the SWR classifications, which were designed to

provide residential development areas supporting the overall land use mix outlined in the 472 DRI. The SWC classification is primarily designed to support commercial development, however the only portions of the Property that are currently classified under SWC are the areas that will be improved with the Cassadaga Road extension and associated stormwater infrastructure.

Pulte Homes began working with County staff on subdivision approvals for the Property in 2021. When Pulte submitted initial applications, we determined that the Property could not be developed with the minimum required density of 4 units per acre required by the SWR land use classification based on the minimum dimensional requirements adopted in the SWR zoning classification for single family lots. As a result, we coordinated with County staff and the County Council approved revisions to the minimum single family lot dimensional requirements in order to permit development that would meet the minimum required density. During the time the County was processing administrative amendments to the SWR and SWC zoning classifications, consideration of the pending preliminary plat was put on hold. The subdivision review proceeded following the County's correction of the SWR zoning classification's dimensional criteria.

While the preliminary plat was under review and the SWR zoning classification revisions were being reviewed and approved, the City and County revised the boundaries of the utility service areas for the Property. The result of those revisions added the Property to the City's utility service boundary. Since the preliminary plat review was substantially underway at that point in time, we coordinated with City and County staff to proceed with annexation of the Property into the City once the preliminary plat review was completed.

Based on the approved preliminary plat, the Property is currently under development. Based on our coordination with City and County staff, the proposed applications submitted to the City with this letter will annex the Property, assign a land use classification consistent with the approved residential density and incorporate the development standards outlined in the County's SWR classification into a PUD for the Property. The County will continue to provide permit review and inspections for the subdivision improvements required by the approved preliminary plat development order. The City will inspect and improve all utility improvements included in the preliminary plat development order since it is the utility provider. Our intent is to finalize the PUD rezoning in time to allow vertical permitting for all single family and townhome residential structures through the City. In addition, since the City considers townhomes as a multi-family use and subject to the City's community design standards, review and approval of the proposed architectural design for the townhomes is also proposed as part of the PUD approval.
At completion, the development of the Property will include 112 townhome units and 91 single family units. The resulting density is 5.2 units/acre and complies with the minimum required density of the County's SWR land use classification. It is also consistent with the City's LDR land use classification. As noted above, the development includes construction of

extension of Cassadaga Road, and the provision of supporting open space and stormwater amenities. Site development and permitting of horizontal site improvements will be permitted through the County of Volusia, with vertical building permit review and issuance proposed under the City of DeLand and in accordance with the proposed PUD regulations.

Sincerely,

Mark A. Watts, Esq.
Mark.Watts@cobbcole.com

Ford 472
Project № 21145, v1.3
February 2025

Traffic Impact Analysis
City of Deland
Florida

Prepared for:

Pulte Group
4901 Vineland Road, Suite 460
Orando, Florida 32811

Prepared by:

3101 Maguire Boulevard, Suite 265
Orlando, Florida 32803
www.trafficmobility.com
(407) 531-5332

EXECUTIVE SUMMARY

Project Information

Name:	Ford 472
Location:	West of Dr. Martin Luther King Jr. Beltway (MLK) and north of State Road 472 (SR 472)
Jurisdiction	City of Deland, Florida
Description:	91 single family dwelling units and 112 townhomes

Findings

Trip Generation: 1,728 Net New External ADT / 121 AM Peak / 154 PM Peak

Adverse Impacts: The proposed development impacts the following adverse roadways:

- Graves Avenue from Veterans Memorial Parkway to Normandy Boulevard
- Howland Boulevard from I-4/SR 472 to Wolf Pack Run
- Orange Camp Road from US 17/92 to Princeton Road
- West Volusia Beltway from Harley Strickland Boulevard to Rhode Island Avenue

SR 472 and MLK Beltway is currently experiencing delays and is projected to continue to do so at project buildout. However, with background improvements submitted by other projects, the intersection is expected to operate at an overall adequate LOS. The development adds approximately 1% to the total projected traffic.

Recommendations

Access Road Improvements:

<u>MLK Beltway and Cassadaga Road</u>
Install a 455-foot-long northbound left turn lane on MLK Beltway.
Install a 455-foot-long southbound right turn lane on MLK Beltway.
Install a 145-foot-long eastbound left turn lane and a shared right turn/thru lane on Cassadaga Road.

<u>Cassadaga Road Extension and Access I</u>
Install a 145-foot-long westbound left turn lane on Cassadaga Road.
Provide a 145-foot-long southbound egress lane for the left turn movement.

Off-Site Mitigation: The project's proportionate share mitigation is $234,281.24, which shall be paid in accordance with a mitigation agreement with Volusia County.

PROFESSIONAL ENGINEERING CERTIFICATION

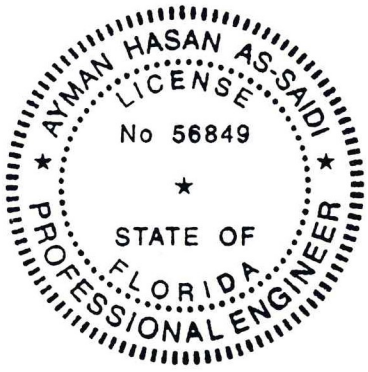
I hereby certify that I am a Professional Engineer properly registered in the State of Florida practicing with Traffic & Mobility Consultants LLC, a corporation authorized to operate as an engineering business, CA-30024, by the State of Florida Department of Professional Regulation, Board of Professional Engineers, and that I have prepared or approved the evaluations, findings, opinions, conclusions, or technical advice attached hereto for:

PROJECT: Ford 472

LOCATION: City of Deland, Florida

CLIENT: Pulte Group

I hereby acknowledge that the procedures and references used to develop the results contained in these computations are standard to the professional practice of Transportation Engineering as applied through professional judgment and experience.



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY

AYMAN H AS-SAIDI

Digitally signed by AYMAN H AS-SAIDI
Date: 2025.02.13 15:18:53 -05'00'

ON THE DATE ADJACENT TO THE SEAL

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TRAFFIC & MOBILITY CONSULTANTS LLC
3101 MAGUIRE BOULEVARD, SUITE 265
ORLANDO, FLORIDA 32803

CERTIFICATE OF AUTHORIZATION CA-30024

AYMAN H. AS-SAIDI, P.E. № 56849

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1.0 INTRODUCTION

This analysis was prepared in support of a development application for the Ford 472 project. The project is a residential development that includes the land uses and quantities presented in **Table 1**. The project's anticipated buildout date is 2028. This analysis has been updated to address the comments received from Volusia County. The response to the comments letter is provided in **Appendix A**, along with the comment letter from Volusia County.

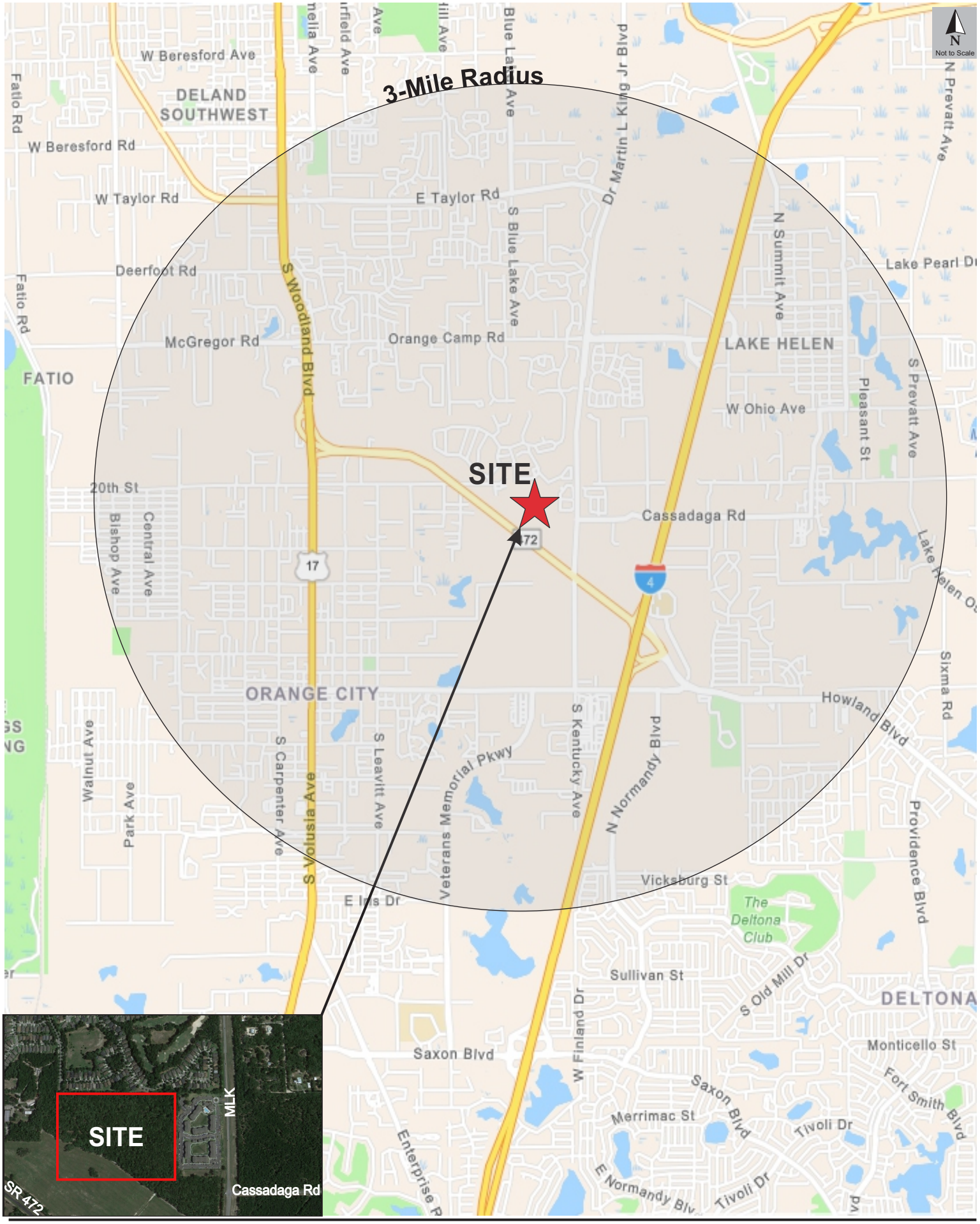
Table 1
Development Plan

Land Use	Size	ITE Code
Single Family Residential	91 DU	210
Townhomes	112 DU	215

The site is located west of Dr. Martin Luther King Jr. Beltway (MLK) and north of State Road 472 (SR 472) in the City of Deland, Florida. **Figure 1** depicts the site location and the surrounding transportation network. Cassadaga Road and Blue Lake Avenue are planned to be extended to facilitate access to the project site. Access will be provided via two driveways: one (1) full access driveway on the Cassadaga Road extension and one (1) full access driveway on the Blue Lake Avenue extension. The proposed access plan is illustrated in **Figure 2**. A conceptual site plan depicting the site layout, land uses, and access points is provided in **Appendix B**. The conceptual layout of the intersections along the Cassadaga Road extension and Blue Lake Avenue Extension along with the approved development plan are also provided in **Appendix B**.

The analysis was conducted in accordance with the methodology approved by Volusia County, which is provided along with the approval letter in **Appendix C**.

Information used in this analysis includes data collected by Traffic & Mobility Consultants, information provided by the project team, and/or other data and information obtained from Volusia County, the Institute of Transportation Engineers (ITE), and the Florida Department of Transportation (FDOT).



TMC Traffic & Mobility CONSULTANTS

21145 Ford 472, v1.3

Site Location Map **Figure 1**


N
Not to Scale
MLK
Proposed
Full Access
Proposed S.Blue Lake Ave Extension
Proposed Cassadaga Rd Extension
Proposed
Full Access
Existing Signal
Existing Median
Opening
SR 472
MLK

2.0 PROJECT TRAFFIC

2.1 Trip Generation

The trips generated by the proposed development were projected using data published in the ITE *Trip Generation Manual, 11th Edition*. Trip generation rates and/or equations published for the land uses were applied to the proposed development program to determine the total trips generated by the project.

The trip generation calculations are summarized in **Table 2** and detailed information is included in **Appendix D.**

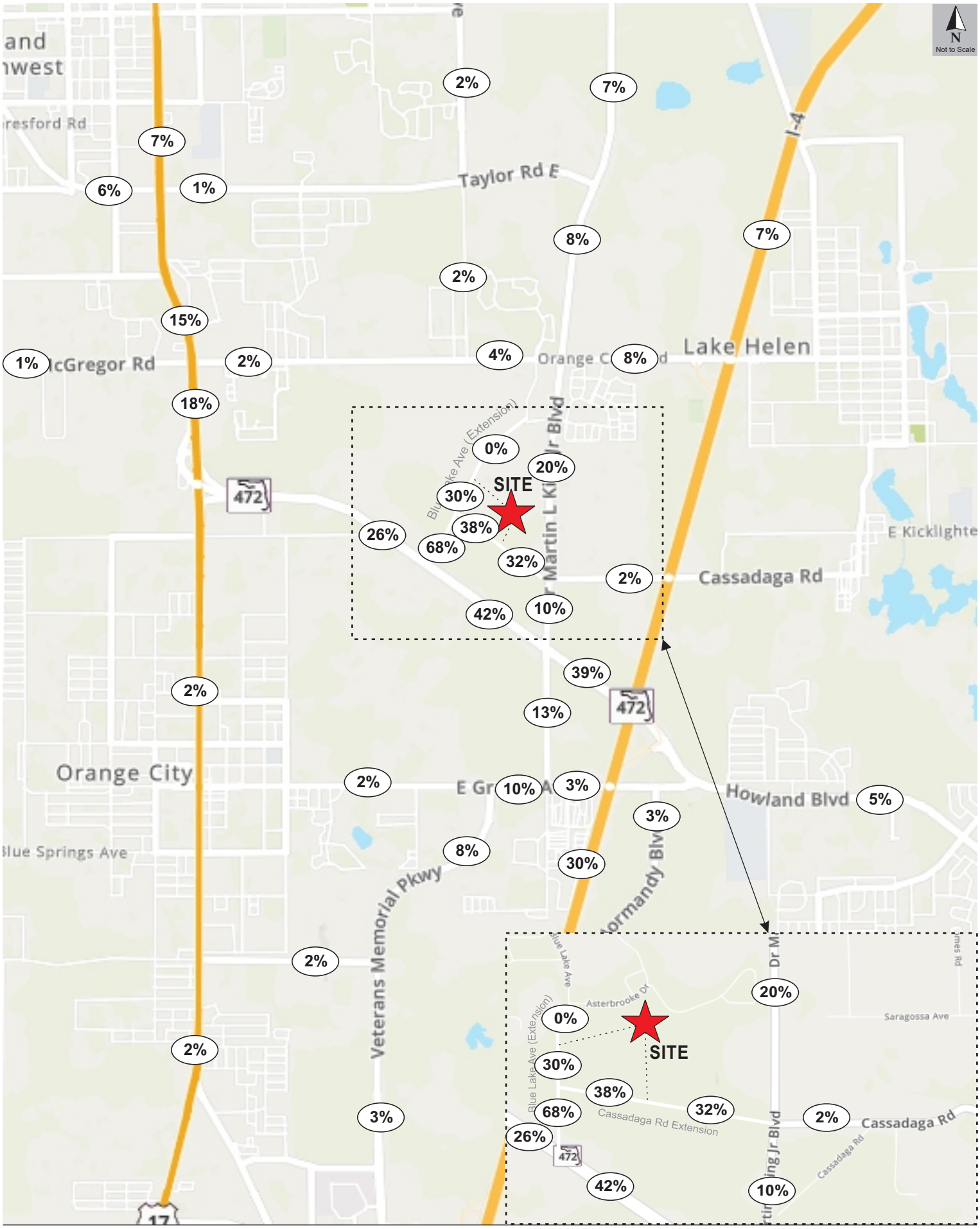
Table 2
Trip Generation Summary

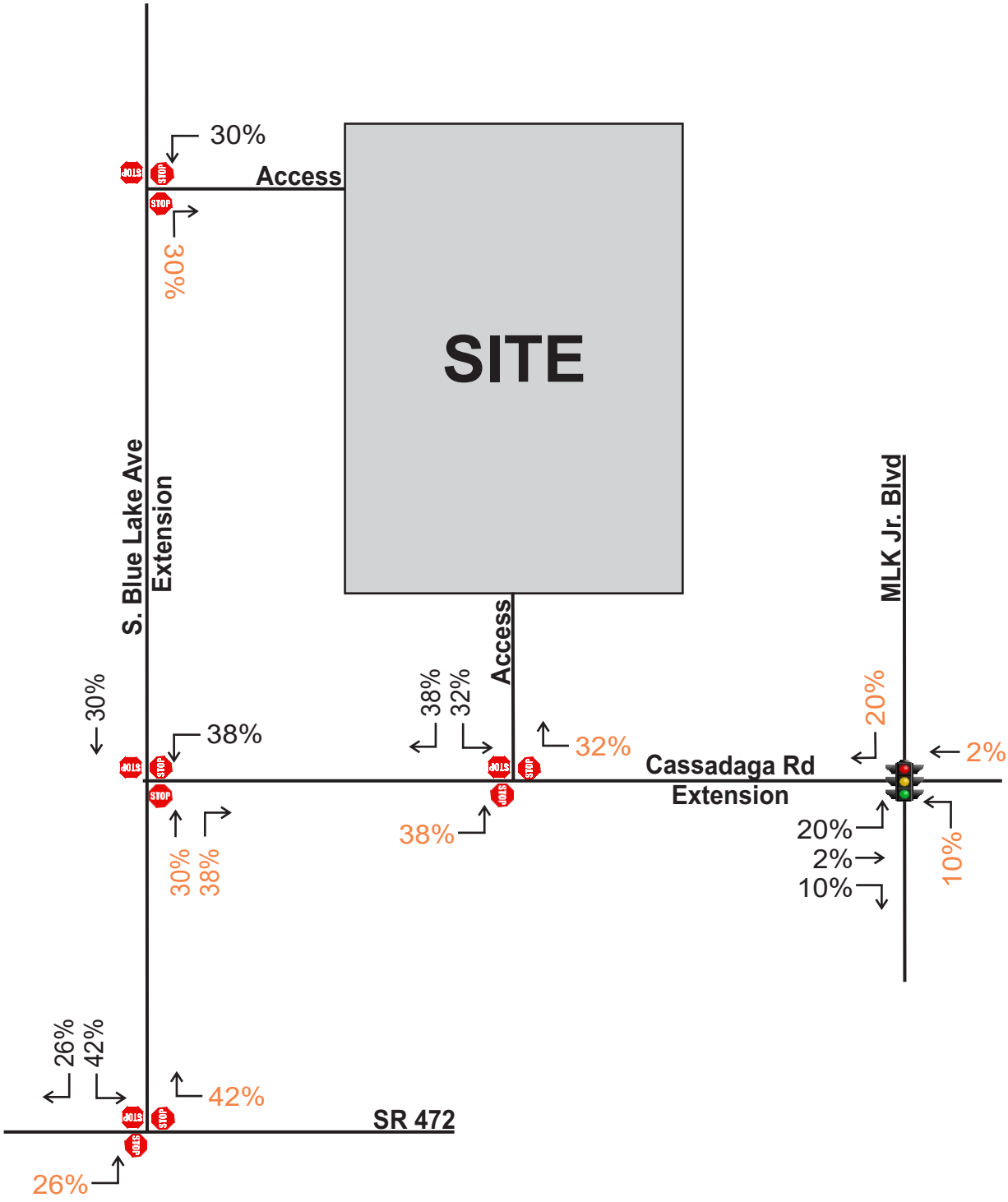
ITE Code	Land Use	Size	Daily		AM Peak Hour				PM Peak Hour			
			Rate	Trips	Rate	Total	Enter	Exit	Rate	Total	Enter	Exit
210	Single Family Residential	91 DU	10.17	925	0.75	68	17	51	1.00	91	57	34
215	Single Family Attached (Townhomes)	112 DU	7.17	803	0.47	53	13	40	0.56	63	37	26
Total Trip Generation				**1,728**		**121**	**30**	**91**		**154**	**94**	**60**

Trip generation analysis based on ITE Trip Generation Manual, 11th Edition

2.2 Trip Distribution

A preliminary trip distribution pattern was developed using the *Central Florida Regional Planning Model (CFRPMv7)*. The adopted model was modified to include project specific Traffic Analysis Zones with the corresponding socio-economic data to reflect the proposed development. A Select Zone Analysis was executed to obtain a model-generated trip distribution pattern on the surrounding transportation network. Minor manual adjustments were applied to the model generated distribution pattern to better reflect the local transportation network and prevailing travel patterns. The final trip distribution pattern is illustrated in **Figure 3** and the model output plots are included **Appendix E**. The trip assignment at the project driveways was determined based on the relative trip generation of the different components of the site and their proximity to the driveways. The driveway trip assignment is illustrated in **Figure 4**.


N
Not to Scale
I-4
Taylor Rd E
Lake Helen
Cassadaga Rd
E Kicklighter
Orange City
Howland Blvd
Veterans Memorial Pkwy
Blue Springs Ave
Blue Lake Ave (Extension)
Asterbrooke Dr
Saragossa Ave
Cassadaga Rd Extension
SITE
SITE
472
17
2%
7%
7%
6%
1%
8%
7%
2%
15%
1%
2%
4%
8%
18%
0%
20%
30%
38%
26%
68%
32%
2%
42%
10%
39%
13%
2%
10%
3%
5%
3%
8%
30%
2%
2%
3%
20%
0%
30%
38%
68%
32%
2%
26%
42%
10%


N
Not to Scale
30%
Access
30%
SITE
S. Blue Lake Ave
Extension
MLK Jr. Blvd
Access
38%
32%
20%
2%
30%
38%
32%
Cassadaga Rd
Extension
38%
20%
2%
10%
30%
38%
10%
26%
42%
42%
SR 472
26%
LEGEND
Entering
Exiting

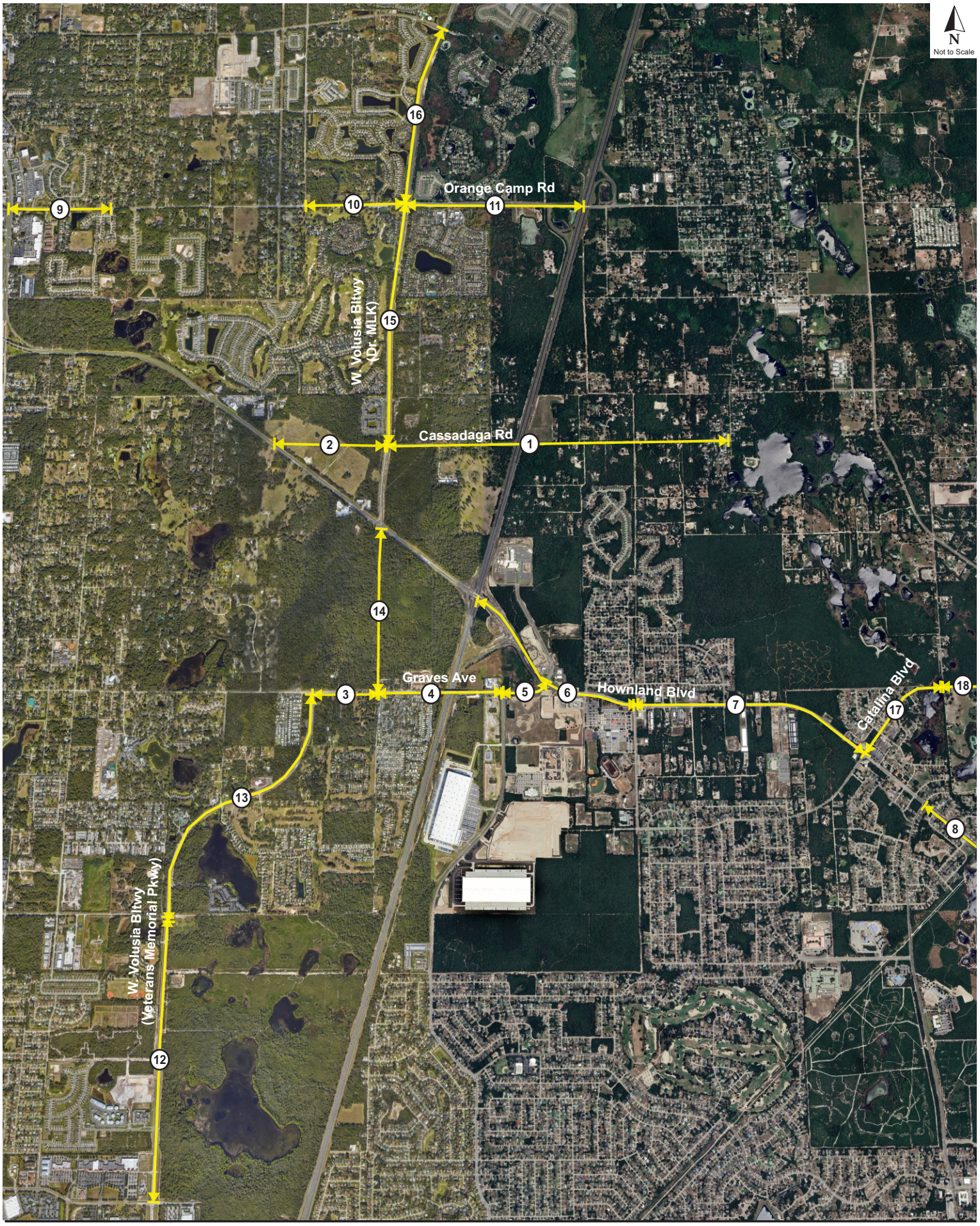
3.0 STUDY AREA

3.1 Study Roadways

The study area was established in accordance with the requirements of Volusia County and the TIA methodology. The impact area includes roadway segments where project trips are equivalent to 3% or more of the roadway segment's capacity and roadway segments within 3 miles that are designated as Critical/Near Critical and Vested Critical/Near Vested Critical (C/NC/VC/NVC) facilities. The project's study roadway segments are listed in **Table 3** and displayed in **Figure 4.** The roadway segment information and characteristics were obtained from the 2021 Volusia County *Annual Average Daily Traffic (AADT) and Historical Counts*, which is included in **Appendix F.**

Table 3
Study Roadway Segments

Seg #	Segment Information		
	Roadway	From	To
1	Cassadaga Rd	W. Volusia Bltwy (Dr. MLK Bltwy)	Macy Ave
2	Cassadaga Rd	W. Volusia Bltwy (Dr. MLK Bltwy)	SR 472
3	Graves Ave	Veterans Memorial Pkwy	Kentucky Ave
4	Graves Ave	Kentucky Ave	Normandy Blvd
5	Graves Ave	Normandy Blvd	Howland Blvd
6	Howland Blvd	I-4/SR 472	Wolf Pack Run
7	Howland Blvd	Wolf Pack Run	Catalina Blvd
8	Howland Blvd	Providence Blvd	Elkcam Blvd
9	Orange Camp Rd	US 17/92	Princeton Rd
10	Orange Camp Rd	Blue Lake Ave	W. Volusia Bltwy (Dr. MLK Bltwy)
11	Orange Camp Rd	W. Volusia Bltwy (Dr. MLK Bltwy)	I-4
12	W. Volusia Bltwy (Veterans Memorial Pkwy)	Harley Strickland Blvd	Rhode Island Ave
13	W. Volusia Bltwy (Veterans Memorial Pkwy)	Rhode Island Ave	Graves Ave
14	W. Volusia Bltwy (Veterans Memorial Pkwy)	Graves Ave	SR 472
15	W. Volusia Bltwy (Dr. MLK Bltwy)	Cassadaga Rd	Orange Camp Rd
16	W. Volusia Bltwy (Dr. MLK Bltwy)	Orange Camp Rd	Taylor Rd
17	Catalina Blvd	Howland Blvd	Sixma Rd
18	Catalina Blvd	Sixma Rd	Lake Helen Osteen


N
Not to Scale
Orange Camp Rd
Cassadaga Rd
Graves Ave
Hownland Blvd
Catalina Blvd
W Volusia Bltwy (Dr. MLK)
W Volusia Bltwy (Veterans Memorial Pkwy)
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18

3.2 Study Intersections

The study area encompasses major intersections that were identified in the methodology, which also include the two access points planned on the extensions of Blue Lake Avenue and Cassadaga Road. These two access points include one (1) full access driveway on Cassadaga Road Extension and one (1) full access driveway on Blue Lake Avenue Extension. The study intersections and access points are presented in **Table 4** and illustrated in **Figure 5**.

Table 4
Study Intersections

Int #	Intersection		Traffic Control
	Major Road	Minor Road	
1	Dr. MLK Bltwy	Orange Camp Rd	Roundabout
2	Dr. MLK Bltwy	Cassadaga Rd	Signal
3	Dr. MLK Bltwy / Kentucky Ave	SR 472	Signal
4	SR 472	Blue Lake Ave (Ext.)	Two-Way Stop
5	SR 472	Minnesota Ave	Two-Way Stop
6	Cassadaga Rd (Ext.)	Access I	Two-Way Stop
7	Blue Lake Ave (Ext.)	Access II	Two-Way Stop
8	Blue Lake Ave (Ext.)	Cassadaga Rd (Ext.)	Two-Way Stop


N
Not to Scale
Orange Camp Rd
1
Dr. MLK Bltwy
Minnesota Ave
5
7
Blue Lake Ave Extension
SR 472
8
6
Cassadaga Road Extension
2
Cassadaga Rd
4
3
Kentucky Ave

4.0 TRANSPORTATION IMPROVEMENTS

Transportation improvement programs published by Volusia County and the FDOT work program were reviewed to assess any planned or ongoing projects within the next few years that could impact the study area of the project. Improvements that are funded for construction within three (3) years were considered programmed and were incorporated in the analysis. The planned and programmed improvements are listed in **Table 5**.

Table 5
Planned and Programmed Improvements

Roadway	From	To	Improvement	Status
Howland Blvd	Providence Blvd	Elkcam Blvd	Widen From 2 to 4 Lanes	Under Construction
Orange Camp Rd	Dr. MLK Bltwy	I-4	Widen From 2 to 4 Lanes	Under Construction
Cassadaga Rd	Dr. MLK Bltwy	Blue Lake Ave (Ext)	Extension	Planned by Developer
Blue Lake Ave	SR 472	Asterbrooke Dr	Extension	Planned by Developer

Source: 2021-22 Volusia County Road Program & Development Plan

Two (2) improvements currently under construction were identified, each set to positively influence the area. Howland Boulevard is currently undergoing expansion from two (2) lanes to four (4) lanes between Providence Boulevard and Elkcam Boulevard. Additionally, Orange Camp Road is being widened from two (2) to four (4) lanes, stretching from Dr. MLK Beltway to I-4. Details from the *Volusia County Road Program 2021-22*, which illustrate these developments, are included in **Appendix G** for reference.

Furthermore, the developer has outlined plans to extend Cassadaga Road and Blue Lake Avenue to enhance access to the Project Site. These proposed extensions are depicted in the concept plan for the site, provided in **Appendix B**.

5.0 IMPROVEMENTS AT THE INTERSECTION OF SR 472 AND MLK BELTWAY

Following the county's directive to obtain City confirmation on whether additional projects should be included in the vested trip calculation, the City of DeLand was consulted, and they identified two approved projects near the Ford 472 site - Deland Tech Park and TM BTR (Yardley). These approved developments are located across from the Ford 472 site but are not listed in the Volusia County Database. These developments are anticipated to significantly impact traffic patterns near the Ford 472 project. To account for these influences, the traffic volumes from both Deland Tech Park and TM BTR have been included in the background traffic analysis as vested trips.

Previous studies have indicated that the intersection of SR 472 and MLK Beltway is currently experiencing and is projected to continue experiencing delays. Given that Deland Tech Park is a major development expected to substantially increase traffic at this intersection, several improvements were recommended in the traffic impact study. These recommendations include:

- Constructing a westbound left turn lane
- Constructing a northbound left turn lane and an additional through lane
- Constructing a southbound left turn lane and an additional through lane
- Optimizing signal timing to improve traffic flow

These recommended improvements from the Deland Tech Park study were also integrated into the TM BTR analysis. The queue evaluation and proportionate share calculations have been carried out based on the findings and recommendations in the Traffic Impact Analyses (TIAs). For further details, excerpts from the TIAs for these projects are provided in **Appendix H**. The proportionate share of this development reflecting those improvements have been calculated in accordance with the requirements of Volusia County using the *Master Proportionate Fair Share Table,* which is detailed in Section 11 of the report.

6.0 TRAFFIC PROJECTIONS

6.1 Projected Roadway Volumes

Existing roadway information was obtained from the 2022 Volusia County *AADT and Historical Counts.* The information includes roadway segment data, existing traffic volumes, and capacities.

Projected background traffic in the buildout year 2028 was derived by comparing historical growth rate trends and vested trips and applying the appropriate resulting background volume in accordance with the Volusia County *Segment Growth Rates and Vested Trips Instruction Policy*. Historical traffic count data was obtained from the 2022 Volusia County *AADT and Historical Counts* and the vested trips were obtained from the Volusia County *Vested Trip Database*. As noted in previous section, the two nearby developments, Deland Tech Park and TM BTR, were not included in the County database. Thus, trips from these projects were added to the vested trip calculation, along with those already listed in the database.

The historical growth trend analysis worksheets, vested trip information, and the *Segment Growth Rates and Vested Trips Instruction Policy* are included in **Appendix I**. The applicable growth rate calculations are summarized in **Table 6**. The total projected volumes on the roadway segments include background traffic and project trips, which were calculated based on the project's trip generation and distribution pattern.

Table 6
Growth Projection Methods

Segment Information			5 Years		10 Years		Applied	Exist	2028	Vested		Growth Calculation		Background +
Roadway	From	To	R^2	GR	R^2	GR	GR	Vol	Growth	Trips	VCTE Growth Rate Policy	Method	Growth	Vested Traffic
Cassadaga Rd	W. Volusia Bltwy (Dr. MLK Bltwy)	Macy Ave	33.33%	3.21%	61.71%	2.56%	2.56%	210	32	120	GR + Vested Trips	GR + Vested Trips	152	362
Cassadaga Rd*	W. Volusia Bltwy (Dr. MLK Bltwy)	Blue Lake Ave (Extension)	--	--	--	--	--	--	--	--	--	--	--	0
Graves Ave	Veterans Memorial Pkwy	Kentucky Ave	3.40%	-0.59%	54.65%	1.69%	3.52%	1,635	345	573	Highest of GR or Vested Trips	Vested Trips	573	2208
Graves Ave	Kentucky Ave	Normandy Blvd	64.59%	5.20%	79.70%	3.52%	3.52%	1,675	354	931	Highest of GR or Vested Trips	Vested Trips	931	2,606
Graves Ave	Normandy Blvd	Howland Blvd	25.13%	2.13%	76.75%	3.02%	3.02%	1,340	243	997	Highest of GR or Vested Trips	Vested Trips	997	2,337
Howland Blvd	I-4/SR 472	Wolf Pack Run	77.13%	-5.22%	0.21%	0.15%	1.00%	2,410	145	1,054	GR + Vested Trips	GR + Vested Trips	1,199	3,609
Howland Blvd	Wolf Pack Run	Catalina Blvd	57.09%	-4.07%	0.10%	-0.12%	1.00%	1,460	88	925	GR + Vested Trips	GR + Vested Trips	1,013	2,473
Howland Blvd	Providence Blvd	Elkcam Blvd	76.18%	-10.47%	16.72%	-1.78%	1.00%	1,020	61	289	GR + Vested Trips	GR + Vested Trips	350	1,370
Orange Camp Rd	US 17/92	Princeton Rd	5.36%	-0.37%	77.38%	3.56%	3.56%	1,160	248	172	Highest of GR or Vested Trips	GR	248	1,408
Orange Camp Rd	Blue Lake Ave	W. Volusia Bltwy (Dr. MLK Bltwy)	27.91%	-2.02%	80.82%	1.14%	1.14%	1,075	74	262	GR + Vested Trips	GR + Vested Trips	336	1,411
Orange Camp Rd	W. Volusia Bltwy (Dr. MLK Bltwy)	I-4	55.67%	-2.76%	59.37%	2.51%	1.14%	1,170	80	361	GR + Vested Trips	GR + Vested Trips	441	1,611
W. Volusia Bltwy (Veterans Memorial Pkwy)	Harley Strickland Blvd	Rhode Island Ave	24.78%	-1.58%	17.34%	0.67%	1.00%	1,480	89	403	GR + Vested Trips	GR + Vested Trips	492	1,972
W. Volusia Bltwy (Veterans Memorial Pkwy)	Rhode Island Ave	Graves Ave	0.02%	-0.11%	24.60%	-1.76%	1.00%	1,100	66	400	Highest of GR or Vested Trips	Vested Trips	400	1,500
W. Volusia Bltwy (Kentucky Ave)	Graves Ave	SR 472	2.86%	0.62%	36.04%	1.22%	2.00%	910	109	381	GR + Vested Trips	GR + Vested Trips	490	1,400
W. Volusia Bltwy (Dr. MLK Bltwy)	Cassadaga Rd	Orange Camp Rd	74.00%	-7.48%	1.76%	-0.45%	1.00%	755	45	642	GR + Vested Trips	GR + Vested Trips	687	1,442
W. Volusia Bltwy (Dr. MLK Bltwy)	Orange Camp Rd	Taylor Rd	70.70%	-2.00%	3.62%	-0.67%	1.00%	910	55	437	GR + Vested Trips	GR + Vested Trips	492	1,402
Catalina Blvd**	Howland Blvd	Sixma Rd	69.89%	-35.96%	43.83%	-12.19%	1.00%	155	8	126	GR + Vested Trips	GR + Vested Trips	134	289
Catalina Blvd**	Sixma Rd	Lake Helen Osteen	69.89%	-35.96%	43.83%	-12.19%	1.00%	155	8	110	GR + Vested Trips	GR + Vested Trips	118	273

Vested trips obtained from *Volusia County Vested Trip Database* and also include trips from Deland Tech Park and TM BTR (Yardley)

*This segments is an extension and do not currently exist.

**No data in *Volusia County 2022 AADT*. Historical AADT obtained from *Florida Traffic Online (FTO) 2023*. Existing PM Peak Hour Volume estimated using AADT, K factor and D Factor

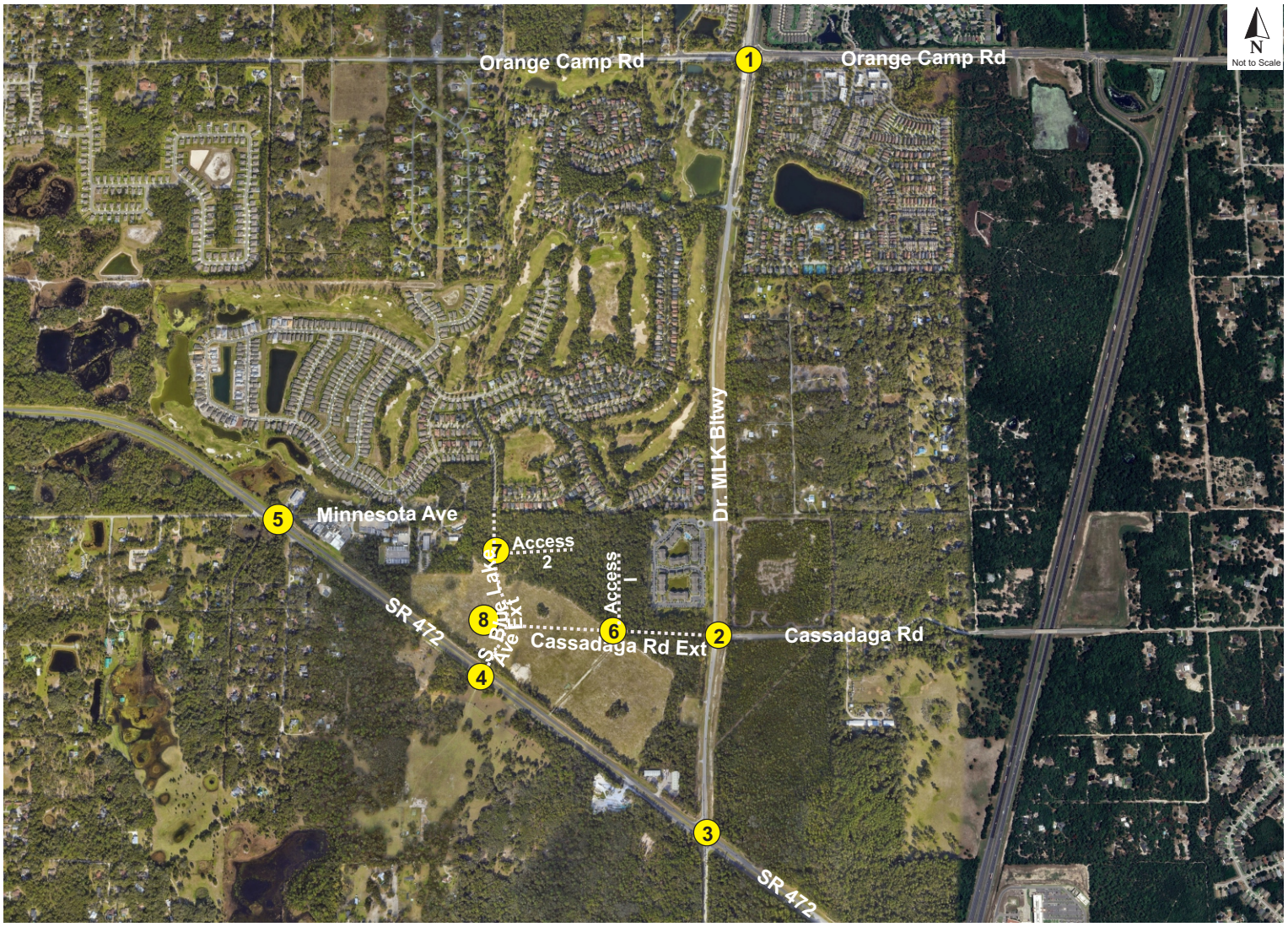
6.2 Projected Intersection Volumes

Existing AM and PM peak hour turning movement volumes were obtained at the study intersections on June 12, 2024. The counts were seasonally adjusted using the applicable seasonal factor obtained from the FDOT *Traffic Online Peak Season Factor Category Report*. The raw turning movement volumes and supporting information are provided in **Appendix J**.

The two developments, Deland Tech Park and TM BTR, located across from the Ford 472 project, are expected to significantly impact traffic patterns in the area. Therefore, trips from these developments have been included in the background traffic analysis as vested trips. Excerpts from the TIA detailing the vested trips added to the intersection volume for our project are provided in **Appendix K**. Projected background intersection volumes for the buildout year 2030 were estimated using the annual growth rates determined for the respective segment provided in **Table 6**, then adding the vested trips from Deland Tech Park and TM BTR.

There is no existing traffic volume data for the Blue Lake Avenue Extension and Cassadaga Road Extension as these segments do not currently exist. There are approximately 50 single family units close to the planned extension of Blue Lake Avenue Extension. It is assumed that 25 of these homes will use the Blue Lake Ave Extension to access SR 472 and 10 of these homes will use Cassadaga Road Extension to access MLK Beltway. To estimate the background traffic volume at the intersection of Blue Lake Avenue Extension and Access II, peak hour volumes were derived using the *ITE Trip Generation Manual, 11th edition* (using trips of both 25 units and 10 residential units). Additionally, the background traffic volume at the intersection of SR 472 and Blue Lake Avenue was divided into eastbound and westbound directions according to the existing split ratio at that intersection. It was done in a similar manner at Cassadaga Road Extension.

The total projected intersection volumes include background traffic and project trips, which were calculated based on the project's trip generation and assignment at each intersection. Detailed intersection volume calculations are provided in **Appendix L** and the resulting existing, background (including vested trips), and buildout volumes are illustrated in **Figure 7** and **Figure 8** for the AM peak hour and **Figure 9** and **Figure 10** for the PM peak hour.



1. Dr. MLK Bltwy & Orange Camp Rd

NB	L	173 + {14} + [4] + (4) = 195
	T	468 + {20} + [7] + (7) = 502
	R	54 + {25} + [4] + (7) = 90
SB	L	269
	T	250 + {51} + [2] + (2) = 305
	R	38
EB	L	51
	T	425
	R	54 + {38} + [1] + (2) = 95
WB	L	44 + {70} + [1] + (2) = 117
	T	328
	R	128

			38	305	269	BO		
			38	303	269	BK		
			37	240	259	EX		
			0	2	0			
BO	BK	EX						
51	51	49	0			0	122	128	128
425	425	406	2			2	314	328	328
95	93	52	1			0	42	115	117
							EX	BK	BO
			0	2	0			
		EX	166	450	52			
		BK	191	495	83			
		BO	195	502	90			

2. Dr. MLK Bltwy & Cassadaga Rd

NB	L	1 + (3) = 4
	T	330 + {38} + [14] = 382
	R	228 + {14} + [2] = 242
SB	L	66 + {70} + [6] = 142
	T	387 + {143} = 530
	R	1 + (6) = 7
EB	L	2 + (18) = 20
	T	2 + (2) = 4
	R	3 + (9) = 12
WB	L	227 + {12} + [50] = 289
	T	(1)
	R	61 + {39} + [4] = 104

			7	530	142	BO			
			1	530	142	BK			
			0	372	63	EX			
			0	1	1	LN			
BO	BK	EX	LN						
20	2	0	1			0	55	104	104
4	2	0	1			1	0	0	1
12	3	0	0			1	206	289	289
						LN	EX	BK	BO
			LN	0	1	1			
			EX	0	317	219			
			BK	1	382	242			
			BO	4	382	242			

3. Dr. MLK Bltwy / Kentucky Ave & SR 472

NB	L	144 + (1) = 145
	T	255 + {9} + [5] + (3) = 272
	R	62 + {56} = 118
SB	L	212 + {116} + [25] = 353
	T	349 + {3} + [14] + (9) = 375
	R	64 + {5} + [11] = 80
EB	L	64 + {21} + [3] = 88
	T	965 + {82} + (35) = 1082
	R	106 + (3) = 109
WB	L	105 + {19} = 124
	T	901 + {34} + (11) = 946
	R	250 + {23} + [8] = 281

			80	375	353	BO			
			80	366	353	BK			
			59	323	196	EX			
			1	1	1				
BO	BK	EX							
88	88	62	1			1	240	281	281
1,082	1,047	928	2			2	866	935	946
109	106	102	1			1	101	124	124
							EX	BK	BO
			0	1	1				
		EX	133	236	57				
		BK	144	269	118				
		BO	145	272	118				

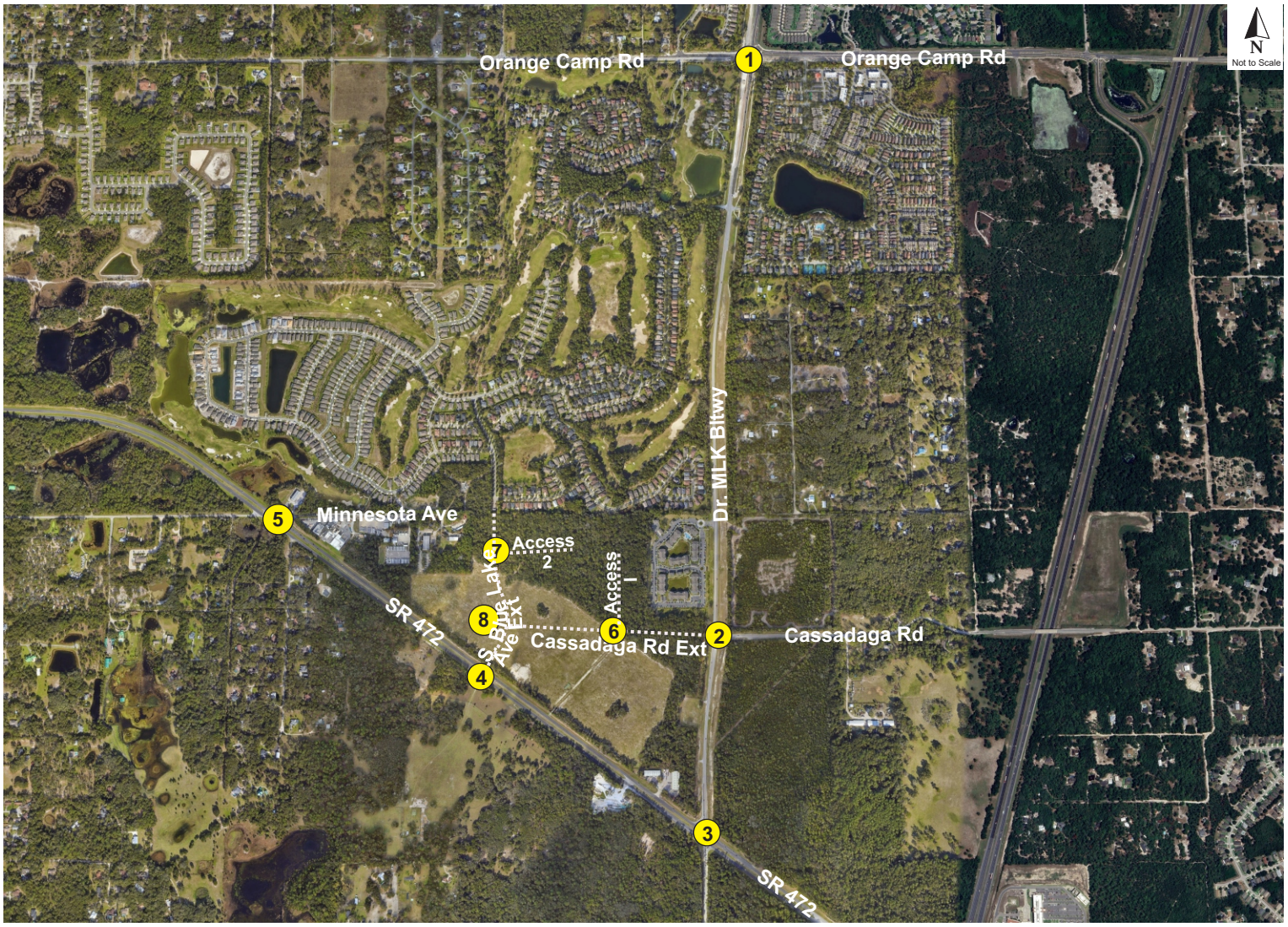
4. SR 472 & Blue Lake Ave (Ext.)

NB	L	
	T	
	R	
SB	L	8 + (38) = 46
	T	
	R	8 + (24) = 32
EB	L	3 + (8) = 11
	T	1136 + {103} + [3] = 1242
	R	
WB	L	
	T	1101 + {39} + [11] = 1151
	R	2 + (12) = 14

			32	0	46	BO			
			8	0	8	BK			
			0	0	0	EX			
			1	1	0	LN			
BO	BK	EX	LN						
11	3	0	1			1	0	2	14
1,242	1,242	1,092	2			2	1,059	1,151	1,151
0	0	0	0			0	0	0	0
						LN	EX	BK	BO
			LN	0	0	0			
			EX	0	0	0			
			BK	0	0	0			
			BO	0	0	0			

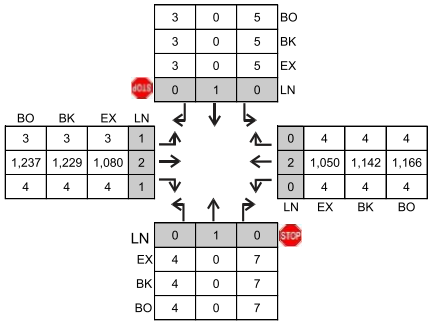
Legend: Background + {Tech Park} + [TM BTR] + (Project) = Total

BO = Buildout; BK = Background + Vested; EX = Existing
1 Lanes by movement



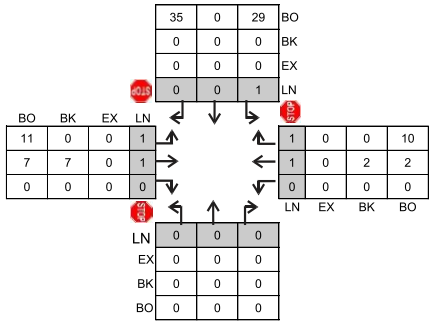
5. SR 472 & Minnesota Ave

NB	L	4
	T	
	R	7
SB	L	5
	T	
	R	3
EB	L	3
	T	1123 + {103} + [3] + (8) = 1237
	R	4
WB	L	4
	T	1092 + {39} + [11] + (24) = 1166
	R	4



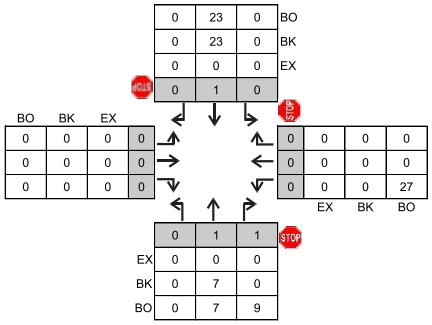
6. Cassadaga Rd (Ext.) & Access I

NB	L	
	T	
	R	
SB	L	(29)
	T	
	R	(35)
EB	L	(11)
	T	7
	R	
WB	L	
	T	2
	R	(10)



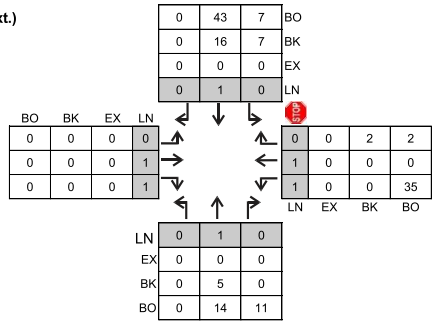
7. Blue Lake Ave (Ext.) & Access II

NB	L	
	T	7
	R	(9)
SB	L	
	T	23
	R	
EB	L	
	T	
	R	
WB	L	(27)
	T	
	R	



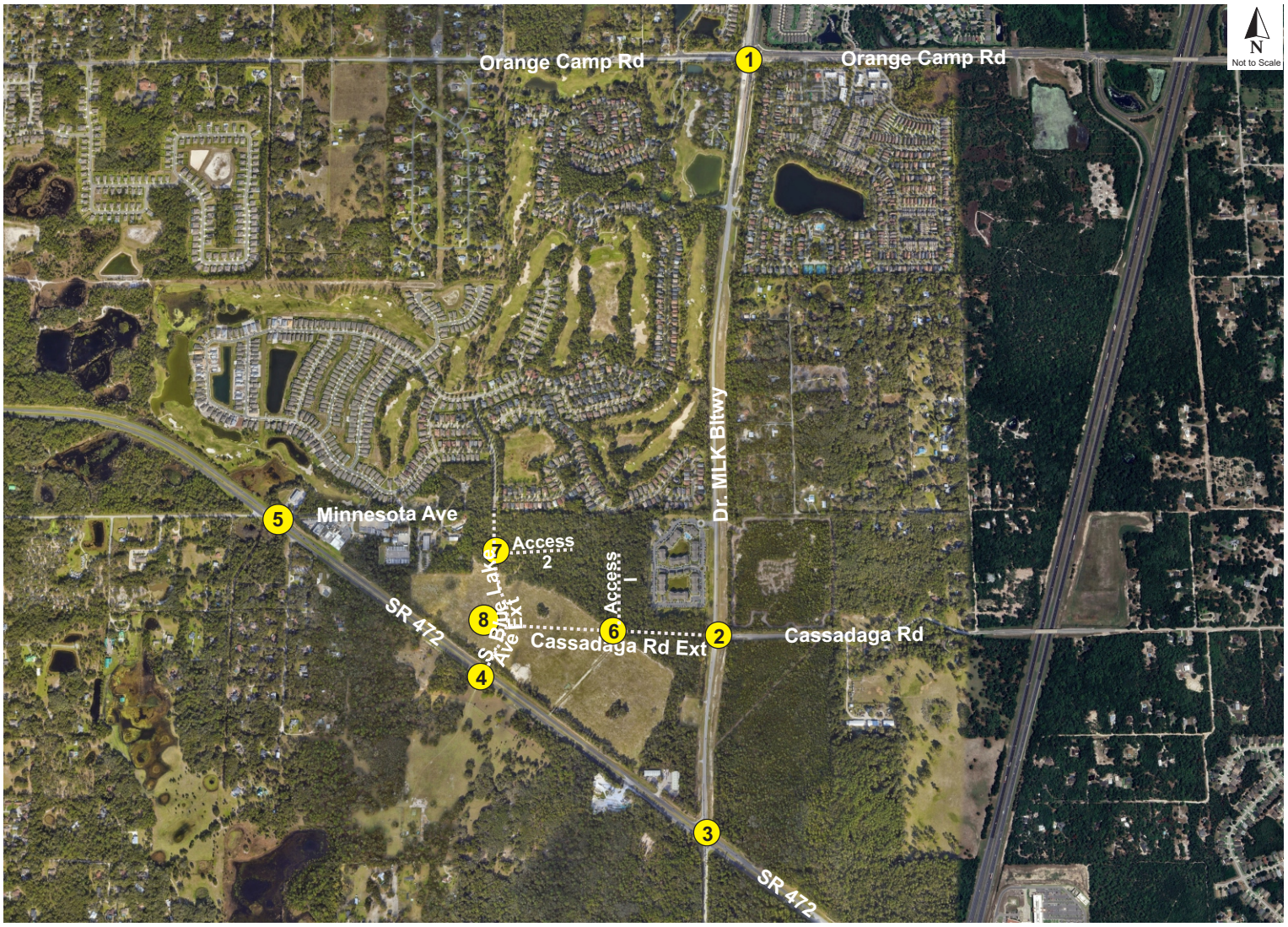
8. Blue Lake Ave (Ext.) & Cassadaga Rd (Ext.)

NB	L	
	T	5 + (9) = 14
	R	(11)
SB	L	7
	T	16 + (27) = 43
	R	
EB	L	
	T	
	R	
WB	L	(35)
	T	
	R	2



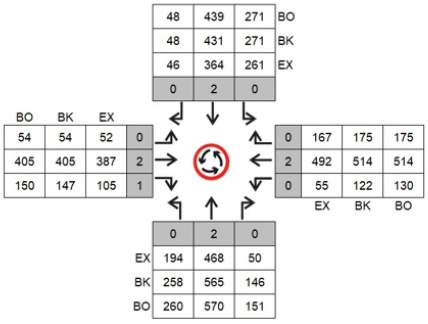
Legend: Background + {Tech Park} + [TM BTR] + (Project) = Total

BO = Buildout; BK = Background + Vested; EX = Existing
1 Lanes by movement



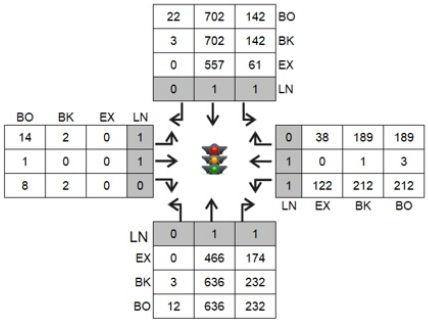
1. Dr. MLK Bltwy & Orange Camp Rd

NB	L	202 + {54} + [2] + (2) = 260
	T	487 + {73} + [5] + (5) = 570
	R	52 + {92} + [2] + (5) = 151
SB	L	271
	T	379 + {44} + [8] + (8) = 439
	R	48
EB	L	54
	T	405
	R	110 + {33} + [4] + (3) = 150
WB	L	58 + {60} + [4] + (8) = 130
	T	514
	R	175



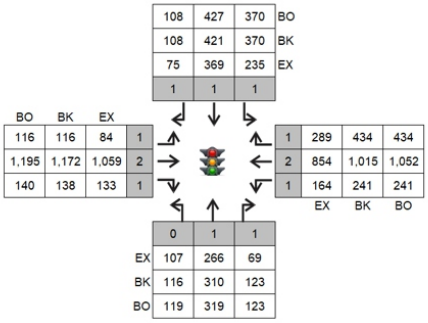
2. Dr. MLK Bltwy & Cassadaga Rd

NB	L	3 + (9) = 12
	T	485 + {142} + [9] = 636
	R	181 + {51} = 232
SB	L	63 + {60} + [19] = 142
	T	579 + {123} = 702
	R	3 + (19) = 22
EB	L	2 + (12) = 14
	T	(1)
	R	2 + (6) = 8
WB	L	134 + {46} + [32] = 212
	T	1 + (2) = 3
	R	42 + {145} + [2] = 189



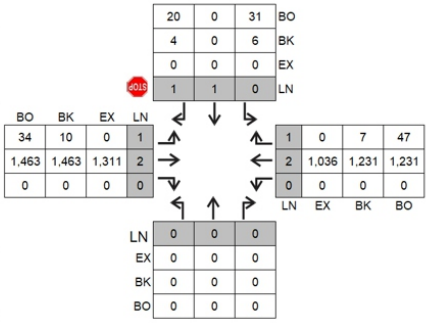
3. Dr. MLK Bltwy / Kentucky Ave & SR 472

NB	L	116 + (3) = 119
	T	287 + {8} + [15] + (9) = 319
	R	75 + {48} = 123
SB	L	254 + {100} + [16] = 370
	T	399 + {13} + [9] + (6) = 427
	R	81 + {20} + [7] = 108
EB	L	87 + {18} + [11] = 116
	T	1101 + {71} + (23) = 1195
	R	138 + (2) = 140
WB	L	171 + {70} = 241
	T	888 + {127} + (37) = 1052
	R	301 + {106} + [27] = 434



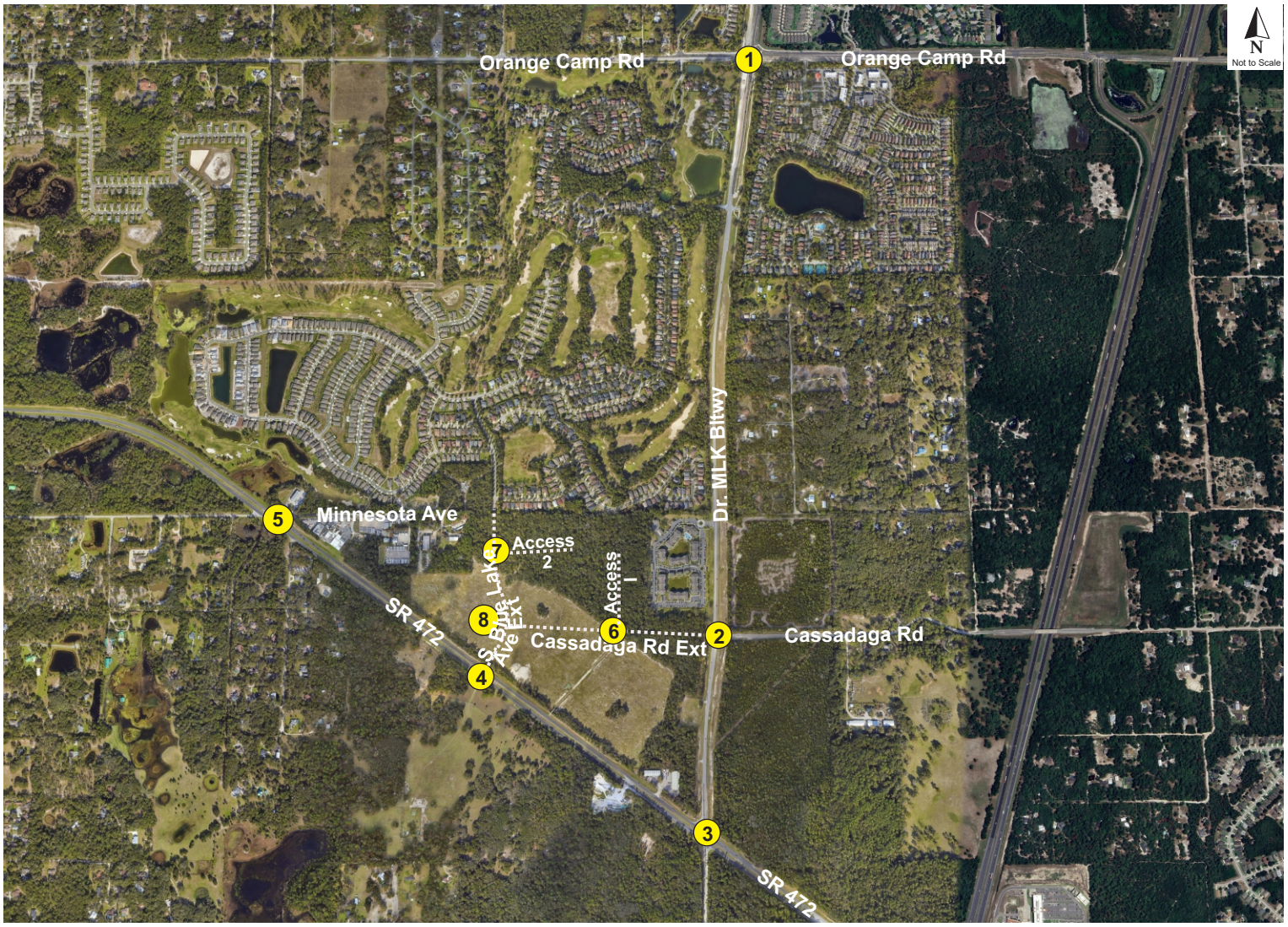
4. SR 472 & Blue Lake Ave (Ext.)

NB	L	
	T	
	R	
SB	L	6 + (25) = 31
	T	
	R	4 + (16) = 20
EB	L	10 + (24) = 34
	T	1363 + {89} + [11] = 1463
	R	
WB	L	
	T	1077 + {147} + [7] = 1231
	R	7 + (40) = 47



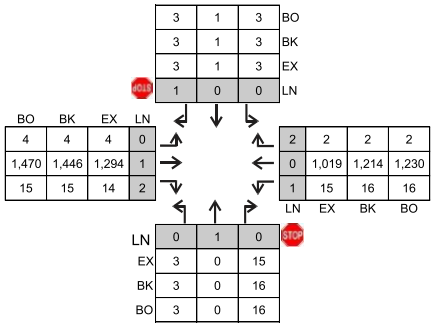
Legend: Background + {Tech Park} + [TM BTR] + (Project) = Total

BO = Buildout; BK = Background + Vested; EX = Existing
1 Lanes by movement



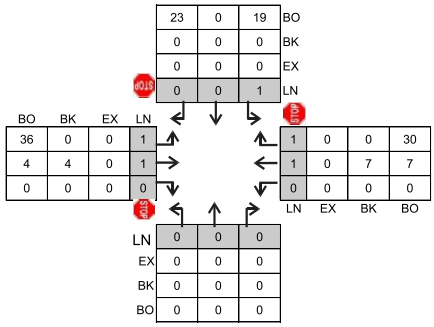
5. SR 472 & Minnesota Ave

NB	L	3
	T	
	R	16
SB	L	3
	T	1
	R	3
EB	L	4
	T	1346 + {89} + [11] + (24) = 1470
	R	15
WB	L	16
	T	1060 + {147} + [7] + (16) = 1230
	R	2



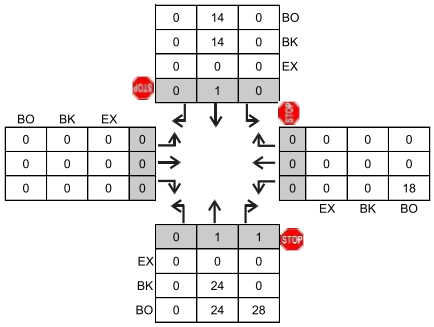
6. Cassadaga Rd (Ext.) & Access I

NB	L	
	T	
	R	
SB	L	(19)
	T	
	R	(23)
EB	L	(36)
	T	4
	R	
WB	L	
	T	7
	R	(30)



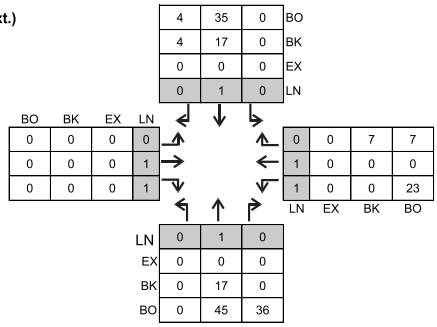
7. Blue Lake Ave (Ext.) & Access II

NB	L	
	T	24
	R	(28)
SB	L	
	T	14
	R	
EB	L	
	T	
	R	
WB	L	(18)
	T	
	R	



8. Blue Lake Ave (Ext.) & Cassadaga Rd (Ext.)

NB	L	
	T	17 + (28) = 45
	R	(36)
SB	L	
	T	17 + (18) = 35
	R	4
EB	L	
	T	
	R	
WB	L	(23)
	T	
	R	7



Legend: Background + {Tech Park} + [TM BTR] + (Project) = Total

BO = Buildout; BK = Background + Vested; EX = Existing
[1] Lanes by movement

7.0 CAPACITY ANALYSIS

7.1 Roadway Segments

Roadway segment capacity was analyzed based on the adopted capacities and the corresponding traffic volumes, as summarized in **Table 7**. The results of the capacity analysis reveal the following:

- The following roadway segments are projected to exceed their adopted capacity due to existing or background traffic. Project trips do not have a significant impact on these segments.
    - Graves Avenue from Veterans Memorial Parkway to Kentucky Avenue
    - Graves Avenue from Kentucky Avenue to Normandy Boulevard
    - Howland Boulevard from I-4/SR 472 to Wolf Pack Run
    - Orange Camp Road from US 17/92 to Princeton Road
    - West Volusia Beltway (Veterans Memorial Parkway) from Harley Strickland Boulevard to Rhode Island Avenue

- All remaining segments are projected to operate within their adopted capacity at the project buildout.

Table 7
Segment Analysis

Seg #	Segment Information			Exist Lns	Imp Lns	Exist 2W PM Cap	Imp 2W PM Cap	2022 Existing Conditions PM Peak			Background Conditions PM Peak			Project		Buildout Conditions PM Peak			Trips % of Cap
	Roadway	From	To					Vol	V/C	Adeq?	Vol	V/C	Adeq?	Dist %	Trips	Vol	V/C	Adeq?	
1	Cassadaga Rd	W. Volusia Bltwy (Dr. MLK Bltwy)	Macy Ave	2	2	1,020	1,020	210	0.21	YES	362	0.35	YES	2%	3	365	0.36	YES	0.3%
2	Cassadaga Rd*	W. Volusia Bltwy (Dr. MLK Bltwy)	Blue Lake Ave (Extension)	2	2	1,020	1,020	--	--	--	0	--	YES	38%	59	59	0.06	YES	5.8%
3	Graves Ave	Veterans Memorial Pkwy	Kentucky Ave	2	2	1,620	1,620	1,635	1.01	**NO**	2,208	1.36	**NO**	10%	15	2,223	1.37	**NO**	0.9%
4	Graves Ave	Kentucky Ave	Normandy Blvd	2	2	1,620	1,620	1,675	1.03	**NO**	2,606	1.61	**NO**	3%	5	2,611	1.61	**NO**	0.3%
5	Graves Ave	Normandy Blvd	Howland Blvd	4	4	2,740	2,740	1,340	0.49	YES	2,337	0.85	YES	3%	5	2,342	0.85	YES	0.2%
6	Howland Blvd	I-4/SR 472	Wolf Pack Run	4	4	3,410	3,410	2,410	0.71	YES	3,609	1.06	**NO**	39%	60	3,669	1.08	**NO**	1.8%
7	Howland Blvd	Wolf Pack Run	Catalina Blvd	4	4	3,410	3,410	1,460	0.43	YES	2,473	0.73	YES	5%	8	2,481	0.73	YES	0.2%
8	Howland Blvd	Providence Blvd	Elkcam Blvd	2	4	1,230	3,410	1,020	0.83	YES	1,370	0.40	YES	2%	3	1,373	0.40	YES	0.1%
9	Orange Camp Rd	US 17/92	Princeton Rd	2	2	1,270	1,270	1,160	0.91	YES	1,408	1.11	**NO**	2%	3	1,411	1.11	**NO**	0.2%
10	Orange Camp Rd	Blue Lake Ave	W. Volusia Bltwy (Dr. MLK Bltwy)	2	2	1,540	1,540	1,075	0.70	YES	1,411	0.92	YES	4%	6	1,417	0.92	YES	0.4%
11	Orange Camp Rd	W. Volusia Bltwy (Dr. MLK Bltwy)	I-4	2	4	1,540	3,410	1,170	0.76	YES	1,611	0.47	YES	8%	12	1,623	0.48	YES	0.4%
12	W. Volusia Bltwy (Veterans Memorial Pkwy)	Harley Strickland Blvd	Rhode Island Ave	2	2	1,540	1,540	1,480	0.96	YES	1,972	1.28	**NO**	3%	5	1,977	1.28	**NO**	0.3%
13	W. Volusia Bltwy (Veterans Memorial Pkwy)	Rhode Island Ave	Graves Ave	2	2	1,620	1,620	1,100	0.68	YES	1,500	0.93	YES	8%	12	1,512	0.93	YES	0.7%
14	W. Volusia Bltwy (Kentucky Ave)	Graves Ave	SR 472	2	2	1,540	1,540	910	0.59	YES	1,400	0.91	YES	13%	20	1,420	0.92	YES	1.3%
15	W. Volusia Bltwy (Dr. MLK Bltwy)	Cassadaga Rd	Orange Camp Rd	2	2	1,540	1,540	755	0.49	YES	1,442	0.94	YES	20%	31	1,473	0.96	YES	2.0%
16	W. Volusia Bltwy (Dr. MLK Bltwy)	Orange Camp Rd	Taylor Rd	2	2	1,540	1,540	910	0.59	YES	1,402	0.91	YES	8%	12	1,414	0.92	YES	0.8%
17	Catalina Blvd**	Howland Blvd	Sixma Rd	2	2	960	960	155	0.16	YES	289	0.30	YES	0%	0	289	0.30	YES	0.0%
18	Catalina Blvd**	Sixma Rd	Lake Helen Osteen	2	2	960	960	155	0.16	YES	273	0.28	YES	0%	0	273	0.28	YES	0.0%

Source: *Volusia County 2022 AADT*

*This segments is an extension and do not currently exist. Peak Capacity assumed same as the adjacent segment of same road.

**No data in *Volusia County 2022 AADT*. Existing PM Peak Volume is of 2023 obtained from Florida Traffic Online. Existing Peak Capacity assumed same as in 2019 and obtained from Volusia County 2019 AADT

7.2 Intersections

The study intersections were analyzed in accordance with the methods of the *Highway Capacity Manual (HCM)* as applied in the *Synchro* analytical tool. The detailed *HCM* analysis sheets are provided in **Appendix M**. The analysis results for existing, background, and buildout conditions are summarized in **Table 8**, which reveals the following:

- The intersection of SR 472 and Dr. Martin Luther King Jr Beltway is projected to operate at an inadequate LOS, due to the existing and background traffic.
- All remaining intersections are projected to operate at adequate LOS at the project buildout.

7.3 Intersection Improvements

The following improvements were recommended for the intersection of SR 472 and MLK Beltway by other developments as reflected in their TIAs:

- Construct a westbound left turn lane
- Construct a northbound left turn lane and a through lane
- Construct a southbound left turn lane and a through lane
- Optimize the signal timing

With the recommended improvements, the intersection is projected to operate at an overall adequate LOS. The results of the analysis are summarized in **Table 9** for the background and buildout scenarios. The adjusted analysis worksheets are included in **Appendix N.**

Table 8
Intersection Analysis

Int	Intersection		Control	Time	Scenario	EB		WB		NB		SB		Overall	
#	Major Road	Minor Road		Period		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	Dr. MLK Bltwy	Orange Camp Rd	RAB	AM	Existing	8.7	A	9.9	A	14.0	B	8.6	A	10.6	B
					Backg'd+Vested	11.8	B	12.7	B	17.7	C	11.2	B	13.7	B
					Buildout	11.9	B	12.9	B	18.4	C	11.3	B	14.0	B
				PM	Existing	10.2	B	13.2	B	12.7	B	12.7	B	12.3	B
					Backg'd+Vested	13.7	B	21.3	C	20.3	C	19.0	C	19.0	C
					Buildout	14.2	B	22.0	C	20.9	C	19.7	C	19.6	C
2	Dr. MLK Bltwy	Cassadaga Rd	Signal	AM	Existing	--	--	22.9	C	13.9	B	7.3	A	13.4	B
					Backg'd+Vested	32.1	C	25.6	C	28.4	C	25.7	C	26.7	C
					Buildout	31.7	C	25.8	C	28.4	C	26.1	C	27.0	C
				PM	Existing	--	--	21.4	C	14.7	B	7.2	A	12.0	B
					Backg'd+Vested	39.1	D	37.7	D	28.7	C	25.6	C	29.2	C
					Buildout	39.0	D	37.9	D	28.6	C	26.5	C	29.6	C
3	Dr. MLK Bltwy / Kentucky Ave	SR 472	Signal	AM	Existing	55.6	E	50.6	D	153.8	F	92.6	F	71.8	E
					Backg'd+Vested	67.8	E	62.0	E	207.3	F	151.2	F	98.5	F
					Buildout	73.5	E	62.5	E	212.0	F	157.2	F	102.2	F
				PM	Existing	66.6	E	70.0	E	161.9	F	154.4	F	93.6	F
					Backg'd+Vested	93.0	F	119.5	F	226.9	F	248.9	F	145.9	F
					Buildout	98.9	F	120.9	F	242.9	F	253.2	F	150.7	F
4	SR 472	Blue Lake Ave (Ext.)	TWSC	AM	Buildout	11.8	B	27.8	D	--	--	--	--	--	--
				PM	Buildout	13.0	B	31.3	D	--	--	--	--	--	--
5	SR 472	Minnesota Ave	TWSC	AM	Existing	10.9	B	11.1	B	19.4	C	23.4	C	--	--
					Backg'd+Vested	11.5	B	12.0	B	22.5	C	26.4	D	--	--
					Buildout	11.6	B	12.1	B	22.7	C	27.1	D	--	--
				PM	Existing	10.8	B	12.9	B	19.6	C	25.1	D	--	--
					Backg'd+Vested	12.0	B	14.2	B	22.5	C	31.4	D	--	--
					Buildout	12.1	B	14.4	B	23.0	C	32.2	D	--	--
					Buildout		A		A		A		A	--	--
6	Cassadaga Rd (Ext)	Access I	TWSC	AM	Buildout	7.3	A	0.0	A	--	--	8.8	A	--	--
				PM	Buildout	7.4	A	0.0	A	--	--	8.9	A	--	--
7	Blue Lake Ave (Ext.)	Access II	TWSC	AM	Buildout	--	--	8.8	A	0.0	A	0.0	A	--	--
				PM	Buildout	--	--	8.8	A	0.0	A	0.0	A	--	--
8	Blue Lake Ave (Ext.)	Cassadaga Rd (Ext.)	TWSC	AM	Buildout	--	--	9.1	A	0.0	A	7.3	A	--	--
				PM	Buildout	--	--	9.1	A	0.0	A	7.4	A	--	--

Average delay expressed in seconds/vehicle

**These intersections will only exist at buildout so they do not have existing and background conditions.*

Table 9
Intersection Analysis with Improvements

Int #	Intersection		Control	Time Period	Scenario	EB		WB		NB		SB		Overall	
	Major Road	Minor Road				Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	Dr. MLK Bltwy	Orange Camp Rd	RAB	AM	Backg'd+Vested	11.8	B	12.7	B	17.7	C	11.2	B	13.7	B
					Buildout	11.9	B	12.9	B	18.4	C	11.3	B	14.0	B
				PM	Backg'd+Vested	13.7	B	21.3	C	20.3	C	19.0	C	19.0	C
					Buildout	14.2	B	22.0	C	20.9	C	19.7	C	19.6	C
2	Dr. MLK Bltwy	Cassadaga Rd	Signal	AM	Backg'd+Vested	32.1	C	25.6	C	28.4	C	25.7	C	26.7	C
					Buildout	31.7	C	25.8	C	28.4	C	26.1	C	27.0	C
				PM	Backg'd+Vested	39.1	D	37.7	D	28.7	C	25.6	C	29.2	C
					Buildout	39.0	D	37.9	D	28.6	C	26.5	C	29.6	C
3	Dr. MLK Bltwy / Kentucky Ave	SR 472	Signal	AM	Backg'd+Vested	43.6	D	37.4	D	48.5	D	48.6	D	43.0	D
					Buildout	46.0	D	38.1	D	48.5	D	48.5	D	44.0	D
				PM	Backg'd+Vested	51.2	D	46.6	D	60.3	E	66.5	E	53.2	D
					Buildout	53.3	D	49.0	D	60.6	E	67.2	E	55.0	D
4	SR 472	Blue Lake Ave (Ext.)	TWSC	AM	Buildout	11.8	B	27.8	D	--	--	--	--	--	--
				PM	Buildout	13.0	B	31.3	D	--	--	--	--	--	--
5	SR 472	Minnesota Ave	TWSC	AM	Backg'd+Vested	11.5	B	12.0	B	22.5	C	26.4	D	--	--
					Buildout	11.6	B	12.1	B	22.7	C	27.1	D	--	--
				PM	Backg'd+Vested	12.0	B	14.2	B	22.5	C	31.4	D	--	--
					Buildout	12.1	B	14.4	B	23.0	C	32.2	D	--	--
6*	Cassadaga Rd (Ext)	Access I	TWSC	AM	Buildout	7.3	A	0.0	A	--	--	8.8	A	--	--
				PM	Buildout	7.4	A	0.0	A	--	--	8.9	A	--	--
7*	Blue Lake Ave (Ext.)	Access II	TWSC	AM	Buildout	--	--	8.8	A	0.0	A	0.0	A	--	--
				PM	Buildout	--	--	8.8	A	0.0	A	0.0	A	--	--
8*	Blue Lake Ave (Ext.)	Cassadaga Rd (Ext.)	TWSC	AM	Buildout	--	--	9.1	A	0.0	A	7.3	A	--	--
				PM	Buildout	--	--	9.1	A	0.0	A	7.4	A	--	--

Average delay expressed in seconds/vehicle

**These intersections will only exist at buildout so they do not have background conditions.*

7.4 Queue Evaluation

An evaluation was conducted to determine whether the existing turn lane lengths at the signalized study intersections are adequate to accommodate projected traffic at project buildout. The two signalized study intersections are MLK Beltway and Cassadaga Road, and SR 472 and MLK Beltway. The turn lanes that are projected to receive project trips at the MLK Beltway and Cassadaga Road intersection are not currently in place. These turn lanes are necessary for accessing the project site and are evaluated in the Access Review section.

This section focuses on the SR 472 and MLK Beltway intersection. As previously noted, this intersection is significantly impacted by new developments, particularly Deland Tech Park Queue lengths were obtained from the HCM analysis worksheets, which are included in **Appendix M** and **Appendix N**. Specifically:

- Existing condition queue lengths were derived from the HCM worksheets in **Appendix M**.
- Background and projected condition queue lengths were obtained from the HCM worksheets in **Appendix N**, which accounts for improvements recommended by Deland Tech Park.

The required deceleration lengths are based on the FDOT *Design Manual (FDM) Exhibit 212-1,* provided in **Appendix O**.

Total turn lane length was calculated as the sum of the deceleration length and projected queue length. The results of the evaluation, summarized in **Table 10**, show that the northbound left turn lane and the eastbound right turn lane planned for the SR 472 and MLK Beltway intersection should be approx. 550 feet and 530 feet long respectively in the background condition to accommodate traffic from the background condition and the traffic from the approved projects. The length of northbound left-turn lane required is determined by the AM peak hour, while the length of eastbound right-turn lane is determined by the PM peak hour, as the 95th percentile queue lengths are higher during these respective periods. The analysis indicated that the turn lanes required to accommodate background and vested trips will be sufficient to handle the additional project trips.

Table 10
Queue Evaluation

Intersection	Turn Lane	Posted Speed Limit	Existing Lane Length	Required Deceleration	Existing					Background + Vested w Improvements					Buildout w Improvements						Adequate?
					# of LNS	95th Percentile Queue		Length Needed	Length Deficiency	# of LNS	95th Percentile Queue		Length Needed	Length Deficiency	# of LNS	95th Percentile Queue		Length Needed	Length Deficiency	Project Trips	
						Vehicle	Length				Vehicle	Length				Vehicle	Length				
AM PEAK																					
SR 472 & MLK Beltway	NBL*	55	0'	350'	0	32	800'	1,150'	1,150'	1	8	200'	550'	550'	1	8	200'	550'	0'	1	YES
	EBR	60	540'	405'	1	4	100'	505'	0	1	3	75'	480'	0	1	3	75'	480'	0	3	YES
PM PEAK																					
SR 472 & MLK Beltway	NBL*	55	0'	350'	0	33	825'	1,175'	1,175'	1	7	175'	525'	525'	1	7	175'	525'	0'	3	YES
	EBR	60	540'	405'	1	6	150'	555'	15'	1	5	125'	530'	0	1	5	125'	530'	0	2	YES

95th percentile queue vehicle was rounded to whole number
*95th percentile queue length = vehicle * 25 ft*
**Length deficiency at buildout calculated compared to background condition considering improvements at the intersection of SR 472 and MLK Boulevard, as recommended by previous TIAs, are implemented.*
**Adequate or Not Based on Background Condition with Improvements*

8.0 ACCESS REVIEW

The development proposes to connect to the transportation network by extending Cassadaga Road and Blue Lake Avenue to intersect SR 472 at an existing full median opening and connect with MLK at Cassadaga Road. Access to the site will be provided via two full-access driveways: one (1) on the Cassadaga Road extension and one (1) on the Blue Lake Avenue extension.

SR 472 is a 4-lane divided roadway with a posted speed limit of 60 miles per hour (mph) near the access driveway at Blue Lake Avenue Extension. MLK Beltway is a 2-lane undivided roadway with a posted speed limit of 55 mph. The Blue Lake Avenue Extension is proposed to connect SR 472 to residential developments north of SR 472, while the Cassadaga Road Extension will connect to Blue Lake Avenue Extension to provide access to the site. Since both roadway extensions will lead to residential areas, it is expected that the speed limit for these roads will be 25 mph.

8.1 Access Road Improvements

Road improvements were evaluated to determine the need for deceleration lanes and egress lanes at the project driveways and the deceleration lanes at the nearby intersections. The need for deceleration lanes and the turn lane dimensions were evaluated based on the guidelines of the Volusia County *Land Development Code (LDC)*, provided in **Appendix P**. While these guidelines provided a framework, engineering judgment and planning considerations were also applied to ensure the most effective treatment. Consequently, the following turn lanes are recommended based on a combination of regulatory guidelines and professional assessment.

- Intersection #2 – MLK Beltway and Cassadaga Road
    - Northbound left turn lane
    - Southbound right turn lane

- Intersection # 4 – SR 472 and Blue Lake Avenue Extension
    - Westbound right turn lane

- Intersection #6 – Cassadaga Rd Extension and Access I
    - Eastbound left turn lane

Intersection #2 – MLK Beltway and Cassadaga Road

Deceleration Lanes

The intersection at MLK Beltway and Cassadaga Road is currently a signalized, 3-legged intersection. With the planned extension of Cassadaga Road, it will be reconfigured into a 4-legged intersection. To accommodate this change, it is recommended to add a northbound left turn deceleration lane and a southbound right turn deceleration lane. The eastbound approach is expected to function adequately with a two-lane configuration: one lane dedicated to left turns and the other shared between right turns and through movements.

- Northbound Left Turn Deceleration Lane
  Design Speed = 55 mph
  Recommended Lane Length = 455 feet (Incl. 50-foot taper) (per Volusia County *LDC*)

- Southbound Right Turn Deceleration Lane
  Design Speed = 55 mph
  Recommended Lane Length = 455 feet (Incl. 50-foot taper) (per Volusia County *LDC*)

- Eastbound Left Turn Deceleration Lane
  Assumed Design Speed = 25 mph
  A deceleration lane length of 145 feet is projected to sufficiently accommodate the left turn movement.

Intersection #4 – SR 472 and Blue Lake Avenue Extension

Deceleration Lanes

The intersection at SR 472 and Blue Lake Avenue Extension currently have approximately:

- 510-foot-long Westbound Right Turn Deceleration Lane
- 500-foot-long Eastbound Left Turn Deceleration Lane
- 440-foot-long Southbound Left Turn Deceleration Lane

The recommendations for turn lanes are as follows:

- Westbound Right Turn Deceleration Lane
  Design Speed = 60 mph
  Recommended Lane Length = 455 feet (Incl. 50-foot taper) (There is no turn lane length recommended in *LDC* for speed > 55 mph, thus a turn lane length of 455 feet is recommended)

- Eastbound Left Turn Deceleration Lane
  Design Speed = 60 mph
  Recommended Lane Length = 455 feet (Incl. 50-foot taper) (There is no turn lane length recommended in *LDC* for speed > 55 mph, thus a turn lane length of 455 feet is recommended)

- Southbound Left Turn Deceleration Lane
  Assumed Design Speed = 25 mph
  A deceleration lane length of 145 feet is projected to sufficiently accommodate the left turn movement.

The existing deceleration lanes at the intersection of SR 472 and Blue Lake Avenue Extension are longer than the recommended values. Thus, the intersection is not recommended for any improvements.

Intersection #6 – Cassadaga Road Extension and Access I

Deceleration Lanes

The full access driveway at Cassadaga Road is recommended to be improved with an eastbound left turn lane. This lane will primarily provide separation for left turn movements from through traffic while also offering some deceleration.

With an assumed speed limit of 25 mph for this segment, a conservative length of 145 feet (Incl. 50-foot taper) is recommended for the eastbound left turn lane.

Egress Lanes

The driveway is projected to operate adequately with the following egress lane configuration:

- One (1) southbound lane for the right turn movement
- One (1) southbound lane for the left turn movement - A deceleration lane length of 145 feet is projected to sufficiently accommodate the left turn movement.

Intersection #7 – Blue Lake Avenue Extension and Access II

Deceleration Lanes

Based on *Volusia County LDC* and engineering judgement, a deceleration lane is not necessary at this entrance.

Egress Lanes

The driveway is projected to operate adequately with the following egress lane configuration:

- One (1) westbound lane for the right turn and left turn movements

9.0 ALTERNATIVE TRANSPORTATION MODES

A review of pedestrian, bicycle, and transit facilities was conducted. This review consists of a visual inventory of available facilities to determine the context of alternative transportation modes in the vicinity of the proposed development.

9.1 Pedestrian and Bicycle Facilities

Google Earth maps and field observations indicate that the surrounding area in vicinity of the project site is generally undeveloped. TM BTR at Deland Crossings will construct sidewalks on the perimeter of the development.

There are no sidewalks on MLK Beltway or on SR 472 adjacent to the site. MLK Beltway and SR 472 are both equipped with bike lanes on both sides of the street, adjacent to the site.

9.2 Transit Facilities

The West Volusia transit route map was reviewed from *Volusia County's Public Transit System* website to determine the available transit route near the proposed development. Currently, there is not a transit route on MLK Beltway or Cassadaga Road, or SR 472 near the proposed development. The closest route (Route 20) is located on US 17/92, approximately 2.2-miles from the proposed development. The West Volusia bus service map is included in **Appendix Q**.

9.3 Proximity to Nearby Schools

A review of existing schools within a 2-mile radius of the project site was conducted to identify student walking routes from/to school. No school was identified within a 2-mile radius. The closest public school (Deltona High School) is located approximately 2.5-miles from the project site. As mentioned in the previous section, the area is not improved with pedestrian and bicyclist facilities. Therefore, it is likely that students will use buses to/from schools.

10.0 SAFETY ASSESSMENT

A safety assessment was performed for the intersections at MLK Beltway and Cassadaga Road and at SR 472 and Blue Lake Avenue. For the purpose of this assessment, five (5) years of historical crash data was obtained from *Signal 4 Analytics*. The study period for the assessment spans from 2019 to 2023 and the crash data is provided in **Appendix R**.

MLK Beltway and Cassadaga Road

Based on the crash data, five (5) crashes were reported in the vicinity of the access point at MLK Beltway and Cassadaga Road within the last five (5) years. All of these crashes were rear-end collisions. Of these, three (3) occurred in 2019, which may have been influenced by the intersection's previous stop-controlled configuration. The intersection has since been signalized, which may have contributed to the reduction in crashes. There has been only one (1) crash in 2022 and one (1) crash in 2023. None of the crashes resulted in fatalities. Out of the five (5) crashes, two (2) had no injuries, while three (3) involved possible or non-incapacitating injuries. A map of the crashes at this location is provided in **Figure 11**.

SR 472 and Blue Lake Avenue Extension

Based on the crash data, there have been no crashes reported directly at the SR 472 and proposed Blue Lake Avenue Extension intersection. However, two (2) crashes occurred in close proximity. One (1) of these was a rear-end collision, and the other (1) was a sideswipe collision. The rear-end crash, which resulted in a serious injury, occurred in 2019 and happened during daylight conditions. The sideswipe crash, which resulted in no injury, occurred in 2022 under clear day conditions. A map of the crashes at this location is provided in **Figure 12**.

Overall, the number of crashes at both intersections is relatively low, indicating that there is not a safety issue. The data suggests that the current conditions at these intersections are generally safe, with no significant patterns of frequent or severe crashes.


N
Not to Scale
Proposed Cassadaga Road Extension
LEGEND
Angle
Animal
Left Turn
Right Turn
Sidewsipe
Rear End
Other/Unkown



TMC Traffic & Mobility CONSULTANTS

21145 Ford 472, v1.3

SR 472 and Blue Lake Avenue Crash Map **Figure 12**

11.0 PROPORTIONATE SHARE CALCULATION

The project's impacts on the adverse transportation facilities within the study area are proposed to be mitigated through a payment of the project's proportionate share of the cost to make the planned or identified mitigating improvements.

The proportionate share calculations for adopted roadway widening projects were prepared in accordance with the requirements of Volusia County using the *Master Proportionate Fair Share (PFS) Table*, provided in **Appendix S**.

For segments not available in the *Master PFS Table*, the cost of improving the same roadway and the length difference were used to calculate the proportionate share (PropShare). For example, the segment of Howland Boulevard from Forest Edge to Wolf Pack Run was available in the table. This segment was 0.25 miles long, with a total improvement cost of $2,021,542.48. The segment from I-4/SR 472 to Wolf Pack Run was 0.4 miles long. Therefore, the total cost of improving Howland Boulevard from I-4/SR 472 to Wolf Pack Run was calculated as:

$$\$2,021,542.48 \times (0.4/0.25) = \$3,234,467.96$$

This total cost was then multiplied by the project percentage to determine the PropShare Cost. A similar method was applied to calculate the PropShare Cost for Orange Camp Road (from US-17-92 to Princeton) and Veterans Memorial Parkway (from Harley Strickland Boulevard to Rhode Island Avenue).

The project's roadway segment proportionate share mitigation was calculated to be $142,189.78, as summarized in **Table 11**.

Table 11
Roadway Segments Proportionate Share Calculation

Roadway Segment	Roadway Improvement	Capacity			Project Trips	Prop Share %	Improvement Cost	Prop Share
		Base	Improved	Increase				
Graves Ave								
Veterans Memorial Pkwy to Kentucky Ave	Widen 2 to 4 Lanes	1,620	3,410	1,790	15	0.84%	$2,534,673.55	$21,240.28
Kentucky Ave to Normandy Blvd	Widen 2 to 4 Lanes	1,620	3,410	1,790	5	0.28%	$18,134,221.59	$50,654.25
Howland Blvd								
I-4/SR 472 to Wolf Pack Run	Widen 4 to 6 Lanes	3,410	5,120	1,710	14	0.82%	$3,234,467.96*	$26,481.02
Orange Camp Rd								
US 17-92 to Princeton	Widen 2 to 4 Lanes	1,270	3,410	2,140	3	0.14%	$5,329,975.45	$7,471.93
W. Volusia Bltwy (Veterans Memorial Pkwy)								
Harley Strickland Blvd to Rhode Island Ave	Widen 2 to 4 Lanes	1,540	3,410	1,870	5	0.27%	$13,592,020.00*	$36,342.30
							Total Roadway Segment Proportionate Share	**$142,189.78**

Volusia County Master Prop Fair Share Table
**Not listed in Master Table, improvement cost estimated using the portion of this segment listed in Master table taking into consideration the length difference*

The proportionate share calculations for improvements at the intersection of SR 472 and MLK Beltway were also carried out in accordance with the requirements of Volusia County using the Master Proportionate Fair Share Table. The Fair Share Table and other relevant information are provided in **Appendix S**. The project's total proportionate share mitigation was calculated to be $92,019.46, as summarized in calculations shown in **Table 12**.

Table 12
Proportionate Share Calculation of Improvements at SR 472 and MLK Beltway

Roadway Segment	Roadway Improvement	Capacity			Project Trips	Prop Share %	Improvement Cost	Prop Share
		Base	Improved	Increase				
West Volusia Beltway (MLK)								
Cassadaga Rd to SR 472	Widen 2 to 4 Lanes	1,540	3,410	1,870	15	0.80%	$2,707,186.81	$21,715.40
Kentucky Ave								
Graves Ave to SR 472	Widen 2 to 4 Lanes	1,540	3,410	1,870	20	1.07%	$5,890,388.87	$62,998.81
							Roadway Segment Proportionate Share	**$84,714.21**

Volusia County Master Prop Fair Share Table

Improvement	Capacity			Project Trips	Prop Share %	Improvement Cost	Prop Share
	Base	Improved	Increase				
Adding a WBL Turn Lane							
No project Trips in this approach so not responsible for PropShare							$0
Adding a NBL Turn Lane							
Add a 550' turn lane	119	203	84	1	1.19%	$619,688.72	$7,377.25
Adding a SBL Turn Lane							
No project Trips in this approach so not responsible for PropShare							$0
						Turn Lane Proportionate Share	**$7,377.25**

Improvement Cost Based on FDOT Generic Cost + 25% for Design/Consultant
Base and Improved Capacity for NBL Turn Lane Obtained from Synchro Analysis of Projected AM Peak Before and After Improvements

Thus, the project's total proportionate share cost was calculated to be $234,281.24. The applicant intends to enter into a proportionate share mitigation agreement with Volusia County to establish the payment of the mitigation funds, the allocation of impact fee credits, and any other applicable terms.

12.0 STUDY CONCLUSIONS

This traffic analysis was conducted to evaluate the impacts of Ford 472, a residential development. The site is located west of MLK Beltway and north of State Road 472 (SR 472) in the City of Deland, Florida.

The analysis included a determination of trip generation, a review of transportation capacity and operations, a review of the proposed site access plan, a review of alternative modes of transportation, and a safety assessment. The results of the traffic analysis are summarized as follows:

Summary of Findings

- The proposed development is projected to generate 1,728 net new external daily trips, of which 121 trips occur during the AM peak hour and 154 trips occur during the PM peak hour.

- A review of roadway capacity conditions indicates that the following adverse roadway segments are projected to be impacted by the proposed development:
    - Graves Avenue
        - Veterans Memorial Parkway to Kentucky Avenue
        - Kentucky Avenue to Normandy Boulevard
    - Howland Boulevard
        - I-4/SR 472 to Wolf Pack Run
    - Orange Camp Road
        - US 17/92 to Princeton
    - West Volusia Beltway
        - Harley Strickland Boulevard to Rhode Island Avenue

- A review of intersection operations indicates that the intersection of SR 472 and MLK Beltway is projected to operate below the adopted LOS due to existing and background traffic. However, with the improvements recommended by the previously approved projects, the intersection is projected to operate adequately.

Summary of Recommendations

- The recommended access improvements are:
    - MLK Beltway and Cassadaga Road
      Install a 455-foot-long northbound left turn deceleration lane on MLK Beltway
      Install a 455-foot-long southbound right turn deceleration lane on MLK Beltway
      Provide an eastbound shared lane for right turn and through movements
      Provide a 145-foot-long eastbound lane for the left turn movement

    - Cassadaga Road Extension and Access I
      Install a 145-foot-long eastbound left turn deceleration lane on Cassadaga Road
      Provide one (1) southbound egress lane for the right turn movement
      Provide a 145-foot-long southbound egress lane for the left turn movement

    - Blue Lake Avenue Extension and Access II
      Deceleration lane is not necessary
      Provide one (1) westbound shared lane for right turn and left turn movements

- The project's proportionate share mitigation is $234,281.24 which shall be paid in accordance with a mitigation agreement with Volusia County.

APPENDICES

Appendix A
Comment Letter and Response to Comment Letter

February 13, 2025

Mr. William White
Engineering Assistant II
Volusia County Traffic Engineering
123 West India Avenue
Deland, Florida 32720
WDWhite@volusia.org

Re: Ford 472
Response to TIA Comments
TMC Project № 21145, v1.2
Volusia County, Florida

Dear Mr. White,

Please find below our responses to the review comments prepared by Volusia County Traffic Engineering dated January 8, 2025, regarding the above referenced Traffic Impact Analysis dated December 2024. The comments are listed in **bold** typeface and the TMC responses follow in *italic* typeface. Additionally, a revised TIA is provided under separate cover reflecting the changes resulting from these comments.

1. **Synchro files are missing throughout document. Example missing existing, background, or projected (varies at a.m. & p.m. as well). Please provide all relevant output reports.**

   *TMC Response: Printouts of all HCM output are provided in **Appendices M** and **N** of the revised report (as included in version 1.2). The Synchro files will be provided to the County via electronic file.*

2. **Peak hour factors vary throughout TIA, please provide reasoning.**

   *TMC Response: Peak hour factors for the intersections are based on the Turning Movement Counts observed at each intersection. Some discrepancies in the Synchro sheets have been identified and corrected accordingly. The revised **Appendices M** and **N** now reflect the updated values.*

3. **There appears to be a significant amount of traffic that exits the network between intersection 4 and intersection 3 EB during peak hours, please review & explain.**

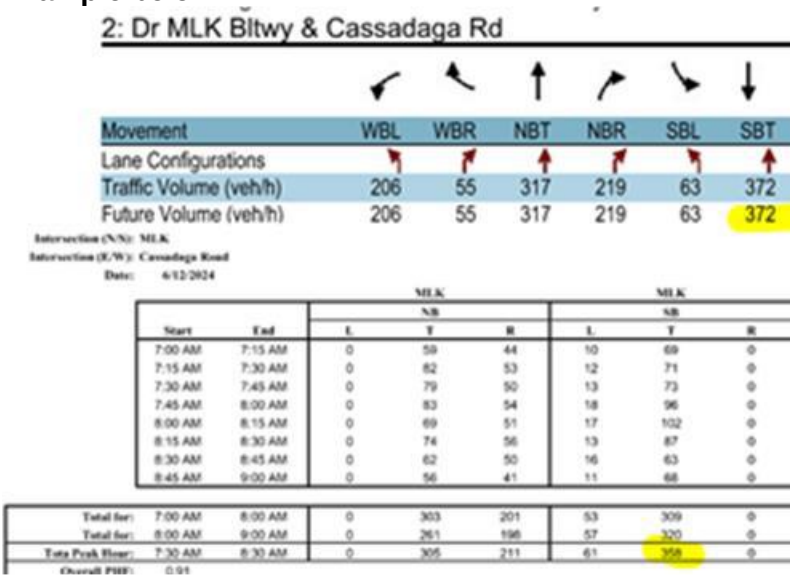
   TMC Response: The traffic exiting from intersection 4 towards intersection 3 eastbound follows the network and exits through intersection 3, rather than between the two intersections. As an example, during the AM peak hour:
   - *Project trips exiting from intersection 4 towards intersection 3 eastbound: 42% (38 trips) via southbound left movement*
   - *Project trips exiting from intersection 3 eastbound:*
     - *Eastbound through movement: 39% (35 trips)*
     - *Eastbound right movement: 3% (3 trips)*

- *Total: 42% (38 trips), which aligns with the trips exiting from intersection 4.*

Similarly, for vested trips during the AM peak hour, 103 trips exit intersection 4 eastbound through and continue through intersection 3 as:

- *82 trips via eastbound through movement*
- *21 trips via eastbound left movement*
- *Total: 103 trips, confirming that traffic follows the expected path through the network.*

4. There are differences in the existing data in synchro and the TMC, please clarify. Example below:



2: Dr MLK Bltwy & Cassadaga Rd

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	206	55	317	219	63	372
Future Volume (veh/h)	206	55	317	219	63	372

Intersection (N/S): MLK
Intersection (E/W): Cassadaga Road
Date: 6/12/2024

		MLK NB			MLK NB		
Start	End	L	T	R	L	T	R
7:00 AM	7:15 AM	0	59	44	10	69	0
7:15 AM	7:30 AM	0	82	53	12	71	0
7:30 AM	7:45 AM	0	79	50	13	73	0
7:45 AM	8:00 AM	0	83	54	18	96	0
8:00 AM	8:15 AM	0	69	51	17	102	0
8:15 AM	8:30 AM	0	74	56	13	87	0
8:30 AM	8:45 AM	0	62	50	16	63	0
8:45 AM	9:00 AM	0	56	41	11	68	0
Total for:	7:00 AM	8:00 AM	0	303	201	53	309	0
Total for:	8:00 AM	9:00 AM	0	261	196	57	320	0
Tota Peak Hour:	7:30 AM	8:30 AM	0	305	211	61	358	0
Overall PHF:	0.91							

TMC Response: As explained in Section 6.2, the raw counts were adjusted by a seasonal factor of 1.04. The existing count data (358) was multiplied by 1.04 to total 372, the adjusted southbound through volume, as shown in the Volume Projections worksheet provided in ***Appendix L,*** *an excerpt of which follows:*

Intersection:		Dr. MLK Bltwy & Cassadaga Rd				
Appr	Mvmt	Lns	Raw	SF	Adjusted	GF
NB	L	0	0	1.04	0	1.0
	T	1	305	1.04	317	1.0
	R	1	211	1.04	219	1.0
SB	L	1	61	1.04	63	1.0
	T	1	358	1.04	372	1.0
	R	0	0	1.04	0	1.0
EB	L	1	0	1.04	0	1.1
	T	1	0	1.04	0	1.1
	R	0	0	1.04	0	1.1
WB	L	1	198	1.04	206	1.1
	T	1	0	1.04	0	1.1
	R	0	53	1.04	55	1.1

*Background Volumes Estimated using *ITE Trip Generation Manu*

5. The county has 2023 count data midblock on MLK between Cassadaga Rd and SR-472. The TIA 2024 existing count is significantly higher, please review & verify.

TMC Response:

W. Volusia Bltwy (Dr MLK Jr)	SR 472 to Cassadaga Rd.	1940	County	Yes	0.20	55	UA_NSSRC1_2W_2L_UWL	Minor Arterial - Urban	E	17,050	0.72	C	710	990	1,540	2

The AADT count data publicly available from Volusia County is from 2022. According to this data, the total count recorded was 710 during AM peak hours and 990 during PM peak hours as shown in the figure above. However, the Turning Movement Count (TMC) conducted in 2024 as part of this TIA recorded the following counts:

- *AM Peak Hour:*
  - *Southbound (SB): 358 + 198 = 556*
  - *Northbound (NB): 305 + 211 = 516*
  - *Total AM Peak: 1,072*
- *PM Peak Hour:*
  - *Southbound (SB): 536 + 117 = 653*
  - *Northbound (NB): 448 + 167 = 615*
  - *Total PM Peak: 1,268*

While it is true that the 2024 existing count is significantly higher than the 2022 count, the traffic count survey was conducted in accordance with standard procedures. The increase in traffic volumes could be attributed to ongoing developments in the area, which may have led to a growth in vehicular flow between 2022 and 2024.

6. Please show how annual growth rates were accounted for in the roadway segments and intersection analyses

*TMC Response: The methodology used for incorporating annual growth rates in roadway segments is detailed in Section 6.1 and further outlined in Table 6 of the revised report (as included in version 1.2). The approach for intersection analyses is explained in Section 6.2, with detailed calculations provided in **Appendix L** of the revised report (as included in version 1.2).*

7. Please show how seasonal factors were accounted for in the roadway segments and intersection analyses

*TMC Response: Seasonal factors were applied only to turning movement counts and are not applicable to roadway segments. The methodology for incorporating seasonal factors into intersection analyses is explained in Section 6.2, with detailed calculations provided in **Appendix L** of the revised report (as included in version 1.2).*

8. For Synchro analyses, please include the output reports that show the Q-length to verify against table 10 values.

*TMC Response: The queue lengths for turn lanes summarized in Table 10 are based on the Synchro worksheets were provided in **Appendix N** (as included in version 1.2). However,*

*the queue lengths for the existing condition are derived from the Synchro worksheets in **Appendix M** (as included in version 1.2). To avoid confusion, Section 7.4 has been updated to clarify this distinction. Please see TIA v1.3 attached.*

9. Please improve the intersection LOS E result at MLK Blvd & SR-472 analysis / PM Peak Hour (Buildout W Improvements) condition which is not in line with adopted LOS requirement.

TMC Response: As explained in Section 7.3, several improvements were previously recommended for the MLK Blvd and SR 472 intersection by other developments. With these improvements in place, the intersection operates in an adequate condition and is capable of accommodating project trips. Additionally, as per Volusia County's comment on September 16, 2024, a proportionate share cost for these improvements was requested to be calculated, as these improvements exceeded concurrency requirements. Consequently, this calculation was incorporated into the revised report (as included in version 1.2).

The allowable Level of Service (LOS) at MLK Blvd and SR 472 is LOS E, which aligns with the adopted LOS requirement. Therefore, the intersection's LOS at PM Peak Hour (Buildout with Improvements) condition remains in compliance with this standard. However, please note that with the revision of Synchro analysis, the overall LOS at MLK Blvd and SR 472 is improved to D.

10. Background traffic volumes (including vested trips) were adjusted manually in some cases. Appendix I and L should clearly justify these adjustments and match the volumes shown in Figures 7–10 (intersection volumes).

*TMC Response: Background traffic volumes (including vested trips) were not adjusted manually. Background traffic volumes were estimated by applying appropriate seasonal factors and growth factors to existing traffic counts and then adding vested trips from Deland Tech Park and TM BTR, as explained in Section 6.2 of the report. The vested trip data was obtained from the TIA of TM BTR and is highlighted in **Appendix K** of the revised report (as included in version 1.2)*.

11. Traffic counts from June 2024 might not fully reflect peak seasonal conditions despite adjustments using FDOT seasonal factors. Ensure accuracy of adjustment factors in Appendix J.

TMC Response: Per County guidelines, traffic counts must be no more than two years old and should be adjusted using FDOT seasonal factors. The traffic counts used in this analysis were collected less than a year ago, and the appropriate seasonal adjustment factor was applied to reflect peak seasonal conditions. This methodology is consistent with Volusia County's standard practice, aligns with procedures followed in other jurisdictions, and is considered an industry-standard practice. If an alternative method is preferred, we are open to incorporating it for this and future analysis.

12. For the intersection of SR 472 and MLK Beltway, Intersection delays and LOS under "Buildout with Improvements" conditions were marginally better than "Background with

Vested" conditions (Tables 8 and 9), Please clarify the improvement effectiveness from Appendix N.

TMC Response: The LOS and delay under the Buildout with Improvements condition are not significantly better because these improvements were already accounted for in the Background with Vested condition. The improvements included in this analysis were recommended in previous projects and were therefore factored into the background conditions of this project.

13. Queue lengths for turn lanes are summarized in Table 10, but discrepancies exist with Appendix M worksheets regarding 95th percentile values (e.g., SR 472 eastbound right-turn queue).

*TMC Response: The queue lengths for turn lanes summarized in Table 10 are based on the Synchro worksheets provided in **Appendix N**. However, the queue lengths for the existing condition are derived from the Synchro worksheets in **Appendix M**. To avoid confusion, Section 7.4 has been updated to clarify this distinction. Please see TIA v1.3 attached.*

14. For deceleration lanes at MLK and Cassadaga Road, ensure that lane lengths are consistent with Land Development Code values. Appendix O calculations occasionally deviate by ~5%.

TMC Response: Deceleration lanes at MLK and Cassadaga Road were previously recommended based on FDM Exhibit 212-2. In response to this comment, the deceleration lanes at MLK and Cassadaga Road have now been recommended in accordance with the Volusia County Land Development Code (LDC).

15. Westbound right-turn lane at SR 472 and Blue Lake Ave Extension recommended at 455 feet, but queue analysis (Table 10) suggests this length might be underestimated.

TMC Response: T The westbound right-turn lane at SR 472 and Blue Lake Ave Extension was originally recommended at 455 feet based on FDM Exhibit 212-1. However, there is currently an approximately 510-foot-long westbound right-turn lane at this location. The existing turn lane was initially overlooked, as it was recently installed as part of the Blue Lake Ave Extension. Analysis indicates that a 510-foot-long turn lane can adequately accommodate project trips, and thus, no improvements are required at SR 472 and Blue Lake Ave Extension. The TIA has been updated accordingly to include this information. Please see TIA v1.3 attached.

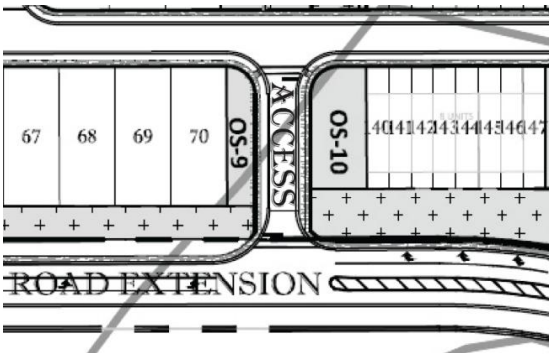
Also, it is important to note that the queue analysis in Table 10 reflects storage needs at SR 472 and MLK Beltway, a higher-volume intersection. In contrast, SR 472 and Blue Lake Ave Extension serves lower traffic volumes and does not require extensive queue storage. Thus, Table 10's analysis does not directly apply as the operational characteristics of these intersections differ.

16. Within Table 12, the total proportionate share ($233,945.91) includes estimated improvement costs. Check alignment of project share percentages with Appendix S, particularly for improvements not listed in the Master PFS Table.

*TMC Response: Table 12 only accounts for the total proportionate share cost of the improvements at the intersection of SR 472 and MLK Beltway. These improvements were recommended by previous developments and based on the comments from the County on September 16, 2024, the proportionate share was calculated and included in this project's proportionate share cost. The total cost of $233,945.91 included this amount as well as the proportionate share cost of improving roadway segments impacted by this project. Please note that because of Synchro revision the new cost is updated to $234,281.24. The project share percentages have been verified against **Appendix S**, and adjustments have been made where necessary to ensure consistency (as included in version 1.2). Additionally, for improvements not listed in the Master Proportionate Fair Share (PFS) Table, the cost allocation methodology was applied in accordance with County guidelines and has been explained in section 11.0 and also reflected in **Appendix S** (as included in version 1.2).*

17. Within Appendix B Intersections layouts should match operational assumptions in LOS analysis (e.g., shared lanes at Cassadaga Road). Potential conflicts observed for eastbound left turn at Access I.

TMC Response: The intersection layouts in Appendix B have been reviewed and confirmed to match the operational assumptions used in the LOS analysis. An example of Cassadaga Road and Access I have been provided with in the figure below for reference.



HCM 7th TWSC
6: Cassadaga Rd Ext & Access I

Intersection						
Int Delay, s/veh	6.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	7	2	10	29	35
Future Vol, veh/h	11	7	2	10	29	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	275	-	-	275	0	-
Veh in Median Storage, #	-	0	0	-	0	-

HCM 7th TWSC
6: Cassadaga Rd Ext & Access I

Intersection						
Int Delay, s/veh	5.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	36	4	7	30	19	23
Future Vol, veh/h	36	4	7	30	19	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	275	-	-	275	0	-
Veh in Median Storage, #	-	0	0	-	0	-

18. Please submit soft copy of the Synchro files used.

TMC Response: A soft copy of the Synchro file has been submitted along with the revised TIA, as requested.

19. Please submit a soft copy of the excel spreadsheet used for your PFS calculation.

TMC Response: A soft copy of the PFS spreadsheet has been submitted along with the revised TIA, as requested.

20. Present traffic count results to account for all modes of movements and provide soft copy of all count survey data using the following file types:

- **Intersection data - .txt export from PetraPro; .txt export from Traffic Data Online.**
- **Midblock data: .prn export from TraxPro/StarNEXT; .csv export from VIAS; .prn export from TrafficViewerPro**

TMC Response: The raw counts collected by the field technician have been submitted along with the revised TIA, as requested.

END OF COMMENTS

We trust these responses and the revised Traffic Impact Analysis adequately address the review comments. We remain available to discuss this matter further or to answer any questions you may have.

Kind regards,

TRAFFIC & MOBILITY CONSULTANTS LLC



Ayman H. As-Saidi, PE
VP of Engineering

Volusia County
Traffic Engineering

Project Name: **Ford 472**
Subject: **TIA Comments**
Date: **1/8/2025**

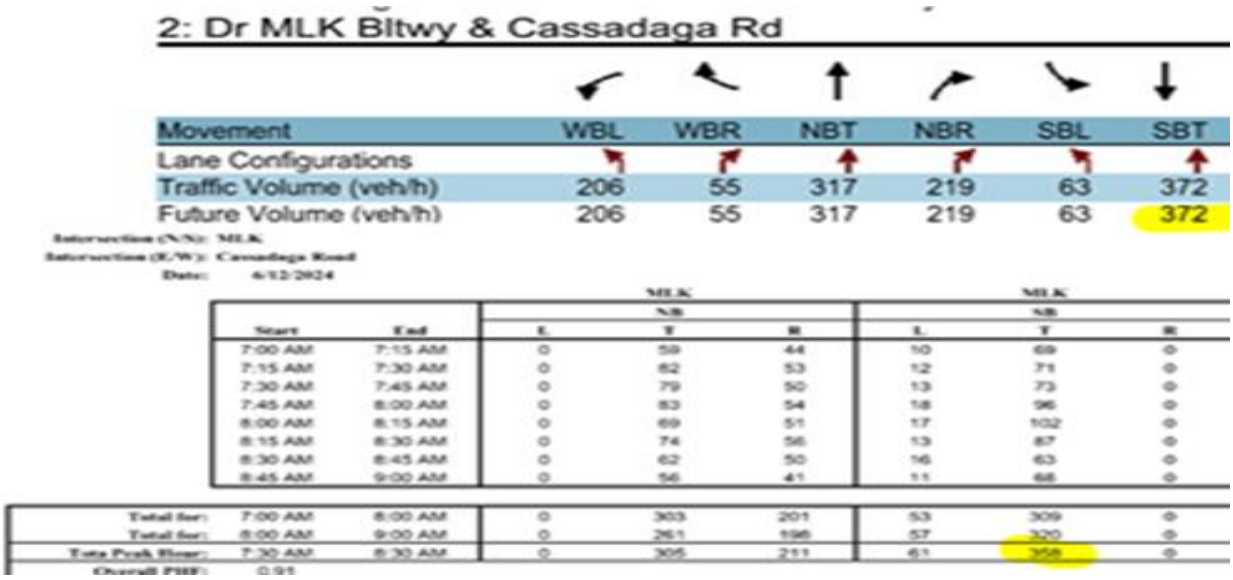
TIA Comments

1. Synchro files are missing throughout document. Example missing existing, background, or projected (varies at a.m. & p.m. as well). Please provide all relevant output reports.

2. Peak hour factors vary throughout TIA, please provide reasoning.

3. There appears to be a significant amount of traffic that exits the network between intersection 4 and intersection 3 EB during peak hours, please review & explain.

4. There are differences in the existing data in synchro and the TMC, please clarify. Example below:



2: Dr MLK Bltwy & Cassadaga Rd

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	206	55	317	219	63	372
Future Volume (veh/h)	206	55	317	219	63	372

Intersection (N/S): MLK
Intersection (E/W): Cassadaga Road
Date: 4/12/2024

		MLK NB			MLK NB		
Start	End	L	T	R	L	T	R
7:00 AM	7:15 AM	0	59	44	10	69	0
7:15 AM	7:30 AM	0	62	53	12	71	0
7:30 AM	7:45 AM	0	79	50	13	73	0
7:45 AM	8:00 AM	0	83	54	18	96	0
8:00 AM	8:15 AM	0	69	51	17	102	0
8:15 AM	8:30 AM	0	74	56	13	87	0
8:30 AM	8:45 AM	0	62	50	16	63	0
8:45 AM	9:00 AM	0	56	41	11	68	0
Total for:	7:00 AM	8:00 AM	0	303	201	53	309	0
Total for:	8:00 AM	9:00 AM	0	261	196	57	320	0
Tote Peak Hour:	7:30 AM	8:30 AM	0	305	211	61	358	0
Overall PHF:	0.91							

5. The county has 2023 count data midblock on MLK between Cassadaga Rd and SR-472. The TIA 2024 existing count is significantly higher, please review & verify.

6. Please show how annual growth rate were accounted for in the roadway segments and intersection analyses

7. Please show how seasonal factors were accounted for in the roadway segments and intersection analyses

8. For Synchro analyses, please include the output reports that show the Q-length to verify against table 10 values.

9. Please improve the intersection LOS E result at MLK Blvd & SR-472 analysis / PM Peak Hour (Buildout W Improvements) condition which is not in line with adopted LOS requirement.

10. Background traffic volumes (including vested trips) were adjusted manually in some cases. Appendix I and L should clearly justify these adjustments and match the volumes shown in Figures 7–10 (intersection volumes).

11. Traffic counts from June 2024 might not fully reflect peak seasonal conditions despite adjustments using FDOT seasonal factors. Ensure accuracy of adjustment factors in Appendix J.

12. For the intersection of SR 472 and MLK Beltway, Intersection delays and LOS under "Buildout with Improvements" conditions were marginally better than "Background with Vested" conditions(Tables 8 and 9), Please clarify the improvement effectiveness from Appendix N.

13. Queue lengths for turn lanes are summarized in Table 10, but discrepancies exist with Appendix M worksheets regarding 95th percentile values (e.g., SR 472 eastbound right-turn queue).

14. For deceleration lanes at MLK and Cassadaga Road, ensure that lane lengths are consistent with Land Development Code values. Appendix O calculations occasionally deviate by ~5%.

15. Westbound right-turn lane at SR 472 and Blue Lake Ave Extension recommended at 455 feet, but queue analysis (Table 10) suggests this length might be underestimated.\

16. Within Table 12, the total proportionate share ($233,945.91) includes estimated improvement costs. Check alignment of project share percentages with Appendix S, particularly for improvements not listed in the Master PFS Table.

17. Within Appendix B Intersections layouts should match operational assumptions in LOS analysis (e.g., shared lanes at Cassadaga Road). Potential conflicts observed for eastbound left turn at Access I.

18. Please submit soft copy of the Synchro files used.

19. Please submit a soft copy of the excel spreadsheet used for your PFS calculation.

20. Present traffic count results to account for all modes of movements and provide soft copy of all count survey data using the following file types:

    - Intersection data - .txt export from PetraPro; .txt export from Traffic Data Online.
    - Midblock data: .prn export from TraxPro/StarNEXT; .csv export from VIAS; .prn export from TrafficViewerPro

December 10, 2024

Mr. William White
Engineering Assistant II
Volusia County Traffic Engineering
123 West India Avenue
Deland, Florida 32720
WDWhite@volusia.org

Re: Ford 472
Response to TIA Comments
TMC Project № 21145, v1.1
Volusia County, Florida

Dear Mr. White,

Please find below our responses to the review comments prepared by the Volusia County Traffic Engineering dated December 9, 2024, regarding the above referenced Traffic Impact Analysis dated October 2024. The comments are listed in **bold** typeface and the TMC responses follow in *italic* typeface. The **bold** typeface in **red** are the edits made by Volusia County to the comments provided on December 3, 2024. Additionally, a revised TIA is provided under cover reflecting the changes resulting from these comments.

1. **Please revise table 10 to include all study intersections to confirm the development buildout 2028- year and corresponding Development Buildout LOS using the following format, noting the referenced vested project in appendix H&N reflects a buildout Yr 2027. Provide in a tabulated format the results of all studied signalized intersections to include current / Projected plus vested / Projected plus vested plus development to include the following parameters:**
    1. **Intersection delay (sec/veh)** **Shown on tables 8 & 9**
    2. **Movement delay (sec/veh)** **Shown on tables 8 & 9**
    3. **Intersection LOS** **Shown on tables 8 & 9**
    4. **Movement LOS** **Shown on tables 8 & 9**
    5. **Back of queue Ft/ln (95th percentile)** **Update Table 10 to include all study intersections with project trips, separated by AM and PM as shown in the attached Queue Length Analysis.**

    Confirmation of sufficient storage length left/right turn movement(s) if turning lanes are available.

Intersection	Turn Lane	Posted Speed Limit (mph)	Existing Lane Length (ft)	Required Deceleration (ft)	Current Yr. Traffic				Future Yr. Traffic + Vested				Development Build-Out					
					# of Lanes	95th Percentile Queue Length (veh x 25 ft)	Total Required Turn Lane Length (ft)	Lane Length Deficiency (ft)	# of Lanes	95th Percentile Queue Length (veh x 25 ft)	Total Required Turn Lane Length (ft)	Lane Length Deficiency (ft)	# of Lanes	95th Percentile Queue Length (veh x 25 ft)	Total Required Turn Lane Length (ft)	Lane Length Deficiency (ft)	Lane Length Deficiency Difference from Future & Vested to Build-Out (ft)	Project Trips
AM PEAK																		
Name	NBL																	
	NBR																	
	SBL																	
PM PEAK																		
Name	NBL																	
	NBR																	
	SBL																	

TMC Response: Table 10 has been revised to include the study intersection with project trips for both AM and PM periods, consistent with the provided Queue Length Analysis. Please refer to Table 10 in the revised TIA v1.2 attached.

2. Please use the updated PFS spreadsheet dated July 2024 and forward a soft copy of your PFS spreadsheet.

TMC Response: The TIA has been updated in accordance with the PFS spreadsheet dated July 2024, provided by the County. Please see Section 11 in the revised TIA v1.2 attached. Additionally, a soft copy of the updated PFS spreadsheet has been submitted along with the revised TIA, as requested.

.

END OF COMMENTS

We trust these responses and the revised Traffic Impact Analysis adequately address the review comments. We remain available to discuss this matter further or to answer any questions you may have.

Kind regards,

TRAFFIC & MOBILITY CONSULTANTS LLC



Ayman H. As-Saidi, PE
VP of Engineering

Nikesh Poudel

From: William White <WDWhite@volusia.org>
Sent: Monday, December 9, 2024 2:23 PM
To: Nikesh Poudel
Cc: Jay I Williams; Omar Atallah; Ayman As-Saidi; 21145 FORD 472
Subject: Fw: Follow-Up on Revised TIA for Ford 472 Project – October 2024
Attachments: TIA Comment Letter Dec 2024.pdf; Queue Length Analysis Table.docx; Master PFS table 2024-01 TWK - July 2024.xlsx

Nikesh,

1. Please revise table 10 to include all study intersections to confirm the development buildout 2028-year and corresponding Development Buildout LOS using the following format, noting the referenced vested project in appendix H&N reflects a buildout Yr 2027
   Provide in a tabulated format the results of all studied signalized intersections to include current / Projected plus vested / Projected plus vested plus development to include the following parameters:
   1. ~~Intersection delay (sec/veh)~~ **Shown on tables 8 & 9**
   2. ~~Movement delay (sec/veh)~~ **Shown on tables 8 & 9**
   3. ~~Intersection LOS~~ **Shown on tables 8 & 9**
   4. ~~Movement LOS~~ **Shown on tables 8 & 9**
   5. Back of queue Ft/ln (95TH percentile) **Update Table 10 to include all study intersections with project trips, separated by AM and PM as shown in the attached Queue Length Analysis.**

   Confirmation of sufficient storage length left/right turn movement(s) if turning lanes are available.

6. Please use the updated PFS spreadsheet dated July 2024 and forward a soft copy of your PFS spreadsheet.

October 23, 2024

Mr. William White
Engineering Assistant II
Volusia County Traffic Engineering
123 West India Avenue
Deland, Florida 32720
WDWhite@volusia.org

Re: Ford 472
Response to TIA Comments
TMC Project № 21145
Volusia County, Florida

Dear Mr. White,

Please find below our responses to the review comments prepared by the Volusia County Traffic Engineering dated September 16, 2024, regarding the above referenced Traffic Impact Analysis dated September 2024. The comments are listed in **bold** typeface and the TMC responses follow in *italic* typeface. Additionally, a revised TIA is provided under cover reflecting the changes resulting from these comments.

1. **Refer to the attached traffic growth policy for compliance.**

   TMC Response: The attached traffic growth policy has been adhered to in the Traffic Impact Analysis v1.0.

2. **Referencing TIA report page 12 section 5 Improvement at intersection of SR 472 & MLK, recommendation of improvements by other vested project shall be considered but also confirmed in line with the concurrency laws requirement that developments maintain the adopted LOS standards to ensure that growth does not outpace infrastructure capacity. The TIA's proposed improvements to deficient intersections not only meet these standards but exceed them, potentially resulting in a higher LOS than required. Given that these improvements offer benefits that surpass the basic concurrency requirements, it is equitable that the costs associated with these enhancements be allocated proportionately to the developments that generate the additional traffic demand. The Proportionate Fair Share (PFS) mechanism is designed to ensure that developments contribute fairly to the costs of necessary infrastructure improvements. When improvements elevate an intersection's LOS beyond the adopted standard, the additional capacity created is primarily intended to accommodate the increased traffic generated by the development. Therefore, it is appropriate for the development to bear the cost of this additional capacity in proportion to its usage of the intersection. This approach ensures that existing residents and businesses are not subsidizing infrastructure improvements that disproportionately benefit new developments. By tying the PFS costs directly to the proportion of trips generated by the development, we ensure a fair and transparent distribution of costs. The improvements beyond the adopted LOS represent an added**

benefit to the transportation network, and it is logical that the entities creating the need for these improvements should fund them accordingly.

TMC Response: Acknowledged. The Proportionate Fair Share for all improvements listed in the TIAs of previous developments have been evaluated. The report has been updated to reflect the Proportionate Fair Share costs that Ford 472 is responsible for at the intersection of SR 472 and MLK. Please refer to Table 12 in the revised TIA v1.1 attached.

3. **Please provide for all studied intersections in tabulated format the LOS of: Existing AM/PM Peak Hour, Projected background + vested AM/PM Peak Hour, Projected background + vested with improvement AM/PM Peak Hour, & Buildout AM/PM Peak Hour.**

TMC Response: The report has been updated to include the requested LOS information in a tabulated format for all studied intersections under all conditions: Existing AM/PM Peak Hour, Projected background + vested AM/PM Peak Hour, Projected background + vested with improvement AM/PM Peak Hour, & Buildout AM/PM Peak Hour. Please refer to Table 8 and Table 9 in the revised TIA v1.1 attached.

4. **To verify proper connectivity, provide intersections concept layouts that correspond to LOS analysis for the new roadway intersections along S Blue Lake Ave. & Cassadaga Rd.**

TMC Response: The TIA report has been updated to include the LOS analysis and concept layouts for the new roadway intersections along S Blue Lake Ave. & Cassadaga Rd. Please refer to Appendix B for the concept layout and Table 8 and Table 9 for the updated LOS analysis in the revised TIA v1.1 attached.

5. **CTE confirmation with your listed proposed improvement(s) would be in line with County improvement strategy ahead of being assumed as acceptable improvement(s) as stated in the TIA guideline.**

Access Rd Improvement(s)	Valid Assumption	Invalid Assumption	Alternative Improvement to be considered	Comment
Intersection #2 – MLK Beltway and Cassadaga Road				
Northbound left turn lane	X			
Southbound right turn lane	X			
Intersection # 4 – SR 472 and Blue Lake Avenue Extension				
Westbound right turn lane	X			
Intersection #6 – Cassadaga Rd Extension and Access I				
Eastbound left turn lane	X			

TMC Response: The confirmation of the assumptions by the County has been acknowledged.

6. **Please include the following statement if applicable**
   Given the staged nature of the development and recognizing the potential evolution of traffic patterns over time, the developer is required to conduct a comprehensive reevaluation of the access control type in conjunction with each stage of development. This process is essential to ensure that access control measures align with the changing transportation needs and conditions associated with the different phases of the project. The developer must collaborate closely with the CTE to assess and adjust the access control type based on the specific requirements and challenges presented by each stage. This reevaluation should consider factors such as the increasing population density, changing land use patterns, and corresponding shifts in traffic volumes. For each stage, the developer is expected to submit a revised access control proposal that reflects the current and anticipated traffic conditions. This proposal should outline any necessary modifications to the initially proposed access control type, taking into account factors such as peak traffic periods, pedestrian movements, and the integration of alternative transportation modes. The CTE will review each stage's access control proposal, ensuring that it complies with established standards and guidelines. The goal is to adapt the access control type to the evolving demands of the development, promoting an efficient and safe transportation network throughout the different phases. This staged approach to access control evaluation aims to create a flexible and responsive framework that accommodates the dynamic nature of the development. It is imperative that the developer remains proactive in reassessing and refining access control measures to uphold the highest standards of transportation planning and engineering throughout the entire staged development process.

   TMC Response: Please note that this project will be developed in one (1) phase/stage; therefore, the proposed access driveway points have been analyzed for the full buildout of the project and access management has been evaluated accordingly, and the above statement is not applicable.

END OF COMMENTS

We trust these responses and the revised Traffic Impact Analysis adequately address the review comments. We remain available to discuss this matter further or to answer any questions you may have.

Kind regards,

TRAFFIC & MOBILITY CONSULTANTS LLC



Ayman H. As-Saidi, PE
VP of Engineering

Volusia County
Traffic Engineering

Project Name: **Ford 472**
Subject: **TIA Comments**
Date: **9-16-24**

TIA Comments

1. Refer to the attached traffic growth policy for compliance.

2. Referencing TIA report page 12 section 5 Improvement at intersection of SR 472 & MLK, recommendation of improvements by other vested project shall be considered but also confirmed in line with the concurrency laws requirement that developments maintain the adopted LOS standards to ensure that growth does not outpace infrastructure capacity. The TIA's proposed improvements to deficient intersections not only meet these standards but exceed them, potentially resulting in a higher LOS than required. Given that these improvements offer benefits that surpass the basic concurrency requirements, it is equitable that the costs associated with these enhancements be allocated proportionately to the developments that generate the additional traffic demand. The Proportionate Fair Share (PFS) mechanism is designed to ensure that developments contribute fairly to the costs of necessary infrastructure improvements. When improvements elevate an intersection's LOS beyond the adopted standard, the additional capacity created is primarily intended to accommodate the increased traffic generated by the development. Therefore, it is appropriate for the development to bear the cost of this additional capacity in proportion to its usage of the intersection. This approach ensures that existing residents and businesses are not subsidizing infrastructure improvements that disproportionately benefit new developments. By tying the PFS costs directly to the proportion of trips generated by the development, we ensure a fair and transparent distribution of costs. The improvements beyond the adopted LOS represent an added benefit to the transportation network, and it is logical that the entities creating the need for these improvements should fund them accordingly.

Background Conditions									
Intersection	Adopted LOS	AM Peak Hour				PM Peak Hour			
		Delay (sec.)	LOS	Overall Highest V/C	Movement(s) with V/C > 1	Delay (sec.)	LOS	Overall Highest V/C	Movement(s) with V/C > 1

3. Please provide for all studied intersections in tabulated format the LOS of: Existing AM/PM Peak Hour, Projected background + vested AM/PM Peak Hour, Projected

background + vested with improvement AM/PM Peak Hour, & Buildout AM/PM Peak Hour,

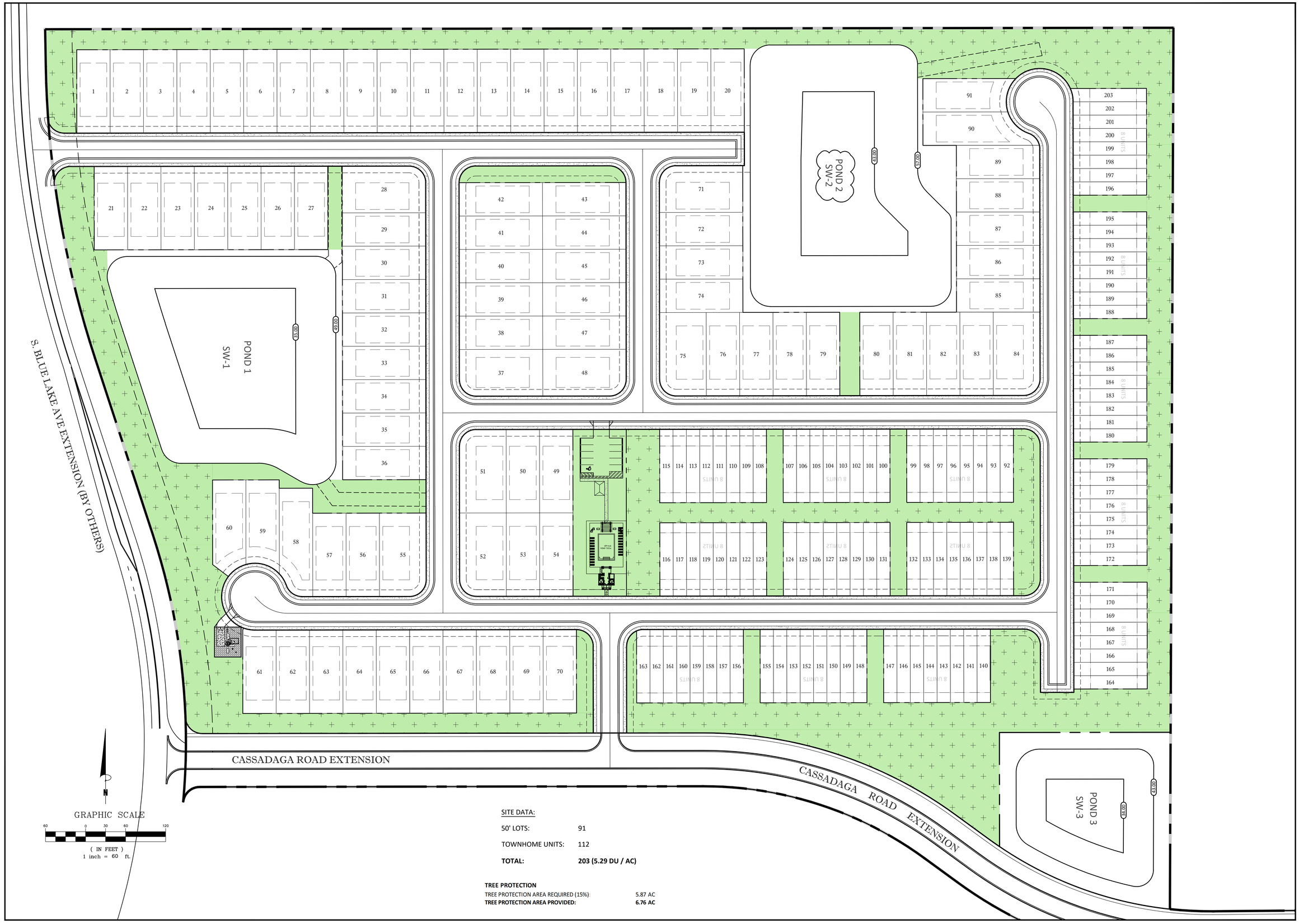
4. To verify proper connectivity, provide intersections concept layouts that correspond to LOS analysis for the new roadway intersections along S Blue Lake Ave. & Cassadaga Rd.

5. CTE confirmation with your listed proposed improvement(s) would be in line with County improvement strategy ahead of being assumed as acceptable improvement(s) as stated in the TIA guideline

Access Rd Improvement(s)	Valid Assumption	Invalid Assumption	Alternative Improvement to be considered	Comment
Intersection #2 – MLK Beltway and Cassadaga Road				
Northbound left turn lane	X			
Southbound right turn lane	X			
Intersection # 4 – SR 472 and Blue Lake Avenue Extension				
Westbound right turn lane	X			
Intersection #6 – Cassadaga Rd Extension and Access I				
Eastbound left turn lane	X			

6. Please include the following statement (if applicable)
Given the staged nature of the development and recognizing the potential evolution of traffic patterns over time, the developer is required to conduct a comprehensive reevaluation of the access control type in conjunction with each stage of development. This process is essential to ensure that access control measures align with the changing transportation needs and conditions associated with the different phases of the project. The developer must collaborate closely with the CTE to assess and adjust the access control type based on the specific requirements and challenges presented by each stage. This reevaluation should consider factors such as the increasing population density, changing land use patterns, and corresponding shifts in traffic volumes. For each stage, the developer is expected to submit a revised access control proposal that reflects the current and anticipated traffic conditions. This proposal should outline any necessary modifications to the initially proposed access control type, taking into account factors such as peak traffic periods, pedestrian movements, and the integration of alternative transportation modes. The CTE will review each stage's access control proposal, ensuring that it complies with established standards and guidelines. The goal is to adapt the access control type to the evolving demands of the development, promoting an efficient and safe transportation network throughout the different phases. This staged approach to access control evaluation aims to create a flexible and responsive framework that accommodates the dynamic nature of the development. It is imperative that the developer remains proactive in reassessing and refining access control measures to uphold the highest standards of transportation planning and engineering throughout the entire staged development process.

Appendix B
Site Information



SITE DATA:

50' LOTS:	91
TOWNHOME UNITS:	112
TOTAL:	**203 (5.29 DU / AC)**

TREE PROTECTION

TREE PROTECTION AREA REQUIRED (15%):	5.87 AC
TREE PROTECTION AREA PROVIDED:	**6.76 AC**

KELLY, COLLINS & GENTRY, INC.
KCG
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 898-7858 FAX (407) 898-1488

DATE	REVISION

PREPARED FOR:
PULTE GROUP

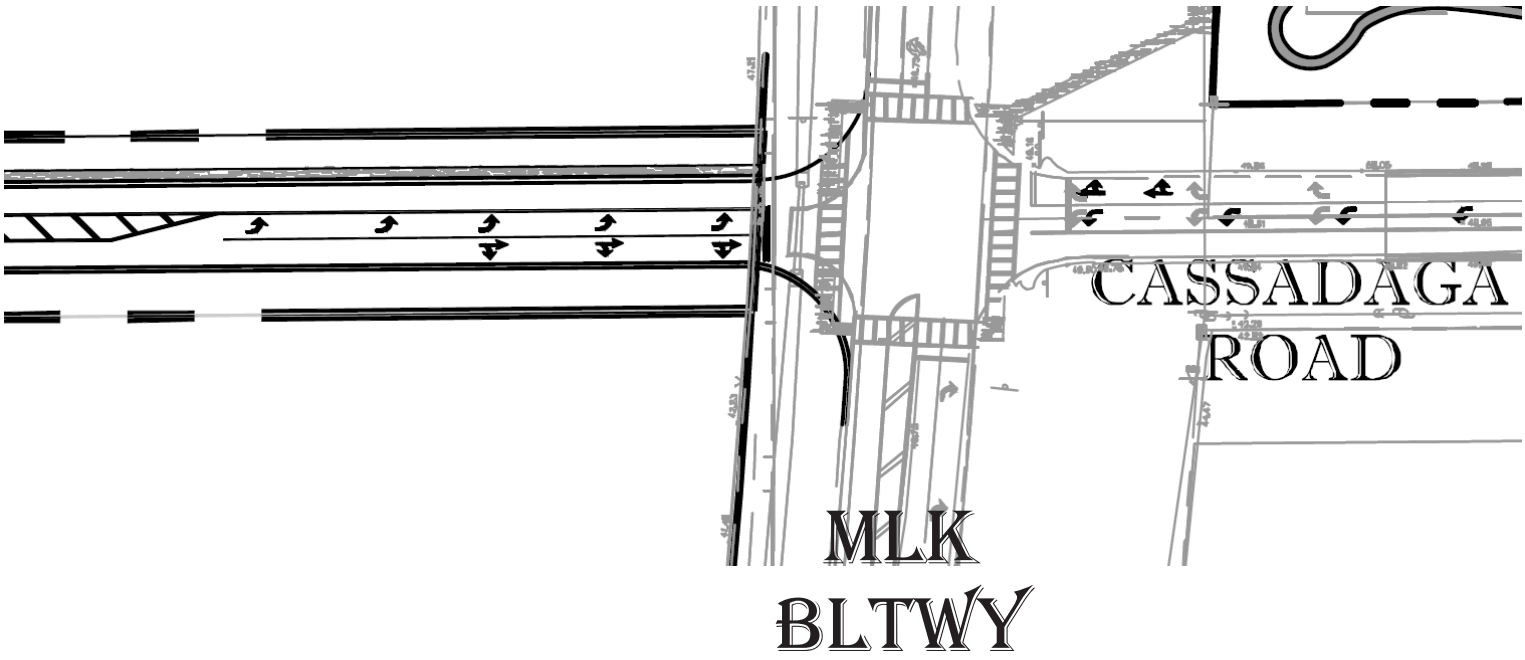
FORD 472
SUBDIVISION

CONCEPT PLAN

DRAWN:	GPR
DESIGN:	GPR
CHECKED:	SCF
JOB NO.:	1496.000
DATE:	07/25/2023

SHEET
1 OF 1

N
Not to Scale



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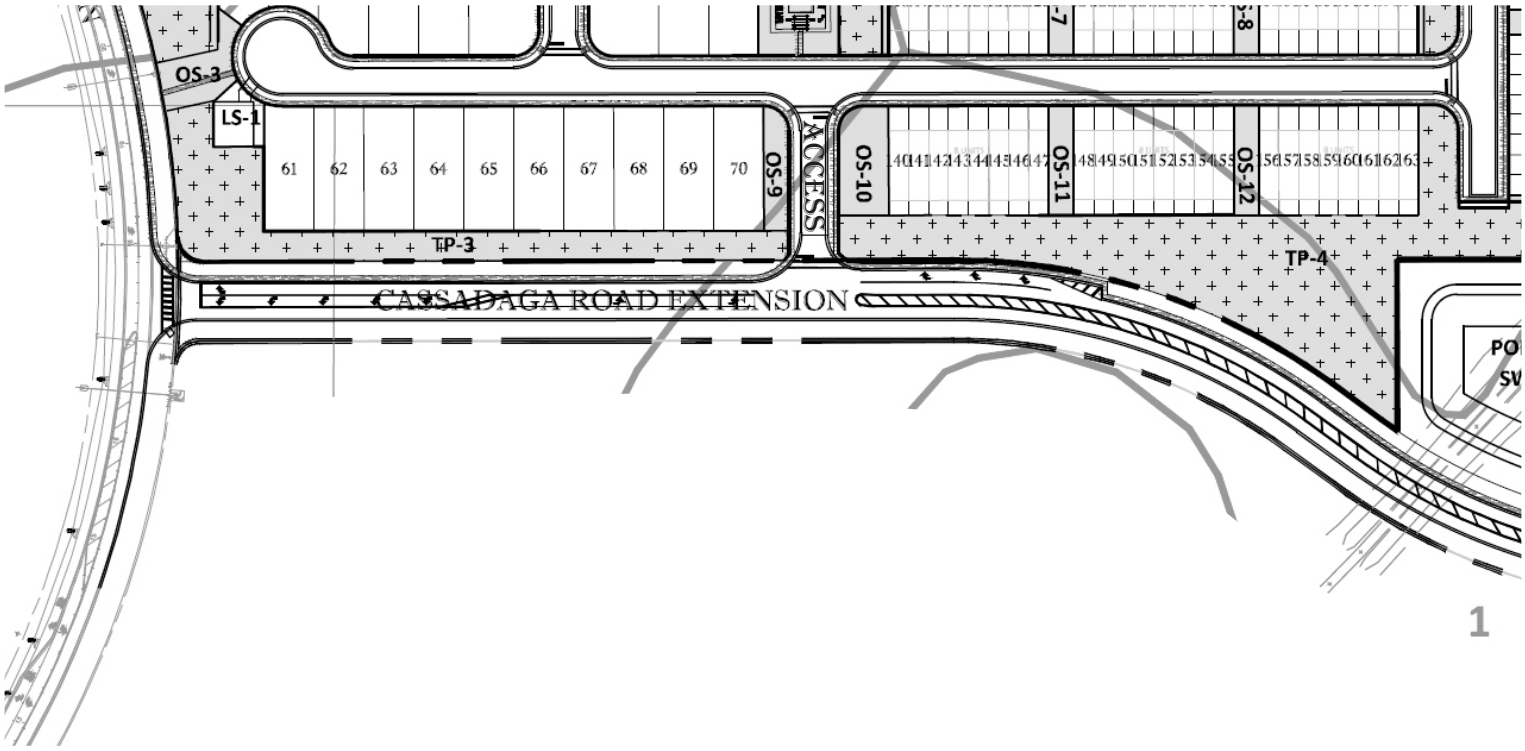

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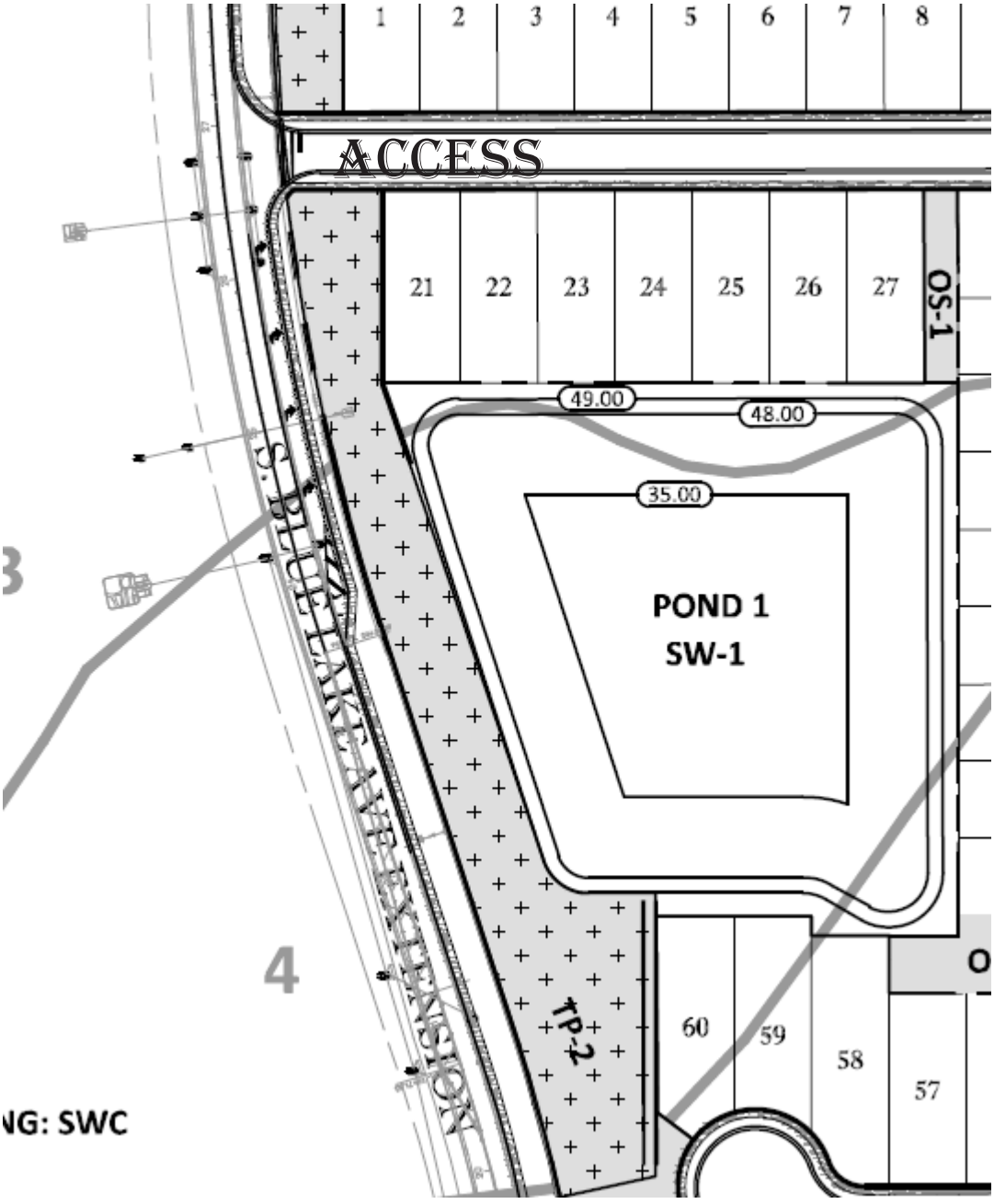

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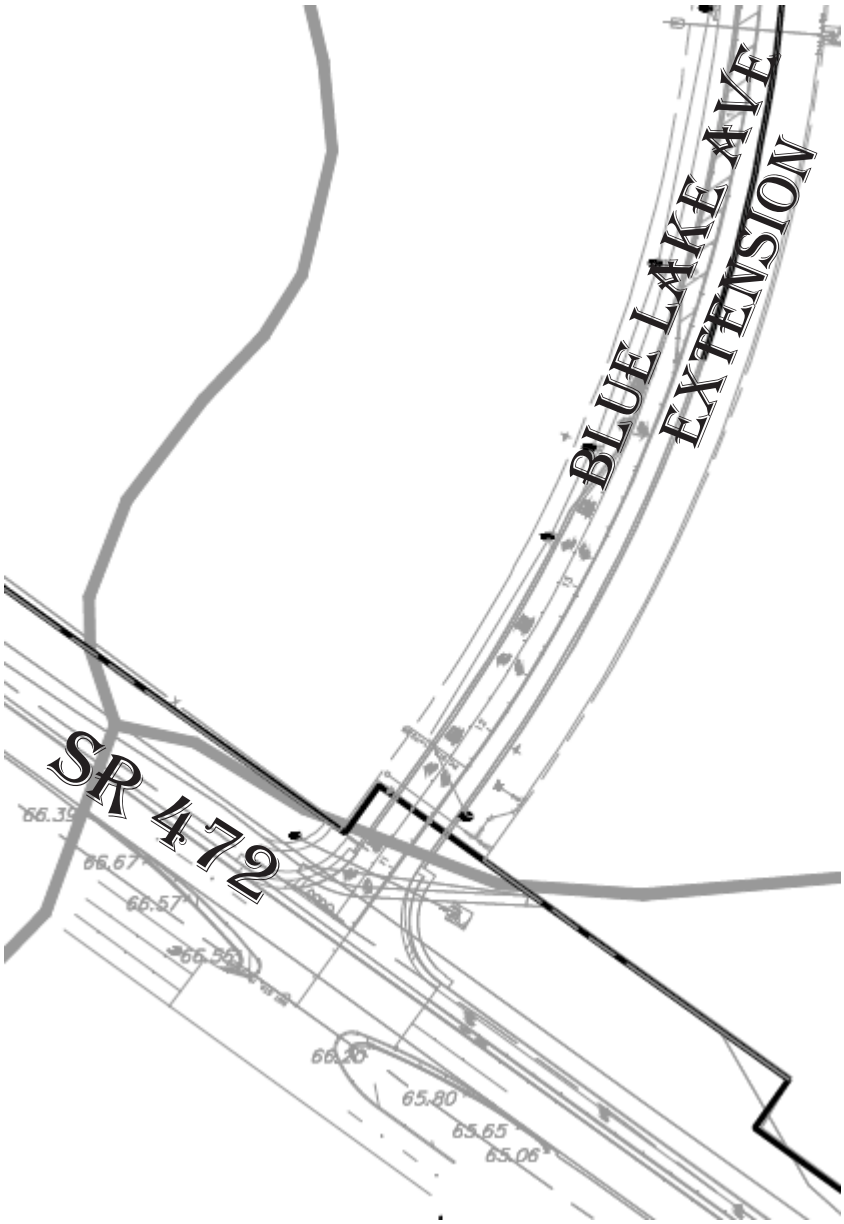


Volusia County
FLORIDA

Growth & Resource Management
Land Development

November 27, 2023

Christopher Wrenn
PulteGroup, Inc.
4901 Vineland Rd
Orlando, FL 32811

Re: Subdivision Overall Development Plan Preliminary Development Order
2022-S-ODP-0353 / 1072480
Ford 472 Subdivision

Dear Mr. Wrenn:

This letter is the Subdivision Overall Preliminary Development Order for the above-referenced development. Pursuant to the following findings, the DRC has approved the application:

1. The application was accepted on May 15, 2023, and discussed at the June 14, 2023, Technical Staff Review Meeting.

2. The DRC considered the application at their regularly scheduled meeting of October 10, 2023, and approved the Overall Development Plan application 2022-S-ODP-0353, subject to the submittal of revised plans to the satisfactory resolution of staff comments.

3. Revised plans were accepted on October 26, 2023.

A copy of the approved version of the plan, last revision dated October 18, 2023, by Sean Fortier, is enclosed.

Based on this letter you may submit an application for a Preliminary Plat Development Order. A blank application form and a checklist of exhibits and procedures are attached. A fee, as outlined in the attached fee schedule, must be paid at the time of application submittal. The Preliminary Plat application must be consistent with the approved Overall Development Plan and any remaining conditions imposed by the DRC.

Section 72-536(b) of the LDC states, “It is a violation of this division for anyone who is the owner or agent of the owner of any land to transfer, sell, agree to sell, or negotiate to sell such land by reference to, exhibition of, or other use of a plat of a subdivision of such land without having the plat approved as required by this division.”

Pursuant to Section 125.022(5), F.S., issuance of this development order by the county does not in any way create any rights on the part of the applicant to obtain a permit from a state or federal agency and does not create any liability on the part of the county for issuance of the permit if the applicant fails to obtain requisite approvals or fulfill the obligations imposed by a state or federal agency or undertakes actions that result in a violation of state or federal law. All other applicable state or federal permits shall be obtained before commencement of this development.

Pursuant to Section 72-502(g) of Article III Land Development, Chapter 72 Code of Ordinances (LDC), any person claiming to be aggrieved by a decision of the Enforcement Official or the DRC may file a written appeal within thirty (30) days after said decision with the Land Development Manager to have the decision reviewed by the Volusia County Council. The appeal shall state fully the specific grounds for the appeal and all of the facts relied upon by the petitioner. The County Council shall consider only those items specified in this petition.

Please feel free to contact the Land Development office if you have any questions. The project name and number must be referenced on all inquiries.

Sincerely,



Carol McFarlane, AICP
Planning and Land Development Director
cmcfarlane@volusia.org

CRM/rc
Enclosures

c: James L Rickman, Allen & Company, 16 E Plant St, Winter Garden, FL 34787
Ford Frank A, Group 7 87 5 / Group 4 12 5, Po Box 457, Deland Fl 32721
Sean Fortier, Kelly, Collins & Gentry, Inc, 1700 N Orange Av, Orlando, FL 32804
Todd Bonnett, Bonnett Design Group, LLC, 400 S Orlando Av Suite 201, Maitland, FL 32751
David Romero (via e-mail)

PARCEL DESCRIPTION

PARCEL 1
GOVERNMENT LOT 2, EXCEPT THE W 1/4 THEREOF LYING NORTH OF S.R. 15A, AND LYING SOUTH OF A LINE PARALLEL TO AND 900 FEET SOUTH OF THE NORTH LINE OF SAID GOV'T LOT 2, AND EXCEPT THE EAST 660 FEET OF THE NORTH 1056 FEET, LYING IN SECTION 1, TOWNSHIP 18 SOUTH, RANGE 30 EAST, VOLUSIA COUNTY, FLORIDA.

AND
THE NORTH 900 FEET OF THE EAST 1/4 OF GOVERNMENT LOT 2, LYING NORTH OF S.R. 15A, EXCEPT THE NORTH 660 FEET THEREOF, LYING IN SECTION 1, TOWNSHIP 18 SOUTH, RANGE 30 EAST, VOLUSIA COUNTY, FLORIDA.

PARCEL2
THE EAST 1/4 OF GOVERNMENT LOT 2, LYING NORTH OF STATE ROAD 15-A, EXCEPT THE NORTH 900 FEET THEREOF, AND THE WEST 1/4 OF GOVERNMENT LOT 1, LYING NORTH OF STATE ROAD 15-A, EXCEPT THE NORTH 900 FEET, LYING IN SECTION 1, TOWNSHIP 18 SOUTH, RANGE 30 EAST, VOLUSIA COUNTY, FLORIDA.

NOTE:

PARCEL DESCRIPTION PROVIDED BY ALLEN & COMPANY, DATED 06/08/2021.

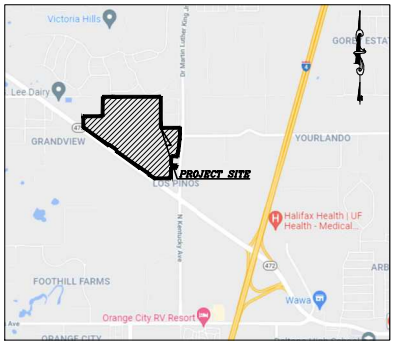
OVERALL DEVELOPMENT PLAN

FOR:

FORD 472 SUBDIVISION

NORTH OF SR 472 & WEST OF DR MARTIN LUTHER KING JR BELTWAY VOLUSIA COUNTY, FLORIDA

VICINITY MAP



SCALE: 1"=2000'

LAND DEVELOPMENT
Approved Overall Development Plan
Land Development Code of Volusia County, Florida
Project Number: 2022-S-ODP-0353

11/27/2023
Planning & Land Development Director

PARCEL ID #:
800100000020

PREPARED FOR:

PULTE GROUP

4901 VINELAND ROAD SUITE 460
ORLANDO, FLORIDA 32811
PHONE: (407) 661 2152

DEVELOPMENT TEAM:

DEVELOPER
PULTE GROUP
4901 VINELAND ROAD SUITE 460
ORLANDO, FLORIDA 32811
PHONE: (407) 661 2152

ENGINEER
KELLY, COLLINS & GENTRY, INC.
1700 NORTH ORANGE AVENUE,
SUITE 400
ORLANDO, FLORIDA 32804
PHONE: (407) 898-7858
FAX: (407) 898-1488

SURVEYOR
ALLEN & COMPANY
16 EAST PLANT STREET
WINTER GARDEN, FLORIDA 34787
PHONE: (407) 654-5355

LANDSCAPE ARCHITECT
BONNET DESIGN GROUP, LLC
PHONE: (407) 463-0136

UTILITIES:

WATER & SEWER
CITY OF DELAND
1101 SOUTH AMELIA AVENUE,
DELAND, FLORIDA 32724
PHONE: (386) 626-7250

RECLAIM WATER
VOLUSIA COUNTY UTILITIES
123 W INDIANA AVE, DELAND, FLORIDA 32720
PHONE: (386) 736-2700

PREPARED BY:

KELLY, COLLINS & GENTRY, INC.
ENGINEERING • PLANNING

1700 NORTH ORANGE AVENUE
SUITE 400
ORLANDO, FLORIDA 32804
PHONE (407) 898-7858
FAX (407) 898-1488

SECTION 01 TOWNSHIP 18, RANGE 30, VOLUSIA COUNTY, FLORIDA

SHEET INDEX

SHEET TITLE	SHEET NO.
COVER SHEET	C-1.0
EROSION CONTROL & TREE PROTECTION	EC-1.0
OVERALL PLAN	C-2.0 TO C-2.1
DIMENSION PLAN	C-3.0 TO C-3.2
PAVING, GRADING, & DRAINAGE PLAN	C-4.0 TO C-4.2
UTILITY PLAN	C-5.0 TO C-5.2

Sean Fortier
2023.10.18
13:29:01-04'00'

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY SEAN C. FORTIER, P.E. ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

FOR REVIEW ONLY
NOT TO BE USED FOR CONSTRUCTION UNLESS SIGNED BY THIS BLOCK

SEAN C. FORTIER, P.E.
FLORIDA REGISTRATION NO.
NOT VALID FOR CONSTRUCTION UNLESS SIGNED BY THIS BLOCK

REVISIONS:

DATE	DESCRIPTION

DRAWN: GPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

SHEET
C-1.0

FORD 472 SUBDIVISION VOLUSIA COUNTY, FL

EROSION CONTROL:

1. GENERAL: CONTRACTOR SHALL INSTALL ANY ADDITIONAL EROSION CONTROL WHEN NECESSARY IN ORDER TO MEET STATE AND LOCAL STANDARDS.
2. EXISTING SYSTEMS: CONTRACTOR SHALL PROTECT ALL EXISTING STORMWATER COLLECTION SYSTEMS FROM DAMAGE BY SEDIMENT OR OTHER CONSTRUCTION RELATED CAUSES.
3. CONFLICTS: CONTRACTOR SHALL COORDINATE ALL UTILITY CROSSINGS AND ADDRESS CONFLICTS PRIOR TO BEGINNING WORK IN A GIVEN AREA(S).
4. STABILIZATION:
   A. EROSION CONTROL SHALL BE MAINTAINED WITHIN CONSTRUCTION AREAS BY QUICKLY STABILIZING DISTURBED AREAS TO PREVENT THE RELEASE OF SEDIMENT. THIS SHALL BE ACCOMPLISHED USING SOD, TURBIDITY FENCES, AND OTHER MEANS ACCEPTABLE TO OWNER, ENGINEER, AND REGULATORY AGENCIES.
   B. AREAS DISTURBED THAT WILL NOT BE IMPROVED FOR A PERIOD OF 30 DAYS OR MORE SHALL RECEIVE TEMPORARY STABILIZATION AS DEEMED NECESSARY BY THE MUNICIPAL INSPECTOR.
5. BMPs:
   A. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, CONTRACTOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES BMP TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
   B. WITH UTILIZING CONSTRUCTION PHASES, CONTRACTOR SHALL BE RESPONSIBLE FOR ADDITIONAL ON-SITE BMPs AS DEEMED NECESSARY AND SHALL BE APPROVED BY JURISDICTIONAL AUTHORITIES.
   C. ALL BMPs SHALL BE CLEANED OF SEDIMENT WHEN 50% OR LESS OF BMP IS REACHED.
   D. ALL BMPs SHALL REMAIN IN PLACE UNTIL SUCH TIME THAT THE MUNICIPAL INSPECTOR ALLOWS REMOVAL.
   E. APPROPRIATE BMPs MUST BE IMPLEMENTED TO ENSURE THAT DISCHARGES DO NOT EXCEED SURFACE WATER QUALITY STANDARDS PER THE FDEP CONSTRUCTION GENERIC PERMIT (CGP). IF DEWATERING OFFSITE OR INTO A COUNTY MS4, TURBIDITY MUST BE MONITORED TO ENSURE THAT DISCHARGES DO NOT EXCEED 29 NTU OVER BACKGROUND PER 62-302.530 FAC. REFER TO THE DEWATERING REQUIREMENTS IN 62-621.300(4)(a) CONSTRUCTION GENERIC PERMIT OR 62-621.300(2)(a) DEWATERING GENERIC PERMIT AS APPLICABLE.
   F. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPs SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROL BMPs AFTER EACH RAIN EVENT OF 1/2" AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, REVEGETATING, AND REMETTING, MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs, OR MODIFICATIONS OF THOSE INSTALLED SHALL BE REQUIRED.
   G. CONTRACTOR SHALL INSPECT BMPs AT END OF EACH WORKING DAY.
   H. SEDIMENT REMOVED FROM BMPs SHALL BE DISPOSED OF IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS, OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED OR PLACED IN TEMPORAL STOCKPILES.
   I. BMPs USED ON SITE MUST MEET THE MINIMUM SPECIFICATIONS IN THE 2013 STATE OF FLORIDA E&SC DESIGNER AND REVIEWER MANUAL.
6. MULCH:
   A. MULCH WITH MULCH CONTROL NETTING OR EROSION CONTROL BLANKETS SHALL BE INSTALLED ON ALL SLOPES 3:1 AND STEEPER.
   B. STRAW MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN.
7. ENTRANCE/EXIT:
   A. CONSTRUCTION ENTRANCE SHALL BE GRADED SO THAT NO SEDIMENTS LEAVE THE SITE.
   B. ALL EMPLOYEES, SUBCONTRACTORS, AND SUPPLIERS SHALL UTILIZE CONSTRUCTION ACCESS.
   C. CONSTRUCTION VEHICLES SHALL ENTER AND EXIT THE SITE AT ONE LOCATION.
   D. ALL EXIT LOCATIONS INTENDED SHALL BE USED CONTINUOUSLY AND FOR A PERIOD OF TIME SHALL HAVE STABILIZED CONSTRUCTION ENTRANCE/EXIT BMPs (TC-1 "STABILIZED CONSTRUCTION ENTRANCE/EXIT" OR TC-2 "ENTRANCE/OUTLET TIRE WASH").
   E. INSPECT ROUTINELY FOR DAMAGE AND ASSESS EFFECTIVENESS OF THE BMP. REMOVE AGGREGATE, SEPARATE AND DISPOSE OF SEDIMENT IF CONSTRUCTION ENTRANCE/EXIT IS CLOGGED NO MORE THAN 50% WITH SEDIMENT.
   F. IF APPLICABLE, ROUTE RUNOFF FROM STABILIZED ENTRANCES THROUGH A SEDIMENT TRAPPING DEVICE BEFORE DISCHARGE.
8. INLETS:
   G. ALL EXISTING AND PROPOSED STORM DRAINAGE INLETS AND PIPES SHALL BE PROTECTED FROM SILT, SAND, AND DEBRIS DURING CONSTRUCTION. ANY ACCUMULATION OF DEBRIS WITHIN THE STORM DRAINAGE PIPE SYSTEM SHALL BE REMOVED BY CONTRACTOR.
   H. PROVIDE GEOHAY HAY BALES IN FRONT OF ALL DRAINAGE CURB INLETS AND PROVIDE FILTER FABRIC UNDER THE GRATE OF ALL DITCH BOTTOM INLETS AFTER INITIAL COMPLETION OF THE DRAINAGE STRUCTURES. MAINTAIN THESE MEASURES DAILY.
9. DAILY:
   A. CONSTRUCTION SITE SHALL BE INSPECTED FOR EROSION PROBLEMS DAILY AND AFTER EACH RAINFALL GREATER THAN 0.5". A RAIN GAUGE SHALL BE ON SITE TO MEASURE THE FALL AMOUNTS.
   B. THE ADJACENT STREETS SHALL BE SWEPT AT THE END OF EACH DAY OF DIRT FROM THE CONSTRUCTION SITE. CONTRACTOR SHALL IMPLEMENT STREET SWEEPING AND VACUUMING AS NEEDED. CLEAN DIRT FROM ROADWAYS DAILY.
   C. CONSTRUCTION SITE SHALL BE CLEANED OF LITTER AND TRASH EACH DAY AND DISPOSED OF OFF-SITE.
   D. INSPECT ALL SEDIMENT CONTROL DEVICES FOR DAMAGE DAILY AND REPAIRS AS NEEDED.
   E. CONTRACTOR SHALL EMPLOY SAFETY AND ROADWAY ENTRY AND EXIT PLANS ON A DAILY/WEEKLY BASIS.
   F. HUMAN WASTEWATER SHALL BE COLLECTED ON-SITE BY THE USE OF TEMPORARY SANITARY SERVICE.
10. SILT FENCE:
   A. SILT FENCE SHALL BE IN PLACE AS SHOWN PRIOR TO CONSTRUCTION.
   B. PRIOR TO CONSTRUCTION, SILT FENCE SHALL BE INSTALLED AT THE LIMITS OF CONSTRUCTION AS DEFINED THROUGHOUT THIS PLAN SET. SEE DETAIL SHEETS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION ON EROSION CONTROL.
   C. SILT FENCE SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
11. SOD: ALL DISTURBED AREAS SHALL BE SODDED EXCEPT AS SHOWN ON PLAN. ALL SOD IN RIGHT OF WAY SHALL BE ARGENTINE BAHIA. ALL SLOPES 4:1 OR GREATER SHALL BE SODDED.
12. STOCKPILES: SHALL BE ENCOMPASSED WITH SILT FENCE, SHALL NOT EXCEED 35' IN HEIGHT, AND SHALL NOT BE LOCATED NEAR SITE PERIMETER. LOCATION AND SLOPE SHALL BE APPROVED BY MUNICIPAL INSPECTOR AND OTHER JURISDICTIONAL AUTHORITIES AS REQUIRED.
13. TOXIC SUBSTANCES: ALL TOXIC SUBSTANCES (IF ANY) BROUGHT ON-SITE SHALL BE HANDLED AND STORED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND STANDARDS. ALL SUBSTANCES THAT MAY BE CONSIDERED TOXIC SHALL ALSO BE HANDLED AND STORED ACCORDING TO FEDERAL, STATE, AND LOCAL LAWS AND STANDARDS.
14. DRAINAGE/GRADE: THE CONTRACTOR SHALL PROPERLY GRADE ALL EXCAVATED SURFACES TO PROVIDE POSITIVE DRAINAGE AND PREVENT PONDING OF WATER; FINAL CONTROL OF SURFACE WATER TO AVOID DAMAGE TO ADJOINING PROPERTIES OR TO FINISHED WORK ON THE SITE; AND SHALL TAKE REMEDIAL MEASURES TO PREVENT EROSION OF FRESHLY GRADED AREAS UNTIL SUCH TIME AS PERMANENT DRAINAGE AND EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
15. GRAVEL LAYER: GRAVEL LAYER SHALL BE 12" MIN THICK AND PLACED OVER GEOTEXTILE MAT.
16. SPEED: TRUCK SPEED TO BE REDUCED TO CONTROL DUST.
17. DITCHES: KEEP ALL TEMPORARY ROADWAY DITCHES CLEAR.
18. WATER DOWN: CONTRACTOR TO WATER DOWN AREAS WHEN AND WHERE DISTURBED SOIL IS RAISING AND BECOMING AIRBORNE IN ORDER TO SETTLE IT. PERMIT AS NEEDED.
19. SEDIMENT BASIN: LARGE SITES MAY REQUIRE A TEMPORARY SEDIMENT BASIN. CONTRACTOR SHALL DETERMINE LOCATION. TEMPORARY SEDIMENT BASIN SHALL BE APPROVED BY JURISDICTIONAL AUTHORITIES.
20. STORMWATER DISCHARGE: CONTRACTOR TO ABIDE BY ALL PROVISIONS OF THE FDEP GENERAL PERMIT FOR STORM WATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES.
21. DUST ABATEMENT: CONTRACTOR TO PROVIDE A DUST ABATEMENT PLAN INCLUDING A 6-FOOT HIGH SCREEN FENCE ALONG ALL PROPERTY LINES.

DEMOLITION NOTES:

1. DEMOLISH AS REQUIRED TO ACCOMPLISH WORK INDICATED IN THESE DOCUMENTS. ALL REQUIRED DEMOLITION WORK SHALL BE INCLUDED IN THE BASE BID PACKAGE SUBMITTED BY THE CONTRACTOR.
2. DO NOT ALLOW MATERIALS AND DEBRIS GENERATED BY DEMOLITION ACTIVITIES TO ACCUMULATE ON THE JOB SITE. REMOVE DAILY AND DISPOSE OF IN A LEGAL MANNER. NO ON SITE SALE OR BURNING OF REMOVED ITEMS IS PERMITTED.
3. THIS PLAN IS TO BE USED IN CONJUNCTION WITH THE ENTIRE SET OF CONSTRUCTION DRAWINGS. DO NOT REMOVE ANY ITEMS WITHOUT VERIFYING AND COORDINATING WITH ALL GENERAL TRADES AS TO HOW THEY RELATE TO THE OVERALL PROJECT.
4. THE CONTRACTOR MUST TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THE SAFETY OF THE PUBLIC AND/OR WORKMEN ON THE SITE TO PREVENT ACCIDENTS OR INJURY TO ANY PERSON ON, ABOUT OR ADJACENT TO THE PREMISES. THE CONTRACTOR SHALL COMPLY WITH ALL LAWS, ORDINANCES, CODES AND REGULATIONS PERTAINING TO SAFETY AND THE PREVENTIONS OF ACCIDENTS.
5. THE CONTRACTOR MUST MAINTAIN ADEQUATE SUPPORTS, INSULATIONS, WATERPROOFING, EMERGENCY LIGHTING, SECURITY, ALARMS, ETC. FOR ALL OR PART OF ITEMS WHICH ARE TO REMAIN.

CONTRACTOR CERTIFICATION:

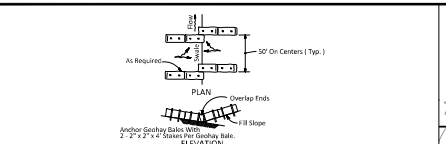
" I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND, AND SHALL COMPLY WITH THE TERMS AND CONDITIONS OF THE STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES AND THIS STORMWATER POLLUTION PLAN THEREUNDER."

NAME: TITLE:

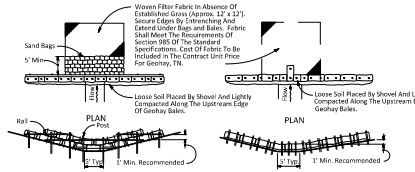
CONTRACTING FIRM: ADDRESS:

TELEPHONE #: DATE:

THIS SOIL EROSION/SEDIMENT CONTROL & DUST ABATEMENT PLAN IS FOR THE PURPOSE OF SHOWING INTENTION OF METHOD TO CONTROL STORM WATER RUNOFF & DUST DISTURBANCE CAUSED BY CONSTRUCTION ACTIVITY. CONTRACTOR SHALL ADJUST AND/OR ADD BMP'S BASED ON SPECIFIC SITE CONDITIONS & CONSTRUCTION ACTIVITY SATISFYING NPDES REQUIREMENTS. CONTRACTOR TO OBTAIN GENERAL PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES (RULE 62-621.300(4), F.A.C.)



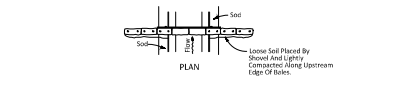
BARRIERS FOR FILL SLOPES



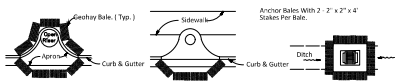
BARRIER FOR UNPAVED DITCHES



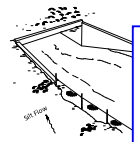
BALES BACKED BY FENCE



BARRIER FOR PAVED DITCH

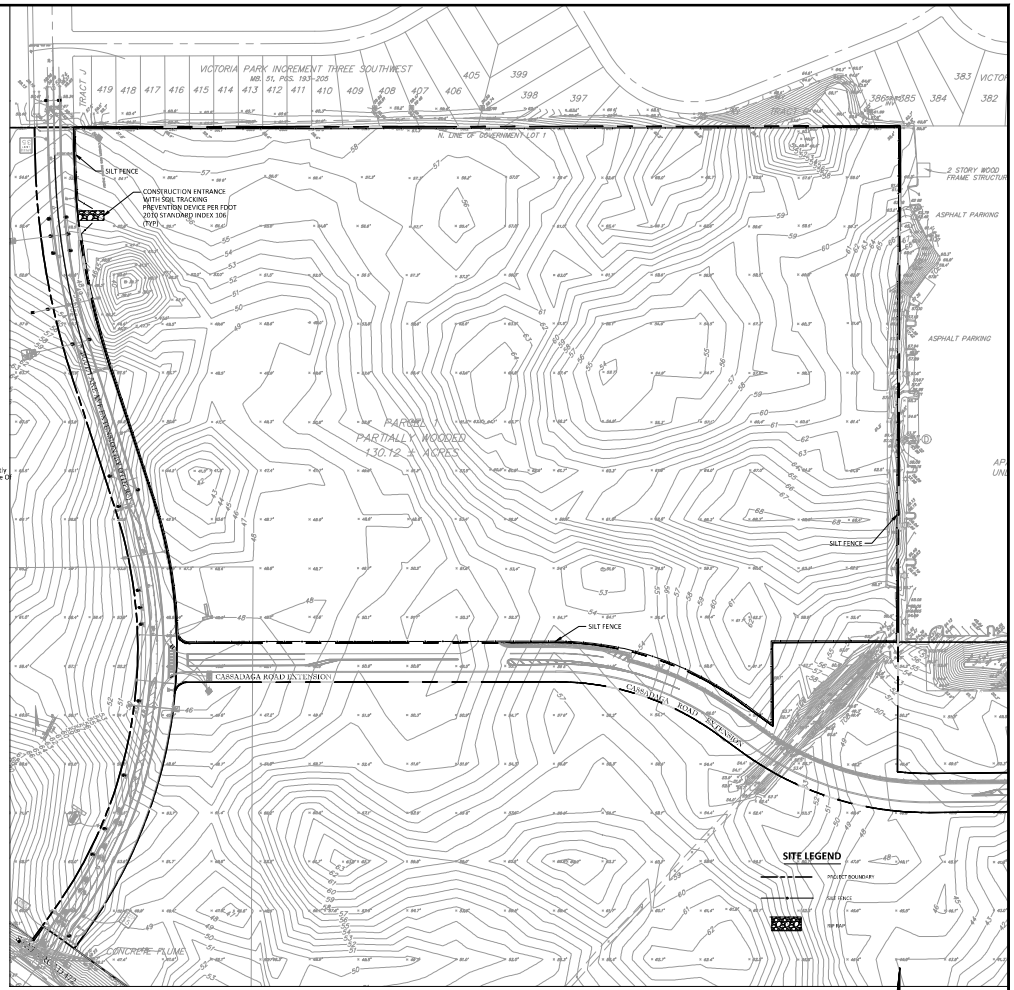


PROTECTION AROUND INLETS OR SIMILAR STRUCTURES

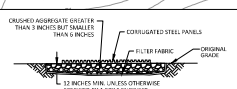


LAND DEVELOPMENT
Approved Overall Development Plan
Land Development Code of Volusia County, Florida
Project Number: 2022-S-ODP-0353

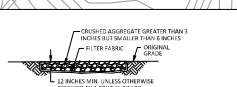
11/27/2023
Planning & Land Development Director



NOTE:
SILT FENCE SHOWN FOR SCHEMATIC PURPOSES ONLY. SILT FENCE SHOULD BE INSTALLED AT THE LIMITS OF CONSTRUCTION AS DEFINED THROUGHOUT THIS PLAN SET.

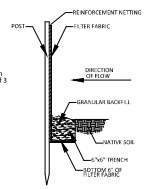


SECTION A-A
NTS

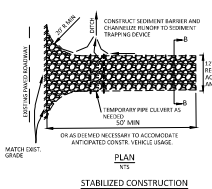


SECTION B-B
NTS

GRAPHIC SCALE
150 0 75 150 300
(IN FEET)
1 inch = 150 ft.

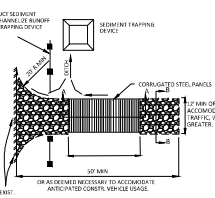


SILT BARRIER DETAIL
N.T.S.



PLAN
NTS

STABILIZED CONSTRUCTION ENTRANCE/EXIT (TYPE 1)



PLAN
NTS

STABILIZED CONSTRUCTION ENTRANCE/EXIT (TYPE 2)

FOR REVIEW ONLY
CIVIL DISCIPLINE ONLY
CERTIFICATE OF AUTHORIZATION NUMBER 27868
STATE OF FLORIDA
SEAN C. FORTIER, P.E.
FLORIDA REGISTRATION #69936
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

KELLY, COLLINS & GENTRY, INC.
KCG
1706 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 586-7800 FAX (407) 896-1488

REVISION | DATE

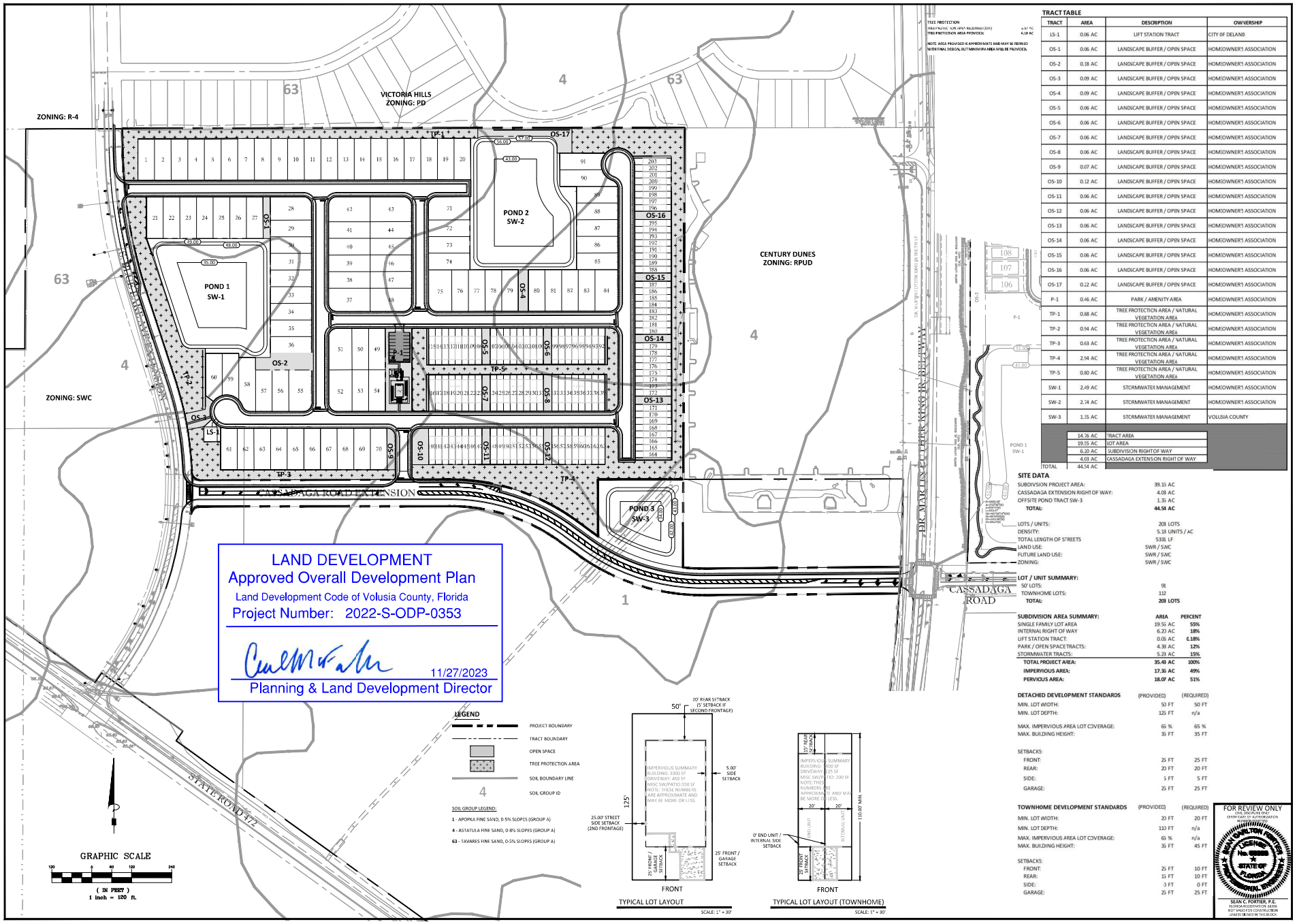
PREPARED FOR:
PULTE GROUP

FORD 472
SUBDIVISION

EROSION CONTROL & TREE REMOVAL-PROTECTION PLAN

DRAWN: CPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

SHEET
EC-1.0



TRACT TABLE

TRACT	AREA	DESCRIPTION	OWNERSHIP
LS-1	0.06 AC	LIFT STATION TRACT	CITY OF DELAND
OS-1	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-2	0.18 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-3	0.09 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-4	0.09 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-5	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-6	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-7	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-8	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-9	0.07 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-10	0.12 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-11	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-12	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-13	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-14	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-15	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-16	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-17	0.22 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
P-1	0.46 AC	PARK / AMENITY AREA	HOMEOWNER'S ASSOCIATION
TP-1	0.88 AC	TREE PROTECTION AREA / NATURAL VEGETATION AREA	HOMEOWNER'S ASSOCIATION
TP-2	0.94 AC	TREE PROTECTION AREA / NATURAL VEGETATION AREA	HOMEOWNER'S ASSOCIATION
TP-3	0.63 AC	TREE PROTECTION AREA / NATURAL VEGETATION AREA	HOMEOWNER'S ASSOCIATION
TP-4	2.94 AC	TREE PROTECTION AREA / NATURAL VEGETATION AREA	HOMEOWNER'S ASSOCIATION
TP-5	0.80 AC	TREE PROTECTION AREA / NATURAL VEGETATION AREA	HOMEOWNER'S ASSOCIATION
SW-1	2.49 AC	STORMWATER MANAGEMENT	HOMEOWNER'S ASSOCIATION
SW-2	2.74 AC	STORMWATER MANAGEMENT	HOMEOWNER'S ASSOCIATION
SW-3	1.35 AC	STORMWATER MANAGEMENT	VOLUSIA COUNTY
	14.76 AC	TRACT AREA	
	19.55 AC	LOT AREA	
	6.20 AC	SUBDIVISION RIGHT OF WAY	
	4.03 AC	CASSADAGA EXTENSION RIGHT OF WAY	
TOTAL	44.54 AC		

SITE DATA

SUBDIVISION PROJECT AREA:	39.15 AC
CASSADAGA EXTENSION RIGHT OF WAY:	4.03 AC
OFFSITE POND TRACT SW-3	1.35 AC
TOTAL:	**44.53 AC**
LOTS / UNITS:	208 LOTS
DENSITY:	5.18 UNITS / AC
TOTAL LENGTH OF STREETS	5331 LF
LAND USE:	SWR / SWC
FUTURE LAND USE:	SWR / SWC
ZONING:	SWR / SWC

LOT / UNIT SUMMARY:

50' LOTS:	96
TOWNHOME LOTS:	112
TOTAL:	**208 LOTS**

SUBDIVISION AREA SUMMARY:	AREA	PERCENT
SINGLE FAMILY LOT AREA	19.55 AC	55%
INTERNAL RIGHT OF WAY	6.20 AC	18%
LIFT STATION TRACT:	0.06 AC	0.18%
PARK / OPEN SPACE TRACTS:	4.38 AC	12%
STORMWATER TRACTS:	5.23 AC	15%
TOTAL PROJECT AREA:	**35.43 AC**	**100%**
IMPERVIOUS AREA:	**17.35 AC**	**49%**
PERVIOUS AREA:	**18.07 AC**	**51%**

DETACHED DEVELOPMENT STANDARDS	(PROVIDED)	(REQUIRED)
MIN. LOT WIDTH:	50 FT	50 FT
MIN. LOT DEPTH:	125 FT	n/a
MAX. IMPERVIOUS AREA LOT COVERAGE:	65 %	65 %
MAX. BUILDING HEIGHT:	35 FT	35 FT
SETBACKS:		
FRONT:	25 FT	25 FT
REAR:	20 FT	20 FT
SIDE:	5 FT	5 FT
GARAGE:	25 FT	25 FT

TOWNHOME DEVELOPMENT STANDARDS	(PROVIDED)	(REQUIRED)
MIN. LOT WIDTH:	20 FT	20 FT
MIN. LOT DEPTH:	110 FT	n/a
MAX. IMPERVIOUS AREA LOT COVERAGE:	65 %	n/a
MAX. BUILDING HEIGHT:	35 FT	45 FT
SETBACKS:		
FRONT:	25 FT	10 FT
REAR:	15 FT	10 FT
SIDE:	0 FT	0 FT
GARAGE:	25 FT	25 FT

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SEAN C. FORTIER, P.E.
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ORLANDO, FLORIDA 32804
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REVISION
DATE

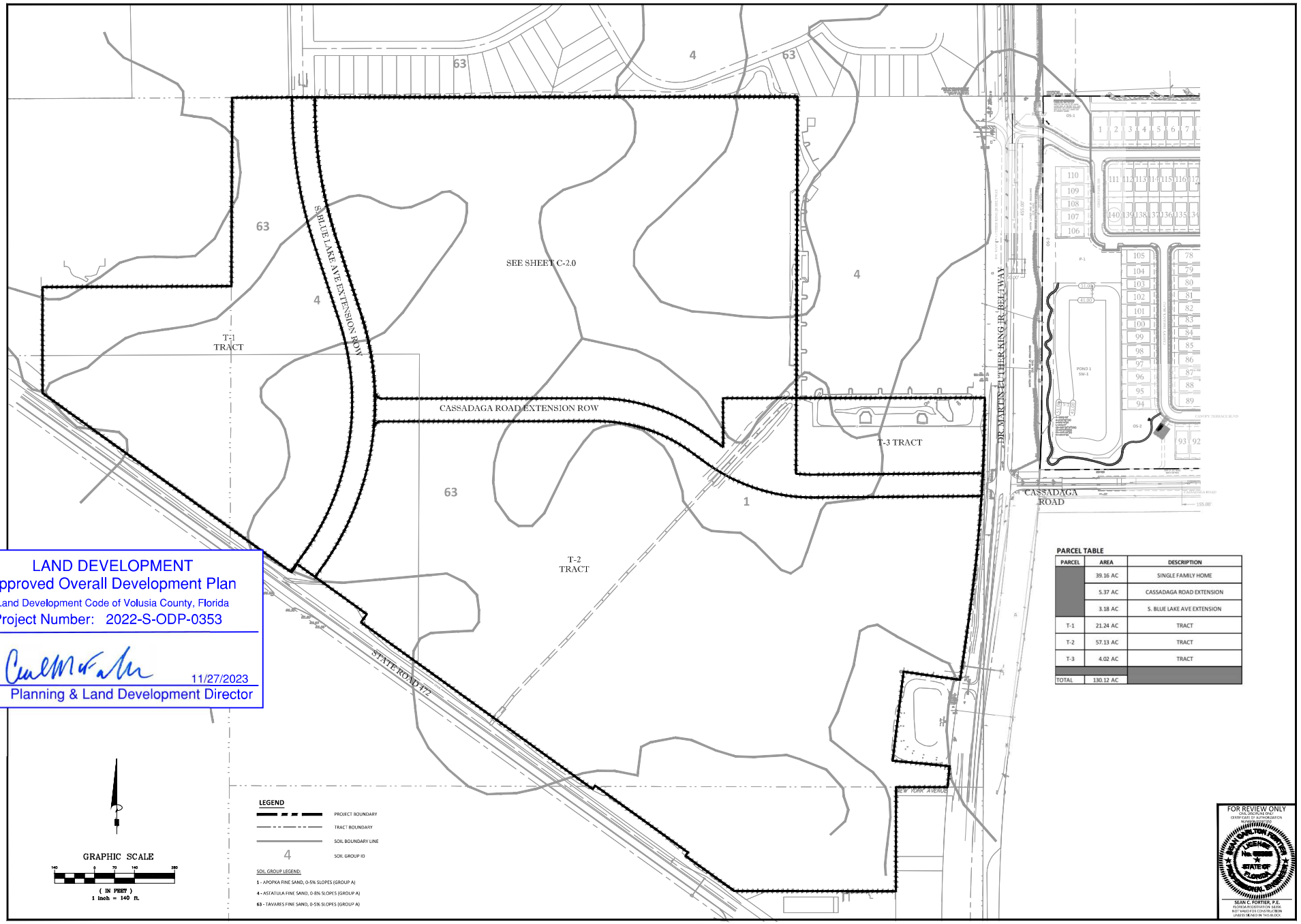
PREPARED FOR:
PULTE GROUP

FORD 472
SUBDIVISION

OVERALL PLAN

DRAWN: CPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

SHEET
C-2.0



LAND DEVELOPMENT
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Land Development Code of Volusia County, Florida
Project Number: 2022-S-ODP-0353

11/27/2023
Planning & Land Development Director

PARCEL TABLE

PARCEL	AREA	DESCRIPTION
	39.16 AC	SINGLE FAMILY HOME
	5.37 AC	CASSADAGA ROAD EXTENSION
	3.18 AC	S. BLUE LAKE AVE EXTENSION
T-1	21.24 AC	TRACT
T-2	57.13 AC	TRACT
T-3	4.02 AC	TRACT
TOTAL	130.12 AC	

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DATE	REVISION

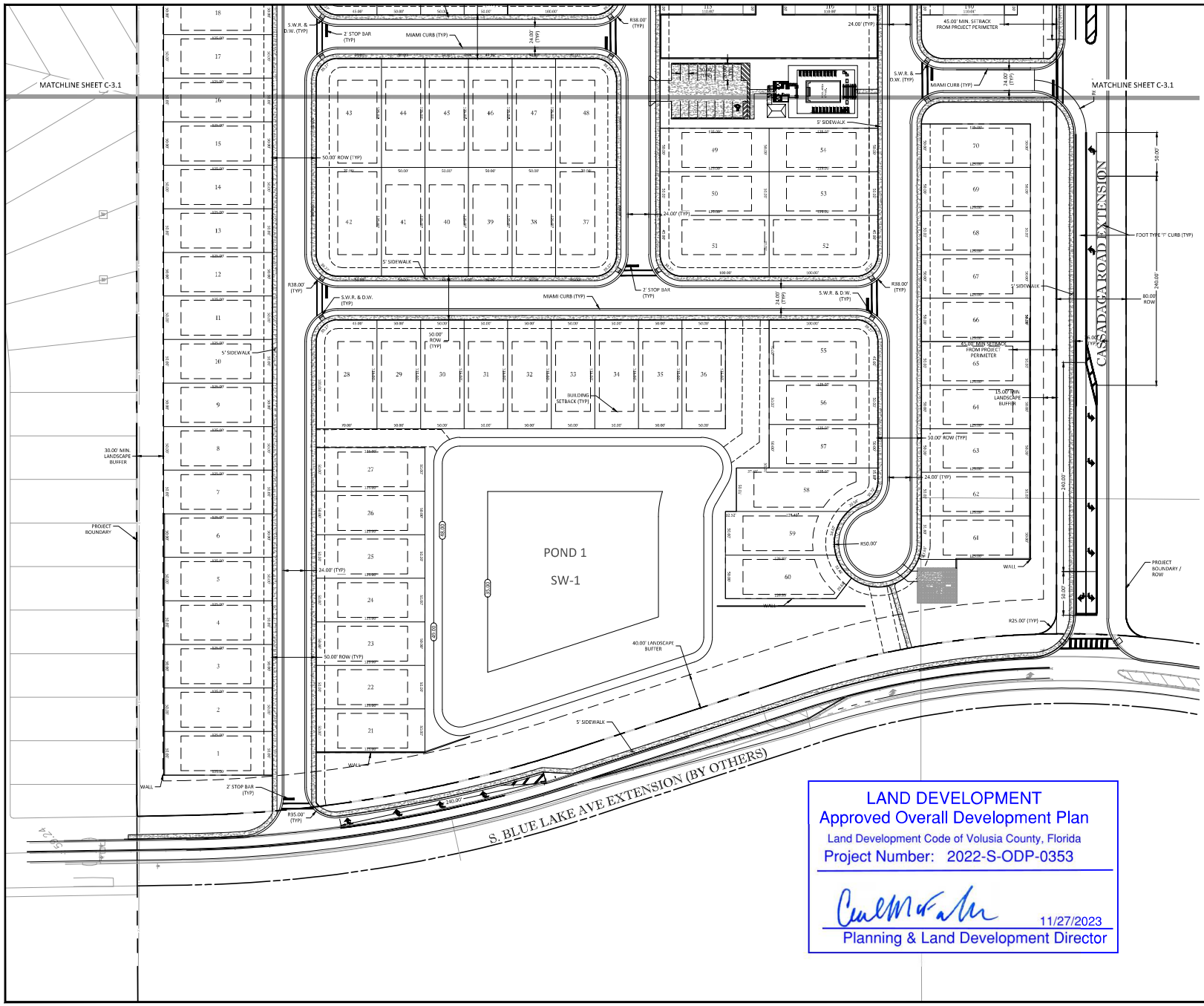
PREPARED FOR:
PULTE GROUP

FORD 472 SUBDIVISION

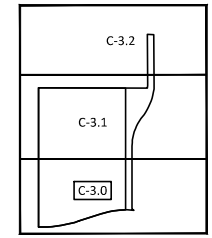
OVERALL PLAN

DRAWN: GPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

SHEET
C-2.1



KEY MAP



LEGEND

- PROJECT BOUNDARY
- TRACT BOUNDARY
- SETBACKS
- 33 LOT NUMBER
- SW-1 TRACT ID

C.W. : ALL CROSSWALKS TO BE HEAVY DUTY CONCRETE. ALL CROSSWALK & RAMPS TO MEET ADA SPECIFICATIONS & FOOT INDEX 522-002.

D.W. : DETECTABLE WARNING TO MEET ADA SPECIFICATIONS

S.W.R. (CR 6,8,20,21): SIDEWALK RAMP. ALL SIDEWALK RAMPS TO MEET ADA SPECIFICATION. SEE FOOT INDEX 522-002 FOR CURB RAMP DETAILS.

NOTES:

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2. DIMENSIONS ARE TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
3. ALL PAVEMENT MARKINGS WILL BE THERMOPLASTIC.
4. DETECTABLE WARNING SURFACE WILL BE REQUIRED AT ALL PLACES WHERE PEDESTRIAN PATH MEETS VEHICULAR PATH.

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

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11/27/2023
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#4000 0000 1000

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DATE	REVISION

PREPARED FOR:
PULTE GROUP

FORD 472 SUBDIVISION

DIMENSION PLAN

DRAWN: GPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

SHEET
C-3.0

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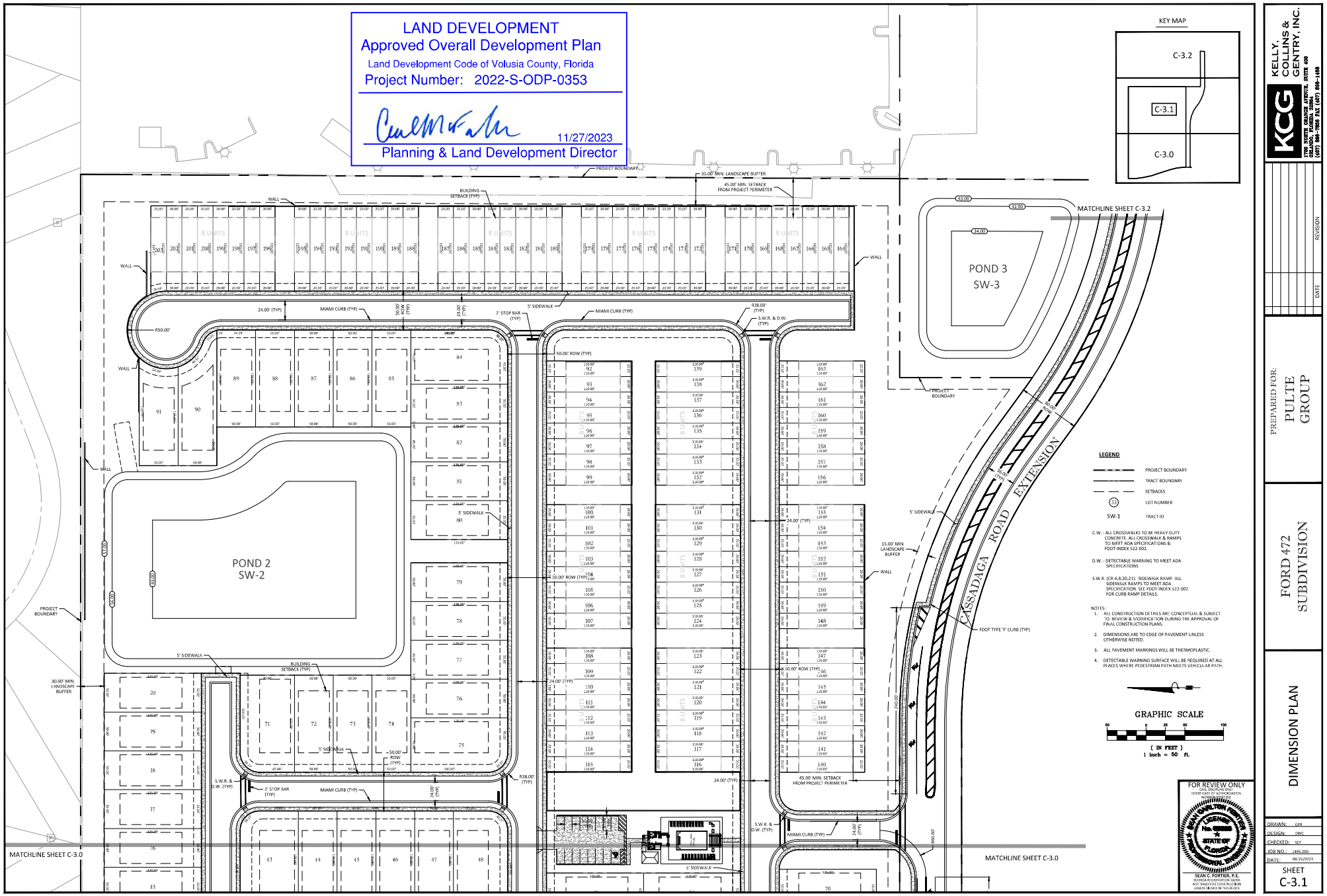

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REVISION
DATE

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PULTE GROUP

FORD 472
SUBDIVISION

DIMENSION PLAN

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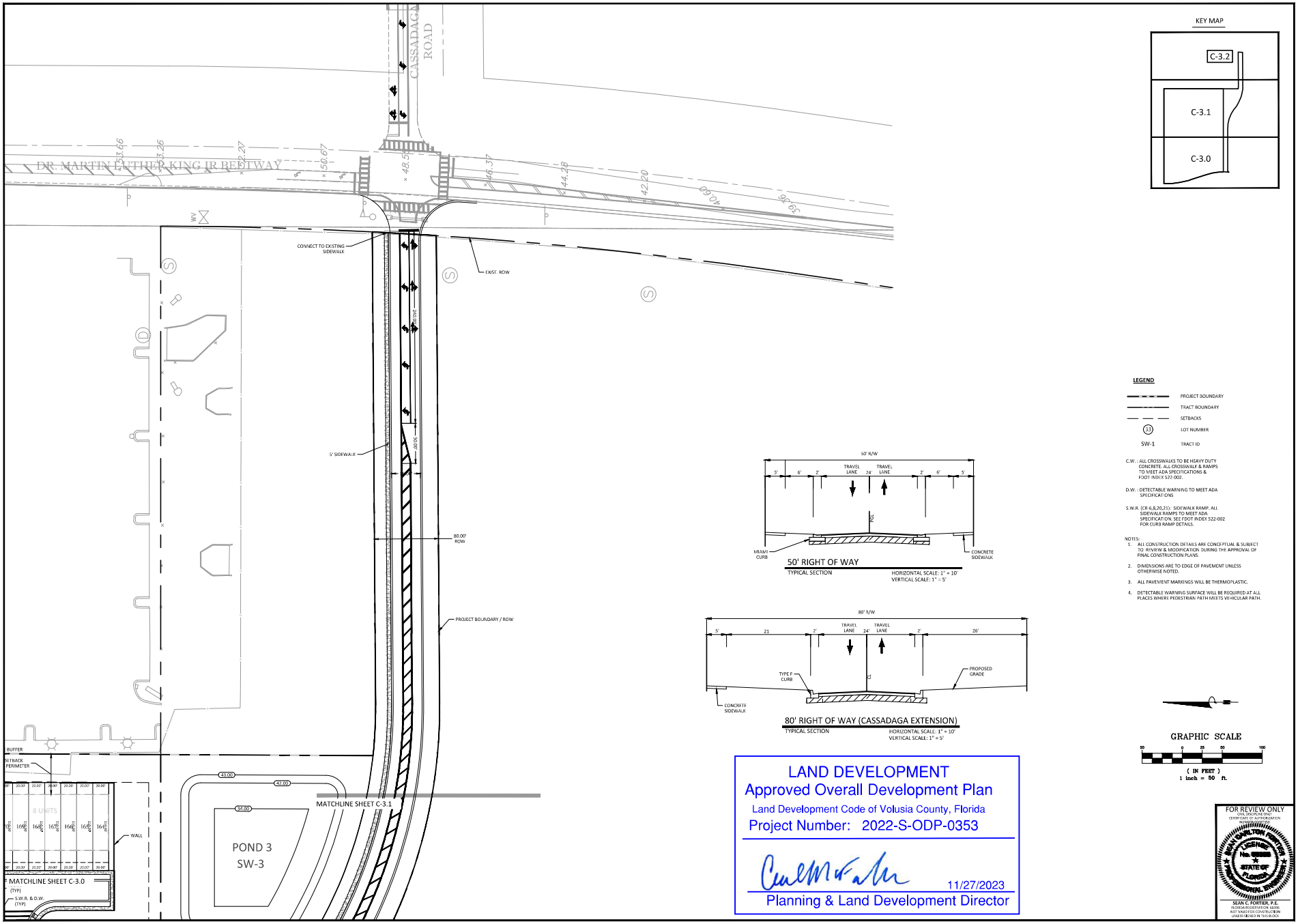
SHEET
C-3.1



KEY MAP

50' RIGHT OF WAY
TYPICAL SECTION
HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 5'

80' RIGHT OF WAY (CASSADAGA EXTENSION)
TYPICAL SECTION
HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 5'

LEGEND

- PROJECT BOUNDARY
- TRACT BOUNDARY
- SETBACKS
- (33) LOT NUMBER
- SW-1 TRACT ID

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50 0 25 50 100
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CERTIFICATE OF AUTHORIZATION NUMBER 35169
SEAN C. FORTIER, P.E.
LICENSE No. 93868
STATE OF FLORIDA
PROFESSIONAL ENGINEER
FLORIDA REGISTRATION #93868
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FORD 472
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DIMENSION PLAN

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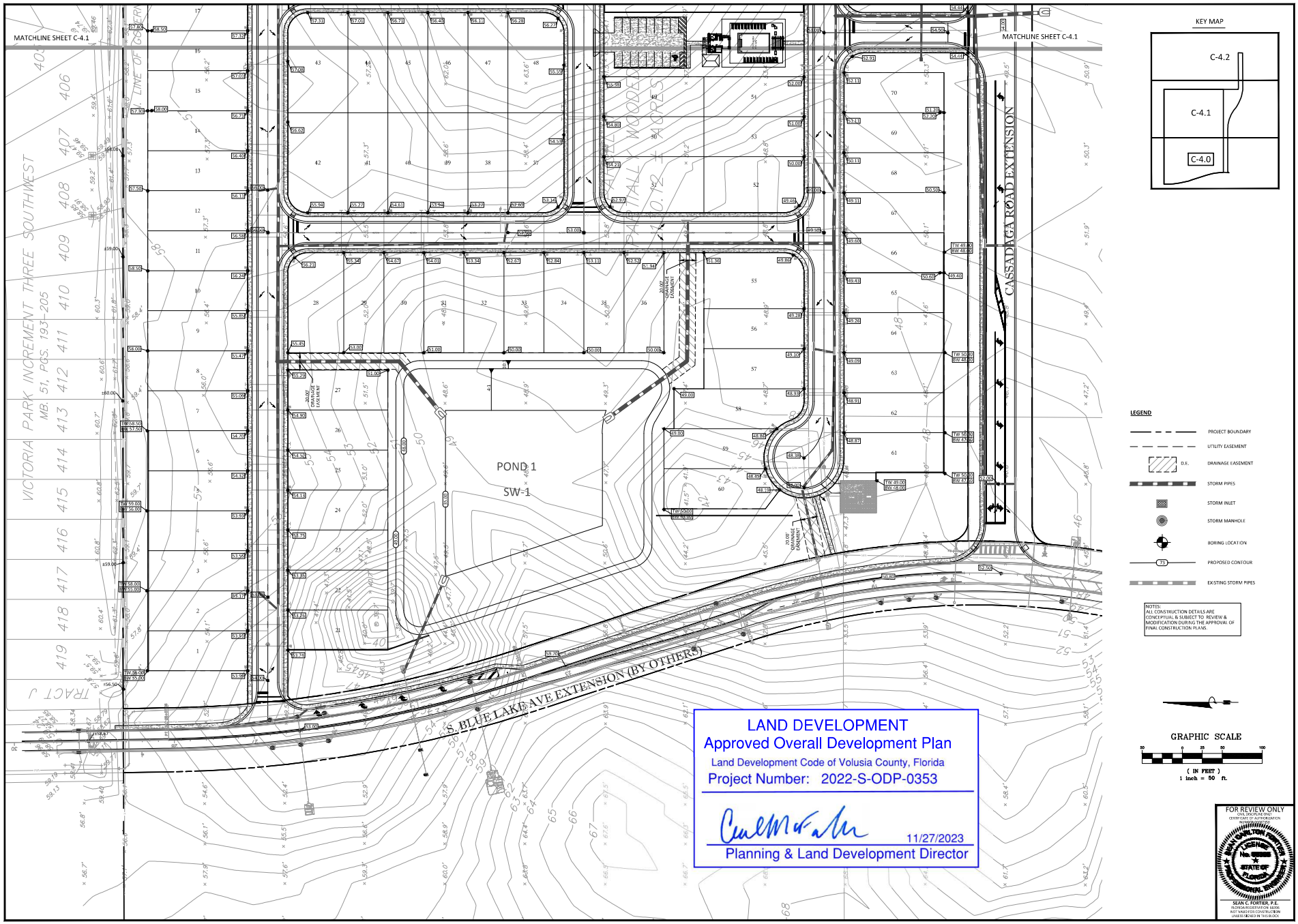
SHEET
C-3.2



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DATE

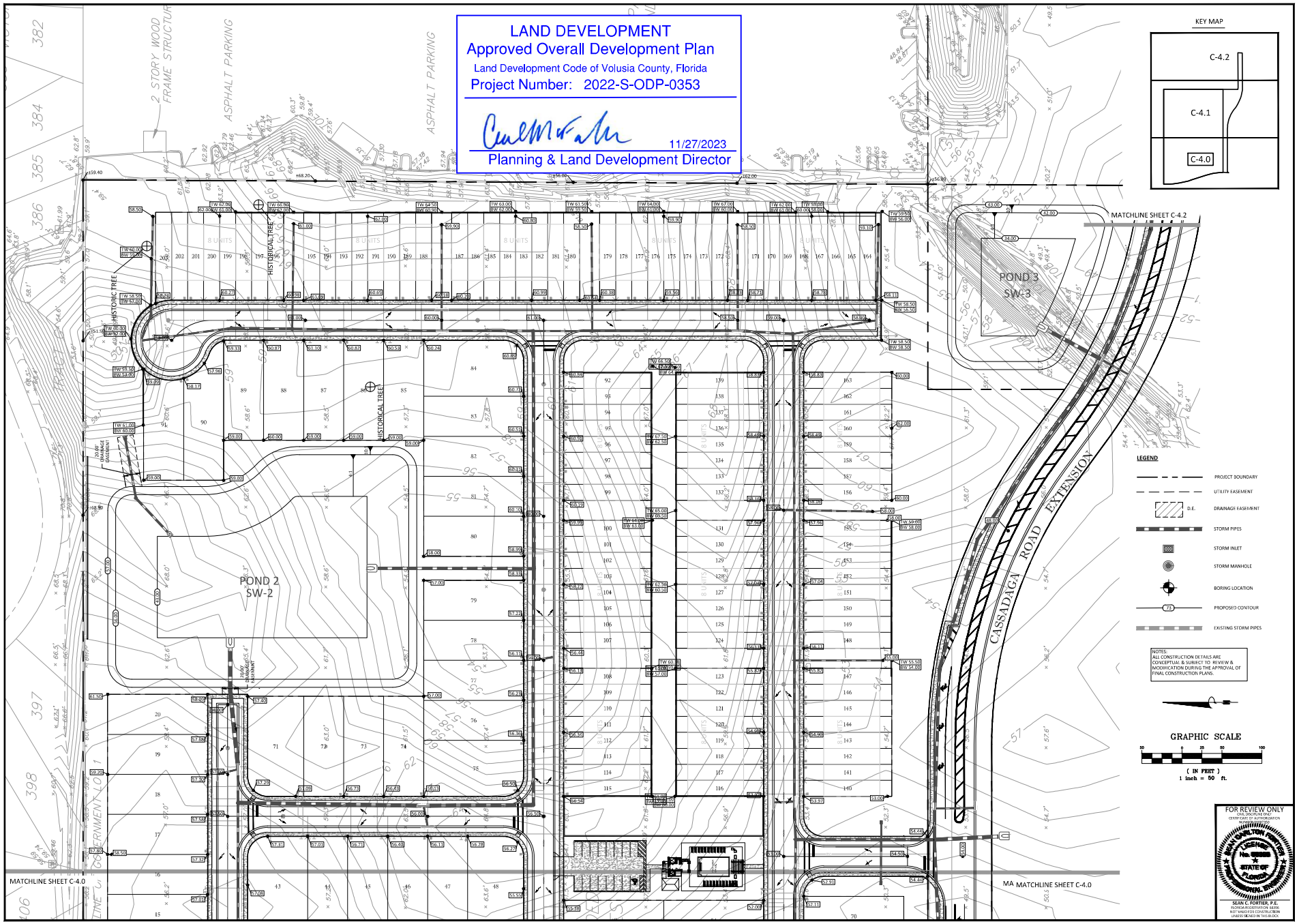
PREPARED FOR:
PULTE GROUP

FORD 472
SUBDIVISION

PAVING, GRADING, & DRAINAGE PLAN

DRAWN: CPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1486.000
DATE: 08/21/2023

SHEET
C-4.0



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FORD 472
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PAVING, GRADING, & DRAINAGE PLAN

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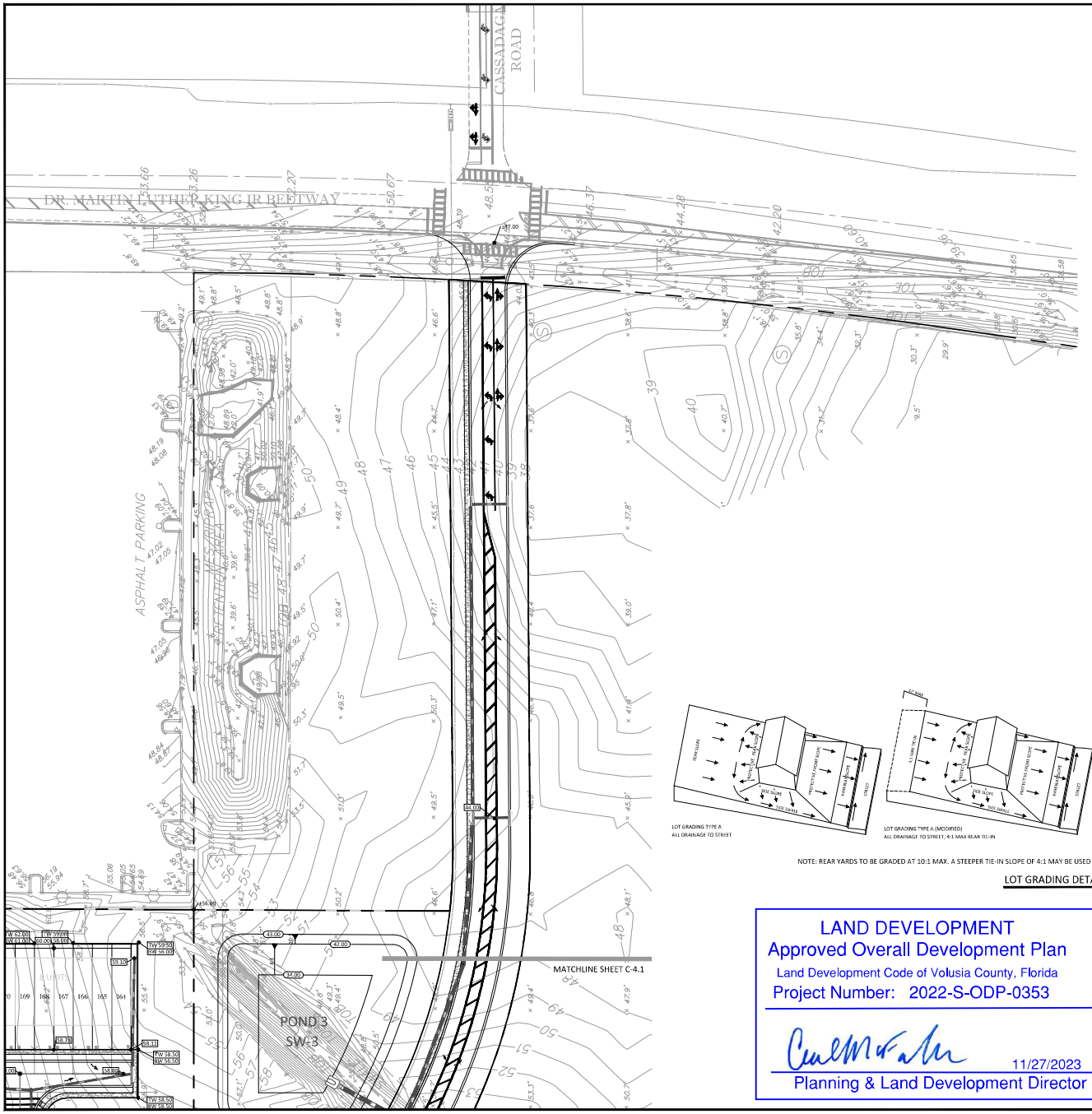
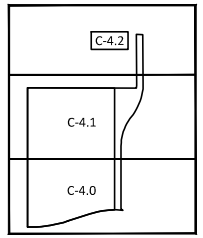
SHEET
C-4.1



KEY MAP



LEGEND

- PROJECT BOUNDARY
- UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- STORM PIPES
- STORM INLET
- STORM MANHOLE
- BORING LOCATION
- PROPOSED CONTOUR
- EXISTING STORM PIPES

NOTES:
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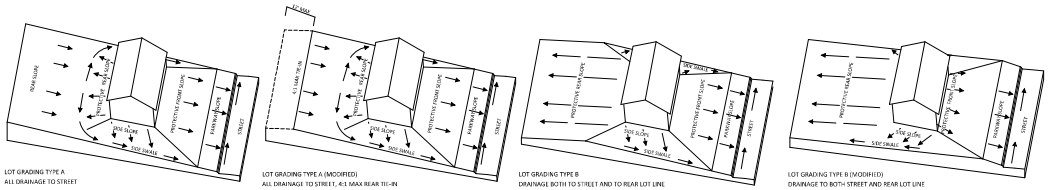

NOTE: REAR YARDS TO BE GRADED AT 10:1 MAX. A STEEPER TIE-IN SLOPE OF 4:1 MAY BE USED WITHIN 12' OF REAR PROPERTY LINE ONLY.

LOT GRADING DETAILS

NTS

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11/27/2023
Planning & Land Development Director

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

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NUMBER 6988

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PULTE GROUP

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SUBDIVISION

PAVING, GRADING & DRAINAGE PLAN

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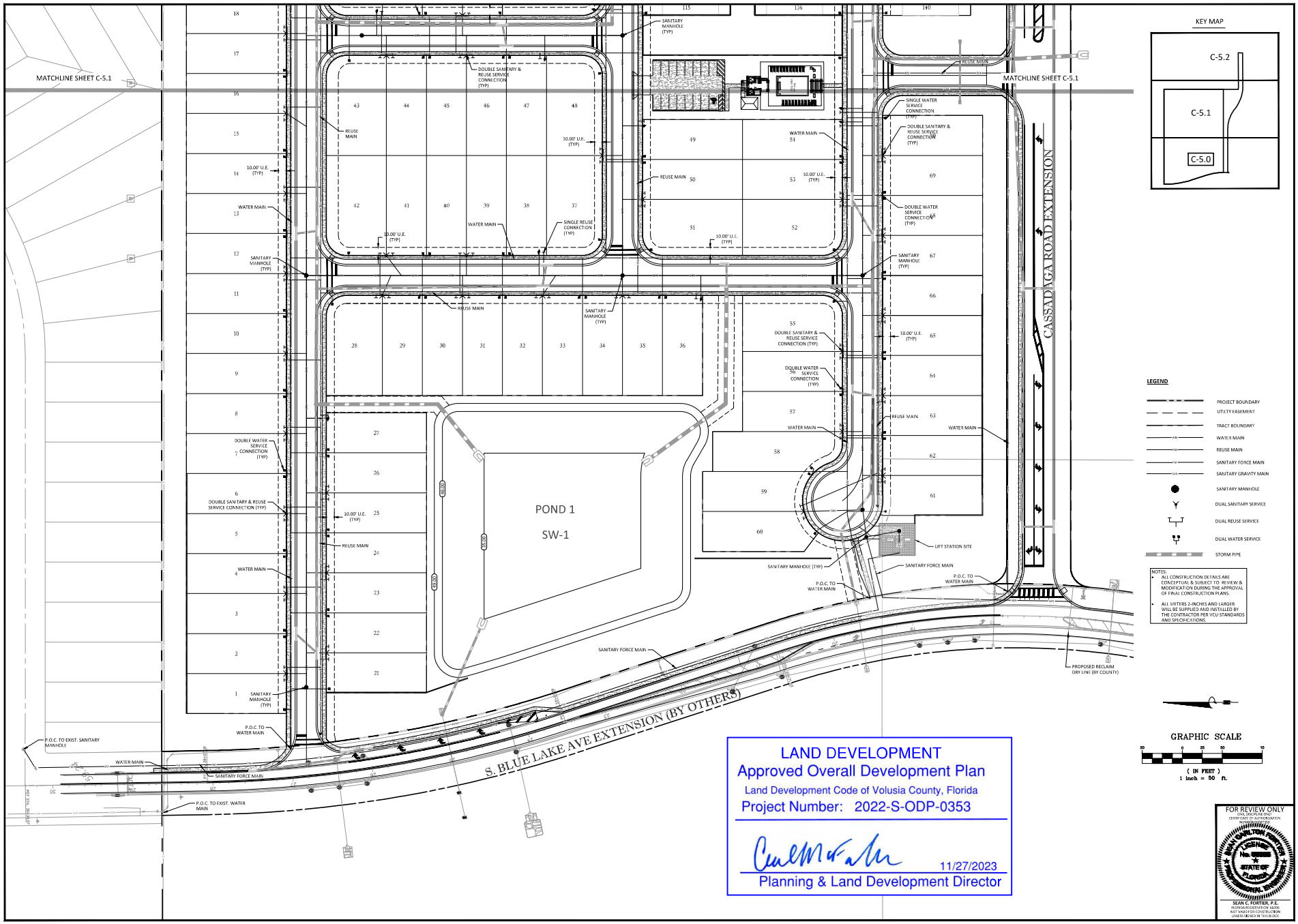
SHEET
C-4.2



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FORD 472
SUBDIVISION

UTILITY PLAN

DRAWN: CPR
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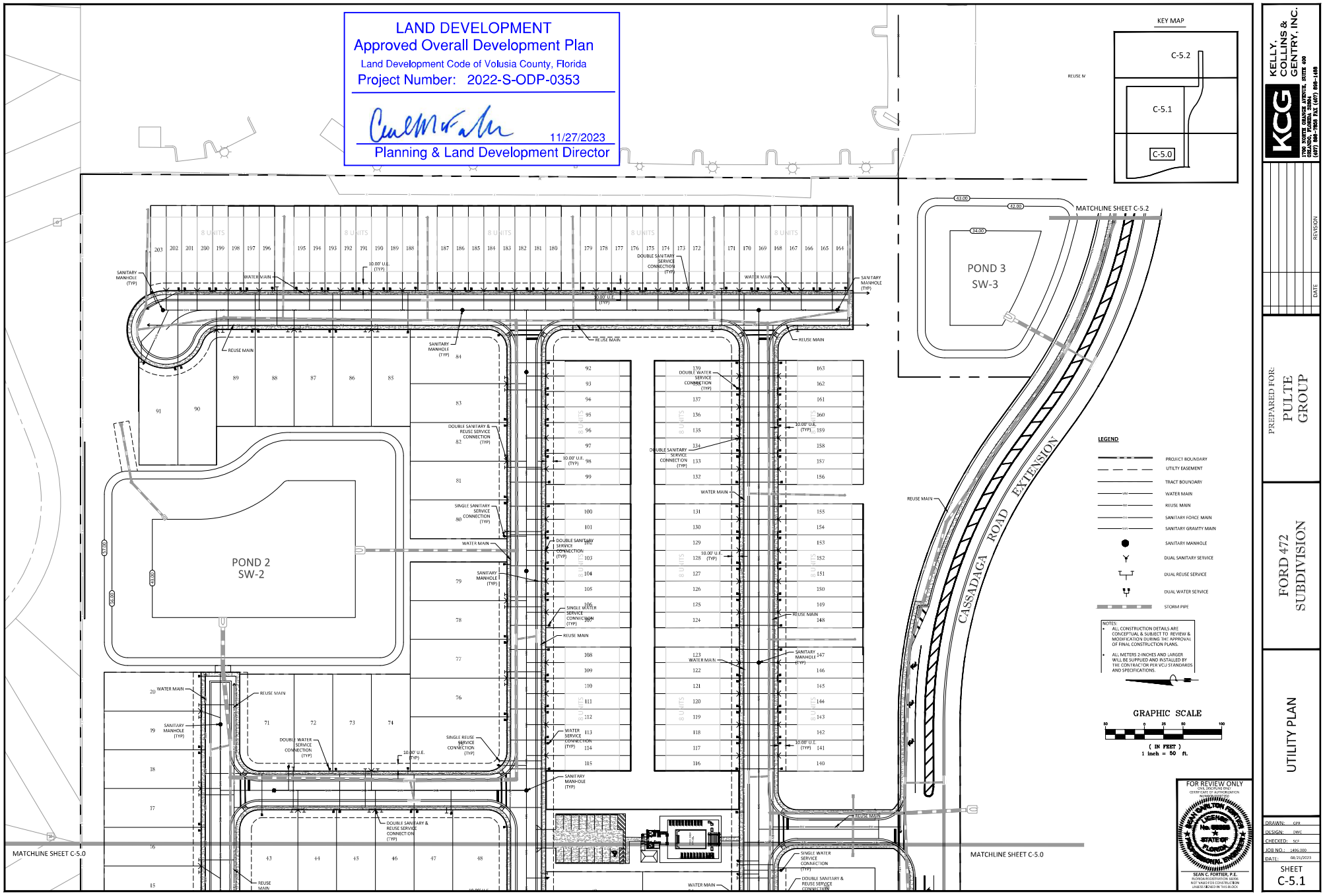
SHEET
C-5.0


LAND DEVELOPMENT
Approved Overall Development Plan
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Project Number: 2022-S-ODP-0353
11/27/2023
Planning & Land Development Director
KEY MAP
C-5.2
C-5.1
C-5.0
POND 2
SW-2
POND 3
SW-3
CASSADAGA ROAD EXTENSION
MATCHLINE SHEET C-5.2
MATCHLINE SHEET C-5.0
LEGEND
PROJECT BOUNDARY
UTILTY EASEMENT
TRACT BOUNDARY
WATER MAIN
REUSE MAIN
SANITARY FORCE MAIN
SANITARY GRAVITY MAIN
SANITARY MANHOLE
DUAL SANITARY SERVICE
DUAL REUSE SERVICE
DUAL WATER SERVICE
STORM PIPE
NOTES:
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ALL METERS 2-INCHES AND LARGER WILL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR PER VCU STANDARDS AND SPECIFICATIONS.
GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft.
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PULTE GROUP
FORD 472 SUBDIVISION
UTILITY PLAN
DRAWN:
DESIGN:
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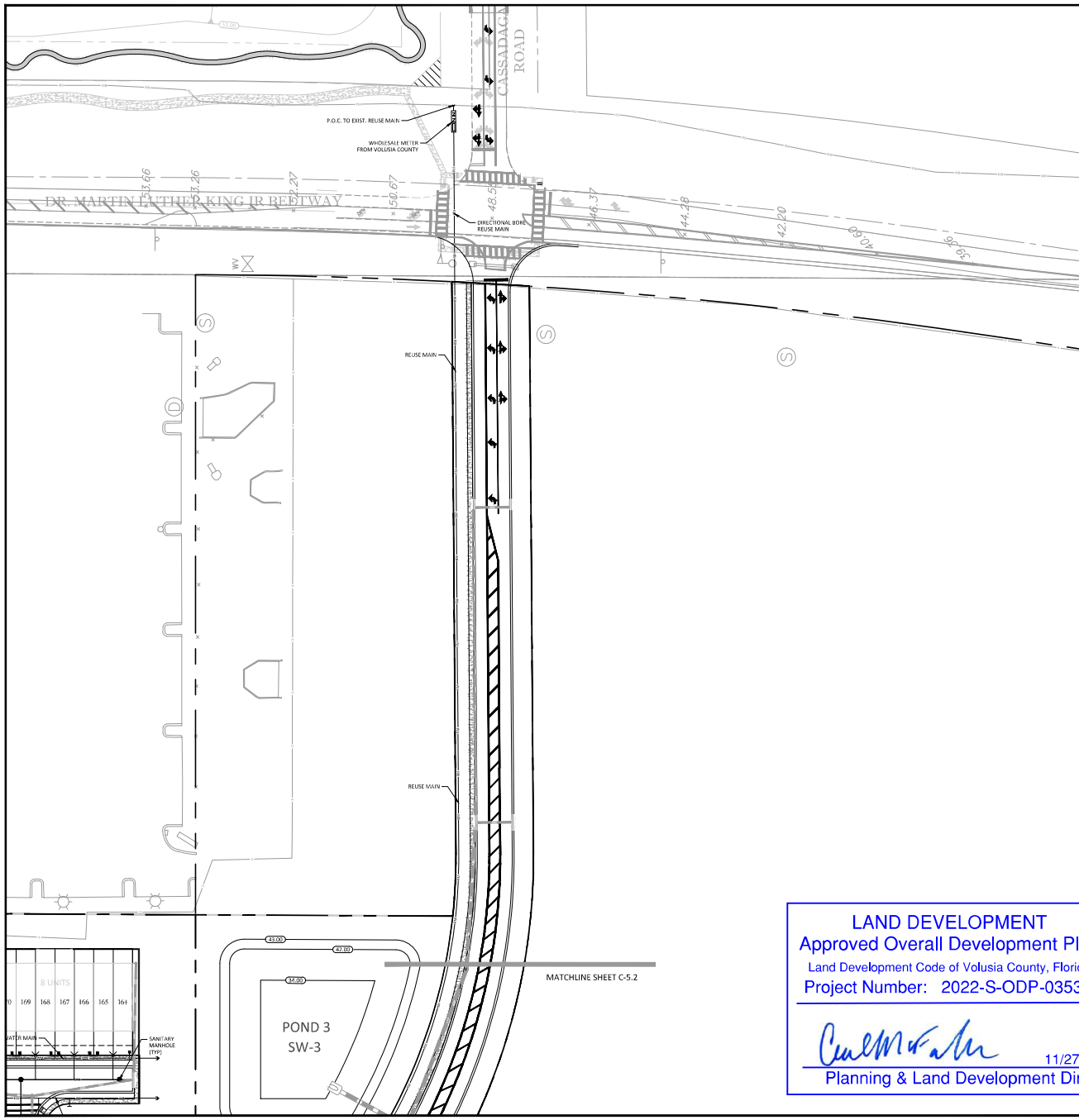
DATE:
SHEET
C-5.1



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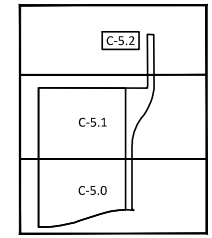

LEGEND

- PROJECT BOUNDARY
- UTILTY EASEMENT
- TRACT BOUNDARY
- WATER MAIN
- REUSE MAIN
- SANITARY FORCE MAIN
- SANITARY GRAVITY MAIN
- SANITARY MANHOLE
- DUAL SANITARY SERVICE
- DUAL REUSE SERVICE
- DUAL WATER SERVICE
- STORM PIPE

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GRAPHIC SCALE

50 0 25 50 100

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DATE	REVISION

PREPARED FOR:
PULTE GROUP

FORD 472 SUBDIVISION

UTILITY PLAN

DRAWN: GPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

SHEET
C-5.2

Appendix C
Study Methodology and Approval

Volusia County
Traffic Engineering

The following proposed development project has an *APPROVED TIA METHODOLOGY:*

Project: **Ford 472**

Date of Approval: **July 18, 2024**

Date of Expiration*: **January 18, 2025**

TIA Approval Required By*: **July 18, 2025**

Conditions:

The respective TIA can now be accepted for review by the county. TIAs must be completed per the River-to-Sea TPO TIA Guidelines, which can be found on the R2CTPO.org website.

Approval Signature: _____

TIA SUBMISSION TO COUNTY:

Two steps are required:

1) Submit the following items through email to Omar Atallah (Oatallah@volusia.org) and William White (Wdwhite@volusia.org)
- *PDF copy of the complete TIA (TIA needs to include completed TIA checklist)*
- *Response to Comments (if resubmitted)*

2) Due size limitations and computer input file incompatibility issues, send the following directly to VCTE by Mail or Delivery:
- *CD or USB drive containing all computer input files*

***REMINDERS:**

- TIA approval needs to be obtained within a year of the approved methodology based on the interpretation of the TPO TIA Guidelines, which state that an approved methodology is valid for up to 6 months and a TIA is valid for up to a year..
- The TIA submitted to support a development plan or use permit cannot be older than one year.
- Advisory: If the applicant waits to submit the TIA or TIA revisions, requested updates to vested trip data, growth rates, traffic count data, etc. are likely to occur. (Example: Applicant submits TIA, receives comments, but doesn't update the TIA and respond to comments until 10 months later.)

Questions about TIAs and TIA methodologies should be addressed to Omar Atallah at Oatallah@volusia.org

MEMORANDUM

June 5, 2024

Re: Ford 472 Subdivision
Traffic Impact Analysis Methodology
City of DeLand, Florida
Project № 21145, v2.1

The following is an outline of the Traffic Impact Analysis (TIA) methodology for the above referenced project. In general, the TIA will conform to the methodology requirements and guidelines documented by the River to Sea Transportation Planning Organization (R2CTPO). The memorandum also addresses Volusia County comments, as detailed in the response to comment letters provided in the **Attachments.**

Project

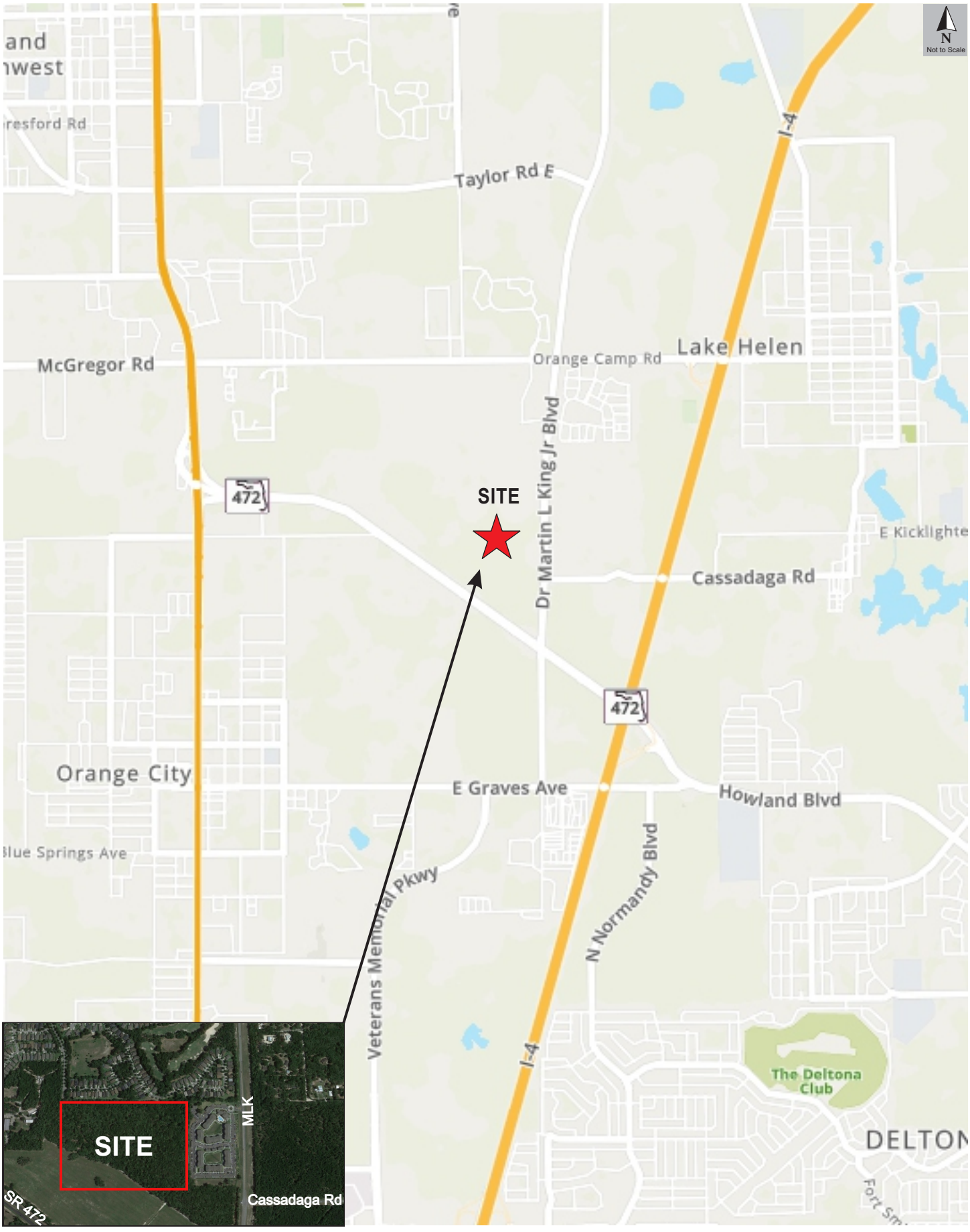
The proposed development consists of 91 single family dwelling units and 112 townhomes with an anticipated buildout year of 2028. The proposed conceptual site plan along with the approved development plan is provided in the **Attachments**. An excerpt of the contract depicting the right to create an easement for Cassadaga Road extension is also provided in the **Attachments**.

Project Location

The site is located west of Dr. Martin Luther King Jr. Beltway (MLK) and north of State Road 472 (SR 472) in the City of DeLand, Florida, as shown in **Figure 1**.

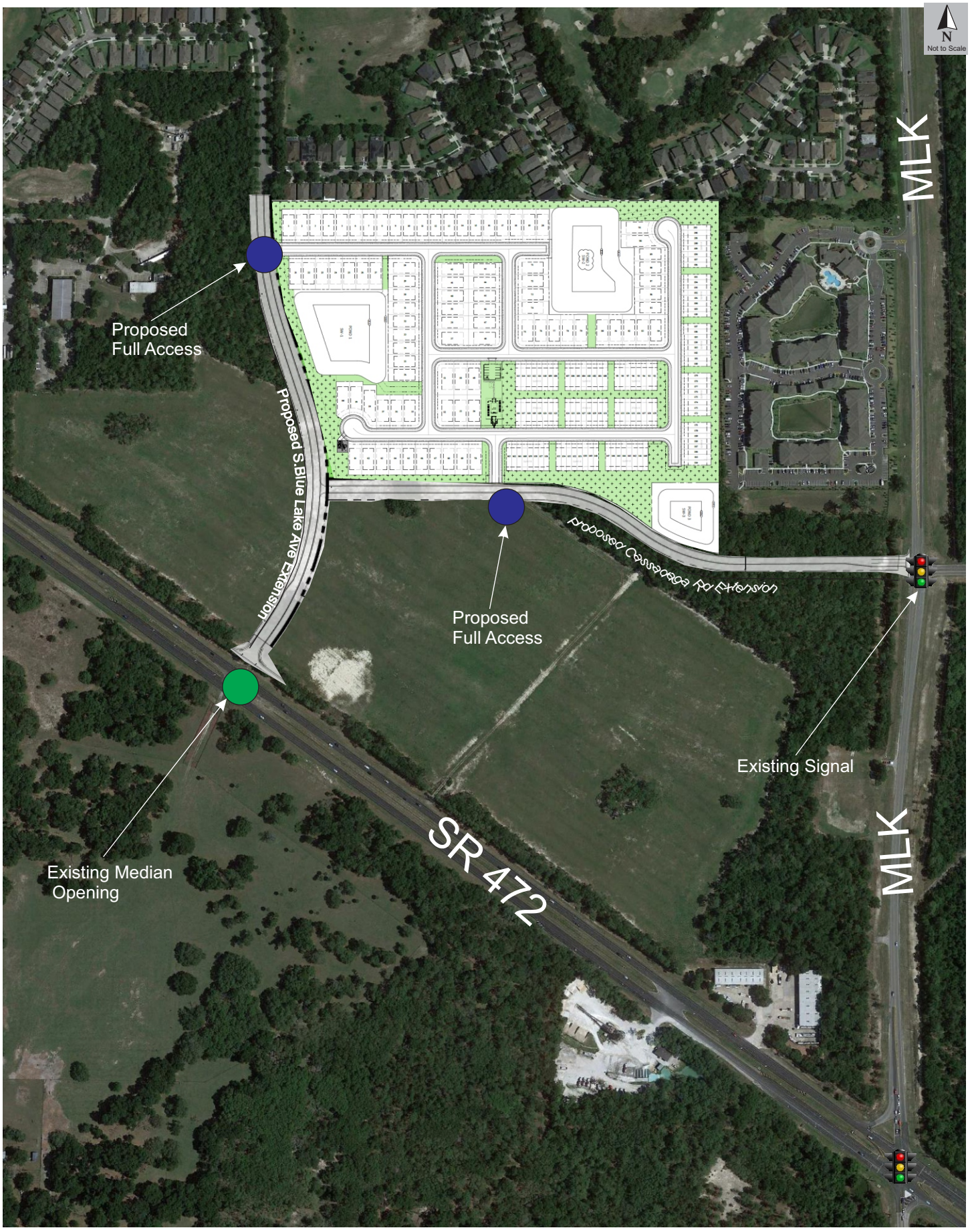
Project Access

The development is proposing to connect to the transportation network by extending Cassadaga Road and South Blue Lake Avenue to connect at SR 472 at an existing full median opening and to MLK at Cassadaga Road. Access to the site is proposed via two (2) full access driveways, one (1) each on Cassadaga Road extension and one (1) on Blue Lake Avenue Extension. The proposed access plan is shown in **Figure 2.**



Site Location Map
Ford 472
21145, v2.1

Figure 1



Proposed Access Plan
Ford 472
21145, v2.1

Figure
2

Trip Generation

The trip generation analysis for the proposed development was conducted using the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, *11th Edition*. The trip generation calculation for the project is summarized in **Table 1** and detailed trip generation sheets are provided in **Attachments**. **Table 1** summarizes the resulting trip generation analysis.

Table 1

Trip Generation Calculation

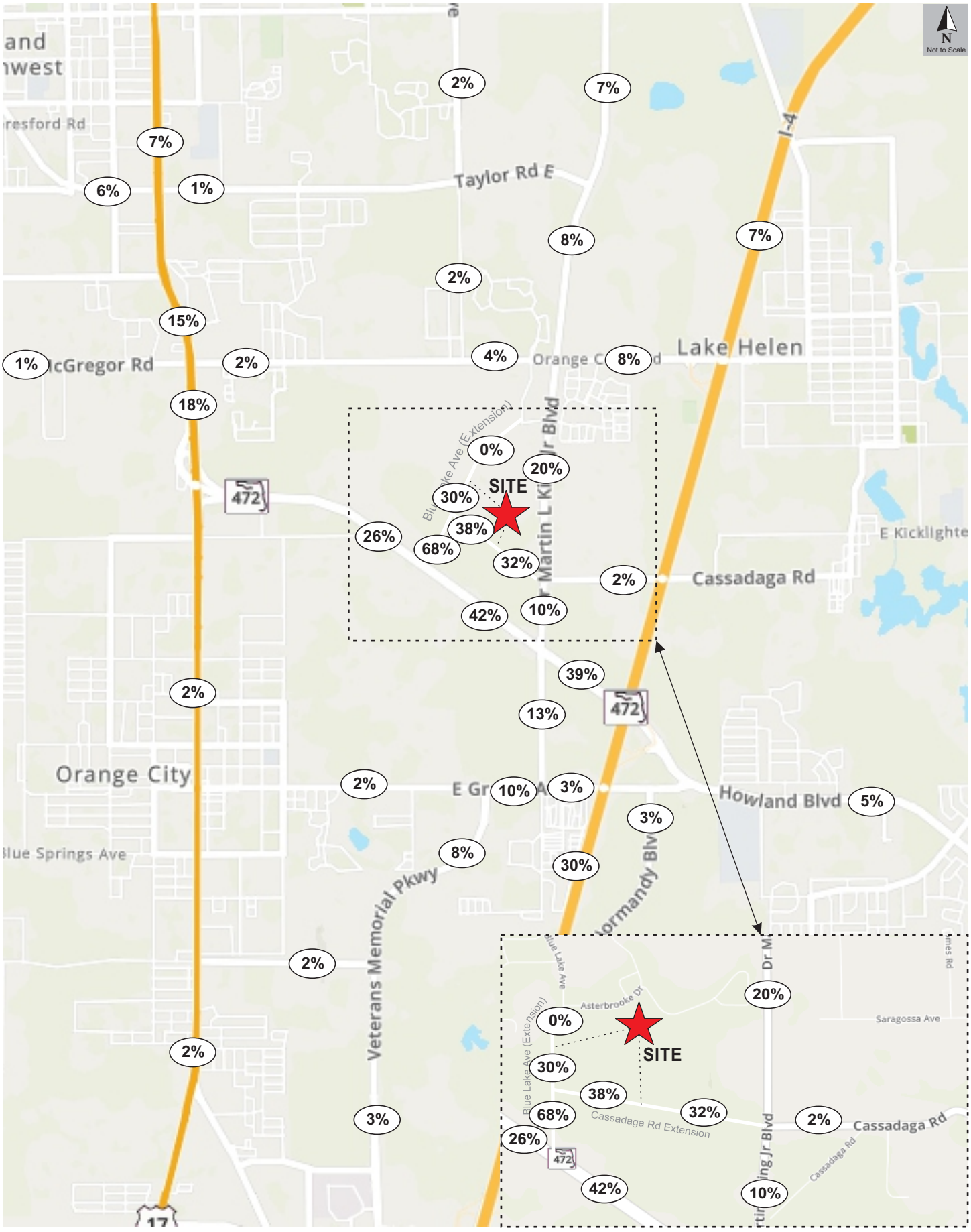
ITE			Daily		AM Peak Hour				PM Peak Hour			
Code	Land Use	Size	Rate	Trips	Rate	Total	Enter	Exit	Rate	Total	Enter	Exit
210	Single Family Residential	91 DU	10.17	925	0.75	68	17	51	1.00	91	57	34
215	Single Family Attached (Townhomes)	112 DU	7.17	803	0.47	53	13	40	0.56	63	37	26
Net Trip Generation				1,728		121	30	91		154	94	60

ITE Trip Generation Manual, 11th Edition

The proposed development is projected to generate 1,728 new daily trips, of which 121 trips occur during the AM peak hour and 154 trips occur during the PM peak hour. Per the River to Sea Transportation Planning (R2CTPO) traffic study guidelines, the development requires a traffic impact analysis as it generates more than 1,000 daily new trips.

Trip Distribution

A trip distribution pattern was estimated using the *Central Florida Regional Planning Model (CFRPM v7.0).* The model highway network was modified to add the proposed Cassadaga Road extension and S. Blue Lake Avenue connection to SR 472. The distribution was slightly adjusted to reflect modification to the local network as well as prevailing traffic flow patterns in the general area. The raw model output is included in the **Attachments.** The adjusted trip distribution is shown in **Figure 3.**

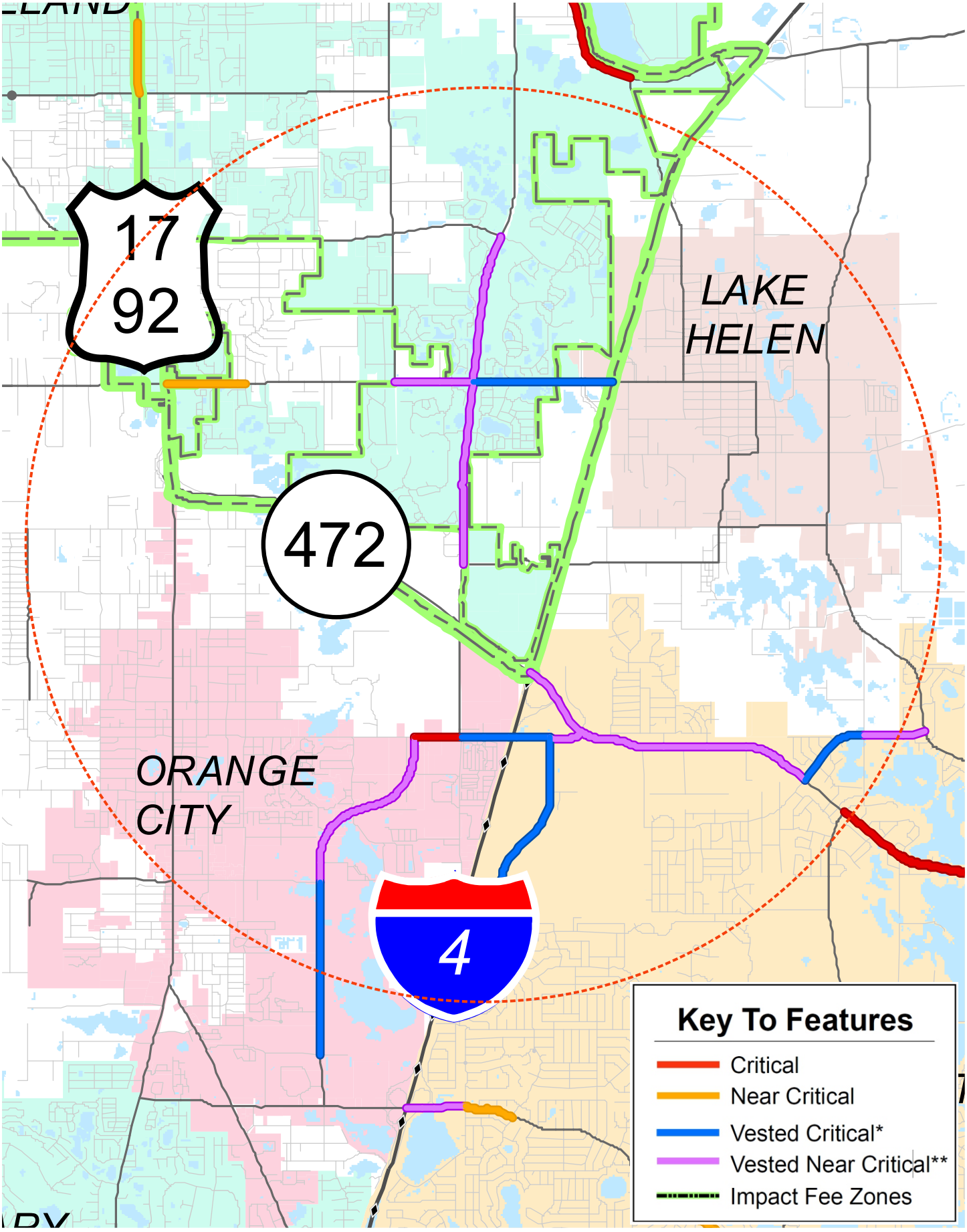


Project Trip Distribution
Ford 472
21145, v2.1

Figure 3

Study Area

Per the TIA requirements, if a project generates between 100 and 300 2-way peak hour external trips, the study area will encompass roadways with direct connection to the site or where the project's peak hour trips consume three percent (3%) or more of the 2-way peak hour generalized service volume based on the adopted level of service (LOS). In addition, the study will include Critical/Near Critical and Vested Critical/Near Vested Critical (C/NC/VC/NVC) roadway segments within a 3-mile radius. A map of the C/NC/VC/NVC segments is shown in **Figure 4**. Roadway segments, daily volumes and 2-way peak hour capacities were obtained from the *Volusia County 2021 AADT & Historical Counts*, included in the **Attachments**. The significance test for roadway segments within the 3-mile radius is provided in **Table 2.**



TMC Traffic & Mobility CONSULTANTS

3-Mile Critical/Near Critical Roadway Map
Ford 472
21145, v2.1

Figure 4

Table 2
Significance Test

Road	Segment	Sta ID	Lns	LOS Std	PK 2W Cap	C/ NC?	Project Trips				
							Dist	Volume	Signif	y/n?	Study
US 17/92	Rhode Island Ave. to Graves Ave.	5165	4	D	3,580		2%	3	0.08%	NO	NO
US 17/92	Graves Ave. to New York Ave.	5166	4	D	3,580		2%	3	0.08%	NO	NO
US 17/92	New York Ave to SR 472	445	4	D	3,580		2%	3	0.08%	NO	NO
US 17/92	SR 472 to SR 15A/Taylor Rd.	1004	6	D	5,390		18%	28	0.52%	NO	NO
US 17/92	SR 15A/Taylor Rd. to Beresford Ave.	1006	4	E	3,790		7%	11	0.29%	NO	NO
I-4	Saxon Blvd. to SR 472	1003	6	D	10,510		30%	46	0.44%	NO	NO
I-4	SR 472 to Orange Camp Rd.	485	6	D	10,510		7%	11	0.10%	NO	NO
I-4	Orange Camp Rd. to SR 44	497	6	D	10,510		7%	11	0.10%	NO	NO
SR 472	US 17/92 to CR 4101/MLK Blvd	472	4	D	5,960		42%	65	1.09%	NO	NO
SR 472	CR 4101/MLK Blvd to I-4 (end of state road)	535	4	D	3,580		39%	60	1.68%	NO	NO
Blue Lake Ave.	Orange Camp Rd. to Taylor Rd.	231	2	E	1,540		2%	3	0.19%	NO	NO
Cassadaga Rd.	W. Volusia Bltwy. to Macy Ave.	280	2	E	1,020		2%	3	0.29%	NO	**YES**
Graves Av/CR 4145	Veteran's Memorial Pkwy. to Kentucky Ave.	775	2	E	1,620	C	10%	15	0.93%	NO	**YES**
Graves Av/CR 4145	Kentucky Ave. to Normandy Blvd.	900a	2	E	1,620	VC	3%	5	0.31%	NO	**YES**
Graves Av/CR 4145	Normandy Blvd. to Howland Blvd.	900b	4	E	2,740	VNC	3%	5	0.18%	NO	**YES**
Hill Ave.	Taylor Rd. to Beresford Ave.	878	2	E	1,020		1%	2	0.20%	NO	NO
Howland Blvd.	I-4/SR 472 to Wolf Pack Run	901	4	E	3,410	VNC	39%	60	1.76%	NO	**YES**
Howland Blvd.	Wolf Pack Run to Catalina Blvd.	903	4	E	3,410	VNC	5%	8	0.23%	NO	**YES**
Howland Blvd.	Catalina Blvd. to Providence Blvd.	905	4	E	3,410		3%	5	0.15%	NO	NO
Howland Blvd.	Providence Blvd. to Elkcam Blvd.	906	2	E	1,230	C	2%	3	0.24%	NO	**YES**
Macy Ave.	Ohio St. to Cassadaga Rd.	1150	2	C	1,020		2%	3	0.29%	NO	NO
McGregor Rd.	Spring Garden Ave. to US17/92	1211	2	E	1,230		1%	2	0.16%	NO	NO
Orange Camp Rd.	US 17/92 to Princeton	1380	2	E	1,270	NC	2%	3	0.24%	NO	**YES**
Orange Camp Rd.	Princeton. to Blue Lake Ave.	1382	2	E	1,540		2%	3	0.19%	NO	NO
Orange Camp Rd.	Blue Lake Ave. to W Volusia Bltwy. (Dr MLK	1384	2	E	1,540	VNC	4%	6	0.39%	NO	**YES**
Orange Camp Rd.	W Volusia Bltwy. (Dr MLK Jr) to I-4	1385	2	E	1,540	VC	8%	12	0.78%	NO	**YES**
Summit Ave.	SR 44 to Main St.	1791	2	E	1,230		1%	2	0.16%	NO	NO
Taylor Rd. (DL)	Stratford Dr. to Blue Lake Ave.	1818	2	E	1,540		1%	2	0.13%	NO	NO
Taylor Rd. (DL)	Blue Lake Ave. to Martin Luther King Bltwy.	1819	2	E	1,230		1%	2	0.16%	NO	NO
W. Volusia Bltwy (Vetera	Harley Strickland Blvd. to Rhode Island Ave.	1901	2	E	1,540	VC	3%	5	0.32%	NO	**YES**
W. Volusia Bltwy (Vetera	Rhode Island Ave. to Graves Ave.	1902	2	E	1,620	VNC	8%	12	0.74%	NO	**YES**
W. Volusia Bltwy (Vetera	Graves Ave to SR 472	1030	2	E	1,540		13%	20	1.30%	NO	NO
W. Volusia Bltwy (Dr MLK	SR 472 to Cassadaga Rd.	1940	2	E	1,540		10%	15	0.97%	NO	NO
W. Volusia Bltwy (Dr MLK	Cassadaga Rd. to Orange Camp Rd.	1942	2	E	1,540	VNC	20%	31	2.01%	NO	**YES**
W. Volusia Bltwy (Dr MLK	Orange Camp Rd. to Taylor Rd.	1943	2	E	1,540	VNC	8%	12	0.78%	NO	**YES**
W. Volusia Bltwy (Dr MLK	Taylor Rd. to Beresford Ave. Ext.	1945	2	E	1,540		7%	11	0.71%	NO	NO
Normandy Blvd	Graves Ave to Rhode Island	DLT-105.000	2	D	1,150	VC	3%	5	0.43%	NO	**YES**
Catalina Blvd	Howland Blvd to Sixma Road	DLT-20.020	2	D	960	VC	0%	0	0.00%	NO	**YES**
Catalina Blvd	Sixma Road to Lake Helen Osteen	DLT-20.030	2	D	960	VNC	0%	0	0.00%	NO	**YES**

NOTE: The segment **W. Volusia Bltwy.** to **Macy Ave** in **Cassadaga Rd.** requires study because it has direct connection to the site.

Based on the significance test above, the study roadway segments are as follows:

- Cassadaga Road/Cassadaga Road Extension
  - West Volusia Beltway (MLK) to Macy Avenue
  - West Volusia Beltway (MLK) to SR 472 (Proposed)
- Graves Avenue/CR 4145
  - Veterans Memorial Parkway to Kentucky Avenue
  - Kentucky Avenue to Normandy Boulevard
  - Normandy Boulevard to Howland Boulevard
- Howland Boulevard
  - I-4/SR 472 to Wolf Pack Run
  - Wolf Pack Run to Catalina Boulevard
  - Providence Boulevard to Elkcam Boulevard
- Orange Camp Road
  - US 17/92 to Princeton Road
  - Blue Lake Avenue to W. Volusia Beltway (Dr. MLK Jr)
  - W. Volusia Beltway (Dr. MLK Jr) to I-4
- W. Volusia Beltway/MLK
  - Harley Strickland to Rhode Island Avenue
  - Rhode Island Avenue to Graves Avenue
  - Graves Avenue to SR 472 (Normandy Boulevard)
  - Cassadaga Road to Orange Camp Road
  - Orange Camp Road to Taylor Road
- Catalina Boulevard
  - Howland Boulevard to Sixma Road
  - Sixma Road to Lake Helen Osteen

The study intersections are as follows:

- MLK & Orange Camp Road (roundabout)
- MLK & Cassadaga Road (unsignalized/future signal)
- MLK/Kentucky Avenue & SR 472 (signalized)
- SR 472 & Blue Lake Avenue Extension (unsignalized)
- Howland Boulevard and Minnesota Avenue (unsignalized)
- Project Access driveway on Cassadaga Road Extension (unsignalized)
- Project Access driveway on Blue Lake Avenue Extension (unsignalized)

Roadway Segment and Intersection Analysis

The traffic analysis will include existing and 2028 buildout conditions for both roadway segment and intersection capacity analysis. Roadway segments will be analyzed for the PM peak 2-way volumes. The analysis will be based on existing and service volumes as obtained from the most recent *Volusia County Average Annual Daily Traffic & Historical Counts,* included in the **Attachments***.* The intersection analysis will be conducted for the PM peak hours based on field counts, projected movements, *Synchro* software and the methods of the *Highway Capacity Manual, 7th edition (HCM)*.

Background and Buildout Traffic

Background traffic will be projected to the buildout year 2028 based on *Volusia County's Segment Growth Rates and Vested Trips Instruction Policy,* included in the **Attachments**. Buildout conditions will be analyzed by comparing the total projected traffic volumes to their service volumes at the adopted level of service LOS standard for the roadway segments and intersections. Total projected traffic volumes at buildout year 2028 will be calculated as the sum of background traffic and project trips.

Intersections volumes at buildout will be computed by adjusting the raw field counts based on the appropriate seasonal factor obtained from *FDOT Traffic Online*, then adding it to the projected traffic growth and trips generated by the development. An intersection analysis will be conducted for the AM and PM peak hour conditions, based on field counts, buildout traffic, *Synchro* software and the methods of *HCM, 7th edition*.

Planned and Programmed Improvements

The Transportation Improvements Programs for the City, County, and FDOT were reviewed to determine if any roadway or intersection improvements were funded for construction within the next few years. **Table 3** summarizes the list of roadway segments programmed for improvement as obtained from the Volusia County Road Program 2021-22, excerpts of which are included in the **Attachments.** The first two rows listed in the table below will be considered in the buildout condition analysis for this project.

Table 3

Planned & Programmed Improvements

Roadway	From	To	Improvement	Status
Howland Boulevard	Providence Blvd	Elkcam Boulevard	Widen From 2 to 4 Lanes	Under Construction
Orange Camp Road	MLK Jr. Beltway	I-4	Widen From 2 to 4 Lanes	Under Construction
Graves Avenue	Veterans Memorial Parkway	Kentucky Avenue	Widen From 2 to 3 Lanes	Design Underway
Veterans Memorial Parkway	Current limit of 4 lanes	Rhode Island Avenue	Widen From 2 to 4 Lanes	Design Underway
Beresford Road	Blue Lake Avenue	Kepler Road/MLK Jr Beltway	Extension	Design and Row Acquisition Underway
Blue Lake Avenue	Victoria Park	SR 472	Extension	Conceptual Preparation Underway

Source: 2021-22 Volusia County Road Program

Proportionate Share

If the development results in offsite impacts, the development will mitigate its impact to the deficient facilities by contributing a proportionate share. The proportionate share calculation will be based on costs approved by Volusia County Engineering and Construction Division. All proposed mitigation improvements will be consistent with the appropriate City and County comprehensive plans' transportation elements. In particular, if a proposed mitigation improvement is to widen a county roadway beyond that which is indicated on the County's adopted *Future Number of Lanes Map* (or allowed by the County Transportation Engineering since a county map amendment is pending), an alternative mitigation improvement project must be proposed.

Alternative Mode Analysis

A review of transit, pedestrian and bicycle facilities will be conducted in accordance with the R2CTPO and Volusia County requirements.

Report

A report detailing the methods, findings, and recommendations of the traffic analysis will be prepared for submittal to the City and County.

ATTACHMENTS

June 5, 2024

Mr. William White
Engineering Assistant II
Volusia County Traffic Engineering
123 West India Avenue
Deland, Florida 32720
WDWhite@volusia.org

Re: Ford 472
Response to TIA Methodology Comments
TMC Project № 21145
Volusia County, Florida

Dear Mr. White,

Please find below our responses to the review comments prepared by the Volusia County Traffic Engineering dated April 15, 2024, regarding the above referenced Methodology dated November 23, 2023. The comments are listed in **bold** typeface and the TMC responses follow in *italic* typeface. Additionally, a revised Methodology is provided under cover reflecting the changes resulting from these comments.

1. **Traffic study will require concept plans for the development as part of the review and approval.**
   Refer to the municode code Sec. 72-577. - Conceptual or final site plan review. Conceptual site plan application.
   a) **Current zoning classification(s);**
   b) **Schematic representation of proposed use, including building size, shape and location on the site;**
   c) **Schematic representation of vehicular circulation within the site, including driveways, parking areas and loading areas;**
   d) **Schematic representation of points of connection to the public right-of-way.**

   TMC Response: Approved Overall Development Plan is provided in the Attachments.

2. **The proposed build-out as stated is year 2026. Please confirm that this is realistic build-out date.**

   TMC Response: Buildout Year is now anticipated for 2028. Relevant changes have been made in the revised Methodology.

3. **Land use used in table 2 project trip generation shall replicate the project Concept layout proposed uses and building sizes data.**

   TMC Response: The land use data in the Trip Generation table (Table 2) has been updated to reflect the concept layout proposed uses and building sizes data.

4. **Confirm if there are any planned phases for the development and full development buildout year.**

   TMC Response: The development is planned to be built in a single phase with the buildout year 2028.

5. **Refer to the attached traffic growth policy for compliance.**

   TMC Response: Noted. The traffic policy provided will be referred to for the Traffic Impact Analysis Report.

6. **Please state any planned or programmed improvements that will be assumed for future conditions.**

   TMC Response: Improvements that will be assumed for buildout condition are updated and stated in the revised Methodology.

7. **For vested Trip Database, please confirm with relevant agency/city for their updated list of vested developments.**

   TMC Response: Most recent vested trip database from Volusia County will be obtained and used in the final TIA report.

8. **Submit a recorded right-of-way / easement agreement for Cassadaga Rd extension.**

   TMC Response: We do not yet have an easement for the roadway extension, but the client is working on it. However, please see the Attachments regarding the rights to create an easement.

9. **Intersection analyses the use of latest version "HCM 7th Edition" for TIAs.**

   TMC Response: HCM 7th Edition will be used in the TIA and has been updated in the Methodology.

10. **Signal warrant analysis will be required for the signalized intersection at MLK & proposed Cassadaga Rd extension.**

    TMC Response: There is an existing traffic signal at the MLK & Cassadaga Road intersection.

11. **Please include the following statement if applicable**
    Given the staged nature of the development and recognizing the potential evolution of traffic patterns over time, the developer is required to conduct a comprehensive reevaluation of the access control type in conjunction with each stage of development. This process is essential to ensure that access control measures align with the changing transportation needs and conditions associated with the different phases of the project. The developer must collaborate closely with the CTE to assess and adjust

the access control type based on the specific requirements and challenges presented by each stage. This reevaluation should consider factors such as the increasing population density, changing land use patterns, and corresponding shifts in traffic volumes. For each stage, the developer is expected to submit a revised access control proposal that reflects the current and anticipated traffic conditions. This proposal should outline any necessary modifications to the initially proposed access control type, taking into account factors such as peak traffic periods, pedestrian movements, and the integration of alternative transportation modes. The CTE will review each stage's access control proposal, ensuring that it complies with established standards and guidelines. The goal is to adapt the access control type to the evolving demands of the development, promoting an efficient and safe transportation network throughout the different phases. This staged approach to access control evaluation aims to create a flexible and responsive framework that accommodates the dynamic nature of the development. It is imperative that the developer remains proactive in reassessing and refining access control measures to uphold the highest standards of transportation planning and engineering throughout the entire staged development process.

TMC Response: Please note that this project will be developed in one (1) phase/stage; therefore, the proposed access driveway points will be analyzed for the full buildout of the project and access management will be evaluated accordingly.

12. **Refer to TIA guideline section 7 (though an analysis of safety and access management issues may still need to be completed) and provide documentation that support this requirement. A crash diagram with georeferenced crash locations highlighting crash trends based on 5yrs period. The crash analysis is to include all listed study intersection(s) /segment(s) adjoining the development and intersection(s)/segment(s) with mitigated development measure(s).**

TMC Response: Acknowledged. The TIA will include a section for crash analysis to include study intersections and roadway segments adjoining the development and intersection(s)/segment(s) with mitigated development measures.

END OF COMMENTS

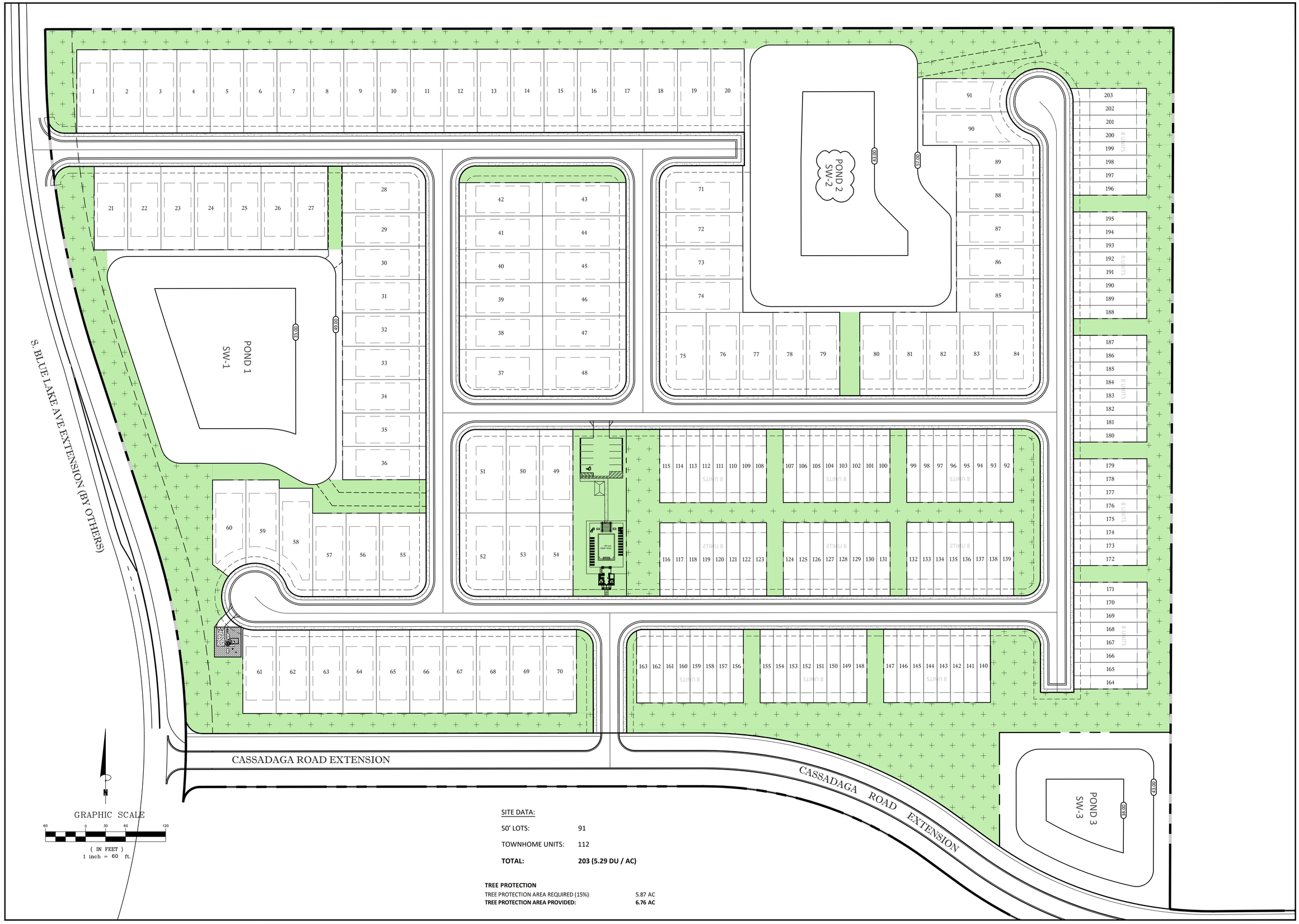
We trust these responses and the revised Methodology adequately address the review comments. We remain available to discuss this matter further or to answer any questions you may have.

Kind regards,

TRAFFIC & MOBILITY CONSULTANTS LLC



Ayman As-Saidi, PE
VP of Engineering



SITE DATA:

50' LOTS:	91
TOWNHOME UNITS:	112
TOTAL:	**203 (5.29 DU / AC)**

TREE PROTECTION

TREE PROTECTION AREA REQUIRED (15%):	5.87 AC
TREE PROTECTION AREA PROVIDED:	**6.76 AC**

KELLY, COLLINS & GENTRY, INC.
KCG
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 898-7858 FAX (407) 898-1488

DATE	REVISION

PREPARED FOR:
PULTE GROUP

FORD 472
SUBDIVISION

CONCEPT PLAN

DRAWN:	GPR
DESIGN:	GPR
CHECKED:	SCF
JOB NO.:	1496.000
DATE:	07/25/2023

SHEET
1 OF 1

Volusia County
FLORIDA

Growth & Resource Management
Land Development

November 27, 2023

Christopher Wrenn
PulteGroup, Inc.
4901 Vineland Rd
Orlando, FL 32811

Re: Subdivision Overall Development Plan Preliminary Development Order
2022-S-ODP-0353 / 1072480
Ford 472 Subdivision

Dear Mr. Wrenn:

This letter is the Subdivision Overall Preliminary Development Order for the above-referenced development. Pursuant to the following findings, the DRC has approved the application:

1. The application was accepted on May 15, 2023, and discussed at the June 14, 2023, Technical Staff Review Meeting.

2. The DRC considered the application at their regularly scheduled meeting of October 10, 2023, and approved the Overall Development Plan application 2022-S-ODP-0353, subject to the submittal of revised plans to the satisfactory resolution of staff comments.

3. Revised plans were accepted on October 26, 2023.

A copy of the approved version of the plan, last revision dated October 18, 2023, by Sean Fortier, is enclosed.

Based on this letter you may submit an application for a Preliminary Plat Development Order. A blank application form and a checklist of exhibits and procedures are attached. A fee, as outlined in the attached fee schedule, must be paid at the time of application submittal. The Preliminary Plat application must be consistent with the approved Overall Development Plan and any remaining conditions imposed by the DRC.

Section 72-536(b) of the LDC states, “It is a violation of this division for anyone who is the owner or agent of the owner of any land to transfer, sell, agree to sell, or negotiate to sell such land by reference to, exhibition of, or other use of a plat of a subdivision of such land without having the plat approved as required by this division.”

Pursuant to Section 125.022(5), F.S., issuance of this development order by the county does not in any way create any rights on the part of the applicant to obtain a permit from a state or federal agency and does not create any liability on the part of the county for issuance of the permit if the applicant fails to obtain requisite approvals or fulfill the obligations imposed by a state or federal agency or undertakes actions that result in a violation of state or federal law. All other applicable state or federal permits shall be obtained before commencement of this development.

Pursuant to Section 72-502(g) of Article III Land Development, Chapter 72 Code of Ordinances (LDC), any person claiming to be aggrieved by a decision of the Enforcement Official or the DRC may file a written appeal within thirty (30) days after said decision with the Land Development Manager to have the decision reviewed by the Volusia County Council. The appeal shall state fully the specific grounds for the appeal and all of the facts relied upon by the petitioner. The County Council shall consider only those items specified in this petition.

Please feel free to contact the Land Development office if you have any questions. The project name and number must be referenced on all inquiries.

Sincerely,



Carol McFarlane, AICP
Planning and Land Development Director
cmcfarlane@volusia.org

CRM/rc
Enclosures

c: James L Rickman, Allen & Company, 16 E Plant St, Winter Garden, FL 34787
Ford Frank A, Group 7 87 5 / Group 4 12 5, Po Box 457, Deland Fl 32721
Sean Fortier, Kelly, Collins & Gentry, Inc, 1700 N Orange Av, Orlando, FL 32804
Todd Bonnett, Bonnett Design Group, LLC, 400 S Orlando Av Suite 201, Maitland, FL 32751
David Romero (via e-mail)

PARCEL DESCRIPTION

PARCEL 1
GOVERNMENT LOT 2, EXCEPT THE W 1/4 THEREOF LYING NORTH OF S.R. 15A, AND LYING SOUTH OF A LINE PARALLEL TO AND 900 FEET SOUTH OF THE NORTH LINE OF SAID GOV'T LOT 2, AND EXCEPT THE EAST 660 FEET OF THE NORTH 1056 FEET, LYING IN SECTION 1, TOWNSHIP 18 SOUTH, RANGE 30 EAST, VOLUSIA COUNTY, FLORIDA.

AND
THE NORTH 900 FEET OF THE EAST 1/4 OF GOVERNMENT LOT 2, LYING NORTH OF S.R. 15A, EXCEPT THE NORTH 660 FEET THEREOF, LYING IN SECTION 1, TOWNSHIP 18 SOUTH, RANGE 30 EAST, VOLUSIA COUNTY, FLORIDA.

PARCEL2
THE EAST 1/4 OF GOVERNMENT LOT 2, LYING NORTH OF STATE ROAD 15-A, EXCEPT THE NORTH 900 FEET THEREOF, AND THE WEST 1/4 OF GOVERNMENT LOT 1, LYING NORTH OF STATE ROAD 15-A, EXCEPT THE NORTH 900 FEET, LYING IN SECTION 1, TOWNSHIP 18 SOUTH, RANGE 30 EAST, VOLUSIA COUNTY, FLORIDA.

NOTE:

PARCEL DESCRIPTION PROVIDED BY ALLEN & COMPANY, DATED 06/08/2021.

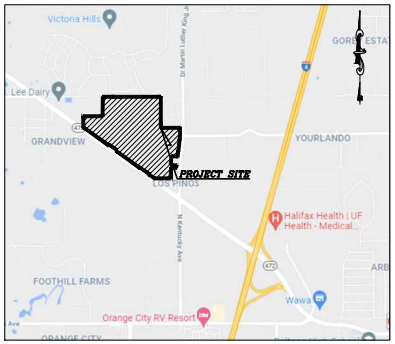
OVERALL DEVELOPMENT PLAN

FOR:

FORD 472 SUBDIVISION

NORTH OF SR 472 & WEST OF DR MARTIN LUTHER KING JR BELTWAY VOLUSIA COUNTY, FLORIDA

VICINITY MAP



SCALE: 1"=2000'

LAND DEVELOPMENT
Approved Overall Development Plan
Land Development Code of Volusia County, Florida
Project Number: 2022-S-ODP-0353

11/27/2023
Planning & Land Development Director

PARCEL ID #:
800100000020

PREPARED FOR:

PULTE GROUP

4901 VINELAND ROAD SUITE 460
ORLANDO, FLORIDA 32811
PHONE: (407) 661 2152

DEVELOPMENT TEAM:

DEVELOPER
PULTE GROUP
4901 VINELAND ROAD SUITE 460
ORLANDO, FLORIDA 32811
PHONE: (407) 661 2152

ENGINEER
KELLY, COLLINS & GENTRY, INC.
1700 NORTH ORANGE AVENUE,
SUITE 400
ORLANDO, FLORIDA 32804
PHONE: (407) 898-7858
FAX: (407) 898-1488

SURVEYOR
ALLEN & COMPANY
16 EAST PLANT STREET
WINTER GARDEN, FLORIDA 34787
PHONE: (407) 654-5355

LANDSCAPE ARCHITECT
BONNET DESIGN GROUP, LLC
PHONE: (407) 463-0136

UTILITIES:

WATER & SEWER
CITY OF DELAND
1101 SOUTH AMELIA AVENUE,
DELAND, FLORIDA 32724
PHONE: (386) 626-7250

RECLAIM WATER
VOLUSIA COUNTY UTILITIES
123 W INDIANA AVE, DELAND, FLORIDA 32720
PHONE: (386) 736-2700

PREPARED BY:

KELLY, COLLINS & GENTRY, INC.
ENGINEERING • PLANNING

1700 NORTH ORANGE AVENUE
SUITE 400
ORLANDO, FLORIDA 32804
PHONE (407) 898-7858
FAX (407) 898-1488

SECTION 01 TOWNSHIP 18, RANGE 30, VOLUSIA COUNTY, FLORIDA

SHEET INDEX

SHEET TITLE	SHEET NO.
COVER SHEET	C-1.0
EROSION CONTROL & TREE PROTECTION	EC-1.0
OVERALL PLAN	C-2.0 TO C-2.1
DIMENSION PLAN	C-3.0 TO C-3.2
PAVING, GRADING, & DRAINAGE PLAN	C-4.0 TO C-4.2
UTILITY PLAN	C-5.0 TO C-5.2

Sean Fortier
2023.10.18
13:29:01-04'00'

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY SEAN C. FORTIER, P.E. ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

FOR REVIEW ONLY
NOT TO BE USED FOR CONSTRUCTION UNLESS SIGNED BY THIS BLOCK

SEAN C. FORTIER, P.E.
FLORIDA REGISTRATION NO.
NOT VALID FOR CONSTRUCTION UNLESS SIGNED BY THIS BLOCK

REVISIONS:

DATE	DESCRIPTION

DRAWN: GPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

SHEET
C-1.0

FORD 472 SUBDIVISION VOLUSIA COUNTY, FL

EROSION CONTROL:

1. GENERAL: CONTRACTOR SHALL INSTALL ANY ADDITIONAL EROSION CONTROL WHEN NECESSARY IN ORDER TO MEET STATE AND LOCAL STANDARDS.
2. EXISTING SYSTEMS: CONTRACTOR SHALL PROTECT ALL EXISTING STORMWATER COLLECTION SYSTEMS FROM DAMAGE BY SEDIMENT OR OTHER CONSTRUCTION RELATED CAUSES.
3. CONFLICTS: CONTRACTOR SHALL COORDINATE ALL UTILITY CROSSINGS AND ADDRESS CONFLICTS PRIOR TO BEGINNING WORK IN A GIVEN AREA(S).
4. STABILIZATION:
   A. EROSION CONTROL SHALL BE MAINTAINED WITHIN CONSTRUCTION AREAS BY QUICKLY STABILIZING DISTURBED AREAS TO PREVENT THE RELEASE OF SEDIMENT. THIS SHALL BE ACCOMPLISHED USING SOD, TURBIDITY FENCES, AND OTHER MEANS ACCEPTABLE TO OWNER, ENGINEER, AND REGULATORY AGENCIES.
   B. AREAS DISTURBED THAT WILL NOT BE IMPROVED FOR A PERIOD OF 30 DAYS OR MORE SHALL RECEIVE TEMPORARY STABILIZATION AS DEEMED NECESSARY BY THE MUNICIPAL INSPECTOR.
5. BMPs:
   A. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, CONTRACTOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES BMP TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
   B. WITH UTILIZING CONSTRUCTION PHASES, CONTRACTOR SHALL BE RESPONSIBLE FOR ADDITIONAL ON-SITE BMPs AS DEEMED NECESSARY AND SHALL BE APPROVED BY JURISDICTIONAL AUTHORITIES.
   C. ALL BMPs SHALL BE CLEANED OF SEDIMENT WHEN 50% OR LESS OF BMP IS REACHED.
   D. ALL BMPs SHALL REMAIN IN PLACE UNTIL SUCH TIME THAT THE MUNICIPAL INSPECTOR ALLOWS REMOVAL.
   E. APPROPRIATE BMPs MUST BE IMPLEMENTED TO ENSURE THAT DISCHARGES DO NOT EXCEED SURFACE WATER QUALITY STANDARDS PER THE FDEP CONSTRUCTION GENERIC PERMIT (CGP). IF DEWATERING DEPOSITS OR INTO A COUNTY MS4, TURBIDITY MUST BE MONITORED TO ENSURE THAT DISCHARGES DO NOT EXCEED 29 NTU OVER BACKGROUND PER 62-302.530 FAC. REFER TO THE DEWATERING REQUIREMENTS IN 62-621.300(4)(a) CONSTRUCTION GENERIC PERMIT OR 62-621.300(2)(a) DEWATERING GENERIC PERMIT AS APPLICABLE.
   F. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPs SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROL BMPs AFTER EACH RAIN EVENT OF 1/2" AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, REVEGETATING, AND REMETTING, MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs, OR MODIFICATIONS OF THOSE INSTALLED SHALL BE REQUIRED.
   G. CONTRACTOR SHALL INSPECT BMPs AT END OF EACH WORKING DAY.
   H. SEDIMENT REMOVED FROM BMPs SHALL BE DISPOSED OF IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS, OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED OR PLACED IN TOPSOIL STOCKPILES.
   I. BMPs USED ON SITE MUST MEET THE MINIMUM SPECIFICATIONS IN THE 2013 STATE OF FLORIDA E&SC DESIGNER AND REVIEWER MANUAL.
6. MULCH:
   A. MULCH WITH MULCH CONTROL NETTING OR EROSION CONTROL BLANKETS SHALL BE INSTALLED ON ALL SLOPES 3:1 AND STEEPER.
   B. STRAW MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN.
7. ENTRANCE/EXIT:
   A. CONSTRUCTION ENTRANCE SHALL BE GRADED SO THAT NO SEDIMENTS LEAVE THE SITE.
   B. ALL EMPLOYEES, SUBCONTRACTORS, AND SUPPLIERS SHALL UTILIZE CONSTRUCTION ACCESS.
   C. CONSTRUCTION VEHICLES SHALL ENTER AND EXIT THE SITE AT ONE LOCATION.
   D. ALL EXIT LOCATIONS INTENDED SHALL BE USED CONTINUOUSLY AND FOR A PERIOD OF TIME SHALL HAVE STABILIZED CONSTRUCTION ENTRANCE/EXIT BMPs (TC-1 "STABILIZED CONSTRUCTION ENTRANCE/EXIT" OR TC-2 "ENTRANCE/OUTLET TIRE WASH").
   E. INSPECT ROUTINELY FOR DAMAGE AND ASSESS EFFECTIVENESS OF THE BMP. REMOVE AGGREGATE, SEPARATE AND DISPOSE OF SEDIMENT IF CONSTRUCTION ENTRANCE/EXIT IS CLOGGED NO MORE THAN 50% WITH SEDIMENT.
   F. IF APPLICABLE, ROUTE RUNOFF FROM STABILIZED ENTRANCES THROUGH A SEDIMENT TRAPPING DEVICE BEFORE DISCHARGE.
8. INLETS:
   G. ALL EXISTING AND PROPOSED STORM DRAINAGE INLETS AND PIPES SHALL BE PROTECTED FROM SILT, SAND, AND DEBRIS DURING CONSTRUCTION. ANY ACCUMULATION OF DEBRIS WITHIN THE STORM DRAINAGE PIPE SYSTEM SHALL BE REMOVED BY CONTRACTOR.
   H. PROVIDE GEOHAY HAY BALES IN FRONT OF ALL DRAINAGE CURB INLETS AND PROVIDE FILTER FABRIC UNDER THE GRATE OF ALL DITCH BOTTOM INLETS AFTER INITIAL COMPLETION OF THE DRAINAGE STRUCTURES. MAINTAIN THESE MEASURES DAILY.
9. DAILY:
   A. CONSTRUCTION SITE SHALL BE INSPECTED FOR EROSION PROBLEMS DAILY AND AFTER EACH RAINFALL GREATER THAN 0.5". A RAIN GAUGE SHALL BE ON SITE TO MEASURE THE FALL AMOUNTS.
   B. THE ADJACENT STREETS SHALL BE SWEPT AT THE END OF EACH DAY OF DIRT FROM THE CONSTRUCTION SITE. CONTRACTOR SHALL IMPLEMENT STREET SWEEPING AND VACUUMING AS NEEDED. CLEAN DIRT FROM ROADWAYS DAILY.
   C. CONSTRUCTION SITE SHALL BE CLEANED OF LITTER AND TRASH EACH DAY AND DISPOSED OF OFF-SITE.
   D. INSPECT ALL SEDIMENT CONTROL DEVICES FOR DAMAGE DAILY AND REPAIRS AS NEEDED.
   E. CONTRACTOR SHALL EMPLOY SAFETY AND ROADWAY ENTRY AND EXIT PLANS ON A DAILY/WEEKLY BASIS.
   F. HUMAN WASTEWATER SHALL BE COLLECTED ON-SITE BY THE USE OF TEMPORARY SANITARY SERVICE.
10. SILT FENCE:
   A. SILT FENCE SHALL BE IN PLACE AS SHOWN PRIOR TO CONSTRUCTION.
   B. PRIOR TO CONSTRUCTION, SILT FENCE SHALL BE INSTALLED AT THE LIMITS OF CONSTRUCTION AS DEFINED THROUGHOUT THIS PLAN SET. SEE DETAIL SHEETS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION ON EROSION CONTROL.
   C. SILT FENCE SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
11. SOD: ALL DISTURBED AREAS SHALL BE SODDED EXCEPT AS SHOWN ON PLAN. ALL SOD IN RIGHT OF WAY SHALL BE ARGENTINE BAHIA. ALL SLOPES 4:1 OR GREATER SHALL BE SODDED.
12. STOCKPILES: SHALL BE ENCOMPASSED WITH SILT FENCE, SHALL NOT EXCEED 35' IN HEIGHT, AND SHALL NOT BE LOCATED NEAR SITE PERIMETER. LOCATION AND SLOPE SHALL BE APPROVED BY MUNICIPAL INSPECTOR AND OTHER JURISDICTIONAL AUTHORITIES AS REQUIRED.
13. TOXIC SUBSTANCES: ALL TOXIC SUBSTANCES (IF ANY) BROUGHT ON-SITE SHALL BE HANDLED AND STORED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND STANDARDS. ALL SUBSTANCES THAT MAY BE CONSIDERED TOXIC SHALL ALSO BE HANDLED AND STORED ACCORDING TO FEDERAL, STATE, AND LOCAL LAWS AND STANDARDS.
14. DRAINAGE/GRADE: THE CONTRACTOR SHALL PROPERLY GRADE ALL EXCAVATED SURFACES TO PROVIDE POSITIVE DRAINAGE AND PREVENT PONDING OF WATER; DIRECT CONTROL SURFACE WATER TO AVOID DAMAGE TO ADJOINING PROPERTIES OR TO FINISHED WORK ON THE SITE; AND SHALL TAKE REMEDIAL MEASURES TO PREVENT EROSION OF FRESHLY GRADED AREAS UNTIL SUCH TIME AS PERMANENT DRAINAGE AND EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
15. GRAVEL LAYER: GRAVEL LAYER SHALL BE 12" MIN THICK AND PLACED OVER GEOTEXTILE MAT.
16. SPEED: TRUCK SPEED TO BE REDUCED TO CONTROL DUST.
17. DITCHES: KEEP ALL TEMPORARY ROADWAY DITCHES CLEAR.
18. WATER DOWN: CONTRACTOR TO WATER DOWN AREAS WHEN AND WHERE DISTURBED SOIL IS RAISING AND BECOMING AIRBORNE IN ORDER TO SETTLE IT. PERMIT AS NEEDED.
19. SEDIMENT BASIN: LARGE SITES MAY REQUIRE A TEMPORARY SEDIMENT BASIN. CONTRACTOR SHALL DETERMINE LOCATION. TEMPORARY SEDIMENT BASIN SHALL BE APPROVED BY JURISDICTIONAL AUTHORITIES.
20. STORMWATER DISCHARGE: CONTRACTOR TO ABIDE BY ALL PROVISIONS OF THE FDEP GENERAL PERMIT FOR STORM WATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES.
21. DUST ABATEMENT: CONTRACTOR TO PROVIDE A DUST ABATEMENT PLAN INCLUDING A 6-FOOT HIGH SCREEN FENCE ALONG ALL PROPERTY LINES.

DEMOLITION NOTES:

1. DEMOLISH AS REQUIRED TO ACCOMPLISH WORK INDICATED IN THESE DOCUMENTS. ALL REQUIRED DEMOLITION WORK SHALL BE INCLUDED IN THE BASE BID PACKAGE SUBMITTED BY THE CONTRACTOR.
2. DO NOT ALLOW MATERIALS AND DEBRIS GENERATED BY DEMOLITION ACTIVITIES TO ACCUMULATE ON THE JOB SITE. REMOVE DAILY AND DISPOSE OF IN A LEGAL MANNER. NO ON SITE SALE OR BURNING OF REMOVED ITEMS IS PERMITTED.
3. THIS PLAN IS TO BE USED IN CONJUNCTION WITH THE ENTIRE SET OF CONSTRUCTION DRAWINGS. DO NOT REMOVE ANY ITEMS WITHOUT VERIFYING AND COORDINATING WITH ALL GENERAL TRADES AS TO HOW THEY RELATE TO THE OVERALL PROJECT.
4. THE CONTRACTOR MUST TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THE SAFETY OF THE PUBLIC AND/OR WORKMEN ON THE SITE TO PREVENT ACCIDENTS OR INJURY TO ANY PERSON ON, ABOUT OR ADJACENT TO THE PREMISES. THE CONTRACTOR SHALL COMPLY WITH ALL LAWS, ORDINANCES, CODES AND REGULATIONS PERTAINING TO SAFETY AND THE PREVENTIONS OF ACCIDENTS.
5. THE CONTRACTOR MUST MAINTAIN ADEQUATE SUPPORTS, INSULATIONS, WATERPROOFING, EMERGENCY LIGHTING, SECURITY, ALARMS, ETC. FOR ALL OR PART OF ITEMS WHICH ARE TO REMAIN.

CONTRACTOR CERTIFICATION:

"I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND, AND SHALL COMPLY WITH THE TERMS AND CONDITIONS OF THE STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES AND THIS STORMWATER POLLUTION PLAN THEREUNDER."

NAME: _____ TITLE: _____

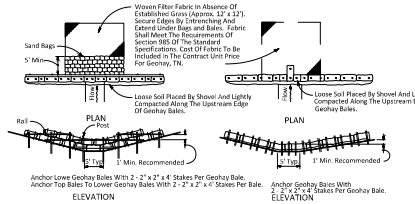
CONTRACTING FIRM: _____ ADDRESS: _____

TELEPHONE #: _____ DATE: _____

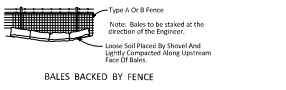
THIS SOIL EROSION/SEDIMENT CONTROL & DUST ABATEMENT PLAN IS FOR THE PURPOSE OF SHOWING INTENTION OF METHOD TO CONTROL STORM WATER RUNOFF & DUST DISTURBANCE CAUSED BY CONSTRUCTION ACTIVITY. CONTRACTOR SHALL ADJUST AND/OR ADD BMP'S BASED ON SPECIFIC SITE CONDITIONS & CONSTRUCTION ACTIVITY SATISFYING NPDES REQUIREMENTS. CONTRACTOR TO OBTAIN GENERAL PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES (RULE 62-621.300(4), F.A.C.)



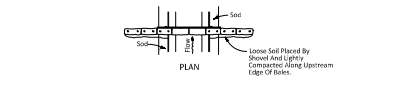
BARRIERS FOR FILL SLOPES



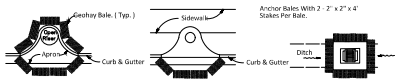
BARRIER FOR UNPAVED DITCHES



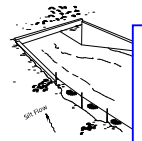
BALES BACKED BY FENCE

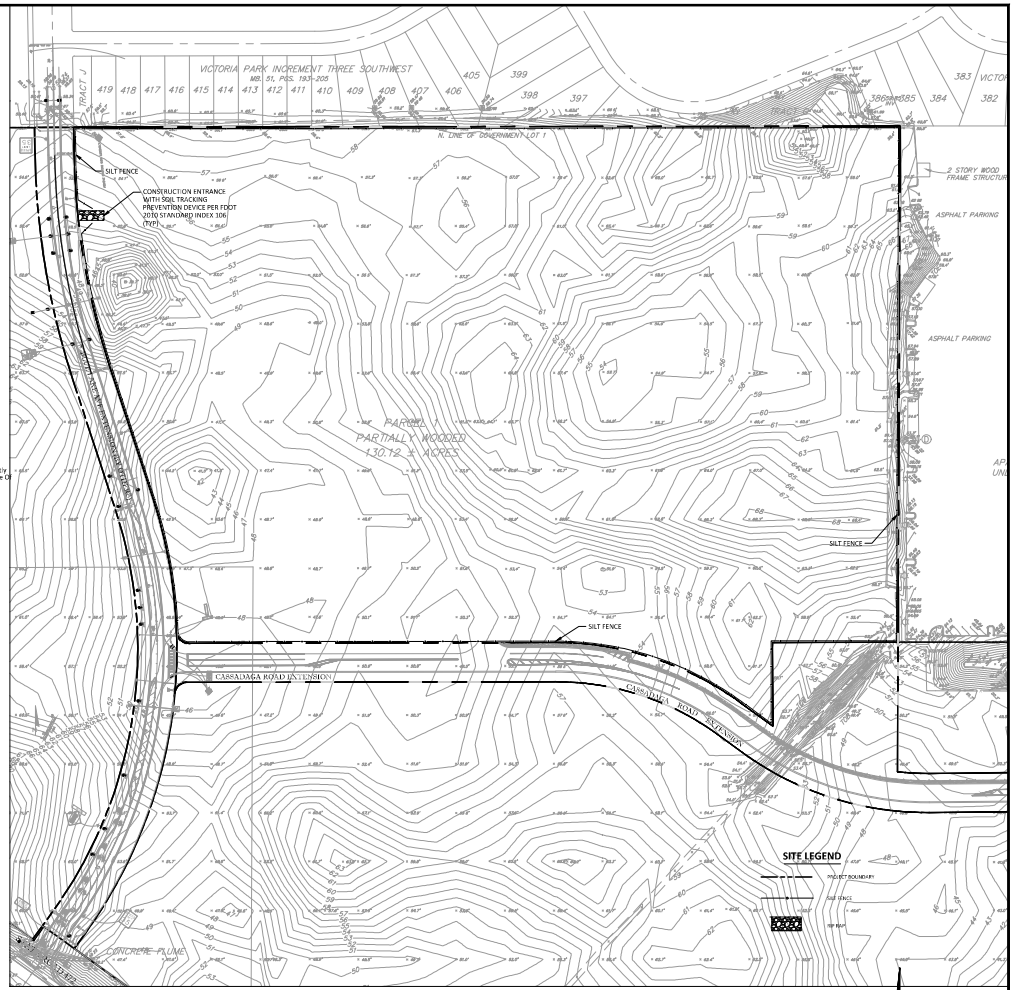


BARRIER FOR PAVED DITCH

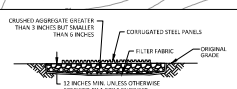


PROTECTION AROUND INLETS OR SIMILAR STRUCTURES

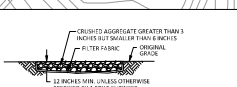




NOTE:
SILT FENCE SHOWN FOR SCHEMATIC PURPOSES ONLY. SILT FENCE SHOULD BE INSTALLED AT THE LIMITS OF CONSTRUCTION AS DEFINED THROUGHOUT THIS PLAN SET.



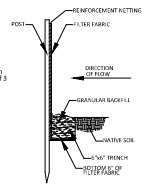
SECTION A-A
NTS



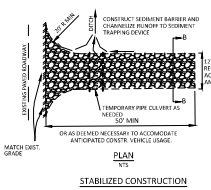
SECTION B-B
NTS

GRAPHIC SCALE



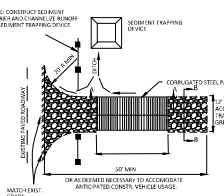


SILT BARRIER DETAIL
N.T.S.



PLAN
NTS

STABILIZED CONSTRUCTION ENTRANCE/EXIT (TYPE 1)



PLAN
NTS

STABILIZED CONSTRUCTION ENTRANCE/EXIT (TYPE 2)

LAND DEVELOPMENT
Approved Overall Development Plan
Land Development Code of Volusia County, Florida
Project Number: 2022-S-ODP-0353

11/27/2023
Planning & Land Development Director

FOR REVIEW ONLY
CIVIL DISCIPLINE ONLY
CERTIFICATE OF AUTHORIZATION NUMBER 27868

SEAN C. FORTIER, P.E.
FLORIDA REGISTRATION #68366
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

KELLY, COLLINS & GENTRY, INC.
KCG
1706 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 586-7800 FAX (407) 896-1488

REVISION	DATE

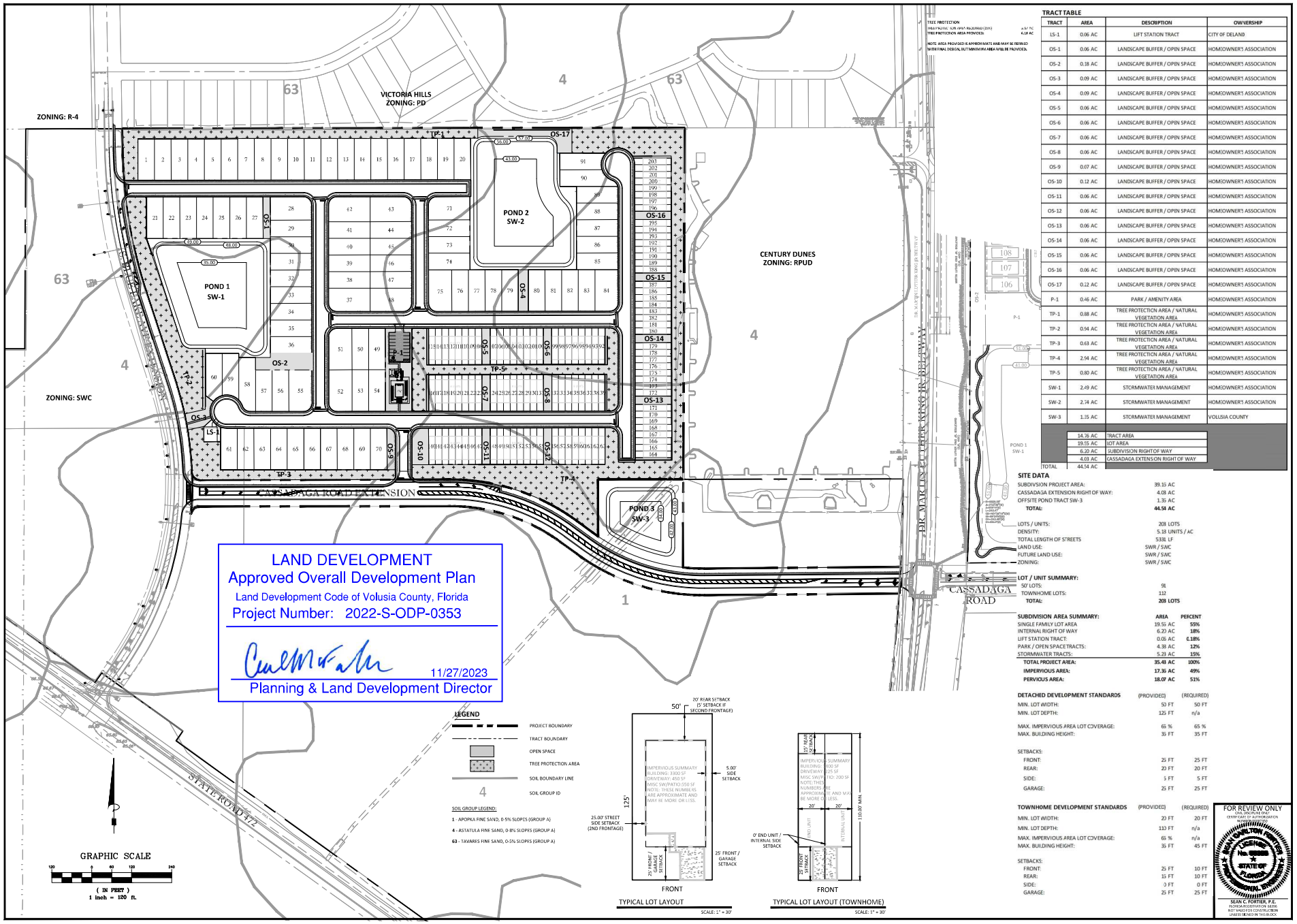
PREPARED FOR:
PULTE GROUP

FORD 472
SUBDIVISION

EROSION CONTROL & TREE REMOVAL-PROTECTION PLAN

DRAWN: CPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

SHEET
EC-1.0



TRACT TABLE

TRACT	AREA	DESCRIPTION	OWNERSHIP
LS-1	0.06 AC	LIFT STATION TRACT	CITY OF DELAND
OS-1	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-2	0.18 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-3	0.09 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-4	0.09 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-5	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-6	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-7	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-8	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-9	0.07 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-10	0.12 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-11	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-12	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-13	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-14	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-15	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-16	0.06 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
OS-17	0.22 AC	LANDSCAPE BUFFER / OPEN SPACE	HOMEOWNER'S ASSOCIATION
P-1	0.46 AC	PARK / AMENITY AREA	HOMEOWNER'S ASSOCIATION
TP-1	0.88 AC	TREE PROTECTION AREA / NATURAL VEGETATION AREA	HOMEOWNER'S ASSOCIATION
TP-2	0.94 AC	TREE PROTECTION AREA / NATURAL VEGETATION AREA	HOMEOWNER'S ASSOCIATION
TP-3	0.63 AC	TREE PROTECTION AREA / NATURAL VEGETATION AREA	HOMEOWNER'S ASSOCIATION
TP-4	2.94 AC	TREE PROTECTION AREA / NATURAL VEGETATION AREA	HOMEOWNER'S ASSOCIATION
TP-5	0.80 AC	TREE PROTECTION AREA / NATURAL VEGETATION AREA	HOMEOWNER'S ASSOCIATION
SW-1	2.49 AC	STORMWATER MANAGEMENT	HOMEOWNER'S ASSOCIATION
SW-2	2.74 AC	STORMWATER MANAGEMENT	HOMEOWNER'S ASSOCIATION
SW-3	1.35 AC	STORMWATER MANAGEMENT	VOLUSIA COUNTY

	14.76 AC	TRACT AREA
	19.55 AC	LOT AREA
	6.20 AC	SUBDIVISION RIGHT OF WAY
	4.03 AC	CASSADAGA EXTENSION RIGHT OF WAY
TOTAL	44.54 AC	

SITE DATA

SUBDIVISION PROJECT AREA:	39.15 AC
CASSADAGA EXTENSION RIGHT OF WAY:	4.03 AC
OFFSITE POND TRACT SW-3	1.35 AC
TOTAL:	**44.54 AC**
LOTS / UNITS:	208 LOTS
DENSITY:	5.18 UNITS / AC
TOTAL LENGTH OF STREETS	5331 LF
LAND USE:	SWR / SWC
FUTURE LAND USE:	SWR / SWC
ZONING:	SWR / SWC

LOT / UNIT SUMMARY:

50' LOTS:	96
TOWNHOME LOTS:	112
TOTAL:	**208 LOTS**

SUBDIVISION AREA SUMMARY:

	AREA	PERCENT
SINGLE FAMILY LOT AREA	19.55 AC	55%
INTERNAL RIGHT OF WAY	6.20 AC	18%
LIFT STATION TRACT:	0.06 AC	0.18%
PARK / OPEN SPACE TRACTS:	4.38 AC	12%
STORMWATER TRACTS:	5.23 AC	15%
TOTAL PROJECT AREA:	**35.43 AC**	**100%**
IMPERVIOUS AREA:	**17.35 AC**	**49%**
PERVIOUS AREA:	**18.07 AC**	**51%**

DETACHED DEVELOPMENT STANDARDS	(PROVIDED)	(REQUIRED)
MIN. LOT WIDTH:	50 FT	50 FT
MIN. LOT DEPTH:	125 FT	n/a
MAX. IMPERVIOUS AREA LOT COVERAGE:	65 %	65 %
MAX. BUILDING HEIGHT:	35 FT	35 FT
SETBACKS:		
FRONT:	25 FT	25 FT
REAR:	20 FT	20 FT
SIDE:	5 FT	5 FT
GARAGE:	25 FT	25 FT

TOWNHOME DEVELOPMENT STANDARDS	(PROVIDED)	(REQUIRED)
MIN. LOT WIDTH:	20 FT	20 FT
MIN. LOT DEPTH:	110 FT	n/a
MAX. IMPERVIOUS AREA LOT COVERAGE:	65 %	n/a
MAX. BUILDING HEIGHT:	35 FT	45 FT
SETBACKS:		
FRONT:	25 FT	10 FT
REAR:	15 FT	10 FT
SIDE:	0 FT	0 FT
GARAGE:	25 FT	25 FT

FOR REVIEW ONLY
CIVIL DISCIPLINE ONLY
CERTIFICATE OF AUTHORIZATION
NUMBER 27000

SEAN C. FORTIER, P.E.
FLORIDA REGISTRATION #65936
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

KELLY, COLLINS & GENTRY, INC.
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1706 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 586-7800 FAX (407) 896-1468

REVISION
DATE

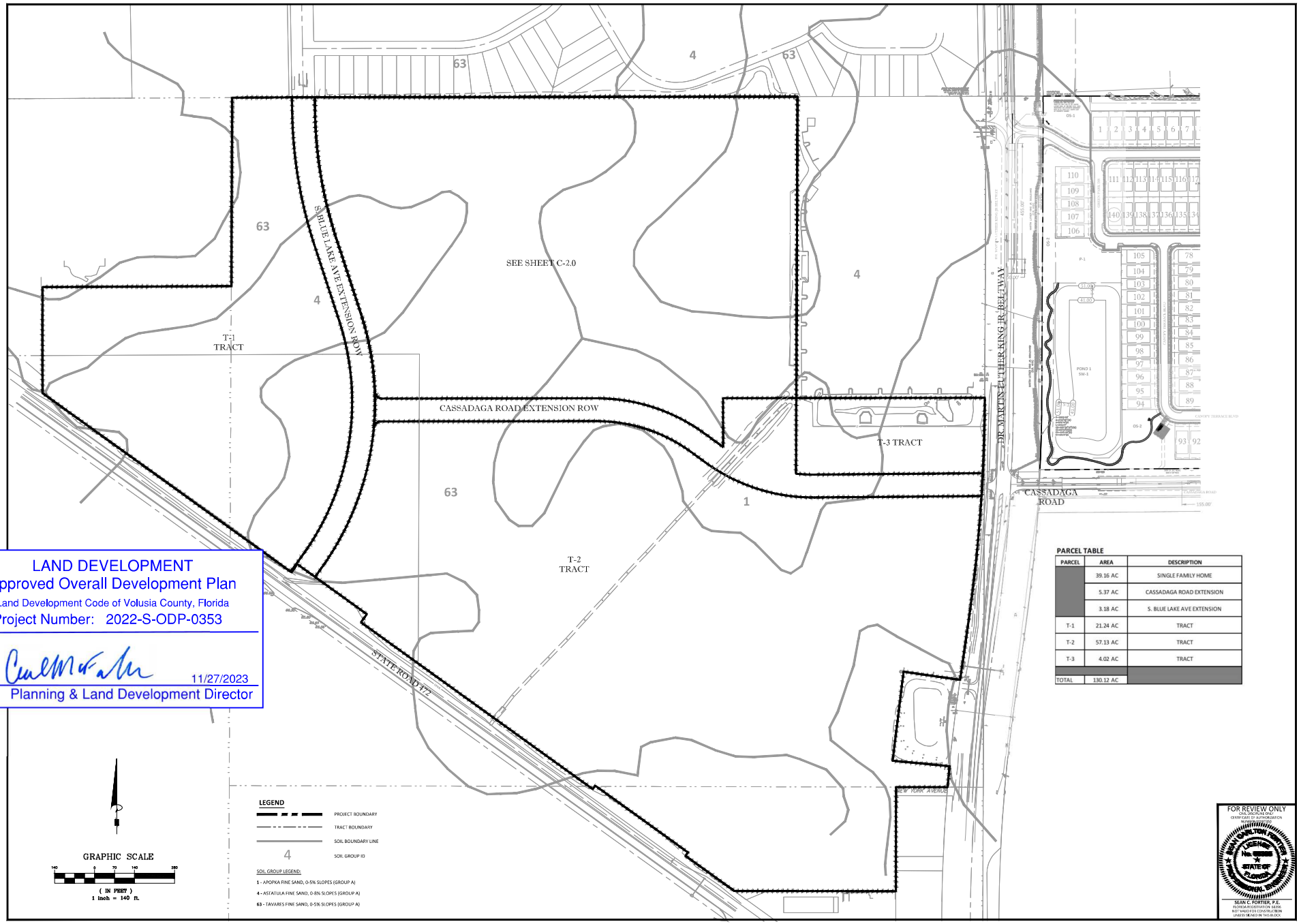
PREPARED FOR:
PULTE GROUP

FORD 472 SUBDIVISION

OVERALL PLAN

DRAWN: CPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

SHEET
C-2.0



LAND DEVELOPMENT
Approved Overall Development Plan
Land Development Code of Volusia County, Florida
Project Number: 2022-S-ODP-0353

11/27/2023
Planning & Land Development Director

PARCEL TABLE

PARCEL	AREA	DESCRIPTION
	39.16 AC	SINGLE FAMILY HOME
	5.37 AC	CASSADAGA ROAD EXTENSION
	3.18 AC	S. BLUE LAKE AVE EXTENSION
T-1	21.24 AC	TRACT
T-2	57.13 AC	TRACT
T-3	4.02 AC	TRACT
TOTAL	130.12 AC	

FOR REVIEW ONLY
CIVIL DISCIPLINE ONLY
CERTIFICATE OF AUTHORIZATION
NUMBER 35000
LICENSED
No. 73000
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
SEAN C. FORTIER, P.E.
FLORIDA REGISTRATION #73000
NOT VALID FOR CONSTRUCTION
UNLESS SIGNED IN THIS BLOCK

KELLY, COLLINS & GENTRY, INC.
KCG
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 540-7800 FAX (407) 896-1468

REVISION
DATE

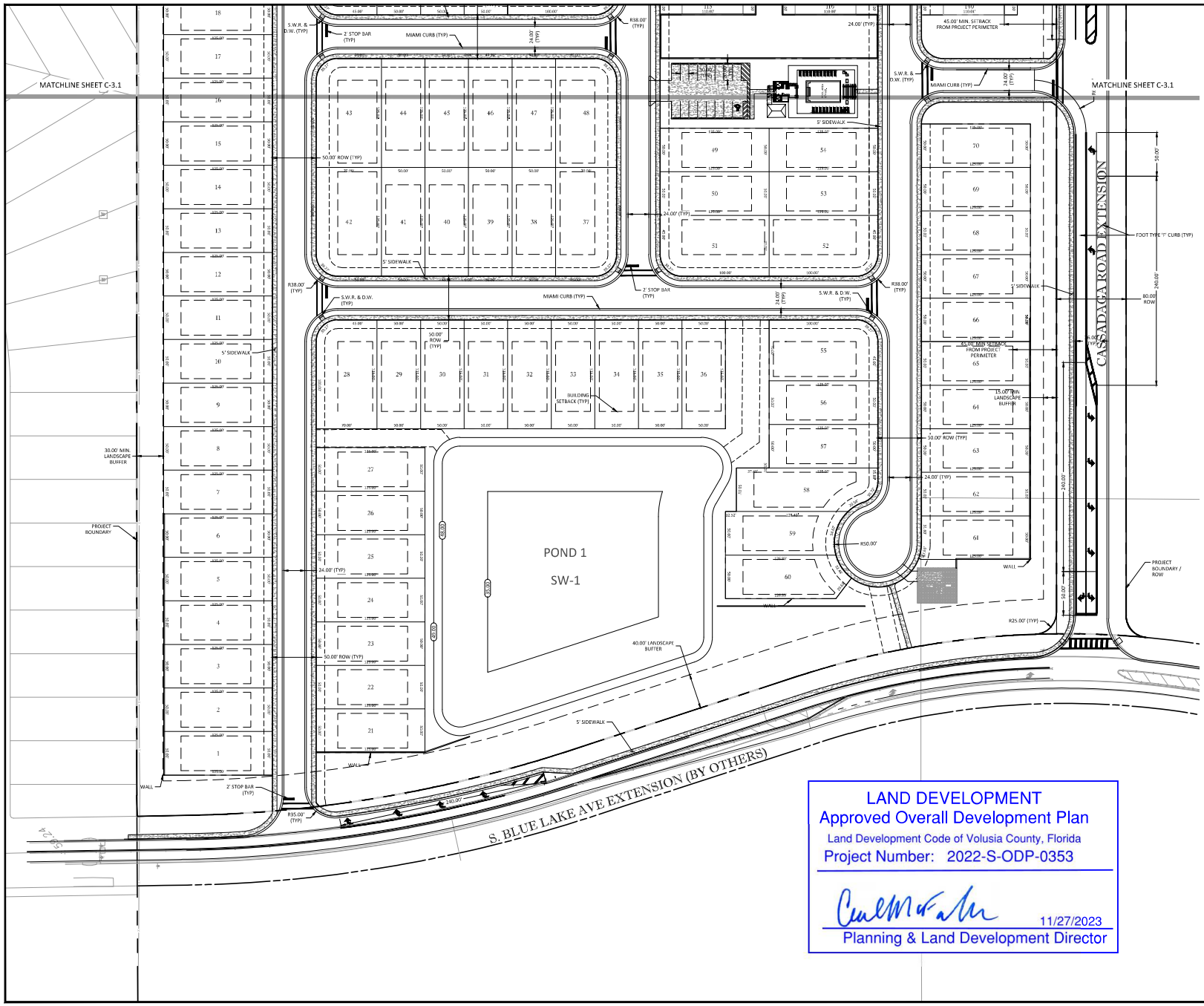
PREPARED FOR:
PULTE GROUP

FORD 472
SUBDIVISION

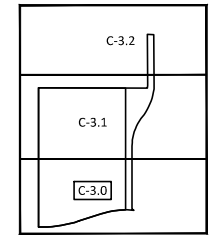
OVERALL PLAN

DRAWN: CPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1490.000
DATE: 08/21/2023

SHEET
C-2.1



KEY MAP



LEGEND

- PROJECT BOUNDARY
- TRACT BOUNDARY
- SETBACKS
- 33 LOT NUMBER
- SW-1 TRACT ID

C.W. : ALL CROSSWALKS TO BE HEAVY DUTY CONCRETE. ALL CROSSWALK & RAMPS TO MEET ADA SPECIFICATIONS & FOOT INDEX 522-002.

D.W. : DETECTABLE WARNING TO MEET ADA SPECIFICATIONS

S.W.R. (CR 6,8,20,21): SIDEWALK RAMP. ALL SIDEWALK RAMPS TO MEET ADA SPECIFICATION. SEE FOOT INDEX 522-002 FOR CURB RAMP DETAILS.

NOTES:

1. ALL CONSTRUCTION DETAILS ARE CONCEPTUAL & SUBJECT TO REVIEW & MODIFICATION DURING THE APPROVAL OF FINAL CONSTRUCTION PLANS.
2. DIMENSIONS ARE TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
3. ALL PAVEMENT MARKINGS WILL BE THERMOPLASTIC.
4. DETECTABLE WARNING SURFACE WILL BE REQUIRED AT ALL PLACES WHERE PEDESTRIAN PATH MEETS VEHICULAR PATH.

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

LAND DEVELOPMENT
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11/27/2023
Planning & Land Development Director

FOR REVIEW ONLY
ONLY DISCIPLINE ONLY
CERTIFICATE OF AUTHORIZATION
#4000 0000 0000

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1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 898-7858 FAX (407) 898-1488

DATE	REVISION

PREPARED FOR:
PULTE GROUP

FORD 472 SUBDIVISION

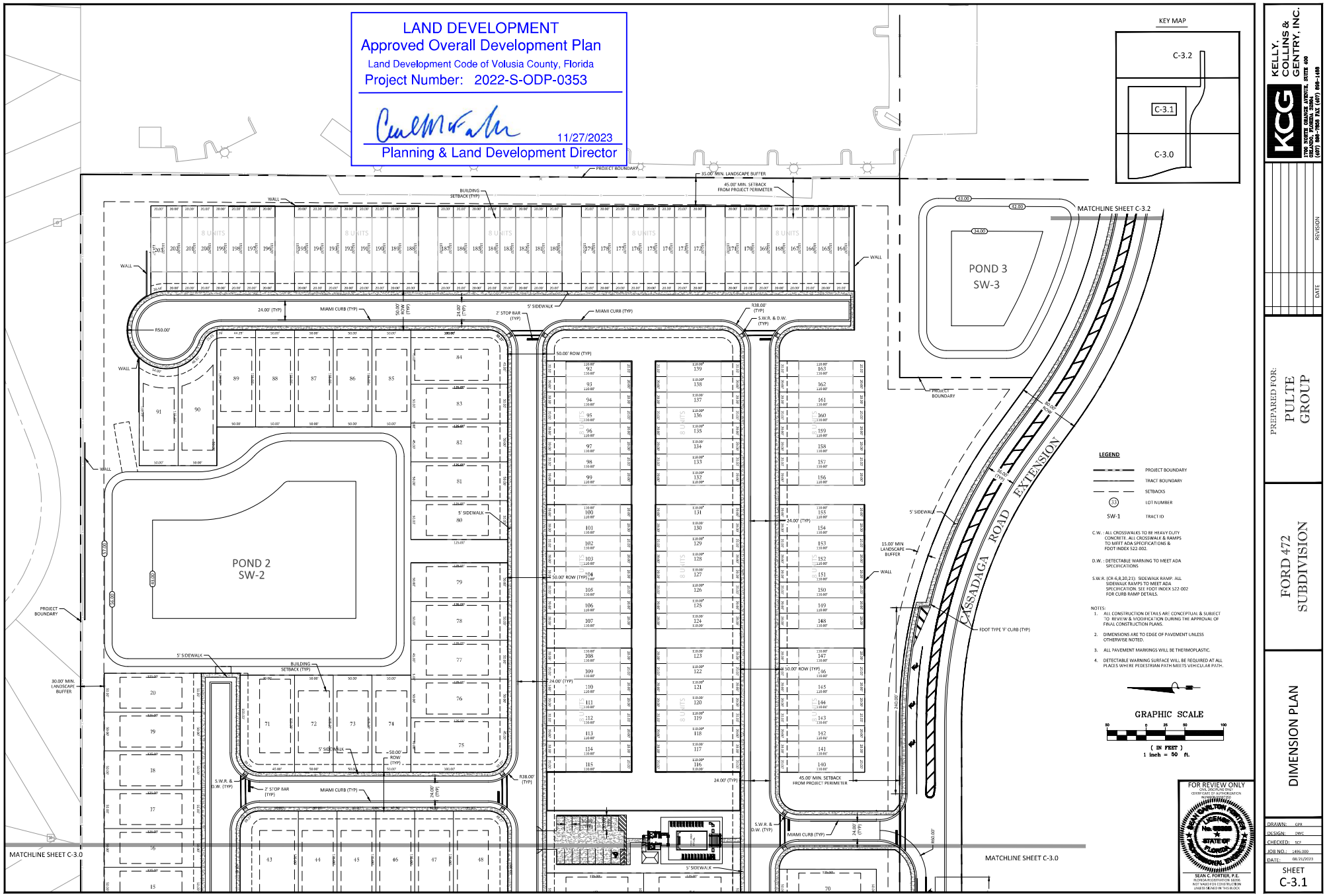
DIMENSION PLAN

DRAWN: GPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

SHEET
C-3.0

LAND DEVELOPMENT
Approved Overall Development Plan
Land Development Code of Volusia County, Florida
Project Number: 2022-S-ODP-0353

11/27/2023
Planning & Land Development Director



KELLY, COLLINS & GENTRY, INC.
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 586-7800 FAX (407) 896-1450

REVISION | DATE

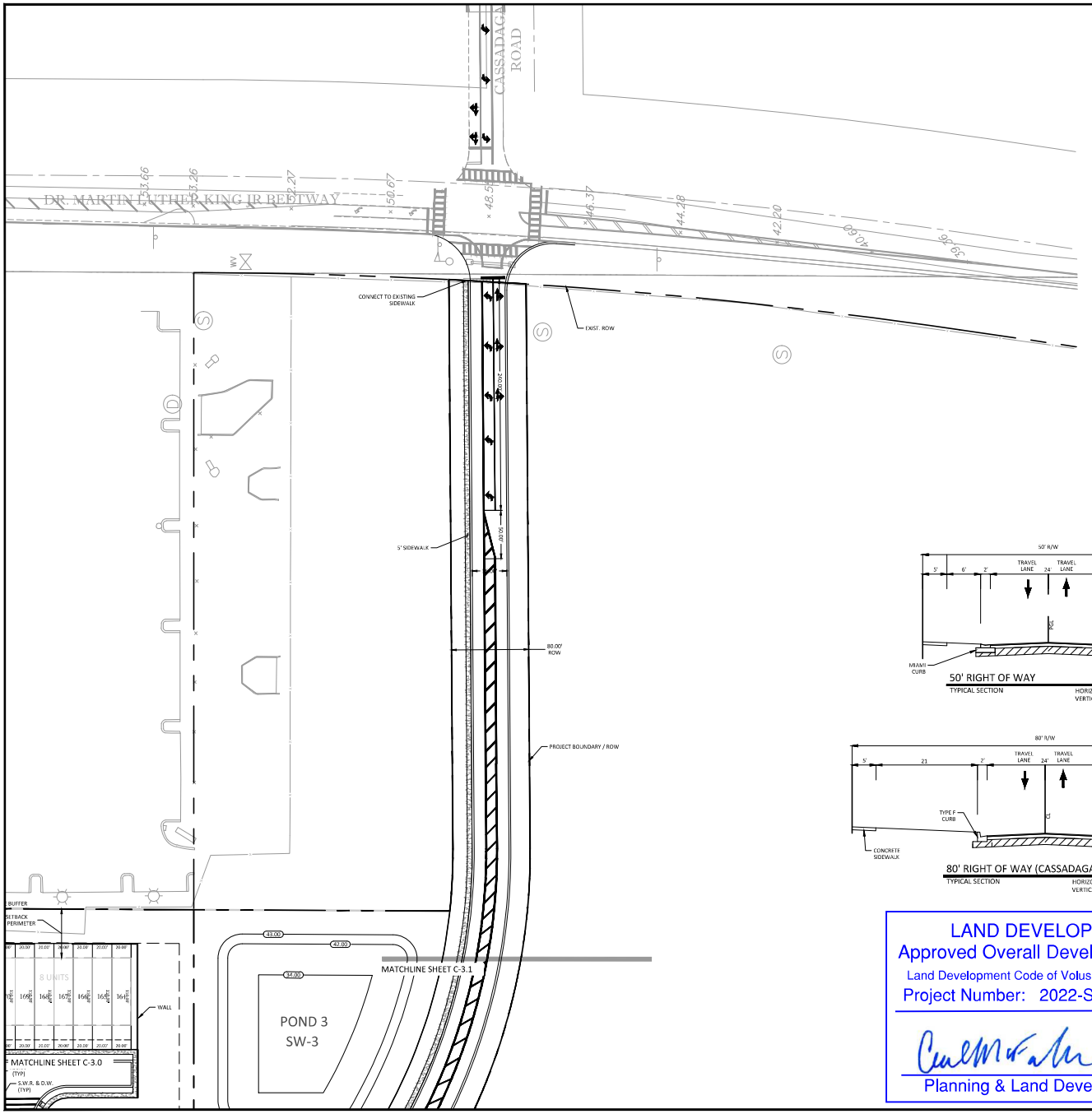
PREPARED FOR:
PULTE GROUP

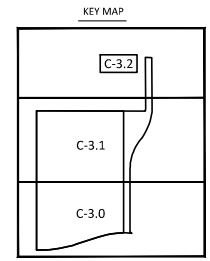
FORD 472
SUBDIVISION

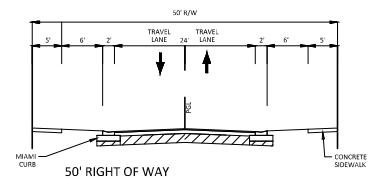
DIMENSION PLAN

DRAWN: CPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

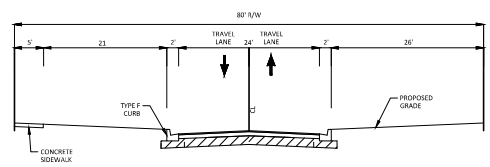
SHEET
C-3.1







50' RIGHT OF WAY
TYPICAL SECTION
HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 5'



80' RIGHT OF WAY (CASSADAGA EXTENSION)
TYPICAL SECTION
HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 5'

LEGEND

- PROJECT BOUNDARY
- TRACT BOUNDARY
- SETBACKS
- 33 LOT NUMBER
- SW-1 TRACT ID

C.W. : ALL CROSSWALKS TO BE HEAVY DUTY CONCRETE. ALL CROSSWALK & RAMPS TO MEET ADA SPECIFICATIONS & FDOT INDEX 522-002.

D.W. : DETECTABLE WARNING TO MEET ADA SPECIFICATIONS

S.W.R. (CR 6,8,20,21): SIDEWALK RAMP. ALL SIDEWALK RAMPS TO MEET ADA SPECIFICATION. SEE FDOT INDEX 522-002 FOR CURB RAMP DETAILS.

NOTES:

1. ALL CONSTRUCTION DETAILS ARE CONCEPTUAL & SUBJECT TO REVIEW & MODIFICATION DURING THE APPROVAL OF FINAL CONSTRUCTION PLANS.
2. DIMENSIONS ARE TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
3. ALL PAVEMENT MARKINGS WILL BE THERMOPLASTIC.
4. DETECTABLE WARNING SURFACE WILL BE REQUIRED AT ALL PLACES WHERE PEDESTRIAN PATH MEETS VEHICULAR PATH.

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

LAND DEVELOPMENT
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Project Number: 2022-S-ODP-0353

11/27/2023
Planning & Land Development Director

FOR REVIEW ONLY
ONE DISCIPLINE ONLY
CERTIFICATE OF AUTHORIZATION
NO. 00000000

SEAN C. FORTIER, P.E.
FLORIDA REGISTRATION 68356
NOT VALID FOR CONSTRUCTION
UNLESS SIGNED IN THIS BLOCK

KCG
KELLY, COLLINS & GENTRY, INC.
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 898-7858 FAX (407) 898-1488

DATE	REVISION

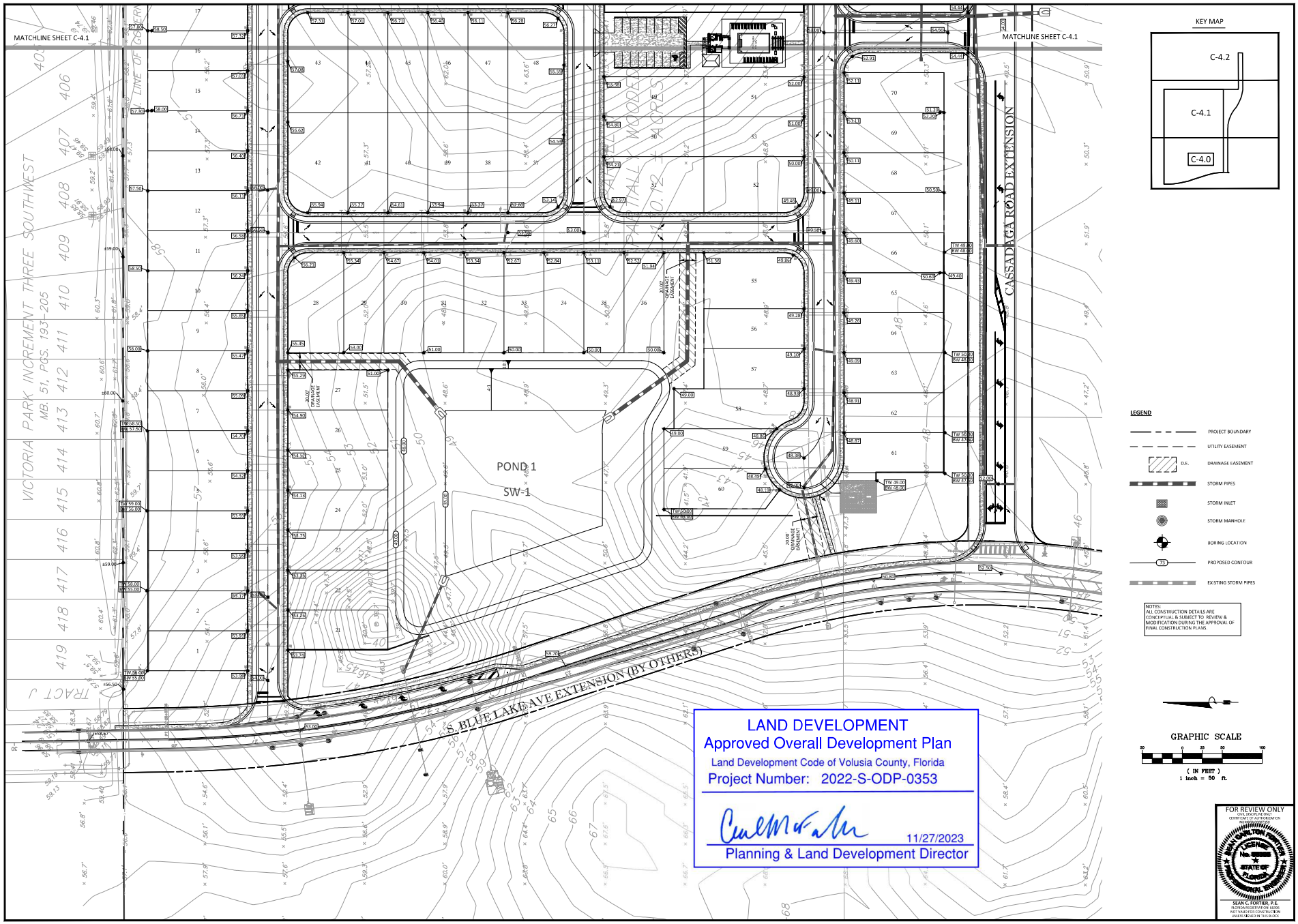
PREPARED FOR:
PULTE GROUP

FORD 472 SUBDIVISION

DIMENSION PLAN

DRAWN: GPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

SHEET
C-3.2



KELLY, COLLINS & GENTRY, INC.
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 586-1700 FAX (407) 896-1486

REVISION
DATE

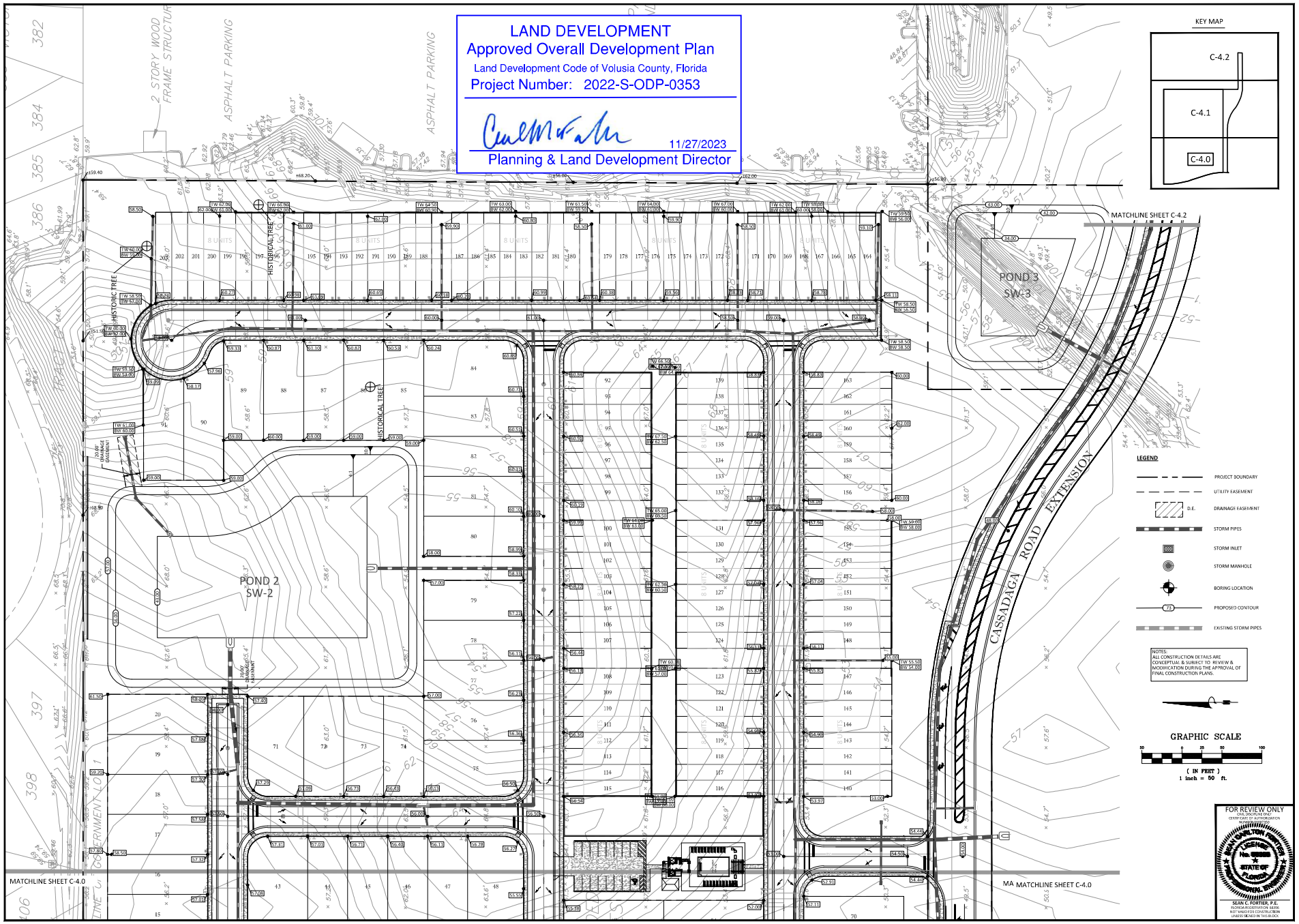
PREPARED FOR:
PULTE GROUP

FORD 472
SUBDIVISION

PAVING, GRADING, & DRAINAGE PLAN

DRAWN: CPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1486.000
DATE: 08/21/2023

SHEET
C-4.0



KELLY, COLLINS & GENTRY, INC.
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 586-7800 FAX (407) 896-1486

REVISION | DATE

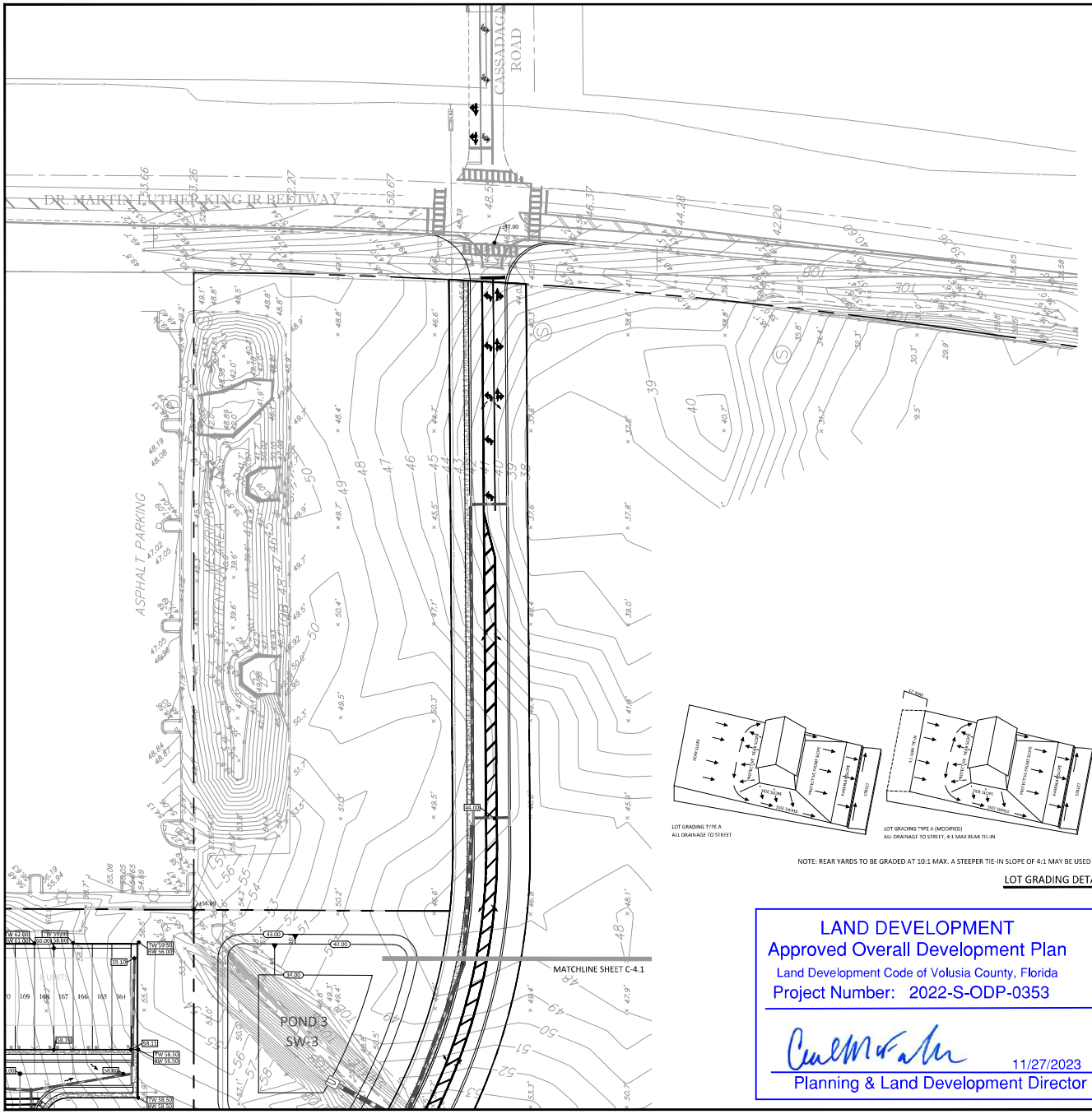
PREPARED FOR:
PULTE GROUP

FORD 472
SUBDIVISION

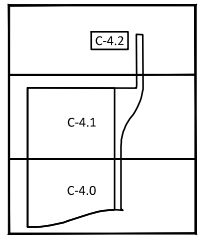
PAVING, GRADING, & DRAINAGE PLAN

DRAWN: CPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1490.000
DATE: 08/21/2023

SHEET
C-4.1



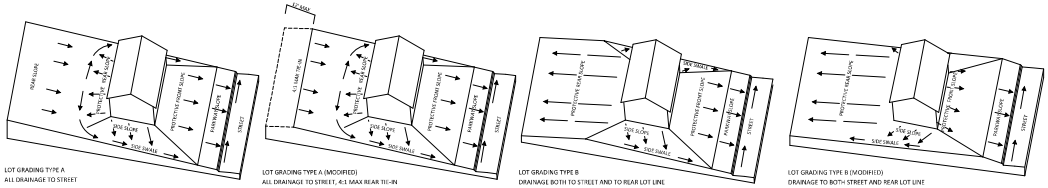
KEY MAP



LEGEND

- PROJECT BOUNDARY
- UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- STORM PIPES
- STORM INLET
- STORM MANHOLE
- BORING LOCATION
- 73 PROPOSED CONTOUR
- EXISTING STORM PIPES

NOTES:
ALL CONSTRUCTION DETAILS ARE CONCEPTUAL & SUBJECT TO REVIEW & MODIFICATION DURING THE APPROVAL OF FINAL CONSTRUCTION PLANS.



NOTE: REAR YARDS TO BE GRADED AT 10:1 MAX. A STEEPER TIE-IN SLOPE OF 4:1 MAY BE USED WITHIN 12' OF REAR PROPERTY LINE ONLY.

LOT GRADING DETAILS

NTS

LAND DEVELOPMENT
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Land Development Code of Volusia County, Florida
Project Number: 2022-S-ODP-0353

11/27/2023
Planning & Land Development Director

GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1 inch = 50 ft.

FOR REVIEW ONLY
ONE DISCIPLINE ONLY
CERTIFICATE OF AUTHORIZATION
NO. 00000 ENGINEERING
SEAN CARLTON FORTIER
LICENSE No. 53555
STATE OF FLORIDA
PROFESSIONAL ENGINEER
SEAN C. FORTIER, P.E.
FLORIDA REGISTRATION 53555
NOT VALID FOR CONSTRUCTION
UNLESS SIGNED IN THIS BLOCK

KELLY, COLLINS & GENTRY, INC.
KCG
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 898-7858 FAX (407) 898-1488

DATE	REVISION

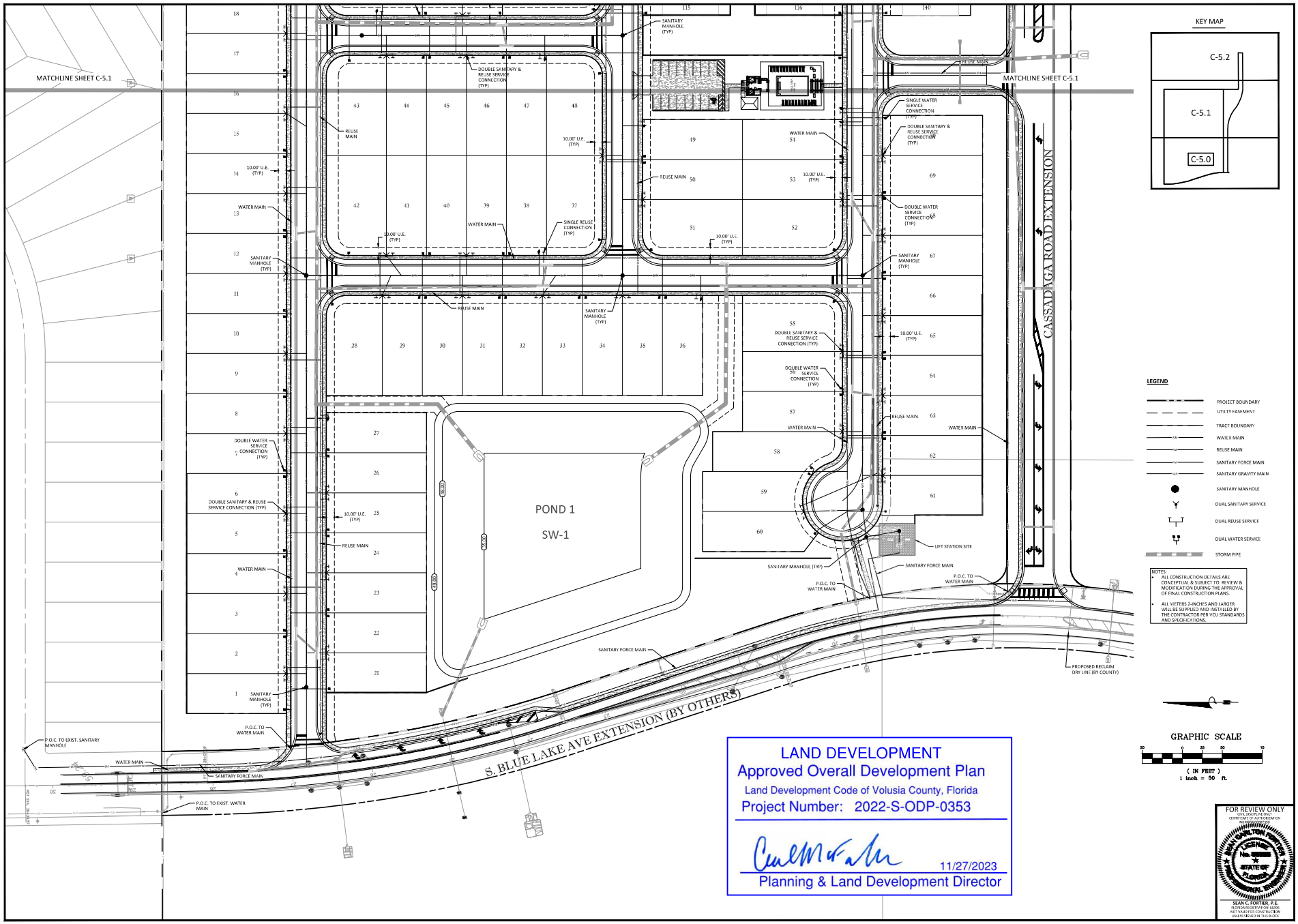
PREPARED FOR:
PULTE GROUP

FORD 472 SUBDIVISION

PAVING, GRADING & DRAINAGE PLAN

DRAWN: GPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

SHEET
C-4.2



LAND DEVELOPMENT
Approved Overall Development Plan
Land Development Code of Volusia County, Florida
Project Number: 2022-S-ODP-0353

11/27/2023
Planning & Land Development Director

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CERTIFICATE OF AUTHORIZATION
NUMBER 35169

SEAN C. FORTIER, P.E.
FLORIDA REGISTRATION #83196
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KELLY, COLLINS & GENTRY, INC.
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 586-7800 FAX (407) 896-1486

REVISION
DATE

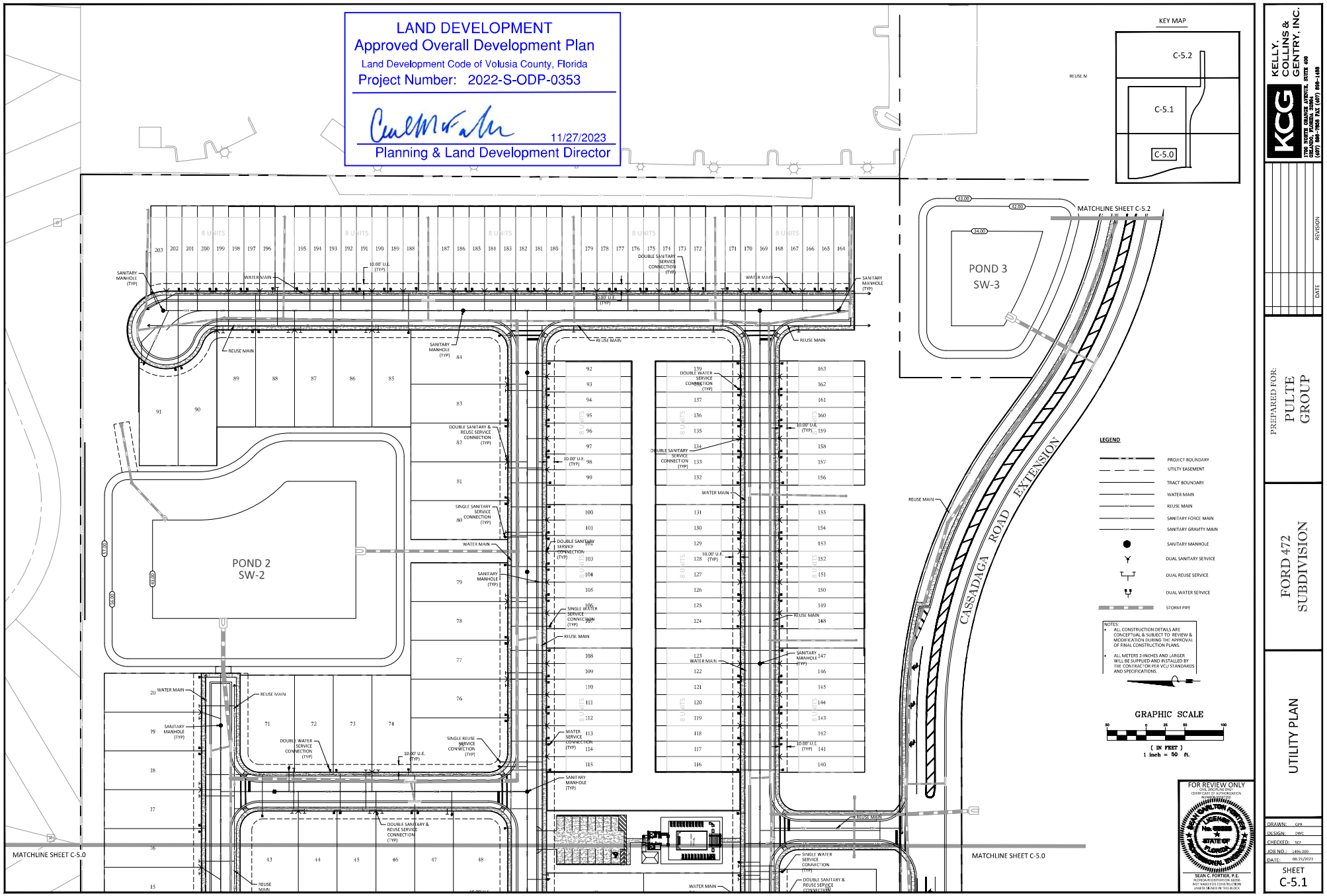
PREPARED FOR:
PULTE GROUP

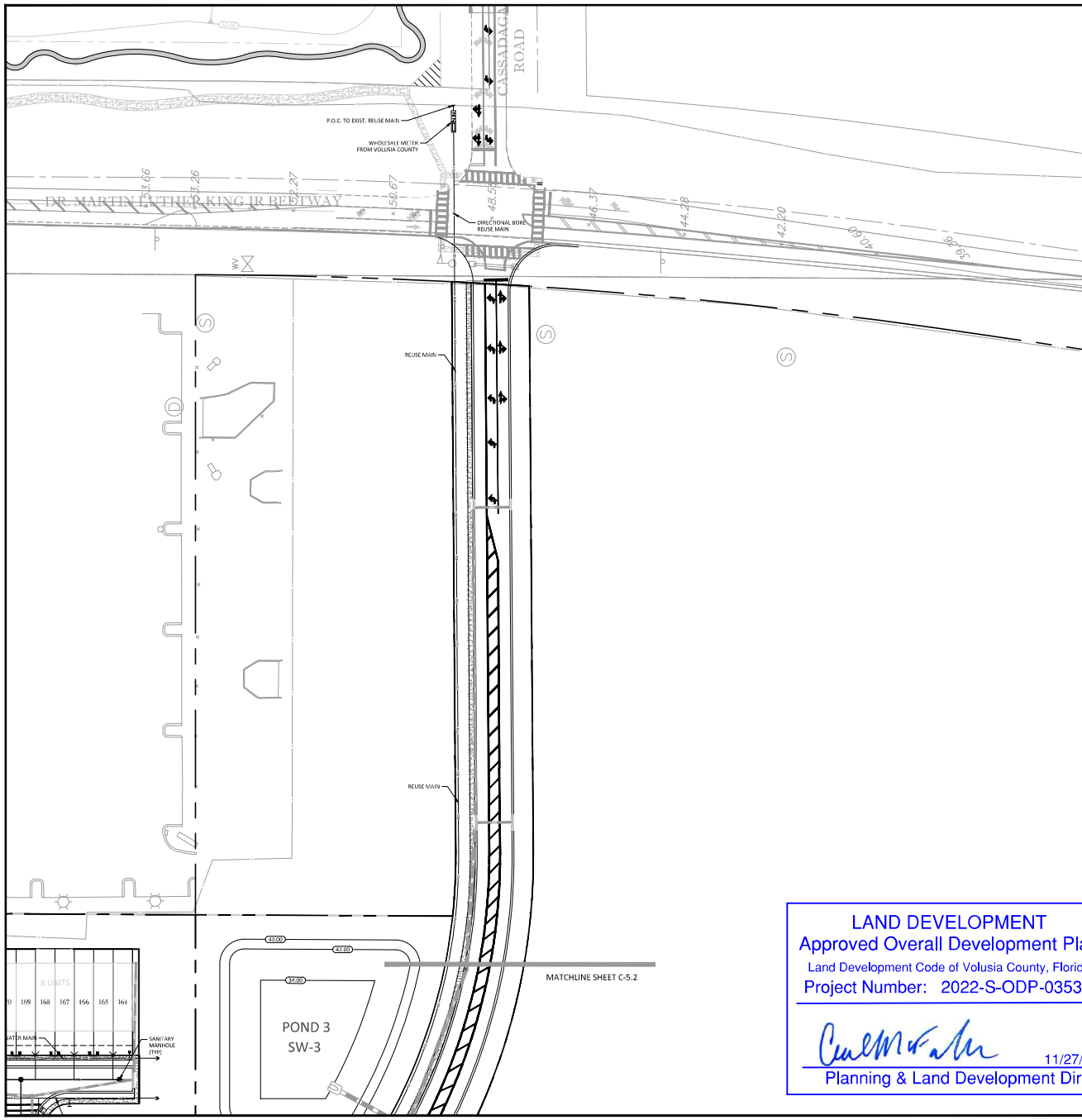
FORD 472
SUBDIVISION

UTILITY PLAN

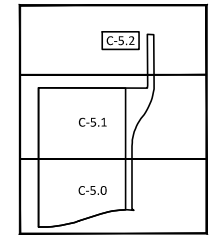
DRAWN: CPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

SHEET
C-5.0


LAND DEVELOPMENT
Approved Overall Development Plan
Land Development Code of Volusia County, Florida
Project Number: 2022-S-ODP-0353
11/27/2023
Planning & Land Development Director
KEY MAP
C-5.2
C-5.1
C-5.0
POND 2
SW-2
POND 3
SW-3
CASSADAGA ROAD EXTENSION
MATCHLINE SHEET C-5.2
MATCHLINE SHEET C-5.0
LEGEND
PROJECT BOUNDARY
UTILTY EASEMENT
TRACT BOUNDARY
WATER MAIN
REUSE MAIN
SANITARY FORCE MAIN
SANITARY GRAVITY MAIN
SANITARY MANHOLE
DUAL SANITARY SERVICE
DUAL REUSE SERVICE
DUAL WATER SERVICE
STORM PIPE
NOTES:
ALL CONSTRUCTION DETAILS ARE CONCEPTUAL & SUBJECT TO REVIEW & MODIFICATION DURING THE APPROVAL OF FINAL CONSTRUCTION PLANS.
ALL METERS 2-INCHES AND LARGER WILL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR PER VCU STANDARDS AND SPECIFICATIONS.
GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft.
FOR REVIEW ONLY
SEAN C. FORTIER, P.E.
KELLY, COLLINS & GENTRY, INC.
PREPARED FOR:
PULTE GROUP
FORD 472 SUBDIVISION
UTILITY PLAN
DRAWN:
DESIGN:
CHECKED:
JOB NO.:
DATE:
SHEET
C-5.1



KEY MAP



LEGEND

- PROJECT BOUNDARY
- UTILTY EASEMENT
- TRACT BOUNDARY
- WATER MAIN
- REUSE MAIN
- SANITARY FORCE MAIN
- SANITARY GRAVITY MAIN
- SANITARY MANHOLE
- DUAL SANITARY SERVICE
- DUAL REUSE SERVICE
- DUAL WATER SERVICE
- STORM PIPE

NOTES:
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GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

LAND DEVELOPMENT
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Land Development Code of Volusia County, Florida
Project Number: 2022-S-ODP-0353

11/27/2023
Planning & Land Development Director

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ONE DISCIPLINE ONLY
CERTIFICATE OF AUTHORIZATION
#0000[illegible]

SEAN C. FORTIER, P.E.
FLORIDA REGISTRATION 68356
NOT VALID FOR CONSTRUCTION
UNLESS SIGNED IN THIS BLOCK

KELLY, COLLINS & GENTRY, INC.
KCG
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 898-7656 FAX (407) 898-1488

DATE	REVISION

PREPARED FOR:
PULTE GROUP

FORD 472 SUBDIVISION

UTILITY PLAN

DRAWN: GPR
DESIGN: DWC
CHECKED: SCF
JOB NO.: 1496.000
DATE: 08/21/2023

SHEET
C-5.2

6.3. Access Road. In the event a governmental authority requires, or Buyer desires, an access road (the "**Access Road**") connecting the Property to Dr. Martin Luther King, Jr. Boulevard, Seller agrees to dedicate or (at Seller's option) grant the easement or right of way necessary to satisfy such requirements across property Seller owns or controls, located to the east of the Property. Seller agrees to provide the easement or right of way at no additional cost to Buyer, and Buyer agrees to design, permit

and construct, at Buyer's expense, the necessary road, utilities and improvements related to the Access Road as provided in the Development Permits. Buyer and Seller will work together in good faith to determine the exact location, dimensions, terms and conditions of the Access Road to be documented by written agreement of the parties prior to the expiration of the Inspection Period, to the extent it is a requirement. Seller's obligation under this section are conditioned upon the parties agreeing to and entering into such written agreement and agreeing upon the design, plans and specifications of the Access Road.

Single-Family Detached Housing
(210)

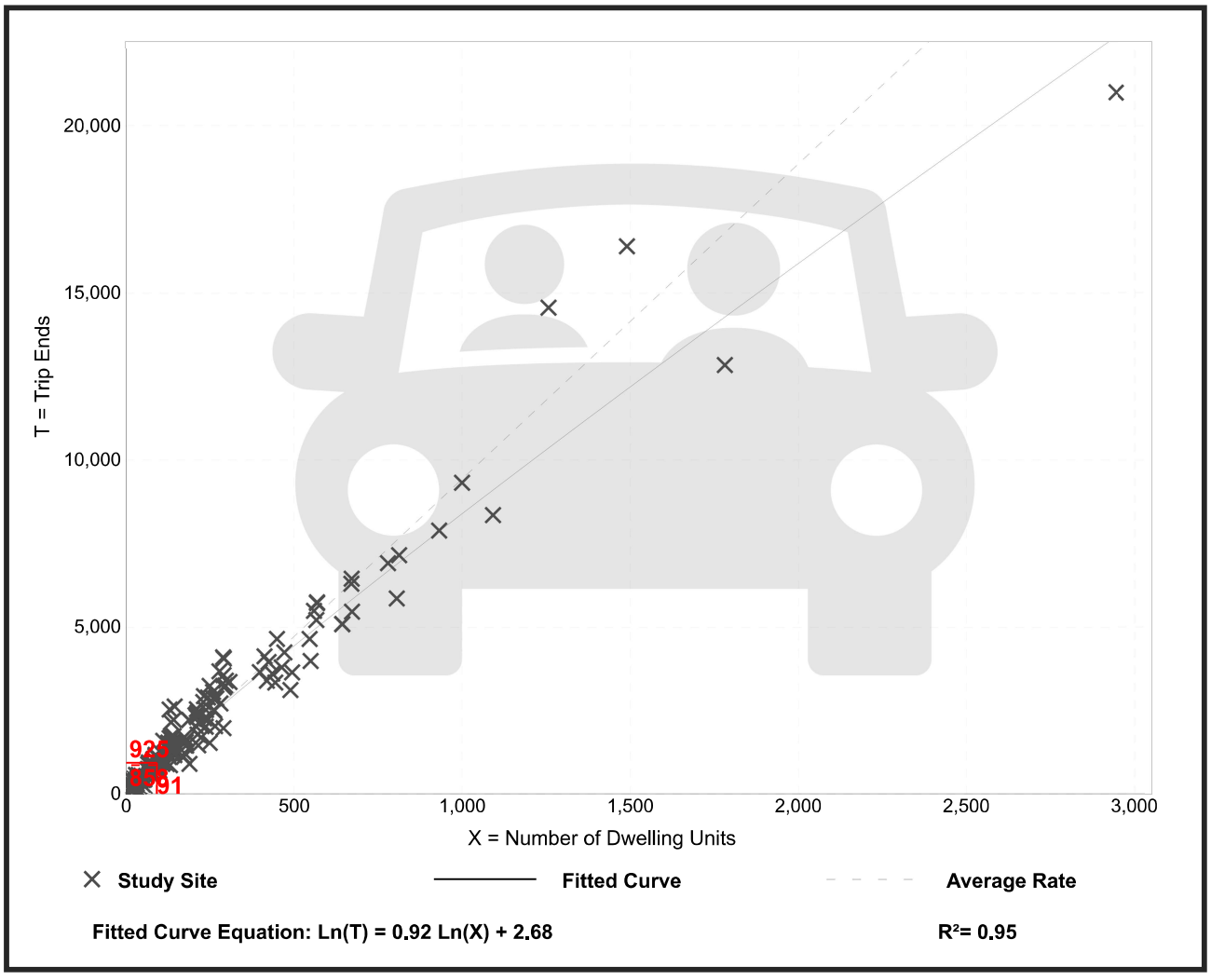
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 174
Avg. Num. of Dwelling Units: 246
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.43	4.45 - 22.61	2.13

Data Plot and Equation



Trip Gen Manual, 11th Edition • Institute of Transportation Engineers

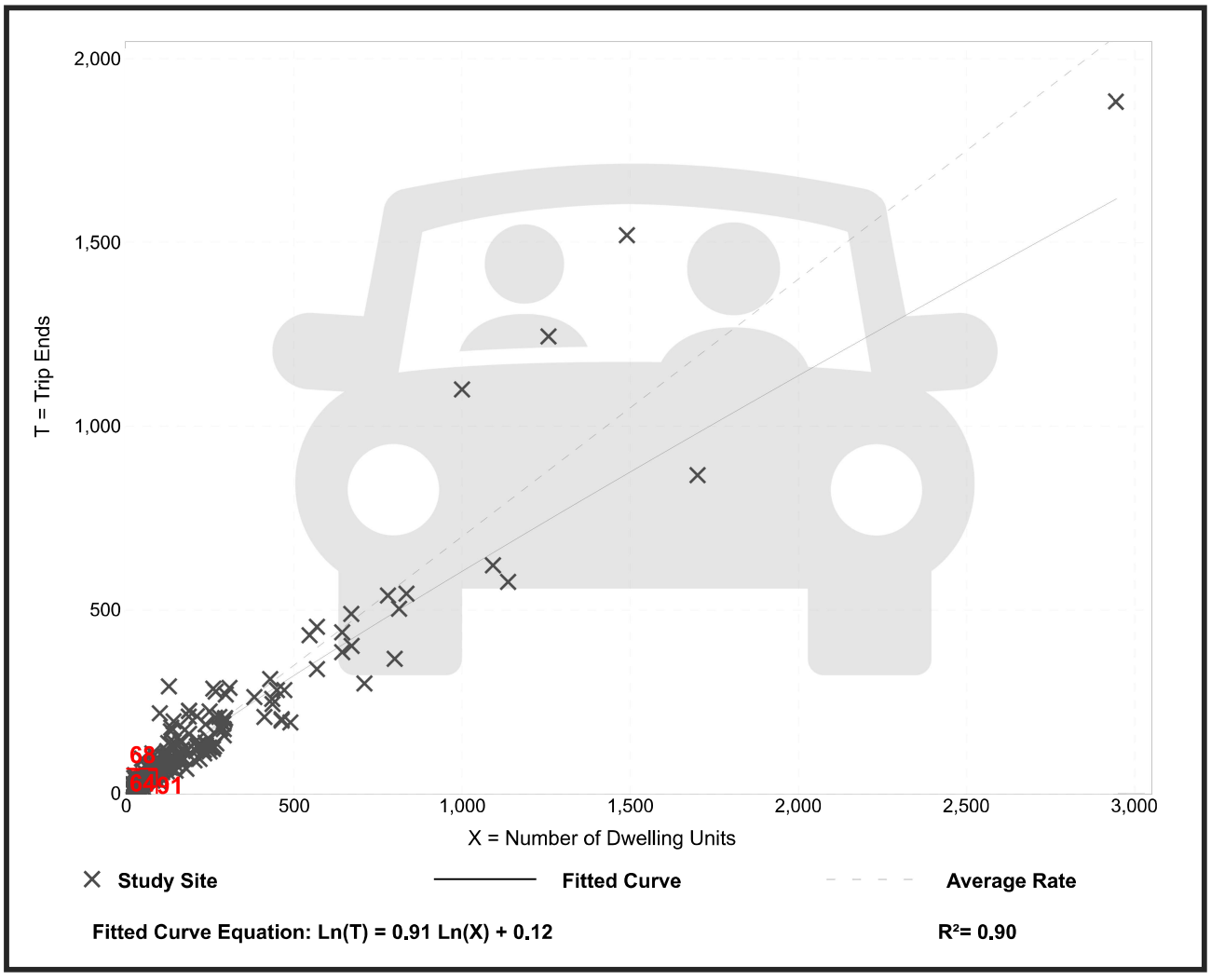
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	192
Avg. Num. of Dwelling Units:	226
Directional Distribution:	25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.70	0.27 - 2.27	0.24

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

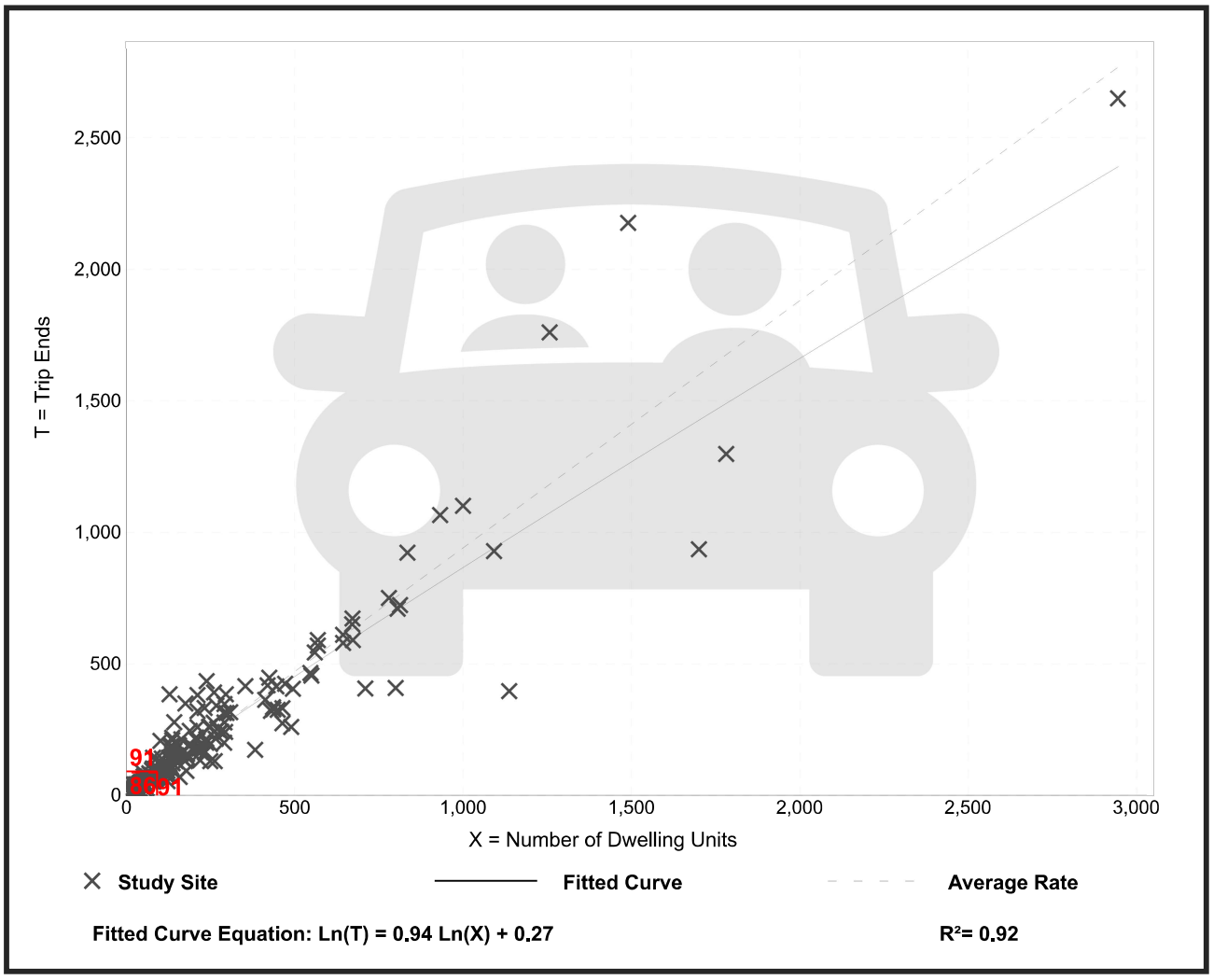
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	208
Avg. Num. of Dwelling Units:	248
Directional Distribution:	63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.94	0.35 - 2.98	0.31

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Single-Family Attached Housing
(215)

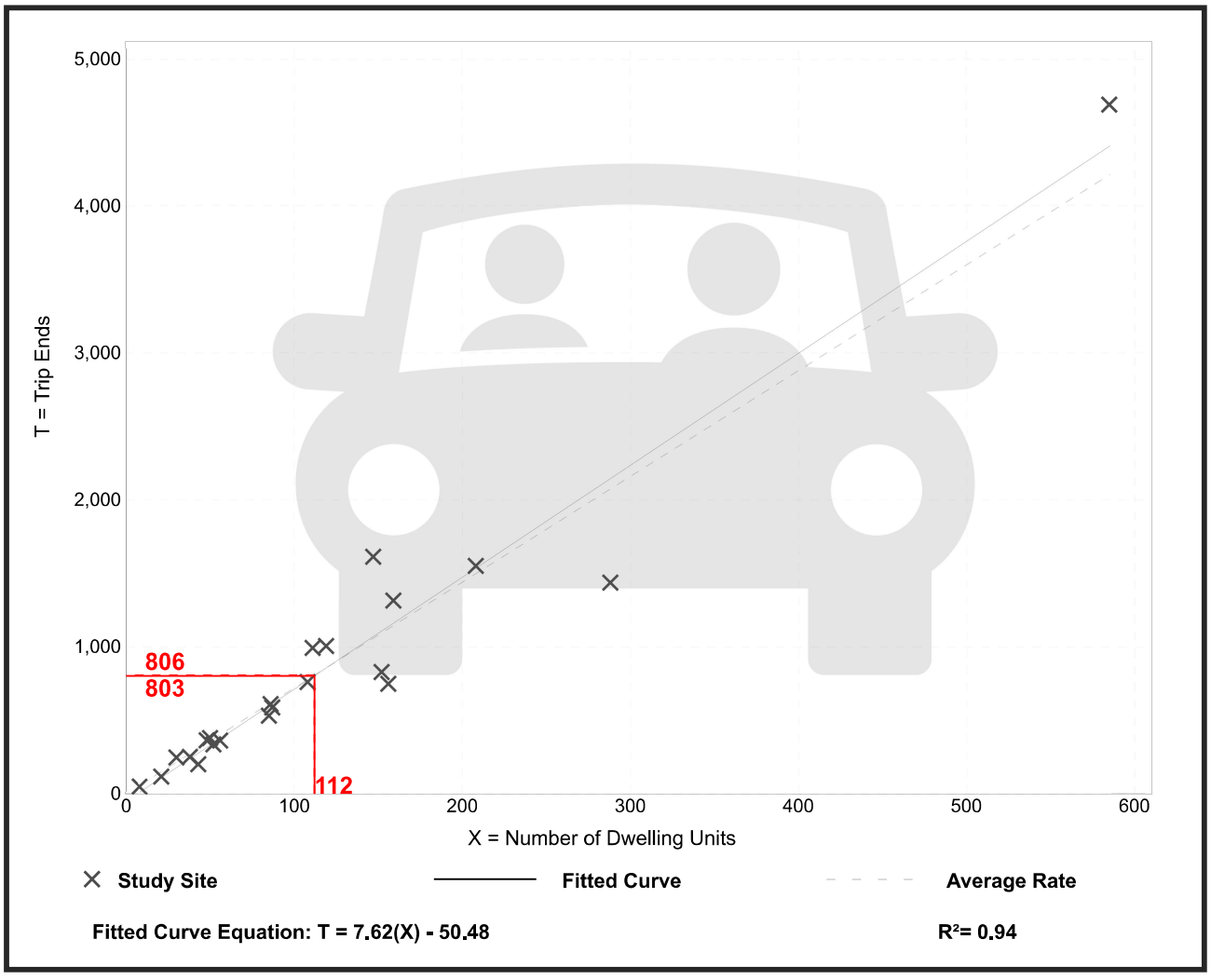
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 22
Avg. Num. of Dwelling Units: 120
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
7.20	4.70 - 10.97	1.61

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

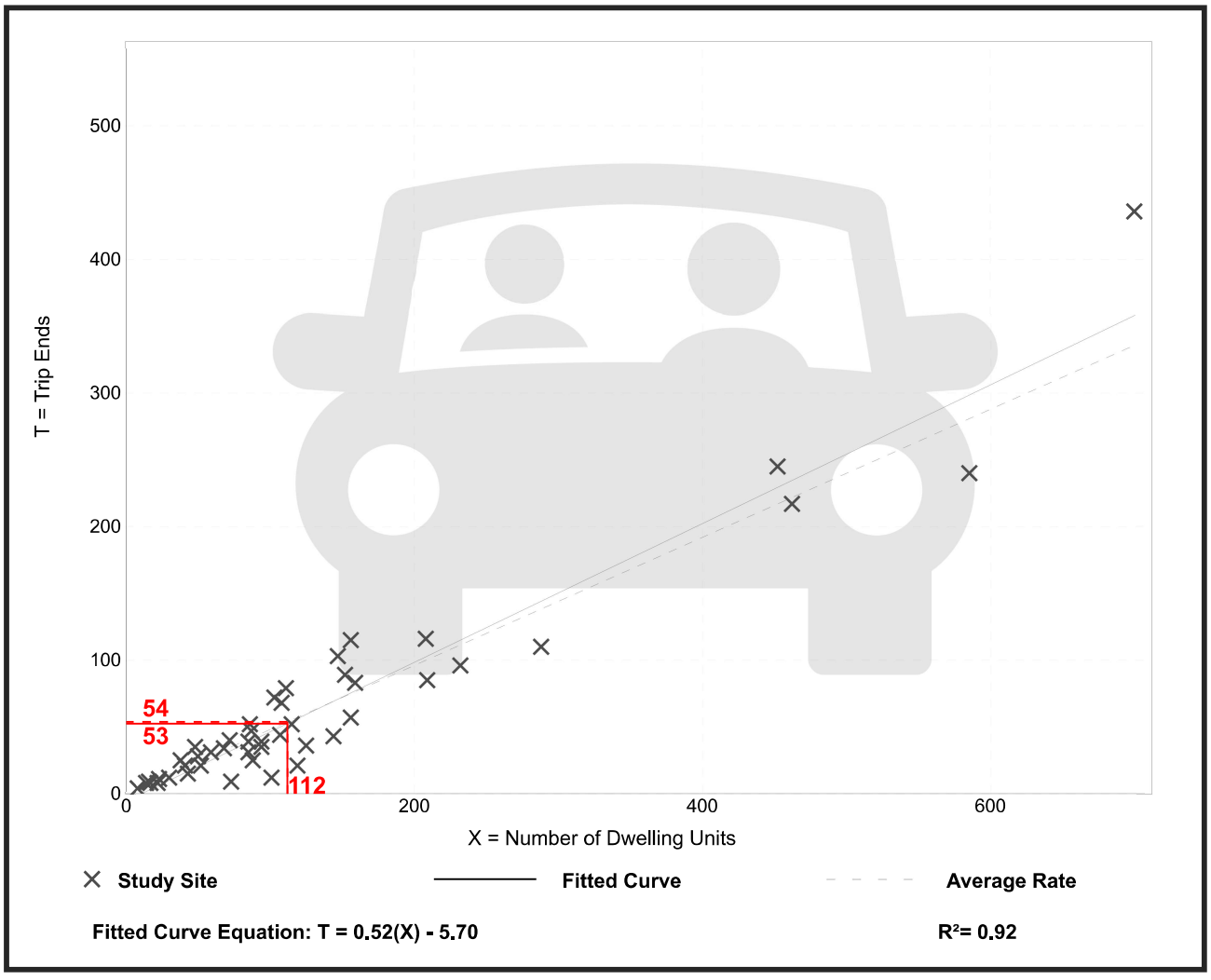
Single-Family Attached Housing
(215)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	46
Avg. Num. of Dwelling Units:	135
Directional Distribution:	25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.48	0.12 - 0.74	0.14

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

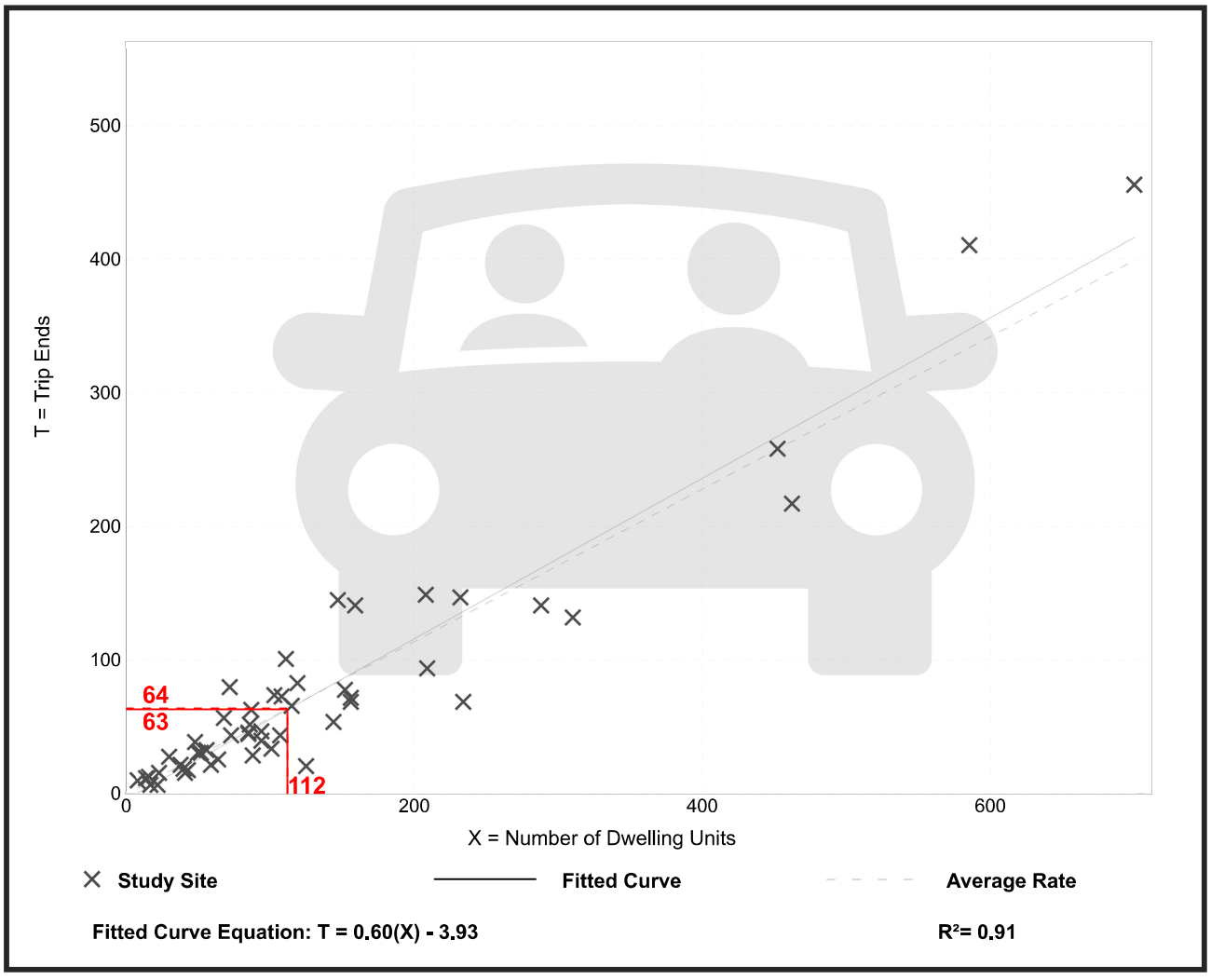
Single-Family Attached Housing
(215)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	51
Avg. Num. of Dwelling Units:	136
Directional Distribution:	59% entering, 41% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.57	0.17 - 1.25	0.18

Data Plot and Equation



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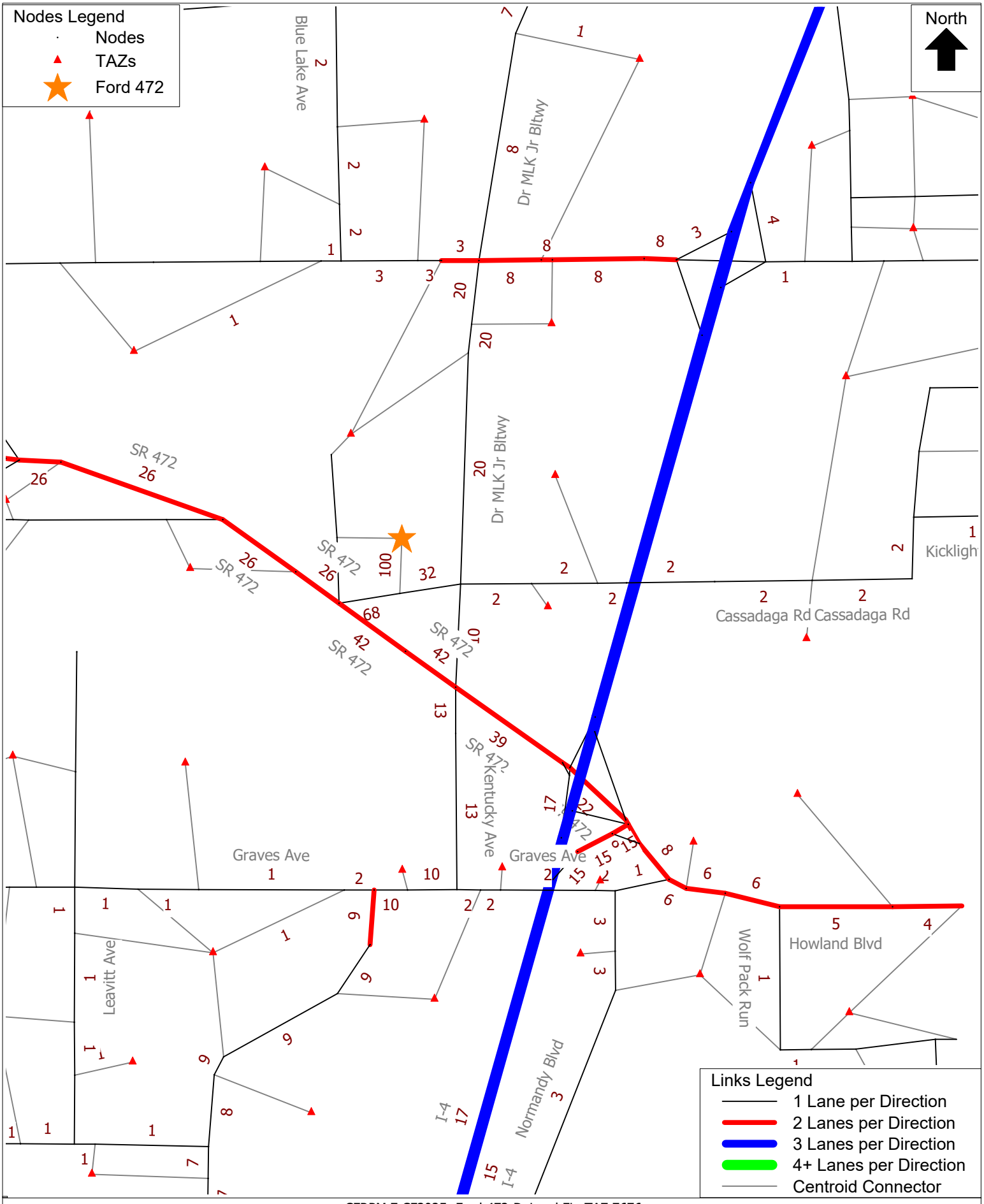

CFRPM 7 CF2025 -Ford 472-DeLand FL. TAZ 7676
Project Distribution
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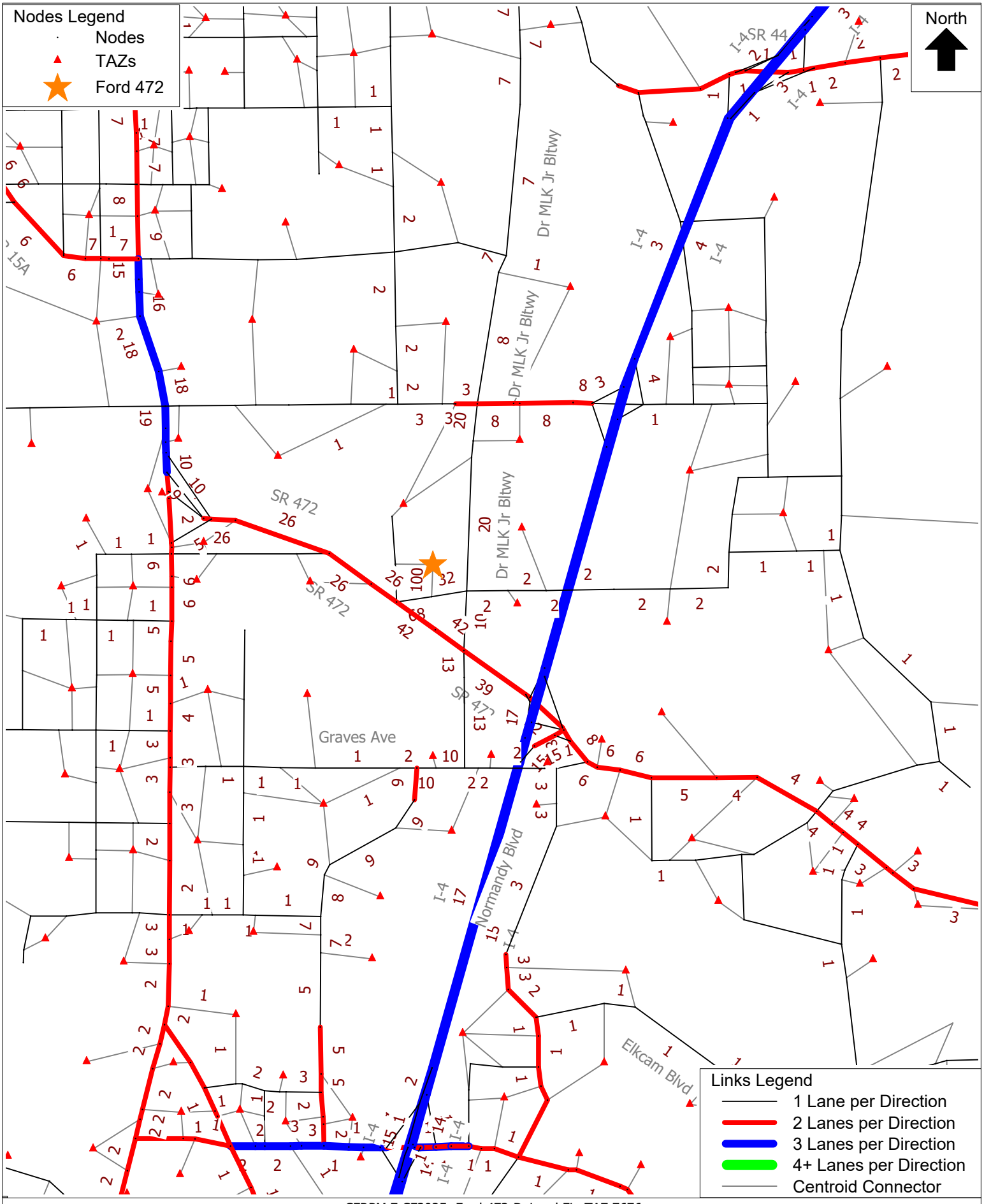

CFRPM 7 CF2025 -Ford 472-DeLand FL. TAZ 7676
Project Distribution
C:\FSUTMS\D5\CFRPM7\Base\CF_2025\P21145\OUTPUT\HWYLOAD_SL_AllDay_A25.NET Fri 20 Aug 2021

cube

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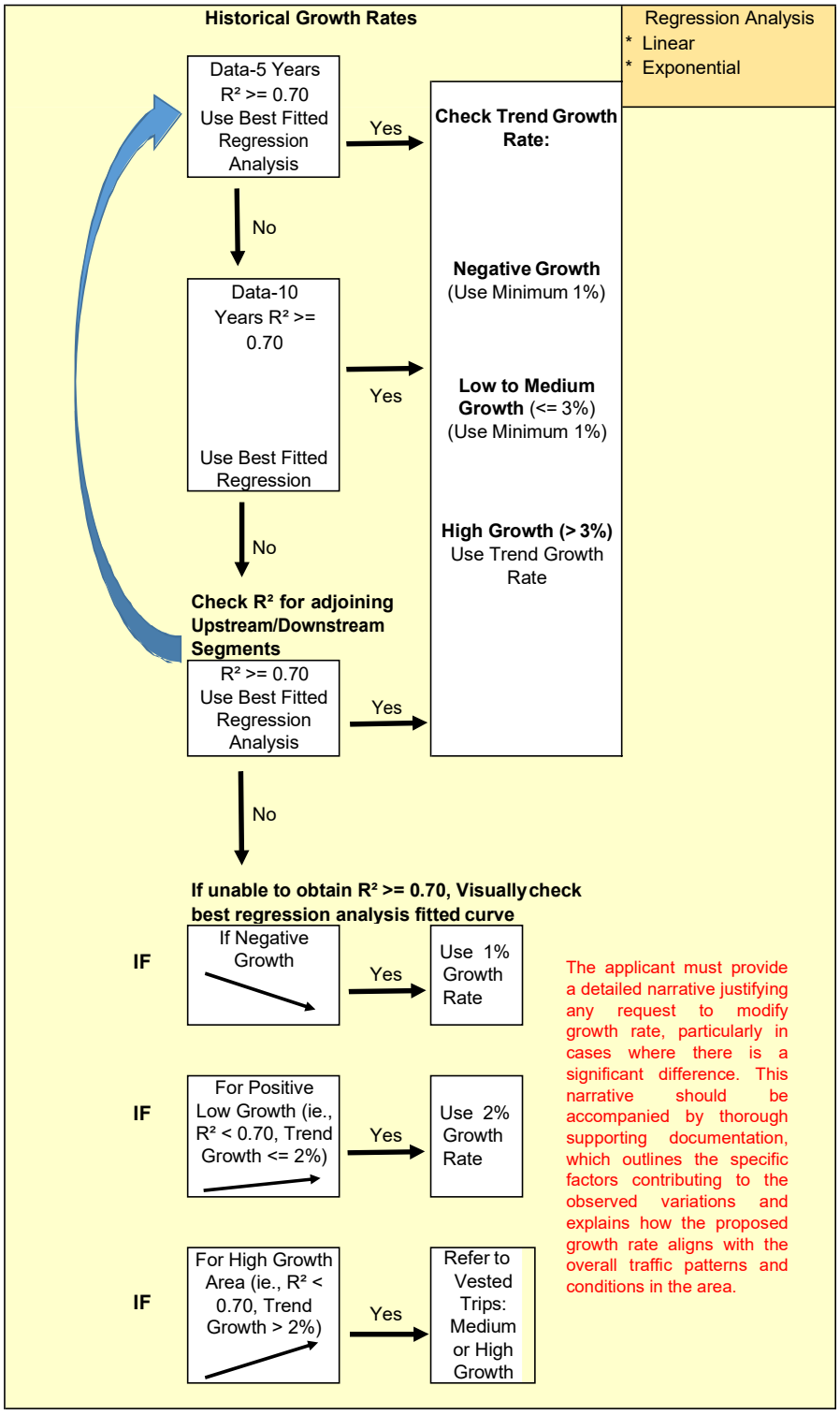
Road Name	Limits (From - To)	Count Station Number	Roadway Maintaining Agency	2021 Roadway on County's Thoroughfare	Distance (in miles)	Posted Speed	2020 QLOS Facility Type	2010 Federal Functional Classification	2011 AADT	2012 AADT	2013 AADT	2014 AADT	2015 AADT	2016 AADT	2017 AADT	2018 AADT	2019 AADT	2020 AADT	EST 2021 AADT	VC 2021 Allowable LOS	DAILY 2021 LOS Capacity	DAILY V/C Ratio	DAILY LOS	EST 2021 AM Peak	EST 2021 PM Peak	PEAK 2Way 2021 LOS Capacity	2021 No. of Lanes
Rd_Name	Limits	Cnt_Sta	MainRes	Tfare21	Distance	SPD2013	F_Type_20	Fun_Class_2010	AADT_11	AADT_12	AADT_13	AADT_14	AADT_15	AADT_16	AADT_17	AADT_18	AADT_19	AADT_20	AADT_21	VCA_LOS_21	Cap_21	VCRatio_20	LOS_20	AMPKHR_2	PMPKHR_2	2W_Cap_21	Lanes_20
I-4	Seminole Co. to Dirksen Dr.	484	FDOT	Yes	3.58	65	UA_FWIS_6L	Principal Arterial - Interstate - Urban	102,500	106,500	108,000	110,000	113,000	110,000	112,000	114,000	111,000	104,000		D	113,600	0.92	D			10,510	6
I-4	Dirksen Dr. to Saxon Blvd.	484	FDOT	Yes	2.79	70	UA_FWIS_6L	Principal Arterial - Interstate - Urban	93,600	93,900	96,400	99,800	106,510	108,000	-	112,700	111,000	104,000		D	113,600	0.92	D			10,510	6
I-4	Saxon Blvd. to SR 472	1003	FDOT	Yes	3.15	70	UA_FWIS_6L	Principal Arterial - Interstate - Urban	79,500	88,000	88,500	89,500	92,500	90,000	92,000	94,000	99,000	93,000		D	113,600	0.82	C			10,510	6
I-4	SR 472 to Orange Camp Rd.	485	FDOT	Yes	2.12	70	UA_FWIS_6L	Principal Arterial - Interstate - Urban	70,500	77,500	77,000	78,000	80,500	71,000	72,500	74,000	82,000	77,000		D	113,600	0.68	C			10,510	6
I-4	Orange Camp Rd. to SR 44	497	FDOT	Yes	2.56	70	UA_FWIS_6L	Principal Arterial - Interstate - Urban	62,000	55,500	60,500	65,500	71,500	74,500	77,000	79,000	80,000	78,000		D	113,600	0.69	C			10,510	6
I-4	SR 44 to US 92 Connector	486	FDOT	Yes	10.31	70	UA_FWIS_6L	Principal Arterial - Interstate - Rural	54,000	55,000	55,000	56,000	57,000	58,000	65,500	65,500	66,500	59,500		C	93,900	0.63	B			8,450	6
I-4	US 92 Connector to I-95	491	FDOT	Yes	3.52	70	UA_FWIS_6L	Principal Arterial - Interstate - Urban	43,000	40,000	40,000	41,000	41,500	42,000	46,000	47,000	48,000	51,000		D	113,600	0.45	B			10,510	6
I-95	Brevard Co. to SR 442/Indian River Blvd.	0436-B	FDOT	Yes	11.45	70	RUA_FW_6L	Principal Arterial - Interstate - Urban/Rural	30,500	30,000	26,500	27,500	36,000	29,000	29,000	30,500	33,000	32,000		C	69,000	0.46	B			7,250	6
I-95	SR 442/Indian River Blvd. to SR 44	503	FDOT	Yes	4.84	70	UA_FWIS_6L	Principal Arterial - Interstate - Urban	31,000	31,000	32,500	35,000	36,000	46,500	41,500	42,500	47,000	46,000		D	113,600	0.40	B			10,510	6
I-95	SR 44 to SR 421/Dunlawton Ave.	133	FDOT	Yes	6.99	70	UA_FWIS_6L	Principal Arterial - Interstate - Urban	36,600	36,900	36,600	37,700	37,000	40,700	-	-	24,000	43,000		D	113,600	0.38	B			10,510	6
I-95	SR 421/Dunlawton Ave. to I-4/SR 400/Beville	494	FDOT	Yes	4.57	70	UA_FWIS_6L	Principal Arterial - Interstate - Urban	44,500	42,500	45,000	46,500	47,500	49,500	51,500	-	68,000	74,500		D	113,600	0.66	C			10,510	6
I-95	I-4/SR 400/Beville Rd. to US 92/ISB	494	FDOT	Yes	1.26	65	UA_FWIS_6L + AUX	Principal Arterial - Interstate - Urban	74,500	71,500	71,500	75,500	77,000	66,500	62,500	66,500	68,000	74,500		D	113,600	0.66	C			10,510	6
I-95	US 92/ISB to LPGA Blvd.	494	FDOT	Yes	3.56	65	UA_FWIS_6L	Principal Arterial - Interstate - Urban	74,500	71,500	71,500	75,500	77,000	66,500	62,500	66,500	68,000	74,500		D	113,600	0.66	C			10,510	6
I-95	LPGA Blvd. to SR 40/Granada Blvd	534	FDOT	Yes	2.64	70	UA_FWIS_6L + AUX	Principal Arterial - Interstate - Urban	76,000	69,500	70,000	74,000	77,000	85,000	87,000	78,500	85,500	83,000		D	133,600	0.62	B			12,310	6
I-95	SR 40/Granada Blvd to US 1	495	FDOT	Yes	5.55	70	UA_FWIS_6L	Principal Arterial - Interstate - Urban	62,500	66,500	63,500	64,500	66,000	50,500	47,500	50,500	53,000	58,000		D	113,600	0.51	B			10,510	6
I-95	US 1 to Flagler Co. Line/Old Dixie	496	FDOT	Yes	5.00	70	UA_FWIS_6L	Principal Arterial - Interstate - Urban	60,500	64,500	69,500	70,500	72,500	66,000	62,000	65,500	67,000	73,500		D	113,600	0.65	C			10,510	6
US 1	Brevard Co. to Kennedy Pkwy.	531	FDOT	Yes	3.97	55	RUA_UFH_2W_4L	Principal Arterial - Other - Rural	3,400	3,100	3,100	3,200	3,400	3,600	3,400	3,400	4,200	4,000		C	31,200	0.13	B			4,270	4
US 1	Kennedy Pkwy. to Putnam Grove Rd.	531	FDOT	Yes	1.63	65	RDA_UFH_2W_4L	Principal Arterial - Other - Rural	3,400	3,100	3,100	3,200	3,400	3,600	3,400	3,400	4,200	4,000		C	42,300	0.09	B			4,020	4
US 1	Putnam Grove Rd. to Halifax Ave.	531	FDOT	Yes	0.57	65	RDA_UFH_2W_4L	Principal Arterial - Other - Rural	3,400	3,100	3,100	3,200	3,400	3,600	3,400	3,400	4,200	4,000		C	42,300	0.09	B			4,020	4
US 1	Halifax Ave. to H.H. Birch Rd.	9929	FDOT	Yes	2.05	45	RDA_UFH_2W_4L	Principal Arterial - Other - Rural	11,000	11,100	11,100	11,400	12,400	13,300	13,600	14,100	14,300	13,400		C	42,300	0.32	B			4,020	4
US 1	H.H. Birch Rd. to Volco Rd.	9929	FDOT	Yes	3.70	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	11,000	11,100	11,100	11,400	12,400	13,300	13,600	14,100	14,300	13,400		D	39,800	0.34	C			3,580	4
US 1	Volco Rd. to SR 442/Indian River Blvd.	27	FDOT	Yes	2.26	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	18,900	19,000	18,800	18,200	20,400	21,500	21,500	22,500	23,500	22,500		D	39,800	0.57	C			3,580	4
US 1	SR 442/Indian River Blvd. to Park Ave.	5170	FDOT	Yes	1.49	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	26,500	25,500	25,000	24,500	25,500	27,500	28,500	29,500	25,500	24,500		D	39,800	0.62	C			3,580	4
US 1	Park Ave. to 10th Ave.	5168	FDOT	Yes	1.00	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	27,000	25,500	25,000	25,000	26,000	26,000	26,000	27,000	26,000	25,000		D	39,800	0.63	C			3,580	4
US 1	10th Ave. to Canal St./Bus. SR 44	5154	FDOT	Yes	1.52	35	UA_SSAC2_2W_4L	Principal Arterial - Other - Urban	22,000	21,500	18,600	18,700	19,500	24,000	22,500	22,000	22,000	22,000		D	32,400	0.68	D			2,920	4
US 1	Canal St./Bus. SR 44 to Turnbull Bay Rd.	5155	FDOT	Yes	1.34	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	22,500	24,500	22,000	23,000	24,000	26,500	24,500	25,500	26,500	24,000		D	39,800	0.60	C			3,580	4
US 1	Turnbull Bay Rd. to Art Center Ave.	5159	FDOT	Yes	2.24	55	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	23,500	22,500	23,500	24,500	25,500	26,500	27,500	26,000	26,000	25,000		D	39,800	0.63	C			3,580	4
US 1	Art Center Ave. to SR 5A/Nova Rd.	13	FDOT	Yes	3.19	45	UA_UFH_2W_4L_D	Principal Arterial - Other - Urban	19,400	19,600	20,500	21,500	21,500	25,000	26,000	25,500	24,500	23,500		D	66,200	0.35	B			5,960	4
US 1	SR 5A/Nova Rd. to Commonwealth	152	FDOT	Yes	1.23	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	14,100	13,800	13,900	13,200	13,800	15,400	15,700	15,700	15,900	15,500		D	39,800	0.39	C			3,580	4
US 1	Commonweath to SR 421/Dunlawton Ave.	5057	FDOT	Yes	1.37	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	20,500	19,600	20,300	20,500	21,500	20,500	20,400	21,000	21,000	20,200		D	39,800	0.51	C			3,580	4
US 1	SR 421/Dunlawton Ave. to Reed Canal Rd.	213	FDOT	Yes	1.18	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	24,500	24,500	24,500	26,500	25,000	28,500	25,500	26,500	25,000	24,000		D	39,800	0.60	C			3,580	4
US 1	Reed Canal Rd. to Big Tree Rd.	5061	FDOT	Yes	1.17	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	27,500	25,000	26,500	27,500	28,500	27,000	28,000	27,500	27,500	23,000		D	39,800	0.58	C			3,580	4
US 1	Big Tree Rd. to Bellewood Ave.	5063	FDOT	Yes	0.45	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	26,500	24,500	27,000	29,000	30,000	-	-	-	24,500	23,500		D	39,800	0.59	C			3,580	4
US 1	Bellewood Ave. to SR 400/Beville Rd	5063	FDOT	Yes	0.27	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	28,000	27,500	26,000	29,000	30,000	26,500	26,000	27,000	24,500	23,500		D	39,800	0.59	C			3,580	4
US 1	SR 400/Beville Rd to Bellevue Ave.	452	FDOT	Yes	1.05	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	32,500	30,000	29,500	33,000	32,000	34,000	30,500	33,000	33,000	32,000		D	39,800	0.80	C			3,580	4
US 1	Bellevue Ave. to Orange Ave.	5066	FDOT	Yes	0.72	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	28,000	29,500	28,000	29,500	30,500	28,500	29,000	30,000	30,500	29,500		D	39,800	0.74	C			3,580	4
US 1	Orange Ave. to US 92/ISB	5070	FDOT	Yes	0.30	35	UA_SSAC2_2W_4L	Principal Arterial - Other - Urban	28,000	26,000	29,000	26,500	27,500	31,000	28,500	29,500	31,000	30,000		D	32,400	0.93	D			2,920	4
US 1	US 92/ISB to Fairview/Main St.	5074	FDOT	Yes	0.66	35	UA_SSAC2_2W_4L	Principal Arterial - Other - Urban	24,000	23,500	26,000	30,500	31,500	-	-	-	28,000	27,000		D	32,400	0.83	D			2,920	4
US 1	Fairview/Main St. to SR 430/Mason Ave.	5074	FDOT	Yes	0.54	35	UA_SSAC2_2W_4L	Principal Arterial - Other - Urban	27,000	27,000	27,500	27,000	28,000	27,000	27,000	26,000	28,000	27,000		D	32,400	0.83	D			2,920	4
US 1	SR 430/Mason Ave. to LPGA Blvd.	1018	FDOT	Yes	1.47	35	UA_SSAC2_2W_4L	Principal Arterial - Other - Urban	26,000	21,500	24,000	24,500	23,500	24,500	24,000	25,500	25,500	24,000		D	32,400	0.74	D			2,920	4
US 1	LPGA Blvd. to Hand Ave.	1018	FDOT	Yes	2.00	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	26,000	21,500	24,000	24,500	23,500	24,500	24,000	25,500	25,500	24,000		D	39,800	0.60	C			3,580	4
US 1	Hand Ave. to SR 40/Granada Blvd.	5142	FDOT	Yes	0.84	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	21,500	19,000	20,300	20,800	21,500	22,000	23,000	23,500	24,000	23,000		D	39,800	0.58	C			3,580	4
US 1	SR 40/Granada Blvd. to SR 5A/Nova Rd.	1019	FDOT	Yes	1.83	55	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	16,300	16,400	16,600	17,500	18,100	19,300	20,000	19,100	19,300	19,500		D	39,800	0.49	C			3,580	4
US 1	SR 5A/Nova Rd. to Airport Rd.	100	FDOT	Yes	1.13	55	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	26,000	22,500	25,500	26,500	26,000	28,500	29,500	30,500	32,000	31,000		D	39,800	0.78	C			3,580	4
US 1	Airport Rd. to I-95	351	FDOT	Yes	2.81	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	20,500	19,400	20,200	21,000	22,500	23,000	24,500	23,500	23,500	22,500		D	39,800	0.57	C			3,580	4
US 1	I-95. to Flagler Co Line	536	FDOT	Yes	1.53	60	UA_UFH_2W_4L_D	Principal Arterial - Other - Urban	15,100	13,400	14,300	14,200	14,800	16,000	16,800	17,200	18,200	17,600		D	66,200	0.27	B			5,960	4
US 17/92	Seminole Co. to Barwick Rd.	0040-S	FDOT	Yes	0.52	50	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	19,800	19,300	22,000	22,500	26,500	27,500	29,500	31,000	33,000	32,000		D	39,800	0.80	C			3,580	4
US 17/92	Barwick Rd to Ft. Florida Rd.	0040-S	FDOT	Yes	0.76	50	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	19,800	19,300	22,000	22,500	26,500	27,500	29,500	31,000	33,000	32,000		D	39,800	0.80	C			3,580	4
US 17/92	Ft. Florida Rd. to Dirksen Dr.	101	FDOT	Yes	0.72	50	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	19,800	19,300	23,000	24,000	23,000	28,500	28,000	30,000	30,000	29,000		D	39,800	0.73	C			3,580	4
US 17/92	Dirksen Dr. to Valencia Rd.	479.1	FDOT	Yes	1.05	50	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	21,000	21,500	21,500	21,000	22,500	22,000	24,000	25,000	24,500	23,500		D	39,800	0.59	C			3,580	4
US 17/92	Valencia Rd to Highbanks Rd.	7	FDOT	Yes	0.74	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	21,000	21,500	21,500	21,500	24,000	24,500	25,500	25,500	25,500	24,500		D	39,800	0.62	C			3,580	4
US 17/92	Highbanks Rd. to DeBary Plantation Blvd	8	FDOT	Yes	0.92	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	27,500	26,000	22,000	23,000	24,500	25,500	25,000	25,000	25,000	24,000		D	39,800	0.60	C			3,580	4
US 17/92	DeBary Plantation Blvd to Saxon Blvd.	509	FDOT	Yes	0.61	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	27,500	26,000	26,000	25,500	27,500	30,500	29,500	32,000	31,500	30,500		D	39,800	0.77	C			3,580	4
US 17/92	Saxon Blvd. to Enterprise Rd.	539	FDOT	Yes	0.80	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	27,500	26,000	17,600	18,600	19,400	21,000	22,000	23,000	24,000	23,000		D	39,800	0.58	C			3,580	4
US 17/92	Enterprise Rd. to Rhode Island Ave.	444	FDOT	Yes	0.75	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	32,500	29,500	30,500	29,000	32,000	31,500	31,000	33,000	32,000	31,000		D	39,800	0.78	C			3,580	4
US 17/92	Rhode Island Ave. to Graves Ave.	5165	FDOT	Yes	1.01	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	29,000	26,500	29,000	27,500	28,500	31,000	32,000	32,000	32,000	31,000		D	39,800	0.78	C			3,580	4
US 17/92	Graves Ave. to New York Ave.	5166	FDOT	Yes	1.00	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	29,000	27,500	26,500	27,500	28,500	29,500	29,500	30,500	31,000	30,000		D	39,800	0.75	C			3,580	4
US 17/92	New York Ave to SR 472	445	FDOT	Yes	0.75	55	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	27,000	26,000	27,000	25,000	28,000	29,000	30,000	30,000	30,000	29,000		D	39,800	0.73	C			3,580	4
US 17/92	SR 472 to SR 15A/Taylor Rd.	1004	FDOT	Yes	1.75	45	UA_SSAC1_2W_6L	Principal Arterial - Other - Urban	44,000	41,000	45,000	42,000	47,000	47,000	47,500	55,500	54,500	52,500		D	59,900	0.88	C			5,390	6
US 17/92	SR 15A/Taylor Rd. to Beresford Ave.	1006	FDOT	Yes	1.02	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	27,500	27,000	27,000	27,500	23,500	33,500	30,000	31,000	32,000	31,000		E	42,190	0.73	C			3,790	4
US 17/92	Beresford Ave. to Euclid Ave.	5173	FDOT	Yes	0.49	35	UA_SSAC2_2W_2L	Principal Arterial - Other - Urban	18,000	16,800	16,600	16,400	17,000	16,300	18,500	19,300	19,400	18,700		E	16,380	1.14	F			1,480	2
US 17/92	Euclid Ave. to SR 44/New York Ave.	5004	FDOT	Yes	0.49	30	UA_SSAC2_2W_2L	Principal Arterial - Other - Urban	16,600	15,100	16,300	14,800	15,400	17,200	17,800	13,000	13,200	12,800		E	15,600	0.82	D			1,410	2
US 17/92	SR 44/New York Ave. to Plymouth Ave.	5008	FDOT	Yes	1.01	30	UA_SSAC2_2W_2L	Principal Arterial - Other - Urban	16,400	16,000	16,300	15,500	16,100	18,200	16,200	19,100	19,300	18,700		DeLand	19,150	0.98	DeLand			1,410	2
US 17/92	Plymouth Ave. to US 92/ISB	66	FDOT	Yes	0.83	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	21,500	22,500	20,500	21,000	22,000	23,000	21,500	22,500	23,000	22,000		E	42,190	0.52	C			3,790	4
US 17	US 92 to Mercers Fernery Rd.	1000	FDOT	Yes	0.68	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	30,000	27,500	29,000	29,000	30,000	33,500	29,000	37,500	33,000	32,000		E	42,190	0.76	C			3,790	4
US 17	Mercers Fernery Rd. to Glenwood Rd.	69	FDOT	Yes	0.51	55	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	21,000	20,500	20,500	19,500	21,000	24,500	25,500	26,000	26,000	25,000		D	39,800	0.63	C			3,580	4
US 17	Glenwood Rd. to SR 15A/CR 15A	236	FDOT	Yes	1.64	55	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	14,500	13,700	13,500	13,500	14,800	14,800	17,300	15,200	15,000	14,600		D	39,800	0.37	C			3,580	4
US 17	SR 15A/CR 15A to Reynolds Rd	476	FDOT	Yes	2.76	45	UA_UFH_2W_4L_D	Principal Arterial - Other - Urban	16,400	16,000	15,800	16,200	17,200	17,200	18,500	18,100	18,300	17,700		D	66,200	0.27	B			5,960	4
US 17	Reynolds Rd to Spring Garden Ranch Rd.	519	FDOT	Yes	1.09	55	UA_UFH_2W_2L_U	Principal Arterial - Other - Urban	10,100	10,200	10,100	10,000	10,400	11,400	11,600	12,000	11,600	11,200		D	24,200	0.46	B			2,180	2
US 17	Spring Garden Ranch Rd. to Lake Winona Rd	104	FDOT	Yes	0.56	45	UA_UFH_2W_2L_U	Principal Arterial - Other - Urban	7,500	7,400	7,300	7,400	8,100	8,400	8,600	9,000	9,600	9,400		D	24,200	0.39	B			2,180	2
US 17	Lake Winona Rd. to SR 40	104	FDOT	Yes	4.93	45	RUA_UFH_2W_2L_	Principal Arterial - Other - Rural	7,500	7,400	7,300	7,400	8,100	8,400	8,600	9,000	9,600	9,400		C	18,000	0.52	B			1,620	2
US 17	SR 40 to Washington Ave.	448	FDOT	Yes	5.02	45	RDA_UFH_2W_2L_	Principal Arterial - Other - Rural	6,300	5,700	6,200	5,500	6,100	6,200	6,600	7,400	7,600	7,400		C	15,700	0.47	B			1,490	2
US 17	Washington Ave. to CR 305/Lk George Rd	46	FDOT	Yes	5.28	55	RDA_UFH_2W_2L_	Principal Arterial - Other - Rural	4,600	4,300	4,500	4,400	4,900	5,000	5,400	5,300	6,100	5,900		C	15,700	0.38	B			1,490	2
US 17	CR 305/Lk George Rd to Putnam County	280	FDOT	Yes	3.41	60	RUA_UFH_2W_2L_	Principal Arterial - Other - Rural	4,400	4,400	4,400	4,200	4,800	5,200	5,400	5,900	5,900	5,700		C	18,000	0.32	B			1,620	2
US 92	US 17 to Jacobs Rd.	1001	FDOT	Yes	1.41	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	25,000	24,500	25,500	24,500	25,500	28,000	28,500	28,500	24,500	26,500		D	39,800	0.67	C			3,580	4
US 92	Jacobs Rd. to Kepler Rd.	5	FDOT	Yes	1.23	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	25,000	22,500	22,500	22,500	26,000	26,000	25,000	25,000	25,000	24,000		D	39,800	0.60	C			3,580	4
US 92	Kepler Rd. to Old Daytona Rd.	9925	FDOT	Yes	1.32	65	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	13,400	13,000	13,000	14,100	15,100	16,400	16,200	16,200	16,200	14,200		D	39,800	0.36	C			3,580	4
US 92	Old Daytona Rd. to Red John Dr.	9925	FDOT	Yes	7.20	55	RUA_UFH_2W_4L_	Principal Arterial - Other - Urban/Rural	13,400	13,000	13,000	14,100	15,100	16,400	16,200	16,200	16,200	14,200		C	44,900	0.32	B			4,270	4
US 92	Red John Dr. to I-4 EB Ramp	478.2	FDOT	Yes	2.26	55	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	20,000	19,800	19,800	16,400	17,600	18,600	19,100	18,400	19,500	18,900		D	39,800	0.47	C			3,580	4
US 92	I-4 EB Ramp to LPGA Blvd.	478.1	FDOT	Yes	0.58	55	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	20,000	19,800	25,200	16,400	17,600	18,600	19,100	18,400	19,500	18,900		D	39,800	0.47	C			3,580	4
US 92	LPGA Blvd. to I-95	532	FDOT	Yes	2.03	55	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	27,000	24,500	25,000	26,500	27,000	32,000	30,000	29,500	31,000	30,000		D	39,800	0.75	C			3,580	4
US 92	I-95 to Williamson Blvd.	508	FDOT	Yes	0.71	50	UA_SSAC1_2W_8L	Principal Arterial - Other - Urban	40,500	40,500	37,500	43,000	45,000	39,000	39,000	46,500	47,500	46,500		C	78,800	0.59	C			7,090	8
US 92	Williamson Blvd. to Bill France Blvd.	5172	FDOT	Yes	1.13	50	UA_SSAC1_2W_8L	Principal Arterial - Other - Urban	43,000	41,500	42,000	43,500	41,000	50,500	40,500	41,500	46,000	45,000		C	78,800	0.57	C			7,090	8
US 92	Bill France Blvd. to SR 483/Clyde Morris Blvd.	5094	FDOT	Yes	0.86	50	UA_SSAC1_2W_8L	Principal Arterial - Other - Urban	39,500	35,500	36,000	35,500	36,500	37,500	38,500	38,000	39,000	38,000		D	78,800	0.48	C			7,210	8
US 92	SR 483/Clyde Morris Blvd. to SR 5A/Nova Rd.	5096	FDOT	Yes	0.93	45	UA_SSAC1_2W_6L	Principal Arterial - Other - Urban	43,000	39,000	36,000	36,500	37,500	44,500	41,500	40,000	41,000	40,000		D	59,900	0.67	C			5,390	6
US 92	SR 5A/Nova Rd. to Martin Luther King Blvd.	5099	FDOT	Yes	0.78	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	25,500	27,500	26,000	28,500	29,500	28,000	27,500	28,500	29,000	28,000		D	39,800	0.70	C			3,580	4
US 92	Martin Luther King Blvd. to US 1	5104	FDOT	Yes	0.38	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	25,500	26,000	22,000	24,500	25,500	26,000	27,000	-	23,500	22,500		D	39,800	0.57	C			3,580	4
US 92	US 1 to Beach St.	5105	FDOT	Yes	0.23	30	UA_SSAC2_2W_4L	Principal Arterial - Other - Urban	17,500	17,300	15,200	18,100	18,800	23,500	22,500	23,000	23,000	15,000		D	32,400	0.46	D			2,920	4
US 92	Beach St. to SR 441/Peninsula Dr.	337	FDOT	Yes	0.88	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	13,500	18,100	13,200	14,300	16,100	22,300	27,000	25,000	23,000	22,000		D	39,800	0.55	C			3,580	4
US 92	SR 441/Peninsula Dr. to SR A1A/Atlantic	5109	FDOT	Yes	0.30	30	UA_SSAC2_2W_4L	Principal Arterial - Other - Urban	8,900	9,900	8,200	7,900	8,200	11,700	12,400	14,300	14,500	14,100		D	32,400	0.44	C			2,920	4
SR A1A - Dunlawton Ave.	US 1 to SR A1A/Atlantic Ave.	427	FDOT	Yes	1.25	35	UA_SSAC2_2W_4L	Principal Arterial - Other - Urban	27,000	26,000	26,000	28,000	30,000	30,500	22,500	23,500	25,500

SR A1A - Atlantic Ave. North	Harvard Dr. to SR 40/Granada Blvd.	5124	FDOT		Yes	1.70	35	UA_SSAC2_2W_4L	Principal Arterial - Other - Urban	16,600	17,600	16,400	15,600	16,200	17,200	17,800	19,400	19,500	18,900		D	32,400	0.58	D			2,920	4
SR A1A - Ocean Shore Blvd.	SR 40/Granada Blvd. to Neptune Ave	5125	FDOT		Yes	0.70	35	UA_UFH_2W_2L_U	Principal Arterial - Other - Urban	15,600	12,300	14,000	16,600	17,200	16,200	17,000	17,400	15,900	15,500		D	24,200	0.64	C			2,180	2
SR A1A - Ocean Shore Blvd.	Neptune Ave to Ormond Mall	174	FDOT		Yes	1.69	40	UA_UFH_2W_2L_U	Principal Arterial - Other - Urban	18,500	15,100	15,400	15,700	16,000	15,800	16,400	15,000	15,200	14,700		D	24,200	0.61	C			2,180	2
SR A1A - Ocean Shore Blvd.	Ormond Mall to High Bridge Rd	368	FDOT		Yes	6.42	55	UA_UFH_2W_2L_U	Principal Arterial - Other - Urban	15,500	15,300	15,800	15,500	16,100	15,500	16,200	16,600	16,700	16,300		D	24,200	0.67	C			2,180	2
SR A1A - Ocean Shore Blvd.	High Bridge Rd toFlagler Co Line	368	FDOT		Yes	1.26	55	UA_UFH_2W_2L_U	Principal Arterial - Other - Urban	15,500	15,300	15,800	15,500	16,100	15,500	16,200	16,600	16,700	16,300		D	24,200	0.67	C			2,180	2
SR 5A - Nova Rd.	US 1. to Spruce Creek Rd	458	FDOT		Yes	1.44	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	16,800	16,300	16,800	17,900	17,200	17,800	19,100	18,800	21,500	20,500		D	39,800	0.52	C			3,580	4
SR 5A - Nova Rd.	Spruce Creek Rd. to SR 421/Dunlawton Ave.	1016	FDOT		Yes	1.08	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	23,500	25,000	24,500	26,000	27,000	26,000	29,500	25,000	28,000	27,000		D	39,800	0.68	C			3,580	4
SR 5A - Nova Rd.	SR 421/Dunlawton Ave. to Madeline Ave	1017.2	FDOT		Yes	1.30	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	26,500	25,500	26,000	27,000	28,000	26,500	27,500	27,000	27,000	18,000		D	39,800	0.45	C			3,580	4
SR 5A - Nova Rd.	Madeline Ave. to Big Tree	363.2	FDOT		Yes	1.61	50	UA_SSAC1_2W_6L	Principal Arterial - Other - Urban	27,000	25,500	26,500	26,500	26,500	27,000	26,000	27,000	29,500	28,500		D	49,850	0.57	C			4,490	5
SR 5A - Nova Rd.	Big Tree to SR 400/Beville Rd.	363.1	FDOT		Yes	0.70	50	UA_SSAC1_2W_6L	Principal Arterial - Other - Urban	27,000	25,500	26,500	26,500	26,500	27,000	26,000	27,000	29,500	28,500		D	59,900	0.48	C			5,390	6
SR 5A - Nova Rd.	SR 400/Beville Rd. to Bellevue Ave.	348	FDOT		Yes	1.00	50	UA_SSAC1_2W_6L	Principal Arterial - Other - Urban	34,000	33,000	33,000	34,500	35,500	37,000	36,500	37,500	36,000	35,000		D	59,900	0.58	C			5,390	6
SR 5A - Nova Rd.	Bellevue Ave. to US 92/ISB	5090	FDOT		Yes	1.07	45	UA_SSAC1_2W_6L	Principal Arterial - Other - Urban	32,500	32,000	33,000	32,500	34,500	36,000	35,000	36,000	37,000	35,000		D	59,900	0.58	C			5,390	6
SR 5A - Nova Rd.	US 92/ISB to SR 430/Mason Ave.	5088	FDOT		Yes	1.22	45	UA_SSAC1_2W_6L	Principal Arterial - Other - Urban	30,000	30,000	31,000	31,500	31,000	32,000	36,000	31,500	35,500	34,500		D	59,900	0.58	C			5,390	6
SR 5A - Nova Rd.	SR 430/Mason Blvd to LPGA Blvd.	366	FDOT		Yes	1.47	45	UA_SSAC1_2W_6L	Principal Arterial - Other - Urban	27,500	27,000	25,500	26,500	28,500	29,000	34,500	35,500	32,500	31,500		D	59,900	0.53	C			5,390	6
SR 5A - Nova Rd.	LPGA Blvd. to Hand Ave.	528	FDOT		Yes	2.06	45	UA_SSAC1_2W_6L	Principal Arterial - Other - Urban	28,000	28,500	26,000	26,500	27,500	29,000	34,000	26,500	29,000	28,000		D	59,900	0.47	C			5,390	6
SR 5A - Nova Rd.	Hand Ave. to SR 40/Granada Ave	510	FDOT		Yes	1.15	45	UA_SSAC1_2W_6L	Principal Arterial - Other - Urban	24,000	28,500	27,500	25,500	26,500	27,500	28,000	29,000	28,500	27,500		D	59,900	0.46	C			5,390	6
SR 5A - Nova Rd.	SR 40/Granada Ave to Wilmette Ave.	518	FDOT		Yes	0.51	45	UA_SSAC1_2W_6L	Principal Arterial - Other - Urban	24,000	23,500	23,500	23,500	24,500	24,000	25,500	25,500	25,500	21,500		D	59,900	0.36	C			5,390	6
SR 5A - Nova Rd.	Wilmette Ave. to US 1	459	FDOT		Yes	1.00	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	12,800	12,300	12,400	13,100	13,600	14,000	13,600	14,300	14,800	14,400		D	39,800	0.36	C			3,580	4
SR 11	US 17 to CR 15A	4	FDOT		Yes	2.45	55	UA_UFH_2W_2L_U	Principal Arterial - Other - Urban	6,100	6,000	6,300	6,200	6,400	7,700	6,900	7,100	6,700	6,500		D	24,200	0.27	B			2,180	2
SR 11	CR 15A to SR 40	527	FDOT		Yes	9.19	60	RUA_UFH_2W_2L	Principal Arterial - Other - Rural	2,700	2,700	2,800	2,900	3,100	3,400	3,700	3,900	3,900	3,900		C	6,450	0.60	C			620	2
SR 11	SR 40 to Flagler Co. Line	0009-F	FDOT		Yes	2.42	60	RUA_UFH_2W_2L	Principal Arterial - Other - Rural	2,000	2,200	2,100	2,400	2,400	2,800	2,800	2,700	2,700	3,500		C	6,450	0.54	C			620	2
SR 15A	US 17/92/Taylor to New Hampshire Ave.	1005	FDOT		Yes	1.17	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	19,700	19,000	20,500	21,000	21,900	22,500	25,000	26,000	26,000	25,000		D	39,800	0.63	C			3,580	4
SR 15A	New Hampshire Ave. to Beresford Ave.	6	FDOT		Yes	0.59	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	21,000	20,500	21,000	20,100	23,000	23,500	24,000	26,000	26,000	25,000		D	39,800	0.63	C			3,580	4
SR 15A	Beresford Ave. to SR 44/New York Ave.	474	FDOT		Yes	1.00	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	21,500	21,000	22,000	22,000	24,000	25,000	25,500	26,500	27,000	26,000		D	39,800	0.65	C			3,580	4
SR 15A	SR 44/New York Ave. to Plymouth Ave.	463	FDOT		Yes	1.01	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	21,900	23,000	23,000	25,000	25,000	26,000	27,000	28,000	28,000	27,000		D	39,800	0.68	C			3,580	4
SR 15A	Plymouth Ave. to CR 92	537	FDOT		Yes	0.83	50	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	22,500	18,900	21,500	20,800	21,500	21,800	25,500	24,000	25,000	24,000		D	39,800	0.60	C			3,580	4
SR 15A	CR 92 to Glenwood Rd.	465	FDOT		Yes	1.20	50	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	13,800	13,100	13,600	13,400	14,000	14,700	15,600	17,400	17,600	13,600		D	39,800	0.34	C			3,580	4
SR 15A	Glenwood Rd. to US 17	466	FDOT		Yes	1.11	50	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	10,300	10,200	10,600	10,500	10,900	10,900	12,200	12,600	12,600	12,200		D	39,800	0.31	C			3,580	4
SR 40	Lake County to Emporia Rd.	533	FDOT		Yes	0.86	55	RDA_UFH_2W_2L	Principal Arterial - Other - Rural	7,000	6,800	6,300	6,800	7,000	8,700	8,500	9,800	8,700	8,500		C	15,700	0.54	B			1,490	2
SR 40	Emporia Rd. to US 17	344	FDOT		Yes	5.58	55	RDA_UFH_2W_2L	Principal Arterial - Other - Rural	6,500	6,600	5,900	6,200	7,600	8,500	8,000	8,200	8,400	8,200		C	15,700	0.52	B			1,490	2
SR 40	US 17 to SR 11	530	FDOT		Yes	6.69	60	RUA_UFH_2W_2L	Principal Arterial - Other - Rural	4,800	5,400	5,500	5,600	5,800	6,900	6,800	7,200	6,900	6,700		C	8,600	0.78	C			820	2
SR 40	SR 11 to Pinto Lane	530	FDOT		Yes	6.83	60	RUA_UFH_2W_2L	Principal Arterial - Other - Rural	4,800	5,400	5,500	5,600	5,800	6,900	6,800	7,200	6,900	6,700		C	8,600	0.78	C			820	2
SR 40	Pinto Lane to Rima Ridge Rd (urban boundar	523	FDOT		Yes	1.25	60	RDA_UFH_2W_4L	Principal Arterial - Other - Urban/Rural	10,600	9,400	9,400	10,000	10,400	11,100	11,800	11,600	13,700	13,300		C	#REF!	#REF!	B			4,020	4
SR 40	Rima Ridge Rd to Tymber Creek Rd.	499	FDOT		Yes	4.36	60	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	27,000	26,500	27,000	27,000	28,000	30,500	35,000	31,500	31,500	26,500		D	39,800	0.67	C			3,580	4
SR 40	Tymber Creek Rd. to I-95	499	FDOT		Yes	0.79	50	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	27,000	26,500	27,000	27,000	28,000	30,500	35,000	31,500	31,500	26,500		D	39,800	0.67	C			3,580	4
SR 40	I-95 to Clyde Morris Blvd.	522	FDOT		Yes	1.58	50	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	36,000	33,000	33,500	34,500	35,500	35,500	38,000	34,500	35,500	36,000		D	39,800	0.90	C			3,580	4
SR 40	Clyde Morris Blvd. to SR 5A/Nova Rd.	489	FDOT		Yes	1.06	50	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	33,000	33,000	32,000	33,000	33,000	32,000	34,000	34,500	36,500	35,500		D	39,800	0.89	C			3,580	4
SR 40	SR5A/Nova Rd. to US 1	1020	FDOT		Yes	1.33	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	30,000	30,000	30,000	30,000	31,000	31,000	32,000	33,500	34,000	31,000		D	39,800	0.78	C			3,580	4
SR 40	US 1 to Halifax Ave.	171	FDOT		Yes	1.11	35	UA_SSAC2_2W_4L	Principal Arterial - Other - Urban	34,000	33,500	34,000	31,500	31,000	34,500	38,500	39,500	39,500	38,500		D	32,400	1.19	F			2,920	4
SR 40	Halifax Ave. to SR A1A	5128	FDOT		Yes	0.37	35	UA_SSAC2_2W_4L	Principal Arterial - Other - Urban	20,500	18,000	18,900	19,500	20,400	20,200	21,000	21,000	19,200	18,500		D	32,400	0.57	D			2,920	4
SR 44	Lake Co. to Shell Rd.	1007	FDOT		Yes	1.19	55	RDA_UFH_2W_2L	Principal Arterial - Other - Rural	9,000	9,400	9,200	9,600	10,000	12,900	11,000	12,200	12,300	11,900		C	15,700	0.76	C			1,490	2
SR 44	Shell Rd. to Grand Ave.	1007	FDOT		Yes	1.26	45	UA_UFH_2W_2L_U	Principal Arterial - Other - Urban	9,000	9,400	9,200	9,600	10,000	12,900	11,000	12,200	12,300	11,900		D	24,200	0.49	C			2,180	2
SR 44	Grand Ave. to Old New York/Hazen Rd.	290	FDOT		Yes	0.70	55	UA_UFH_2W_2L_U	Principal Arterial - Other - Urban	9,700	9,300	9,700	9,800	10,100	10,800	11,200	12,400	12,600	12,200		D	24,200	0.50	C			2,180	2
SR 44	Old New York/Hazen Rd. to SR 15A/Spring G	274	FDOT		Yes	0.71	40	UA_UFH_2W_2L_U	Principal Arterial - Other - Urban	11,800	11,500	11,700	11,600	11,900	12,800	13,200	13,900	14,100	13,700		D	24,200	0.57	C			2,180	2
SR 44	SR 15A/Spring Garden Ave. to Stone St.	447	FDOT		Yes	0.50	40	UA_SSAC1_2W_2L	Principal Arterial - Other - Urban	11,300	11,300	10,600	10,800	11,500	11,700	11,500	11,700	10,500	10,100		E	18,939	0.53	C			1,712	2
SR 44	Stone St. to Clara Ave.	5012	FDOT		Yes	0.51	35-40	UA_SSAC1_2W_2L	Principal Arterial - Other - Urban	11,100	10,900	10,600	10,300	10,700	10,800	11,200	11,000	11,200	10,800		E	18,939	0.57	C			1,712	2
SR 44	Clara Ave. to Amelia Ave.	5015	FDOT		Yes	0.50	25-35	UA_SSAC1_2W_2L	Principal Arterial - Other - Urban	9,200	8,600	8,700	8,600	9,000	9,300	9,700	9,900	7,700	7,500		E	14,800	0.51	D			1,410	2
SR 44	Amelia Ave. to Hill Ave.	80	FDOT		Yes	1.00	35/40/45	UA_SSAC1_2W_2L	Principal Arterial - Other - Urban	13,300	13,000	14,100	12,200	12,600	13,100	13,500 -		12,300	11,900		E	18,939	0.63	C			1,712	2
SR 44	Hill Ave. to Blue Lake Ave.	80	FDOT		Yes	0.51	45	UA_SSAC1_2W_2L	Principal Arterial - Other - Urban	13,300	13,000	12,600	11,900	14,000	12,600	12,500	12,900	12,300	11,900		DeLand	19,800	0.60				1,712	2
SR 44	Blue Lake Ave. to Kepler Rd.	19	FDOT		Yes	0.94	45	UA_SSAC1_2W_2L	Principal Arterial - Other - Urban	16,400	15,600	15,900	14,300	16,900	15,700	17,500	17,300	17,300	16,700		DeLand	20,800	0.80				1,712	2
SR 44	Kepler Rd. to Summit Ave.	259	FDOT		Yes	1.18	45-50	UA_SSAC1_2W_2L	Principal Arterial - Other - Urban	18,300	17,800	18,000	16,700	17,200	20,200	19,400	21,500	19,800	19,200		DeLand	19,800	0.97				1,712	2
SR 44	Summit Ave. to I-4	538	FDOT		Yes	0.98	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	16,800	17,500	17,000	15,200	15,800	18,100	21,500	20,500	22,000	21,000		D	39,800	0.53	C			3,580	4
SR 44	I-4 to Prevatt Ave.	480	FDOT		Yes	0.74	55	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	16,400	17,200	19,900	18,700	20,500	21,500	21,500	21,500	22,500	21,500		D	39,800	0.54	C			3,580	4
SR 44	Prevatt Ave. to Pioneer Tr.	41	FDOT		Yes	5.93	65	RUA_UFH_2W_4L	Principal Arterial - Other - Rural	13,600	14,900	16,700	16,400	17,600	19,500	13,900	14,300	15,800	15,400		C	44,900	0.34	B			4,270	4
SR 44	Pioneer Tr. to SR 415/CR 415	1011	FDOT		Yes	3.56	65	RUA_UFH_2W_4L	Principal Arterial - Other - Rural	10,500	9,900	12,200	12,500	12,900	14,500	15,600	15,700	15,200	14,800		C	44,900	0.33	B			4,270	4
SR 44	SR 415/CR 415 to Samsula Dr.	1012	FDOT		Yes	1.14	65	RDA_UFH_2W_4L	Principal Arterial - Other - Rural	15,800	13,500	15,700	17,000	17,600	20,500	22,000	21,500	22,000	21,000		C	42,300	0.50	B			4,020	4
SR 44	Samsula Dr. to Airport Rd	423	FDOT		Yes	1.70	65	RDA_UFH_2W_4L	Principal Arterial - Other - Urban/Rural	16,200	14,400	18,300	17,400	19,200	20,000	22,000	15,600	15,800	15,400		C	42,300	0.36	B			4,020	4
SR 44	Airport Rd. to I-95	423	FDOT		Yes	2.05	65	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	16,200	14,400	18,300	17,400	19,200	20,000	22,000	15,600	15,800	15,400		D	39,800	0.39	C			3,580	4
SR 44	I-95 to Mission Dr	515	FDOT		Yes	2.83	55	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	25,000	27,500	30,000	27,500	28,500	35,000	31,500	35,500	34,500	33,500		D	39,800	0.84	C			3,580	4
SR 44	Mission Dr. to Live Oak	514	FDOT		Yes	1.35	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	17,800	18,700	19,600	18,300	19,000	19,500	18,000	23,500	20,500	19,700		D	39,800	0.49	C			3,580	4
SR 44/SR A1A/S Causeway	Live Oak to Peninsula Ave.	207	FDOT		Yes	1.30	50	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	24,000	26,500	26,500	27,000	29,500	30,000	23,500	32,500	27,500	26,500		D	39,800	0.67	C			3,580	4
SR 44/SR A1A/S Causeway	Peninsula Ave. to Saxon Dr.	5180	FDOT		Yes	0.35	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	21,000	22,500	23,000	22,000	23,000	24,500	25,500	28,000	28,000	22,000		D	39,800	0.55	C			3,580	4
SR 44/SR A1A/3rd Ave/Atlantic	Saxon Dr. to 6th Ave	5043	FDOT		Yes	0.50	40	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	14,000	15,300	14,200	14,000	14,600	12,700	17,500	17,900	13,300	12,900		D	39,800	0.32	C			3,580	4
SR 44 (Business) - Canal St.	SR 44/Lytle St to Pioneer Trail	516	FDOT		Yes	0.17	40	UA_SSAC1_2W_2L	Minor Arterial - Urban	11,400	10,800	11,300	10,500	10,900	9,500	9,800	10,000	10,200	9,900		D	17,700	0.56	C			1,600	2
SR 44 (Business) - Canal St.	Pioneer Tr. to US 1	111	FDOT		Yes	0.76	40	UA_SSAC1_2W_2L	Minor Arterial - Urban	11,700	11,100	11,600	11,500	12,500	11,500	11,900	12,600	12,800	12,400		D	17,700	0.70	C			1,600	2
SR 46	Seminole Co. to Brevard Co.	0416-B			Yes	5.44	55	RUA_UFH_2W_2L	Principal Arterial - Other - Rural	5,600	6,000	5,600	5,300	7,100	5,900	7,400	7,600	8,100	7,900		C	18,000	0.44	B			1,620	2
SR 400 - Beville Rd.	I-95 to Williamson Blvd.	501	FDOT		Yes	0.28	55	UA_SSAC1_2W_6L	Principal Arterial - Other - Urban	24,000	24,000	26,500	28,000	29,000	26,000	28,500	29,000	31,500	30,500		D	59,900	0.51	C			5,390	6
SR 400 - Beville Rd.	Williamson Blvd. to SR 483/Clyde Morris Blvc	5189	FDOT		Yes	1.91	55	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	27,000	26,500	28,500	31,000	32,000	30,500	30,500	31,500	30,500	29,500		D	39,800	0.74	C			3,580	4
SR 400 - Beville Rd.	SR 483/Clyde Morris Blvd. to SR 5A/Nova Rd.	511	FDOT		Yes	0.68	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	32,000	33,000	33,000	33,000	34,000	32,000	33,000	33,500	35,500	34,500		D	39,800	0.87	C			3,580	4
SR 400 - Beville Rd.	SR 5A/Nova Rd. to US 1	502	FDOT		Yes	1.34	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	23,000	24,000	24,500	25,500	26,500	27,000	26,500	26,000	24,500	23,500		D	39,800	0.59	C			3,580	4
SR 415	Seminole Co. to Enterprise-Osteen Rd.	25	FDOT		Yes	4.39	55	UA_UFH_2W_4L_D	Minor Arterial - Urban/Rural	16,800	16,800	16,800	17,000	17,500	18,300	21,500	23,000	24,000	23,000		D	66,200	0.35	D			5,960	4
SR 415	Enterprise-Osteen Rd. to Howland Blvd.	437	FDOT		Yes	1.83	45	UA_SSAC1_2W_4L	Minor Arterial - Urban	15,100	15,200	15,200	15,400	15,500	17,300	17,700	19,800	19,900	19,300		D	39,800	0.48	C			3,580	4
SR 415	Howland Blvd. to Acorn Lake Rd	321	FDOT		Yes	0.88	45	UA_SSAC1_2W_4L	Minor Arterial - Urban	5,900	6,500	6,500	6,600	7,300	8,600	7,900	8,100	8,600	8,400		D	39,800	0.21	C			3,580	4
SR 415	Acorn Lake Rd to SR 44	1009	FDOT		Yes	10.49	55	RUA_UFH_2W_2L	Minor Arterial - Rural	8,300	7,700	9,000	9,000	9,400	11,700	12,700	13,200	12,200	11,400		C	18,000	0.63	C			1,620	2
SR 421 - Dunlawton Ave.	Williamson to Clyde Morris Blvd.	517	FDOT		Yes	1.07	45	UA_SSAC1_2W_6L	Principal Arterial - Other - Urban	39,500	38,500	45,500	48,000	46,000	47,500	49,000	52,500	53,500	52,000		D	59,900	0.87	C			5,390	6
SR 421 - Dunlawton Ave.	Clyde Morris Blvd. to SR 5A/Nova Rd.	1014	FDOT		Yes	1.31	50	UA_SSAC1_2W_6L	Principal Arterial - Other - Urban	28,500	26,500	28,500	29,000	38,500	41,500	42,500	41,000	40,000	39,000		D	59,900	0.65	C			5,390	6
SR 421 - Dunlawton Ave.	SR5A/Nova Rd. to Spruce Creek Rd.	1015	FDOT		Yes	0.91	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	27,000	28,000	27,500	29,500	30,500	31,500	33,000	32,000	33,000	32,000		D	39,800	0.80	C			3,580	4
SR 421 - Dunlawton Ave.	Spruce Creek Rd. to US 1	5181	FDOT		Yes	0.71	45	UA_SSAC1_2W_4L	Principal Arterial - Other - Urban	25,000	25,500	25,000	26,000	27,000	27,500	28,500	28,500	26,500	25,500		D	39,800	0.64	C			3,580	4
SR 430 - Mason Ave.	SR 483/Clyde Morris Blvd. to SR 5A/Nova Rd.	5197	FDOT		Yes	0.99	35	UA_SSAC2_2W_4L	Minor Arterial - Urban	18,200	17,800	18,200	18,500	19,000	20,600	22,000	21,500	21,500	20,700		D	24,300	0.85	D			2,190	4
SR 430 - Mason Ave.	SR 5A/Nova Rd. to US 1	5197	FDOT		Yes	1.08	35	UA_SSAC2_2W_4L	Minor Arterial - Urban	18,200	17,800	18,200	18,500	19,000	20,600	22,000	21,500	21,500	20,700		D	24,300	0.85	D			2,190	4
SR 430 - Mason Ave.	US 1 to Beach St.	5197	FDOT		Yes	0.30	35	UA_SSAC2_2W_4L	Minor Arterial - Urban	18,200	17,800	18,200	18,500	19,000	20,600	22,000	21,500	21,500	20,700		D	32,400	0.64	D			2,920	4
SR 430 - Oakridge Blvd. - EB	Beach St. to Peninsula Dr	5196E	FDOT		Yes	0.70	40	UA_SSAC1_1W_2L	Minor Arterial - Urban	5,500	5,300	5,600	5,900	6,400	7,200	6,500	7,500	11,000	9,200		D	23,880	0.39	C			2,150	2
SR 430 - Oakridge Blvd. - EB	Peninsula Dr to SR A1A/Atlantic	5195	FDOT		Yes	0.28	40	UA_SSAC1_1W_2L	Minor Arterial - Urban	4,700	3,600	4,100	4,200	4,400	4,600	5,400	6,000	4,900	4,800		D	23,880	0.20	C			2,150	2
SR 430 - Seabreeze Bridge - WB	Beach St. to Peninsula Dr	5196W	FDOT		Yes	1.01	40	UA_SSAC1_1W_2L	Minor Arterial - Urban	8,100	7,100	7,200	6,400	6,600 -	-	-		11,500	9,900		D	23,880	0.41	C			2,150	2
SR 430 - Seabreeze Bridge - WB	Peninsula Dr to SR A1A/Atlantic	5191	FDOT		Yes	0.29	30	UA_SSAC2_1W_2L	Minor Arterial - Urban	5,300	4,300	4,900	4,900	5,100	5,800	6,400	7,000	6,000	5,800		D	19,440	0.30	C			1,750	2
SR 441 - Peninsula Dr.	SR A1A/Dunlawton to Florida Shores	5188	FDOT		Yes	2.42	40	UA_SSAC1_2W_2L	Minor Arterial - Urban	5,600	5,300	5,400	5,600	5,400	5,600	5,900	5,700	6,000	5,800		D	17,700	0.33	C			1,600	2
SR 441 - Peninsula Dr.	Florida Shores to Silver Beach Ave.	5187	FDOT		Yes	2.34	35	UA_SSAC1_2W_2L	Minor Arterial - Urban	8,700	9,400	9,300	8,300	8,700	9,000	8,800	8,800	9,000	8,400		D	17,700	0.47	C			1,600	2
SR 441 - Peninsula Dr.	Silver Beach Ave. to US 92/ISB	5187	FDOT		Yes	0.65	35	UA_SSAC1_2W_2L	Minor Arterial - Urban	8,700	9,400	9,300	8,300	8,700	9,000	8,800	8,800	9,000	8,400		D	17,700	0.47	C			1,600	2
SR 442 - Indian River Blvd.	I-95 to Air Park Rd.	170	FDOT		Yes	2.09	55	UA_SSAC1_2W_4L	Minor Arterial - Urban	8,900	9,500	9,920	10,200	10,800	11,400	12,100	12,600	13,200	12,300		D	39,800	0.31	C			3,580	4
SR 442 - Indian River Blvd.	Air Park Rd. to US 1	5190	FDOT		Yes	1.69	45	UA_SSAC1_2W_4L	Minor Arterial - Urban	16,400	16,100	16,800	16,400	17,000	17,600	17,000	16,500	18,000	17,500		D	39,800	0.44	C			3,580	4
SR 472	US 17/92 to CR 4101/MLK Blvd	472	FDOT		Yes	2.31	60	UA_UFH_2W_4L_D	Principal Arterial - Other - Urban	19,700	20,100	21,000	21,400	23,000	24,000	24,000	29,000	29,000	24,000		D	66,200	0.36	B			5,960	4
SR 472	CR 4101/MLK Blvd to I-4 (end of state

Airport Rd. (PO)	Williamson Blvd to Pioneer Tr.	64	County		Yes	2.50	45	UA_UFH_2W_2L_U	Major Collector - Urban	6,000	6,160	6,040	6,120	7,690	8,430	7,590	7,170	6,600	6,260	7,380	E	32,600	0.23	B	520	630	2,930	2
Airport Rd. (NSB)	Pioneer Tr. to Luna Bella Ln	67	County		Yes	1.60	45	UA_UFH_2W_2L_D	Major Collector - Urban	3,110	3,300	3,320	3,550	3,930	4,570	7,590	4,180	4,320	4,540	5,020	E	34,230	0.15	B	320	420	3,080	2
Airport Rd. (NSB)	Luna Bella Ln to SR 44	68	County		Yes	1.80	45	UA_UFH_2W_2L_D	Major Collector - Urban	2,250	2,610	2,770	3,270	3,760	4,780	7,590	5,150	5,470	6,160	6,860	E	34,230	0.20	B	490	530	3,080	2
Amelia Ave.	SR 44 to Ohio Ave.	73	County		Yes	0.15	30	UA_NSSRC2_2W_4	Major Collector - Urban	10,380	10,580	10,650	10,430	9,410	10,990	11,250	11,780	14,830	8,480	8,530	E	22,820	0.37	C	510	760	2,060	4
Amelia Ave.	Ohio Ave. to Minnesota Ave.	74	County		Yes	0.15	30	UA_NSSRC2_2W_2	Major Collector - Urban	10,310	10,260	10,380	10,320	9,310	11,630	11,140	12,110	12,230	8,650	9,470	E	13,640	0.69	D	530	730	1,020	2
Amelia Ave.	Minnesota Ave. to Plymouth Ave.	75	County		Yes	0.50	30	UA_NSSRC2_2W_2	Major Collector - Urban	10,610	10,230	10,590	10,630	9,170	11,890	11,500	12,840	11,030	8,720	9,850	E	14,040	0.70	D	550	800	1,270	2
Amelia Ave.	Plymouth Ave. to US 92	77	County		Yes	0.85	35	UA_NSSRC2_2W_2	Major Collector - Urban	6,610	6,080	6,700	6,980	6,050	7,430	7,050	6,870	6,360	5,040	5,530	E	14,040	0.39	C	280	500	1,270	2
Ariel Rd.	Beacon Light Rd. to US 1	91	County			1.20	35	RUA_UFH_2W_2L_	Local	560	540	540	540	640	670	550	690	590	590	660	C	6,450	0.10	B	50	70	620	2
Arredondo Grant Rd.	Spring Garden Ranch Rd. to James St.	100	County		Yes	0.60	30	RUA_UFH_2W_2L_	Major Collector - Urban/Rural	1,100	1,140	1,020	1,060	-	1,030	1,150	1,230	1,240	1,120	1,260	C	6,450	0.20	B	110	130	620	2
Arredondo Grant Rd.	James St. to SR 11	101	County		Yes	2.00	35	RUA_UFH_2W_2L_	Major Collector - Rural	510	580	600	610	-	700	780	810	860	850	880	C	6,450	0.14	B	70	100	620	2
Atlantic Ave. (PI)	Beach St. to Major St	110	County		Yes	2.80	35	UA_NSSRC2_2W_2	Minor Collector - Urban	1,760	2,930	2,910	2,630	8,840	3,310	3,420	3,000	2,740	2,390	4,030	E	13,640	0.30	C	210	370	1,020	2
Atlantic Ave. (DBS)	Major St to Marcelle Ave.	111	County		Yes	1.30	35	UA_NSSRC2_2W_2	Minor Collector - Urban	6,780	9,420	9,420	9,260	9,600	9,670	9,720	7,680	11,050	9,940	11,030	E	13,640	0.81	D	660	890	1,020	2
Atlantic Ave. (DBS)	Marcelle Ave. to Phillis Ave.	113	County		Yes	0.75	35	UA_NSSRC2_2W_2	Minor Collector - Urban	8,250	11,990	11,760	11,450	11,850	12,920	12,330	9,970	12,090	11,040	12,890	E	14,740	0.87	D	710	1,040	1,330	2
Atlantic Ave. (DBS)	Phillis Ave. to SR A1A/Dunlawton Ave	115	County		Yes	0.40	35	UA_NSSRC2_2W_2	Minor Collector - Urban	9,170	13,680	13,050	12,920	14,770	15,190	13,540	12,970	15,730	11,290	11,850	E	14,740	0.80	D	740	960	1,330	4
Atlantic Ave/Turtle Mound Rd.	Canaveral Nat'l Park to Turtle Mound Rd.	1872	County		Yes	7.65	45	UA_NSSRC2_2W_2	Principal Arterial - Other - Urban	2,230	2,610	2,450	2,180	2,960	3,050	1,770	2,170	3,140	3,440	3,260	E	13,640	0.24	C	180	300	1,020	2
Atlantic Ave/Turtle Mound Rd.	Turtle Mound Rd. to Saxon Dr.	116	County		Yes	1.60	45	UA_NSSRC1_2W_2	Principal Arterial - Other - Urban	5,580	6,560	6,390	5,520	4,190	6,690	4,850	5,000	7,370	7,030	6,780	E	17,050	0.40	C	430	570	1,540	2
Atlantic Ave/Turtle Mound Rd.	Saxon Dr to Hiles Blvd.	118	County		Yes	0.45	45	UA_NSSRC1_2W_2	Principal Arterial - Other - Urban	5,650	6,530	6,370	5,450	7,470	7,300	5,380	5,000	7,310	7,560	7,100	E	17,050	0.42	C	450	560	1,540	2
Atlantic Ave/Turtle Mound Rd.	Hiles Blvd. to 27th Ave.	120	County		Yes	1.55	45	UA_NSSRC1_2W_2	Principal Arterial - Other - Urban	9,900	11,900	11,400	9,650	8,370	11,630	9,600	9,600	13,370	12,250	13,440	E	17,050	0.79	C	740	1,030	1,540	2
Atlantic Ave/Turtle Mound Rd.	27th Ave. to 6th Ave.	122	County		Yes	1.45	45	UA_NSSRC1_2W_4	Principal Arterial - Other - Urban	13,430	16,510	14,560	12,960	14,450	12,070	15,900	12,720	11,630	18,120	15,010	E	37,970	0.40	C	1,120	1,140	3,410	4
Beach/Riverside/Beach (OB)	Division Ave. to SR 40	131	County		Yes	0.60	35	UA_NSSRC2_2W_2	Major Collector - Urban	6,860	6,800	6,620	7,280	6,700	8,530	6,940	8,090	7,480	6,610	7,490	E	13,640	0.55	D	520	650	1,020	2
Beach/Riverside/Beach (OB)	SR 40 to Wilmette Ave.	132	County		Yes	0.70	35	UA_NSSRC2_2W_2	Major Collector - Urban	8,780	8,780	8,070	8,950	8,610	9,310	7,800	9,700	8,870	9,580	9,180	E	16,000	0.57	D	700	790	1,440	2
Beach/Riverside/Beach (OB)	Wilmette Ave. to Inglesa Ave.	135	County		Yes	2.55	35	UA_NSSRC2_2W_2	Major Collector - Urban	5,660	5,740	5,300	5,410	7,390	6,250	5,410	6,930	6,330	7,250	6,490	E	16,000	0.41	D	470	630	1,440	2
Beach/Riverside/Beach (OB)	Inglesa Ave to Pine Tree Dr.	137	County		Yes	1.10	35	UA_NSSRC2_2W_2	Major Collector - Urban	2,000	1,950	1,830	1,840	2,010	2,160	2,140	2,650	2,500	3,570	2,860	E	16,000	0.18	C	180	290	1,440	2
Beacon Light Rd.	Halifax Ave. to Ariel Rd.	140	County		Yes	2.75	35	RUA_UFH_2W_2L_	Minor Collector - Rural	190	210	170	180	190	240	250	240	280	290	300	C	6,450	0.05	B	20	30	620	2
Beacon Light Rd.	Ariel Rd. to Volco Rd.	141	County		Yes	1.25	35	RUA_UFH_2W_2L_	Minor Collector - Rural	430	370	380	410	390	500	520	460	400	470	600	C	6,450	0.09	B	40	60	620	2
Bellevue Ave. Extension	CR 415/Tomoka Farms Rd to Williamson Blv	151	County		Yes	0.50	35	UA_NSSRC2_2W_2	Minor Collector - Urban	4,970	5,010	5,290	5,290	6,210	5,520	6,100	7,310	6,940	5,880	6,260	E	13,640	0.46	D	440	550	1,020	2
Bellevue Ave. Extension	Williamson Blvd to SR 483/Clyde Morris Blvd	153	County		Yes	2.50	45	UA_NSSRC1_2W_2	Minor Collector - Urban	2,760	2,410	2,570	2,880	2,540	3,250	3,160	4,350	4,060	3,430	3,130	E	13,640	0.23	C	230	310	1,230	2
Beresford Ave.	Beresford Rd. to Fatio Rd	161	County		Yes	0.70	35	UA_NSSRC1_2W_2	Major Collector - Urban	1,280	1,340	1,340	820	1,320	1,560	2,110	1,810	2,100	2,180	2,310	E	13,640	0.17	C	190	220	1,020	2
Beresford Ave.	Fatio Rd. to SR 15A	162	County		Yes	1.30	30	UA_NSSRC2_2W_2	Major Collector - Urban	3,590	3,720	3,540	3,750	3,240	3,440	4,160	4,320	4,650	4,100	4,490	E	13,640	0.33	C	370	400	1,020	2
Beresford Ave.	SR 15A to US 17/92	164	County		Yes	1.75	30	UA_NSSRC2_2W_2	Major Collector - Urban	4,810	4,760	4,740	4,130	-	4,780	5,210	5,070	5,010	5,050	5,170	E	13,640	0.38	C	260	440	1,020	2
Beresford Ave.	US 17/92 to Amelia Ave	165	County		Yes	0.25	35	UA_NSSRC2_2W_2	Major Collector - Urban	9,700	9,520	9,750	9,520	9,490	10,410	10,480	12,250	11,380	10,310	10,530	E	14,740	0.71	D	600	900	1,330	2
Beresford Ave.	Amelia Ave. to Hill Ave.	167	County		Yes	1.00	40	UA_NSSRC1_2W_2	Major Collector - Urban	5,600	5,970	6,070	5,710	5,280	5,710	7,090	7,930	6,570	6,610	7,320	E	17,900	0.41	C	550	690	1,620	2
Beresford Ave.	Hill Ave. to Blue Lake Ave.	169	County		Yes	1.35	40	UA_NSSRC1_2W_2	Future - Major Collector - Urban	2,980	3,300	3,460	3,240	-	3,780	4,440	5,170	4,380	4,300	3,950	E	13,640	0.29	C	300	370	1,230	2
Beresford Ave.	Blue Lake Ave. to MLK (Kepler Rd.)	Future Rd	County		Yes	0.80	40	UA_NSSRC1_2W_2	Future - Major Collector - Urban	-	-	-	-	-	-	-	-	-	-	-	E	13,640	-	-	-	-	1,230	0
Beresford Ave.	MLK (Kepler Rd.) to SR 44	Future Rd	County		Yes	0.75	40	UA_NSSRC1_2W_2	Future - Major Collector - Urban	-	-	-	-	-	-	-	-	-	-	-	E	13,640	-	-	-	-	1,230	0
Beresford Rd.	SR 15A to Spring Garden Ave.	180	County			0.40	30	UA_NSSRC2_2W_2	Major Collector - Urban	470	940	890	860	-	3,520	1,000	5,270	620	480	530	E	13,640	0.04	C	40	50	1,020	2
Beresford Rd.	Spring Garden Ave. to Fatio Rd.	181	County			0.75	30	UA_NSSRC2_2W_2	Major Collector - Urban	670	710	630	670	-	850	780	690	850	550	840	E	13,640	0.06	C	60	80	1,020	2
Beresford Rd.	Fatio Rd. to Beresford Ave	182	County			1.30	30	UA_NSSRC2_2W_2	Major Collector - Urban	1,050	1,060	950	1,120	1,150	1,370	1,370	1,630	1,700	1,740	1,930	E	13,640	0.14	C	160	200	1,020	2
Beresford Rd.	Beresford Ave. to Old New York Ave.	183	County			0.30	35	UA_NSSRC2_2W_2	Major Collector - Urban	1,990	2,050	1,980	2,100	2,130	2,640	2,620	2,980	2,970	3,420	3,640	E	13,640	0.27	C	280	360	1,020	2
Big Tree Rd.	Clyde Morris Blvd. to Nova Rd.	192	County		Yes	1.10	35	UA_NSSRC2_2W_2	Minor Collector - Urban	7,700	8,080	7,200	7,670	5,680	8,750	5,850	6,520	6,920	6,040	6,550	E	13,640	0.48	D	420	570	1,020	2
Big Tree Rd.	Nova Rd. to Magnolia Ave.	193	County		Yes	0.40	35	UA_NSSRC2_2W_2	Minor Collector - Urban	12,230	11,460	11,040	11,350	11,820	13,740	13,190	13,990	12,950	11,220	12,370	E	14,740	0.84	D	830	1,030	1,330	2
Big Tree Rd.	Magnolia Ave. to Kenilworth Ave.	195	County		Yes	0.45	35	UA_NSSRC2_2W_2	Minor Collector - Urban	10,850	10,160	9,290	10,010	9,970	12,190	11,380	11,860	10,810	9,690	10,670	E	14,740	0.72	D	750	720	1,330	3
Big Tree Rd.	Kenilworth Ave. to US 1	196	County		Yes	0.55	35	UA_NSSRC2_2W_2	Minor Collector - Urban	7,270	6,790	6,570	6,970	8,930	8,880	8,110	8,640	8,180	7,200	7,770	E	14,740	0.53	D	470	620	1,330	3
Blackburn Rd.	CR 3 to Emporia Rd	211	County			1.25	35	RUA_UFH_2W_2L_	Minor Collector - Rural	550	550	550	560	640	650	580	590	610	640	730	C	6,450	0.11	B	60	70	620	2
Blackwelder Rd.	Lake Winona Rd. to SR 11	221	County			3.25	35	RUA_UFH_2W_2L_	Local	180	180	170	170	220	210	150	210	200	210	210	C	6,450	0.03	B	20	20	620	2
Blue Lake Ave.	SR 472 to Orange Camp Rd	Future Rd	County		Yes	1.05	45	UA_NSSRC1_2W_2	Major Collector - Urban	-	-	-	-	-	-	-	-	-	-	-	E	17,050	-	-	-	-	1,540	2
Blue Lake Ave.	Orange Camp Rd. to Taylor Rd.	231	County		Yes	1.05	45	UA_NSSRC1_2W_2	Major Collector - Urban	4,110	4,250	3,980	4,180	-	4,660	5,140	4,750	6,480	5,470	5,480	E	17,050	0.32	C	620	530	1,540	2
Blue Lake Ave.	Taylor Rd. to Beresford Ave.	232	County		Yes	1.05	45	UA_NSSRC1_2W_2	Major Collector - Urban	5,200	5,730	5,440	5,820	5,080	5,770	6,910	8,240	8,800	7,460	7,580	E	13,640	0.56	C	600	730	1,230	2
Blue Lake Ave.	Beresford Ave. to Voorhis Ave.	234	County		Yes	0.75	30	UA_NSSRC1_2W_2	Major Collector - Urban	4,180	4,310	4,010	3,750	4,480	4,420	4,610	5,290	4,950	4,970	5,270	E	13,640	0.39	C	410	530	1,020	2
Blue Lake Ave.	Voorhis Ave. to SR 44	235	County		Yes	0.25	30	UA_NSSRC2_2W_2	Major Collector - Urban	3,480	3,520	3,370	3,520	3,550	3,570	3,900	4,560	3,640	3,890	4,140	E	13,640	0.30	C	330	400	1,020	2
Blue Lake Ave.	SR 44 to Minnesota Ave.	236	County		Yes	0.55	30	UA_NSSRC2_2W_2	Major Collector - Urban	4,330	4,190	4,060	4,500	3,880	4,200	5,380	4,920	6,290	5,390	5,720	E	13,640	0.42	D	430	520	1,020	2
Blue Lake Ave.	Minnesota Ave. to Plymouth Ave.	237	County		Yes	1.00	40	UA_NSSRC1_2W_2	Major Collector - Urban	5,780	5,380	5,200	5,670	5,680	5,790	6,750	7,750	7,950	7,040	7,250	E	13,640	0.53	C	560	670	1,230	2
Blue Springs Av (West)	Sparkman Dr to Lawton Dr	239	County			0.60	35	UA_NSSRC2_2W_2	Minor Collector - Urban	5,830	5,410	5,080	5,460	4,020	4,200	5,920	5,600	5,920	5,140	5,090	E	13,640	0.37	C	470	450	1,020	2
Brownlee Rd.	Raulerson Rd. #1 to Raulerson Rd.	240	County			1.70	35	RUA_UFH_2W_2L_	Local	140	180	180	190	160	180	170	190	160	140	200	C	6,450	0.03	B	10	20	620	2
Cardinal Blvd.	SR 421/Dunlawton Ave. to Demotte Ave	245	County			0.15	30	UA_NSSRC2_2W_2	Minor Collector - Urban					1,280	1,690	1,110	1,110	1,080	1,450	1,440	E	13,640	0.11	C	70	130	1,020	2
Cardinal Blvd.	Demotte Ave. to Marcelle Ave	260	County			0.90	30	UA_NSSRC2_2W_2	Minor Collector - Urban	5,090	5,160	4,740	4,740	5,230	7,190	5,030	5,190	5,780	5,380	5,650	E	13,640	0.41	D	350	470	1,020	2
Cardinal Blvd.	Marcelle Ave to Major St.	261	County			1.00	30	UA_NSSRC2_2W_2	Local	790	870	730	820	880	1,330	810	690	780	810	910	E	13,640	0.07	C	50	80	1,020	2
Carter Rd.	SR 11 to Marsh Rd.	270	County			1.75	40	UA_NSSRC1_2W_2	Local	1,400	1,460	1,420	1,520	-	1,700	1,700	1,800	1,860	1,750	1,830	E	13,640	0.13	C	120	160	1,230	2
Cassadaga Rd.	W. Volusia Bltwy. to Macy Ave.	280	County		Yes	1.80	30	UA_NSSRC2_2W_2	Major Collector - Urban	1,970	2,190	2,010	1,900	2,260	2,200	2,500	2,400	2,220	2,380	2,720	E	13,640	0.20	C	350	250	1,020	2
Clara Ave.	SR 15A to New Hampshire Ave.	301	County			0.50	30	UA_NSSRC2_2W_2	Major Collector - Urban	1,640	1,640	1,850	1,870	-	1,820	2,100	2,050	2,080	1,780	1,820	E	13,640	0.13	C	120	160	1,020	2
Clara Ave.	New Hampshire Ave. to Beresford Ave.	303	County			0.50	30	UA_NSSRC2_2W_2	Major Collector - Urban	2,070	2,040	2,270	2,200	-	2,350	3,050	2,860	2,710	2,660	2,770	E	13,640	0.20	C	170	270	1,020	2
Clifton Rd.	Lake Winona Rd. to SR 11	311	County			1.70	30	RUA_UFH_2W_2L_	Local	190	160	170	160	170	230	170	210	180	210	190	C	6,450	0.03	B	20	20	620	2
Clyde Morris Blvd.	Taylor Rd. to SR 421/Dunlawton Ave	330	County		Yes	0.95	40	UA_NSSRC1_2W_2	Minor Arterial - Urban	10,060	9,900	9,190	9,390	8,810	11,220	10,440	10,520	9,910	8,210	9,520	E	17,050	0.56	C	1,010	930	1,540	2
Clyde Morris Blvd.	SR 421/Dunlawton Ave. to Willow Run Blvd.	332	County		Yes	0.65	45	UA_NSSRC1_2W_4	Principal Arterial - Other - Urban	21,310	19,060	18,420	19,280	21,080	21,990	20,230	21,070	18,660	16,850	19,850	E	37,970	0.52	C	1,210	1,560	3,410	4
Clyde Morris Blvd.	Willow Run Blvd. to Madeline Ave.	333	County		Yes	1.30	45	UA_NSSRC1_2W_4	Principal Arterial - Other - Urban	22,750	21,460	20,000	21,710	20,770	22,480	23,240	24,390	21,430	18,820	23,970	E	37,970	0.63	C	1,440	1,950	3,410	4
Clyde Morris Blvd.	Madeline Ave. to Big Tree Rd.	335	County		Yes	1.00	45	UA_NSSRC1_2W_4	Principal Arterial - Other - Urban	24,200	22,260	20,800	22,910	25,110	20,770	24,230	21,490	20,350	21,160	22,050	E	37,970	0.58	C	1,280	1,860	3,410	4
Clyde Morris Blvd.	Big Tree Rd. to SR 400/Beville Rd.	337	County		Yes	0.90	45	UA_NSSRC1_2W_4	Principal Arterial - Other - Urban	24,600	22,880	21,790	23,460	21,760	23,500	24,140	24,280	23,720	19,700	20,620	E	36,070	0.57	C	1,240	1,700	3,240	4
Clyde Morris Blvd.	SR 430/Mason Ave. to Bill France Blvd.	338	County		Yes	0.60	45	UA_NSSRC1_2W_4	Principal Arterial - Other - Urban	13,140	12,310	11,990	12,960	13,930	14,960	14,750	17,520	15,440	13,530	14,860	E	37,970	0.39	C	970	1,170	3,410	4
Clyde Morris Blvd.	Bill France Blvd. to LPGA Blvd.	341	County		Yes	1.25	50	UA_NSSRC1_2W_4	Principal Arterial - Other - Urban	13,450	12,880	12,290	13,370	14,540	13,480	15,910	16,280	15,950	13,940	15,900	E	37,970	0.42	C	1,090	1,330	3,410	4
Clyde Morris Blvd.	LPGA Blvd. to Hand Ave.	343	County		Yes	1.50	50	UA_NSSRC1_2W_4	Principal Arterial - Other - Urban	14,070	13,560	12,280	13,520	13,440	15,250	15,620	15,440	14,640	13,350	17,350	E	37,970	0.46	C	1,240	1,470	3,410	4
Clyde Morris Blvd.	Hand Ave to SR 40/Granada Blvd.	348	County		Yes	0.80	35	UA_NSSRC2_2W_4	Principal Arterial - Other - Urban	12,340	11,940	11,230	11,670	12,230	12,130	12,460	14,400	12,900	11,980	12,700	E	30,420	0.42	C	880	1,030	2,740	4
Commonwealth Blvd.	Spruce Creek Rd. to Orange Ave.	360	County			0.55	30	UA_NSSRC2_2W_2	Minor Collector - Urban	5,250	5,450	5,220	5,180	5,460	5,450	5,530	5,430	5,540	5,260	5,570	E	13,640	0.41	C	350	470	1,020	2
Commonwealth Blvd.	Orange Ave. to US 1	361	County			0.35	30	UA_NSSRC2_2W_2	Minor Collector - Urban	3,670	3,540	3,530	3,620	3,890	3,920	3,840	3,680	3,870	3,850	3,870	E	13,640	0.28	C	230	330	1,020	2
CR 3	Ponce DeLeon Blvd. to Lake Winona Rd.	380	County		Yes	0.45	45	UA_NSSRC1_2W_2	Local	670	610	690	680	-	870	850	910	940	960	1,180	E	13,640	0.09	C	70	110	1,230	2
CR 3	Lake Winona Rd. to SR 40	380	County		Yes	5.04	35	RDA_UFH_2W_2L_	Local	670	610	680	680	-	870	850	910	940	960	1,180	C	11,775	0.10	B	70	110	1,230	2
CR 3	SR 40 to Emporia Rd	382	County		Yes	3.40	45	RDA_UFH_2W_2L_	Minor Collector - Rural	700	680	720	690	-	890	1,030	1,060	910	1,310	1,490	C	11,775	0.13	B	100	120	1,230	2
CR 3	Emporia Rd to Washington Ave.	384	County		Yes	1.20	30	RDA_UFH_2W_2L_	Minor Collector - Rural	1,650	1,680	1,660	1,580	1,750	2,190	2,300	2,130	2,130	1,780	1,890	C	11,775	0.16	B	130	200	1,230	2
CR 3	Washington Ave. to 'US 17	386	County		Yes	2.20	35	RDA_UFH_2W_2L_	Minor Collector - Rural	1,040	1,100	1,060	1,250	1,160	1,330	1,100	1,140	1,140	1,240	1,230	C	11,775	0.10	B	70	100	1,230	2
CR 15A	US 17 to Airport Rd.	440	County		Yes	0.90	50	UA_UFH_2W_2L_U	Minor Arterial - Urban	4,220	4,160	3,980	4,120		4,770	4,810	4,720	4,390	5,420	5,230	E	24,450	0.21	B	330	480	2,200	2
CR 15A	Airport Rd. to SR 11	441	County		Yes	1.25	40	UA_UFH_2W_2L_U	Minor Arterial - Urban	2,190	2,060	2,070	2,130	-	2,680	2,610	2,480	2,780	3,070	2,940	E	24,450	0.12	B	200	280	2,200	2
CR 92 (Intn'l Spdwy Blvd.)	SR 15A to Stone St.	450	County		Yes	0.25	45	UA_NSSRC1_2W_4	Principal Arterial - Other - Urban	11,970	11,770	12,070	11,940	13,310	14,620	14,060	13,620	15,300	14,360	13,780	E	37,970	0.36	C	780	1,100	3,410	4
CR 92 (Intn'l Spdwy Blvd.)	Stone St. to US 17/92	452	County		Yes	0.75	45	UA_NSSRC1_2W_4	Principal Arterial - Other - Urban	14,370	14,000	14,510	13,800	15,230	16,440	15,250	13,230	14,530	13,960	14,720	E	37,970	0.39	C	790	1,220	3,410	4
CR 305 (Bunnell Rd.)	US 17 to Cowart Rd.	460	County		Yes	1.50	50	RUA_UFH_2W_2L_	Major Collector - Rural	1,490	1,420	1,360	1,460	1,560	1,790	1,750	1,850	1,900	1,780	2,110	C	6,450	0.33	B	200	210	620	2
CR 305 (Bunnell Rd.)	Cowart Rd. to Flagler Co.	461	County		Yes	3.00	50	RUA_UFH_2W_2L_	Major Collector - Rural	990	890	910	990	-	1,370	1,270	1,360	1,390	1,330	1,600	C	6,450	0.25	B	160	170	620	2
Cow Creek Rd.	SR 442 to Volco Rd.	420	County		Yes	3.50	50	RUA_UFH_2W_2L_	Local	750	740	760	850	840	860	800	900	1,050	750	990	C	6,450	0.15	B	70	90	620	2
Cowart Rd.	Bunnell Rd to Little Brown Church Rd.	430	County			2.05	40	RUA_UFH_2W_2L_	Local	260	230	220	250	230	250	290	320	230	240	280	C	6,450	0.04	B	20	20	620	2
Daugharty Rd. (S. End)	Marsh Rd. to SR 11	470	County		Yes	0.80	35	RUA_UFH_2W_2L_	Local	510	510	490	520	-	560	500	520	530	520	520	C	6,450	0.08	B	30	50	620	2
Daugharty Rd.	SR 11 to Marsh Rd.	472	County			0.95	35	RUA_UFH_2W_2L_	Minor Collector - Rural	550	550	510	580	-	760	720	700	800	830	860	C	6,450	0.13	B	70	80	620	2
Demotte Ave.	Peninsula Dr. to Cardinal Blvd	500	County			0.20	35	UA_NSSRC2_2W_2	Minor Collector - Urban	3,940	4,480	4,050	4,120	4,690	6,270	4,610	4,740	5,190	5,060	5,090	E	13,640	0.47	C	340	490	1,020	2
Derbyshire Rd.	SR 430/Mason Ave. to LPGA Blvd.	511	County			1.45	30	UA_NSSRC2_2W_2	Major Collector - Urban	5,950	5,980	5,870	6,130	6,330	6,590	6,410	8,230	7,940	7,310	8,000	E	13,640	0.59	D	480	650	1,020	2
Derbyshire Rd.	LPGA Blvd. to Flomich St.	512	County		Yes	0.75	30	UA_NSSRC2_2W_2	Major Collector - Urban	7,930	7,470	7,320	7,280	6,040	8,020	7,300	8,790	8,890	8,010	7,900	E	13,640	0.58	D	460	650	1,020	2
Dirksen/DeBary/Doyle	US 17/92 to Sunrise Blvd.	520	County		Yes	1.75	45	UA_NSSRC1_2W_2	Minor Arterial - Urban	6,910	6,230	6,190	6,680	7,780	10,270	8,050	8,290	8,360	7,400	8,470	E	13,640	0.62	C	590	930	1,230	2
Dirksen/DeBary/Doyle	Sunrise Blvd to WB I-4 Ramps

Dunn/George Engram/Fairview/Main	Bill France Blvd. to Clyde Morris Blvd.	718	County		Yes	0.85	35	UA_NSSRC2_2W_2	Minor Arterial - Urban	10,550	10,400	10,150	10,730	#REF!	12,880	10,510	14,510	14,390	11,550	11,600	E	14,740	0.79	D	730	960	1,330	2
Dunn/George Engram/Fairview/Main	Clyde Morris Blvd. to SR 5A/Nova Rd.	719	County		Yes	1.00	40	UA_NSSRC1_2W_4	Minor Arterial - Urban	10,430	10,310	10,230	10,830	10,640	10,870	10,800	11,500	11,760	8,360	9,330	E	37,970	0.25	C	600	770	3,410	4
Dunn/George Engram/Fairview/Main	SR 5A/Nova Rd. to US 1	720	County		Yes	1.20	35	UA_NSSRC2_2W_4	Minor Arterial - Urban	5,570	5,060	5,380	4,990	9,640	10,550	10,750	11,790	11,040	8,950	9,260	E	30,420	0.30	C	550	770	2,740	4
Dunn/George Engram/Fairview/Main	US 1 to Beach St	631	County		Yes	0.40	30	UA_NSSRC2_2W_2	Minor Arterial - Urban	6,980	6,330	6,560	6,190	5,880	5,350	5,620	6,080	6,290	4,870	5,710	E	14,040	0.41	C	300	490	1,270	2
Dunn/George Engram/Fairview/Main	Beach St. to Peninsula Dr.	1170	County		Yes	0.60	30	UA_NSSRC2_2W_2	Minor Arterial - Urban	6,010	5,700	5,540	5,210	8,020	7,190	7,440	8,410	8,470	5,280	6,330	E	14,040	0.45	C	330	540	1,270	2
Emporia Rd.	SR 40 to Peterson/Blackburn	560	County		Yes	3.00	40	RUA_UFH_2W_2L	Minor Collector - Rural	690	720	690	660 -		910	860	850	920	920	1,090	C	6,450	0.17	B	70	100	620	2
Emporia Rd.	Peterson/Blackburn to US 17	564	County		Yes	1.45	40	RUA_UFH_2W_2L	Minor Collector - Rural	1,280	1,230	1,320	1,060 -		1,250	1,220	1,110	1,100	1,290	1,700	C	6,450	0.26	B	150	130	620	2
Enterprise Ave. (NSB)	Pioneer Tr. to Halleck St.	570	County			0.10	35	UA_NSSRC2_2W_2	Major Collector - Urban	7,460	7,000	7,740	7,900	8,210	8,550	9,760	9,230	9,530	9,080	9,800	E	13,640	0.72	D	630	830	1,020	2
Enterprise Rd.	DeBary Ave. to Deltona Blvd.	581	County		Yes	1.10	35	UA_NSSRC2_2W_2	Minor Arterial - Urban	7,800	7,150	7,270	7,390	7,050	8,300	8,660	9,320	7,630	7,680	8,520	E	14,040	0.61	D	640	720	1,270	2
Enterprise Rd.	Deltona Blvd. to Highbanks Rd.	582	County		Yes	0.50	35	UA_NSSRC2_2W_4	Minor Arterial - Urban	15,330	14,620	14,110	15,010	15,820	14,130	16,650	16,720	17,920	15,730	16,690	E	30,420	0.55	D	1,010	1,370	2,740	4
Enterprise Rd.	Highbanks Rd. to Saxon Blvd.	584	County		Yes	1.55	45	UA_NSSRC1_2W_4	Minor Arterial - Urban	23,460	23,750	21,590	23,790	20,550	20,510	25,710	19,820	25,290	19,830	20,900	E	37,970	0.55	C	1,270	1,740	3,410	4
Enterprise Rd.	Saxon Blvd. to Harley Strickland Blvd.	585	County		Yes	0.50	45	UA_NSSRC1_2W_4	Minor Arterial - Urban	23,670	22,790	20,710	22,110	23,120	23,900	23,240	19,220	23,680	22,540	23,370	E	37,970	0.62	C	1,370	1,940	3,410	4
Enterprise Rd.	Harley Strickland Blvd. to US 17/92	586	County		Yes	0.50	35	UA_NSSRC2_2W_4	Minor Arterial - Urban	22,090	20,900	19,330	20,650	20,860	21,370	21,970	23,760	20,970	24,510	25,680	E	30,420	0.84	D	1,500	2,070	2,740	4
Enterprise-Osteen Rd.	Providence to Garfield Rd	600	County		Yes	1.50	30	UA_NSSRC2_2W_2	Minor Collector - Urban	2,690	2,470	2,470	2,490	2,630	3,110	3,360	3,350	3,920	3,490	3,500	E	13,640	0.26	C	240	370	1,020	2
Enterprise-Osteen Rd.	Garfield Rd to Reed Ellis Rd.	601	County		Yes	1.70	35	UA_NSSRC2_2W_2	Minor Collector - Urban	1,850	1,690	1,690	1,760	1,960	2,400	2,930	2,860	3,100	2,900	2,970	E	13,640	0.22	C	220	330	1,020	2
Enterprise-Osteen Rd.	Reed Ellis Rd. to SR 415	602	County		Yes	2.50	35	UA_NSSRC2_2W_2	Minor Collector - Urban	1,160	1,080	1,160	1,140	1,250	1,480	1,360	1,250	1,250	1,310	1,280	E	13,640	0.09	C	70	120	1,020	2
Euclid Ave.	Grand to Fatio Rd.	610	County			0.25	35	UA_NSSRC2_2W_2	Minor Collector - Urban	1,190	1,080	1,150	1,030	1,130	1,190	1,310	1,300	1,420	1,220	1,390	E	13,640	0.10	C	90	120	1,020	2
Euclid Ave.	Fatio Rd. to Woodward Ave.	611	County			0.25	30	UA_NSSRC2_2W_2	Minor Collector - Urban	1,360	1,270	1,330	1,220	1,360	1,390	1,460	1,570	1,590	1,490	1,620	E	13,640	0.12	C	110	140	1,020	2
Euclid Ave.	Woodward Ave. to SR 15A	612	County			0.50	30	UA_NSSRC2_2W_2	Minor Collector - Urban	2,310	2,300	2,290	2,140	2,280	2,320	2,440	2,640	2,570	2,530	2,650	E	13,640	0.19	C	200	240	1,020	2
Euclid Ave.	SR 15A to Adelle Ave.	613	County			0.75	30	UA_NSSRC2_2W_2	Minor Collector - Urban	2,440	2,510	2,430	2,380	2,450	2,830	2,790	3,130	2,970	2,880	2,960	E	13,640	0.22	C	200	270	1,020	2
Euclid Ave.	Adelle Ave. to US 17/92	614	County			0.50	30	UA_NSSRC2_2W_2	Minor Collector - Urban	2,150	2,200	2,150	2,210 -		2,260	2,190	2,330	2,060	2,100	2,260	E	13,640	0.17	C	130	200	1,020	2
Flomich St.	Derbyshire Rd. to SR 5A/Nova Rd.	650	County		Yes	0.30	30	UA_NSSRC2_2W_2	Major Collector - Urban	5,450	5,570	5,430	5,140	4,900	5,300	5,470	5,540	5,510	4,820	5,100	E	13,640	0.37	C	280	440	1,020	2
French Ave.	Beginning of road to Blue Springs Park	690	County			1.00	30	UA_NSSRC2_2W_2	Minor Collector - Urban	140	180	130	270 -		200 -		160	150	150	230	E	13,640	0.02	C	10	30	1,020	2
French Ave.	Blue Springs Park to Lawton Ave./Hamilton	691	County			1.25	35	UA_NSSRC2_2W_2	Minor Collector - Urban	520	670	480	1,260 -		710 -		1,000	1,040	1,100	1,090	E	13,640	0.08	C	40	130	1,020	2
Garfield Ave.	SR 44 to Plymouth Ave.	700	County			1.00	30	UA_NSSRC2_2W_2	Local	2,350	2,280	1,980	1,910 -		2,430	2,270	2,400	2,070	1,920	2,130	E	13,640	0.16	C	140	180	1,020	2
Garfield Ave.	Plymouth Ave. to US 92	702	County			0.85	30	UA_NSSRC2_2W_2	Local	2,310	2,220	2,100	2,280 -		2,390	2,760	3,100	2,830	2,370	2,510	E	13,640	0.18	C	160	210	1,020	2
Garfield Rd.	Doyle Rd. to Enterprise-Osteen Rd	711	County			0.90	40	UA_NSSRC1_2W_2	Minor Collector - Urban	1,860	1,680	1,530	1,550	1,670	1,900	2,130	1,850	2,220	1,920	2,020	E	13,640	0.15	C	140	200	1,230	2
Glencoe Rd.	Taylor Rd. to Paige Ave.	730	County			1.50	40	UA_NSSRC1_2W_2	Minor Collector - Urban	1,310	1,300	1,410	1,510	1,660	1,740	1,810	2,040	2,110	2,260	2,540	E	13,640	0.19	C	190	250	1,230	2
Glencoe Rd.	Paige Ave. to SR 44	731	County			1.10	35	UA_NSSRC2_2W_2	Minor Collector - Urban	3,710	3,780	3,820	3,720	4,030	4,280 -				4,500	5,360	E	13,640	0.39	C	380	460	1,020	2
Glencoe Rd.	SR 44 to Pioneer Tr.	732	County			0.85	35	UA_NSSRC2_2W_2	Minor Collector - Urban	1,670	1,820	1,930	1,870	1,570	1,500	1,590	1,770	1,800	1,850	2,080	E	13,640	0.15	C	140	190	1,020	2
Glenwood Rd.	Grand Ave. to SR 15A	741	County			1.60	35	UA_NSSRC2_2W_2	Minor Collector - Urban	4,210	4,170	4,030	4,040 -		4,360	4,120	4,380	4,500	4,360	4,210	E	13,640	0.31	C	250	370	1,020	2
Glenwood Rd.	SR 15A to US 17	743	County			1.25	35	UA_NSSRC2_2W_2	Major Collector - Urban	2,140	2,140	2,050	2,000 -		2,400	2,260	2,340	2,390	2,110	1,750	E	13,640	0.13	C	120	200	1,020	2
Grand Av/CR 4053	Old New York Ave. to SR 44	748	County		Yes	0.60	30	UA_NSSRC2_2W_2	Major Collector - Urban	810	860	830	940	970 -			1,230	1,550	1,870	1,980	2,290	E	13,640	0.17	C	170	250	1,020	2
Grand Av/CR 4053	SR 44 to Minnesota Ave.	750	County		Yes	0.90	35	UA_NSSRC2_2W_2	Major Collector - Urban	2,250	1,820	2,190	2,280	2,570	3,090	3,010	3,630	4,090	3,860	4,440	E	13,640	0.33	C	310	470	1,020	2
Grand Av/CR 4053	Minnesota Ave. to Plymouth Ave.	751	County		Yes	0.50	40	UA_NSSRC1_2W_2	Major Collector - Urban	1,240	1,270	1,260	1,240	1,410	1,760	1,530	1,680	1,900	1,780	1,880	E	13,640	0.14	C	130	180	1,230	2
Grand Av/CR 4053	Plymouth Ave. to Glenwood Rd.	752	County		Yes	2.10	40	UA_NSSRC1_2W_2	Major Collector - Urban	1,910	2,010	2,080	1,990	2,330	2,680	2,310	2,570	2,650	2,570	2,800	E	13,640	0.21	C	200	250	1,230	2
Grand Av/CR 4053	Glenwood Rd. to Lemon St.	754	County		Yes	1.30	35	UA_NSSRC2_2W_2	Major Collector - Urban	3,700	3,630	3,550	3,550	3,860	4,010	4,020	4,200	4,270	3,950	4,070	E	14,740	0.28	C	270	370	1,330	2
Grand Av/CR 4053	Lemon St. to Retta St.	756	County		Yes	1.80	40	UA_NSSRC1_2W_2	Major Collector - Urban	1,740	1,720	1,700	1,740	1,990	2,100	1,860	2,190	2,200	2,280	2,300	E	13,640	0.17	C	160	210	1,230	2
Graves Av/CR 4145	Veteran's Memorial Pkwy. to Kentucky Ave.	775	County		Yes	0.30	45	UA_NSSRC1_2W_2	Minor Arterial - Urban	17,570	17,140	16,750	17,160	18,780	19,180	19,190	19,590	21,760	19,090	19,750	E	17,900	1.10	F	1,180	1,640	1,620	2
Graves Av/CR 4145	Kentucky Ave. to Normandy Blvd.	900a	County		Yes	0.60	45	UA_NSSRC1_2W_2	Minor Arterial - Urban	13,790	11,840	12,970	13,640	14,510	15,310	14,060	15,520	16,040	15,580	16,370	E	17,900	0.91	C	1,000	1,420	1,620	2
Graves Av/CR 4145	Normandy Blvd. to Howland Blvd.	900b	County		Yes	0.25	35	UA_NSSRC2_2W_4	Minor Arterial - Urban	13,790	11,840	12,970	13,640	14,510	15,310	14,060	15,520	16,040	16,310	19,290	E	30,420	0.63	D	1,290	1,650	2,740	4
Greens Dairy Rd.	SR 15A to Stone St.	780	County			0.50	30	UA_NSSRC2_2W_2	Local	120	90	100	120 -		150	200	210	230	200	160	E	13,640	0.01	C	10	20	1,020	2
Halleck St. (NSB)	Wayne Ave. to Enterprise Ave.	810	County		Yes	0.20	30	UA_NSSRC2_2W_2	Major Collector - Urban	6,170	5,780	5,890	6,450	6,530	6,410	6,940	7,200	6,940	6,830	7,390	E	13,640	0.54	D	110	180	1,020	2
Hand Ave.	Williamson Blvd. to Clyde Morris Blvd.	830	County		Yes	1.25	50	UA_NSSRC1_2W_2	Major Collector - Urban	7,660	7,900	6,750	8,330	9,520	8,720	6,880	9,860	9,590		9,480	E	17,050	0.56	A	640	770	1,540	2
Hand Ave.	Clyde Morris Blvd. to Shangri La Dr.	832	County		Yes	0.75	50	UA_NSSRC1_2W_2	Major Collector - Urban	13,220	13,090	10,230	13,950	14,870	15,370	16,690	17,010	16,350	14,340	15,180	E	17,050	0.89	C	1,050	1,230	1,540	2
Hand Ave.	Shangri La Dr. to SR 5A/Nova Rd.	833	County		Yes	0.25	45	UA_NSSRC1_2W_4	Major Collector - Urban	14,880	14,320	13,350	14,950	16,320	15,820	17,270	18,250	17,000	13,370	16,410	E	37,970	0.43	C	1,090	1,360	3,410	4
Hazen Rd.	SR 44 to Plymouth Ave.	850	County		Yes	1.00	40	UA_NSSRC1_2W_2	Major Collector - Urban	1,050	1,240	1,250	1,400 -		1,480	1,680	1,680	1,980	1,650	1,440	1,790	E	13,640	0.13	C	140	180	1,230	2
Hazen Rd.	Plymouth Ave. to Mercers Fernery Rd.	852	County			1.50	35	UA_NSSRC2_2W_2	Major Collector - Urban	720	700	800	820	680	850	910	1,020	1,380	840	910	E	13,640	0.07	C	130	80	1,020	2
Highbridge Rd.	Walter Boardman Ln. to John Anderson Dr.	871	County		Yes	1.60	30	RDA_UFH_2W_2L	Major Collector - Rural	1,830	2,100	1,750	2,020	2,480	2,770	2,210	2,570	3,160		3,390	C	11,775	0.29	A	200	290	1,120	2
Highbridge Rd.	John Anderson Dr. to SR A1A	872	County		Yes	0.20	30	UA_NSSRC2_2W_2	Major Collector - Urban	1,520	1,780	1,490	1,660	2,170	2,380	2,120	2,110	2,680	2,490	2,940	E	13,640	0.22	C	170	240	1,020	2
Hill Ave.	Taylor Rd. to Beresford Ave.	878	County			1.00	30	UA_NSSRC2_2W_2	Local	430	480	550	820 -		1,070	1,030	1,260	1,140	1,060	1,080	E	13,640	0.08	C	80	110	1,020	2
Hill Ave.	Beresford Ave. to Voorhis Ave.	881	County			0.75	30	UA_NSSRC2_2W_2	Major Collector - Urban	2,310	2,370	2,200	2,510 -		2,680	2,780	2,840	2,980	2,430	2,450	E	13,640	0.18	C	230	240	1,020	2
Hill Ave.	Voorhis Ave. to SR 44	882	County			0.25	30	UA_NSSRC2_2W_2	Major Collector - Urban	2,530	2,780	2,540	2,760 -		3,220	3,150	3,710	3,590	3,060	3,130	E	13,640	0.23	C	270	280	1,020	2
Hill Ave./Jacobs Rd.	Plymouth Ave. to US 92	950	County		Yes	0.85	40	UA_NSSRC1_2W_2	Major Collector - Urban	5,870	5,190	5,820	5,900	6,170	7,590	7,510	8,420	8,270	7,230	7,390	E	13,640	0.54	C	600	560	1,230	2
Hontoon Rd.	end of road to Botts Landing Rd.	890	County			2.00	35	UA_NSSRC2_2W_2	Minor Collector - Urban	870	790	840	880	1,000	1,090	1,040	930	970	970	1,120	C	5,260	0.21	C	80	100	1,020	2
Hontoon Rd.	Botts Landing Rd. to Old New York Ave.	891	County			1.15	40	UA_NSSRC1_2W_2	Minor Collector - Urban	3,050	2,840	2,820	2,990	3,180	3,450	3,240	3,020	3,190	2,950	3,540	C	12,100	0.29	C	240	290	1,230	2
Howland Blvd.	I-4/SR 472 to Wolf Pack Run	901	FDOT		Yes	0.40	45	UA_NSSRC1_2W_4	Minor Arterial - Urban	30,490	29,890	27,480	30,590	36,570	32,320	38,300	36,990	34,320	30,660	31,360	E	37,970	0.83	C	2,080	2,530	3,410	4
Howland Blvd.	Wolf Pack Run to Catalina Blvd.	903	County		Yes	1.15	45	UA_NSSRC1_2W_4	Minor Arterial - Urban	28,010	27,440	25,280	27,770	31,520	30,270	30,040	31,480	30,520	26,130	28,510	E	37,970	0.75	C	1,860	2,310	3,410	4
Howland Blvd.	Catalina Blvd. to Providence Blvd.	905	County		Yes	0.35	45	UA_NSSRC1_2W_4	Minor Arterial - Urban	22,110	21,930	20,070	22,700	23,710	23,950	25,520	23,110	23,670	19,360	20,570	E	37,970	0.54	C	1,360	1,670	3,410	4
Howland Blvd.	Providence Blvd. to Elkcam Blvd.	906	County		Yes	2.10	45	UA_NSSRC1_2W_2	Minor Arterial - Urban	16,890	14,140	15,150	16,430	16,780	17,220	18,800	18,930	17,430	13,580	14,120	E	13,640	1.04	E	970	1,110	1,230	2
Howland Blvd.	Elkcam Blvd. to Lake Helen-Osteen Rd.	908	County		Yes	0.30	45/40	UA_NSSRC1_2W_4	Minor Arterial - Urban	15,300	15,620	14,220	15,090	16,530	15,940	18,760	18,190	17,500	13,670	16,110	E	37,970	0.42	C	950	1,260	3,410	4
Howland Blvd.	Lake Helen-Osteen Rd. to Newmark Dr.	909	County		Yes	0.70	40	UA_NSSRC1_2W_4	Minor Arterial - Urban	20,350	20,990	19,330	19,900	19,690	21,360	25,290	23,160	21,860	19,970	22,640	E	37,970	0.60	C	1,470	1,890	3,410	4
Howland Blvd.	Newmark Dr. to Courtland Blvd.	911	County		Yes	1.15	45	UA_NSSRC1_2W_4	Minor Arterial - Urban	16,640	16,990	15,600	15,490	16,060	17,440	20,200	18,130	20,630	16,480	19,260	E	37,970	0.51	C	1,310	1,640	3,410	4
Howland Blvd.	Courtland Blvd. to Ft Smith Blvd.	913	County		Yes	1.80	45	UA_NSSRC1_2W_4	Minor Arterial - Urban	13,280	12,920	11,770	11,240	10,990	12,000	16,230	14,620	14,080	12,970	15,700	E	37,970	0.41	C	1,280	1,360	3,410	4
Howland Blvd.	Ft Smith Blvd. to SR 415	915	County		Yes	0.65	45	UA_NSSRC1_2W_4	Minor Arterial - Urban	12,650	12,180	12,530	12,960	14,030	13,600	18,230	16,400	17,200	15,690	17,850	E	37,970	0.47	C	1,230	1,590	3,410	4
I-4 Frontage Rd.	Summit Ave. to Orange Camp Rd.	Future Ro	County		Yes	2.00	45	UA_NSSRC1_2W_2	n/c	-	-	-	-	-	-	-	-	-	-	-	-	12,100	-	-	-	-	1,230	0
I-4 Frontage Rd.	Orange Campe Rd. to Cassadaga Rd.	Future Ro	County		Yes	1.35	45	UA_NSSRC1_2W_4	n/c	-	-	-	-	-	-	-	-	-	-	-	E	37,970	-	-	-	-	3,410	0
I-4 Frontage Rd.	Cassadaga Rd. to SR 472	Future Ro	County		Yes	0.70	45	UA_NSSRC1_2W_4	n/c	-	-	-	-	-	-	-	-	-	-	-	E	37,970	-	-	-	-	3,410	0
Indian Lake Rd.	Tiger Bay Rd. to US 92	935	County			0.80	40	UA_NSSRC1_2W_2	Local	6,090	5,550	5,180	5,150	5,870	6,660	6,590	6,370	6,470	4,710	5,250	E	13,640	0.38	C	490	490	1,230	2
John Anderson Dr.	Halifax Dr to Lynnhurst	972	County		Yes	0.85	30	UA_NSSRC2_2W_2	Major Collector - Urban	5,390	5,520	6,730	4,370	5,180	5,790	5,520	5,200	5,570	5,060	3,590	E	13,640	0.26	C	280	290	1,020	2
John Anderson Dr.	Lynnhurst to Highbridge Rd.	974	County		Yes	7.40	35	UA_NSSRC2_2W_2	Major Collector - Urban	3,590	3,960	4,570	3,240	3,700	4,190	4,080	3,870	3,940	3,670	3,890	E	13,640	0.29	C	290	340	1,020	2
John Anderson Hwy.	Walter Boardman Lane to Flagler Co.	990	County		Yes	1.00	5 NB / 30 S	RDA_UFH_2W_2L	Minor Collector - Rural	1,000	1,140	900	950	1,150	1,190	1,170	1,200	1,180	1,230	1,420	C	11,775	0.12	B	90	130	1,120	2
Josephine St./10th St.	Old Mission Rd. to Tatum Blvd.	1000	County		Yes	0.30	30	UA_NSSRC2_2W_2	Major Collector - Urban	5,810	5,860	5,910	5,820	4,830	6,650	6,230	5,590	7,020	5,840	6,010	E	13,640	0.44	D	610	530	1,020	2
Josephine St./10th St. (NSB)	Tatum Blvd. to US 1	1002	County		Yes	1.80	35	UA_NSSRC2_2W_2	Major Collector - Urban	7,350	7,140 -	-	-	4,940	6,990 -	-	-	-	-	-	E	14,040	-	A	30	40	1,270	2
Kathy Dr. (N. Penin.)	John Anderson Dr. to SR A1A	1011	County			0.44	30	UA_NSSRC2_2W_2	Local	420	460	470	460	410	500	410	440	430	430	470	E	13,640	0.03	C	690	910	1,020	2
Kennedy Pkwy (Old SR 3)	US 1 to Park Entrance	1020	Federal			4.00	55	RUA_UFH_2W_2L	Major Collector - Rural	700	660 -	-	-	-			850	850	850		C	6,450		B	120	140	620	2
Kicklighter Rd.	Macy Ave. to Lake Helen-Osteen/Prevatt	1051	County		Yes	0.75	30	UA_NSSRC2_2W_2	Minor Collector - Urban	2,080	1,810	1,690	1,680	1,820	2,020	2,100	2,190	2,110	1,880	1,950	E	13,640	0.14	C	410	200	1,020	2
Lake George Rd.	Bream Dr. to US 17	1062	County			3.90	30	RUA_UFH_2W_2L	Local	860	820	740	780	810	810	850	880	790	710	730	C	6,450	0.11	B	50	60	620	2
Lake Helen-Osteen Rd.	Howland Blvd. to Elkcam Blvd.	1070	County		Yes	0.40	35	UA_NSSRC2_2W_2	Minor Arterial - Urban	6,140	6,050	6,060	5,920	6,140	6,360	7,430	7,800	6,910	6,710	7,970	E	13,640	0.58	D	570	730	1,020	2
Lake Helen-Osteen Rd.	Elkcam Blvd. to Haulover Blvd.	1071	County		Yes	1.75	45	UA_NSSRC1_2W_2	Minor Arterial - Urban	7,690	7,540	7,220	6,920	5,440	5,680	5,490	9,500	8,270	8,160	9,470	E	13,640	0.69	C	690	820	1,230	2
Lake Helen-Osteen Rd.	Haulover Blvd. to Catalina Blvd.	1072	County		Yes	0.50	45	UA_NSSRC1_2W_2	Minor Arterial - Urban	10,320	9,740	9,570	9,850	10,510	11,000	11,260	12,610	11,300	11,210	12,740	E	13,640	0.93	C	1,040	1,090	1,230	2
Lake Helen-Osteen Rd.	Catalina Blvd. to Captain Dr	1073	County		Yes	0.40	45	UA_NSSRC1_2W_2	Minor Arterial - Urban	7,410	7,090	6,840	7,110	7,420	7,700	7,830	8,560	7,580	7,650	8,480	E	13,640	0.62	C	700	750	1,230	2
Lake Helen-Osteen Rd.	Captain Dr. to Kicklighter Rd.	1076	County		Yes	1.40	40	UA_NSSRC1_2W_2	Minor Arterial - Urban	7,030	6,570	6,750	6,760	6,990	7,280	7,910	7,590	8,260	7,750	8,940	E	13,640	0.66	C	1,050	840	1,230	2
Prevatt Ave.	Kicklighter Rd to Lake Pearl Dr.	1520	County		Yes	1.50	40	UA_NSSRC1_2W_2	Minor Arterial - Urban	4,800	4,390	4,570	3,910 -		4,640	5,070	5,220	4,600	4,540	6,080	C	15,120	0.40	C	590	530	1,540	2
Prevatt Ave.	Lake Pearl Dr. to SR 44	1523	County		Yes	1.80	55	UA_NSSRC1_2W_2	Minor Arterial - Urban	4,630	4,230	4,470	4,200	4,570	5,680	5,510	4,800	4,700	5,710	7,210	E	17,050	0.42	C	650	560	1,540	2
Lake Winona Rd.	CR 3 to US 17	1080	County		Yes	0.15	35	RUA_UFH_2W_2L	Local	160	170	170	220 -		350	290	260	200	220	280	C	6,450	0.04	B	20	30	620	2
Lake Winona Rd.	US 17 to Blackwelder Rd.	1081	County		Yes	2.25	35	RUA_UFH_2W_2L	Minor Collector - Rural	880	800	800	980 -		1,030	980	1,110	1,130	1,070	1,050	C	6,450	0.16	B	80	90	620	2
Lake Winona Rd.	Blackwelder Rd. to SR 40	1082	County		Yes	3.70	35	RUA_UFH_2W_2L	Minor Collector - Rural	150	120	140	160 -		200	170	190	200	130	190	C	6,450	0.03	B	20	20	620	2
Children's Way/Lakeshore Dr.	Main St. to Providence Blvd.	1090	County		Yes	0.70	30	UA_NSSRC2_2W_2	Local	1,000	960	900	870	940	1,000	1,000	840	830	1,500	940	E	13,640	0.07	C	60	110	1,020	2
Lakeshore Dr.	Providence Blvd. to Garfield Rd	1092	County		Yes	0.45	30	UA_NSSRC2_2W_2	Minor Collector - Urban	2,590	2,610	2,520	2,570	2,820	3,170	3,180	2,970	3,120	1,770	3,130	E	13,640	0.23	C	180	300	1,020	2
Lakeview Dr. (LH)	Ohio Ave. to Main St.	1100	County		Yes	0.50	30	UA_NSSRC2_2W_2	Minor Collector - Urban	2,600	2,790	2,740	3,280	3,690	3,280	4,330	4,390	3,890	3,420	3,830	C	5,260	0.73	C	440	390	1,020	2
Lakeview Dr. (LH)	Main St. to New York Ave.	1101	County			0.25	30	UA_NSSRC2_2W_2	Minor Collector - Urban	1,130	1,190	1,110	1,140	1,250	1,150	1,420	1,170	1,120	1,230	1,330	C	5,260	0.25	C	130	130	1,020

Volusia County's Segment Growth Rates and Vested Trips Instructions Policy



The applicant must provide a detailed narrative justifying any request to modify growth rate, particularly in cases where there is a significant difference. This narrative should be accompanied by thorough supporting documentation, which outlines the specific factors contributing to the observed variations and explains how the proposed growth rate aligns with the overall traffic patterns and conditions in the area.

AND

IF there are - Vested Trips

Negative Growth (Use Minimum 1%):

\+ Vested Trips

Low to Medium Growth (<= 3%)(Use Minimum 1%):

\+ Vested Trips

High Growth (> 3%):

Use the Highest # of the two (growth rate or vested trips). Need to submit supporting documentation & justification.

HIGH GROWTH & HIGH VESTED TRIPS

If there are Vested Trips from multiple approved projects on segment.
And, Vested Trips comprise of multiple uses that would normally have significant interaction (residential, retail, office, restaurant, etc…).

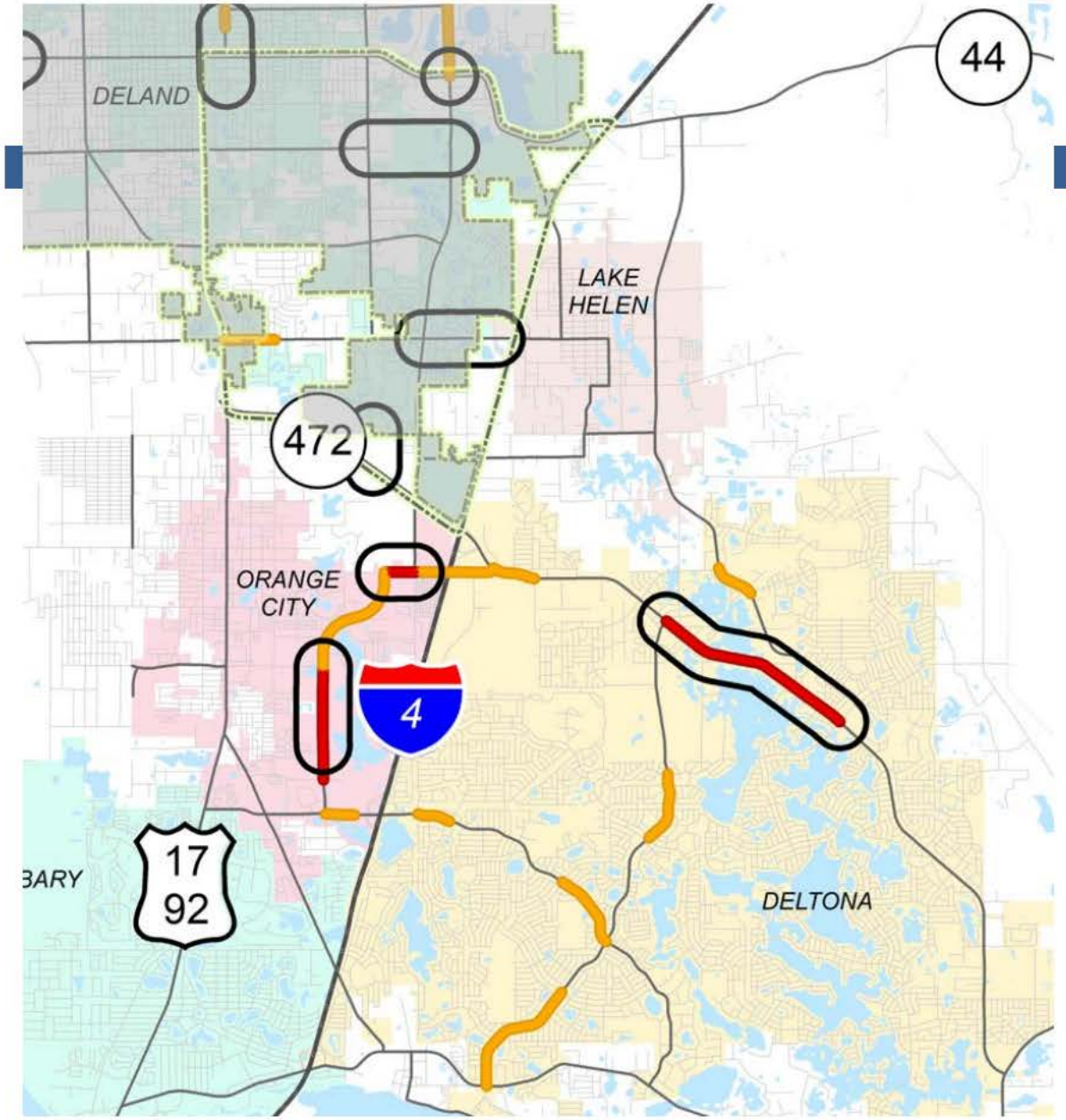
And, Vested Trips make up more than 30% of the total future background traffic.

Then, Vested Trips can be reduced by 30% upon request by the Applicant

Signed:_____ Date:_____

Jay Williams, PE, PTOE

ZONE 3



Deltona

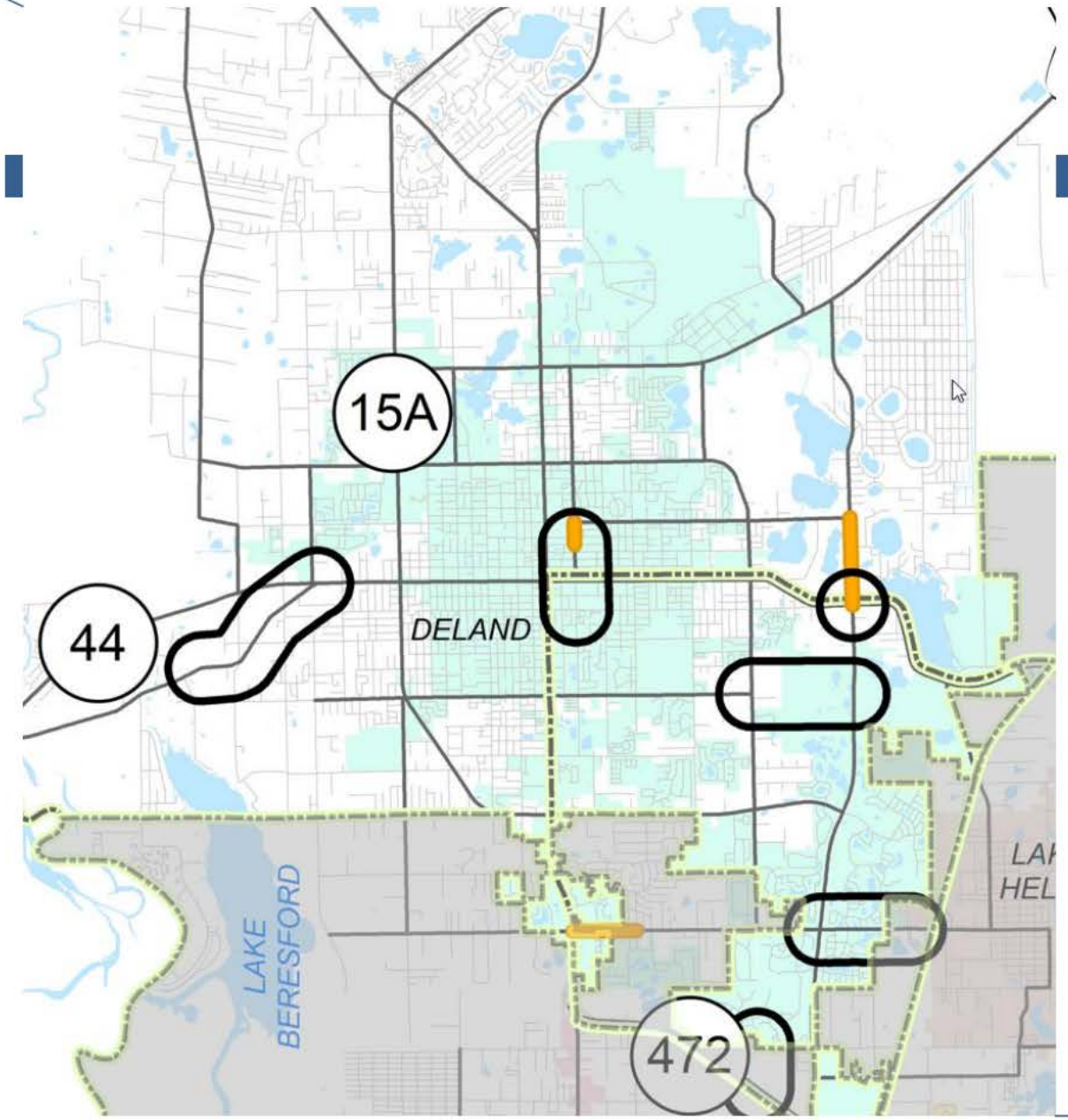
- Howland Blvd widening from Providence Blvd to Elkcam Blvd
  (Construction Underway)

Orange City

- Graves Ave widening from 2 Lanes to 3 Lanes Veterans Memorial Pkwy to Kentucky Av
  (Design Underway)

- Veterans Memorial Pkwy widening from current limits of 4 Lanes to Rhode Island Av
  (Design Underway)

ZONE 4



DeLand

- **Orange Camp Rd widening from Martin Luther King Jr. Btwy to I-4**
  (Construction Underway)
- **Old New York Av Add Paved Shoulders SR 44 to Shell Rd**
  (Design Underway)
- **Beresford Rd Extension from Blue Lake Av to Kepler Rd/Martin Luther King Jr. Btwy**
  (Design & ROW Acquisition Underway)

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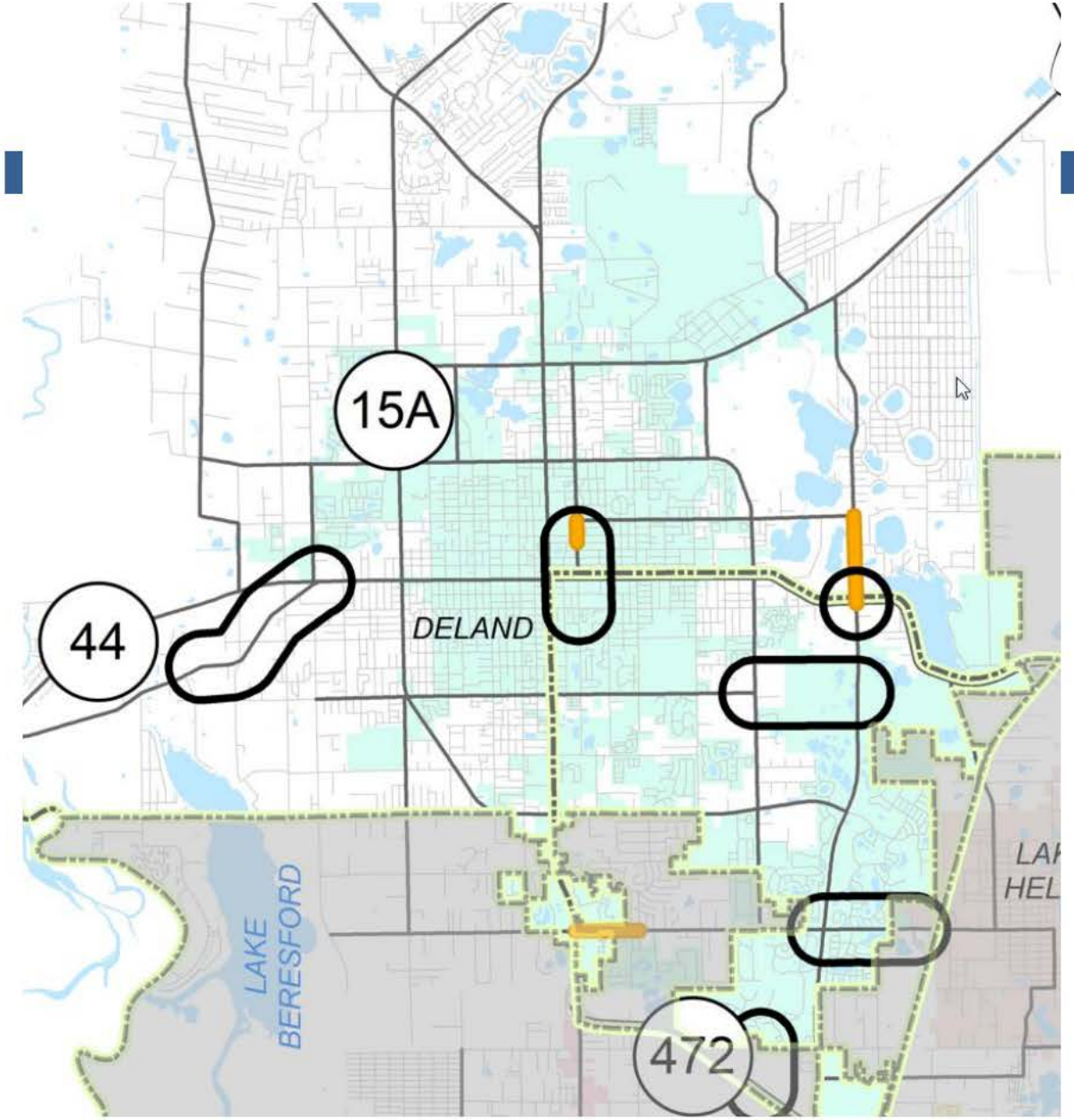


- **Amelia Av Lane Reduction from Voorhis Ave to Ohio Ave**
  (Design & ROW Acquisition Underway)
- **Blue Lake Av Extension from Blue Lake Av in Victoria Park to SR 472**
  (Design & ROW Acquisition Underway)

Appendix D
ITE Trip Generation Sheets

Single-Family Detached Housing
(210)

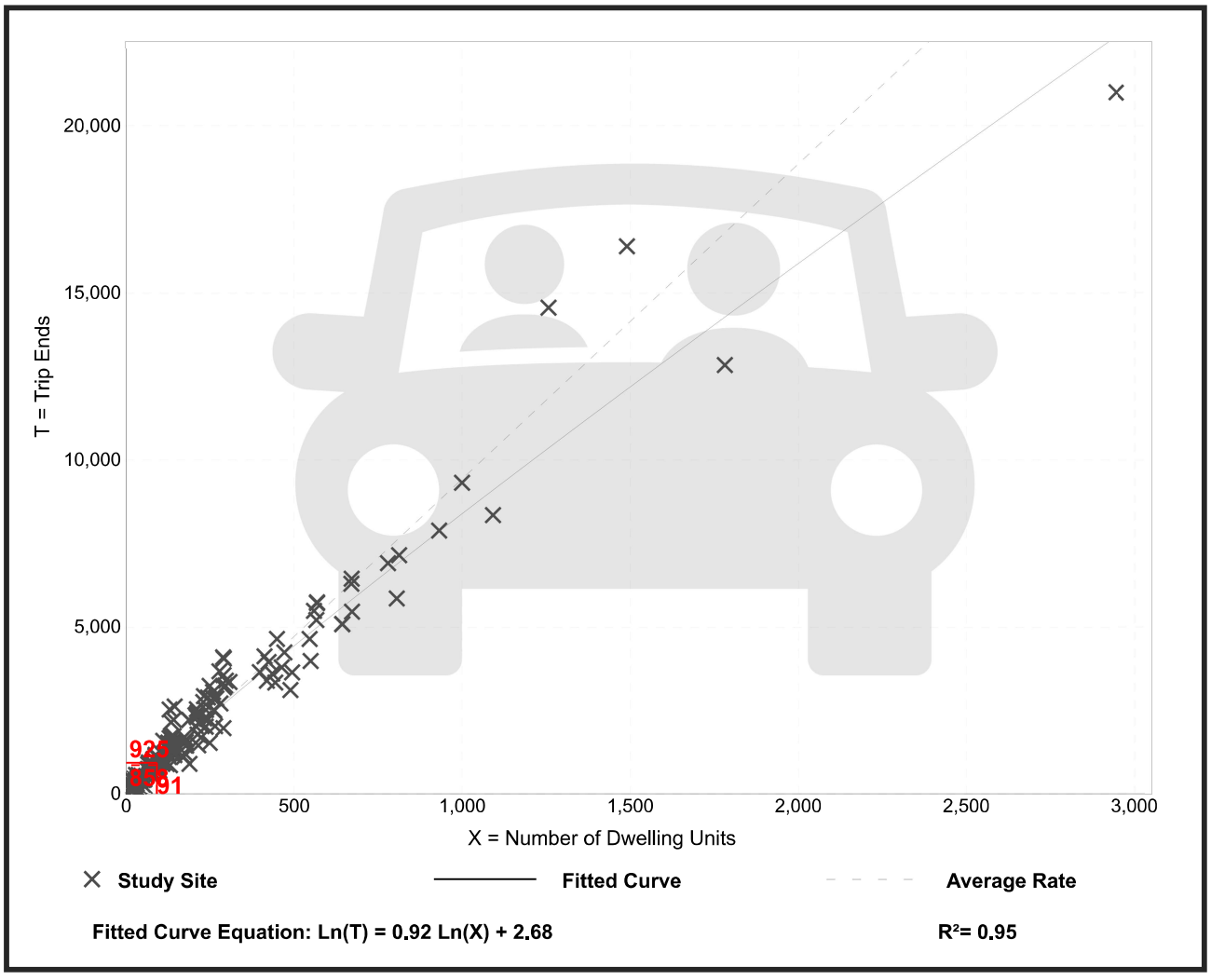
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 174
Avg. Num. of Dwelling Units: 246
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.43	4.45 - 22.61	2.13

Data Plot and Equation



Trip Gen Manual, 11th Edition • Institute of Transportation Engineers

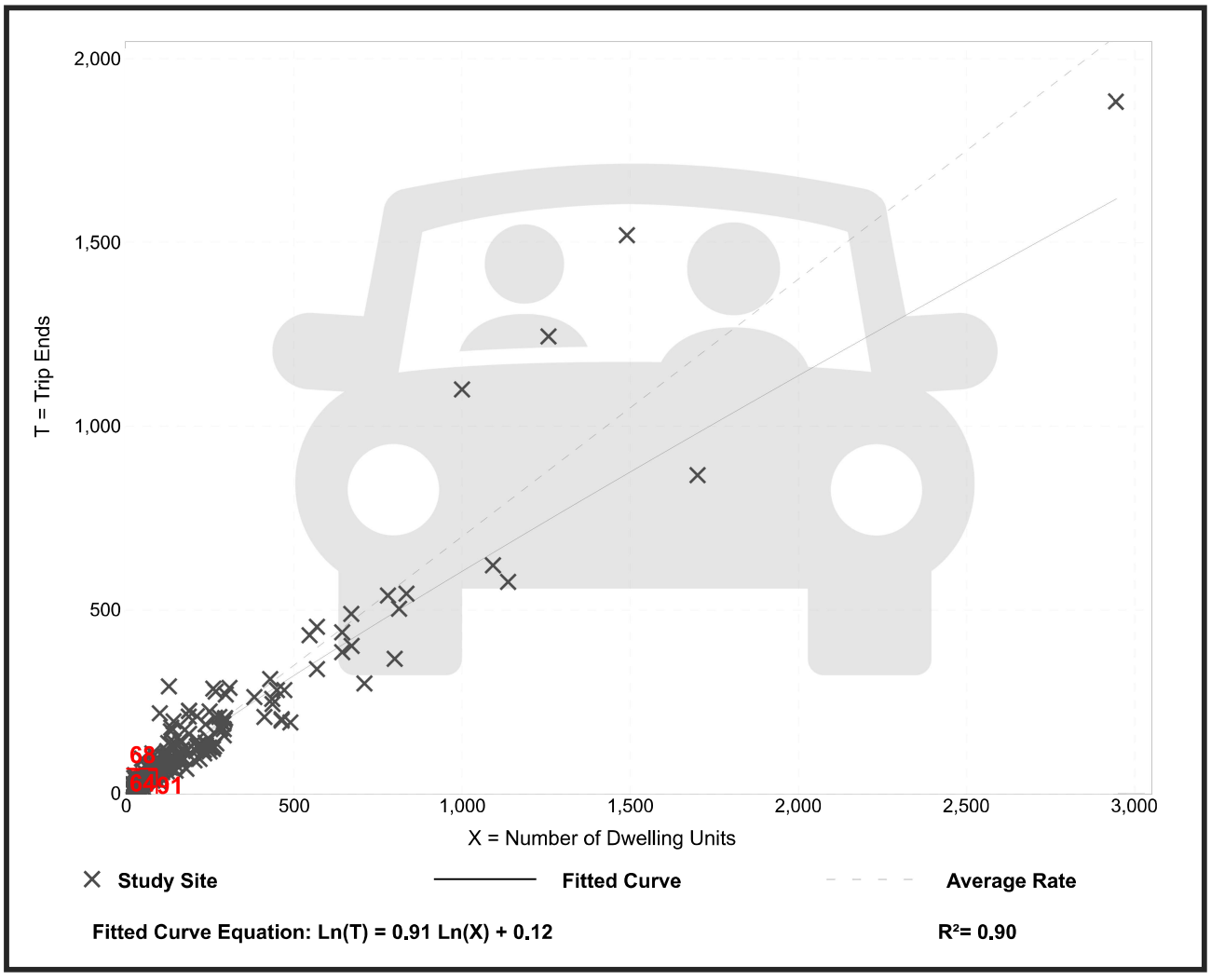
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 192
Avg. Num. of Dwelling Units: 226
Directional Distribution: 25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.70	0.27 - 2.27	0.24

Data Plot and Equation



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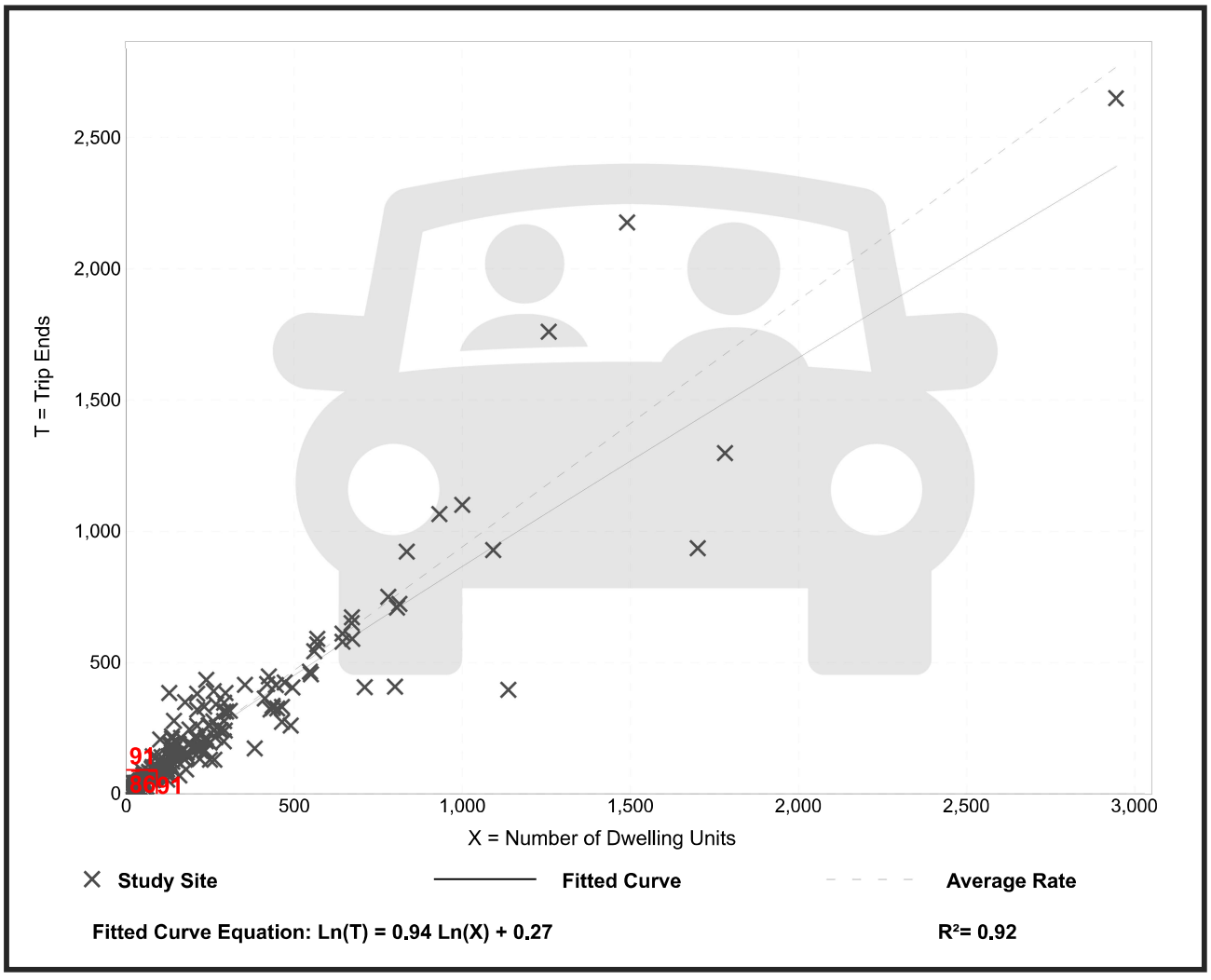
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	208
Avg. Num. of Dwelling Units:	248
Directional Distribution:	63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.94	0.35 - 2.98	0.31

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Single-Family Attached Housing
(215)

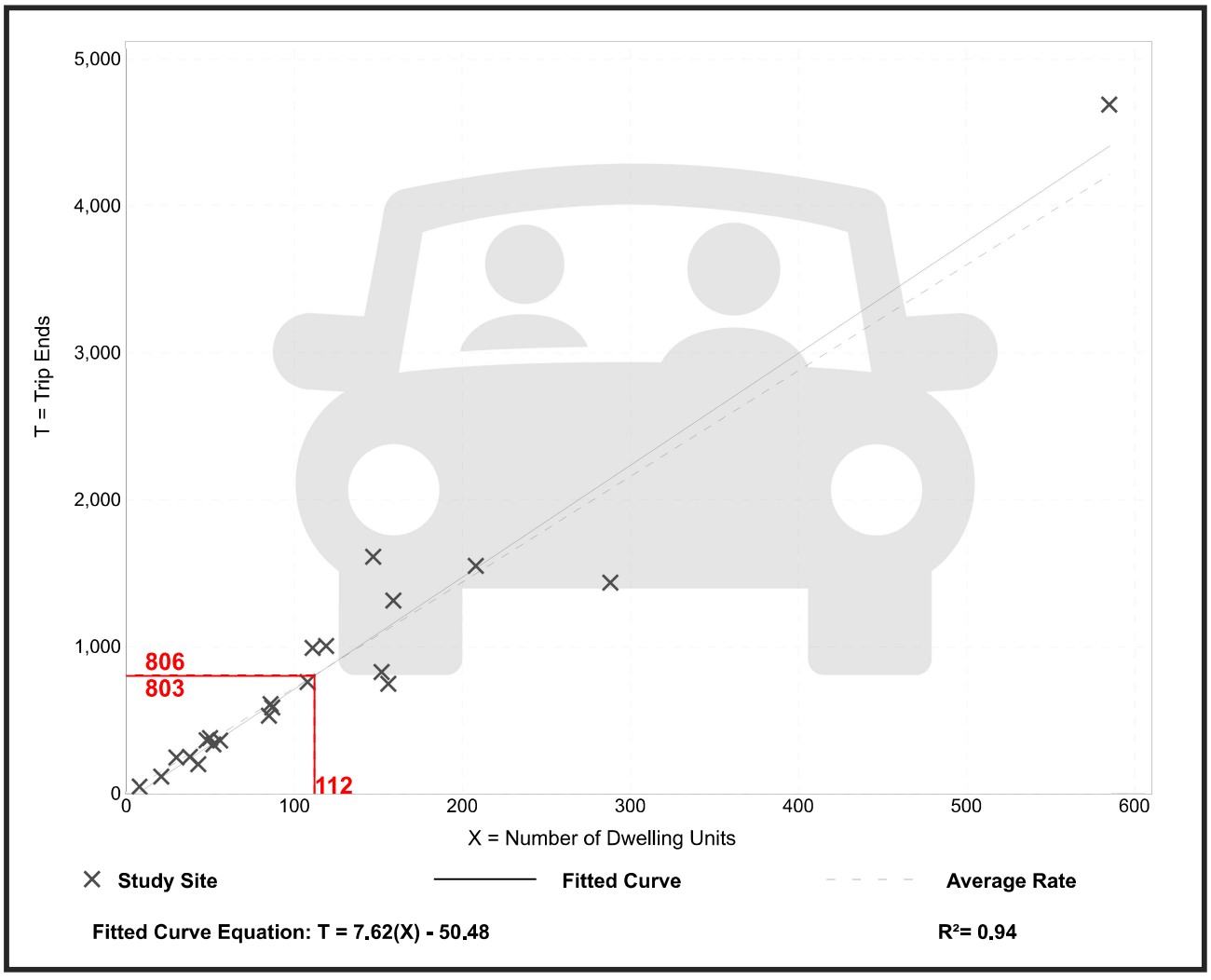
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 22
Avg. Num. of Dwelling Units: 120
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
7.20	4.70 - 10.97	1.61

Data Plot and Equation



Trip Gen Manual, 11th Edition • Institute of Transportation Engineers

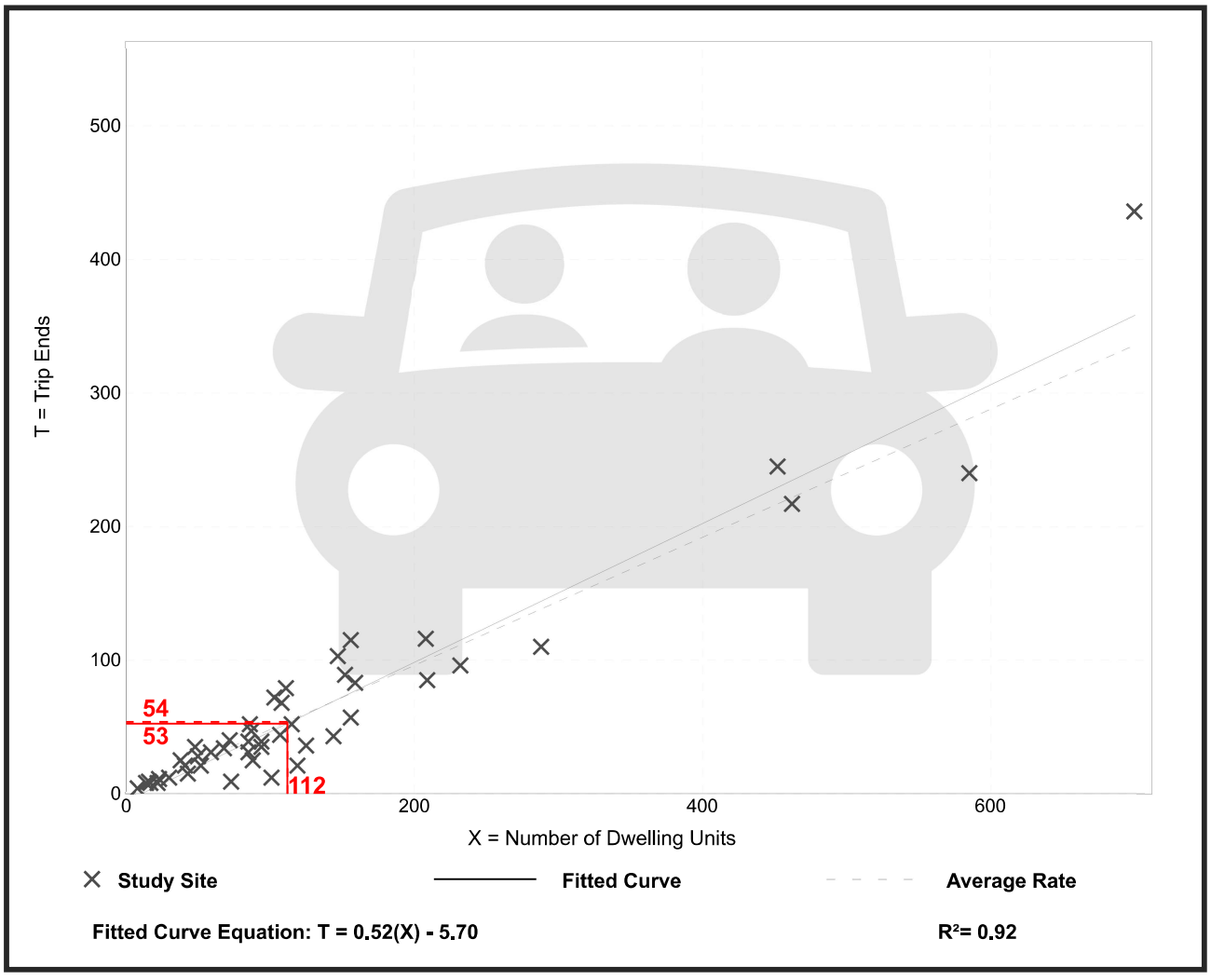
Single-Family Attached Housing
(215)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	46
Avg. Num. of Dwelling Units:	135
Directional Distribution:	25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.48	0.12 - 0.74	0.14

Data Plot and Equation



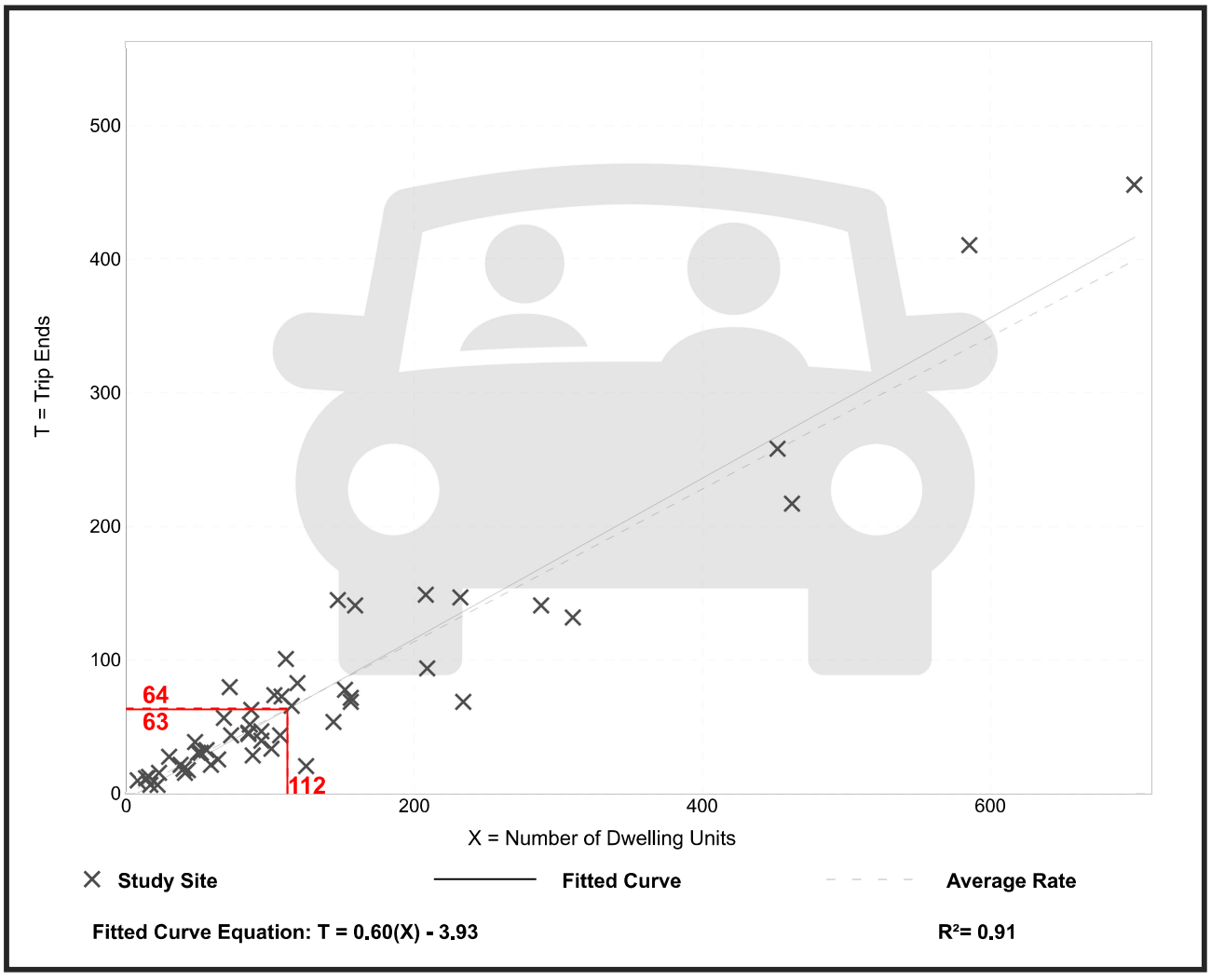
Single-Family Attached Housing
(215)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	51
Avg. Num. of Dwelling Units:	136
Directional Distribution:	59% entering, 41% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.57	0.17 - 1.25	0.18

Data Plot and Equation



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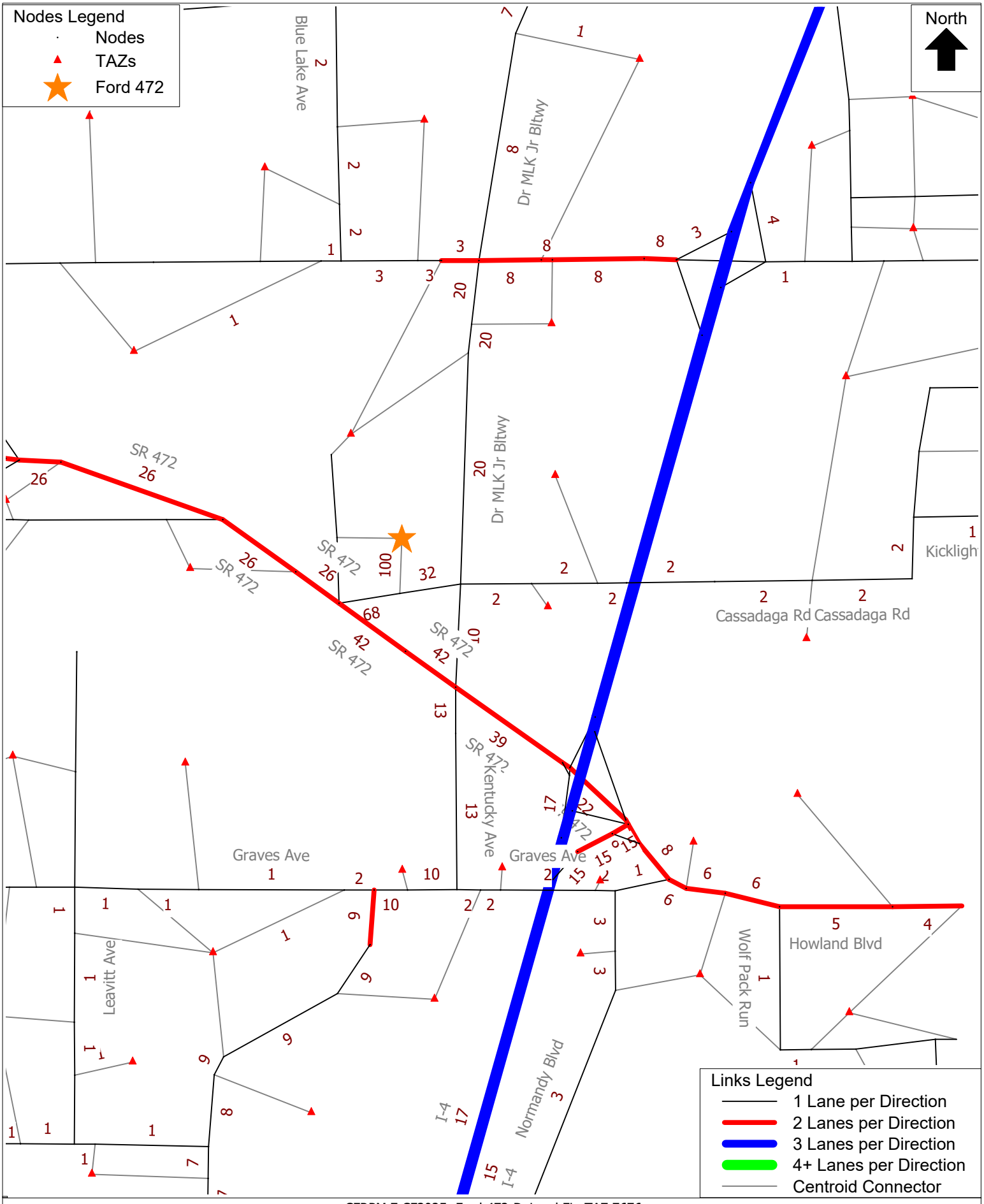
Appendix E
Model Distribution Plots



CFRPM 7 CF2025 -Ford 472-DeLand FL. TAZ 7676
Project Distribution
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cube

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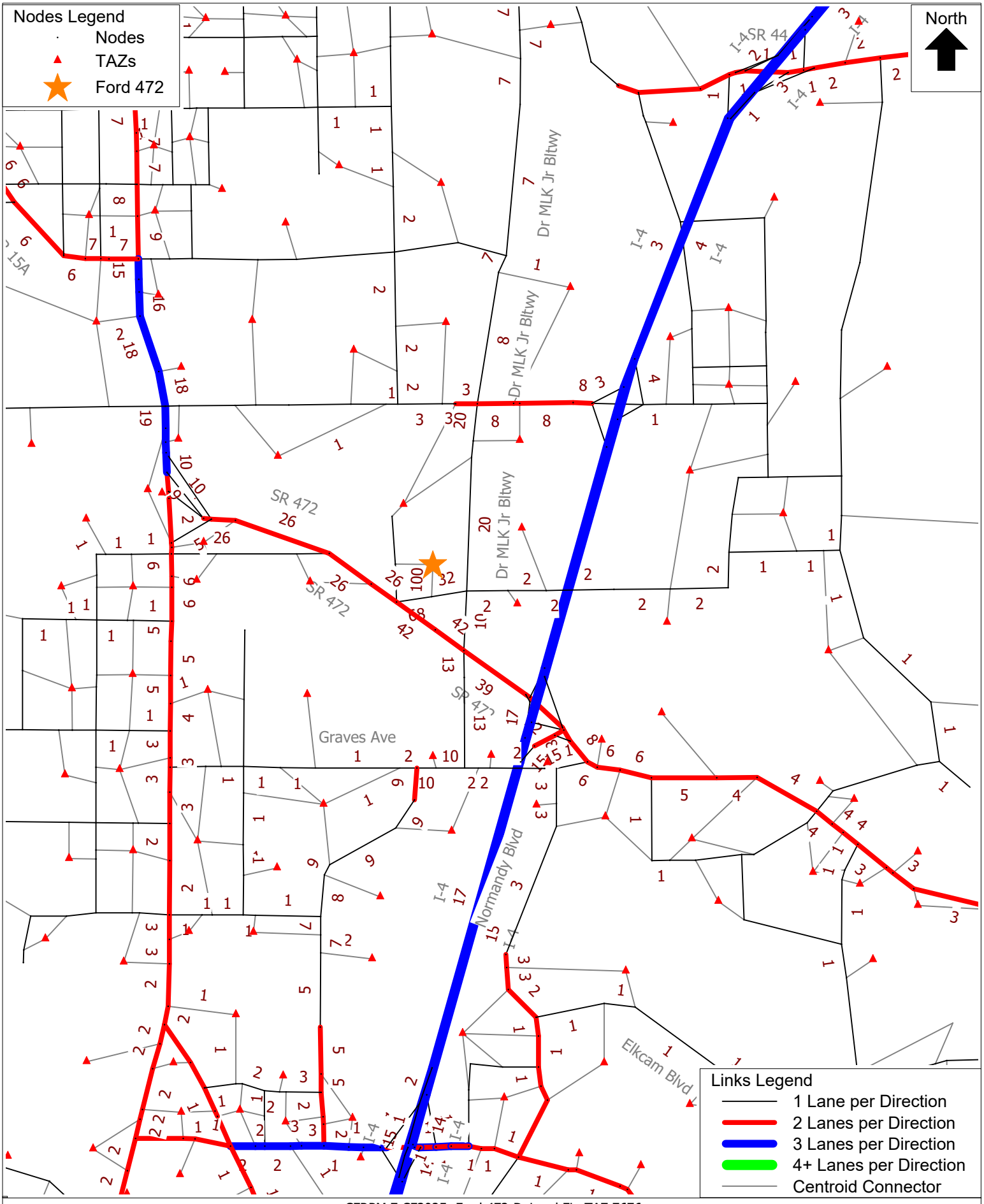

CFRPM 7 CF2025 -Ford 472-DeLand FL. TAZ 7676
Project Distribution
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Appendix F
2022 Volusia County AADT and Historical Counts

Road Name	Limits (From - To)	Count Station Number	Roadway Maintaining Agency	2021 Roadway on County's Thoroughfare	Distance (in miles)	Posted Speed	2021 QLOS Facility Type	2010 Federal Functional Classification	2011 AADT	2012 AADT	2013 AADT	2014 AADT	2015 AADT	2016 AADT	2017 AADT	2018 AADT	2019 AADT	2020 AADT	2021 AADT	2022 AADT	VC 2022 Allowable LOS	DAILY 2022 LOS Capacity	DAILY 2021 V/C Ratio	DAILY 2022 LOS	2022 AM Peak	2022 PM Peak	PEAK 2Way 2022 LOS Capacity	2021 No. of Lanes
Rd_Name	Limits	Cnt_Sta	MainRes	Tfare21	Distance	SPD2013	F_Type_21	Fun_Class_2010	AADT_11	AADT_12	AADT_13	AADT_14	AADT_15	AADT_16	AADT_17	AADT_18	AADT_19	AADT_20	AADT_21	AADT_22	VCA_LOS_22	Cap_22	VCRatio_22	LOS_22	AMPKHR_22	PMPKHR_22	2W_Cap_22	Lanes_20
Cassadaga Rd.	W. Volusia Bltwy. to Macy Ave.	280	County	Yes	1.80	30	UA_NSSRC2_2W_2L_U_0L	Major Collector - Urban	1,970	2,190	2,010	1,900	2,260	2,200	2,500	2,400	2,220	2,380	2,750	2,500	E	13,640	0.18	C	140	210	1,020	2
Graves Av/CR 4145	Veteran's Memorial Pkwy. to Kentuck	775	County	Yes	0.30	45	UA_NSSRC1_2W_2L_D_WL	Minor Arterial - Urban	**17,570**	17,140	16,750	17,160	18,780	19,180	19,190	19,590	**21,760**	19,090	19,750	20,000	E	17,900	1.12	F	1,230	1,635	1,620	2
Graves Av/CR 4145	Kentucky Ave. to Normandy Blvd.	900a	County	Yes	0.60	45	UA_NSSRC1_2W_2L_D_WL	Minor Arterial - Urban	13,790	11,840	12,970	13,640	14,510	15,310	14,060	15,520	16,040	15,580	16,370	19,700	E	17,900	1.10	C	1,420	1,675	1,620	2
Graves Av/CR 4145	Normandy Blvd. to Howland Blvd.	900b	County	Yes	0.25	35	UA_NSSRC2_2W_4L_D_WL	Minor Arterial - Urban	13,790	11,840	12,970	13,640	14,510	15,310	14,060	15,520	16,040	16,310	18,540	16,100	E	30,420	0.53	D	1,140	1,340	2,740	4
Howland Blvd.	I-4/SR 472 to Wolf Pack Run	901	FDOT	Yes	0.40	45	UA_NSSRC1_2W_4L_D_WL	Minor Arterial - Urban	30,490	29,890	27,480	30,590	36,570	32,320	38,300	36,990	34,320	30,660	31,040	30,900	E	37,970	0.81	C	2,185	2,410	3,410	4
Howland Blvd.	Wolf Pack Run to Catalina Blvd.	903	County	Yes	1.15	45	UA_NSSRC1_2W_4L_D_WL	Minor Arterial - Urban	28,010	27,440	25,280	27,770	31,520	30,270	30,040	31,480	30,520	26,130	28,510	27,100	E	37,970	0.71	C	1,975	2,125	3,410	4
Howland Blvd.	Providence Blvd. to Elkcam Blvd.	906	County	Yes	2.10	45	UA_NSSRC1_2W_2L_U_0L	Minor Arterial - Urban	16,890	14,140	15,150	16,430	16,780	17,220	18,800	18,930	**17,430**	13,580	13,980	13,900	E	13,640	1.02	E	945	1,020	1,230	2
Orange Camp Rd.	US 17/92 to Princeton	1380	County	Yes	0.75	35	UA_NSSRC2_2W_2L_U_WL	Minor Arterial - Urban	9,020	9,640	9,080	9,320	11,480	11,800	12,370	13,170	14,220	13,570	13,600	13,200	E	14,040	0.94	E	840	1,160	1,270	2
Orange Camp Rd.	Blue Lake Ave. to W Volusia Bltwy. (I	1384	County	Yes	0.55	50	UA_NSSRC1_2W_2L_U_WL	Minor Arterial - Urban	8,880	9,600	9,330	9,980	11,700	12,110	12,650	13,910	14,220	13,660	14,510	12,400	E	17,050	0.73	C	845	1,075	1,540	2
Orange Camp Rd.	W Volusia Bltwy. (Dr MLK Jr) to I-4	1385	County	Yes	1.00	50	UA_NSSRC1_2W_2L_U_WL	Minor Arterial - Urban	10,910	11,300	10,870	10,700	12,020	12,050	13,080	15,040	14,430	13,230	14,200	13,300	E	17,050	0.78	C	1,310	1,170	1,540	2
W. Volusia Bltwy (Veteran	Harley Strickland Blvd. to Rhode Islan	1901	County	Yes	1.22	55	UA_NSSRC1_2W_2L_U_WL	Minor Arterial - Urban	13,810	15,170	18,000	17,750	**18,830**	**20,170**	**19,290**	**19,420**	**21,190**	**19,030**	**19,440**	**18,800**	E	**17,050**	**1.10**	F	**1,030**	**1,480**	**1,540**	2
W. Volusia Bltwy (Veteran	Rhode Island Ave. to Graves Ave.	1902	County	Yes	1.50	45	UA_NSSRC1_2W_2L_D_WL	Minor Arterial - Urban	14,100	14,830	15,510	15,510	18,510	16,430	14,420	13,400	16,420	13,800	14,870	14,100	E	17,900	0.79	C	850	1,100	1,620	2
W. Volusia Bltwy (Veteran	Graves Ave to SR 472	1030	County	Yes	0.80	45	UA_NSSRC1_2W_2L_U_WL	Major Collector - Urban	7,970	9,010	9,050	9,320	10,380	10,670	10,350	10,570	10,900	9,420	10,830	11,000	E	17,050	0.65	C	690	910	1,540	2
W. Volusia Bltwy (Dr MLK	Cassadaga Rd. to Orange Camp Rd.	1942	County	Yes	1.40	55	UA_NSSRC1_2W_2L_U_WL	Minor Arterial - Urban	9,940	10,280	10,320	10,840	11,860	12,050	11,130	12,540	12,370	10,760	11,570	9,150	E	17,050	0.54	C	620	755	1,540	2
W. Volusia Bltwy (Dr MLK	Orange Camp Rd. to Taylor Rd.	1943	County	Yes	1.00	55	UA_NSSRC1_2W_2L_U_WL	Minor Arterial - Urban	11,240	11,850	11,440	12,050	14,330	13,800	12,670	14,480	12,240	12,210	12,840	11,000	E	17,050	0.65	C	845	910	1,540	2

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2023 HISTORICAL AADT REPORT

COUNTY: 79 - VOLUSIA

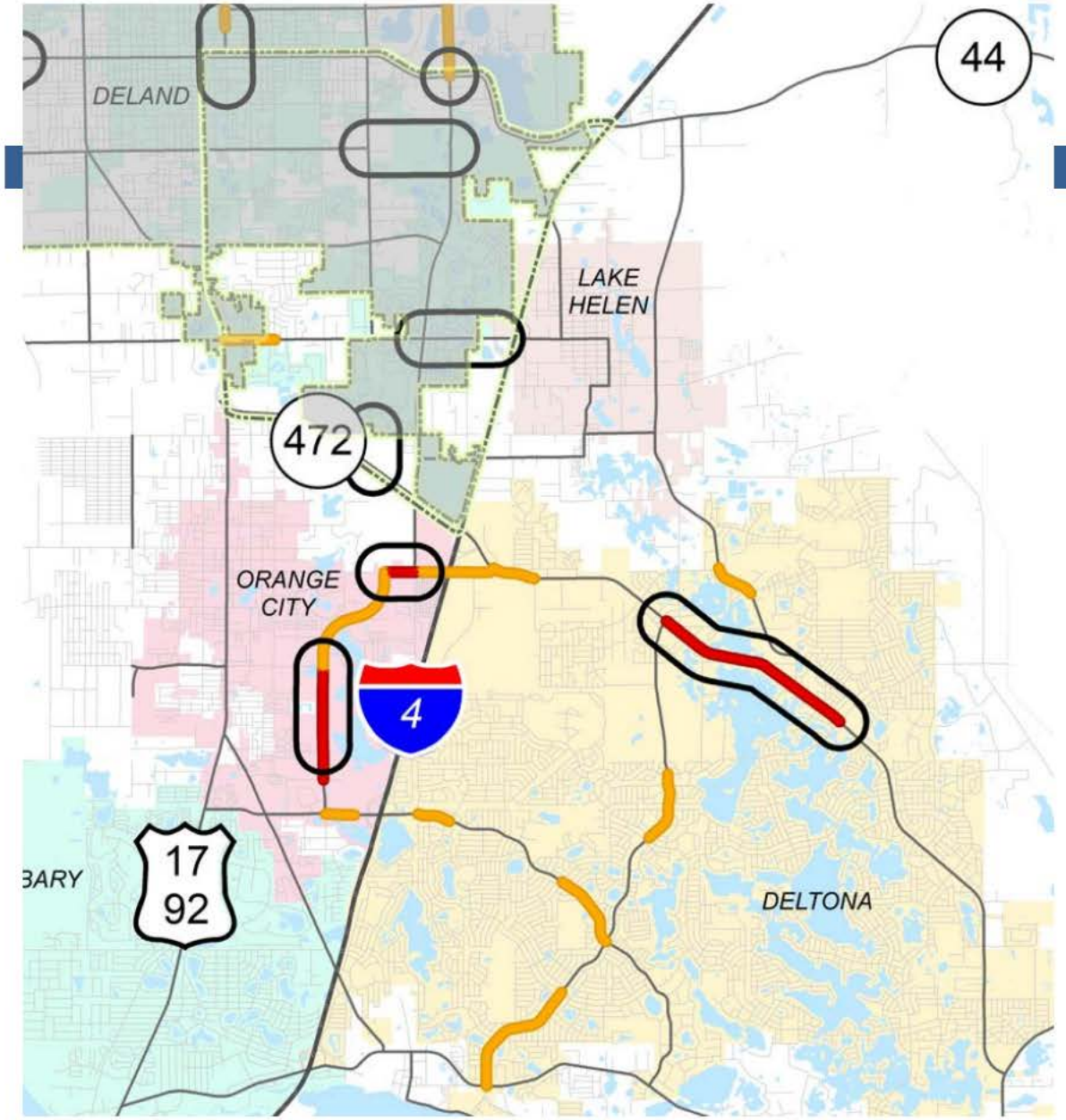
SITE: 8193 - CATALINA BLVD, 800' N OF HOWLAND BLVD - OFF SYSTEM HPMS 21

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2023	2900 F	N 1400	S 1500	9.00	59.10	9.80
2022	2700 C	N 1300	S 1400	9.00	58.80	3.50
2021	12500 C	N 6100	S 6400	9.00	58.20	10.90
2020	10900 S	N 5200	S 5700	9.00	58.70	4.00
2019	11300 F	N 5400	S 5900	9.00	59.00	6.70
2018	11100 C	N 5300	S 5800	9.00	60.00	5.10
2017	12000 T	N 6000	S 6000	9.00	60.90	3.10
2016	11600 S	N 5800	S 5800	9.00	61.40	2.40
2015	11000 F	N 5500	S 5500	9.00	60.20	2.90
2014	10600 C	N 5300	S 5300	9.00	59.20	3.60

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Appendix G
Planned and Programmed Improvements

ZONE 3



Deltona

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  (Construction Underway)

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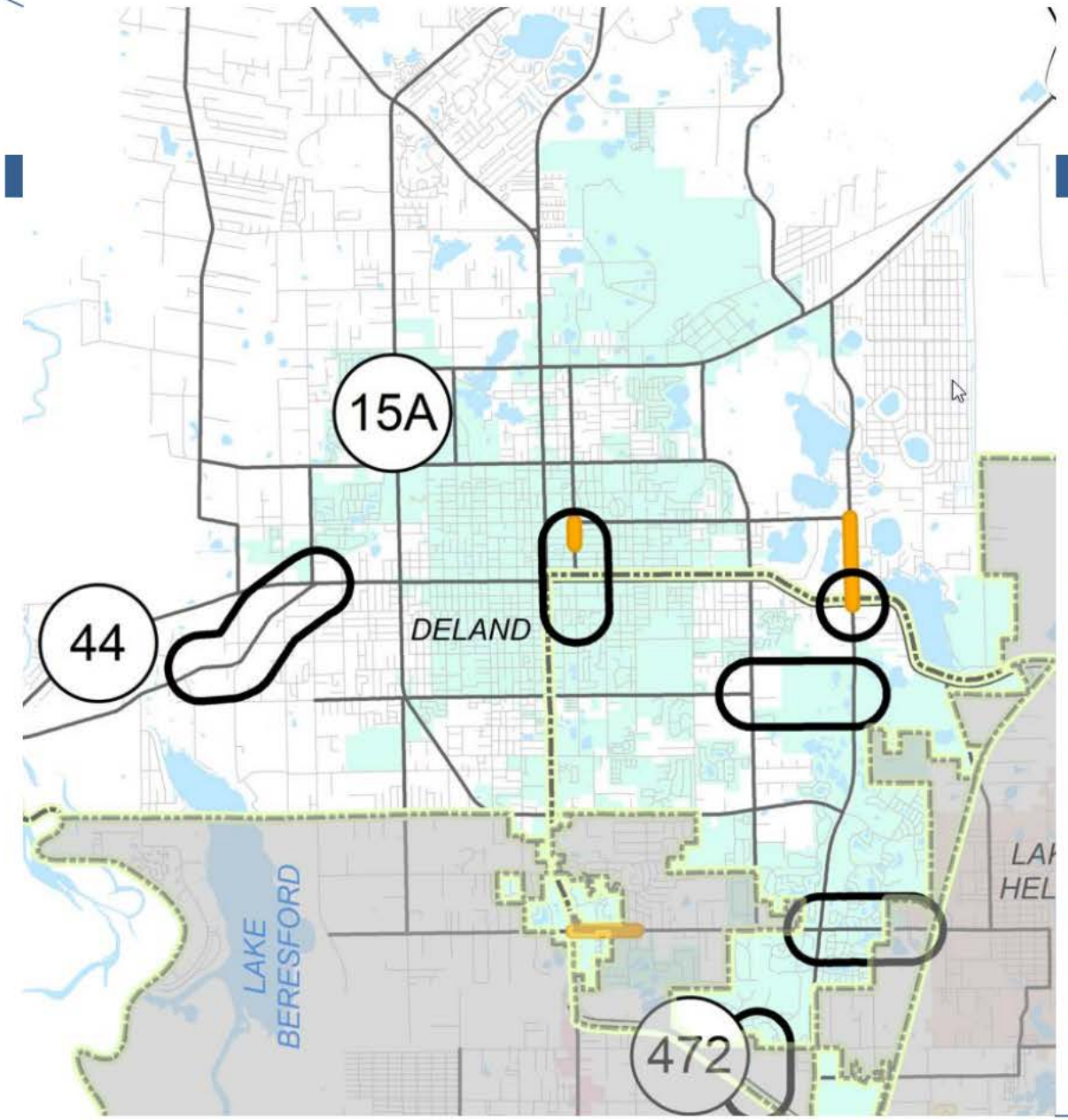
ZONE 4



DeLand

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  (Construction Underway)
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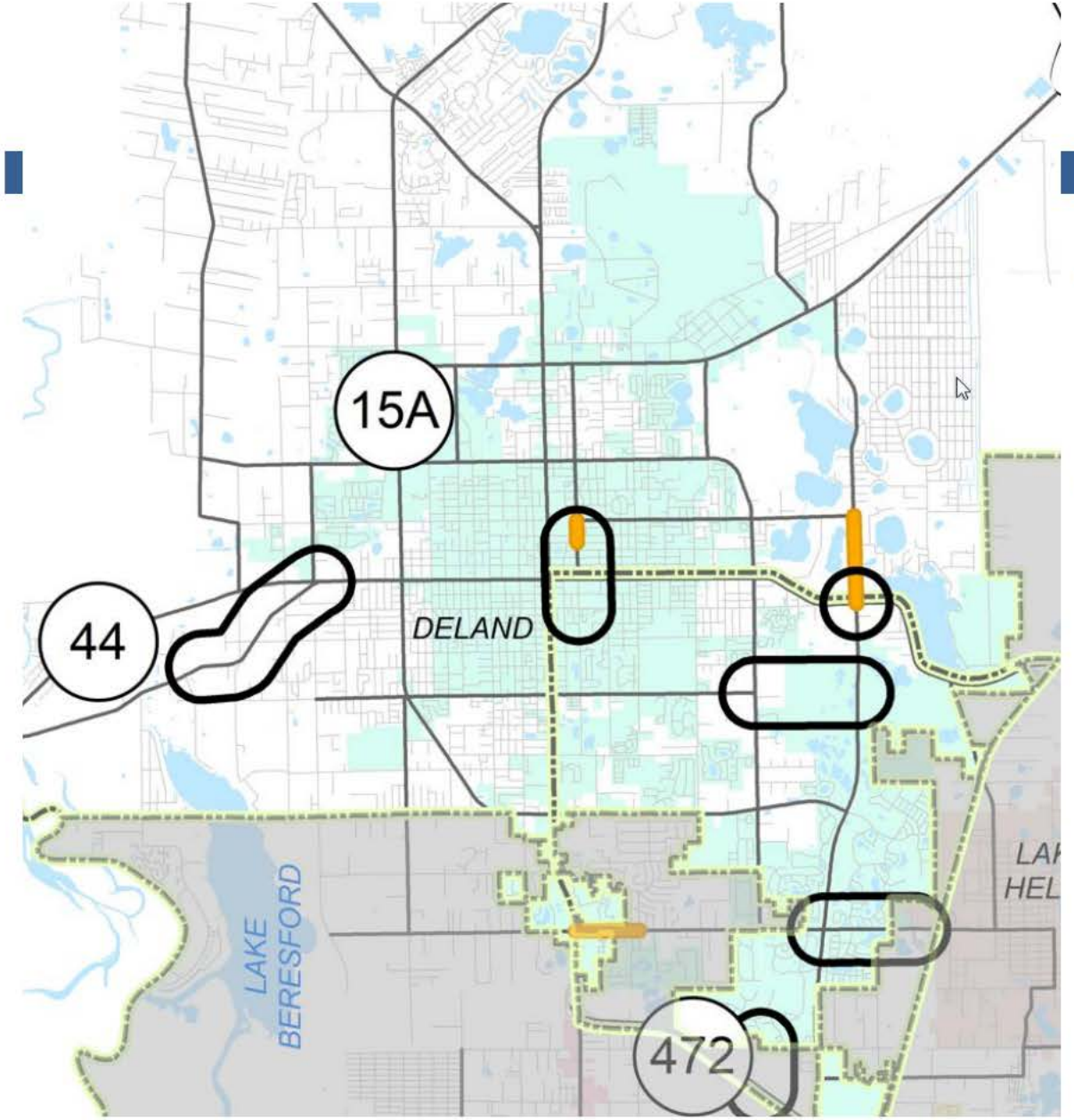
  (Design Underway)
- **Beresford Rd Extension from Blue Lake Av to Kepler Rd/Martin Luther King Jr. Btwy**
  (Design & ROW Acquisition Underway)

ZONE 4



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  (Design & ROW Acquisition Underway)
- **Blue Lake Av Extension from Blue Lake Av in Victoria Park to SR 472**
  (Design & ROW Acquisition Underway)

Appendix H
Recommended Improvements in Previous TIAs

TM BTR AT DELAND CROSSINGS
Project № 22012, v1.1
December 2022

TRAFFIC IMPACT ANALYSIS
CITY OF DELAND
FLORIDA

Prepared by:

Traffic & Mobility Consultants
3101 Maguire Boulevard, Suite 265
Orlando, Florida 32803
www.trafficmobility.com
(407) 531-5332

Prepared for:

Taylor Morrison of Florida Inc
2600 Lake Lucien Drive, Suite 350
Maitland, Florida 32751

3.6 Intersection Improvements

The following improvements are recommended at the intersection of SR 472 and Dr. Martin Luther King Jr Beltway and should be incorporated at project buildout:

- SR 472 and Dr. Martin Luther King Jr Beltway –
  - Construct a westbound left turn lane
  - Construct a northbound left turn lane and a through lane
  - Construct a southbound left turn lane and a through lane
  - Optimize the signal timing

With the recommended improvements, the intersection is projected to operate at an overall adequate LOS. The results of the analysis are summarized in **Table 8** for the background and buildout scenarios**.**

Table 8
Improved Intersection Capacity Analysis Summary

Intersection	Traffic Control	Time Period	Scenario	EB			WB			NB			SB			Overall	
				Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS
SR 472 & Dr. MLK Jr Bltwy	Signal	AM	Background	42.3	D	0.97	37.2	D	0.76	72.7	E	0.87	68.6	E	0.86	48.9	D
			Buildout	43.4	D	0.99	37.5	D	0.76	71.8	E	0.87	70.7	E	0.87	49.7	D
		PM	Background	52.9	D	1.14	49.0	D	1.03	71.9	E	0.86	65.6	E	0.86	55.7	E
			Buildout	58.7	E	1.23	49.6	D	1.03	65.9	E	0.86	66.7	E	0.86	57.4	E

Average delay is expressed in seconds/vehicle

The analysis indicates that the intersection of SR 472 and Dr. Martin Luther King Jr Beltway is projected to operate at adequate LOS due to the improvements. The adjusted analysis worksheets are included in **Appendix L**.

KITTELSON & ASSOCIATES

DELAND TECH PARK TRAFFIC IMPACT ANALYSIS

DELAND, FLORIDA

July 2023



YEAR 2027 FUTURE BACKGROUND INTERSECTION CAPACITY ANALYSIS (WITH BACKGROUND RELATED IMPROVMENTS)

The background intersection lane configurations are shown in **Figure 12**. To help improve operations at the intersections showing an overall LOS F or overcapacity movements under the year 2027 PM peak hour future background conditions, the following background related improvements are recommended:

- SR 472 at Kentucky Avenue/Dr Martin Luther King Jr Beltway
  - Add one additional eastbound through lane (v/c ratio is 0.97 on east leg of intersection)
  - Add one additional westbound through lane (v/c ratio is 0.97 on east leg of intersection)
  - Add exclusive northbound left turn lane
  - Use protected/permitted phasing for northbound/southbound left turn movements
  - Optimize signal timings/splits (eliminate the split phase operation)
- Kentucky Avenue at Graves Avenue
  - Add one additional eastbound through lane (v/c ratio is 1.36 on west leg of intersection in background condition)
  - Add one additional southbound left turn lane
  - Add overlap phasing on the southbound right turn movement
  - Optimize signal timings/splits)
- Veteran's Memorial Parkway at Rhode Island Avenue
  - Add southbound shared through-right lane and remove exclusive southbound right turn lane. There is an acceleration lane on the south leg of this intersection that can be converted to a second receiving lane.
- Howland Boulevard at Graves Avenue/Halifax Crossing Boulevard
  - Add one additional eastbound through lane (v/c ratio is 1.05 on both legs of intersection)
  - Add one additional westbound through lane (v/c ratio is 1.05 on both legs of intersection)

With the above recommended improvements, these intersections are expected to operate at an overall LOS E or better and no overcapacity movements. The results of the improved background conditions are presented in **Table 9** and the Synchro intersection report printouts are provided in **Appendix M**.

Table 9: Year 2027 Future Background Intersection Capacity Analysis (With Background Improvements)

Intersection	Intersection Control Type	PM Peak Hour		
		v/c	Delay	LOS
SR 472 at Kentucky Ave./Dr Martin Luther King Jr Bltwy.	Signalized	0.98	58.2	E
Kentucky Ave. at Graves Ave.	Signalized	0.93	42.0	D
Veteran's Memorial Pkwy. at Rhode Island Ave.	Signalized	0.92	38.2	D
Howland Blvd. at Graves Ave./Halifax Crossing Blvd.	Signalized	0.94	39.6	D

Note: The operational results presented for each intersection represent the worst movement v/c ratio and overall intersection delay and LOS.

Appendix I

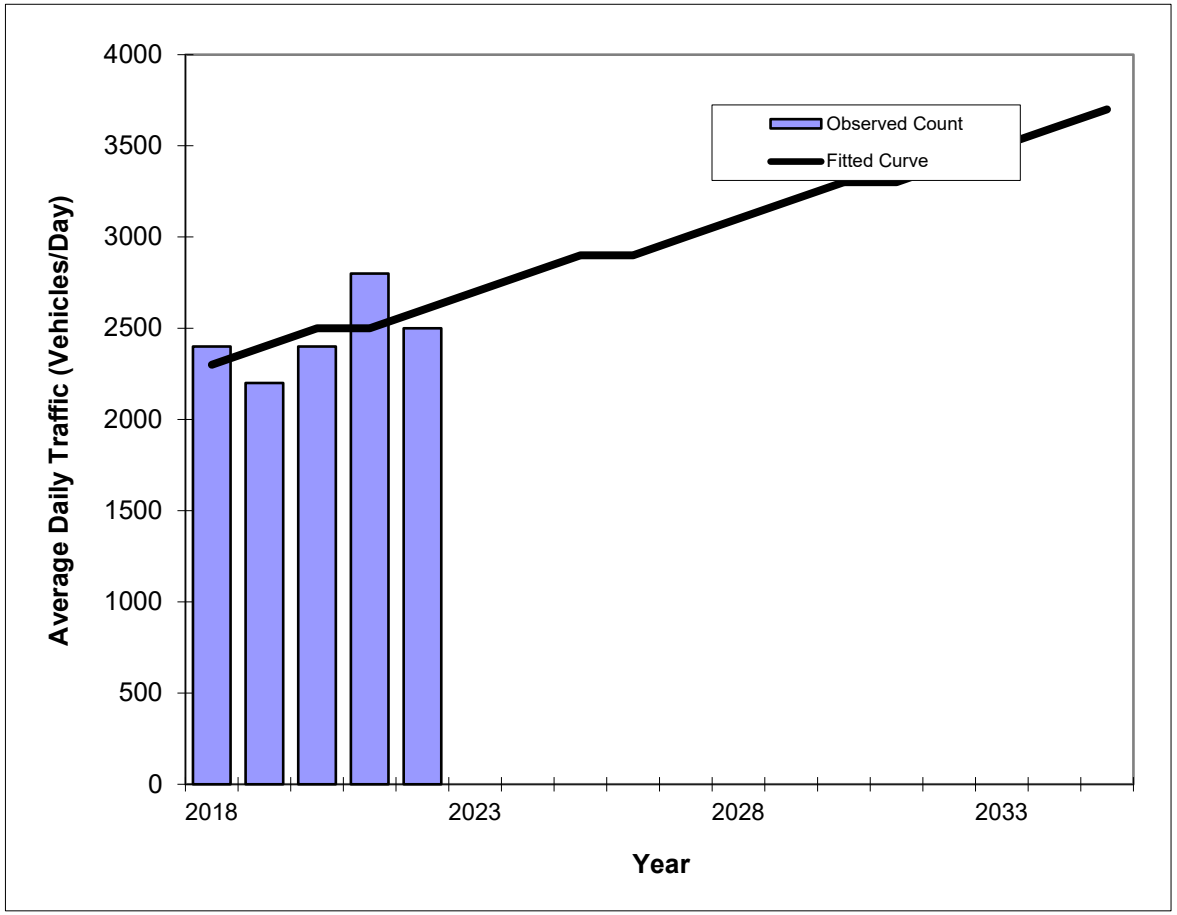
Historical Growth trend Analysis Worksheets, Vested Trip Information and Segment Growh Rates and Vested Trips Instruction Policy

Traffic Trends - V03.a

CASSADAGA RD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	280
Highway:	CASSADAGA RD



Year	Traffic (ADT/AADT) Count*	Trend**
2018	2400	2300
2019	2200	2400
2020	2400	2500
2021	2800	2500
2022	2500	2600
2026 Opening Year Trend		
2026	N/A	2900
2027 Mid-Year Trend		
2027	N/A	3000
2028 Design Year Trend		
2028	N/A	3100
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	80
Trend R-squared:	33.33%
Trend Annual Historic Growth Rate:	3.26%
Trend Growth Rate (2022 to Design Year):	3.21%
Printed:	6-Aug-24

Straight Line Growth Option

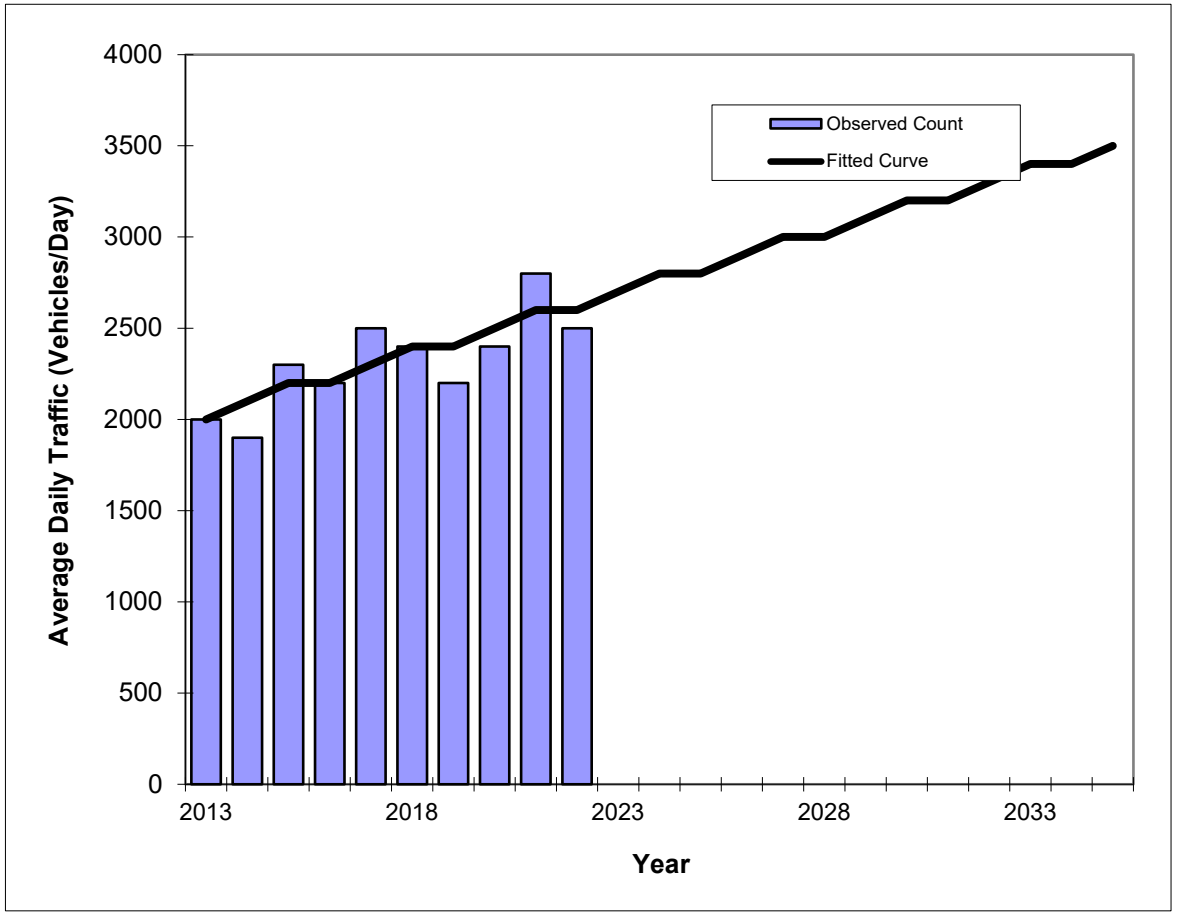
***Axle-Adjusted**

Traffic Trends - V03.a

CASSADAGA RD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	280
Highway:	CASSADAGA RD



Year	Traffic (ADT/AADT) Count*	Trend**
2013	2000	2000
2014	1900	2100
2015	2300	2200
2016	2200	2200
2017	2500	2300
2018	2400	2400
2019	2200	2400
2020	2400	2500
2021	2800	2600
2022	2500	2600
2026 Opening Year Trend		
2026	N/A	2900
2027 Mid-Year Trend		
2027	N/A	3000
2028 Design Year Trend		
2028	N/A	3000
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	68
Trend R-squared:	61.71%
Trend Annual Historic Growth Rate:	3.33%
Trend Growth Rate (2022 to Design Year):	2.56%
Printed:	6-Aug-24

Straight Line Growth Option

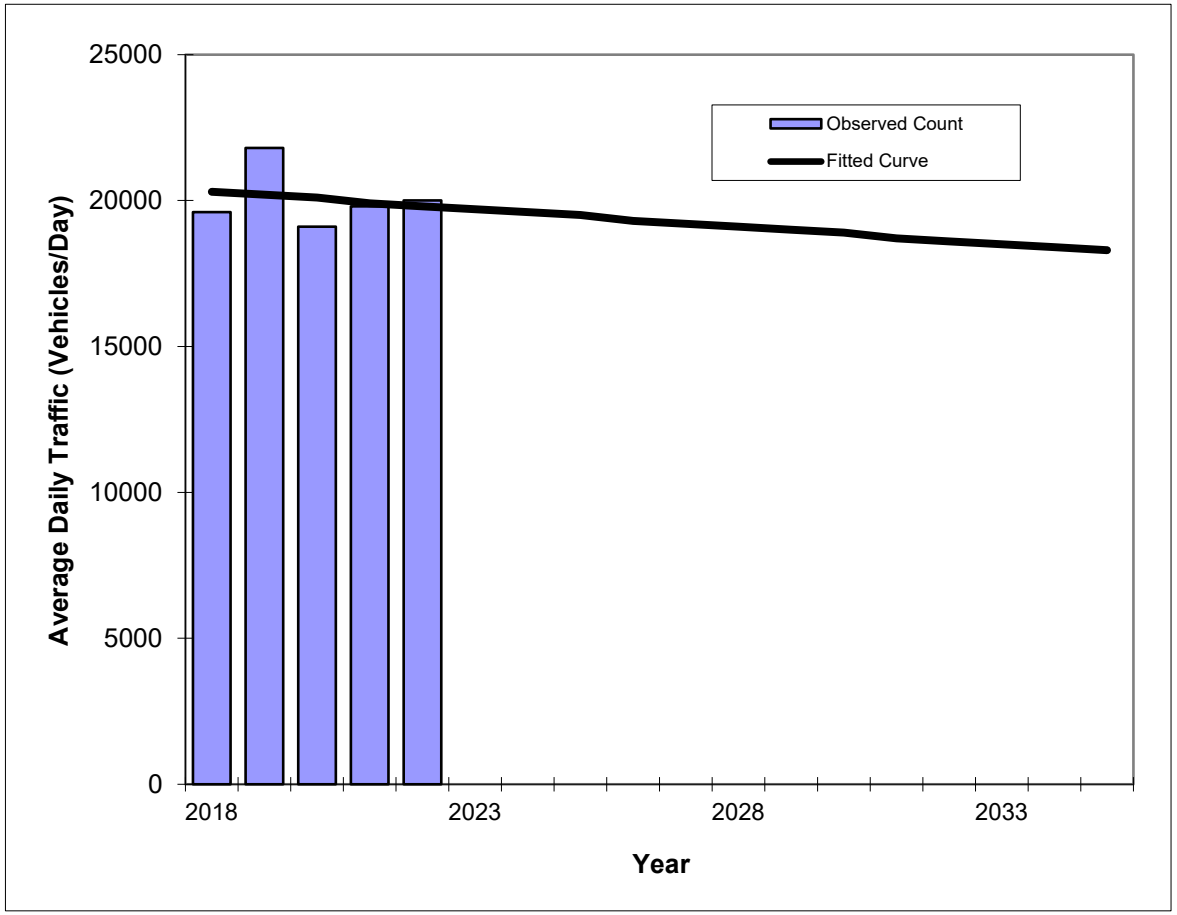
***Axle-Adjusted**

Traffic Trends - V03.a

GRAVES AVE --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	775
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2018	19600	20300
2019	21800	20200
2020	19100	20100
2021	19800	19900
2022	20000	19800
2026 Opening Year Trend		
2026	N/A	19300
2027 Mid-Year Trend		
2027	N/A	19200
2028 Design Year Trend		
2028	N/A	19100
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-120
Trend R-squared:	3.40%
Trend Annual Historic Growth Rate:	-0.62%
Trend Growth Rate (2022 to Design Year):	-0.59%
Printed:	6-Aug-24

Straight Line Growth Option

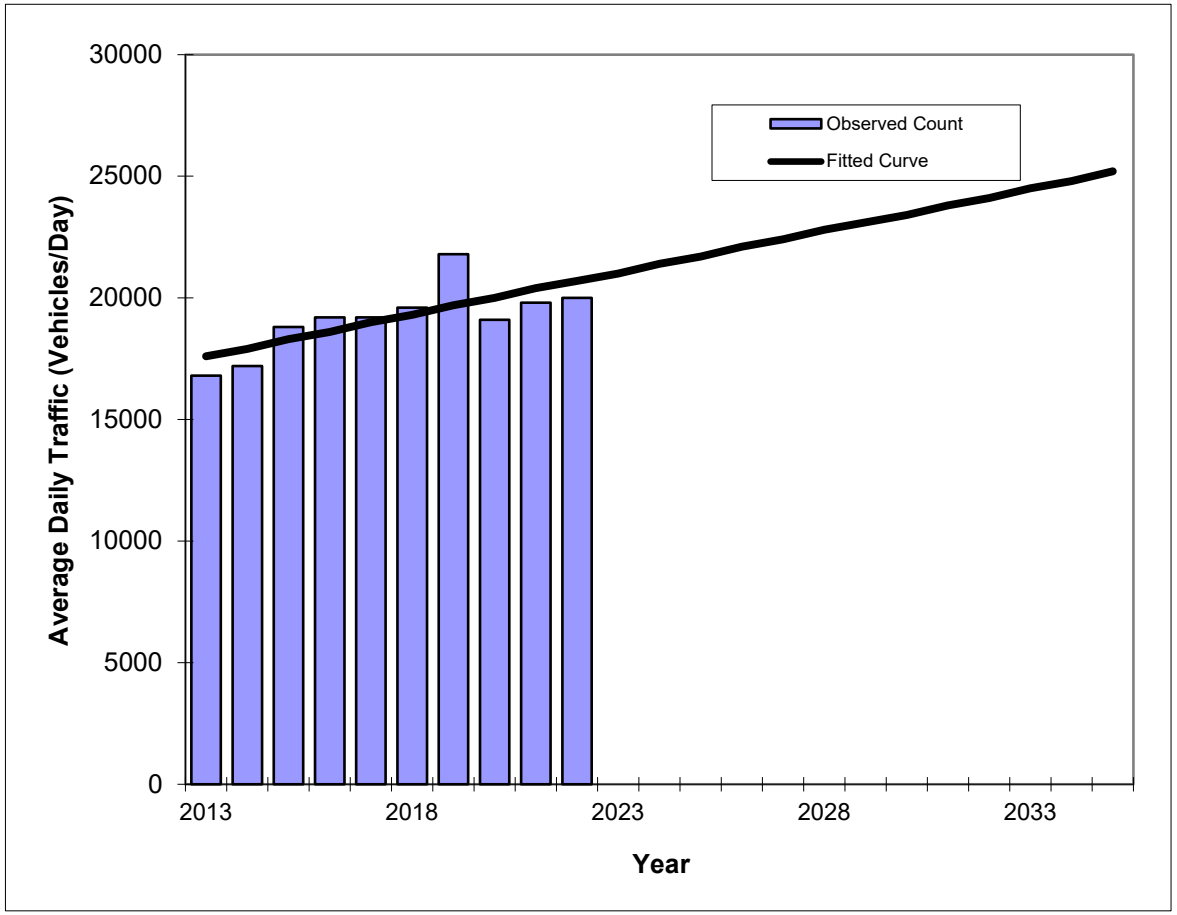
***Axle-Adjusted**

Traffic Trends - V03.a

GRAVES AVE --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	775
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2013	16800	17600
2014	17200	17900
2015	18800	18300
2016	19200	18600
2017	19200	19000
2018	19600	19300
2019	21800	19700
2020	19100	20000
2021	19800	20400
2022	20000	20700
2026 Opening Year Trend		
2026	N/A	22100
2027 Mid-Year Trend		
2027	N/A	22400
2028 Design Year Trend		
2028	N/A	22800
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	344
Trend R-squared:	54.65%
Trend Annual Historic Growth Rate:	1.96%
Trend Growth Rate (2022 to Design Year):	1.69%
Printed:	6-Aug-24

Straight Line Growth Option

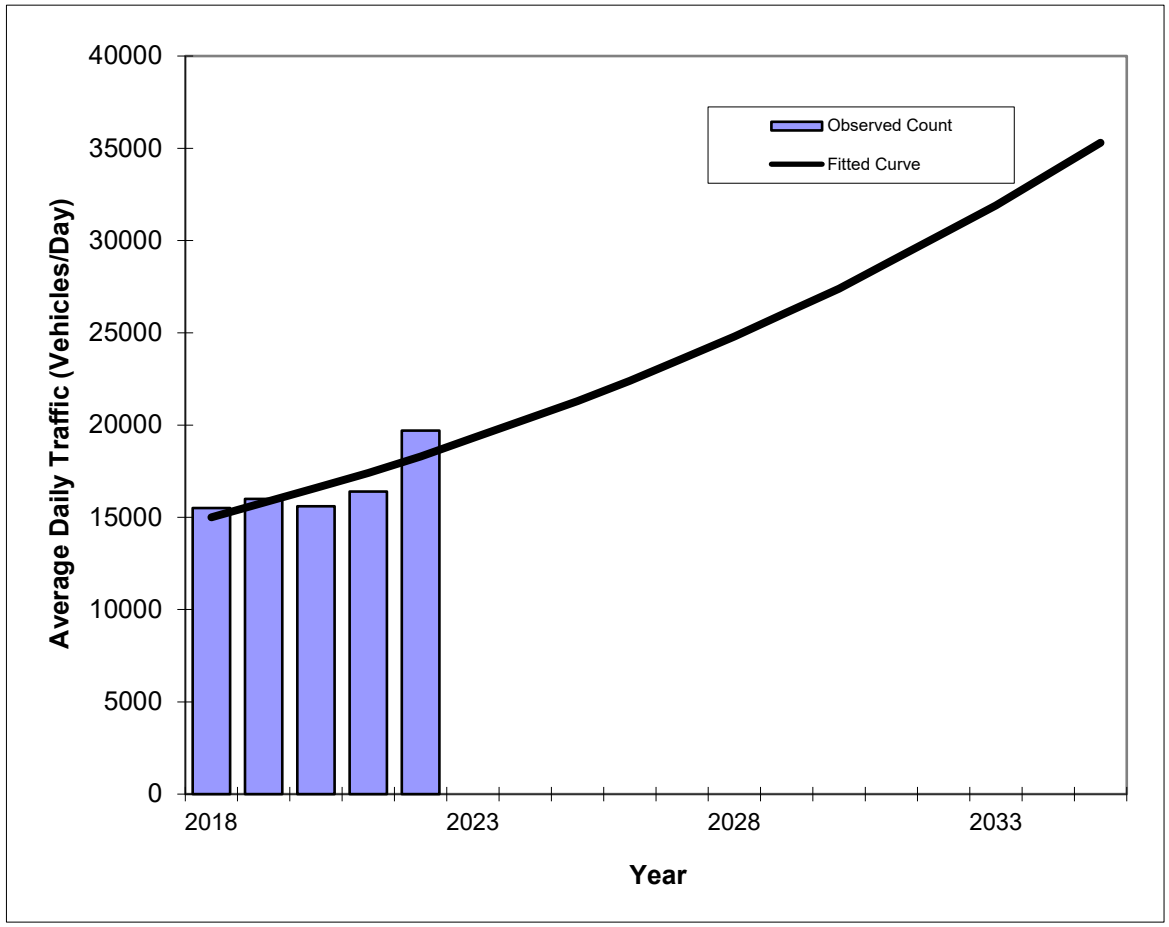
***Axle-Adjusted**

Traffic Trends - V03.a

GRAVES AVE --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	900a
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2018	15500	15000
2019	16000	15800
2020	15600	16600
2021	16400	17400
2022	19700	18300
2026 Opening Year Trend		
2026	N/A	22400
2027 Mid-Year Trend		
2027	N/A	23600
2028 Design Year Trend		
2028	N/A	24800
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

Trend R-squared:	64.59%
Compounded Annual Historic Growth Rate:	5.10%
Compounded Growth Rate (2022 to Design Year):	5.20%
Printed:	20-Aug-24

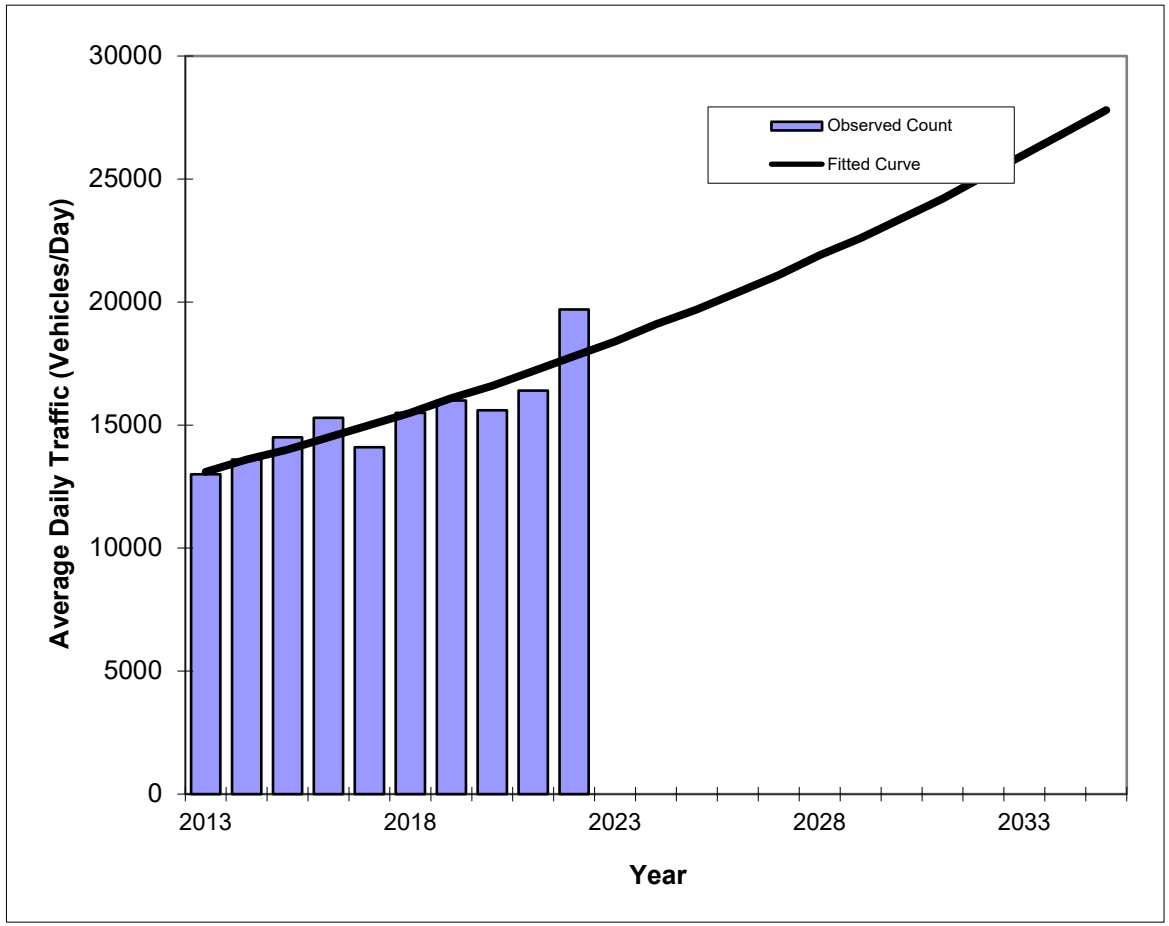
Exponential Growth Option

Traffic Trends - V03.a

GRAVES AVE --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	900a
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2013	13000	13100
2014	13600	13600
2015	14500	14000
2016	15300	14500
2017	14100	15000
2018	15500	15500
2019	16000	16100
2020	15600	16600
2021	16400	17200
2022	19700	17800
2026 Opening Year Trend		
2026	N/A	20400
2027 Mid-Year Trend		
2027	N/A	21100
2028 Design Year Trend		
2028	N/A	21900
TRANPLAN Forecasts/Trends		

Trend R-squared:	79.70%
Compounded Annual Historic Growth Rate:	3.47%
Compounded Growth Rate (2022 to Design Year):	3.52%
Printed:	20-Aug-24

Exponential Growth Option

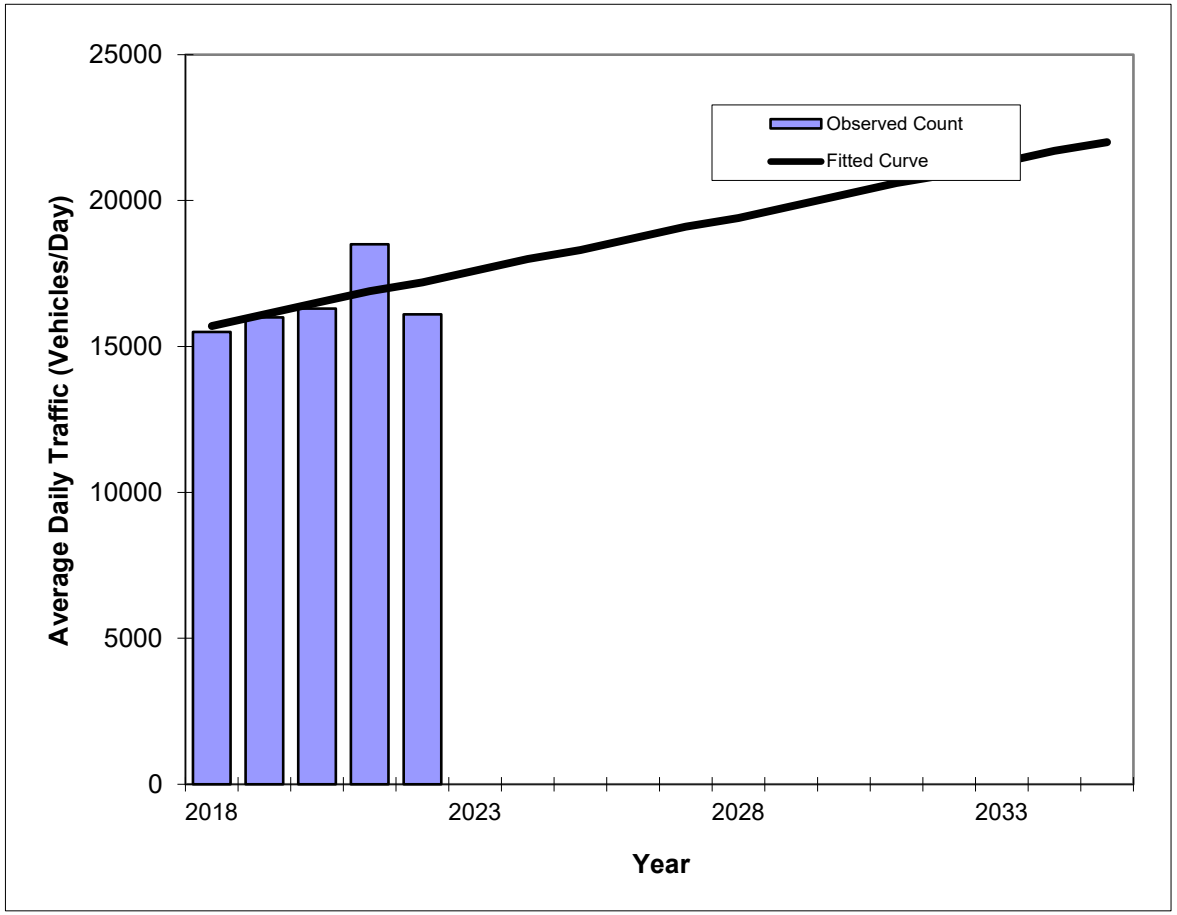
***Axle-Adjusted**

Traffic Trends - V03.a

GRAVES AVE --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	900b
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2018	15500	15700
2019	16000	16100
2020	16300	16500
2021	18500	16900
2022	16100	17200
2026 Opening Year Trend		
2026	N/A	18700
2027 Mid-Year Trend		
2027	N/A	19100
2028 Design Year Trend		
2028	N/A	19400
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	370
Trend R-squared:	25.13%
Trend Annual Historic Growth Rate:	2.39%
Trend Growth Rate (2022 to Design Year):	2.13%
Printed:	6-Aug-24

Straight Line Growth Option

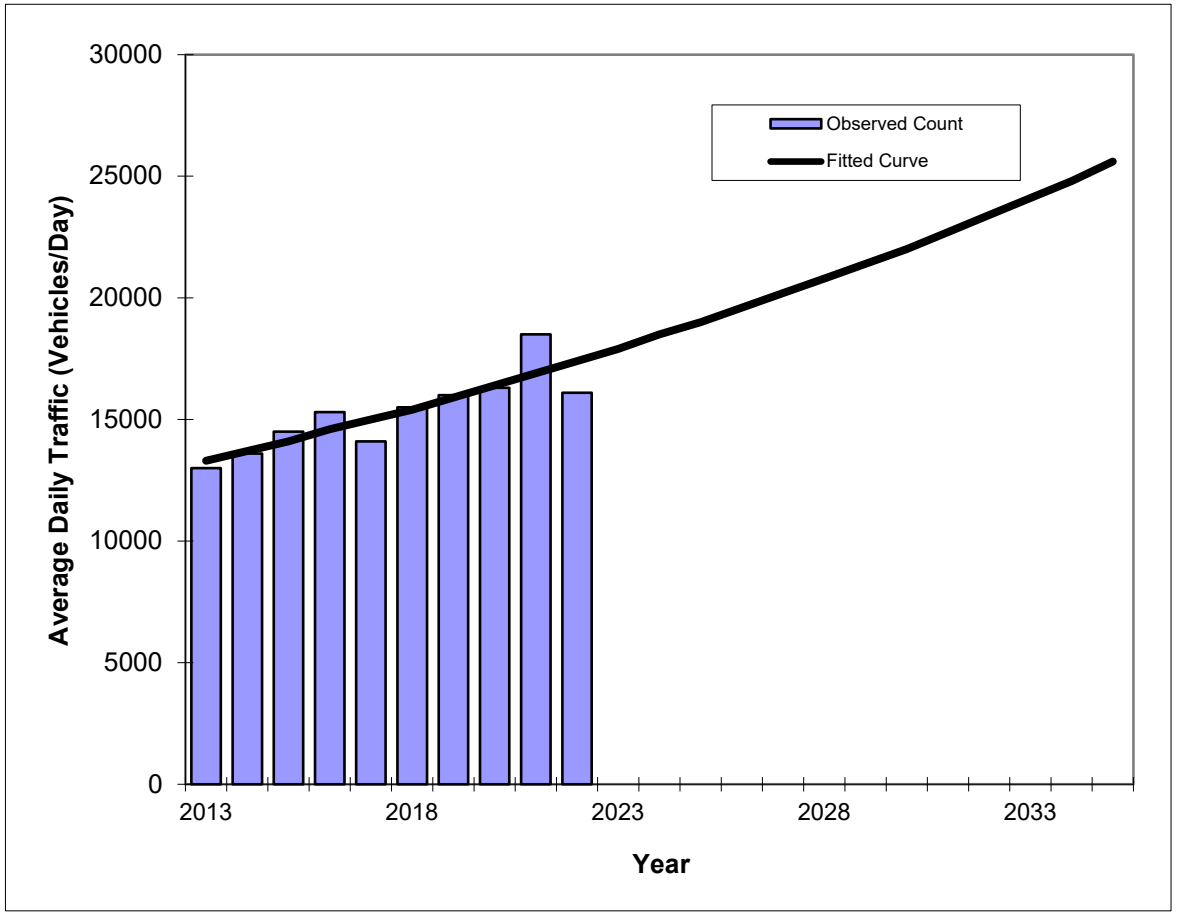
***Axle-Adjusted**

Traffic Trends - V03.a

GRAVES AVE --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	900b
Highway:	GRAVES AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2013	13000	13300
2014	13600	13700
2015	14500	14100
2016	15300	14600
2017	14100	15000
2018	15500	15400
2019	16000	15900
2020	16300	16400
2021	18500	16900
2022	16100	17400
2026 Opening Year Trend		
2026	N/A	19600
2027 Mid-Year Trend		
2027	N/A	20200
2028 Design Year Trend		
2028	N/A	20800
TRANPLAN Forecasts/Trends		

Trend R-squared:	76.75%
Compounded Annual Historic Growth Rate:	3.03%
Compounded Growth Rate (2022 to Design Year):	3.02%
Printed:	6-Aug-24

Exponential Growth Option

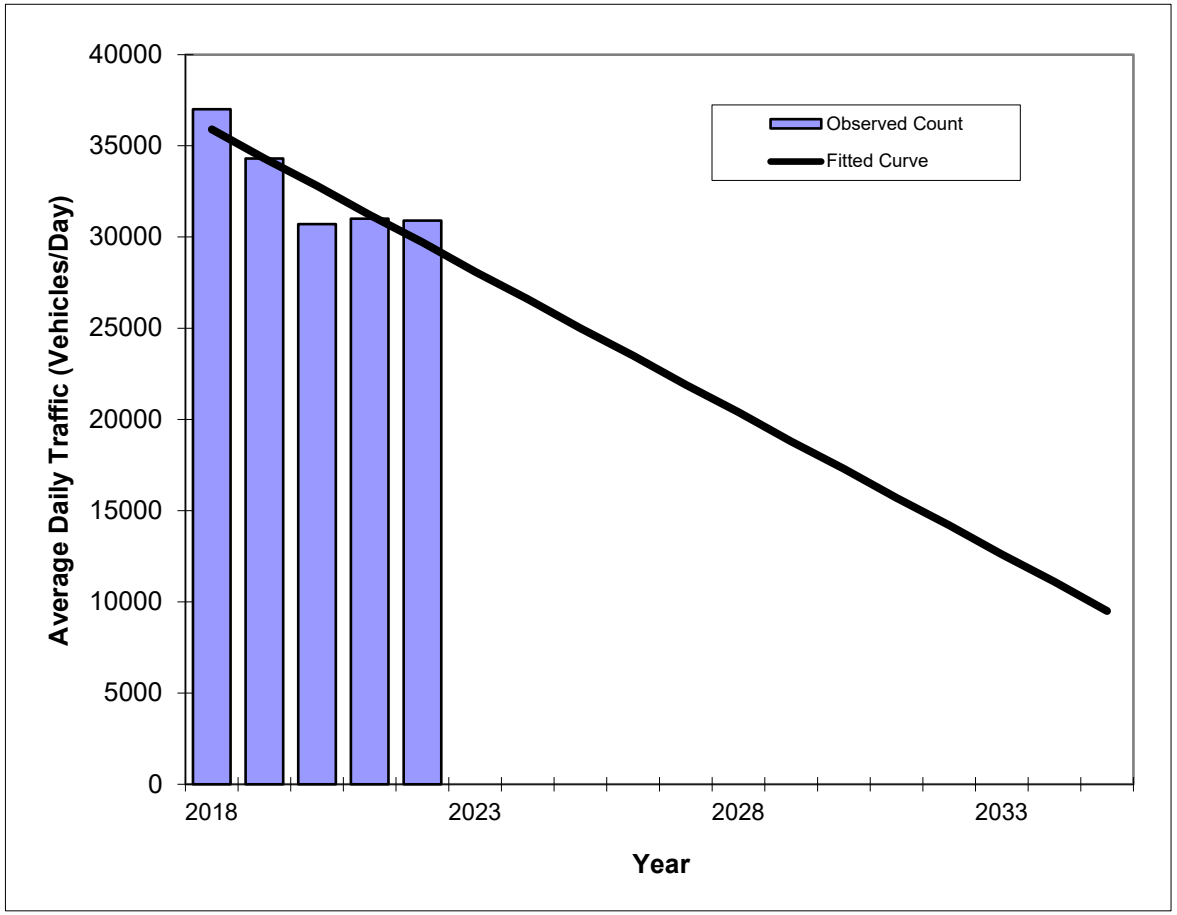
***Axle-Adjusted**

Traffic Trends - V03.a

HOWLAND BOULEVARD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	901
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2018	37000	35900
2019	34300	34300
2020	30700	32800
2021	31000	31200
2022	30900	29700
2026 Opening Year Trend		
2026	N/A	23500
2027 Mid-Year Trend		
2027	N/A	21900
2028 Design Year Trend		
2028	N/A	20400
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-1,550
Trend R-squared:	77.13%
Trend Annual Historic Growth Rate:	-4.32%
Trend Growth Rate (2022 to Design Year):	-5.22%
Printed:	6-Aug-24

Straight Line Growth Option

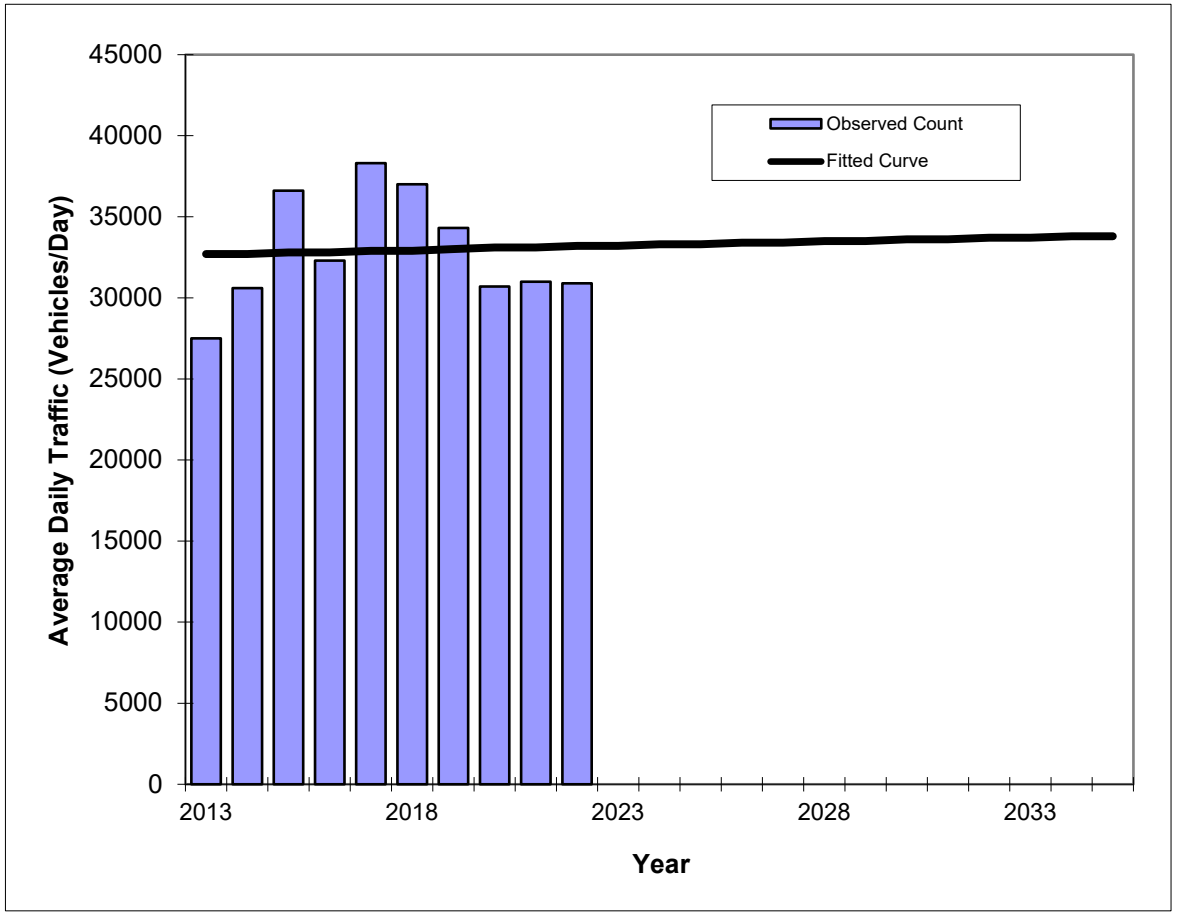
***Axle-Adjusted**

Traffic Trends - V03.a

HOWLAND BOULEVARD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	901
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2013	27500	32700
2014	30600	32700
2015	36600	32800
2016	32300	32800
2017	38300	32900
2018	37000	32900
2019	34300	33000
2020	30700	33100
2021	31000	33100
2022	30900	33200
2026 Opening Year Trend		
2026	N/A	33400
2027 Mid-Year Trend		
2027	N/A	33400
2028 Design Year Trend		
2028	N/A	33500
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	52
Trend R-squared:	0.21%
Trend Annual Historic Growth Rate:	0.17%
Trend Growth Rate (2022 to Design Year):	0.15%
Printed:	6-Aug-24

Straight Line Growth Option

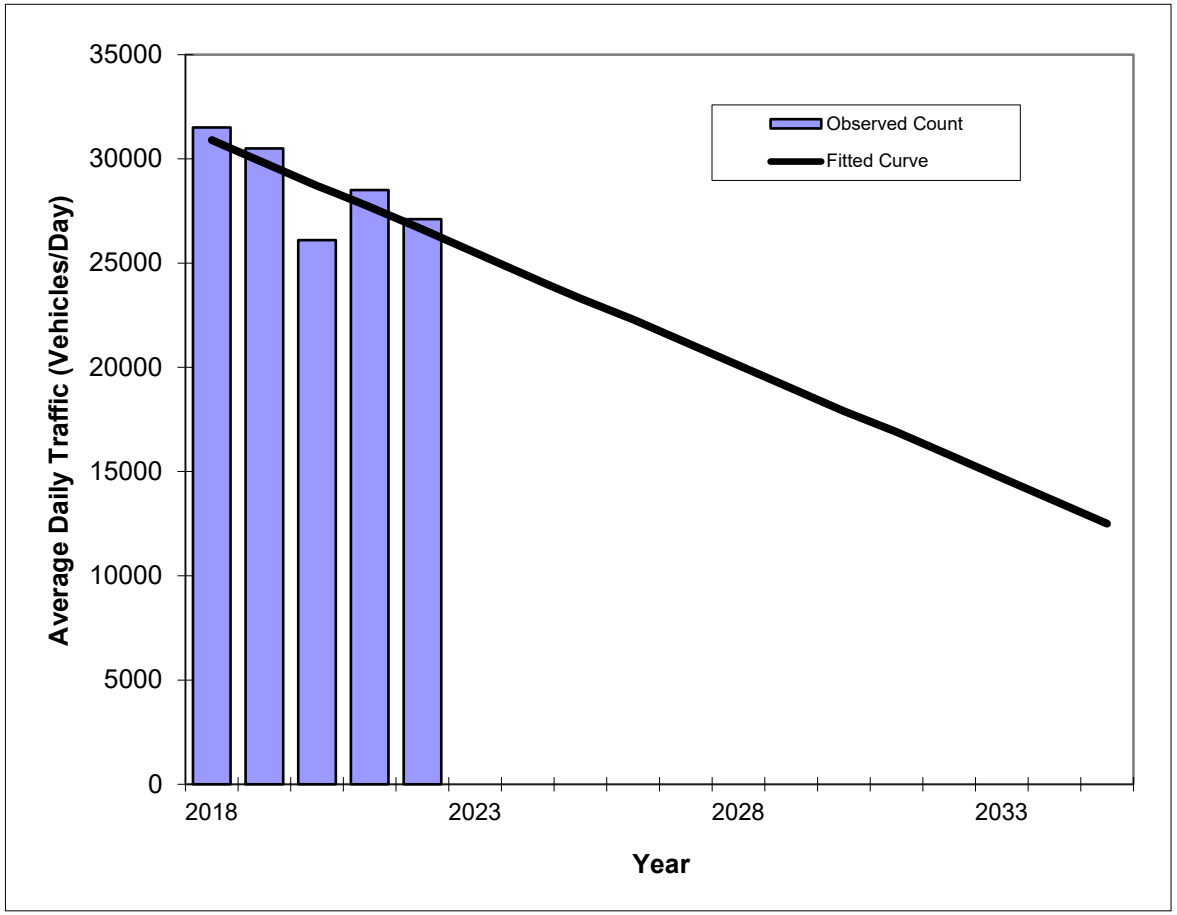
***Axle-Adjusted**

Traffic Trends - V03.a

HOWLAND BOULEVARD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	903
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2018	31500	30900
2019	30500	29800
2020	26100	28700
2021	28500	27700
2022	27100	26600
2026 Opening Year Trend		
2026	N/A	22300
2027 Mid-Year Trend		
2027	N/A	21200
2028 Design Year Trend		
2028	N/A	20100
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-1,080
Trend R-squared:	57.09%
Trend Annual Historic Growth Rate:	-3.48%
Trend Growth Rate (2022 to Design Year):	-4.07%
Printed:	6-Aug-24

Straight Line Growth Option

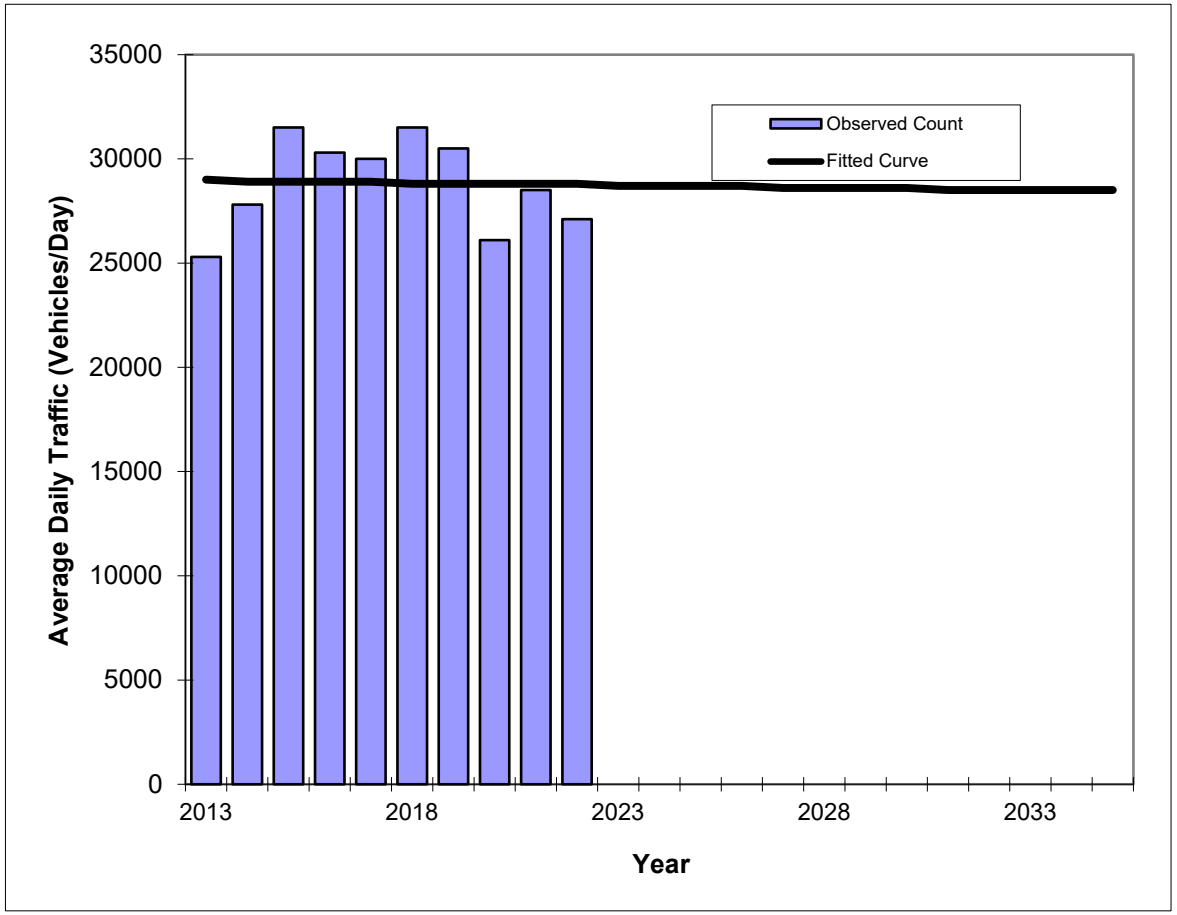
***Axle-Adjusted**

Traffic Trends - V03.a

HOWLAND BOULEVARD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	903
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2013	25300	29000
2014	27800	28900
2015	31500	28900
2016	30300	28900
2017	30000	28900
2018	31500	28800
2019	30500	28800
2020	26100	28800
2021	28500	28800
2022	27100	28800
2026 Opening Year Trend		
2026	N/A	28700
2027 Mid-Year Trend		
2027	N/A	28600
2028 Design Year Trend		
2028	N/A	28600
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-23
Trend R-squared:	0.10%
Trend Annual Historic Growth Rate:	-0.08%
Trend Growth Rate (2022 to Design Year):	-0.12%
Printed:	6-Aug-24

Straight Line Growth Option

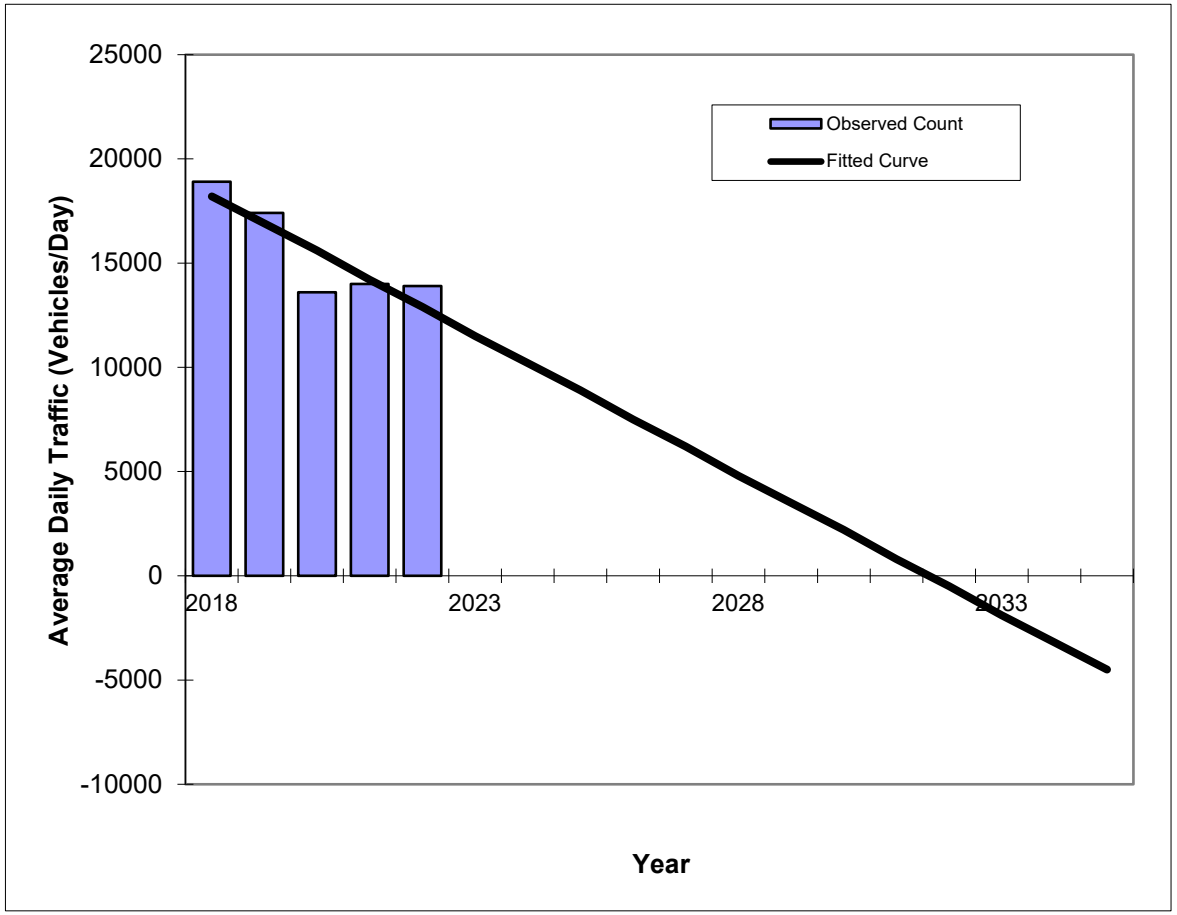
***Axle-Adjusted**

Traffic Trends - V03.a

HOWLAND BOULEVARD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	906
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2018	18900	18200
2019	17400	16900
2020	13600	15600
2021	14000	14200
2022	13900	12900
2026 Opening Year Trend		
2026	N/A	7500
2027 Mid-Year Trend		
2027	N/A	6200
2028 Design Year Trend		
2028	N/A	4800
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-1,340
Trend R-squared:	76.18%
Trend Annual Historic Growth Rate:	-7.28%
Trend Growth Rate (2022 to Design Year):	-10.47%
Printed:	6-Aug-24

Straight Line Growth Option

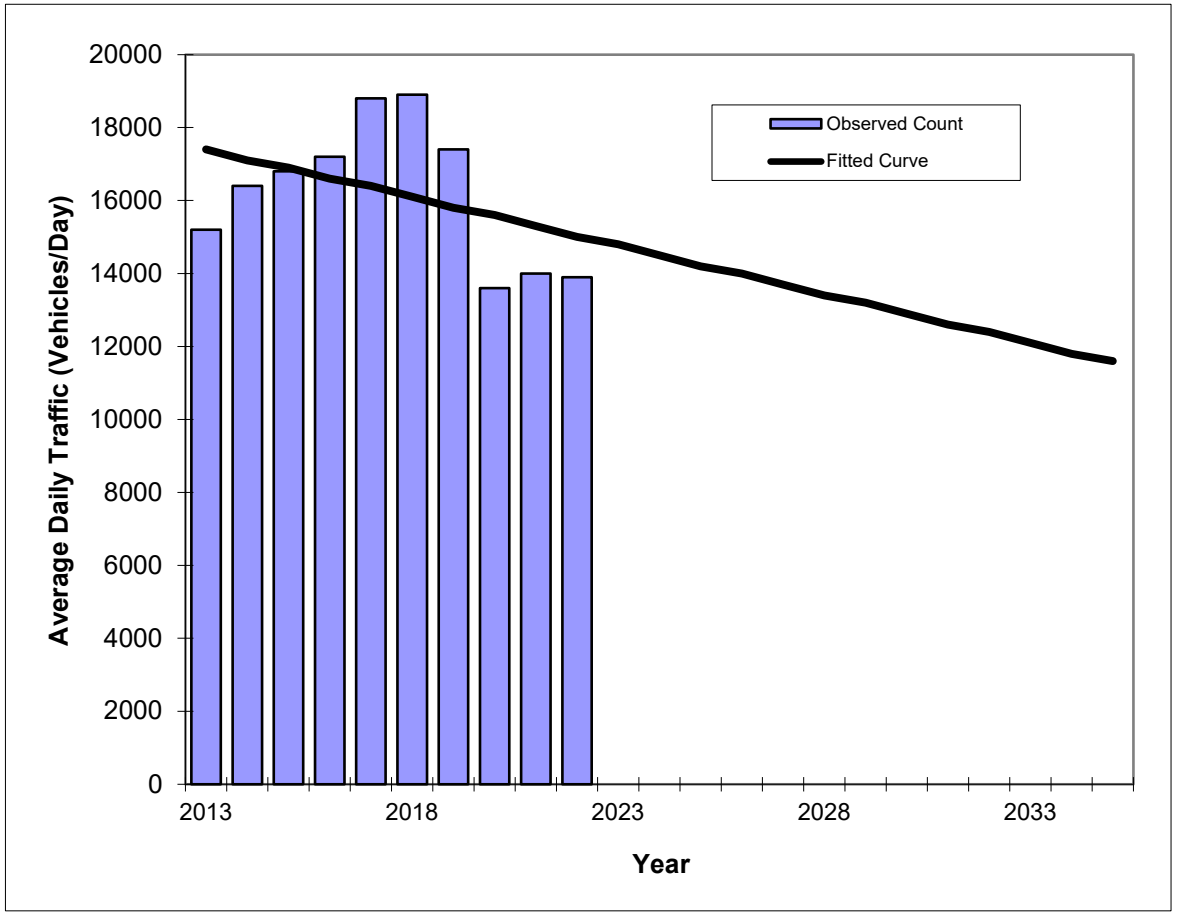
***Axle-Adjusted**

Traffic Trends - V03.a

HOWLAND BOULEVARD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	906
Highway:	HOWLAND BOULEVARD



Year	Traffic (ADT/AADT) Count*	Trend**
2013	15200	17400
2014	16400	17100
2015	16800	16900
2016	17200	16600
2017	18800	16400
2018	18900	16100
2019	17400	15800
2020	13600	15600
2021	14000	15300
2022	13900	15000
2026 Opening Year Trend		
2026	N/A	14000
2027 Mid-Year Trend		
2027	N/A	13700
2028 Design Year Trend		
2028	N/A	13400
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-265
Trend R-squared:	16.72%
Trend Annual Historic Growth Rate:	-1.53%
Trend Growth Rate (2022 to Design Year):	-1.78%
Printed:	6-Aug-24

Straight Line Growth Option

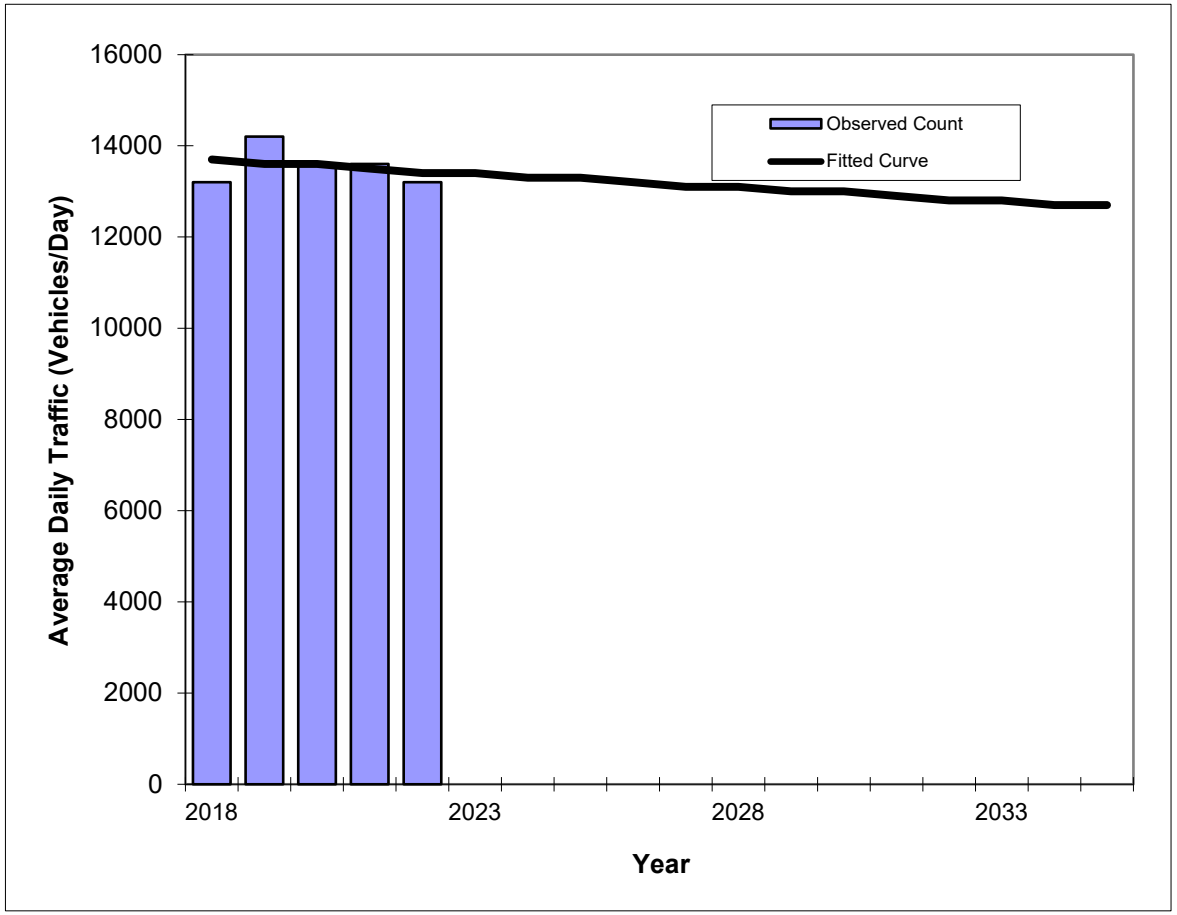
***Axle-Adjusted**

Traffic Trends - V03.a

ORANGE CAMP RD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1380
Highway:	ORANGE CAMP RD



Year	Traffic (ADT/AADT) Count*	Trend**
2018	13200	13700
2019	14200	13600
2020	13600	13600
2021	13600	13500
2022	13200	13400
2026 Opening Year Trend		
2026	N/A	13200
2027 Mid-Year Trend		
2027	N/A	13100
2028 Design Year Trend		
2028	N/A	13100
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-60
Trend R-squared:	5.36%
Trend Annual Historic Growth Rate:	-0.55%
Trend Growth Rate (2022 to Design Year):	-0.37%
Printed:	6-Aug-24

Straight Line Growth Option

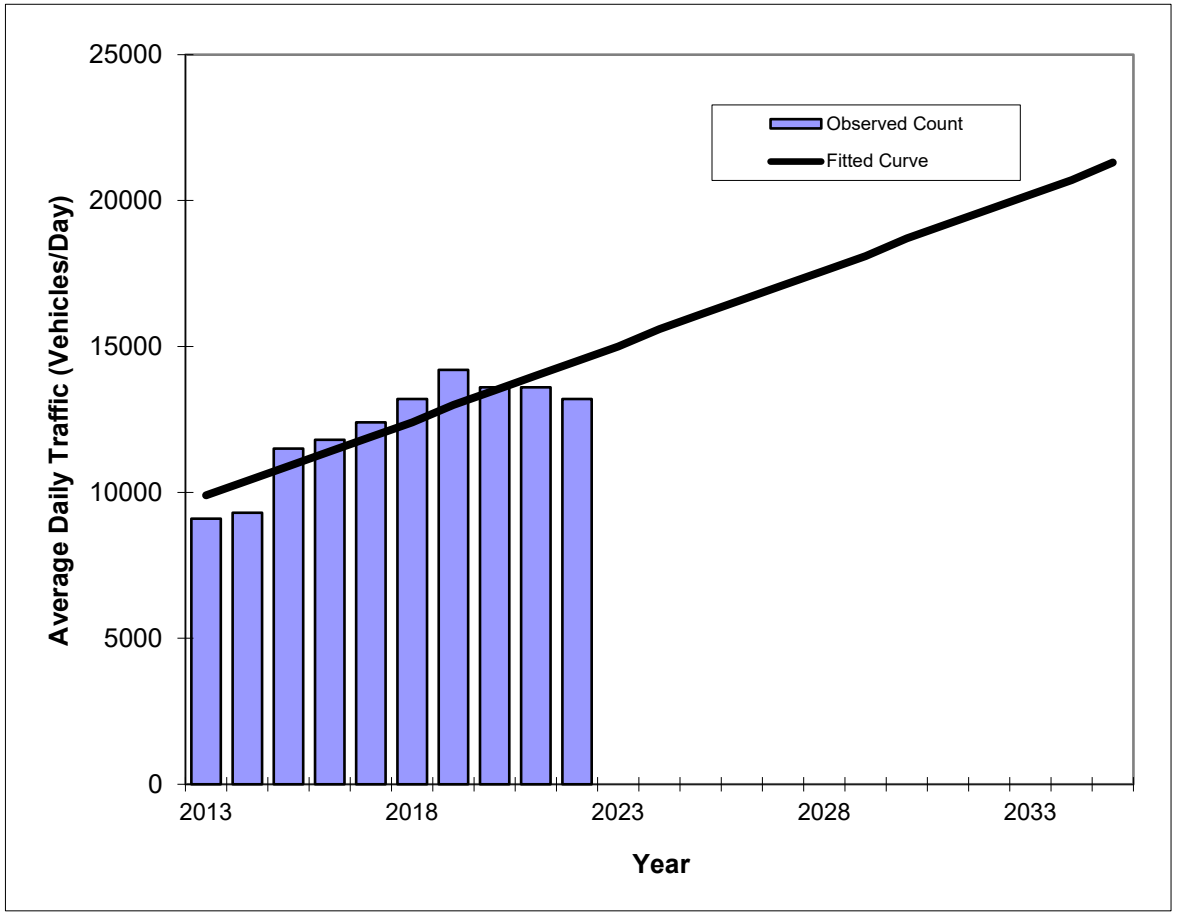
***Axle-Adjusted**

Traffic Trends - V03.a

ORANGE CAMP RD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1380
Highway:	ORANGE CAMP RD



Year	Traffic (ADT/AADT) Count*	Trend**
2013	9100	9900
2014	9300	10400
2015	11500	10900
2016	11800	11400
2017	12400	11900
2018	13200	12400
2019	14200	13000
2020	13600	13500
2021	13600	14000
2022	13200	14500
2026 Opening Year Trend		
2026	N/A	16600
2027 Mid-Year Trend		
2027	N/A	17100
2028 Design Year Trend		
2028	N/A	17600
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	518
Trend R-squared:	77.38%
Trend Annual Historic Growth Rate:	5.16%
Trend Growth Rate (2022 to Design Year):	3.56%
Printed:	6-Aug-24

Straight Line Growth Option

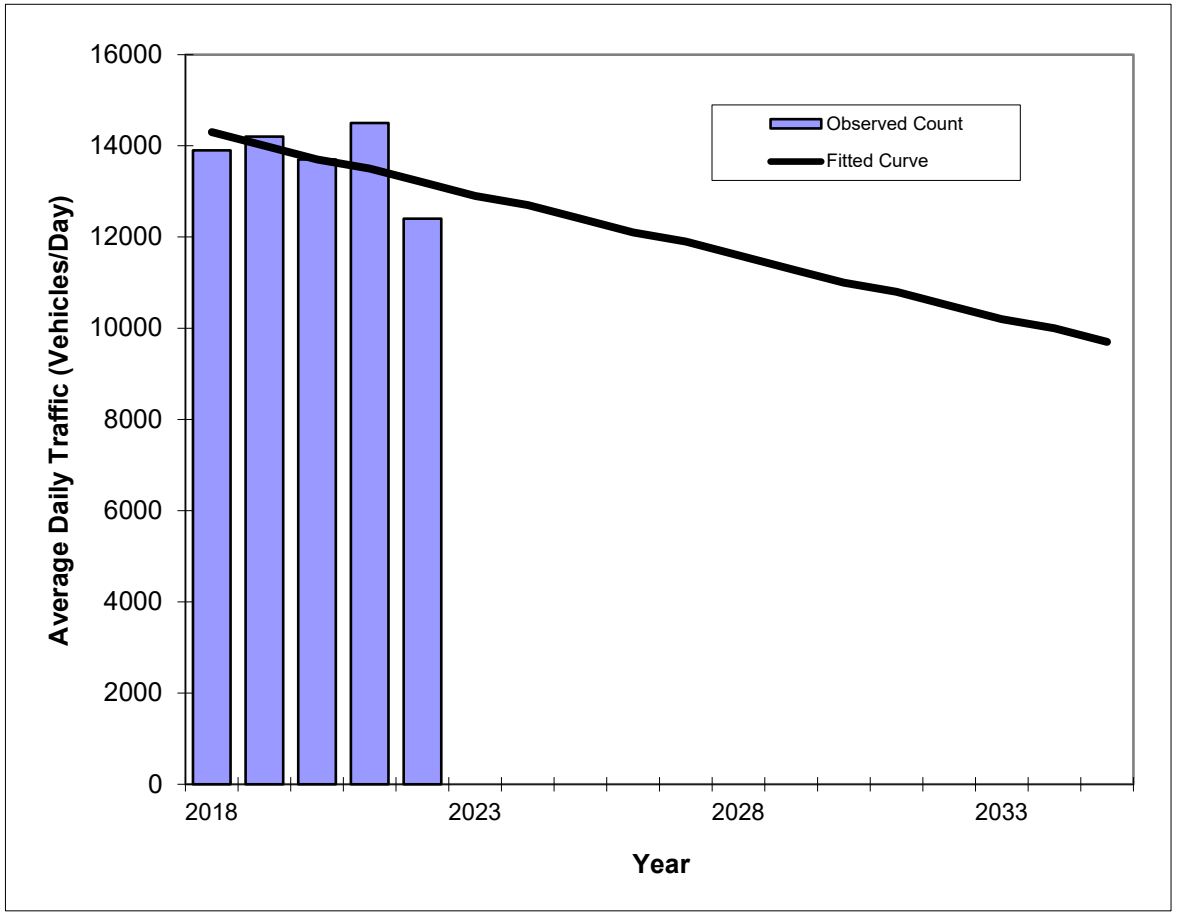
*Axle-Adjusted

Traffic Trends - V03.a

ORANGE CAMP RD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1384
Highway:	ORANGE CAMP RD



Year	Traffic (ADT/AADT) Count*	Trend**
2018	13900	14300
2019	14200	14000
2020	13700	13700
2021	14500	13500
2022	12400	13200
2026 Opening Year Trend		
2026	N/A	12100
2027 Mid-Year Trend		
2027	N/A	11900
2028 Design Year Trend		
2028	N/A	11600
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-270
Trend R-squared:	27.91%
Trend Annual Historic Growth Rate:	-1.92%
Trend Growth Rate (2022 to Design Year):	-2.02%
Printed:	6-Aug-24

Straight Line Growth Option

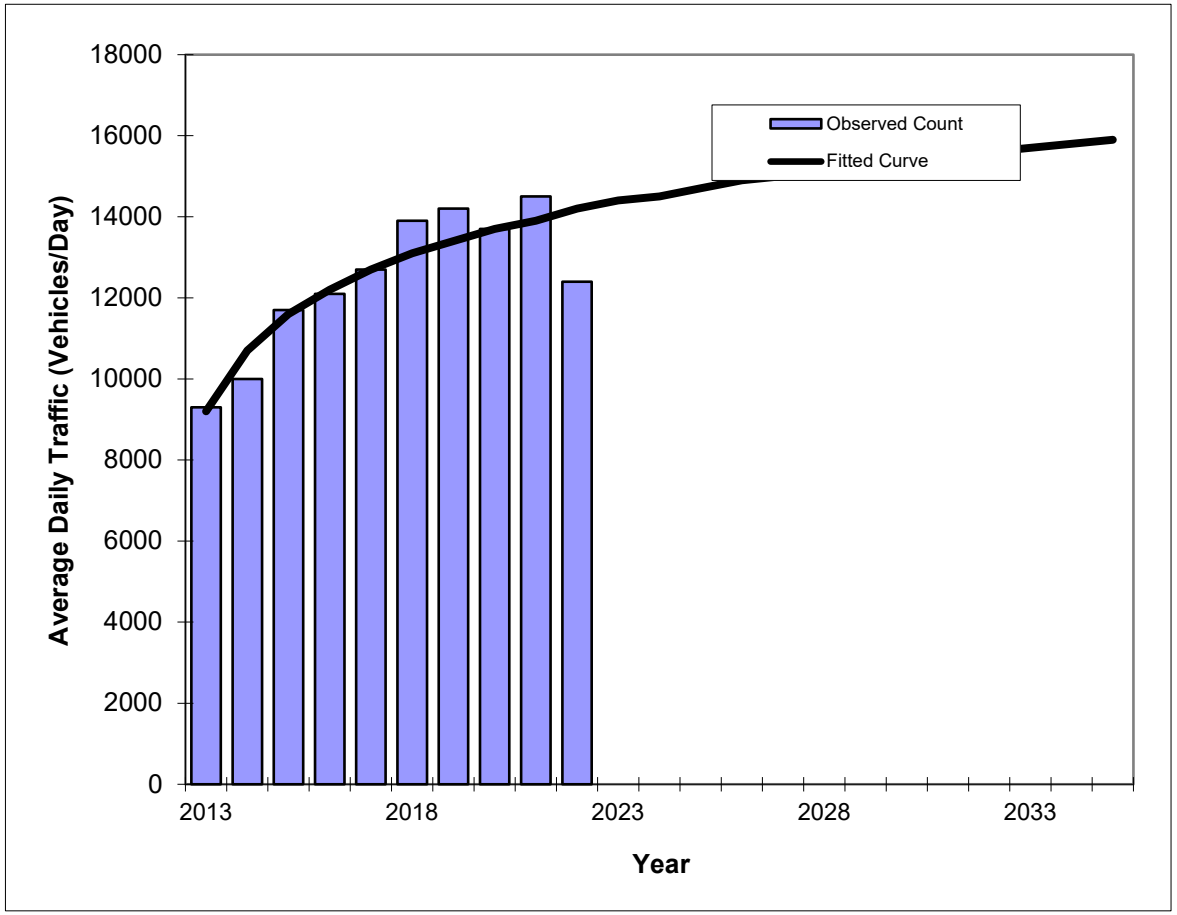
***Axle-Adjusted**

Traffic Trends - V03.a

ORANGE CAMP RD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1384
Highway:	ORANGE CAMP RD



Year	Traffic (ADT/AADT) Count*	Trend**
2013	9300	9200
2014	10000	10700
2015	11700	11600
2016	12100	12200
2017	12700	12700
2018	13900	13100
2019	14200	13400
2020	13700	13700
2021	14500	13900
2022	12400	14200
2026 Opening Year Trend		
2026	N/A	14900
2027 Mid-Year Trend		
2027	N/A	15000
2028 Design Year Trend		
2028	N/A	15200
TRANPLAN Forecasts/Trends		

Trend R-squared:	80.82%
Compounded Annual Historic Growth Rate:	4.94%
Compounded Growth Rate (2022 to Design Year):	1.14%
Printed:	6-Aug-24

Decaying Exponential Growth Option

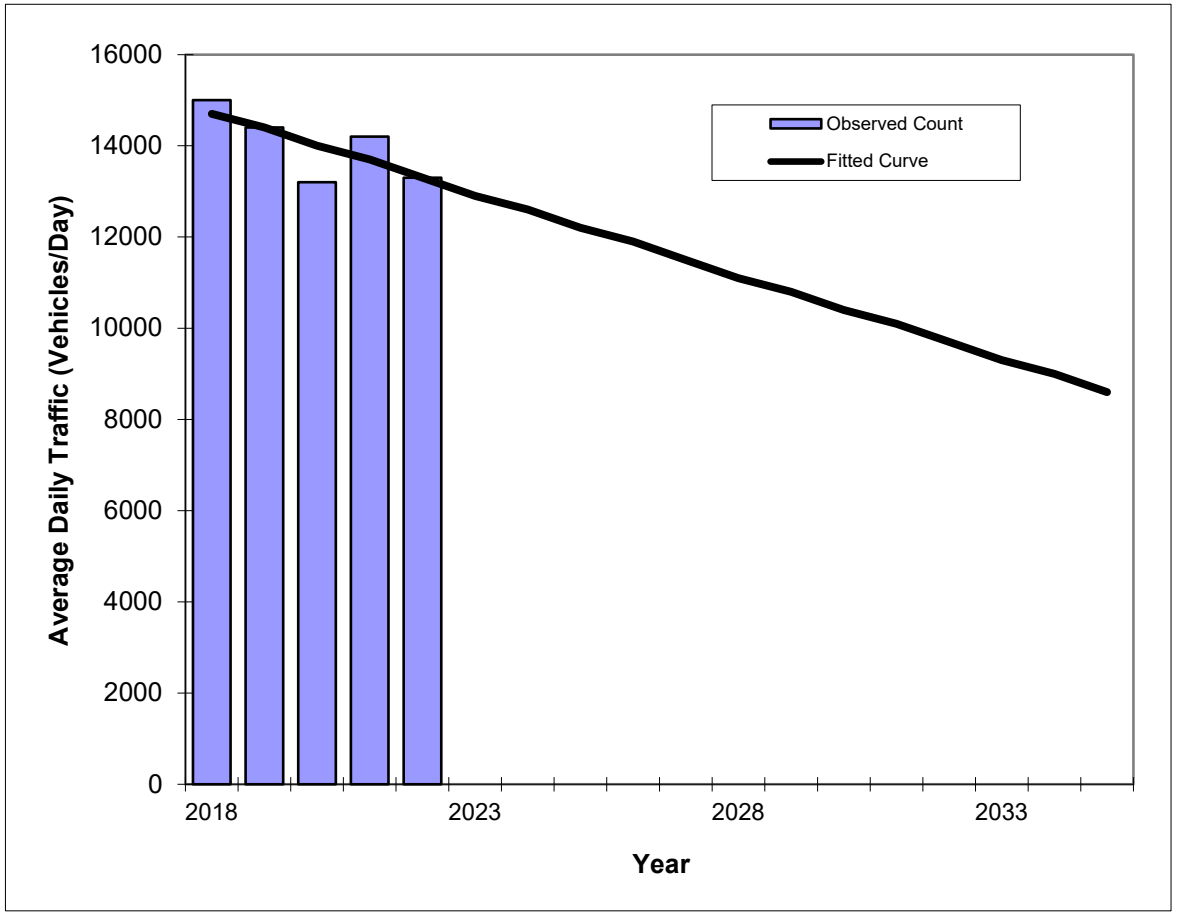
***Axle-Adjusted**

Traffic Trends - V03.a

ORANGE CAMP RD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1385
Highway:	ORANGE CAMP RD



Year	Traffic (ADT/AADT) Count*	Trend**
2018	15000	14700
2019	14400	14400
2020	13200	14000
2021	14200	13700
2022	13300	13300
2026 Opening Year Trend		
2026	N/A	11900
2027 Mid-Year Trend		
2027	N/A	11500
2028 Design Year Trend		
2028	N/A	11100
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-360
Trend R-squared:	55.67%
Trend Annual Historic Growth Rate:	-2.38%
Trend Growth Rate (2022 to Design Year):	-2.76%
Printed:	6-Aug-24

Straight Line Growth Option

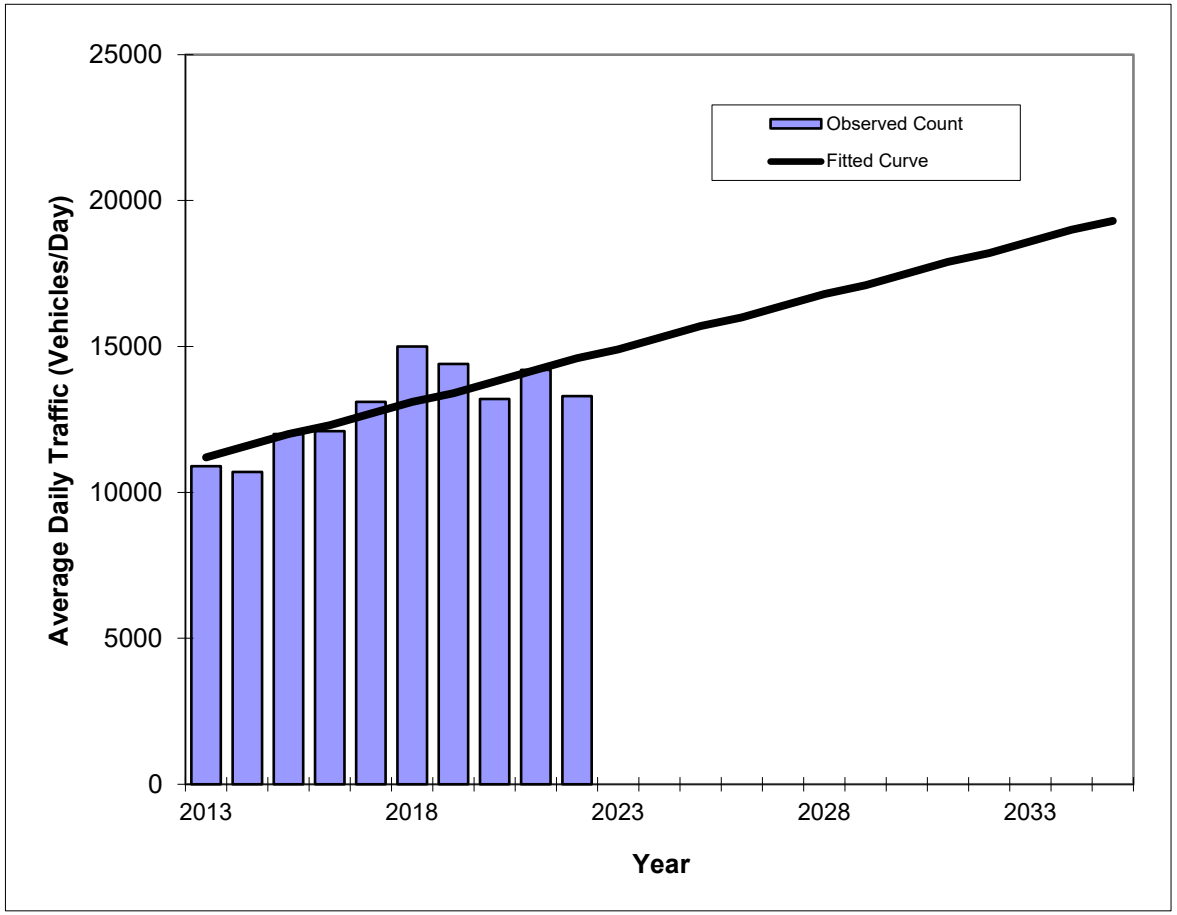
***Axle-Adjusted**

Traffic Trends - V03.a

ORANGE CAMP RD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1385
Highway:	ORANGE CAMP RD



Year	Traffic (ADT/AADT) Count*	Trend**
2013	10900	11200
2014	10700	11600
2015	12000	12000
2016	12100	12300
2017	13100	12700
2018	15000	13100
2019	14400	13400
2020	13200	13800
2021	14200	14200
2022	13300	14600
2026 Opening Year Trend		
2026	N/A	16000
2027 Mid-Year Trend		
2027	N/A	16400
2028 Design Year Trend		
2028	N/A	16800
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	369
Trend R-squared:	59.37%
Trend Annual Historic Growth Rate:	3.37%
Trend Growth Rate (2022 to Design Year):	2.51%
Printed:	6-Aug-24

Straight Line Growth Option

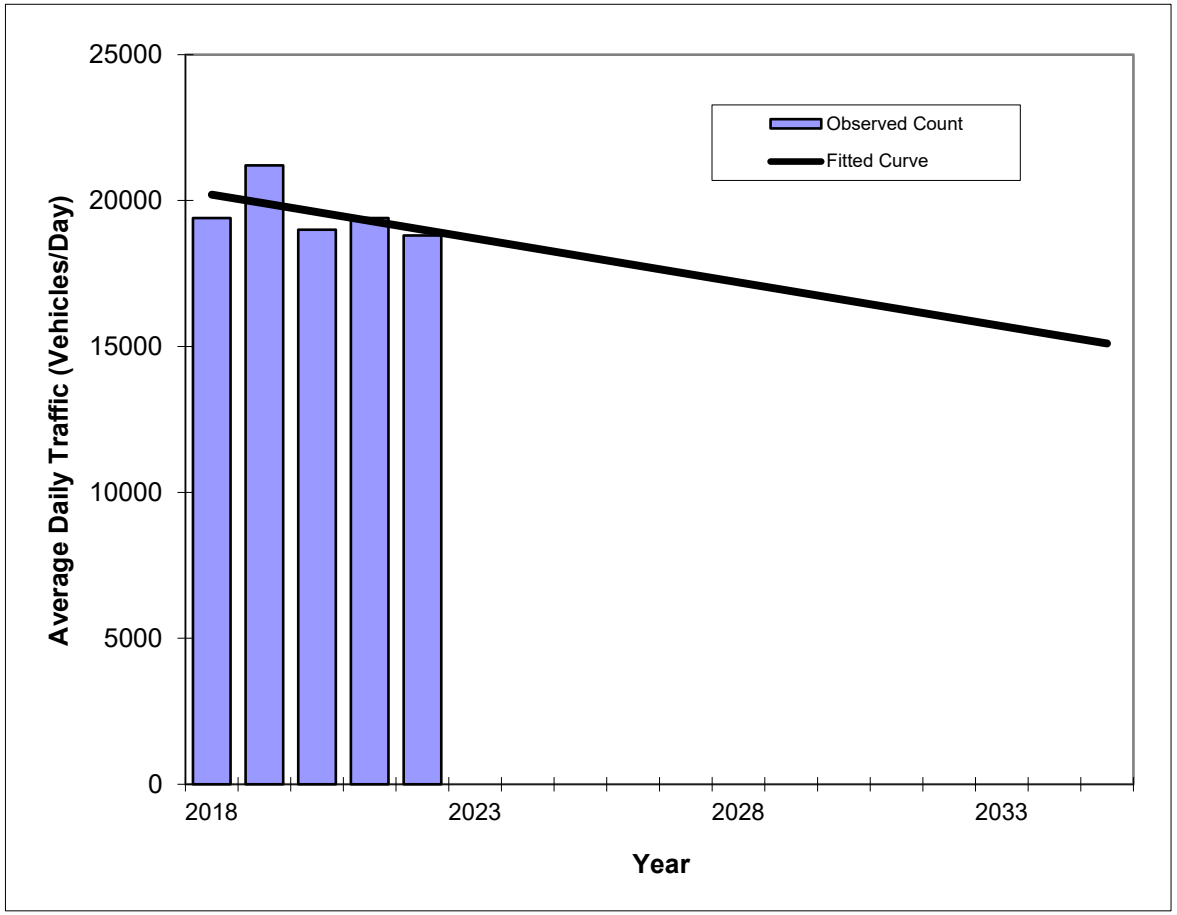
***Axle-Adjusted**

Traffic Trends - V03.a

W Volusia Beltway --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1901
Highway:	W Volusia Beltway



Year	Traffic (ADT/AADT) Count*	Trend**
2018	19400	20200
2019	21200	19900
2020	19000	19600
2021	19400	19300
2022	18800	19000
2026 Opening Year Trend		
2026	N/A	17800
2027 Mid-Year Trend		
2027	N/A	17500
2028 Design Year Trend		
2028	N/A	17200
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-300
Trend R-squared:	24.78%
Trend Annual Historic Growth Rate:	-1.49%
Trend Growth Rate (2022 to Design Year):	-1.58%
Printed:	6-Aug-24

Straight Line Growth Option

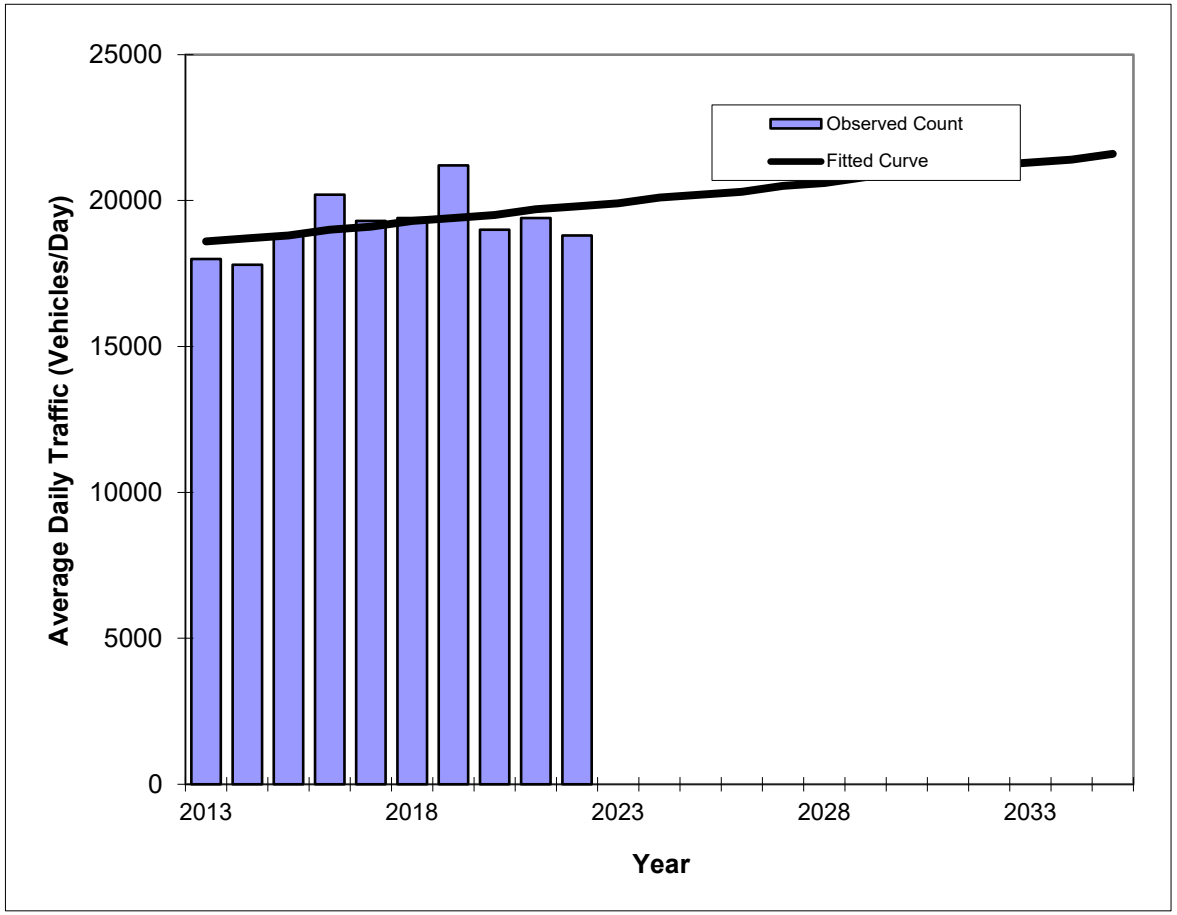
***Axle-Adjusted**

Traffic Trends - V03.a

W Volusia Beltway --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1901
Highway:	W Volusia Beltway



Year	Traffic (ADT/AADT) Count*	Trend**
2013	18000	18600
2014	17800	18700
2015	18800	18800
2016	20200	19000
2017	19300	19100
2018	19400	19300
2019	21200	19400
2020	19000	19500
2021	19400	19700
2022	18800	19800
2026 Opening Year Trend		
2026	N/A	20300
2027 Mid-Year Trend		
2027	N/A	20500
2028 Design Year Trend		
2028	N/A	20600
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	136
Trend R-squared:	17.34%
Trend Annual Historic Growth Rate:	0.72%
Trend Growth Rate (2022 to Design Year):	0.67%
Printed:	6-Aug-24

Straight Line Growth Option

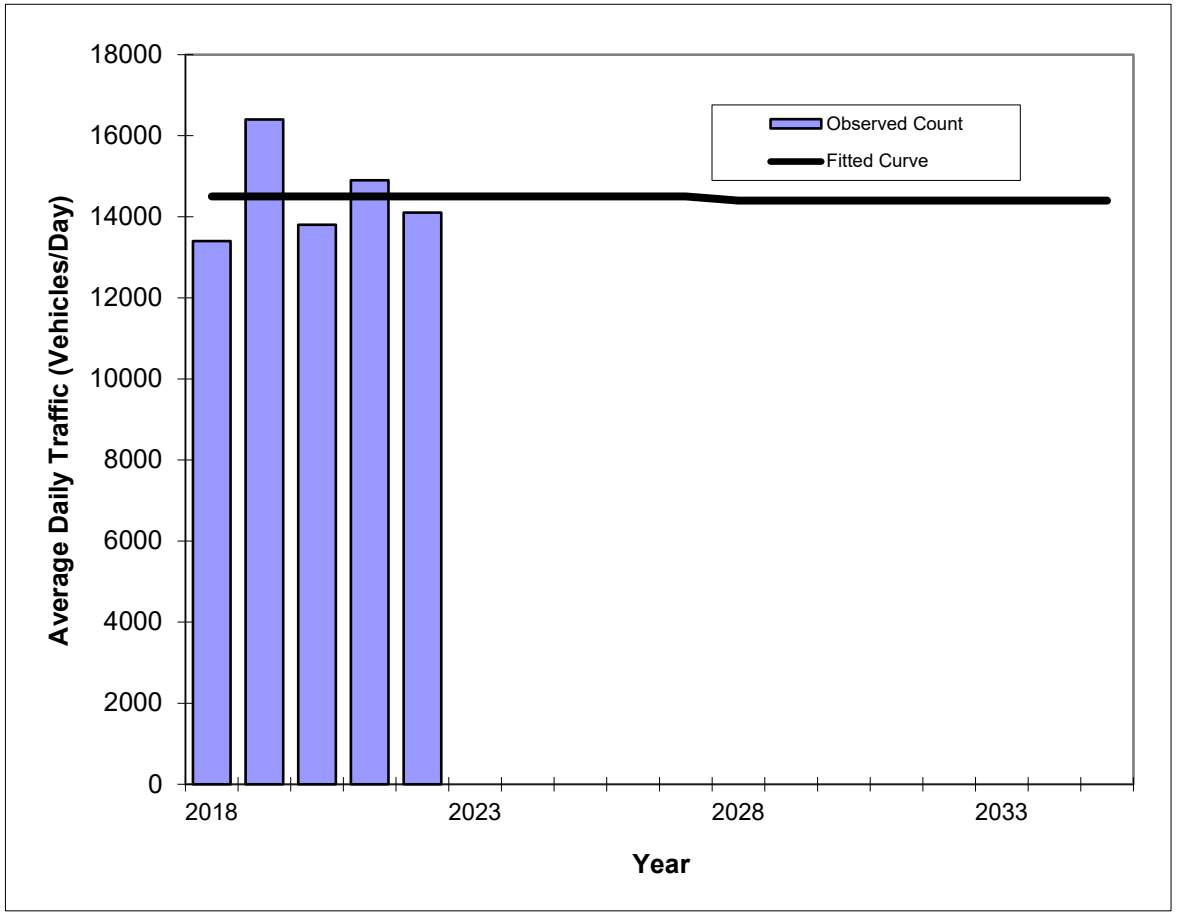
***Axle-Adjusted**

Traffic Trends - V03.a

W Volusia Beltway --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1902
Highway:	W Volusia Beltway



Year	Traffic (ADT/AADT) Count*	Trend**
2018	13400	14500
2019	16400	14500
2020	13800	14500
2021	14900	14500
2022	14100	14500
2026 Opening Year Trend		
2026	N/A	14500
2027 Mid-Year Trend		
2027	N/A	14500
2028 Design Year Trend		
2028	N/A	14400
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-10
Trend R-squared:	0.02%
Trend Annual Historic Growth Rate:	0.00%
Trend Growth Rate (2022 to Design Year):	-0.11%
Printed:	6-Aug-24

Straight Line Growth Option

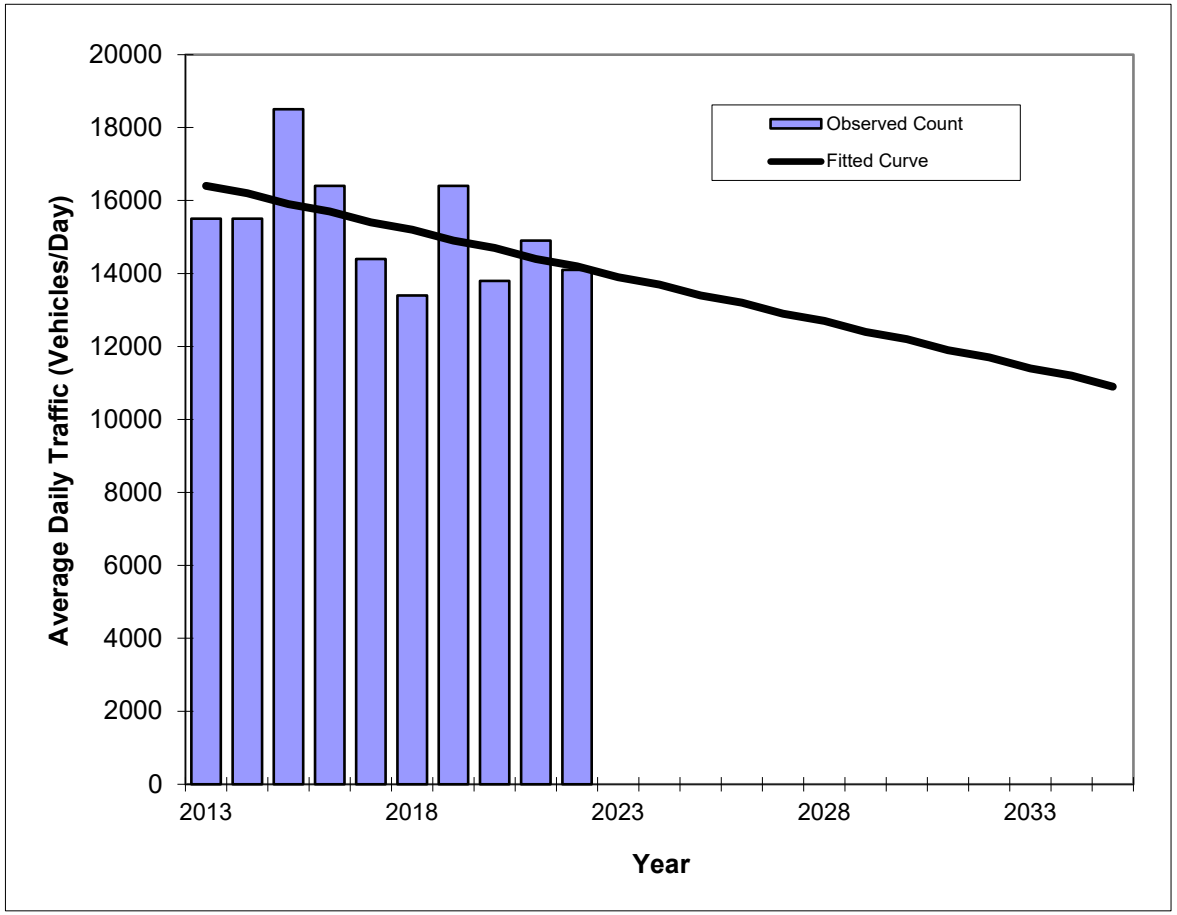
***Axle-Adjusted**

Traffic Trends - V03.a

W Volusia Beltway --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1902
Highway:	W Volusia Beltway



Year	Traffic (ADT/AADT) Count*	Trend**
2013	15500	16400
2014	15500	16200
2015	18500	15900
2016	16400	15700
2017	14400	15400
2018	13400	15200
2019	16400	14900
2020	13800	14700
2021	14900	14400
2022	14100	14200
2026 Opening Year Trend		
2026	N/A	13200
2027 Mid-Year Trend		
2027	N/A	12900
2028 Design Year Trend		
2028	N/A	12700
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-250
Trend R-squared:	24.60%
Trend Annual Historic Growth Rate:	-1.49%
Trend Growth Rate (2022 to Design Year):	-1.76%
Printed:	6-Aug-24

Straight Line Growth Option

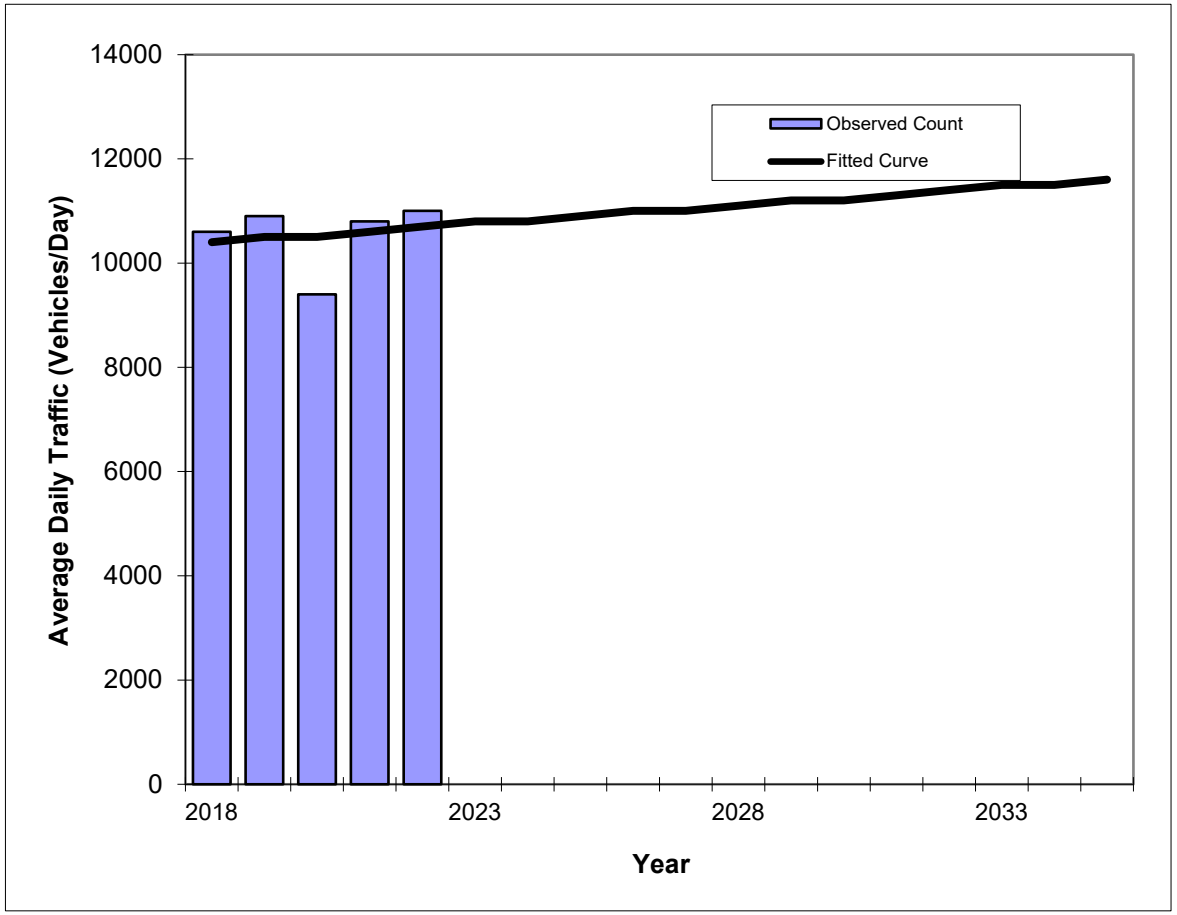
***Axle-Adjusted**

Traffic Trends - V03.a

W Volusia Beltway --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1030
Highway:	W Volusia Beltway



Year	Traffic (ADT/AADT) Count*	Trend**
2018	10600	10400
2019	10900	10500
2020	9400	10500
2021	10800	10600
2022	11000	10700
2026 Opening Year Trend		
2026	N/A	11000
2027 Mid-Year Trend		
2027	N/A	11000
2028 Design Year Trend		
2028	N/A	11100
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	70
Trend R-squared:	2.86%
Trend Annual Historic Growth Rate:	0.72%
Trend Growth Rate (2022 to Design Year):	0.62%
Printed:	6-Aug-24

Straight Line Growth Option

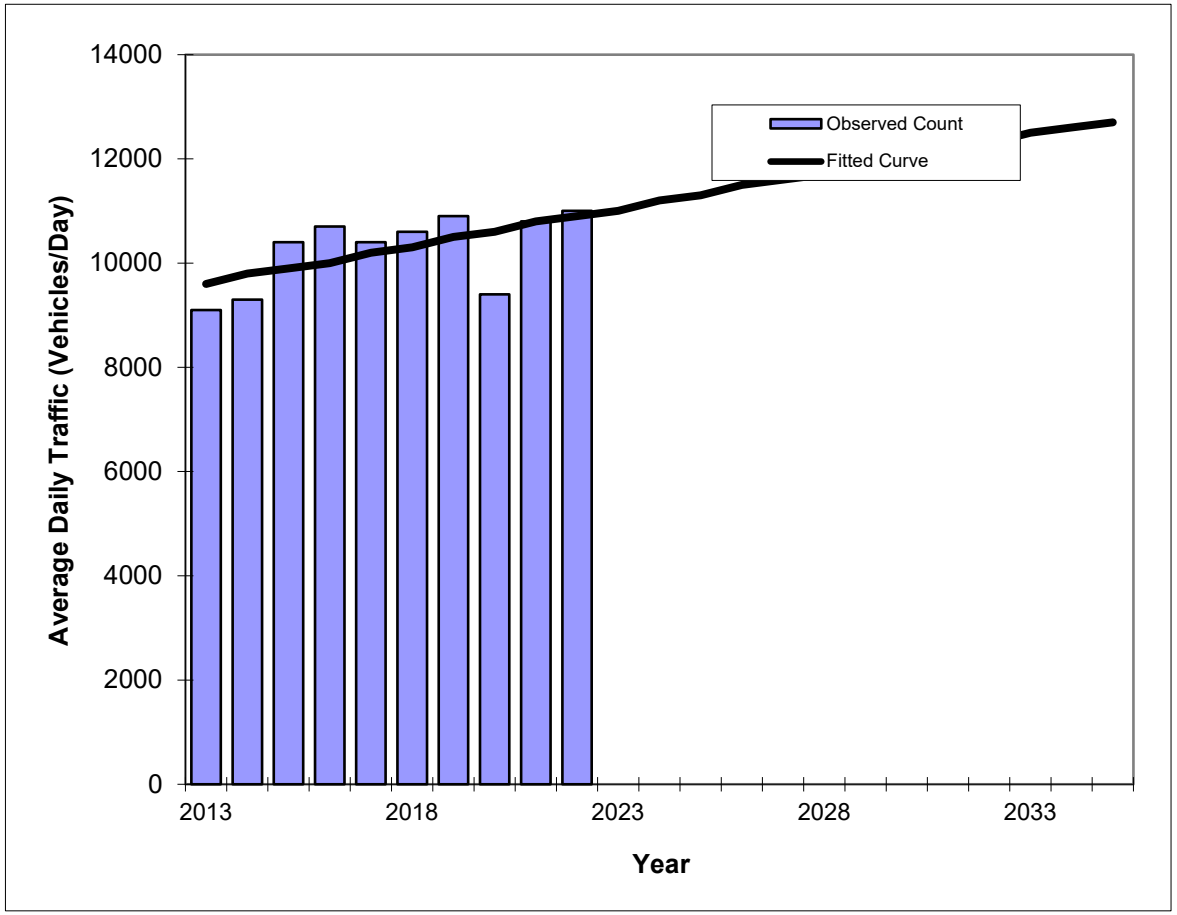
***Axle-Adjusted**

Traffic Trends - V03.a

W Volusia Beltway --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1030
Highway:	W Volusia Beltway



Year	Traffic (ADT/AADT) Count*	Trend**
2013	9100	9600
2014	9300	9800
2015	10400	9900
2016	10700	10000
2017	10400	10200
2018	10600	10300
2019	10900	10500
2020	9400	10600
2021	10800	10800
2022	11000	10900
2026 Opening Year Trend		
2026	N/A	11500
2027 Mid-Year Trend		
2027	N/A	11600
2028 Design Year Trend		
2028	N/A	11700
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	142
Trend R-squared:	36.04%
Trend Annual Historic Growth Rate:	1.50%
Trend Growth Rate (2022 to Design Year):	1.22%
Printed:	6-Aug-24

Straight Line Growth Option

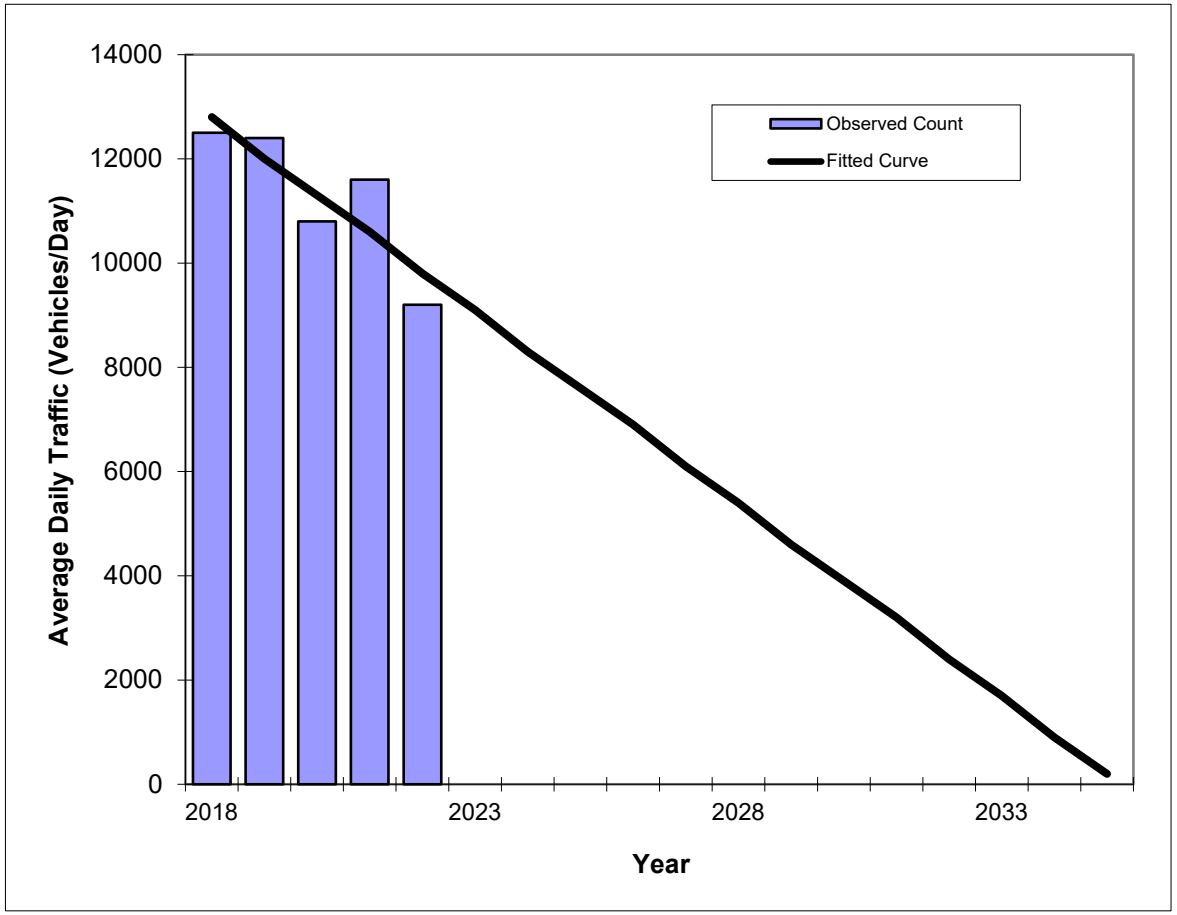
***Axle-Adjusted**

Traffic Trends - V03.a

W Volusia Beltway --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1942
Highway:	W Volusia Beltway



Year	Traffic (ADT/AADT) Count*	Trend**
2018	12500	12800
2019	12400	12000
2020	10800	11300
2021	11600	10600
2022	9200	9800
2026 Opening Year Trend		
2026	N/A	6900
2027 Mid-Year Trend		
2027	N/A	6100
2028 Design Year Trend		
2028	N/A	5400
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-740
Trend R-squared:	74.00%
Trend Annual Historic Growth Rate:	-5.86%
Trend Growth Rate (2022 to Design Year):	-7.48%
Printed:	6-Aug-24

Straight Line Growth Option

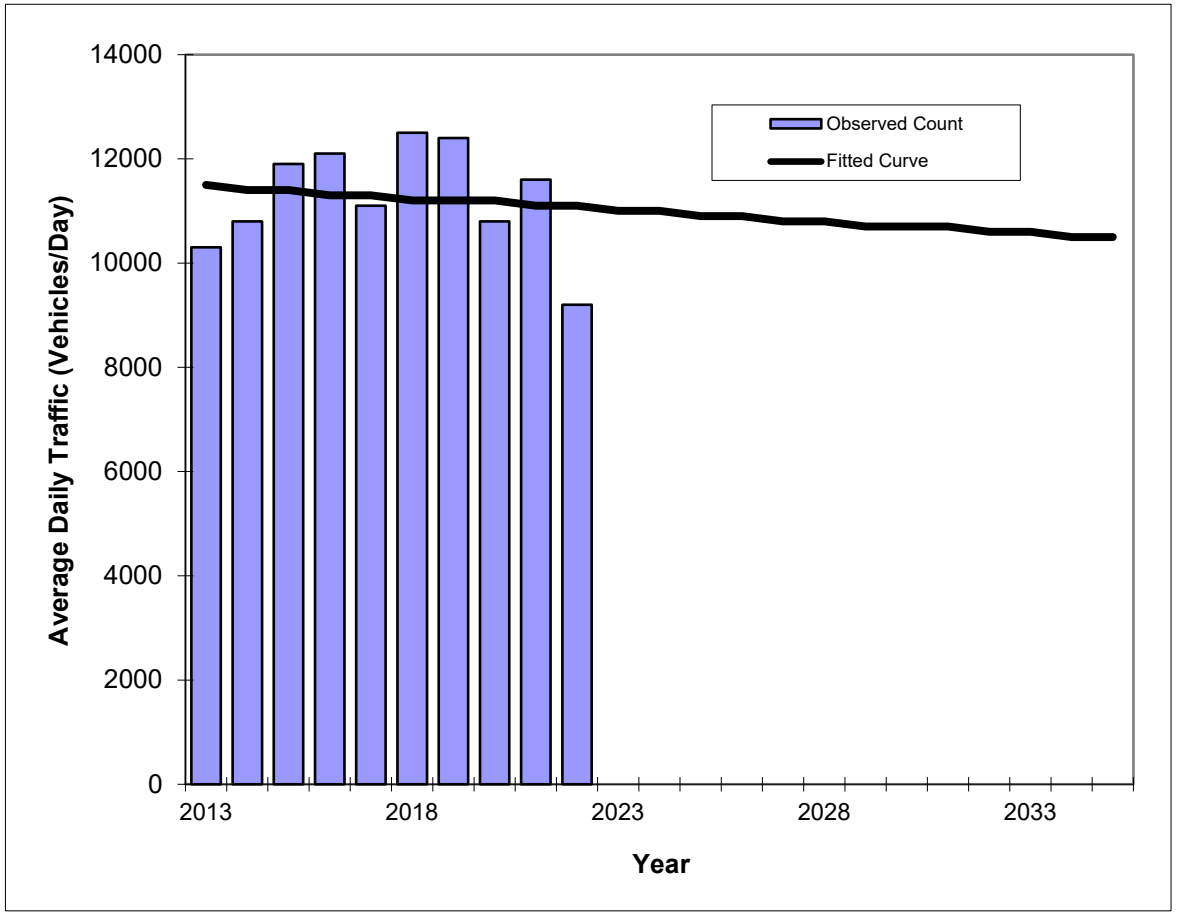
***Axle-Adjusted**

Traffic Trends - V03.a

W Volusia Beltway --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1942
Highway:	W Volusia Beltway



Year	Traffic (ADT/AADT) Count*	Trend**
2013	10300	11500
2014	10800	11400
2015	11900	11400
2016	12100	11300
2017	11100	11300
2018	12500	11200
2019	12400	11200
2020	10800	11200
2021	11600	11100
2022	9200	11100
2026 Opening Year Trend		
2026	N/A	10900
2027 Mid-Year Trend		
2027	N/A	10800
2028 Design Year Trend		
2028	N/A	10800
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-45
Trend R-squared:	1.76%
Trend Annual Historic Growth Rate:	-0.39%
Trend Growth Rate (2022 to Design Year):	-0.45%
Printed:	6-Aug-24

Straight Line Growth Option

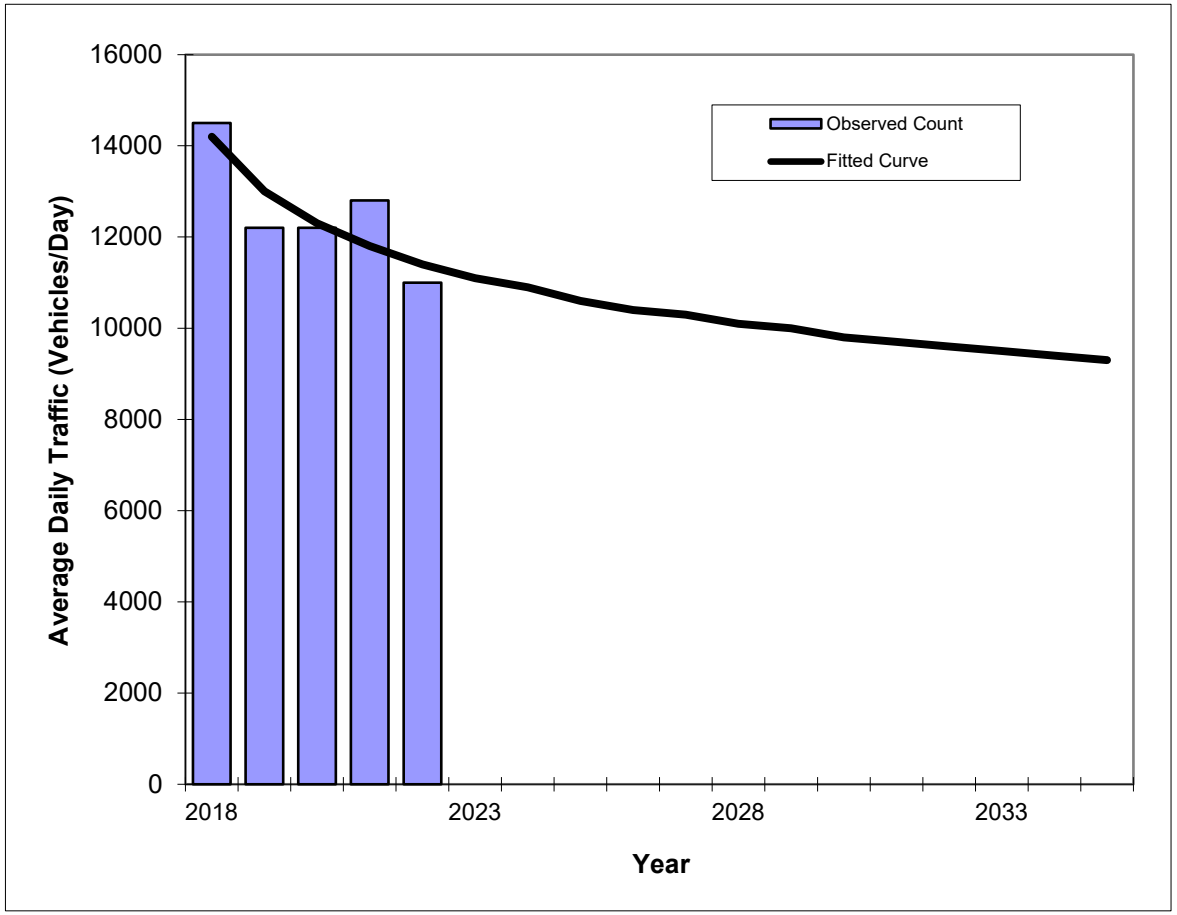
***Axle-Adjusted**

Traffic Trends - V03.a

W Volusia Beltway --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1943
Highway:	W Volusia Beltway



Year	Traffic (ADT/AADT) Count*	Trend**
2018	14500	14200
2019	12200	13000
2020	12200	12300
2021	12800	11800
2022	11000	11400
2026 Opening Year Trend		
2026	N/A	10400
2027 Mid-Year Trend		
2027	N/A	10300
2028 Design Year Trend		
2028	N/A	10100
TRANPLAN Forecasts/Trends		

Trend R-squared:	70.70%
Compounded Annual Historic Growth Rate:	-5.34%
Compounded Growth Rate (2022 to Design Year):	-2.00%
Printed:	6-Aug-24

Decaying Exponential Growth Option

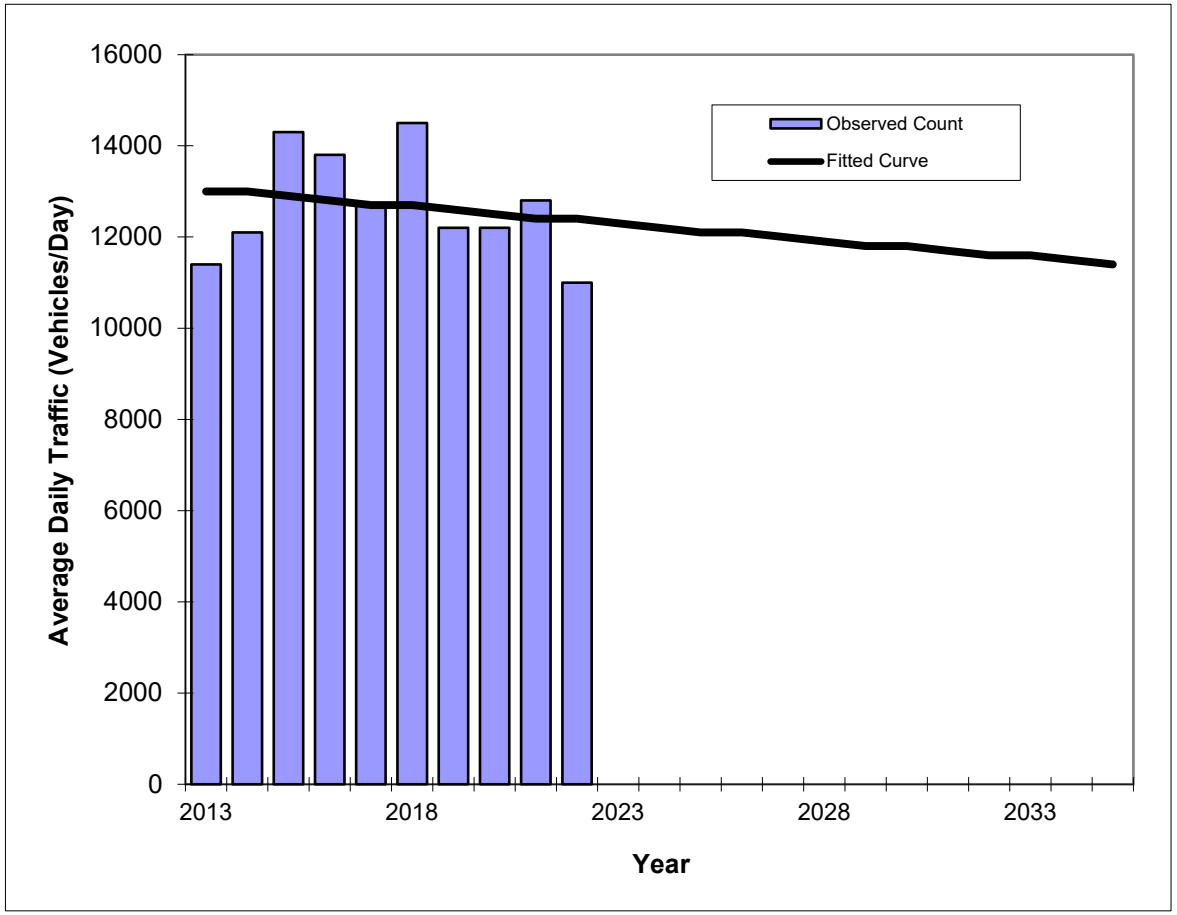
***Axle-Adjusted**

Traffic Trends - V03.a

W Volusia Beltway --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	1943
Highway:	W Volusia Beltway



Year	Traffic (ADT/AADT) Count*	Trend**
2013	11400	13000
2014	12100	13000
2015	14300	12900
2016	13800	12800
2017	12700	12700
2018	14500	12700
2019	12200	12600
2020	12200	12500
2021	12800	12400
2022	11000	12400
2026 Opening Year Trend		
2026	N/A	12100
2027 Mid-Year Trend		
2027	N/A	12000
2028 Design Year Trend		
2028	N/A	11900
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-74
Trend R-squared:	3.62%
Trend Annual Historic Growth Rate:	-0.51%
Trend Growth Rate (2022 to Design Year):	-0.67%
Printed:	6-Aug-24

Straight Line Growth Option

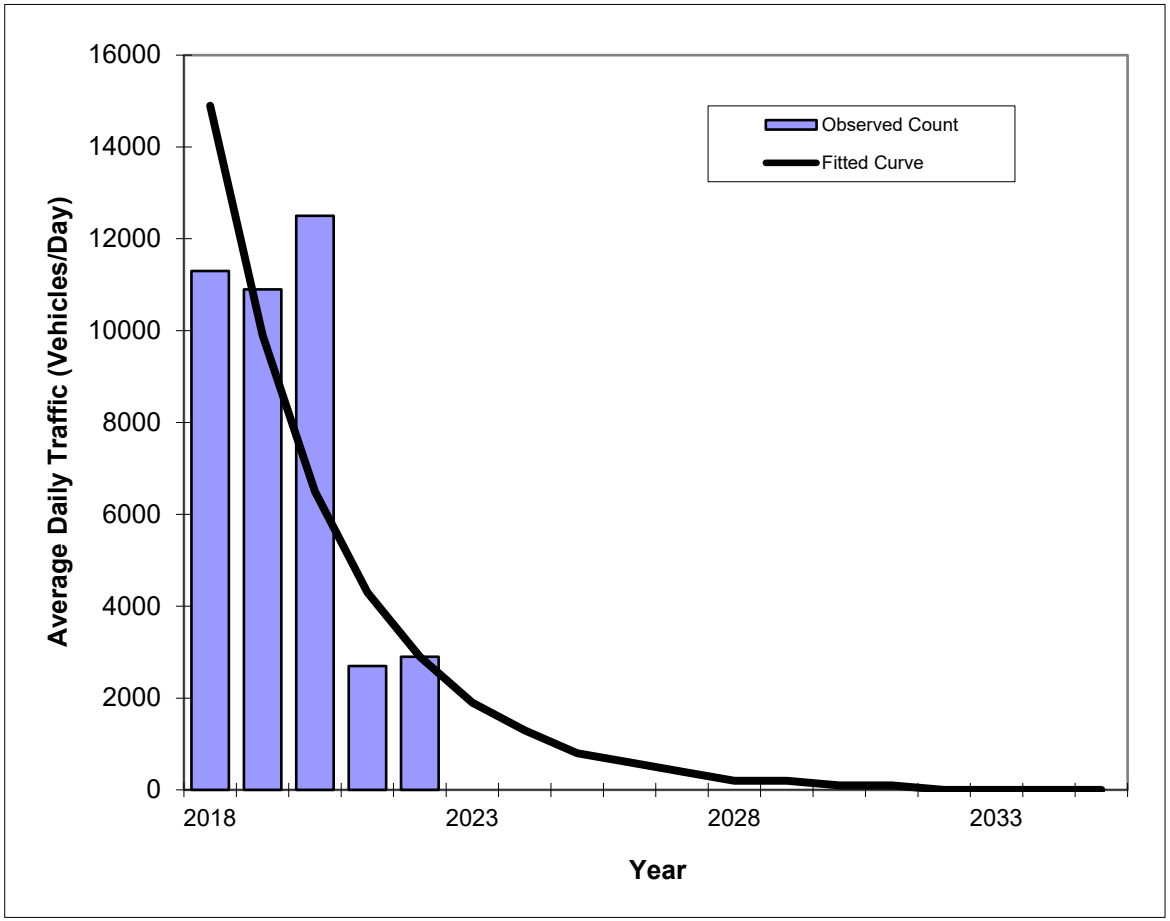
***Axle-Adjusted**

Traffic Trends - V03.a

CATALINA BLVD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	8193
Highway:	CATALINA BLVD



Year	Traffic (ADT/AADT) Count*	Trend**
2018	11300	14900
2019	10900	9900
2020	12500	6500
2021	2700	4300
2022	2900	2900
2026 Opening Year Trend		
2026	N/A	600
2027 Mid-Year Trend		
2027	N/A	400
2028 Design Year Trend		
2028	N/A	200
TRANPLAN Forecasts/Trends		

Trend R-squared:	69.89%
Compounded Annual Historic Growth Rate:	-33.58%
Compounded Growth Rate (2022 to Design Year):	-35.96%
Printed:	6-Aug-24

Exponential Growth Option

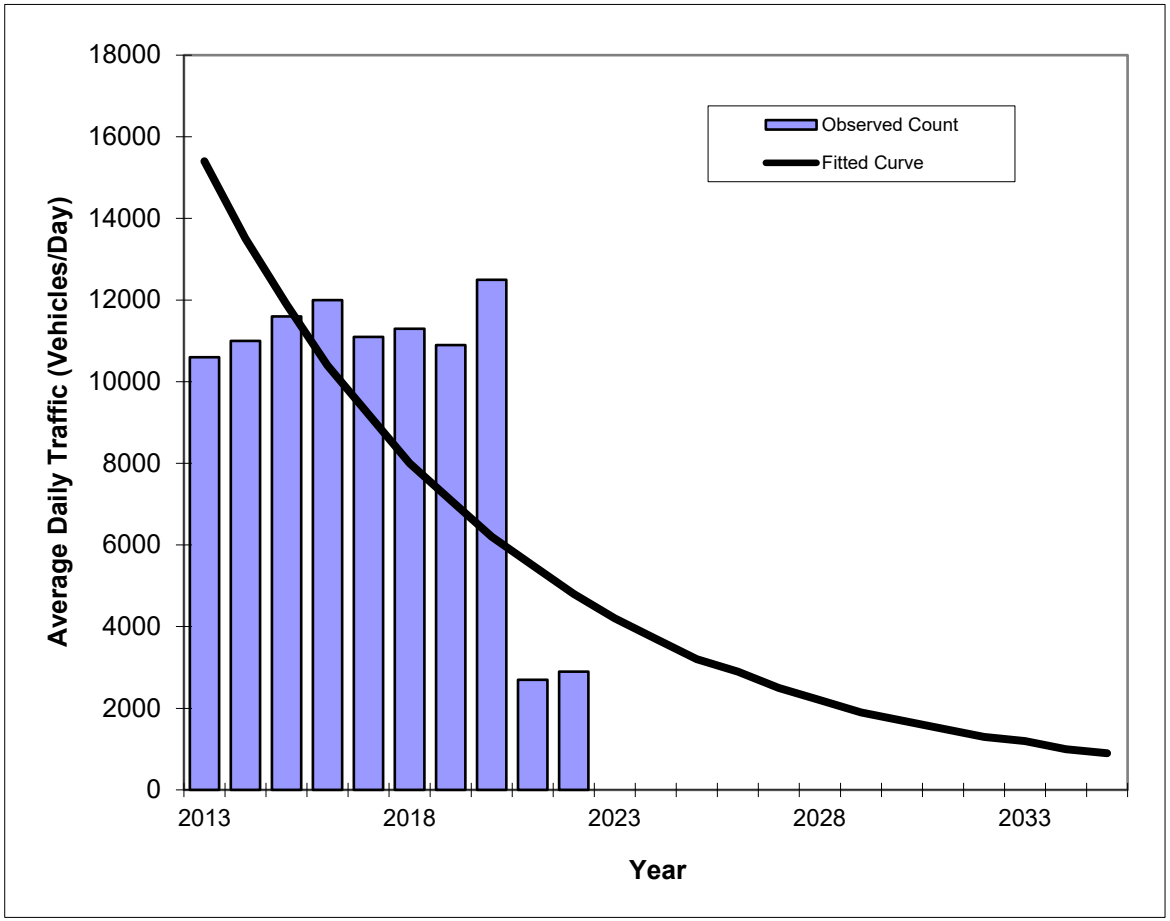
***Axle-Adjusted**

Traffic Trends - V03.a

CATALINA BLVD --

FIN#	21100
Location	1

County:	Volusia (79)
Station #:	8193
Highway:	CATALINA BLVD



Year	Traffic (ADT/AADT) Count*	Trend**
2013	10600	15400
2014	11000	13500
2015	11600	11900
2016	12000	10400
2017	11100	9200
2018	11300	8000
2019	10900	7100
2020	12500	6200
2021	2700	5500
2022	2900	4800
2026 Opening Year Trend		
2026	N/A	2900
2027 Mid-Year Trend		
2027	N/A	2500
2028 Design Year Trend		
2028	N/A	2200
TRANPLAN Forecasts/Trends		

Trend R-squared:	43.83%
Compounded Annual Historic Growth Rate:	-12.15%
Compounded Growth Rate (2022 to Design Year):	-12.19%
Printed:	6-Aug-24

Exponential Growth Option

***Axle-Adjusted**

Volusia County Vested Trip Database on Critical/Non-Critical Roads - By Critical Area, PM Peak

Approved Devts and Devts under Review

Developments not considered vested

Parent Tract trips - should not be included in overall, only for informational purposes

****ALWAYS REFER TO THE VC AADT SPREADSHEET FOR COUNT AND CAPACITY INFO. (Not this spreadsheet)****

Updated #######

****ALWAYS REFER TO THE VC AADT SPREADSHEET FOR COUNT AND CAPACITY INFO. (Not this spreadsheet)****

Roadway	Segment	2021PM Pk Hr (VCTE) (VCTE Staff note: RED font = FDOT pk volumes based on daily V/C proportion.)	Capacity	2020 Parc Hill (50% Removed)	SWAC Phase IA Trips 11,444 (removed 13% Integra Daws)	Victoria Park Ph 2 Remaining Trips per city (reduced by 75%)	Victoria Park Ph 3 trips per city (0% removed)	Halifax Crossing s/ BPUD (37% Removed)	Hawthorne Landing	Rivera Bella East Unit 8&9 REMOVED 50%	Ft Florida Commons	Riverbend 2008	Springview Unit 8 REMOVED 90%	Canterwood ALF	Vineland Reserve	Fernanda Place (85% removed)	Enterprise Osteen (Reflects only 189 units as woods)	Enterprise Osteen East	Lincoln Oaks 2019	133 S. Courtland Blvd	Doyle Road Tract	Reserve at Victoria 2019	Park Lake Estates 2020	Crosswinds 2020	Beresford Woods 2019	DeBary Town Center	T-11 Kepler at SR 44 2019	Azalea Walk 2019 (20% removed)	Estates at Pelham Square 2019	Animal ER Critical Care 2019	Liberty Station, Orange City 2019	The Crossings, Orange City 2020	Eloah Estates 2022	Deltona Village PUD 2010 (see PUD trip tracker) 375 remaining not reflected on network	Deltona Village 2020/Mango Street	Portland Industrial 2020	Orange City Oncology 2025	Canopy Terrace/Kirk Subdivision	Grandview Gardens	Three Island Lake South	Villages at Pelham Square	Oak Hammock Reserve	Dean River Estates	Circle K at SR 40/US 17	Total Vested Trips	Lastest AADT plus Vested trips	V/C with Vested trips	V/C without Vested Trips	
I-4 Segments based on AADT V/C																																														
Graves Ave	VMP to Kentucky Ave	1640	1620	38	40	1	9	111																					13	141	44		94											479	2116	1.30	1.01	Critical
Graves Ave	Kentucky to Normandy	1420	1620		80	1	9	352																						311	44	19	109											925	2345	1.45	0.88	Vested Critical
Graves Ave	Normandy Blvd to Howland Blvd	1590	2740		80	1	9	352																						311	44	19	175											991	2581	0.94	0.58	Vested Near Critical
Howland Blvd	I-4 to Wolf Pack Run	2530	3410		130	15		254							9														10	187	82	57	116					8					868	3398	1.00	0.74	Vested Near Critical
Howland Blvd	Wolf Pack Run to Catalina Blvd	2310	3410		119			238							10															152	133	25	98					8					783	3093	0.91	0.68	Vested Near Critical
Howland Blvd	Providence Blvd to Elkcam	1110	1080					89							16															63	82		58					8					289	1389	1.14	0.99	Critical
Orange Camp Rd+B14	I-7/32 to Princeton	1,150	1270	0	20	8	57															19	16		11					3	20			14										168	1318	1.04	0.91	Near Critical
Orange Camp Rd	Blue Lake Ave to MLK	1,210	1540	0	20	11	80															22	16	4						3	20	2		21										197	1407	0.91	0.75	Vested Near Critical
Orange Camp Rd	MLK to I-4	1,170	1540		40	17	111															59	49	9						3	10	3		54										353	1523	0.99	0.76	Vested Critical
MLK	Taylor to Orange Camp	1030	1540				8	59														123	101	0										54										345	1375	0.89	0.67	Vested Near Critical
MLK	Orange Camp to Cassadaga Rd	990	1540	0	90	12	83															54	44	3						14	51	10		21										382	1372	0.89	0.64	Vested Near Critical
Kentucky	SR 472 to Graves	910	1540																											67	162	10		31										270	1180	0.77	0.59	
VMP	Graves Ave to Rhode Island	1200	1620	49	90	1	10																							48	91	8		35										332	1532	0.95	0.74	Vested Near Critical
VMP	Rhode Island to Harley Strickland	1490	1620	235	80	1	3																							35	20			23										397	1887	1.16	0.92	Vested Critical
Catalina Blvd	Howland Blvd to Sixma Road	1002	960																												123								3					*126*	1128	1.18	1.04	Vested Critical
Catalina Blvd	Sixma Rd to Lake Helen Osteen	856	960																												110													*110*	966	1.01	0.89	Vested Near Critical

Table 5: Future Buildout Roadway Volumes

Roadway	Segment	2027 2-Way PM Background Volume	Model Distribution	Buildout Trips	2027 2-Way PM Buildout Volume
Dr Martin Luther King Jr Beltway	SR 472 to Cassadaga Rd.	1,524	16.25%	198	1,722
	Cassadaga Rd. to Orange Camp Rd.	1,685	21.30%	260	1,945
	Orange Camp Rd. to Taylor Rd.	1,634	7.50%	92	1,726
	Taylor Rd. to Beresford Ave.	1,425	6.60%	81	1,506
Kentucky Avenue	Graves Ave. to SR 472	1,489	9.10%	111	1,600
Veteran's Memorial Parkway	Rhode Island Ave. to Graves Ave.	1,566	4.60%	56	1,622
Cassadaga Road	Dr. Martin Luther King Jr Bltwy. to Macy Ave.	308	9.80%	120	428
Orange Camp Road	Blue Lake Ave. to Dr Martin Luther King Jr Bltwy.	1,670	4.80%	59	1,729
Graves Avenue	Veteran's Memorial Pkwy. to Kentucky Ave.	2,203	7.00%	85	2,288
Howland Boulevard	I-4/SR 472 to Wolf Pack Rn.	3,580	15.28%	186	3,766
	Wolf Pack Rn. to Catalina Blvd.	3,307	11.60%	142	3,449
	Catalina Blvd. to Providence Blvd.	2,336	10.07%	123	2,459
SR 472	US 17/92 to Martin Luther King Jr Bltwy.	3,193	16.74%	204	3,397
	Martin Luther King Jr Bltwy. to I-4	3,466	26.40%	322	3,788
Macy Avenue	Ohio St. to Cassadaga Rd.	193	6.60%	81	274
Kicklighter Road	Macy Ave. to Lake Helen-Osteen Rd./Prevatt Ave.	270	5.60%	68	338
Normandy Blvd.	Graves Ave. to Rhode Island Ave.	1,547	5.65%	69	1,616

3.3 Roadway Segment Analysis

Roadway segment capacity was analyzed based on the adopted peak hour capacities, as obtained from the *Volusia County 2021 AADT & Historical Counts*. The analysis compares the roadway PM peak traffic to the segment capacity to determine if the segment's LOS operation is adequate. The analysis was conducted for the existing, projected background, and projected buildout traffic. **Table 4** summarizes the roadway capacity analysis.

Table 4
Roadway Capacity Analysis

Roadway Segment	Seg ID	# of Lns	2Way Cap	Existing		Background		Project Total			
				Vol	Adeq?	Vol	Adeq?	Dist	Trips	Vol	Adeq?
US 17 / 92											
SR 472 to SR 15A / Taylor Rd*	1,004	6	5,390	1,027	YES	1,190	YES	10%	12	1,202	YES
Graves Ave / CR 4145											
Veteran's Memorial Pkwy to Kentucky Ave	775	2	1,620	1,640	**NO**	1,905	**NO**	15%	18	1,923	**NO**
Kentucky Ave to Normandy Blvd	900a	2	1,620	1,420	YES	1,880	**NO**	5%	6	1,886	**NO**
Normandy Blvd to Howland Blvd	900b	4	2,740	1,590	YES	2,050	YES	5%	6	2,056	YES
Orange Camp Rd											
US 17 / 92 to Princeton Rd	1,380	2	1,270	1,160	YES	1,364	**NO**	3%	4	1,368	**NO**
Princeton Rd to Blue Lake Ave	1,382	2	1,540	1,170	YES	1,402	YES	4%	5	1,407	YES
Blue Lake Ave to W Volusia Bltwy (Dr. MLK Jr)	1,384	2	1,540	1,220	YES	1,531	YES	5%	6	1,537	YES
W Volusia Bltwy (Dr. MLK Jr) to I-4	1,385	2	1,540	1,920	**NO**	2,409	**NO**	5%	6	2,415	**NO**
W. Volusia Bltwy											
Saxon Blvd to Harley Strickland Blvd	1,900	4	3,410	1,280	YES	1,527	YES	5%	6	1,533	YES
Harley Strickland Blvd to Rhode Island Ave	1,901	2	1,540	1,490	YES	1,748	**NO**	5%	6	1,754	**NO**
Rhode Island Ave to Graves Ave	1,902	2	1,620	1,200	YES	1,408	YES	10%	12	1,420	YES
SR 472 to Cassadaga Rd	1,940	2	1,540	1,050	YES	1,232	YES	70%	85	1,317	YES

** 2021 volume obtained from FDOT's Florida Traffic Online*

The following roadway segments are projected to operate above their adopted capacities due to existing traffic volumes or projected background growth:

- Graves Avenue / CR 4145 from Veteran's Memorial Parkway to Normandy Boulevard
- Orange Camp Road from US 17/92 to Princeton Road
- Orange Camp Road from W Volusia Beltway to I-4
- W Volusia Beltway from Harley Strickland Boulevard to Rhode Island Avenue

It is recommended that the four (4) roadway segments be widened from 2-lanes to 4-lanes, and it should also be noted that the proposed development does not cause any roadway segments to become deficient.

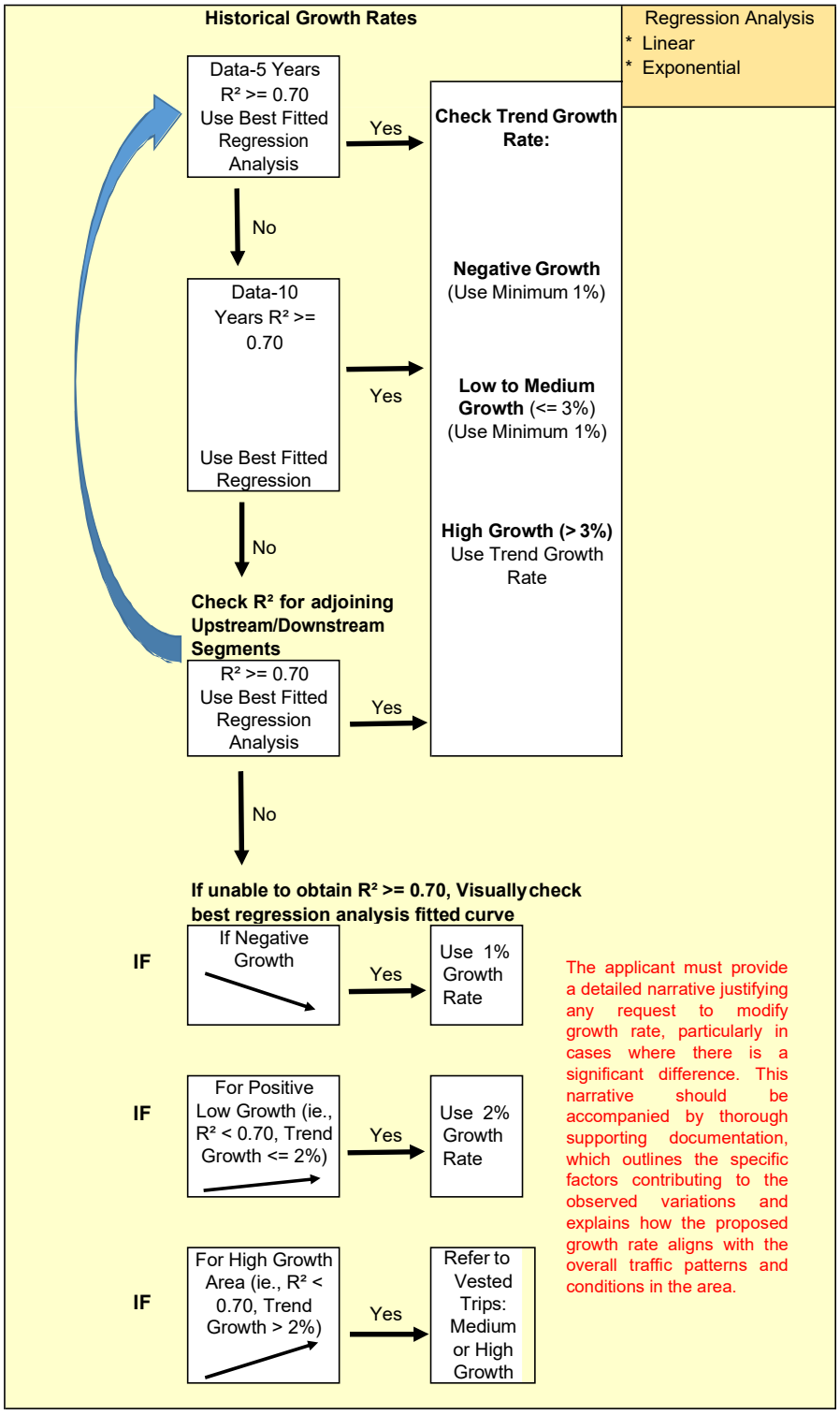
Segment Information			Deland Tech Park	TM BTR	Vested Trip Database
Roadway	From	To			
Cassadaga Rd	W. Volusia Bltwy (Dr. MLK Bltwy)	Macy Ave	120	0	0
Cassadaga Rd*	W. Volusia Bltwy (Dr. MLK Bltwy)	Blue Lake Ave (Extension)	0	0	0
Graves Ave	Veterans Memorial Pkwy	Kentucky Ave	85	18	470
Graves Ave	Kentucky Ave	Normandy Blvd	0	6	925
Graves Ave	Normandy Blvd	Howland Blvd	0	6	991
Howland Blvd	I-4/SR 472	Wolf Pack Run	186	0	868
Howland Blvd	Wolf Pack Run	Catalina Blvd	142	0	783
Howland Blvd	Providence Blvd	Elkcam Blvd	0	0	289
Orange Camp Rd	US 17/92	Princeton Rd	0	4	168
Orange Camp Rd	Blue Lake Ave	W. Volusia Bltwy (Dr. MLK Bltwy)	59	6	197
Orange Camp Rd	W. Volusia Bltwy (Dr. MLK Bltwy)	I-4	0	6	355
W. Volusia Bltwy (Veterans Memorial Pkwy)	Harley Strickland Blvd	Rhode Island Ave	0	6	397
W. Volusia Bltwy (Veterans Memorial Pkwy)	Rhode Island Ave	Graves Ave	56	12	332
W. Volusia Bltwy (Kentucky Ave)	Graves Ave	SR 472	111	0	270
W. Volusia Bltwy (Dr. MLK Bltwy)	Cassadaga Rd	Orange Camp Rd	260	0	382
W. Volusia Bltwy (Dr. MLK Bltwy)	Orange Camp Rd	Taylor Rd	92	0	345
Catalina Blvd**	Howland Blvd	Sixma Rd	0	0	126
Catalina Blvd**	Sixma Rd	Lake Helen Osteen	0	0	110

Vested trips obtained from *Volusia County Vested Trip Database* and also include trips from Deland Tech Park and TM BTR (Yardley)

*This segments is an extension and do not currently exist. The only trips that will be using this segment would be the project trips.

**No data in *Volusia County 2022 AADT* . Historical AADT obtained from *Florida Traffic Online (FTO) 2023* . Existing PM Peak Hour Volume estimated using AADT, K factor and D Factor

Volusia County's Segment Growth Rates and Vested Trips Instructions Policy



The applicant must provide a detailed narrative justifying any request to modify growth rate, particularly in cases where there is a significant difference. This narrative should be accompanied by thorough supporting documentation, which outlines the specific factors contributing to the observed variations and explains how the proposed growth rate aligns with the overall traffic patterns and conditions in the area.

AND

IF there are - Vested Trips

Negative Growth (Use Minimum 1%):

\+ Vested Trips

Low to Medium Growth (<= 3%)(Use Minimum 1%):

\+ Vested Trips

High Growth (> 3%):

Use the Highest # of the two (growth rate or vested trips). Need to submit supporting documentation & justification.

HIGH GROWTH & HIGH VESTED TRIPS

If there are Vested Trips from multiple approved projects on segment.
And, Vested Trips comprise of multiple uses that would normally have significant interaction (residential, retail, office, restaurant, etc…).

And, Vested Trips make up more than 30% of the total future background traffic.

Then, Vested Trips can be reduced by 30% upon request by the Applicant

Signed:_____ Date:_____

Jay Williams, PE, PTOE

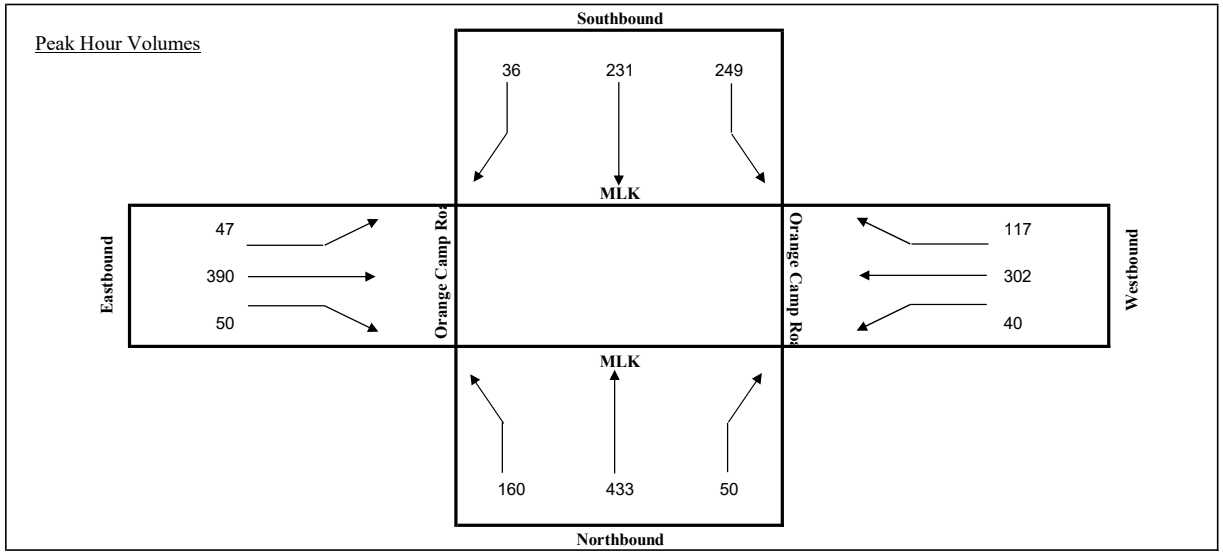
Appendix J
Turning Movement Counts, Seasonal Factor Report and Signal Timing

TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): MLK
Intersection (E/W): Orange Camp Road
Date: 6/12/2024

			MLK			MLK			Orange Camp Road			Orange Camp Road			
			NB			SB			EB			WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 AM	7:15 AM	21	56	8	44	49	6	10	90	10	5	59	14	372
7:15 AM	7:30 AM	25	64	13	62	65	7	7	110	11	6	67	17	454
7:30 AM	7:45 AM	40	88	10	74	66	10	12	116	14	6	69	28	533
7:45 AM	8:00 AM	41	127	14	69	53	12	14	103	11	11	77	31	563
8:00 AM	8:15 AM	35	111	12	56	59	5	10	92	9	10	86	30	515
8:15 AM	8:30 AM	44	107	14	50	53	9	11	79	16	13	70	28	494
8:30 AM	8:45 AM	40	85	10	66	60	4	13	89	11	9	58	30	475
8:45 AM	9:00 AM	31	77	14	58	50	7	9	75	12	8	65	22	428
Total for:	7:00 AM	8:00 AM	127	335	45	249	233	35	43	419	46	28	272	90	1922
Total for:	8:00 AM	9:00 AM	150	380	50	230	222	25	43	335	48	40	279	110	1912
Tota Peak Hour:	7:30 AM	8:30 AM	160	433	50	249	231	36	47	390	50	40	302	117	2105
Overall PHF:	0.93														

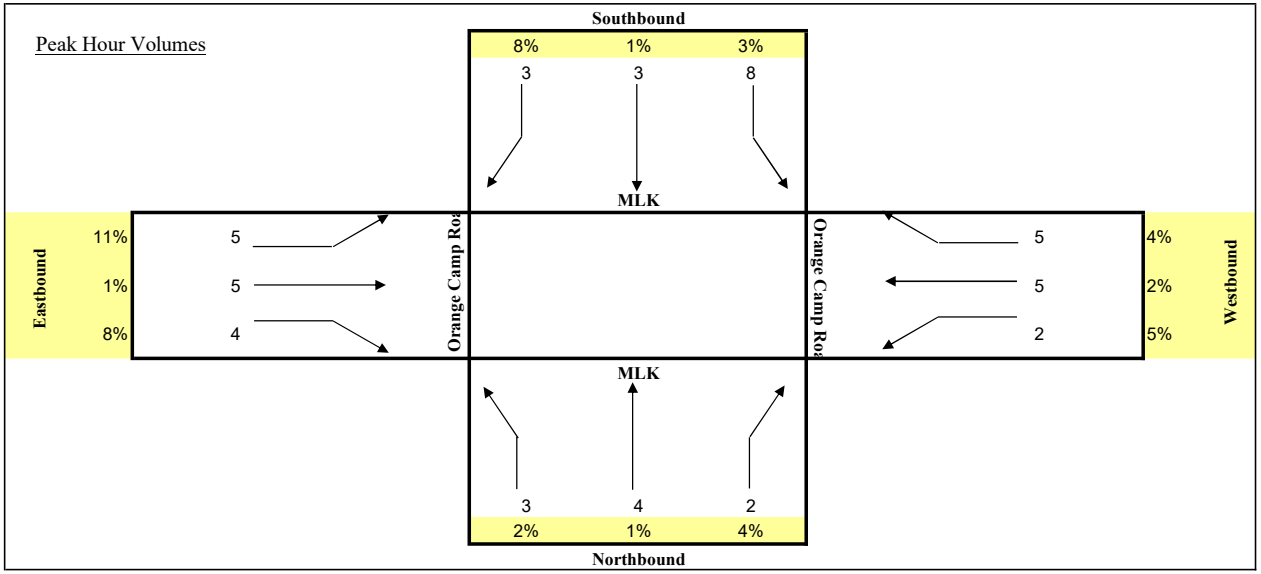


TURNING MOVEMENT COUNT ANALYSIS

TRUCKS

Intersection (N/S): MLK
Intersection (E/W): Orange Camp Road
Date: 6/12/2024

		MLK NB			MLK SB			Orange Camp Road EB			Orange Camp Road WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 AM	7:15 AM	2	2	1	0	1	1	3	1	1	0	2	2	16
7:15 AM	7:30 AM	0	1	1	2	1	0	0	2	0	0	1	1	9
7:30 AM	7:45 AM	1	0	0	1	0	1	1	0	0	2	0	0	6
7:45 AM	8:00 AM	1	1	0	4	0	1	2	1	1	1	3	1	16
8:00 AM	8:15 AM	1	0	1	1	2	0	0	1	0	0	1	1	8
8:15 AM	8:30 AM	0	0	1	0	1	1	2	0	2	0	1	3	11
8:30 AM	8:45 AM	1	3	0	3	0	1	1	3	1	1	0	0	14
8:45 AM	9:00 AM	0	0	0	1	1	0	1	0	0	0	2	1	6
Total for:	7:00 AM	8:00 AM	4	4	2	7	2	3	6	4	2	3	6	4	47
Total for:	8:00 AM	9:00 AM	2	3	2	5	4	2	4	4	3	1	4	5	39
Tota Peak Hour:	7:45 AM	8:45 AM	3	4	2	8	3	3	5	5	4	2	5	5	49
Overall PHF:	0.77														

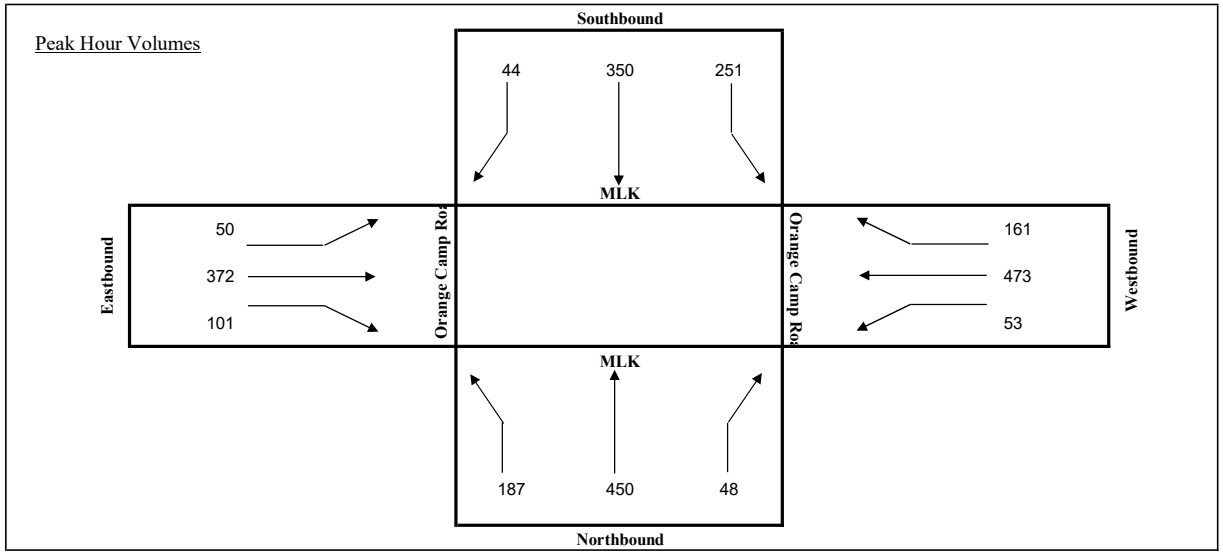


TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): MLK
Intersection (E/W): Orange Camp Road
Date: 6/12/2024

		MLK			MLK			Orange Camp Road			Orange Camp Road			
		NB			SB			EB			WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 PM	4:15 PM	31	131	6	49	67	8	12	86	22	7	110	36	565
4:15 PM	4:30 PM	35	132	11	61	70	11	16	96	20	12	125	42	631
4:30 PM	4:45 PM	49	115	11	66	88	9	11	89	28	15	111	41	633
4:45 PM	5:00 PM	53	98	15	59	92	14	9	102	24	16	117	37	636
5:00 PM	5:15 PM	50	105	11	65	100	10	14	85	29	10	120	41	640
5:15 PM	5:30 PM	62	113	14	62	84	10	10	79	24	17	111	40	626
5:30 PM	5:45 PM	52	94	8	55	74	14	15	91	30	21	99	35	588
5:45 PM	6:00 PM	49	102	11	60	80	10	13	82	26	16	102	34	585
Total for:	4:00 PM	5:00 PM	168	476	43	235	317	42	48	373	94	50	463	156	2465
Total for:	5:00 PM	6:00 PM	213	414	44	242	338	44	52	337	109	64	432	150	2439
Tota Peak Hour:	4:15 PM	5:15 PM	187	450	48	251	350	44	50	372	101	53	473	161	2540
Overall PHF:	0.99														

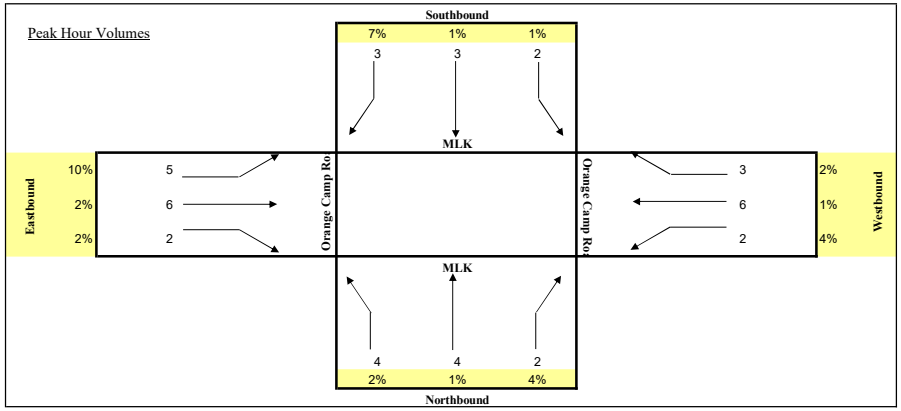


TURNING MOVEMENT COUNT ANALYSIS

TRUCKS

Intersection (N/S): MLK
Intersection (E/W): Orange Camp Road
Date: 6/12/2024

		MLK NB			MLK SB			Orange Camp Road EB			Orange Camp Road WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 PM	4:15 PM	1	2	0	0	2	1	3	2	0	0	1	1	13
4:15 PM	4:30 PM	0	2	1	1	0	0	1	3	0	1	2	0	11
4:30 PM	4:45 PM	2	0	1	1	0	0	0	1	1	1	3	1	11
4:45 PM	5:00 PM	1	0	0	0	1	2	1	0	1	0	0	1	7
5:00 PM	5:15 PM	0	1	0	1	1	0	1	1	0	0	0	0	5
5:15 PM	5:30 PM	1	0	1	2	0	1	0	0	0	0	2	0	7
5:30 PM	5:45 PM	0	0	0	0	1	0	0	1	0	1	2	0	5
5:45 PM	6:00 PM	1	1	0	1	0	0	1	1	1	0	1	1	8
Total for:	4:00 PM	5:00 PM	4	4	2	2	3	3	5	6	2	2	6	3	42
Total for:	5:00 PM	6:00 PM	2	2	1	4	2	1	2	3	1	1	5	1	25
Tota Peak Hour:	4:00 PM	5:00 PM	4	4	2	2	3	3	5	6	2	2	6	3	42
Overall PHF:	0.81														

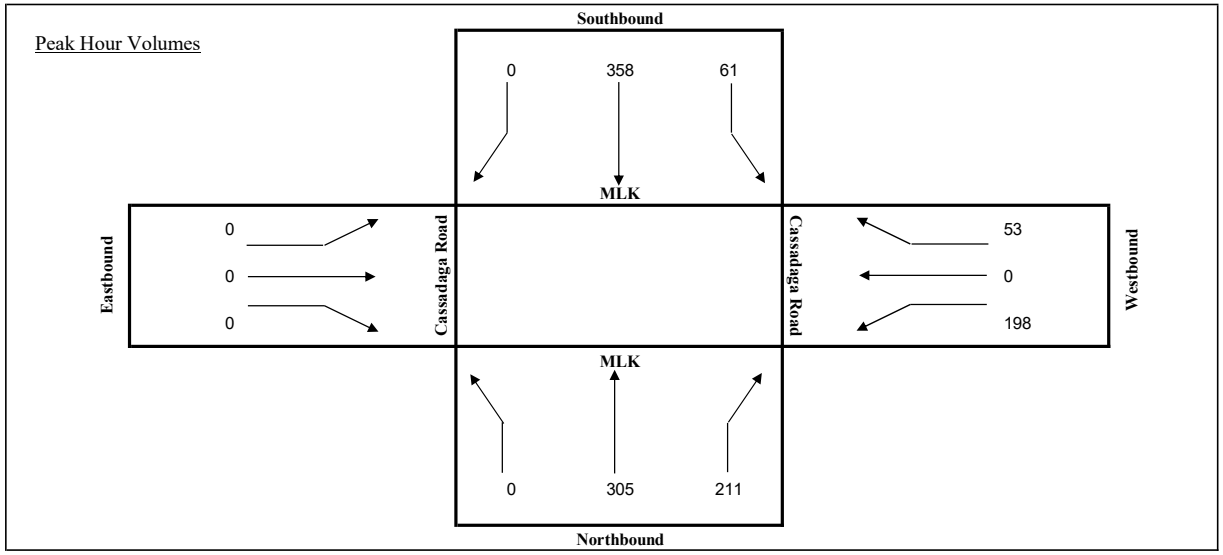


TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): MLK
Intersection (E/W): Cassadaga Road
Date: 6/12/2024

		MLK			MLK			Cassadaga Road			Cassadaga Road			
		NB			SB			EB			WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 AM	7:15 AM	0	59	44	10	69	0	0	0	0	27	0	7	216
7:15 AM	7:30 AM	0	82	53	12	71	0	0	0	0	35	0	8	261
7:30 AM	7:45 AM	0	79	50	13	73	0	0	0	0	47	0	12	274
7:45 AM	8:00 AM	0	83	54	18	96	0	0	0	0	58	0	16	325
8:00 AM	8:15 AM	0	69	51	17	102	0	0	0	0	51	0	11	301
8:15 AM	8:30 AM	0	74	56	13	87	0	0	0	0	42	0	14	286
8:30 AM	8:45 AM	0	62	50	16	63	0	0	0	0	37	0	10	238
8:45 AM	9:00 AM	0	56	41	11	68	0	0	0	0	34	0	12	222
Total for:	7:00 AM	8:00 AM	0	303	201	53	309	0	0	0	0	167	0	43	1076
Total for:	8:00 AM	9:00 AM	0	261	198	57	320	0	0	0	0	164	0	47	1047
Tota Peak Hour:	7:30 AM	8:30 AM	0	305	211	61	358	0	0	0	0	198	0	53	1186
Overall PHF:	0.91														

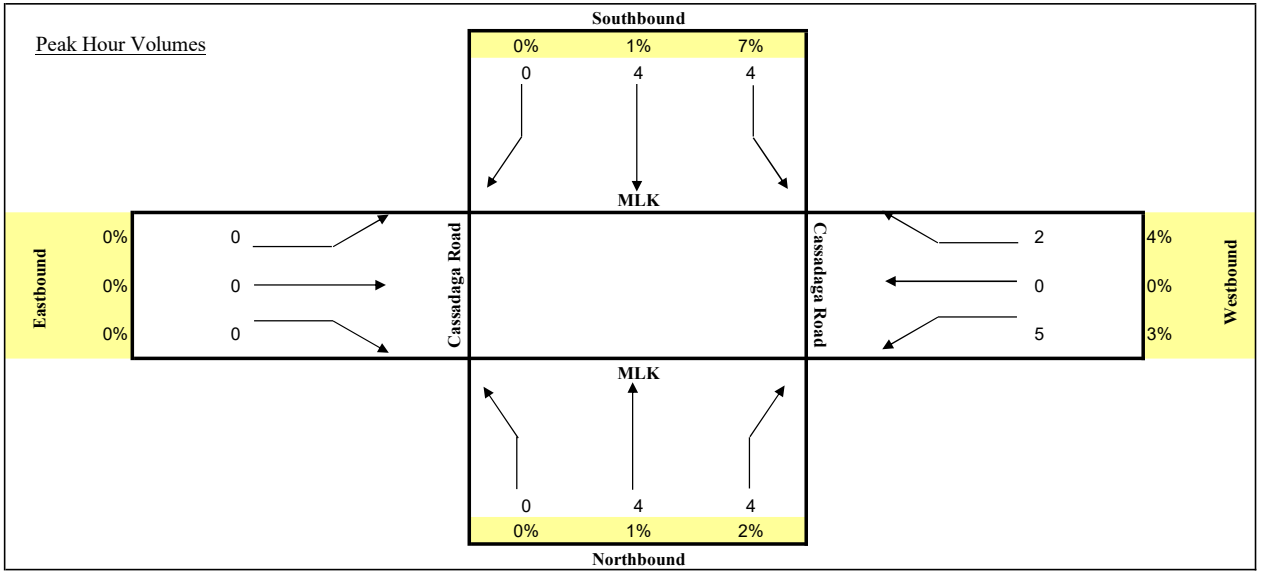


TURNING MOVEMENT COUNT ANALYSIS

TRUCKS

Intersection (N/S): MLK
Intersection (E/W): Cassadaga Road
Date: 6/12/2024

		MLK NB			MLK SB			Cassadaga Road EB			Cassadaga Road WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 AM	7:15 AM	0	2	0	1	2	0	0	0	0	2	0	1	8
7:15 AM	7:30 AM	0	1	2	1	1	0	0	0	0	1	0	0	6
7:30 AM	7:45 AM	0	0	1	0	0	0	0	0	0	0	0	1	2
7:45 AM	8:00 AM	0	1	0	1	1	0	0	0	0	3	0	0	6
8:00 AM	8:15 AM	0	2	1	2	2	0	0	0	0	1	0	1	9
8:15 AM	8:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	8:45 AM	0	0	2	2	0	0	0	0	0	1	0	1	6
8:45 AM	9:00 AM	0	2	0	1	1	0	0	0	0	2	0	1	7
Total for:	7:00 AM	8:00 AM	0	4	3	3	4	0	0	0	0	6	0	2	22
Total for:	8:00 AM	9:00 AM	0	5	3	5	3	0	0	0	0	4	0	3	23
Tota Peak Hour:	7:15 AM	8:15 AM	0	4	4	4	4	0	0	0	0	5	0	2	23
Overall PHF:	0.64														

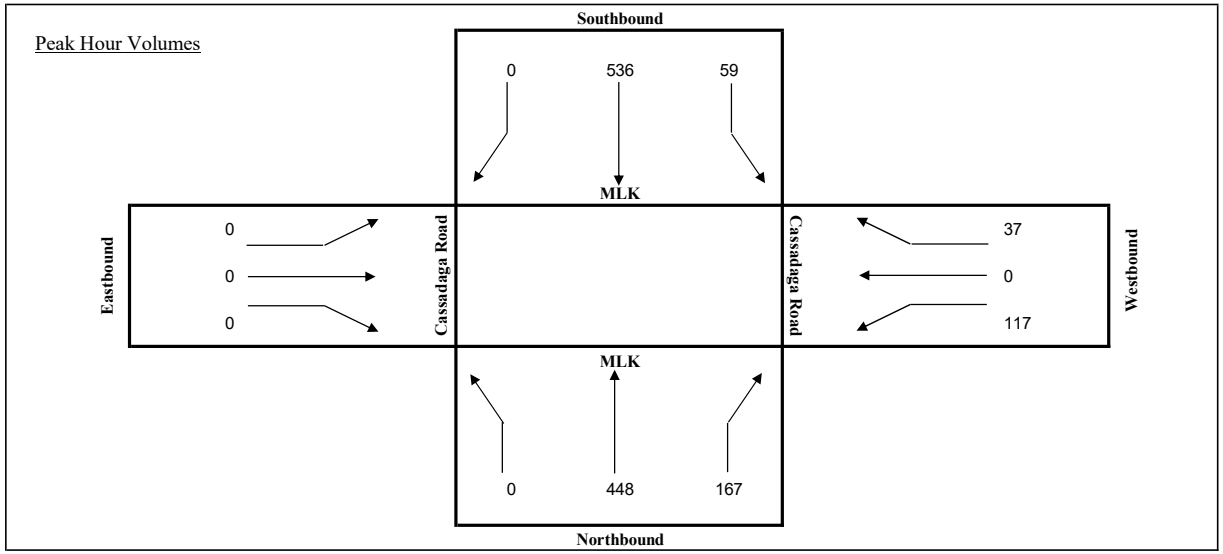


TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): MLK
Intersection (E/W): Cassadaga Road
Date: 6/12/2024

			MLK NB			MLK SB			Cassadaga Road EB			Cassadaga Road WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 PM	4:15 PM	0	101	24	11	111	0	0	0	0	17	0	11	275
4:15 PM	4:30 PM	0	101	33	13	112	0	0	0	0	26	0	7	292
4:30 PM	4:45 PM	0	100	39	22	136	0	0	0	0	36	0	13	346
4:45 PM	5:00 PM	0	116	45	16	131	0	0	0	0	32	0	9	349
5:00 PM	5:15 PM	0	107	41	12	115	0	0	0	0	21	0	7	303
5:15 PM	5:30 PM	0	125	42	9	154	0	0	0	0	28	0	8	366
5:30 PM	5:45 PM	0	116	37	17	128	0	0	0	0	35	0	3	336
5:45 PM	6:00 PM	0	96	30	13	118	0	0	0	0	30	0	7	294
Total for:	4:00 PM	5:00 PM	0	418	141	62	490	0	0	0	0	111	0	40	1262
Total for:	5:00 PM	6:00 PM	0	444	150	51	515	0	0	0	0	114	0	25	1299
Tota Peak Hour:	4:30 PM	5:30 PM	0	448	167	59	536	0	0	0	0	117	0	37	1364
Overall PHF:	0.93														

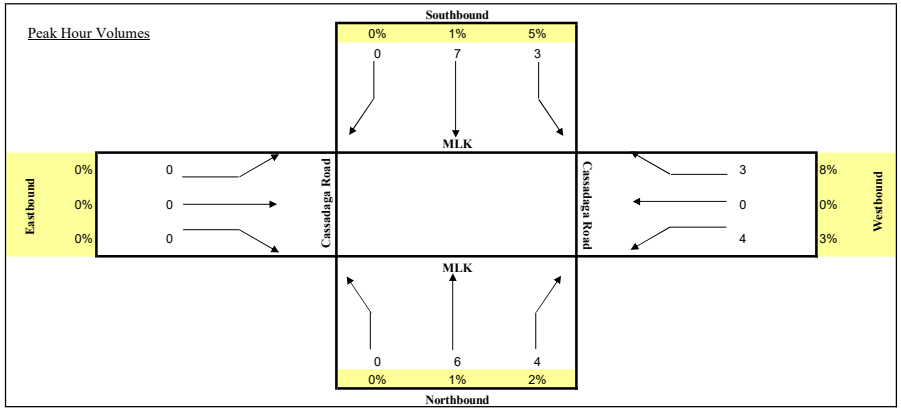


TURNING MOVEMENT COUNT ANALYSIS

TRUCKS

Intersection (N/S): MLK
Intersection (E/W): Cassadaga Road
Date: 6/12/2024

		MLK NB			MLK SB			Cassadaga Road EB			Cassadaga Road WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 PM	4:15 PM	0	3	0	1	2	0	0	0	0	0	0	1	7
4:15 PM	4:30 PM	0	0	0	0	1	0	0	0	0	1	0	1	3
4:30 PM	4:45 PM	0	3	3	2	0	0	0	0	0	0	0	0	8
4:45 PM	5:00 PM	0	1	0	0	2	0	0	0	0	2	0	0	5
5:00 PM	5:15 PM	0	0	1	1	1	0	0	0	0	0	0	2	5
5:15 PM	5:30 PM	0	2	0	0	4	0	0	0	0	2	0	1	9
5:30 PM	5:45 PM	0	0	1	0	0	0	0	0	0	2	0	0	3
5:45 PM	6:00 PM	0	1	0	1	1	0	0	0	0	0	0	1	4
Total for:	4:00 PM	5:00 PM	0	7	3	3	5	0	0	0	0	3	0	2	23
Total for:	5:00 PM	6:00 PM	0	3	2	2	6	0	0	0	0	4	0	4	21
Tota Peak Hour:	4:30 PM	5:30 PM	0	6	4	3	7	0	0	0	0	4	0	3	27
Overall PHF:	0.75														

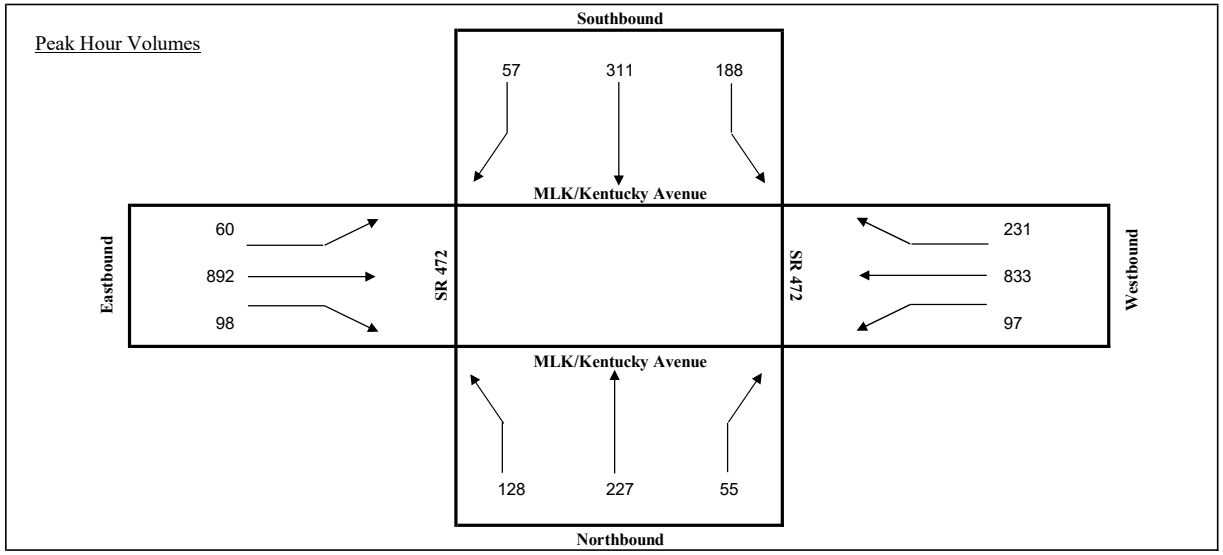


TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): MLK/Kentucky Avenue
Intersection (E/W): SR 472
Date: 6/12/2024

			MLK/Kentucky Avenue			MLK/Kentucky Avenue			SR 472			SR 472			
			NB			SB			EB			WB			
Start	End		L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 AM	7:15 AM		27	51	6	29	53	13	10	209	11	17	187	43	656
7:15 AM	7:30 AM		30	62	11	36	60	10	16	209	11	11	199	57	712
7:30 AM	7:45 AM		25	67	12	44	67	9	12	210	19	20	212	50	747
7:45 AM	8:00 AM		35	59	17	52	86	16	11	237	21	22	214	67	837
8:00 AM	8:15 AM		37	50	12	51	81	21	17	240	33	30	210	54	836
8:15 AM	8:30 AM		31	51	14	41	77	11	20	205	25	25	197	60	757
8:30 AM	8:45 AM		23	42	11	37	57	6	15	217	31	19	191	55	704
8:45 AM	9:00 AM		21	52	12	29	62	10	12	180	24	17	169	33	621
Total for:	7:00 AM	8:00 AM	117	239	46	161	266	48	49	865	62	70	812	217	2952
Total for:	8:00 AM	9:00 AM	112	195	49	158	277	48	64	842	113	91	767	202	2918
Tota Peak Hour:	7:30 AM	8:30 AM	128	227	55	188	311	57	60	892	98	97	833	231	3177
Overall PHF:	0.95														

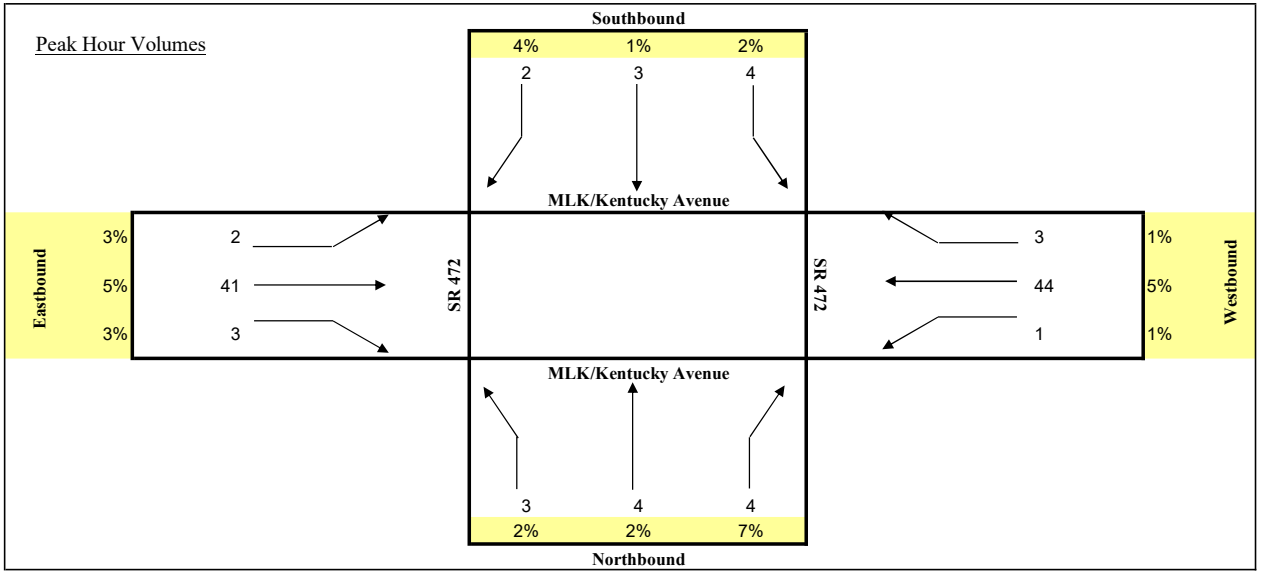


TURNING MOVEMENT COUNT ANALYSIS

TRUCKS

Intersection (N/S): MLK/Kentucky Avenue
Intersection (E/W): SR 472
Date: 6/12/2024

		MLK/Kentucky Avenue			MLK/Kentucky Avenue			SR 472			SR 472			
		NB			SB			EB			WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 AM	7:15 AM	1	2	1	1	2	1	0	8	2	2	10	1	31
7:15 AM	7:30 AM	0	1	2	0	2	0	1	11	0	0	9	1	27
7:30 AM	7:45 AM	0	1	1	0	0	0	0	7	0	1	13	0	23
7:45 AM	8:00 AM	2	1	1	3	0	1	0	13	1	0	10	0	32
8:00 AM	8:15 AM	1	1	0	1	1	1	1	10	2	0	12	2	32
8:15 AM	8:30 AM	0	1	0	0	0	0	0	9	0	1	8	1	20
8:30 AM	8:45 AM	0	0	1	1	0	0	1	9	1	1	11	1	26
8:45 AM	9:00 AM	1	2	0	0	1	1	0	5	0	0	6	0	16
Total for:	7:00 AM	8:00 AM	3	5	5	4	4	2	1	39	3	3	42	2	113
Total for:	8:00 AM	9:00 AM	2	4	1	2	2	2	2	33	3	2	37	4	94
Tota Peak Hour:	7:15 AM	8:15 AM	3	4	4	4	3	2	2	41	3	1	44	3	114
Overall PHF:	0.89														

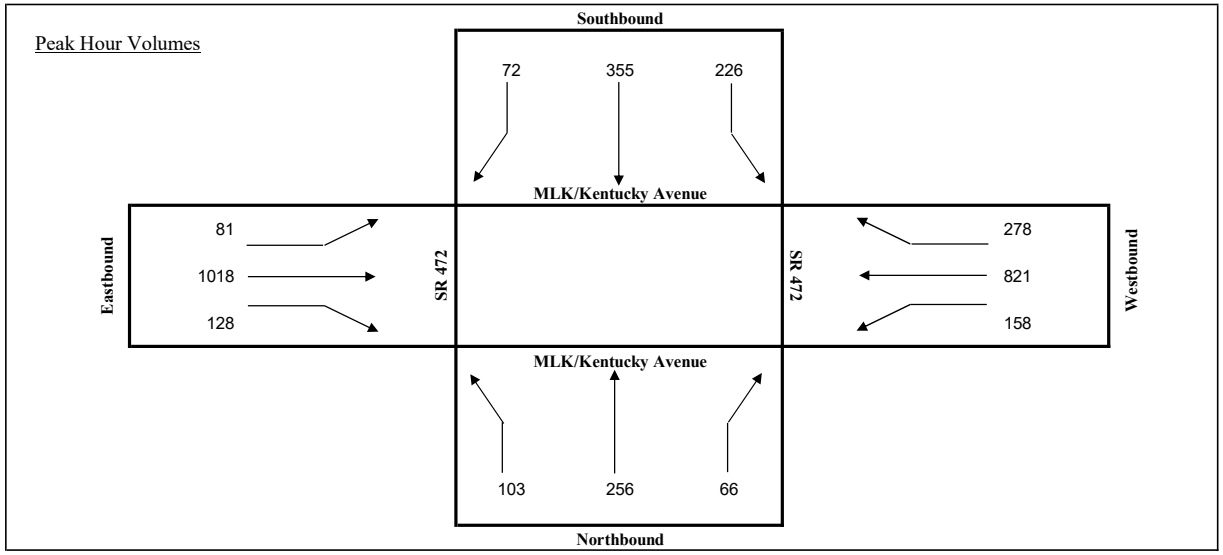


TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): MLK/Kentucky Avenue
Intersection (E/W): SR 472
Date: 6/12/2024

			MLK/Kentucky Avenue			MLK/Kentucky Avenue			SR 472			SR 472			
			NB			SB			EB			WB			
Start	End		L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 PM	4:15 PM		25	53	22	51	63	14	21	205	30	34	193	50	761
4:15 PM	4:30 PM		30	59	19	48	71	19	21	247	36	31	202	54	837
4:30 PM	4:45 PM		28	64	21	58	95	19	20	296	42	37	212	55	947
4:45 PM	5:00 PM		25	65	13	56	92	15	22	257	28	41	224	74	912
5:00 PM	5:15 PM		25	60	16	49	70	17	21	242	26	43	181	67	817
5:15 PM	5:30 PM		25	67	16	63	98	21	18	223	32	37	204	82	886
5:30 PM	5:45 PM		18	58	16	52	99	19	16	242	26	35	193	79	853
5:45 PM	6:00 PM		20	44	11	53	86	15	14	212	22	37	185	68	767
Total for:	4:00 PM	5:00 PM	108	241	75	213	321	67	84	1005	136	143	831	233	3457
Total for:	5:00 PM	6:00 PM	88	229	59	217	353	72	69	919	106	152	763	296	3323
Tota Peak Hour:	4:30 PM	5:30 PM	103	256	66	226	355	72	81	1018	128	158	821	278	3562
Overall PHF:	0.94														

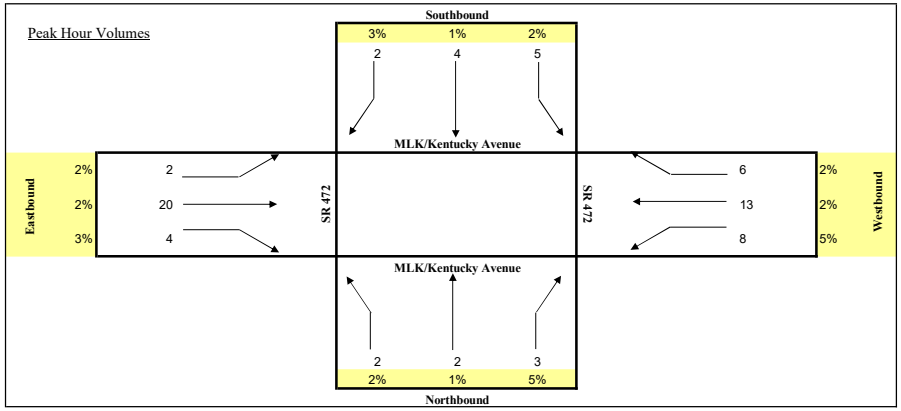


TURNING MOVEMENT COUNT ANALYSIS

TRUCKS

Intersection (N/S): MLK/Kentucky Avenue
Intersection (E/W): SR 472
Date: 6/12/2024

		MLK/Kentucky Avenue			MLK/Kentucky Avenue			SR 472			SR 472			
		NB			SB			EB			WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 PM	4:15 PM	1	0	2	1	1	0	1	2	0	1	5	2	16
4:15 PM	4:30 PM	0	0	0	1	0	1	0	1	1	1	6	0	11
4:30 PM	4:45 PM	0	1	0	0	0	0	2	5	2	3	5	3	21
4:45 PM	5:00 PM	1	0	0	2	1	1	0	3	2	2	4	1	17
5:00 PM	5:15 PM	1	0	1	0	1	0	0	6	0	1	2	1	13
5:15 PM	5:30 PM	0	1	2	3	2	1	0	6	0	2	2	1	20
5:30 PM	5:45 PM	0	0	0	0	2	0	0	2	1	2	4	1	12
5:45 PM	6:00 PM	0	0	1	1	0	0	1	4	0	1	3	0	11
Total for:	4:00 PM	5:00 PM	2	1	2	4	2	2	3	11	5	7	20	6	65
Total for:	5:00 PM	6:00 PM	1	1	4	4	5	1	1	18	1	6	11	3	56
Tota Peak Hour:	4:30 PM	5:30 PM	2	2	3	5	4	2	2	20	4	8	13	6	71
Overall PHF:	0.85														

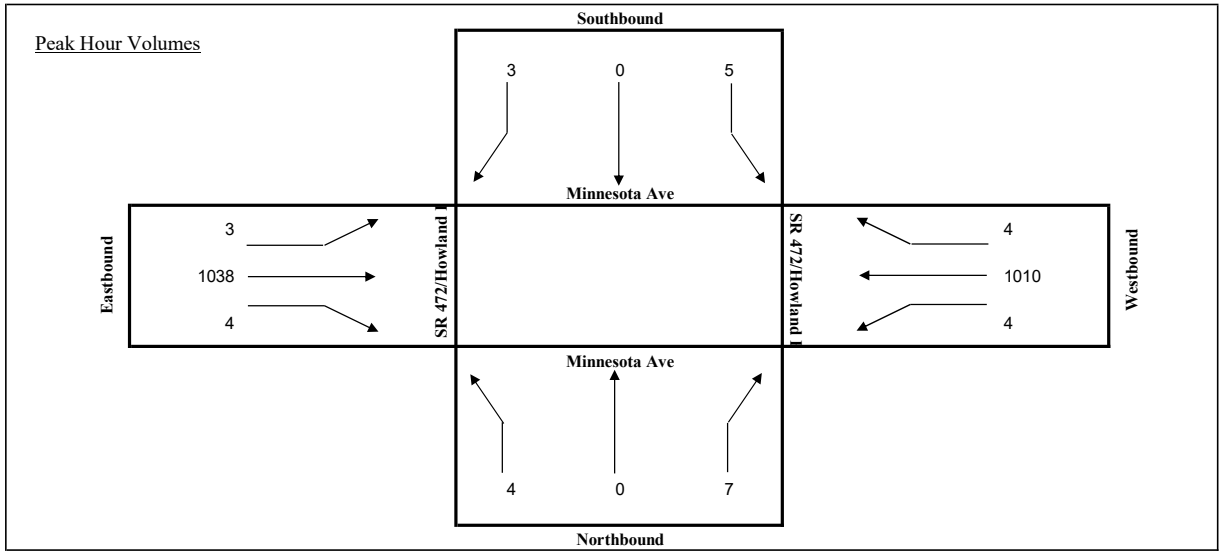


TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): Minnesota Ave
Intersection (E/W): SR 472/Howland Blvd
Date: 6/12/2024

		Minnesota Ave			Minnesota Ave			SR 472/Howland Blvd			SR 472/Howland Blvd			
		NB			SB			EB			WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 AM	7:15 AM	1	0	3	1	0	0	2	226	0	0	223	4	460
7:15 AM	7:30 AM	1	0	2	1	0	0	2	232	0	2	234	2	476
7:30 AM	7:45 AM	1	0	0	0	0	1	2	240	1	1	243	1	490
7:45 AM	8:00 AM	0	0	1	1	0	0	1	269	0	1	263	1	537
8:00 AM	8:15 AM	3	0	5	1	0	1	0	281	2	1	266	2	562
8:15 AM	8:30 AM	0	0	1	3	0	1	0	248	1	1	238	0	493
8:30 AM	8:45 AM	1	0	1	0	0	0	2	261	1	0	219	2	487
8:45 AM	9:00 AM	1	0	1	2	0	0	0	217	3	2	197	0	423
Total for:	7:00 AM	8:00 AM	3	0	6	3	0	1	7	967	1	4	963	8	1963
Total for:	8:00 AM	9:00 AM	5	0	8	6	0	2	2	1007	7	4	920	4	1965
Tota Peak Hour:	7:30 AM	8:30 AM	4	0	7	5	0	3	3	1038	4	4	1010	4	2082
Overall PHF:	0.93														

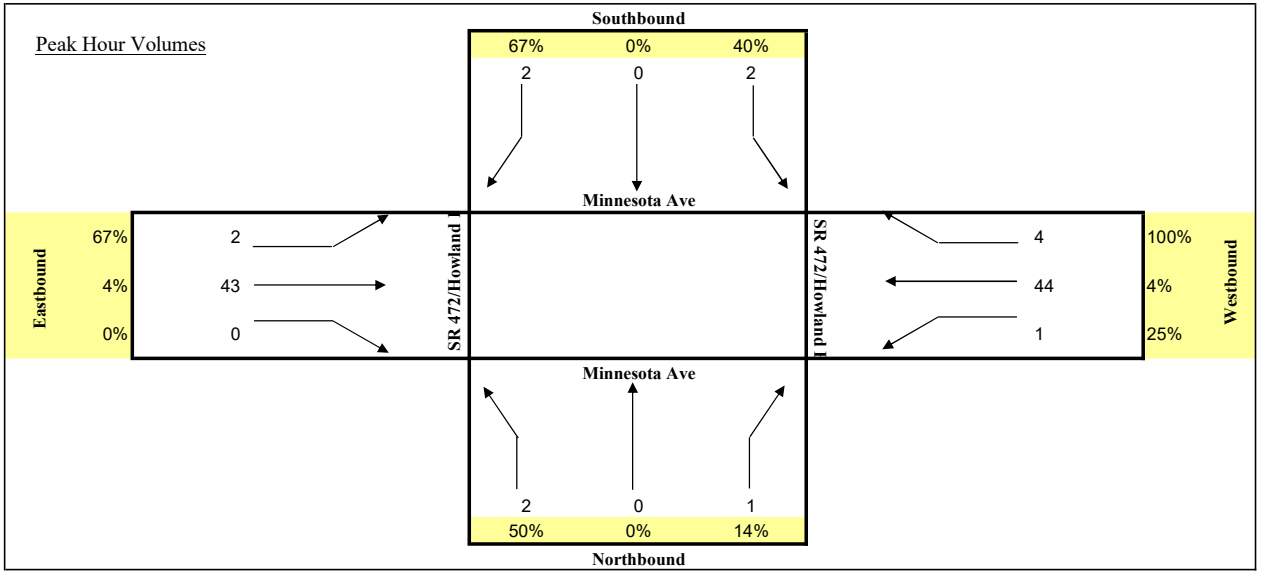


TURNING MOVEMENT COUNT ANALYSIS

TRUCKS

Intersection (N/S): Minnesota Ave
Intersection (E/W): SR 472/Howland Blvd
Date: 6/12/2024

		Minnesota Ave			Minnesota Ave			SR 472/Howland Blvd			SR 472/Howland Blvd			
		NB			SB			EB			WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
7:00 AM	7:15 AM	0	0	0	1	0	0	2	9	0	0	10	2	24
7:15 AM	7:30 AM	1	0	0	1	0	0	1	11	0	0	8	1	23
7:30 AM	7:45 AM	0	0	0	0	0	1	0	7	0	0	13	0	21
7:45 AM	8:00 AM	0	0	0	0	0	0	1	14	0	1	11	1	28
8:00 AM	8:15 AM	1	0	1	1	0	1	0	11	0	0	12	2	29
8:15 AM	8:30 AM	0	0	0	2	0	0	0	7	0	0	8	0	17
8:30 AM	8:45 AM	1	0	0	0	0	0	1	11	1	0	10	1	25
8:45 AM	9:00 AM	0	0	1	1	0	0	0	6	1	1	7	0	17
Total for:	7:00 AM	8:00 AM	1	0	0	2	0	1	4	41	0	1	42	4	96
Total for:	8:00 AM	9:00 AM	2	0	2	4	0	1	1	35	2	1	37	3	88
Tota Peak Hour:	7:15 AM	8:15 AM	2	0	1	2	0	2	2	43	0	1	44	4	101
Overall PHF:	0.87														

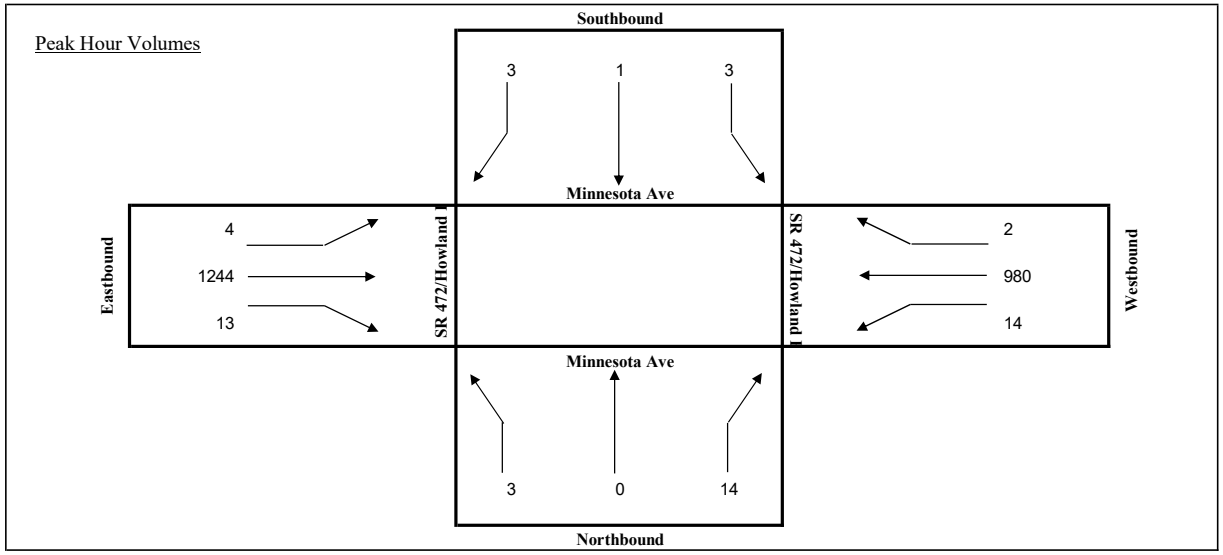


TURNING MOVEMENT COUNT ANALYSIS

AUTOS & TRUCKS

Intersection (N/S): Minnesota Ave
Intersection (E/W): SR 472/Howland Blvd
Date: 6/12/2024

		Minnesota Ave			Minnesota Ave			SR 472/Howland Blvd			SR 472/Howland Blvd			
		NB			SB			EB			WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 PM	4:15 PM	2	0	6	0	0	3	1	250	7	3	227	2	501
4:15 PM	4:30 PM	0	0	4	2	0	1	0	300	3	6	244	1	561
4:30 PM	4:45 PM	1	0	5	0	0	0	0	354	5	2	256	0	623
4:45 PM	5:00 PM	2	0	2	1	0	1	1	305	3	5	258	0	578
5:00 PM	5:15 PM	0	0	3	0	1	1	3	285	2	1	222	1	519
5:15 PM	5:30 PM	0	1	2	1	0	0	3	271	7	4	253	2	544
5:30 PM	5:45 PM	1	0	2	2	0	1	0	279	5	4	225	0	519
5:45 PM	6:00 PM	0	0	4	1	0	0	1	245	7	5	213	1	477
Total for:	4:00 PM	5:00 PM	5	0	17	3	0	5	2	1209	18	16	985	3	2263
Total for:	5:00 PM	6:00 PM	1	1	11	4	1	2	7	1080	21	14	913	4	2059
Tota Peak Hour:	4:15 PM	5:15 PM	3	0	14	3	1	3	4	1244	13	14	980	2	2281
Overall PHF:	0.92														

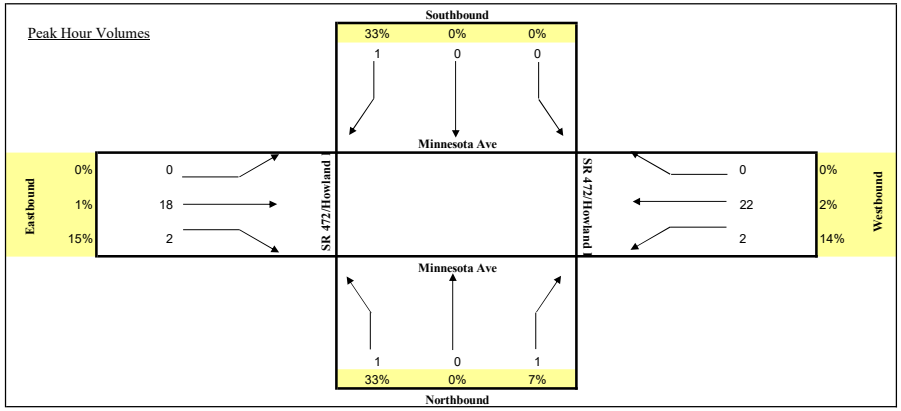


TURNING MOVEMENT COUNT ANALYSIS

TRUCKS

Intersection (N/S): Minnesota Ave
Intersection (E/W): SR 472/Howland Blvd
Date: 6/12/2024

		Minnesota Ave			Minnesota Ave			SR 472/Howland Blvd			SR 472/Howland Blvd			
		NB			SB			EB			WB			
Start	End	L	T	R	L	T	R	L	T	R	L	T	R	TOTAL
4:00 PM	4:15 PM	1	0	0	0	0	1	0	3	1	0	6	0	12
4:15 PM	4:30 PM	0	0	1	0	0	0	0	1	0	1	6	0	9
4:30 PM	4:45 PM	0	0	0	0	0	0	0	9	0	0	5	0	14
4:45 PM	5:00 PM	0	0	0	0	0	0	0	5	1	1	5	0	12
5:00 PM	5:15 PM	0	0	1	0	0	1	0	5	0	0	3	0	10
5:15 PM	5:30 PM	0	0	0	0	0	0	0	6	0	0	3	0	9
5:30 PM	5:45 PM	0	0	0	0	0	0	0	3	0	0	4	0	7
5:45 PM	6:00 PM	0	0	0	0	0	0	0	5	0	0	3	0	8
Total for:	4:00 PM	5:00 PM	1	0	1	0	0	1	0	18	2	2	22	0	47
Total for:	5:00 PM	6:00 PM	0	0	1	0	0	1	0	19	0	0	13	0	34
Tota Peak Hour:	4:00 PM	5:00 PM	1	0	1	0	0	1	0	18	2	2	22	0	47
Overall PHF:	0.84														



2023 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 7900 VOLUSIA COUNTYWIDE

MOCF: 0.95

WEEK	DATES	SF	PSCF
1	01/01/2023 - 01/07/2023	1.01	1.06
2	01/08/2023 - 01/14/2023	1.01	1.06
3	01/15/2023 - 01/21/2023	1.01	1.06
4	01/22/2023 - 01/28/2023	0.99	1.04
5	01/29/2023 - 02/04/2023	0.98	1.03
* 6	02/05/2023 - 02/11/2023	0.96	1.01
* 7	02/12/2023 - 02/18/2023	0.95	1.00
* 8	02/19/2023 - 02/25/2023	0.94	0.99
* 9	02/26/2023 - 03/04/2023	0.93	0.98
*10	03/05/2023 - 03/11/2023	0.92	0.97
*11	03/12/2023 - 03/18/2023	0.92	0.97
*12	03/19/2023 - 03/25/2023	0.93	0.98
*13	03/26/2023 - 04/01/2023	0.94	0.99
*14	04/02/2023 - 04/08/2023	0.95	1.00
*15	04/09/2023 - 04/15/2023	0.97	1.02
*16	04/16/2023 - 04/22/2023	0.97	1.02
*17	04/23/2023 - 04/29/2023	0.98	1.03
*18	04/30/2023 - 05/06/2023	0.98	1.03
19	05/07/2023 - 05/13/2023	0.99	1.04
20	05/14/2023 - 05/20/2023	1.00	1.05
21	05/21/2023 - 05/27/2023	1.01	1.06
22	05/28/2023 - 06/03/2023	1.02	1.07
23	06/04/2023 - 06/10/2023	1.03	1.08
24	06/11/2023 - 06/17/2023	1.04	1.09
25	06/18/2023 - 06/24/2023	1.04	1.09
26	06/25/2023 - 07/01/2023	1.05	1.11
27	07/02/2023 - 07/08/2023	1.06	1.12
28	07/09/2023 - 07/15/2023	1.06	1.12
29	07/16/2023 - 07/22/2023	1.06	1.12
30	07/23/2023 - 07/29/2023	1.06	1.12
31	07/30/2023 - 08/05/2023	1.06	1.12
32	08/06/2023 - 08/12/2023	1.06	1.12
33	08/13/2023 - 08/19/2023	1.06	1.12
34	08/20/2023 - 08/26/2023	1.05	1.11
35	08/27/2023 - 09/02/2023	1.05	1.11
36	09/03/2023 - 09/09/2023	1.04	1.09
37	09/10/2023 - 09/16/2023	1.04	1.09
38	09/17/2023 - 09/23/2023	1.03	1.08
39	09/24/2023 - 09/30/2023	1.02	1.07
40	10/01/2023 - 10/07/2023	1.01	1.06
41	10/08/2023 - 10/14/2023	1.00	1.05
42	10/15/2023 - 10/21/2023	0.99	1.04
43	10/22/2023 - 10/28/2023	0.99	1.04
44	10/29/2023 - 11/04/2023	0.99	1.04
45	11/05/2023 - 11/11/2023	0.99	1.04
46	11/12/2023 - 11/18/2023	1.00	1.05
47	11/19/2023 - 11/25/2023	1.00	1.05
48	11/26/2023 - 12/02/2023	1.00	1.05
49	12/03/2023 - 12/09/2023	1.00	1.05
50	12/10/2023 - 12/16/2023	1.01	1.06
51	12/17/2023 - 12/23/2023	1.01	1.06
52	12/24/2023 - 12/30/2023	1.01	1.06
53	12/31/2023 - 12/31/2023	1.01	1.06

* PEAK SEASON

09-MAR-2024 18:41:41 830UPD 5_7900_PKSEASON.TXT

COUNTY OF VOLUSIA TRAFFIC SIGNAL TIMING SHEET

LOCATION: Sig #471, CR 4101 (MLK Beltway) @ Cassadaga Rd.
Orange City

FREE: X

DATE: 10/24/2022

SIGNAL #: 471

CO-ORD:

Design By: Sean Castello

NETWORK #:

Volusia County
FLORIDA

Controller Timing Chart

PHASE	1	2	3	4	5	6	7	8	
DIRECTION		SB		WB	SBL	NB			
TURN TYPE		-		SPLIT LAG	PROT	-			
MIN GREEN		17		7	5	17			
EXTENSION		3		3	3	3			
YELLOW		5.5		4.0	5.5	5.5			
RED CLR		2.0		2.8	2.0	2.0			
WALK									
PED CLR									
MAX 1		70		50	30	70			
MAX 2									
MAX 3		-		-		-			
DYM MAX									
DYM STP									
RECALL		MIN		-		MIN			
DETECTOR		LOCK		NON-LOCK	NON-LOCK	LOCK			
FLASH		YELLOW		RED	RED	YELLOW			

COORDINATION TIMINGS

PATTERN	1	2	3	4	5	6	7	8	
CYCLE				-	-	-	-	-	
OFFSET				-	-	-	-	-	

PHASE	1	2	3	4	5	6	7	8	
PATTERN 1									
PATTERN 2									
PATTERN 3									
PATTERN 4	-	-	-	-	-	-	-	-	
PATTERN 5	-	-	-	-	-	-	-	-	
PATTERN 6	-	-	-	-	-	-	-	-	
PATTERN 7	-	-	-	-	-	-	-	-	

Controller IP		Switch IP		Camera IP	
Controller Gateway		Switch Gateway		Camera Gateway	

REMARKS:

COUNTY OF VOLUSIA TRAFFIC SIGNAL TIMING SHEET

LOCATION: I71, CR 4101 (MLK Beltway) @ Cassada
Orange City

FREE: X

DATE: 10/24/2022

SIGNAL #: 471

CO-ORD:

Design By: Sean Castello

NETWORK #:

Volusia County
FLORIDA

TIME OF DAY SCHEDULE

BASE DAY		1	2	3	4	5	6	7	Crosswalk Length
	TIME	00:00-00:00							
MON #1	PATTERN	FREE							P2
	TIME	00:00-00:00							
TUES #1	PATTERN	FREE							
	TIME	00:00-00:00							
WED #1	PATTERN	FREE							P4
	TIME	00:00-00:00							
THU #1	PATTERN	FREE							
	TIME	00:00-00:00							
FRI #1	PATTERN	FREE							P6
	TIME	00:00-00:00							
SAT #1	PATTERN	FREE							
	TIME	00:00-00:00							
SUN #1	PATTERN	FREE							P8

CONTROLLER TYPE		CONDITION OF OVERHEAD	GOOD	PROGRAM NUMBER	
Econolite ASC/3		OVERHEAD STREET NAMES	NO		
PHASES:	8Φ	ILLUMINATED STREET NAMES	YES		SIGNAL OWNER
CABINET TYPE	V	PRE-EMPTION	YES	Controller IP Address	FDOT
CABINET DATE		PRE-EMPTION TYPE	INFRARED	0	LED YES

REMARKS:

Seq #4	2	1	4	3	Seq #5	1	2	3	4	Seq #7	1	2	4	3	
	5	6				6	5				6	5			

COUNTY OF VOLUSIA TRAFFIC SIGNAL TIMING SHEET

LOCATION: SR 472 @ CR 4101 (MLK Beltway)
Orange City

FREE: [ ]

DATE: 5/16/2022

SIGNAL #: 222

CO-ORD: [X]

Design By: Sean Castello

NETWORK #: OC/Deltona Area Network # 90

Controller Timing Chart

PHASE	1	2	3	4	5	6	7	8	
DIRECTION	EBL	WB	SB	NB	WBL	EB			
TURN TYPE	PROT	-	SPLIT LEAD	SPLIT LAG	PROT	-			
MIN GREEN	5	17	7	7	5	17			
EXTENSION	3	4	4	4	3	4			
YELLOW	5.5	5.5	5.6	5.5	5.5	5.5			
RED CLR	2.8	2.8	3.8	3.3	2.8	2.8			
WALK									
PED CLR									
MAX 1	25	60	35	35	35	60			
MAX 2									
MAX 3		-		-		-			
DYM MAX		90		35		90			
DYM STP		10		10		10			
RECALL		MIN		-		MIN			
DETECTOR	NON-LOCK	LOCK	NON-LOCK	NON-LOCK	NON-LOCK	LOCK			
FLASH	RED	YELLOW	RED	RED	RED	YELLOW			

COORDINATION TIMINGS

PATTERN	1	2	3	4	5	6	7	8	
CYCLE	150	130	150	-	-	-	-	-	
OFFSET	93	99	0	-	-	-	-	-	

PHASE	1	2	3	4	5	6	7	8	
PATTERN 1	19	57	37	37	19	57			
PATTERN 2	19	43	31	37	19	43			
PATTERN 3	19	59	35	37	20	58			
PATTERN 4	-	-	-	-	-	-	-	-	
PATTERN 5	-	-	-	-	-	-	-	-	
PATTERN 6	-	-	-	-	-	-	-	-	
PATTERN 7	-	-	-	-	-	-	-	-	

Controller IP	10.40.91.25	Switch IP	10.40.90.25	Camera IP	10.40.92.25
Controller Gateway	10.40.91.1	Switch Gateway	10.40.90.1	Camera Gateway	10.40.92.1

REMARKS:

Pattern #1		2	1	4	3	Pat #2		1	2	3	4	Pat #3		1	2	4	3
Seq #4		5	6			Seq #5		6	5			Seq #7		6	5		

COUNTY OF VOLUSIA TRAFFIC SIGNAL TIMING SHEET

LOCATION: SR 472 @ CR 4101 (MLK Beltway)
Orange City

FREE: [ ]

DATE: 5/16/2022

SIGNAL #: 222

CO-ORD: [X]

Design By: Sean Castello

NETWORK #: OC/Deltona Area Network # 90

TIME OF DAY SCHEDULE

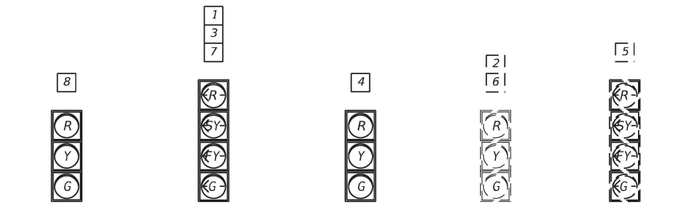
BASE DAY		1	2	3	4	5	6	7	Crosswalk Length
	TIME	06:30-09:00	09:00-16:00	16:00-18:15	18:15-00:00				
MON #1	PATTERN	PATTERN #1	PATTERN #2	PATTERN #3	FREE				P2
	TIME	06:30-09:00	09:00-16:00	16:00-18:15	18:15-00:00				
TUES #1	PATTERN	PATTERN #1	PATTERN #2	PATTERN #3	FREE				
	TIME	06:30-09:00	09:00-16:00	16:00-18:15	18:15-00:00				
WED #1	PATTERN	PATTERN #1	PATTERN #2	PATTERN #3	FREE				P4
	TIME	06:30-09:00	09:00-16:00	16:00-18:15	18:15-00:00				
THU #1	PATTERN	PATTERN #1	PATTERN #2	PATTERN #3	FREE				
	TIME	06:30-09:00	09:00-16:00	16:00-18:15	18:15-00:00				
FRI #1	PATTERN	PATTERN #1	PATTERN #2	PATTERN #3	FREE				P6
	TIME	00:00-00:00							
SAT #2	PATTERN	FREE							
	TIME	00:00-00:00							
SUN #2	PATTERN	FREE							P8

CONTROLLER TYPE		CONDITION OF OVERHEAD	GOOD	PROGRAM NUMBER	
Econolite ASC/3		OVERHEAD STREET NAMES	NO		
PHASES:	8Φ	ILLUMINATED STREET NAMES	YES	02.62.00	SIGNAL OWNER
CABINET TYPE	V	PRE-EMPTION	YES	Controller IP Address	FDOT
CABINET DATE	03/2008	PRE-EMPTION TYPE	INFRARED	10.40.91.25	LED YES

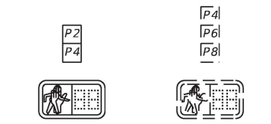
REMARKS:

Seq #4					Seq #5					Seq #7				
	2	1	4	3		1	2	3	4		1	2	4	3
	5	6				6	5				6	5		

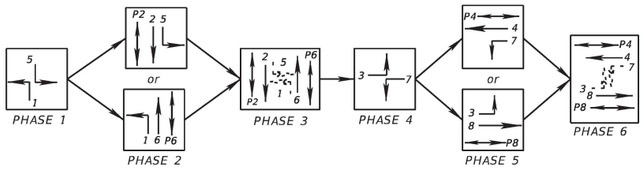
TRAFFIC SIGNAL HEAD DETAILS



PEDESTRIAN SIGNAL HEAD DETAILS



S.O.P. 10 (MOD)



EXISTING RADAR DETECTION

(R2) (R4)

(SEE VEHICLE DETECTION NOTES)

RADAR DETECTION PAY ITEMS

(R1) (R5) (R6) (R7) (R8)

660-3-12	2 EA
660-3-52	2 EA
660-3-62	1 EA

CABINET PAY ITEMS

632-7-1	1 PI
660-3-51	1 EA
671-2-40	1 EA

LEGEND:

- EXISTING SIGNAL HEAD
- RELOCATED SIGNAL HEAD
- PROPOSED SIGNAL HEAD
- EXISTING VEHICLE DETECTOR
- MODIFIED VEHICLE DETECTOR
- PROPOSED VEHICLE DETECTOR

RADAR DETECTION CONNECTION CHART

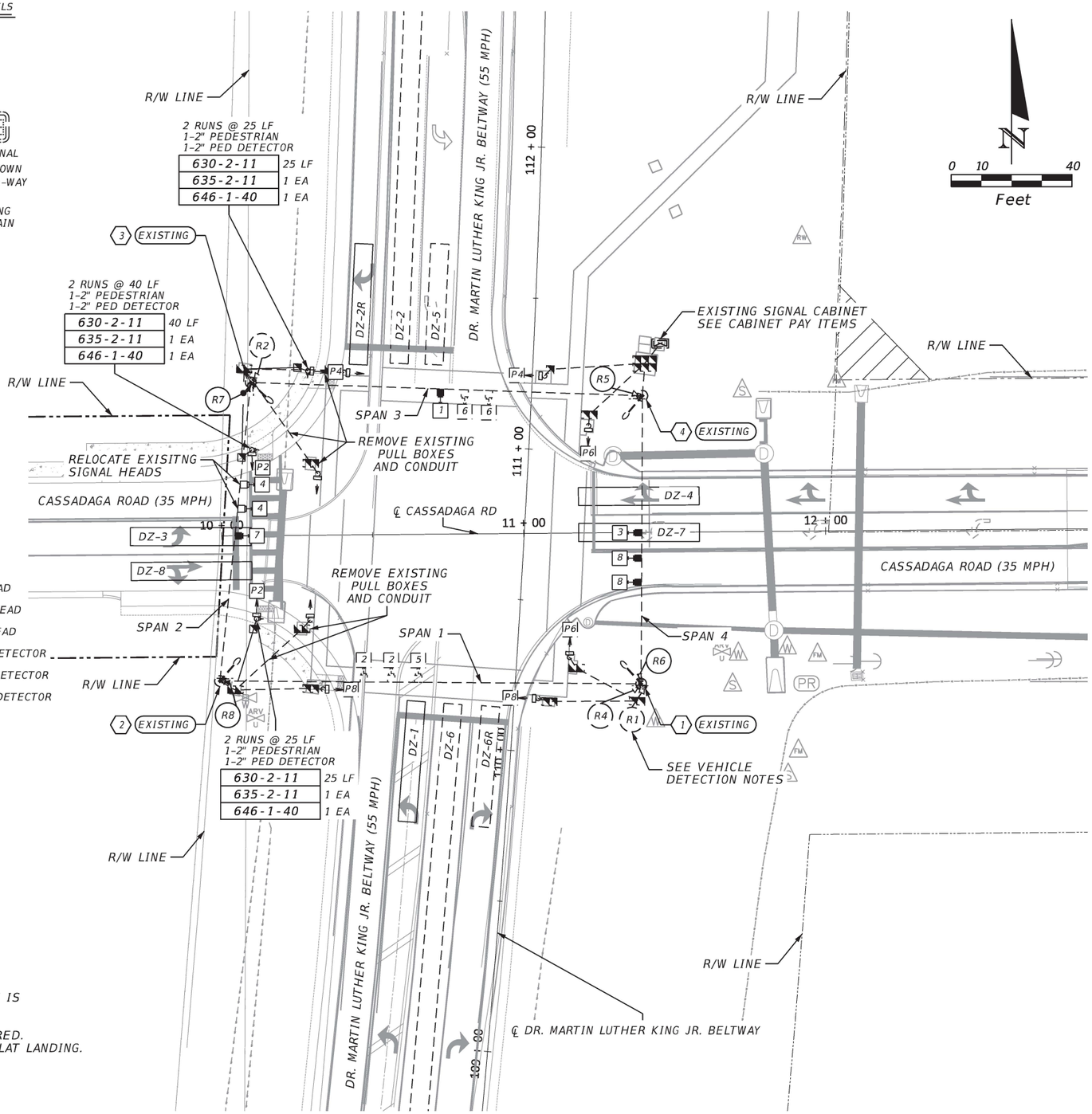
DETECTOR ID	DETECTION ZONE	DELAY TIME (SEC)	DETECTION ZONE DIMENSION	DETECTOR TYPE
R2	DZ-2	-	EXISTING	ADVANCE
R4	DZ-6	-	EXISTING	ADVANCE
R5	DZ-5	-	EXISTING	PRESENCE
	DZ-2R	10	6' X 40'	PRESENCE
R6	DZ-4	-	6' X 40'	PRESENCE
	DZ-7	-	6' X 40'	PRESENCE
R7	DZ-3	-	6' X 40'	PRESENCE
	DZ-8	-	6' X 40'	PRESENCE
R8	DZ-1	-	6' X 40'	PRESENCE
	DZ-6R	10	EXISTING	PRESENCE

SIZE AND PLACEMENT OF RADAR DETECTION ZONES ARE INITIAL AND MAY REQUIRE FIELD ADJUSTING AS DIRECTED BY PROJECT ENGINEER.

INITIAL CONTROLLER TIMINGS

	PHASE	NBL	SBT	EBL	WBT	SBL	NBT	WBL	EBT
	TIMING FUNCTION								
	MOVEMENT NUMBER	1	2	3	4	5	6	7	8
TIMING FUNCTION	MINIMUM GREEN	5.0	10.0	5.0	7.0	5.0	10.0	5.0	7.0
	EXTENSION	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	MAXIMUM GREEN 1	30.0	70.0	30.0	60.0	30.0	70.0	30.0	60.0
	MAXIMUM GREEN 2	--	--	--	--	--	--	--	--
	YELLOW CLEARANCE	5.5	5.5	4.0	4.0	5.5	5.5	4.0	4.0
	ALL RED	3.0	2.0	3.0	2.1	3.0	2.0	3.0	2.1
	PEDESTRIAN WALK	--	7.0	--	7.0	--	7.0	--	7.0
	PED. CLEARANCE	--	13.0	--	18.0	--	19.0	--	18.0
	RECALL	--	MIN	--	--	--	MIN	--	--
	FLASH	R	Y	R	R	R	Y	R	R

SIGNAL TIMINGS TO BE ADJUSTED BY VOLUSIA COUNTY BASED ON THE OBSERVED TRAFFIC FLOW WITHIN TWO WEEKS AFTER INSTALLATION.



SIGNALIZATION NOTES:

1. THE MAJOR STREET IS DR. MARTIN LUTHER KING JR. BELTWAY (SPEED LIMIT 55 MPH) AND THE MINOR STREET IS CASSADAGA ROAD (SPEED LIMIT 35 MPH).
2. THE MAJOR STREET MOVEMENTS ARE 1,2,5&6, AND THE MINOR STREET MOVEMENTS ARE 3,4,7&8.
3. DURING FLASH OPERATION, MOVEMENTS 2&6 SHALL FLASH YELLOW, AND MOVEMENT 1,3,4,5,7&8 SHALL FLASH RED.
4. CONTRACTOR TO ENSURE ALL PEDESTRIAN DETECTORS ARE IMMEDIATELY ADJACENT TO A MINIMUM 48" X 48" FLAT LANDING.
5. CONTRACTOR SHALL USE EXISITNG CONDUIT UNLESS OTHERWISE NOTED ON THE PLANS.

VEHICLE DETECTION NOTES:

1. REMOVE DETECTOR R1. EXISTING CABLE TO REMAIN.
2. RELOCATE DETECTOR R5 FROM POLE 3 TO POLE 4. UTILIZE CABLE FROM REMOVED DETECTOR R3.
3. RELOCATE DETECTOR R6 FROM POLE 3 TO POLE 1. UTILIZE CABLE FROM REMOVED DETECTOR R1.
4. DETECTOR R7 TO UTILIZE CABLE FROM RELOCATED DETECTOR R5.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

TRAFFIC & MOBILITY CONSULTANTS LLC
3101 MAGUIRE BLVD, SUITE 265
ORLANDO, FL 32803
OFFICE: (407) 531-5332
FAX: (407) 531-5331
JEREMY M. CROWE, P.E. 77064
CERTIFICATE OF AUTHORIZATION NO.:30024

Volusia County FLORIDA

SIGNALIZATION PLAN SIGNAL NO. 471

SHEET NO. T-5

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

4/24/2024 3:07:31 PM kv
P:\21145.1 Cassadaga Rd & Dr Martin Luther King Jr Beltway SIG DES\300 - CADD\Signalization\PLANS601.dgn

Appendix K
Excerpts of TM BTR TIAs

Project No. 22012 TM BTR Deland, v1.1

Intersection Volumes

Period	Tgen	Enter	Exit	DR MLK	SF	AGR	Years	Legend
AM Peak		23	72	4.30%	0.00	2.00%	3	Backg'd + (Project) = Total

Intersection= Orange Camp Rd & Dr. MLK Jr Bltwy — 1

Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	Vested	Tech Park	%Proj Ent	%Proj Ext	Project	Total	Formula
	L	46	1.00	46	1.06		49	0				0	49	49
EB	T	463	1.00	463	1.06		491	0				0	491	491
	R	55	1.00	55	1.06		58	0	38	5%		1	97	58 + [38] + (1) = 97
	L	42	1.00	42	1.06		45	0	70	5%		1	116	45 + [70] + (1) = 116
WB	T	343	1.00	343	1.06		364	0				0	364	364
	R	136	1.00	136	1.06		144	0				0	144	144
	L	158	1.00	158	1.13		178	0	14		5%	4	196	178 + [14] + (4) = 196
NB	T	369	1.00	369	1.13		417	0	20		10%	7	444	417 + [20] + (7) = 444
	R	42	1.00	42	1.13		47	0	25		5%	4	76	47 + [25] + (4) = 76
	L	331	1.00	331	1.13		374	0				0	374	374
SB	T	248	1.00	248	1.13		280	0	51	10%		2	333	280 + [51] + (2) = 333
	R	41	1.00	41	1.13		46	0				0	46	46

Intersection= Cassadaga Rd & Dr. MLK Jr Bltwy — 2

Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	Vested	Tech Park	%Proj Ent	%Proj Ext	Project	Total	Formula
	L	0	1.00	0	1.06		0	0				0	0	
EB	T	0	1.00	0	1.06		0	0				0	0	
	R	0	1.00	0	1.06		0	0				0	0	
	L	227	1.00	227	1.06		241	0	12		70%	50	303	241 + [12] + (50) = 303
WB	T	0	1.00	0	1.06		0	0				0	0	
	R	54	1.00	54	1.06		57	0	39		5%	4	100	57 + [39] + (4) = 100
	L	0	1.00	0	1.13		0	0				0	0	
NB	T	343	1.00	343	1.13		387	0	38		20%	14	439	387 + [38] + (14) = 439
	R	240	1.00	240	1.13		271	0	14			0	285	271 + [14] = 285
	L	77	1.00	77	1.13		87	0	70	25%		6	163	87 + [70] + (6) = 163
SB	T	360	1.00	360	1.13		406	0	143			0	549	406 + [143] = 549
	R	0	1.00	0	1.13		0	0				0	0	

Intersection= SR 472 & Dr. MLK Jr Bltwy — 3

Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	Vested	Tech Park	%Proj Ent	%Proj Ext	Project	Total	Formula
	L	88	1.00	88	1.06		93	0	21	15%		3	117	93 + [21] + (3) = 117
EB	T	915	1.00	915	1.06		970	0	82			0	1052	970 + [82] + = 1052
	R	103	1.00	103	1.06		109	0				0	109	109
	L	106	1.00	106	1.06		112	0	19			0	131	112 + [19] = 131
WB	T	864	1.00	864	1.06		916	0	34			0	950	916 + [34] = 950
	R	289	1.00	289	1.06		306	0	23	35%		8	337	306 + [23] + (8) = 337
	L	138	1.00	138	1.13		156	0				0	156	156
NB	T	185	1.00	185	1.13		209	0	9	20%		5	223	209 + [9] + (5) = 223
	R	56	1.00	56	1.13		63	0	56			0	119	63 + [56] = 119
	L	212	1.00	212	1.13		239	0	116		35%	25	380	239 + [116] + (25) = 380
SB	T	320	1.00	320	1.13		361	0	3		20%	14	378	361 + [3] + (14) = 378
	R	57	1.00	57	1.13		64	0	5		15%	11	80	64 + [5] + (11) = 80

Intersection= Kentucky Ave & Graves Ave — 4

Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	Vested	Tech Park	%Proj Ent	%Proj Ext	Project	Total	Formula
	L	159	1.00	159	1.00		159	0	46	15%		3	208	159 + [46] + (3) = 208
EB	T	359	1.00	359	1.00		359	119				0	478	359 + {119} = 478
	R	4	1.00	4	1.00		4	0				0	4	4
	L	2	1.00	2	1.00		2	0				0	2	2
WB	T	598	1.00	598	1.00		598	146				0	744	598 + {146} = 744
	R	204	1.00	204	1.00		204	0	13	5%		2	219	204 + [13] + (2) = 219
	L	6	1.00	6	1.13		7	0				0	7	7
NB	T	10	1.00	10	1.13		11	0				0	11	11
	R	9	1.00	9	1.13		10	0				0	10	10
	L	163	1.00	163	1.13		184	0	5		5%	4	193	184 + [5] + (4) = 193
SB	T	7	1.00	7	1.13		8	0				0	8	8
	R	361	1.00	361	1.13		408	0	18		15%	11	437	408 + [18] + (11) = 437

Project No. 22012 TM BTR Deland, v1.1

Intersection Volumes

Period	Tgen	Enter	Exit	DR MLK	SF	AGR	Years	Legend
PM Peak		76	45	4.30%	0.00	2.00%	3	Backg'd

Intersection= Orange Camp Rd & Dr. MLK Jr Bltwy — 1

Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	Vested	Tech Park	%Proj Ent	%Proj Ext	Project	Total	Formula
	L	53	1.00	53	1.06		56	0				0	56	56
EB	T	341	1.00	341	1.06		361	0				0	361	361
	R	103	1.00	103	1.06		109	0	33	5%		4	146	109 + [33] + (4) = 146
	L	68	1.00	68	1.06		72	0	60	5%		4	136	72 + [60] + (4) = 136
WB	T	454	1.00	454	1.06		481	0				0	481	481
	R	172	1.00	172	1.06		182	0				0	182	182
	L	256	1.00	256	1.13		289	0	54		5%	2	345	289 + [54] + (2) = 345
NB	T	355	1.00	355	1.13		401	0	73		10%	5	479	401 + [73] + (5) = 479
	R	40	1.00	40	1.13		45	0	92		5%	2	139	45 + [92] + (2) = 139
	L	244	1.00	244	1.13		275	0				0	275	275
SB	T	354	1.00	354	1.13		400	0	44	10%		8	452	400 + [44] + (8) = 452
	R	55	1.00	55	1.13		62	0				0	62	62

Intersection= Cassadaga Rd & Dr. MLK Jr Bltwy — 2

Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	Vested	Tech Park	%Proj Ent	%Proj Ext	Project	Total	Formula
	L	0	1.00	0	1.06		0	0				0	0	
EB	T	0	1.00	0	1.06		0	0				0	0	
	R	0	1.00	0	1.06		0	0				0	0	
	L	116	1.00	116	1.06		123	0	46		70%	32	201	123 + [46] + (32) = 201
WB	T	0	1.00	0	1.06		0	0				0	0	
	R	28	1.00	28	1.06		30	0	145		5%	2	177	30 + [145] + (2) = 177
	L	0	1.00	0	1.13		0	0				0	0	
NB	T	482	1.00	482	1.13		544	0	142		20%	9	695	544 + [142] + (9) = 695
	R	167	1.00	167	1.13		189	0	51			0	240	189 + [51] = 240
	L	59	1.00	59	1.13		67	0	60	25%		19	146	67 + [60] + (19) = 146
SB	T	570	1.00	570	1.13		644	0	123			0	767	644 + [123] = 767
	R	0	1.00	0	1.13		0	0				0	0	

Intersection= SR 472 & Dr. MLK Jr Bltwy — 3

Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	Vested	Tech Park	%Proj Ent	%Proj Ext	Project	Total	Formula
	L	109	1.00	109	1.06		116	0	18	15%		11	145	116 + [18] + (11) = 145
EB	T	1113	1.00	1,113	1.06		1180	0	71			0	1251	1180 + [71] = 1251
	R	137	1.00	137	1.06		145	0				0	145	145
	L	156	1.00	156	1.06		165	0	70			0	235	165 + [70] = 235
WB	T	844	1.00	844	1.06		895	0	127			0	1022	895 + [127] = 1022
	R	278	1.00	278	1.06		295	0	106	35%		27	428	295 + [106] + (27) = 428
	L	123	1.00	123	1.13		139	0				0	139	139
NB	T	271	1.00	271	1.13		306	0	8	20%		15	329	306 + [8] + (15) = 329
	R	83	1.00	83	1.13		94	0	48			0	142	94 + [48] = 142
	L	210	1.00	210	1.13		237	0	100		35%	16	353	237 + [100] + (16) = 353
SB	T	291	1.00	291	1.13		329	0	13		20%	9	351	329 + [13] + (9) = 351
	R	69	1.00	69	1.13		78	0	20		15%	7	105	78 + [20] + (7) = 105

Intersection= Kentucky Ave & Graves Ave — 4

Approach	Mvmt	Raw	SF	Adjusted	GR	Redirect	Adj Bg'd	Vested	Tech Park	%Proj Ent	%Proj Ext	Project	Total	Formula
	L	336	1.00	336	1.00		336	0	40	15%		11	387	336 + [40] + (11) = 387
EB	T	677	1.00	677	1.00		677	146				0	823	677 + {146} = 823
	R	10	1.00	10	1.00		10	0				0	10	10
	L	13	1.00	13	1.00		13	0				0	13	13
WB	T	514	1.00	514	1.00		514	119				0	633	514 + {119} = 633
	R	139	1.00	139	1.00		139	0	11	5%		4	154	139 + [11] + (4) = 154
	L	17	1.00	17	1.13		19	0				0	19	19
NB	T	10	1.00	10	1.13		11	0				0	11	11
	R	9	1.00	9	1.13		10	0				0	10	10
	L	223	1.00	223	1.13		252	0	17		5%	2	271	252 + [17] + (2) = 271
SB	T	8	1.00	8	1.13		9	0				0	9	9
	R	350	1.00	350	1.13		395	0	66		15%	7	468	395 + [66] + (7) = 468

Appendix L
Projected Intersection Volume Calculation

Project No. 21145 Ford 472
Intersection Volumes

Analysis Period	Factors SF	AGR	Years	Tgen Enter	Exit	Legend
AM Peak	1.04	1.00%	4	30	91	Backg'd + (Tech Park) + [TM BTR] + (Project) = Total

Intersection: Dr. MLK Bltwy & Orange Camp Rd — 1

App	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Volumes
	L	0	160	1.04	**166**	1.04	**173**	14	4	**191**	0%	4%	**4**	**195**	173 + {14} + [4] + (4) = 195
NB	T	2	433	1.04	**450**	1.04	**468**	20	7	**495**	0%	8%	**7**	**502**	468 + {20} + [7] + (7) = 502
	R	0	50	1.04	**52**	1.04	**54**	25	4	**83**	0%	8%	**7**	**90**	54 + {25} + [4] + (7) = 90
	L	0	249	1.04	**259**	1.04	**269**			**269**	0%	0%	**0**	**269**	269
SB	T	2	231	1.04	**240**	1.04	**250**	51	2	**303**	8%	0%	**2**	**305**	250 + {51} + [2] + (2) = 305
	R	0	36	1.04	**37**	1.04	**38**			**38**	0%	0%	**0**	**38**	38
	L	0	47	1.04	**49**	1.05	**51**			**51**	0%	0%	**0**	**51**	51
EB	T	2	390	1.04	**406**	1.05	**425**			**425**	0%	0%	**0**	**425**	425
	R	1	50	1.04	**52**	1.05	**54**	38	1	**93**	4%	0%	**2**	**95**	54 + {38} + [1] + (2) = 95
	L	0	40	1.04	**42**	1.05	**44**	70	1	**115**	8%	0%	**2**	**117**	44 + {70} + [1] + (2) = 117
WB	T	2	302	1.04	**314**	1.05	**328**			**328**	0%	0%	**0**	**328**	328
	R	0	117	1.04	**122**	1.05	**128**			**128**	0%	0%	**0**	**128**	128

Intersection: Dr. MLK Bltwy & Cassadaga Rd — 2

Appr	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Formula
	L	0	0	1.04	0	1.04	**1***			**1**	10%	0%	**3**	**4**	1 + (3) = 4
NB	T	1	305	1.04	317	1.04	**330**	38	14	**382**	0%	0%	**0**	**382**	330 + {38} + [14] = 382
	R	1	211	1.04	219	1.04	**228**	14		**242**	0%	0%	**0**	**242**	228 + {14} = 242
	L	1	61	1.04	63	1.04	**66**	70	6	**142**	0%	0%	**0**	**142**	66 + {70} + [6] = 142
SB	T	1	358	1.04	372	1.04	**387**	143		**530**	0%	0%	**0**	**530**	387 + {143} = 530
	R	0	0	1.04	0	1.04	**1***			**1**	20%	0%	**6**	**7**	1 + (6) = 7
	L	1	0	1.04	0	1.10	**2***			**2**	0%	20%	**18**	**20**	2 + {18} = 20
EB	T	1	0	1.04	0	1.10	**2***			**2**	0%	2%	**2**	**4**	2 + (2) = 4
	R	0	0	1.04	0	1.10	**3***			**3**	0%	10%	**9**	**12**	3 + {9} = 12
	L	1	198	1.04	206	1.10	**227**	12	50	**289**	0%	0%	**0**	**289**	227 + {12} + [50] = 289
WB	T	1	0	1.04	0	1.10	**0**			**0**	2%	0%	**1**	**1**	(1)
	R	0	53	1.04	55	1.10	**61**	39	4	**104**	0%	0%	**0**	**104**	61 + {39} + [4] = 104

*Background Volumes Estimated using *ITE Trip Generation Manual 11th Edition*.

Intersection: Dr. MLK Bltwy / Kentucky Ave & SR 472 — 3

Appr	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Formula
	L	0	128	1.04	133	1.08	**144**			**144**	3%	0%	**1**	**145**	144 + (1) = 145
NB	T	1	227	1.04	236	1.08	**255**	9	5	**269**	10%	0%	**3**	**272**	255 + {9} + [5] + (3) = 272
	R	1	55	1.04	57	1.08	**62**	56		**118**	0%	0%	**0**	**118**	62 + {56} = 118
	L	1	188	1.04	196	1.08	**212**	116	25	**353**	0%	0%	**0**	**353**	212 + {116} + [25] = 353
SB	T	1	311	1.04	323	1.08	**349**	3	14	**366**	0%	10%	**9**	**375**	349 + {3} + [14] + (9) = 375
	R	1	57	1.04	59	1.08	**64**	5	11	**80**	0%	0%	**0**	**80**	64 + {5} + [11] = 80
	L	1	60	1.04	62	1.04	**64**	21	3	**88**	0%	0%	**0**	**88**	64 + {21} + [3] = 88
EB	T	2	892	1.04	928	1.04	**965**	82		**1047**	0%	39%	**35**	**1082**	965 + {82} + (35) = 1082
	R	1	98	1.04	102	1.04	**106**			**106**	0%	3%	**3**	**109**	106 + (3) = 109
	L	1	97	1.04	101	1.04	**105**	19		**124**	0%	0%	**0**	**124**	105 + {19} = 124
WB	T	2	833	1.04	866	1.04	**901**	34		**935**	39%	0%	**11**	**946**	901 + {34} + (11) = 946
	R	1	231	1.04	240	1.04	**250**	23	8	**281**	0%	0%	**0**	**281**	250 + {23} + [8] = 281

Intersection: SR 472 & Blue Lake Ave (Ext.) — 4

Appr	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Formula
	L	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
NB	T	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	L	0	0	1.04	0	1.04	**8***			**8**	0%	42%	**38**	**46**	8 + (38) = 46
SB	T	1	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	1	0	1.04	0	1.04	**8***			**8**	0%	26%	**24**	**32**	8 + (24) = 32
	L	1	0	1.04	0	1.04	**3***			**3**	26%	0%	**8**	**11**	3 + (8) = 11
EB	T	2	1050	1.04	1,092	1.04	**1136**	103	3	**1242**	0%	0%	**0**	**1242**	1136 + {103} + [3] = 1242
	R	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	L	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
WB	T	2	1018	1.04	1,059	1.04	**1101**	39	11	**1151**	0%	0%	**0**	**1151**	1101 + {39} + [11] = 1151
	R	1	0	1.04	0	1.04	**2***			**2**	42%	0%	**12**	**14**	2 + {12} = 14

EBT obtained adding EBT, SBL and NBR at the intersection of Howland Blvd (SR 472) and Minnesota Ave.
WBT obtained adding WBT, SBR and NBL at the intersection of MLK and SR 472.
Vested Trips from Tech Park and TM BTR estimated using vested trips from MLK and SR 472.
*Background Volumes Estimated using *ITE Trip Generation Manual 11th Edition*.

Intersection: SR 472 & Minnesota Ave — 5

Appr	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Formula
	L	0	4	1.04	4	1.04	**4**			**4**	0%	0%	**0**	**4**	4
NB	T	1	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	0	7	1.04	7	1.04	**7**			**7**	0%	0%	**0**	**7**	7
	L	0	5	1.04	5	1.04	**5**			**5**	0%	0%	**0**	**5**	5
SB	T	1	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	0	3	1.04	3	1.04	**3**			**3**	0%	0%	**0**	**3**	3
	L	1	3	1.04	3	1.04	**3**			**3**	0%	0%	**0**	**3**	3
EB	T	2	1038	1.04	1,080	1.04	**1123**	103	3	**1229**	26%	0%	**8**	**1237**	1123 + {103} + [3] + (8) = 1237
	R	1	4	1.04	4	1.04	**4**			**4**	0%	0%	**0**	**4**	4
	L	0	4	1.04	4	1.04	**4**			**4**	0%	0%	**0**	**4**	4
WB	T	2	1010	1.04	1,050	1.04	**1092**	39	11	**1142**	0%	26%	**24**	**1166**	1092 + {39} + [11] + (24) = 1166
	R	0	4	1.04	4	1.04	**4**			**4**	0%	0%	**0**	**4**	4

Intersection: Cassadaga Rd (Ext.) & Access I — 6

Appr	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Formula
	L	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
NB	T	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	L	1	0	1.04	0	1.04	**0**			**0**	0%	32%	**29**	**29**	(29)
SB	T	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	0	0	1.04	0	1.04	**0**			**0**	0%	38%	**35**	**35**	(35)
	L	1	0	1.04	0	1.04	**0**			**0**	38%	0%	**11**	**11**	(11)
EB	T	1	0	1.04	0	1.04	**7***			**7**	0%	0%	**0**	**7**	7
	R	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	L	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
WB	T	1	0	1.04	0	1.04	**2***			**2**	0%	0%	**0**	**2**	2
	R	1	0	1.04	0	1.04	**0**			**0**	32%	0%	**10**	**10**	(10)

*Background Volumes Estimated using *ITE Trip Generation Manual 11th Edition*.

Intersection: Blue Lake Ave (Ext.) & Access II — 7

Appr	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Formula
	L	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
NB	T	1	0	1.04	0	1.04	**7***			**7**	0%	0%	**0**	**7**	7
	R	1	0	1.04	0	1.04	**0**			**0**	30%	0%	**9**	**9**	(9)
	L	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
SB	T	1	0	1.04	0	1.04	**23***			**23**	0%	0%	**0**	**23**	23
	R	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	L	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
EB	T	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	L	0	0	1.04	0	1.04	**0**			**0**	0%	30%	**27**	**27**	(27)
WB	T	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	

*Background Volumes Estimated using *ITE Trip Generation Manual 11th Edition*.

Intersection: Blue Lake Ave (Ext.) & Cassadaga Rd (Ext.) — 8

Appr	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Formula
	L	0		1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
NB	T	1		1.04	0	1.04	**5***			**5**	30%	0%	**9**	**14**	5 + (9) = 14
	R	0		1.04	0	1.04	**0**			**0**	38%	0%	**11**	**11**	(11)
	L	0		1.04	0	1.04	**7***			**7**	0%	0%	**0**	**7**	7
SB	T	1		1.04	0	1.04	**16***			**16**	0%	30%	**27**	**43**	16 + (27) = 43
	R	0		1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	L	0		1.04	0	1.21	**0**			**0**	0%	0%	**0**	**0**	
EB	T	1		1.04	0	1.21	**0**			**0**	0%	0%	**0**	**0**	
	R	1		1.04	0	1.21	**0**			**0**	0%	0%	**0**	**0**	
	L	1		1.04	0	1.21	**0**			**0**	0%	38%	**35**	**35**	(35)
WB	T	1		1.04	0	1.21	**0**			**0**	0%	0%	**0**	**0**	
	R	0		1.04	0	1.21	**2**			**2**	0%	0%	**0**	**2**	2

*Background Volumes Estimated using ITE Trip Generation Manual 11th Edition.

Project No. 21145 Ford 472
Intersection Volumes

Analysis Period	Factors SF	AGR	Years	Tgen Enter	Exit	Legend
PM Peak	1.04	1.00%	4	94	60	Backg'd + {Tech Park} + [TM BTR] + (Project) = Total

Intersection: Dr. MLK Bltwy & Orange Camp Rd — 1

App	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Volumes
	L	0	187	1.04	**194**	1.04	**202**	54	2	**258**	0%	4%	**2**	**260**	202 + {54} + [2] + (2) = 260
NB	T	2	450	1.04	**468**	1.04	**487**	73	5	**565**	0%	8%	**5**	**570**	487 + {73} + [5] + (5) = 570
	R	0	48	1.04	**50**	1.04	**52**	92	2	**146**	0%	8%	**5**	**151**	52 + {92} + [2] + (5) = 151
	L	0	251	1.04	**261**	1.04	**271**			**271**	0%	0%	**0**	**271**	271
SB	T	2	350	1.04	**364**	1.04	**379**	44	8	**431**	8%	0%	**8**	**439**	379 + {44} + [8] + (8) = 439
	R	0	44	1.04	**46**	1.04	**48**			**48**	0%	0%	**0**	**48**	48
	L	0	50	1.04	**52**	1.05	**54**			**54**	0%	0%	**0**	**54**	54
EB	T	2	372	1.04	**387**	1.05	**405**			**405**	0%	0%	**0**	**405**	405
	R	1	101	1.04	**105**	1.05	**110**	33	4	**147**	4%	0%	**3**	**150**	110 + {33} + [4] + (3) = 150
	L	0	53	1.04	**55**	1.05	**58**	60	4	**122**	8%	0%	**8**	**130**	58 + {60} + [4] + (8) = 130
WB	T	2	473	1.04	**492**	1.05	**514**			**514**	0%	0%	**0**	**514**	514
	R	0	161	1.04	**167**	1.05	**175**			**175**	0%	0%	**0**	**175**	175

Intersection: Dr. MLK Bltwy & Cassadaga Rd — 2

Appr	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Formula
	L	0	0	1.04	0	1.04	**3***			**3**	10%	0%	**9**	**12**	3 + (9) = 12
NB	T	1	448	1.04	466	1.04	**485**	142	9	**636**	0%	0%	**0**	**636**	485 + {142} + [9] = 636
	R	1	167	1.04	174	1.04	**181**	51		**232**	0%	0%	**0**	**232**	181 + {51} = 232
	L	1	59	1.04	61	1.04	**63**	60	19	**142**	0%	0%	**0**	**142**	63 + {60} + [19] = 142
SB	T	1	536	1.04	557	1.04	**579**	123		**702**	0%	0%	**0**	**702**	579 + {123} = 702
	R	0	0	1.04	0	1.04	**3***			**3**	20%	0%	**19**	**22**	3 + (19) = 22
	L	1	0	1.04	0	1.10	**2***			**2**	0%	20%	**12**	**14**	2 + (12) = 14
EB	T	1	0	1.04	0	1.10	**0**			**0**	0%	2%	**1**	**1**	(1)
	R	0	0	1.04	0	1.10	**2***			**2**	0%	10%	**6**	**8**	2 + (6) = 8
	L	1	117	1.04	122	1.10	**134**	46	32	**212**	0%	0%	**0**	**212**	134 + {46} + [32] = 212
WB	T	1	0	1.04	0	1.10	**1***			**1**	2%	0%	**2**	**3**	1 + (2) = 3
	R	0	37	1.04	38	1.10	**42**	145	2	**189**	0%	0%	**0**	**189**	42 + {145} + [2] = 189

*Background Volumes Estimated using *ITE Trip Generation Manual 11th Edition*.

Intersection: Dr. MLK Bltwy / Kentucky Ave & SR 472 — 3

Appr	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Formula
	L	0	103	1.04	107	1.08	**116**			**116**	3%	0%	**3**	**119**	116 + (3) = 119
NB	T	1	256	1.04	266	1.08	**287**	8	15	**310**	10%	0%	**9**	**319**	287 + {8} + [15] + (9) = 319
	R	1	66	1.04	69	1.08	**75**	48		**123**	0%	0%	**0**	**123**	75 + {48} = 123
	L	1	226	1.04	235	1.08	**254**	100	16	**370**	0%	0%	**0**	**370**	254 + {100} + [16] = 370
SB	T	1	355	1.04	369	1.08	**399**	13	9	**421**	0%	10%	**6**	**427**	399 + {13} + [9] + (6) = 427
	R	1	72	1.04	75	1.08	**81**	20	7	**108**	0%	0%	**0**	**108**	81 + {20} + [7] = 108
	L	1	81	1.04	84	1.04	**87**	18	11	**116**	0%	0%	**0**	**116**	87 + {18} + [11] = 116
EB	T	2	1018	1.04	1,059	1.04	**1101**	71		**1172**	0%	39%	**23**	**1195**	1101 + {71} + (23) = 1195
	R	1	128	1.04	133	1.04	**138**			**138**	0%	3%	**2**	**140**	138 + {2} = 140
	L	1	158	1.04	164	1.04	**171**	70		**241**	0%	0%	**0**	**241**	171 + {70} = 241
WB	T	2	821	1.04	854	1.04	**888**	127		**1015**	39%	0%	**37**	**1052**	888 + {127} + (37) = 1052
	R	1	278	1.04	289	1.04	**301**	106	27	**434**	0%	0%	**0**	**434**	301 + {106} + [27] = 434

Intersection: SR 472 & Blue Lake Ave (Ext.) — 4

Appr	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Formula
	L	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
NB	T	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	L	0	0	1.04	0	1.04	**6***			**6**	0%	42%	**25**	**31**	6 + (25) = 31
SB	T	1	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	1	0	1.04	0	1.04	**4***			**4**	0%	26%	**16**	**20**	4 + (16) = 20
	L	1	0	1.04	0	1.04	**10***			**10**	26%	0%	**24**	**34**	10 + (24) = 34
EB	T	2	1261	1.04	1,311	1.04	**1363**	89	11	**1463**	0%	0%	**0**	**1463**	1363 + {89} + [11] = 1463
	R	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	L	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
WB	T	2	996	1.04	1,036	1.04	**1077**	147	7	**1231**	0%	0%	**0**	**1231**	1077 + {147} + [7] = 1231
	R	1	0	1.04	0	1.04	**7***			**7**	42%	0%	**40**	**47**	7 + (40) = 47

EBT obtained addnq EBT, SBL and NBR at the intersection of Howland Blvd (SR 472) and Minnesota Ave.
WBT obtained addnq WBT, SBR and NBL at the intersection of MLK and SR 472.
Vested Trips from Tech Park and TM BTR estimated using vested trips from MLK and SR 472.
*Background Volumes Estimated using *ITE Trip Generation Manual 11th Edition*.

Intersection: SR 472 & Minnesota Ave — 5

Appr	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Formula
	L	0	3	1.04	3	1.04	**3**			**3**	0%	0%	**0**	**3**	3
NB	T	1	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	0	14	1.04	15	1.04	**16**			**16**	0%	0%	**0**	**16**	16
	L	0	3	1.04	3	1.04	**3**			**3**	0%	0%	**0**	**3**	3
SB	T	1	1	1.04	1	1.04	**1**			**1**	0%	0%	**0**	**1**	1
	R	0	3	1.04	3	1.04	**3**			**3**	0%	0%	**0**	**3**	3
	L	1	4	1.04	4	1.04	**4**			**4**	0%	0%	**0**	**4**	4
EB	T	2	1244	1.04	1,294	1.04	**1346**	89	11	**1446**	26%	0%	**24**	**1470**	1346 + {89} + [11] + (24) = 1470
	R	1	13	1.04	14	1.04	**15**			**15**	0%	0%	**0**	**15**	15
	L	0	14	1.04	15	1.04	**16**			**16**	0%	0%	**0**	**16**	16
WB	T	2	980	1.04	1,019	1.04	**1060**	147	7	**1214**	0%	26%	**16**	**1230**	1060 + {147} + [7] + (16) = 1230
	R	0	2	1.04	2	1.04	**2**			**2**	0%	0%	**0**	**2**	2

Intersection: Cassadaga Rd (Ext.) & Access I — 6

Appr	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Formula
	L	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
NB	T	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	L	1	0	1.04	0	1.04	**0**			**0**	0%	32%	**19**	**19**	(19)
SB	T	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	0	0	1.04	0	1.04	**0**			**0**	0%	38%	**23**	**23**	(23)
	L	1	0	1.04	0	1.04	**0**			**0**	38%	0%	**36**	**36**	(36)
EB	T	1	0	1.04	0	1.04	**4***			**4**	0%	0%	**0**	**4**	4
	R	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	L	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
WB	T	1	0	1.04	0	1.04	**7***			**7**	0%	0%	**0**	**7**	7
	R	1	0	1.04	0	1.04	**0**			**0**	32%	0%	**30**	**30**	(30)

*Background Volumes Estimated using *ITE Trip Generation Manual 11th Edition*.

Intersection: Blue Lake Ave (Ext.) & Access II — 7

Appr	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Tech Park	TM BTR	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Formula
	L	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
NB	T	1	0	1.04	0	1.04	**24***			**24**	0%	0%	**0**	**24**	24
	R	1	0	1.04	0	1.04	**0**			**0**	30%	0%	**28**	**28**	(28)
	L	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
SB	T	1	0	1.04	0	1.04	**14***			**14**	0%	0%	**0**	**14**	14
	R	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	L	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
EB	T	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	L	0	0	1.04	0	1.04	**0**			**0**	0%	30%	**18**	**18**	(18)
WB	T	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
	R	0	0	1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	

*Background Volumes Estimated using *ITE Trip Generation Manual 11th Edition*.

Intersection: Blue Lake Ave (Ext.) & Cassadaga Rd (Ext.) — 8

Appr	Mvmt	Lns	Raw	SF	Adjusted	GR	Adj Bg'd	Redirect	Vested	Bg'd+Vested	ProjIn	ProjOut	Project	BldOut	Formula
	L	0		1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
NB	T	1		1.04	0	1.04	**17***			**17**	30%	0%	**28**	**45**	17 + (28) = 45
	R	0		1.04	0	1.04	**0**			**0**	38%	0%	**36**	**36**	(36)
	L	0		1.04	0	1.04	**0**			**0**	0%	0%	**0**	**0**	
SB	T	1		1.04	0	1.04	**17***			**17**	0%	30%	**18**	**35**	17 + (18) = 35
	R	0		1.04	0	1.04	**4***			**4**	0%	0%	**4**	**4**	4
	L	0		1.04	0	1.21	**0**			**0**	0%	0%	**0**	**0**	
EB	T	1		1.04	0	1.21	**0**			**0**	0%	0%	**0**	**0**	
	R	1		1.04	0	1.21	**0**			**0**	0%	0%	**0**	**0**	
	L	1		1.04	0	1.21	**0**			**0**	0%	38%	**23**	**23**	(23)
WB	T	1		1.04	0	1.21	**0**			**0**	0%	0%	**0**	**0**	
	R	0		1.04	0	1.21	**7***			**7**	0%	0%	**0**	**7**	7

*Background Volumes Estimated using *ITE Trip Generation Manual 11th Edition*.

Appendix M
HCM Analysis Worksheets

Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	546	514	718	576
Demand Flow Rate, veh/h	568	530	734	591
Vehicles Circulating, veh/h	595	737	793	573
Vehicles Exiting, veh/h	569	790	370	694
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	8.7	9.9	14.0	8.6
Approach LOS	A	A	B	A

Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR
Assumed Moves	LT	TR	LT	TR	LT	TR	LT	TR
RT Channelized								
Lane Util	0.470	0.530	0.470	0.530	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328
A (Intercept)	1350	1420	1350	1420	1350	1420	1350	1420
B (Slope)	9.199e-4	8.501e-4	9.199e-4	8.501e-4	9.199e-4	8.501e-4	9.199e-4	8.501e-4
Entry Flow, veh/h	267	301	249	281	345	389	278	313
Cap Entry Lane, veh/h	781	856	685	759	651	724	797	873
Entry HV Adj Factor	0.962	0.962	0.971	0.970	0.979	0.979	0.974	0.975
Flow Entry, veh/h	257	290	242	273	338	381	271	305
Cap Entry, veh/h	751	824	665	736	637	708	776	851
V/C Ratio	0.342	0.351	0.363	0.370	0.530	0.538	0.349	0.359
Control Delay, s/veh	9.0	8.5	10.3	9.6	14.5	13.5	8.9	8.4
LOS	A	A	B	A	B	B	A	A
95th %tile Queue, veh	2	2	2	2	3	3	2	2

Intersection	
Intersection Delay, s/veh	13.7
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	612	615	826	656
Demand Flow Rate, veh/h	639	634	844	674
Vehicles Circulating, veh/h	759	816	828	697
Vehicles Exiting, veh/h	612	856	570	753
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	11.8	12.7	17.7	11.2
Approach LOS	B	B	C	B

Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR
Assumed Moves	LT	TR	LT	TR	LT	TR	LT	TR
RT Channelized								
Lane Util	0.469	0.531	0.470	0.530	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328
A (Intercept)	1350	1420	1350	1420	1350	1420	1350	1420
B (Slope)	9.199e-4	8.501e-4	9.199e-4	8.501e-4	9.199e-4	8.501e-4	9.199e-4	8.501e-4
Entry Flow, veh/h	300	339	298	336	397	447	317	357
Cap Entry Lane, veh/h	672	745	637	710	630	702	711	785
Entry HV Adj Factor	0.959	0.957	0.970	0.970	0.978	0.980	0.973	0.975
Flow Entry, veh/h	288	324	289	326	388	438	309	348
Cap Entry, veh/h	644	713	618	688	617	688	692	765
V/C Ratio	0.447	0.455	0.468	0.473	0.630	0.636	0.446	0.455
Control Delay, s/veh	12.3	11.5	13.2	12.2	18.4	17.1	11.6	10.8
LOS	B	B	B	B	C	C	B	B
95th %tile Queue, veh	2	2	2	3	4	5	2	2

Intersection	
Intersection Delay, s/veh	14.0
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	614	617	847	658
Demand Flow Rate, veh/h	641	636	865	676
Vehicles Circulating, veh/h	763	829	828	704
Vehicles Exiting, veh/h	617	864	576	761
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	11.9	12.9	18.4	11.3
Approach LOS	B	B	C	B

Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR
Assumed Moves	LT	TR	LT	TR	LT	TR	LT	TR
RT Channelized								
Lane Util	0.470	0.530	0.470	0.530	0.471	0.529	0.470	0.530
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328
A (Intercept)	1350	1420	1350	1420	1350	1420	1350	1420
B (Slope)	9.199e-4	8.501e-4	9.199e-4	8.501e-4	9.199e-4	8.501e-4	9.199e-4	8.501e-4
Entry Flow, veh/h	301	340	299	337	407	458	318	358
Cap Entry Lane, veh/h	669	742	630	702	630	702	706	781
Entry HV Adj Factor	0.959	0.957	0.970	0.970	0.978	0.980	0.973	0.975
Flow Entry, veh/h	289	325	290	327	398	449	309	349
Cap Entry, veh/h	641	710	611	681	617	689	687	761
V/C Ratio	0.450	0.458	0.475	0.480	0.646	0.652	0.450	0.459
Control Delay, s/veh	12.4	11.6	13.5	12.5	19.1	17.7	11.7	11.0
LOS	B	B	B	B	C	C	B	B
95th %tile Queue, veh	2	2	3	3	5	5	2	2

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	550	722	720	678
Demand Flow Rate, veh/h	576	744	735	696
Vehicles Circulating, veh/h	705	743	732	765
Vehicles Exiting, veh/h	756	724	549	722
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	10.2	13.2	12.7	12.7
Approach LOS	B	B	B	B

Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR
Assumed Moves	LT	TR	LT	TR	LT	TR	LT	TR
RT Channelized								
Lane Util	0.470	0.530	0.470	0.530	0.469	0.531	0.470	0.530
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328
A (Intercept)	1350	1420	1350	1420	1350	1420	1350	1420
B (Slope)	9.199e-4	8.501e-4	9.199e-4	8.501e-4	9.199e-4	8.501e-4	9.199e-4	8.501e-4
Entry Flow, veh/h	271	305	350	394	345	390	327	369
Cap Entry Lane, veh/h	706	780	681	755	688	762	668	741
Entry HV Adj Factor	0.954	0.956	0.970	0.971	0.980	0.978	0.974	0.973
Flow Entry, veh/h	259	292	339	383	338	381	318	359
Cap Entry, veh/h	673	746	661	733	675	745	650	721
V/C Ratio	0.384	0.391	0.514	0.522	0.501	0.512	0.490	0.498
Control Delay, s/veh	10.6	9.9	13.6	12.7	13.1	12.3	13.2	12.3
LOS	B	A	B	B	B	B	B	B
95th %tile Queue, veh	2	2	3	3	3	3	3	3

Intersection	
Intersection Delay, s/veh	19.0
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	612	819	979	757
Demand Flow Rate, veh/h	642	844	999	777
Vehicles Circulating, veh/h	853	912	763	922
Vehicles Exiting, veh/h	846	850	732	834
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	13.7	21.3	20.3	19.0
Approach LOS	B	C	C	C

Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR
Assumed Moves	LT	TR	LT	TR	LT	TR	LT	TR
RT Channelized								
Lane Util	0.470	0.530	0.470	0.530	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328
A (Intercept)	1350	1420	1350	1420	1350	1420	1350	1420
B (Slope)	9.199e-4	8.501e-4	9.199e-4	8.501e-4	9.199e-4	8.501e-4	9.199e-4	8.501e-4
Entry Flow, veh/h	302	340	397	447	470	529	365	412
Cap Entry Lane, veh/h	616	688	583	654	669	742	578	649
Entry HV Adj Factor	0.952	0.954	0.969	0.971	0.979	0.980	0.975	0.974
Flow Entry, veh/h	288	324	385	434	460	519	356	401
Cap Entry, veh/h	586	656	565	635	655	728	564	632
V/C Ratio	0.490	0.494	0.681	0.683	0.702	0.713	0.631	0.635
Control Delay, s/veh	14.4	13.2	22.3	20.4	20.9	19.8	19.8	18.3
LOS	B	B	C	C	C	C	C	C
95th %tile Queue, veh	3	3	5	5	6	6	4	5

Intersection	
Intersection Delay, s/veh	19.6
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	617	827	992	765
Demand Flow Rate, veh/h	648	852	1014	785
Vehicles Circulating, veh/h	869	920	763	932
Vehicles Exiting, veh/h	848	857	754	840
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	14.2	22.0	20.9	19.7
Approach LOS	B	C	C	C

Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR
Assumed Moves	LT	TR	LT	TR	LT	TR	LT	TR
RT Channelized								
Lane Util	0.471	0.529	0.469	0.531	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328
A (Intercept)	1350	1420	1350	1420	1350	1420	1350	1420
B (Slope)	9.199e-4	8.501e-4	9.199e-4	8.501e-4	9.199e-4	8.501e-4	9.199e-4	8.501e-4
Entry Flow, veh/h	305	343	400	452	477	537	369	416
Cap Entry Lane, veh/h	607	678	579	650	669	742	573	643
Entry HV Adj Factor	0.951	0.953	0.971	0.969	0.978	0.980	0.975	0.975
Flow Entry, veh/h	290	327	389	438	466	526	360	406
Cap Entry, veh/h	577	647	562	630	654	727	558	627
V/C Ratio	0.503	0.506	0.691	0.696	0.713	0.723	0.644	0.647
Control Delay, s/veh	14.9	13.7	22.9	21.2	21.5	20.4	20.6	18.9
LOS	B	B	C	C	C	C	C	C
95th %tile Queue, veh	3	3	5	6	6	6	5	5



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	206	55	317	219	63	372
Future Volume (veh/h)	206	55	317	219	63	372
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1841	1841	1870	1870	1841	1870
Adj Flow Rate, veh/h	226	48	348	188	69	409
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	4	4	2	2	4	2
Cap, veh/h	298	265	630	534	409	1023
Arrive On Green	0.17	0.17	0.34	0.34	0.06	0.55
Sat Flow, veh/h	1753	1560	1870	1585	1753	1870
Grp Volume(v), veh/h	226	48	348	188	69	409
Grp Sat Flow(s),veh/h/ln	1753	1560	1870	1585	1753	1870
Q Serve(g_s), s	6.2	1.3	7.7	4.5	1.2	6.4
Cycle Q Clear(g_c), s	6.2	1.3	7.7	4.5	1.2	6.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	298	265	630	534	409	1023
V/C Ratio(X)	0.76	0.18	0.55	0.35	0.17	0.40
Avail Cap(c_a), veh/h	632	562	908	769	666	1575
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.0	17.9	13.6	12.6	9.3	6.6
Incr Delay (d2), s/veh	4.0	0.3	0.8	0.4	0.2	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.6	2.3	4.3	7.9	0.5	2.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	23.9	18.3	14.4	13.0	9.5	6.9
LnGrp LOS	C	B	B	B	A	A
Approach Vol, veh/h	274		536			478
Approach Delay, s/veh	22.9		13.9			7.3
Approach LOS	C		B			A

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		35.1		15.4	10.6	24.5
Change Period (Y+Rc), s		7.5		6.8	7.5	7.5
Max Green Setting (Gmax), s		42.5		18.2	10.5	24.5
Max Q Clear Time (g_c+I1), s		8.4		8.2	3.2	9.7
Green Ext Time (p_c), s		2.2		0.6	0.1	2.1

Intersection Summary	
HCM 7th Control Delay, s/veh	13.4
HCM 7th LOS	B

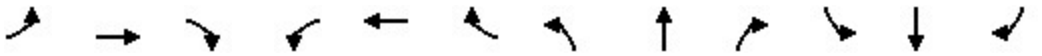
HCM 7th Signalized Intersection Summary
2: Dr MLK Bltwy & Cassadaga Rd Ext/Cassadaga Rd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	2	3	289	0	104	1	382	242	142	530	1
Future Volume (veh/h)	2	2	3	289	0	104	1	382	242	142	530	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1841	1870	1841	1870	1870	1870	1841	1870	1870
Adj Flow Rate, veh/h	2	2	2	318	0	102	1	420	213	156	582	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	4	2	4	2	2	2	4	2	2
Cap, veh/h	307	69	69	532	0	328	153	512	434	295	673	1
Arrive On Green	0.06	0.08	0.08	0.19	0.00	0.21	0.00	0.27	0.27	0.09	0.36	0.36
Sat Flow, veh/h	1781	858	858	1753	0	1585	1781	1870	1585	1753	1867	3
Grp Volume(v), veh/h	2	0	4	318	0	102	1	420	213	156	0	583
Grp Sat Flow(s),veh/h/ln	1781	0	1716	1753	0	1585	1781	1870	1585	1753	0	1870
Q Serve(g_s), s	0.1	0.0	0.2	12.3	0.0	4.3	0.0	16.6	8.9	4.9	0.0	22.9
Cycle Q Clear(g_c), s	0.1	0.0	0.2	12.3	0.0	4.3	0.0	16.6	8.9	4.9	0.0	22.9
Prop In Lane	1.00		0.50	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	307	0	138	532	0	328	153	512	434	295	0	674
V/C Ratio(X)	0.01	0.00	0.03	0.60	0.00	0.31	0.01	0.82	0.49	0.53	0.00	0.86
Avail Cap(c_a), veh/h	713	0	1170	710	0	1081	635	1479	1253	618	0	1478
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.0	0.0	33.5	24.0	0.0	26.6	22.4	26.9	24.1	19.7	0.0	23.5
Incr Delay (d2), s/veh	0.0	0.0	0.1	1.1	0.0	0.5	0.0	3.3	0.9	1.5	0.0	3.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	0.1	8.6	0.0	2.9	0.0	11.2	6.0	3.3	0.0	14.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.0	0.0	33.6	25.1	0.0	27.1	22.4	30.2	24.9	21.2	0.0	27.0
LnGrp LOS	C		C	C		C	C	C	C	C		C
Approach Vol, veh/h		6			420			634			739	
Approach Delay, s/veh		32.1			25.6			28.4			25.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.6	36.0	12.0	22.4	15.5	29.1	22.0	12.4
Change Period (Y+Rc), s	8.5	7.5	7.0	6.1	8.5	7.5	7.0	6.1
Max Green Setting (Gmax), s	21.5	62.5	23.0	53.9	21.5	62.5	23.0	53.9
Max Q Clear Time (g_c+I1), s	2.0	24.9	2.1	6.3	6.9	18.6	14.3	2.2
Green Ext Time (p_c), s	0.0	3.5	0.0	0.6	0.3	3.0	0.6	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	26.7
HCM 7th LOS	C

HCM 7th Signalized Intersection Summary
2: Dr MLK Bltwy & Cassadaga Rd Ext/Cassadaga Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	4	12	289	1	104	4	382	242	142	530	7
Future Volume (veh/h)	20	4	12	289	1	104	4	382	242	142	530	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1841	1870	1841	1870	1870	1870	1841	1870	1870
Adj Flow Rate, veh/h	22	4	13	318	1	102	4	420	213	156	582	8
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	4	2	4	2	2	2	4	2	2
Cap, veh/h	309	32	105	523	3	330	156	516	437	296	671	568
Arrive On Green	0.06	0.08	0.08	0.19	0.21	0.21	0.01	0.28	0.28	0.09	0.36	0.36
Sat Flow, veh/h	1781	387	1257	1753	15	1572	1781	1870	1585	1753	1870	1585
Grp Volume(v), veh/h	22	0	17	318	0	103	4	420	213	156	582	8
Grp Sat Flow(s),veh/h/ln	1781	0	1644	1753	0	1587	1781	1870	1585	1753	1870	1585
Q Serve(g_s), s	0.9	0.0	0.8	12.5	0.0	4.4	0.1	16.8	9.0	5.0	23.2	0.3
Cycle Q Clear(g_c), s	0.9	0.0	0.8	12.5	0.0	4.4	0.1	16.8	9.0	5.0	23.2	0.3
Prop In Lane	1.00		0.76	1.00		0.99	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	309	0	138	523	0	333	156	516	437	296	671	568
V/C Ratio(X)	0.07	0.00	0.12	0.61	0.00	0.31	0.03	0.81	0.49	0.53	0.87	0.01
Avail Cap(c_a), veh/h	710	0	1108	696	0	1069	626	1461	1238	613	1461	1238
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.5	0.0	33.9	24.2	0.0	26.7	22.4	27.0	24.2	19.9	23.9	16.5
Incr Delay (d2), s/veh	0.1	0.0	0.4	1.1	0.0	0.5	0.1	3.2	0.8	1.5	3.6	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	0.0	0.6	8.7	0.0	3.0	0.1	11.3	6.0	3.3	14.3	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.6	0.0	34.3	25.3	0.0	27.2	22.5	30.2	25.1	21.4	27.5	16.6
LnGrp LOS	C		C	C		C	C	C	C	C	C	B
Approach Vol, veh/h		39			421			637			746	
Approach Delay, s/veh		31.7			25.8			28.4			26.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	36.2	12.0	22.9	15.5	29.6	22.1	12.8
Change Period (Y+Rc), s	8.5	7.5	7.0	6.1	8.5	7.5	7.0	6.1
Max Green Setting (Gmax), s	21.5	62.5	23.0	53.9	21.5	62.5	23.0	53.9
Max Q Clear Time (g_c+I1), s	2.1	25.2	2.9	6.4	7.0	18.8	14.5	2.8
Green Ext Time (p_c), s	0.0	3.5	0.0	0.7	0.3	3.0	0.6	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	27.0
HCM 7th LOS	C

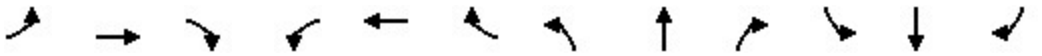


Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	122	38	466	174	61	557
Future Volume (veh/h)	122	38	466	174	61	557
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1841	1841	1870	1870	1841	1870
Adj Flow Rate, veh/h	131	29	501	135	66	599
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	2	2	4	2
Cap, veh/h	226	201	664	563	350	1071
Arrive On Green	0.13	0.13	0.35	0.35	0.06	0.57
Sat Flow, veh/h	1753	1560	1870	1585	1753	1870
Grp Volume(v), veh/h	131	29	501	135	66	599
Grp Sat Flow(s),veh/h/ln	1753	1560	1870	1585	1753	1870
Q Serve(g_s), s	3.4	0.8	11.3	2.9	1.0	9.6
Cycle Q Clear(g_c), s	3.4	0.8	11.3	2.9	1.0	9.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	226	201	664	563	350	1071
V/C Ratio(X)	0.58	0.14	0.75	0.24	0.19	0.56
Avail Cap(c_a), veh/h	666	593	957	811	627	1660
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.6	18.5	13.6	10.9	9.3	6.4
Incr Delay (d2), s/veh	2.4	0.3	2.1	0.2	0.3	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.4	1.3	6.3	5.4	0.4	2.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	22.0	18.8	15.7	11.1	9.6	6.9
LnGrp LOS	C	B	B	B	A	A
Approach Vol, veh/h	160		636			665
Approach Delay, s/veh	21.4		14.7			7.2
Approach LOS	C		B			A

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		34.9		13.0	10.4	24.5
Change Period (Y+Rc), s		7.5		6.8	7.5	7.5
Max Green Setting (Gmax), s		42.5		18.2	10.5	24.5
Max Q Clear Time (g_c+I1), s		11.6		5.4	3.0	13.3
Green Ext Time (p_c), s		3.6		0.3	0.1	2.4

Intersection Summary	
HCM 7th Control Delay, s/veh	12.0
HCM 7th LOS	B

HCM 7th Signalized Intersection Summary
2: Dr MLK Bltwy & Cassadaga Rd Ext/Cassadaga Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	0	2	212	0	189	3	636	232	142	702	3
Future Volume (veh/h)	2	0	2	212	0	189	3	636	232	142	702	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1841	1870	1841	1870	1870	1870	1841	1870	1870
Adj Flow Rate, veh/h	2	0	2	228	0	191	3	684	197	153	755	3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	4	2	4	2	2	2	4	2	2
Cap, veh/h	222	0	115	420	0	255	170	770	652	246	893	4
Arrive On Green	0.05	0.00	0.07	0.14	0.00	0.16	0.00	0.41	0.41	0.07	0.48	0.48
Sat Flow, veh/h	1781	0	1585	1753	0	1585	1781	1870	1585	1753	1862	7
Grp Volume(v), veh/h	2	0	2	228	0	191	3	684	197	153	0	758
Grp Sat Flow(s),veh/h/ln	1781	0	1585	1753	0	1585	1781	1870	1585	1753	0	1869
Q Serve(g_s), s	0.1	0.0	0.1	11.0	0.0	11.0	0.1	32.5	8.0	4.7	0.0	34.0
Cycle Q Clear(g_c), s	0.1	0.0	0.1	11.0	0.0	11.0	0.1	32.5	8.0	4.7	0.0	34.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	222	0	115	420	0	255	170	770	652	246	0	897
V/C Ratio(X)	0.01	0.00	0.02	0.54	0.00	0.75	0.02	0.89	0.30	0.62	0.00	0.85
Avail Cap(c_a), veh/h	557	0	891	595	0	891	563	1220	1034	513	0	1219
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.8	0.0	41.3	32.4	0.0	38.4	20.4	26.2	18.9	21.1	0.0	21.8
Incr Delay (d2), s/veh	0.0	0.0	0.1	1.1	0.0	4.4	0.0	5.3	0.3	2.5	0.0	4.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	0.1	8.2	0.0	8.0	0.1	19.8	5.3	3.2	0.0	19.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.8	0.0	41.3	33.5	0.0	42.8	20.4	31.4	19.2	23.6	0.0	26.0
LnGrp LOS	D		D	C		D	C	C	B	C		C
Approach Vol, veh/h		4			419			884			911	
Approach Delay, s/veh		39.1			37.7			28.7			25.6	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	53.5	12.0	21.5	15.4	47.0	20.4	13.1
Change Period (Y+Rc), s	8.5	7.5	7.0	6.1	8.5	7.5	7.0	6.1
Max Green Setting (Gmax), s	21.5	62.5	23.0	53.9	21.5	62.5	23.0	53.9
Max Q Clear Time (g_c+I1), s	2.1	36.0	2.1	13.0	6.7	34.5	13.0	2.1
Green Ext Time (p_c), s	0.0	4.9	0.0	1.3	0.3	4.9	0.4	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	29.2
HCM 7th LOS	C

HCM 7th Signalized Intersection Summary
2: Dr MLK Bltwy & Cassadaga Rd Ext/Cassadaga Rd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	1	8	212	3	189	12	636	232	142	702	22
Future Volume (veh/h)	14	1	8	212	3	189	12	636	232	142	702	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1841	1870	1841	1870	1870	1870	1841	1870	1870
Adj Flow Rate, veh/h	15	1	9	228	3	191	13	684	197	153	755	24
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	4	2	4	2	2	2	4	2	2
Cap, veh/h	220	12	105	413	4	251	178	770	652	246	876	742
Arrive On Green	0.05	0.07	0.07	0.14	0.16	0.16	0.02	0.41	0.41	0.07	0.47	0.47
Sat Flow, veh/h	1781	161	1449	1753	25	1564	1781	1870	1585	1753	1870	1585
Grp Volume(v), veh/h	15	0	10	228	0	194	13	684	197	153	755	24
Grp Sat Flow(s),veh/h/ln	1781	0	1610	1753	0	1589	1781	1870	1585	1753	1870	1585
Q Serve(g_s), s	0.7	0.0	0.6	11.0	0.0	11.2	0.4	32.5	8.0	4.7	34.5	0.8
Cycle Q Clear(g_c), s	0.7	0.0	0.6	11.0	0.0	11.2	0.4	32.5	8.0	4.7	34.5	0.8
Prop In Lane	1.00		0.90	1.00		0.98	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	220	0	117	413	0	255	178	770	652	246	876	742
V/C Ratio(X)	0.07	0.00	0.09	0.55	0.00	0.76	0.07	0.89	0.30	0.62	0.86	0.03
Avail Cap(c_a), veh/h	555	0	905	588	0	893	550	1219	1033	513	1219	1033
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.1	0.0	41.5	32.4	0.0	38.5	20.4	26.2	19.0	21.1	22.7	13.8
Incr Delay (d2), s/veh	0.1	0.0	0.3	1.2	0.0	4.6	0.2	5.3	0.3	2.5	4.8	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	0.0	0.4	8.2	0.0	8.1	0.3	19.8	5.3	3.2	20.2	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.2	0.0	41.8	33.6	0.0	43.1	20.5	31.4	19.2	23.7	27.5	13.8
LnGrp LOS	D		D	C		D	C	C	B	C	C	B
Approach Vol, veh/h		25			422			894			932	
Approach Delay, s/veh		39.0			37.9			28.6			26.5	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	52.4	12.0	21.5	15.4	47.0	20.4	13.1
Change Period (Y+Rc), s	8.5	7.5	7.0	6.1	8.5	7.5	7.0	6.1
Max Green Setting (Gmax), s	21.5	62.5	23.0	53.9	21.5	62.5	23.0	53.9
Max Q Clear Time (g_c+I1), s	2.4	36.5	2.7	13.2	6.7	34.5	13.0	2.6
Green Ext Time (p_c), s	0.0	4.9	0.0	1.3	0.3	4.9	0.4	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	29.6
HCM 7th LOS	C

HCM 7th Signalized Intersection Summary
3: Dr MLK Bltwy & SR 472

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	928	102	101	866	240	133	236	57	196	323	59
Future Volume (veh/h)	62	928	102	101	866	240	133	236	57	196	323	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1870	1856	1841	1870	1841	1856	1870	1826	1870
Adj Flow Rate, veh/h	65	977	74	106	912	161	140	248	0	206	340	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	7	2	3	4	2	4	3	2	5	2
Cap, veh/h	83	1154	494	127	1233	545	123	217		325	334	
Arrive On Green	0.05	0.32	0.32	0.07	0.35	0.35	0.19	0.19	0.00	0.18	0.18	0.00
Sat Flow, veh/h	1781	3554	1522	1781	3526	1560	652	1156	1572	1781	1826	1585
Grp Volume(v), veh/h	65	977	74	106	912	161	388	0	0	206	340	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1522	1781	1763	1560	1808	0	1572	1781	1826	1585
Q Serve(g_s), s	5.4	38.4	5.2	8.8	34.0	11.2	28.2	0.0	0.0	16.0	27.4	0.0
Cycle Q Clear(g_c), s	5.4	38.4	5.2	8.8	34.0	11.2	28.2	0.0	0.0	16.0	27.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.36		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	83	1154	494	127	1233	545	340	0		325	334	
V/C Ratio(X)	0.79	0.85	0.15	0.84	0.74	0.30	1.14	0.00		0.63	1.02	
Avail Cap(c_a), veh/h	127	1154	494	127	1233	545	340	0		325	334	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.87	0.87	0.00
Uniform Delay (d), s/veh	70.8	47.2	35.9	68.8	42.8	35.4	60.9	0.0	0.0	56.7	61.3	0.0
Incr Delay (d2), s/veh	16.2	7.7	0.6	35.9	4.0	1.4	92.9	0.0	0.0	3.5	51.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.0	24.4	3.5	8.9	21.2	7.8	31.1	0.0	0.0	11.6	23.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	87.0	54.9	36.6	104.7	46.8	36.7	153.8	0.0	0.0	60.1	112.3	0.0
LnGrp LOS	F	D	D	F	D	D	F			E	F	
Approach Vol, veh/h		1116			1179			388			546	
Approach Delay, s/veh		55.6			50.6			153.8			92.6	
Approach LOS		E			D			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.2	60.8		37.0	19.0	57.0		37.0				
Change Period (Y+Rc), s	8.3	8.3		8.8	8.3	8.3		9.6				
Max Green Setting (Gmax), s	10.7	48.7		28.2	10.7	48.7		27.4				
Max Q Clear Time (g_c+I1), s	7.4	36.0		30.2	10.8	40.4		29.4				
Green Ext Time (p_c), s	0.0	4.9		0.0	0.0	3.8		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	71.8	
HCM 7th LOS	E	

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 7th Signalized Intersection Summary
3: Dr MLK Bltwy & SR 472

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	1047	106	124	935	281	144	269	118	353	366	80
Future Volume (veh/h)	88	1047	106	124	935	281	144	269	118	353	366	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1870	1856	1841	1870	1841	1856	1870	1826	1870
Adj Flow Rate, veh/h	93	1102	79	131	984	204	152	283	0	372	385	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	7	2	3	4	2	4	3	2	5	2
Cap, veh/h	113	1154	494	127	1172	518	119	221		325	334	
Arrive On Green	0.06	0.32	0.32	0.07	0.33	0.33	0.19	0.19	0.00	0.18	0.18	0.00
Sat Flow, veh/h	1781	3554	1522	1781	3526	1560	632	1177	1572	1781	1826	1585
Grp Volume(v), veh/h	93	1102	79	131	984	204	435	0	0	372	385	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1522	1781	1763	1560	1809	0	1572	1781	1826	1585
Q Serve(g_s), s	7.7	45.5	5.5	10.7	38.8	15.1	28.2	0.0	0.0	27.4	27.4	0.0
Cycle Q Clear(g_c), s	7.7	45.5	5.5	10.7	38.8	15.1	28.2	0.0	0.0	27.4	27.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.35		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	113	1154	494	127	1172	518	340	0		325	334	
V/C Ratio(X)	0.82	0.96	0.16	1.03	0.84	0.39	1.28	0.00		1.14	1.15	
Avail Cap(c_a), veh/h	127	1154	494	127	1172	518	340	0		325	334	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.73	0.73	0.00
Uniform Delay (d), s/veh	69.4	49.6	36.1	69.6	46.4	38.5	60.9	0.0	0.0	61.3	61.3	0.0
Incr Delay (d2), s/veh	30.5	17.7	0.7	88.3	7.3	2.2	146.4	0.0	0.0	88.1	91.7	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.8	29.8	3.8	12.6	24.3	9.9	39.4	0.0	0.0	28.3	29.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	99.8	67.3	36.8	158.0	53.7	40.7	207.3	0.0	0.0	149.4	153.0	0.0
LnGrp LOS	F	E	D	F	D	D	F			F	F	
Approach Vol, veh/h		1274			1319			435			757	
Approach Delay, s/veh		67.8			62.0			207.3			151.2	
Approach LOS		E			E			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.8	58.2		37.0	19.0	57.0		37.0				
Change Period (Y+Rc), s	8.3	8.3		8.8	8.3	8.3		9.6				
Max Green Setting (Gmax), s	10.7	48.7		28.2	10.7	48.7		27.4				
Max Q Clear Time (g_c+I1), s	9.7	40.8		30.2	12.7	47.5		29.4				
Green Ext Time (p_c), s	0.0	4.0		0.0	0.0	0.8		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	98.5
HCM 7th LOS	F

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	1082	109	124	947	281	145	272	118	353	375	80
Future Volume (veh/h)	88	1082	109	124	947	281	145	272	118	353	375	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1870	1856	1841	1870	1841	1856	1870	1826	1870
Adj Flow Rate, veh/h	93	1139	82	131	997	204	153	286	0	372	395	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	7	2	3	4	2	4	3	2	5	2
Cap, veh/h	113	1154	494	127	1172	518	119	222		325	334	
Arrive On Green	0.06	0.32	0.32	0.07	0.33	0.33	0.19	0.19	0.00	0.18	0.18	0.00
Sat Flow, veh/h	1781	3554	1522	1781	3526	1560	631	1179	1572	1781	1826	1585
Grp Volume(v), veh/h	93	1139	82	131	997	204	439	0	0	372	395	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1522	1781	1763	1560	1809	0	1572	1781	1826	1585
Q Serve(g_s), s	7.7	47.8	5.8	10.7	39.5	15.1	28.2	0.0	0.0	27.4	27.4	0.0
Cycle Q Clear(g_c), s	7.7	47.8	5.8	10.7	39.5	15.1	28.2	0.0	0.0	27.4	27.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.35		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	113	1154	494	127	1172	518	340	0		325	334	
V/C Ratio(X)	0.82	0.99	0.17	1.03	0.85	0.39	1.29	0.00		1.14	1.18	
Avail Cap(c_a), veh/h	127	1154	494	127	1172	518	340	0		325	334	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.73	0.73	0.00
Uniform Delay (d), s/veh	69.4	50.3	36.2	69.6	46.6	38.5	60.9	0.0	0.0	61.3	61.3	0.0
Incr Delay (d2), s/veh	30.5	23.6	0.7	88.3	7.9	2.2	151.1	0.0	0.0	88.1	103.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.8	32.0	3.9	12.6	24.8	9.9	40.1	0.0	0.0	28.3	31.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	99.8	73.9	36.9	158.0	54.5	40.7	212.0	0.0	0.0	149.4	164.6	0.0
LnGrp LOS	F	E	D	F	D	D	F			F	F	
Approach Vol, veh/h		1314			1332			439			767	
Approach Delay, s/veh		73.5			62.5			212.0			157.2	
Approach LOS		E			E			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.8	58.2		37.0	19.0	57.0		37.0				
Change Period (Y+Rc), s	8.3	8.3		8.8	8.3	8.3		9.6				
Max Green Setting (Gmax), s	10.7	48.7		28.2	10.7	48.7		27.4				
Max Q Clear Time (g_c+I1), s	9.7	41.5		30.2	12.7	49.8		29.4				
Green Ext Time (p_c), s	0.0	3.8		0.0	0.0	0.0		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh		102.2
HCM 7th LOS		F

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	1059	133	164	854	289	107	266	69	235	369	75
Future Volume (veh/h)	84	1059	133	164	854	289	107	266	69	235	369	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1870	1856	1841	1870	1841	1856	1870	1826	1870
Adj Flow Rate, veh/h	89	1127	108	174	909	214	114	283	0	250	393	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	7	2	3	4	2	4	3	2	5	2
Cap, veh/h	109	1177	504	139	1227	543	98	243		302	309	
Arrive On Green	0.06	0.33	0.33	0.08	0.35	0.35	0.19	0.19	0.00	0.17	0.17	0.00
Sat Flow, veh/h	1781	3554	1522	1781	3526	1560	521	1294	1572	1781	1826	1585
Grp Volume(v), veh/h	89	1127	108	174	909	214	397	0	0	250	393	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1522	1781	1763	1560	1815	0	1572	1781	1826	1585
Q Serve(g_s), s	7.4	46.6	7.7	11.7	34.0	15.5	28.2	0.0	0.0	20.3	25.4	0.0
Cycle Q Clear(g_c), s	7.4	46.6	7.7	11.7	34.0	15.5	28.2	0.0	0.0	20.3	25.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.29		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	109	1177	504	139	1227	543	341	0		302	309	
V/C Ratio(X)	0.82	0.96	0.21	1.25	0.74	0.39	1.16	0.00		0.83	1.27	
Avail Cap(c_a), veh/h	127	1177	504	139	1227	543	341	0		302	309	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.87	0.87	0.00
Uniform Delay (d), s/veh	69.6	49.1	36.1	69.2	43.0	36.9	60.9	0.0	0.0	60.2	62.3	0.0
Incr Delay (d2), s/veh	28.7	17.8	1.0	159.4	4.1	2.1	101.0	0.0	0.0	15.3	142.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.5	30.4	5.2	18.2	21.2	10.1	32.5	0.0	0.0	15.2	35.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	98.2	66.9	37.1	228.5	47.0	39.1	161.9	0.0	0.0	75.5	204.6	0.0
LnGrp LOS	F	E	D	F	D	D	F			E	F	
Approach Vol, veh/h		1324			1297			397			643	
Approach Delay, s/veh		66.6			70.0			161.9			154.4	
Approach LOS		E			E			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.5	60.5		37.0	20.0	58.0		35.0				
Change Period (Y+Rc), s	8.3	8.3		8.8	8.3	8.3		9.6				
Max Green Setting (Gmax), s	10.7	50.7		28.2	11.7	49.7		25.4				
Max Q Clear Time (g_c+I1), s	9.4	36.0		30.2	13.7	48.6		27.4				
Green Ext Time (p_c), s	0.0	5.4		0.0	0.0	0.8		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	93.6
HCM 7th LOS	F

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 7th Signalized Intersection Summary
3: Dr MLK Bltwy & SR 472

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	1172	138	241	1015	434	116	310	123	370	421	108
Future Volume (veh/h)	116	1172	138	241	1015	434	116	310	123	370	421	108
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1870	1856	1841	1870	1841	1856	1870	1826	1870
Adj Flow Rate, veh/h	123	1247	114	256	1080	369	123	330	0	394	448	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	7	2	3	4	2	4	3	2	5	2
Cap, veh/h	127	1177	504	139	1192	527	93	249		302	309	
Arrive On Green	0.07	0.33	0.33	0.08	0.34	0.34	0.19	0.19	0.00	0.17	0.17	0.00
Sat Flow, veh/h	1781	3554	1522	1781	3526	1560	493	1323	1572	1781	1826	1585
Grp Volume(v), veh/h	123	1247	114	256	1080	369	453	0	0	394	448	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1522	1781	1763	1560	1816	0	1572	1781	1826	1585
Q Serve(g_s), s	10.3	49.7	8.1	11.7	43.9	30.8	28.2	0.0	0.0	25.4	25.4	0.0
Cycle Q Clear(g_c), s	10.3	49.7	8.1	11.7	43.9	30.8	28.2	0.0	0.0	25.4	25.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.27		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	127	1177	504	139	1192	527	341	0		302	309	
V/C Ratio(X)	0.97	1.06	0.23	1.84	0.91	0.70	1.33	0.00		1.31	1.45	
Avail Cap(c_a), veh/h	127	1177	504	139	1192	527	341	0		302	309	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.73	0.73	0.00
Uniform Delay (d), s/veh	69.5	50.1	36.2	69.2	47.4	43.1	60.9	0.0	0.0	62.3	62.3	0.0
Incr Delay (d2), s/veh	69.7	43.4	1.0	405.6	11.5	7.5	166.0	0.0	0.0	154.4	214.9	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.4	38.3	5.6	33.3	27.6	18.3	42.5	0.0	0.0	35.3	44.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	139.2	93.5	37.3	474.8	58.9	50.6	226.9	0.0	0.0	216.7	277.2	0.0
LnGrp LOS	F	F	D	F	E	D	F			F	F	
Approach Vol, veh/h		1484			1705			453			842	
Approach Delay, s/veh		93.0			119.5			226.9			248.9	
Approach LOS		F			F			F			F	

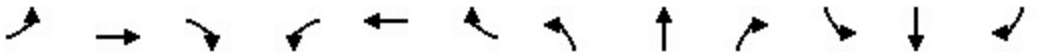
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.0	59.0		37.0	20.0	58.0		35.0				
Change Period (Y+Rc), s	8.3	8.3		8.8	8.3	8.3		9.6				
Max Green Setting (Gmax), s	10.7	50.7		28.2	11.7	49.7		25.4				
Max Q Clear Time (g_c+I1), s	12.3	45.9		30.2	13.7	51.7		27.4				
Green Ext Time (p_c), s	0.0	3.1		0.0	0.0	0.0		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	145.9	
HCM 7th LOS	F	

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 7th Signalized Intersection Summary
3: Dr MLK Bltwy & SR 472



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	1195	140	241	1052	434	119	319	123	370	427	108
Future Volume (veh/h)	116	1195	140	241	1052	434	119	319	123	370	427	108
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1870	1856	1841	1870	1841	1856	1870	1826	1870
Adj Flow Rate, veh/h	123	1271	116	256	1119	369	127	339	0	394	454	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	7	2	3	4	2	4	3	2	5	2
Cap, veh/h	127	1177	504	139	1192	527	93	248		302	309	
Arrive On Green	0.07	0.33	0.33	0.08	0.34	0.34	0.19	0.19	0.00	0.17	0.17	0.00
Sat Flow, veh/h	1781	3554	1522	1781	3526	1560	495	1321	1572	1781	1826	1585
Grp Volume(v), veh/h	123	1271	116	256	1119	369	466	0	0	394	454	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1522	1781	1763	1560	1816	0	1572	1781	1826	1585
Q Serve(g_s), s	10.3	49.7	8.3	11.7	46.2	30.8	28.2	0.0	0.0	25.4	25.4	0.0
Cycle Q Clear(g_c), s	10.3	49.7	8.3	11.7	46.2	30.8	28.2	0.0	0.0	25.4	25.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.27		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	127	1177	504	139	1192	527	341	0		302	309	
V/C Ratio(X)	0.97	1.08	0.23	1.84	0.94	0.70	1.36	0.00		1.31	1.47	
Avail Cap(c_a), veh/h	127	1177	504	139	1192	527	341	0		302	309	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.71	0.71	0.00
Uniform Delay (d), s/veh	69.5	50.1	36.3	69.2	48.2	43.1	60.9	0.0	0.0	62.3	62.3	0.0
Incr Delay (d2), s/veh	69.7	50.5	1.1	405.6	15.0	7.5	182.0	0.0	0.0	154.0	223.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.4	40.1	5.7	33.3	29.4	18.3	45.0	0.0	0.0	35.1	45.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	139.2	100.6	37.4	474.8	63.2	50.6	242.9	0.0	0.0	216.3	285.3	0.0
LnGrp LOS	F	F	D	F	E	D	F			F	F	
Approach Vol, veh/h		1510			1744			466			848	
Approach Delay, s/veh		98.9			120.9			242.9			253.2	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.0	59.0		37.0	20.0	58.0		35.0				
Change Period (Y+Rc), s	8.3	8.3		8.8	8.3	8.3		9.6				
Max Green Setting (Gmax), s	10.7	50.7		28.2	11.7	49.7		25.4				
Max Q Clear Time (g_c+I1), s	12.3	48.2		30.2	13.7	51.7		27.4				
Green Ext Time (p_c), s	0.0	1.8		0.0	0.0	0.0		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	150.7	
HCM 7th LOS	F	

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	1242	1151	14	46	32
Future Vol, veh/h	11	1242	1151	14	46	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	515	-	-	275	275	0
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	1350	1251	15	50	35

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1266	0	-	0	1950	626
Stage 1	-	-	-	-	1251	-
Stage 2	-	-	-	-	699	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	545	-	-	-	56	427
Stage 1	-	-	-	-	233	-
Stage 2	-	-	-	-	454	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	545	-	-	-	55	427
Mov Cap-2 Maneuver	-	-	-	-	160	-
Stage 1	-	-	-	-	228	-
Stage 2	-	-	-	-	454	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.1	0	27.82
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	545	-	-	-	160	427
HCM Lane V/C Ratio	0.022	-	-	-	0.312	0.081
HCM Control Delay (s/veh)	11.8	-	-	-	37.3	14.2
HCM Lane LOS	B	-	-	-	E	B
HCM 95th %tile Q(veh)	0.1	-	-	-	1.2	0.3

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	34	1463	1231	47	31	20
Future Vol, veh/h	34	1463	1231	47	31	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	515	-	-	275	275	0
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	37	1590	1338	51	34	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1389	0	-	0	2207	669
Stage 1	-	-	-	-	1338	-
Stage 2	-	-	-	-	869	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	489	-	-	-	38	400
Stage 1	-	-	-	-	209	-
Stage 2	-	-	-	-	371	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	489	-	-	-	35	400
Mov Cap-2 Maneuver	-	-	-	-	130	-
Stage 1	-	-	-	-	193	-
Stage 2	-	-	-	-	371	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.29	0	31.27
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	489	-	-	-	130	400
HCM Lane V/C Ratio	0.076	-	-	-	0.259	0.054
HCM Control Delay (s/veh)	13	-	-	-	42.1	14.5
HCM Lane LOS	B	-	-	-	E	B
HCM 95th %tile Q(veh)	0.2	-	-	-	1	0.2

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1080	4	4	1050	4	4	0	7	5	0	3
Future Vol, veh/h	3	1080	4	4	1050	4	4	0	7	5	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	520	-	-	520	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	1161	4	4	1129	4	4	0	8	5	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1133	0	0	1166	0	0	1743	2312	583	1727	2312	567
Stage 1	-	-	-	-	-	-	1170	1170	-	1140	1140	-
Stage 2	-	-	-	-	-	-	573	1142	-	587	1172	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	612	-	-	595	-	-	55	38	456	57	38	467
Stage 1	-	-	-	-	-	-	205	265	-	214	274	-
Stage 2	-	-	-	-	-	-	472	273	-	463	264	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	612	-	-	595	-	-	54	37	456	55	37	467
Mov Cap-2 Maneuver	-	-	-	-	-	-	149	138	-	153	138	-
Stage 1	-	-	-	-	-	-	204	264	-	212	272	-
Stage 2	-	-	-	-	-	-	465	271	-	453	263	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.03	0.04	19.44	23.38
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	261	612	-	-	595	-	-	204
HCM Lane V/C Ratio	0.045	0.005	-	-	0.007	-	-	0.042
HCM Control Delay (s/veh)	19.4	10.9	-	-	11.1	-	-	23.4
HCM Lane LOS	C	B	-	-	B	-	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1229	4	4	1142	4	4	0	7	5	0	3
Future Vol, veh/h	3	1229	4	4	1142	4	4	0	7	5	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	520	-	-	520	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	1322	4	4	1228	4	4	0	8	5	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1232	0	0	1326	0	0	1953	2571	663	1906	2571	616
Stage 1	-	-	-	-	-	-	1330	1330	-	1239	1239	-
Stage 2	-	-	-	-	-	-	623	1241	-	667	1332	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	561	-	-	517	-	-	38	26	404	42	26	433
Stage 1	-	-	-	-	-	-	163	222	-	186	246	-
Stage 2	-	-	-	-	-	-	441	245	-	414	222	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	561	-	-	517	-	-	38	25	404	40	25	433
Mov Cap-2 Maneuver	-	-	-	-	-	-	121	116	-	131	116	-
Stage 1	-	-	-	-	-	-	162	221	-	184	244	-
Stage 2	-	-	-	-	-	-	434	243	-	404	220	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.03	0.04	22.47	26.37
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	218	561	-	-	517	-	-	177
HCM Lane V/C Ratio	0.054	0.006	-	-	0.008	-	-	0.049
HCM Control Delay (s/veh)	22.5	11.5	-	-	12	-	-	26.4
HCM Lane LOS	C	B	-	-	B	-	-	D
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1237	4	4	1166	4	4	0	7	5	0	3
Future Vol, veh/h	3	1237	4	4	1166	4	4	0	7	5	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	520	-	-	520	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	1330	4	4	1254	4	4	0	8	5	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1258	0	0	1334	0	0	1974	2605	667	1936	2605	629
Stage 1	-	-	-	-	-	-	1339	1339	-	1265	1265	-
Stage 2	-	-	-	-	-	-	635	1267	-	672	1341	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	549	-	-	513	-	-	37	24	401	40	24	425
Stage 1	-	-	-	-	-	-	161	220	-	179	239	-
Stage 2	-	-	-	-	-	-	433	238	-	412	219	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	549	-	-	513	-	-	36	24	401	38	24	425
Mov Cap-2 Maneuver	-	-	-	-	-	-	119	114	-	127	113	-
Stage 1	-	-	-	-	-	-	160	219	-	178	237	-
Stage 2	-	-	-	-	-	-	426	236	-	402	218	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.03	0.04	22.71	27.05
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	215	549	-	-	513	-	-	172
HCM Lane V/C Ratio	0.055	0.006	-	-	0.008	-	-	0.05
HCM Control Delay (s/veh)	22.7	11.6	-	-	12.1	-	-	27.1
HCM Lane LOS	C	B	-	-	B	-	-	D
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1294	14	15	1019	2	3	0	15	3	1	3
Future Vol, veh/h	4	1294	14	15	1019	2	3	0	15	3	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	520	-	-	520	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	1407	15	16	1108	2	3	0	16	3	1	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1110	0	0	1422	0	0	2010	2565	711	1853	2572	555
Stage 1	-	-	-	-	-	-	1423	1423	-	1141	1141	-
Stage 2	-	-	-	-	-	-	587	1142	-	712	1430	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	625	-	-	475	-	-	35	26	376	46	25	475
Stage 1	-	-	-	-	-	-	143	200	-	213	274	-
Stage 2	-	-	-	-	-	-	463	273	-	389	198	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	625	-	-	475	-	-	33	25	376	42	24	475
Mov Cap-2 Maneuver	-	-	-	-	-	-	108	114	-	136	109	-
Stage 1	-	-	-	-	-	-	142	199	-	206	264	-
Stage 2	-	-	-	-	-	-	442	264	-	370	197	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.03	0.19	19.6	25.1
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	266	625	-	-	475	-	-	187
HCM Lane V/C Ratio	0.074	0.007	-	-	0.034	-	-	0.041
HCM Control Delay (s/veh)	19.6	10.8	-	-	12.9	-	-	25.1
HCM Lane LOS	C	B	-	-	B	-	-	D
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.1

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1446	15	16	1214	2	3	0	16	3	1	3
Future Vol, veh/h	4	1446	15	16	1214	2	3	0	16	3	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	520	-	-	520	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	1572	16	17	1320	2	3	0	17	3	1	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1322	0	0	1588	0	0	2284	2945	794	2150	2952	661
Stage 1	-	-	-	-	-	-	1589	1589	-	1355	1355	-
Stage 2	-	-	-	-	-	-	695	1357	-	795	1597	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	519	-	-	409	-	-	21	15	331	27	14	405
Stage 1	-	-	-	-	-	-	112	166	-	157	216	-
Stage 2	-	-	-	-	-	-	399	216	-	347	164	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	519	-	-	409	-	-	20	14	331	24	14	405
Mov Cap-2 Maneuver	-	-	-	-	-	-	85	89	-	102	84	-
Stage 1	-	-	-	-	-	-	111	165	-	151	207	-
Stage 2	-	-	-	-	-	-	377	206	-	326	163	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.03	0.18	22.47	31.44
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	227	519	-	-	409	-	-	144
HCM Lane V/C Ratio	0.091	0.008	-	-	0.042	-	-	0.053
HCM Control Delay (s/veh)	22.5	12	-	-	14.2	-	-	31.4
HCM Lane LOS	C	B	-	-	B	-	-	D
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.2

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1470	15	16	1230	2	3	0	16	3	1	3
Future Vol, veh/h	4	1470	15	16	1230	2	3	0	16	3	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	520	-	-	520	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	1598	16	17	1337	2	3	0	17	3	1	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1339	0	0	1614	0	0	2318	2989	807	2180	2996	670
Stage 1	-	-	-	-	-	-	1615	1615	-	1373	1373	-
Stage 2	-	-	-	-	-	-	704	1374	-	808	1623	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	511	-	-	400	-	-	20	14	324	26	13	400
Stage 1	-	-	-	-	-	-	108	161	-	153	212	-
Stage 2	-	-	-	-	-	-	394	211	-	341	160	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	511	-	-	400	-	-	19	13	324	23	13	400
Mov Cap-2 Maneuver	-	-	-	-	-	-	82	86	-	99	81	-
Stage 1	-	-	-	-	-	-	107	160	-	147	203	-
Stage 2	-	-	-	-	-	-	372	202	-	320	158	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.03	0.18	22.99	32.18
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	221	511	-	-	400	-	-	140
HCM Lane V/C Ratio	0.094	0.009	-	-	0.043	-	-	0.054
HCM Control Delay (s/veh)	23	12.1	-	-	14.4	-	-	32.2
HCM Lane LOS	C	B	-	-	B	-	-	D
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.2

Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	7	2	10	29	35
Future Vol, veh/h	11	7	2	10	29	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	275	-	-	275	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	8	2	11	32	38

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	13	0	-	0	34	2
Stage 1	-	-	-	-	2	-
Stage 2	-	-	-	-	32	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1605	-	-	-	980	1082
Stage 1	-	-	-	-	1021	-
Stage 2	-	-	-	-	991	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1605	-	-	-	972	1082
Mov Cap-2 Maneuver	-	-	-	-	972	-
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	991	-

Approach	EB	WB	SB
HCM Control Delay, s/v	4.44	0	8.75
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1605	-	-	-	1029
HCM Lane V/C Ratio	0.007	-	-	-	0.068
HCM Control Delay (s/veh)	7.3	-	-	-	8.8
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	36	4	7	30	19	23
Future Vol, veh/h	36	4	7	30	19	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	275	-	-	275	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	4	8	33	21	25

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	40	0	-	0	90	8
Stage 1	-	-	-	-	8	-
Stage 2	-	-	-	-	83	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1569	-	-	-	910	1075
Stage 1	-	-	-	-	1015	-
Stage 2	-	-	-	-	941	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1569	-	-	-	888	1075
Mov Cap-2 Maneuver	-	-	-	-	888	-
Stage 1	-	-	-	-	990	-
Stage 2	-	-	-	-	941	-

Approach	EB	WB	SB
HCM Control Delay, s/v	6.62	0	8.85
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1569	-	-	-	981
HCM Lane V/C Ratio	0.025	-	-	-	0.047
HCM Control Delay (s/veh)	7.4	-	-	-	8.8
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Intersection	
Int Delay, s/veh	3.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	0	7	9	0	23
Future Vol, veh/h	27	0	7	9	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	275	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	0	8	10	0	25

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	33	8	0	0	-	-
Stage 1	8	-	-	-	-	-
Stage 2	25	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	981	1075	-	-	0	-
Stage 1	1015	-	-	-	0	-
Stage 2	998	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	981	1075	-	-	-	-
Mov Cap-2 Maneuver	981	-	-	-	-	-
Stage 1	1015	-	-	-	-	-
Stage 2	998	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.78	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	981	-
HCM Lane V/C Ratio	-	-	0.03	-
HCM Control Delay (s/veh)	-	-	8.8	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	0.1	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	18	0	0	28	0	0
Future Vol, veh/h	18	0	0	28	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	275	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	0	0	30	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1	0	0	0	-	-
Stage 1	0	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	1022	-	-	-	0	-
Stage 1	-	-	-	-	0	-
Stage 2	1022	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1022	-	-	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v		0	0
HCM LOS	-		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s/veh)	-	-	-	-
HCM Lane LOS	-	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-

Intersection	
Int Delay, s/veh	3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	35	2	14	11	7	43
Future Vol, veh/h	35	2	14	11	7	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	2	15	12	8	47

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	83	21	0	0	27	0
Stage 1	21	-	-	-	-	-
Stage 2	62	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	919	1056	-	-	1587	-
Stage 1	1001	-	-	-	-	-
Stage 2	961	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	914	1056	-	-	1587	-
Mov Cap-2 Maneuver	914	-	-	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	956	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.07	0	1.02
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	914	1056	252	-
HCM Lane V/C Ratio	-	-	0.042	0.002	0.005	-
HCM Control Delay (s/veh)	-	-	9.1	8.4	7.3	0
HCM Lane LOS	-	-	A	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	0	-

Intersection	
Int Delay, s/veh	2.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	7	45	36	4	28
Future Vol, veh/h	23	7	45	36	4	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	8	49	39	4	30

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	108	68	0	0	88	0
Stage 1	68	-	-	-	-	-
Stage 2	39	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	890	995	-	-	1508	-
Stage 1	954	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	887	995	-	-	1508	-
Mov Cap-2 Maneuver	887	-	-	-	-	-
Stage 1	954	-	-	-	-	-
Stage 2	980	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.05	0	0.92
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	887	995	225	-
HCM Lane V/C Ratio	-	-	0.028	0.008	0.003	-
HCM Control Delay (s/veh)	-	-	9.2	8.6	7.4	0
HCM Lane LOS	-	-	A	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	0	-

Appendix N
HCM Analysis Worksheets-Improved

HCM 7th Signalized Intersection Summary
3: Dr MLK Bltwy & SR 472

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	1047	106	124	935	281	144	269	118	353	366	80
Future Volume (veh/h)	88	1047	106	124	935	281	144	269	118	353	366	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1870	1856	1841	1870	1841	1856	1870	1826	1870
Adj Flow Rate, veh/h	93	1102	79	131	984	204	152	283	0	372	385	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	7	2	3	4	2	4	3	2	5	2
Cap, veh/h	97	1294	554	165	1260	558	202	396		489	491	
Arrive On Green	0.05	0.36	0.36	0.05	0.36	0.36	0.11	0.11	0.00	0.14	0.14	0.00
Sat Flow, veh/h	1781	3554	1522	3456	3526	1560	1781	3497	1572	3456	3469	1585
Grp Volume(v), veh/h	93	1102	79	131	984	204	152	283	0	372	385	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1522	1728	1763	1560	1781	1749	1572	1728	1735	1585
Q Serve(g_s), s	5.5	30.0	3.7	3.9	26.1	10.2	8.7	8.2	0.0	10.9	11.3	0.0
Cycle Q Clear(g_c), s	5.5	30.0	3.7	3.9	26.1	10.2	8.7	8.2	0.0	10.9	11.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	97	1294	554	165	1260	558	202	396		489	491	
V/C Ratio(X)	0.96	0.85	0.14	0.80	0.78	0.37	0.75	0.71		0.76	0.78	
Avail Cap(c_a), veh/h	97	1294	554	165	1260	558	305	600		592	595	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	49.5	30.8	22.4	49.5	30.1	24.9	45.1	44.9	0.0	43.3	43.5	0.0
Incr Delay (d2), s/veh	78.8	7.2	0.5	23.2	4.9	1.9	5.6	2.4	0.0	4.7	5.6	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.9	18.8	2.3	3.9	16.3	6.7	7.2	6.4	0.0	8.4	8.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	128.4	38.0	22.9	72.7	34.9	26.8	50.7	47.3	0.0	48.0	49.1	0.0
LnGrp LOS	F	D	C	E	C	C	D	D		D	D	
Approach Vol, veh/h		1274			1319			435			757	
Approach Delay, s/veh		43.6			37.4			48.5			48.6	
Approach LOS		D			D			D			D	

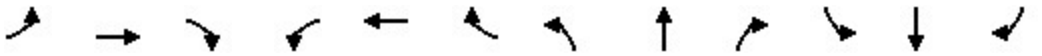
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.0	45.8		20.7	13.3	46.5		24.5				
Change Period (Y+Rc), s	8.3	8.3		8.8	8.3	8.3		9.6				
Max Green Setting (Gmax), s	5.7	28.3		18.0	5.0	29.0		18.0				
Max Q Clear Time (g_c+I1), s	7.5	28.1		10.7	5.9	32.0		13.3				
Green Ext Time (p_c), s	0.0	0.1		1.2	0.0	0.0		1.6				

Intersection Summary	
HCM 7th Control Delay, s/veh	43.0
HCM 7th LOS	D

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 7th Signalized Intersection Summary
3: Dr MLK Bltwy & SR 472



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	1082	109	124	946	281	145	272	118	353	375	80
Future Volume (veh/h)	88	1082	109	124	946	281	145	272	118	353	375	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1870	1856	1841	1870	1841	1856	1870	1826	1870
Adj Flow Rate, veh/h	93	1139	82	131	996	204	153	286	0	372	395	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	7	2	3	4	2	4	3	2	5	2
Cap, veh/h	97	1283	550	165	1250	553	203	398		498	499	
Arrive On Green	0.05	0.36	0.36	0.05	0.35	0.35	0.11	0.11	0.00	0.14	0.14	0.00
Sat Flow, veh/h	1781	3554	1522	3456	3526	1560	1781	3497	1572	3456	3469	1585
Grp Volume(v), veh/h	93	1139	82	131	996	204	153	286	0	372	395	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1522	1728	1763	1560	1781	1749	1572	1728	1735	1585
Q Serve(g_s), s	5.5	31.6	3.8	3.9	26.7	10.2	8.7	8.3	0.0	10.8	11.5	0.0
Cycle Q Clear(g_c), s	5.5	31.6	3.8	3.9	26.7	10.2	8.7	8.3	0.0	10.8	11.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	97	1283	550	165	1250	553	203	398		498	499	
V/C Ratio(X)	0.96	0.89	0.15	0.80	0.80	0.37	0.75	0.72		0.75	0.79	
Avail Cap(c_a), veh/h	97	1283	550	165	1250	553	305	600		592	595	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	49.5	31.5	22.6	49.5	30.5	25.2	45.1	44.9	0.0	43.1	43.4	0.0
Incr Delay (d2), s/veh	78.8	9.3	0.6	23.2	5.3	1.9	5.6	2.4	0.0	4.3	6.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.9	20.0	2.4	3.9	16.7	6.8	7.3	6.5	0.0	8.3	8.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	128.4	40.9	23.2	72.7	35.8	27.1	50.7	47.3	0.0	47.4	49.5	0.0
LnGrp LOS	F	D	C	E	D	C	D	D		D	D	
Approach Vol, veh/h		1314			1331			439			767	
Approach Delay, s/veh		46.0			38.1			48.5			48.5	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.0	45.5		20.8	13.3	46.2		24.7				
Change Period (Y+Rc), s	8.3	8.3		8.8	8.3	8.3		9.6				
Max Green Setting (Gmax), s	5.7	28.3		18.0	5.0	29.0		18.0				
Max Q Clear Time (g_c+I1), s	7.5	28.7		10.7	5.9	33.6		13.5				
Green Ext Time (p_c), s	0.0	0.0		1.2	0.0	0.0		1.6				

Intersection Summary	
HCM 7th Control Delay, s/veh	44.0
HCM 7th LOS	D

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	1172	138	241	1015	434	116	310	123	370	421	108
Future Volume (veh/h)	116	1172	138	241	1015	434	116	310	123	370	421	108
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1870	1856	1841	1870	1841	1856	1870	1826	1870
Adj Flow Rate, veh/h	123	1247	114	256	1080	369	123	330	0	394	448	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	7	2	3	4	2	4	3	2	5	2
Cap, veh/h	140	1354	580	276	1348	597	206	404		496	498	
Arrive On Green	0.08	0.38	0.38	0.08	0.38	0.38	0.12	0.12	0.00	0.14	0.14	0.00
Sat Flow, veh/h	1781	3554	1522	3456	3526	1560	1781	3497	1572	3456	3469	1585
Grp Volume(v), veh/h	123	1247	114	256	1080	369	123	330	0	394	448	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1522	1728	1763	1560	1781	1749	1572	1728	1735	1585
Q Serve(g_s), s	8.5	41.8	6.3	9.2	34.1	23.9	8.2	11.5	0.0	13.8	15.9	0.0
Cycle Q Clear(g_c), s	8.5	41.8	6.3	9.2	34.1	23.9	8.2	11.5	0.0	13.8	15.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	140	1354	580	276	1348	597	206	404		496	498	
V/C Ratio(X)	0.88	0.92	0.20	0.93	0.80	0.62	0.60	0.82		0.79	0.90	
Avail Cap(c_a), veh/h	140	1354	580	276	1348	597	257	504		498	500	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	57.0	36.9	25.9	57.1	34.4	31.2	52.5	54.0	0.0	51.8	52.6	0.0
Incr Delay (d2), s/veh	43.0	11.7	0.8	35.1	5.1	4.8	2.8	8.3	0.0	8.6	19.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.2	26.1	4.1	9.0	20.8	14.2	6.7	9.2	0.0	10.6	12.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	100.0	48.6	26.7	92.2	39.4	36.0	55.3	62.2	0.0	60.4	71.8	0.0
LnGrp LOS	F	D	C	F	D	D	E	E		E	E	
Approach Vol, veh/h		1484			1705			453			842	
Approach Delay, s/veh		51.2			46.6			60.3			66.5	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.1	56.1		23.3	18.3	55.9		27.5				
Change Period (Y+Rc), s	8.3	8.3		8.8	8.3	8.3		9.6				
Max Green Setting (Gmax), s	9.8	44.2		18.0	10.0	44.0		18.0				
Max Q Clear Time (g_c+I1), s	10.5	36.1		13.5	11.2	43.8		17.9				
Green Ext Time (p_c), s	0.0	4.7		0.9	0.0	0.1		0.1				

Intersection Summary	
HCM 7th Control Delay, s/veh	53.2
HCM 7th LOS	D

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	1195	140	241	1052	434	119	319	123	370	427	108
Future Volume (veh/h)	116	1195	140	241	1052	434	119	319	123	370	427	108
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1870	1856	1841	1870	1841	1856	1870	1826	1870
Adj Flow Rate, veh/h	123	1271	116	256	1119	369	127	339	0	394	454	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	7	2	3	4	2	4	3	2	5	2
Cap, veh/h	140	1352	579	268	1338	592	210	413		498	500	
Arrive On Green	0.08	0.38	0.38	0.08	0.38	0.38	0.12	0.12	0.00	0.14	0.14	0.00
Sat Flow, veh/h	1781	3554	1522	3456	3526	1560	1781	3497	1572	3456	3469	1585
Grp Volume(v), veh/h	123	1271	116	256	1119	369	127	339	0	394	454	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1522	1728	1763	1560	1781	1749	1572	1728	1735	1585
Q Serve(g_s), s	8.5	43.1	6.4	9.2	36.1	24.0	8.5	11.8	0.0	13.8	16.1	0.0
Cycle Q Clear(g_c), s	8.5	43.1	6.4	9.2	36.1	24.0	8.5	11.8	0.0	13.8	16.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	140	1352	579	268	1338	592	210	413		498	500	
V/C Ratio(X)	0.88	0.94	0.20	0.95	0.84	0.62	0.60	0.82		0.79	0.91	
Avail Cap(c_a), veh/h	140	1352	579	268	1338	592	257	504		498	500	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	57.0	37.4	26.0	57.4	35.2	31.5	52.4	53.8	0.0	51.7	52.7	0.0
Incr Delay (d2), s/veh	43.0	13.8	0.8	42.5	6.3	4.9	2.8	8.8	0.0	8.5	20.5	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.2	27.2	4.2	9.3	22.0	14.3	7.0	9.5	0.0	10.5	13.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	100.0	51.2	26.7	100.0	41.6	36.4	55.1	62.7	0.0	60.2	73.2	0.0
LnGrp LOS	F	D	C	F	D	D	E	E		E	E	
Approach Vol, veh/h		1510			1744			466			848	
Approach Delay, s/veh		53.3			49.0			60.6			67.2	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.1	55.8		23.5	18.0	55.9		27.6				
Change Period (Y+Rc), s	8.3	8.3		8.8	8.3	8.3		9.6				
Max Green Setting (Gmax), s	9.8	44.2		18.0	9.7	44.3		18.0				
Max Q Clear Time (g_c+I1), s	10.5	38.1		13.8	11.2	45.1		18.1				
Green Ext Time (p_c), s	0.0	3.9		0.9	0.0	0.0		0.0				

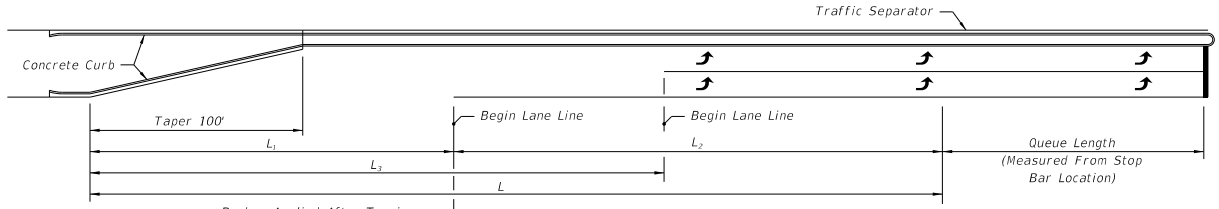
Intersection Summary	
HCM 7th Control Delay, s/veh	55.0
HCM 7th LOS	D

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

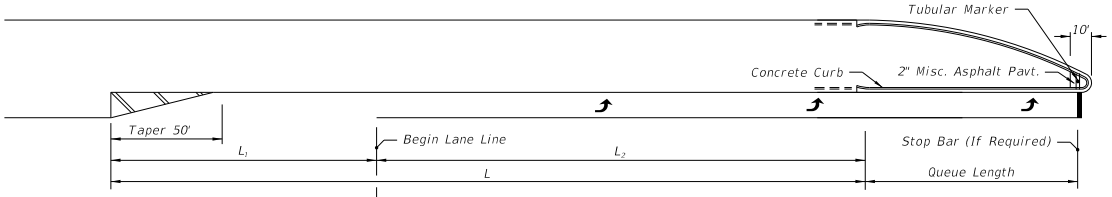
Appendix O
FDM Exhibit 212-1

MEDIAN TURN LANES
MINIMUM DECELERATION LENGTHS



Brakes Applied After Turning
Vehicle Clears Through Lane;
Entry Speed:
10 mph Below Design Speed
For Low Speed Roadways
Average Running Speed For
High Speed Roadways

DOUBLE LEFT TURN



Brakes Applied After Turning
Vehicle Clears Through Lane;
Entry Speed:
10 mph Below Design Speed
For Low Speed Roadways
Average Running Speed For
High Speed Roadways

SINGLE LEFT TURN

MEDIAN TURN LANES					
Design Speed (mph)	Entry Speed (mph)	Clearance Distance L_1 (ft.)	Brake To Stop Distance L_2 (ft.)	Total Decel. Distance L (ft.)	Clearance Distance L_3 (ft.)
25	15	70	25	95	90
30	20	70	50	120	100
35	25	70	75	145	110
40	30	80	75	155	120
45	35	85	100	185	135
50	44	105	185	290	160
55	48	125	225	350	195
60	52	145	260	405	230
65	55	170	290	460	270
70	58	200	325	525	300

NOTE:
1) For C3 Context Classification roadways with Design Speeds of 50 mph, the following values may be used under constrained conditions:
   - Entry Speed of 40 mph
   - Brake to stop distance (L_2) of 135 ft.
   - Total deceleration distance (L) of 240 ft.

2) For RRR Projects with Design Speeds of 50 mph and Entry Speeds of 40 mph, existing brake to stop distances (L_2) of 135 ft. and total deceleration distances (L) of 240 ft. may be retained.

NOT TO SCALE

EXHIBIT 212-1
01/01/2024

Appendix P
Volusia County Land Development Code Turn Lane Guidelines

Major DW	355	365	370	385
Signalized, 4 lanes or more	370	380	385	1320*

DW = Driveway

Minor DW = Maximum ADT of 500 or a maximum peak hour volume of 50

Intermediate DW = Maximum ADT of 1,500 or maximum peak hour volume of 150

Major DW = Maximum ADT of 5,000 or maximum peak hour volume of 500

*Desirable spacing.

Driveway centerline spacing may be increased if the required turn lane storage or transition is increased by any governmental agency. Minimum driveway centerline spacing may be decreased if one-way driveways are utilized and accepted by the DRC.

(4) *Special driveway requirements.* In the case of a land use with special driveway needs, an applicant may submit a traffic engineering study requesting deviations from the requirements of this section. If deviations from driveway requirements are permitted, substitute requirements which deviate no more than necessary to serve the special land use needs may be applied to the development in order to minimize the impact on the adjacent street.

(5) *Turn lanes requirements.*

a. *Turn lane requirements immediately adjacent to the development.*

1. A left-turn lane of 12 feet in width, conforming to Table VI, shall be provided at each driveway when the average daily trip ends of the driveway is 1,000 vehicles or more and/or the average peak hour inbound left-turn volume is 25 vehicles or more. Increased queue lengths (waiting vehicle storage) may be required by the CTE to provide for additional storage, based upon a peak hour entering volume greater than 75 vehicles in the peak hour. No queue length is required if the peak hour entering volume is 75 vehicles in the peak hour or less.
2. A right-turn lane of 12 feet in width, conforming to Table VI shall be provided at each driveway when the speed limit equals or exceeds 35 miles per hour or if the development will generate 100 or more right-turn movements during the peak hour. Increased storage and transition queue lengths (waiting vehicle storage) may be

required by the CTE to provide for additional storage, based upon a peak hour entering volume greater than 150 vehicles in the peak hour. No queue length is required if the peak hour entering volume is 150 vehicles in the peak hour or less.

b. *Additional improvements immediately adjacent to the development.* At intersections, with a thoroughfare which abut the development, the following improvements shall be provided:

1. A right-turn lane of 12 feet in width, conforming to subsection (e)(5) and Table VI, shall be provided if the development will generate 100 or more right turns during the peak hour.
2. A left-turn lane of 12 feet in width conforming to subsection (e)(5) and Table VI, shall be provided if the street's speed limit is 35 miles per hour or greater and if the development will generate 25 or more left turns during the peak hour.

c. *Through lane pavement transition tapers.* A through lane pavement transition taper shall be provided on all streets and roadways where the through lane is offset to provide for right turn lanes, left turn lanes, lane width changes and an increase or reduction in the number of through lanes. The through lane pavement transition taper length shall be based upon FDOT Standard Index #526 and 17346, and calculated using the following formulas:

For design speeds less than or equal to 40 m.p.h. use:

$$L = \frac{WS^2}{60}$$

For design speeds greater than or equal to 45 m.p.h. use:

L	=	WS
L	=	the pavement transition taper length in feet.
W	=	the width of the through lane lateral transition in feet (offset).

TABLE VI. TURN LANE DIMENSIONAL REQUIREMENTS

EXPAND

Speed Limit (mph)	Urban Section Deceleration Length (feet)*	Rural Section Deceleration Length (feet)*
30	145	145
35	155	155
40	185	185
45	240	320
50	N/A**	385
55	N/A**	455

Appendix Q
VOTRAN Bus Route Information

Votran

We drive a great bargain



English/Español January 2024

For DeLand, Deltona, Orange City, and DeBary

WEST VOLUSIA COUNTY

Area Bus Service Guide



VO to GO

Text VO and your bus stop ID to 321123 to receive a real-time update of the next bus to arrive at your stop.

Download the free myStop app

my

myStop brings rider information to your mobile devices. Plan trips, track buses in real time or setup rider alerts to receive up-to-date notifications about possible delays, detours or schedule changes to each route.

How to contact us

Votran, 950 Big Tree Road, South Daytona, FL 32119

Telephone **386-756-7496** Fax **386-756-7487**

website **www.votran.org**

FOR INFORMATION:

Greater Daytona Beach Area **386-761-7700**

West Volusia **386-943-7033**

Buses displaying "Out of Service" do not stop for passengers.

Votran

We drive a great bargain

A service of Volusia County Government

Welcome



Thank you for choosing Votran, a service of Volusia County Government. Votran is a safe, affordable and convenient option. We hope you'll continue to ride Votran every day...to work, to school, to shop, and to play.

How to use the bus map and timetables

System map

Find your street or the street nearest to you on the map. Note the name, number and color of the route nearest you. Bus departure times can be found on the timetable for this route.

Find your destination on the map. Look for the nearest bus route to this location. If this route is different from the first route you have selected, look at the second timetable and map and check where a transfer may be made. Most transfers are made at **Market Place, Providence/Fort Smith Boulevards and Amelia SuperStop at Northgate Plaza.**

"Votran's mission is to identify and safely meet the mobility needs of Volusia County. This mission will be accomplished through a courteous, dependable and environmentally-sound team committment to quality service."

Timetable

Check the timetable on the schedule under your route number and look for the time point (cross streets) closest to where you would like to board the bus. Follow the column down the timetable and find a departure time convenient for your trip. Read across the line to the time point closest to your destination transfer point to find your arrival time.

If your boarding or destination point is between two timepoints, the bus will arrive at your destination at a time between the time the bus passes the first timepoint and arrives at the second timepoint. If your trip appears difficult to plan or you have questions, please call **386-943-7033** for assistance. We will help you plan your trip.

Fares - exact fare only

(Subject to change without notice)

Votran does not issue transfers. We recommend that you purchase an all day pass.

ADULT	**$1.75**
SENIOR CITIZENS (65 OR OLDER)	**$0.85**
DISABLED	**$0.85**
YOUTHS (AGES 7-18)	**$0.85**
CHILDREN (under age 7)	**FREE**

Children must be accompanied by a fare-paying adult passenger. Limited to three children.

Passengers must show valid proof of status when paying a reduced fare or showing a reduced fare pass.

SENIOR CITIZENS (65 AND OLDER):
Government ID or license, U.S. Medicare card (red, white and blue), passport, etc.

DISABLED:
Valid agency ID: Conklin Center, ACT, WORC, Medicare card (red, white and blue), passport, (Not Medicaid Gold Card) or Votran ID card indicating "disabled."

YOUTH (AGES 7-18):
Government ID or license showing valid proof of age, school ID (not college ID)

SAVE MONEY WITH VALUE PASSES

Value passes offer convenience and cost-savings for frequent riders. There are multiple options to suit your travel need.

1-DAY PASS	**$3.75**
3-DAY PASS	**$7.50**
7-DAY PASS	**$13.00**
31-DAY PASS	**$46.00**

SENIOR CITIZENS/DISABLED/YOUTH

1-DAY PASS	**$1.85**
3-DAY PASS	**$3.75**
7-DAY PASS	**$6.50**
31-DAY PASS	**$23.00**

- Passes offer unlimited rides for the duration of the pass.
- Fares can be paid with cash, tokens or passes.
- One-day passes are available on-board all fixed route buses.
- Other value passes are available for purchase at the following locations:

VOTRAN OFFICE:	Weekdays, 8:00 a.m. – 5:00 p.m.
TRANSFER PLAZA:	Monday – Saturday, 7:30 a.m. – 5:00 p.m.
DELTONA REGIONAL PUBLIC LIBRARY:	2150 Eustace Ave, Deltona Call (386) 289-7207 Cash only.
HISTORIC COURTHOUSE	Treasury and Billing Office 125 W. New York Ave, Room 120 DeLand, FL 32720 Monday – Friday, 8:00 a.m. – 4:30 p.m.

Purchase Fare Passes online at votran.org.

Travel tips

1. **EXACT FARE**
When boarding always have exact change ready with proper ID card. Operators are not allowed to make change, handle or deposit fares.

2. **REDUCED FARE**
If you qualify for reduced fares, have your U.S. Medicare, proof of age or Votran ID card ready.

3. **SMOKING, EATING AND DRINKING**
Extinguish your cigarettes and finish your food and soft drink before boarding. All are prohibited. This includes electronic smoking devices.

4. **GETTING ON BUS**
When you have arrived at the street location where you need to catch the bus, stand near a designated stop or where there is no sign, stand at the far side of the intersection, not the near side. The bus will not stop in midblock. Watch for your bus to determine the correct route number before signaling the operator to stop. Signal the bus operator by raising your hand.

5. **GETTING OFF BUS**
When you get within a block of your destination, signal the operator to stop by pushing the yellow strip next to the window or by pulling the cord. Stay seated until the bus comes to a complete stop, then move to the rear of the bus to exit. Wait until the green light above the door signals you to push the vertical bars.

6. **PET CARRIERS ON BUS**
Small dogs or cats may ride Votran provided they are in a pet carrier. Pet carriers will need to fit between the riders feet or in the riders lap. Pet carriers may not block the aisle nor be placed in a seat. Small dogs that exhibit excessive barking or aggression will be asked to leave the bus.

7. **BAGGAGE AND STROLLERS**
You may carry on items that can be safely stowed on board once you are seated. Due to safety regulations Votran is unable to permit items such as bicycles, surf boards, or any article that will block the aisles. Bike racks are provided on the exterior of all buses. Strollers must be folded prior to boarding the bus.

8. **NO SHOES, NO SHIRT, NO SERVICE!**

9. **HOLIDAYS**
Votran routes operate on a limited schedule for New Years Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day and Christmas Day. Log into our website at **www.votran.org** for more details.

10. **HAVE A COMMENT, MISUNDERSTANDING OR COMMENDATION?**
Should you wish to make a comment, outline a misunderstanding or commendation of an employee, please contact our office at **386-943-7033**. Please note the bus route, bus number, time of day and location involved in the matter. You also may describe it in writing and mail it to Votran, 950 Big Tree Rd., South Daytona, FL 32119, or report it through our website **www.votran.org**.

11. **UNFORSEEN EVENTS WILL DELAY BUSES.**

SCHEDULE IS SUBJECT TO CHANGE WITHOUT NOTICE

Points of interest served by Votran

Point of Interest	See Map	Grid Ref	Votran Routes
ATTRACTION/RECREATION			
Dupont Lakes	West Volusia	I6	21, 22
GOVERNMENT/SOCIAL SERVICE			
DeLand City Hall/Government Center	West Volusia	E3	20, VoRide
Deltona City Hall	West Volusia	I6	21, 22, 23
Deltona Library	West Volusia	I5	21, 22, 23
DeBary City Hall	West Volusia	K3	20, 23, 31, 33
Methodist Children's Home	West Volusia	K4	21, 22
Orange City City Hall	West Volusia	H3	20, 31
Thomas C. Kelly County Admin Center	West Volusia	E3	20, 31, VoRide
HOSPITALS/MEDICAL CENTERS			
AdventHealth - DeLand	West Volusia	D2	20, VoRide
AdventHealth - Orange City	West Volusia	I3	23, 33
Ambulatory Surgical Ctr of Central FL	West Volusia	E2	20, VoRide
Deltona Healthcare Rehab Cntr	West Volusia	I6	21, 22
V.A. Clinic Deltona	West Volusia	J4	21, 22
V.C. Health Department	West Volusia	I3	23, 33
SCHOOLS/COLLEGES/UNIVERSITIES			
BCU - Deltona Campus	West Volusia	J5	23, 33
DeLand Middle School	West Volusia	F3	20, 31, VoRide
DeLand High School	West Volusia	E3	VoRide
Daytona State College - DeLand	West Volusia	F5	VoRide
Daytona State College - Deltona	West Volusia	I6	21, 22, 23
Deltona Christian School	West Volusia	K5	21, 22
Deltona Middle School	West Volusia	K4	21, 22
Discovery Elementary School	West Volusia	J4	21, 22
Friendship Elementary School	West Volusia	I7	21, 22
Galaxy Middle School	West Volusia	I5	21, 22
Heritage Middle School	West Volusia	J7	21, 22
Orange City Elementary School	West Volusia	H3	20, 31
Pine Ridge High School	West Volusia	J7	21, 22
Southwestern Middle School	West Volusia	F2	20, 31, VoRide
Spirit Elementary School	West Volusia	J5	23, 33
Starke Elementary School	West Volusia	F3	20, 31, VoRide
Stetson University	West Volusia	E3	20, 31, VoRide
Sunrise Elementary School	West Volusia	K7	21, 22
Timbercrest Elementary School	West Volusia	I5	21, 22
SHOPPING CENTERS			
Breezewood Plaza	West Volusia	I3	20, 31
Country Club Corners - Publix	West Volusia	G3	20, 31, VoRide
Crowne Centre Plaza	West Volusia	J3	20, 21, 22, 23, 33
DeBary Commons Shopping Ctr	West Volusia	J3	20, 23, 31, 33
DeLand Plaza	West Volusia	E3	20, VoRide
Deltona Plaza	West Volusia	J4	21, 22
Dogwood Plaza	West Volusia	I3	20, 31
Dupont Lakes Shopping Center	West Volusia	I7	21, 22, 23
Four Townes Shopping Center	West Volusia	I3	20, 31
Marketplace Shopping Center	West Volusia	J3	20, 21, 22, 23, 33
Northgate Shopping Center	West Volusia	D3	20, 31, 60, VoRide
Oakbrook Professional Center	West Volusia	E2	20, VoRide
Orange City Plaza	West Volusia	I3	20, 31
Saxon Plaza Shopping Center	West Volusia	J4	23, 33
Three Seasons Plaza	West Volusia	I3	20, 31
Village Marketplace	West Volusia	I3	20
Walmart - DeLand	West Volusia	D3	20, VoRide
Walmart - Osteen	West Volusia	K7	21, 22
Walmart - South DeLand	West Volusia	F3	20, 31, VoRide
West Volusia Shopping Center	West Volusia	G3	20, 31
Whispering Pines Plaza	West Volusia	I3	20, 31
Woodland Plaza	West Volusia	F3	20, 31, VoRide
TRANSPORTATION			
Amelia SuperStop	West Volusia	D3	20, 31, 60, VoRide
DeLand Municipal Airport	West Volusia	D3	60
Market Place Transfer Center	West Volusia	J3	20, 21, 22, 23, 33
DeLand Intermodal Transfer Facility	West Volusia	E3	20, 31, VoRide
Saxon Park and Ride	West Volusia	J4	23, 33
SunRail - Debary	West Volusia	F5	31, 33
DeLand Amtrak	West Volusia	E1	VoRide

Other services

PERSONS WITH DISABILITIES
All regular fixed buses are equipped for wheelchair accessibility. Votran's Gold service provides door-to-door transportation to persons unable to use the regular fixed bus service. Transportation is provided daily between 6 a.m. – 6 p.m. with a charge of **$3.00** per trip. Applications for Gold service can be obtained from **votran.org** or by request by calling **386-322-5100**. All applicants must be certified by their doctors.

Greater Daytona Beach Area **386-761-7700**

West Volusia **386-943-7033**

COMMUTER ASSISTANCE SERVICES
If bus services are unable to meet your needs, please consider car or van pooling to reach your destination. Votran offers a variety of commuter assistance services to persons who travel to work within Volusia County or to neighboring areas. To learn more please visit our web site or reach us toll-free at **866-610-RIDE**.

BIKES STOW AND GO
All Votran fixed route buses are equipped with bicycle racks that accommodate up to two bicycles. Racks are available on a first-come, first-served basis, so be prepared to secure your bicycle if the positions are full.

LOST AND FOUND
If you've lost something on the bus, please call **386-756-7496** between 8 a.m. – 5 p.m., Monday – Friday.

Bienvenidos



Muchas gracias por elegir Votran, un servicio del Gobierno del Condado de Volusia. Votran es la opción de transporte segura, al alcance y más conveniente. Esperamos continúe usted viajando con Votran todos los días...al trabajo, la escuela, las tiendas, y a jugar.

Como usar el Horario y el Mapa de las rutas Votran

El Mapa Del Sistema Votran

Encuentre la calle donde usted está ubicado o la calle más cerca de usted en el mapa. Fíjese en el nombre, el número, y el color de la ruta más cerca. La hora de salida del autobús se puede ver en el horario de esta ruta.

Encuentre la localización del lugar adonde usted quiere ir en el mapa. Busque la ruta del autobús más cerca a esta localidad. Si esta ruta es diferente a la primera ruta que usted escogió, mire a la segunda ruta y su horario y busque en donde usted puede hacer un transbordo. El transbordo se puede hacer en **'Market Place', 'Providence/Fort Smith' bulevares y Amelia Super Stop en Northgate Plaza.**

"La misión de Votran es identificar y satisfacer las necesidades de mobilidad en forma segura por el condado de Volusia. Esta misión se logrará a través de un cortés, confiable y un equipo ecológico compromiso a servicio de calidad."

Horario

Revíse la parte que indica el horario del autobús debajo del número de la ruta que usted ha determinado como la mejor para su viaje, y busque la calle o el punto de embarcar que está más cerca a donde usted quiere tomar el autobús. Siga la columna a través del horario hasta que usted encuentre una hora de salida conveniente para su viaje. Lea hacía abajo de esta linea hasta la hora y lugar más cerca de donde usted quiere ir para estimar su hora de llegada.

Si su calle o punto de embarcar o desembarcar el autobús está en el medio de dos paradas, usted puede calcular su llegada con la hora de llegada de la parada antes y de la parada después de la suya. Su autobús llegará a una hora entre estos dos horarios. Si su viaje le parece difícil de planear, o si usted tiene preguntas o necesita ayuda, por favor de llamar este número, **386-943-7033.**

Tarifa - Exacta Solamente

(Conforme a cambio sin aviso)

Votran no emite traslados. Le recomendamos que compre un pase de día entero.

ADULTOS	**$1.75**
CIUDADANOS MAYORES (DE 65 AÑOS)	**$0.85**
PERSONAS INCAPACITADAS	**$0.85**
JOVENES (ENTRE LAS EDADES DE 7 A 18 AÑOS)	**$0.85**
NIÑOS (menores de 7 años de edad)	**GRATIS**

Todo niño debe de ser acompañado por un pasajero adulto con tarifa pagada. Limitado a tres (3) niños.

Todo pasajero debe de mostrar la prueba válida de su estado personal al pagar el precio reducido del pase, o demostrar su pase reducido.

CIUDADANOS JUBILADOS (DESDE 65 AÑOS Y MÁS DE EDAD):
Identificación del gobierno o licencia, tarjeta de Medicare de los EEUU. (rojo, blanco y azul), pasaporte, etc.

INCAPACITADOS:
Identificación valida de la agencia emisora: Conklin Center, ACT, WORC, Tarjeta de Medicare (rojo, blanco y azul), pasaporte, (No se acepta la tarjeta de oro de Medicaid) o tarjeta de identificación de Votran indicando la palabra "disabled."

JÓVENES (DESDE LAS EDADES DE 7 A 18 AÑOS):
Identificación del gobierno o licencia que demuestra la prueba válida de la edad, identificación escolar (no se acepta tarjeta de identificación universitaria).

AHORE SU DINERO COMPRANDO LOS PASES DE TRANSPORTACIÓN

Los pasos del valor ofrecen la conveniencia y los coste-ahorros para los jinetes frecuentes. Hay opciones múltiples para satisfacer su necesidad del recorrido.

PASE DE UN DÍA	**$3.75**
PASE DE 3 DÍAS	**$7.50**
PASE DE 7 DÍAS	**$13.00**
PASE DE 31 DÍA	**$46.00**

PERSONAS JUBILADAS/INCAPACITADOS/JÓVENES

PASE DE UN DÍA	**$1.85**
PASE DE 3 DÍAS	**$3.75**
PASE DE 7 DÍAS	**$6.50**
PASE DE 31 DÍA	**$23.00**

- Los pases ofrecen paseos ilimitados para la duración del paseo.
- Las tarifas se pueden pagar con dinero en efectivo, fichas, o pases.
- Pases de un día están disponibles a bordo todos los autobuses con rutas fijas.
- Otros pases están disponibles para la venta en las siguientes localizaciones:

OFICINA DE VOTRAN:	días laborales, 8:00 a.m. – 5:00 p.m.
PLAZA DE TRANSFERENCIA:	lunes a sábado, 7:30 a.m. – 5:00 p.m.
DELTONA REGIONAL PUBLIC LIBRARY (BIBLIOTECA REGIONAL):	2150 Eustace Ave, Deltona Llame al (386) 289-7207 Únicamente efectivo.
HISTORIC COURTHOUSE	Treasury and Billing Office 125 W. New York Ave, Room 120 DeLand, FL 32720 lunes a viernes, 8:00 a.m. – 5:00 p.m.

Compra de una tarifa pasa en línea en votran.org.

Lo que necesita para el recorrido

1. **TARIFA EXACTA**
Al abordar siempre tenga listo el cambio exacto con la tarjeta apropiada de identificación. No se permite a los operadores a hacer cambio, manejar o depositar el dinero.

2. **PRECIOS REDUCIDOS**
Si usted califica a recibir precios reducidos, tenga listo su tarjeta de Medicare de los EEUU, prueba de su edad, o tarjeta de identificación de Votran.

3. **EL FUMAR, COMER, Y CONSUMIR BEBIDA**
Extinga sus cigarrillos y acabe de alimentarse con comida y refrescos antes de subir. Se prohíben todos. Esto incluye dispositivos electronicós fumadores.

4. **SUBIRSE EN EL AUTOBUS**
Cuando usted ha llegado a la localización en la calle donde usted necesita tomar el autobús, debe de pararse cerca de una parada designada o donde no hay una señal, debe de pararse a los mas lejano de la intersección, no al lado cercano. El autobús no se parará en medio bloque de la calle. Asómese a su autobús para determinar el número correcto de la ruta antes que le señale al operador que se pare. Señale al operador del autobús levantando su mano.

5. **BAJAR DEL AUTOBUS**
Cuando usted ya llegue dentro un bloque de su destinación, señale al operador para que se pare oprimiendo la tira amarilla al lado de la ventana o jalando la cuerda. Permanezca sentado hasta que el autobús se pare completamente. Después muévase a la parte trasera del autobús para salir. Espere hasta que la luz verde sobre la puerta le señale que empuje las barras verticales.

6. **PORTADORES DE MASCOTAS EN EL AUTOBUS**
Perros o gatos pequeños pueden montar Votran siempre que estén en unportador de mascotas. Los portadores deben caber entre sus pies orencima de sus piernas. Los portadores no pueden bloquear el pasillo oser colocados en un asiento. Los perros pequeños que exhiben excesivosladridos o agresión se les pedirá que bajen el autobús.

7. **MALETAS Y COCHES**
Usted puede cargar adentro artículos que se puedan guardar con seguridad a bordo una vez que esté sentado. Debido a las normas de seguridad, Votran no puede permitir artículos tales como bicicletas, tablas de surfear, o cualquier artículo que bloquee los pasillos. Los estantes de bicicletas se proveen en el exterior de todos los autobuses. Cochecitos debe doblarse antes de abordar el autobus.

8. **¡NO ZAPATOS, NO CAMISA, NO SERVICIO!**

9. **DIAS FERIADOS**
Las Rutas de Votran operan en un horario limitado para el Día de Año Nuevo, Memorial Day, el 4 de julio, Labor Day, Thanksgiving Day y el Dia de Navidad. Inicie sesión en nuestro sitio web en **www.votran.org** para más detalles.

10. **¿TIENE ALGUN COMENTARIO, UN MALENTENDIDO, O UNA RECOMENDACION?**
Si usted desea hacer un comentario, dar un resumen sobre un malentendido o elogiar un empleado, por favor comuníquese con nuestra oficina llamando al **386-943-7033**. Favor de anotar la ruta del autobús, número del autobús, la hora del día y la localización implicada en el caso. Usted también puede describir en detalle por escrito y enviarlo por correo postal a Votran, 950 Big Tree Rd., South Daytona, FL 32119, informe a través de nuestro sitio web **www.votran.org**.

11. **EVENTOS IMPREVISTOS RETRASARAN LOS AUTOBUSES**

ESTE HORARIO PUEDE CAMBIAR SIN AVISO

WEST VOLUSIA BUS SERVICE

- All times shown in **bold** are p.m. trips.
- All trips shown in ▭ do not operate on Saturdays.
- All trips shown in ▭ operate on Saturdays only.

Schedule is subject to change without notice

20 DeLand/Orange City

MON-SAT: ***Northbound from Market Place to Deland***

Charles Beall/ Angeles	Market Place *(Arrive)*	Market Place *(Depart)*	Volusia/ Rhode Island	Volusia/ French	Woodland/ Orange Camp	DeLand ITF Gate 2	Thomas C. Kelly County Adm.Ctr	AdventHealth DeLand	Int'l Speedway/ S.R. 15-A	Amelia SuperStop
-:-	-:-	-:-	5:45	5:49	5:55	6:03	-:-	-:-	-:-	6:13
-:-	-:-	6:16	6:24	6:29	6:37	6:47	6:52	6:59	7:04	7:10
-:-	-:-	-:-	6:38	6:43	6:50	-:-	-:-	-:-	-:-	7:10
-:-	-:-	7:25	7:31	7:36	7:42	7:53	8:00	8:08	8:13	8:19
-:-	-:-	8:25	8:31	8:36	8:42	8:53	9:00	9:08	9:13	9:19
9:03	9:13	9:25	9:31	9:36	9:42	9:53	10:00	10:08	10:13	10:19
9:55	10:05	10:25	10:31	10:36	10:42	10:53	11:00	11:08	11:13	11:19
10:55	11:05	11:25	11:31	11:36	11:42	11:53	**12:00**	**12:08**	**12:13**	**12:19**
11:55	**12:05**	**12:25**	**12:31**	**12:36**	**12:42**	**12:53**	**1:00**	**1:08**	**1:13**	**1:19**
12:55	**1:05**	**1:25**	**1:31**	**1:36**	**1:42**	**1:53**	**2:00**	**2:08**	**2:13**	**2:19**
1:55	**2:05**	**2:25**	**2:31**	**2:36**	**2:42**	**2:53**	**3:00**	**3:08**	**3:13**	**3:19**
2:55	**3:05**	**3:25**	**3:31**	**3:36**	**3:42**	**3:53**	**4:00**	**4:08**	**4:13**	**4:19**
3:55	**4:05**	**4:25**	**4:31**	**4:36**	**4:42**	**4:53**	**5:00**	**5:08**	**5:13**	**5:19**
4:55	**5:05**	**5:25**	**5:31**	**5:36**	**5:42**	**5:53**	**6:00**	**6:08**	**6:13**	**6:19**
5:55	**6:05**	**6:25**	**6:31**	**6:36**	**6:42**	**6:53**	**7:00**	**7:08**	**7:13**	**7:19**

MON-SAT ***Southbound from Deland to Market Place***

Amelia SuperStop	Walmart Deland	Amelia SuperStop	Int'l Speedway/ S.R. 15-A	AdventHealth DeLand	Thomas C. Kelly Co. Admin. Ctr	DeLand ITF Gate 1 *(Depart)*	Woodland/ McGregor	Volusia/ French	Volusia/ Rhode Island	Market Place	Charles Beall/ Angeles
6:14	6:23	6:28	6:35	6:39	6:45	6:50	7:00	7:07	7:11	7:20	-:-
7:14	7:19	7:26	7:33	7:37	7:43	7:50	8:00	8:07	8:11	8:20	-:-
8:14	-:-	-:-	-:-	-:-	-:-	8:24	8:34	8:40	8:44	8:53	9:03
8:29	8:34	8:41	8:49	8:54	9:01	9:15	9:24	9:30	9:34	9:45	9:55
9:29	9:34	9:41	9:49	9:54	10:01	10:15	10:24	10:30	10:34	10:45	10:55
10:29	10:34	10:41	10:49	10:54	11:01	11:15	11:24	11:30	11:34	11:45	11:55
11:29	11:34	11:41	11:49	11:54	**12:01**	**12:15**	**12:24**	**12:30**	**12:34**	**12:45**	**12:55**
12:29	**12:34**	**12:41**	**12:49**	**12:54**	**1:01**	**1:15**	**1:24**	**1:30**	**1:34**	**1:45**	**1:55**
1:29	**1:34**	**1:41**	**1:49**	**1:54**	**2:01**	**2:15**	**2:24**	**2:30**	**2:34**	**2:45**	**2:55**
2:29	**2:34**	**2:41**	**2:49**	**2:54**	**3:01**	**3:15**	**3:24**	**3:30**	**3:34**	**3:45**	**3:55**
3:29	**3:34**	**3:41**	**3:49**	**3:54**	**4:01**	**4:15**	**4:24**	**4:30**	**4:34**	**4:45**	**4:55**
4:29	**4:34**	**4:41**	**4:49**	**4:54**	**5:01**	**5:15**	**5:24**	**5:30**	**5:34**	**5:45**	**5:55**
5:29	**5:34**	**5:41**	**5:49**	**5:54**	**6:01**	**6:15**	**6:24**	**6:30**	**6:34**	**6:45**	-:-
6:20	**6:29**	-:-	-:-	-:-	-:-	**6:40**	**6:50**	**6:57**	-:-	-:-	-:-
6:24	**6:29**	**6:36**	**6:44**	**6:49**	**6:56**	**7:10**	**7:19**	**7:25**	**7:29**	**7:38**	-:-
7:20	**7:29**	-:-	-:-	-:-	-:-	**7:40**	**7:50**	**7:57**	**8:01**	-:-	-:-

21 Deltona

MON-SAT: ***Outbound from Market Place to Walmart/Osteen via Providence/Ft. Smith***

Market Place	Deltona Plaza	Providence/ Normandy	Methodist Children's Home	Providence/ Normandy	Providence/ Tivoli	Walmart/ Osteen
-:-	-:-	-:-	-:-	-:-	5:08	5:20
6:25	6:33	6:40	6:46	6:52	6:57	7:11
-:-	-:-	-:-	-:-	-:-	7:04	7:18
8:25	8:33	8:40	8:46	8:52	8:57	9:11
10:25	10:33	10:40	10:46	10:52	10:57	11:11
12:25	**12:33**	**12:40**	**12:46**	**12:52**	**12:57**	**1:11**
2:25	**2:33**	**2:40**	**2:46**	**2:52**	**2:57**	**3:11**
4:25	**4:33**	**4:40**	**4:46**	**4:52**	**4:57**	**5:11**
6:25	**6:33**	**6:40**	**6:46**	**6:52**	**6:57**	**7:11**

MON-SAT: ***Inbound Walmart/Osteen to Market Place via Elkcam/Providence***

Walmart/ Osteen	Pine Ridge High School	Howland/ Elkcam	Newmark/ Montecito	Providence/ Ft. Smith	Deltona City Hall	Deltona Library	Providence/ Tivoli	Providence/ Normandy	Deltona Plaza	Market Place
5:21	5:24	5:31	5:36	5:40	-:-	5:46	5:52	5:56	6:03	6:15
7:19	7:22	7:29	7:34	7:38		7:44	7:50	7:54	8:01	8:13
7:22	7:25	7:32	7:37	7:41	7:45	7:47	7:53	7:57	8:04	8:19
9:22	9:25	9:32	9:37	9:41	9:45	9:47	9:53	9:57	10:04	10:19
11:22	11:25	11:32	11:37	11:41	11:45	11:47	11:53	11:57	**12:04**	**12:19**
1:22	**1:25**	**1:32**	**1:37**	**1:41**	**1:45**	**1:47**	**1:53**	**1:57**	**2:04**	**2:19**
3:22	**3:25**	**3:32**	**3:37**	**3:41**	**3:45**	**3:47**	**3:53**	**3:57**	**4:04**	**4:19**
5:22	**5:25**	**5:32**	**5:37**	**5:41**	**5:45**	**5:47**	**5:53**	**5:57**	**6:04**	**6:19**
7:19	**7:22**	**7:29**	-:-	-:-	-:-	-:-	-:-	-:-	-:-	-:-

22 Deltona

MON-SAT: ***Outbound from Market Place to Walmart/Osteen via Elkcam/Providence***

Market Place	Deltona Plaza	Providence/ Normandy	Providence/ Tivoli	Deltona City Hall	Deltona Library	Elkcam/ Howland	Pine Ridge High School	Walmart/ Osteen
-:-	-:-	5:52	5:57	-:-	6:03	6:11	6:18	6:22
7:25	7:33	7:40	7:45	7:51	7:54	8:03	8:10	8:15
9:25	9:33	9:40	9:45	9:51	9:54	10:03	10:10	10:15
11:25	11:33	11:40	11:45	11:51	11:54	**12:03**	**12:10**	**12:15**
1:25	**1:33**	**1:40**	**1:45**	**1:51**	**1:54**	**2:03**	**2:10**	**2:15**
3:25	**3:33**	**3:40**	**3:45**	**3:51**	**3:54**	**4:03**	**4:10**	**4:15**
5:25	**5:33**	**5:40**	**5:45**	**5:51**	**5:54**	**6:03**	**6:10**	**6:15**

MON-SAT: ***Inbound from Walmart/Osteen to Market Place via Ft. Smith/Providence***

Walmart/ Osteen	Providence/ Tivoli	Providence/ Normandy	Methodist Children's Home	Providence/ Normandy	Deltona Plaza	Market Place
6:24	6:37	6:41	6:47	6:54	7:01	7:18
8:24	8:37	8:41	8:47	8:54	9:01	9:18
10:24	10:37	10:41	10:47	10:54	11:01	11:18
12:24	**12:37**	**12:41**	**12:47**	**12:54**	**1:01**	**1:18**
2:24	**2:37**	**2:41**	**2:47**	**2:54**	**3:01**	**3:18**
4:24	**4:37**	**4:41**	**4:47**	**4:54**	**5:01**	**5:18**
6:20	**6:33**	**6:37**	**6:43**	**6:50**	**6:57**	**7:14**

ROUTE 22 DOES NOT OPERATE ON HOLIDAYS
LA RUTA 22, NO TRABAJA EN LOS DIAS DE FIESTA

23 Orange City

MON-FRI: ***Eastbound from Market Place to Ft. Smith/Providence***

Market Place	Charles Beall/ Angeles	Saxon Blvd Market Place	AdventHealth Orange City	Saxon/Tivoli	Providence/ Ft. Smith
-:-	5:24	5:31	5:35	5:45	5:49
6:20	6:28	6:35	6:39	6:49	6:53
7:20	7:28	7:35	7:39	7:49	7:53
8:20	8:28	8:35	8:39	8:49	8:53
9:20	9:28	9:35	9:39	9:49	9:53
10:20	10:28	10:35	10:39	10:49	10:53
11:20	11:28	11:35	11:39	11:49	11:53
12:20	**12:28**	**12:35**	**12:39**	**12:49**	**12:53**
1:20	**1:28**	**1:35**	**1:39**	**1:49**	**1:53**
2:25	-:-	-:-	**2:31**	**2:41**	**2:45**
3:25	-:-	-:-	**3:31**	**3:41**	**3:45**
4:25	-:-	-:-	**4:31**	**4:41**	**4:45**
5:25	-:-	-:-	**5:31**	**5:41**	**5:45**

MON-FRI: ***Westbound from Providence/Ft. Smith to Market Place***

Providence/ Ft. Smith	Saxon Blvd Park & Ride	Market Place
5:49	6:01	6:16
6:53	7:05	7:20
7:53	8:05	8:20
8:53	9:05	9:20
9:53	10:05	10:20
10:53	11:05	11:20
11:53	**12:05**	**12:20**
12:53	**1:05**	**1:20**
1:53	**2:05**	**2:20**
2:45	**2:57**	**3:12**
3:45	**3:57**	**4:12**
4:45	**4:57**	**5:12**
5:45	**5:57**	**6:12**

SAT ONLY: ***Eastbound from Market Place to Ft. Smith/Providence***

Market Place	Charles Beall/ Angeles	Saxon Blvd Market Place	AdventHealth Orange City	Saxon/Tivoli	Providence/ Ft. Smith
-:-	-:-	-:-	6:39	6:49	6:53
7:20	7:28	7:35	7:39	7:49	7:53
8:20	8:28	8:35	8:39	8:49	8:53
9:20	9:28	9:35	9:39	9:49	9:53
10:20	10:28	10:35	10:39	10:49	10:53
11:20	11:28	11:35	11:39	11:49	11:53
12:20	**12:28**	**12:35**	**12:39**	**12:49**	**12:53**
1:20	**1:28**	**1:35**	**1:39**	**1:49**	**1:53**
2:20	**2:28**	**2:35**	**2:39**	**2:49**	**2:53**
3:20	**3:28**	**3:35**	**3:39**	**3:49**	**3:53**
4:20	**4:28**	**4:35**	**4:39**	**4:49**	**4:53**
5:20	**5:28**	**5:35**	**5:39**	**5:49**	**5:53**

SAT ONLY: ***Westbound from Providence/Ft. Smith to Market Place***

Providence/ Ft. Smith	Saxon Blvd Park & Ride	Market Place
6:53	7:05	7:20
7:53	8:05	8:20
8:53	9:05	9:20
9:53	10:05	10:20
10:53	11:05	11:20
11:53	**12:05**	**12:20**
12:53	**1:05**	**1:20**
1:53	**2:05**	**2:20**
2:53	**3:05**	**3:20**
3:53	**4:05**	**4:20**
4:53	**5:05**	**5:20**
5:53	**6:05**	**6:20**

31 SunRail - US 17-92

MON-FRI ONLY: ***Southbound to SunRail DeBary Station***

Amelia Super Stop	DeLand ITF *(Departs)*	Woodland/ McGreggor	Volusia/ Graves	Charles Beall/ Saxon	Charles Beall/ Highbanks	DeBary SunRail Station	SunRail Departs
4:43	4:53	5:00	5:05	5:12	5:16	5:20	5:30
5:13	5:23	5:30	5:35	5:42	5:46	5:50	6:00
5:43	5:53	6:00	6:05	6:12	6:16	6:20	6:30
6:13	6:23	6:30	6:35	6:42	6:46	6:50	7:00
6:43	6:53	7:00	7:05	7:12	7:16	7:20	7:30
7:08	7:18	7:25	7:30	7:37	7:41	7:45	8:00
7:43	7:53	8:00	8:05	8:12	8:16	8:20	9:00
3:15	**3:31**	**3:40**	**3:47**	**3:56**	**4:02**	**4:08**	**4:30**
3:45	**4:01**	**4:10**	**4:17**	**4:26**	**4:32**	**4:38**	**5:00**
4:15	**4:31**	**4:40**	**4:47**	**4:56**	**5:02**	**5:08**	**5:30**
4:45	**5:01**	**5:10**	**5:17**	**5:26**	**5:32**	**5:38**	-:-
5:15	**5:31**	**5:40**	**5:47**	**5:56**	**6:02**	**6:08**	-:-
5:45	**6:01**	**6:10**	**6:17**	**6:26**	**6:32**	**6:38**	**6:50**
6:18	**6:34**	**6:43**	**6:50**	**6:59**	**7:05**	**7:11**	**8:10**
6:48	**7:04**	**7:13**	**7:20**	**7:29**	**7:35**	**7:41**	**8:10**

MON-FRI ONLY: ***Northbound to Amelia Super Stop***

SunRail Arrives	DeBary SunRail Station	Charles Beall/ Highbanks	Saxon/ Charles Beall	Volusia/ Graves	Woodland/ McGreggor	DeLand ITF *(departs)*	Amelia Super Stop
-:-	5:25	5:30	5:33	5:39	5:44	5:57	6:06
-:-	5:55	6:00	6:03	6:09	6:14	6:27	6:36
-:-	6:25	6:30	6:33	6:39	6:44	6:52	7:01
-:-	6:55	7:00	7:03	7:09	7:14	7:27	7:36
7:18	7:25	7:30	7:33	7:39	7:44	7:57	8:06
7:48	7:55	8:00	8:03	8:09	8:14	8:27	8:36
2:43	**3:25**	**3:30**	**3:33**	**3:39**	**3:44**	**4:00**	**4:09**
3:48	**3:55**	**4:00**	**4:03**	**4:09**	**4:14**	**4:30**	**4:39**
-:-	**4:25**	**4:30**	**4:33**	**4:39**	**4:44**	**5:00**	**5:09**
4:48	**4:55**	**5:00**	**5:03**	**5:09**	**5:14**	**5:30**	**5:39**
5:18	**5:25**	**5:30**	**5:33**	**5:39**	**5:44**	**6:00**	**6:09**
5:48	**5:55**	**6:00**	**6:03**	**6:09**	**6:14**	**6:30**	**6:39**
6:18	**6:25**	**6:30**	**6:33**	**6:39**	**6:44**	**7:00**	**7:09**
6:53	**7:05**	**7:10**	**7:13**	**7:19**	**7:24**	**7:40**	**7:49**
7:23	**7:35**	**7:40**	**7:43**	**7:49**	**7:54**	**8:10**	**8:19**
7:53	**8:05**	**8:10**	**8:13**	**8:19**	**8:24**	**8:40**	**8:49**

33 SunRail - Dupont Lakes

MON-FRI ONLY: ***Westbound to SunRail DeBary Station***

Dupont Lakes Shopping Ctr	Deltona City Hall	Saxon Blvd Park & Ride*	Saxon Blvd Market Place*	DeBary SunRail Station	SunRail Departs
4:25	4:35	4:50	4:58	5:15	5:30
5:25	5:35	5:50	5:58	6:15	6:30
6:25	6:35	6:50	6:58	7:15	7:30
2:25	**2:35**	**2:50**	**2:58**	**3:15**	**3:30**
4:25	**4:35**	**4:50**	**4:58**	**5:15**	**5:30**
-:-	-:-	-:-	**6:25**	**6:42**	**6:50**

MON-FRI ONLY: ***Eastbound to Dupont Lakes***

SunRail Arrives	DeBary SunRail Station	Saxon Blvd Market Place*	AdventHealth Orange City	Saxon Blvd Park & Ride*	Deltona City Hall	Dupont Lakes Shopping Ctr
7:18	7:28	7:40	7:44	7:48	8:06	8:20
8:18	8:28	8:40	8:44	8:48	9:06	9:20
2:43	**3:20**	**3:32**	**3:36**	**3:40**	**3:58**	**4:12**
5:18	**5:28**	**5:40**	**5:44**	**5:48**	**6:06**	**6:20**
6:53	**6:58**	**7:07**	**7:11**	**7:14**	**7:24**	**7:37**

* Buses do not enter Deltona City Hall, Park & Ride, or Market Place. Bus stops are located on the main road.
** Los autobuses no entran en el Ayuntamiento de Deltona, Park & Ride o Market Place. Las paradas de autobús se encuentran en la carretera principal.*

60 East/West Connector

MON-SAT: ***Departs Gate S-5 Westbound to Amelia Superstop***
Does not go inside Volusia Mall

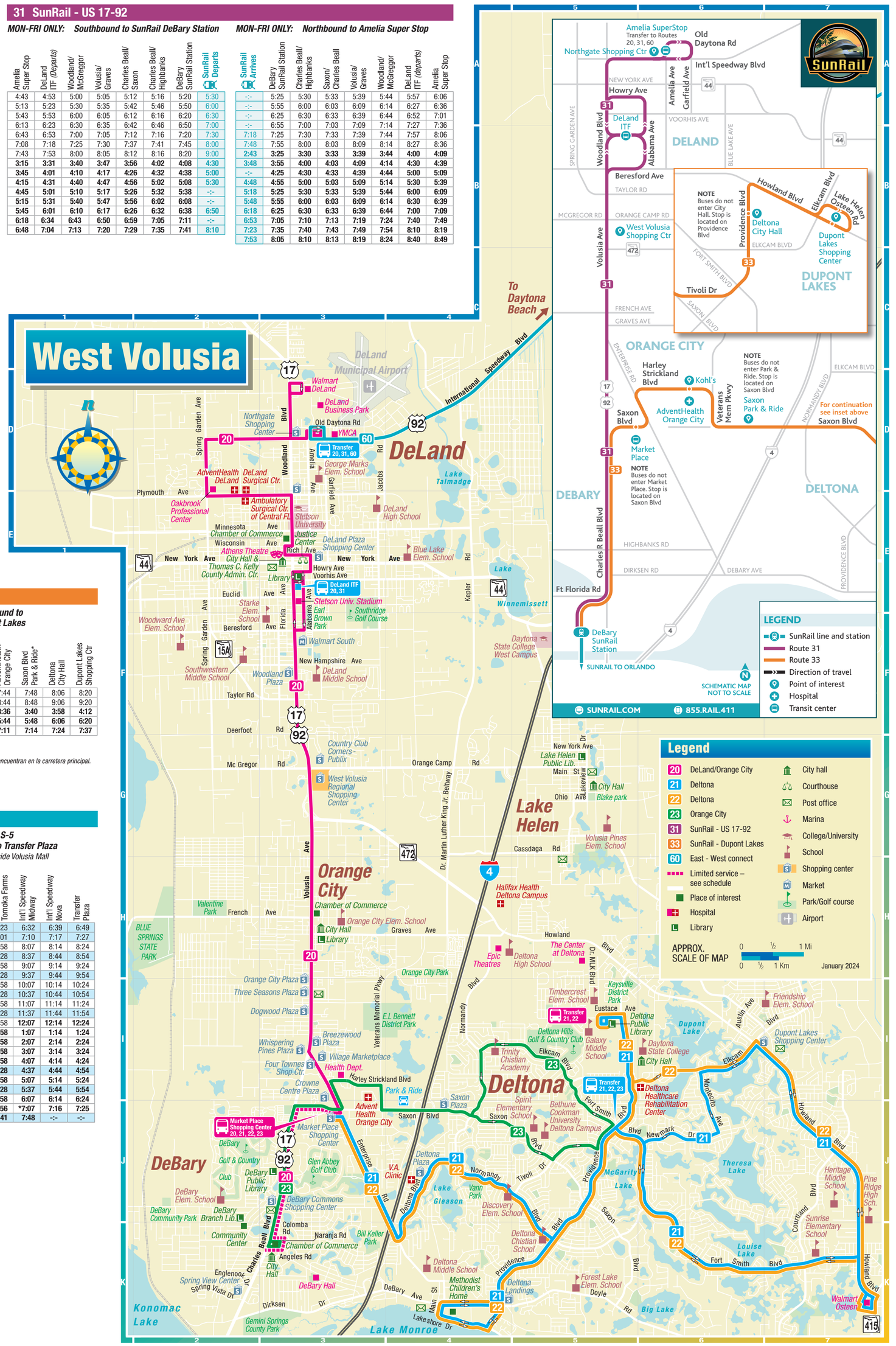
Transfer Plaza	Int'l Speedway Nova	Int'l Speedway Midway	Int'l Speedway Tomoka Farms	Branch Jail	Int'l Speedway Kepler Rd	Amelia Super Stop
-:-	-:-	5:15	5:20	-:-	5:36	5:40
-:-	-:-	*5:57	6:03	-:-	6:19	6:23
6:32	6:40	6:45	6:53	7:01	7:13	7:19
-:-	-:-	6:56	7:01	-:-	7:13	7:19
7:02	7:10	7:15	7:23	7:31	7:43	7:49
7:32	7:40	7:45	7:53	8:01	8:13	8:19
8:02	8:10	8:15	8:23	8:31	8:43	8:49
8:32	8:40	8:45	8:53	9:01	9:13	9:19
9:02	9:10	9:15	9:23	9:31	9:43	9:49
9:32	9:40	9:45	9:53	10:01	10:13	10:19
10:02	10:10	10:15	10:23	10:31	10:43	10:49
10:32	10:40	10:45	10:53	11:01	11:13	11:19
11:32	11:40	11:45	11:53	**12:01**	**12:13**	**12:19**
12:32	**12:40**	**12:45**	**12:53**	**1:01**	**1:13**	**1:19**
1:32	**1:40**	**1:45**	**1:53**	**2:01**	**2:13**	**2:19**
2:32	**2:40**	**2:45**	**2:53**	**3:01**	**3:13**	**3:19**
3:02	**3:10**	**3:15**	**3:23**	**3:31**	**3:43**	**3:49**
3:32	**3:40**	**3:45**	**3:53**	**4:01**	**4:13**	**4:19**
4:02	**4:10**	**4:15**	**4:23**	**4:31**	**4:43**	**4:49**
4:32	**4:40**	**4:45**	**4:53**	**5:01**	**5:13**	**5:19**
5:32	**5:40**	**5:45**	**5:53**	**6:01**	**6:13**	**6:19**
6:32	**6:40**	**6:45**	**6:53**	**7:01**	**7:13**	**7:19**

MON-SAT: ***Arrives Gate S-5 Eastbound to Transfer Plaza***
Does not go inside Volusia Mall

Amelia Super Stop	Int'l Speedway Kepler Rd	Branch Jail	Int'l Speedway Tomoka Farms	Int'l Speedway Midway	Int'l Speedway Nova	Transfer Plaza
5:51	5:56	6:12	6:23	6:32	6:39	6:49
6:29	6:34	6:50	7:01	7:10	7:17	7:27
7:26	7:31	7:47	7:58	8:07	8:14	8:24
7:56	8:01	8:17	8:28	8:37	8:44	8:54
8:26	8:31	8:47	8:58	9:07	9:14	9:24
8:56	9:01	9:17	9:28	9:37	9:44	9:54
9:26	9:31	9:47	9:58	10:07	10:14	10:24
9:56	10:01	10:17	10:28	10:37	10:44	10:54
10:26	10:31	10:47	10:58	11:07	11:14	11:24
10:56	11:01	11:17	11:28	11:37	11:44	11:54
11:26	11:31	11:47	11:58	**12:07**	**12:14**	**12:24**
12:26	**12:31**	**12:47**	**12:58**	**1:07**	**1:14**	**1:24**
1:26	**1:31**	**1:47**	**1:58**	**2:07**	**2:14**	**2:24**
2:26	**2:31**	**2:47**	**2:58**	**3:07**	**3:14**	**3:24**
3:26	**3:31**	**3:47**	**3:58**	**4:07**	**4:14**	**4:24**
3:56	**4:01**	**4:17**	**4:28**	**4:37**	**4:44**	**4:54**
4:26	**4:31**	**4:47**	**4:58**	**5:07**	**5:14**	**5:24**
4:56	**5:01**	**5:17**	**5:28**	**5:37**	**5:44**	**5:54**
5:26	**5:31**	**5:47**	**5:58**	**6:07**	**6:14**	**6:24**
6:24	**6:29**	**6:45**	**6:56**	***7:07**	**7:16**	**7:25**
*****7:23**	**7:27**	-:-	**7:41**	**7:48**	-:-	-:-

* Serves the Daytona Airport at 5:55 a.m. Westbound and 7:05 p.m. Eastbound.
** Sirve al aeropuerto de Daytona a las 5:55 a.m. en dirección oeste y a las 7:05 p.m. hacia el este.*

***The last eastbound trip ends at Clyde Morris. Passengers may deboard at Midway and take Route 10. Night Service at :31 past the hour to go to the Intermodal Transit Facility at Earl St. and A1A.
****El último viaje en dirección este termina en Clyde Morris. Los pasajeros pueden desembarcar en Midway y tomar el servicio nocturno de la ruta 10 a las: 31 después de la hora para ir a la instalación de tránsito intermodal en Earl St. y A1A.*



Appendix R
Signal Four Analytics Crash Data

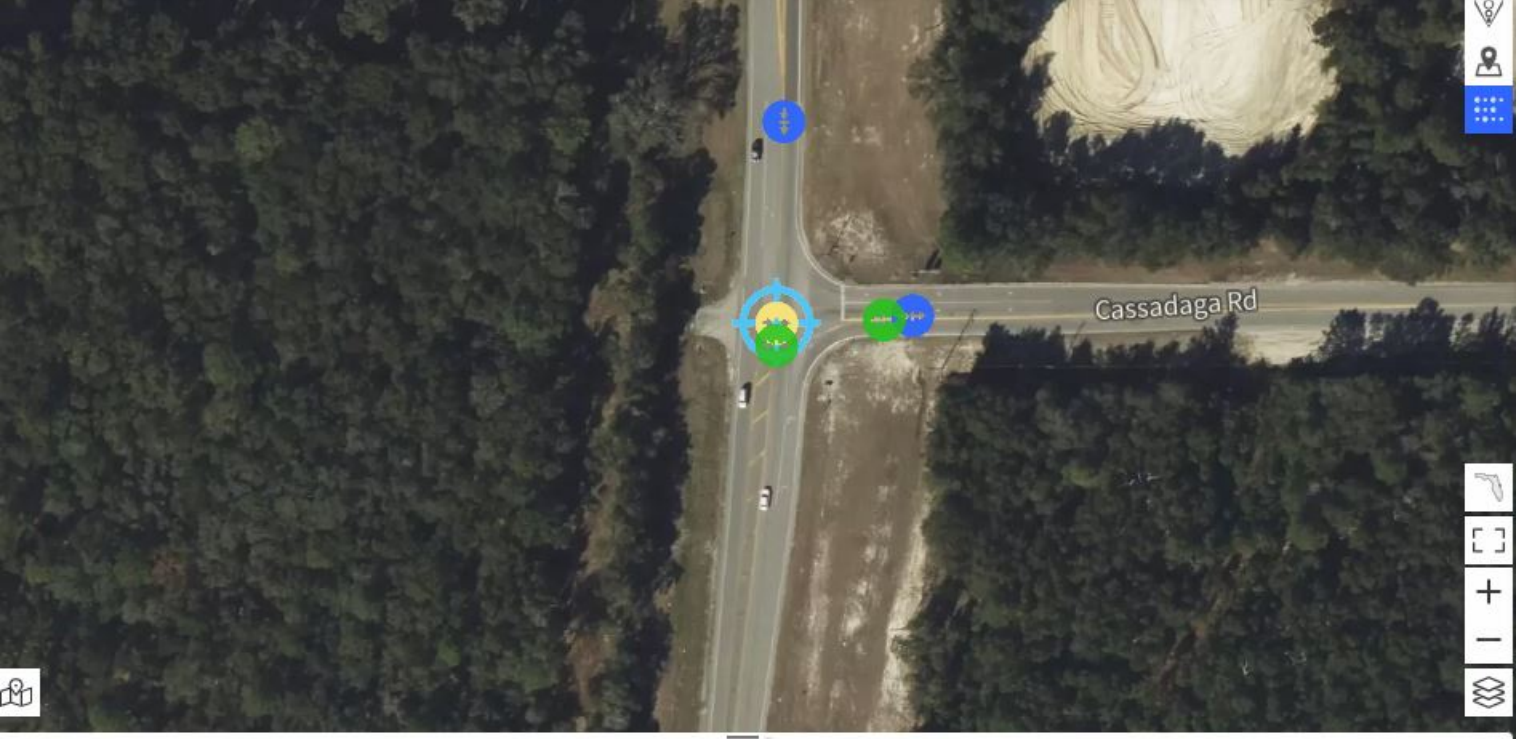
MLK Beltway and Cassadaga Road

REPORT_NUMBER	CRASH_YEAR	TOTAL_NUMBER_OF_VEHICLES	TOTAL_NUMBER_OF_PERSONS	COUNTY_CODE	CITY_CODE	COUNTY_NAME	CITY_NAME	RURAL_OR_URBAN	ON_STREET_ROAD_HIGHWAY	DIRECTION_FROM_INTERSECTION	FROM_INTERSECTION_OF	TYPE_OF_INTERSECTION	PHOTOS_TAKEN	LIGHT_CONDITION	WEATHER_CONDITION	ROAD_SURFACE_CONDITION	SCHOOL_BUS_RELATED_CODE	TYPE_OF_IMPACT	FIRST_HARMFUL_EVENT	LOCATION	INTERCHANGE_FLAG	JUNCTION_FLAG	ROAD_CIRCUMSTANCES_1	ROAD_CIRCUMSTANCES_2	ROAD_CIRCUMSTANCES_3	ENVIRONMENT_CIRCUMSTANCES_1	ENVIRONMENT_CIRCUMSTANCES_2
88074562	2019	2	1	8	36	Volusia	Deland	Urban	CASSADAGA ROAD	East	COUNTY ROAD 4101	T-Intersect	N	Daylight	Clear	Dry	N	Front to Rear	Motor Vehicle in Transport	On Roadwa	N	Intersectio	None			None	
88074557	2019	2	2	8	36	Volusia	Deland	Urban	CASSADAGA ROAD	East	COUNTY ROAD 4101	T-Intersect	N	Daylight	Clear	Dry	N	Front to Rear	Motor Vehicle in Transport	On Roadwa	N	Intersectio	None			None	
87240604	2019	3	3	8	48	Volusia	Orange Cit	Rural	COUNTY ROAD 4101 (	North	CASSADAGA RD	Not at Inte	N	Daylight	Clear	Dry	N	Front to Rear	Motor Vehicle in Transport	On Roadwa	N	Non-Juncti	None			None	
24974479	2022	2	2	8	36	Volusia	Deland	Rural	COUNTY ROAD 4101 (DR. MLK BE		CASSADAGA ROAD	Not at Inte	N	Daylight	Clear	Dry	N	Front to Rear	Motor Vehicle in Transport	On Roadwa	N	Non-Juncti	Work Zone			None	
25074130	2023	2	4	8	0	Volusia	Unincorpo	Rural	COUNTY ROAD 4101	South	CASSADAGA ROAD	Not at Inte	N	Dark - Ligh	Clear	Wet	N	Front to Rear	Motor Vehicle in Transport	On Roadwa	N	Non-Juncti	None			None	

ENVIRONMENT_CIRCUMSTANCES_3	WORK_ZONE_RELATED_FLAG	CRASH_IN_WORK_ZONE	TYPE_OF_WORK_ZONE	WORKERS_PRESENT	LAW_ENFORCEMENT_PRESENT	INVESTIGATOR_RANK	INVESTIGATING_AGENCY_NAME	INVESTIGATING_AGENCY_TYPE	LOAD_DATE	CODEABLE	S4_CRASH_TYPE	S4_CRASH_TYPE_SIMPLIFIED	S4_CRASH_SEVERITY_DETAIL	S4_DAY_OR_NIGHT	S4_IS_AGGRESSIVE_DRIVING	S4_IS_ALCOHOL_RELATED	S4_IS_CMV_INVOLVED	S4_IS_DISTRACTED	S4_IS_DRUG_RELATED	S4_IS_HIT_AND_RUN	S4_IS_INTERSECTION_RELATED	S4_IS_LANE_DEPARTURE_RELATED	S4_IS_SPEEDING_RELATED	S4_NONE_INJURY_COUNT	S4_INJURY_COUNT	S4_POSSIBLE_INJURY_COUNT	S4_NON_INCAPACITATING_INJURY_COUNT	S4_INCAPACITATING_INJURY_COUNT	S4_FATALITY_COUNT	S4_FATALITY_WITHIN_30_DAYS_COUNT
	N					TROOPER	Florida Hig	Florida Hig	########	Y	Rear End	Rear End	No Injury	DAY	N	N	N	N	N	Y	Y	N	N	1	0	0	0	0	0	0
	N					TROOPER	Florida Hig	Florida Hig	########	Y	Rear End	Rear End	Possible Injury	DAY	N	N	N	Y	N	N	Y	N	N	1	1	1	0	0	0	0
	N					SERGEANT	Florida Hig	Florida Hig	########	Y	Rear End	Rear End	Possible Injury	DAY	N	N	N	N	N	N	N	N	N	1	2	2	0	0	0	0
	Y	Activity Are	Work on Sh	Y	N	TPR	Florida Hig	Florida Hig	########	Y	Rear End	Rear End	Non-Incapacitating I	DAY	N	N	N	N	N	N	N	N	N	1	1	0	1	0	0	0
	N					TPR	Florida Hig	Florida Hig	########	Y	Rear End	Rear End	No Injury	NIGHT	N	N	N	Y	N	N	N	N	N	4	0	0	0	0	0	0

S4_NON_TRAFFIC_FATALITY_COUNT	S4_TRAILER_COUNT	S4_MOTORCYCLE_COUNT	S4_MOPED_COUNT	S4_NON_MOTORIST_COUNT	S4_BICYCLIST_COUNT	S4_PEDESTRIAN_COUNT	S4_DRIVER_COUNT	S4_AGING_DRIVER_COUNT	S4_TEENAGER_DRIVER_COUNT	S4_PASSENGER_COUNT	S4_UNRESTRAINED_COUNT	S4_UNRESTRAINED_INJURY_COUNT	S4_UNRESTRAINED_INCAPACITATING_INJURY_COUNT	S4_UNRESTRAINED_FATALITY_COUNT	S4_MOTORCYCLIST_COUNT	S4_MOTORCYCLIST_INCAPACITATING_INJURY_COUNT	S4_MOTORCYCLIST_FATALITY_COUNT	S4_IS_PEDESTRIAN_INVOLVED	S4_PEDESTRIAN_INCAPACITATING_INJURY_COUNT	S4_PEDESTRIAN_FATALITY_COUNT	S4_IS_BICYCLIST_INVOLVED	S4_BICYCLIST_INCAPACITATING_INJURY_COUNT	S4_BICYCLIST_FATALITY_COUNT	S4_CITATION_COUNT	S4_CITATION_AMOUNT	S4_PROPERTY_DAMAGE_COUNT	S4_PROPERTY_DAMAGE_AMOUNT	S4_VEHICLE_DAMAGE_COUNT	S4_VEHICLE_DAMAGE_AMOUNT	S4_TOTAL_DAMAGE_AMOUNT	S4_TRANSPORT_BY_EMS_COUNT
0	0	0	0	0	0	0	1	0	0	0	0	0	0	0				N	0	0	N	0	0	0	0	0	0	1	1000	1000	0
0	0	0	0	0	0	0	2	1	0	0	0	0	0	0				N	0	0	N	0	0	1	0	0	0	2	8000	8000	0
0	0	0	0	0	0	0	3	0	0	0	0	0	0	0				N	0	0	N	0	0	1	0	0	0	3	21500	21500	0
0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	N	0	0	N	0	0	2	0	0	0	2	2000	2000	1
0	0	0	0	0	0	0	2	0	1	2	0	0	0	0	0	0	0	N	0	0	N	0	0	1	0	0	0	2	15000	15000	0

S4_TRANSPORT_BY_LAW_ENFORCEMENT_COUNT	S4_TRANSPORT_BY_OTHER_COUNT	S4_GEOLOCATION_STATUS	S4_PRELIMINARY_GEOLOCATION_STATUS	S4_X	S4_Y	S4_LATITUDE	S4_LONGITUDE
0	0	Preliminary	Editor Map	474153.9	3204263	28.96614	-81.2653
0	0	Preliminary	Editor Map	474160.4	3204264	28.96615	-81.2652
0	0	Preliminary	Editor Map	474131	3204309	28.96655	-81.2655
0	0	Preliminary	Computer	474129.2	3204263	28.96613	-81.2655
0	0	Preliminary	Editor Map	474129.2	3204258	28.96609	-81.2655



Injury Summary | Common Attributes | FDOT Attributes

	Total	Fatal Crashes	Serious Injury Cras...	Injury Crashes	Property Damage ...
Crashes	5	0	0	3	2
Fatalities (within 30 Days)	0	0	0	0	0
Incapacitating Injuries	0	0	0	0	0
Non-Incapacitating Injuries	1	0	0	1	0
Possible Injuries	3	0	0	3	0
No Injuries	8	0	0	3	5
Non-Traffic Fatalities	0	0	0	0	0

SR 472 & S Blue Lake Avenue

REPORT_NUMBER	CRASH_YEAR	LIGHT_CONDITION	WEATHER_CONDITION	ROAD_SURFACE_CONDITION	S4_CRASH_TYPE_SIMPLIFIED	S4_CRASH_SEVERITY_DETAIL	S4_DAY_OR_NIGHT	
88091687	2019	Daylight	Clear	Dry	Rear End	Incapacitating Injury	DAY	
24654910	2022	Dark - Not Lighted	Clear	Dry	Sideswipe	No Injury	NIGHT	



Appendix S
Volusia County Master Proportionate Share Table and Relevant Information

Master Prop Fair Share approved costs & formulas

12/10/2024

Updated 10/23. FDOT Cost Per Mile Reports were calculated 10-22 therefore the 9-23 CPI for Transportation Services of 9.1% is applied. If there is already a county project with estimates based on itemized estimated costs then those amounts are used. Bridge estimates are $300/sf.

Roadway/ Intersection	Segment	Length	Improvement	Cost per Lane Mile (FDOT 11/22)	Additional Cost	Improvement Cost	Design + CEI (25%)	ROW/Mitigation/ Other Costs	2022 Total Improvement Cost	CPI - Trans Svcs (9.2%)	2023-24 Total Improvement Cost	Existing Capacity	Improved Capacity	Capacity Increase	Project Trips	Project Percentage	Prop Share	Prop Share
Graves Ave	Leavitt Ave to VMP	1.18	Widen 2 to 4 lanes, urban	$4,717,890		$5,567,110	$1,391,778		$6,958,888	$640,218	$7,599,105.42	1,620	3,410	1,790		0.00%	$0.00	updated LREs in PFS spreadsheet
	VMP to Kentucky Ave	0.33	Widen 2 to 4 lanes, urban	$4,717,890	$300,000	$1,856,904	$464,226		$2,321,130	$213,544	$2,534,673.55	1,620	3,410	1,790	15	0.84%	$21,240.28	updated LREs in PFS spreadsheet
	Kentucky Ave to 4L at overpass	0.38	Widen 2 to 4 lanes, rural	$3,250,379	$12,050,000	$13,285,144	$3,321,286		$16,606,430	$1,527,792	$18,134,221.59	1,620	3,410	1,790	5	0.28%	$50,654.25	detailed est
Howland Blvd	Forest Edge to Wolf Pack Run	0.25	Widen 4 to 6 lanes, urban	$4,723,934	$300,000	$1,480,984	$370,246		$1,851,229	$170,313	$2,021,542.48	3,410	5,120	1,710		0.00%	$0.00	detailed est
	I-4/SR 472 to Wolf Pack Run	0.40	Widen 4 to 6 lanes, urban	$4,723,934	$480,000	$2,369,574	$592,393		$2,961,967	$272,501	$3,234,467.96	3,410	5,120	1,710	14	0.82%	$26,481.02	detailed est
	Wolf Pack Run to Catalina Blvd	1.20	Widen 4 to 6 lanes, urban	$4,723,934	$1,870,000	$7,538,721	$1,884,680		$9,423,401	$866,953	$10,290,353.89	3,410	5,120	1,710		0.00%	$0.00	detailed est
Kentucky Ave	Graves Ave to SR 472	0.80	Widen 2 to 4 lanes, rural	$3,250,379	$1,715,000	$4,315,303	$1,078,826		$5,394,129	$496,260	$5,890,388.87	1,540	3,410	1,870	20	1.07%	$62,998.81	detailed est
Orange Camp Road	US 17-92 to MLK	2.15	Widen 2 to 4 lanes, urban	Sales Surtax					$19,080,000	$1,755,360	$20,835,360.00							Sales Surtax
Broken out	US 17-92 to Princeton	0.55	Widen 2 to 4 lanes, urban	$8,874,418					$4,880,930	$449,046	$5,329,975.81	1,270	3,410	2,140	3	0.14%	$7,471.93	Sales Surtax
Broken out	Princeton to Blue Lake	1.05	Widen 2 to 4 lanes, urban	$8,874,418					$0	$0	$0.00	1,540	3,410	1,870		0.00%		Sales Surtax
Broken out	Blue Lake to MLK	0.55	Widen 2 to 4 lanes, urban	$8,874,418					$4,880,930	$449,046	$5,329,975.45	1,540	3,410	1,870		0.00%	$0.00	Sales Surtax
Veterans Memorial Pkwy	SR 472 to Graves Ave	1.00	Widen 2 to 4 lanes, rural	Sales Surtax					$15,000,000	$1,380,000	$16,380,000.00	1,620	3,410	1,790		0.00%	$0.00	Sales Surtax
	Graves Ave to Harley Strickland	2.62	Widen 2 to 4 lanes, rural	Sales Surtax					$9,800,000	$901,600	$10,701,600.00							Sales Surtax
Broken out	Parc Hill Driveway to Rhode Island	0.42	Widen 2 to 4 lanes, rural	ARPA					$4,285,000	$394,220	$4,679,220.00	1,540	3,410	1,870		0.00%	$0.00	Aug 2021 ARPA Presentation to CC
Broken out	Harley Strickland Blvd to Rhode Island	1.22	Widen 2 to 4 lanes, rural	ARPA					$12,446,905	$1,145,115	$13,592,020.00	1,540	3,410	1,870	5	0.27%	$36,342.30	Aug 2021 ARPA Presentation to CC
	Rhode Island to Graves Avenue	1.40	Widen 2 to 4 lanes, rural	ARPA					$7,358,000	$676,936	$8,034,936.00	1,620	3,410	1,790		0.00%	$0.00	Aug 2021 ARPA Presentation to CC
West Volusia Beltway (Kepler Road/MLK)	SR 472 to US 92	7.93	Widen 2 to 4 lanes, rural	Sales Surtax					$44,550,000	$4,098,600	$48,648,600.00							Sales Surtax
Broken out	US 92 to Minnesota Ave	1.90	Widen 2 to 4 lanes, rural	$6,197,772		$11,775,767			$11,775,767	$1,083,371	$12,859,137.35	1,540	3,410	1,870		0.00%	$0.00	Sales Surtax
Broken out	Minnesota Ave to SR 44	0.76	Widen 2 to 4 lanes, rural	$6,197,772		$4,710,307			$4,710,307	$433,348	$5,143,654.94	1,540	3,410	1,870		0.00%	$0.00	Sales Surtax
Broken out	SR 44 to E Euclid Ave	0.75	Widen 2 to 4 lanes, rural	$6,197,772		$1,375.53			$1,376	$127	$1,502.08	1,540	3,410	1,870		0.00%	$0.00	Sales Surtax
Broken out	E Euclid Ave to Beresford Ave	0.75	Widen 2 to 4 lanes, rural	$6,197,772		$3,272.80			$3,273	$301	$3,573.90	1,540	3,410	1,870		0.00%	$0.00	Sales Surtax
Broken out	Beresford Ave to Taylor Rd	1.05	Widen 2 to 4 lanes, rural	$6,197,772		$6,507,661			$6,507,661	$598,705	$7,106,365.38	1,540	3,410	1,870		0.00%	$0.00	Sales Surtax
Broken out	Taylor Rd to Orange Camp Rd	1.04	Widen 2 to 4 lanes, rural	$6,197,772		$6,445,683			$6,445,683	$593,003	$7,038,685.70	1,540	3,410	1,870		0.00%	$0.00	Sales Surtax
Broken out	Orange Camp Rd to Cassadaga Rd	1.28	Widen 2 to 4 lanes, rural	$6,197,772		$7,933,148			$7,933,148	$729,850	$8,662,997.79	1,540	3,410	1,870		0.00%	$0.00	Sales Surtax
Broken out	Cassadaga Rd to SR 472	0.40	Widen 2 to 4 lanes, rural	$6,197,772		$2,479,109			$2,479,109	$228,078	$2,707,186.81	1,540	3,410	1,870	15	0.80%	$21,715.40	Sales Surtax

Segment

	Yellow highlighted segments were available in the Master PropShare and used directly for PropShare calculations.
	Orange highlighted segments were estimated based on data from similar road segments, adjusted for length differences, for PropShare calculations.
	Gray Highlights represent the segments whose data were used to estimate Orange Highlight segments.

Model	Cost Per Mile	Report
Rural		
New Construction Undivided 2 Lane Rural Road with 5' Paved Shoulders: R01	$4,054,799.93	Report
New Construction Undivided 3 Lane Rural Road with 5' Paved Shoulders, Center Turn Lane: R02	$4,864,537.52	Report
New Construction Undivided 4 Lane Rural Road with 5' Paved Shoulders: R03	$5,706,368.51	Report
New Construction Divided 4 Lane Rural Road with 2' Paved Shoulders Inside and 5' Paved Shoulders Outside: R04	$7,951,226.49	Report
New Construction Divided 4 Lane Rural Interstate with Paved Shoulders 10' Outside and 4' Inside: R05	$10,097,170.21	Report
New Construction Undivided 5 Lane Rural Road with 5' Paved Shoulders, Center Turn Lane: R06	$6,767,484.45	Report
New Construction Divided 6 Lane Rural Road with 5' Paved Shoulders Inside and Out: R07	$9,608,322.81	Report
New Construction Divided 6 Lane Rural Interstate with 10' Paved Shoulders Inside and Out: R08	$11,768,829.26	Report
New Construction Extra Cost for 1 Single Additional Lane on Rural Arterial: R09	$869,856.58	Report
New Construction Extra Cost for 1 Single Additional Lane on a Rural Interstate: R10	$1,017,259.79	Report
Mill and Resurface 2 Lane Rural Road with 5' Paved Shoulders: R11	$725,185.30	Report
Mill and Resurface 3 Lane Rural Road with 5' Paved Shoulders and Center Turn Lane: R12	$1,006,207.20	Report
Mill and Resurface 4 Lane Rural Road with 5' Paved Shoulders: R13	$1,564,875.63	Report
Mill and Resurface 4 Lane Divided Rural Arterial with 5' Outside Shoulders and 2' Inside: R14	$1,650,420.86	Report
Mill and Resurface 4 Lane Divided Rural Interstate with Paved Shoulders 10' Outside and 4' Inside: R15	$1,900,930.32	Report
Mill and Resurface 5 Lane Rural Road with 5' Paved Shoulders and Center Turn Lane: R16	$1,888,819.25	Report
Mill and Resurface 6 Lane Divided Rural Arterial with 5' Paved Shoulders Inside and Out: R17	$2,353,319.54	Report
Mill and Resurface 6 Lane Divided Rural Interstate with 10' Paved Shoulders Inside and Out: R18	$2,712,032.04	Report
Mill and Resurface 1 Additional Lane Rural Interstate: R19	$446,396.49	Report
Mill and Resurface 1 Additional Lane Rural Arterial: R20	$373,714.37	Report
Widen Existing 2 Lane Arterial to 4 Lanes Undivided; Add 1 Lane to Each Side; 5' Paved Shoulders: R21	$4,225,423.96	Report
Widen Existing 2 Lane Arterial to 4 Lane Divided; Resurface Existing 2 Lanes; 5' Paved Shoulders Inside and Out: R22	$5,088,776.22	Report
Widen Existing 4 Lane Divided Arterial to 6 Lane Divided; Resurface Existing 4 Lanes; 5' Paved Shoulders Inside and Out: R23	$4,836,960.89	Report
Widen 4 Lane Interstate to 6 Lanes (In Median); Mill and Resurface Existing; 10' Paved Shoulders Inside and Out: R24	$7,113,435.51	Report
Widen 4 Lane Interstate to 6 Lanes (Outside); Mill and Resurface Existing; 10' Shoulders Outside; Widen Existing 4' Inside Shoulders to 10': R25	$6,668,747.14	Report
Widen Existing 6 Lane Divided Arterial to 8 Lane Divided; Resurface Existing 6 Lanes; 5' Paved Shoulders Inside and Out: R26	$5,295,850.61	Report
Widen 6 Lane Interstate to 8 Lanes (in Median); Mill and Resurface Existing; 10' Paved Shoulders Inside and Out: R27	$7,831,556.14	Report
Widen Divided Rural 4-Lane to Allow for Left Turn Lane, 300': R28	$270,409.62	Report
Widen Divided Rural 4-Lane for Right Turn Lane, 300': R29	$266,909.26	Report

PLANNING STAFF REPORT
CITY OF DELAND PLANNING BOARD
September 10, 2025

APPLICATION NO: LDR25-136 Text Amendment to Land Development Regulations

APPLICANT: City of DeLand

STAFF PLANNER: Chris Carson, AICP, Senior Planner

REQUEST: City-Initiated Land Development Regulations Text Amendment to Modify Section 33-17 – Zoning Districts, to clarify where Tiny Home Communities are permitted by conditional use; add a new Section, 33-19.15 titled Tiny Home Community Performance Standards and Conditions to allow Tiny Home Communities in some of the single-family residential and commercial zoning districts, add specific performance standards for the tiny home communities; and amend Section 33-12, Definitions, to include several new definitions pertaining to Tiny Home Communities.

APPLICABLE ORDINANCES: *Sec. 33-135. Procedure for text amendments.*

> *33-135.01(a)* Amendments to the text of this chapter may be initiated by the city or upon application of any interested person.
>
> *33-135.12(b)* The Planning Board shall review proposed changes in this chapter, which shall make a recommendation to the City Commission prior to final action adopting or not adopting the amendment. However, at the request of the Planning Board or the City Commission, or in the discretion of the City Manager, proposed amendments may be taken directly to the City Commission for action.

LOCATION: City-wide

STAFF SUMMARY:
In 2023, the Mayor and City Commission directed staff to research and explore how Tiny Home Communities could function in City limits as the City's current Land Development Regulations (LDRs) do not allow Tiny Home Communities. In 2024, staff presented findings to both City Commission and Planning Board to gather feedback. Staff then outlined code revisions based on City Commission and Planning Board feedback. In August, 2025, staff hosted an open house with the public and conducted an online survey to gather further input. Public feedback at the open house was overwhelmingly positive with an overall sentiment that tiny homes are an appropriate housing option. The survey confirmed this sentiment with 83 % of the 253 total responses in favor of allowing Tiny Home Communities.

As such, staff is proposing the following revisions to the Land Development Regulations:

The following draft regulations are proposed to be added to Article 1 and 2 of the Land Development Regulations:

33-12. Definitions

Tiny Home – means an attached or detached residential dwelling with a minimum 200 square feet to a maximum of 600 square feet under heat and air, that is set on an approved permanent foundation. The structure contains plumbing, heating, air conditioning, and an electrical system, meets all applicable Florida Building Code standards. The structures must be site built or of modular construction.

Tiny Home Community – means a single development of 3 or more Tiny Homes on a single lot or parcel.

Tiny Home Community Building – means a structure designed to serve a Tiny Home Community which may contain, but are not limited to, a club house, common dining area, kitchen, bathroom, laundry facilities, and/or storage.

Manufactured Modular Home means a structure or building module as defined by statute and under the jurisdiction and control of the Florida Department of Community Affairs, installed and used as a residence, that is set on an approved permanent foundation. The structure contains plumbing, heating, air conditioning, and an electrical system. The term does not include a mobile home. Modular homes must comply with the standards of the Florida Building Commission, be constructed off-site, and possess a Department of Business and Professional Regulation (DBPR) Insignia label. The term may include a Tiny Home (see **Tiny Home)**.

Transitional Housing - means a Tiny Home Community linked to support services that are offered, for a period less than 24 months, to transition into independent living and permanent housing for persons with low incomes, experiencing homelessness or at imminent risk of homelessness. Support services may include meals, child care, counseling, vocational rehabilitation and other similar services. Transitional Housing shall be managed by a non-profit, religious, institutional, or other quasi-government entity.

Transit Stop – means a designated location or facility where City-recognized public transportation operators pick up and drop off passengers.

33-17 Zoning districts

33-17 Allowed uses in residential zoning districts

	R-R	R-R1	R-1AA	R-1A	R-1B	R-1	R-1C	R-2	R-8	R-12	R-16	R-M	E-1
Tiny Home Community										C	C		

33-17.23 Allowed uses in commercial zoning districts

	P-1	BR	C-1	C-2	C-2A	C-2AC	C-3	C-4	M-1
Tiny Home Community			C	C					

33-19. – Special requirements applicable to conditional uses. (the following subsection will be added)

33-19.15. Tiny Home Community Performance Standards and Conditions

a) *Intent*. A Tiny Home Community is intended to provide affordable housing options and opportunities for infill development within the City's Core Gateway Overlay, with site designs that minimize the impact on adjacent properties and promote development patterns that are compatible with the surrounding areas.

b) *General regulations and restrictions*
Tiny Home Communities are allowed in the R-12, R-16, C-1 and C-2 zoning districts, provided the following standards and conditions are met:

1. Locational Standards
    i. A Tiny Home Community shall be located only within the Core Gateway Overlay.
    ii. A Tiny Home Community shall not be located on lots or parcels abutting or with direct access on New York Avenue or Woodland Boulevard.

2. *Maximum Density*
    i. A maximum of 20 Tiny Home units per acre.
    ii. For purposes of calculating density, each Tiny Home unit shall be calculated as 0.5 dwelling units.

3. *Dimensional Standards*
    i. Maximum lot or project size 2 acres.

4. *Setbacks*
    i. Perimeter – 10 feet
    ii. Street – 20 feet
    iii. Vehicle use separation setback is 5 feet. The vehicle use separation area may encroach up to a maximum of 5 feet into the perimeter landscape buffer area.

5. *Minimum separation between structures*
    i. 10 feet

6. *Maximum Impervious Surface Area*
    i. 60%

7. *Maximum Building Height*

i. 35 feet

8. *Parking*
   i. All parking shall be clustered or grouped to maximize open space and common areas.
   ii. 1 space per unit
   iii. 0.25 guest spaces per unit

9. *Bicycle Parking*
   i. 0.5 bicycle parking spaces per Tiny Home.
   ii. Bicycle parking shall be secure, covered, and centrally located.

10. *Landscape buffers*
    Landscaping shall be provided to minimize impact to surrounding properties and to create a cohesive site.

    i. A minimum Class B landscape buffer is required along the street frontage.
    ii. A minimum of a 10-foot landscape buffer shall be provided along the perimeter, and shall contain a minimum of 1 tree and 5 shrubs every 50 linear feet.

11. Tree Protection Area
    i. Fifteen (15) percent of the square footage of the Tiny Home Community shall be designated for the protection of trees.

12. *Design Standards*
    i. Front facades shall include a covered porch, deck, or patio.
    ii. Facades oriented toward public rights-of-way shall include a covered stoop or other type of wall articulation to provide interest and variety.
    iii. Pitched roofs are encouraged.
    iv. A variety of architectural styles and rooflines are required:

0-16 tiny home units	2 styles
17-30 tiny home units	3 styles
> 30 tiny home units	4 styles

13. *Common Area*
    i. All Tiny Homes should face the common area or common walkways.
    ii. The common area shall be usable and may include gathering spaces, common green space, community gardens, recreational areas, play areas, and plazas.

iii. An internal paved sidewalk system shall be included to connect all Tiny Homes to the common open space area and group/clustered parking areas as well as any on-site amenities such as covered bike parking area(s), recreation areas, community gardens, passive park(s), or dog park(s), etc.

14. *Tiny Home Community Building*
    i. No more than two (2) Tiny Home Community Building(s), with a cumulative area of up to 1,200 square feet, shall be allowed in any single Tiny Home Community.

15. *Maintenance*
    i. Each Tiny Home Community shall be responsible for maintaining all common areas, trash areas, common landscaping, stormwater facilities, buffers, parking areas, lighting, shared utility buildings, sidewalks, emergency vehicle access, and internal drives.

16. Alternative Standards for Transitional Housing Development
    Tiny Home Communities consisting of Transitional Housing may apply the following standards:
    i. Parking shall be provided at 0.5 parking spaces per Tiny Home unit. A fifty (50) percent reduction is applied if any of the following conditions apply:
        a. The development is within 0.25 miles of a transit stop;
        b. Shared parking is available within 660' and a shared parking agreement is approved by the Technical Review Committee, Planning Board, or the City Commission, as applicable, and recorded prior to issuance of a development order. Said shared parking agreement shall be in place for a minimum of 10 years which agreement is binding upon the shared parking location and is recorded in the public records.
    ii. A maximum of two (2) independent living areas within a Tiny Home shall be permitted to share a common cooking facility.
    iii. A Tiny Home Community Building may be located on an adjacent site with approval by the Technical Review Committee, Planning Board, or the City Commission, as applicable.

STAFF ANALYSIS AND FINDINGS: Staff finds that these revisions will provide an additional housing option, while maintaining and complementing existing neighborhoods within the core area. It is important to note that these standards are not intended to override or supersede any home owners' association or Planned Development (PD) standards.

Next Steps: The request will go before the City Commission on October 6, 2025 for first reading, and on October 20, 2025 for second reading.

STAFF RECOMMENDATION: Staff recommends that the Planning Board forward these proposed text amendments, project number LDR25-136, to Modify Section 33-17 – Zoning Districts, to clarify where Tiny Home Communities are permitted by conditional use; add a new Section, 33-19.15 titled Tiny Home Community Performance Standards and Conditions to allow Tiny Home Communities in some of the single-family residential and commercial zoning districts, add specific performance standards for the tiny home communities; and amend Section 33-12, Definitions, to include several new definitions pertaining to Tiny Home Communities; to the City Commission for review and approval.

The following draft regulations are proposed to be added to Article 1 and 2 of the Land Development Regulations:

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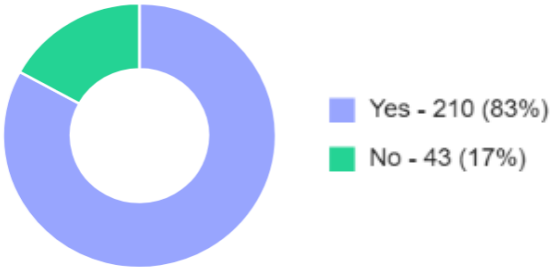
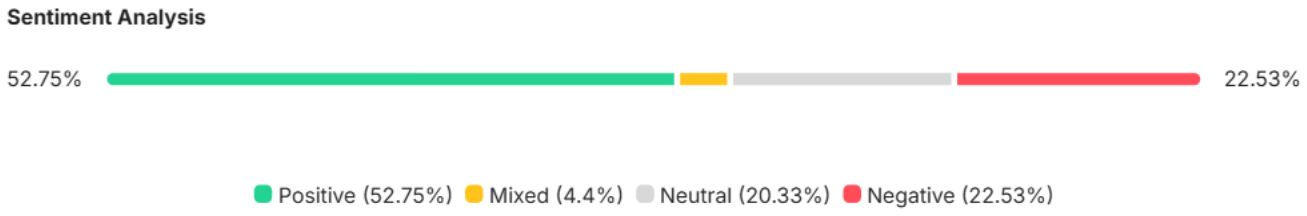
City of DeLand – Land Development Regulations Update
Tiny Home Community Survey – August 2025
August 14, 2025 - 02:30 PM – August 21, 2025 - 11:59 PM

Submissions Started	With at least one response	Submission Completes	Completion Rate
501	253	149	29.74%

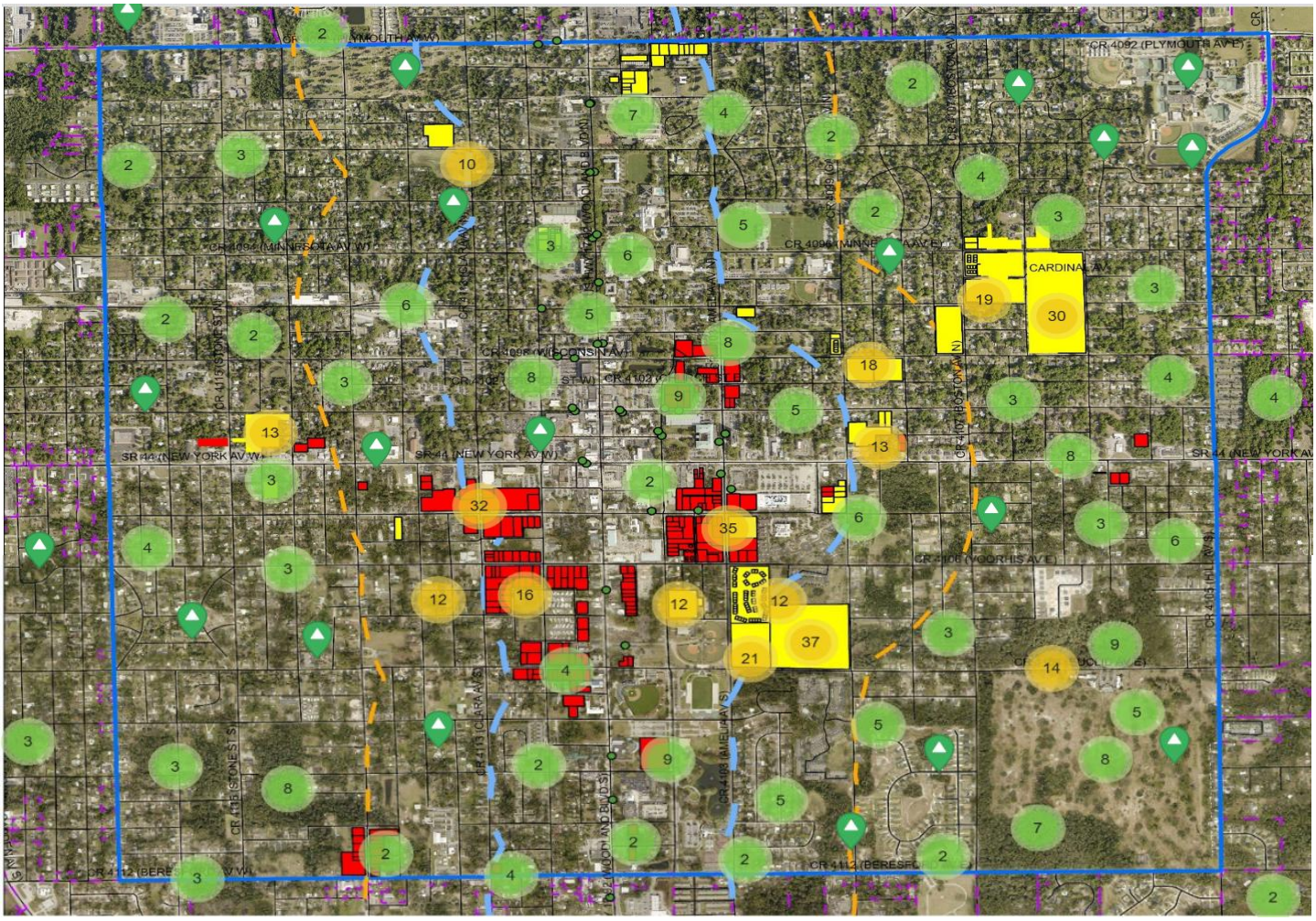
Q1: Do you think the City of DeLand should allow Tiny Home communities? *(253/253)*



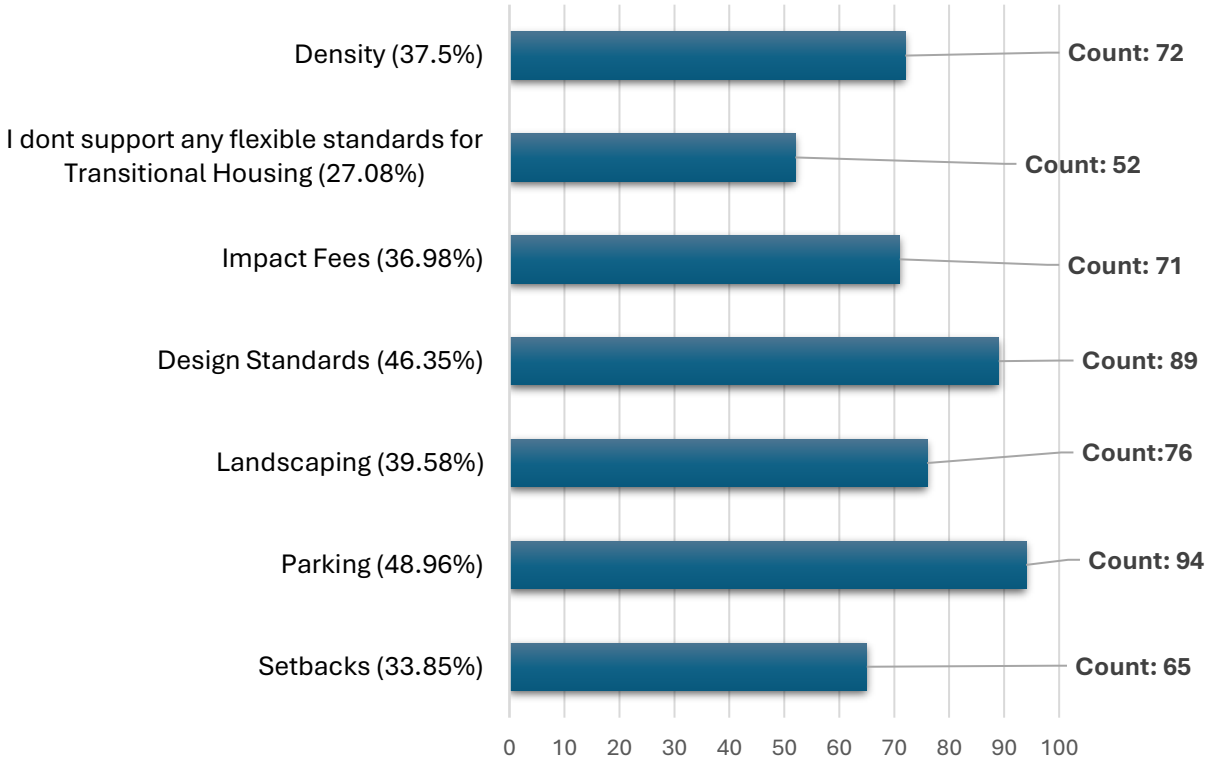
Q2: Tell us why the City of DeLand should/should not allow Tiny Home communities.
(182/253)



Q3: If Tiny Home Communities would be allowed, where would they best fit? Drop pins on the map below, where you think they'd fit best. *(101/253)*



Q4: Do you support flexibility for any of the following standards for Transitional Housing? Select all that apply. *(192/253)*



Q5: Which Tiny Home Designs do you like best? Drop a corresponding pin on each image (click the image and drag to see all images) *(117/253)*



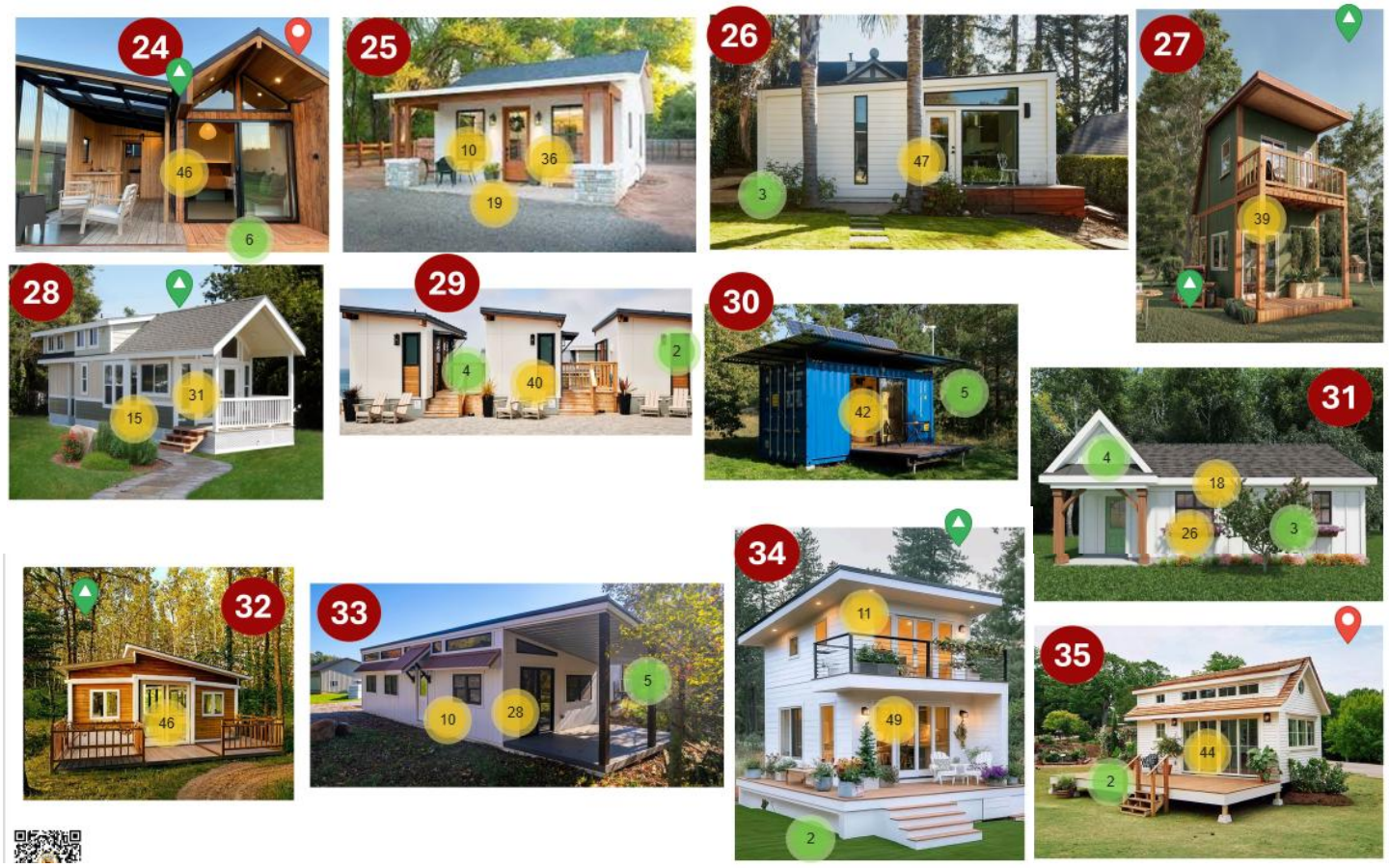
Pin	Count	%
Dislike!	255	31.64%
Like!	551	68.36%

Q6: Which Tiny Home Designs do you like best? Drop a corresponding pin on each image (click the image and drag to see all images) *(99/253)*



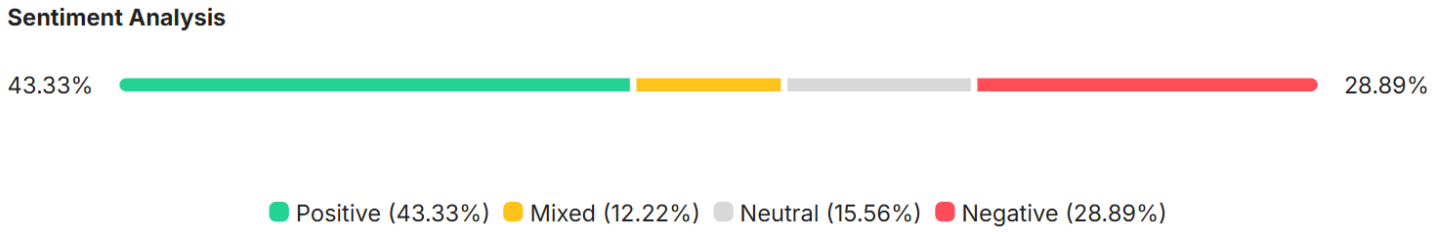
Pin	Count	%
Dislike!	172	29.81%
Like!	405	70.19%

Q7: Which Tiny Home Designs do you like best? Drop a corresponding pin on each image (click the image and drag to see all images) *(88/253)*



Pin	Count	%
Dislike	148	24.46%
Like!	457	75.54%

Q8: Please share any additional thoughts, concerns, or suggestions you have regarding Tiny Home communities in DeLand. *(90/253)*



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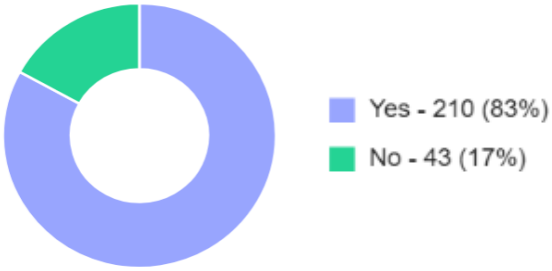

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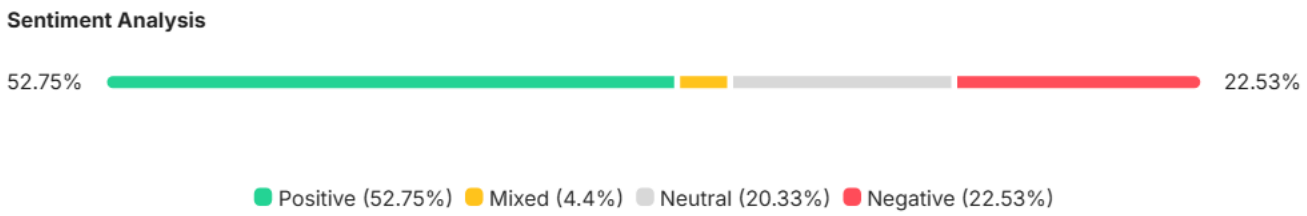


Sentiment Analysis provided by ZenCity uses artificial intelligence to group participants responses into positive/mixed/neutral/negative buckets, as sorted below:

Mixed:

- More affordable homes available. But I think there should be restrictions so as to keep out ruff raf. Personally, I would love to purchase property and put a tiny home 399 square feet on it, please update zoning?
- As long as they are controlled, also not a monopoly by certain companies that pay the most to the city. Everyone should be allowed if zoned for it to have the same chance.
- While I do support the construction and development of tiny homes, allowing tiny hime communities is yet another invitation for non local developers to exploit our land and resources. Planned developments of

current scale are significantly contributing to ecosystem risks and infrastructure failures. These massive developments should be discouraged, with smaller developed acreage limitations.

- Housing is a national crisis but taken acres of trees down to make another subdivision for families who can't even afford to get a mortgage is insane. Tiny communities would have a smaller foot print, smaller impact on the land and could house more long term and still be affordable. The American dream can still be realized just not at the cost of $200K or working your whole life just to survive and have a roof over you head.
- I think people should be allowed to build whatever type of house they wish to. If they by land they should be able to build whatever house they want to live in. A container house would be awesome! Safer then most of these houses being built now a days! We're tired of seeing these copy and paste houses that the city is building. And expecting people to pay 350-450k for You can easily buy 2-3 containers and build your own dream house on a lot. For much less.
- As their own communities yes, as an addition to current residences, with vast limitations. While we like the idea of adding tiny homes to land to allow family to spread out in space, as in the case of mother in law suites, or pool houses. What we don't want to see is single family plots adding tiny homes and renting them out, making mini neighborhoods out of plots in between single family homes. I don't want my 4 neighbors to be 12 neighbors with one driveway.
- Not everyone can afford a full size home. Owners take better care of their property. We need to incentivize young adults to stay and make a life in DeLand.
- They should ALLOW tiny homes. There is a need for affordable housing for low income, homeless and the elderly. There is already a huge base for seniors in the area who are being priced out of traditional housing. Many, such as myself, would love and can afford to buy a small parcel of land, have an affordable "tiny home" placed on it, to live out the rest of our golden years knowing landlords aren't draining every dime with lot increases, rent increases, etc.....Praying this passes and other parts of Florida follows!!!!

Neutral:

- 1.Affordable Housing Solutions -Tiny homes can help address housing shortages and provide more attainable housing for low- and moderate-income residents. -Lower building and utility costs make them an attractive option for people priced out of traditional homes. 2.Environmental Benefits -Smaller homes require fewer resources to build and maintain. -They often have lower energy consumption and carbon footprints. 3.Efficient Land Use -When clustered in well-planned communities, tiny homes can utilize space effectively while maintaining green areas. 4. Lifestyle Flexibility -They appeal to retirees, minimalists, and people who value mobility or downsized living. -Can be used for transitional housing or workforce housing near job centers. 5. Community Development - Can foster tight-knit, intentional communities that encourage shared resources and social interaction.
- Affordability
- I don't feel we need tiny homes, wealready have apartments .
- Affordability and feasibility for many populations.
- We need affordable options for entry level homeowners and those of us that may not be entry level but don't need 1,500 square feet. These homes should be smaller versions of existing homes, not cheap prefabricated mobile homes.
- Smaller foot print
- We need more affordable housing for seniors, veterans and young adults.
- There needs to be affordable housing, especially for those who don't qualify for assistance.

- Affordability and access to home ownership is a huge issue across the nation
- More people need affordable places to live
- Affordability
- They should define what a tiny hole is and is not, and then decide if they are clustered together in their own neighborhood and/or if they will be allowed as ADUs on existing sf properties.
- Not all families are large families
- I would not mind it but I would like to know where and how it would be implemented. Would the developers be allowed to construct developments communities of tiny homes or would individuals be allowed to purchase large plots and develop them? Would the communities be allowed within the city limits and within the historical district? What is the lot size for tiny homes?
- Small footprint home developments/ also the ability for residents to add tiny homes to their own property. Not trailers or converted sheds. Tiny homes on trailers that would be movable and custom built tiny homes.
- We need affordable housing for senior citizens who need to downsize. A beginning home for young families and pur Veterans
- Housing is getting expensive and extremely hard for those trying to rebuild their lives after SUD, or DV type situations. Tiny homes would help house some of the population struggling with affordable housing.
- To many people,no roads to move all these cars now
- Affordable housing option.
- Because the cost of a single family home is out of reach for a lot of people. If a tiny home subdivision is allowed there will be options and maybe less homeless.
- We have less space, and more people in need of options. We also didn't allow new mother in laws to be built, so there is less small housing than would normally be here.
- Affordability options
- To allow all different income and housing options available
- I'd like to these types of communities for limited income families, vs section 8
- Better more affordable housing especially for seniors. Also lower income family. Even with all the senior HUD apartments in Volusia we seniors still can't afford apartments. They want 2.5 income mthly. Thats an average of 2,700 to over 3,000 a month income. And thats is not the average for a native Florida resident. Most are single women seniors. Also most section 8 building are old buildings with health issues like too much moisture mold and mildew due to old code windows, roofs and exterior walls need billion dollar repairs cost. There is not enough section 8 to support senior housing in the State of Florida. We need a better housing affordable safe and health hazard free. We also need rent control at least for seniors and disabled people. Should be mandatory for all rental apartments luxury and otherwise. United States is the only country that doesn't take care of their seniors housing as a priority. Our rents go up every month but our monthly Social Security checks do not. What ever little they give for cost of living they raise the rent exactly that amount or more. 2024 we got hit really bad. If I could buy or rent to own a tiny house that would help a whole lot. Cause don't have to worry of rent increase and being evicted. Homeless like I fear every year. Like I was for 3 years waiting for hud apartment. Paying almost 1,000 rent. And I'm just one of hundreds.
- Opportunity
- Need for different types of housing

- As a property appraiser, I believe in order to have a health housing market their needs to be options at all sizes and price points to reflect the different needs of the community. Is a missed opportunity for housing for people that may be stuck in the rental cycle that want a home but not a large home.
- Give choice on size of homes. Seniors don't want large homes. I'm looking into some now.
- It would be affordable housing
- affordable housing
- Affordability, homelessness
- Like every other housing community in DeLand it will not be regulated. For example, the Neighborhood Center wanting to use shipping containers.
- First of all Thanks to the powers that be, there are No Trees for our Wildlife to live and trees collect Water during floods. You will need a Biat underneath the house attached and stilts.
- People need more affordable housing.

Negative:

- The city is overpopulated and development is not slowing down. Infrastructure cannot handle it.
- No more development in general. Overall congestion and flooding which appear to never be effectively addressed. Hurricane Milton made it clear to all that development needs to stop.
- There are very limited options for seniors with lower incomes, tiny houses would be a great option .
- It will ruin our city
- Stop building everywhere in deland your killing out wild life homes
- your destroying deland building to much
- Too much development
- You will have the same issues as other places where they concentrate on growing the population without growing the infrastructure to support the population. Look at Riverview, FL as an example on what has happened in the past 7 years. Not enough schools, traffic everywhere, higher crime. It took 5 years to get a new highway project made to alleviate traffic created by the influx of new community making without proper infrastructure. Current DeLand citizens + new citizens will all be negatively affected by this. You will also have other issues like flooding which are already happening in Volusia County.
- To much development in Deland. Please stop it
- The city is too congested now. There is an obvious theft and drug problem downtown. Why make it worse with low income housing?
- Only if it's not going to be a glorified trailer park
- To much development going on.
- Not everyone wants to live in an apartment who want minimal living space. And not everyone wants a huge A typical size house.
- For a more affordable option
- There's already too much traffic all over town and the schools are already overcrowded. Cutting down more trees and clearing more land will only make flooding even worse than it already is and will force more wild animals into surrounding neighborhoods.
- It to much building already going on and to crowded
- It lowers the quality of our community. We should be encouraging better quality of new homes.
- Squeezing in more people with multiple cars is already causing issues that is spoiling the best part of living here. The roads don't get any larger, the traffic is now as bad as the area I left to come here, everything is

crowded and I haven't spent any time downtown in years because parking is a bigger hassle than ever before. More congestion is very unappealing.

- too expensive to build big homes
- Because we have a homeless epidemic. We are living in multiple generational homes because we cannot afford our own. If you rent you need 4 room mates just to make rent. Everyone is one paycheck away from being kicked out. The banks have stolen homes from people. The government can spend trillions on war and ballrooms and parades, but cannot help us with this epidemic. So we need to work on it at a local level.
- Mortgages and even rent have become unattainable for the younger generations. They will just move elsewhere if there aren't more affordable housing options.
- It will devalue the city.
- Too much housing - too much development, lack of infrastructure
- Tiny homes should be allowed on land without HOAs, but a tiny home development downtown is asking to become a ghetto, and add to the traffic.
- Barely better than a homeless encampment. Waste of space, resources and other states prove these get bad fast.
- The potential to be poorly constructed and maintained. Stop the development
- From California and seen the tiny homes movement. Doesn't work for homeless as the homes are not maintained or kept clean and become a health concern. I can imagine with humidity it would be much worse.
- Affordable housing is now a misnomer in this town. Tiny Homes would allow more people to be housed appropriately.
- Not enough schools or roads to accommodate more residents.
- not safe
- so people can afford housing! people are being priced out of having a roof over their heads
- Theres already too much development in DeLand, plus they would be worth a fortune and would not benefit DeLand's homeless population.
- 1, the price of home ownership is ever increasing due to property taxes, land values, cost of materials, utilities, interest rates and etc. Apartments are nearly $2k/ month and you don't own anything. Hard to save money. Owning a tiny home allows for saving money, reduced costs of ownership, and sell able later for further home ownership. 2. Most people who are young do not need a 3/2, 4/3, 5/4, or anything similar. Also, lets me honest, nobody wants to live in a trailer park. Having the ability to build a real brick and mortar <800sqft 1/1 or 2/1 property allows for more appropriate living conditions for a single owner. 3. allows for a good path to homesteading. I know multiple people that own vacant lot but then put a trailer / RV down, which is legal. The intent is that someday they can build their dream home on their own property. But, owning a vacant lot and constructing a tiny home is illegal. Makes no sense. That tiny home today could become an ADU / MIL suite later after an additional structure is build. 4. Building codes are to ensure safety, not stifle creativity.
- Renting costs are killing the economy. My rent was raised $300 in 2 years. Needless to say I didn't get a $300 raise from work to compensate for the increase. I can't afford to live by myself anymore. $1200/month is absurd for a single person in a 1 bedroom. Tiny homes are more affordable and perfect for single and even elderly people to live in without causing severe credit card debt. If you're interested in boosting the revenue into DeLand, making housing affordable is necessary.
- There is a desperate need for homeless to find "affordable" housing. No developers, just people to people.

- Too many Americans cannot afford to live any other way.
- Price for rent are to hight and there is no privacy in the rooms land lord lives with Tennant mostly not respectful
- This is going to further increase population density which can barely handle the lowered lot lines from new developments that have gotten exceptions and the apartments downtown plus what will go in the Putnam. Our hospital can't even handle the current load and traffic is difficult and the schools are all under construction to meet current demand.
- please stop destroying this town with ANY type of development. Wildlife will eventually have nowhere to go!
- It brings more riffraff and drugs. That's the last thing Deland needs. CD
- This would possibly lower property values in surrounding neighborhoods. This is not the aesthetic of Deland. I am not confident the restrictions on the units would be cohesive with surrounding areas. Not enough information currently to make me vote yes.

Positive:

- Because like myself that am on disability and only make $1521 a month I need affordable housing and a small place with minimal area but still comfortable. A tiny home would be an great option and a blessing for senior citizens, young adults and citizens on limited income.
- More affordable and great for singles, couples and small families.
- To provide more options for buyers and renters
-
- Affordability and desire for simplicity are important drivers.
- I feel like tiny homes will benefit single people,single mothers and elder people who are by themselves. I feel like it would be more affordable for single people to afford.
- My is would be good for elderly that is on a fixed income and only need a small space. Also for young adults that are transitioning from home with no kids
- Because affordable, it gives the city a new and nice look
- We need to make affordable housing for the many low wage workers who are employed throughout our thriving city. Workers who live closer, will have more disposable income. They will likely drive less, improving commuting times for all. They will also generate property tax revenue.
- I think this is a more affordable option for families that are struggling with rising costs of living.
- It is the responsible thing to do in today's housing market where someone may be able to afford the property, but not a single family house this way they could
- I think this is a great affordable housing option and could also benefit the non profit I work for, Foundations to Freedom. It would give our graduates and families an affordable option once they leave our program. We could have a tiny home community and we as a non profit could oversee it.
- I believe that it should be allowed - as far as a community goes , I believe that's an option but I would really appreciate if homeowners who chose a tiny home could build it wherever.
- With the current real estate market, it can be very difficult for new families to afford their own home. I, as a real estate agent, believe this concept could help new families with affordability issues. I can see tiny home communities being an integral part of or city.
- Creating more opportunities for housing should include as many creative ways to do that including tiny homes. There are dozens of homes in our community already that are less than 700sf.
- For single/ two person residents who cannot afford a larger home to live in a house - like environment. We singles deserve to own our own home too!!

- Seniors who think they can retire on social security are going to have a very tough time. Having tiny houses allows ADUs-which can help seniors make some money with a renter in the backyard plus have an affordable housing option. It also reduces the loneliness of aging in place. Tiny house communities allow people the dignity of their own subsection the huge cost in money and energy off taking care of a larger space.
- It would be an affordable housing solution for older , single people and small families.I think it is an awesome idea
- More affordable for people to buy instead of renting
- It is the latest and best solution for single folks to own a home...I have at least 23 friends in this city that have talked about wanting to establish a tiny home community so we could look after one another (most in our 70s)
- Should to allow for affordable housing for families and those working to make ends meet
- I think they should. Young adults and seniors could really benefit from this option as tiny homes could be built on already owned land
- Everyone deserves a home regardless of size
- Affordable alternative much like the early Mackel Brother homes in Deltona during the 60s. You can put square footage limitations such as between 350 and 500 square feet so they aren't tiny tiny homes with no future.
- We need smaller home choices that are more affordable. Cost less for up keep. Great idea for older people.
- It would allow other housing options for lower incomes.
- Great opportunity for lower income people to afford housing. Lots of plenty don't need or want an entire single-family home and so many apartments are either wait listed (especially low income ones) or entirely unaffordable for average renters.
- Yes, yes, yes to missing middle housing options. We should stop subsidizing suburban housing and encourage highest densities feasible. This will create a more sustainable and walkable community helping everyone. Tiny housing gives affordable options and provides an alternative to traditional multifamily housing for it to transition from higher to lower density. I support tiny housing anywhere that single family homes are allowed and where low density multifamily is allowed.
- It's a great way to provide affordable housing without destroying the environment. Plus I like the idea of multigenerational housing, ie an aging parent or young adult child living in a tiny home of the family property
- Creates affordable housing neighborhood options and allows for families to add cost effective additions to their property to care for family members, offer affordable student housing, or similar rentals.
- This will allow airbnb renting and hoteling culture hence creating more nuance in the community rather than helping the residents.
- Deland should allow structured tiny home communities to support the following populations: Young professionals looking to have an independent start Disabled individuals who need more affordable housing People in transition after natural disasters The aging population who would prefer to downsize Anyone who would prefer a smaller home
- Affordable housing for young professionals will help our community grow and thrive, long term.

- People should be allowed to build homes as small as they like. Bigger doesn't equal nicer, better, etc. Private property rights should include building whatever size home one desires, as long as homes are build to Florida building code for safety reasons.
- There is already over development everywhere in volusia do not need more housing!! Damn apartments have added thousands of new homes!
- They're more affordable
- Tiny homes are a viable and cost effective alternative to apartments if done correctly. I don't want to see packed half lot "communities". There should still be a minimum plot size so future home development is possible
- Not necessarily tiny home communities but being allowed to put an attractive tiny home on private property should be allowed
- My preference is tiny homes for the over 55 folks. As a 68 year old living in a 3/2, it's starting to get to be too much to maintain between the housework, yard work, and the pool. But where would I go if I sold my house? A tiny home would be perfect and keep me in the town I love.
- Lower environmental impact per home.
- I have long thought that tiny home communities would be an ideal living situation for many senior citizens, with private space and independence and outdoor areas (pool, kitchen, gazebo, etc.) shared with a small group of neighbors (ideally friends and family) and as needed shared maintenance, health care, etc. This could also work well for many other demographics of single people or couples to have (possibly as owners) affordable and functional housing. In many cases, however, I think "small" (say 500 sf) would be more functional than "tiny."
- More affordable less to own . Sustainable. You can have a solar as well on those homes as well and more affordable . Home should be allowed up to 600 square feet single floor two rooms and bath for those who do not want a loft . However I would like to own my land and not pay rent (lot) which can go up every year. I am ready for something like this.
- Affordability !!
- It gives more options for those who cannot afford to buy a house or even to rent an apartment now it's so expensive so tiny homes offers those less fortunate to able to be housed and afford to live
- They should allow build tiny homes there is so much needed especially 1 bed or 2 bedrooms
- More affordable option. Not everyone needs a 1000+ sq ft space to live in
- Alot more people can have a home
- We need affordable housing options. We must keep some green spaces. Smaller more affordable homes satisfy both priorities within our community. This should be expanded to the county as a whole.
- It would let people who can not afford a larger house to be a homeowner
- I believe they should allow it for the families to be built but not something we should allow for companies to produce communities of or buy land in mass to sell for. They are affordable in this every declining economy and rising inflation while wages cannot keep up. We do not need people renting them for profit but we do need families to build them that can live within them an are affordable to do so.
- Its a great way to increase downtown population and therefore foot traffic for stores and restaurant with minimal impact to the environment. Its also ideal for our many of our young service industry staff
- This will allow people like teachers who don't get paid enough money for their jobs to qualify for a tiny home. Homes are so expensive and this will allow people to find a home within their budget and yet live in a nice community. I have lived in a large home but now I would like to live in something that has all the

beautiful big open floor plan, one level and enough to be able to afford a home. I would love a home that is one level with a porch in the front and has a medal building design. Homes that are affordable for nurses, fireman, teacher, police officers etc. along with very very low HOA.

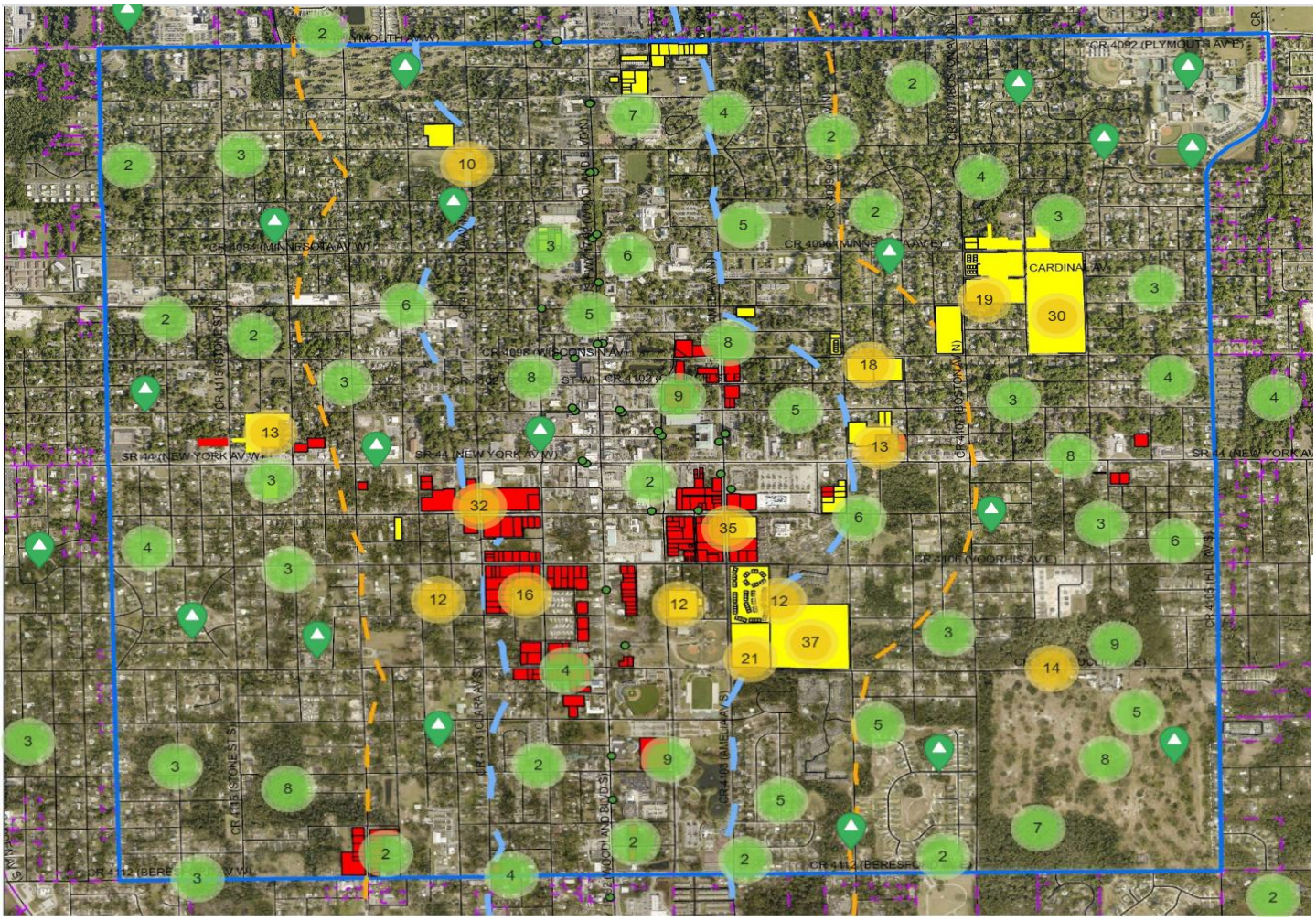
- Should be allow Tiny home communities for families could afford housing, mortgages or rent for singles mother with children or eldelry people.
- My husband and I having been closely following tiny homes for a few years now .. it would be great option for so many .. we are seniors wanting to downsize and are seeing in these communities a bond of close friendships... people who are proud of thier homes ...allowing tiny homes to be placed on properties also Improves land value and family stability... There are amazing quality builders across the United States that the Deland community could be very proud to have their tiny homes here .. There is only great things if this comes to Deland . Thank you
- Affordable housing is a must.
- Tiny homes are a great way to solve part of the housing crisis
- They should make regular housing affordable and not force people to live in tiny houses.
- The homeless are growing in numbers. Every human needs a place to lay their head at night without the fear of being run off. Our shelters have waiting lists and this will provide additional space. Unhoused individuals need help getting on their feet again with skills, community and housing which the tiny home project will do.
- DeLand should definitely permit Tiny Homes. In addition to possibly providing affordable housing it could potentially provide senior housing for empty nesters. Widows and widowers would especially find it attractive in their "Golden Years" when they would like to abandon their albatrosses of 3, 4 and 5 bedroom houses. The income from the sales of their former homes could help supplement their retirement income. Efforts should be made to ensure that the communities are not unduly burdened with home owners associations fees and rules. Maintenance free or minimum maintenance landscaping should be mandatory.
- The city of deland should allow this because alot of people cannot afford a traditional single family house, and other people choose the commodity of living with less. There should always be options for everyone, at the end of the day the goal is so people may have a roof under their heads and live with dignity.
- This is an alternative for housing for older and singles
- Affordable options for housing
- Lower cost homes and easier to maintain for older adults or disabled
- They provide housing for those not able to afford a conventional home and have a small footprint. They are economical and are a great way to evolve the city.
- We should allow tiny homes as a more affordable option for housing
- Good options for low income families
- In DeLand we have numerous homeless people that are not familes and would benefit from a tiny home. I believe that if we can allow these homes and help those that need jobs along with a tiny home that would benefit not only the person of persons looking for a home but the overall community as well.
- It can be a an affordable option.
- It would help a lot of people have a place of their own without paying too much.
- The City of Deland needs to allow a Tiny Home community for many reasons. First, there is such an over development of Florida for larger homes that often sit unused for a while. A Tiny Home community would allow for people to find their homes, whether they are a fist home for some or even a downsize from a larger

home. Second, there is a need for something new that allows the community to stand out. If the City of Deland offers something like this, the community will prosper and grow. People will want to move to Deland for the new opportunity as well as the chance to be a part of something new that adds to the development of the area. Furthermore, with something like this in the area it allows for a sense of community to grow. A Tiny Home community with special amenities for those who live in there allows money to go back into the community with an inexpensive HOA or something that allows them to give back. Overall, something like this would allow the City of Deland to grow and allow the people in it to prosper and give back to the city while allowing new opportunities for the poeple who live in the community.

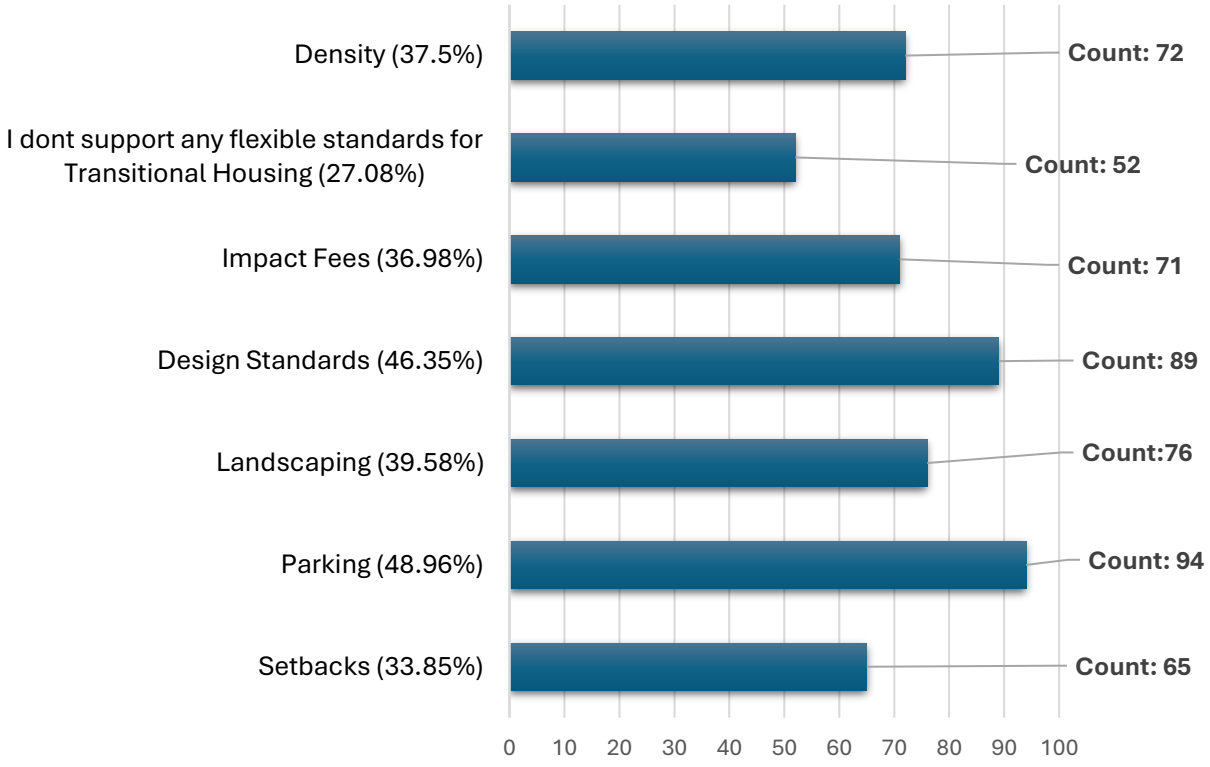
- Our children and less fortunate deserve options they can afford. Insurance costs have become unbearable and we should be able to do what we want with our land.
- DeLand has at least two excellent factors supporting the construction of tiny homes: 1) a superb university drawing students from a variety of regions who require small, lower-cost housing options, and 2) an over-supply of older single family homes on large lots with existing amenities. Tiny homes would be an excellent marriage of those two factors, to the benefit of the city, the tax, base, the homeowners, and renters requiring housing options other than the cookie-cutter development sprawl that DeLand has rabidly applied for the past 30+ years.
- They are a great option for seniors who need smaller living spaces and yards
- Allowing tiny home communities in DeLand provides more affordable housing options, promotes smarter land use through higher-density development near downtown, and aligns with long-term planning goals.
- Well, if they are affordable, it would benefit more people.
- It can help people who can't afford larger houses.
- Times are changing and young adults are choosing to remain single. Sure to this, family homes are not just too expensive but have more space than necessary for a single individual. Tiny homes will provide an alternative and affordable way for this demographic purchase homes. This would also help couples just starting out, an affordable way to purchase their first starter homes.
- Tiny Home communities provide housing opportunities for lower income and single homeowners to live in relative comfort in their own space. Tiny Home communities would also provide a space for elderly citizens to enjoy aging in place in near family members or centers of convenience.
- It makes a more affordable housing option for people who can't afford a larger home.
- tiny homes can be an effective means to provide additional necessary housing options
- Tiny homes would allow for residents that are unable to afford or are without need of a full-size home to have to opportunity to have a home. Since Deland has had issues with homelessness, it would be nice to give a more affordable option to those less fortunate. The Urban Institute did a research report showing the positive impact of the availability of tiny homes on decreasing the homeless population. The Center for Health Journalism also has an article that states that tiny homes were more successful for homeless people to find permanent housing compared to traditional homeless shelters. If Deland can approve developers to build PUD neighborhoods, townhouses, and mobile home parks, then it seems illogical that building a neighborhood with tiny homes would cause an issue.
- With the low wages and higher costs of living it provides affordable housing for those in need. It would also be a great option for those looking to downsize or minimize their footprint. Tiny homes should be allowed in other areas as well, not just in communities. There should be zoning rules updated to allow this in rural areas or where mobile homes are allowed. They wouldn't much impact to the home values in those areas and would again offer more affordable options to those wanting to live this way.

- I have a funny feeling the city is about to “ask” to buy my land again….
- It would allow low income families have a home
- I think it will be a more affordable housing situation for single people on a fixed income.
- Alternative for expensive regular homes
- Affordable living place. For people that are interested.
- It’s a great option for the senior
- It's a splendid idea! Housing costs and rentals have soared. I'd like to think that DeLand is a city of compassion and action on that. Anything we can do to help those folks in desperate circumstances, some with children, living in woods and cars, we should do. They are extremely vulnerable and suffering. We must not turn our backs and simply push them to the fringes of society. I'm not putting pins on the map--put them anywhere and everywhere, but they will be most helpful where the people can walk to resources and possible jobs.
- We need more affordable options for folks that provide shelter and a sense of dignity in being able to be housed.
- To help with affordable housing and preventing further degradation of our resources through suburban sprawl
- I think affordable housing is a good idea, along with ADU's on existing properties. Cities like Ecinitas California did approved style ADU's and provided the plans to the public. I think more diverse style of allowable building styles too. Things like dome houses with aircrete, container homes, barndominiums etc.
- I support the idea of using tiny homes in little communities to help make the most of the space we have. I don't believe they are an actual solution to affordability when they're smaller than the apartments that are already going up and it's left up to the market to price them.
- We need more affordable housing options in this city. This would allow for single adults or couples without children secure permanent housing at a fraction of the cost.
- Provide for more housing closer to town
- It might help with the growing homeless crisis in the downtown area.
- Tiny homes fits the character of Deland. A big small town with solutions for everyone

Q3: If Tiny Home Communities would be allowed, where would they best fit? Drop pins on the map below, where you think they'd fit best. *(101/253)*



Q4: Do you support flexibility for any of the following standards for Transitional Housing? Select all that apply. *(192/253)*



Q5: Which Tiny Home Designs do you like best? Drop a corresponding pin on each image (click the image and drag to see all images) *(117/253)*



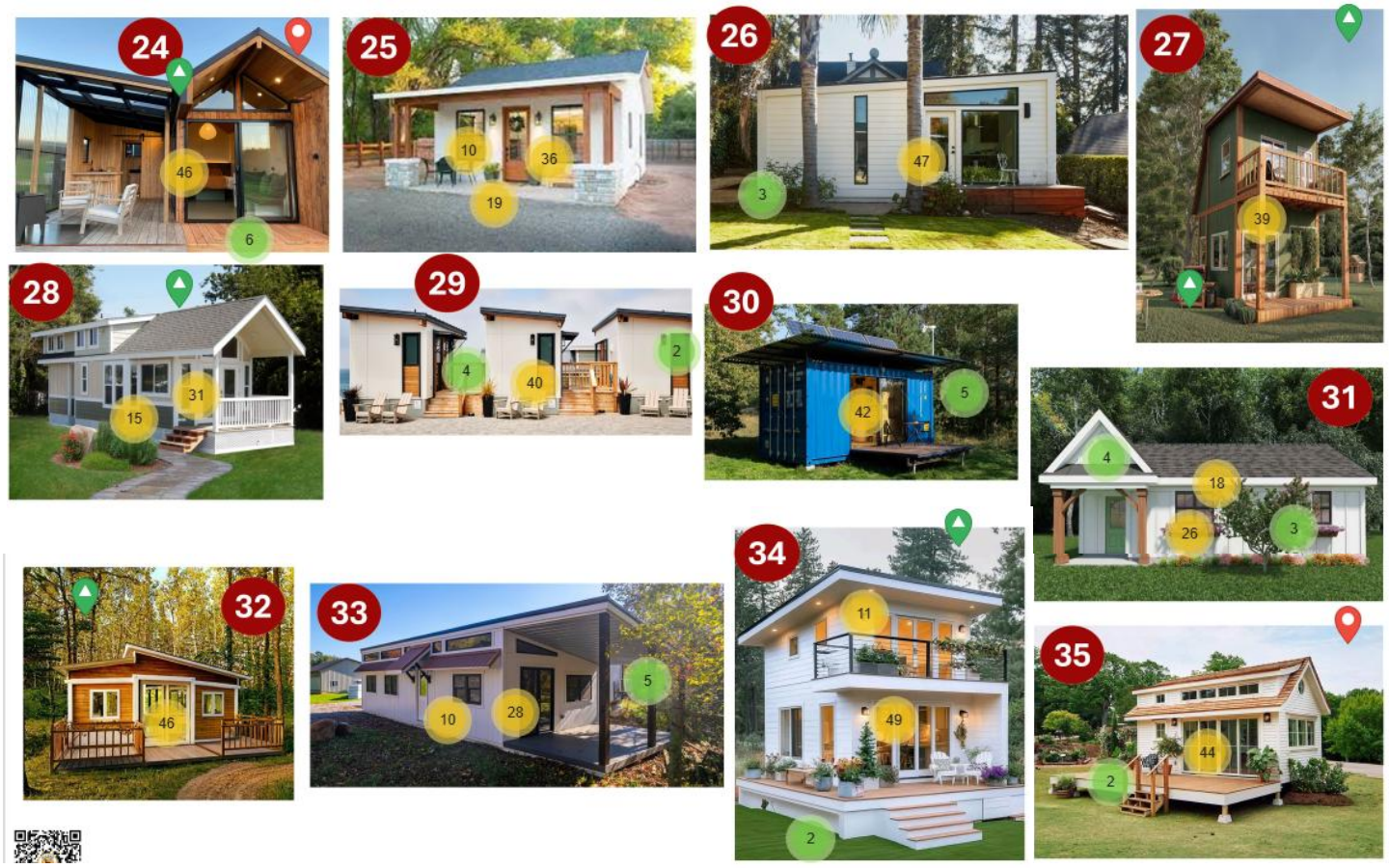
Pin	Count	%
Dislike!	255	31.64%
Like!	551	68.36%

Q6: Which Tiny Home Designs do you like best? Drop a corresponding pin on each image (click the image and drag to see all images) *(99/253)*



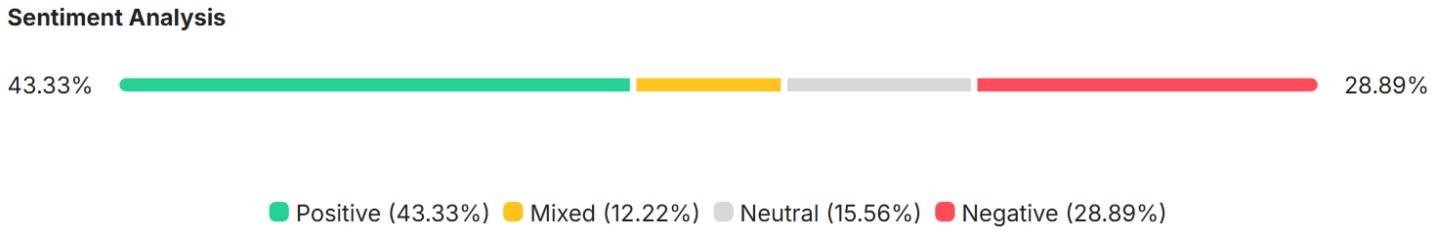
Pin	Count	%
Dislike!	172	29.81%
Like!	405	70.19%

Q7: Which Tiny Home Designs do you like best? Drop a corresponding pin on each image (click the image and drag to see all images) *(88/253)*



Pin	Count	%
Dislike	148	24.46%
Like!	457	75.54%

Q8: Please share any additional thoughts, concerns, or suggestions you have regarding Tiny Home communities in DeLand. *(90/253)*



Sentiment Analysis provided by ZenCity uses artificial intelligence to group participants responses into positive/mixed/neutral/negative buckets, as sorted below:

Mixed:

- Tiny homes will never be kept up well and will look bad within 5 years. It sounds good on paper but in reality, I don't think it will add anything to our community.
- Some of these photo examples are not “tiny.” But the city should have to decide if they will establish sq ft parameters. I don’t find shipping container construction, but in FL, it has to be properly insulated. In a tony home community, will the homes be mobile (on wheels) or built on the ground? (Either is fine, but there are consequences, both good and bad, for each.) Will they be built by a developer and all look the same (ugh!) or simply be a spot where people can build their own or order kits or pre-built homes and locate them there? I prefer the latter. Why is the conversation focused on transition housing for currently unhoused people? Why not acknowledge that many young people, seniors, and middle-aged people might benefit from an option for tiny home living? Will tiny homes be allowed on existing sf parcels as ADUs? They should. This is the question of centralized vs distributed tiny homes. Are they clustered as their own community or integrated into the larger community? There are benefits to both.
- If the idea is transitional housing then multiple stories should be limited. I also really don't want these to be built right on top of each other. Everyone should have space to garden and for privacy.
- Should be able to purchase your land instead of rent . No HOA community garden have chickens for eggs , each plot should be enough to have your own garden . Keep home within a 25,000.00 budget otherwise only the rich can afford it. And land within 10,000 Looking for affordability in homes. Not to go in debt. Otherwise the rich can only live there and not the poor or what. Some people would need the middle class. You can have another section where it's only rent and cap it at $800 a month and then they pay the cost of water and electric and sewage. I have a job and I can't even afford rent! Less is more ! Thanks for considering this
- Tiny homes with a little larger lots would be great. Some people like having a yard but dont need a whole house.
- I think it is important we are not leveling more land for this. If it is land that has buildings not being used, lets use that. We have so many vacant properties that can be used. I am sick of seeing our nature destroyed but we do need transitional housing, small homes, and housing for the homeless. A tiny home should be rewarded with the same benefits as a regular home owner.
- My only concern is that companies will try to take advantage of the new rules and instead of providing affordable housing they find another way to charge multiple thousands for "tiny home" aesthetics. Lot rentals are possibly a way to combat this but I'm not sure.

- More housing options in general, greater varieties of housing options, and more affordable and flexible housing options are critical additions to accommodate DeLand's projected growth. The city has been a very slow adopter of people-friendly characteristics and modern options in both housing and transportation. Instead, leadership has unfailingly applied narrow-minded and antiquated 1950s/60s housing models. Flexible "smart growth", in all its forms, should be an actuality, rather than a fake buzzword thrown about the public meetings to placate the citizens.
- Would like to see Florida appropriate architecture without fireplaces. Wood storage would become a problem. No shipping container conversions
- Make sure handicapp accessible! Hard for people to do stairs!
- I believe this could be a great idea; however, there should be clear requirements for living in these communities. Residents should be expected to engage in education, receive mental health support, and maintain employment in order to continue living there. From my past experience with subsidized housing, I've seen that while it is often well-managed in the beginning, over time it can unfortunately decline and become associated with crime.

Neutral:

- Focus on existing housing.
- Flexibility is important re design. Local government should impose codes that mitigate damage from storms/ to owners and neighbors alike... flying debris etc.
- Can you make the tiny houses affordable for people who is single or single parents
- Transitional housing needs more police presence. Limited density per acre (I.e. do nNOT fit as many as you can)
- allow in more areas, especially with all the smaller lots. Are we able to buy just one like a house? don't want to rent
- There are no concerns for me I love the idea of tiny homes mainly for homeless and the elderly who can no longer afford to live comfortably
- We need more housing apts for seniors one bedroom is very needed in Deland
- Will the tiny homes be limited to developers only or will investors be able to build tiny homes and will there be a limit to the number of homes that a private individual would be able to build? Will someone be able develop and rent tiny homes ?
- Specific community for the tiny house communities(families with low income)
- Tiny homes should be developed in a specific area and not allowed to be scattered throughout town
- Ensuring the community has either regular random UAs if it is used for transitional housing and/or HOA type rules for visitors, noise, and exterior property maintenance.
- After looking at the examples of tiny homes there would need to be something added for the community when it comes to parking. if there was a designated parking between the house or a lot just for the vehicles of the people who live in the community that would be an easy fix. There should also be an option for the people in the tiny homes to have a chance to enclose their property with small fencing. If they have animals, it will make it easy for them to have a small area fence in the back or even on the side of the homes to allow people with animals to provide an opportunity to do minor landscaping, as a way to add some future property value to the area and allow it to grow internally as its own community, is that makes sense.
- Are we going to build more schools to handle all these people?
- People sleep in the side walks they need an area to wash and rest , non profit is the best help is needed

- Build tiny homes that feel larger than their footprint. Add livable space by integrating outdoor living into the overall design 2.design spaces that support families. Add full size appliances and showers. 3. Build spaces to encourage socialization and gathering with neighbors. Courtyards, gardening spaces, butterfly gardens, outdoor water features 4. Use landscaping to add unique character

Negative:

- Clearly based on the survey questions the city has already decided to move forward with this development. I do not support this effort.
- Stop all the building!
- I wish we would stop taking homes of the wild life. I have deer all over the streets now cause the new street and round abount built on blue lake its sad
- A lot of concerns, too much traffic and people .
- They should be offered for section 8 rental or purchase.
- Need more affordable housing in the area.
- no shipping containers, they are ugly and always will be
- Deland does not need a tiny home community. What we need is to stop all of the developers from coming in and building on every inch they can get their greedy hands on. We moved to Deland because it was a smaller, quieter town, but it's quickly losing that charm and becoming another overpopulated suburb full of crime and angry people.
- Development designations should be limited to a few lots. Azalea Walk on Plymouth Ave. Is one example. These huge investment groups have far too much lobbying power, with poor motives
- Tiny home communities are not the answer to homelessness in Deland. Do not support.
- Like I said, this will promote airbnb culture which is not productive for what you are trying to achieve. Also, I hope it is not that smart cities agenda by WEF.
- Too bad that the city was not open to this when Fred Schneider was pushing for it years ago.
- Not in favor of additional housing in our city limits
- This is a bad idea, barely a step above a tent city. It will be alcoholics and drugs. Better put it right next to the emergency room and cemetery.
- The method for dropping pins on the designs is not user friendly so you're not going to get thorough responses.
- I think it's a shame that society has sunken so low that tiny houses is even a thing. Provide Americans with proper housing so they can live the American dream and not be forced to live in subpar conditions.
- I don't recommend wasting the money. The houses will require consistent code enforcement and most likely become an eyesore from lack of maintenance and cleaning. My comments are based off of my experiences in California and I don't want to see it happen here.
- The only thing is that the lots are very small
- There will not be enough to go around. & Also pricing
- Someone on the board thinks tiny homes are "cute", as they sit in their fancy house looking at photos in home decor magazine. In a town like deland, it would create a vacuum sucking in the hopeless, carrying in drugs and crime along the way. Property values would continue to plummet further.
- The community needs to be near facilities like grocery stores, drug stores, laundromats, bus stops. None should be in or near established residential neighborhoods.

- I don't think this should be a city-wide change. If it's allowed, it should only be for this one purpose. As part of their rehab services. We should not be having developers building entire tiny home communities in our city.
- Concern is there will be barely any side setbacks. Concern is the exterior finishings will not be solid. Concern is there will not be minimum standards for upkeep. Suggest keeping it close to the downtown or employment centers. Suggest starting with working families/individuals and only start considering the model for 'transitional communities' once the product has been tested, verified, and accepted by the community.
- Stop building in this town. No one wants it. We've all begged you to stop. Multiple times. On multiple occasions.
- DeLand does not need Tiny Homes Communities or more growth. Stop the Growth!
- By supporting tiny homes, you're taking away from the lure of Deland people don't want to be involved in all these bombs hanging out selling drugs. Believe me, that's why I left Boca Raton crime. Just not a good idea.

Positive:

- I love the idea of tiny homes. I believe they will be more affordable for our residents of Volusia County.
- This is an excellent initiative. There should be an aspect to help the homeless, but also to create a pool of local workers.
- I believe they City of Deland is going to set an example for surrounding areas. Tiny homes are the future of affordable housing.
- Would be nice for a tiny home community also have a central building for use in having members of the community learn vocational skills and or hobbies with shared space and tools.
- Tiny homes are great, we should focus on communities where people own their lots instead of a mobile home model where they pay rent indefinitely to one landowner.
- Housing is for human beings. Let's create as much housing opportunities as we can.
- ADUs are very important options. Sustainability should be considered as well- solar, excellent insulation, bus lines, placement along 92 for bus service into Daytona, and walkability to the shopping is great!
- I think it is a good opportunity for young people and families to have affordable housing. That should be the primary reasoning. I do also feel there should be a separate tiny home community that can be used for transitional housing for the homeless but maybe as a totally separate neighborhood.
- I Ian a 1/2 acre or more (double lot) It would be amazing to be able to build a tiny house on my land for my adult son, aging mom, or even to rent out to offset the mortgage cause times are so tough.
- More variety the better with tiny homes. Let demand decide!
- Allow for ADUs in residential areas. That saves on cutting down trees and already is established. It's a win win for everyone
- Appreciate you seeking feedback. Transitional housing can be very helpful to others if well managed. I believe tiny homes should be allowed. Don't believe in minimum square footage requirements.
- Very dumb idea to add more housing where are the extra jobs for all of these houses ? Why not redevelop old places instead of tearing out more wood lines
- No concerns about the community of tiny homes. This could be a very affordable option. Don't regulate it so hard that it is impossible to achieve. Just like a mobile home community it's an option.
- Deland is a great community for tiny houses. I would hope other parts of volusia county will follow, allowing for variation in density instead of the apartment complexes that are being built all over. The

natural green space that comes with most tiny homes is an improvement on the environmental factors and beautification of the Deland.

- It will bring stability to our city. We are only as strong as our weakest link. Let's elevate our neighbors and form a stronger community!!!
- The designs need to meets the needs of the owners. I don't care about the design. I care about housing our residents. Please review Finland's Housing First Program. Finla d is doing right by their communities. Thank you for this opportunity to share my thoughts.
- This would be a great idea for Deland to construct these homes. I was thinking of moving to a state that has these homes, which are affordable with updated style and has personality woods mixed in with metal . Love love this style. Please make these homes
- I believe this is a great idea. But let people build on their property also. Not only land that you want people to build on.
- Love the ideas! This would be a wonderful way to solve a lot of homeless issues. We'd love to be able to have this for our veterans in transition.
- I think this change would benefit the community
- I think it's a great idea to bring more affordable housing to smaller sized families.
- 'Tiny home' DOES NOT EQUAL cheap or low quality building material, quality of build, cleanliness of home / property, or demand for overall safety. Tiny home are not a place to just push the poor and homeless. Tiny home is for people who need / want a small and manageable space. If a potential home owner is just one person or young then why not live in a home with only 1 or 2 bedrooms and 1 bath. Tiny homes promote the idea of being outside the residence and participating in the community. A good tiny home will have a patio / porch, grill area, dining area, and a small garden / green area. People are not meant to stay inside the structure at all times. Go outside. Sit on a porch. Cook / eat food outside. Maybe there is a neighborhood / community pool or park nearby.
- Affordable housing is the key to bringing more revenue into the community. If you want people to spend money in town on other things, the housing costs must not break the bank.
- Tiny Home communities are a change to meet a changing and growing community. As with most homeownership, there should be some space and quality in the design while maintaining dignity to its residence.
- Would invoke new opportunities for many people.
- I think this is a great idea. Way to go DeLand!
- This is a win win for the community; people will get homes, and the city and county will get additional tax revenue that was not there before. This need to be a change in the building codes and zoning in not just Deland but in all of Volusia. My other suggestion is that we outlaw short term rentals and large corporations from buying up all the stock to keep this revenue in the county.
- A Tiny Home community would be a good addition to the City of Deland. It will give an opportunity to the less fortunate to be able to have a home. If done correctly it has the potential to have a positive impact on the low income and homeless population in the area. Although it may not completely solve the issues that plague the homeless population, it is a good step in the right direction.
- Again, I would like to see tiny homes allowed in more rural areas or where mobile homes are permitted to give people an option for a smaller footprint. The cost to maintain a tiny home is very attractive in today's world of extreme living costs.

- Any location between the Neighborhood Center and Neighborhood Walmart would be ideal so those resources are walkable.
- They are a cost effective way to offer housing to the community. VOA uses shipping containers for housing for Vets. Attractive and cost efficient.
- Insure land parcels are individually owned. Limit homeownerships to Owner Occupants. PEOPLE need affordable housing!!!!!!!!!!!!!! Make parts of this change available and helpful to INDIVIDUALS who desire to live & own their own land and home :)
- I think tiny homes (either individually built as an ADU or as part of a community) are integral to making Deland a better place to live and making the downtown area more accessible to all.
- I would love to be more involved in the process. Here is the one in CA https://www.encinitasca.gov/government/departments/development-services/policy-planning-housing/policy-planning/accessory-dwelling-units I hope Deland brings them in. Also consider changing RV or Trailer parks to allow upgrading the spaces with units like this as well. I have been on Design Review boards in other cities and would consider participating in Deland. alicia@hioctanedesign.com I also think allowing unique trailers like airstreams, container buildings etc for downtown spaces to activate the space.
- I think with the right design and planning, these tiny home communities would fit right into our city. I think it's a great idea. My only fear is that the city will lose the true focus of a project like this which is low-cost, affordable housing options. There needs to be design standards but keep costs as low as possible to stay AFFORDABLE for the people.
- Great option for 55+
- Glad to see the city thinking out of the box!

CITY OF DELAND
Request for Commission Action
September 10, 2025

SUBJECT: Land Development Code Discussion.

DEPARTMENT: Planning

PREPARED BY:

ATTACHMENTS:

APPROVED BY: ,

SUMMARY/HIGHLIGHT: