



**CITY OF DELAND
REGULAR MEETING OF THE PLANNING BOARD
JUNE 27, 2024 AT 5:00 PM
CITY HALL, COMMISSION CHAMBERS
120 SOUTH FLORIDA AVENUE**

AGENDA

CALL TO ORDER

PLEDGE OF ALLEGIANCE

ROLL CALL

PUBLIC PARTICIPATION PROCEEDINGS

PLANNING - OLD BUSINESS

1. Applicant Name: Nicole Martin – Madden Moorhead & Stokes
Project Name: PSB23-029 – Preliminary Plat for Summit Place
Project Location: ±59.88 acres located at N Summit Ave
Description: 300 Townhomes
Project Manager: Emily Kunkel
Continued from June 12, 2024

PLANNING - NEW BUSINESS

OTHER BUSINESS

ADJOURNMENT

**PLANNING DEPARTMENT STAFF REPORT
TO
PLANNING BOARD**

June 27, 2024

APPLICATION: PSB23-029

SUBJECT: Preliminary Plat for Towns at Summit Place

1. **Location:** SW of Daytona State College, NW corner of I-4 and N. Summit Ave.
(County Road 4139)

2. **Applicant:** Mr. Mark Watts, Esq., Cobb Cole

3. **Size:** 59.90+/- Acres

4. **Existing Zoning & Land Use:**

Land Use: Gateway/Activity Center

Zoning: PD (Planned Development)

5. **Surrounding Conditions:**

	SURROUNDING USE:	SURROUNDING ZONING:
North:	Low Density Residential	Park Lake Estates PD
South:	VC: Rural	VC: A-2 & VC: A-3
East:	VC: Public/Semi Public (NE) & VC: Rural (SE)	VC: P (NE) & VC: A-1 (SE)
West:	Low Density Residential	R-1A

6. **Applicable Regulations:**

Sec. 33-146.03 – Preliminary plat.

First Amended & Restated Summit Place Planned Development - Approved May 2024

7. **Physical Characteristics:**

The subject property is located southwest of Daytona State College, northwest corner of the intersection of I-4 and north Summit Ave. (CR 4139) and a portion of northeast corner of I-4 and north Summit Ave. The property is entirely wooded with mature trees and vegetation. The undeveloped site is 59.90+/- acres made up of 42.75+/- acres of upland across the site and 17.148+/- acres of wetlands/lake area located at the north of the site.

8. **Public Utilities and Service:**

Water: The proposed development will be served by City potable water facilities.

Sewer: The proposed development will be served by City sanitary sewer facilities.

Irrigation: The proposed development will be served by City reclaimed water facilities.

9. TYPE OF DEVELOPMENT

The applicant seeks to develop the subject property into a 300-lot townhome subdivision. The approved Planned Development Agreement allows a maximum of 300 multi-family units that will be developed on the west side of north Summit Ave. (CR 4139). The east side of north Summit Ave. (CR 4139) will be developed as commercial/mixed use.

Dimensions:

	Land Development Regulations (R-16)	Adopted Planned Development
Minimum lot area	10,000 SF for first three units plus 2,725 SF for each additional unit	1,886 SF (<i>interior townhome unit</i>) 3,000 SF (<i>exterior townhome unit</i>)
Max building length	150-ft	165-ft (<i>8-unit townhome building</i>)

All the lots in the proposed plan meet the minimum dimensions and lot area standards for the Planned Development.

The residential portion of the project will be completed in 2 phases. Phase I will include 186-units, open space areas, and a mulch trail around the southern portion of Lake Tatum. Phase II will include the primary amenity center, additional open space areas and 114-units. Additional development enhancements will be provided as well as pedestrian and bike access to the neighboring southwest properties, a future City-owned park, and a possible future school.

10. ANALYSIS:

The proposed subdivision is located west of north Summit Ave. (CR 4139) and west McKenzie Ave. Primary access to the subdivision will be via north Summit Ave., secondary access will be from west McKenzie Ave. Summit Ave. (CR 4139) and West McKenzie Rd. are county owned and maintained, the applicant will need to apply for Use Permits from Volusia County. The applicant is currently working on addressing outstanding Traffic Impact Analysis comments from Volusia County Traffic Engineering. The latest outstanding comments are attached.

The development has been designed to utilize the existing topography and drainage conditions identified on the property to minimize impact to the site. As required by section 33-57.07(b) of the Land Development Regulations, a minimum of 15% of the subject property will be dedicated as Tree Protection Area (TPA). The development will be required to maintain a minimum buffer of 25' in width, except along the interstate where there shall be a 15' wide buffer. Special attention and effort shall be given to the preservation of the Tatum Lake ecosystem by incorporating wetland protection, wetland buffers, and stormwater runoff filtration. The development shall integrate wetlands and other environmentally sensitive lands into the open space network.

The existing Lake Tatum is located to the North of the site, and two stormwater ponds are proposed southeast of Lake Tatum. In addition to these stormwater ponds, the environmental buffers have been incorporated into the design of the subdivision as well as methods of Low Impact Development (LID). Supplemental plantings will enhance the functionality and aesthetics of these retention areas using predominantly Florida-Friendly Landscaping. The applicant has already obtained a permit from the St. John's River Water Management District (SJRWMD) and has submitted their Florida Department of Environmental Protection (FDEP) applications for review.

A school concurrency letter dated April 13, 2023 was provided by the Volusia County School Board with the proposed use of a 300-unit Multi-Family development. This letter from the school board offers no objections to the development.

City Commission approved the request for rezoning of the subject property from Summit Place Planned Development to First amended and restated Summit Place Planned Development on May 20, 2024.

Outstanding Issues: Staff and the City's architect have reviewed the proposed elevations and find that the proposed elevations are not varied thereby creating a monotonous repetition of identical structures on a single site. The applicant has made minor changes, such as altering the shutters on the building facades, but has not adequately varied the building elevations. This monotonous repetition leads to a canyon-like feel throughout the development. The recently-approved Planned Development Agreement includes language regarding consistency with the Community Design Standards. Furthermore, the Lake Winnemissett Local Gateway Plan calls for varied architecture to reduce monotonous appearance of buildings.

Staff and the City's architect have met with the applicant to discuss the need for a variety of facades to limit or reduce the monotonous appearance. This concern has been consistently raised with the applicant since the initial sketch plan application submitted on March 9, 2023.. However, the most recent June 20, 2024 submittal does not reduce or eliminate the monotonous appearance. Staff has provided the applicant examples within the D.R. Horton product line that would address the architectural concerns.

Therefore, staff has included a condition of approval regarding the need for revised architectural elevations to be submitted and reviewed prior to scheduling this item before the City Commission. Enhanced architectural features such as varied porches, garage overhangs, front porch railings, differing materials, siding, and color changes are needed to reduce the monotonous repetition.

The proposed plat is not consistent with the adopted Planned Development agreement, concept plan, and applicable land development regulations in that it does not meet the Community Design Standards or the Lake Winnemissett Local Gateway Plan. Prior to construction, a separate site plan must be submitted for any model homes or temporary offices being permitted.

At the April 18, 2024 Technical Review Committee meeting, members recommended the Preliminary Plat be forwarded on to the Planning Board, subject to the addressing of Staff comments. The remaining Staff comments are attached.

At the June 12, 2024 Planning Board meeting, the Board Members recommended the Preliminary Plat be continued to an upcoming Planning Board meeting once all Staff comments have been addressed which included updating the architectural elevations to remove the monotonous appearance.

The applicant submitted architectural elevations and plans on June 20, 2024 addressing some of remaining staff comments from the June 12, 2024 Planning Board meeting, but staff finds that these architectural elevation revisions do not provide enough variety in materials, rooflines, and façade enhancements to reduce the monotony.

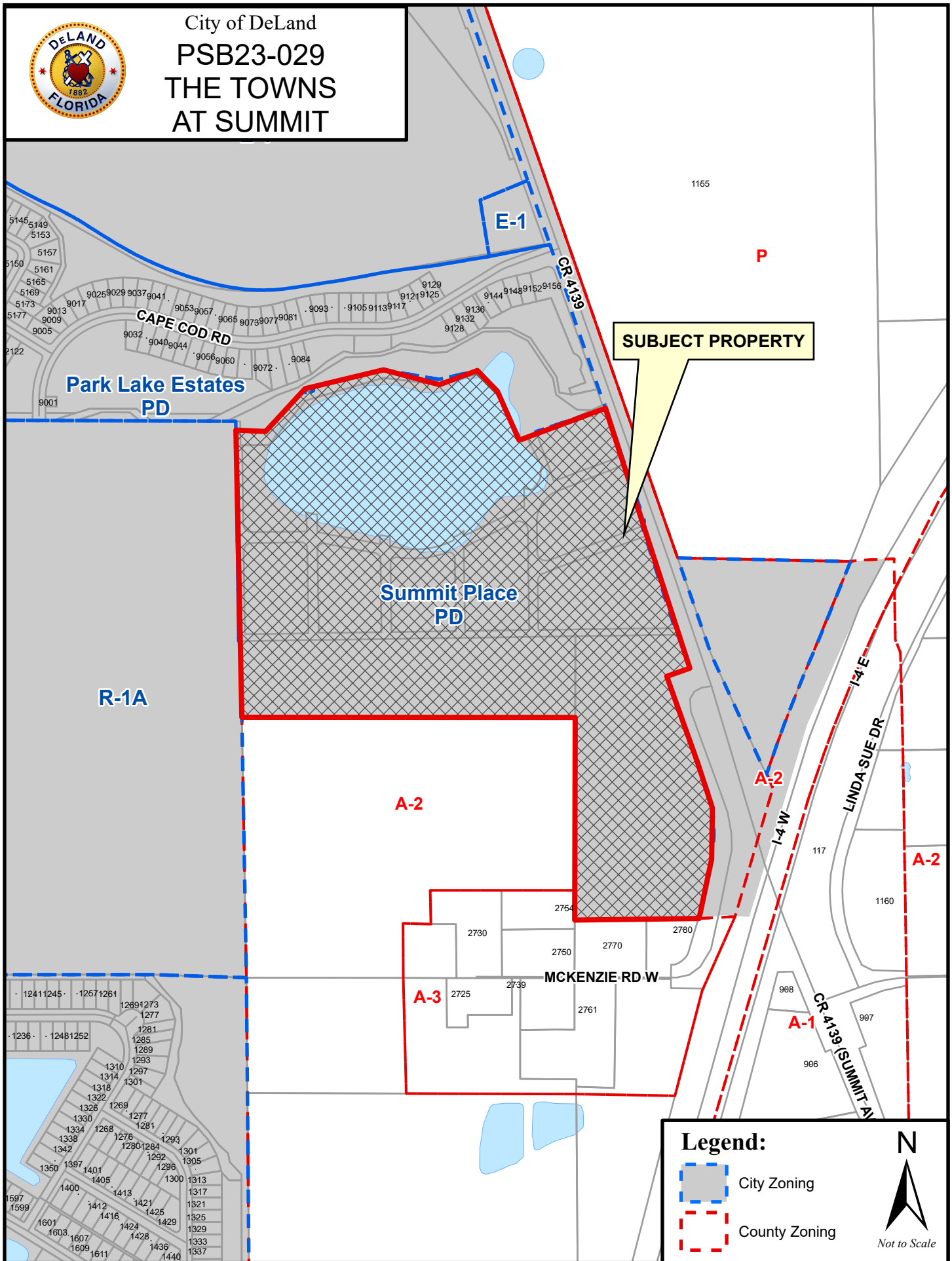
11. STAFF RECOMMENDATION:

Per the City's Land Development Regulations Section 33-146.03(f), Staff recommends that the Planning Board recommend conditional approval of the preliminary plat to the City Commission, subject to the following conditions of approval:

1. All outstanding TRC comments shall be addressed to the satisfaction of City Staff (forestry) prior to scheduling this item for City Commission review.
2. Updated architectural elevations complying with staff recommendations that remove the monotonous appearance and include a variety of materials, colors, and wall plane variation shall be submitted to and signed of by city staff prior to scheduling this item for City Commission consideration.



City of DeLand
PSB23-029
THE TOWNS
AT SUMMIT





City of DeLand
PSB23-029
THE TOWNS
AT SUMMIT



Issues for record PSB23-029

Job Address: 0 E SR 44, Deland FL 32724

Job Description: 300 townhome unit development

Discipline	Status	Details	Attached To	Created By	Last Updated By	Modifications Required
Forestry	Not Accepted	Tree Protection Notes & Tree Barricade Detail Please replace this information with City of DeLand Tree Barricade Detail and requirements. Last comment from reviewer: Please remove the Tree Protection Notes and detail from this sheet (C011) or replace them with the City's Tree Barricade Detail dated January 11, 2024. Please also replace the detail on sheet C700 with the current version dated January 11, 2024. Last response: The tree protection notes and details have been removed from sheet C010 and are located only on sheet C700.	C011	Mariellen Calabro	Kit Dennis	Yes
Planning	Not Accepted	Architecture - Community Design Standards Please revise the site plan to meet the requirements listed in the Community Design Standards (Section 33-94). The elevations do not appear to comply with the City's Community Design Standards. Please revise the elevations to meet these standards. The resubmittal should describe how these standards are being met. Last comment from reviewer: Repeat comment - Revise the elevations to adhere to the City's Community Design Standards, removing the monotony. Last response: Please see the attached revised building elevations.	C100	Melissa Winsett	Emily Ragusa	Yes
Forestry	Not Accepted	Tree Protection Areas Show Tree Protection Areas on the plat. Last comment from reviewer: Change the labeling of Tree Preservation Easements to Tree Protection Areas or Tree Protection Area Easements. This will be consistent with the language used in our code. Last response: The attached revised preliminary plat includes tree preservation easements as required. Sheet C100 of the construction plan set has been revised to include an updated tract table indicating the usage of tracts OS-1, OS-2, and OS-8 as tree protection.	PLAT 1	Mariellen Calabro	Kit Dennis	Yes
Forestry	Not Accepted	Mitigation Cost The current rate of contribution for the Tree Replacement Reserve Account is \$75 per inch not planted. This would increase your contribution to \$544,125, assuming 1,255" DBH of replacement are provided.	TREE REPLACEMENT CALCULATION	Mariellen Calabro	Kit Dennis	Yes

Discipline	Status	Details	Attached To	Created By	Last Updated By	Modifications Required
		Last comment from reviewer: An invoice has been created for the tree mitigation (\$577,525). I will be able to close this comment once the payment has been received. Last response: Please see updated worksheets and tree reports showing the revised calculations, dated June 11, 2024. Also, a summary table has been created and added to sheet L1 which includes the dollar amount the client owes the city for the Tree Replacement Reserve Account.	ONS 02 17 2023a.pdf			

SIDE BY SIDE
FRONT ELEVATION



INTERIOR

END



INTERIOR

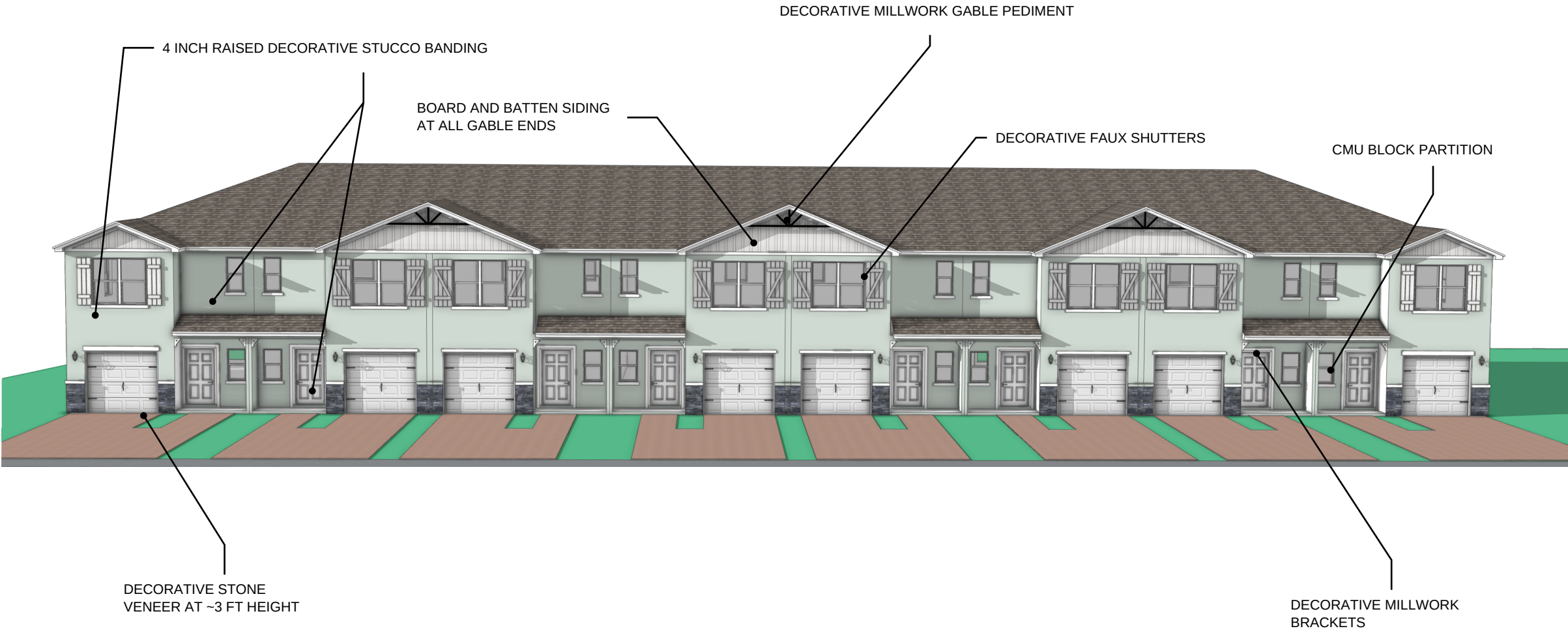
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INTERERIOR

END

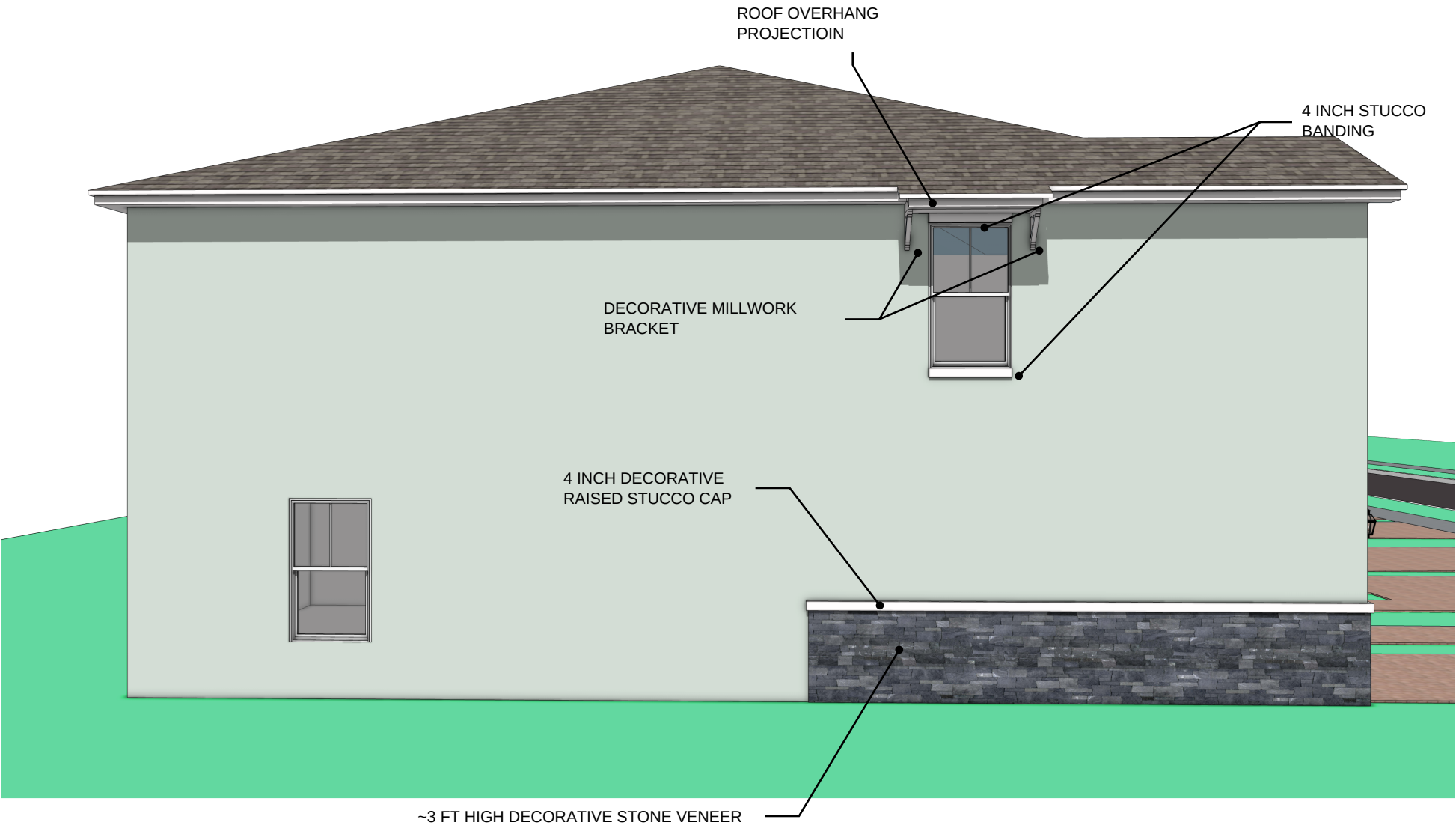
FARMHOUSE INSPIRED
FRONT ELEVATION



FARMHOUSE INSPIRED

SIDE ELEVATION

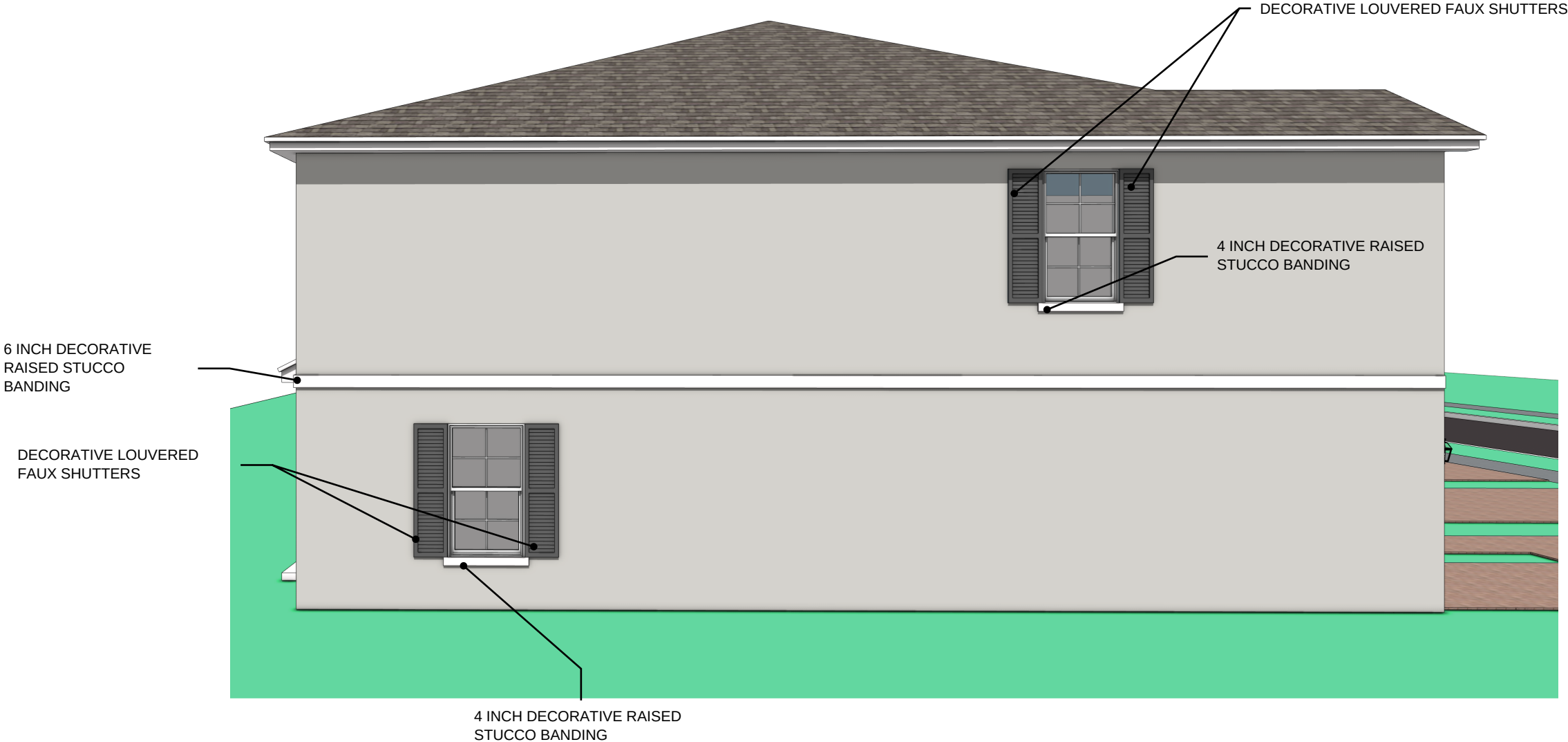
Elevation applies to ROW/open spaces only



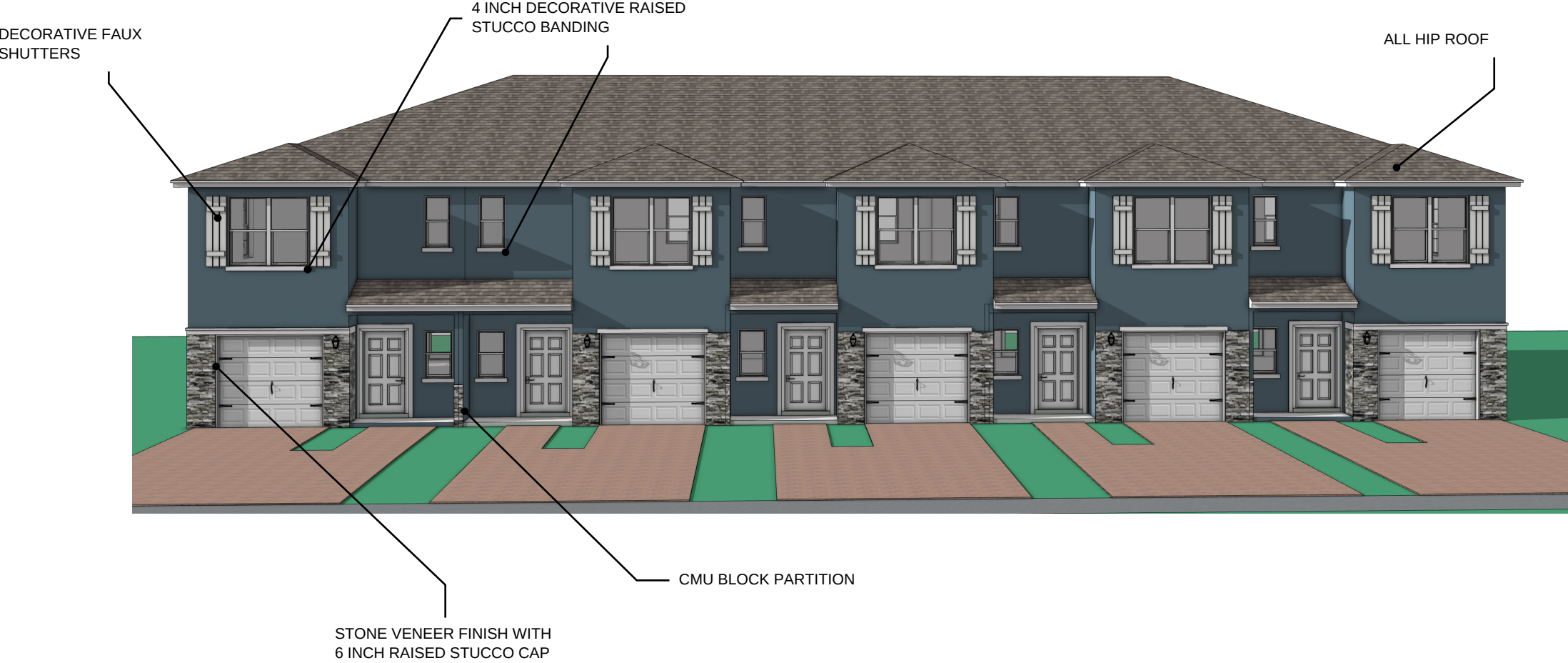
CAPE COD INSPIRED
FRONT ELEVATION



CAPE COD INSPIRED
SIDE ELEVATION
Elevation applies to ROW/open spaces only



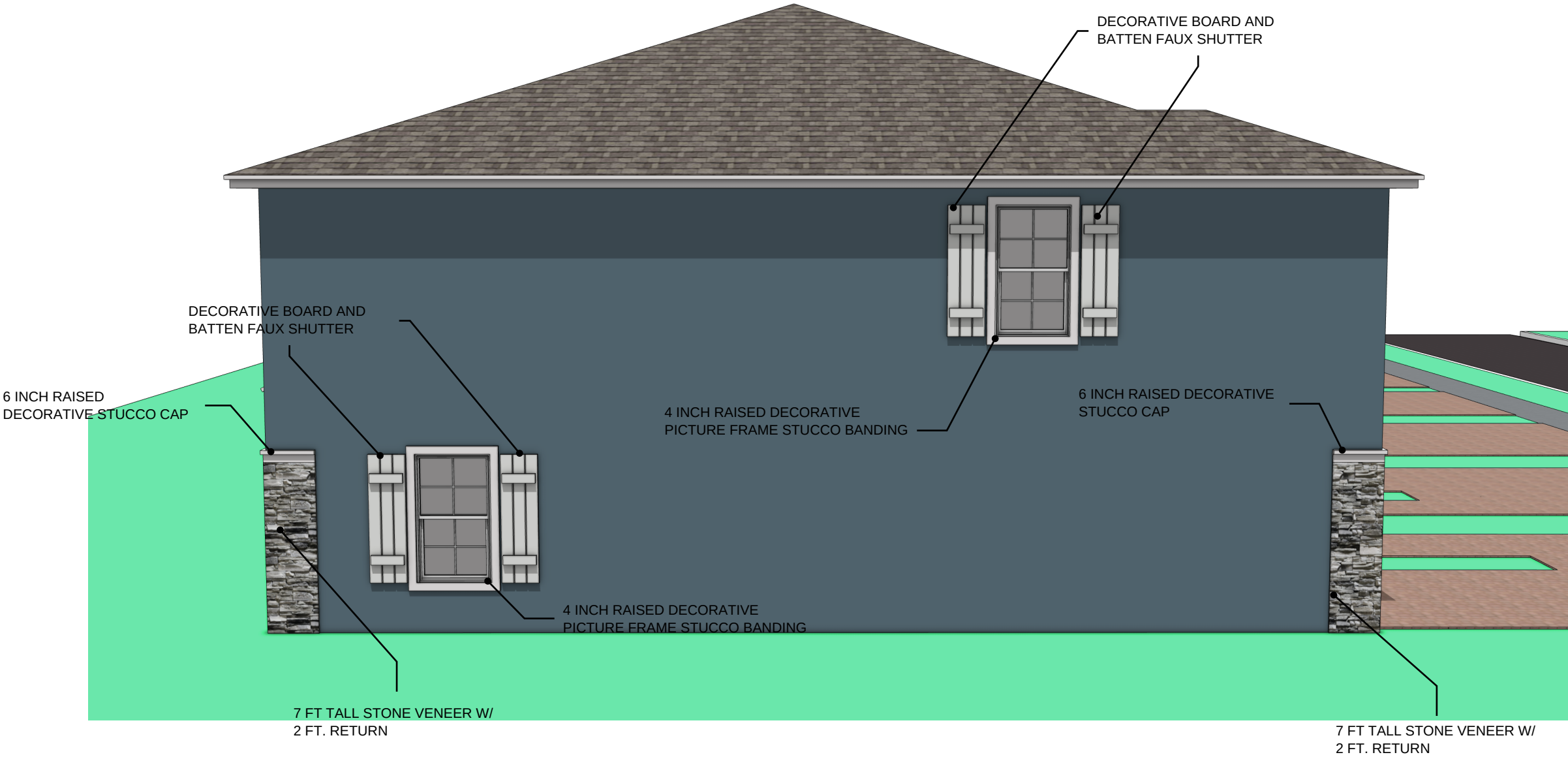
FRENCH PROVINCIAL INSPIRED
FRONT ELEVATION

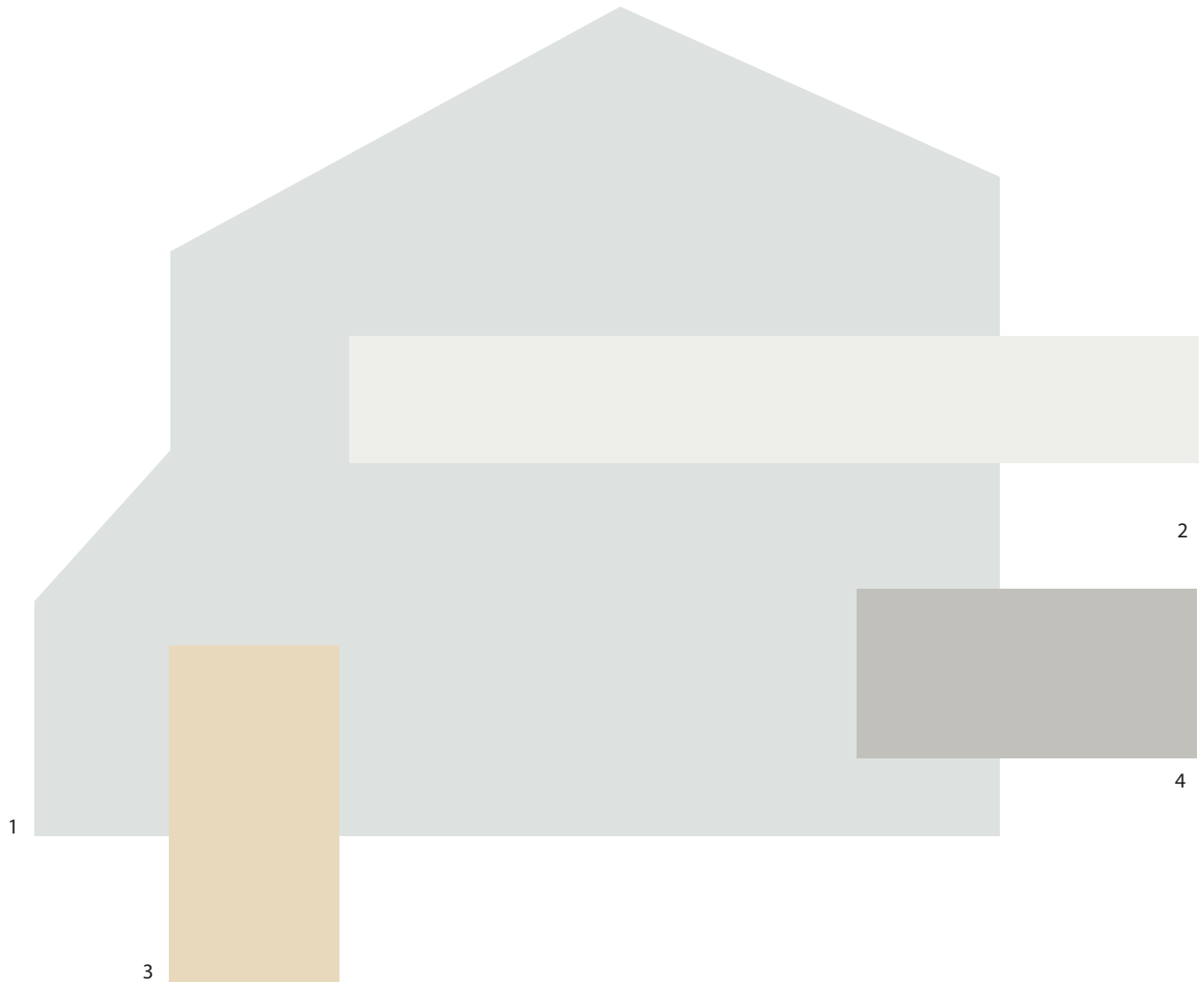


FRENCH PROVINCIAL INSPIRED

SIDE ELEVATION

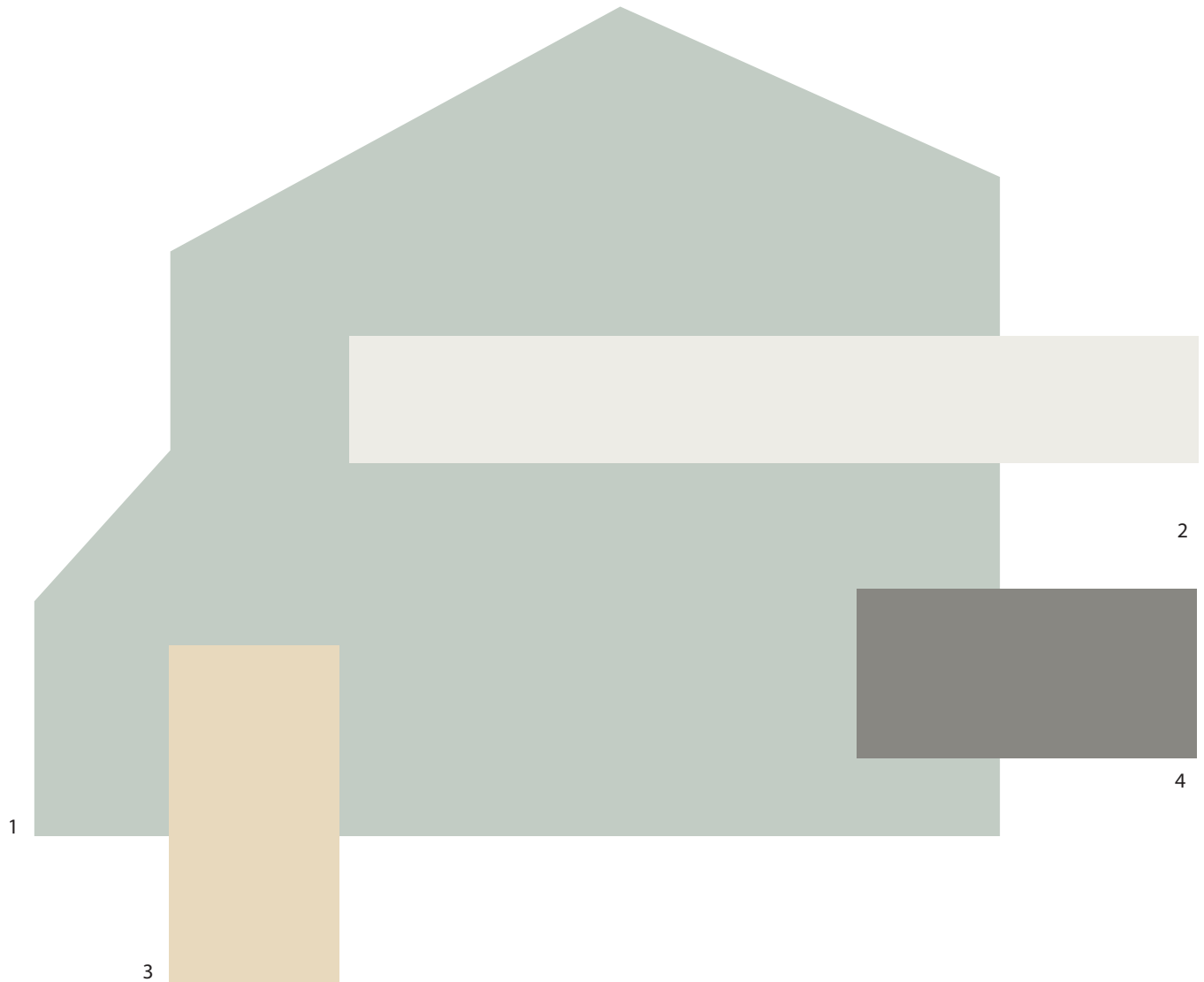
Elevation applies to ROW/open spaces only





SCHEME 3

- | | |
|-------------------------|---------------------------|
| 1 Body | SW 6245 Quicksilver |
| 2 Trim | SW 7006 Extra White |
| 3 Front Door & Shutters | SW 2833 Roycroft Vellum |
| 4 Accent Body | SW 0055 Light French Gray |



SCHEME 10

- 1 Body
- 2 Trim
- 3 Front Door & Shutters
- 4 Accent Body

SW 0068 Copen Blue
SW 7005 Pure White
SW 2833 Roycroft Vellum
SW 0077 Classic French Gray



DR Horton Coastal

- | | |
|----------------|--------------------|
| 1 Body | SW 7664 Smoky Blue |
| 2 Trim | SW 7526 Snowbound |
| 3 Door/Shutter | SWVS 364 Tanker |

SUMMIT PLACE

A PARCEL OF LAND LYING WITHIN SECTION 24, TOWNSHIP 17 SOUTH, RANGE 30 EAST
CITY OF DELAND, VOLUSIA COUNTY, FLORIDA

SHEET 1 OF 12

LEGAL DESCRIPTION

A PARCEL OF LAND LYING WITHIN SECTION 24, TOWNSHIP 17 SOUTH, RANGE 30 EAST, CITY OF DELAND, VOLUSIA COUNTY, FLORIDA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

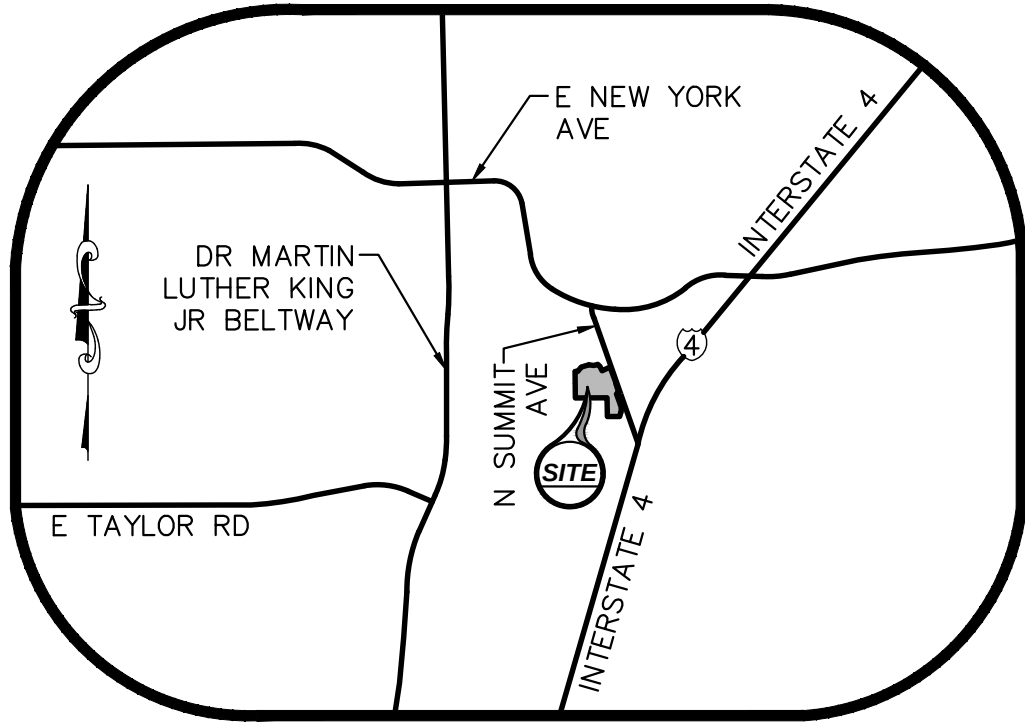
BEGINNING AT THE SOUTHEAST CORNER OF LAKEWOOD PARK VILLAGE PHASE 2, AS RECORDED IN PLAT BOOK 64, PAGES 22 THROUGH 27; THENCE ALONG THE WEST RIGHT-OF-WAY LINE OF C.R. 439 RUN THE FOLLOWING SEVEN (7) COURSES AND DISTANCES: (1) RUN SOUTH 20°11'51" EAST A DISTANCE OF 732.35 FEET; (2) THENCE RUN SOUTH 70°09'26" WEST A DISTANCE OF 14.99 FEET; (3) THENCE RUN SOUTH 17°49'12" EAST A DISTANCE OF 420.88 FEET; (4) THENCE RUN SOUTH 69°48'09" WEST A DISTANCE OF 108.54 FEET; (5) THENCE RUN SOUTH 20°11'50" EAST A DISTANCE OF 496.17 FEET TO A POINT OF CURVATURE WITH A CURVE TO THE RIGHT, CONCAVE SOUTHWESTERLY, HAVING A RADIUS OF 522.96 FEET, A CENTRAL ANGLE OF 35°24'07", A CHORD DISTANCE OF 318.01 FEET WHICH BEARS SOUTH 02°27'54" EAST; (6) THENCE ALONG THE ARC OF SAID CURVE RUN FOR A LENGTH OF 323.13 FEET TO A POINT OF TANGENCY WITH A LINE; (7) THENCE ALONG SAID TANGENT LINE RUN SOUTH 15°21'02" WEST A DISTANCE OF 177.31 FEET; THENCE RUN SOUTH 89°45'13" WEST A DISTANCE OF 520.33 FEET TO A POINT ON THE EAST LINE OF THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 24, TOWNSHIP 17 SOUTH, RANGE 30 EAST; THENCE ALONG SAID EAST LINE RUN NORTH 00°58'20" WEST A DISTANCE OF 791.66 FEET; THENCE RUN SOUTH 89°51'41" WEST A DISTANCE OF 1342.83 FEET TO A POINT ON THE WEST LINE OF THE NORTHEAST QUARTER OF SECTION 24, TOWNSHIP 17 SOUTH, RANGE 30 EAST; THENCE ALONG SAID WEST LINE RUN NORTH 00°35'13" WEST A DISTANCE OF 1119.72 FEET TO A POINT ON THE SOUTH LINE OF THE PLAT OF LAKEWOOD PARK VILLAGE PHASE 2, AS RECORDED IN PLAT BOOK 64, PAGES 22 THROUGH 27; THENCE ALONG SAID SOUTH LINE OF SAID PLAT LAKEWOOD PARK VILLAGE PHASE 2 RUN THE FOLLOWING EIGHT (8) COURSES AND DISTANCES: (1) RUN NORTH 89°34'48" EAST A DISTANCE OF 115.05 FEET; (2) THENCE RUN NORTH 39°17'47" EAST A DISTANCE OF 235.21 FEET; (3) THENCE RUN NORTH 73°15'46" EAST A DISTANCE OF 328.99 FEET; (4) THENCE RUN SOUTH 83°18'20" EAST A DISTANCE OF 228.92 FEET; (5) THENCE RUN NORTH 73°43'09" EAST A DISTANCE OF 159.10 FEET; (6) THENCE RUN SOUTH 47°32'08" EAST A DISTANCE OF 117.55 FEET; (7) THENCE RUN SOUTH 26°56'41" EAST A DISTANCE OF 216.76 FEET; (8) THENCE RUN NORTH 65°18'26" EAST A DISTANCE OF 372.43 FEET RETURNING TO THE POINT OF BEGINNING.

CONTAINING 2,609,383 SQUARE FEET OR 59.903 ACRES, MORE OR LESS.

SURVEYOR'S NOTES

- BEARINGS SHOWN HEREON ARE BASED ON THE EAST LINE OF LAKEWOOD PARK VILLAGE PHASE 2, BEING SOUTH 19°47'16" EAST AS RECORDED IN PLAT BOOK 64, PAGES 22 THROUGH 27 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.
- ALL LOT LINES INTERSECTING CURVILINEAR LOT LINES ARE RADIAL UNLESS OTHERWISE NOTED AS NON-RADIAL (NR).
- ALL PLATTED UTILITY EASEMENTS SHALL ALSO BE EASEMENTS FOR THE CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION OF CABLE TELEVISION SERVICES PROVIDED; HOWEVER, NO SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION OF CABLE TELEVISION SERVICES SHALL INTERFERE WITH THE FACILITIES AND SERVICES OF AN ELECTRIC, TELEPHONE, GAS OR OTHER PUBLIC UTILITY. IN THE EVENT A CABLE TELEVISION COMPANY DAMAGES THE FACILITIES OF A PUBLIC UTILITY, IT SHALL BE SOLELY RESPONSIBLE FOR THE DAMAGES. THIS SECTION SHALL NOT APPLY TO THOSE PRIVATE EASEMENTS GRANTED TO OR OBTAINED BY A PARTICULAR ELECTRIC, TELEPHONE, GAS OR OTHER PUBLIC UTILITY. SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION SHALL COMPLY WITH THE NATIONAL ELECTRICAL SAFETY CODE AS ADOPTED BY THE FLORIDA PUBLIC SERVICE COMMISSION. (SECTION 177.091 (28), FLORIDA STATUTES).
- THERE IS A 10.00 FOOT WIDE UTILITY EASEMENT ALONG ALL FRONT LOT AND TRACT LINES ADJACENT TO ALL RIGHT OF WAY LINES.
- TRACT AM-1 IS AN AMENITY TRACT AND SHALL BE OWNED AND MAINTAINED BY THE SUMMIT PLACE HOMEOWNERS ASSOCIATION, INC., A FLORIDA NON PROFIT CORPORATION (HEREAFTER REFERRED TO AS THE "ASSOCIATION")
- TRACT OS-1 THROUGH OS-5 ARE OPEN SPACE TRACTS AND SHALL BE OWNED AND MAINTAINED BY THE ASSOCIATION.
- TRACTS SMA-1 AND SMA-2 ARE RETENTION AND OPEN SPACE TRACTS AND SHALL BE OWNED AND MAINTAINED BY THE ASSOCIATION.
- TRACT UB-1 IS AN UPLAND BUFFER TRACT AND SHALL BE OWNED AND MAINTAINED BY THE ASSOCIATION. NO CLEARING, GRADING, CONSTRUCTION, OR OTHER ACTIVITIES WHICH DISTURB THE NATURAL STATE OF THE LANDS WITHIN TRACT UB-1 SHALL OCCUR WITHOUT PRIOR WRITTEN CONSENT FROM THE SAINT JOHNS RIVER WATER MANAGEMENT DISTRICT AND/OR ANY OTHER APPLICABLE JURISDICTIONAL AGENCY.
- TRACT W-1 IS A WETLAND TRACT, AND SHALL BE OWNED AND MAINTAINED BY THE ASSOCIATION. NO CLEARING, GRADING, CONSTRUCTION, OR OTHER ACTIVITIES WHICH DISTURB THE NATURAL STATE OF THE LANDS WITHIN TRACT UB-1 SHALL OCCUR WITHOUT PRIOR WRITTEN CONSENT FROM THE SAINT JOHNS RIVER WATER MANAGEMENT DISTRICT AND/OR ANY OTHER APPLICABLE JURISDICTIONAL AGENCY.
- TRACTS M-1 AND M-1 ARE MEDIAN AND LANDSCAPE TRACTS, AND SHALL BE OWNED AND MAINTAINED BY THE ASSOCIATION.
- THE RIGHT-OF-WAY UTILIZATION EASEMENTS (RUE) SHOWN HEREON SHALL BE MAINTAINED BY THE ASSOCIATION.

VICINITY MAP NOT TO SCALE



LEGEND

- = SET 4"x4" CM (CONCRETE MONUMENT) INSCRIBED 'PRM LB 6393' IN ACCORDANCE WITH F.S. 177.091(7) (UNLESS OTHERWISE NOTED)
- = SET NAIL AND DISK ('PCP LB 6393') IN ACCORDANCE WITH F.S. 177.091 (8) (UNLESS OTHERWISE NOTED)
- = CENTERLINE
- R = RADIUS
- Δ = CENTRAL ANGLE (DELTA)
- CH = CHORD DISTANCE
- CB = CHORD BEARING
- L = ARC LENGTH
- CCR# = CERTIFIED CORNER RECORD
- CM = CONCRETE MONUMENT
- DOC# = OFFICIAL RECORDS DOCUMENT NUMBER OF THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA
- DE = DRAINAGE EASEMENT
- F.S. = FLORIDA STATUTES
- ID = IDENTIFICATION
- IR = IRON ROD
- LB = LICENSED BUSINESS
- (OA) = OVERALL
- ORB = OFFICIAL RECORDS BOOK
- PAE = PUBLIC ACCESS EASEMENT
- PC = POINT OF CURVATURE
- PC = PAGE(S)
- PNT = POINT OF NON-TANGENCY
- PRM = PERMANENT REFERENCE MONUMENT
- PSM = PROFESSIONAL SURVEYOR AND MAPPER
- PT = POINT OF TANGENCY
- RUE = RIGHT-OF-WAY UTILIZATION EASEMENT
- UE = UTILITY EASEMENT

NOTICE

THIS PLAT, AS RECORDED IN ITS GRAPHIC FORM, IS THE OFFICIAL DEPICTION OF THE SUBDIVIDED LANDS DESCRIBED HEREIN AND WILL IN NO CIRCUMSTANCES BE SUPPLANTED IN AUTHORITY BY ANY OTHER GRAPHIC OR DIGITAL FORM OF THE PLAT. THERE MAY BE ADDITIONAL RESTRICTIONS THAT ARE NOT RECORDED ON THIS PLAT THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY.

MAP BOOK

PAGE

SUMMIT PLACE

DEDICATION

KNOW ALL MEN BY THESE PRESENTS, D.R. HORTON, INC., A DELAWARE CORPORATION, BEING THE OWNER IN FEE SIMPLE OF THE LANDS DESCRIBED HEREBY DEDICATED SAID LANDS AND PLAT FOR THE USES AND PURPOSES THEREIN EXPRESSED AND DEDICATES:

- TRACT LS-1 (LIFT STATION) AND TRACT RW-1 (RIGHT-OF-WAY) TO THE CITY OF DELAND AND THE PERPETUAL USE OF THE PUBLIC.
- UTILITY EASEMENTS (UE) AND DRAINAGE EASEMENTS (DE) SHOWN HEREON TO THE PERPETUAL USE OF THE PUBLIC.
- THE PUBLIC ACCESS EASEMENT (PAE) SHOWN HEREON TO THE PERPETUAL USE OF THE PUBLIC.

IN WITNESS WHEREOF, THE UNDERSIGNED HAS CAUSED THESE PRESENTS TO BE SIGNED BY THE OFFICER NAMED BELOW AND ITS SEAL AFFIXED HERETO ON THIS _____ DAY OF _____, 2024.

D.R. HORTON, BEING A CENTRAL, FLORIDA COMPANY BY:

SIGNATURE _____ DIVISION PRESIDENT
TITLE

PRINT NAME _____

SIGNED AND SEALED IN THE PRESENCE OF:

WITNESS _____ PRINT NAME _____

WITNESS _____ PRINT NAME _____

ACKNOWLEDGEMENT

STATE OF FLORIDA
COUNTY OF _____

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME BY MEANS OF [] PHYSICAL PRESENCE OR [] ONLINE NOTARIZATION, THIS DAY OF _____, 2024, BY _____, AS D.R. HORTON, INC., A DELAWARE CORPORATION, THEY ARE PERSONALLY KNOWN TO ME OR [] HAS PRODUCED _____ AS IDENTIFICATION.

WITNESS MY HAND AND OFFICIAL SEAL IN THE COUNTY AND STATE LAST AFORESAID THIS ____ DAY OF _____, 2024

NOTARY PUBLIC, STATE OF FLORIDA

PRINTED NAME _____

STATE OF FLORIDA

MY COMMISSION EXPIRES: _____

CERTIFICATE OF APPROVAL BY CITY SURVEYOR

PURSUANT TO CHAPTER 177, FLORIDA STATUTES, I HEREBY CERTIFY THAT I HAVE REVIEWED THIS PLAT FOR CONFORMITY TO CHAPTER 177, FLORIDA STATUTES, AND THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE PLAT COMPLIES WITH THE TECHNICAL REQUIREMENTS OF THAT CHAPTER; PROVIDED, HOWEVER, THAT THIS CERTIFICATION DOES NOT CONFIRM PHYSICAL LOCATION, FIELD VERIFICATION OF MONUMENTS, MATHEMATICAL CORRECTNESS OF SURVEY DATA, PLAT DIMENSIONS, OR COORDINATE GEOMETRY.

REVIEWING SURVEYOR _____ DATE _____

PRINT NAME _____
PROFESSIONAL SURVEYOR & MAPPER NUMBER: _____

CERTIFICATE OF CLERK

I HEREBY CERTIFY THAT I HAVE EXAMINED THE FOREGOING PLAT AND FIND IT COMPLIES IN FORM WITH ALL THE REQUIREMENTS OF CHAPTER 177, FLORIDA STATUTES, AND WAS FILED FOR RECORD ON THIS _____ DAY OF _____, 2024 IN THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

CLERK OF THE CIRCUIT COURT _____ FILE NUMBER _____
IN AND FOR VOLUSIA COUNTY, FLORIDA

PRINT NAME _____

CERTIFICATION OF APPROVAL BY CITY COMMISSION OF THE CITY OF DELAND, VOLUSIA COUNTY, FLORIDA

THIS IS TO CERTIFY THAT ON THE _____ DAY OF _____, 2024 THE CITY COMMISSION OF THE CITY OF DELAND APPROVED THE FOREGOING PLAT.

ATTEST:

CITY CLERK _____ MAYOR _____

PRINT NAME _____ PRINT NAME _____

CERTIFICATE OF APPROVAL BY CITY ENGINEER

I HEREBY CERTIFY THAT ALL STREETS, UTILITIES AND OTHER REQUIRED IMPROVEMENTS HAVE BEEN INSTALLED IN AN ACCEPTABLE MANNER AND ACCORDING TO CITY SPECIFICATION AND STANDARDS AND ALL APPLICABLE REGULATIONS IN THE SUMMIT PLACE SUBDIVISION OR THAT A GUARANTEE OF THE INSTALLATION OF THE REQUIRED IMPROVEMENTS IN A MANNER ACCORDING TO SECTION 33-147 HAS BEEN RECEIVED.

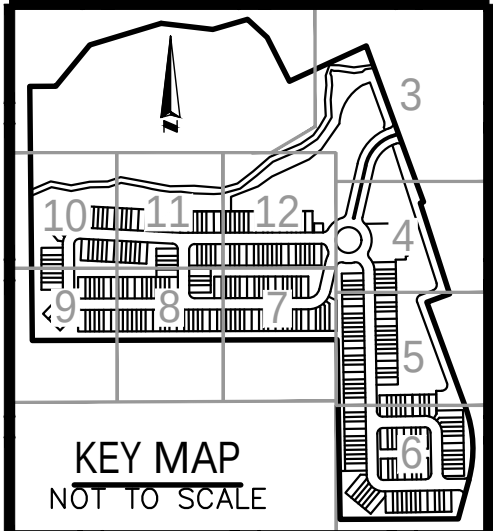
CITY ENGINEER _____

PRINT NAME _____

CERTIFICATE OF SURVEYOR

KNOW ALL MEN BY THESE PRESENTS, THAT I, THE UNDERSIGNED, BEING A PROFESSIONAL SURVEYOR AND MAPPER THAT HAS PREPARED THE FOREGOING PLAT, STATE THAT IT WAS MADE UNDER MY DIRECTION AND SUPERVISION AND THAT THE PLAT COMPLIES WITH ALL OF THE SURVEY REQUIREMENTS OF CHAPTER 177, FLORIDA STATUTES, AND THAT SAID LAND IS LOCATED IN SECTION 24, TOWNSHIP 17 SOUTH, RANGE 30 EAST, VOLUSIA COUNTY, FLORIDA.

SURVEYOR: E. GLENN TURNER, PSM DATE _____
REGISTRATION NUMBER: LS#5643
PROFESSIONAL LAND SURVEYOR
REGISTRATION NUMBER OF LEGAL ENTITY: LB#6393
AMERICAN SURVEYING & MAPPING, INC.



PAGE

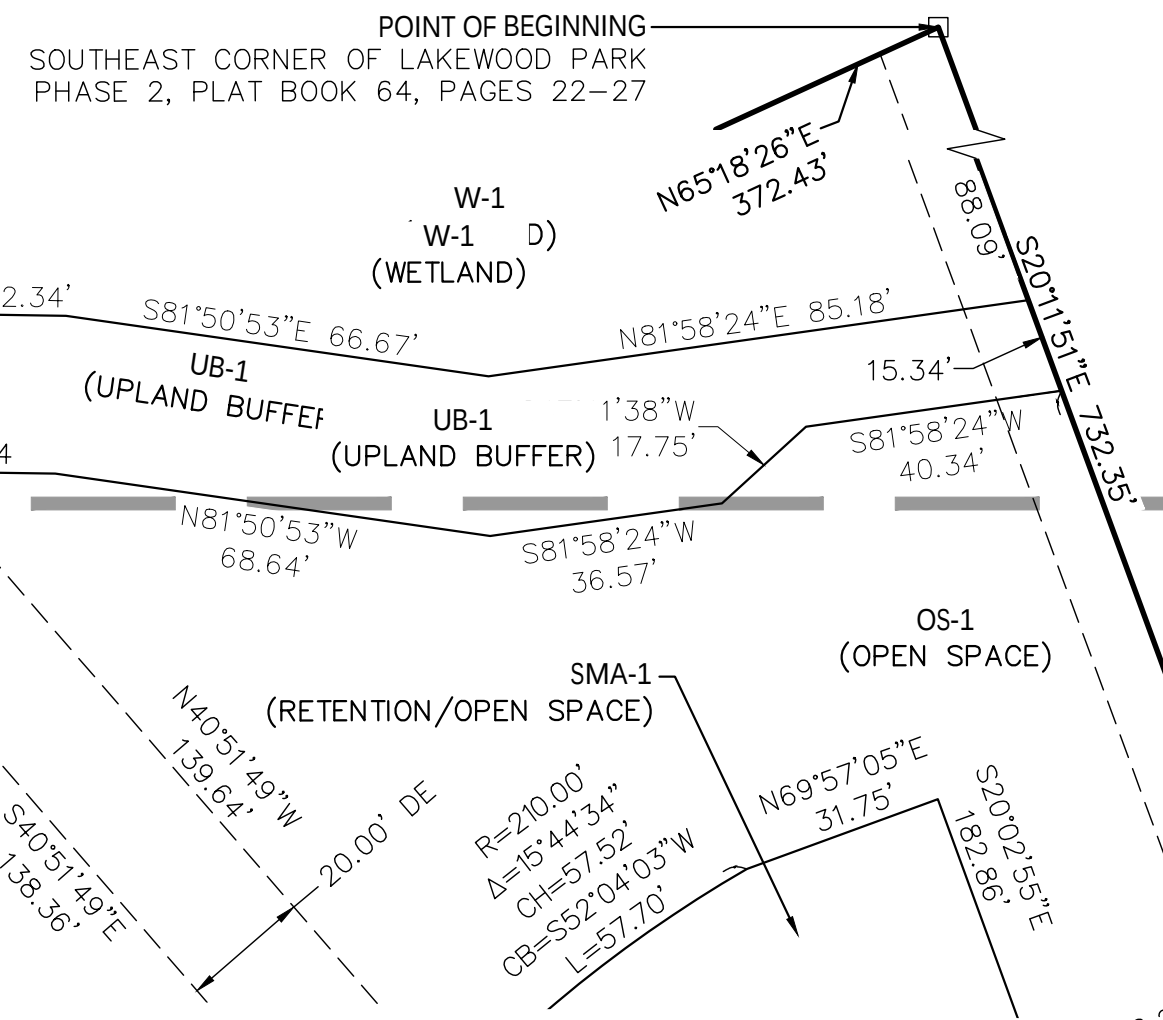
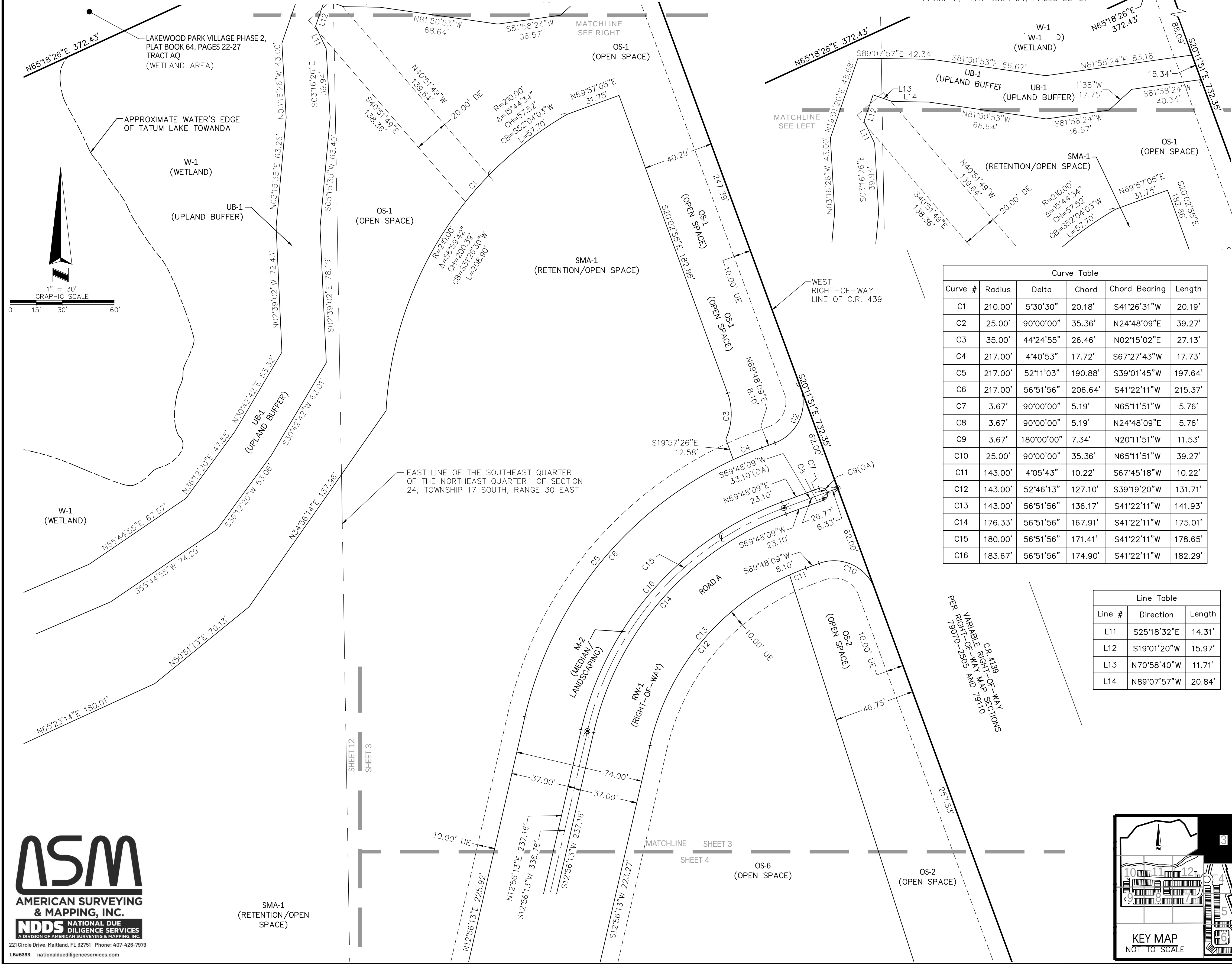
SUMMIT PLACE

A PARCEL OF LAND LYING WITHIN SECTION 24, TOWNSHIP 17 SOUTH, RANGE 30 EAST
CITY OF DELAND, VOLUSIA COUNTY, FLORIDA

SHEET 3 OF 12

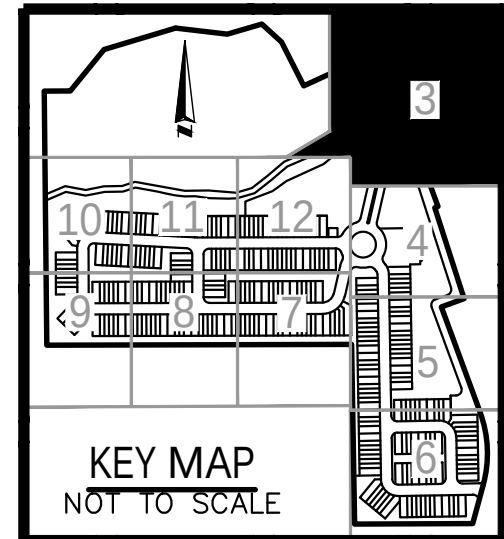
MAP
BOOK

PAGE



Curve Table					
Curve #	Radius	Delta	Chord	Chord Bearing	Length
C1	210.00'	5°30'30"	20.18'	S41°26'31"W	20.19'
C2	25.00'	90°00'00"	35.36'	N24°48'09"E	39.27'
C3	35.00'	44°24'55"	26.46'	N02°15'02"E	27.13'
C4	217.00'	4°40'53"	17.72'	S67°27'43"W	17.73'
C5	217.00'	52°11'03"	190.88'	S39°01'45"W	197.64'
C6	217.00'	56°51'56"	206.64'	S41°22'11"W	215.37'
C7	3.67'	90°00'00"	5.19'	N65°11'51"W	5.76'
C8	3.67'	90°00'00"	5.19'	N24°48'09"E	5.76'
C9	3.67'	180°00'00"	7.34'	N20°11'51"W	11.53'
C10	25.00'	90°00'00"	35.36'	N65°11'51"W	39.27'
C11	143.00'	4°05'43"	10.22'	S67°45'18"W	10.22'
C12	143.00'	52°46'13"	127.10'	S39°19'20"W	131.71'
C13	143.00'	56°51'56"	136.17'	S41°22'11"W	141.93'
C14	176.33'	56°51'56"	167.91'	S41°22'11"W	175.01'
C15	180.00'	56°51'56"	171.41'	S41°22'11"W	178.65'
C16	183.67'	56°51'56"	174.90'	S41°22'11"W	182.29'

Line Table		
Line #	Direction	Length
L11	S25°18'32"E	14.31'
L12	S19°01'20"W	15.97'
L13	N70°58'40"W	11.71'
L14	N89°07'57"W	20.84'



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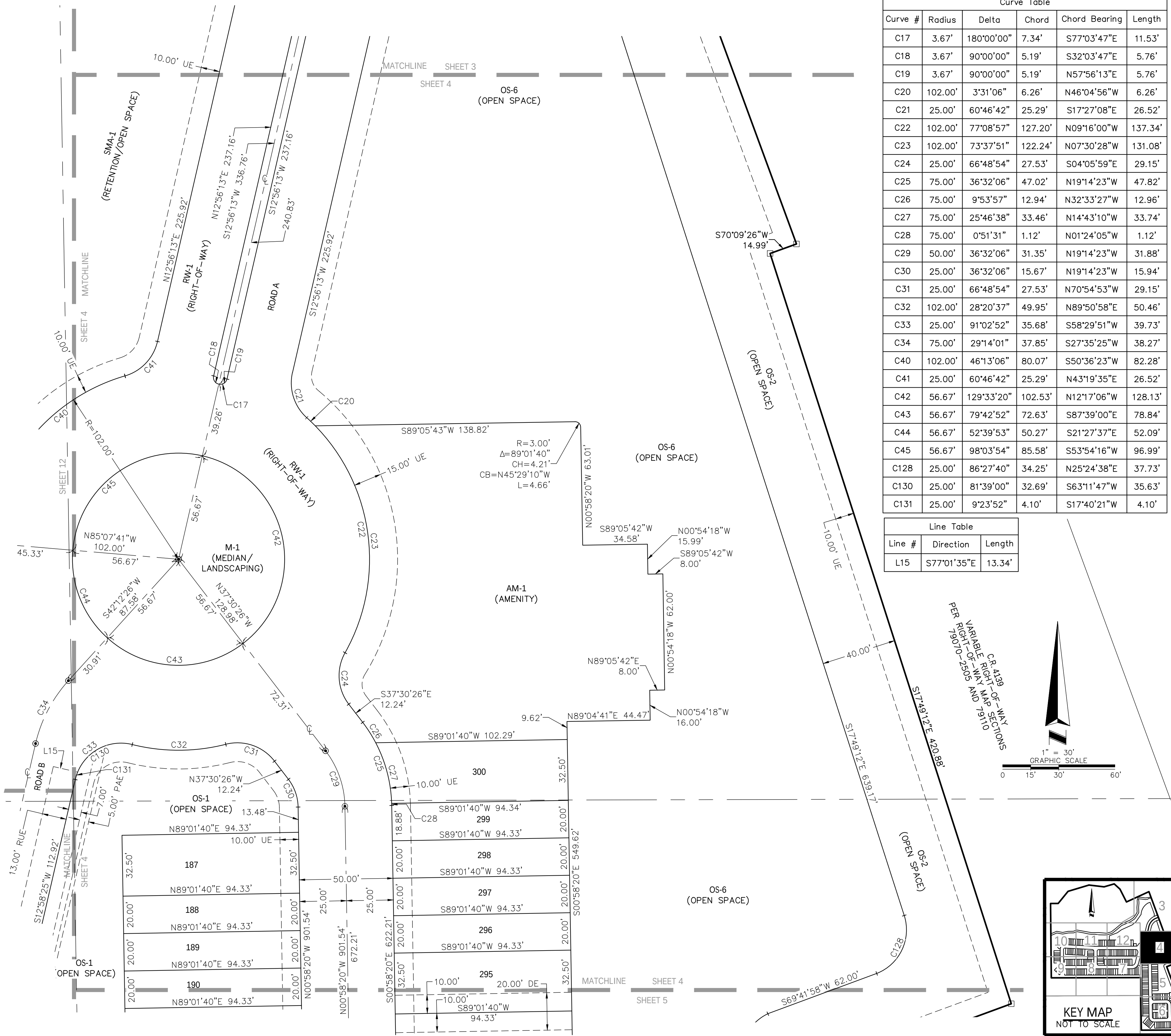
SUMMIT PLACE

A PARCEL OF LAND LYING WITHIN SECTION 24, TOWNSHIP 17 SOUTH, RANGE 30 EAST
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SHEET 4 OF 12

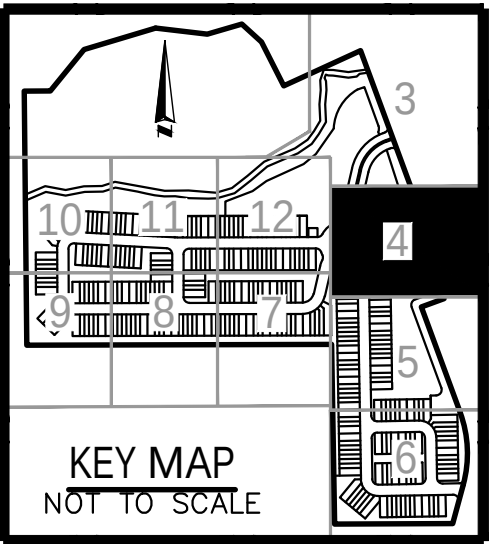
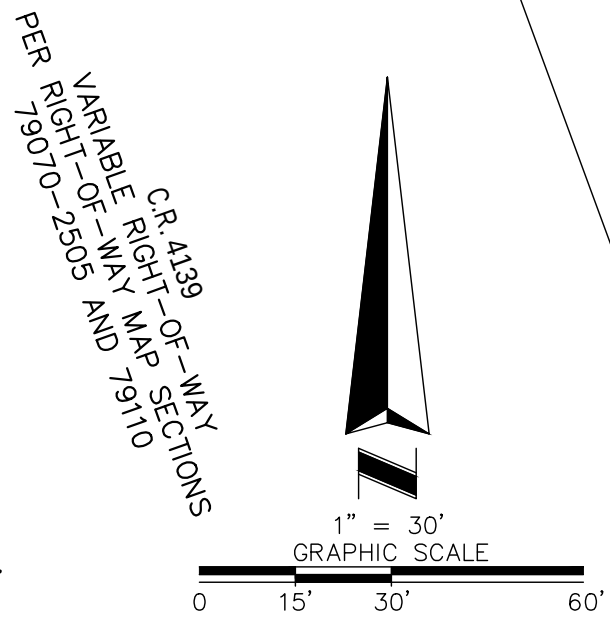
MAP
BOOK

PAGE



Curve Table					
Curve #	Radius	Delta	Chord	Chord Bearing	Length
C17	3.67'	180°00'00"	7.34'	S77°03'47"E	11.53'
C18	3.67'	90°00'00"	5.19'	S32°03'47"E	5.76'
C19	3.67'	90°00'00"	5.19'	N57°56'13"E	5.76'
C20	102.00'	3°31'06"	6.26'	N46°04'56"W	6.26'
C21	25.00'	60°46'42"	25.29'	S17°27'08"E	26.52'
C22	102.00'	77°08'57"	127.20'	N09°16'00"W	137.34'
C23	102.00'	73°37'51"	122.24'	N07°30'28"W	131.08'
C24	25.00'	66°48'54"	27.53'	S04°05'59"E	29.15'
C25	75.00'	36°32'06"	47.02'	N19°14'23"W	47.82'
C26	75.00'	9°53'57"	12.94'	N32°33'27"W	12.96'
C27	75.00'	25°46'38"	33.46'	N14°43'10"W	33.74'
C28	75.00'	0°51'31"	1.12'	N01°24'05"W	1.12'
C29	50.00'	36°32'06"	31.35'	N19°14'23"W	31.88'
C30	25.00'	36°32'06"	15.67'	N19°14'23"W	15.94'
C31	25.00'	66°48'54"	27.53'	N70°54'53"W	29.15'
C32	102.00'	28°20'37"	49.95'	N89°50'58"E	50.46'
C33	25.00'	91°02'52"	35.68'	S58°29'51"W	39.73'
C34	75.00'	29°14'01"	37.85'	S27°35'25"W	38.27'
C40	102.00'	46°13'06"	80.07'	S50°36'23"W	82.28'
C41	25.00'	60°46'42"	25.29'	N43°19'35"E	26.52'
C42	56.67'	129°33'20"	102.53'	N12°17'06"W	128.13'
C43	56.67'	79°42'52"	72.63'	S87°39'00"E	78.84'
C44	56.67'	52°39'53"	50.27'	S21°27'37"E	52.09'
C45	56.67'	98°03'54"	85.58'	S53°54'16"W	96.99'
C128	25.00'	86°27'40"	34.25'	N25°24'38"E	37.73'
C130	25.00'	81°39'00"	32.69'	S63°11'47"W	35.63'
C131	25.00'	9°23'52"	4.10'	S17°40'21"W	4.10'

Line Table		
Line #	Direction	Length
L15	S77°01'35"E	13.34'



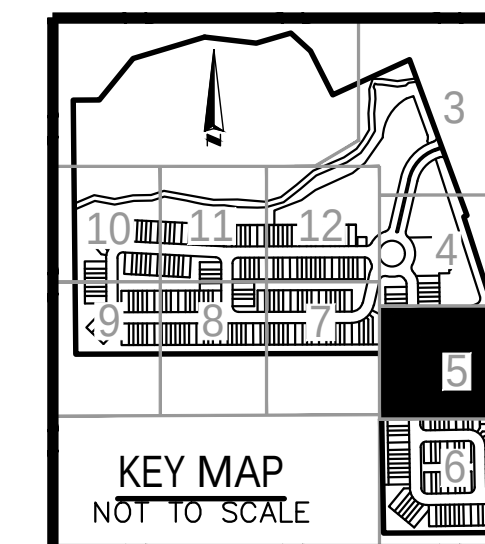
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1" = 30'

GRAPHIC SCALE

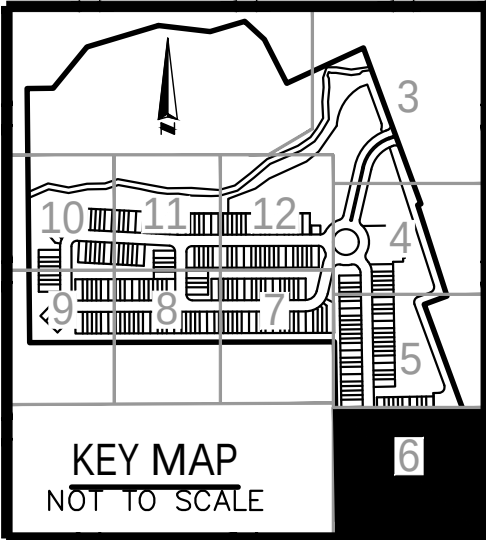
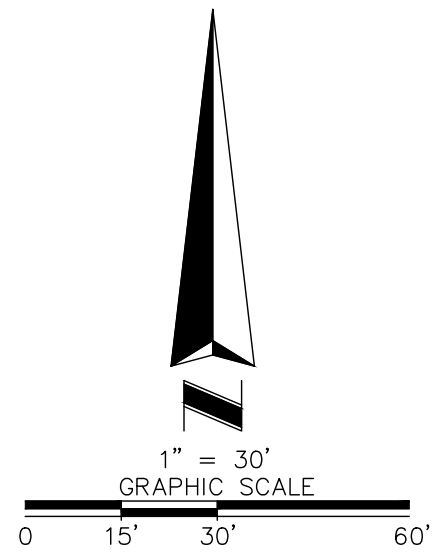
0 15' 30' 60'

Curve Table					
Curve #	Radius	Delta	Chord	Chord Bearing	Length
C57	100.00'	13°14'51"	23.07'	N19°35'51"E	23.12'
C58	25.00'	109°13'31"	40.76'	N34°24'55"E	47.66'
C128	25.00'	86°27'40"	34.25'	N25°24'38"E	37.73'
C129	25.00'	84°42'22"	33.69'	S22°09'23"W	36.96'



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Line Table		
Line #	Direction	Length
L17	N45°58'20"W	1.92'
L18	S45°58'20"E	1.92'



Curve Table					
Curve#	Radius	Delta	Chord	Chord Bearing	Length
C59	25.00'	90°00'00"	35.36'	S45°58'20"E	39.27'
C60	25.00'	61°18'53"	25.50'	S31°37'46"E	26.75'
C61	25.00'	28°41'07"	12.39'	S74°37'46"E	12.52'
C62	25.00'	90°00'00"	35.36'	N45°58'20"W	39.27'
C63	25.00'	28°41'07"	12.39'	N76°37'46"W	12.52'
C64	25.00'	61°18'53"	25.50'	N31°37'46"W	26.75'
C65	50.00'	90°00'00"	70.71'	N45°58'20"W	78.54'
C66	75.00'	90°00'00"	106.07'	N45°58'20"W	117.81'
C67	75.00'	15°22'58"	20.18'	N83°14'21"W	20.24'
C68	75.00'	16°47'34"	21.90'	N67°06'35"W	21.98'
C69	75.00'	11°54'56"	15.57'	N52°45'20"W	15.60'
C70	75.00'	13°51'19"	18.09'	N39°52'12"W	18.14'
C71	75.00'	12°49'13"	16.75'	N26°31'55"W	16.78'
C72	75.00'	14°49'01"	19.34'	N12°42'50"W	19.40'
C73	75.00'	4°19'59"	5.67'	N03°08'19"W	5.67'
C74	25.00'	90°00'00"	35.36'	S44°01'40"W	39.27'
C75	25.00'	39°15'39"	16.80'	S18°39'30"W	17.13'
C76	25.00'	28°41'07"	12.39'	S74°41'07"W	12.52'
C77	25.00'	90°00'00"	35.36'	N44°01'40"E	39.27'
C78	25.00'	28°41'07"	12.39'	N74°41'07"E	12.52'
C79	25.00'	39°15'39"	16.80'	N18°39'30"E	17.13'
C80	25.00'	90°00'00"	35.36'	S45°58'20"E	39.27'
C81	25.00'	30°00'00"	12.94'	S19°58'20"E	13.09'
C82	25.00'	60°00'00"	25.00'	S60°58'20"E	26.18'
C83	25.00'	76°30'58"	30.98'	N50°46'11"E	33.39'
C84	522.96'	2°54'02"	26.47'	N1°34'09"E	26.47'
C85	25.00'	106°19'22"	40.02'	N57°48'39"W	46.39'
C86	75.00'	106°19'22"	106.07'	S45°58'20"E	117.81'
C87	75.00'	14°05'12"	18.38'	S68°00'55"E	18.44'
C88	75.00'	16°51'51"	22.00'	S23°29'27"E	22.08'
C89	75.00'	14°26'24"	18.85'	S39°08'34"E	18.90'
C90	75.00'	15°21'25"	20.04'	S54°02'28"E	20.10'
C91	75.00'	14°08'31"	18.46'	S68°47'26"E	18.51'
C92	75.00'	15°06'39"	19.72'	S83°25'00"E	19.78'
C93	50.00'	90°00'00"	70.71'	S45°58'20"E	78.54'
C94	25.00'	90°00'00"	35.36'	S45°58'20"E	39.27'
C95	25.00'	61°18'53"	25.50'	S31°37'46"E	26.75'
C96	25.00'	28°41'08"	12.39'	S76°37'46"E	12.52'
C132	25.00'	22°03'14"	9.56'	S49°18'56"W	9.62'
C133	25.00'	22°03'14"	9.56'	N49°18'56"E	9.62'



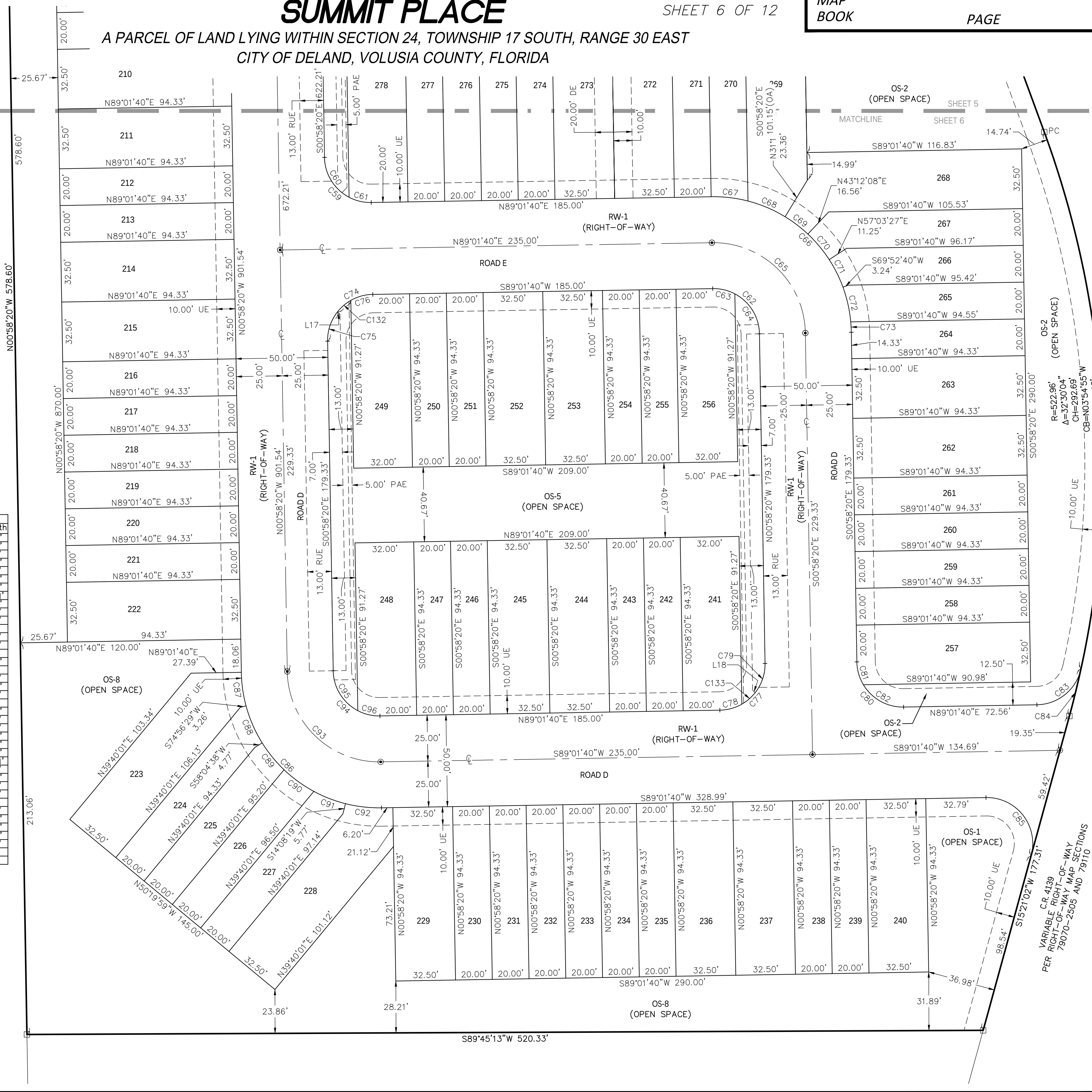
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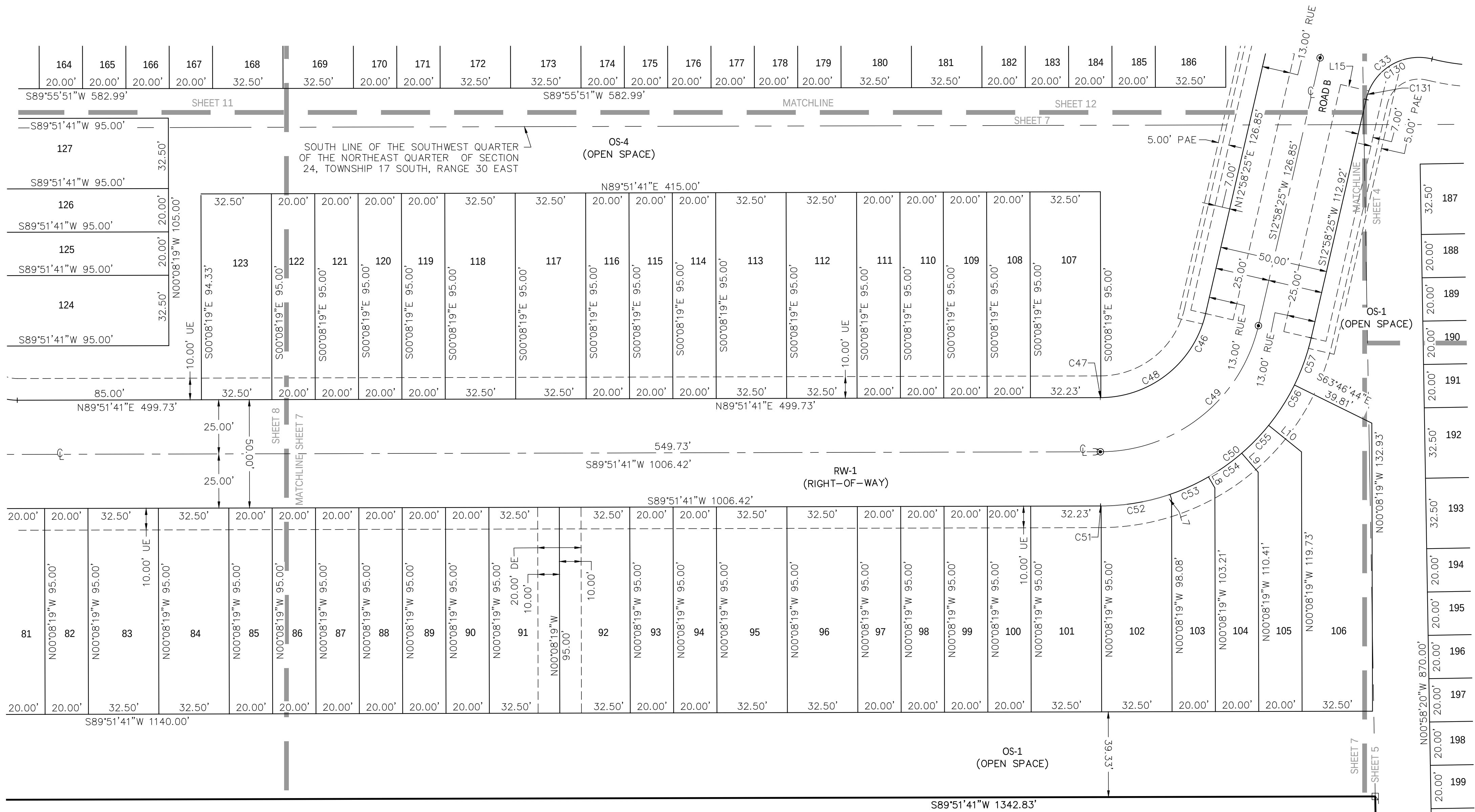
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SHEET 7 OF 12

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Curve Table					
Curve #	Radius	Delta	Chord	Chord Bearing	Length
C33	25.00'	91°02'52"	35.68'	S58°29'51"W	39.73'
C46	50.00'	76°53'17"	62.17'	N51°25'03"E	67.10'
C47	50.00'	0°18'36"	0.27'	N89°42'24"E	0.27'
C48	50.00'	76°34'41"	61.96'	N51°15'45"E	66.83'
C49	75.00'	76°53'17"	93.26'	N51°25'03"E	100.65'
C50	100.00'	76°53'17"	124.35'	N51°25'03"E	134.19'
C51	100.00'	0°09'18"	0.27'	N89°47'03"E	0.27'
C52	100.00'	18°31'35"	32.19'	N80°26'36"E	32.33'
C53	100.00'	11°12'45"	19.54'	N65°34'26"E	19.57'
C54	100.00'	10°48'43"	18.84'	N54°33'42"E	18.87'
C55	100.00'	10°14'21"	17.85'	N44°02'10"E	17.87'
C56	100.00'	12°41'43"	22.11'	N32°34'08"E	22.16'
C57	100.00'	13°14'51"	23.07'	N19°35'51"E	23.12'

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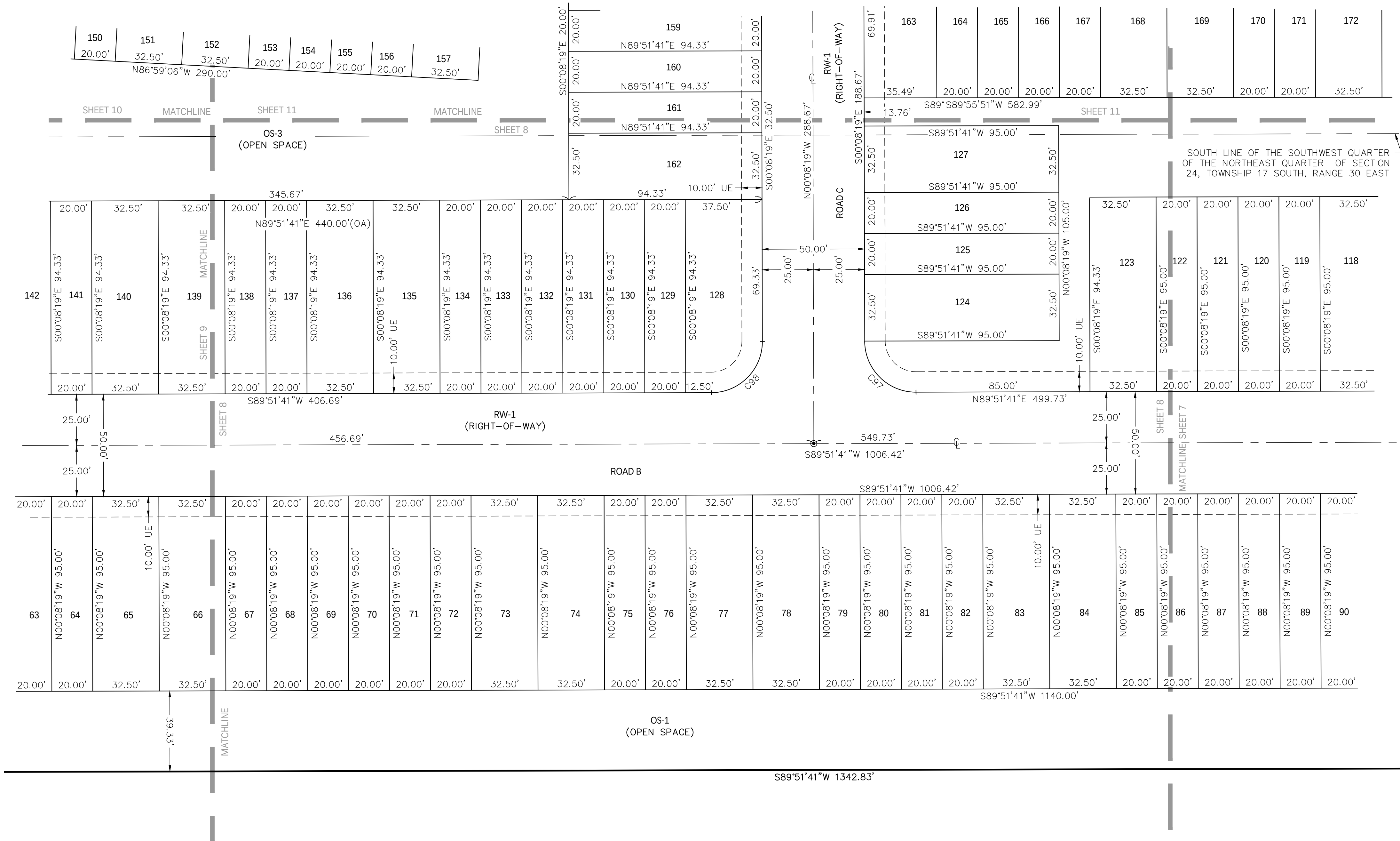
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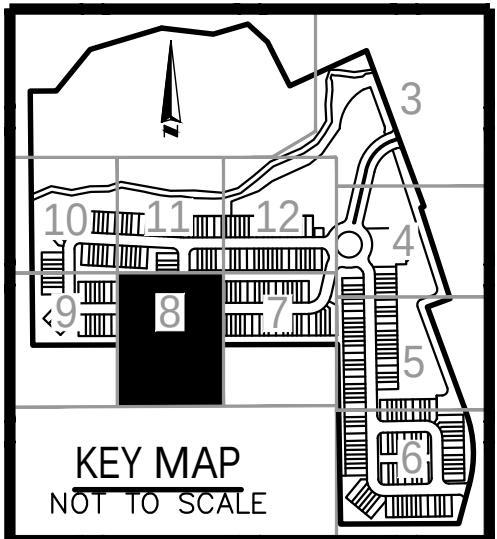
SHEET 8 OF 12

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Curve Table					
Curve #	Radius	Delta	Chord	Chord Bearing	Length
C97	25.00'	90°00'00"	35.36'	S45°08'19"E	39.27'
C98	25.00'	90°00'00"	35.36'	N44°51'41"E	39.27'



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A PARCEL OF LAND LYING WITHIN SECTION 24, TOWNSHIP 17 SOUTH, RANGE 30 EAST
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SHEET 9 OF 12

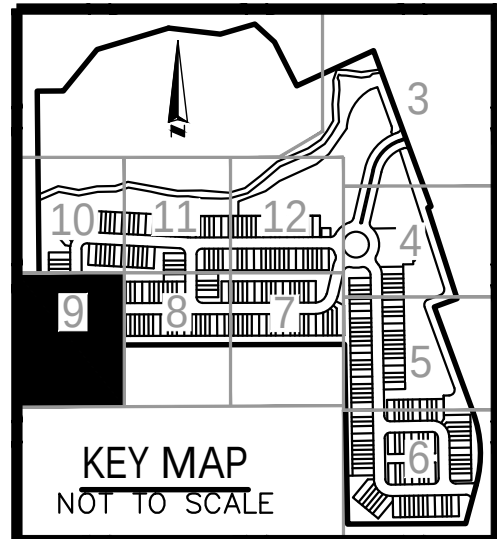
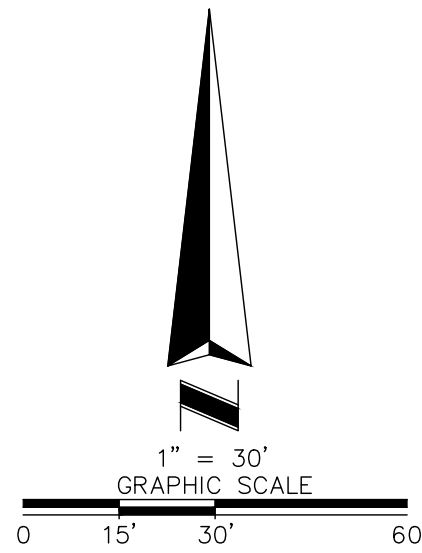
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Curve Table					
Curve #	Radius	Delta	Chord	Chord Bearing	Length
C107	75.00'	89°59'59"	106.07'	S45°08'18"E	117.81'
C108	75.00'	11°56'32"	15.60'	S06°06'35"E	15.63'
C109	75.00'	11°56'32"	15.60'	S06°06'35"E	15.63'
C110	75.00'	18°11'40"	23.72'	S21°10'41"E	23.82'
C111	75.00'	15°28'19"	20.19'	S38°00'41"E	20.25'
C112	75.00'	15°27'36"	20.18'	S53°28'38"E	20.24'
C113	75.00'	22°34'05"	29.35'	S72°29'29"E	29.54'
C114	75.00'	6°21'46"	8.32'	S86°57'25"E	8.33'
C115	50.00'	90°00'00"	70.71'	S45°08'19"E	78.54'
C116	25.00'	90°00'00"	35.36'	S45°08'19"E	39.27'
C117	25.00'	70°34'50"	28.89'	S35°25'44"E	30.80'
C118	25.00'	19°25'10"	8.43'	S80°25'44"E	8.47'



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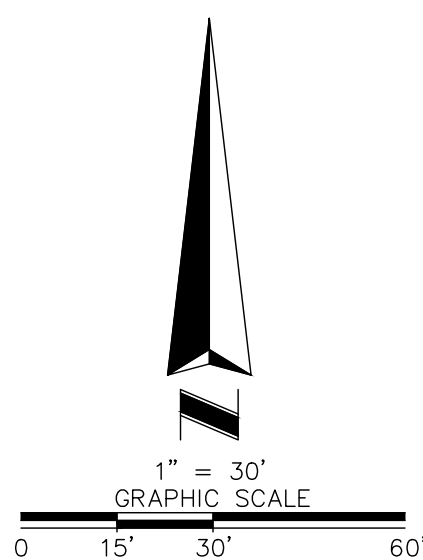
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CITY OF DELAND, VOLUSIA COUNTY, FLORIDA

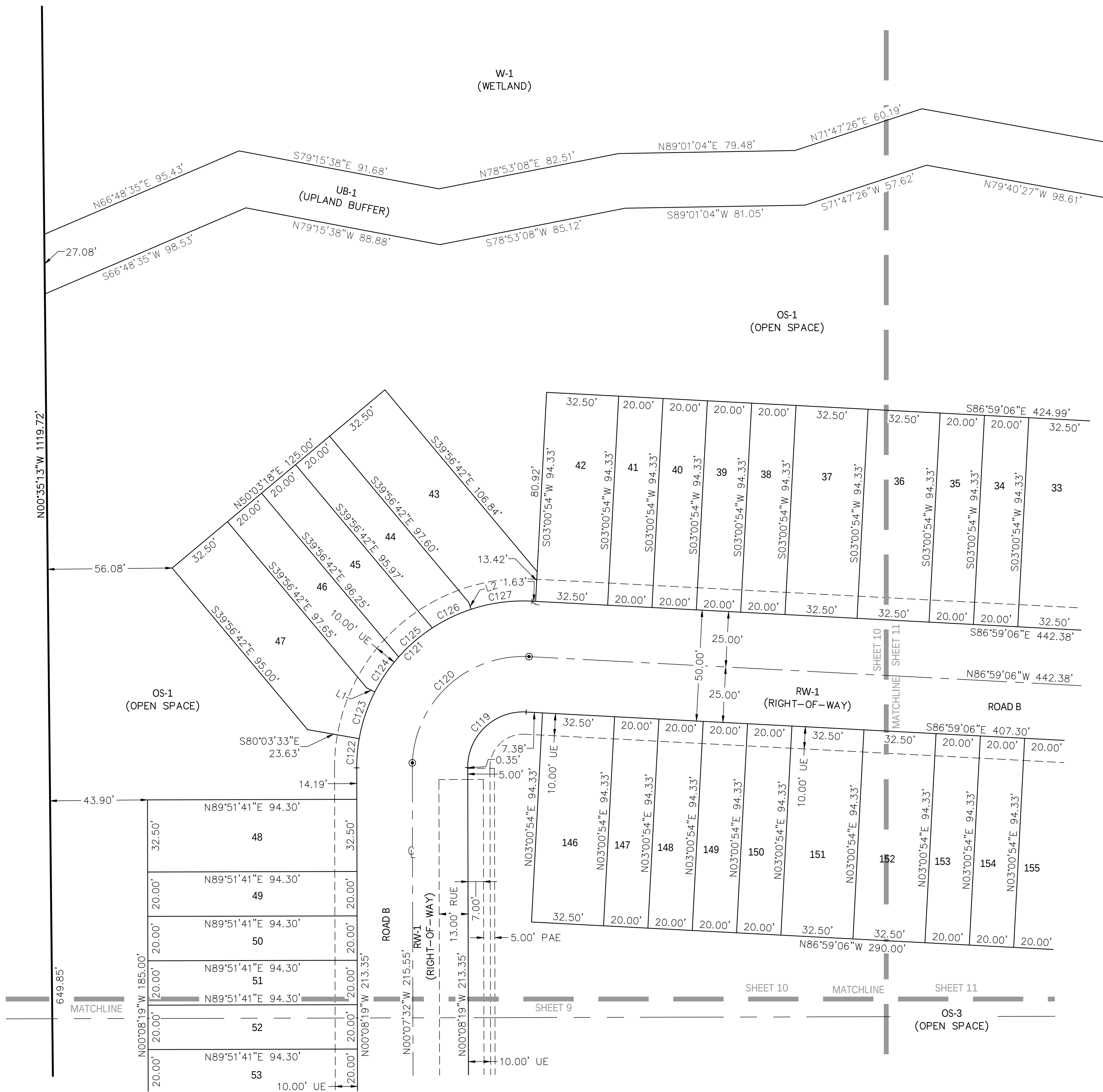
SHEET 10 OF 12

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Curve Table					
Curve #	Radius	Delta	Chord	Chord Bearing	Length
C119	25.00'	93°09'13"	36.31'	S46°26'18"W	40.65'
C120	50.00'	90°37'55"	71.10'	S47°41'57"W	79.09'
C121	75.00'	93°09'13"	108.94'	S46°26'18"W	121.94'
C122	75.00'	10°04'45"	13.18'	S04°54'04"W	13.19'
C123	75.00'	17°00'32"	22.18'	S18°26'43"W	22.26'
C124	75.00'	14°37'58"	19.10'	S34°15'58"W	19.15'
C125	75.00'	15°19'34"	20.00'	S49°14'44"W	20.06'
C126	75.00'	14°49'29"	19.35'	S64°19'15"W	19.41'
C127	75.00'	21°16'54"	27.70'	S82°22'27"W	27.86'



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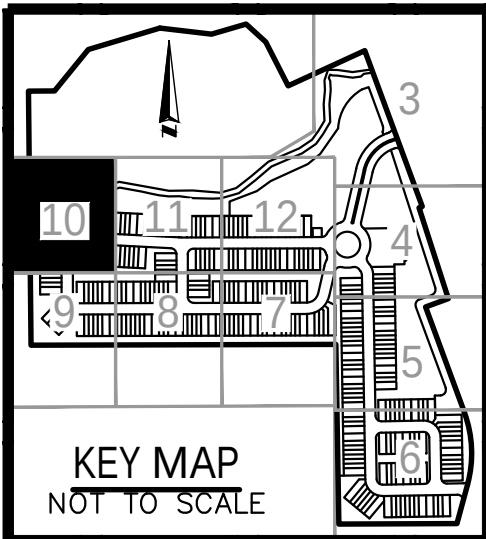
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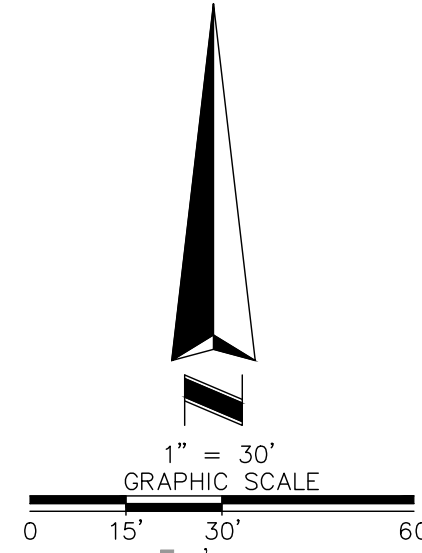
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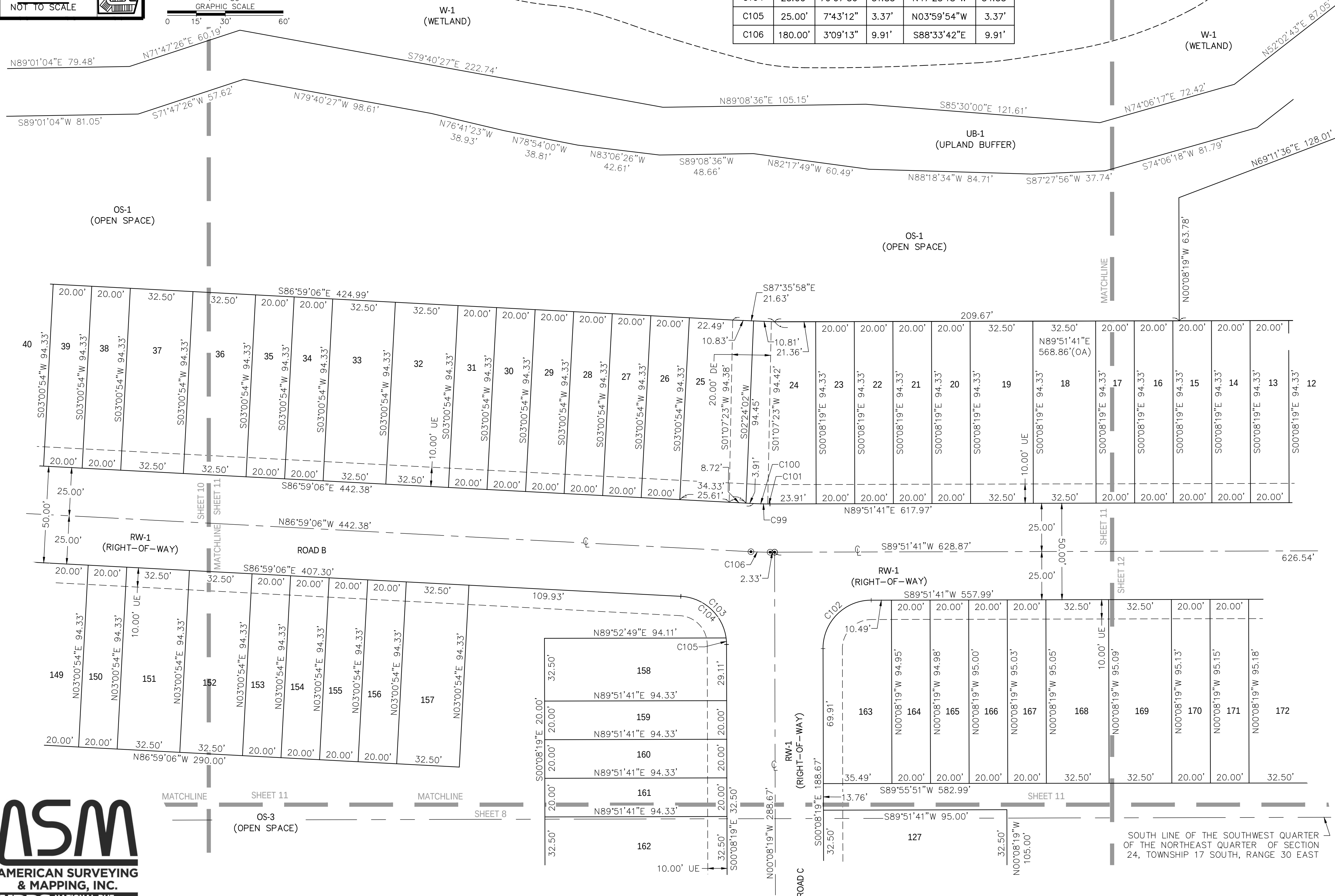


PAGE

KEY MAP
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Curve Table					
Curve #	Radius	Delta	Chord	Chord Bearing	Length
C99	155.00'	3'09"13"	8.53'	S88°33'42"E	8.53'
C100	155.00'	2'43"32"	7.37'	S88°20'52"E	7.37'
C101	155.00'	0'25"41"	1.16'	S89°55'28"E	1.16'
C102	25.00'	90°00'00"	35.36'	S44°51'41"W	39.29'
C103	25.00'	86°50'47"	34.37'	N43°33'42"W	37.87'
C104	25.00'	79°07'36"	31.85'	N47°25'18"W	34.53'
C105	25.00'	73°43'12"	3.37'	N03°59'54"W	3.37'
C106	180.00'	3'09"13"	9.91'	S88°33'42"E	9.91'



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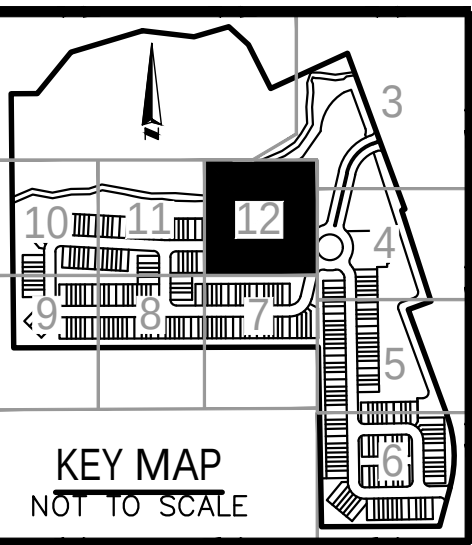
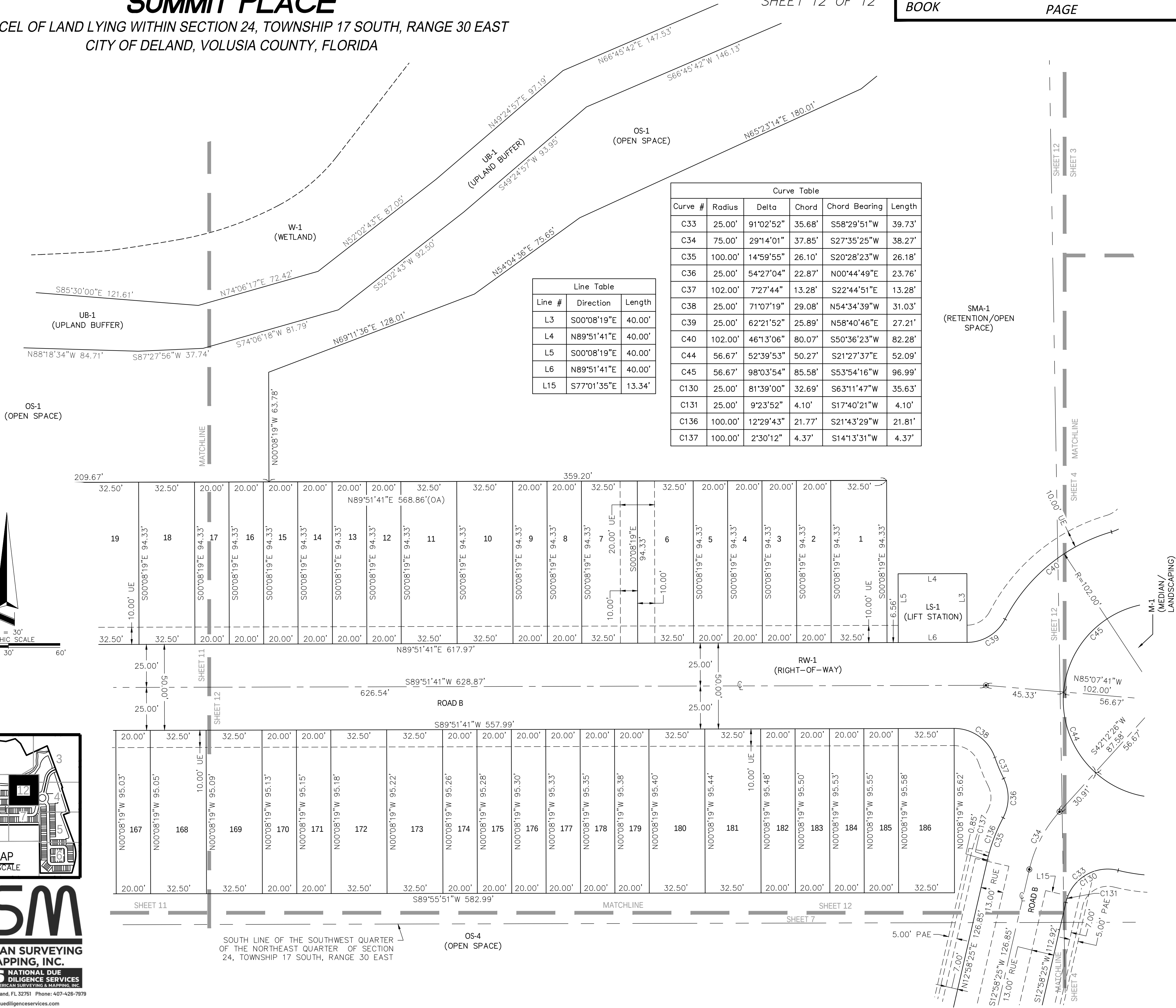
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LEGAL DESCRIPTION:

A PARCEL OF LAND LYING IN SECTION 24, TOWNSHIP 17 SOUTH, RANGE 30 EAST, VOLUSIA COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS:

COMMENCE AT SOUTHEAST CORNER OF THE NORTH 7 CHAINS OF THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 24, TOWNSHIP 17 SOUTH, RANGE 30 EAST, AND RUN SOUTH 00°22'01" EAST ALONG THE WEST LINE OF THE NORTHEAST 1/4 OF SECTION 24, TOWNSHIP 17 SOUTH, RANGE 30 EAST, A DISTANCE OF 97.23 FEET TO THE POINT OF BEGINNING; THENCE DEPARTING SAID WEST LINE, RUN NORTH 89° 34'48" EAST, A DISTANCE OF 115.05 FEET; THENCE RUN NORTH 39°30'34" EAST, A DISTANCE OF 234.81 FEET; THENCE RUN NORTH 73°26'58" EAST, A DISTANCE OF 328.99 FEET; THENCE RUN SOUTH 83°07'08" EAST, A DISTANCE OF 228.92 FEET; THENCE RUN NORTH 73°54'21" EAST, A DISTANCE OF 159.10 FEET; THENCE RUN SOUTH 47°20'56" EAST, A DISTANCE OF 117.55 FEET; THENCE RUN SOUTH 26°45'29" EAST, A DISTANCE OF 216.76 FEET; THENCE RUN NORTH 65°29'38" EAST, A DISTANCE OF 327.31 FEET TO A POINT ON THE WESTERLY RIGHT OF WAY LINE OF COUNTY ROAD 4139 AS RECORDED ON RIGHT OF WAY MAP SECTIONS 79070-2505 AND 79110 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA; THENCE RUN THE FOLLOWING 6 COURSES ALONG SAID WESTERLY RIGHT OF WAY: SOUTH 19°57'26" EAST, A DISTANCE OF 1100.55 FEET; SOUTH 70°04'49" WEST, A DISTANCE OF 14.60 FEET; SOUTH 19°57'36" EAST, A DISTANCE OF 50.00 FEET; SOUTH 70°02'24" WEST, A DISTANCE OF 124.00 FEET; SOUTH 19°57'36" EAST, A DISTANCE OF 495.89 FEET TO A POINT OF CURVATURE OF A CURVE CONCAVE TO THE WEST HAVING A RADIUS OF 522.96 FEET AND A CENTRAL ANGLE OF 35°32'20", THENCE RUN SOUTHEAST ALONG THE ARC OF SAID CURVE A DISTANCE OF 324.38 FEET; THENCE DEPARTING SAID RIGHT OF WAY LINE, RUN SOUTH 89°59'28" WEST ALONG THE NORTH LINE OF THE SOUTH 235.00 FEET OF THE NORTHEAST 1/4 OF THE SOUTHEAST 1/4 OF THE AFOREMENTIONED SECTION 24, A DISTANCE OF 517.99 FEET TO A POINT ON THE EAST LINE OF SAID NORTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SAID SECTION 24; THENCE RUN NORTH 00°45'20" WEST ALONG SAID EAST LINE, A DISTANCE OF 791.90 FEET; THENCE DEPARTING SAID EAST LINE, RUN NORTH 89°53'53" WEST, A DISTANCE OF 1342.71 FEET TO A POINT ON THE AFORESAID WEST LINE OF THE NORTHEAST 1/4 OF SAID SECTION 24, TOWNSHIP 17 SOUTH, RANGE 30 EAST; THENCE RUN NORTH 00°22'01" WEST ALONG SAID WEST LINE, A DISTANCE OF 1119.50 FEET TO THE POINT OF BEGINNING.

LESS AND EXCEPT ANY LAND CONTAINED IN THE WARRANTY DEED RECORDED IN OFFICIAL RECORDS BOOK 5551, PAGE 2688, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

TOGETHER WITH

A PARCEL OF LAND LYING IN SECTION 24, TOWNSHIP 17 SOUTH, RANGE 30 EAST, VOLUSIA COUNTY, FLORIDA, MORE PARTICULARLY DESCRIBED AS:

FOR A POINT OF REFERENCE, BEGIN AT THE INTERSECTION OF THE WESTERLY RIGHT-OF WAY LINE OF INTERSTATE HIGHWAY 4, AND THE EASTERLY RIGHT-OF-WAY LINE OF COUNTY ROAD 4139, AND RUN NORTH 24°27'12" WEST, ALONG SAID EASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 434.81 FEET; THENCE RUN NORTH 19°05'23" WEST, CONTINUING ALONG SAID EASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 99.02 FEET; THENCE RUN NORTH 20°00'50" WEST, CONTINUING ALONG SAID EASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 371.26 FEET; THENCE RUN SOUTH 89°00'48" EAST, DEPARTING SAID EASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 671.24 FEET, TO THE AFOREMENTIONED WESTERLY RIGHT-OF-WAY INE OF INTERSTATE HIGHWAY 4 AND A POINT ON A NON-TANGENT CURVE CONCAVE TO THE SOUTHEAST, HAVING A RADIUS OF 5879.85 FEET AND A CHORD WHICH BEARS SOUTH 21°51'47" WEST, FOR A DISTANCE OF 890.73 FEET; THENCE RUN ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 08°41'18" FOR A LENGTH OF 891.59 FEET TO THE POINT OF BEGINNING.

SUMMIT PLACE	
Sheet Number	Sheet Title
C001	COVER
C002	SYMBOLS AND ABBREVIATIONS
C003	GENERAL NOTES
C010	DEMOLITION PLAN
C100	OVERALL SITE PLAN
C101	SITE PLAN
C102	SITE PLAN
C103	SITE PLAN
C201	UTILITY PLAN
C202	UTILITY PLAN
C203	UTILITY PLAN
C301	DRAINAGE PLAN
C302	DRAINAGE PLAN
C303	DRAINAGE PLAN
C401	GRADING PLAN
C402	GRADING PLAN
C403	GRADING PLAN
C501	OFFSITE DIMENSION, SIGNING, AND STRIPING PLAN
C502	OFFSITE SECTIONS
C601	STREET A PLAN & PROFILE
C602	STREET B-1 PLAN & PROFILE
C603	STREET B-2 PLAN & PROFILE
C604	STREET B-3 PLAN & PROFILE
C605	STREET C PLAN & PROFILE
C606	STREET D-1 PLAN & PROFILE
C607	STREET D-2 PLAN & PROFILE
C608	STREET E PLAN & PROFILE
C609	SUMMIT AVENUE OFF-SITE PLAN & PROFILE
C610	SUMMIT AVENUE OFF-SITE PLAN & PROFILE
C700	EROSION CONTROL PLAN
C701	EROSION CONTROL NOTES AND DETAILS
C800	VEHICLE CIRCULATION PLAN
C900	CONSTRUCTION DETAILS
C901	CONSTRUCTION DETAILS
C902	CONSTRUCTION DETAILS
C903	CONSTRUCTION DETAILS
C904	CONSTRUCTION DETAILS
C910	CITY DETAILS
C911	CITY DETAILS
C912	CITY DETAILS
C913	CITY DETAILS
C914	CITY DETAILS
C915	CITY DETAILS
C916	CITY DETAILS
C917	CITY DETAILS
C918	CITY DETAILS



MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS

431 E. HORATIO AVENUE, SUITE 260
MAITLAND, FLORIDA 32751
PHONE (407) 629-8330
FAX (407) 629-8336

FINAL ENGINEERING PLAN FOR SUMMIT PLACE

PARCELS: 702400000010,
702400000020

SECTIONS 24, TOWNSHIP 17 SOUTH, RANGE 30 EAST
CITY OF DELAND, VOLUSIA COUNTY, FLORIDA

FOR

DR. HORTON
10192 DOWDEN ROAD
ORLANDO, FL 32832
PHONE: (407) 850-5200

PROJECT TEAM MEMBERS:

OWNER:

D.R. HORTON
10192 DOWDEN RD
ORLANDO, FL 32832
PHONE: (407) 850-5200

ENGINEER:

MADDEN, MOORHEAD, & STOKES, LLC.
431 E HORATIO AVENUE, SUITE 260
MAITLAND, FL 32751
PHONE: (407) 629-8330
CONTACT: CHAD MOORHEAD, PE

POWER:

DUKE ENERGY
PHONE: (407) 938-6602
CONTACT: JENNIFER NAZARIAN

WATER & WASTE WATER:

CITY OF DELAND
1101 S. AMELIA AVE.
DELAND, FL 32724
PHONE: (386) 626-7250

CABLE:

CHARTER COMMUNICATIONS
1195 S. WOODLAND BLVD,
DELAND, FL 32720
PHONE: (407) 532-8614
CONTACT: STACY STAFFORD

ENVIRONMENTAL:

ECOLOGICAL CONSULTING SOLUTIONS, INC.
235 HUNT CLUB BOULEVARD, SUITE 202
LONGWOOD FLORIDA
PHONE: (407) 869-9436

SURVEYOR:

AMERICAN SURVEYING & MAPPING, INC
3191 MAGUIRE BLVD, STREET 200.
ORLANDO, FL 32803
PHONE: (407) 426-7979

GEOTECHICAL:

UNIVERSAL ENGINEERING SCIENCES
911 BEVILLE ROAD, SUITE 3
SOUTH DAYTONA, FL 32119
PHONE: (386) 756-1105

GAS:

FLORIDA PUBLIC UTILITIES
450 S. HIGHWAY 17-92
DEBARY, FL 32713
PHONE: (561) 402-2523
CONTACT: MICHELLE MCMURTRY

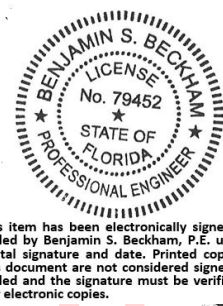
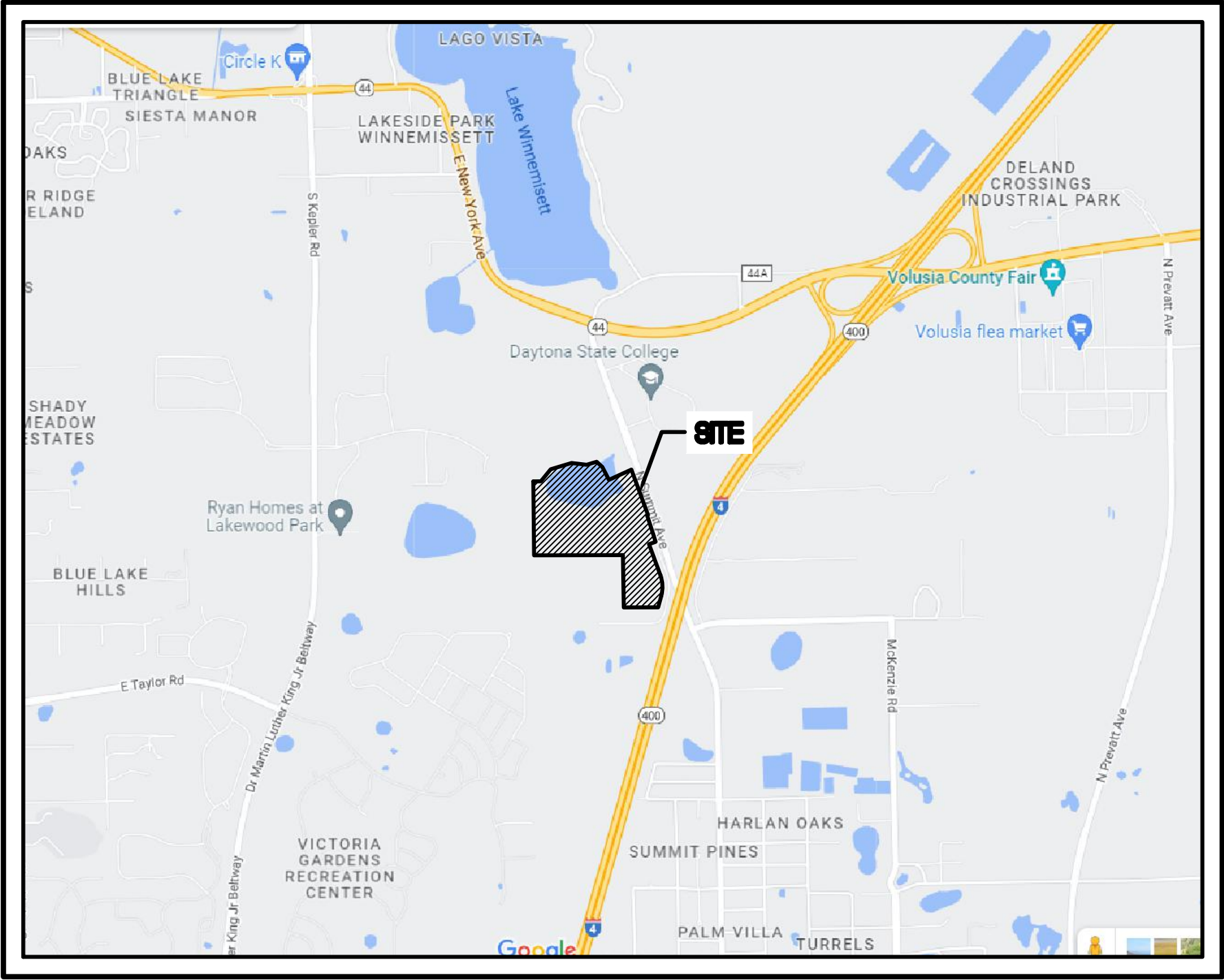
PHONE: (NORTH OF BERESFORD)

AT&T
268 RIDGEWOOD AVE., 2ND FL
DAYTONA BEACH, FL 32114
PHONE: (386) 281-6954
CONTACT: DUANE REYNOLDS

PHONE: (SOUTH OF BERESFORD)

CENTURY LINK
1290 MT. HOMER RD.
EUSTIS, FL 32726
PHONE: (352) 326-1410
CONTACT: JOY BRITIAN

VICINITY MAP
1" = 2,000'



Digitally signed by
Benjamin S Beckham
Date: 2024.05.21
15:05:49 -04'00'

BENJAMIN S. BECKHAM
CERTIFICATE OF AUTHORIZATION NO. EB-0007723

A	AREA	F&C	FRAME AND COVER	P	PC	POINT OF CURVATURE
	ANCHOR BOLT	FD	FLOOR DRAIN		PCC	POINT OF COMPOUND CURVATURE
	ABANDON(ED)	FDN	FOUNDATION		PEP	POLYETHYLENE PIPE
	ACRE(S)	FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION		PFOP	PROFILE GRADE POINT
	ACRE-FT	FF	FINISHED FLOOR		PI	POINT OF INTERSECTION
	ACCP	FG	FINISHED GRADE		P/L	PROPERTY LINE
	ADD	FH	FIRE HYDRANT		POB	POINT OF BEGINNING
	ADT	F&I	FURNISH AND INSTALL		POJ	PUSH ON JOINT
	AL	FIG	FIGURE		PP	POLYPROPYLENE
	ALUM	FIN	FINISHED		PR	PHONE RISER
	ALT	FIT	FITTING		PRC	POINT OF REVERSE CURVATURE
	AM	FL	FENCE LINE		PRESS	PRESSURE
	AMPE	FLR	FLOOR		PROJECT	PROJECT
	AMPEX	FLEX	FLEXIBLE		PROP	PROPOSED
	ARV	FLNG	FLANGE		PRVC	POINT OF REVERSE VERTICAL CURVE
	ARVV	FM	FORCE MAIN		PSF	POUNDS PER SQUARE FOOT
	ASPH	FND	FOUND		PSI	POUNDS PER SQUARE INCH
B	ASPHALT	FPH	FEET PER HOUR	Q	PT	POINT OF TANGENCY
	ASSY	FT	FEET PER MINUTE		PVC	POLYVINYL CHLORIDE
	AVE	FPS	FEET PER SECOND		PWMT	PAVEMENT
	AVERAGE	FT	FEET/FOOT		PWR	POWER
	AZ	FTG	FOOTING			
C	BACKFLOW PREVENTER	G	GA	R	R	RADIUS
	BASELINE		GAL		RCP	REINFORCED CONCRETE PIPE
	BLDG		GALV		RCPA	REINFORCED CONCRETE PIPE ARCH
	BOULEVARD		GM		RD	ROAD
	BM		GM		RDY	ROADWAY
	BN		GPD		RED	REDUCER
	BOUNDARY		GPH		REF	REFERENCE
	BLOWOFF		GPM		REIN	REINFORCE(D)
	BACK OF CURB		GPM		REQD	REQUIRED
	BOTTOM		GSP		REV	REVISE/REVISION
	BEARING		GR		RPM	REVOLUTIONS PER MINUTE
	BETTING OF SLOPE		GRD		RR	RAILROAD
	BUTTERFLY VALVE		GSP		RT	RIGHT
			GV		R/W	RELIEF VALVE
			GW		R/W	RIGHT-OF-WAY
					R/W	REUSE WATER MAIN
D	CAPACITY	H	HB	S	S	SOUTH
	CATCH BASIN		HDPE		SAN	SANITARY SEWER
	CENTER TO CENTER		HDW		SB	SPLASH BLOCK
	CEMENT		HOME		SCH	SCHEDULE
	CFC		HORIZ		SD	SIDE DRAIN
	CUBIC FEET PER MINUTE		HP		SDN	SHELF DRAIN
	CUBIC FEET PER SECOND		HR		SE	SOUTHEAST
	CURB AND GUTTER		HT		SEC	SECONDS
	CLASS		HW		SECT	SECTION
	CAST IRON PIPE		HY		SH	SHEET
	CONSTRUCTION JOINT		I-4		SHGW	SEASONAL HIGH GROUND WATER TABLE
	CENTER LINE		ID		SL	SIMILAR
	CONCRETE LIGHT POLE		ID		S/L	SETBACK LINE
	CLEAR/CLEARANCE		INS		SL	SLOPE
	CL		INS		SM	SHEET METAL
	CLS		IN		SM	SPECIFICATION(S)
	CM		INCH		SPEC	SQ
E	CONCRETE MONUMENT		INCH		SO	SQUARE (INCHES)
	CORRUGATED METAL PIPE		INS		SO FT	SQUARE FOOT/FEET
	ARCH		INT		SO YD	SQUARE YARD(S)

LINES

	CENTER LINE		BUILDING LINE
	WIRE FENCE		CONTOURS
	CHAIN LINK FENCE		RAILROAD TRACKS
	WOOD FENCE		GAS MAIN
	GUARDRAIL		UNDERGROUND ELECTRIC
	EXISTING PLATS		UNDERGROUND TELEPHONE
	RETAINING WALL		OVERHEAD ELECTRIC
	RIGHT-OF-WAY LINE		OVERHEAD TELEPHONE
	SHORELINE		UNDERGROUND CABLE TELEVISION
	SWALE		EASEMENT

 SANITARY SEWER LINE
 EX. FM FORCE MAIN

 CLEANOUT
 MANHOLE

EX. WM	WATER MAIN DIP PIPE	WV	WATER VALVE
EX. RM BFD	REUSE WATER MAIN		FIRE HYDRANT
	BACKFLOW PREVENTOR		WATER METER

	STORM SEWER		FDOT TYPE 1 INLET
	MANHOLE		FDOT TYPE 2 INLET
	MITERED END		FDOT TYPE 3 INLET
	STORM INLET		FDOT TYPE 4 INLET
	FDOT TYPE 6 INLET		FDOT TYPE 5 INLET

	BENCHMARK		GUY POLE		BRICK PAVERS
	RECOVERED 4x4 CM		WOOD UTILITY POLE		DIRT ROAD
	SET 4x4 CM		CONCRETE UTILITY POLE		8" MAPLE TREE
	SET IRON ROD		ELECTRIC MANHOLE		8" OAK TREE
	RECOVERED IRON ROD		TELEPHONE MANHOLE		8" PINE TREE
	CONCRETE		TELEPHONE RISER		8" PALM TREE
	COUNTY ROADS		ELECTRIC BOX / TRANSFORMER		8" MISC. TREE
	INTERSTATE ROADS		WELL		
	STATE ROADS		MONITORING WELL		
	WOOD AND/OR METAL LIGHT POLE		DUMPSTER		
	CONCRETE LIGHT POLE		RR CROSSING SIGN		
	YARD LIGHT		RR CROSSING GATE		
	MISCELLANEOUS SIGN		TRAFFIC SIGNAL POLE		
	SECTION CORNER		SATELLITE DISH		
	EDGE OF PAVEMENT W/O CURB		GUY WIRE		
	EDGE OF PAVEMENT W/CURB		HANDICAP PARKING		
			SPOT ELEVATION		

LINES		STORM DRAIN	
	PROPERTY LINE		100 LF STS 24 HDPE @ 0.20% 100 LINEAR FEET STORM PIPE 24" HIGH DENSITY POLYETHELENE PIPE @ 0.20%
	CONSERVATION SETBACK		UNDERDRAIN 6" HDPE PIPE
	CENTER LINE		DRAINAGE FLOW DIRECTION
	CHAIN LINK FENCE		FDOT INLET TYPE 1
	CONTOUR		FDOT INLET TYPE 2
	EASEMENT		FDOT INLET TYPE 3
	FENCE		FDOT INLET TYPE 4
	GUARDRAIL		FDOT INLET TYPE 5
	LOT LINE		FDOT INLET TYPE 6
	RETAINING WALL		MANHOLE
	RIGHT-OF-WAY LINE		MITERED END SECTION
	SETBACK LINE		SLOPE DIRECTION ARROW FOR POND SIDE SLOPE
	SHORELINE		SPOT ELEVATION
	SWALE		STORM INLET
	TREE LINE		

	100 LF SAN 8 PVC 0.40% 100 LINEAR FEET SANITARY 8" PVC PIPE @ 0.40% SLOPE		BOUND CORNER
	CLEANOUT		CONCRETE
	DOUBLE SANITARY SERVICE		COUNTY ROADS
	FORCE MAIN PVC PIPE		DETAIL REFERENCE
	MANHOLE		DUMPSTER
			FINISHED FLOOR ELEVATION

	WATER MAIN		HANDICAP PARKING
	PVC PIPE		INTERSTATE ROADS
	11 1/2° BEND		LIGHT POLE
	22 1/2° BEND		SECTION CORNER
	45° BEND		STATE ROADS
	90° BEND		SILT FENCE
	TEE		TRAFFIC FLOW PAVEMENT MARKING
	CROSS		UTILITY POLE
	CHECK VALVE		BLDG OR STRUCTURE
	DOUBLE DETECTOR CHECK VALVE		TYPE F CURB & GUTTER
	DOUBLE WATER SERVICE		MIAMI CURB
	GATE VALVE		CROSS SECTION DETAIL
	FIRE HYDRANT		
	METER		
	REDUCER		
	BLOWOFF		
	BACKFLOW PREVENTER		
	SAMPLE POINT		
	CEANOUT		
	RECLAIM WATER MAIN		
	DOUBLE RECLAIM WATER SERVICE		



GENERAL NOTES

1. ALL CONSTRUCTION WORK SHALL BE IN ACCORDANCE WITH THE LATEST LOCAL AGENCY DETAILS, THE FOOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED IN 1981 BY THE STATE OF FLORIDA, AND ALL SUPPLEMENTS THERETO, AND THE FOOT "STANDARD PLANS" WHICHEVER IS MORE STRINGENT.
2. ALL FOOT DESIGN INDICES ARE HEREBY INCORPORATED AS PLAN REFERENCES HEREIN. CONTRACTOR IS RESPONSIBLE FOR OBTAINING COMPLETE COPIES OF ALL APPLICABLE INLET DRAWINGS AND CONSTRUCTING ALL WORKS IN CONFORMANCE WITH THE FOOT 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. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR(S) 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 SOIL DISTRIBUTION
 - FDEP SANITARY SEWER COLLECTION AND TRANSMISSION
 - FDEP REUSE
 - FDEP DREDGE AND FILL
 - FDEP NPDES GENERIC PERMIT FOR STORMWATERDISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES
 - FOOT DRIVEWAY CONNECTION
 - FOOT 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 (CWP)
 - 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. ENGINEER HAS RELIED ON THE GEOLOGICAL EXPENSES INCURRED BY THE CONTRACTOR DUE TO DIFFERING SITE CONDITIONS WILL BE ALLOWED IF CONTRACTOR CAN 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 STRIPPING 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 OF SUCH DAMAGE OR DISPLACEMENT, CONTRACTOR SHALL BE RESPONSIBLE FOR 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 REMAIN. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL TREES. 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 REMAIN.
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 FOOT, AND LOCAL AGENCY APPROVED PROCEDURES.
13. THE CONTRACTOR SHALL RESTORE OFF SITE CONSTRUCTION AREAS TO EQUAL OR BETTER CONDITION THAN EXISTING PRIOR TO COMMENCEMENT OF CONSTRUCTION. CONTRACTOR SHALL SUBMIT AND TO APPROVE THE LOCAL AGENCY'S ENGINEER.
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 SHALL 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 SIZES 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.
24. CONTRACTOR SHALL STAKE ALL IMPROVEMENTS USING THE PLATS(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. 553.85) 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 PLACING. 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 FOOT "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 GEO TECHNICAL REPORTS PREPARED FOR THE SITE. GEO TECHNICAL RECOMMENDATIONS ARE NOT THE RESPONSIBILITY OF ENGINEER. ENGINEER HAS RELIED ON THE GEO TECHNICAL REPORT(S) IN PREPARATION OF THE DRAWINGS. ANY CONFLICT BETWEEN INFORMATION IN 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 GEO TECHNICAL INFORMATION.
7. THE SITE SHALL BE CLEARED OF ALL TREES EXCEPT THOSE WHICH ARE DESIGNATED TO REMAIN. BEFORE CONSTRUCTION, THE CONTRACTOR SHALL MEET AT THE SITE WITH THE OWNER. AT THAT 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 SHALE 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)
 - 12.2. DIAMETERS GREATER THAN OR EQUAL TO 15-INCH SHALL BE HIGH PERFORMANCE POLYPROPYLENE (HP) 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 CONSTRUCTION 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 SLOPE SHALL BE 8.33%.
17. PROVIDE FOOT PATH 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 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 SUBSURFACE 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 WEAR SURFACE IS APPLIED. ALL BAD AREAS SHALL BE CUT OUT AND REPLACED PRIOR TO APPLYING WEARING SURFACE.
21. ASSUMING ACCELERATED 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), LATEST EDITION, AND ANY ADDENDUMS AND ADDENDUMS, AS PUBLISHED BY THE USDOT FEDERAL HIGHWAY ADMINISTRATION AS WELL AS FOOT AND LOCAL AGENCY STANDARDS AND SPECIFICATIONS.
24. REGULATORY SIGNS AND MARKINGS SHALL BE IN PLACE PRIOR TO FINAL INSPECTION FOR PAVING AND DRAINAGE IMPROVEMENTS.
25. PAVEMENT RETURN RADI SHALL BE MEASURED TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
26. POND SLOPES AND BERMS SHALL BE SLOODED TO TWO (2) FEET BELOW THE NORMAL WATER LINE (N.W.L.), IN THE CASE OF DRY BOTTOM PONDS, THE BOTTOM WILL BE SEEDD AND MULCHED UNLESS OTHERWISE SPECIFIED.
27. ALL PRECAST DRAINAGE STRUCTURES TO HAVE STEEL FRAME, ALL STRUCTURES IN PAVED AREAS TO HAVE STEEL RECTANGULAR GRATES WITH H=20 LOADING.
28. CONTRACTOR SHALL NOT COMPACT, STABILIZE, OR CONSTRUCT BASE COURSE WITHIN LANDSCAPE ISLANDS, TRACTS OR MEDANS, WHERE SUCH TREATMENT DOES OCCUR, IT SHALL BE REMOVED AND REPLACED WITH SUITABLE PLANTING SOLS ACCEPTABLE TO LANDSCAPE ARCHITECT.
29. YARD DRAINS SHALL BE NYOPLAST INLINE DRAINS AND DRAIN BASINS, OR APPROVED EQUIV. WITH CAST IRON GRATES AND WATERTIGHT ADAPTER CONNECTIONS. DOWED GRATES SHALL BE PROVIDED IN NON-SLOODED AREAS.
30. ALL FIRE HYDRANT LOCATIONS SHALL BE MARKED BY PLACING BLUE REFLECTIVE PAVEMENT MARKERS IN THE CENTER OF THE NEAREST TRAVEL LANE.
31. MINIMUM LONGITUDINAL SLOPE OF CURB SHALL BE 0.30% UNLESS SPECIFIED OTHERWISE.
32. FINISHED FLOOR ELEVATION IS TYPICALLY 8" INCHES ABOVE DESIGN FINISHED GRADE AT OUTSIDE PERIMETER OF BUILDINGS EXCEPT AT ENTRIES AND WHERE OTHERWISE SHOWN.
33. CONTRACTOR SHALL REMOVE ALL MUCK DEPOSITS IN CONSTRUCTION AREAS AND AREAS TO BE FILLED. SEE GEO TECHNICAL REPORT.
34. DRAINAGE MANHOLES AND INLETS (NOT INCLUDING CURB 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, SIZES AS REQUIRED TO ACCOMMODATE PIPE SIZES AND ORIENTATIONS SHOWN. SHOP DRAWINGS SHALL BE SUBMITTED WHICH CLEARLY REPRESENT SUCH DATA.
35. CONTRACTOR SHALL STABILIZE AND PROTECT ALL END WALL, MITERED END SECTION, FLARED END SECTION, ETC. STRUCTURES THROUGHOUT THE PROJECT UNTO THE BANK SLOPES OF THE RECEIVING WATER BODY ARE STABILIZED AND ACCEPTED BY OWNER.
36. ALL STORM SEWER LINES TO BE TELEVIEWED AND THUMB DRIVE PROVIDED TO THE CITY FOR REVIEW AND ACCEPTANCE.

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 SEWER 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, INC. 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 ABANDONS 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 FILL OF ASPHALT.
18. PIPE LENGTHS SHOWN REPRESENT SCALED DISTANCES BETWEEN MANHOLE CENTERLINE.
19. INVERTS OF SANITARY SEWER 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.
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.
24. ALL PVC FORCE MAINS SHALL BE CLASS 200, SDR 21, COLOR GREEN, WITH A GREEN MAGNETIC TAPE A MIN. OF 2" WIDE, PLACED 1' FOOT BELOW THE PROPOSED GRADE. THE PRINTING ON THE MAGNETIC TAPE SHOULD READ "FORCE MAIN".
25. ALL DUCTILE PIPE SHALL BE PRESSURE CLASS 350 IN ACCORDANCE WITH ANSI A 21.51-91 (AWWA C151). DUCTILE IRON PIPE SHALL RECEIVE EXTERIOR BITUMINOUS COATING IN ACCORDANCE WITH 21-51 (AWWA C151) AND BE CEMENT MORTAR LINED, STANDARD THICKNESS IN ACCORDANCE WITH ANSI 21.4 (AWWA C104).
26. ALL SANITARY SEWER GRAVITY MAINS OR SANITARY SEWER FORCE MAINS THAT REQUIRE DUCTILE IRON PIPE ARE TO BE POLY LINED OR EPOXY LINED.
27. LOCATE BALLS NEED TO BE INSTALLED ON SEWER LATERALS.
28. ALL SEWER MAIN TO BE AIR TESTED.

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 SPECIFICATIONS AND STANDARDS.
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 THROUGH 12-INCH AND CONFORM TO ANSI/AWWA C150/A21.50 (LATEST EDITION). ALL DUCTILE IRON PIPE SHALL HAVE CEMENT MORTAR LINING AS SPECIFIED IN ANSI/AWWA C104/A21.4 (LATEST EDITION). PIPE JOINTS SHALL BE OF THE PUSH-ON RUBBER GASKET TYPE CONFORMING TO ANSI/AWWA C111/A21.11 (LATEST EDITION).
4. CONTRACTOR SHALL VERIFY SIZE AND TYPE OF EXISTING MAIN PRIOR TO ORDERING TAPPING MATERIALS FOR TE-INCS.
5. SITE CONTRACTOR SHALL COORDINATE AND VERIFY ALL UTILITY SERVICES WITH FINAL ARCHITECTURAL DRAWINGS AND BUILDING CONTRACT.
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 SANITARY PIPE. 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 SEWER 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 THE SANITARY OR STORM SEWER, WASTEWATER OR 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 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 OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
 - 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 OR STORMWATER 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 THREE FEET BETWEEN THE BOTTOM OF THE WATER MAIN AND 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 SEWER TREATMENT AND DISPOSAL SYSTEM AS DEFINED IN SECTION 390.00(2)(a), F.S., AND RULE 6A-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 OR SEWER PIPE SHALL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN WATER-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-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 L000 PVC PIPE CONFORMING TO ANSI A-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 150 PSI. CONFORM TO ANSI A-21.51-91 (AWWA C101), OR D.I. COMPACT FITTINGS FOR DIAMETERS 4-INCH TO 12-INCH CONFORMING TO ANSI A-2153 / AWWA C-153.
15. FROM THE POINT OF SERVICE (P.O.S.) FORWARD AS DESIGNATED BY F.S. 633, FIRE SUPPLY PIPE SHALL BE INSTALLED UNDER THE ROADWAY AND SHALL BE 12-INCH.
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 BORE, FLANGE MOUNTED, DOUBLE DISK, PARALLEL SEAT, NON-RISING STEM VALVES WITH O-RING SEALS AND END CONNECTIONS AS CALLED. ALL TEES, CAPS, FLANGES, BENDS, VALVES, ETC., SHALL BE PROVIDED WITH GRP RING RESTRAINTS.
17. ALL NON-METALLIC WATER MAINS SHALL BE INSTALLED WITH A CONTINUOUS, INSULATED 10 GAUGE COPPER WIRE INSTALLED DIRECTLY ON TOP OF THE PIPE FOR LOCATION PURPOSES. IN ADDITION, ALL PVC WATER MAINS SHALL BE A SAID BLUE COLOR. ALL LETTERING SHALL APPEAR LEGIBLY ON PIPE AND SHALL RUN THE ENTIRE LENGTH OF THE PIPE. LETTERING SHALL READ AS IS ACCEPTABLE TO THE UTILITY ENGINEER.
18. SERVICE MAINS FOR FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 24, LATEST EDITION.
19. NEW FIRE HYDRANTS SHALL BE INSTALLED SO THAT 5'-1/4" INCH PIPE IS FACING THE ROADWAY BY WHICH IT IS ACCESSSED. HYDRANTS SHALL BE POSITIONED NOT MORE THAN 5 FEET AWAY FROM THE CURB OR SIDEWALK.
20. HYDROSTATIC TESTING AND THE DISINFECTION OF THE WATER DISTRIBUTION SYSTEM SHALL BE DONE IN ACCORDANCE WITH AWWA STANDARDS. HYDROSTATIC TESTING TO BE DONE IN ACCORDANCE WITH AWWA C-800 FOR DUCTILE IRON PIPE AND C-805 FOR PVC PIPE. DISINFECTION AND BACTERIOLOGICAL EVALUATION TO BE DONE IN ACCORDANCE WITH AWWA C-851 AND RULE 62-555.340 F.A.C.
21. THE CONTRACTOR SHALL SUPPLY COMPLETE AS-BUILT INFORMATION RELATIVE TO LOCATION AND ELEVATION OF ALL WATER LINES AND SERVICES. THE INFORMATION SHALL BE SUBMITTED ON LEGIBLY MARKED-UP PRINTS TO THE ENGINEER WITHIN TWO (2) WEEKS OF THE COMPLETION OF THE WATER LINE CONSTRUCTION.
22. CONTRACTOR SHALL COORDINATE ALL UTILITIES SYSTEMS TEST SCHEDULING TO ALLOW ENGINEER'S ATTENDANCE PROVIDING MINIMUM NOTICE OF FIVE (5) WORKING DAYS. CONTRACTOR'S FAILURE TO PROPERLY NOTIFY ENGINEER MAY RESULT IN RETESTING AT ENGINEER'S OPTION AND AT CONTRACTOR'S EXPENSE.
23. NEW HYDRANTS SHALL BE TESTED AND IN PROPER WORKING ORDER WITH UTILITY PROMOTION/STATION SUPPLIED TO THE FIRE MARSHAL PRIOR TO ANY COMBUSTIBLE CONSTRUCTION, I.E. FIRE FLOW TEST SHALL BE PERFORMED.
24. DEFLECTIONS AT PIPE JOINTS SHALL NOT EXCEED THE LESSOR OF THOSE RECOMMENDED BY THE PIPE MANUFACTURER OR UTILITY PROVIDER'S CONSTRUCTION SPECIFICATIONS.
25. ALL PIPE AND PIPE FITTINGS INSTALLED UNDER THIS PROJECT SHALL BE COLOR CODED IN ACCORDANCE WITH SUB PARAGRAPH 62-555.320(2)(b)(3), F.A.C. USING BLUE AS A PREDOMINANT COLOR. ALL DUCTILE IRON WATER MAINS SHALL BE MARKED WITH A CONTINUOUS STRIPE LOCATED WITHIN THE TOP 90 DEGREES OF THE PIPE. SAID STRIPE SHALL BE A MINIMUM 2 INCHES IN WIDTH AND SHALL BE BLUE IN COLOR. BACKFILL SHALL NOT BE PLACED FOR 30 MINUTES FOLLOWING PAINT APPLICATION FOR PIPE WITH AN INTERNAL DIAMETER OF 24" OR GREATER. TAPE OR PAINT SHALL BE APPLIED IN CONTINUOUS LINES A LONG EACH SIDE OF THE PIPE AS WELL AS ALONG THE TOP OF THE PIPE.
26. MARK RESIDENTIAL SERVICES WITH 6-FOOT HIGH PIECE OF 2"x4" PLANK PAINTED BLUE WITH LOT NUMBER CLEARLY MARKED AND A "W" IMPRESSED IN THE CURB. IT IS THE INTENT THAT EVERY LOT IS PROVIDED WITH A WATER SERVICE; THEREFORE IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSTALL A WATER SERVICE TO EACH LOT.
27. PIPE MATERIALS:
- PVC - ALL PIPE, PIPE FITTINGS, PIPE JOINT PACKING AND JOINTING MATERIALS, VALVES, FIRE HYDRANTS, AND METERS INSTALLED UNDER THIS PROJECT SHALL CONFORM TO APPLICABLE AWWA STANDARDS AND SHALL BE MANUFACTURED IN ACCORDANCE WITH AWWA STANDARD C300, LATEST EDITION. PVC SHALL BE MANUFACTURED IN ACCORDANCE WITH AWWA STANDARD C300. THE PVC SHALL HAVE A MINIMUM HORIZONTAL PRESSURE OF 160 PSI AND SHALL HAVE A DIMENSION RATIO (DR) OF 18. PIPE SHALL BE THE SAME O.D. AS DUCTILE IRON PIPE. PVC JOINT - SHALL BE IN ACCORDANCE WITH ASTM D3126.
 - DUCTILE IRON JOINT - SHALL CONFORM TO ANSI/AWWA C150/C151, A MINIMUM OF CLASS 500 SHALL BE SPECIFIED.
 - DUCTILE IRON JOINT - SHALL BE IN ACCORDANCE WITH ANSI A21.11 AND AWWA C111.
 - SERVICES - SHALL BE IN ACCORDANCE WITH AWWA C901/C900 STANDARDS FOR POLYETHYLENE TUBING, CLASS 160.
28. WATER MAIN CONNECTION SHALL BE MADE UNDER THE SUPERVISION OF THE UTILITY PROVIDER. ALL VALVES SHALL BE OPERATED BY UTILITY PROVIDER PERSONNEL ONLY.
29. ALL PIPE AND PIPE FITTINGS INSTALLED UNDER THIS PROJECT SHALL LEAD-FREE FITTINGS.
30. NEW OR ALTERED FIRE HYDRANT LEADS SHALL HAVE A MINIMUM INSIDE DIAMETER OF 6-INCH AND SHALL INCLUDE AN AUXILIARY VALVE.
31. A CONTINUOUS AND UNIFORM BEDDING WILL BE PROVIDED IN TRENCHES FOR UNDERGROUND PIPE INSTALLED UNDER THIS PROJECT. BACKFILL MATERIAL WILL BE TAPPED IN LAYERS AROUND UNDERGROUND PIPE INSTALLED UNDER THIS PROJECT AND TO A SUFFICIENT HEIGHT ABOVE THE PIPE TO ADEQUATELY SUPPORT AND PROTECT THE PIPE, AND UNSUITABLY SIZED STONES (AS DESCRIBED IN APPLICABLE AWWA STANDARDS OR MANUFACTURERS' RECOMMENDED INSTALLATION PROCEDURES) FOUNDATION MATERIALS WILL BE REMOVED FOR A DEPTH OF AT LEAST SIX INCHES BELOW THE BOTTOM OF UNDERGROUND PIPE INSTALLED UNDER THIS PROJECT.
32. CONTRACTOR SHALL NOT ACTIVATE WATER SERVICE UNTIL FDEP HAS CLEARED THE SYSTEM FOR USE AND THE CLEARANCE LETTER HAS BEEN RECEIVED BY THE OWNER.
33. ENGINEER RESERVES THE RIGHT TO WITHHOLD AUTHORIZATION OF PAYMENT FOR ANY PORTION OF THE UTILITIES PIPE WORK WHICH HAS NOT BEEN TESTED, OBSERVED BY ENGINEER, AND REFERRED TO CONFORM TO PROJECT SPECIFICATIONS.
34. RECLAIMED LOCATE BALLS NEED INSTALLED ON BOTH THE MAINS AND SERVICE. 10 GA LOCATE WIRE IS REQUIRED TO BE USED AS WELL.

RECLAIMED WATER

1. POLYVINYL CHLORIDE PLASTIC PIPE (PVC) 4-INCH THROUGH 12-INCH SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI/AWWA C900 (LATEST EDITION) AND SHALL HAVE A MINIMUM WORKING PRESSURE OF 150 PSI AND HAVE A DR (DIMENSION RATIO) OF 18. PIPE SHALL BE PURPLE AND LABELED "RECLAIMED WATER" OR "NON POTABLE WATER" PROMINENTLY ON EACH PIPE JOINT. JOINTS SHALL BE OF THE PUSH-ON TYPE AND COUPLINGS SHALL CONFORM TO ASTM D3139 DR18 PIPE.
2. DUCTILE IRON PIPE (DIP) SHALL BE STANDARD PRESSURE CLASS 350 IN SIZES 4-INCH THROUGH 12-INCH AND CONFORM TO ANSI/AWWA C150/A21.50 (LATEST EDITION). ALL DUCTILE IRON PIPE SHALL HAVE CEMENT MORTAR LINING AS SPECIFIED IN ANSI/AWWA C104/A21.4 (LATEST EDITION). PIPE JOINTS SHALL BE OF THE PUSH-ON RUBBER GASKET TYPE CONFORMING TO ANSI/AWWA C111/A21.11 (LATEST EDITION).
3. PIPE SIZES GREATER THAN 12" IN BOTH PVC AND DUCTILE IRON PIPE SHALL BE SEPARATELY SPECIFIED ON THE PLANS, WITH THICKNESS CLASSES TO BE SHOWN BASED ON WORKING PRESSURES, PIPE DEPTH AND TRENCH CONDITIONS.
4. COMPACT FITTINGS FOR DUCTILE IRON PIPE AND PVC C900 PIPE SHALL BE DUCTILE IRON AND SHALL CONFORM TO ANSI/AWWA C153/A21.53 (LATEST EDITION) AND SHALL BE CEMENT LINED IN CONFORMANCE WITH ANSI/AWWA C104/A21.4 (LATEST EDITION). 350 PSI MINIMUM PRESSURE RATING.
5. GATE VALVES SHALL BE RESILIENT SEAT AND SHALL CONFORM TO ANSI/AWWA C509 (LATEST EDITION) WITH 2-INCH SQUARE WRENCH NUT, EXTENSION STEMS AND OTHER APPURTENANCES AS REQUIRED. MANUFACTURER'S CERTIFICATION OF THE VALVES' COMPLIANCE WITH AWWA C509 (LATEST EDITION) AND TESTS LISTED THEREIN WILL BE REQUIRED. VALVES SHALL BE CLOW, MUELLER, KENNEDY, MAH, AMERICAN DARLING, OR APPROVED EQUAL.
6. VALVE BOX PADS SHALL BE CONSTRUCTED PER CITY STANDARDS. PAD IS TO BE SET AT FINISH GRADE.
7. UNDERGROUND VALVE IDENTIFICATION (UVI) MARKERS SHALL BE PROVIDED AT EACH VALVE LOCATION. MARKERS SHALL BE 3-INCH DIAMETER AND 1/8-INCH THICK SOLID HARD BRASS WITH 1/4-INCH ROD ANCHOR WITH "TAMPER-PROOF" HOOK END. SURFACE SHALL BE ENGRAVED WITH 1/4-INCH TO 3/8-INCH CAPITAL LETTERS APPROXIMATELY .015-INCH DEEP - HAND PUNCHED LETTERS NOT ACCEPTABLE. FOR OTHER PIPELINE, HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
8. BUTTERFLY VALVES SHALL MEET OR EXCEED THE DESIGN STRENGTH TESTING AND PERFORMANCE REQUIREMENTS OF AWWA C504 (LATEST EDITION). CLASS 150 VALVES SHALL BE DUCTILE IRON, RESILIENT SEAT, AND BE MANUFACTURED BY KENNEDY, MUELLER, MAH, AMERICAN DARLING, OR APPROVED EQUAL. BUTTERFLY VALVES TO BE GRADE 150 OR SIZES GREATER THAN 12-INCH.
9. AIR RELEASE VALVES SHALL BE PLACED AT HIGH POINTS OF THE TRANSMISSION MAIN TO PERMIT ESCAPE OF TRAPPED AIR. THE VALVE SIZE, LOCATION, AND METHOD OF INSTALLATION SHALL BE INDICATED ON THE DRAWINGS, OR AS DIRECTED BY THE ENGINEER. AIR RELEASE VALVES SHALL BE VALVATIC OR APPROVED EQUAL.
10. VALVE BOXES ON BURIED RECLAIMED WATER SHALL BE ADJUSTABLE, CAST IRON CONSTRUCTION, WITH A MINIMUM INTERIOR DIAMETER OF 5-INCH WITH COVERS CAST WITH THIS DESCRIPTION IN LEGIBLE LETTERS. VALVE BOXES SHALL BE SUITABLE FOR THE APPLICABLE SURFACE LOADING AND VALVE SIZE, AND SHALL BE MANUFACTURED BY MUELLER COMPANY, MODEL 1036A, OR APPROVED EQUAL.
11. PIPE INSTALLATION OF PVC RECLAIMED WATER MAIN SHALL BE IN CONFORMANCE WITH ASTM D2774 (LATEST EDITION). INSTALLATION OF DUCTILE IRON PIPE RECLAIMED WATER SHALL BE IN CONFORMANCE WITH AWWA C600 (LATEST EDITION).
12. RECLAIMED WATER SYSTEM PIPES SHALL BE INSTALLED SO AS TO GIVE A MINIMUM HORIZONTAL SEPARATION OF 3 FEET (CENTER OF PIPE TO CENTER OF PIPE) FROM POTABLE WATER LINES AND MINIMUM 3-INCH VERTICAL SEPARATION FROM OUTSIDE WALL TO OUTSIDE WALL AS WELL AS 18-INCH VERTICAL SEPARATION. IN THE CASE OF A CONFLICT WHERE THESE SEPARATIONS CANNOT BE MAINTAINED THE REUSE MAIN SHALL BE UPGRADED TO DIP.
13. COMPACTED BACKFILL SHALL BE TO 98 % MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180 UNDER ALL PAVEMENTS WITH 12-INCH MAXIMUM LIFT THICKNESS. OTHER COMPACTION OF BACKFILL SHALL BE TO 95% MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180 WITH 12-INCH MAXIMUM LIFT THICKNESS. SEE PIPE TRENCHING DETAILS.
14. MINIMUM COVER OVER ALL PIPE SHALL BE 36-INCHES FROM TOP OF PIPE TO FINISHED GRADE, UNLESS OTHERWISE NOTED.
15. INDICATOR TAPE SHALL BE BURIED IN THE RECLAIMED WATER MAIN TRENCH 18-INCH DIRECTLY ABOVE THE MAIN. A CONTINUOUS COPPER DETECTOR WIRE SHALL BE ATTACHED AS SHOWN ON THE PIPE DETECTOR WIRE MARKER DETAIL. INDICATOR TAPE SHALL CALL OUT THAT RECLAIMED OR NON POTABLE SYSTEM IS BELOW. PIPE SHALL BE COLOR CODED PURPLE IN ADDITION TO MARKINGS, SIGNS IN ENGLISH, SPANISH, AND INTERNATIONAL SYMBOLS SHALL BE INSTALLED NOTING THAT NO DRINKING IS ALLOWED. CONTINUITY CHECK WILL BE PERFORMED AND MUST BE ACCEPTABLE.
16. ALLOWABLE LEAKAGE FOR PVC PRESSURE MAINS WILL BE IN ACCORDANCE WITH AWWA M22.
17. THE CONTRACTOR SHALL PROVIDE AT HIS OWN EXPENSE ALL NECESSARY TEST PUMPING EQUIPMENT, WATER, WATER METERS, PRESSURE GAUGES, AND OTHER EQUIPMENT, MATERIAL AND FACILITIES REQUIRED FOR ALL HYDROSTATIC AND LEAKAGE TESTING. CONTRACTOR SHALL CONTACT LOCAL AGENCY, UTILITY PROVIDER, AND ENGINEER IN WRITTEN FORM, FORTY-EIGHT (48) HOURS IN ADVANCE OF PROPOSED TESTING. THE CONTRACTOR SHALL PERFORM SATISFACTORY PRETESTING PRIOR TO NOTIFICATION. NO TESTING WILL BE SCHEDULED ON A MONDAY OR FRIDAY.
18. THE RECLAIMED WATER SYSTEM SHALL BE TESTED FOR LEAKAGE AT 150 PSI FOR TWO (2) HOURS PER UTILITY PROVIDER STANDARDS.
19. ALL RECLAIMED WATER PIPE SHALL BE INSTALLED USING WATER PIPE CRITERIA. MAINS SHALL BE CLASS 52 D.I. PIPE. IF 24-INCHES TO 30-INCHES OF COVER IS PROVIDED AND CLASS 51 IF 30-INCHES TO 36-INCHES OF COVER IS PROVIDED.
20. SIGNS SHALL BE POSTED IN THE VICINITY OF PUBLIC RECLAIMED WATER RECLAIMED WATER IRRIGATION SYSTEMS, ADVISING THE PUBLIC THAT RECLAIMED WATER IS PRACTICED.
21. RECLAIMED LOCATE BALLS NEED INSTALLED ON BOTH THE MAINS AND SERVICE WHIPS. 10 GA LOCATE WIRE IS REQUIRED TO BE USED AS WELL.

FIRE

- PLANS SHALL BE IN ACCORDANCE WITH THE 8TH EDITION OF THE FLORIDA FIRE PREVENTION CODE
- NFPA 101, 2015 EDITION
- NFPA 1, 2015 EDITION
- NFPA 13, 2013 EDITION

DEMOLITION NOTES

1. EXISTING UNDERGROUND UTILITIES, UNLESS OTHERWISE NOTED, MAY BE CAPPED/PLUGGED AND ABANDONED IN PLACE EXCEPT WITHIN 30 FT. OF BUILDING. CAPPED AND PLUGGED PIPE ENDS SHALL BE ENCASED IN CONCRETE, 8" MINIMUM THICKNESS AROUND PIPE. MANHOLE BASES MAY BE LEFT IN PLACE PROVIDED THAT PIPE OPENINGS ARE PLUGGED AND REMAINING BASES ARE FILLED WITH CONCRETE 6" MINIMUM ABOVE HIGHEST INVERT.
2. CONTRACTOR SHALL BE KNOWLEDGEABLE OF THE CONSTRUCTION DOCUMENTS AND BE RESPONSIBLE FOR PROTECTING ANY EXISTING FACILITY SO DESIGNATED OR DESIGNATED TO BE UTILIZED IN THE WORK.
3. CONTRACTOR SHALL REMOVE ALL FOUNDATIONS, CONCRETE SLABS, AND UNDERGROUND STRUCTURES EXISTING ON THE SITE AT THE TIME OF BIDDING UNLESS OTHERWISE DIRECTED.
4. CONTRACTOR SHALL COORDINATE WITH APPLICABLE UTILITY COMPANIES AND BE RESPONSIBLE FOR THE TERMINATION, APPROPRIATE OFF AND REMOVAL OF ALL UNDERGROUND AND ABOVE-GROUND UTILITY SERVICES EXISTING AT THE TIME OF BIDDING UNLESS DIRECTED TO DO OTHERWISE.
5. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING AND DISPOSING ALL WASTE MATERIALS CONFORM WITH ALL RULES AND REGULATIONS APPLICABLE TO THE SPECIFIC MATERIAL FOUND.

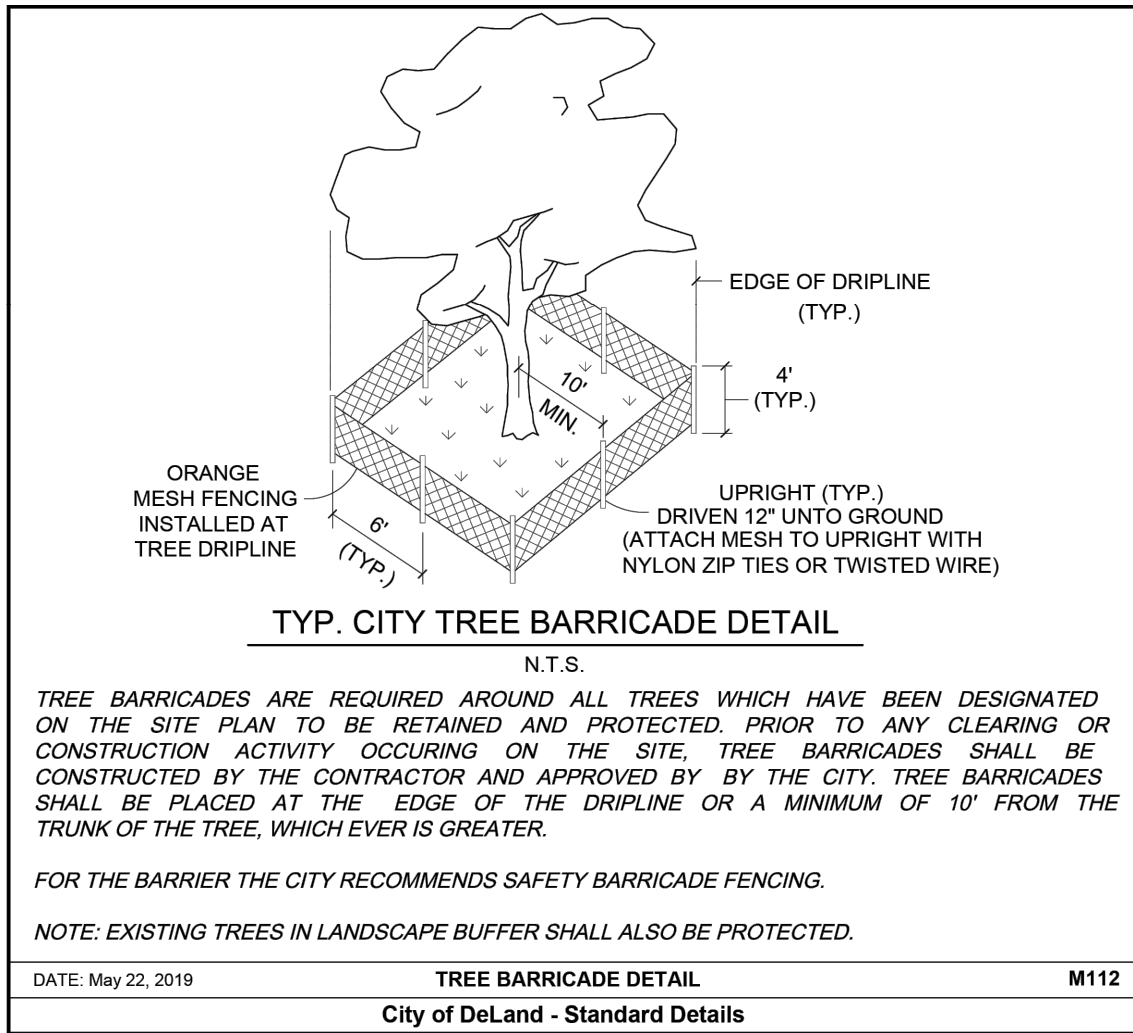
SPECIAL PURPOSE

1. THE EXISTENCE AND LOCATION OF ANY OVERHEAD OR UNDERGROUND UTILITY LINES, PIPES, OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A RESEARCH OF THE AVAILABLE RECORDS. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO SUCH UTILITIES. CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR OVERHEAD UTILITIES SO AS TO SAFELY PROTECT ALL PERSONNEL AND ABOVE-GROUND UTILITY SERVICES. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COST AND LIABILITY IN CONNECTION THEREWITH.

UTILITY AND COMMERCIAL USE

PERMIT REQUIREMENTS:

1. NOTIFY VOLUSIA COUNTY DEVELOPMENT ENGINEERING DIVISION AT (386) 736-5926 A MINIMUM OF 24 HOURS PRIOR TO THE START OF CONSTRUCTION. FAILURE OF THE PERMITTEE TO OBTAIN THE APPROPRI



TREE PROTECTION NOTES

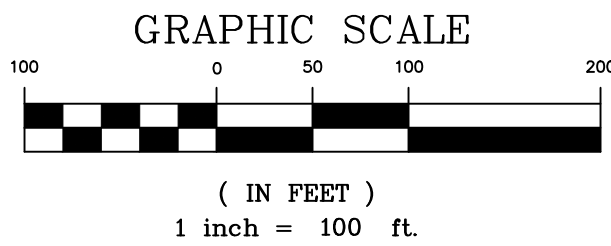
1. DURING CONSTRUCTION, PROTECTIVE BARRIERS SHALL BE PLACED BY SITE CONTRACTOR TO PREVENT DESTRUCTION OF TREES WHICH ARE DESIGNATED TO REMAIN. PROTECTIVE BARRIERS SHALL BE ERECTED PRIOR TO CONSTRUCTION OF ANY KIND ON THE SITE.
2. BARRIERS SHALL CONSIST OF PROTECTIVE WOODEN POSTS TWO (2) INCHES BY FOUR (4) INCHES OR LARGER PLANTED IN SUFFICIENT DEPTH TO BE STABLE WITH AT LEAST FOUR (4) FEET OF POST VISIBLE ABOVE THE GROUND. POSTS SHALL BE PLACED NO CLOSER THAN FIVE (5) FEET TO THE TRUNK UNLESS PROPOSED PAVING CONSTRUCTION WILL NOT PERMIT. POSTS SHALL BE NO FURTHER THAN SIX (6) FEET APART. REFER TO TREE PROTECTION BARRIER DETAIL. EACH SECTION SHALL BE LINKED TOGETHER WITH ORANGE POLYPROPYLENE NET FENCE MATERIAL.
3. PROPOSED GRADES AROUND TREES TO REMAIN SHALL BE MAINTAINED TO WITHIN FOUR (4) INCHES OF THE EXISTING GRADE.
4. THE CONTRACTOR SHALL FOLLOW TREE REMOVAL, TREE PROTECTION AND GENERAL PLANTING REQUIREMENTS AS DEFINED BY LOCAL JURISDICTION.
5. PROTECTIVE BARRIERS SHALL REMAIN IN PLACE AND INTACT UNTIL SUCH TIME AS CONSTRUCTION IS COMPLETE AND ALL EQUIPMENT IS REMOVED FROM SITE.
6. NO BUILDING MATERIALS SUCH AS MACHINERY OR TEMPORARY SOIL DEPOSITS SHALL BE PLACED WITHIN THE PROTECTIVE BARRIER ZONES.
7. BARRIERS SHALL BE PLACED AT THE TREE CANOPY LINE EXCEPT ADJACENT TO THE PROPERTY CONSTRUCTION AREA WHERE IT MAY BE AT ONE HALF OF THE CANOPY DISTANCE ON ONE SIDE ONLY.

DEMOLITION NOTES:

1. THE LOCATION OF STRUCTURES, UTILITIES, ETC. ARE PROVIDED BY OTHERS. THE ENGINEER IS NOT RESPONSIBLE FOR ERRORS OR OMISSIONS RESULTING FROM INACCURACY OF THE INFORMATION OBTAINED. CONTRACTOR IS TO FIELD VERIFY LOCATIONS OF STRUCTURES, UTILITIES, ETC.
2. ALL EXISTING UTILITY AND STRUCTURE LOCATIONS ARE BASED ON INFORMATION PROVIDED BY OTHERS. ADDITIONAL UTILITIES AND STRUCTURES MAY BE PRESENT. SHOULD UNCHARTED UTILITIES OR STRUCTURES BE ENCOUNTERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AS SOON AS POSSIBLE FOR INSTRUCTIONS.
3. THE SITE SHALL BE VISUALLY INSPECTED BY THE CONTRACTOR, PRIOR TO COMMENCEMENT OF THE WORK, TO DETERMINE THE FULL SCOPE OF WORK INVOLVED AND ITS RELATION TO ANY OTHER WORK IN THE AREA, PRIOR TO THE COMMENCEMENT OF ANY WORK, INCLUDING POSSIBLE INTERFERENCE FROM OTHER SIDE ACTIVITIES.
4. ALL ACTIONS REQUIRED BY LAW SHALL BE ACCOMPLISHED PRIOR TO PERMITTING AND ALL PERMITS REQUIRED BY LAW SHALL BE ACQUIRED, AT THE EXPENSE OF THE CONTRACTOR, PRIOR TO DEMOLITION. ALL PERMITS SHALL BE PROMINENTLY POSTED OR DISPLAYED DURING THE DEMOLITION PROCESS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ANY AND ALL DEBRIS FROM THE JOB SITE DURING AND AFTER THE PERFORMANCE OF THE WORK. DEBRIS REMOVAL IS DEFINED AS THE REMOVAL FROM A DEMOLITION SITE, OF DEBRIS RESULTING DIRECTLY FROM THE DEMOLITION. SUCH DEBRIS MAY CONSIST, BUT NOT BE LIMITED TO, PILES OF TRASH, BOARDS, SHINGLES, FALLEN TREES, WOODPILES, ETC. THE CHARGE FOR REMOVING SUCH DEBRIS SHALL INCLUDE ALL EXPENSES ASSOCIATED WITH ITS REMOVAL.
6. ALL MATERIALS DEEMED NON-HAZARDOUS SHALL BE TRANSPORTED AND DISPOSED OF BY THE CONTRACTOR AT AN APPROVED LANDFILL FACILITY.
7. THE CONTRACTOR SHALL ASSURE THAT ALL UTILITIES HAVE BEEN DISCONNECTED AND ALL UTILITY LINES ARE REMOVED FROM THE PROPERTY, IF APPLICABLE, PRIOR TO COMMENCEMENT OF ANY WORK.
8. THE CONTRACTOR SHALL PROVIDE FLAGMAN'S TRAFFIC CONTROL AND SAFETY AT ANY TIME THE DEMOLITION REQUIRES THE BLOCKING OF ANY ROAD OR HIGHWAY FOR ANY LENGTH OF TIME. THIS SHALL INCLUDE THE LOADING AND UNLOADING OF HEAVY EQUIPMENT, A COUNTY OR STATE R/W USE PERMIT IS REQUIRED FOR ANY WORK, INCLUDING EQUIPMENT CIRCULATION, ETC. WITHIN THE APPROPRIATE JURISDICTIONAL AREAS.
9. SALVAGING OF ANY PROPERTY SHALL BE THE PRIVILEGE OF THE CONTRACTOR; HOWEVER NO PERSON OR PERSONS OTHER THAN THE CONTRACTOR MAY SALVAGE ANY PROPERTY WHILE DEMOLITION IS IN PROCESS.
10. THE CONTRACTOR SHALL ASSUME ANY AND ALL LIABILITY FOR PERSONS AND PROPERTY DIRECTLY ON THE DEMOLITION SITE DURING THE DEMOLITION PROCESS.
11. ANY KNOWN WATER WELL LOCATED ON THE PROPERTY SHALL BE HANDLED BY ALL APPLICABLE CODES AND REGULATIONS.
12. THE CONTRACTOR SHALL FILL THE PROPERTY WITH CLEAN FILL DIRT IN ORDER TO MAINTAIN A LEVELED AND GRADED APPEARANCE. THE COST FOR FILL DIRT SHALL INCLUDE ALL COSTS ASSOCIATED WITH PROVIDING THE FILL DIRT.
13. ALL FILL DIRT REMAINING AFTER DEMOLITION SHALL BE LEFT ON SITE FOR FINAL DISPOSITION.
14. THE CONTRACTOR SHALL LOCATE, DRAIN AND CRUSH IN PLACE ANY SEPTIC TANK(S) ON SITE. THE SEPTIC TANK DEBRIS SHALL BE COMPLETELY REMOVED. SEPTIC TANK(S) REMOVAL SHALL INCLUDE PUMPING OF DRAIN FIELD. THIS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL REGULATIONS, CODES AND ORDINANCES.
15. THE CONTRACTOR SHALL ENSURE THAT NO RUBBLE IS BURIED ON SITE.

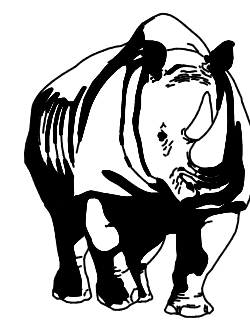
HATCH LEGEND

- NATURAL TREE PROTECTION AREA 40' WIDE OR GREATER
- TREE SAVE AREA LESS THAN 40' IN WIDTH
- DEMOLITION LIMITS:
DEMO EXISTING STORM, UTILITIES, PAVEMENT,
CURBING AND TREES WITHIN LIMITS OF
DEMOLITION AREA, UNLESS OTHERWISE
SPECIFIED ON PLAN.



KEY MAP

N.T.S.



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DEMOLITION PLAN

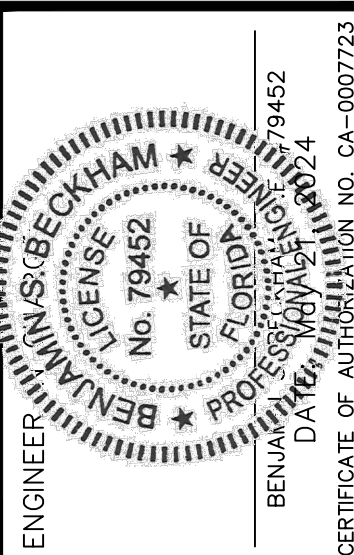
FOR

SUMMIT PLACE

FLORIDA

CITY OF DELAND

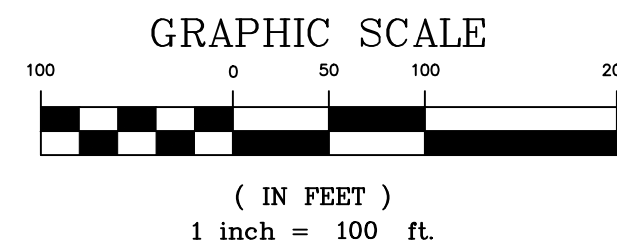
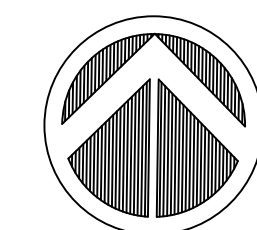
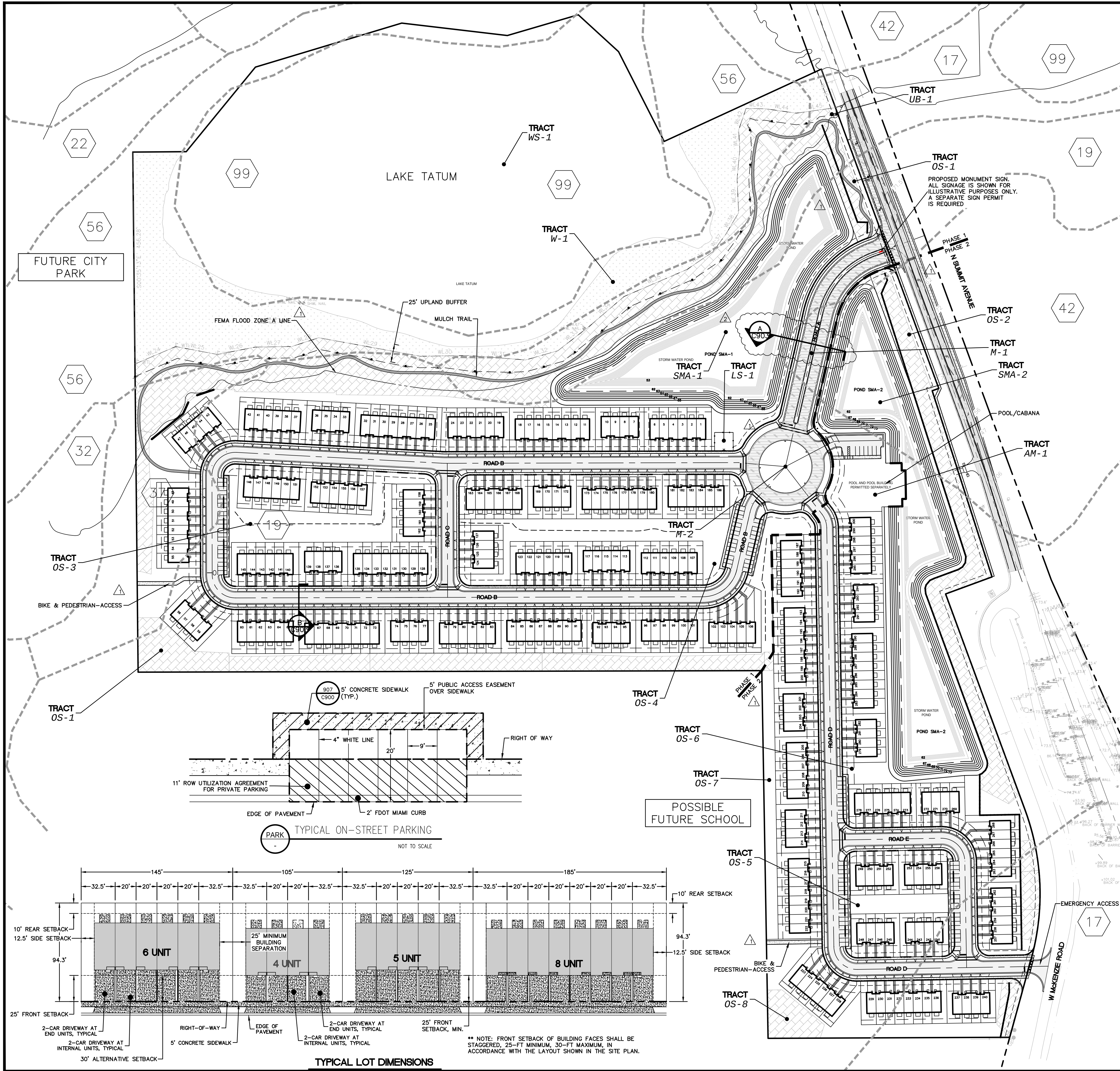
DR. HORTON
10192 DOWEN ROAD
ORLANDO, FL 32832
(407) 850-5200



NO.	DATE	REVISIONS
1	02/20/23	1

JOB # 21886
DATE: 02/20/23
SCALE: 1"=60'
DESIGNED BY: JTT
DRAWN BY: JTT
APPROVED BY: BSB

C010



HATCH LEGEND

- NATURAL TREE PROTECTION AREA 40' WIDE OR GREATER
- PAVEMENT
- HEAVY DUTY PAVEMENT
- FEMA FLOOD ZONE

SITE DATA:

- TOTAL NUMBER OF UNITS:
PHASE 1: 186
PHASE 2: 114
TOTAL: 300
- PROJECT AREA: 59.90 AC
- LAKE AREA: 13.59 AC
- WETLAND AREA: 3.56 AC
- UPLAND AREA: 42.76 AC
- MIN. TREE PROTECTION AREA: 15% = 6.92 AC, 7.17 AC. SHOWN
- BUILDING SETBACKS:
FRONT: 25'
SIDE: 0'
REAR: 10'
MIN. DISTANCE BETWEEN BUILDINGS SIDE TO SIDE: 25'
MIN. DISTANCE BETWEEN BUILDINGS SIDE TO REAR: 25'
MIN. DISTANCE BETWEEN BUILDINGS REAR TO REAR: 50'
- IMPERVIOUS SURFACE RATIO (ISR), 70% MAX:
ROADWAY: 3.98 ACRES/ 6.6%
SIDEWALK: 1.34 ACRES/ 2.2%
BUILDINGS: 6.20 ACRES/ 10.4%
DRIVEWAYS: 3.54 ACRES/ 5.9%
TOTAL IMPERVIOUS: 15.06 ACRES/ 25.1%
PERVIOUS = 52.2%
LAKE TATUM : 13.6 ACRES/ 22.7%
TOTAL: 100.00%
- PARKING REQUIREMENTS: TWO SPACES PER UNIT (GARAGE AND DRIVEWAY SPACE ARE PROVIDED)
VISITOR PARKING: 1 SPACE/3 UNITS = 100 SPACES REQUIRED
100 SPACES AVAILABLE
AMENITY PARKING PROVIDED: 6 REGULAR SPACES
2 HANDICAP SPACES
AMENITY BUILDING = 2,168 SQ.FT
- GROSS DENSITY = UNITS/ PROJECT AREA - LAKE TATUM = 300 / 59.90 AC = 5.01 UNITS/ AC
MAX. GROSS DENSITY = 16 UNITS/ AC
- PROPOSED SITE IMPROVEMENTS SHALL NOT ENCR OACH ONTO FEMA FLOODZONE A LIMITS THROUGH GRADING AND/OR FILL.
- FUTURE LAND USE: GATEWAY
- EMERGING GATEWAY OVERLAY: SUMMIT AVENUE (CR4139)
- MAINTAINING AUTHORITY OVER ADJOINING ROADS: VOLUSIA COUNTY
- ALL LIGHTING WILL BE FULL CUT-OFF AND DARK SKY.
- A MANDATORY HOMEOWNERS ASSOCIATION SHALL BE CREATED TO PROVIDE FOR MANAGEMENT FOR ALL COMMON AREAS AND FACILITIES.
- PROPOSED SITE IMPROVEMENTS SHALL NOT ENCR OACH ONTO FEMA FLOODZONE A LIMITS THROUGH GRADING AND/OR FILL.

SOILS LEGEND

SOIL NUMBER	SOIL NAME
17	POMELLO FINE SAND, 0 TO 5 PERCENT SLOPES
19	DELAND FINE SAND, 0 TO 5 PERCENT SLOPES
37	ORSINO FINE SAND, 0 TO 5 PERCENT SLOPES
42	PAOLA FINE SAND, 0 TO 5 PERCENT SLOPES
56	SAWSJULA MUCK FREQUENTLY PONDED 0 TO 1 PERCENT SLOPES
99	WATER

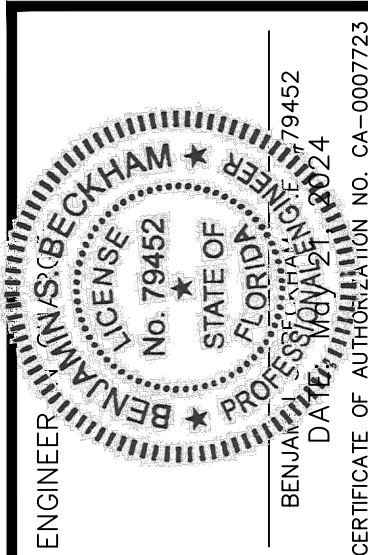
Tract / Land Use Table				
Tract Name	Use	Ownership / Maint.	Acre	(%)
WS-1	Water Surface	HOA	13.59	22.69
W-1	Wetland	HOA	3.55	5.92
UB-1	Upland Buffer	HOA	1.00	1.67
OS-1	Open Space	HOA	6.76	11.28
OS-2	Open Space	HOA	1.67	2.79
OS-3	Open Space	HOA	0.72	1.20
OS-4	Open Space	HOA	0.78	1.30
OS-5	Open Space	HOA	0.32	0.54
OS-6	Open Space	HOA	0.20	0.33
OS-7	Open Space	HOA	0.34	0.57
OS-8	Open Space	HOA	0.83	1.39
LS-1	Lift Station	City of Deland	0.04	0.06
RW-1	Right of Way	City of Deland	6.84	11.42
SMA-1	Retention/Open Space	HOA	3.59	5.99
SMA-2	Retention/Open Space	HOA	3.53	5.90
AM-1	Amenity	HOA	0.56	0.93
M-1	OPEN SPACE	HOA	0.23	0.38
M-2	OPEN SPACE	HOA	0.07	0.07
Single Family Lots			15.29	25.52
Total			59.90	100.00



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OVERALL SITE PLAN
FOR
SUMMIT PLACE
CITY OF DELAND
FLORIDA

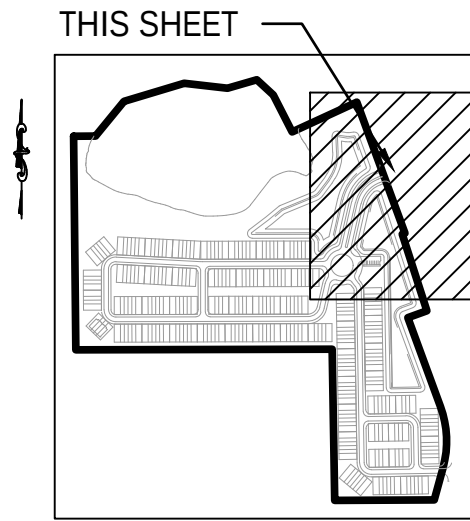
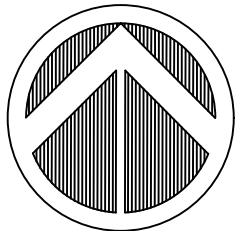
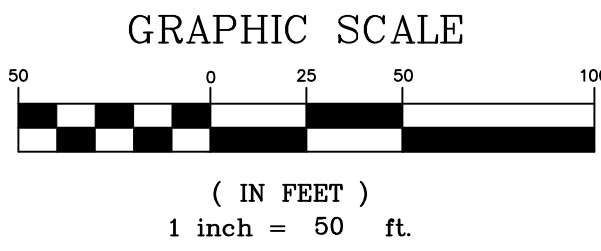
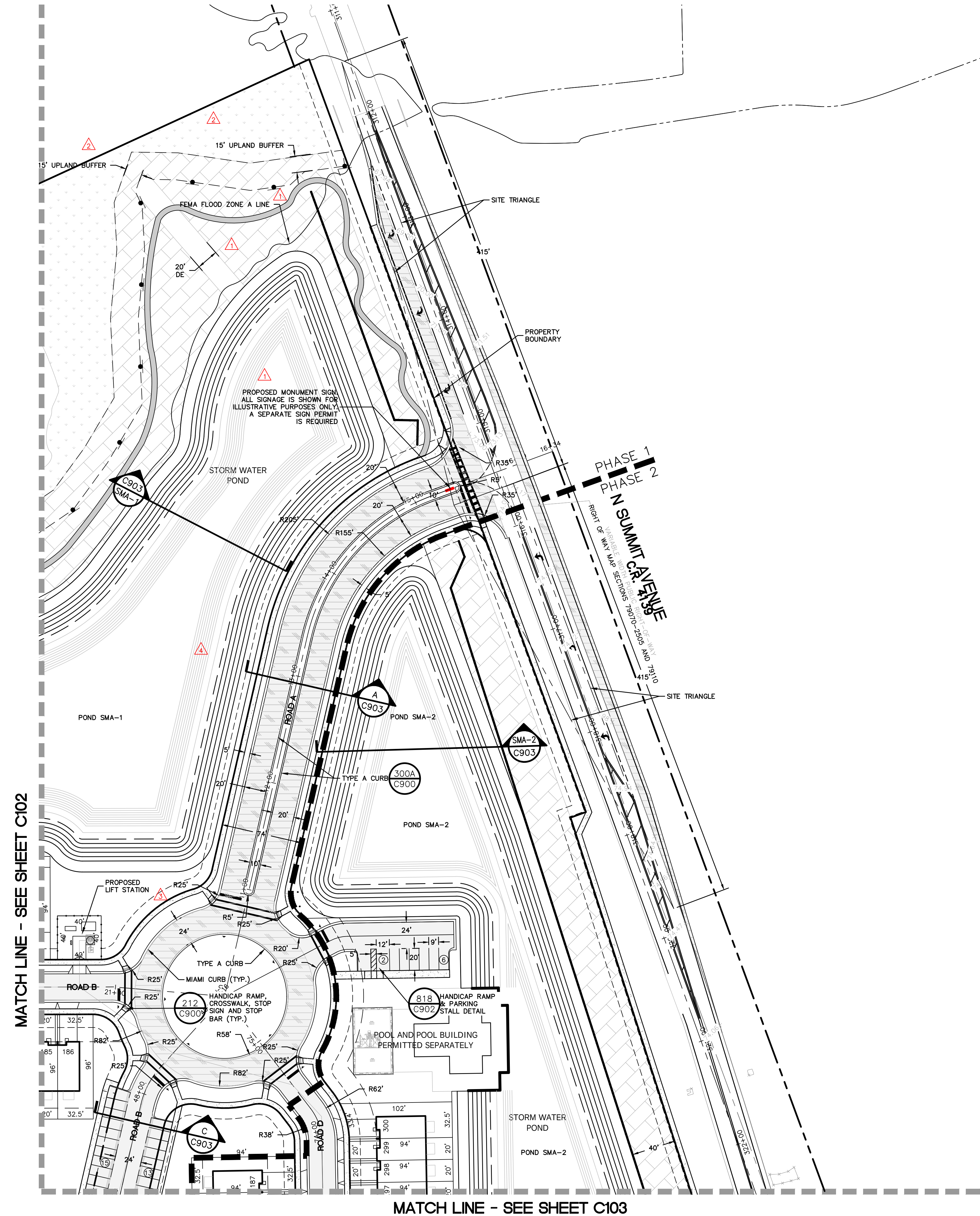
DR HORTON
10192 DOWEN ROAD
ORLANDO, FL 32832
(407) 850-5200



REV	DATE	BY	DESCRIPTION
1	1/23/24	REV PER CITY OF DELAND COMMENTS	
2	4/27/24	REV PER CITY OF DELAND COMMENTS	
3	5/21/24	REV PER CITY OF DELAND COMMENTS	
4	5/21/24	REV PER CITY OF DELAND COMMENTS	
5	5/21/24	REV PER CITY OF DELAND COMMENTS	
6	5/21/24	REV PER CITY OF DELAND COMMENTS	
7	5/21/24	REV PER CITY OF DELAND COMMENTS	
8	5/21/24	REV PER CITY OF DELAND COMMENTS	
9	5/21/24	REV PER CITY OF DELAND COMMENTS	
10	5/21/24	REV PER CITY OF DELAND COMMENTS	
11	5/21/24	REV PER CITY OF DELAND COMMENTS	

JOB # 21886
DATE: 02/20/23
SCALE: 1" = 100'
DESIGNED BY: JTT
DRAWN BY: JTT
APPROVED BY: BSB

C100



KEY MAP
N.T.S.

HATCH LEGEND

- NATURAL TREE PROTECTION AREA
- PAVEMENT
- HEAVY DUTY PAVEMENT

MADDEN
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SITE PLAN
FOR
SUMMIT PLACE
CITY OF DELAND
FLORIDA

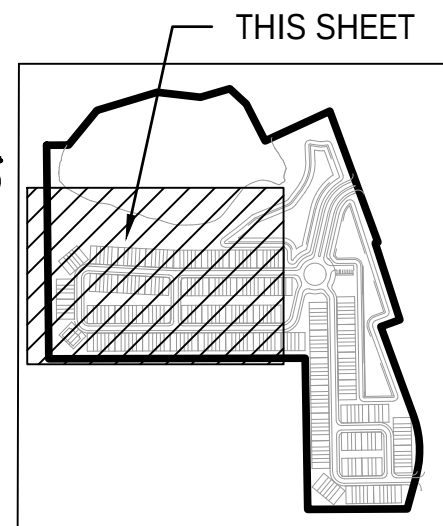
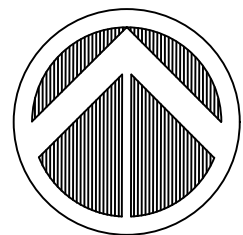
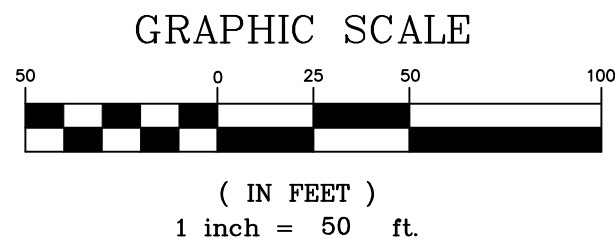
DR. HORTON
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ORLANDO, FL 32832
(407) 850-5200

NO.	DATE	REVISIONS
1	3/15/23	REV. PER CITY OF DELAND COMMENTS DATED 03/09/23
2	9/17/23	REV. PER SCHEMATIC
3	9/17/23	REV. PER CITY OF DELAND COMMENTS
4	04/23/24	REV. PER CITY OF DELAND COMMENTS
5		
6		
7		
8		
9		
10		
11		

JOB # 21886
DATE: 02/20/23
SCALE: 1"=50'
DESIGNED BY: JTT
DRAWN BY: JTT
APPROVED BY: BSB

C101

H:\Data\21086 Summit Ave PD Eng V.mxd 21086_C101 SITE PLAN.dwg May 21, 2024 2:31 PM



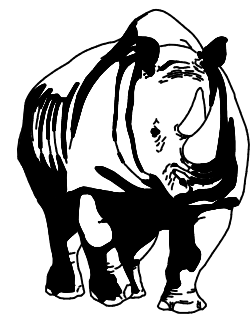
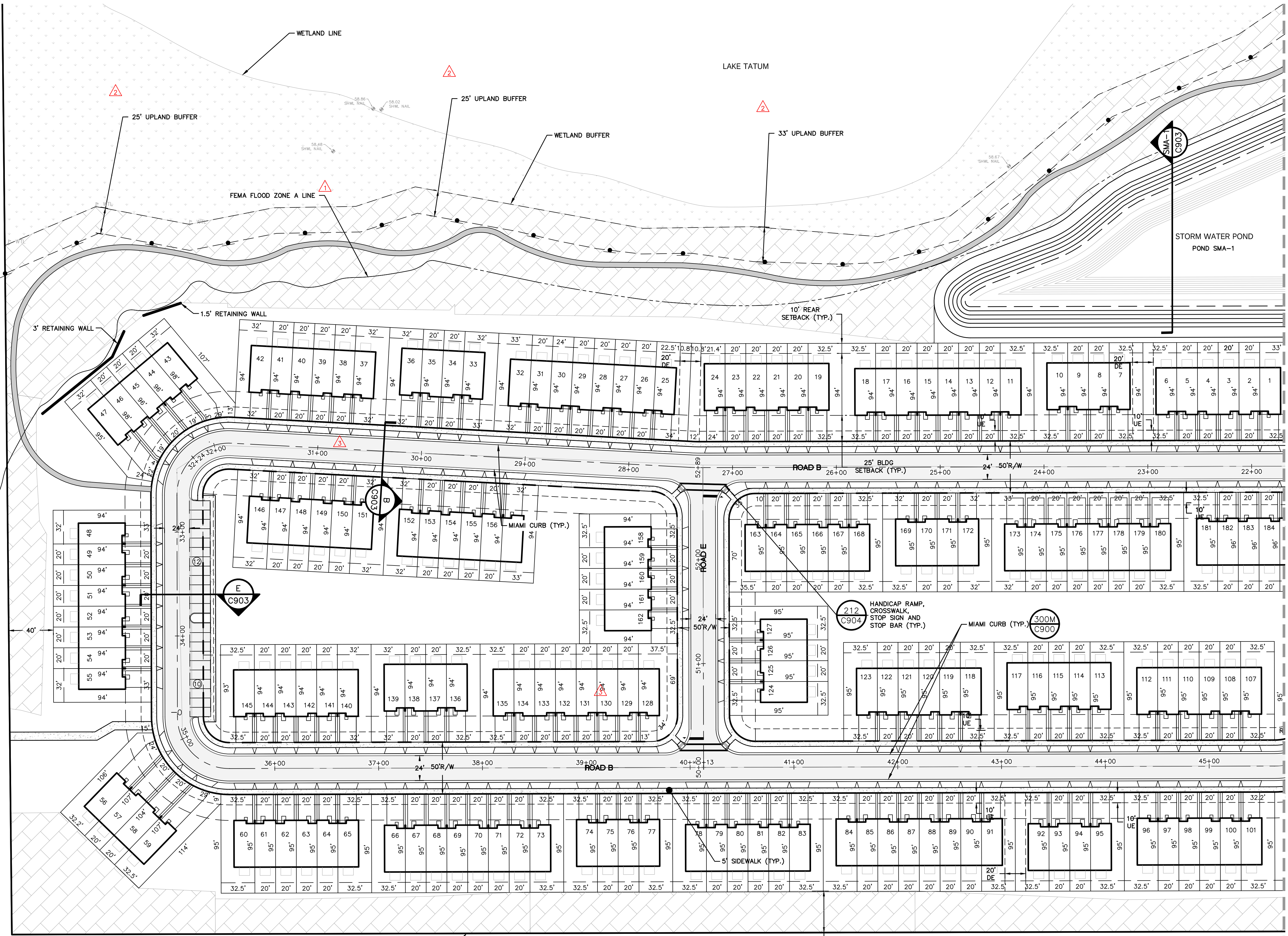
KEY MAP
N.T.S.

MATCH LINE - SEE SHEET C101

MATCH LINE - SEE SHEET C103

HATCH LEGEND

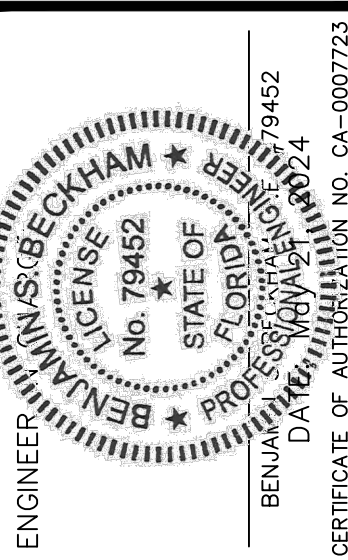
- NATURAL TREE PROTECTION AREA
- PAVEMENT



MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

SITE PLAN
FOR
SUMMIT PLACE
CITY OF BELAND
FLORIDA

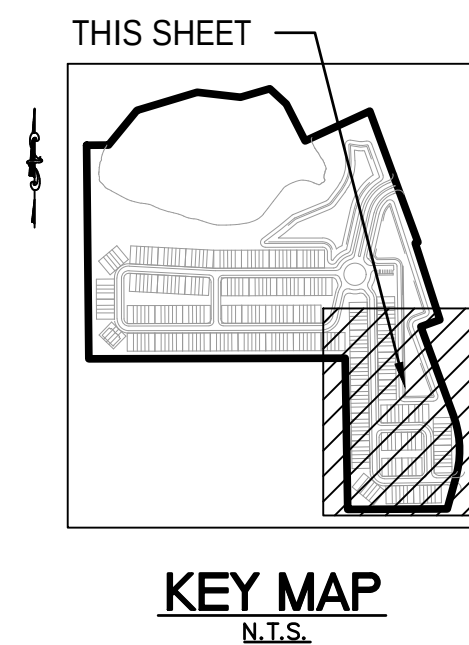
DR. HORTON
10192 DOWDEN ROAD
ORLANDO, FL 32832
(407) 850-5200



REV.	DATE	REVISIONS
1	3/15/23	REV. PER CITY OF BELAND COMMENTS DATED 3/9/23
2	9/7/23	REV. PER BELAND COMMENTS
3	04/23/24	REV. PER CITY OF BELAND COMMENTS
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JOB # 21886
DATE: 02/20/23
SCALE: 1"=50'
DESIGNED BY: JTT
DRAWN BY: JTT
APPROVED BY: BSB

C102

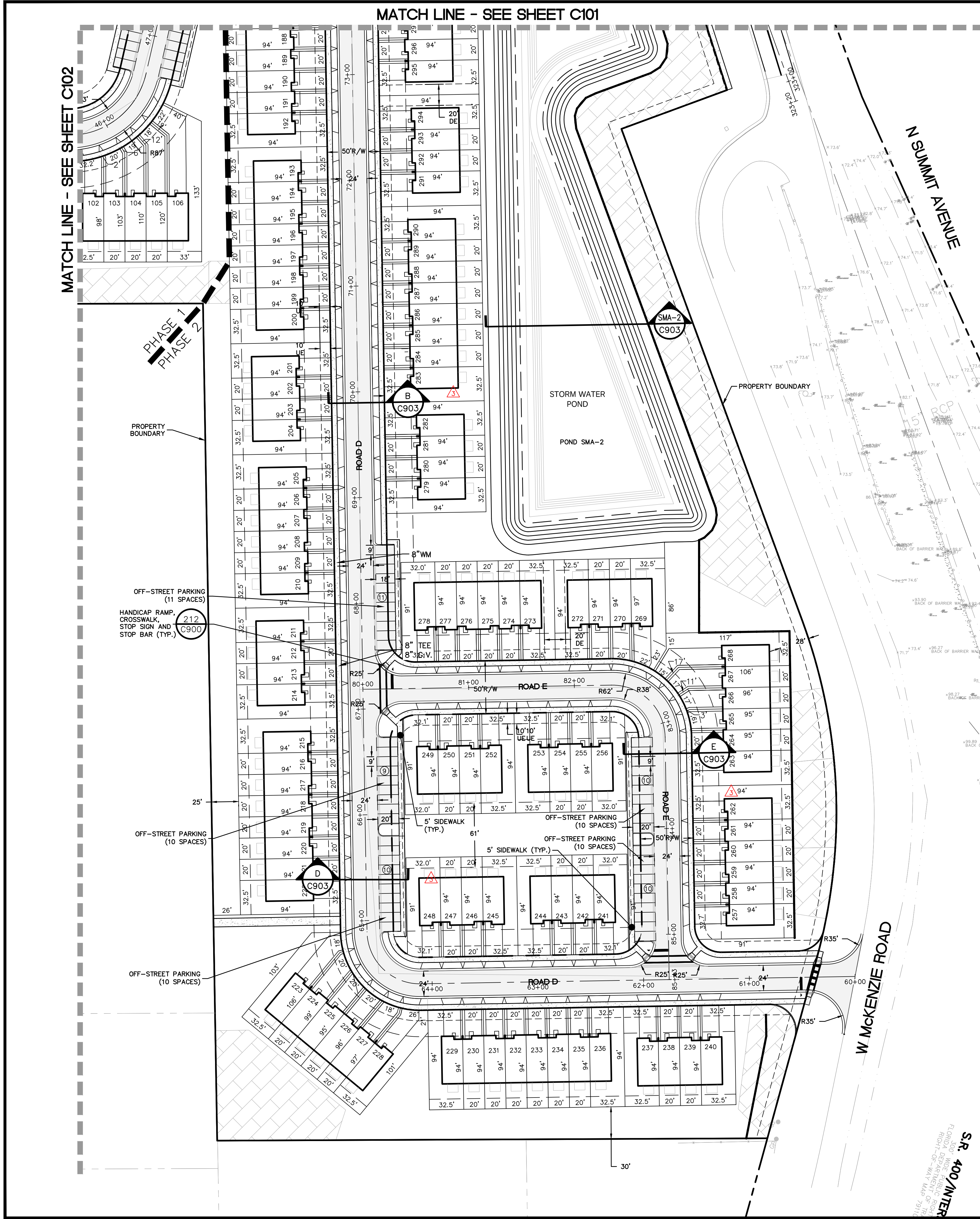


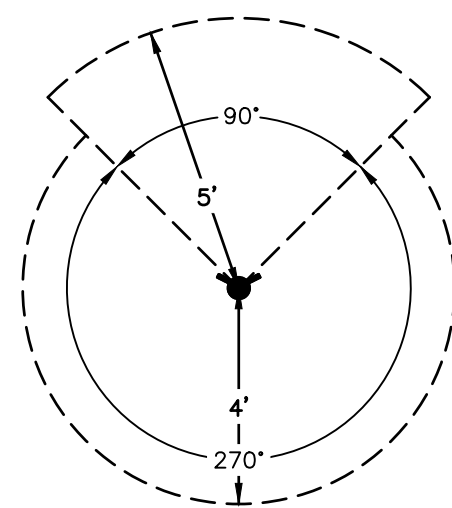
SITE PLAN FOR SUMMIT PLACE

	3/15/23	REV. PER CITY OF DELAND	COMMENTS DATED 3/9/23
	04/23/24	REV. PER CITY OF DELAND	COMMENTS
1			
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JOB # _____ 210
DATE: _____ 02/20/20____
SCALE: _____ 1"=5'
DESIGNED BY: _____ J
DRAWN BY: _____ J
APPROVED BY: _____ B

C103

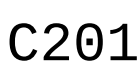


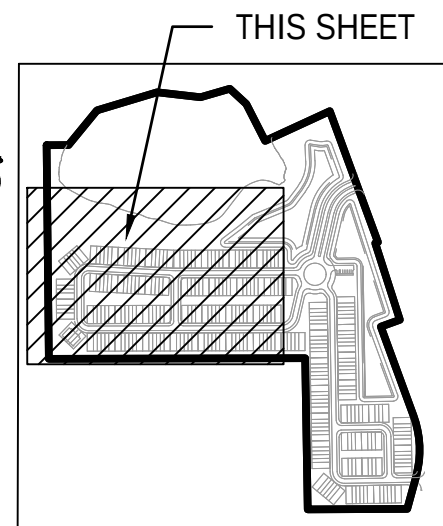
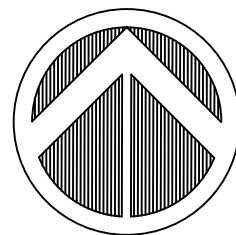
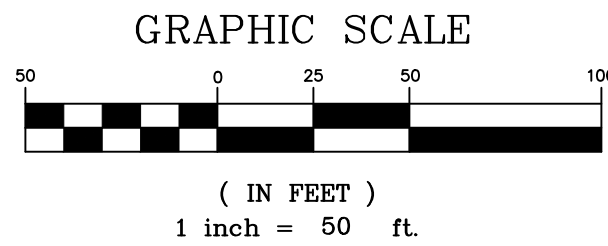
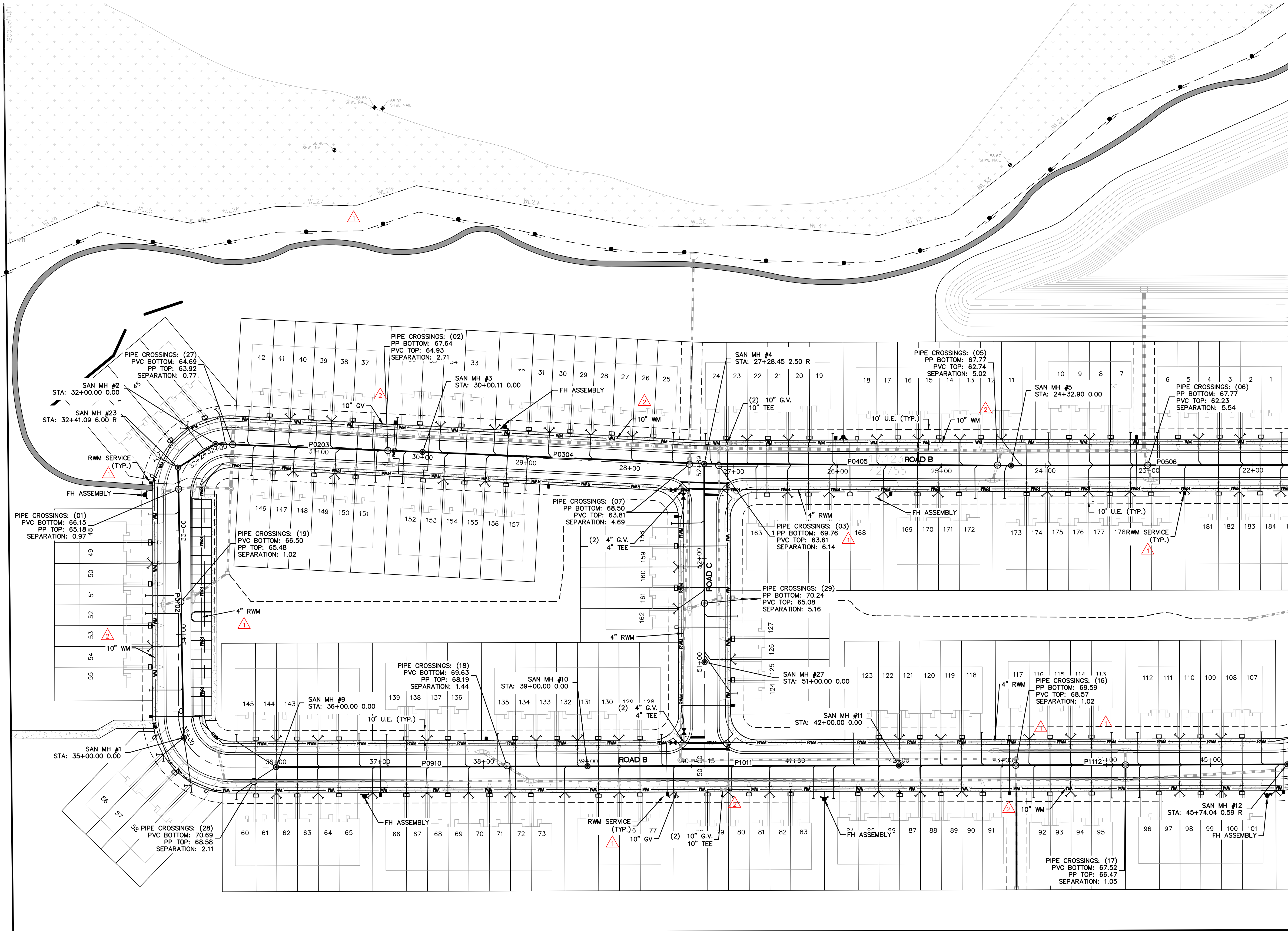


FIRE HYDRANT CLEARANCE DETAIL

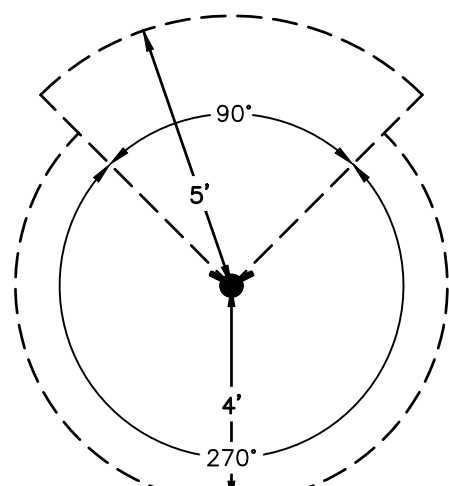
FDEP SEPARATION REQUIREMENTS UNDER 62-555.314 EFFECTIVE 8-28-2003				
HAZARD	HORIZONTAL SEPARATION	VERTICAL SEPARATION		JOINT SPACING
		WATER ABOVE	WATER BELOW	
STORM SEWER	3FT MIN	12IN PREF, 6IN MIN	12IN MIN	3FT MIN
STORM FORCE MAIN	3FT MIN	12IN MIN	12IN MIN	3FT MIN
REGULATED WATER IF REGULATED UNDER 62-610	3FT MIN	12IN MIN	12IN MIN	3FT MIN
REGULATED 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

10. VALVES SHALL NOT BE LOCATED IN SIDEWALKS OR CURBS.





TYPICAL UTILITY LEGEND	
DESCRIPTION	
FIRE HYDRANT ASSEMBLY	
DOUBLE SANITARY SERVICE	
SINGLE SANITARY SERVICE	
DOUBLE WM SERVICE	
SINGLE WM SERVICE	
DOUBLE RWM SERVICE	
SINGLE RWM SERVICE	
GATE VALVE	
WM OR RWM CROSS	
WM OR RWM TEE	
BLOW-OFF AND VALVE	
WATER MAIN	
RECLAIM WATER MAIN	

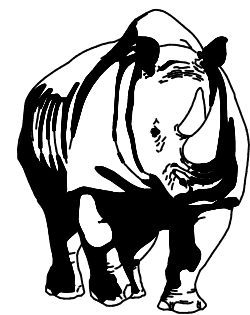


- NOTES:
1. NO OBSTRUCTIONS SHALL BE PLACED WITHIN A 4' CLEARANCE DISTANCE FROM THE REAR AND SIDES OF A FIRE HYDRANT.
 2. NO OBSTRUCTIONS SHALL BE PLACED OR GROWN IN FRONT OF A FIRE HYDRANT.

FIRE HYDRANT CLEARANCE DETAIL

NOTES:

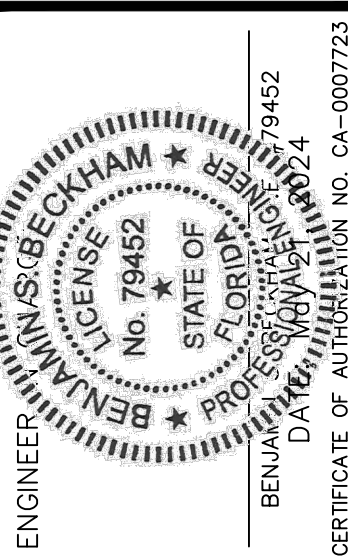
1. VALVES SHALL NOT BE LOCATED IN SIDEWALKS OR CURBS.
2. ALL WM SERVICES UNDER THE ROADWAY SHALL BE INSTALLED IN 2" SCHEDULE 40 PVC CASING PIPE.
3. KEPLER OR MLK RECLAIM LINE HAS BEEN INSTALLED PREVIOUS TO CONSTRUCTION.



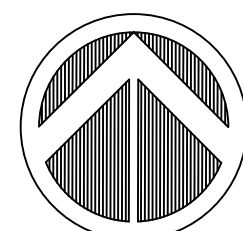
MADDEN
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Maitland, Florida 32751
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UTILITY PLAN
FOR
SUMMIT PLACE
CITY OF DELAND
FLORIDA

DR HORTON
10192 DOWDEN ROAD
ORLANDO, FL 32832
(407) 850-5200



DATE	REVISIONS
03/15/23	REV PER CITY OF DELAND COMMENTS DATED 03/09/23
07/23/24	REV PER QC REVIEW
10/09/24	
11/09/24	
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FIRE HYDRANT CLEARANCE DETAIL

1. VALVES SHALL NOT BE LOCATED IN SIDEWALKS OR CURBS.
2. ALL WM SERVICES UNDER THE ROADWAY SHALL BE INSTALLED IN 2" SCHEDULE 40 PVC CASING PIPE.
3. KEPLER OR MLK RECLAIM LINE HAS BEEN INSTALLED PREVIOUS TO CONSTRUCTION.

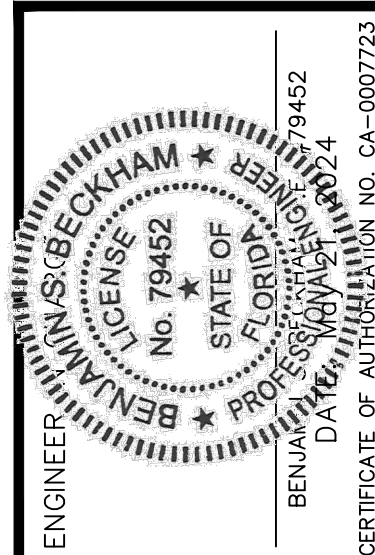


FOR

SUMMIT PLACE

FLORIDA

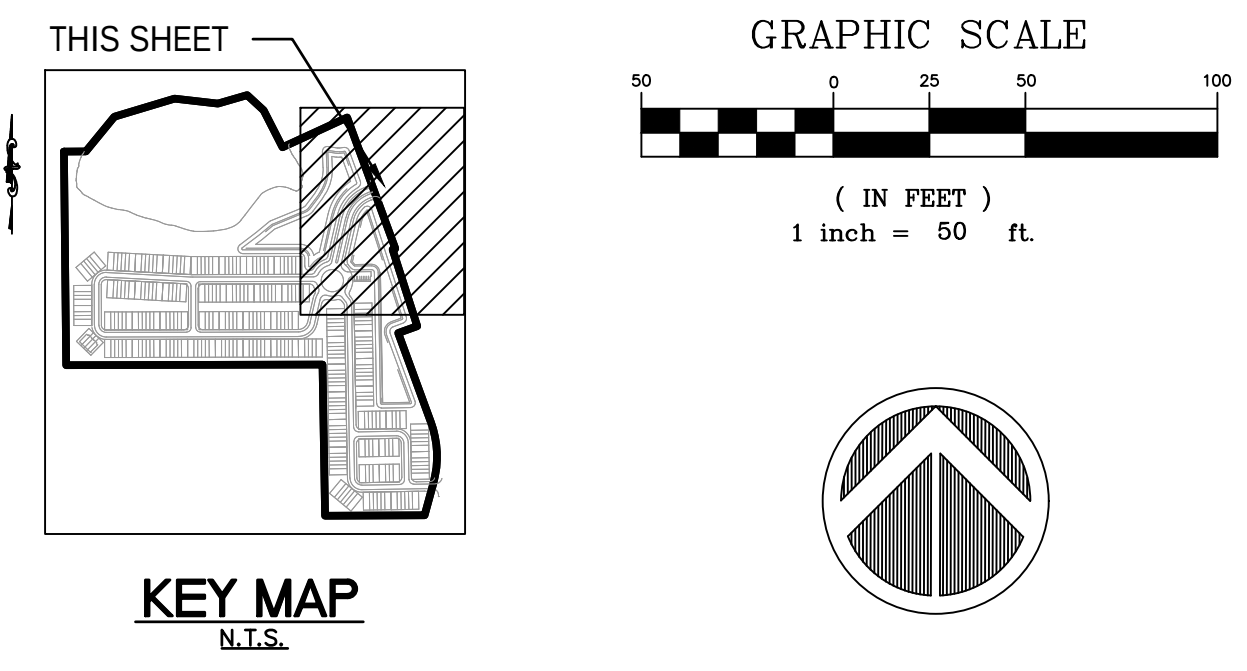
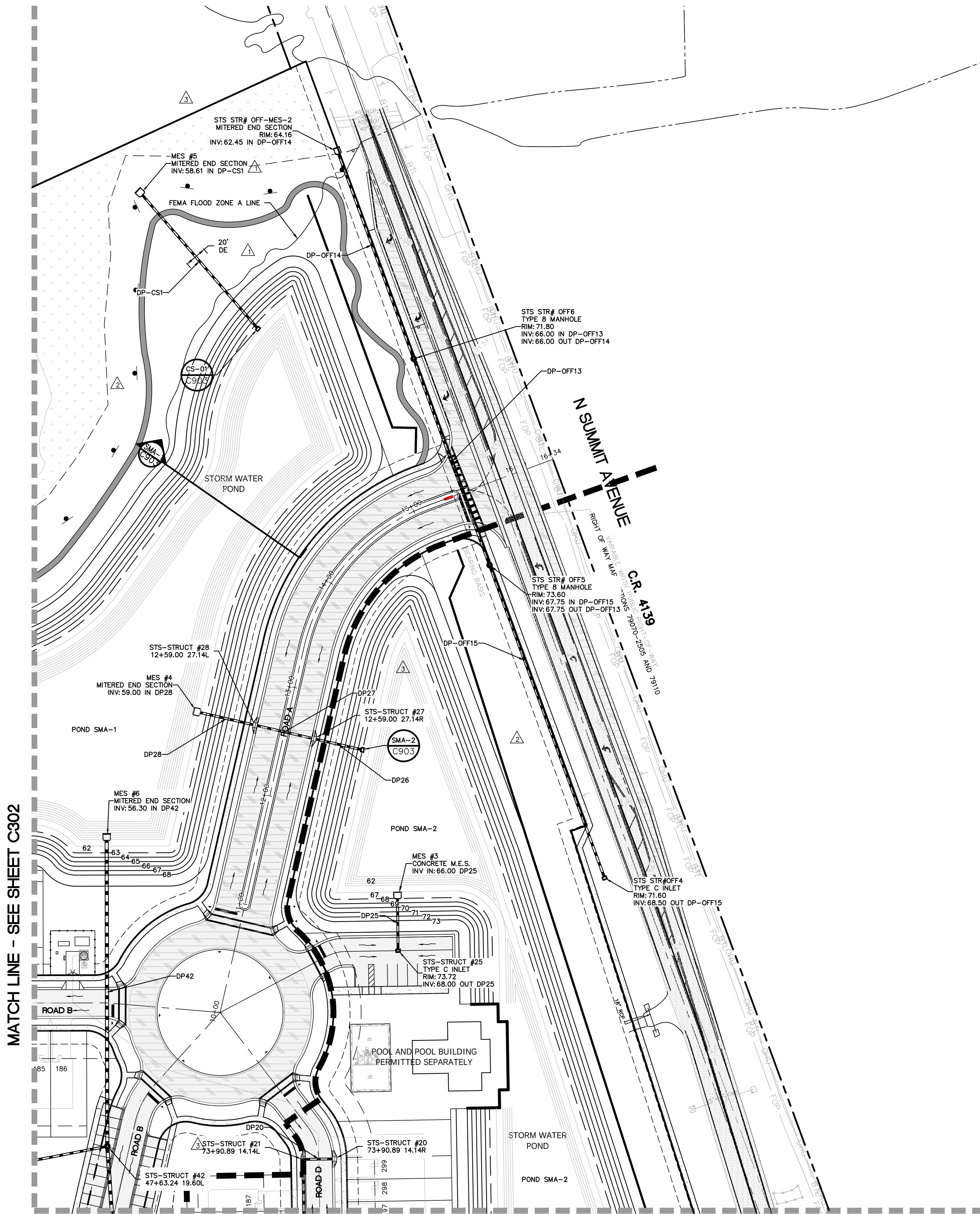
10192 DOWDEN ROAD
ORLANDO, FL 32832
(407) 850-5200



1	REV PER CITY OF DELAND COMMENTS DATED 03/09/23
2	REV. PER Q4 REVIEW
3	
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11	DEVISIONS

JOB # _____ 2108
DATE: _____ 02/20/23
SCALE: _____ 1"=50'
DESIGNED BY: _____ JT
DRAWN BY: _____ JT
APPROVED BY: _____ BSI

C203



STRUCTURE TABLE		STRUCTURE TABLE		STRUCTURE TABLE		STRUCTURE TABLE	
STRUCTURE:	DETAILS:	STRUCTURE:	DETAILS:	STRUCTURE:	DETAILS:	STRUCTURE:	DETAILS:
MES #1	RM = 64.71	STS-STRUCT #18	RM = 75.66	STS-STRUCT #42	RM = 73.65	STS STRG OFF-MES-1	RM = 71.16
MITERED END SECTION	INV. IN = 62.00 (DP17)	INV. OUT = 70.99 (DP18)		FOOT TYPE J MANHOLE	INV. IN = 62.53 (DP40)	MITERED END SECTION	INV. IN = 69.53 (DP-0FF4)
MES #2	RM = 66.15	TYPE V INLET	RM = 75.34		INV. OUT = 62.53 (DP42)	STS STRG OFF-2	RM = 75.30
MITERED END SECTION	INV. IN = 64.00 (DP24)	STS-STRUCT #19	RM = 70.60 (DP18)	STS-STRUCT #43	RM = 71.94	12" DOME GRATE	INV. OUT = 70.11 (DP-0FF1)
MES #3	RM = 67.63	TYPE V INLET	INV. OUT = 70.60 (DP18)	TYPE V INLET	INV. OUT = 63.90 (DP43)		
MITERED END SECTION	INV. IN = 66.00 (DP25)	STS-STRUCT #20	RM = 73.47	TYPE V INLET	RM = 71.94	STS STRG OFF-3	RM = 73.80
MES #6	RM = 59.01	TYPE V INLET	INV. OUT = 68.92 (DP20)	TYPE V INLET	INV. IN = 63.90 (DP43)	TYPE PB MANHOLE	INV. IN = 69.70 (DP-0FF1)
MITERED END SECTION	INV. IN = 56.30 (DP42)	STS-STRUCT #21	RM = 73.47	TYPE V INLET	INV. IN = 63.80 (DP44)	STS STRG OFF-4	RM = 75.27
MES #7	RM = 59.21	TYPE V INLET	INV. OUT = 68.86 (DP20)	STS-STRUCT #45	RM = 71.50	TYPE PB MANHOLE	INV. IN = 68.63 (DP-0FF3)
MITERED END SECTION	INV. IN = 56.00 (DP60)	STS-STRUCT #22	RM = 74.07	FOOT TYPE C INLET	INV. OUT = 63.64 (DP44)	STS STRG OFF-5	RM = 77.11
		TYPE V INLET	INV. IN = 68.20 (DP21)	TYPE V INLET	INV. OUT = 63.64 (DP44)	TYPE PB MANHOLE	INV. IN = 69.21 (DP-0FF2)
STS-STRUCT #1	RM = 75.54	TYPE V INLET	INV. OUT = 68.82 (DP21)	STS-STRUCT #46	RM = 71.03	STS STRG OFF-6	RM = 75.27
TYPE V INLET	INV. OUT = 72.00 (DP1)	STS-STRUCT #23	RM = 74.07	TYPE V INLET	INV. IN = 63.57 (DP46)	TYPE PB MANHOLE	INV. IN = 68.68 (DP-0FF4)
		STS-STRUCT #24	RM = 74.07	STS-STRUCT #47	RM = 71.19		
STS-STRUCT #2	RM = 75.54	TYPE V INLET	INV. IN = 68.14 (DP23)	TYPE V INLET	INV. IN = 63.39 (DP45)	STS STRG OFF-MES-2	RM = 64.16
TYPE V INLET	INV. OUT = 69.75 (DP2)	STS-STRUCT #25	RM = 75.00	FOOT TYPE J MANHOLE	INV. OUT = 63.31 (DP47)	MITERED END SECTION	INV. IN = 62.45 (DP-0FF14)
		STS-STRUCT #26	RM = 73.72		INV. IN = 63.39 (DP47)		
STS-STRUCT #3	RM = 75.54	FOOT TYPE J MANHOLE	INV. OUT = 67.92 (DP23)	STS-STRUCT #48	RM = 70.51	STS STRG OFFS	RM = 73.60
FOOT TYPE J MANHOLE	INV. IN = 69.56 (DP3)	STS-STRUCT #27	RM = 73.72	FOOT TYPE J MANHOLE	INV. OUT = 61.17 (DP49)	TYPE 8 MANHOLE	INV. IN = 67.75 (DP-0FF15)
		STS-STRUCT #28	RM = 73.72	STS-STRUCT #49	RM = 70.51	STS STRG OFFS	RM = 71.80
STS-STRUCT #4	RM = 75.54	TYPE V INLET	INV. OUT = 67.07 (DP29)	1" type V INLET	INV. IN = 61.17 (DP50)	TYPE 8 MANHOLE	INV. IN = 66.00 (DP-0FF13)
FOOT TYPE J MANHOLE	INV. IN = 69.56 (DP3)	STS-STRUCT #29	RM = 73.37		INV. OUT = 61.23 (DP49)	STS STRG OFFS	RM = 71.60
		STS-STRUCT #30	RM = 73.37	STS-STRUCT #50	RM = 70.51	STS STRG OFFS	RM = 71.60
STS-STRUCT #5	RM = 75.54	TYPE V INLET	INV. IN = 67.00 (DP29)	TYPE V INLET	INV. OUT = 61.23 (DP49)	TYPE C INLET	INV. OUT = 68.50 (DP-0FF15)
TYPE V INLET	INV. IN = 71.50 (DP5)	STS-STRUCT #31	RM = 75.42	STS-STRUCT #51	RM = 72.02		
		TYPE V INLET	INV. OUT = 66.53 (DP31)	TYPE V INLET	INV. OUT = 61.80 (DP51)		
STS-STRUCT #6	RM = 74.00	STS-STRUCT #32	RM = 75.75	STS-STRUCT #52	RM = 72.02		
TYPE V INLET	INV. OUT = 69.86 (DP8)	TYPE V INLET	INV. IN = 66.43 (DP31)	TYPE V INLET	INV. IN = 61.17 (DP50)		
		STS-STRUCT #33	RM = 75.75	STS-STRUCT #53	RM = 74.87		
STS-STRUCT #7	RM = 74.00	TYPE V INLET	INV. IN = 66.43 (DP33)	STS-STRUCT #54	RM = 74.87		
TYPE V INLET	INV. IN = 69.86 (DP8)	STS-STRUCT #34	RM = 75.84	FOOT TYPE C INLET	INV. IN = 70.40 (DP53)		
		STS-STRUCT #35	RM = 73.98	STS-STRUCT #55	RM = 74.87		
STS-STRUCT #8	RM = 74.00	TYPE V INLET	INV. IN = 65.35 (DP35)	FOOT TYPE C INLET	INV. OUT = 70.40 (DP54)		
TYPE V INLET	INV. IN = 69.86 (DP8)	STS-STRUCT #36	RM = 72.57		INV. IN = 70.40 (DP55)		
		STS-STRUCT #37	RM = 72.57				
STS-STRUCT #9	RM = 74.00	TYPE V INLET	INV. IN = 64.87 (DP35)	FOOT TYPE J MANHOLE	INV. IN = 69.84 (DP55)		
FOOT TYPE J MANHOLE	INV. OUT = 67.00 (DP10)	STS-STRUCT #38	RM = 72.57		INV. IN = 69.84 (DP56)		
		STS-STRUCT #39	RM = 72.57		INV. IN = 69.84 (DP57)		
STS-STRUCT #10	RM = 74.00	TYPE V INLET	INV. IN = 64.87 (DP36)		INV. OUT = 70.40 (DP54)		
FOOT TYPE J MANHOLE	INV. IN = 67.01 (DP7)	STS-STRUCT #40	RM = 73.01				
		STS-STRUCT #41	RM = 73.01				
STS-STRUCT #11	RM = 74.77	TYPE V INLET	INV. OUT = 64.41 (DP37)				
FOOT TYPE J MANHOLE	INV. OUT = 67.50 (DP11)	STS-STRUCT #42	RM = 73.32				
		STS-STRUCT #43	RM = 73.32				
STS-STRUCT #12	RM = 74.77	TYPE V INLET	INV. IN = 64.00 (DP38)				
FOOT TYPE J MANHOLE	INV. OUT = 67.50 (DP12)	STS-STRUCT #44	RM = 73.00				
		STS-STRUCT #45	RM = 73.00				
STS-STRUCT #13	RM = 75.40	TYPE V INLET	INV. IN = 62.86 (DP40)				
FOOT TYPE J MANHOLE	INV. OUT = 66.25 (DP14)	STS-STRUCT #46	RM = 72.61				
		STS-STRUCT #47	RM = 72.61				
STS-STRUCT #14	RM = 75.40	TYPE V INLET	INV. IN = 62.86 (DP40)				
FOOT TYPE J MANHOLE	INV. OUT = 66.25 (DP14)	STS-STRUCT #48	RM = 72.61				
		STS-STRUCT #49	RM = 72.61				
STS-STRUCT #15	RM = 75.40	TYPE V INLET	INV. IN = 62.86 (DP40)				
FOOT TYPE J MANHOLE	INV. OUT = 66.00 (DP15)	STS-STRUCT #50	RM = 72.61				
		STS-STRUCT #51	RM = 72.61				
STS-STRUCT #16	RM = 76.11	TYPE V INLET	INV. IN = 62.86 (DP40)				
TYPE V INLET	INV. OUT = 67.00 (DP16)	STS-STRUCT #52	RM = 72.61				
		STS-STRUCT #53	RM = 72.61				
STS-STRUCT #17	RM = 75.87	TYPE V INLET	INV. IN = 59.41 (DP58)				
TYPE V INLET	INV. IN = 65.75 (DP15)	STS-STRUCT #54	RM = 72.61				
		STS-STRUCT #55	RM = 72.61				
		STS-STRUCT #56	RM = 72.61				
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		STS-STRUCT #98	RM = 72.61				
		STS-STRUCT #99	RM = 72.61				
		STS-STRUCT #100	RM = 72.61				

PIPE TABLE				
NAME	SIZE	LENGTH	SLOPE	MAT'L
DP1	18"	28.94'	0.32%	PP
DP2	18"	40.45'	0.20%	PP
DP3	18"	53.46'	0.20%	PP
DP4	18"	131.98'	0.92%	PP
DP5	18"	28.80'	0.87%	PP
DP7	24"	145.02'	0.92%	PP
DP8	18"	28.31'	0.20%	PP
DP9	18"	69.97'	0.14%	PP
DP10	24"	199.57'	0.20%	PP
DP11	18"	49.50'	2.28%	PP
DP12	18"	28.22'	2.07%	PP
DP13	30"	83.22'	0.43%	PP
DP14	30"	28.72'	0.87%	PP
DP15	30"	86.44'	0.28%	PP
DP16	18"	46.60'	0.51%	PP
DP17	30"	154.18'	0.32%	PP
DP18	18"	65.04'	0.60%	PP
DP19	18"	237.43'	1.01%	PP
DP20	18"	28.24'	0.21%	PP
DP21	24"	105.95'	0.21%	PP

PIPE TABLE				
NAME	SIZE	LENGTH	SLOPE	MAT'L
DP22	24"	28.75'	0.20%	PP
DP23	24"	107.72'	0.20%	PP
DP24	24"	46.03'	8.52%	PP
DP25	18"	48.98'	4.08%	PP
DP29	18"	31.84'	0.20%	PP
DP30	18"	294.65'	0.19%	PP
DP31	18"	55.19'	0.18%	PP
DP33	24"	282.27'	0.17%	PP
DP34	24"	290.32'	0.20%	PP
DP35	18"	124.82'	0.39%	PP
DP36	18"	28.26'	0.30%	PP
DP37	24"	188.11'	0.20%	PP
DP38	18"	28.10'	0.71%	PP
DP39	24"	59.03'	0.66%	PP
DP40	30"	120.85'	0.27%	PP
DP40A	18"	42.66'	1.17%	PP
DP41	18"	102.77'	3.79%	PP
DP42	30"	277.29'	2.25%	PP
DP43	18"	28.98'	0.35%	PP
DP44	18"	40.59'	0.39%	PP

PIPE TABLE				
NAME	SIZE	LENGTH	SLOPE	MAT'L
DP45	18"	81.46'	0.31%	PP
DP46	18"	29.85'	0.20%	PP
DP47	18"	33.20'	0.38%	PP
DP48	30"	30.82'	0.20%	PP
DP49	30"	28.25'	0.20%	PP
DP50	30"	146.63'	0.20%	PP
DP51	18"	28.83'	0.21%	PP
DP52	30"	321.16'	0.20%	PP
DP53	18"	29.88'	0.20%	PP
DP54	18"	13.15'	0.23%	PP
DP55	18"	144.12'	0.35%	PP
DP56	30"	272.52'	0.20%	PP
DP57	18"	29.66'	0.67%	PP
DP58	30"	137.18'	0.21%	PP
DP59	18"	28.90'	0.68%	PP
DP60	36"	154.28'	2.21%	PP

PIPE TABLE				
NAME	SIZE	LENGTH	SLOPE	MAT'L
DP-0FF1	18"	124.66'	0.33%	PP
DP-0FF2	18"	323.65'	0.20%	PP
DP-0FF3	18"	290.18'	0.20%	PP
DP-0FF4	18"	194.67'	0.18%	PP
DP-0FF13	18"	197.80'	0.88%	PP
DP-0FF14	18"	198.37'	1.79%	PP
DP-0FF15	18"	300.00'	0.25%	PP

PIPE TABLE				
NAME	SIZE	LENGTH	SLOPE	MAT'L
DP-CS1	18"	161.31'	0.20%	PP
DP26	18"	44.86'	3.34%	PP
DP27	18"	54.27'	0.92%	PP
DP28	18"	52.95'	7.55%	PP

MATCH LINE - SEE SHEET C302

MATCH LINE - SEE SHEET C303

MADDEN
WOODHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

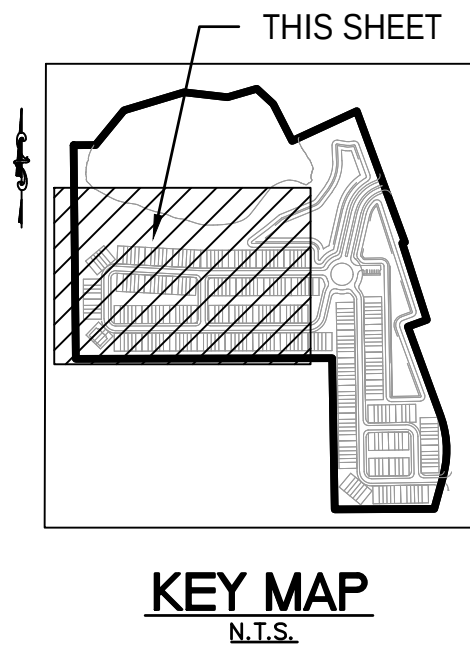
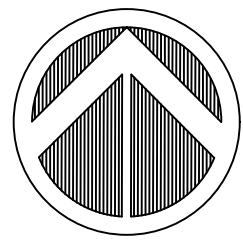
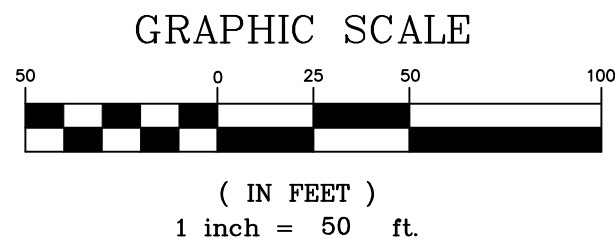
DRAINAGE PLAN
FOR
SUMMIT PLACE
CITY OF DELAND, FLORIDA

DR. HORTON
10192 DOWEN ROAD
ORLANDO, FL 32832
(407) 850-5200

ENGINEER
BENJAMIN S. BUCHANAN
STATE OF FLORIDA
NO. 19452
DATE: 07/26/2024
CITY OF DELAND, FLORIDA
CIVIL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

NO.	DATE	REVISIONS
1	1/23/24	REV. PER CITY OF DELAND COMMENTS DATED 1/19/23
2	10/27/23	REVISED PER SUMMIT COMMENTS
3	02/07/24	CONTRACTOR RFI
4	07/26/24	DATE
5	07/26/24	DATE
6	07/26/24	DATE
7	07/26/24	DATE
8	07/26/24	DATE
9	07/26/24	DATE
10	07/26/24	DATE
11	07/26/24	DATE

C301



KEY MAP
N.T.S.



MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS

431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

DRAINAGE PLAN

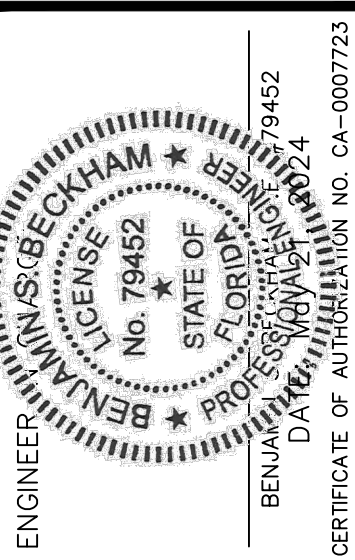
FOR

SUMMIT PLACE

FLORIDA

CITY OF DELAND

DR HORTON
10192 DOWDEN ROAD
ORLANDO, FL 32832
(407) 850-5200



REV	DATE	REVISIONS
1	3/15/23	REV PER CITY OF DELAND COMMENTS DATED 03/09/23
2	1/23/24	REV PER QC REVIEW
3	02/02/2024	CONTRACTOR RT
4		
5		
6		
7		
8		
9		
10		
11		

JOB # 21886
DATE: 02/20/23
SCALE: 1"=50'
DESIGNED BY: JTT
DRAWN BY: JTT
APPROVED BY: BSB



C302



GRADING PLAN

FOR

SUMMIT PLACE

CITY OF DELAND

FLORIDA

ENGINEER



BENJAMIN S. BECKHAM
No. 79452
STATE OF FLORIDA
PROFESSIONAL ENGINEER

79452
24
DATE: MAY 12, 2014

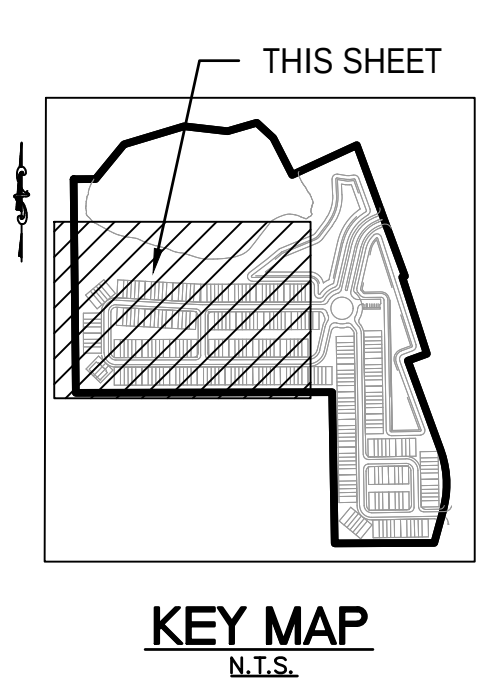
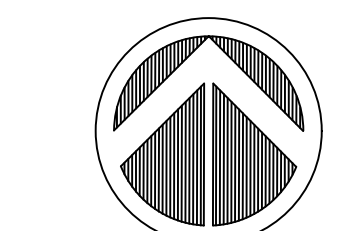
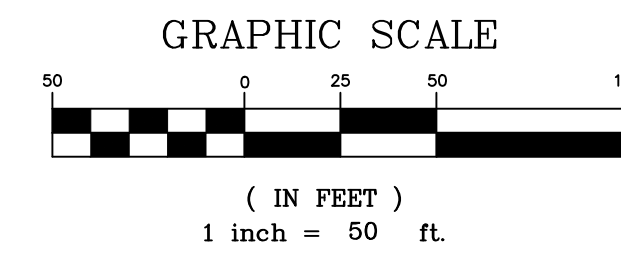
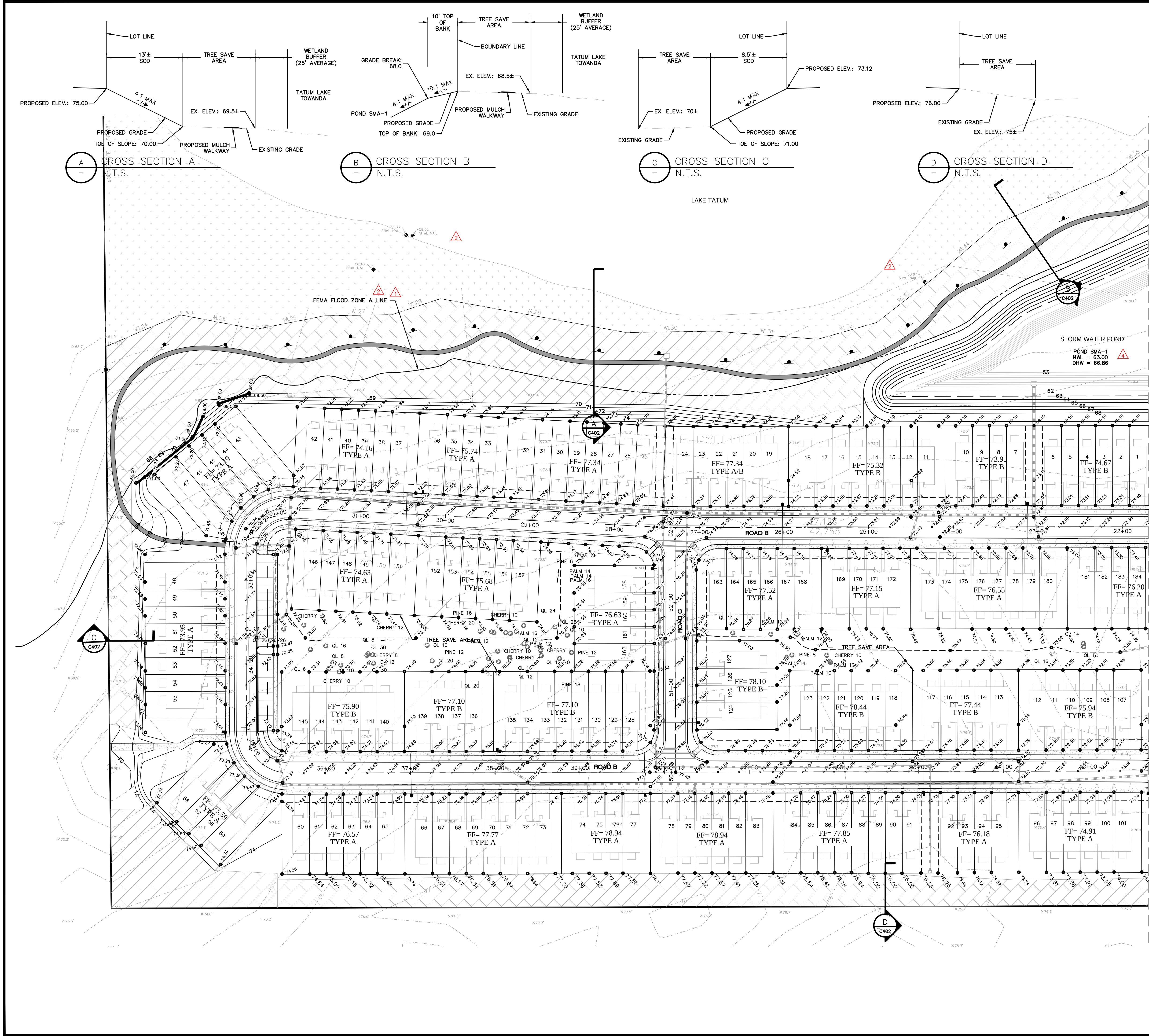
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

JOB # _____ 21086
DATE: _____ 02/20/23
SCALE: _____ 1"=50'
DESIGNED BY: _____ JTT
DRAWN BY: _____ JTT
APPROVED BY: _____ BSB

	SB	TT	TT	@	86	DATE	REVISIONS
H:\Data\21086	Summit Ave PD\Fac\Final\21086	C401	GRADING PLAN.dwg	May 21 2024	2:33 PM		



- NOTES:**
1. ALL LOTS THAT HAVE SLOPES GREATER THAN 20% FROM FFE TO SIDE LOT LINE WILL REQUIRE A THICKENED EDGE SLAB.
 2. ALL FINISHED FLOOR ELEVATIONS SHALL BE A MINIMUM OF 12" ABOVE THE CENTER LINE ELEVATION OF THE ADJACENT ROADWAY.
 3. ALL FINISHED FLOOR ELEVATIONS SHALL BE A MINIMUM OF 12" ABOVE THE ESTABLISHED BASE FLOOR ELEVATION AND/OR 12" ABOVE THE 100 YR 24HR DESIGN HIGH WATER ELEVATION OF THE ADJACENT DETENTION AREA.
 4. MAXIMUM GRADE TRANSITION SLOPE AND SWALE SIDE SLOPE IS 4:1 (H:V)
 5. MINIMUM GUTTER SLOPE IS 0.24%.
 6. SEE SHEET C701 FOR PROPOSED SEDIMENTATION CONTROL TECHNIQUES.
 7. CONTRACTOR TO GRADE LOT PAD 10" (0.83') LOWER THAN FINISHED FLOOR ELEVATION.



MATCH LINE - SEE SHEET C401

MATCH LINE - SEE SHEET C403

- NOTES:
1. ALL LOTS THAT HAVE SLOPES GREATER THAN 20% FROM FFE TO SIDE LOT LINE WILL REQUIRE A THICKENED EDGE SLAB.
 2. ALL FINISHED FLOOR ELEVATIONS SHALL BE A MINIMUM OF 12" ABOVE THE CENTER LINE ELEVATION OF THE ADJACENT ROADWAY.
 3. ALL FINISHED FLOOR ELEVATIONS SHALL BE A MINIMUM OF 12" ABOVE THE ESTABLISHED BASE FLOOD ELEVATION AND/OR 12" ABOVE THE 100 YR 24HR DESIGN HIGH WATER ELEVATION OF THE ADJACENT DETENTION AREA.
 4. MAXIMUM GRADE TRANSITION SLOPE AND SWALE SIDE SLOPE IS 4:1 (H:V)
 5. MINIMUM GUTTER SLOPE IS 0.24%.
 6. SEE SHEET C701 FOR PROPOSED SEDIMENTATION CONTROL TECHNIQUES.
 7. NO CLEARING OR GRADING WITHIN TREE SAVE AREA

MADDEN
HOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

GRADING PLAN
FOR
SUMMIT PLACE
CITY OF BELAND
FLORIDA

DR. HORTON
10192 DOWDEN ROAD
ORLANDO, FL 32832
(407) 850-5200

ENGINEER: BENJAMIN S. BLOCHAM
LICENSE NO. 79452
STATE OF FLORIDA
DATE: 07/20/23
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

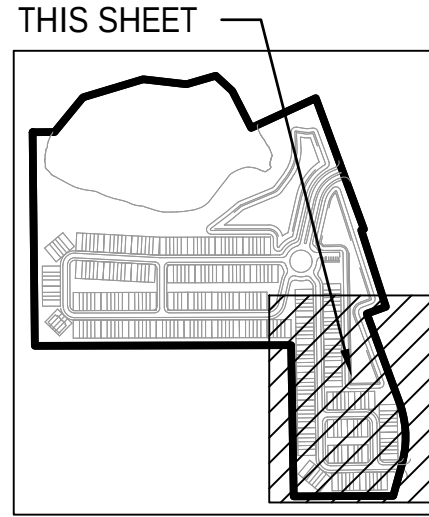
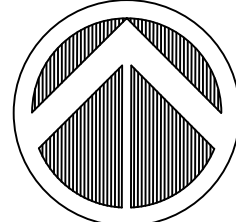
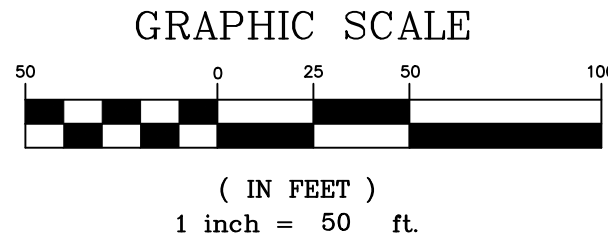
REV.	DATE	DESCRIPTION
1	03/05/23	REV. PER CITY OF BELAND COMMENTS DATED 03/09/23
2	07/20/23	REV. PER SRWMD
3	07/20/23	REV. PER SRWMD
4	07/20/23	REV. PER QC REVIEW

DATE	REVISIONS
03/05/23	1
07/20/23	2
07/20/23	3
07/20/23	4

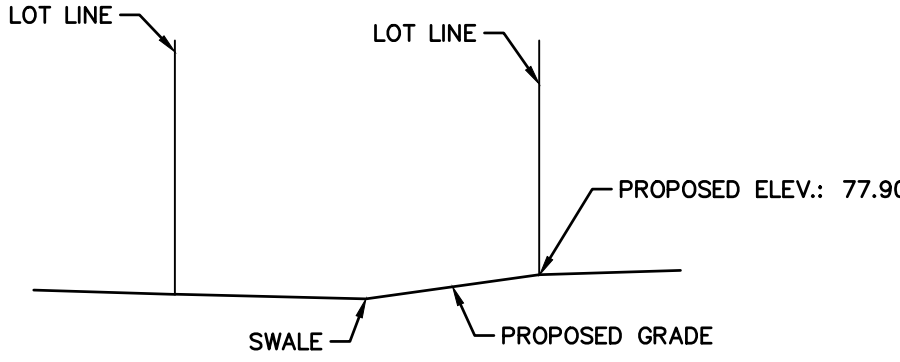
JOB # 21886
DATE: 02/20/23
SCALE: 1"=50'
DESIGNED BY: JTT
DRAWN BY: JTT
APPROVED BY: BSB

C402

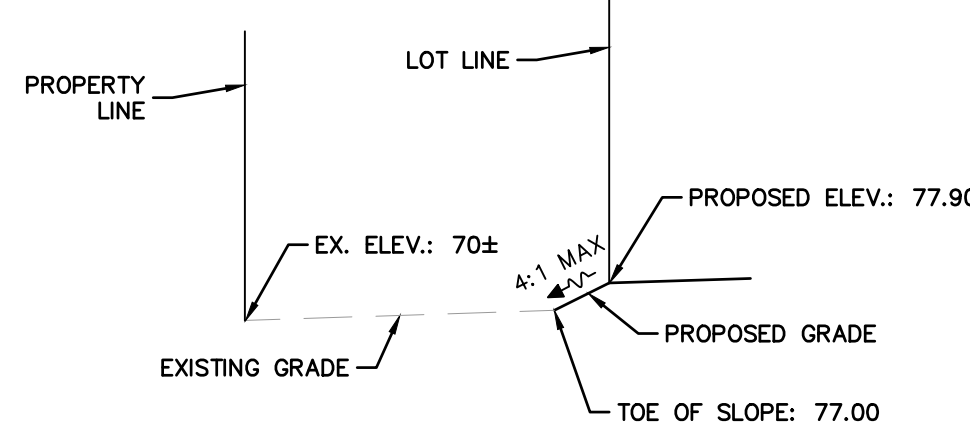
MATCH LINE - SEE SHEET C401



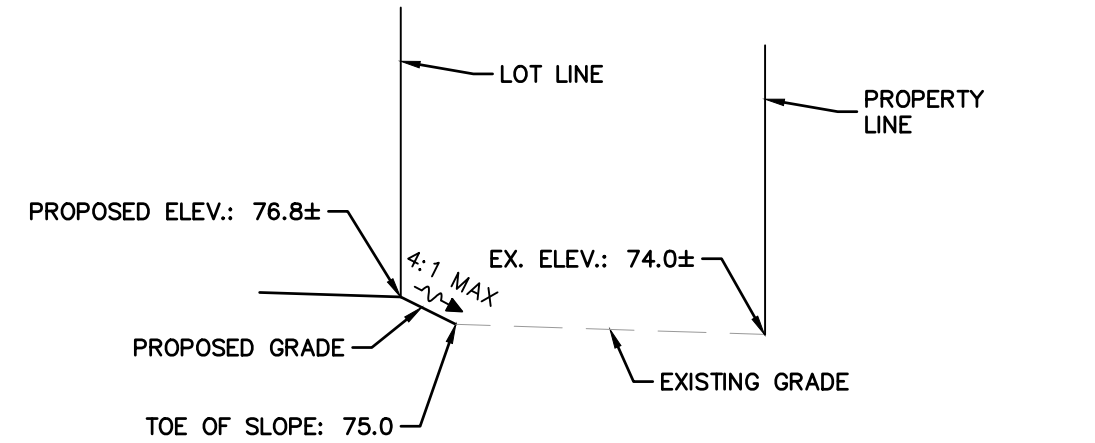
KEY MAP
N.T.S.



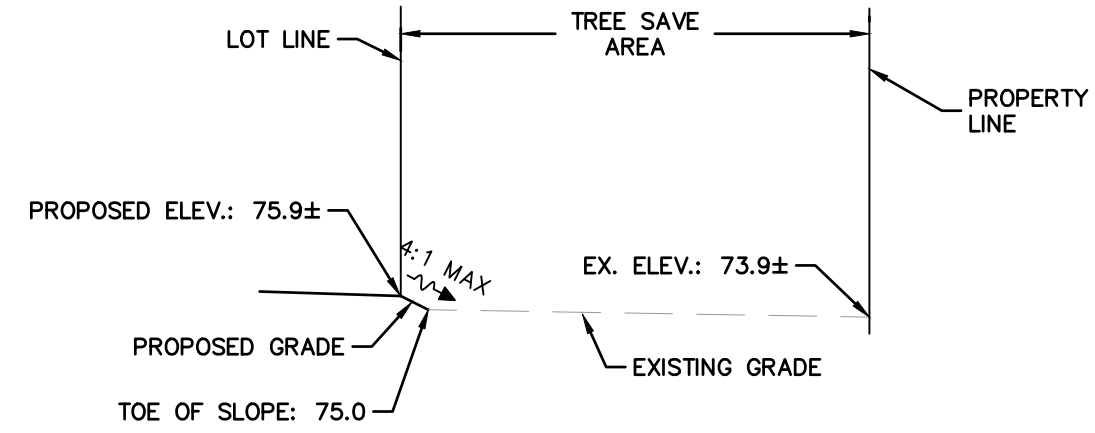
CROSS SECTION E
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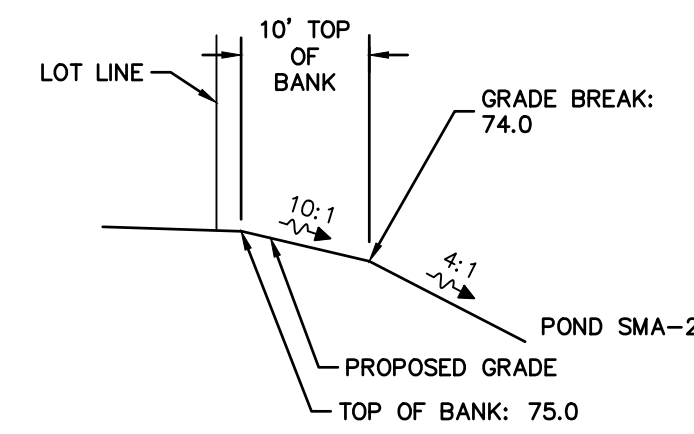
CROSS SECTION F
N.T.S.



CROSS SECTION G
N.T.S.



CROSS SECTION H
N.T.S.



CROSS SECTION I
N.T.S.

- NOTES:
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 - MINIMUM GUTTER SLOPE IS 0.24%.
 - SEE SHEET C701 FOR PROPOSED SEDIMENTATION CONTROL TECHNIQUES.

MADDEN
WOODHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

GRADING PLAN
FOR
SUMMIT PLACE
CITY OF BELAND
FLORIDA

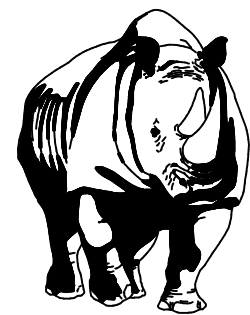
DR. HORTON
10192 DOWDEN ROAD
ORLANDO, FL 32832
(407) 850-5200



DATE	REVISIONS
03/05/23	REV. PER CITY OF BELAND COMMENTS DATED 03/09/23
03/29/24	REV. PER QC REVIEW
04/01/24	
04/02/24	
04/03/24	
04/04/24	
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04/06/24	
04/07/24	
04/08/24	
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04/10/24	
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04/30/24	

JOB # 21886
DATE: 02/20/23
SCALE: 1"=50'
DESIGNED BY: JTT
DRAWN BY: JTT
APPROVED BY: BSB

C403

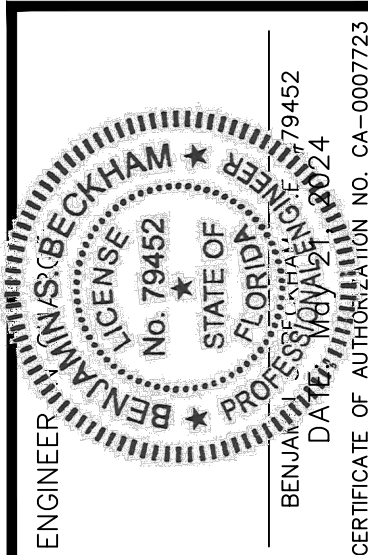


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CIVIL ENGINEERS

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Maitland, Florida 32751
(407) 629-8330

OFF-SITE DIMENSION, STRIPING, AND SIGNAGE PLAN
FOR
SUMMIT PLACE
CITY OF BELAND
FLORIDA

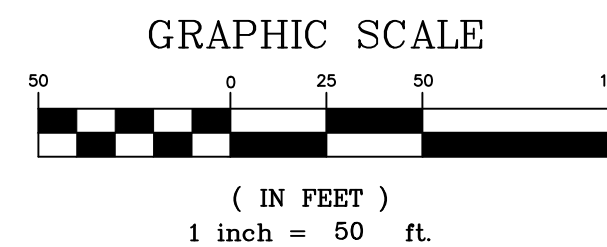
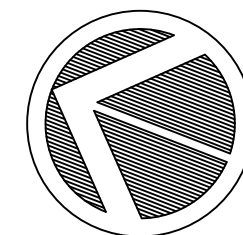
DR. HORTON
10192 DOWEN ROAD
ORLANDO, FL 32832
(407) 850-5200



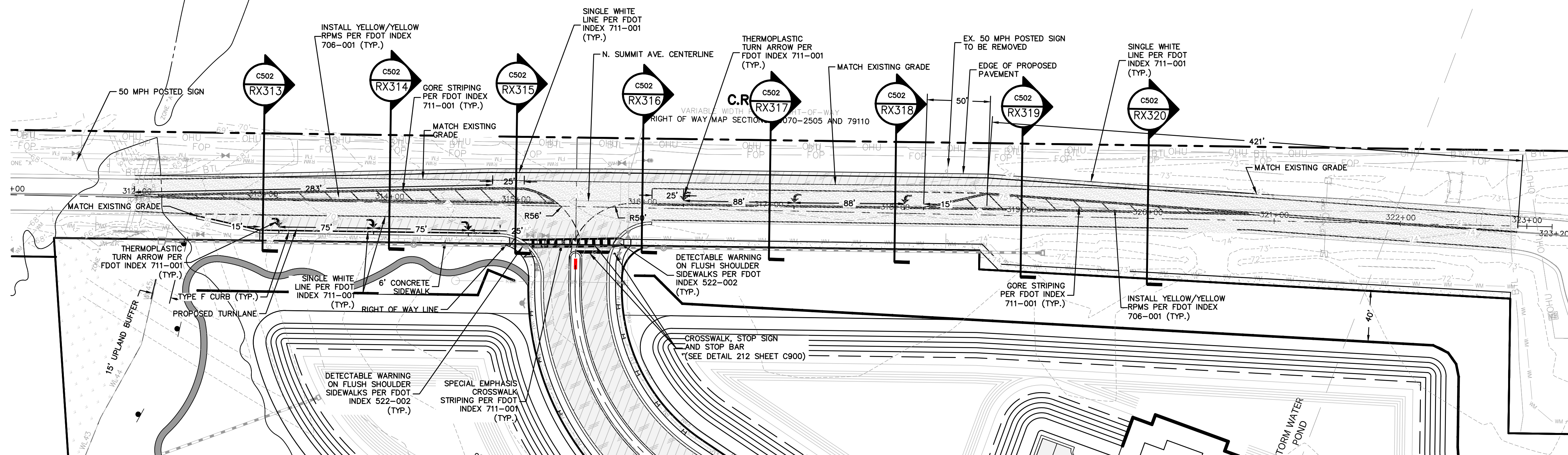
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JOB # 21886
DATE: 02/20/23
SCALE: 1"=50'
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DRAWN BY: JTT
APPROVED BY: BSB

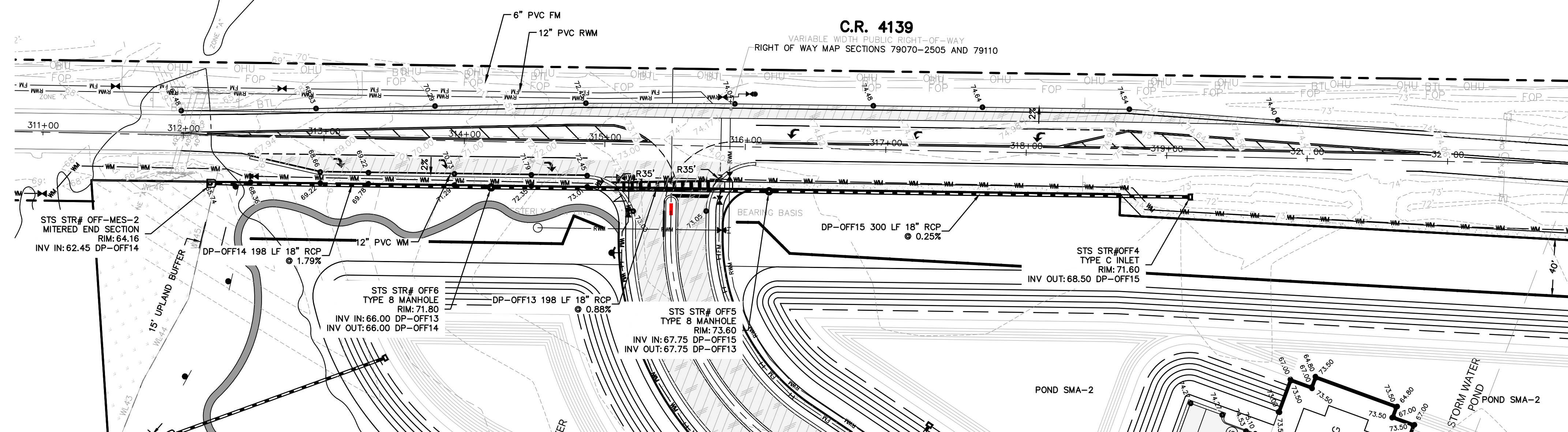
C501



HATCH LEGEND



OFFSITE DEMINESION, STRIPING AND SIGNAGE PLAN
N SUMMIT AVENUE



OFFSITE GRADING AND DRAINAGE PLAN
N SUMMIT AVENUE

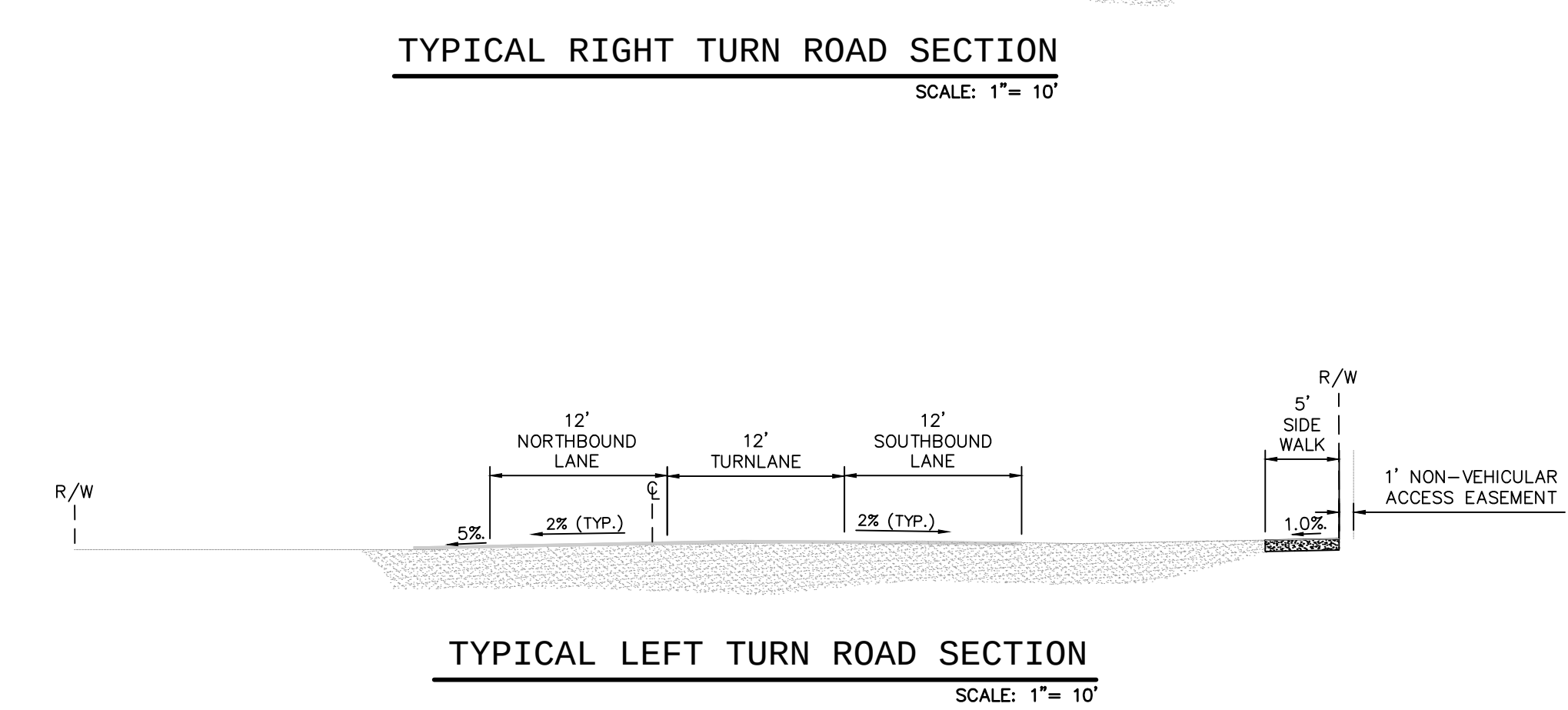
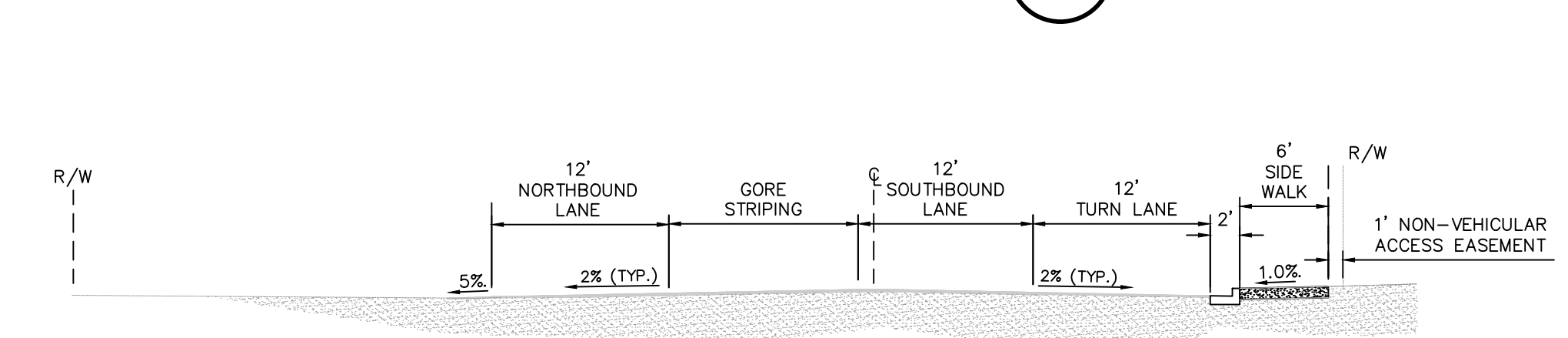
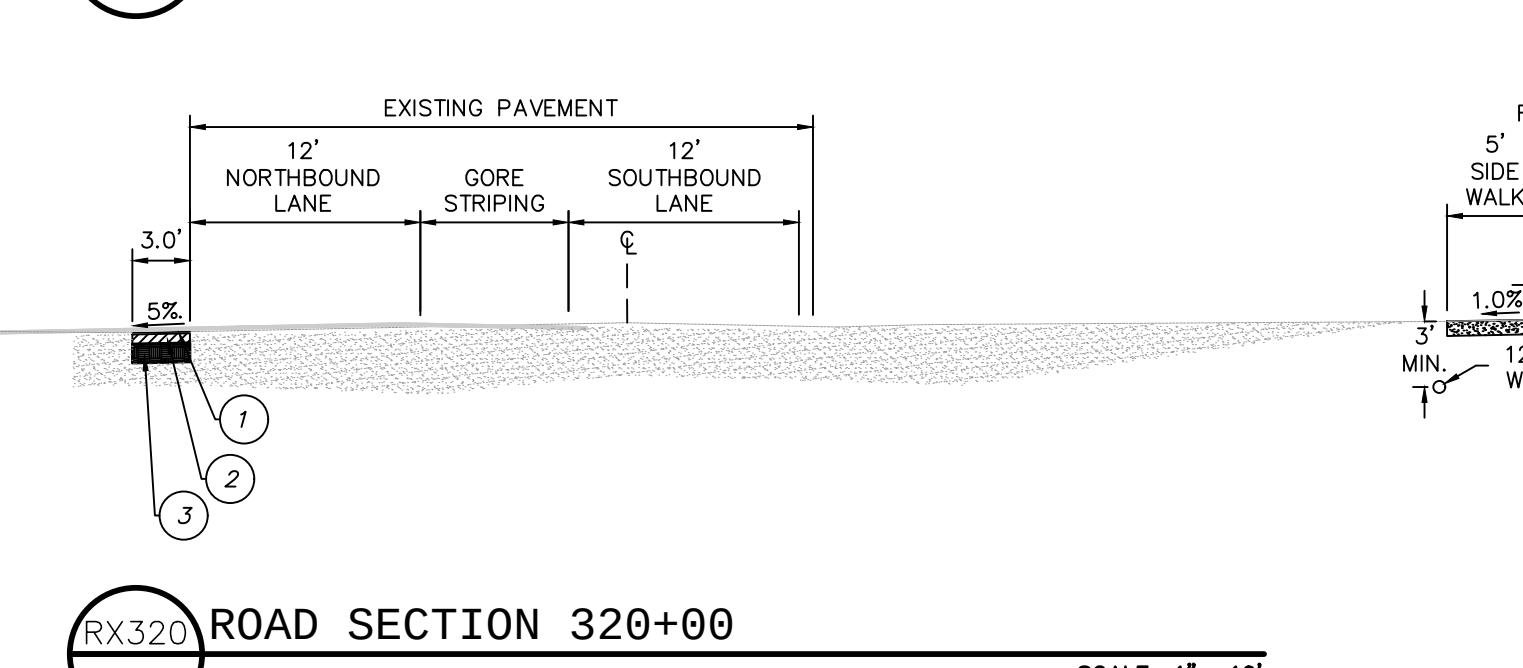
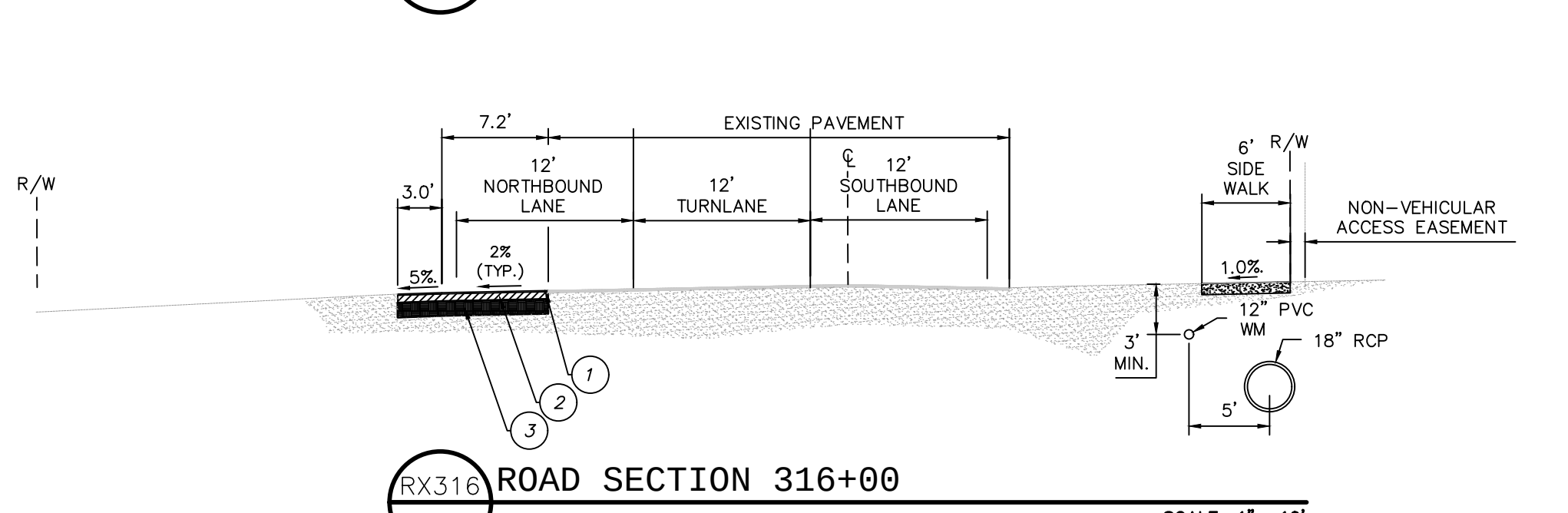
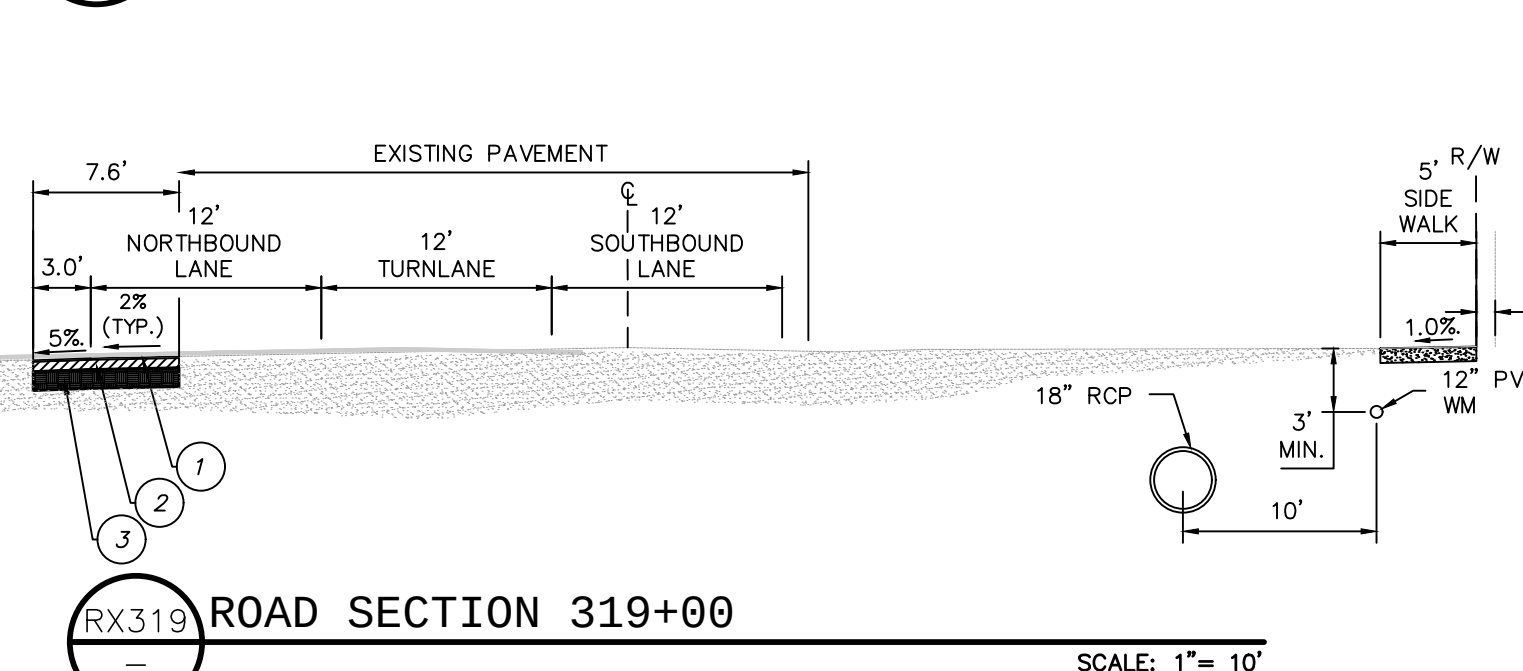
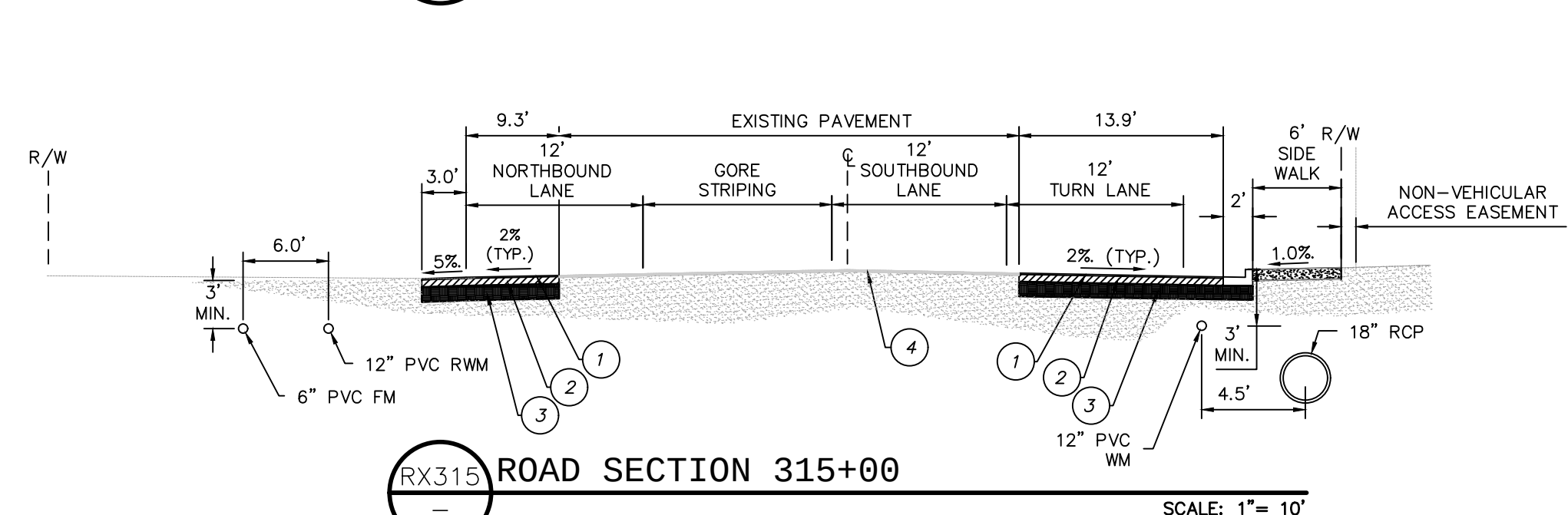
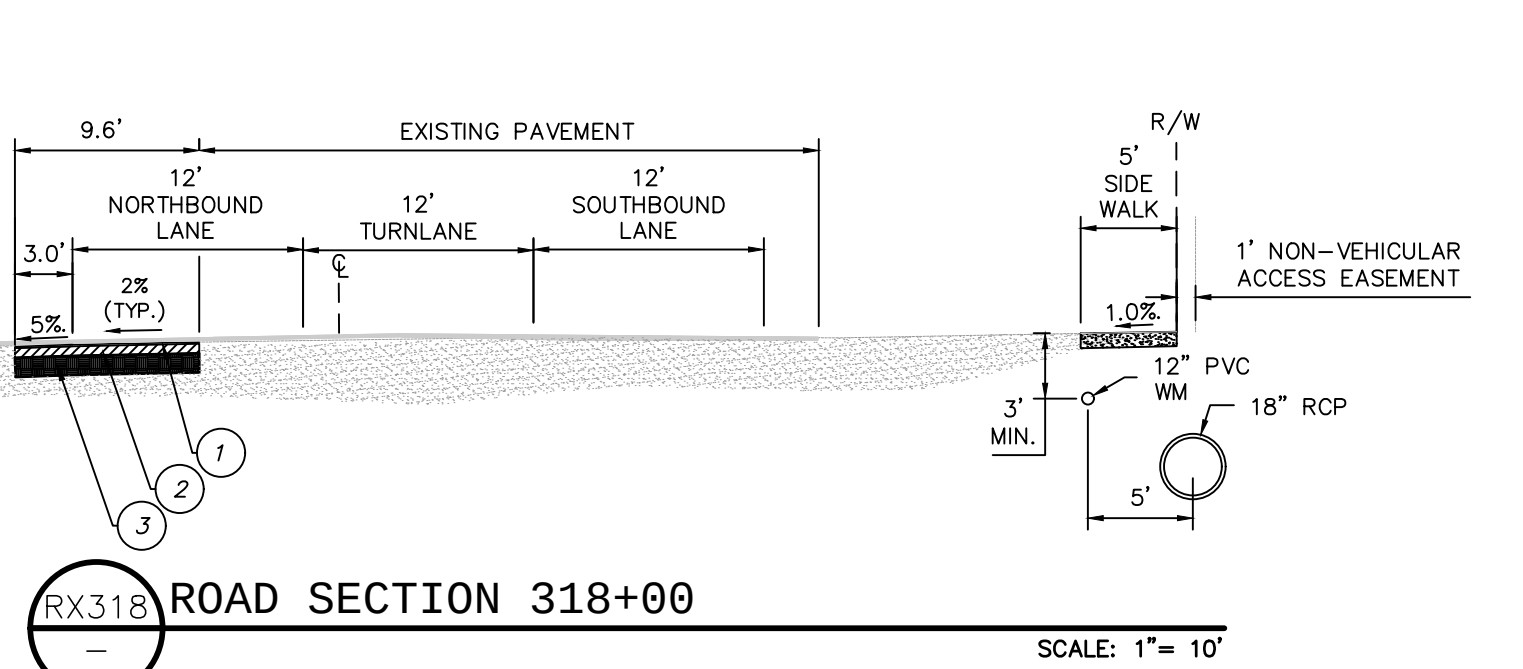
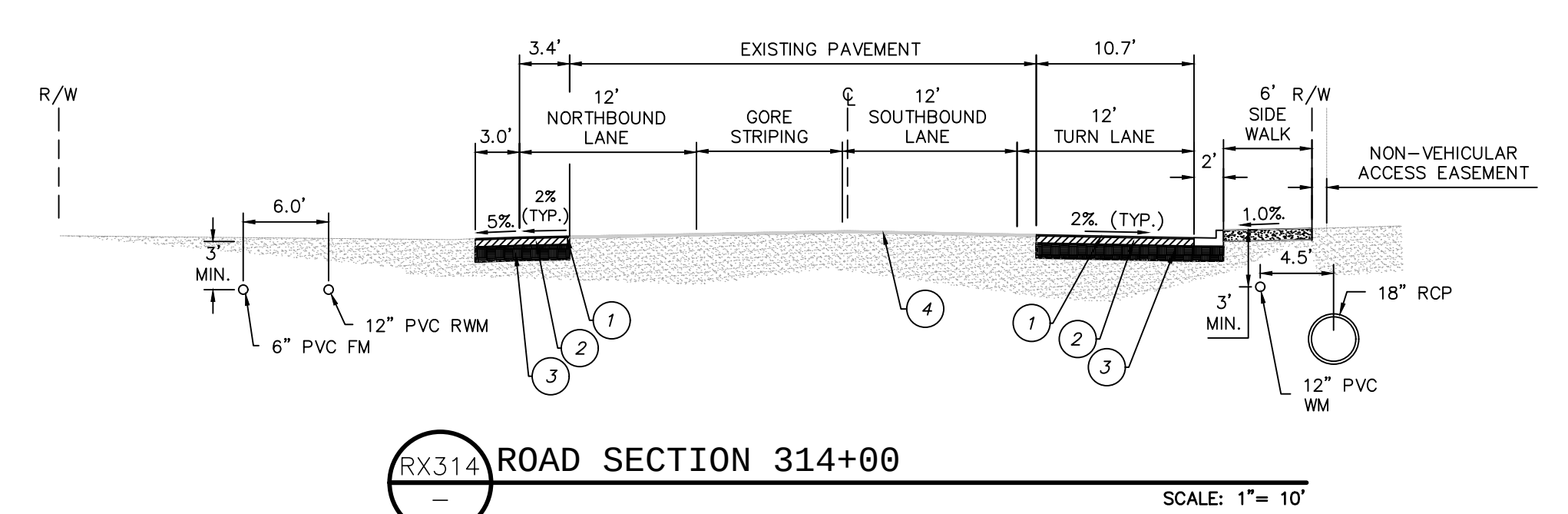
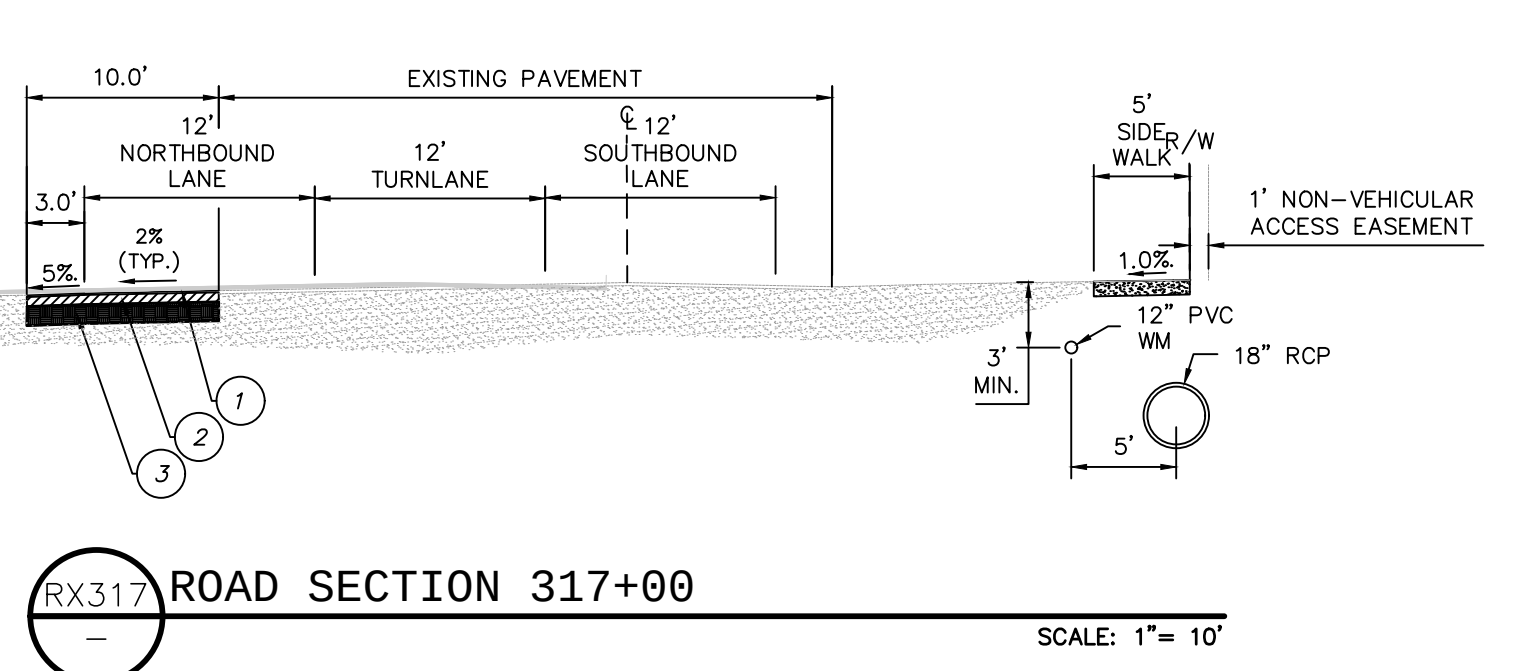
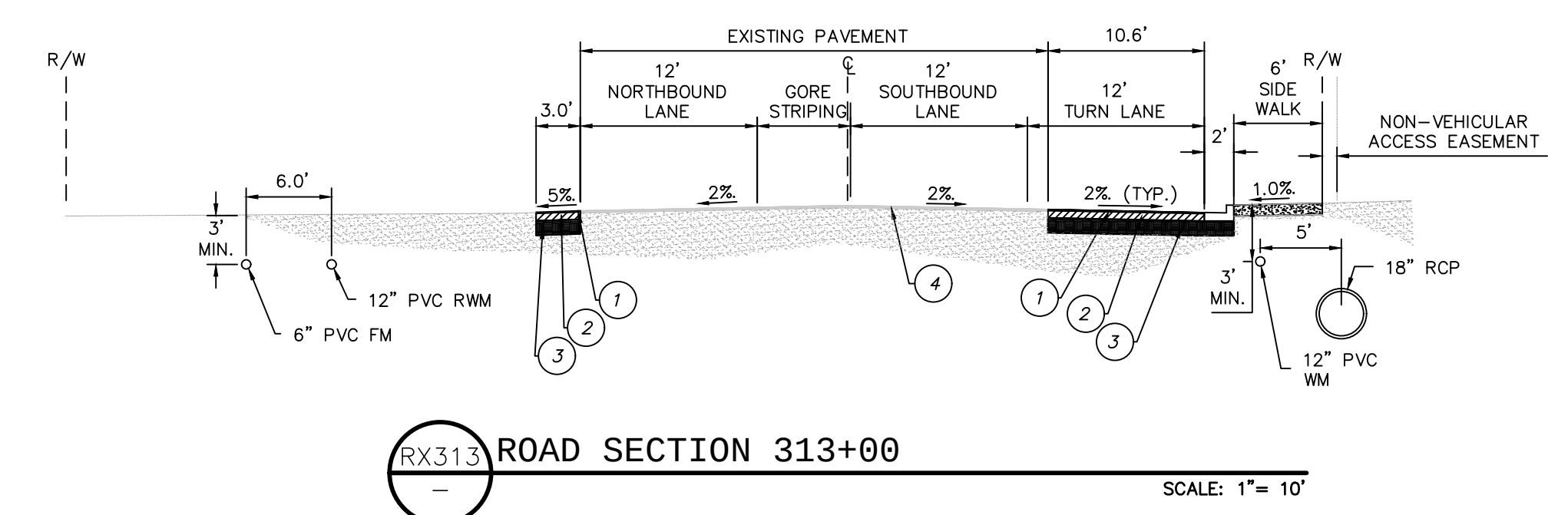
NOTES:

- ALL WORK PER 2023 FDOT STANDARD PLANS AND 2023 FDOT DESIGN MANUAL
- INSTALL THERMOPLASTIC STRIPING AND ARROWS PER FDOT STD. PLAN 711-001
- INSTALL RAISED PAVEMENT MARKERS PER FDOT STD. PLAN 706-001
- INSTALL SOD AT ALL AREAS DISTURBED BY CONSTRUCTION
- ALL AFFECTED SIDEWALKS, RAMPS, AND CROSSWALKS ARE TO BE BUILT AND INSPECTED TO MEET CURRENT ADA REQUIREMENTS.
- MAXIMUM SLOPE IN SWALE AREAS IS 4:1
- INTERSECTION CLEAR SIGHT AREAS ARE TO BE MAINTAINED PER FDOT FDM 212.11
- MAINTENANCE OF TRAFFIC SHALL BE PER FDOT STD. PLANS 102-600, 102-601, 102-602, AND 102-603
- STRUCTURAL SECTION OF THE EXISTING PAVED SHOULDERS WILL NEED TO BE FIELD VERIFIED. SAW CUTTING AT THE LANE LINE SHALL BE REQUIRED IF EXISTING PAVED SHOULDERS WERE NOT CONSTRUCTED TO THE FULL DEPTH ROADWAY PAVEMENT SECTION.
- ALL ASPHALT MIX DESIGNS MUST BE PREAPPROVED BY VOLUSIA COUNTY BEFORE PLACEMENT.
- ANY NECESSARY OVERBUILD GREATER THAN THE STANDARD MILL AND RESURFACING WILL NEED APPROVAL IN THE FIELD BY COUNTY INSPECTOR.
- NOTIFY VOLUSIA COUNTY DEVELOPMENT ENGINEERING DIVISION AT (386) 736-5926 A MINIMUM OF 24 HOURS PRIOR TO THE START OF CONSTRUCTION. FAILURE OF THE PERMITTEE TO OBTAIN THE APPROPRIATE INSPECTIONS PRIOR TO PROCEEDING WITH WORK SHALL NOT RELIEVE THE PERMITTEE FROM REEXCAVATION OR OTHER MEASURES NECESSARY FOR THE INSPECTION OF WORK.
- VOLUSIA COUNTY TRAFFIC ENGINEERING (386) 736-5968 IS NOT A MEMBER OF SUNSHINE ONE CALL. WHEN REQUESTING LOCATES, PLEASE PROVIDE A MINIMUM ADVANCED NOTIFICATION OF TWO (2) BUSINESS DAYS PRIOR TO PROPOSED WORK.
- COORDINATION WITH VOLUSIA COUNTY TRAFFIC OPERATIONS (386) 239-6535 IS REQUIRED WITH A MINIMUM ADVANCED NOTICE OF SEVEN (7) DAYS PRIOR TO ANY SIDEWALK, LANE OR ROAD CLOSURE (INCLUDING FLAGGING OPERATIONS).
- OPERATIONS WITHIN THE COUNTY RIGHT-OF-WAY SHALL NORMALLY BE CONDUCTED 7:00 AM TO 7:00 PM, MONDAY THROUGH FRIDAY. ANY DEVIATION FROM THESE HOURS REQUIRES PRIOR APPROVAL FROM THE COUNTY DEVELOPMENT ENGINEER. EMERGENCY REPAIRS ARE EXCLUDED FROM THIS TIME RESTRICTION.
- DRIVING OR STAGING OF CONSTRUCTION VEHICLES OR MATERIALS IS NOT PERMITTED WITHIN THE COUNTY RIGHT-OF-WAY OR ON PEDESTRIAN WALKWAYS AND PATHS. THERE SHALL BE NO OVERNIGHT CONSTRUCTION VEHICLE RELATED PARKING, CONSTRUCTION MATERIAL PLACEMENT OR STORAGE OF ANY KIND PERMITTED WITHIN THE COUNTY RIGHT-OF-WAY.
- NO TRENCH OR EXCAVATION SHALL BE LEFT OPEN OR UNATTENDED OVERNIGHT, UNLESS APPROVED BY THE COUNTY DEVELOPMENT ENGINEERING INSPECTOR. EXCAVATIONS SHALL MEET THE DROP OFF PROTECTION REQUIREMENTS OF THE LATEST FDOT DESIGN STANDARD INDEX NO. 600.
- RESTORATION SHALL BE REQUIRED FOR ANY DAMAGE TO SIDEWALKS, CURBS, OR OTHER EXISTING STRUCTURES IN THE RIGHT-OF-WAY. ALL DISTURBED AREAS WITHIN THE COUNTY RIGHT OF WAY SHALL BE RE-GRADED AND SODDED. SEED AND MULCH IS NOT AN ACCEPTABLE ALTERNATIVE TO SODDING.
- FOR EXISTING STRIPING TO BE REMOVED VIA GRINDING, THE LATEST, LEAST AGGRESSIVE METHODS SHALL BE USED.

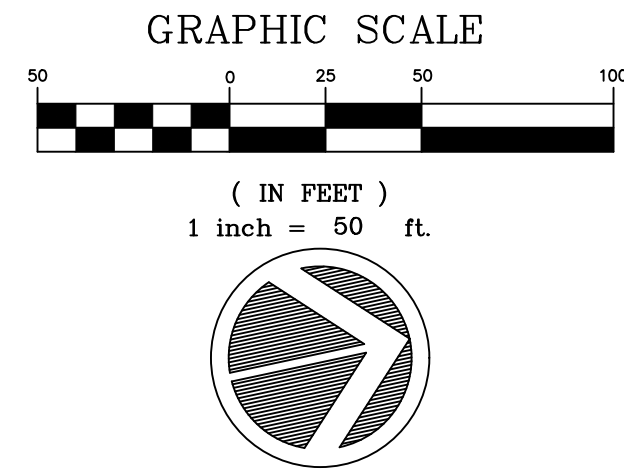
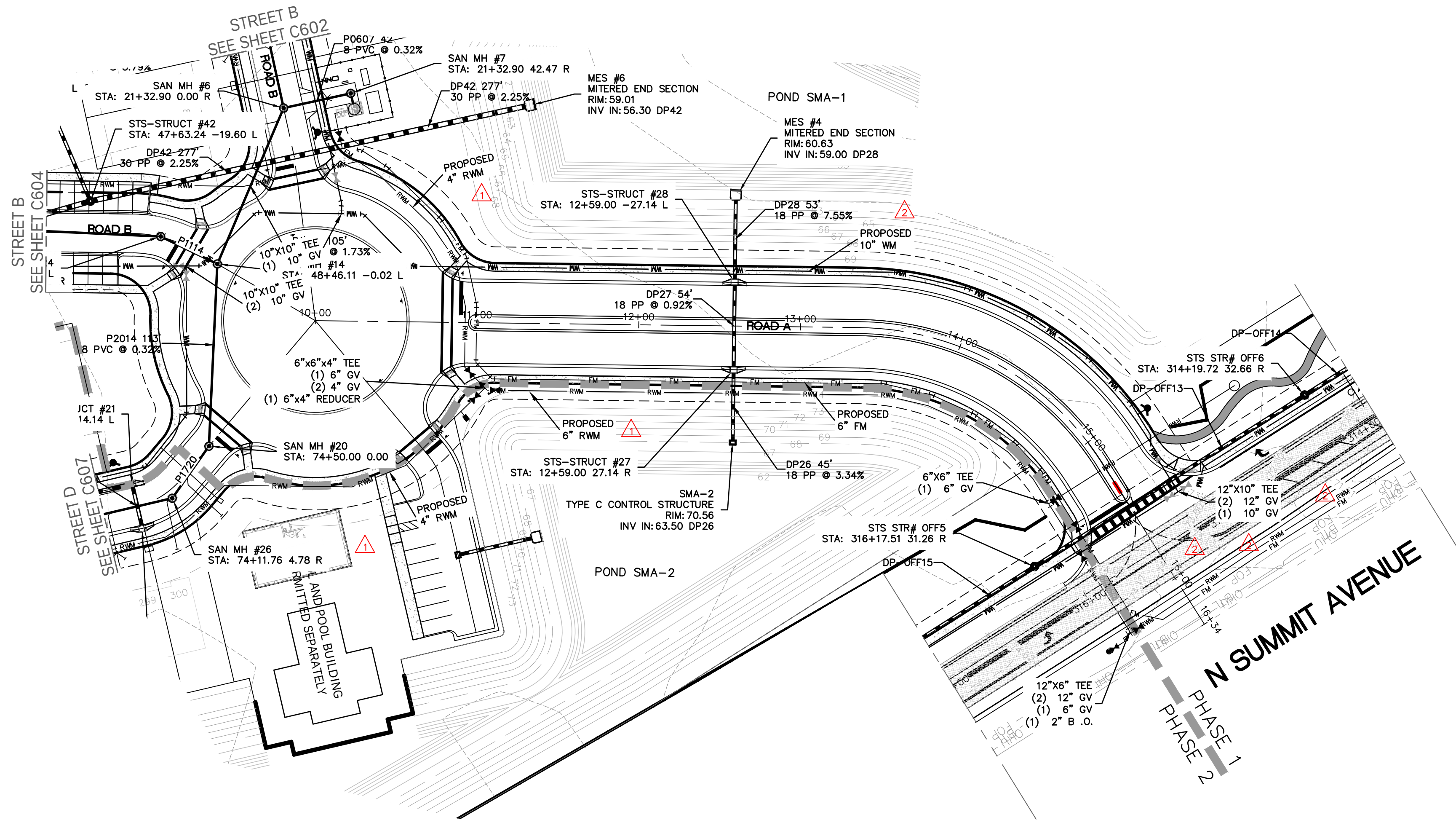
NO.	DATE	REVISIONS
1	02/20/23	1
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JOB # 21886
DATE: 02/20/23
SCALE: NA
DESIGNED BY: JTT
DRAWN BY: JTT
APPROVED BY: BSB

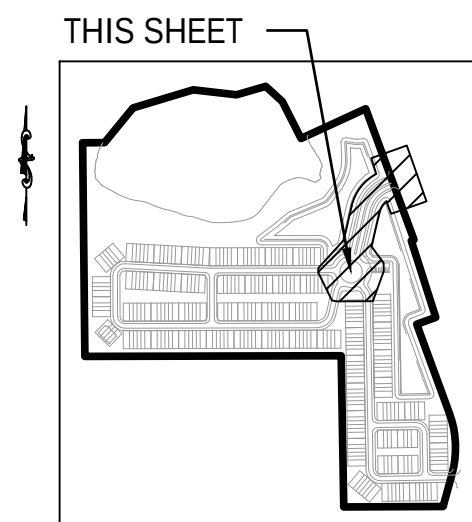
C502



- ROADWAY PAVEMENT SECTIONS
- 1.25" MIN. FDOT FRICTION COURSE TYPE FC-9.5 (TRAFFIC LEVEL C) ASPHALT @ MAX 20% RECYCLED MATERIALS.
 - 2.0" MIN. FDOT SUPERPAVE STRUCTURE COURSE TYPE SP-12.5 (TRAFFIC LEVEL C) ASPHALT @ MAX. 30% RECYCLED MATERIALS.
 - 10" LIMEROCK OR OTHER APPROVED BASE GROUP 9 COMPACTED TO A 98% MAXIMUM DRY DENSITY PER AASHTO T-180 AND CONSTRUCTED IN TWO LIFTS.
 - 12" STABILIZED SUBGRADE LBR 40 COMPACTED TO A 98% MAXIMUM DRY DENSITY PER AASHTO T-180.
 - MILL AND RESURFACE. WHEN RESURFACING, A 2.0% SLOPE MUST BE MAINTAINED OR CREATED.

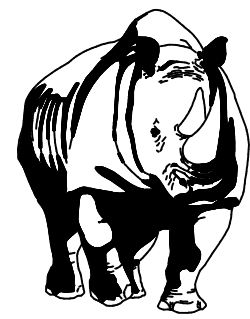
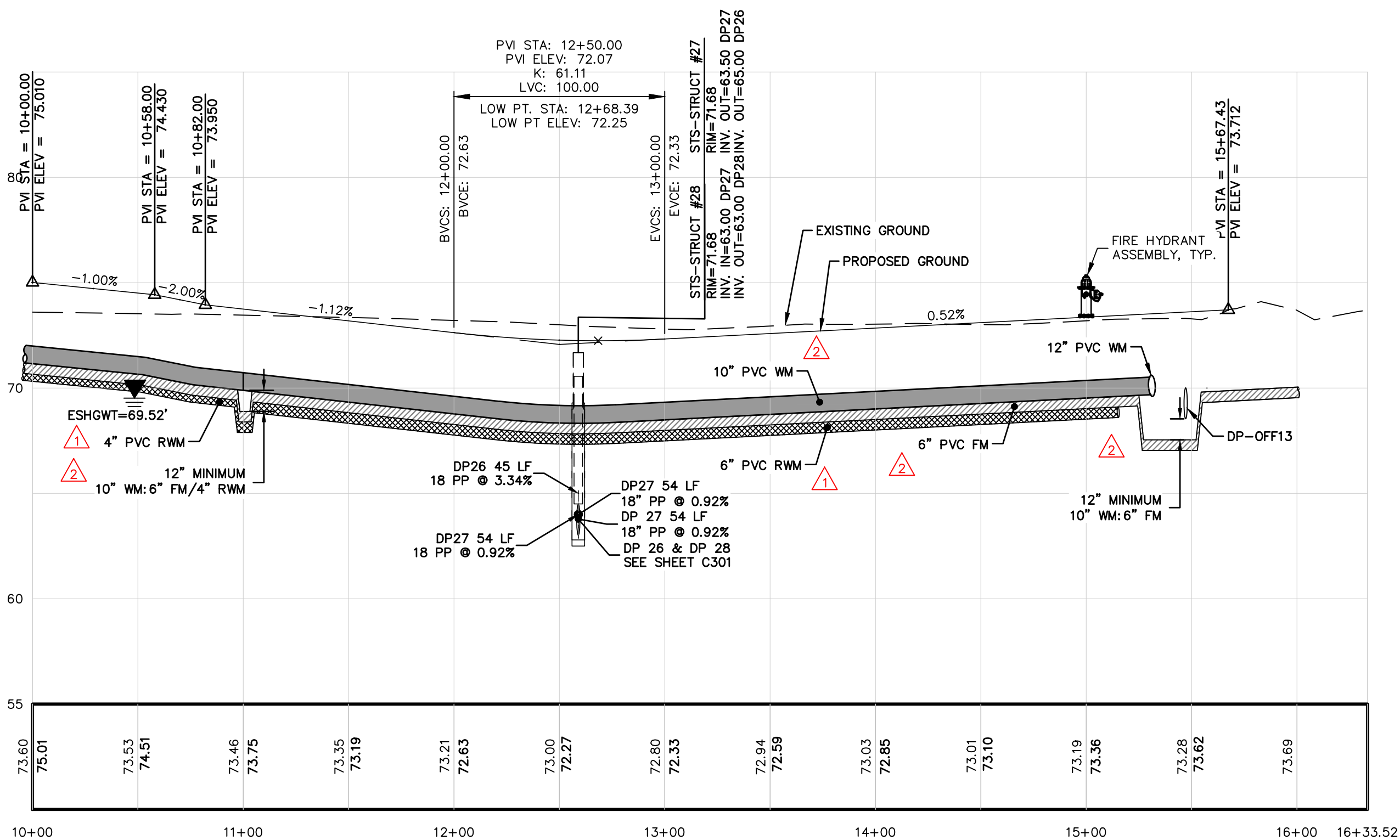


TYPICAL UTILITY LEGEND	
DESCRIPTION	
FIRE HYDRANT ASSEMBLY	
DOUBLE SANITARY SERVICE	
SINGLE SANITARY SERVICE	
DOUBLE WM SERVICE	
SINGLE WM SERVICE	
DOUBLE RWM SERVICE	
SINGLE RWM SERVICE	
GATE VALVE	
WM OR RWM CROSS	
WM OR RWM TEE	
BLOW-OFF AND VALVE	
WATER MAIN	
RECLAIM WATER MAIN	



KEY MAP
N.T.S.

ROAD A



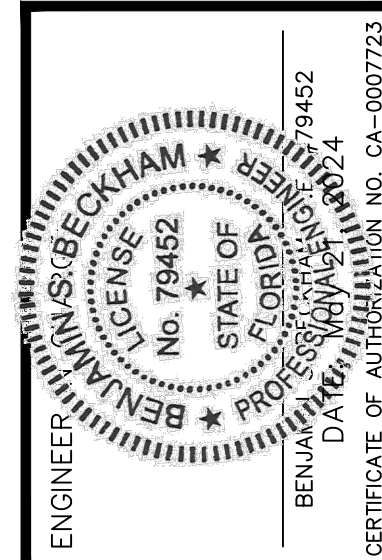
MADDEN
WOODHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

STREET A PLAN + PROFILE

FOR
SUMMIT PLACE

CITY OF DELAND FLORIDA

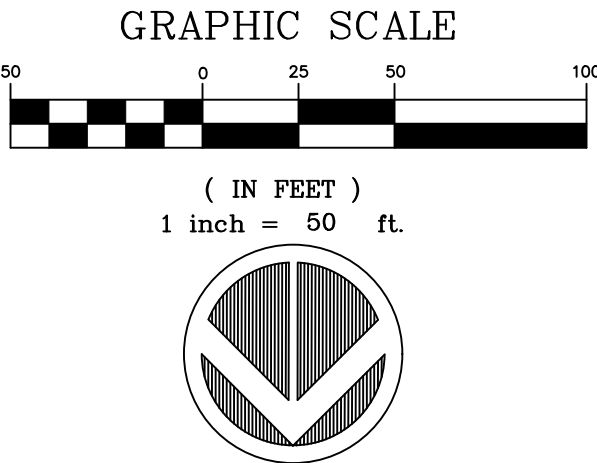
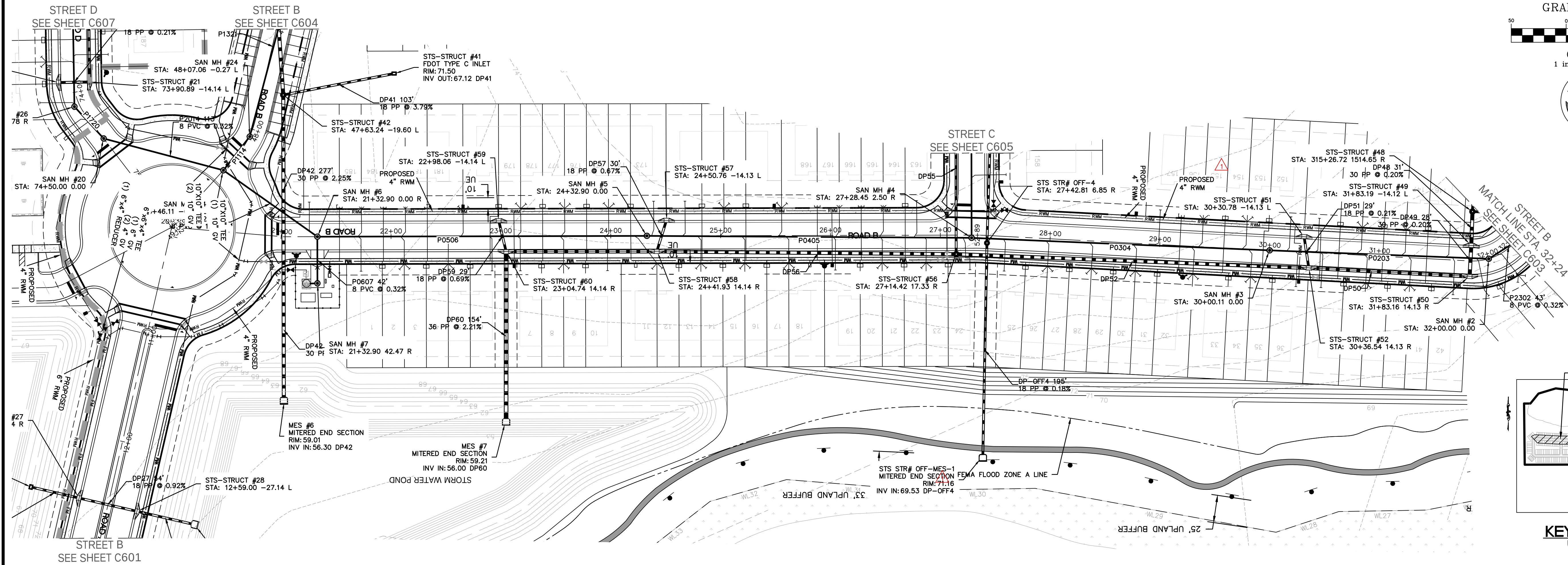
DR HORTON
10192 DOWDEN ROAD
ORLANDO, FL 32832
(407) 850-5200



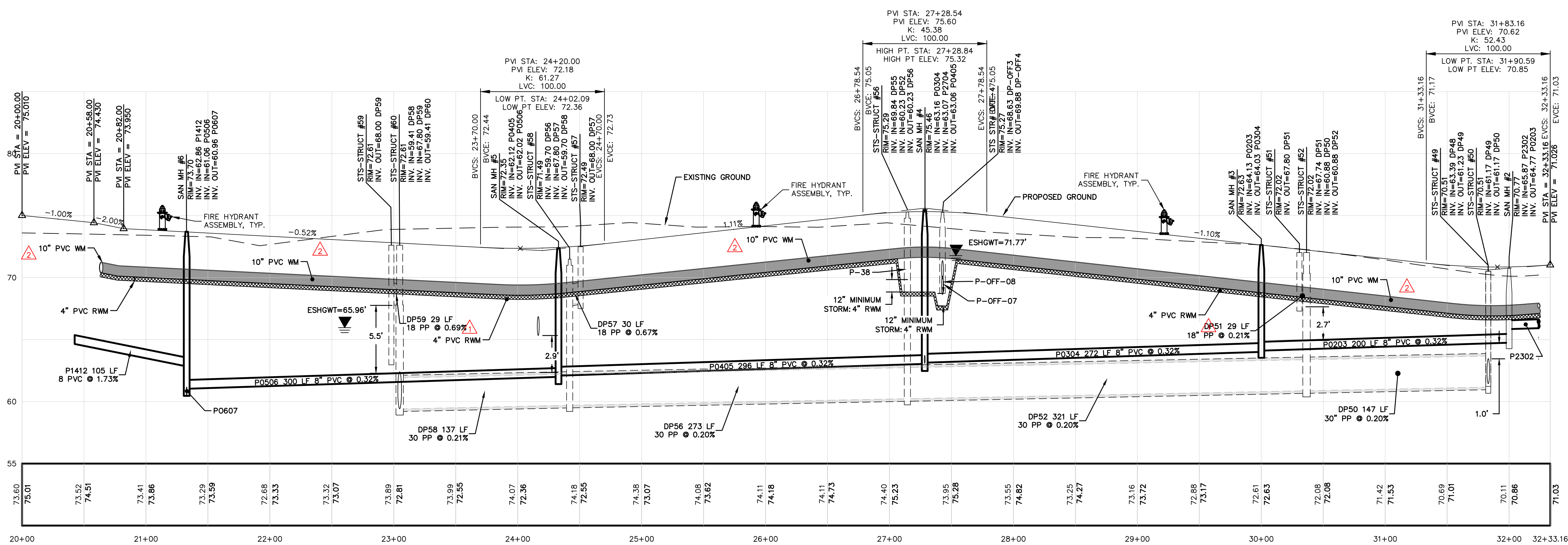
REV.	DATE	REVISIONS
1	3/15/23	REV. PER CITY OF DELAND COMMENTS DATED 3/9/23
2	1/23/24	REV. PER QC REVIEW
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JOB # 21886
DATE: 02/20/23
SCALE: 1"=50'
DESIGNED BY: JTT
DRAWN BY: JTT
APPROVED BY: BSB

C601



ROAD B



MADDEN
WOODHEAD & STOKES, LLC
CIVIL ENGINEERS

431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

STREET B-1 PLAN + PROFILE

FOR

SUMMIT PLACE

CITY OF DELAND

FLORIDA

DR. HORTON

10192 DOWEN ROAD
ORLANDO, FL 32832
(407) 850-5200

ENGINEER: BENJAMIN S. BECKHAM

STATE OF FLORIDA

PROFESSIONAL ENGINEER

NO. 79452

DATE: 02/20/23

CERTIFICATE OF AUTHORIZATION NO. CA-0007723

NO.	DATE	REVISION
1	3/05/23	REV. PER CITY OF DELAND COMMENTS DATED 3/9/23
2	1/23/24	REV. PER QC REVIEW

JOB # 21886

DATE: 02/20/23

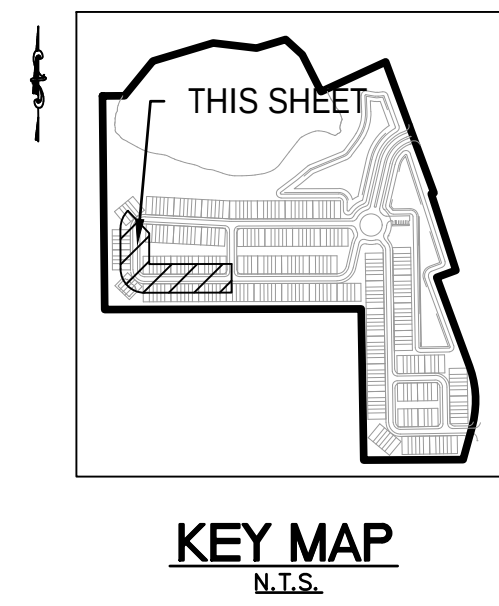
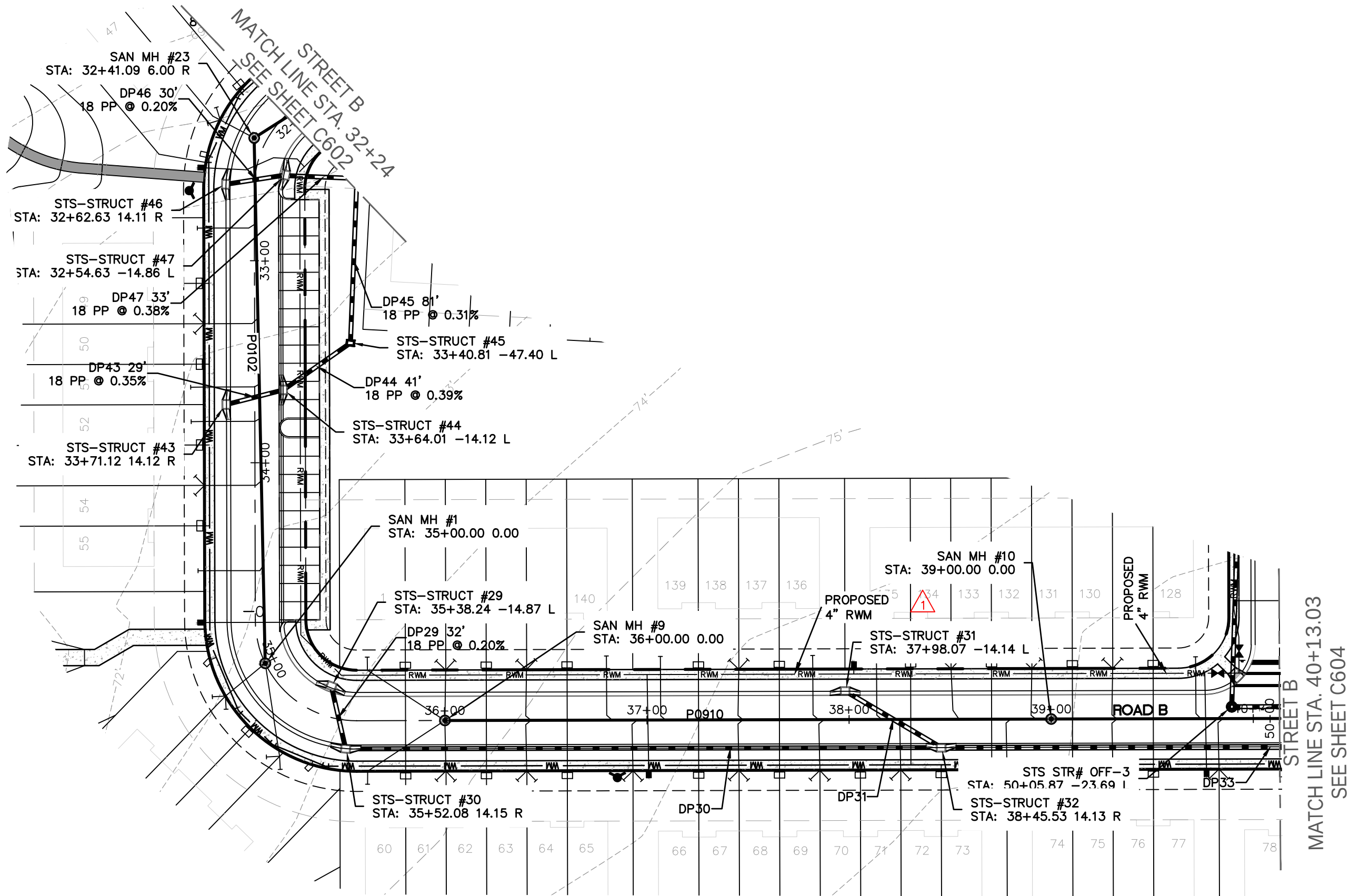
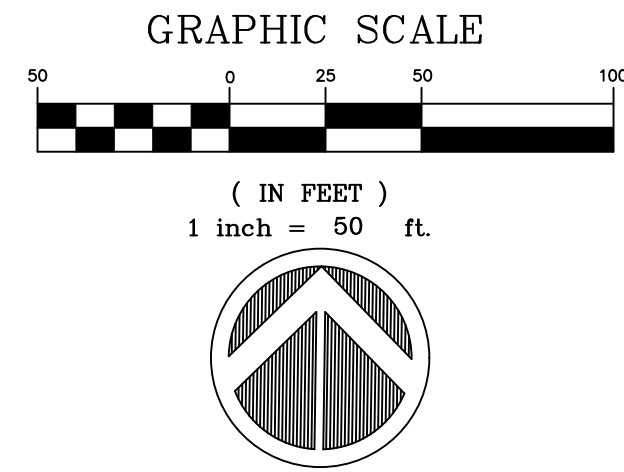
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DESIGNED BY: JTT

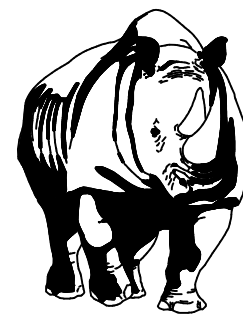
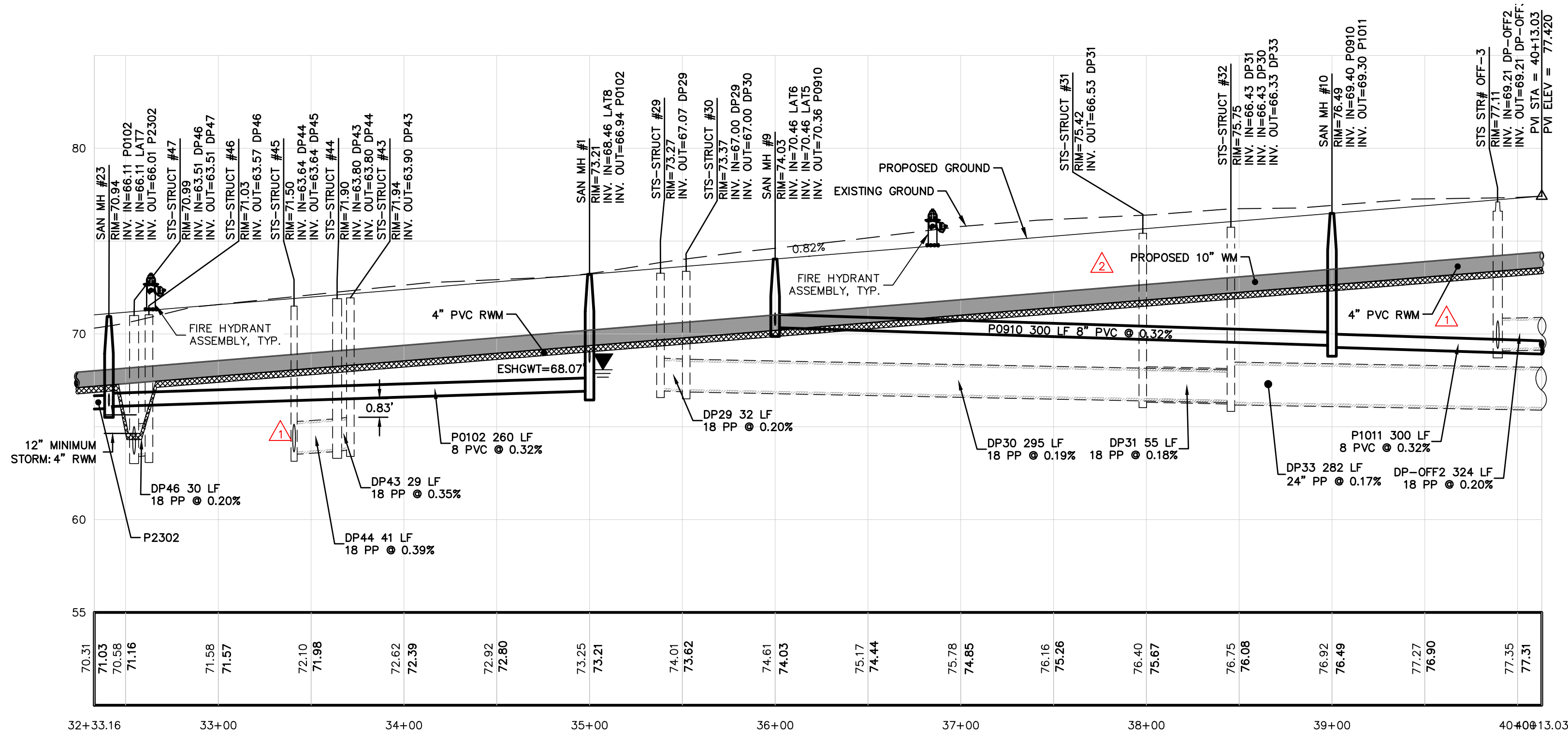
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APPROVED BY: BSB

C602



ROAD B



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WOODHEAD & STOKES, LLC
CIVIL ENGINEERS

431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

STREET B-2 PLAN + PROFILE

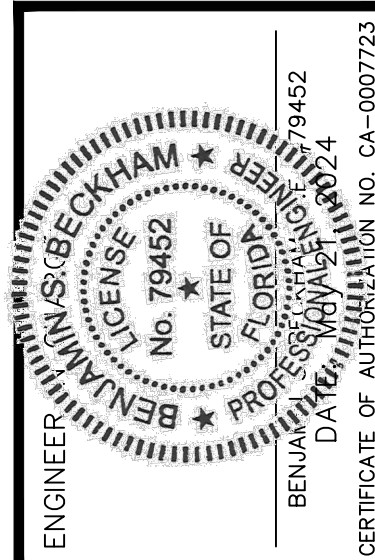
FOR

SUMMIT PLACE

FLORIDA

CITY OF BELAND

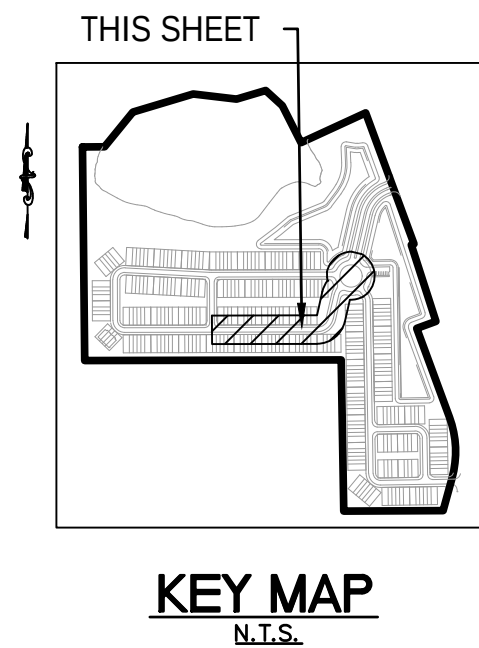
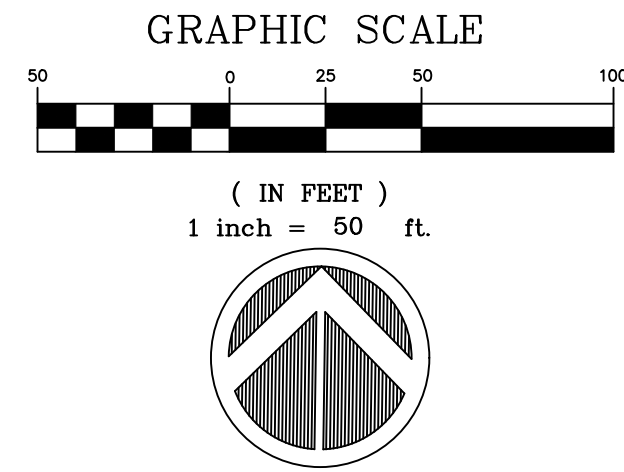
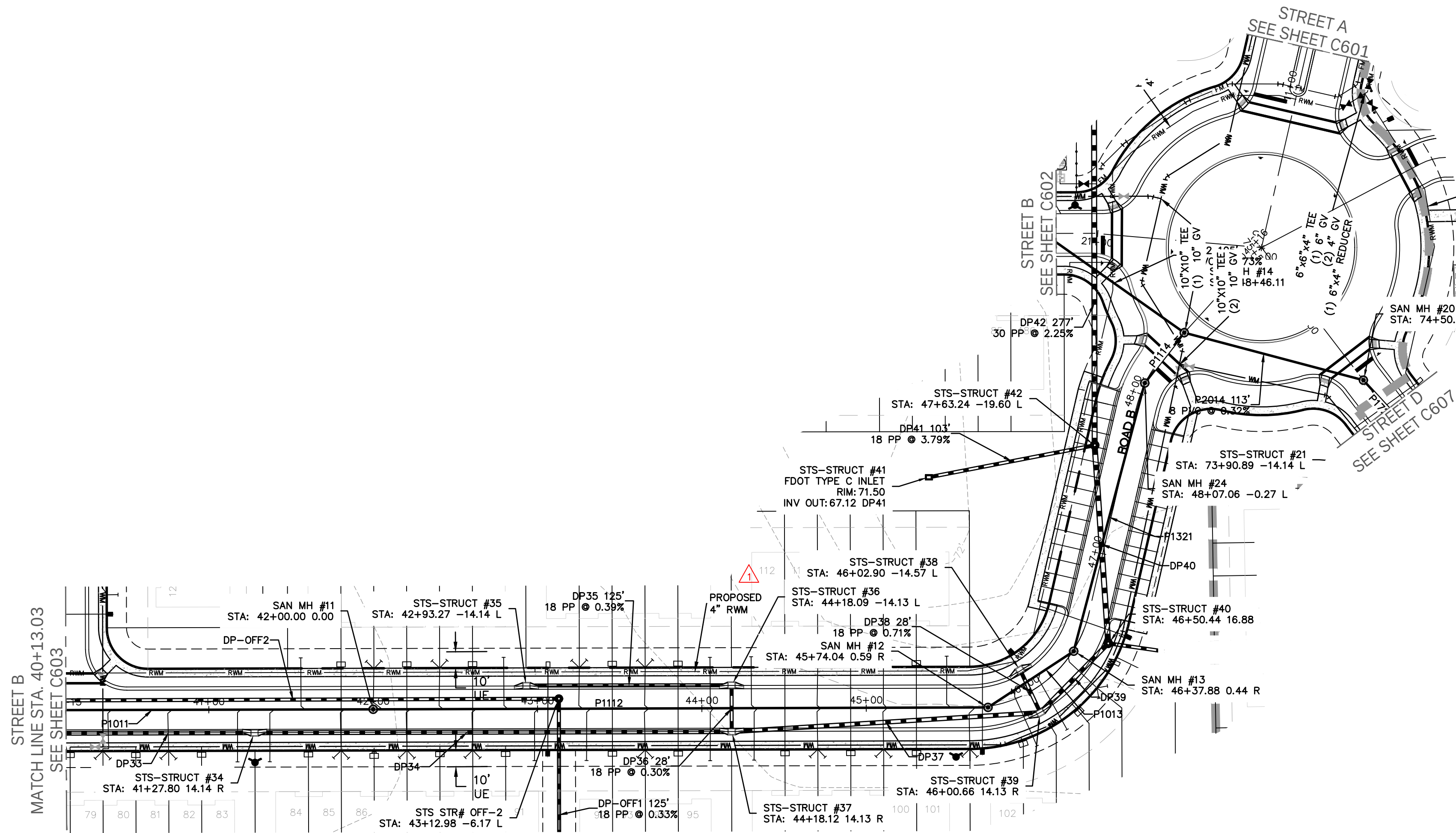
DR. HORTON
10192 DOWDEN ROAD
ORLANDO, FL 32832
(407) 850-5200



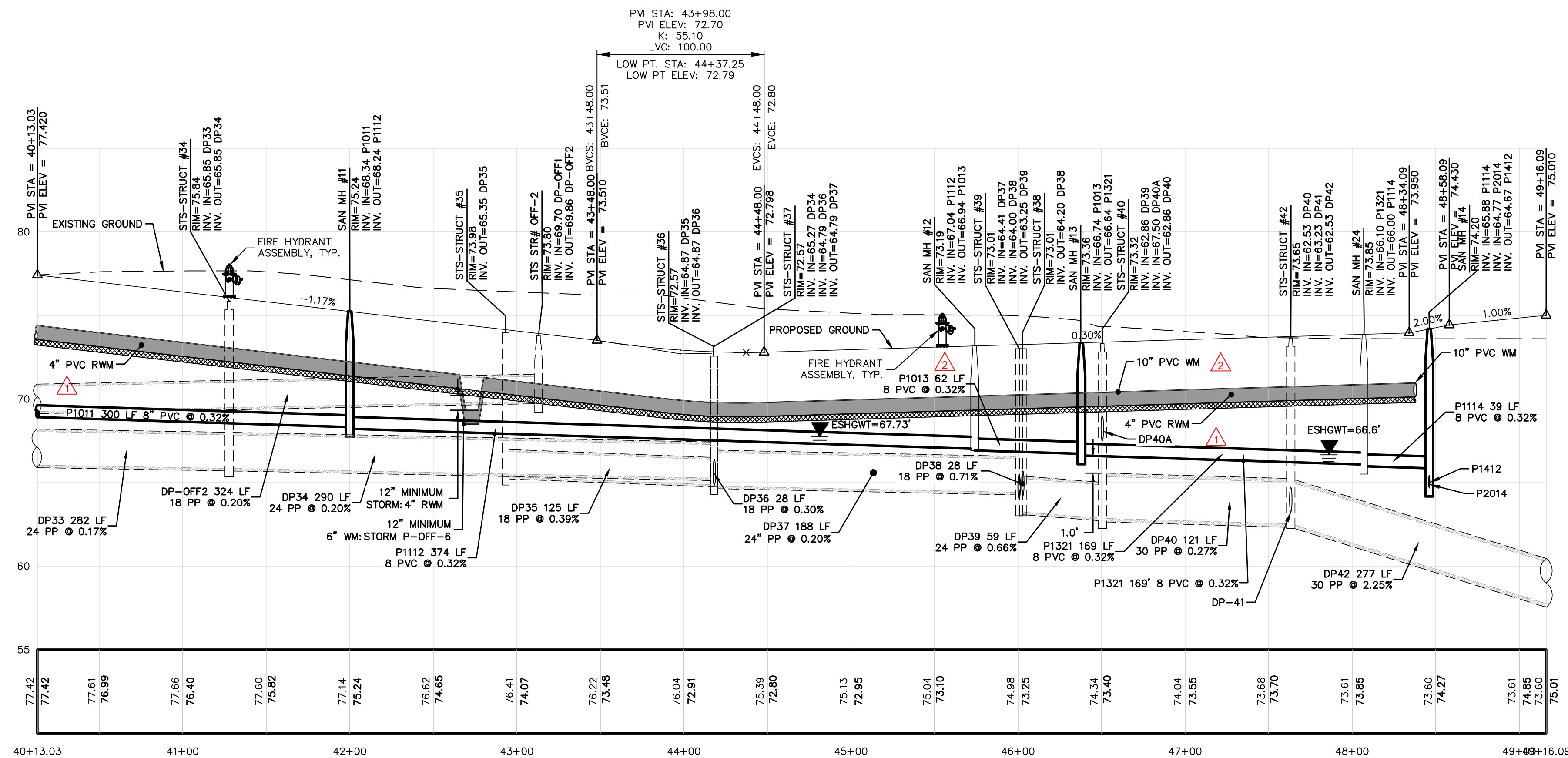
REV.	DATE	REVISIONS
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2	1/23/24	REV. PER QC REVIEW
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JOB # 21886
DATE: 02/20/23
SCALE: 1"=50'
DESIGNED BY: JTT
DRAWN BY: JTT
APPROVED BY: BSB

C603



ROAD B



MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

STREET B-3 PLAN + PROFILE
FOR
SUMMIT PLACE
CITY OF DELAND
FLORIDA

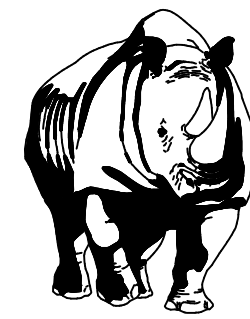
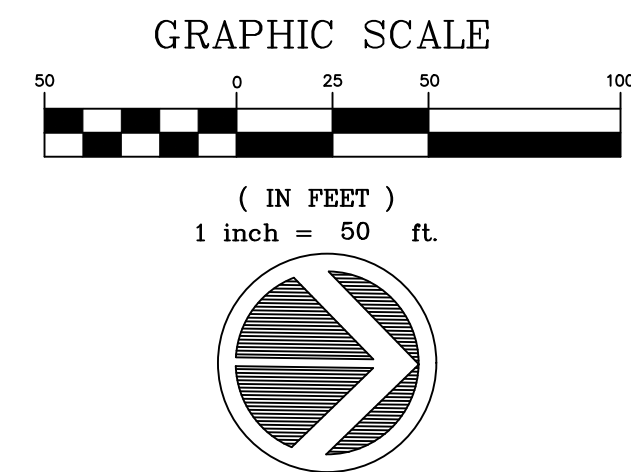
DR. HORTON
10192 DOWNEY ROAD
ORLANDO, FL 32832
(407) 850-5200

ENGINEER
BENJAMIN S. BUCKHAM
No. 79452
STATE OF FLORIDA
DATE: 02/20/23
BENJAMIN S. BUCKHAM
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

NO.	DATE	REVISIONS
1	3/15/23	REV. PER CITY OF DELAND COMMENTS DATED 3/9/23
2	1/23/24	REV. PER QC REVIEW
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JOB # 21886
DATE: 02/20/23
SCALE: 1"=50'
DESIGNED BY: JTT
DRAWN BY: JTT
APPROVED BY: BSB

C604



MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS

431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

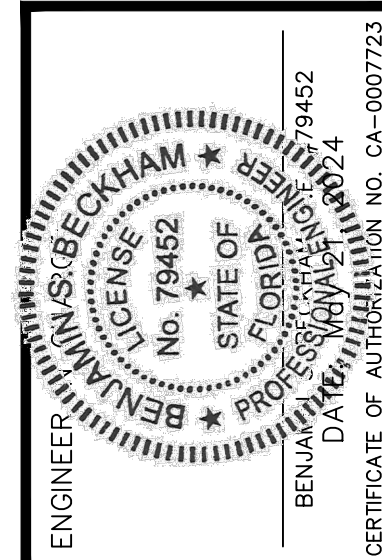
STREET C PLAN + PROFILE

FOR
SUMMIT PLACE

FLORIDA

CITY OF DELAND

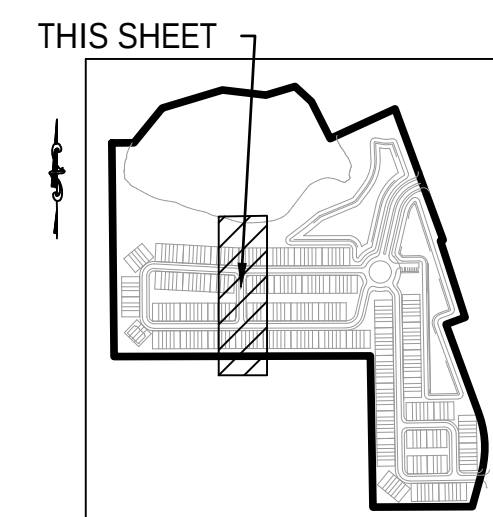
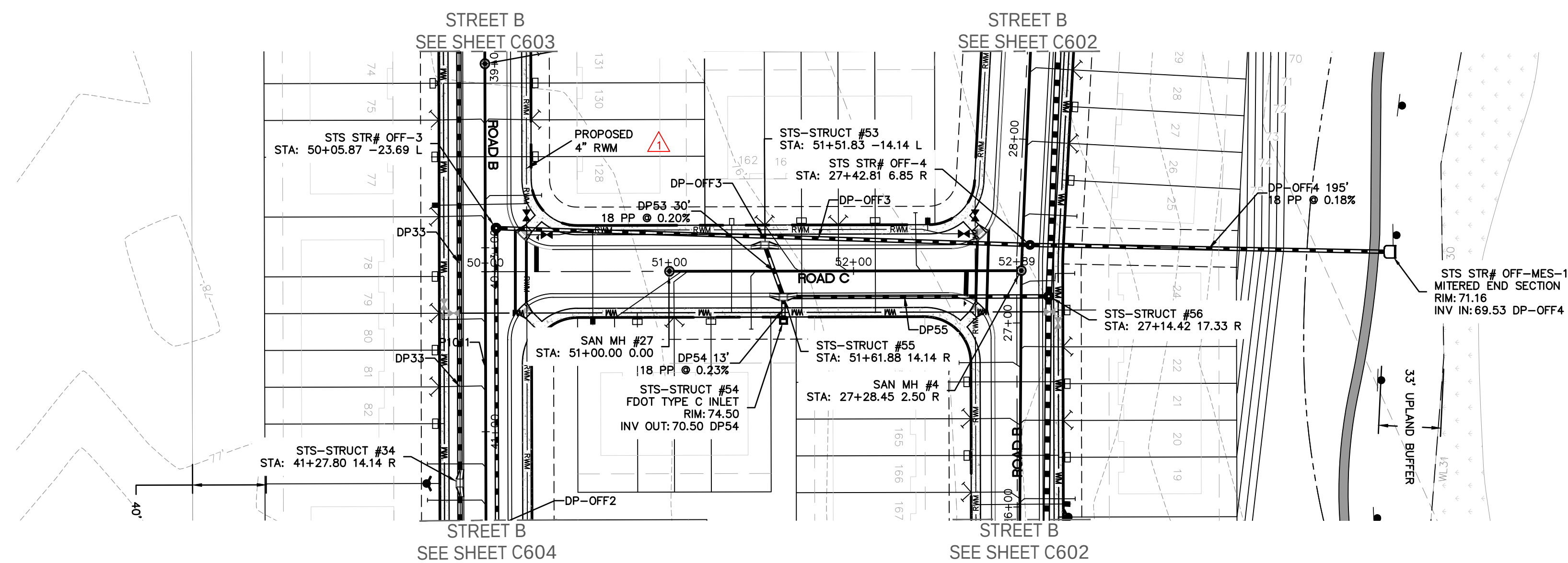
DR HORTON
10192 DOWDEN ROAD
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(407) 850-5200



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1	3/15/23	REV. PER CITY OF DELAND COMMENTS DATED 3/9/23

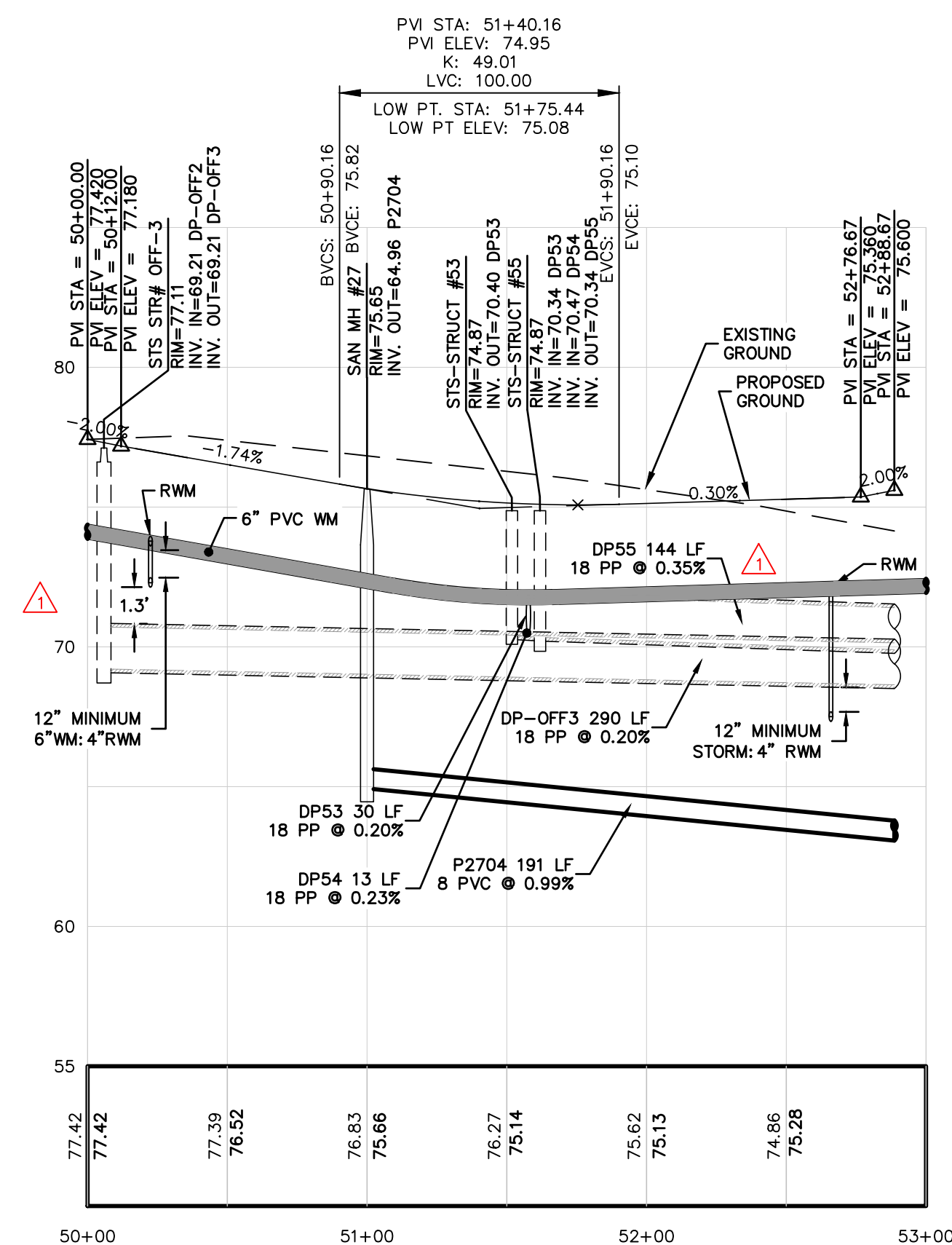
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DRAWN BY: _____ JT
APPROVED BY: _____ BSI

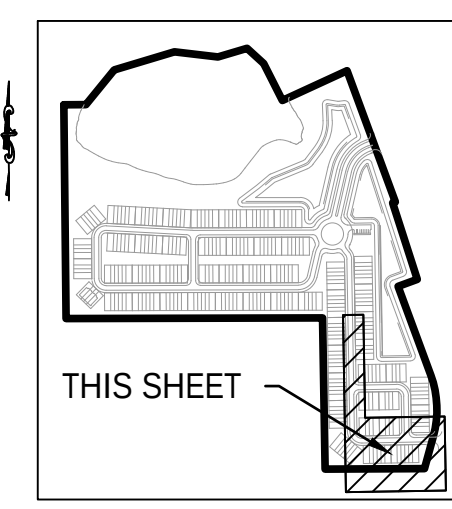
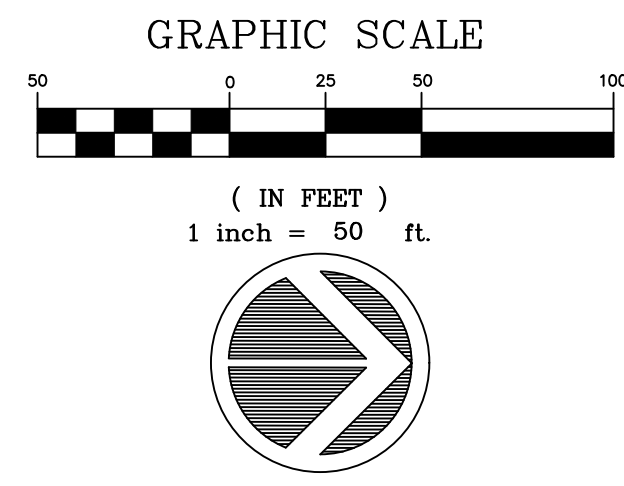
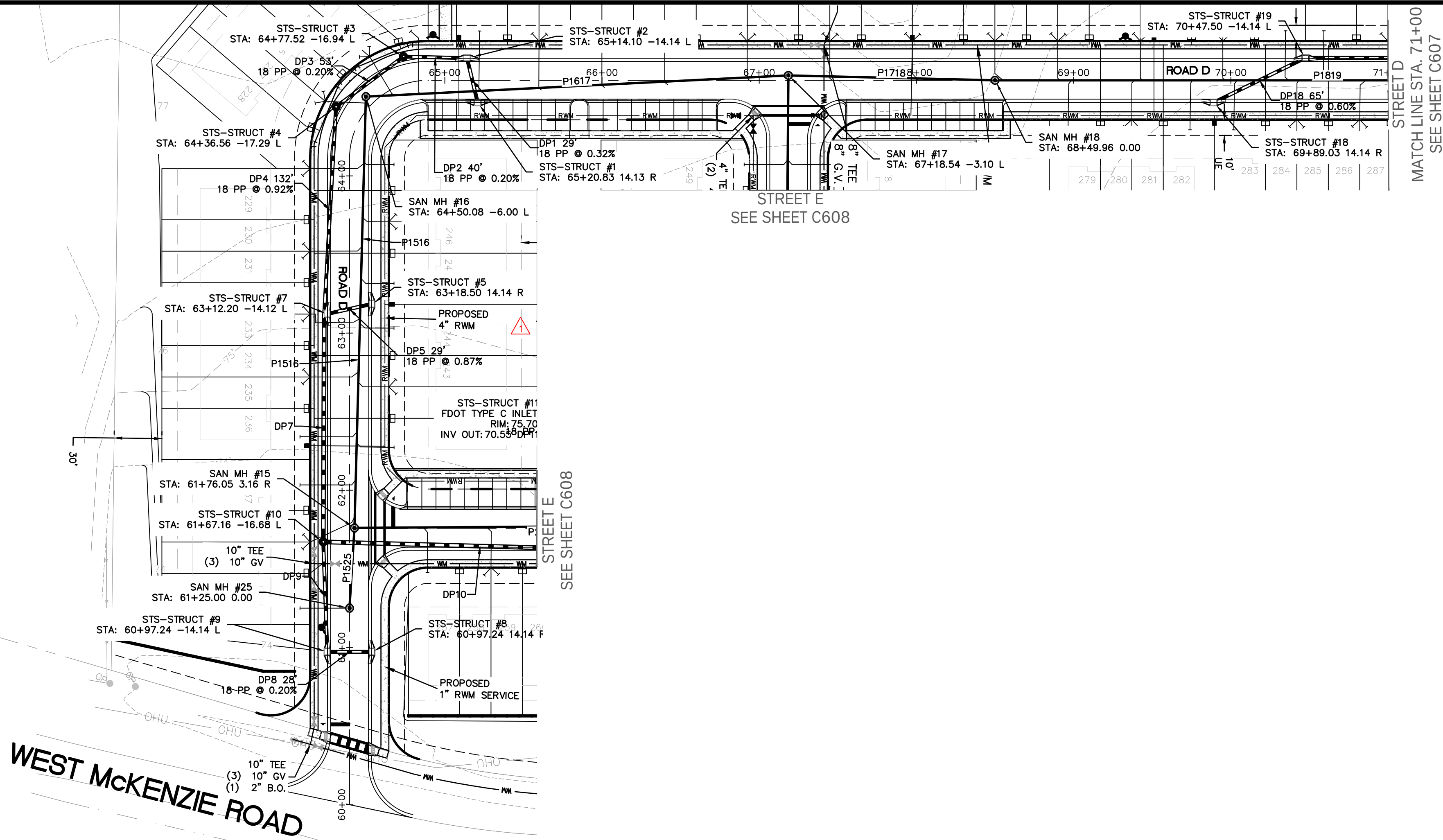
C605



KEY MAP
N.T.S.

ROAD C





MADDEN
WOODHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

STREET D-1 PLAN + PROFILE
FOR
SUMMIT PLACE
CITY OF DELAND, FLORIDA

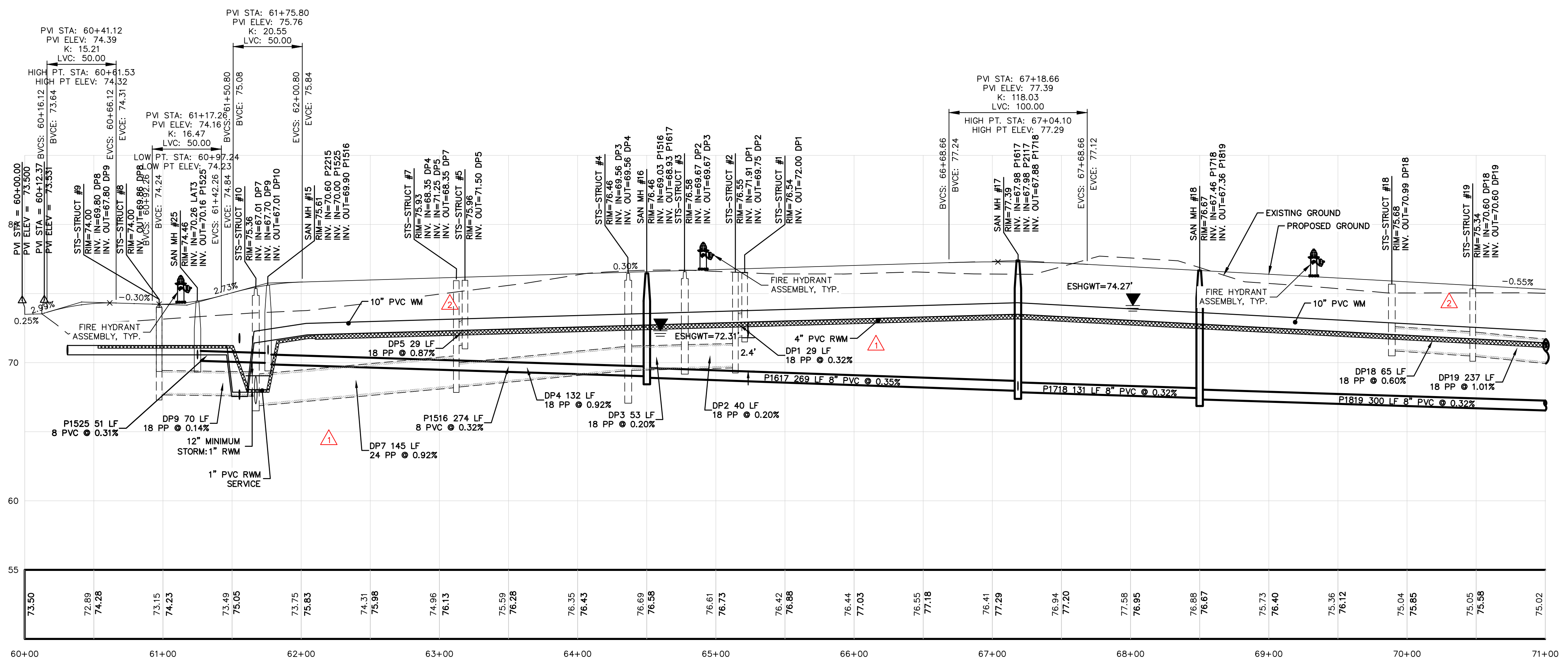
DR. HORTON
10192 DOWDEN ROAD
ORLANDO, FL 32832
(407) 850-5200

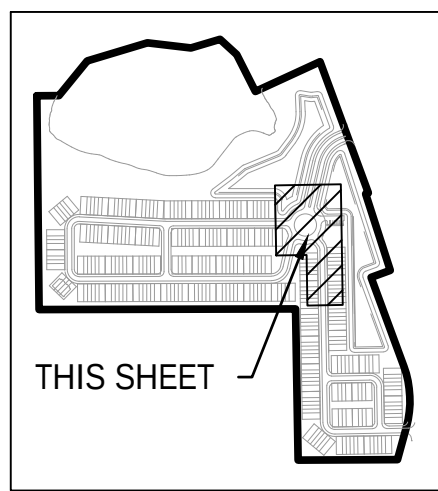
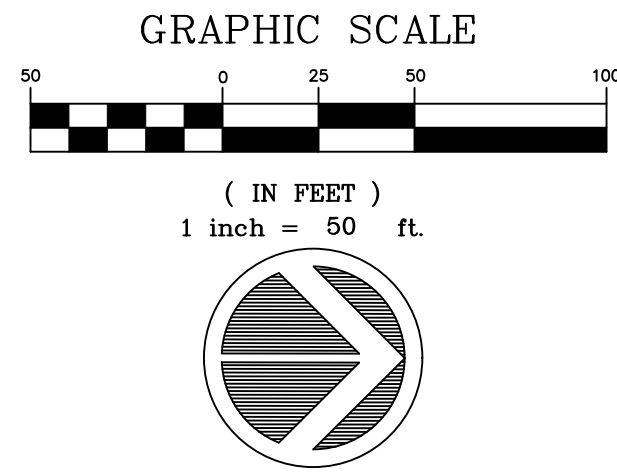
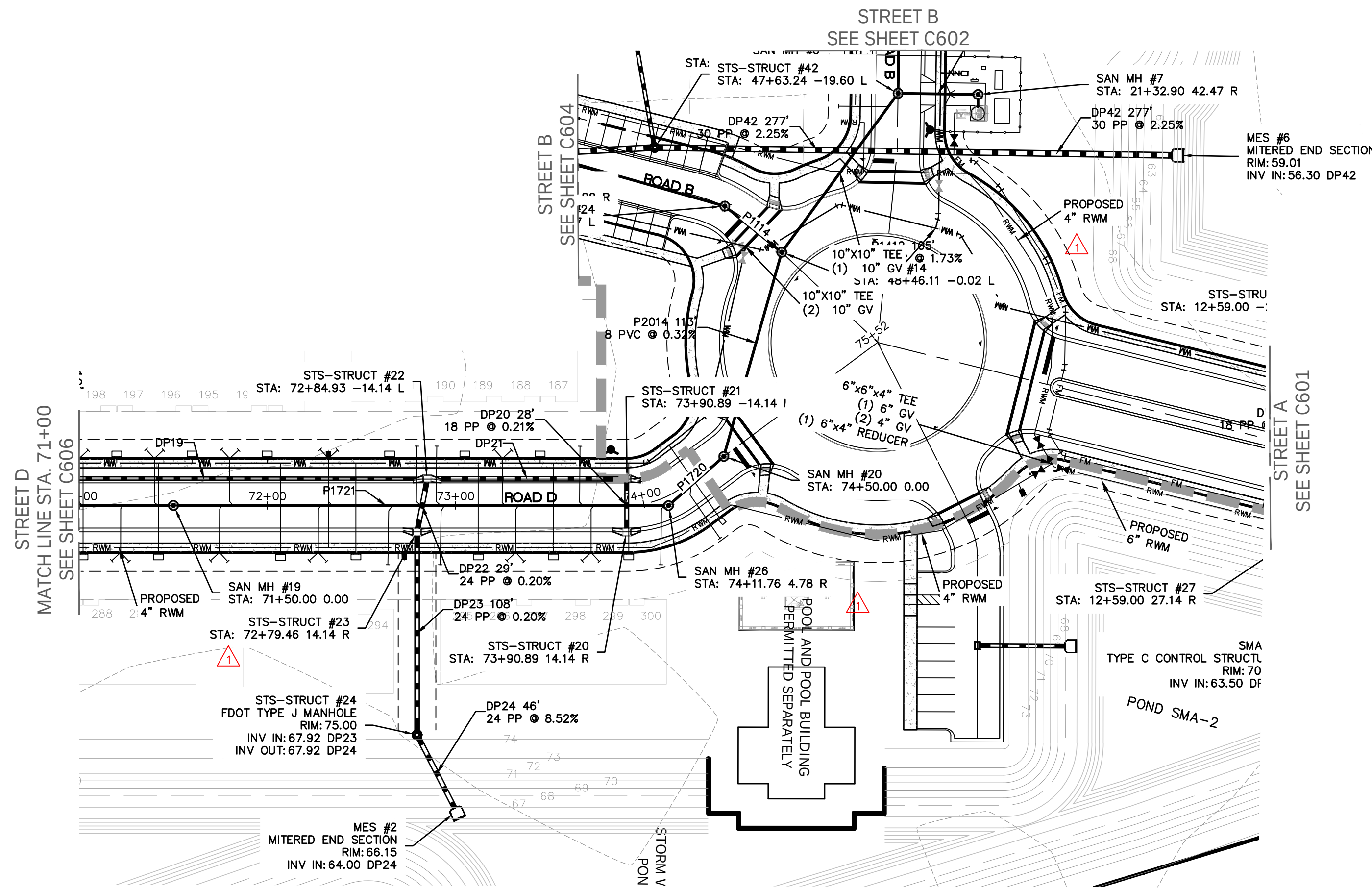
ENGINEER: BENJAMIN S. BLACKHAM
LICENSE NO. 79452
STATE OF FLORIDA
DATE: 02/20/23
CITY OF DELAND
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

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JOB # 21886
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SCALE: 1"=50'
DESIGNED BY: JTT
DRAWN BY: JTT
APPROVED BY: BSB

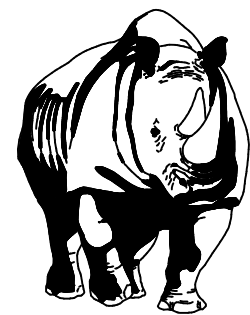
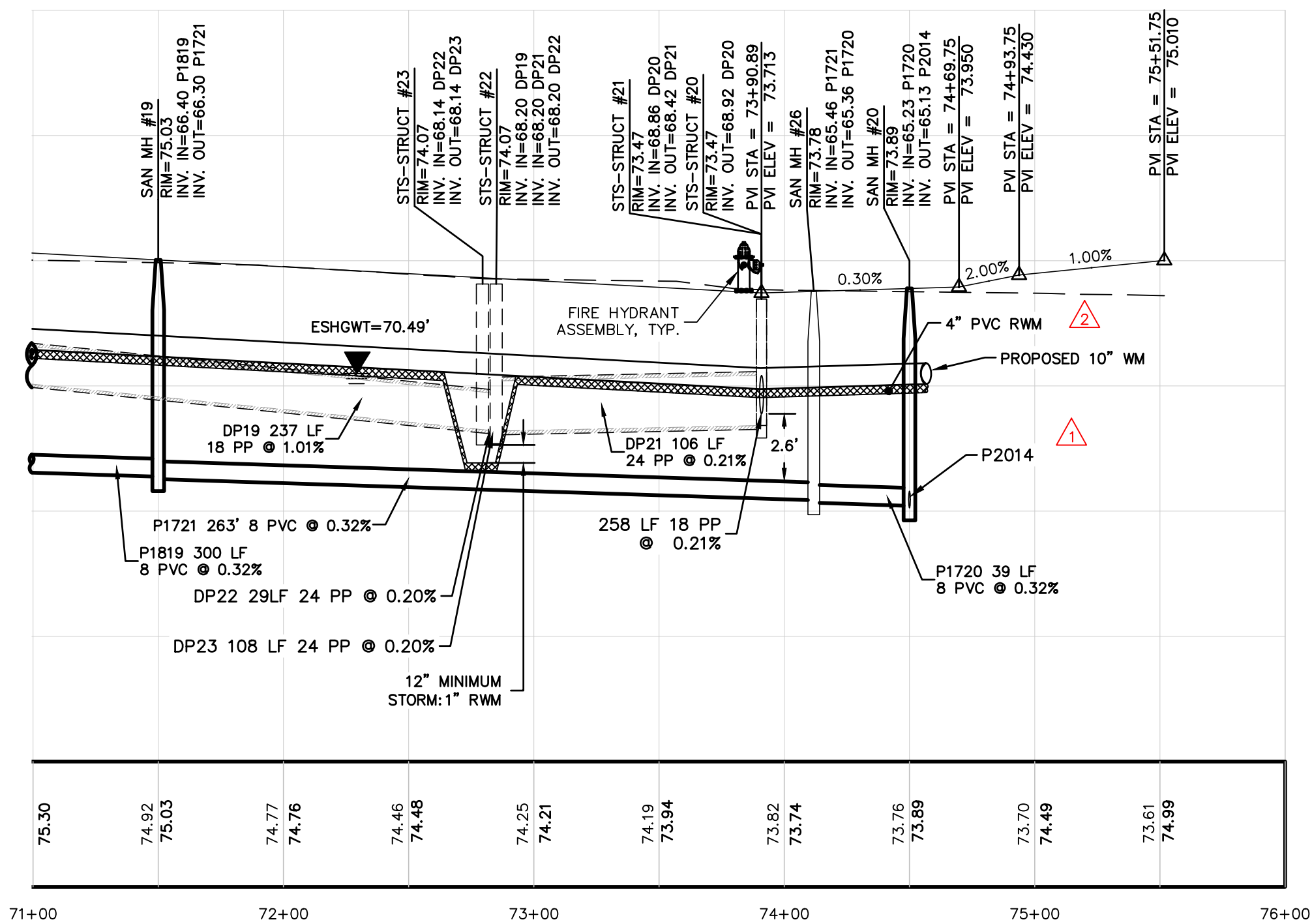
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KEY MAP
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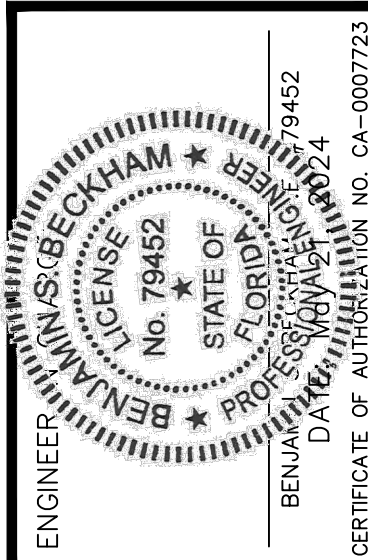


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(407) 629-8330

STREET D-2 PLAN + PROFILE
FOR
SUMMIT PLACE
CITY OF DELAND
FLORIDA

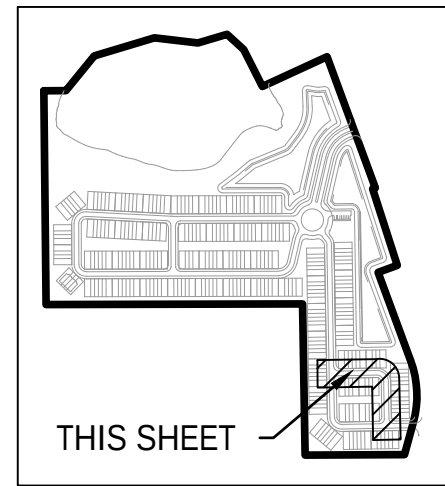
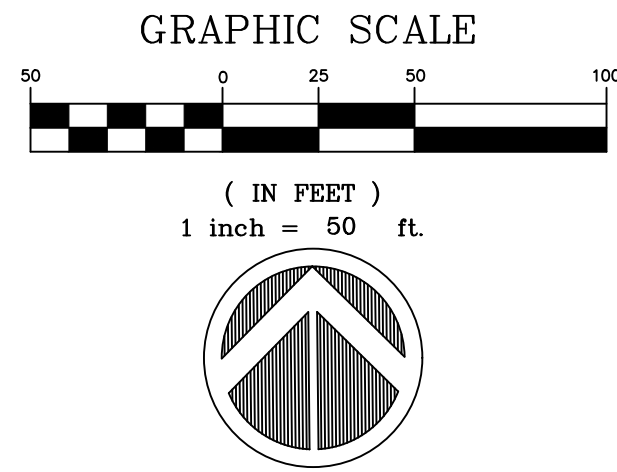
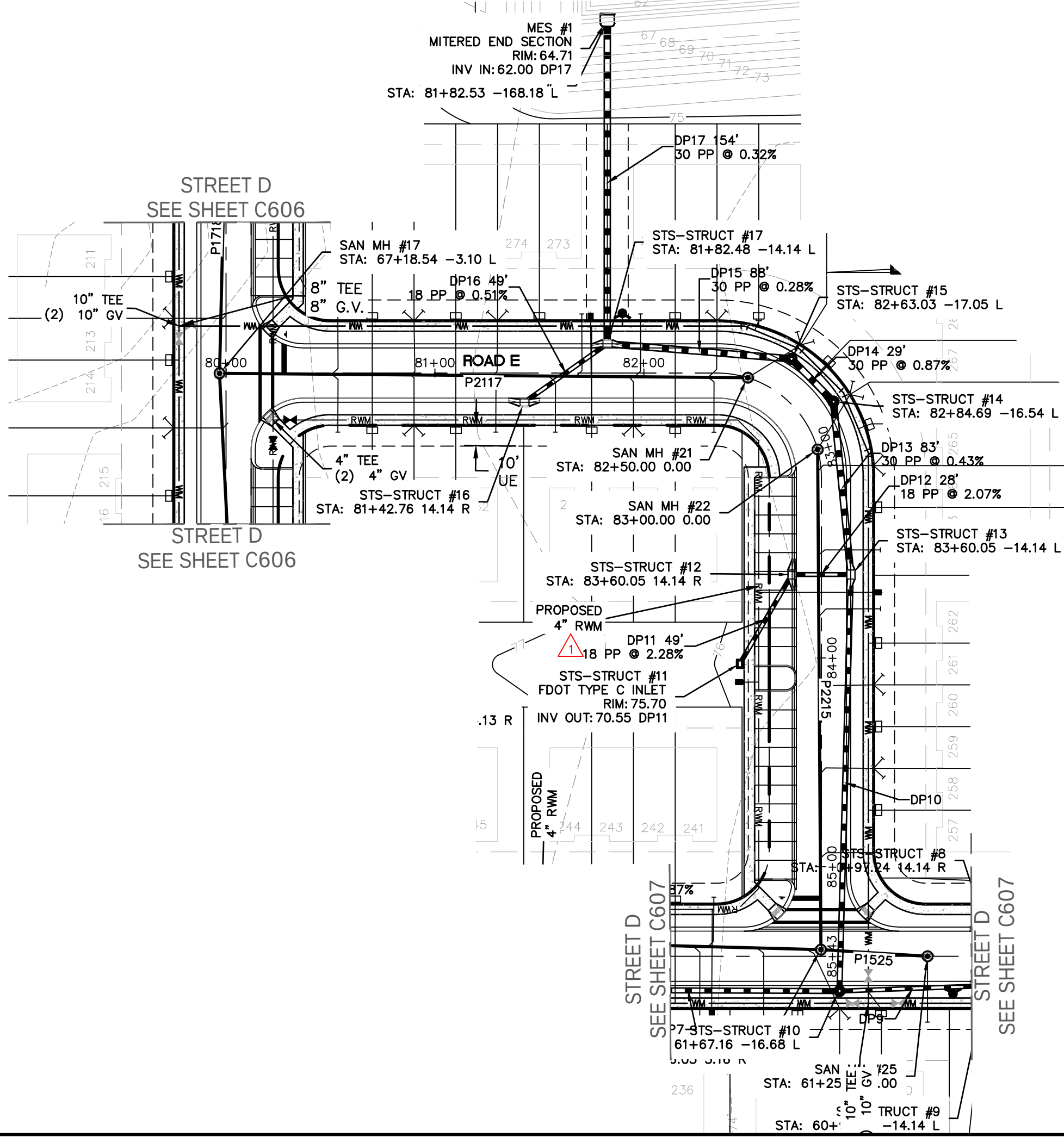
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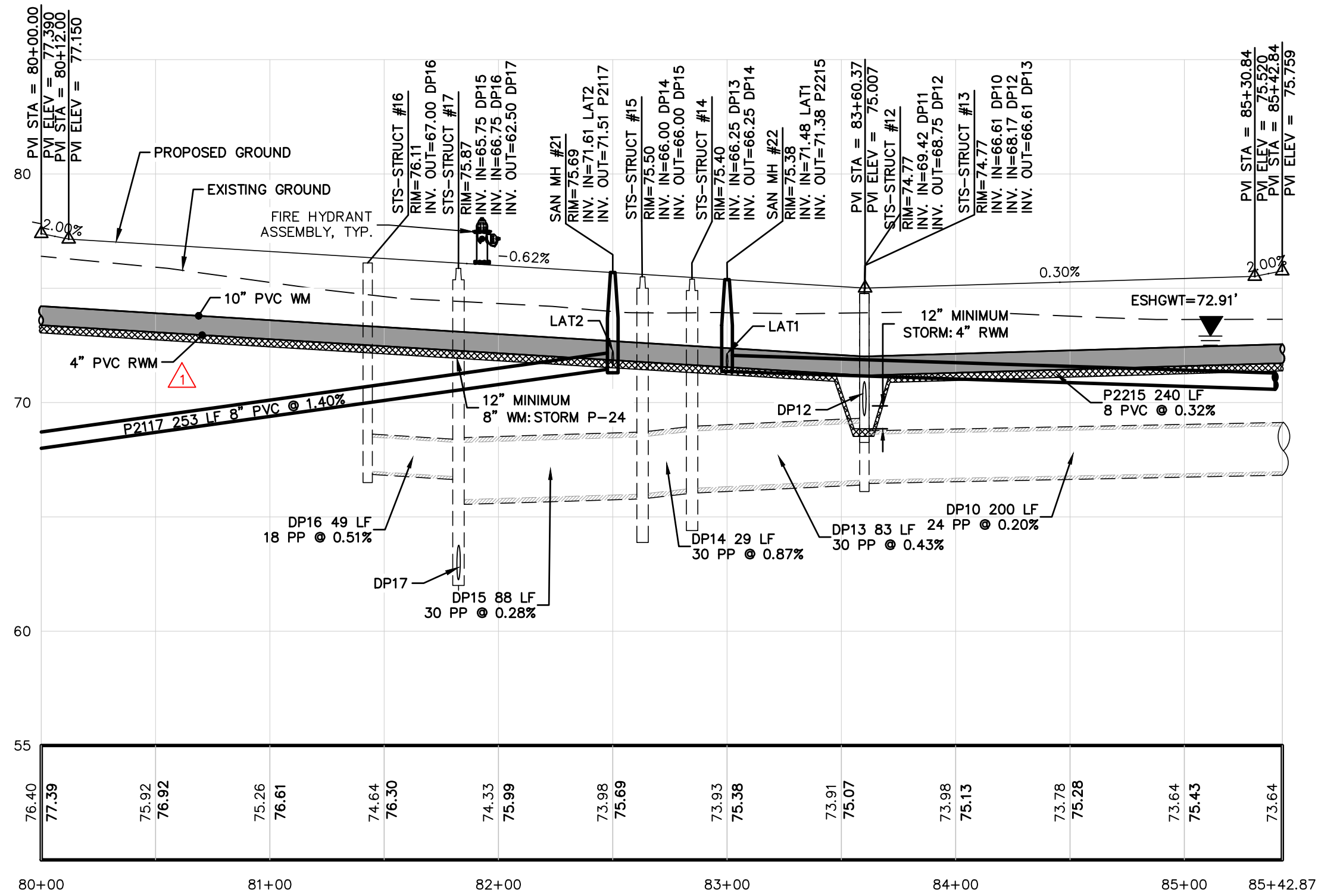
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DRAWN BY: JTT
APPROVED BY: BSB

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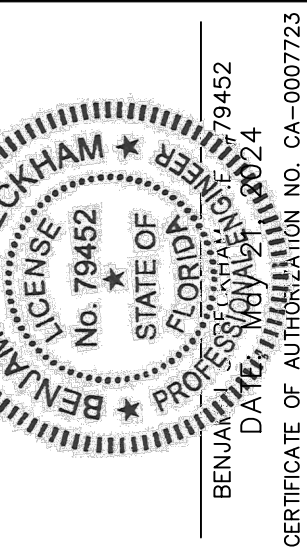
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STREET E PLAN + PROFILE
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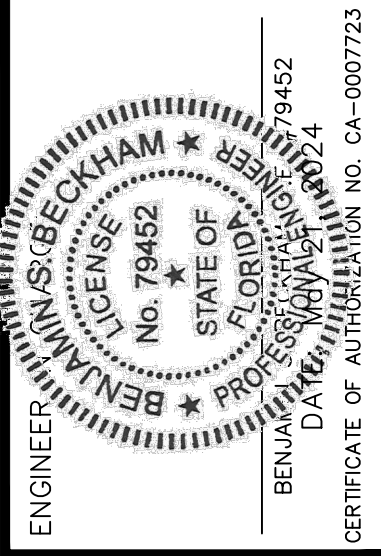
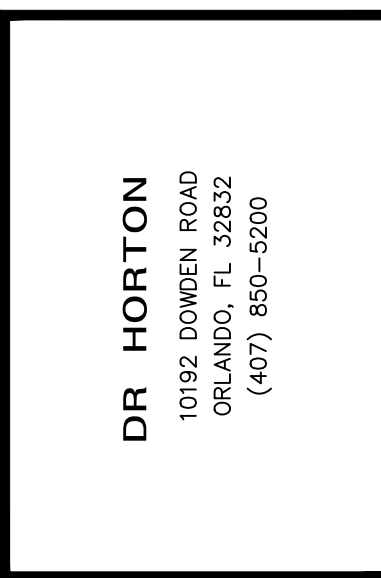
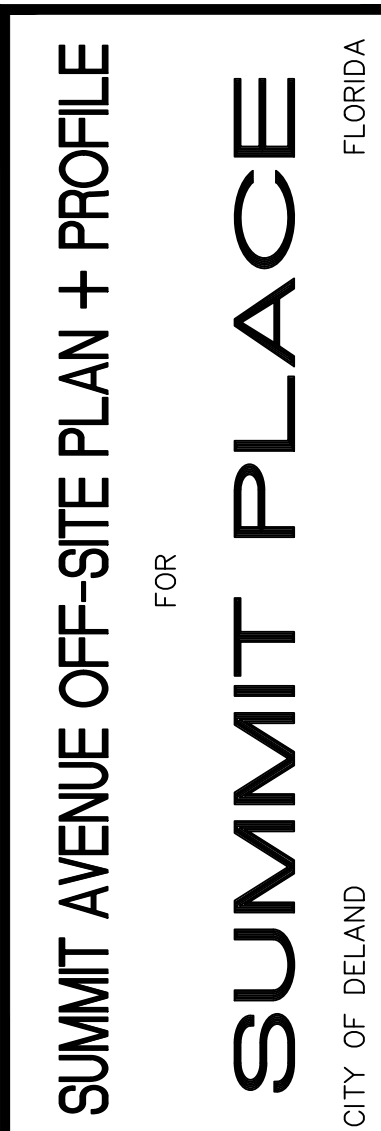
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NO.	DATE	REVISIONS
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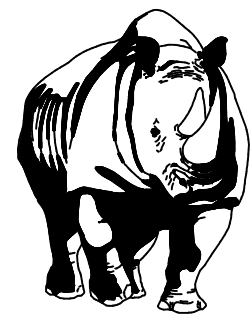
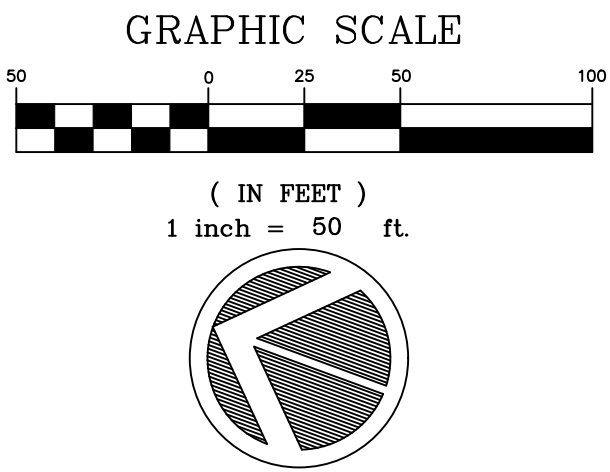
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DRAWN BY: JTT
APPROVED BY: BSS

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JOB # _____ 21086
DATE: _____ 02/20/23
SCALE: _____ 1"=50'
DESIGNED BY: _____ JTT
DRAWN BY: _____ JTT
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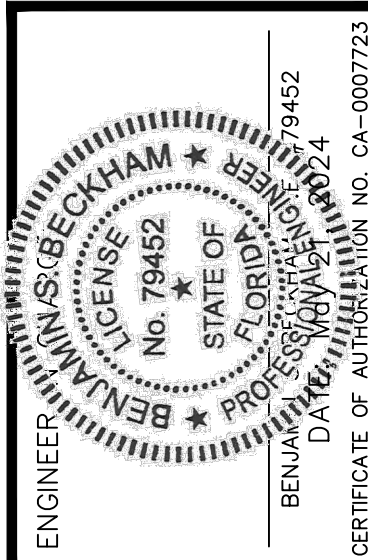


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SUMMIT AVENUE OFF-SITE PLAN + PROFILE
FOR
SUMMIT PLACE
CITY OF DELAND
FLORIDA

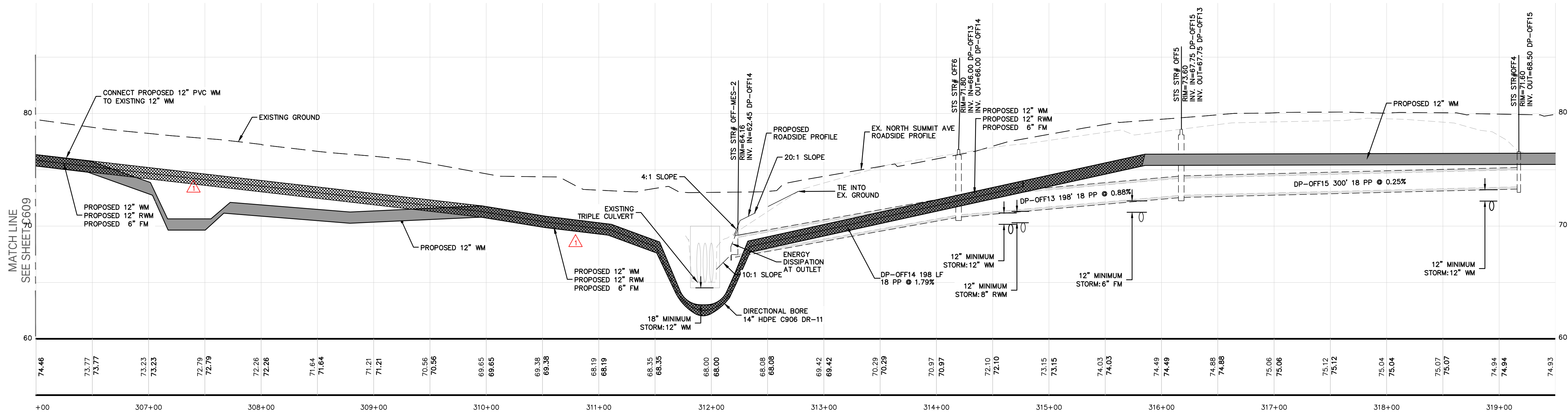
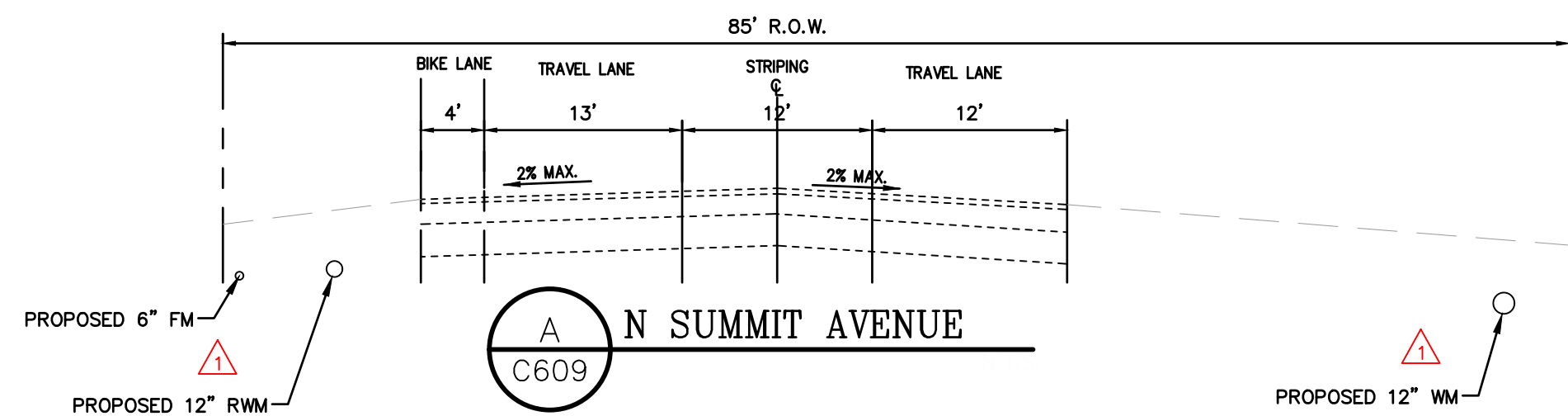
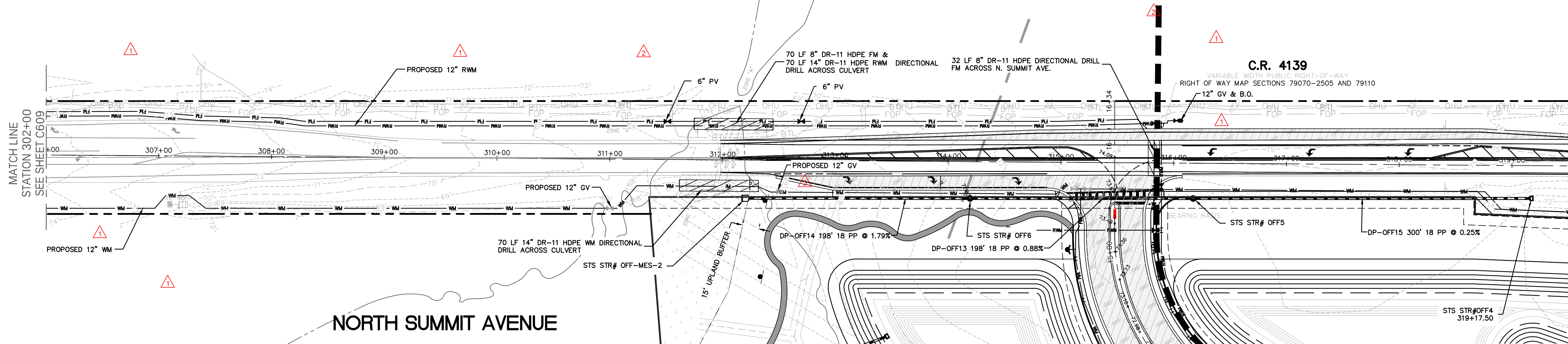
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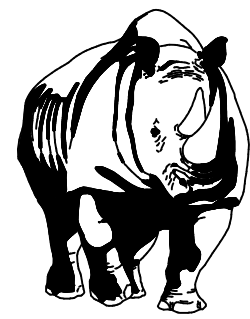
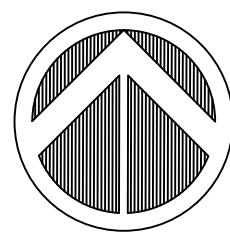
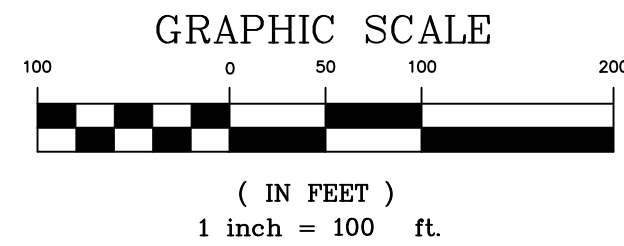


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JOB # 21886
DATE: 02/20/23
SCALE: 1"=50'
DESIGNED BY: JTT
DRAWN BY: JTT
APPROVED BY: BSB

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EROSION CONTROL PLAN

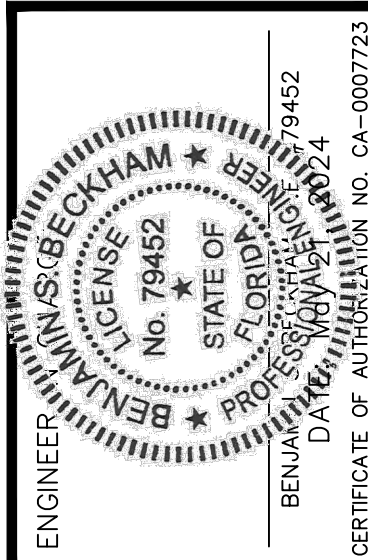
FOR

SUMMIT PLACE

FLORIDA

CITY OF DELAND

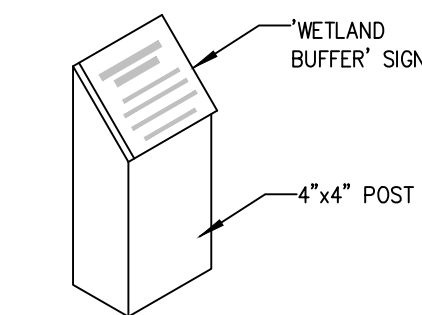
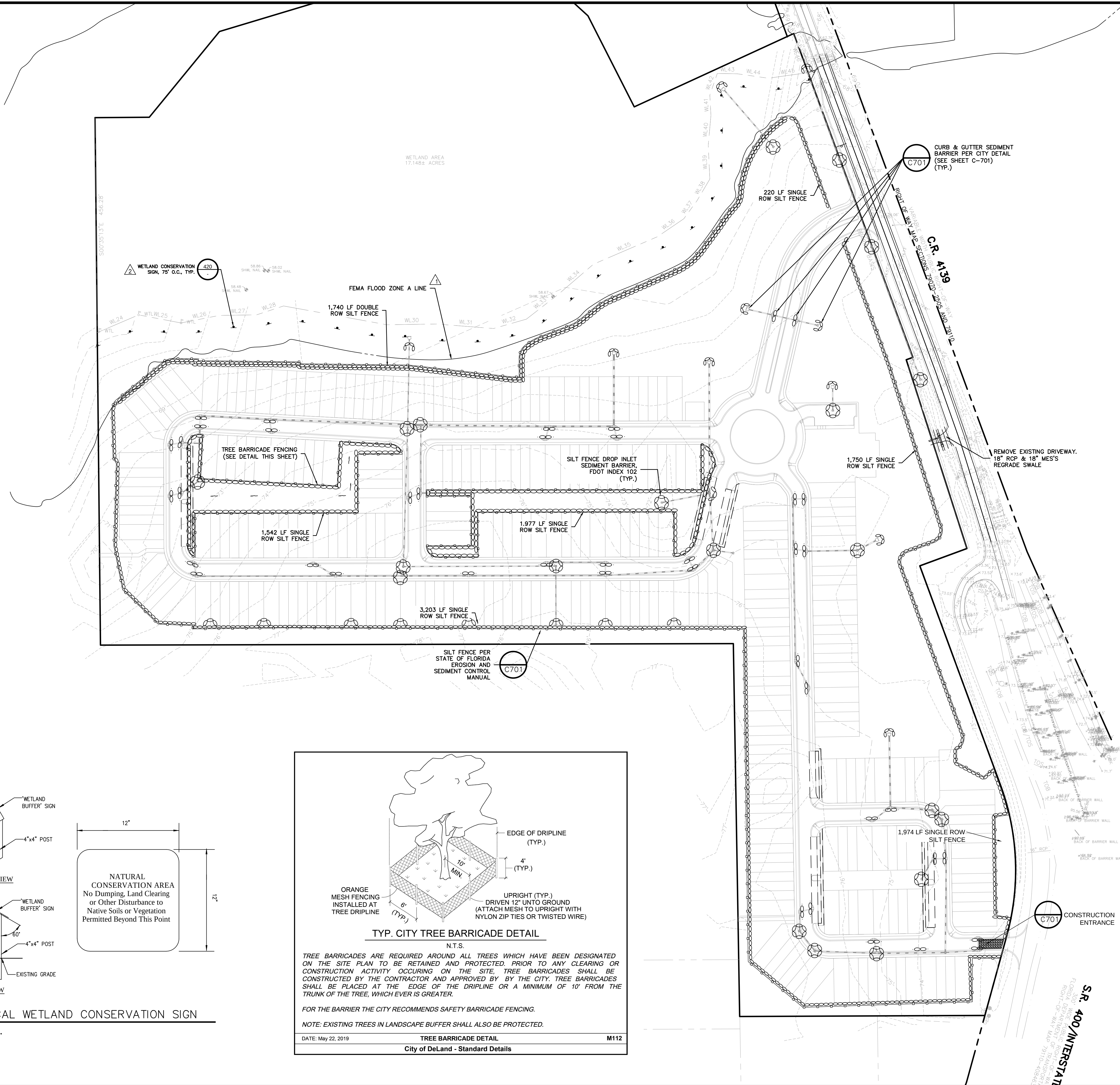
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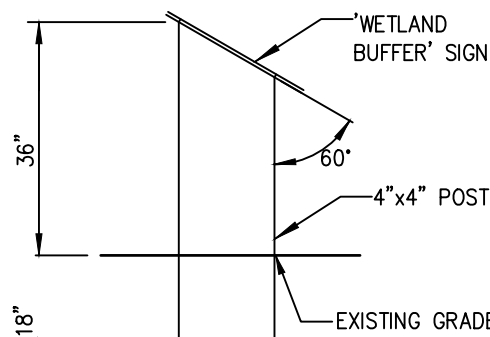
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DRAWN BY: JTT
APPROVED BY: BSB

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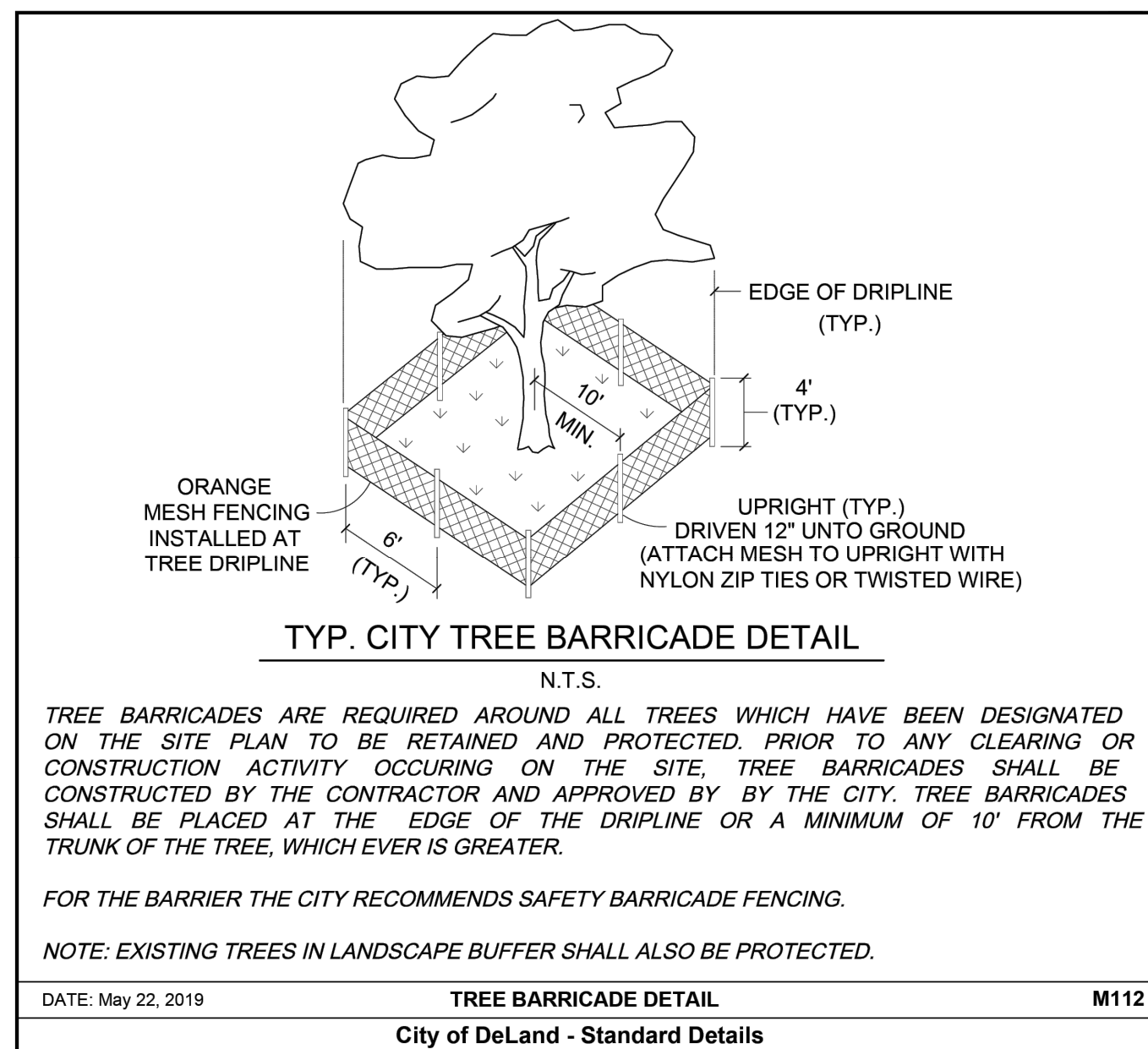


ISOMETRIC VIEW



PROFILE VIEW

420 TYPICAL WETLAND CONSERVATION SIGN
N.T.S.



EROSION CONTROL:

THE CONTRACTOR SHALL PERFORM EROSION CONTROL MEASURES IN ACCORDANCE WITH CITY OF LAKE MARY AND THE SURVMD., DETAILS CONTAINED IN THE PLANS, THE FOLLOWING NOTES AND AS DIRECTED BY THE ENGINEER.

A. TEMPORARY EROSION CONTROL

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- THE CONTRACTOR SHALL PLACE HAY BALES AROUND ALL EXISTING AND NEWLY CONSTRUCTED INLETS TO CONTROL EROSION DURING CONSTRUCTION.
- 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.
- 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.

- PERMANENT SEEDING – ALL AREAS WHICH HAVE BEEN DISTURBED BY THE CONSTRUCTION WILL, AS A MINIMUM, BE FERTILIZED AND SEED.
- 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.
- PERMANENT SODDING – ALL RETENTION/DETENTION BASINS SHALL BE SODDED WITHIN THEIR LIMITS. ALL EXPOSED AREAS WITHIN PUBLIC RIGHT-OF-WAYS WILL BE SOID SODDED. OTHER AREAS WITH AREAS WITH SLOPES STEEPER THAN 4:1 WILL BE SODDED.
- STRIP SODDING – STRIP SOD SHALL BE PLACED ADJACENT TO ALL CURBS, WALKS AND PAVEMENTS AT A MINIMUM 4 FEET WIDTH.
- 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.
- ADDITIONAL FERTILIZATION – GRASSED AREAS NOT ACCEPTED WITHIN 90 DAYS OF THEIR COMPLETION SHALL BE FERTILIZED IN ACCORDANCE WITH THE COUNTY'S FERTILIZER ORDINANCE.
- FOR ADDITIONAL SODDING REQUIREMENTS, REFER TO THE LANDSCAPE PLANS.

STORMWATER POLLUTION PREVENTION NOTES:

- THE CONTRACTOR SHALL EXECUTE ALL MEASURES NECESSARY TO LIMIT THE TRANSPORT OF SEDIMENTS OUTSIDE THE PROJECTS LIMITS. 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.
- 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.
- 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.
- 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.
- AREAS OPENED BY CONSTRUCTION OPERATIONS THAT ARE NOT ANTICIPATED TO BE DRESSED OR RECEIVE FINAL GRASSING TREATMENT WITHIN THIRTY DAYS SHALL BE SEED 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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 ENCRROCHMENT FROM CONSTRUCTION ACTIVITIES.
- 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.
- DELETED.
- EROSION CONTROL AT ALL INLET DRAINAGE STRUCTURES DURING CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH FDOT INDEX NO. 102.
- INSPECTIONS ON EROSION CONTROL MEASURES WILL BE PERFORMED BY THE CONTRACTOR ONCE PER WEEK AND WITHIN 24 HOURS AFTER 1/2 INCH OF RAINFALL. THE INSPECTIONS MUST BE LOGGED BY THE CONTRACTOR AND KEPT WITH THE APPROVED PLANS AND SWPPP.
- GRAVEL CONSTRUCTION ENTRANCES SHALL BE PROVIDED TO MINIMIZE EXPORT OF ONSITE DIRT. IF GRAVEL IS NOT ALLOWED, THE CONSTRUCTION ENTRANCES SHALL BE SWEEP PERIODICALLY AND LOGGED BY THE CONTRACTOR.

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.

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: _____

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.

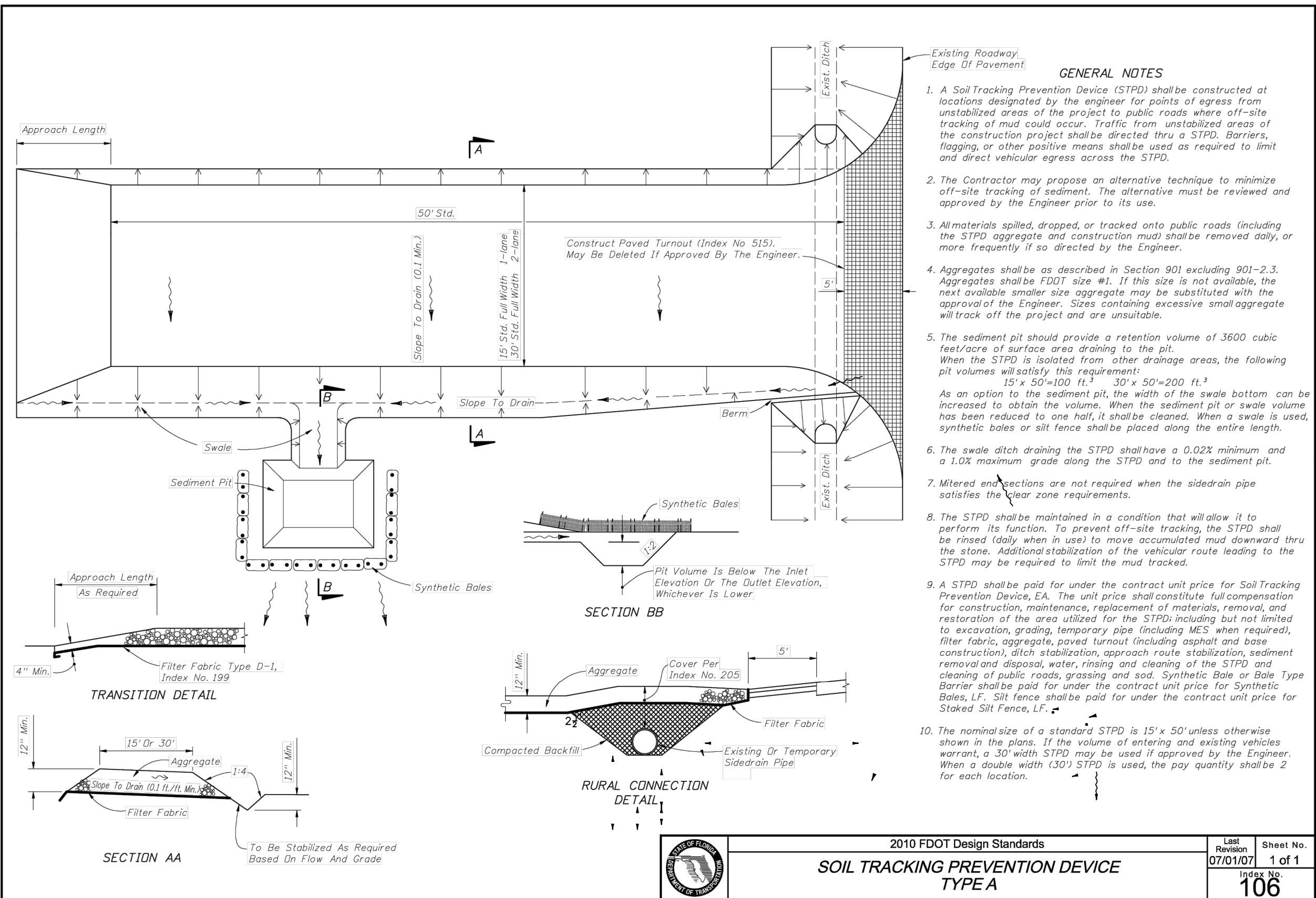
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NAME: _____ SIGNATURE: _____ DATE: _____

ADDRESS: _____ TELEPHONE: _____



DEWATERING NOTE:

DISCHARGE OF GROUNDWATER FROM DEWATERING OPERATIONS REQUIRES APPROVAL FROM FDEP AND THE APPLICABLE WATER MANAGEMENT DISTRICT. THE DEVELOPER/CONTRACTOR SHALL OBTAIN AND FDEP GENERIC PERMIT FOR THE DISCHARGE OF GROUND WATER FROM DEWATERING OPERATIONS PURSUANT TO THE REQUIREMENTS OF 62-621.300(2)(A) AND 62-620 F.A.C. AND FLORIDA STATUTES CHAPTER 403. APPROPRIATE BMPs MUST BE IMPLEMENTED TO ENSURE THAT DISCHARGES DO NOT EXCEED SURFACE WATER QUALITY STANDARDS PER THE CCP. IF DEWATERING OFF SITE OR INTO THE COUNTY MS4, TURBIDITY MUST BE MONITORED TO ENSURE THAT DISCHARGES DO NOT EXCEED 29 NTU OVER BACKGROUND PER 62-302.530 FAC. DISCHARGES DIRECTED TO THE COUNTYS MS4 REQUIRE AN ORANGE COUNTY RIGHT-OF-WAY UTILIZATION PERMIT FOR DEWATERING PRIOR TO THE START OF ANY DISCHARGES. TO OBTAIN RIGHT-OF-WAY APPROVAL, COPIES OF THE FDEP PERMIT, NO. DOCUMENTATION SHOWING DEWATERING AT THE SITE IS NOT WITHIN 500 FT OF KNOWN CONTAMINATION, AND A DEWATERING PLAN SHALL BE SUBMITTED TO ALEXIS CLARK, ORANGE COUNTY ENVIRONMENTAL PROTECTION DIVISION (407-836- 1433) AND ORANGE COUNTY PUBLIC WORKS DEVELOPMENT ENGINEERING PERMITTING SECTION. ANALYTICAL SAMPLING OF GROUNDWATER MAY BE REQUESTED BY ORANGE COUNTY ON A CASE-BY-CASE BASIS TO CONFIRM SITE CONTAMINATION STATUS.

Figure V-2: Illustration of a Silt Fence Barrier

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V-7

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EROSION CONTROL NOTES AND DETAILS
FOR
SUMMIT PLACE
CITY OF DELAND
FLORIDA

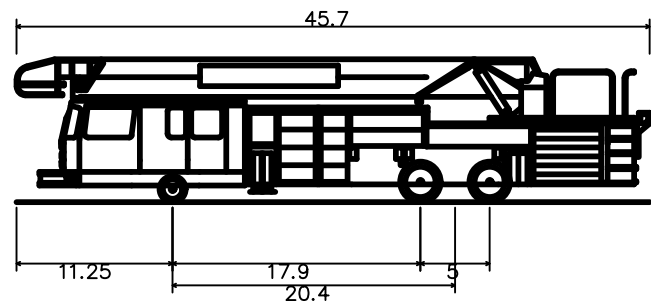
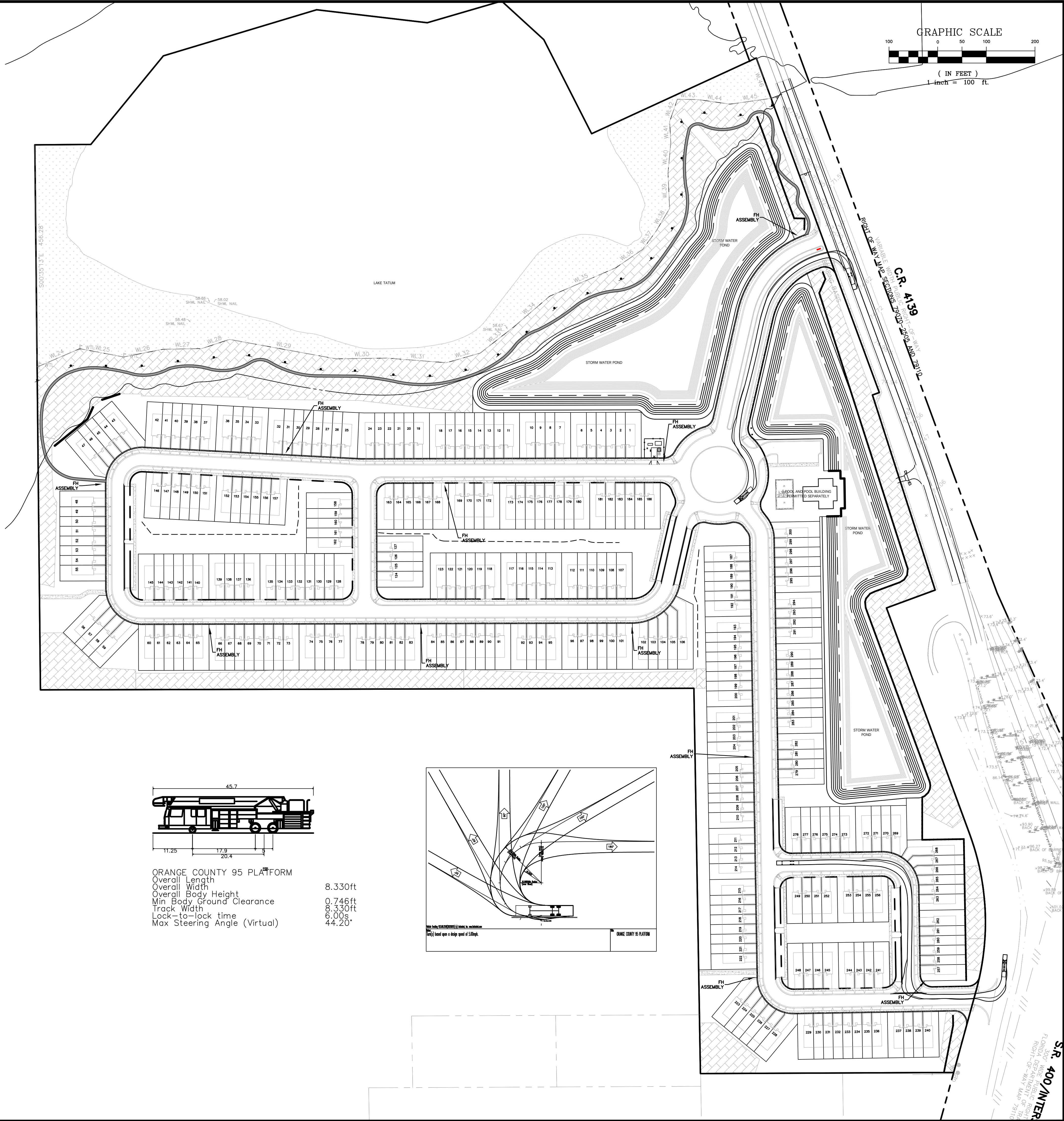
DR. HORTON
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(407) 850-5200

ENGINEER
BENJAMIN S. BUCKHAM
LICENSE NO. 79452
STATE OF FLORIDA
DATE: 07/01/2024
BENJAMIN S. BUCKHAM
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

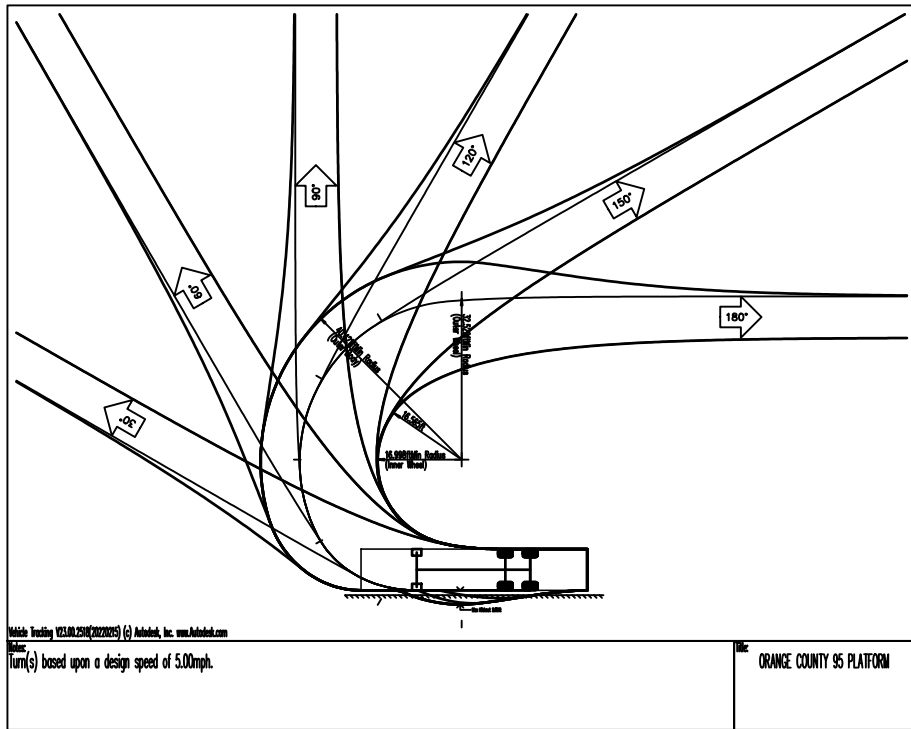
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JOB # _____ 21886
DATE: _____ 02/20/23
SCALE: _____ 1"=100'
DESIGNED BY: _____ JTT
DRAWN BY: _____ JTT
APPROVED BY: _____ BSB

C701



ORANGE COUNTY 95 PLATFORM
Overall Length 45.7
Overall Width 11.25
Overall Body Height 17.9
Min Body Ground Clearance 20.4
Track Width 17.9
Lock-to-lock time 6.00s
Max Steering Angle (Virtual) 44.20°



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VEHICLE CIRCULATION PLAN
FOR
SUMMIT PLACE
CITY OF BELAND
FLORIDA

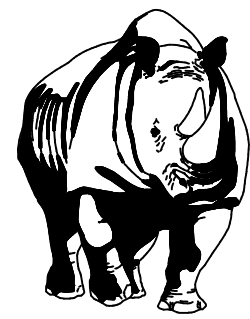
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ENGINEER BENJAMIN S. BLOCKHAM
LICENSE NO. 79452
STATE OF FLORIDA
DATE: 02/20/23
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

NO.	DATE	REVISIONS
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JOB # 21886
DATE: 02/20/23
SCALE: 1"=100'
DESIGNED BY: JTT
DRAWN BY: JTT
APPROVED BY: BSB

C800



MADDEN CIVIL ENGINEERS

431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

CONSTRUCTION DETAILS

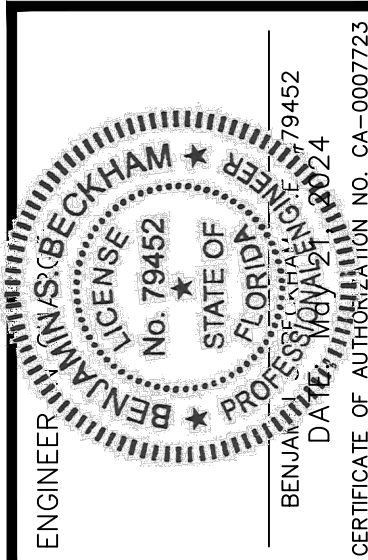
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FLORIDA

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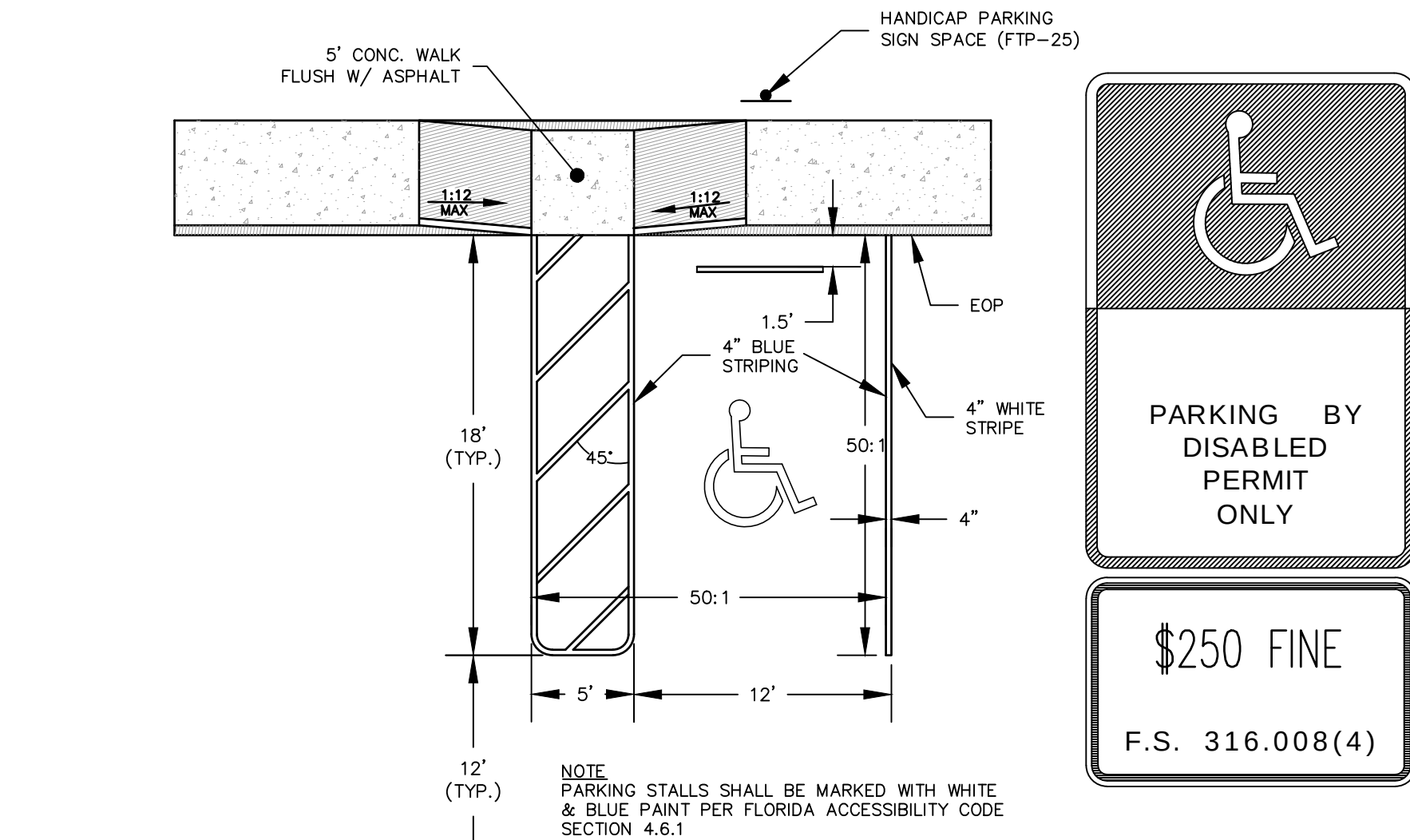
DR. HORTON
10192 DOWDEN ROAD
ORLANDO, FL 32832
(407) 850-5200



NO.	DATE	REVISIONS
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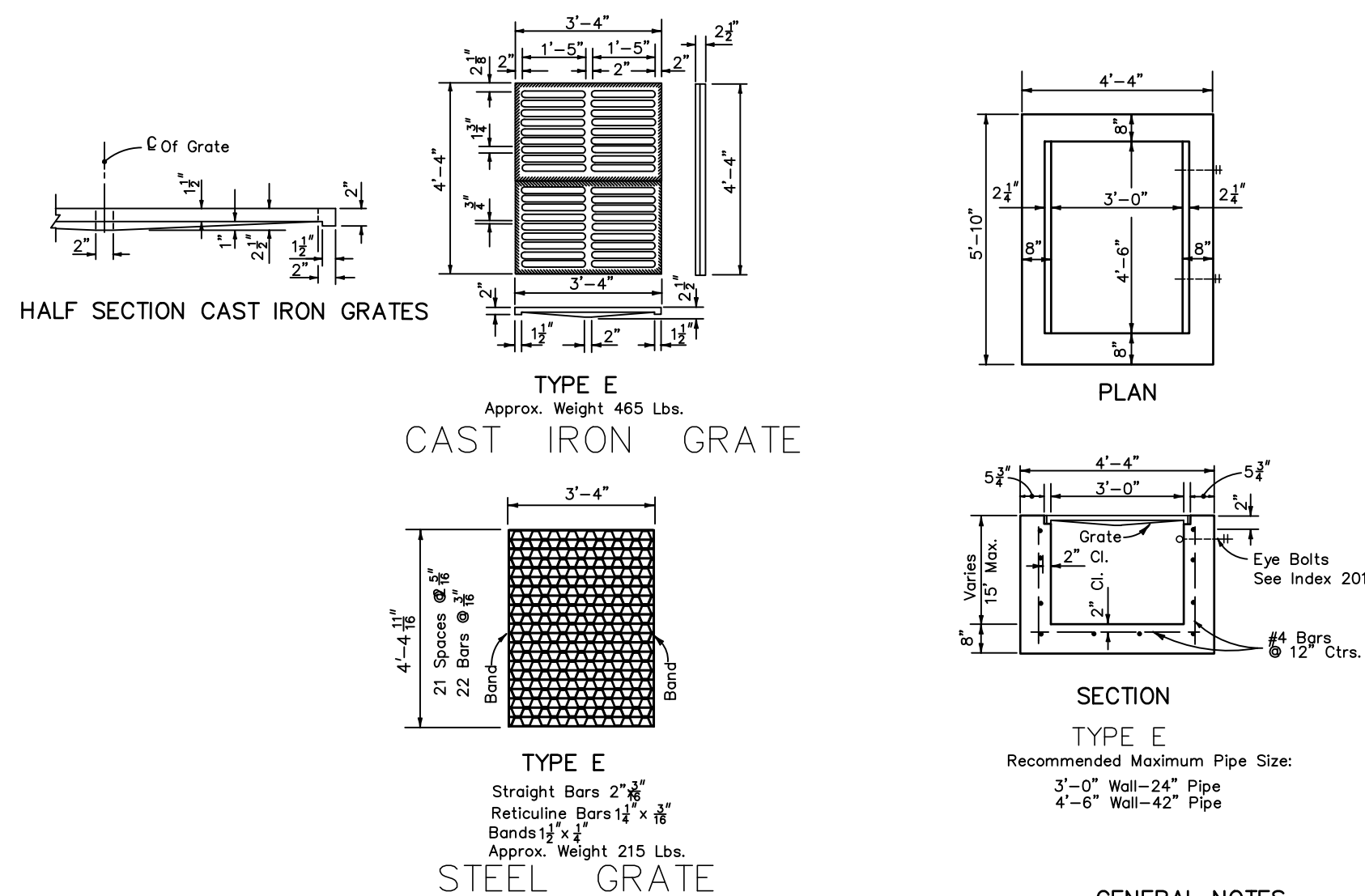
JOB # 21886
DATE: 02/20/23
SCALE: N/A
DESIGNED BY: JTT
DRAWN BY: JTT
APPROVED BY: BSB

C902



- NOTE:
1. ACCESSIBILITY: A) IN ACCORDANCE WITH THE FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION, 4.1.3 SECTION (1), DATED OCT. 1997 AT LEAST ONE ACCESSIBLE ROUTE COMPLYING WITH 4.3 SHALL CONNECT ACCESSIBLE BUILDING OR FACILITY ENTRANCES WITH ALL ACCESSIBLE SPACES AND ELEMENTS WITHIN THE BUILDING OR FACILITY. DOORS ACCESSING THE BUILDING MUST BE DEPICTED ON SITE PLAN. B) THE LOCATION OF HANDICAPPED PARKING STALLS, LOADING ZONES, SIDEWALKS AND RAMPS ON SITE SHALL MEET CHAPTER 316.1955 OF THE FLORIDA ACCESSIBILITY CODE. RAMPS SHALL NOT EXCEED 12:1 SLOPES PARKING SPACE AND AISLE SHALL NOT EXCEED 50:1 CROSS-SLOPE. (TLO 11-16-96) 12-11-96
- NOTE: (HANDICAP SIGN ONLY)
1. ALL LETTERS SHALL BE BLACK AND SHALL CONFORM TO FDOT "ROADWAY AND TRAFFIC DESIGN STANDARDS".
2. TOP PORTION OF SIGN SHALL HAVE REFLECTORIZED (ENGINEERING GRADE) BLUE BACKGROUND WITH WHITE REFLECTORIZED LEGEND AND BORDER.
3. BOTTOM PORTION OF SIGN SHALL HAVE A REFLECTORIZED (ENGINEERING GRADE) WHITE BACKGROUND WITH BLACK BORDER.
4. ONE SIGN REQUIRED FOR EACH PARKING SPACE.
5. HEIGHT OF SIGN SHALL BE 7' MINIMUM ABOVE GROUND IN ACCORDANCE WITH FDOT "ROADWAY AND TRAFFIC DESIGN STANDARDS".

818 HANDICAP RAMP AND PARKING STALL DETAIL
N.T.S.



- GENERAL NOTES
1. These inlets are suitable for bicycle and pedestrian areas and are to be used in ditches, medians and other areas subject to infrequent traffic loadings but are not to be placed in areas subject to any heavy wheel loads.
2. Inlets subject to minimal debris should be constructed without slots. Where debris is a problem inlets should be constructed with slots. Slotted inlets located within roadway clear zones and in areas accessible to pedestrians shall have traversable slots. The traversable slot modification is not adaptable to Inlet Type H. Slots may be constructed at either or both ends as shown on plans.
3. Steel grates are to be used on all inlets where bicycle traffic is anticipated. Steel grates are to be used on all inlets with traversable slots. Either cast iron or steel grates may be used on inlets without slots where bicycle traffic is not anticipated. Either cast iron or steel grates may be used on all inlets with non-traversable slots. Subject to the selection described above, when Alternate G grade is specified in the plans, either the steel grate, hot dipped galvanized after fabrication, or the cast iron grate may be used, unless the plans stipulate the particular type.
4. Recommended maximum pipe sizes shown are for concrete pipe. Pipe sizes larger than those recommended must be checked for fit.
5. All exposed corners and edges of concrete are to be chamfered 1/4".
6. Pavement to be used on inlets without slots and inlets with non-traversable slots only when called for in the plans; but required on all traversable slot inlets. Cost to be included in contract unit price for inlets. Quantities shown are for information only.
7. Traversable slots constructed in existing inlets shall be paid for as inlets partial, and shall include the cost for slot openings, paving and any required replacement grates.
8. Sodding to be used on all inlets not located in paved areas and paid for under contract unit price for Sodding 5Y.
9. For supplementary details see Detail No. 201.

NOTE: Alt. B Structure Bottom Only. See Detail No. 200

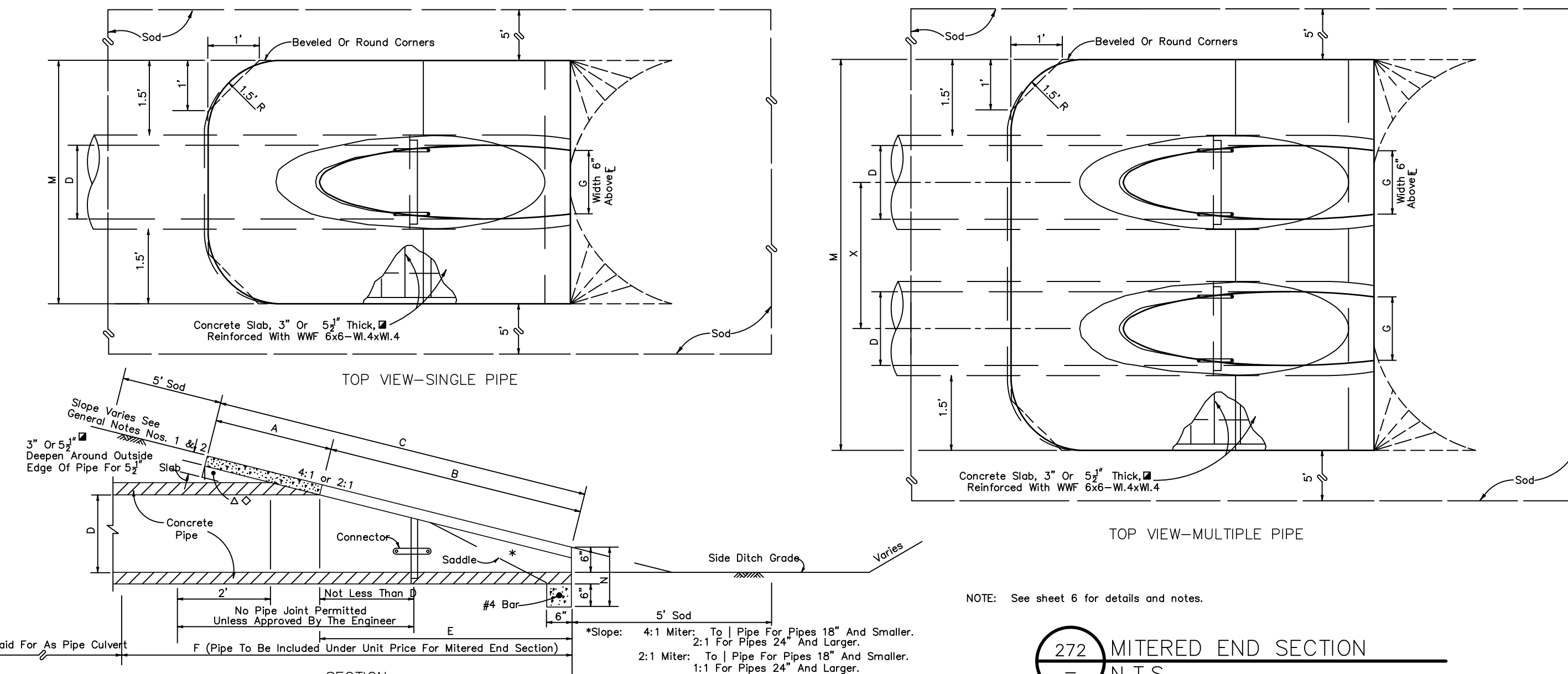
STRUCTURE BOTTOM FOR INLET TYPE E

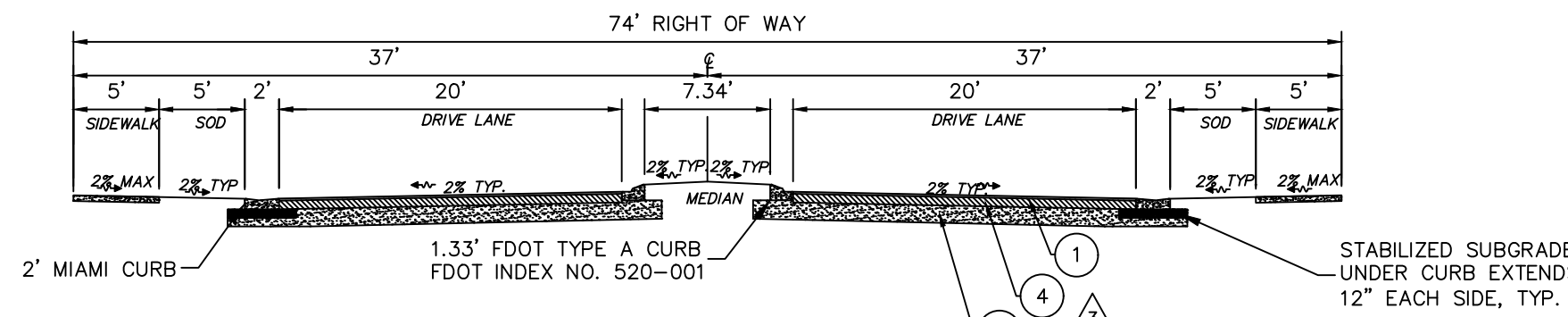
232E F.D.O.T. TYPE E INLET
N.T.S.

DIMENSIONS AND QUANTITIES													
	D	X	A	B	C	E	F	G	M				N
									Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe	
2:1 Slope	15"	2'-7"	1.92	2.18	4.10	2.06	5'	1.22	4.63	7.21	9.79	12.37	1.19
	18"	2'-10"	1.97	2.24	4.21	2.08	6'	1.41	4.92	7.75	10.38	13.42	1.21
	24"	3'-3"	2.03	2.30	4.31	2.10	7'	1.59	5.20	8.09	10.75	13.75	1.23
	30"	4'-3"	2.08	2.35	4.41	2.12	8'	1.77	5.49	8.37	11.03	13.97	1.25
	36"	5'-0"	2.13	2.40	4.51	2.14	9'	1.95	5.78	8.65	11.31	14.19	1.27
	42"	6'-0"	2.18	2.45	4.61	2.16	10'	2.13	6.07	8.93	11.59	14.41	1.29
	48"	6'-9"	2.23	2.50	4.71	2.18	11'	2.31	6.36	9.21	11.87	14.63	1.31
	54"	7'-9"	2.28	2.55	4.81	2.20	12'	2.49	6.65	9.49	12.15	14.85	1.33
	60"	8'-6"	2.33	2.60	4.91	2.22	13'	2.67	6.94	9.77	12.43	15.07	1.35
	66"	9'-6"	2.38	2.65	5.01	2.24	14'	2.85	7.23	10.05	12.71	15.29	1.37
4:1 Slope	15"	2'-7"	2.27	4.09	6.36	4.03	8'	1.22	4.63	7.21	9.79	12.37	1.19
	18"	2'-10"	2.36	4.12	6.48	4.03	9'	1.41	4.92	7.75	10.38	13.42	1.21
	24"	3'-3"	2.43	4.15	6.57	4.03	10'	1.59	5.20	8.09	10.75	13.75	1.23
	30"	4'-3"	2.50	4.18	6.66	4.03	11'	1.77	5.49	8.37	11.03	13.97	1.25
	36"	5'-0"	2.57	4.21	6.75	4.03	12'	1.95	5.78	8.65	11.31	14.19	1.27
	42"	6'-0"	2.64	4.24	6.84	4.03	13'	2.13	6.07	8.93	11.59	14.41	1.29
	48"	6'-9"	2.71	4.27	6.93	4.03	14'	2.31	6.36	9.21	11.87	14.63	1.31
	54"	7'-9"	2.78	4.30	7.02	4.03	15'	2.49	6.65	9.49	12.15	14.85	1.33
	60"	8'-6"	2.85	4.33	7.11	4.03	16'	2.67	6.94	9.77	12.43	15.07	1.35
	66"	9'-6"	2.92	4.36	7.20	4.03	17'	2.85	7.23	10.05	12.71	15.29	1.37

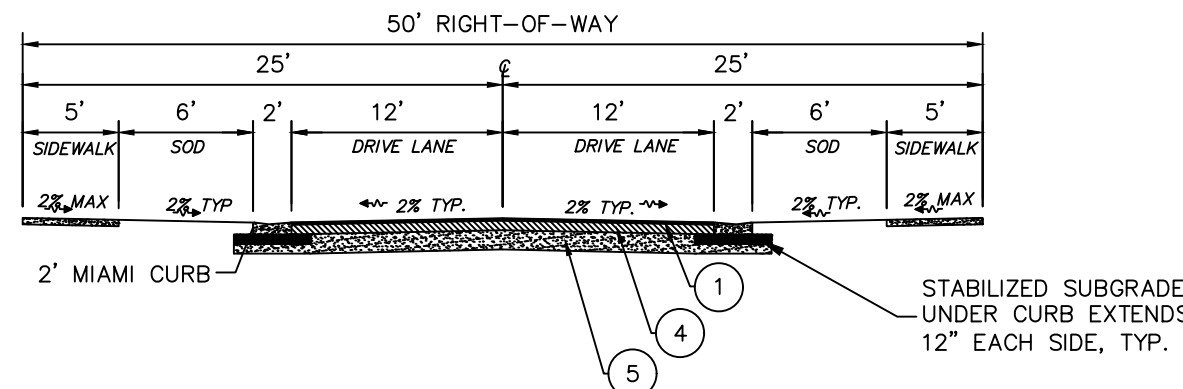
See General Note No. 3.
See Sheet 5 Or 6 For 3" Slab Quantities

B E
Δ 6.42' Δ 6.25' Dimensions permitted to allow use of 8' standard pipe lengths.
Δ 10.40' Δ 10.10' Dimensions permitted to allow use of 12' standard pipe lengths.
Δ Concrete slab shall be deepened to form bridge across crown of pipe. See section below.

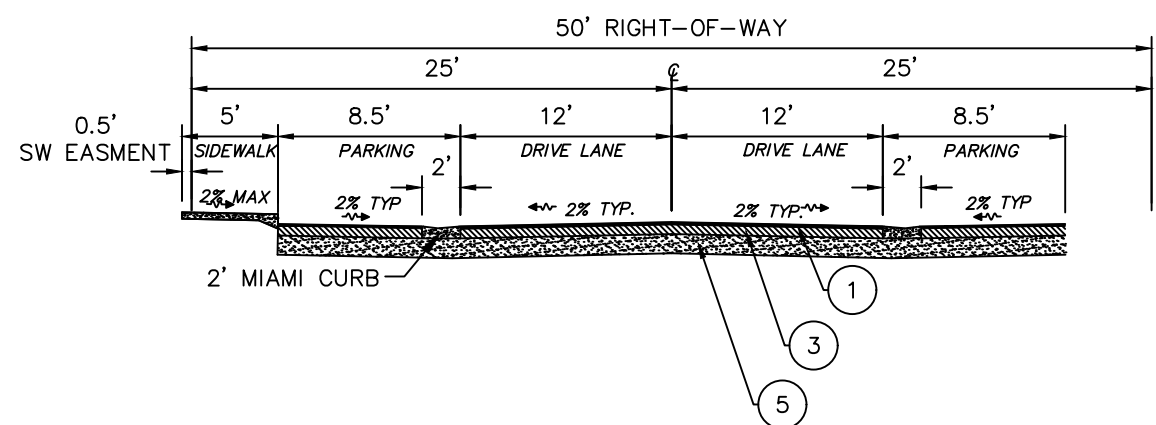




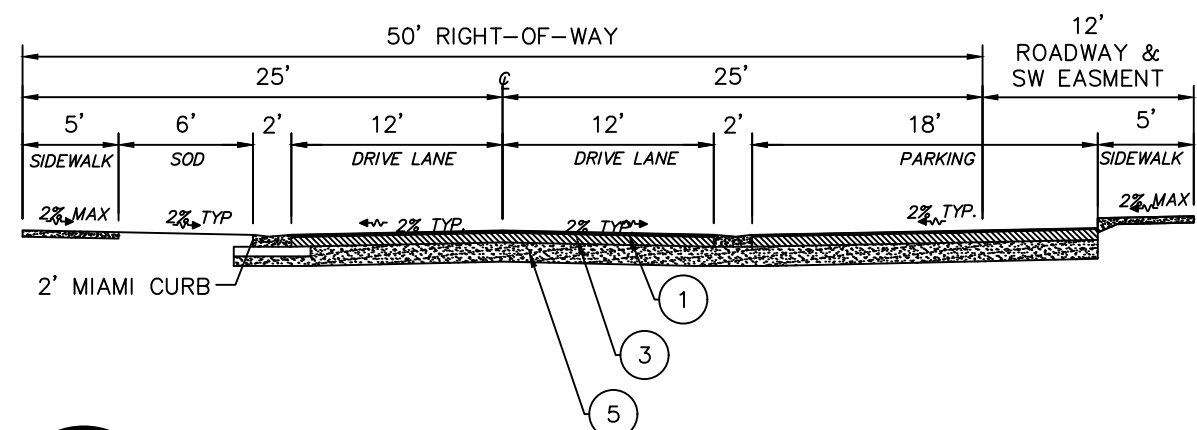
A TYPICAL ENTRANCE SECTION
C101



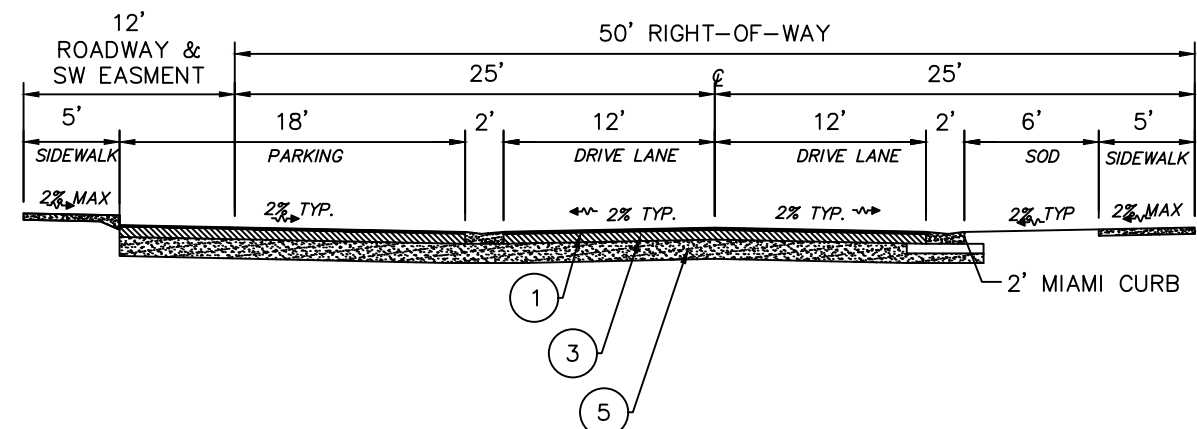
B TYPICAL 50' RIGHT OF WAY SECTION
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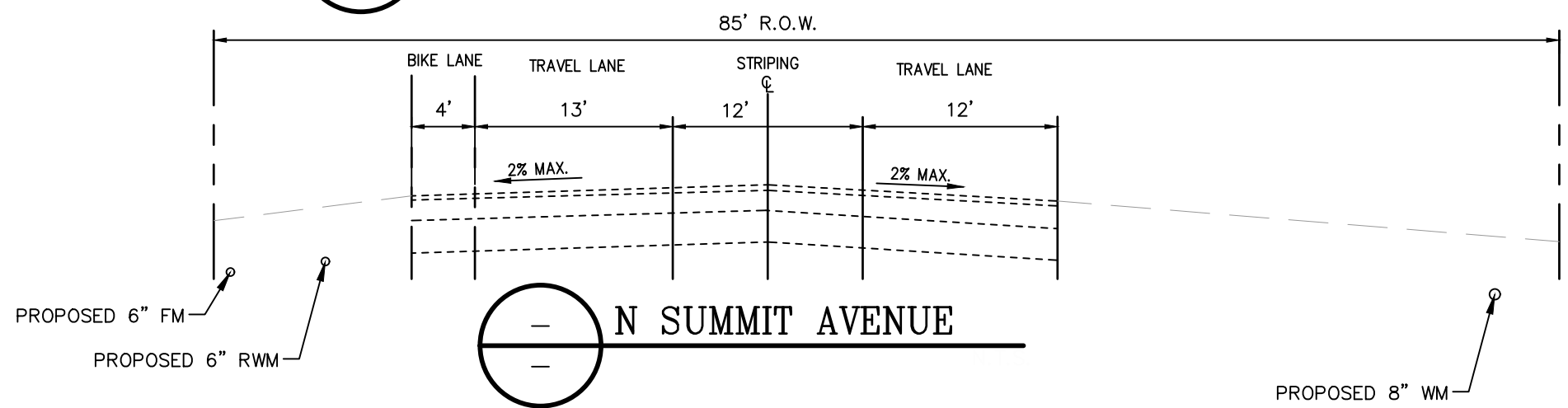
C TYPICAL 50' RIGHT OF WAY SECTION
C102



D TYPICAL 50' RIGHT OF WAY SECTION
C103



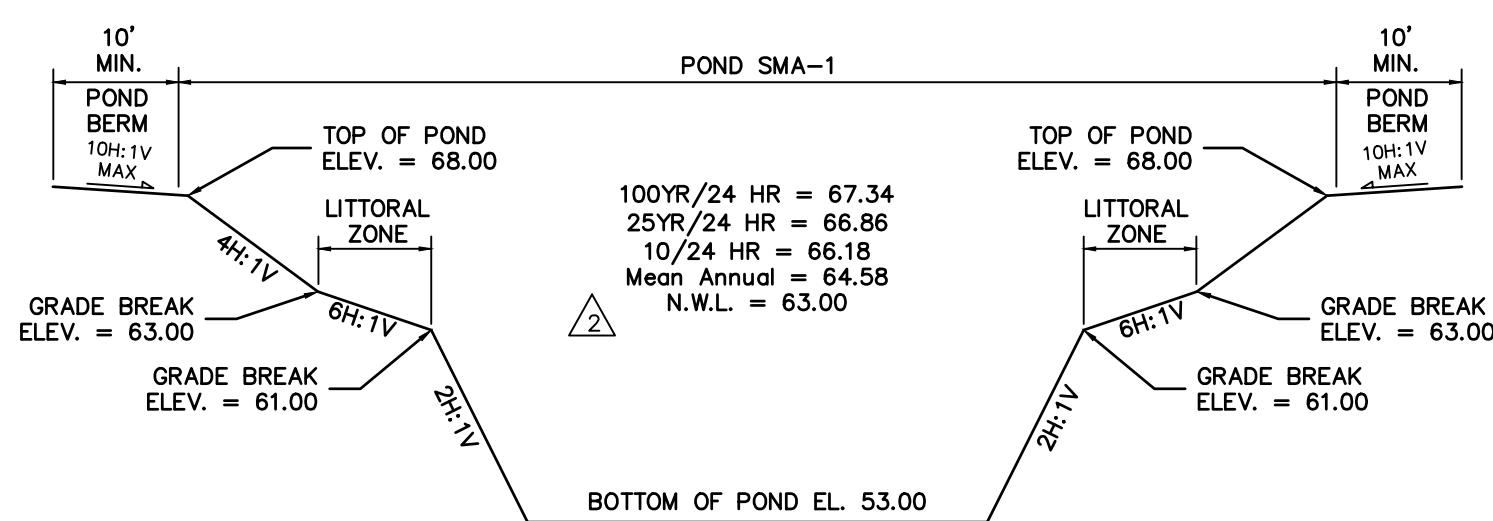
E TYPICAL 50' RIGHT OF WAY SECTION
C103



ROADWAY PAVEMENT SECTIONS (PER GEOTECHNICAL REPORT)

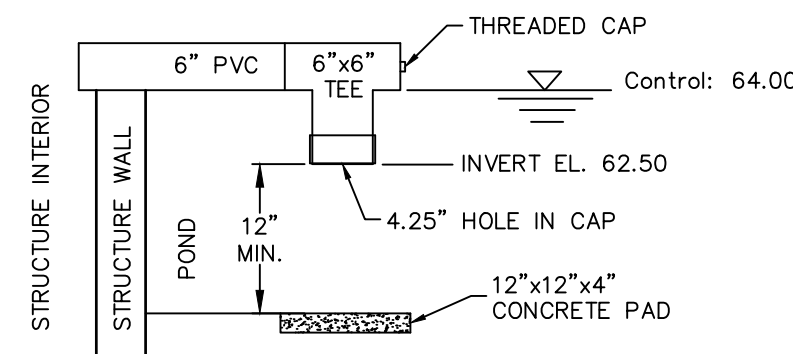
- 1 2.0" FDOT SP-9.5 ASPHALT (NO MORE THAN 35% RECYCLED ASPHALT PAVEMENT)
- 2 6" CRUSHED CONCRETE SOURCED FROM AN FDOT APPROVED SUPPLIER. THE BASE SHOULD BE COMPACTED TO A MINIMUM DENSITY OF 98 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY AND EXHIBIT A MINIMUM LBR OF 130. THE BASE MATERIAL SHALL COMPLY WITH THE GRADATION CRITERIA LISTED IN THE LATEST EDITION OF THE FDOT ROAD AND BRIDGE CONSTRUCTION SPECIFICATIONS. LBR AND SIEVE GRADATION TESTS SHOULD BE PERFORMED AT A MINIMUM FREQUENCY OF ONE TEST PER 10,000 SQUARE FEET AND FOR EACH VISUAL CHANGE IN MATERIAL.
- 3 ALTERNATE:
6" LIMEROCK SOURCED FROM AN FDOT APPROVED SUPPLIER. THE BASE SHOULD BE COMPACTED TO 98 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DENSITY, AND EXHIBIT A MINIMUM LBR OF 100.
- 4 8" CRUSHED CONCRETE SOURCED FROM AN FDOT APPROVED SUPPLIER. THE BASE SHOULD BE COMPACTED TO A MINIMUM DENSITY OF 98 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY AND EXHIBIT A MINIMUM LBR OF 130. THE BASE MATERIAL SHALL COMPLY WITH THE GRADATION CRITERIA LISTED IN THE LATEST EDITION OF THE FDOT ROAD AND BRIDGE CONSTRUCTION SPECIFICATIONS. LBR AND SIEVE GRADATION TESTS SHOULD BE PERFORMED AT A MINIMUM FREQUENCY OF ONE TEST PER 10,000 SQUARE FEET AND FOR EACH VISUAL CHANGE IN MATERIAL.
- 5 12" OF STABILIZED SUBGRADE WITH A MINIMUM LBR OF 40 AND COMPACTED TO AT LEAST 98% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557 TEST METHOD. COMPACTION TESTING OF STABILIZED SUBGRADE SHOULD BE PERFORMED TO FULL DEPTH AT A FREQUENCY OF AT LEAST ONE TEST PER 10,000 SQUARE FEET, OR A MINIMUM OF 4 TESTS, WHICHEVER IS GREATER.

NOTE:
1st ASPHALT LIFT TO BE COMPLETED AT THE FINAL INSPECTION OF THE ROADWAY INFRASTRUCTURE AND 2nd LIFT TO BE COMPLETED WHEN 95% OF THE SUBDIVISION HOMES ARE BUILT OR AS DETERMINED BY THE CITY ENGINEER OR DESIGNEE.

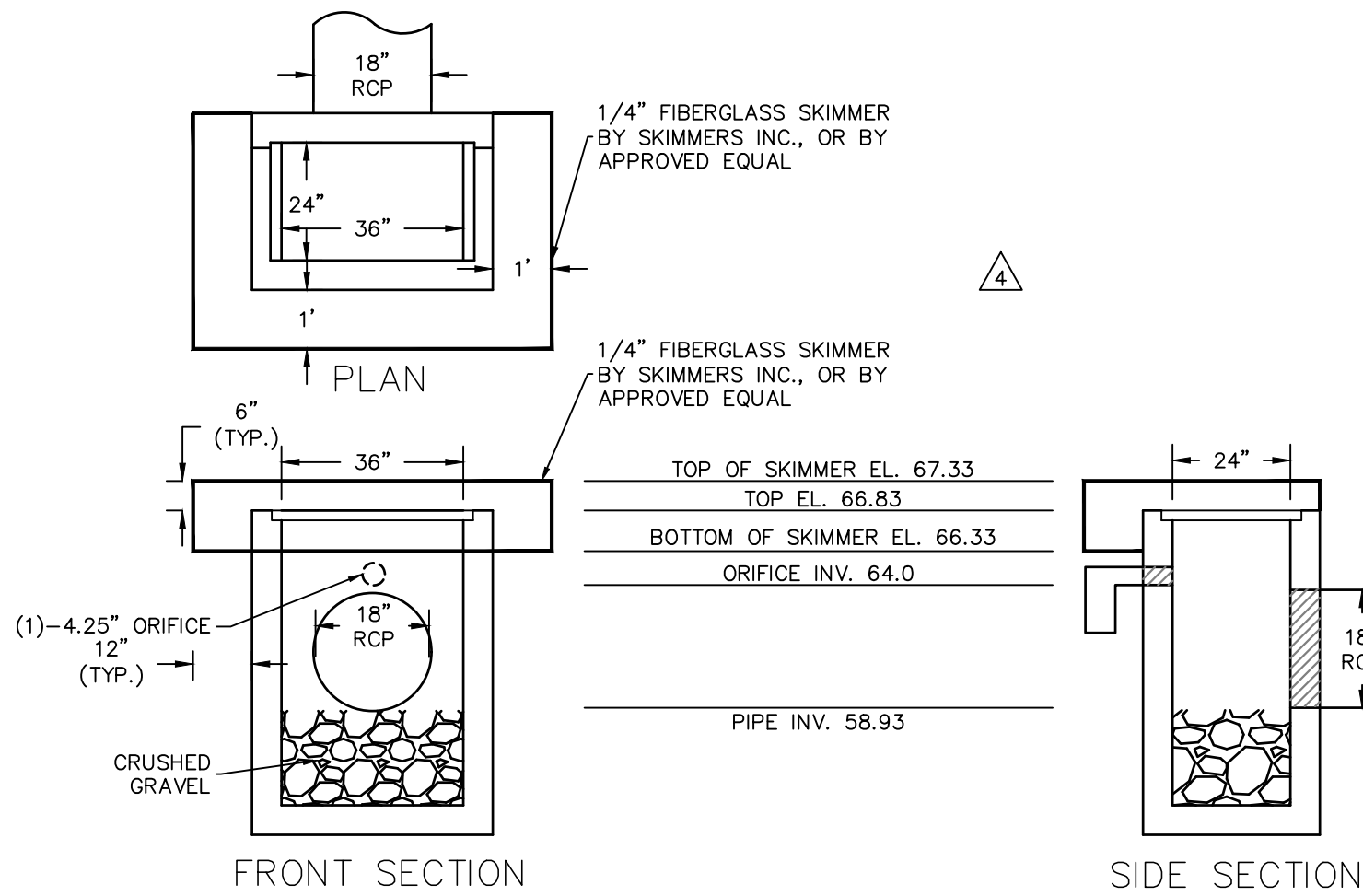


NOTE: POND BERMS AND SIDE SLOPES TO BE SODDED TO 2' BELOW THE NORMAL WATER LEVEL

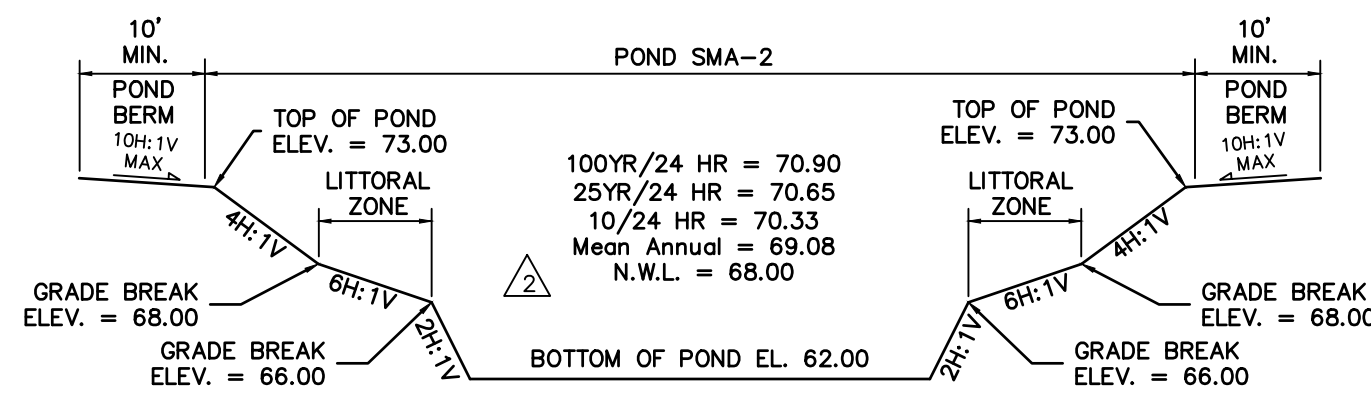
POND SMA-1 SECTION
C101 N.T.S.



PVC1 ORIFICE DETAIL (POND SMA-1)

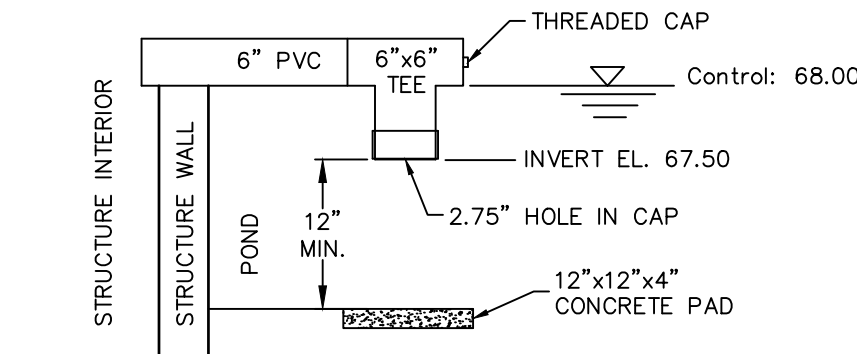


CS-01 FDOT MODIFIED TYPE "C" INLET
N.T.S.

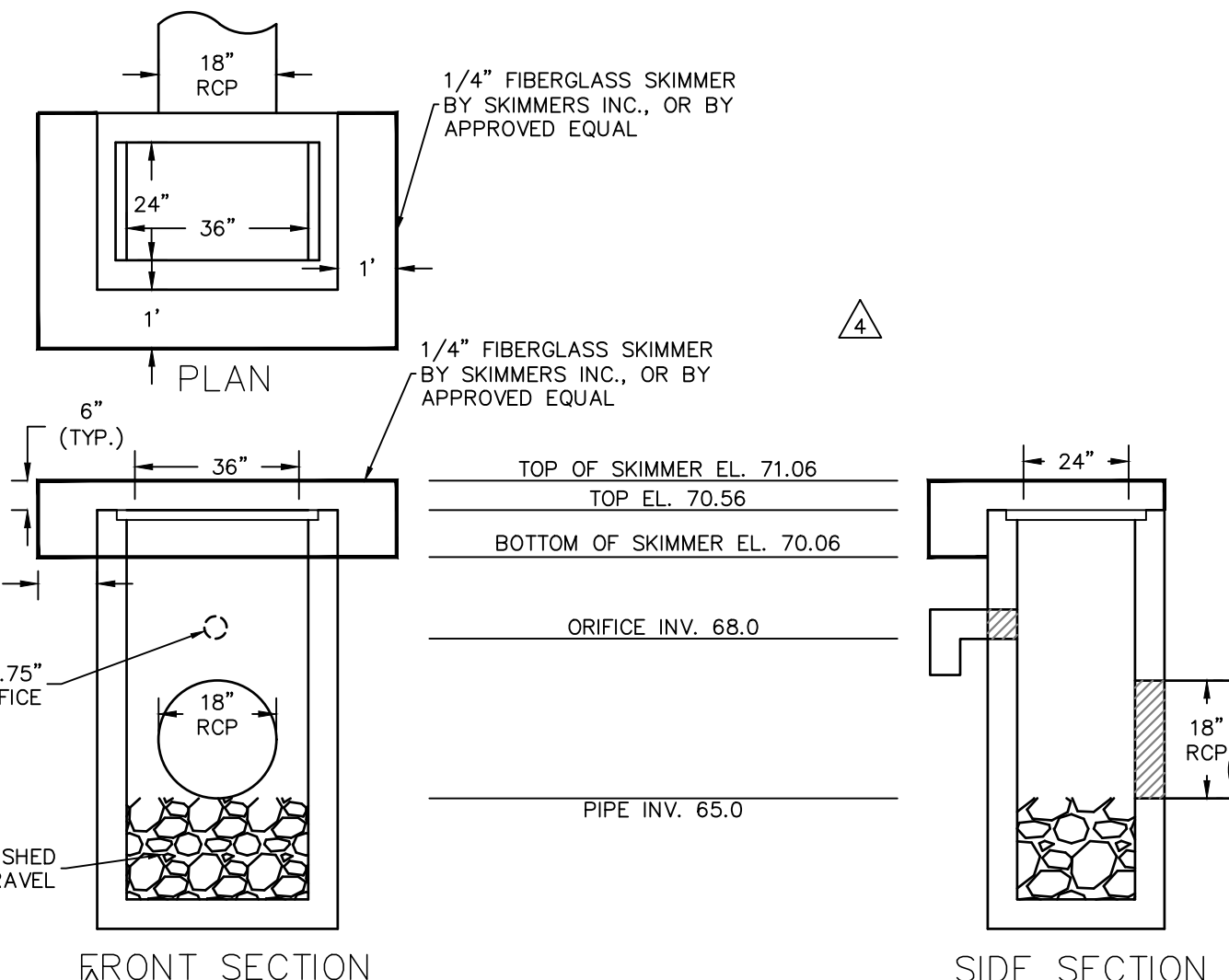


NOTE: POND BERMS AND SIDE SLOPES TO BE SODDED TO 2' BELOW THE NORMAL WATER LEVEL

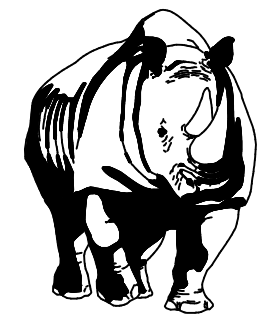
POND SMA-2 SECTION
C101 N.T.S.



PVC2 ORIFICE DETAIL (POND SMA-2)



CS-02 FDOT MODIFIED TYPE "C" INLET
N.T.S.



MADDEN
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

CONSTRUCTION DETAILS

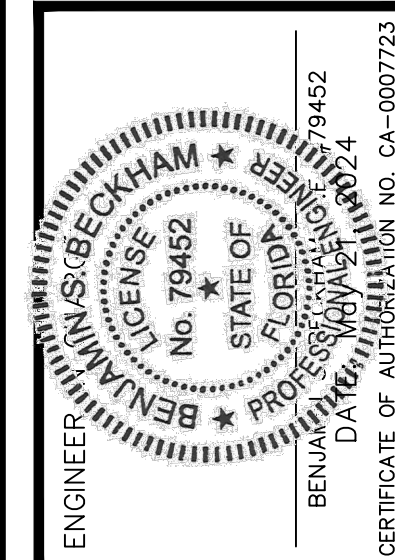
FOR

SUMMIT PLACE

FLORIDA

CITY OF BELAND

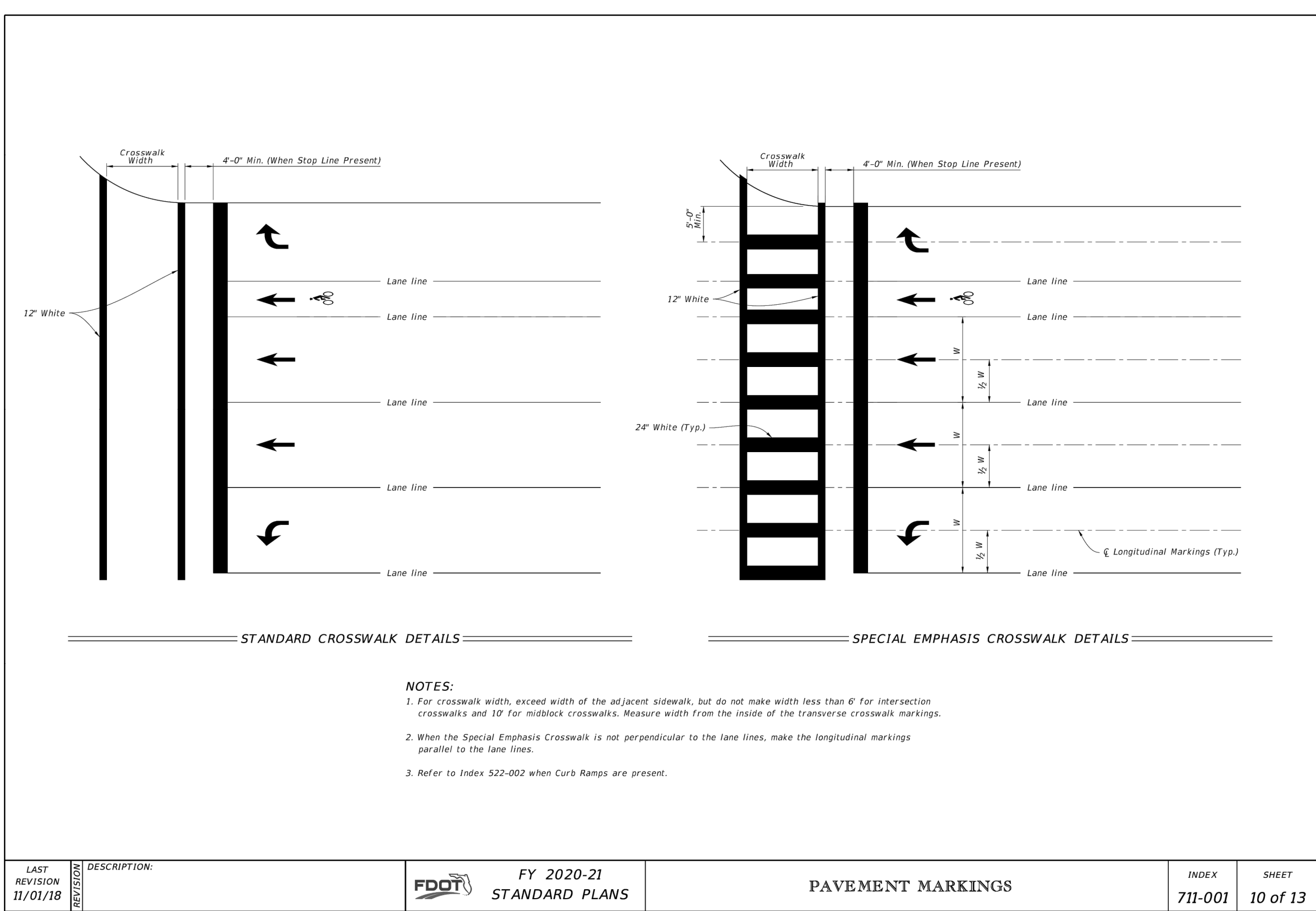
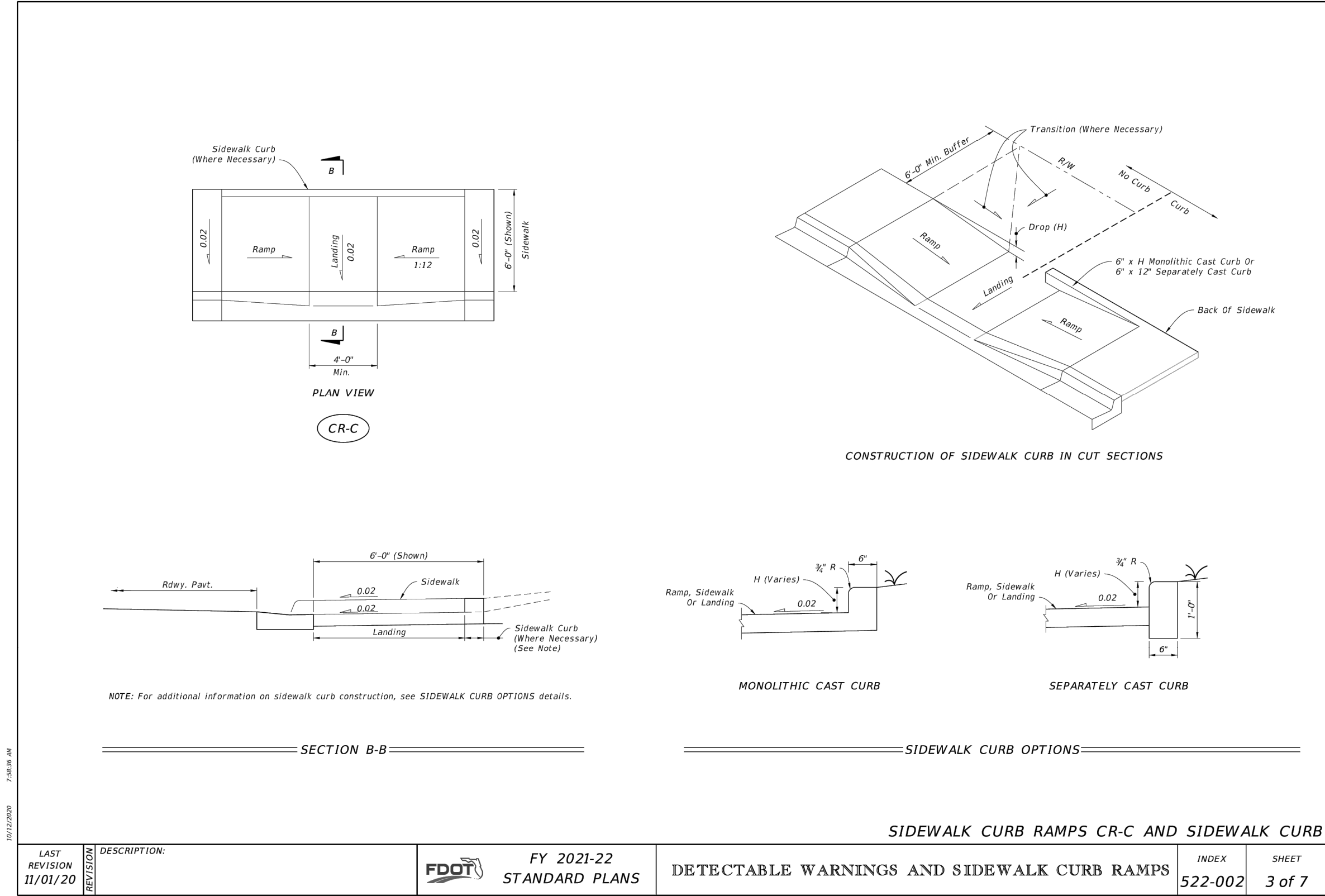
DR HORTON
10192 DOWEN ROAD
ORLANDO, FL 32832
(407) 850-5200



REV.	DATE	REVISIONS
1	3/16/23	REV. PER CITY OF BELAND COMMENTS DATED 3/9/23
2	10/02/23	REVISED PER SHAWMUT COMMENTS
3	04/23/24	REV. PER CITY OF BELAND COMMENTS
4		
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10		
11		

JOB # **21886**
DATE: **02/20/23**
SCALE: **N/A**
DESIGNED BY: **JTT**
DRAWN BY: **JTT**
APPROVED BY: **BSS**

C903



MADDEN
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

CONSTRUCTION DETAILS
FOR
SUMMIT PLACE
CITY OF DELAND
FLORIDA

DR. HORTON
10192 DOWDEN ROAD
ORLANDO, FL 32832
(407) 850-5200

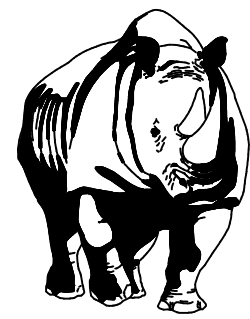
ENGINEER BENJAMIN S. BUCKHAM
LICENSE No. 79452
STATE OF FLORIDA
DATE OF EXPIRATION 02/24/2024
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

REV.	DATE	REVISIONS
1	3/16/23	REV. PER CITY OF DELAND COMMENTS DATED 3/9/23
2		
3		
4		
5		
6		
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10		
11		
12		

JOB # 21886
DATE: 02/20/23
SCALE: N/A
DESIGNED BY: JTT
DRAWN BY: JTT
APPROVED BY: BSB

C904

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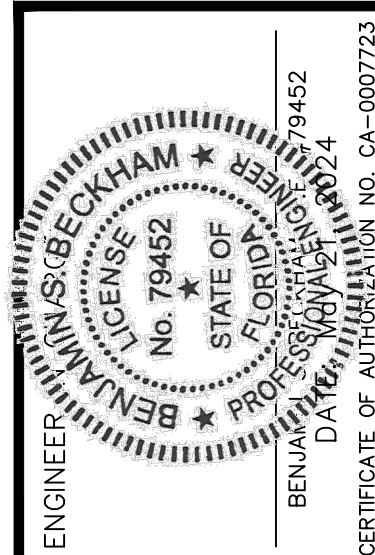


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CITY DETAILS
FOR
SUMMIT PLACE
CITY OF DELAND

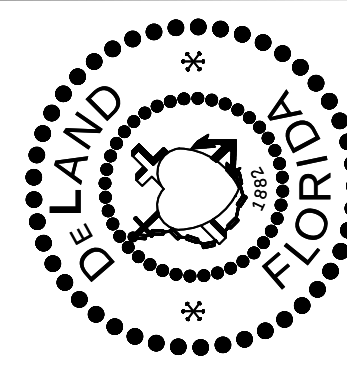
DR. HORTON
10192 DOWNEY ROAD
ORLANDO, FL 32832
(407) 850-5200



DATE	REVISIONS
02/20/23	N/A
JTT	DESIGNED BY:
JTT	DRAWN BY:
BSB	APPROVED BY:

JOB # 21896
DATE: 02/20/23
SCALE: N/A
DESIGNED BY: JTT
DRAWN BY: JTT
APPROVED BY: BSB

C910



CITY OF DELAND, FLORIDA
1102 S. GARFIELD AVENUE, DELAND, FLORIDA 32724

DATE: 11/07/2022
CHECKED BY: NAME

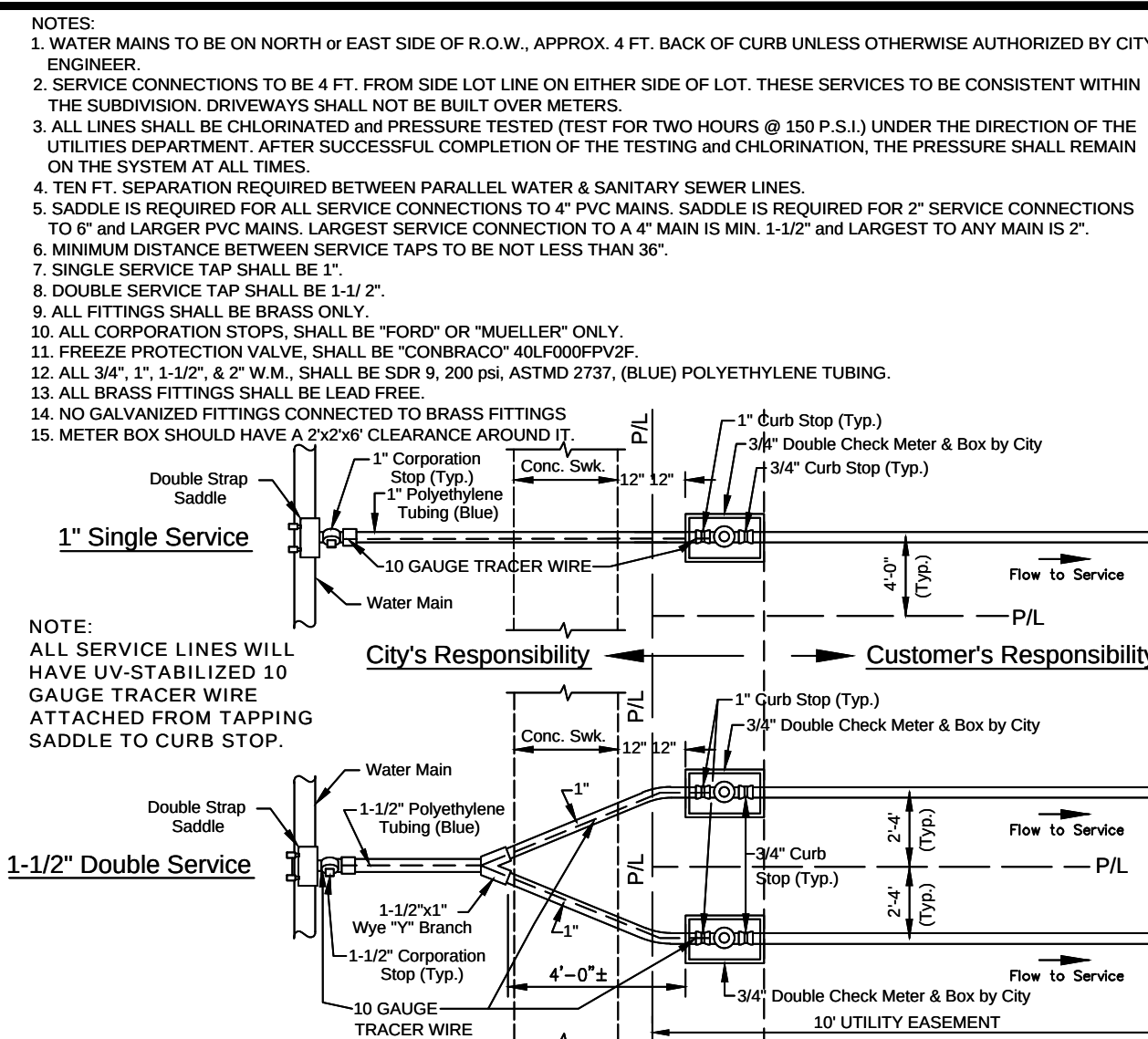
NOT TO SCALE
ERIC SAMPSON

drive letter/details locations

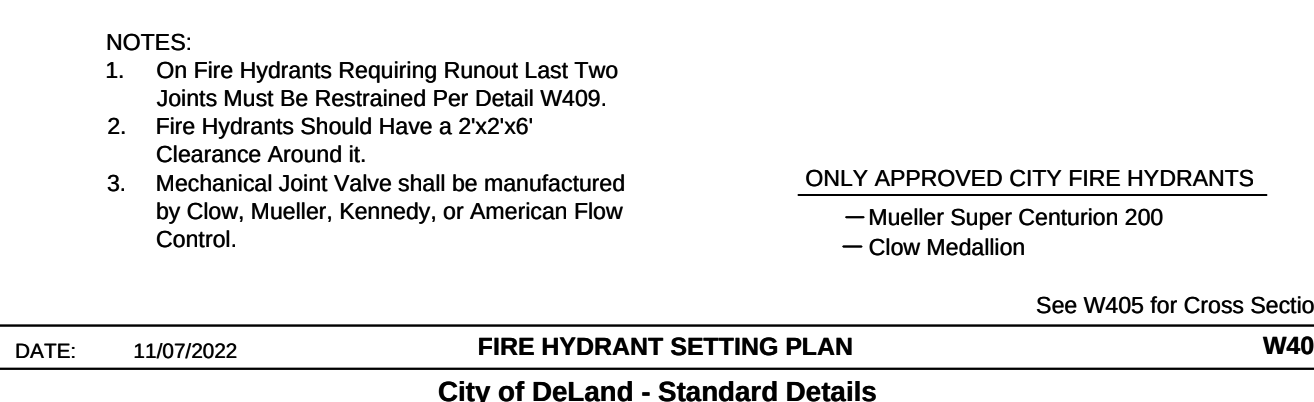
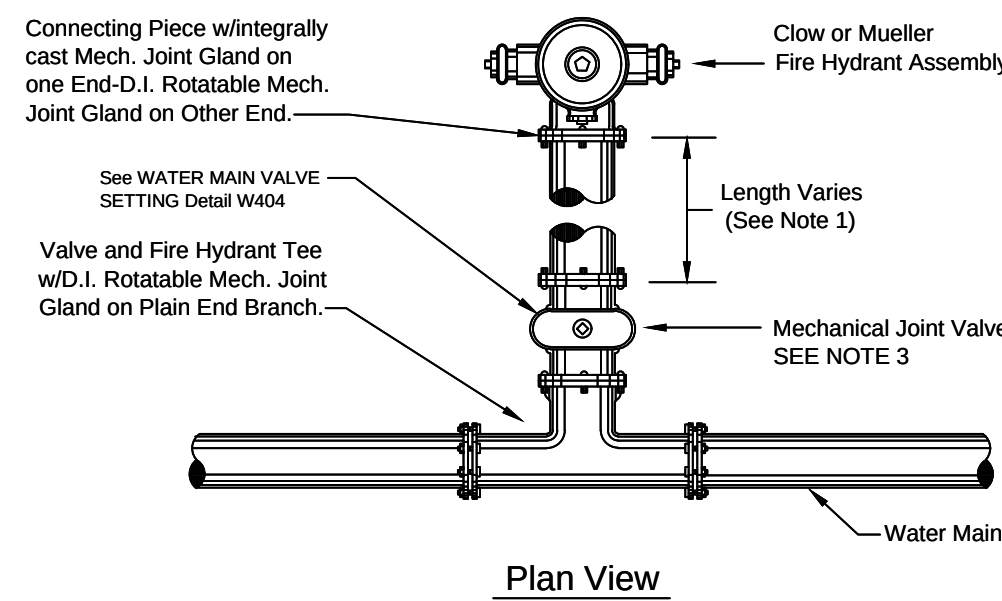
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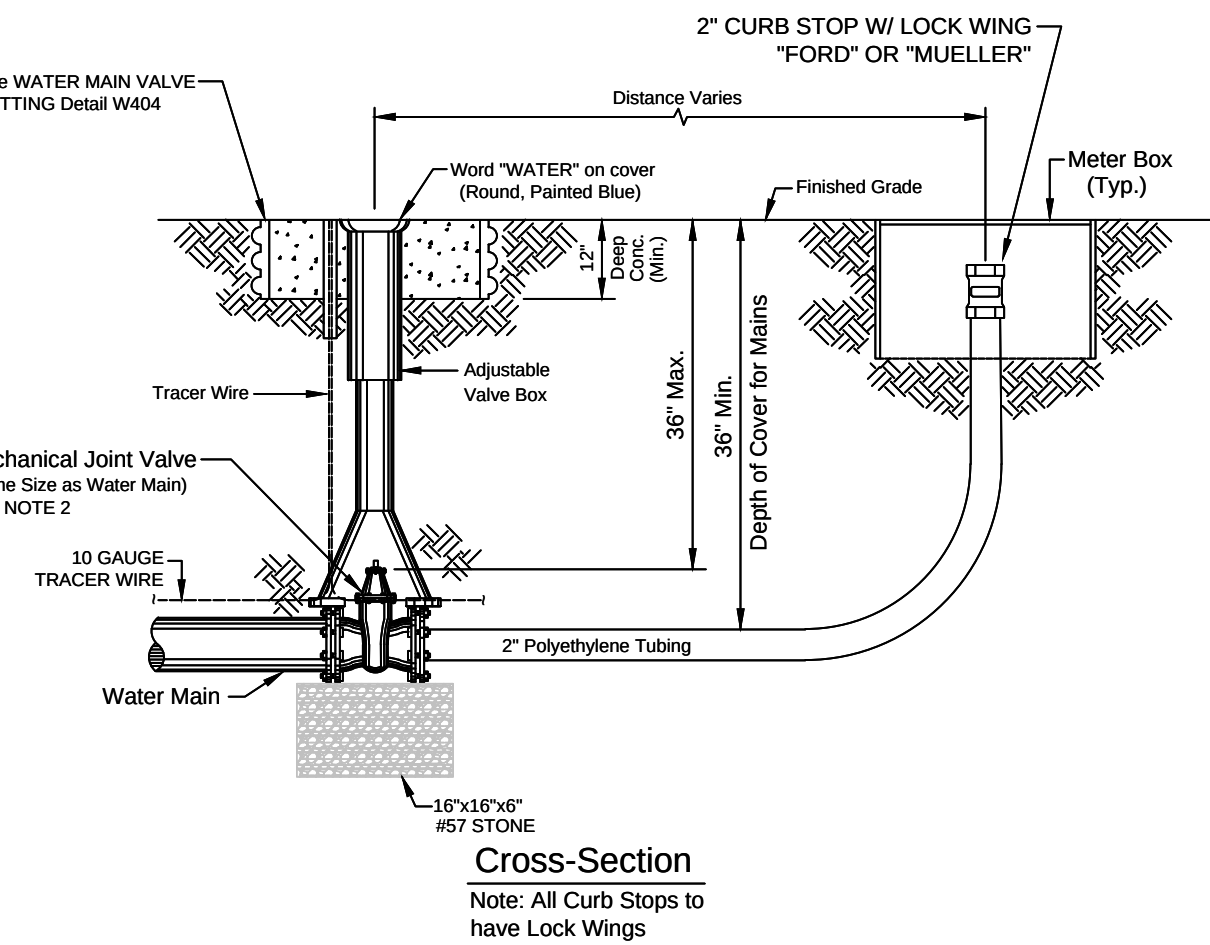
WATER SYSTEM DETAILS (Sheet 1)



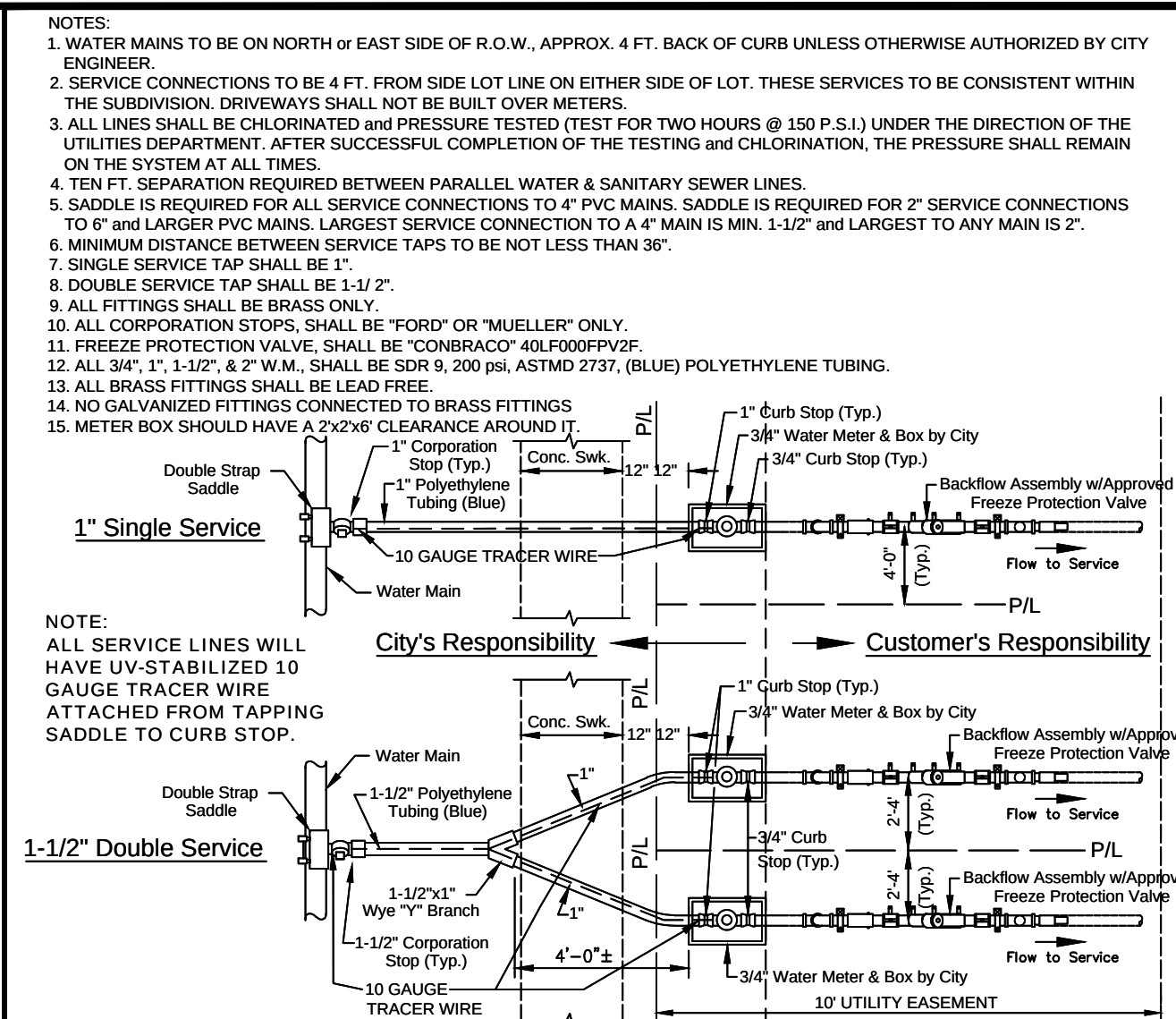
DATE: 11/07/2022 WATER MAIN SERVICE CONN. WITH SIDEWALK (DBL. CHECK METER) W402A City of DeLand - Standard Details



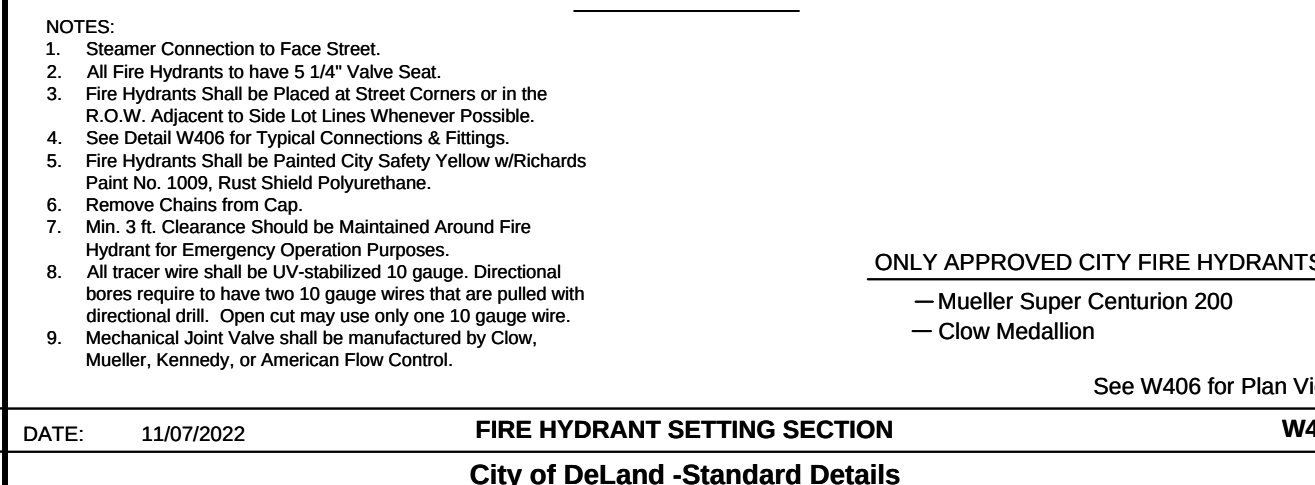
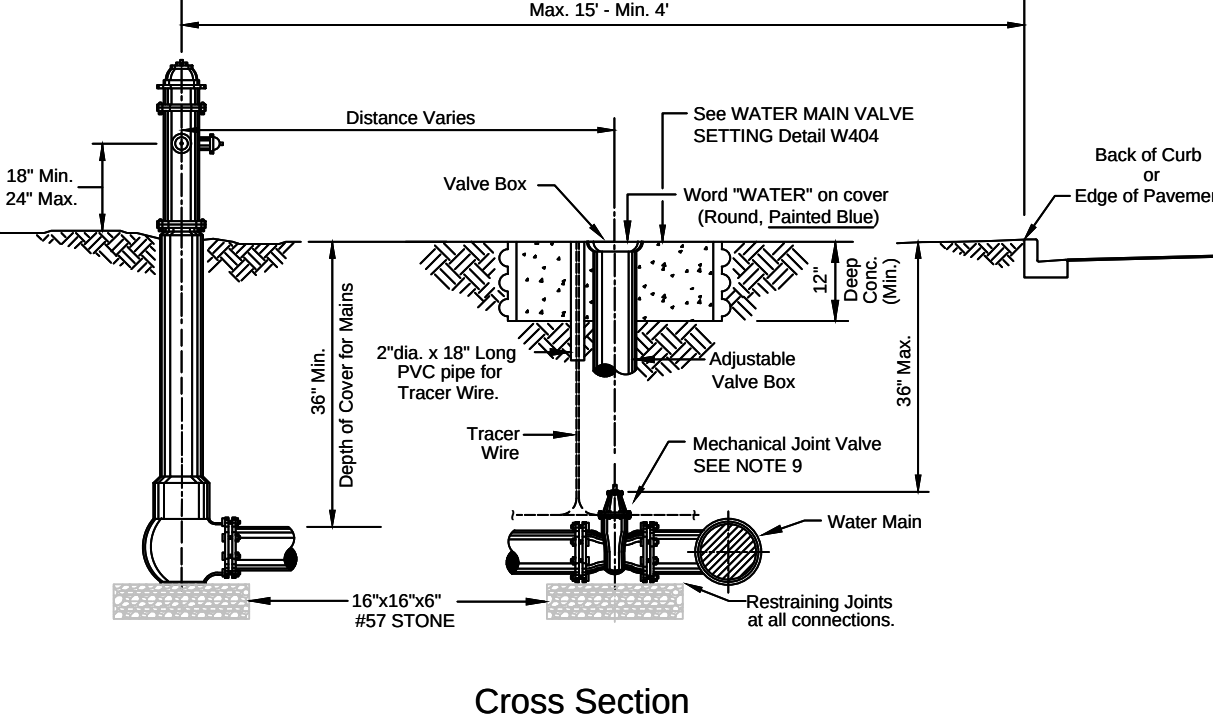
DATE: 11/07/2022 FIRE HYDRANT SETTING PLAN W406 City of DeLand - Standard Details



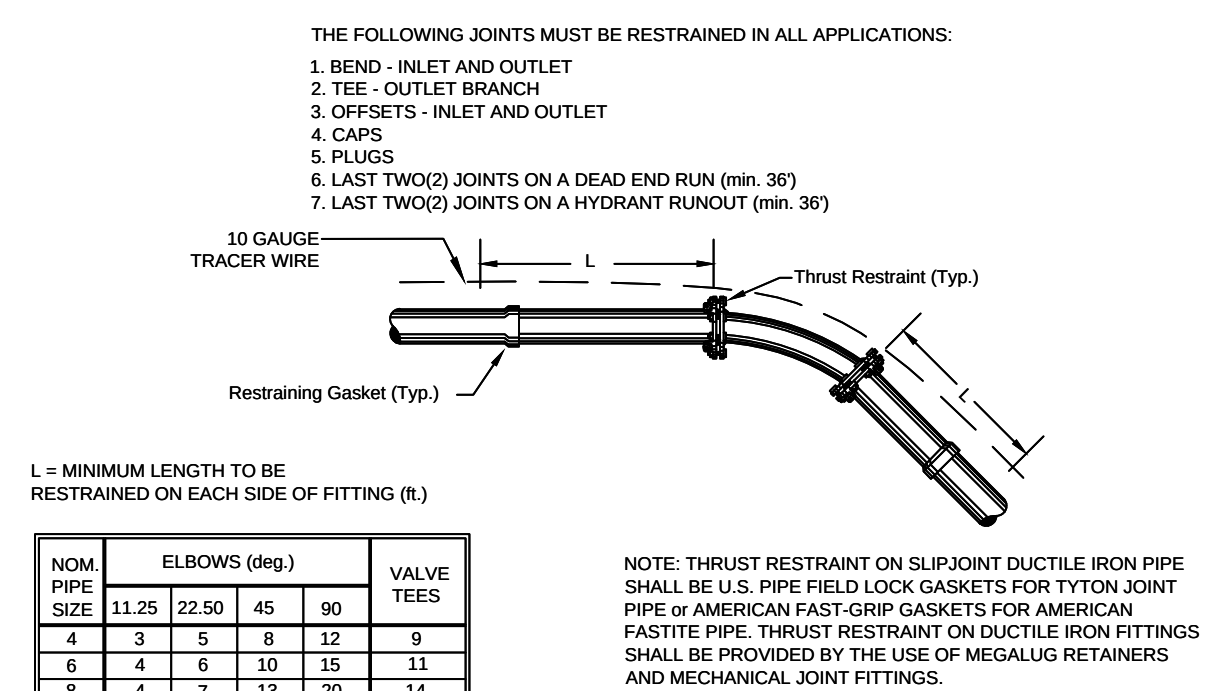
DATE: 11/07/2022 WATER MAIN BLOWOFF DETAIL W410 City of DeLand - Standard Details



DATE: 11/07/2022 WATER MAIN SERVICE CONNECTION WITH SIDEWALK (BACKFLOW) W402 City of DeLand - Standard Details

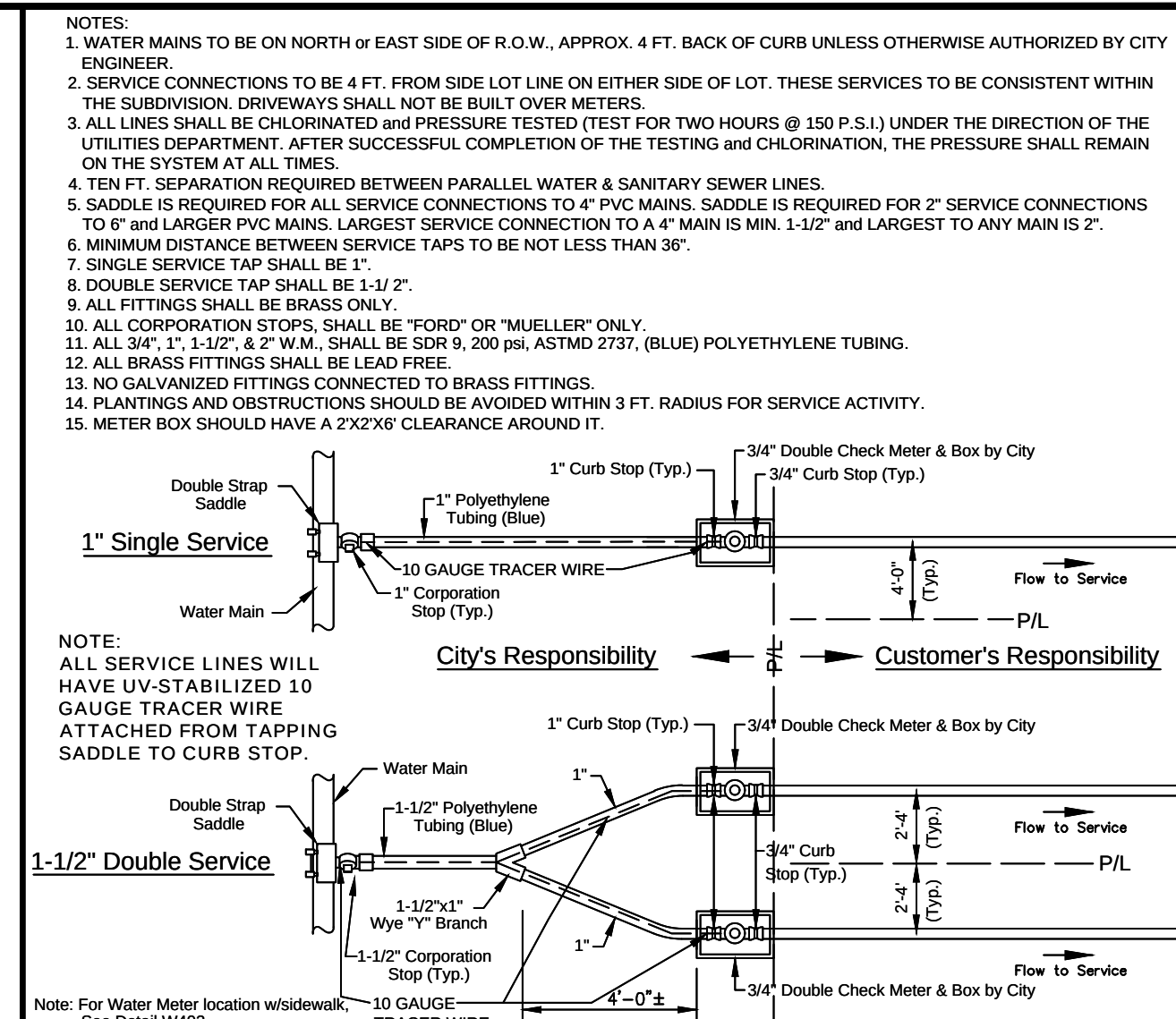


DATE: 11/07/2022 FIRE HYDRANT SETTING SECTION W405 City of DeLand - Standard Details

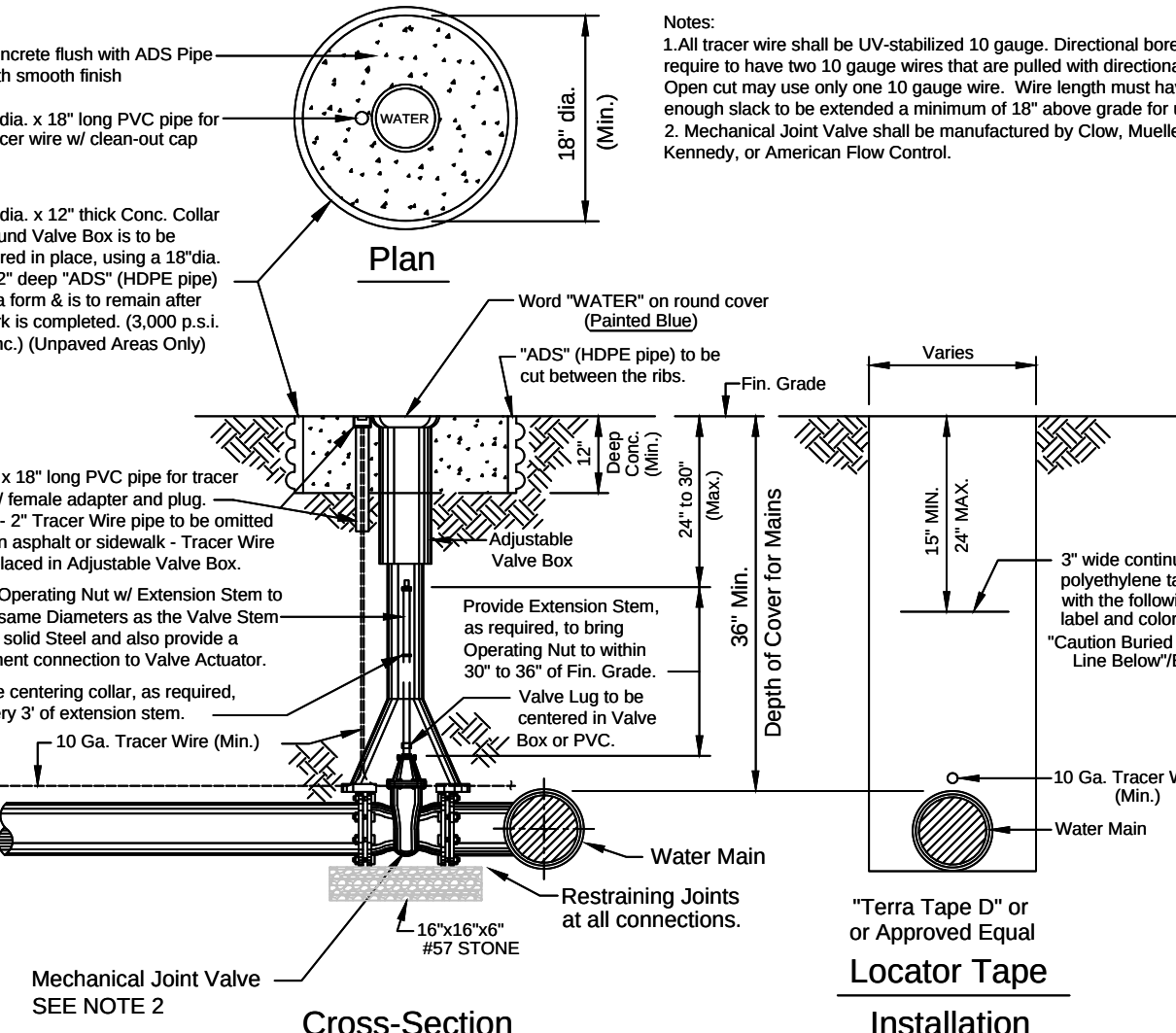


NOM. PIPE SIZE	ELBOWS (deg.)	VALVE TEES
4	11 25	22 50
6	11 25	22 50
8	11 25	22 50
10	11 25	22 50
12	11 25	22 50
14	11 25	22 50
16	11 25	22 50
18	11 25	22 50
20	11 25	22 50
24	11 25	22 50

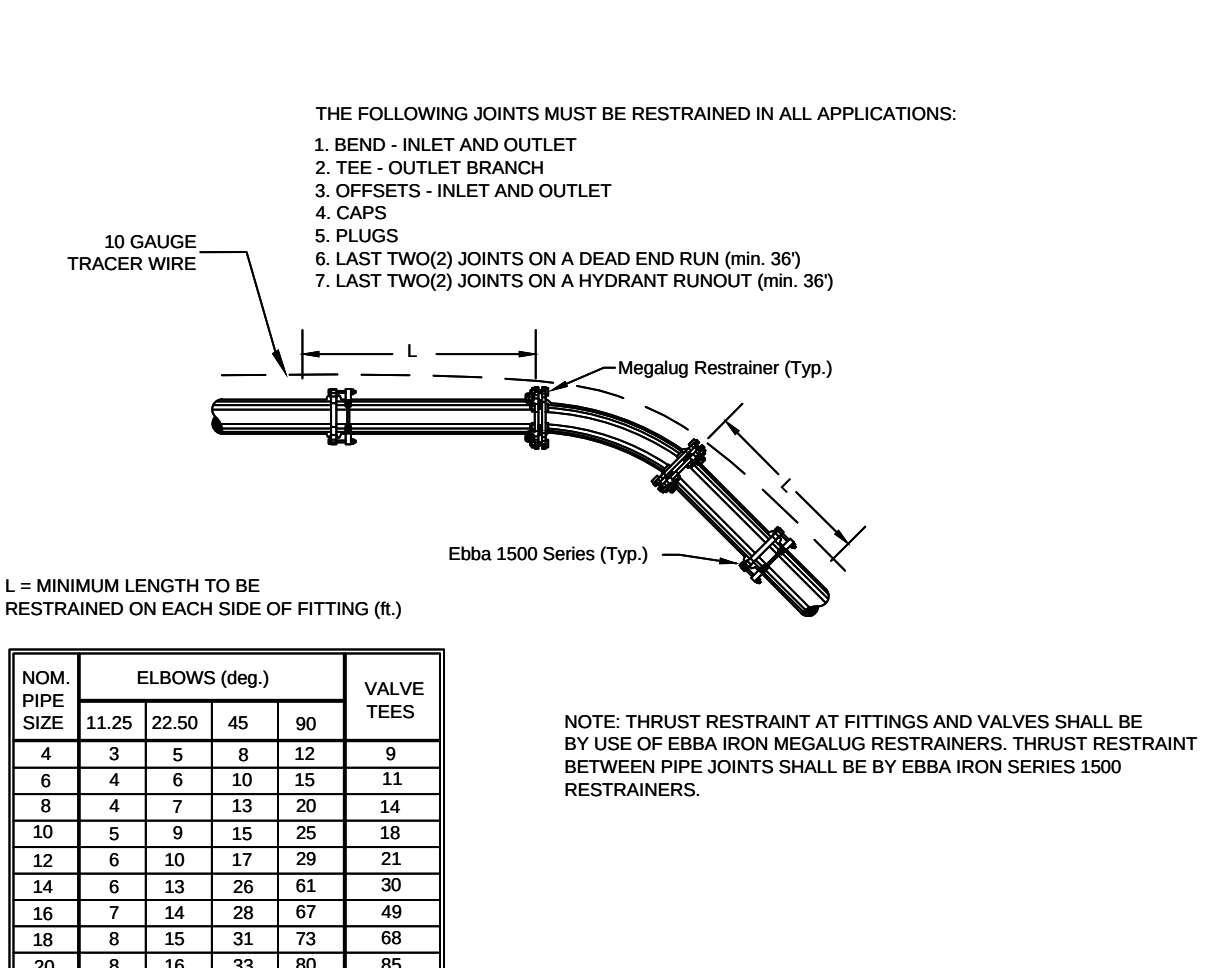
DATE: 11/07/2022 THRUST RESTRAINING DETAIL FOR DUCTILE IRON PIPE W409 City of DeLand - Standard Details



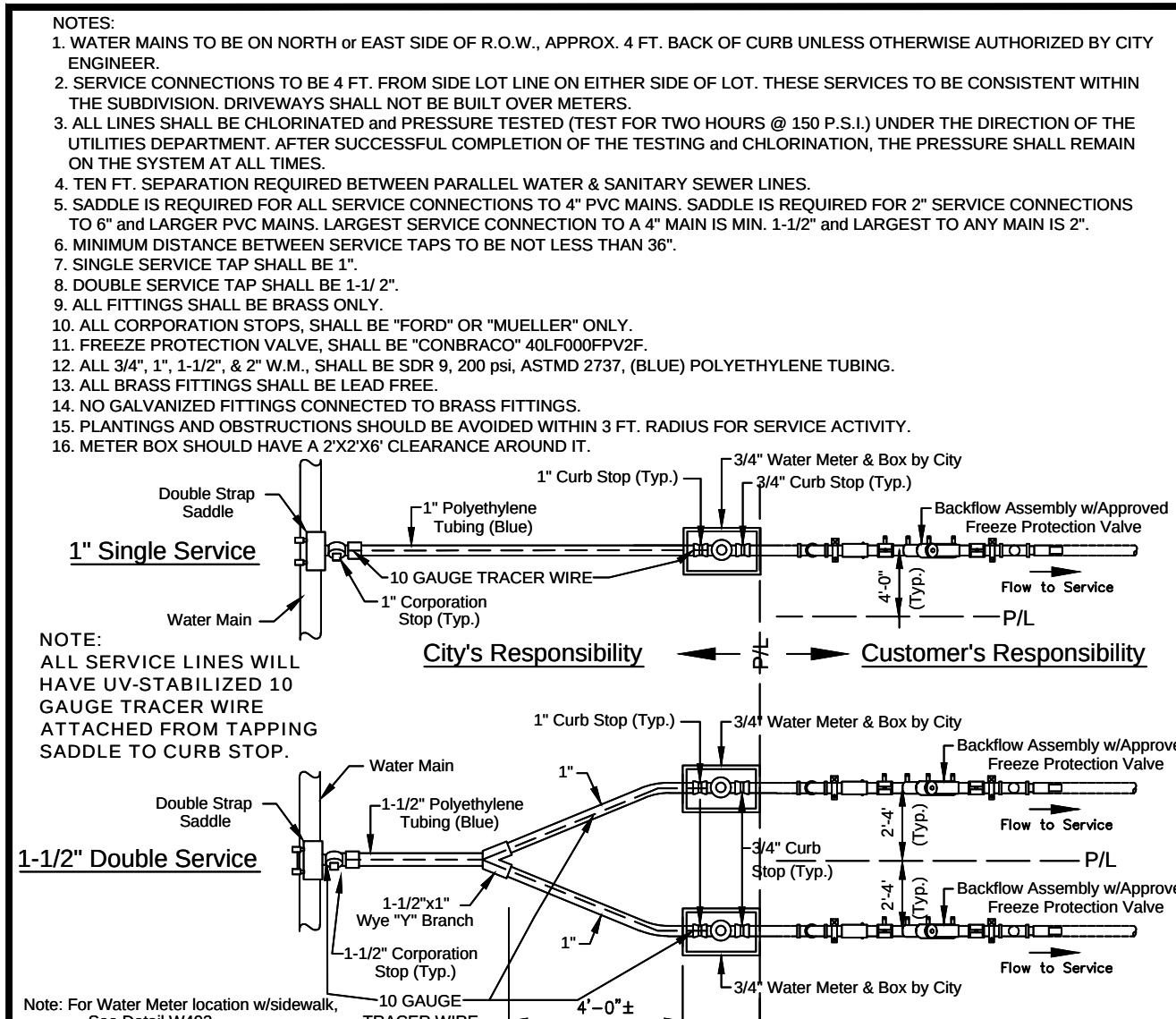
DATE: 11/07/2022 WATER MAIN SERVICE CONNECTION (DOUBLE CHECK METER) W401A City of DeLand - Standard Details



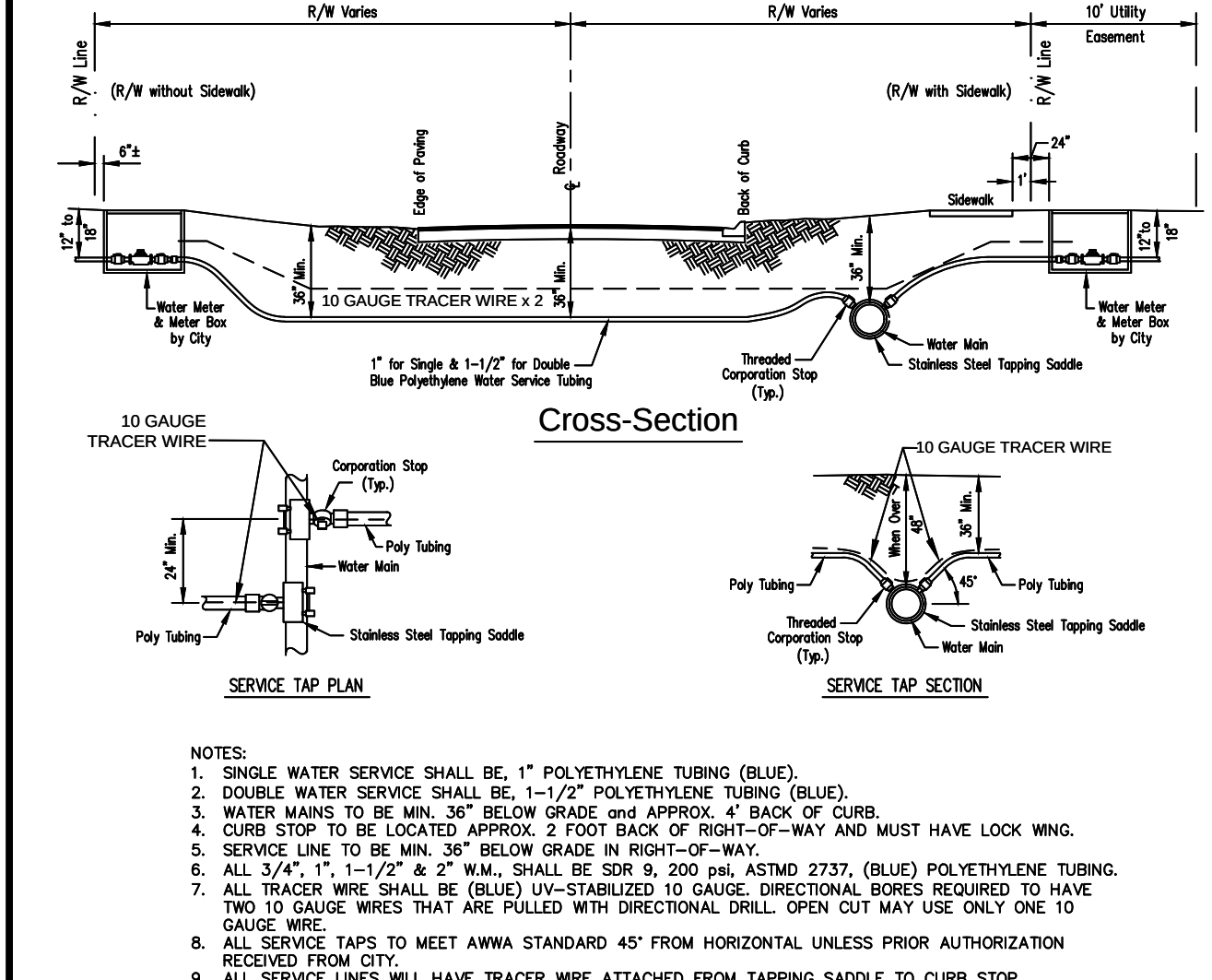
DATE: 11/07/2022 WATER MAIN VALVE SETTING W404 City of DeLand - Standard Details



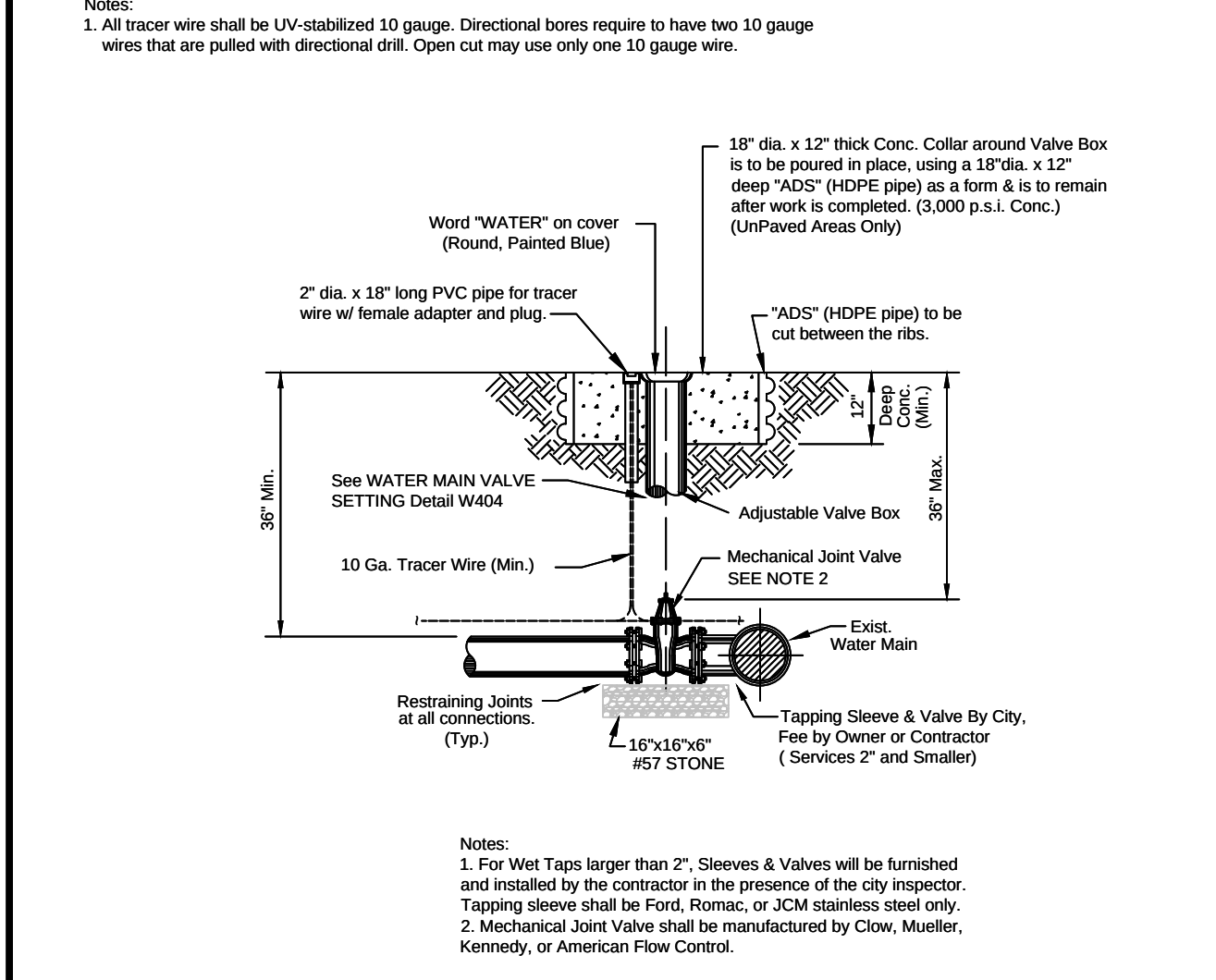
DATE: 11/07/2022 THRUST RESTRAINING DETAIL FOR PVC PIPE W408 City of DeLand - Standard Details



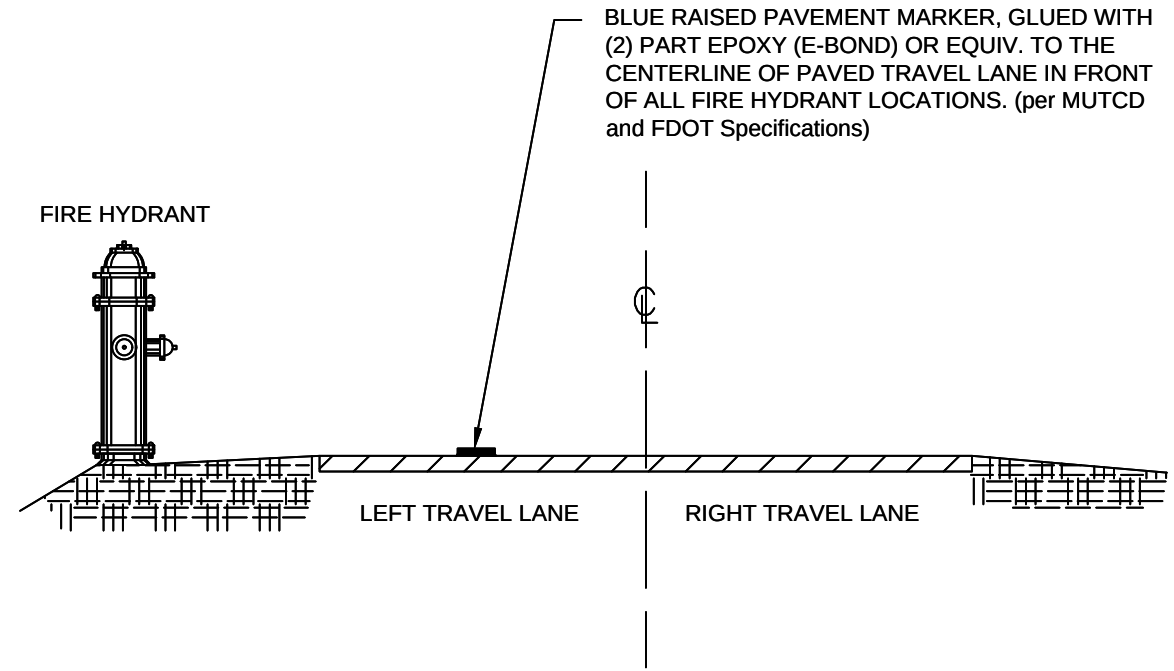
DATE: 11/07/2022 WATER MAIN SERVICE CONNECTION (BACKFLOW) W401 City of DeLand - Standard Details



DATE: 11/07/2022 WATER MAIN SERVICE LINES W403 City of DeLand - Standard Details



DATE: 11/07/2022 TAPPING SLEEVE & VALVE W407 City of DeLand - Standard Details



DATE: 11/07/2022

REFLECTIVE PAVEMENT MARKER FOR FIRE HYDRANT LOCATION

W423

City of DeLand - Standard Details

Approved Ford Valve for Service Lines

1" SERVICE



CATALOG NUMBER	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



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"	9.6
◆ B41-656-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: 11/07/2022

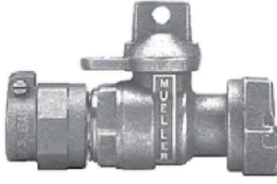
VALVE FOR WATER AND RECLAIM SERVICE LINE

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)

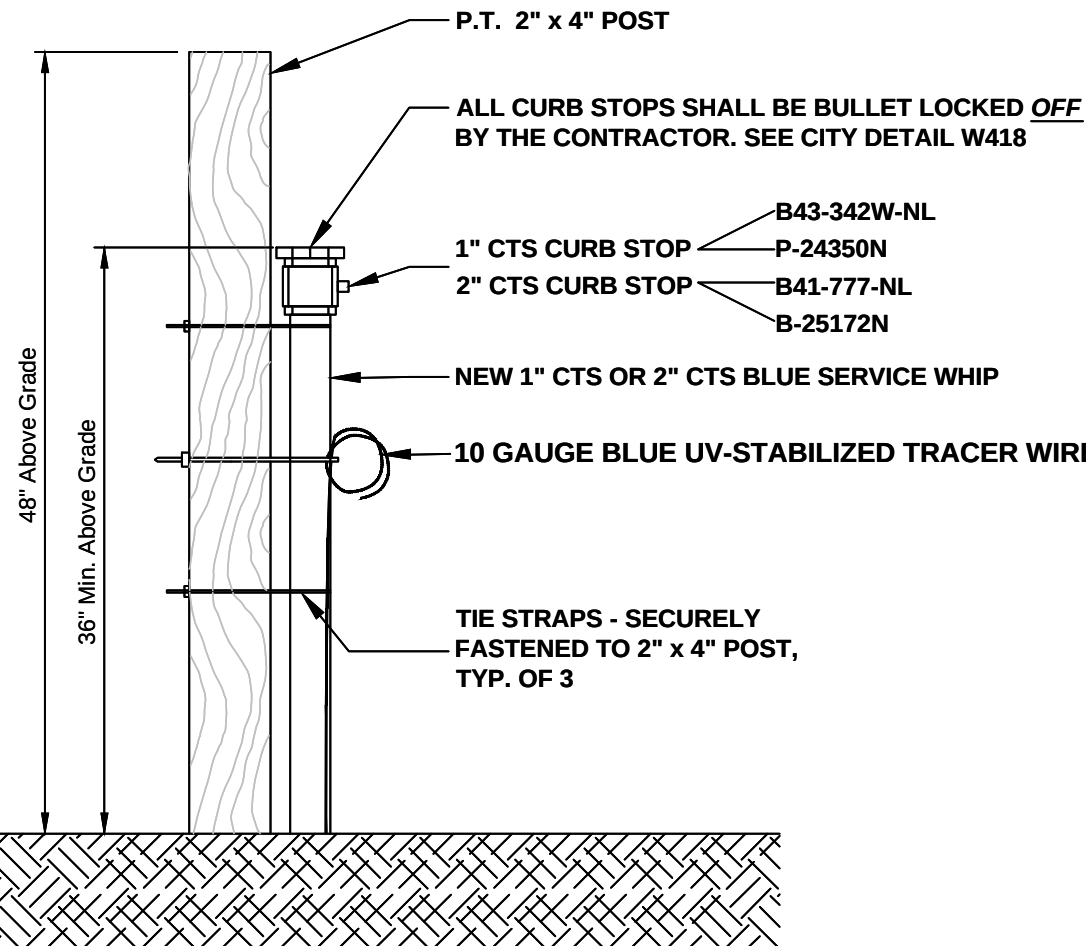
3/4"R	3/4"	1"R	1"	1-1/2"	2"
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DATE: 11/07/2022

VALVE FOR WATER AND RECLAIM SERVICE LINE

W425

City of DeLand - Standard Details

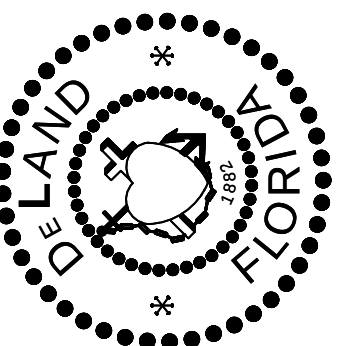


DATE: 11/07/2022

NEW POTABLE SERVICE WHIP

W426

City of DeLand - Standard Details



CITY OF DELAND, FLORIDA

1102 S. GARFIELD AVENUE, DELAND, FLORIDA 32724

TITLE:

WATER SYSTEM DETAILS (Sheet 3)

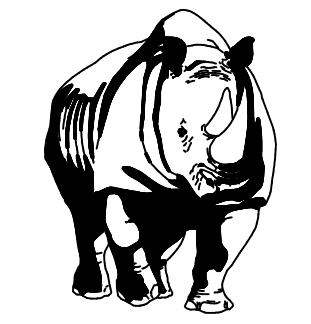
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DATE: 11/07/2022

DRAWN BY: ERIC SAMPSON

CHECKED BY: NAME

FILE: drive letter/details locations



MADDEN

CIVIL ENGINEERS

431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

CITY DETAILS

FOR

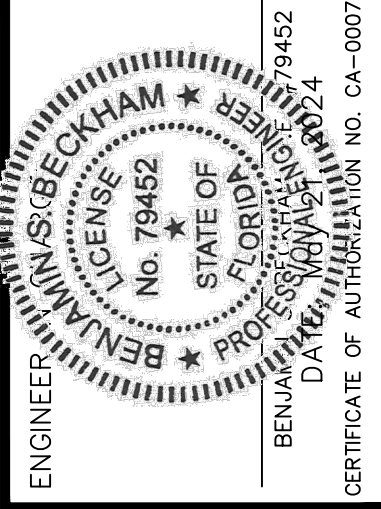
SUMMIT PLACE

CITY OF DELAND

FLORIDA

DR HORTON

10192 DOWDEN ROAD
ORLANDO, FL 32832
(407) 850-5200



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DATE

REVISIONS

JOB #

21886

DATE

02/20/23

SCALE

N/A

DESIGNED BY

JTT

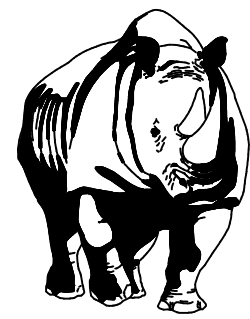
DRAWN BY

JTT

APPROVED BY

BSB

C912



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CIVIL ENGINEERS

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CITY DETAILS

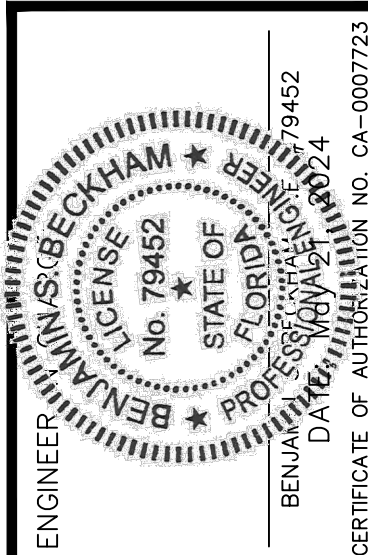
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SUMMIT PLACE

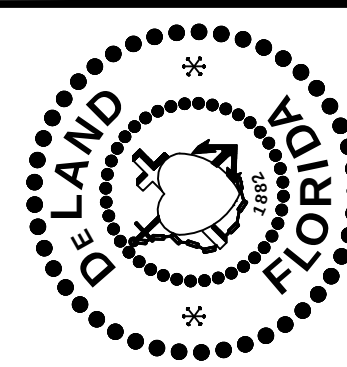
CITY OF DELAND

DR HORTON

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C913

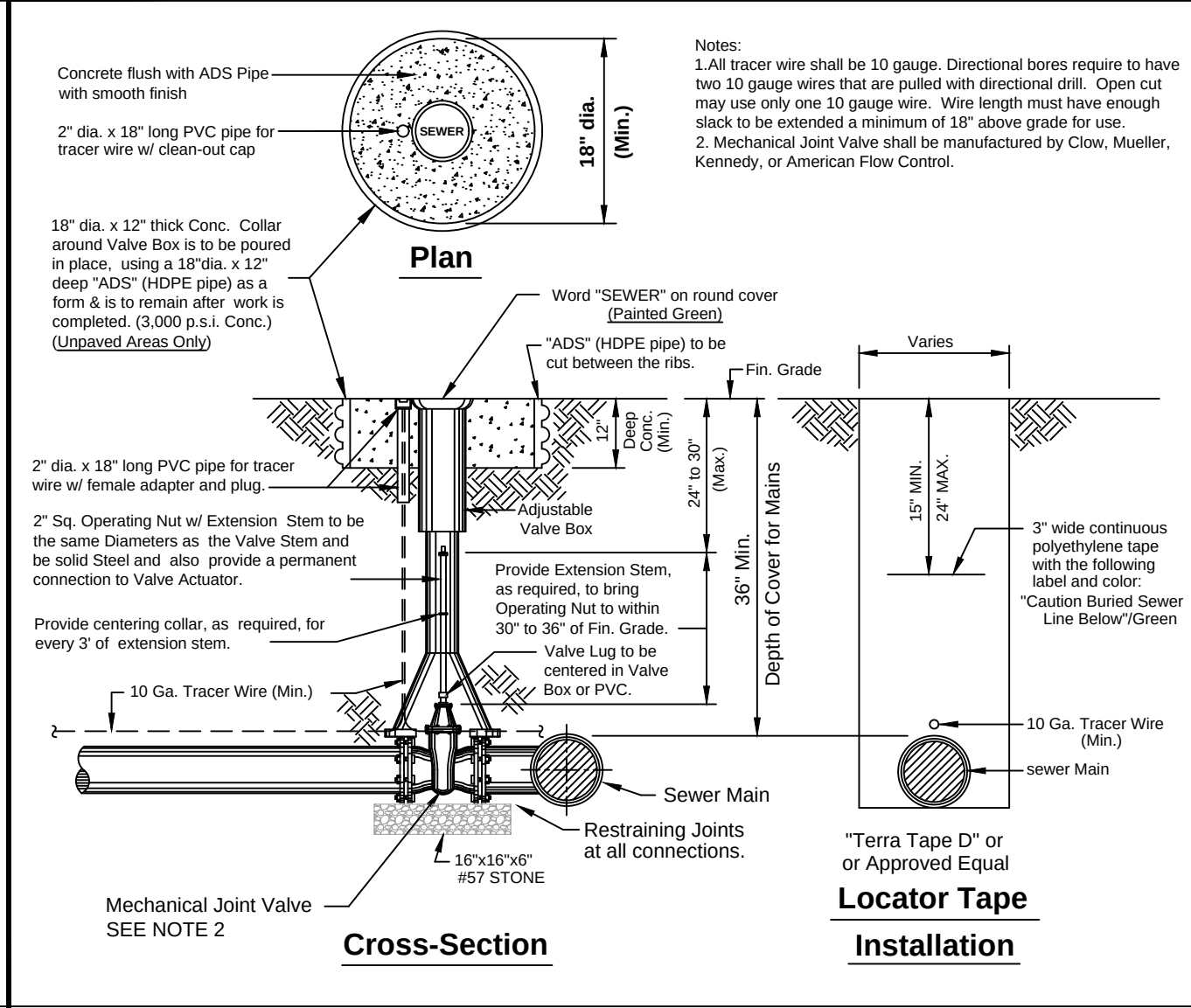
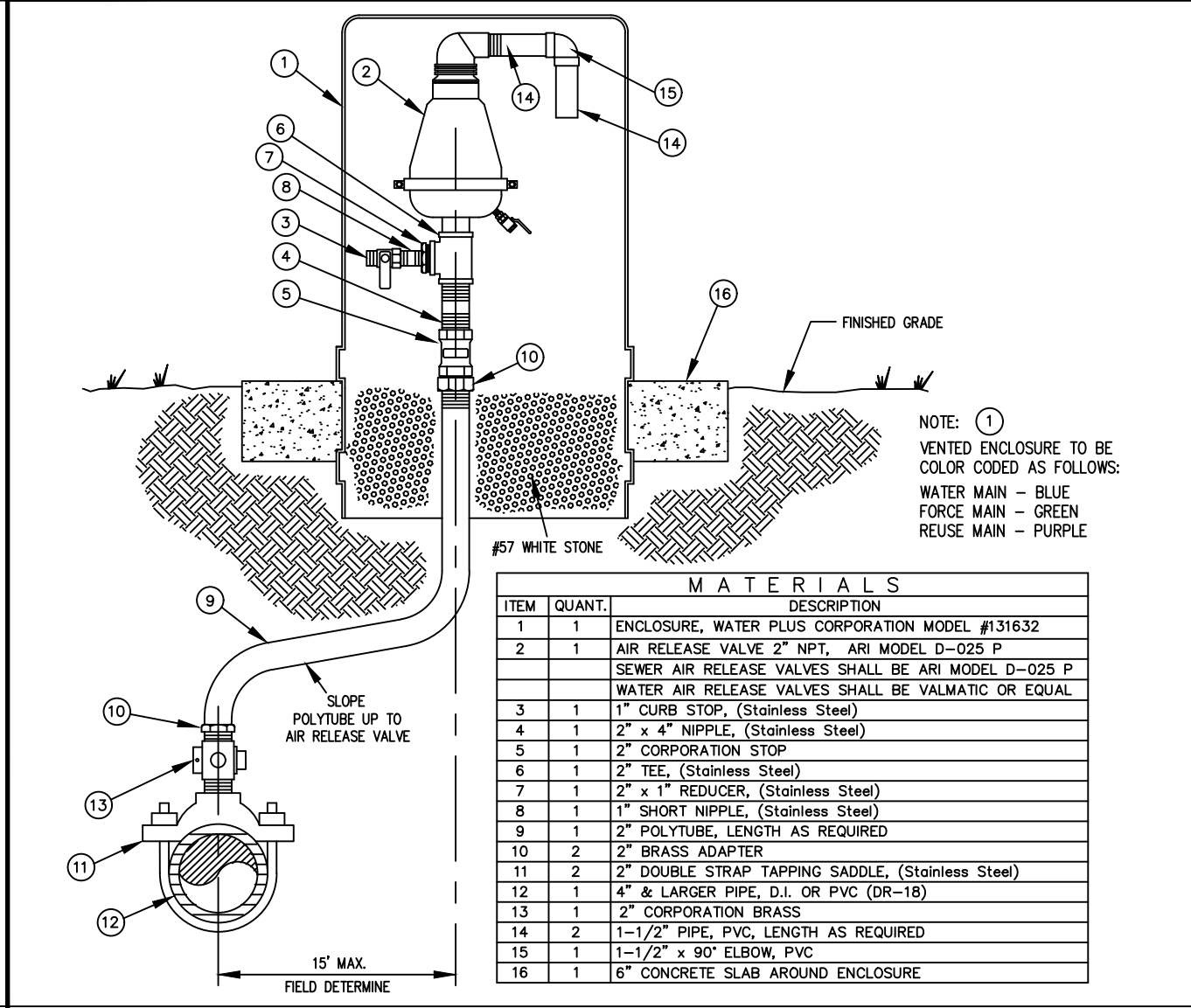
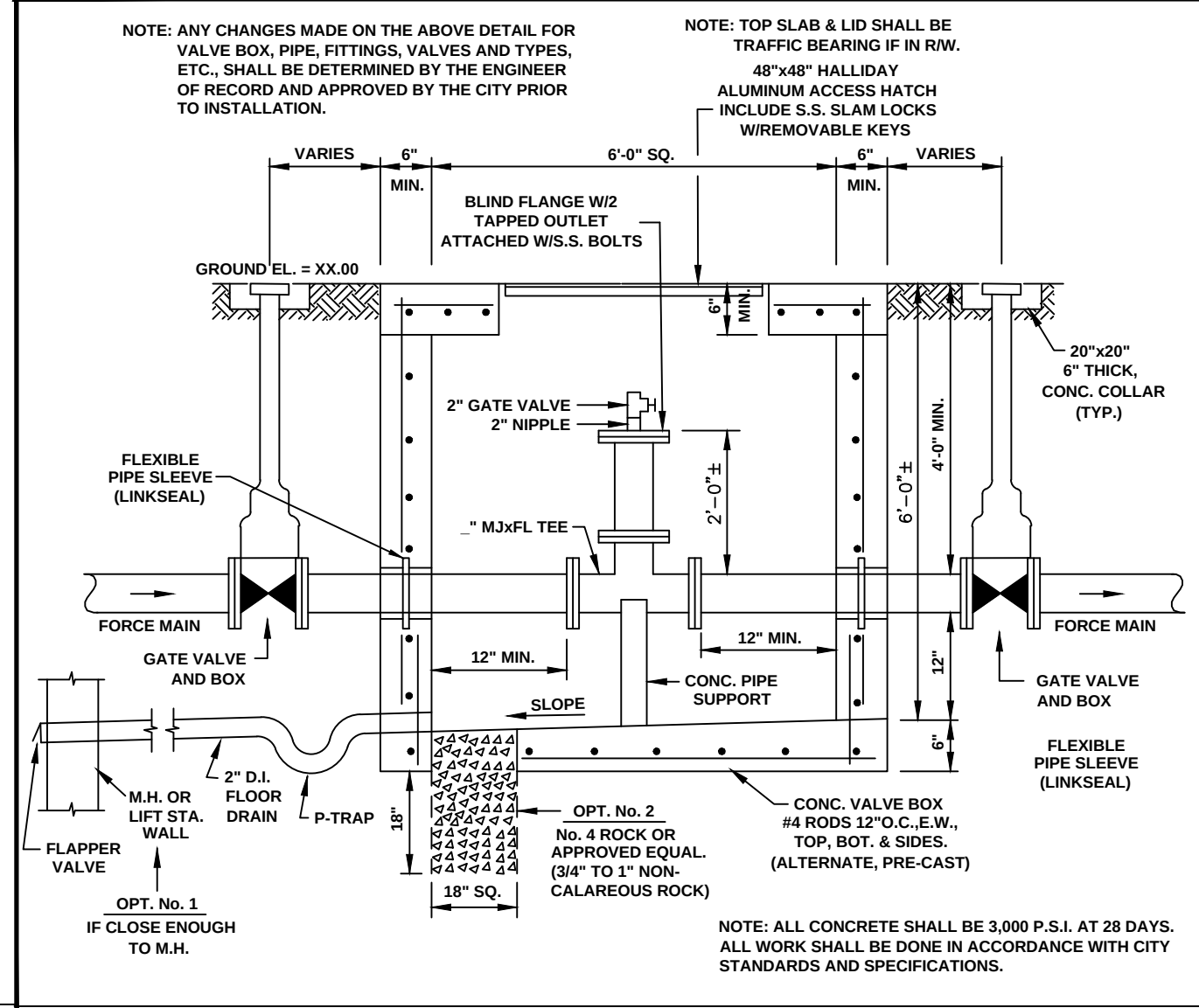
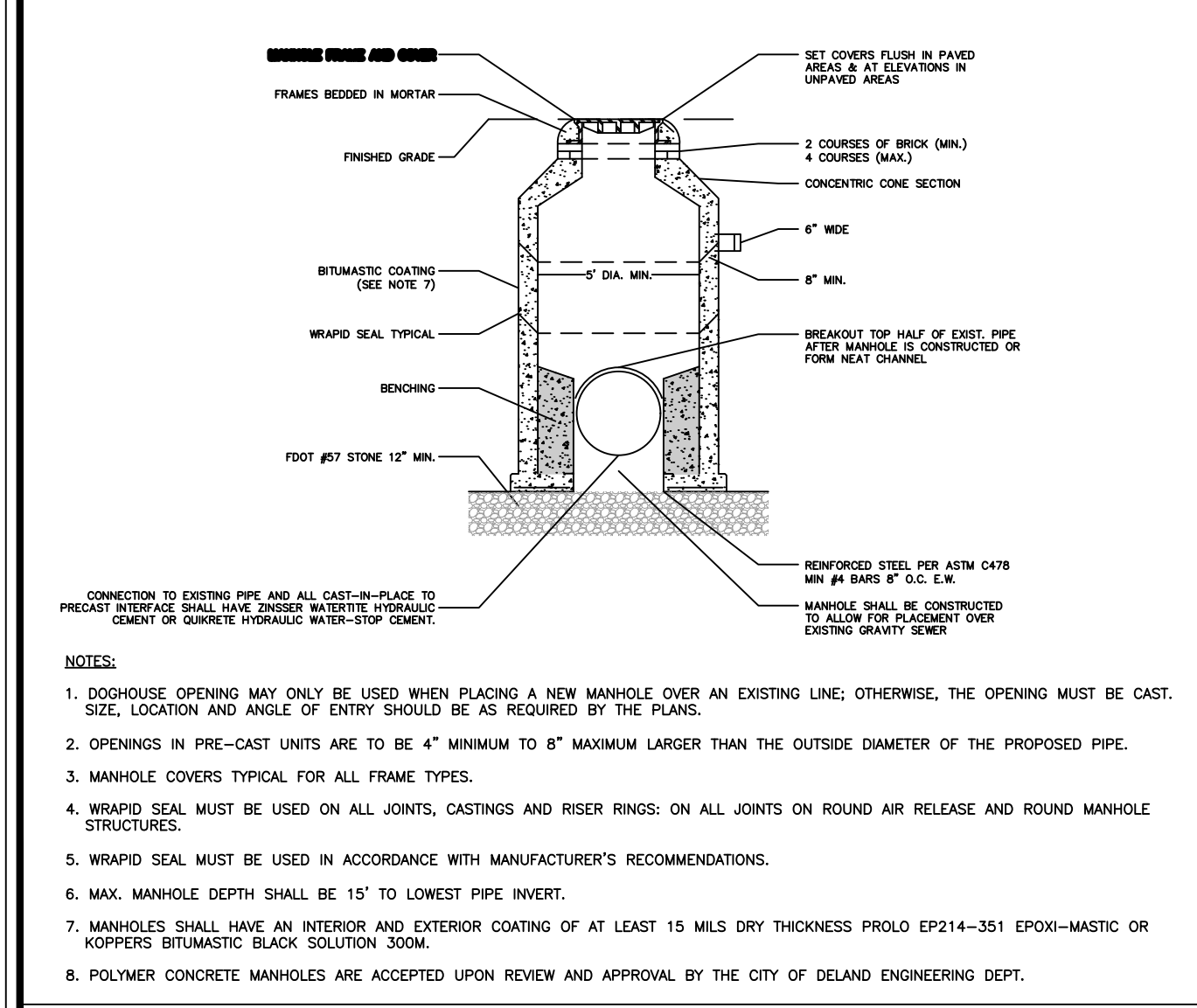
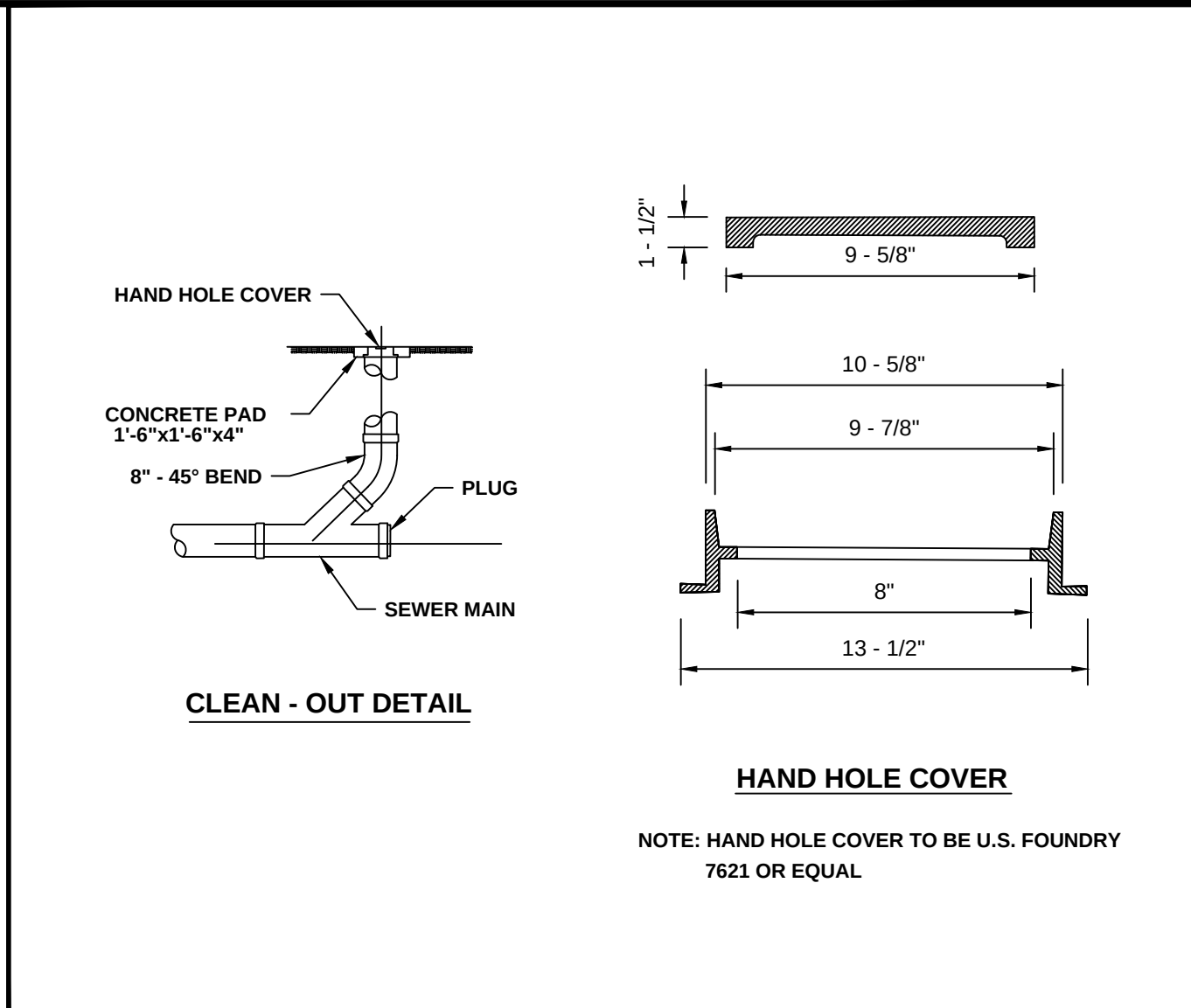
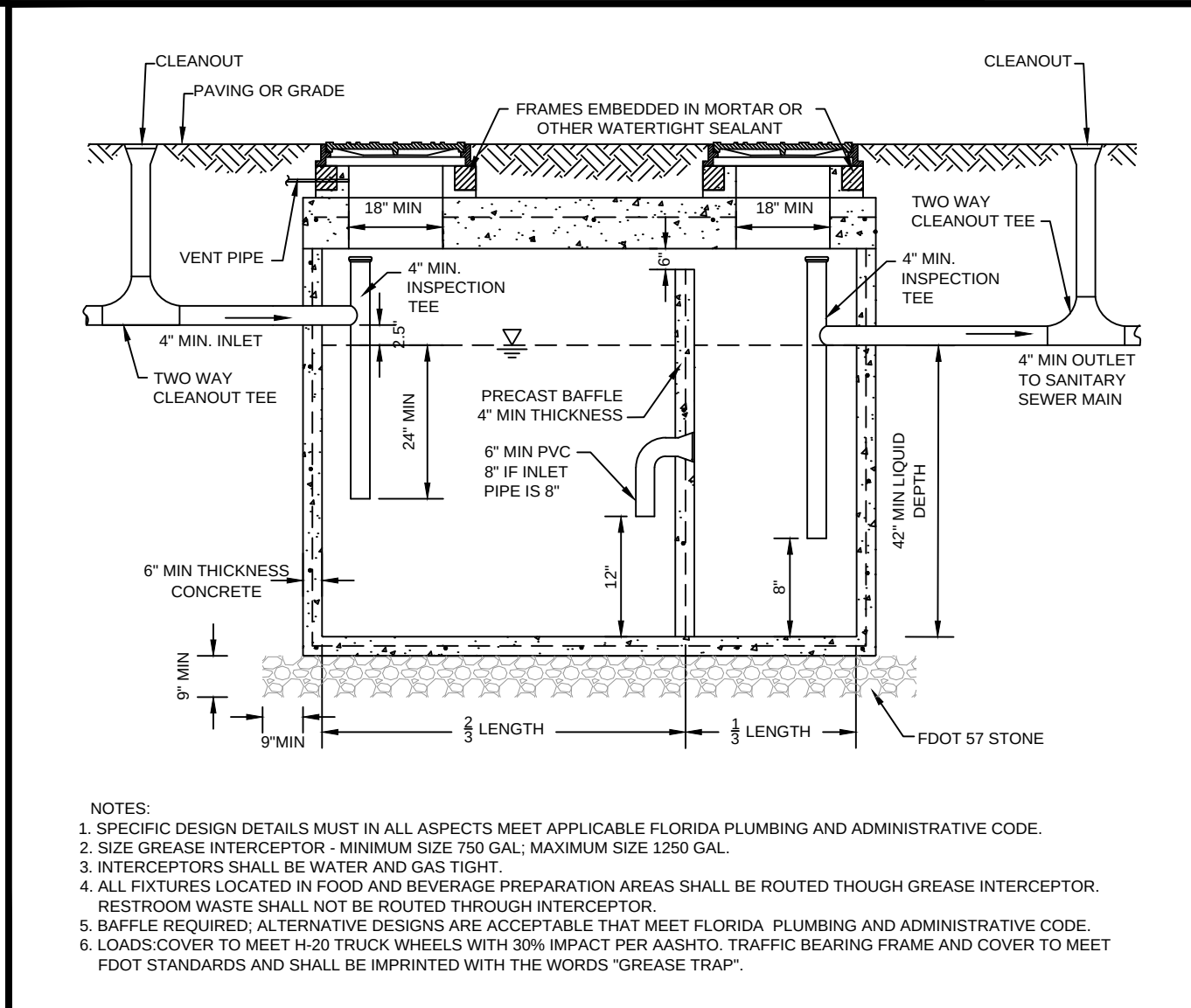
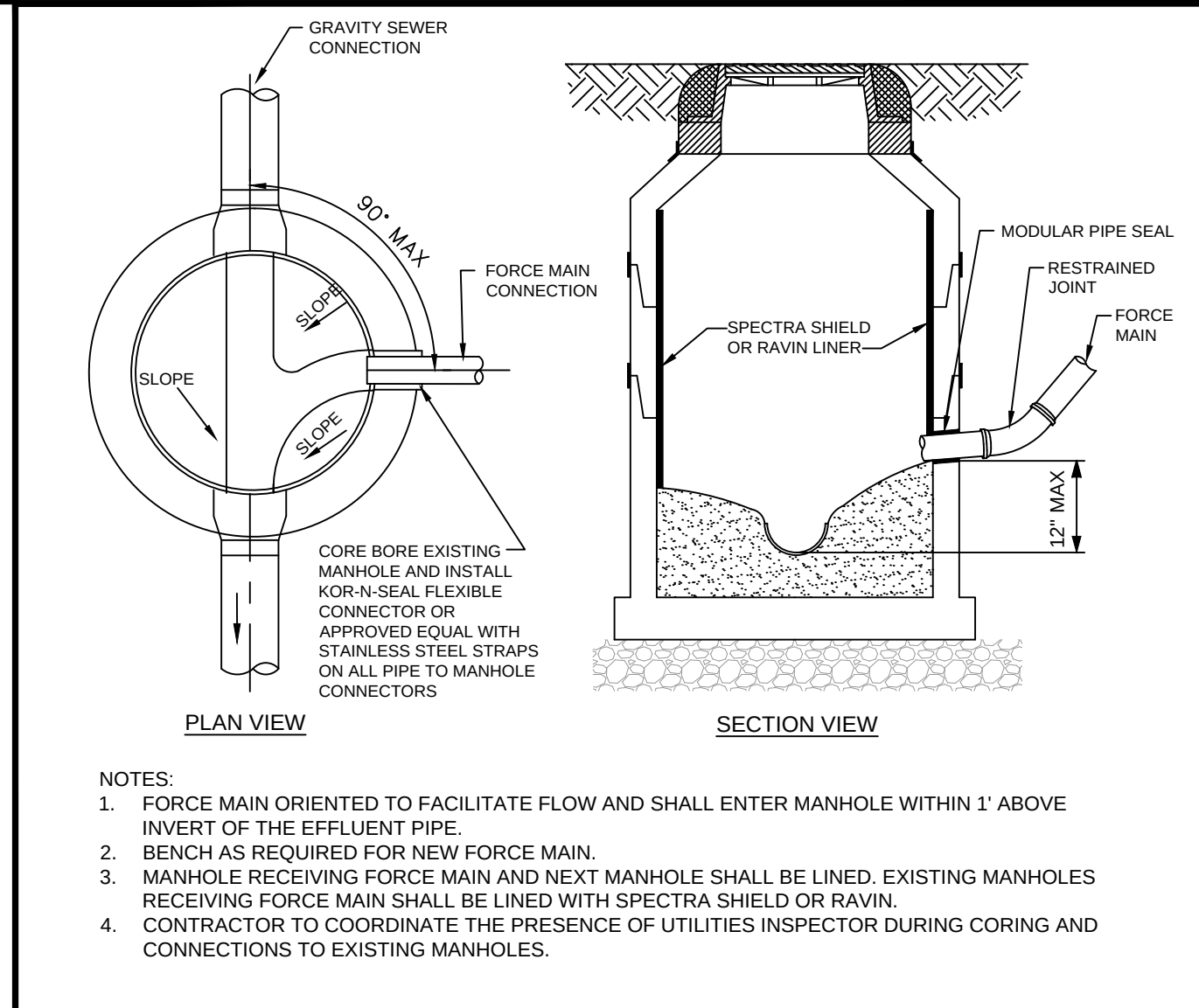
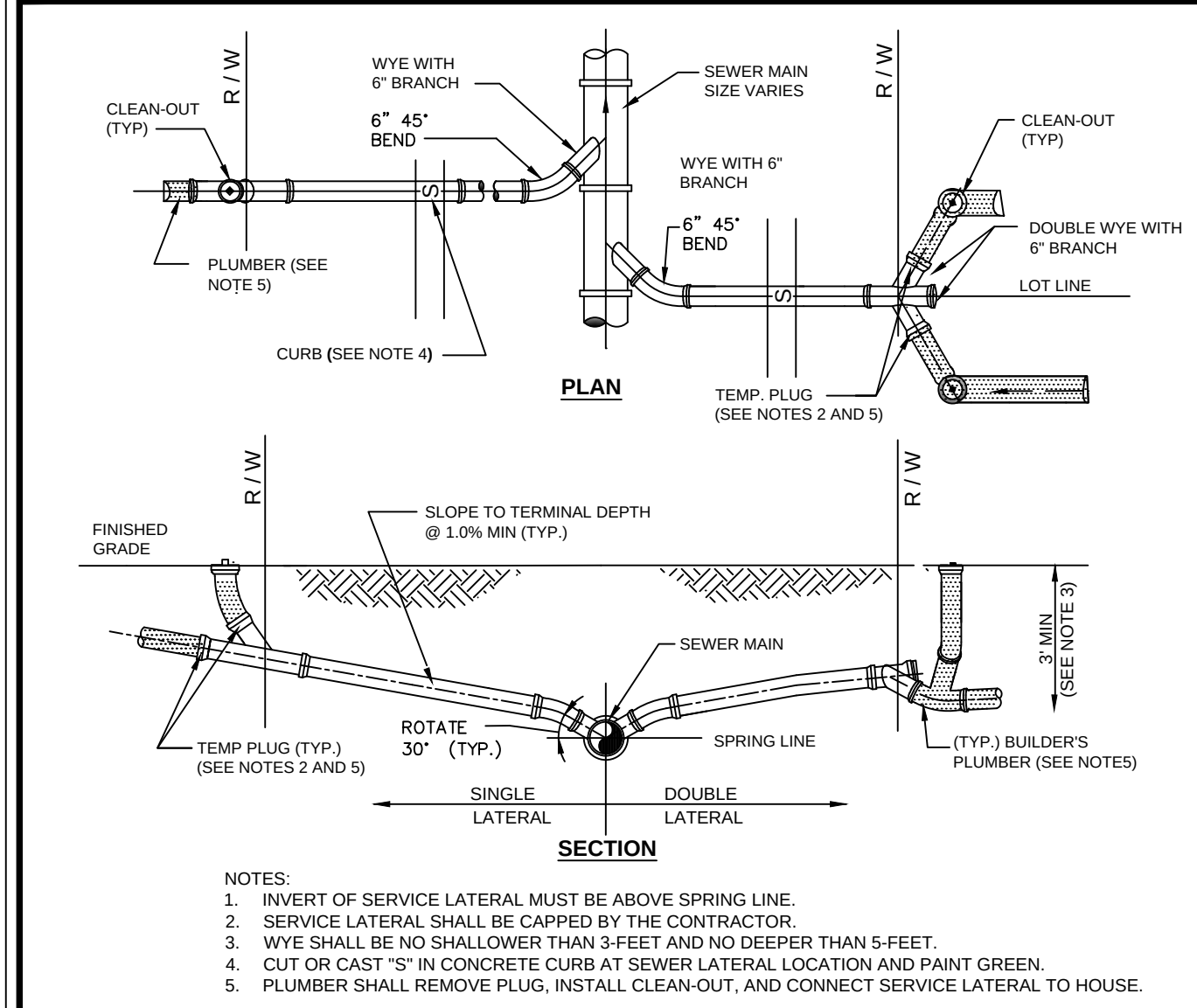
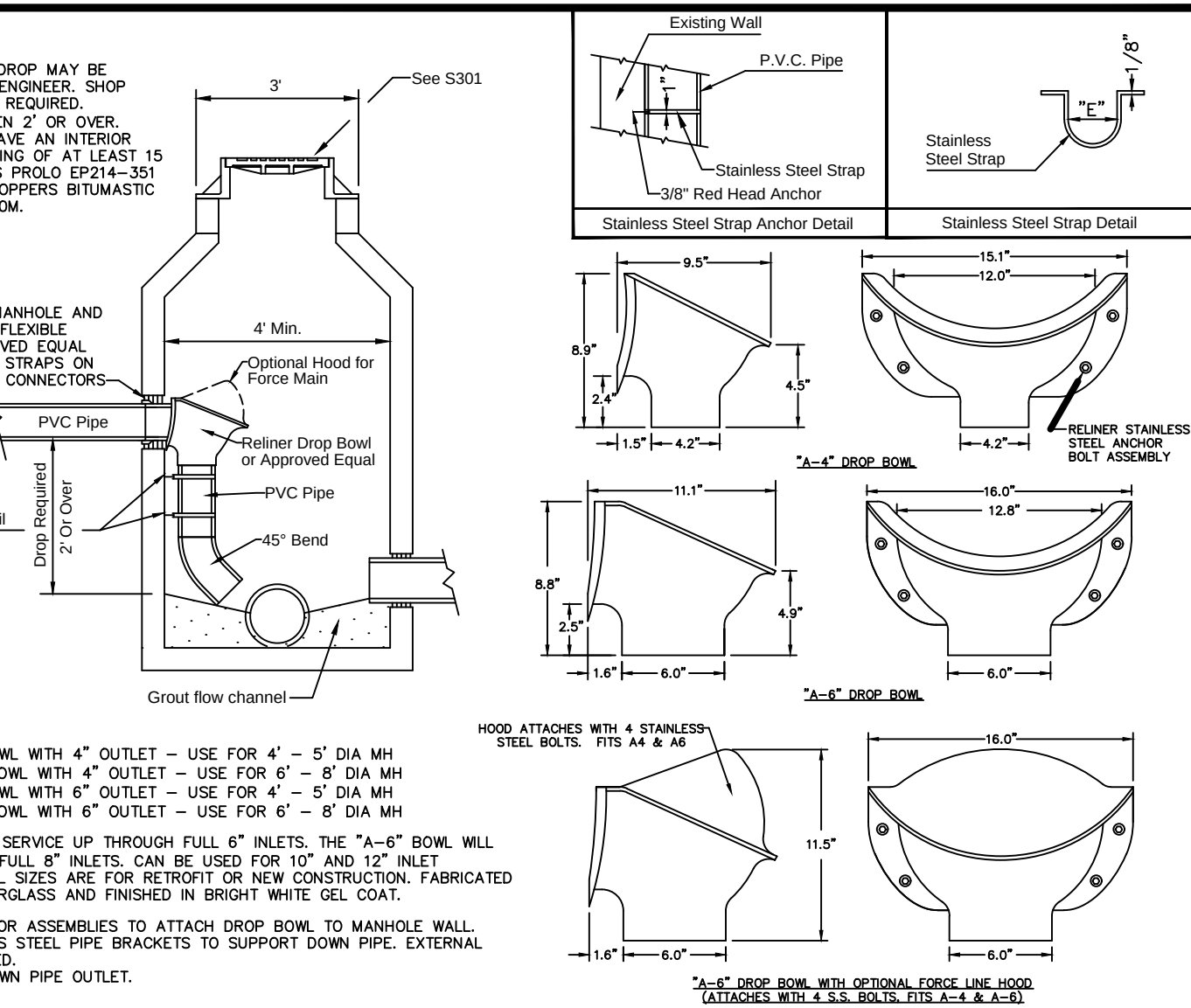
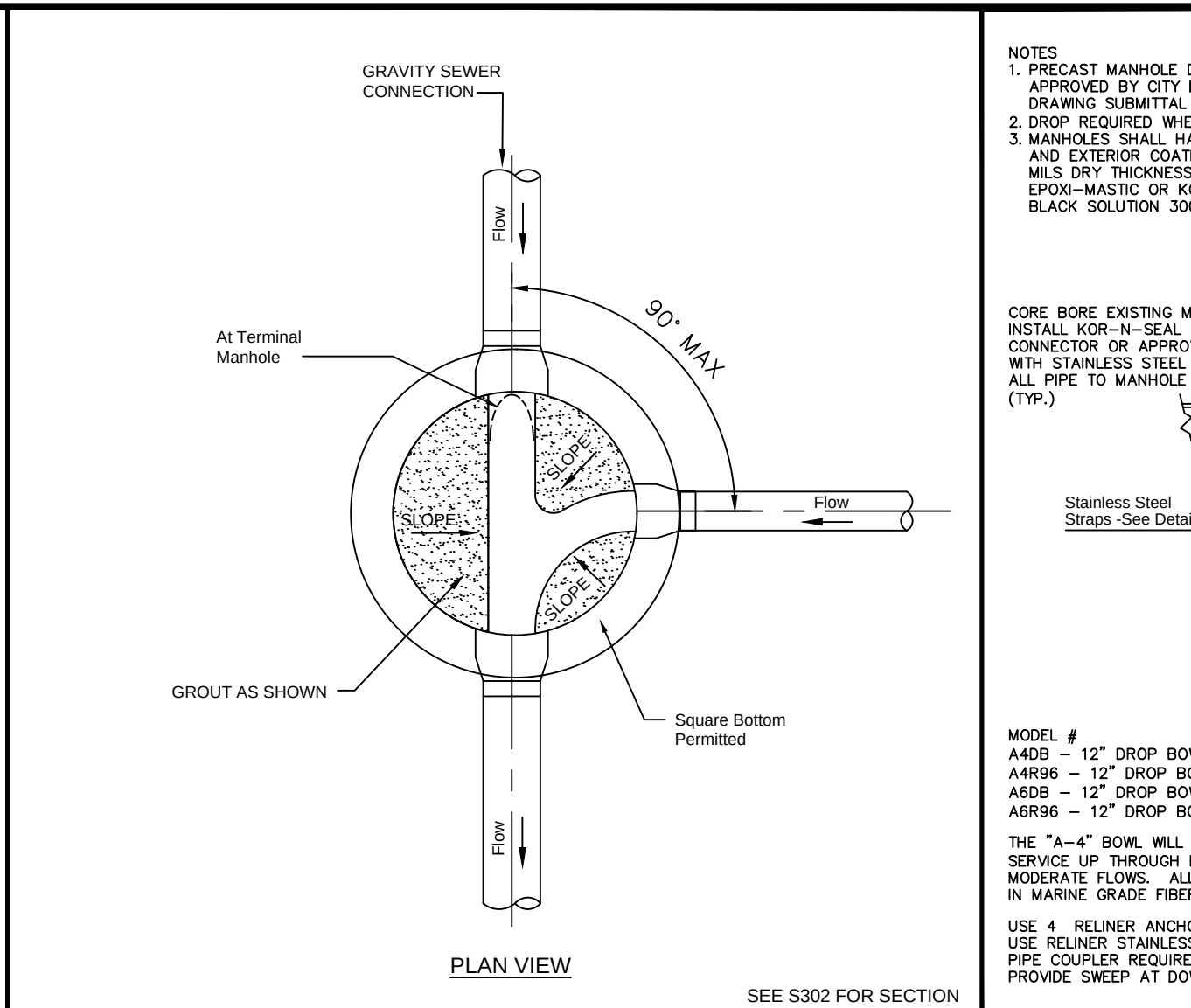
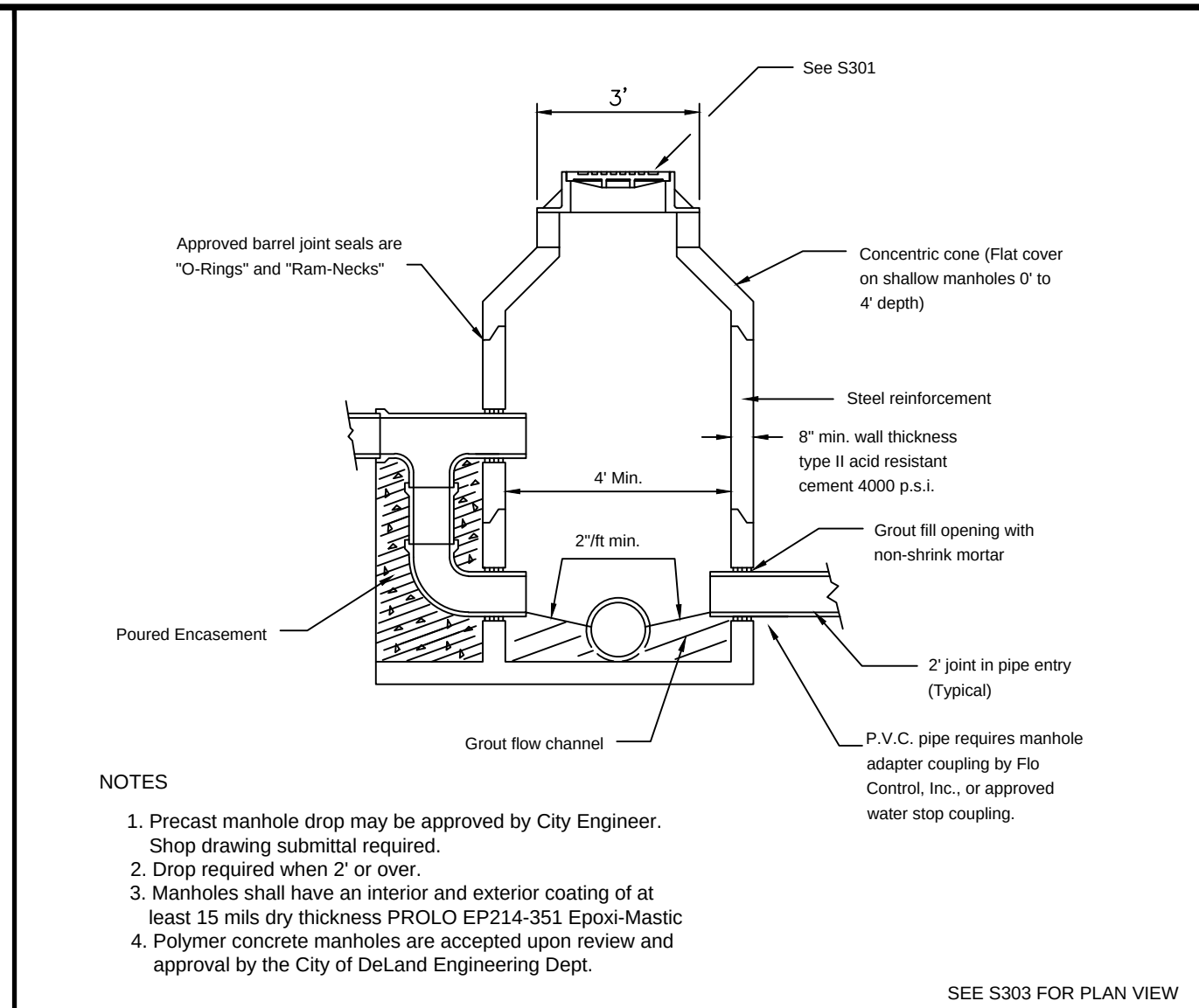
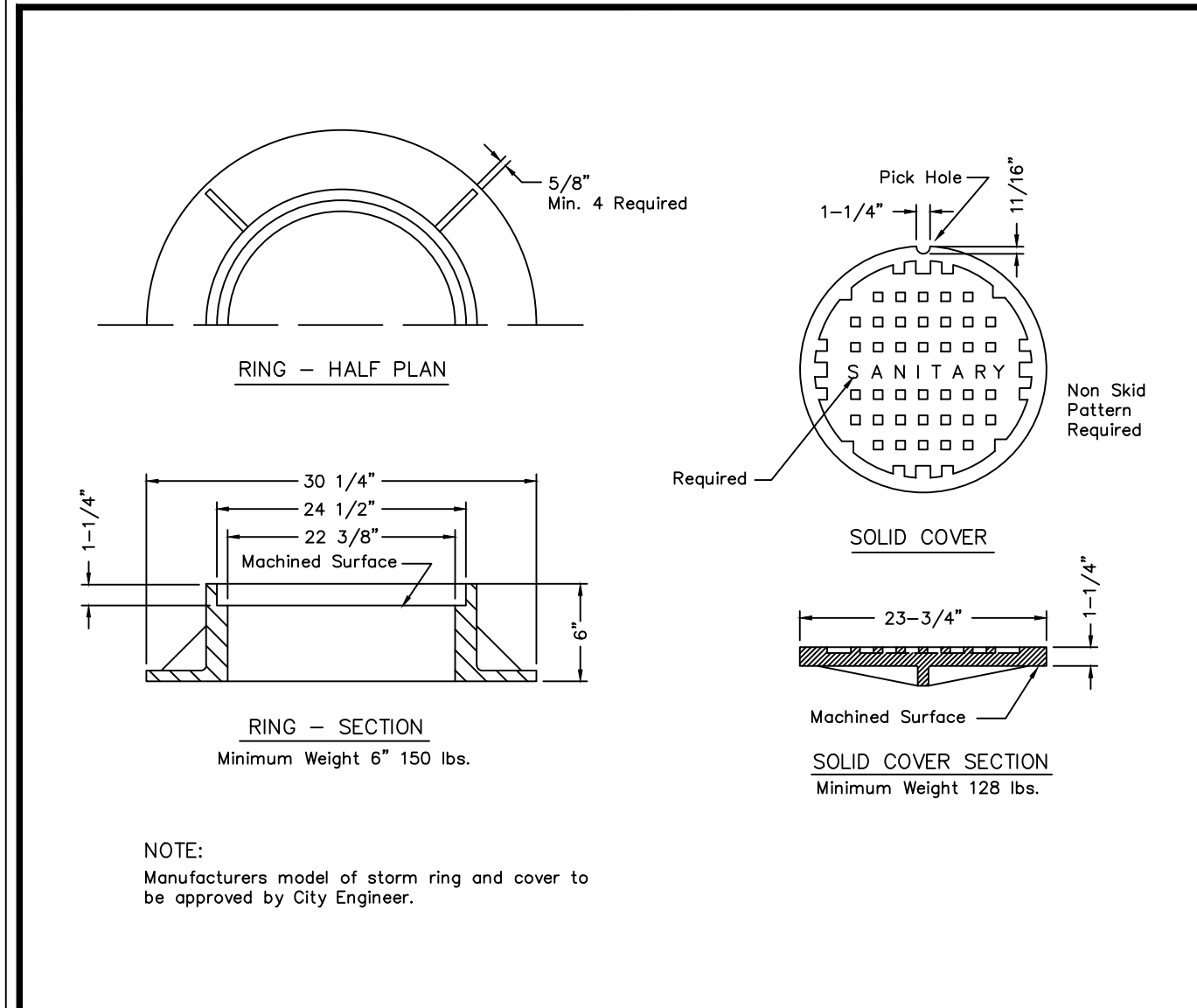


CITY OF DELAND, FLORIDA
1102 S. GARFIELD AVENUE, DELAND, FLORIDA 32724

DATE: 11/07/2022
CHECKED BY: NAME
SCALE: NOT TO SCALE
DRAWN BY: ERIC SAMPSON

SANITARY DETAILS

PAGE 2 OF 5



1. VACUUM PUMP AND FLOAT CHECK VALVE
2. CHECK VALVE
3. CW OR CCW IMPELLER
4. PARKER SOLENOID VALVE (25 PSI)
5. MECHANICAL SEAL
6. SONIC START VACUUM DOME HOUSING
7. SONIC START REPLACEMENT PRIME SENSOR

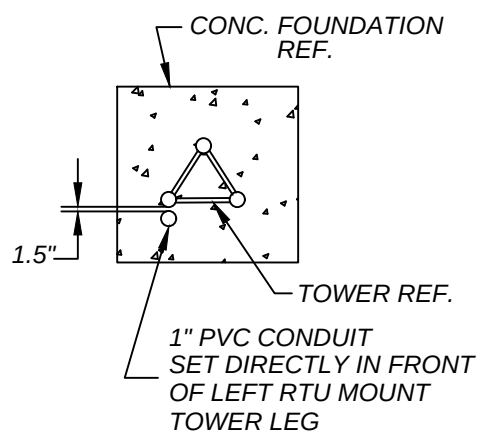
MOTORS:

THE PUMP MOTORS SHALL BE VERTICAL, SOLID SHAFT, NEMA B-FRAME, SQUIRREL-CAGE INDUCTION TYPE. THE PUMP MOTORS SHALL HAVE 50 CYCLE, 480 VOLT ELECTRIC CURRENT. THEY SHALL HAVE CLASS F INSULATION, INSULATION TEMPERATURE SHALL, HOWEVER, BE LIMITED TO CLASS B. THE MOTORS SHALL HAVE NORMAL STARTING TORQUE AND LOW-STARTING CURRENT, AS SPECIFIED BY NEWMAN. THE MOTORS SHALL BE PROTECTED AGAINST OVERHEATING BY THERMAL PROTECTION. THE AIR CIRCULATION BY INTEGRAL FAN. OPENINGS FOR VENTILATION SHALL BE UNIFORMLY SPACED AROUND THE FRAME. LEADS SHALL BE TERMINATED IN CAST CONNECTION BOX AND SHALL BE COVERED BY A LOCKED COVER.

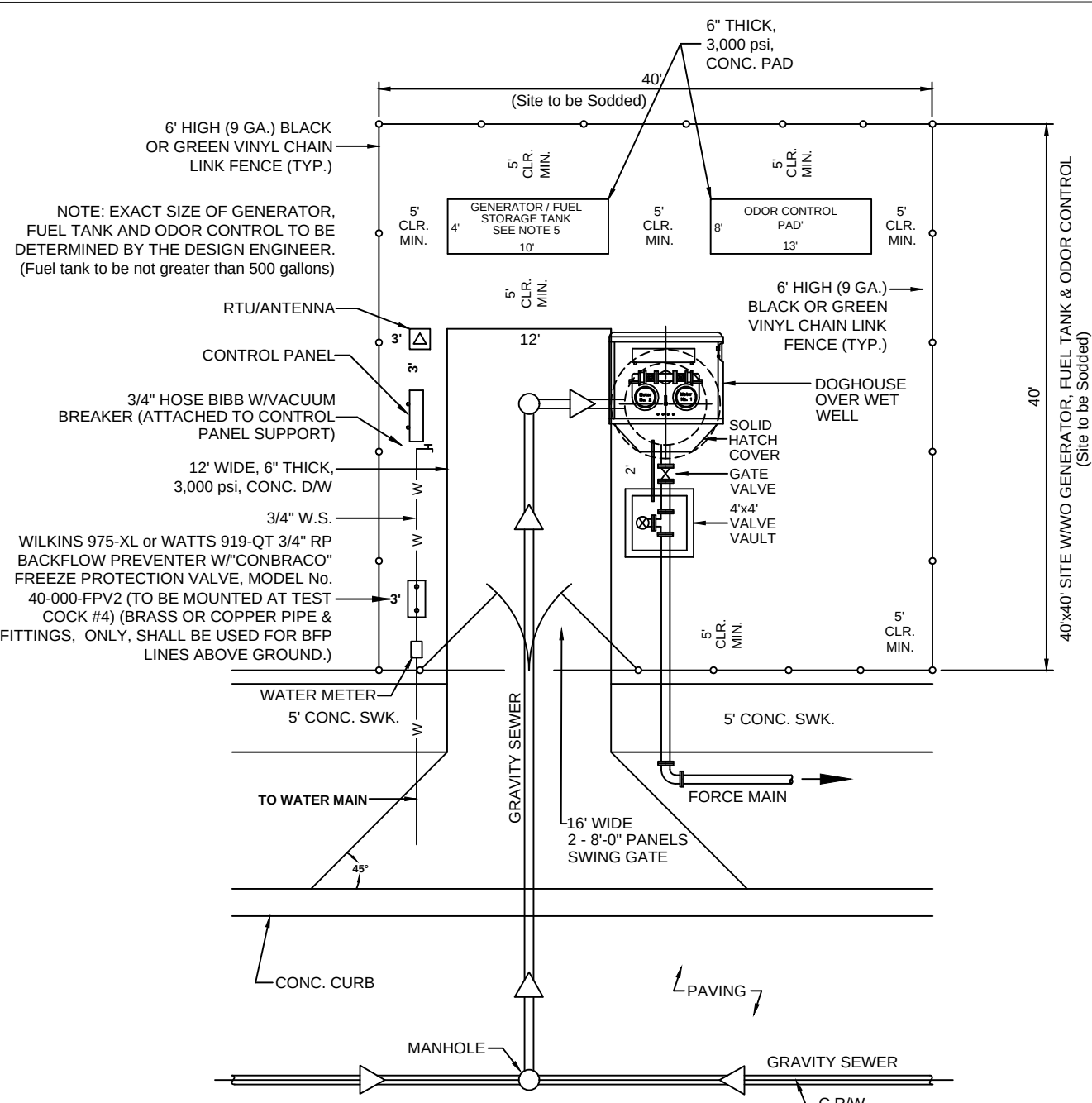
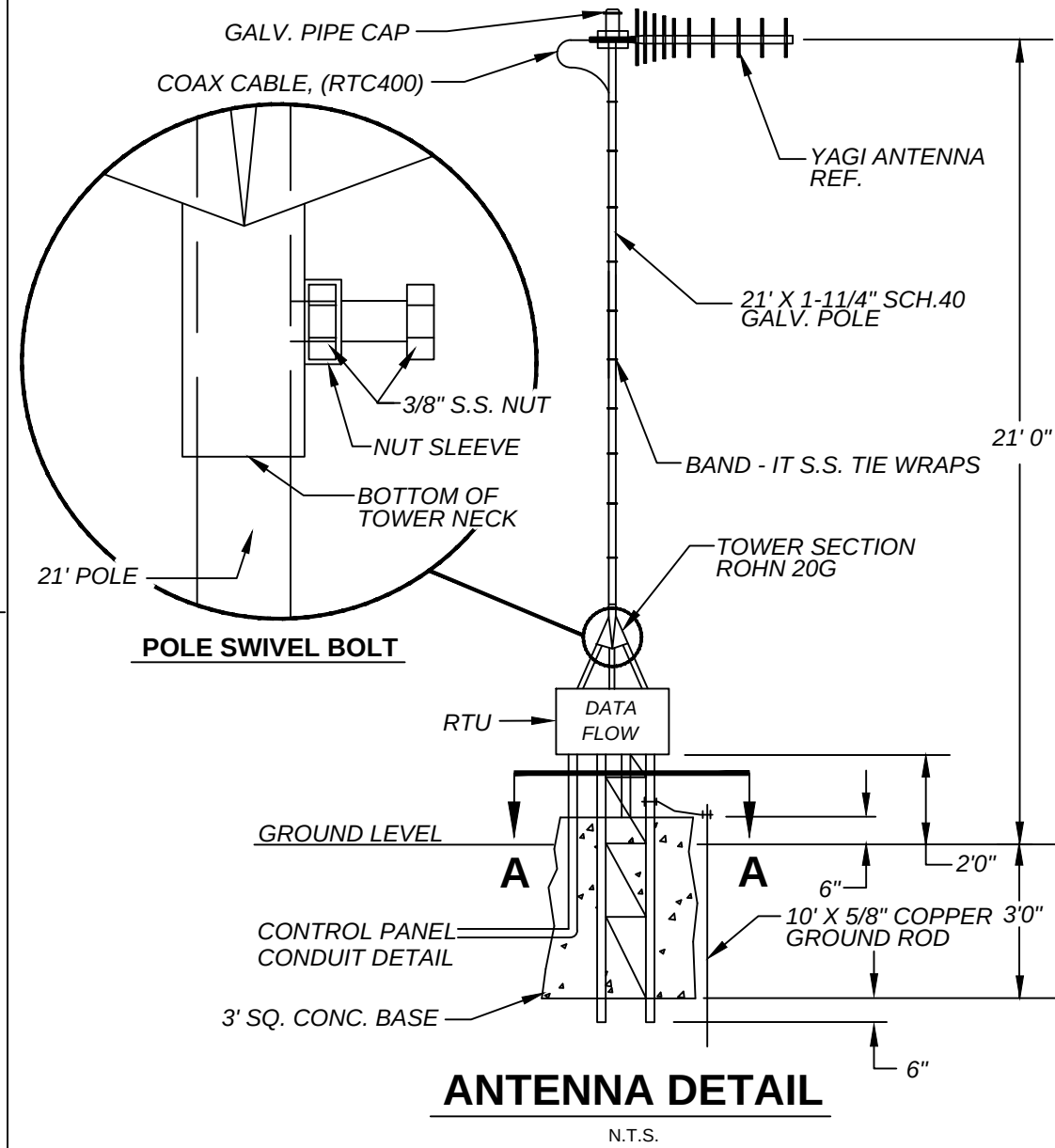
THE MOTORS SHALL HAVE 115 SERVICE FACTOR. THE SERVICE FACTOR SHALL BE RESERVED FOR THE OWNER'S PROTECTION. THE MOTORS SHALL NOT BE OVERLOADED BEYOND THEIR NAMEPLATE OR EXCEED THE SERVICE FACTOR. THE MOTORS SHALL BE OPERATED AT THE SPEED INDICATED ON THE NAMEPLATE. THE MOTORS SHALL BE OPERATED AT THE HEAD IN THE OPERATING RANGE AS SPECIFIED UNDER OPERATING CONDITIONS.

THE MOTOR SHAFTS SHALL BE CENTERED, HAVING A MAXIMUM MISALIGNMENT OF 0.005". THE MOTOR SHAFTS SHALL NOT EXCEED 0.005".

THE MOTORS SHALL BE EQUAL TO OR EXCEED THE DIAMETER SPECIFIED UNDER MAIN PUMPS AND BEARING ASSEMBLY. THE MOTORS SHALL BE MOUNTED TO THE TOP OF THE IMPELLER HUB BY A BEARING CAP. THE BEARING CAP SHALL BE PROVIDED TO HOLD THE BOTTOM MOTOR BEARING IN A FIXED POSITION. BEARING HOUSINGS SHALL BE PROVIDED WITH FITTING FOR LUBRICATION AS WELL AS PURGING. THE BEARING HOUSINGS SHALL BE PROVIDED WITH FITTING FOR OILING. THE HOUSINGS SHALL BE CAPABLE OF SUPPORTING THE ENTIRE WEIGHT OF THE PUMP AND MOTOR.



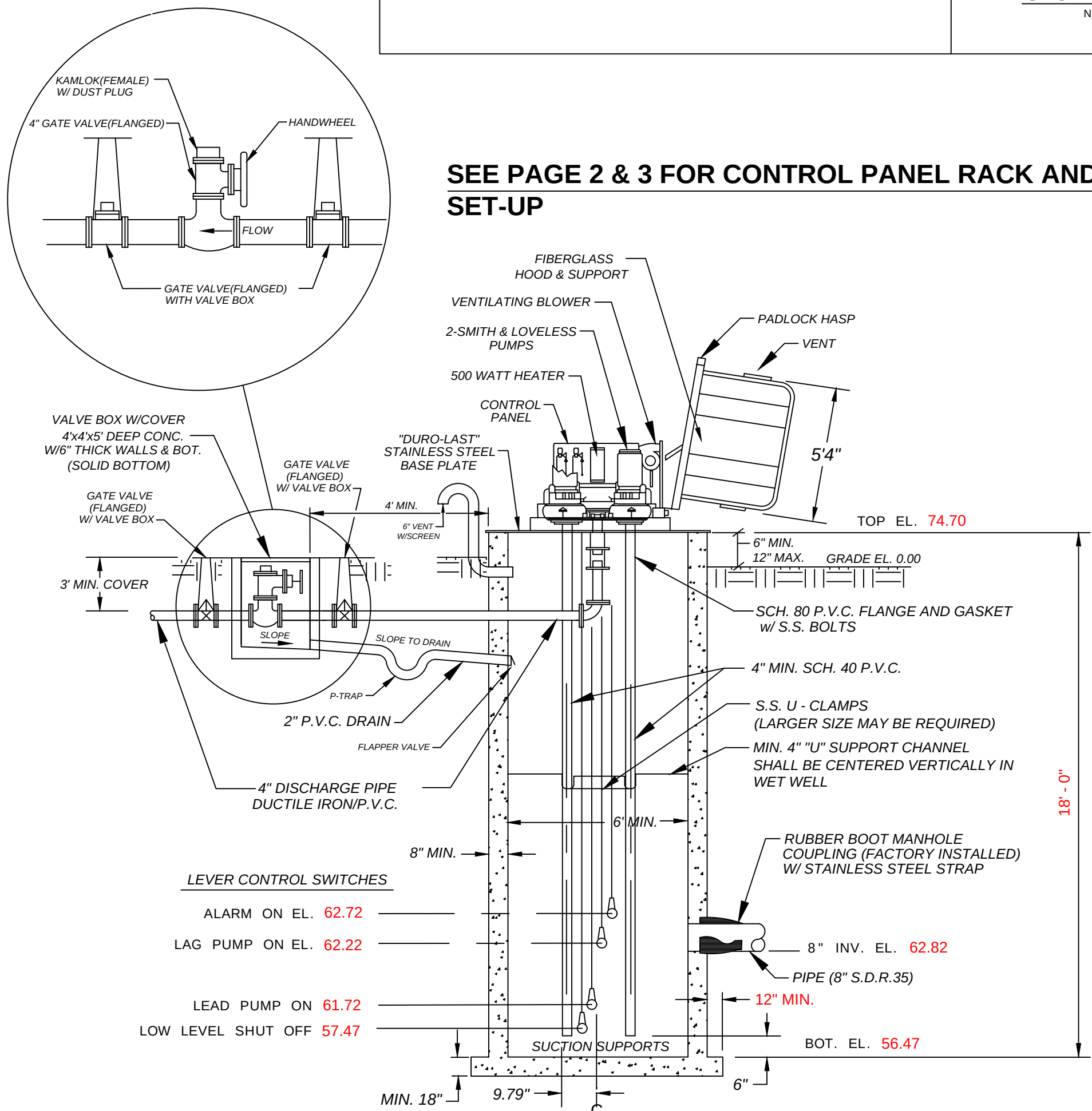
CONDUIT DETAIL
SECTION "A-A"
N.T.S.



NOTES:

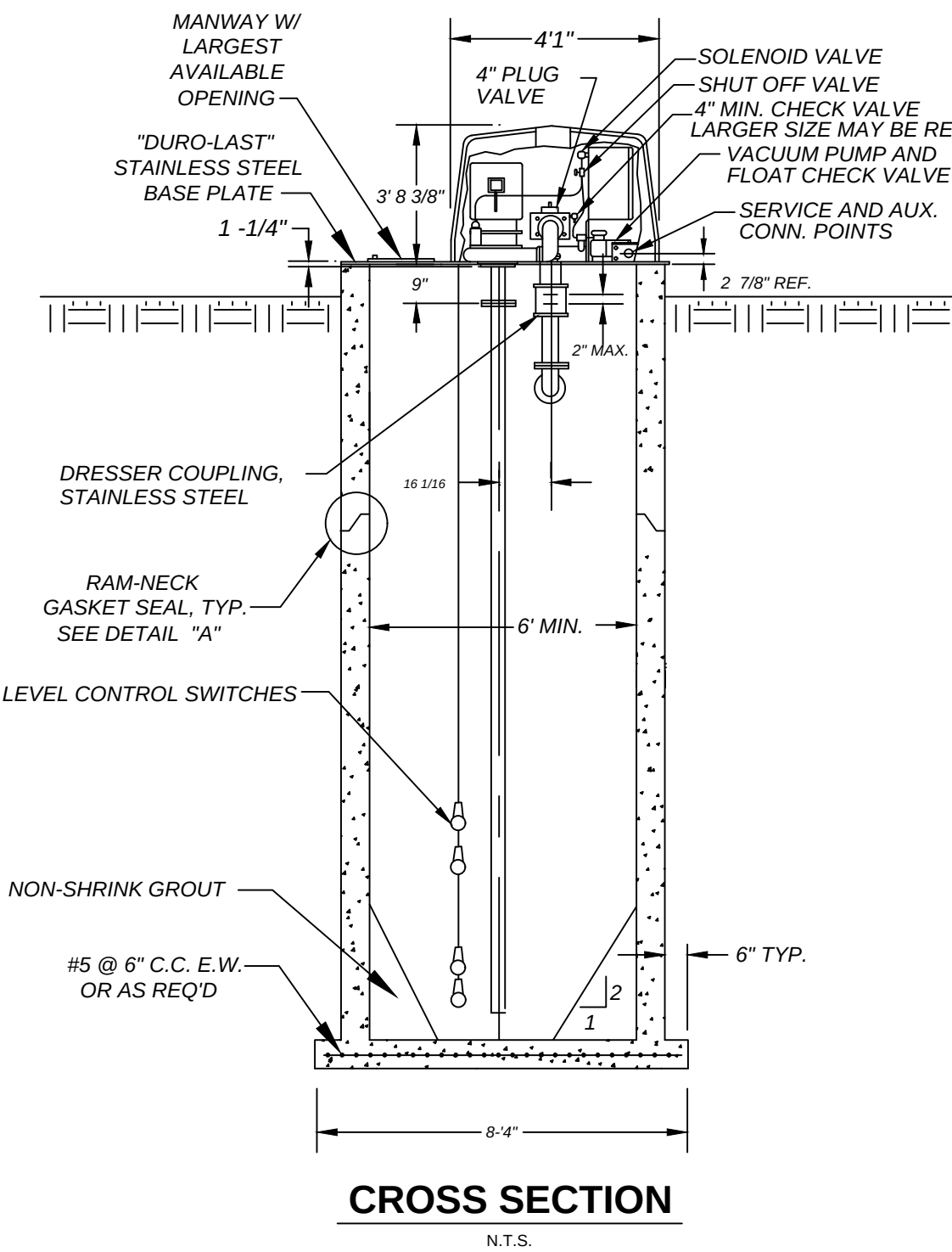
1. MINIMUM 20'-0" ACCESS DRIVEWAY FROM EDGE OF PAVEMENT TO THE GATE SHALL BE PROVIDED ON NON-RESIDENTIAL ROADS.
2. MINIMUM DISTANCE BETWEEN FENCE AND ALL INSTALLED EQUIPMENT SHALL BE 5 FEET UNLESS OTHERWISE NOTED.
3. ALL WORK SHALL BE PER CITY STANDARDS & SPECIFICATIONS.
4. BRASS OR COPPER PIPE & FITTINGS, ONLY, SHALL BE USED FOR HOSE BIBBS AND ALL WATER LINES ABOVE GROUND.
5. CITY ONLY ACCEPTS BLUE STAR, FLORIDA DETROIT DIESEL, CATERPILLAR GENERATORS OR KOHLER.
6. POLYMER CONCRETE WET WALLS ARE ACCEPTED UPON REVIEW AND APPROVAL BY THE CITY OF DELAND ENGINEERING DEPT.

LIFT STATION SITE PLAN

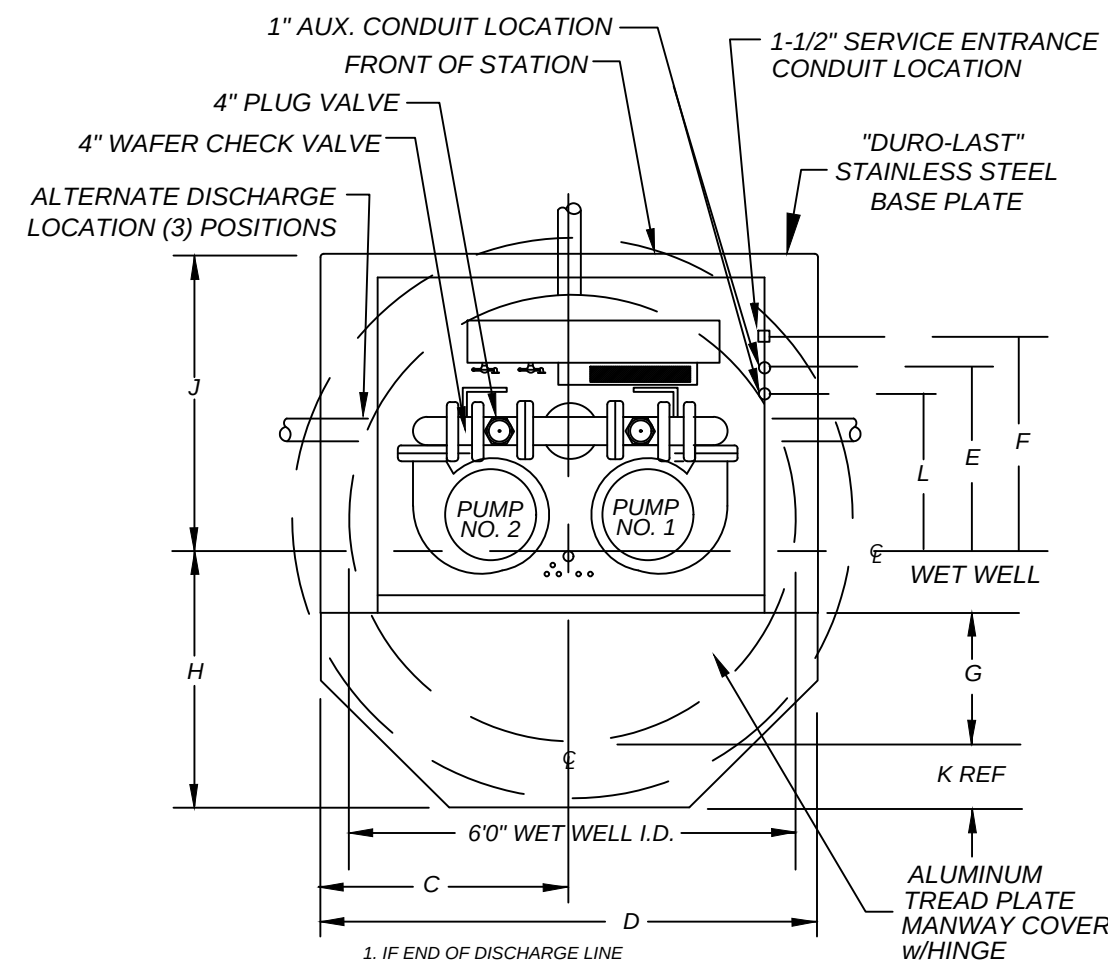


SECTIONAL ELEVATION
N.T.S.

1. ALL MAJOR COMMERCIAL OR RESIDENTIAL PROJECTS MUST PROVIDE AN ON-SITE GENERATOR OR CONTRIBUTE TO THE GENERATOR FUND.
2. GENERATOR MAKE SHALL BE A BLUE STAR, FLORIDA DIESEL (DELOM), OR CATERPILLAR.
3. DIESEL FUEL TANKS WITH THREE DAY VOLUME (200 Gallon Maximum) Storage.
4. AUTOMATIC TRANSFER SWITCH SHALL BE REQUIRED.
5. GENERATOR SHALL BE CONNECTED TO THE REMOTE TELEMETRY UNIT FOR MONITORING.
6. NEW SUBDIVISIONS OF 80 HOMES OR MORE WILL BE REQUIRED TO PROVIDE A UNIT W/ GENERATOR.
7. EXISTING 80 HOMES WILL BE REQUIRED TO PROVIDE A PRO RATA SHARE \$450 PER UNIT.
8. POLYMER CONCRETE WET WELLS ARE ACCEPTED UPON REVIEW AND APPROVAL BY THE CITY OF DELAND ENGINEERING DEPT.



CROSS SECTION
N.T.S.



PLAN VIEW

N.T.S.
MACH. CHAMBER
(SHOWN LESS HOOD)

Note:
Air release valves shall be provided at
all high points on force main.

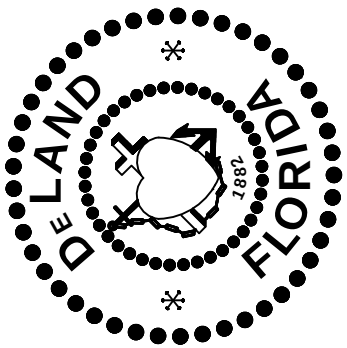
Wet Well (Anti-Floation)
Displacement = 53,844 lbs. Up
Structure = 80,236 lbs. Down

Valve Vault (Anti-Floation)
Displacement = 4,992 lbs. Up
Structure = 6,600 lbs. Down

Index No.
30800
REVISED 5/31/07
REVISED 8/6/08
REVISED 10/12/09
REVISED 4/8/10
REVISED 8/1/13
REVISED 9/2/14
REVISED 5/15/17
REVISED 7/24/18
REVISED 11/05/21

TITLE:

PAGE 3 OF 5



City of DeLand, Engineering Services
1102 S. Garfield Avenue, DeLand, Florida 32724

DATE: 11/07/2022

SCALE: NOT TO SCALE

DRAWN BY: ERIC SAMPSON

SANITARY LIFT STATION

TITL:

FILE: LIFTSTATION.dwg

**** PUMP INFO: PUMPS SHALL BE SMITH & LOVELESS MODEL 4C3B*1, 1,760 RPM, 25 HP, 12.125" IMPELLER.**

**** NOTE: ALL TEXT IN RED HAS BEEN MODIFIED BY MADDEN, MOORHEAD & STOKES, LLC FOR THE PURPOSE OF PROVIDING DIMENSIONAL INFORMATION SPECIFIC TO THIS PROJECT.**

MADDEN

431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

CITY DETAILS

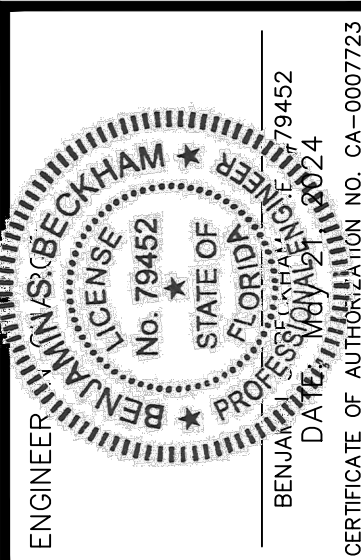
FOR

SUMMIT PLACE

CITY OF DELEAND

DR HORTON

0192 DOWDEN ROAD
ORLANDO, FL 32832
(407) 850-5200



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11	DATE DEVISIONS

JOB # _____ 2108
DATE: _____ 02/20/23
SCALE: _____ N/A
DESIGNED BY: _____ JT
DRAWN BY: _____ JT
APPROVED BY: _____ BSI

C914



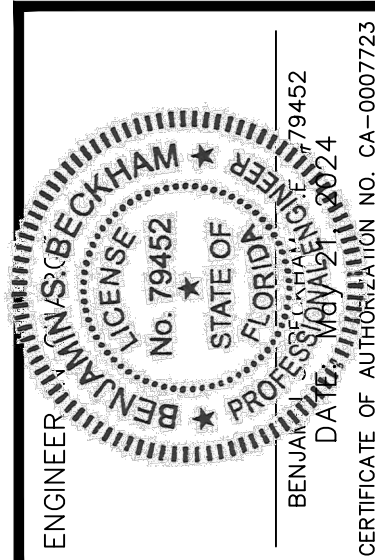
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

CITY DETAILS

FOR

SUMMIT PLACE

DR HORTON
10192 DOWDEN ROAD
ORLANDO, FL 32832
(407) 850-5200



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11	DATE DEVISIONS

JOB # _____ 2108
DATE: _____ 02/20/23
SCALE: _____ N//
DESIGNED BY: _____ JT
DRAWN BY: _____ JT
APPROVED BY: _____ BSI

C915



CONTROL GENERATOR RECEPTACLE PANEL

1. ENCLOSURE : NEMA 4X STAINLESS, 304 GRADE, 1/4 GAUGE, GASKETED, 1/4 BRUSHED FINISH, U.L. AND CSA APPROVED, HASP AND STAPLE FOR PADLOCKING, INSIDE PRINT POCKET, STAINLESS STEEL HINGE, MIN. SIZE 24" x 24" 8" FOR UP TO 15 H.P.
2. MAIN BREAKER : SQUARE D HEAVY DUTY DESIGNED PROPERLY FOR FULL LOAD OF STATION PLUS 25%.
3. EMERGENCY EMBY : SQUARE D HEAVY DUTY DESIGNED PROPERLY FOR FULL LOAD OF STATION PLUS 25%.
4. MECH. INTERLOCK: ALL ALUMINUM AND STAINLESS STEEL POSITIVE MEANS OF LOCKING OFF BREAKER NOT IN USE. THE BREAKERS WILL PROTRUDE THROUGH INNER DOOR.
5. RECEPTACLE: RUSSELL STOLL JRS1044FR (230 VOLT ONLY), MELTRIC PART #37-98047 (480 VOLT ONLY)
6. ANGLE ADAPTER: RUSSELL STOLL J3AB-10, 20 DEG. ADAPTER
7. LIGHTNING ARRESTOR: HEAVY DUTY, SQUARE D PIN SDSA-8850
8. PHASE MONITOR: DIVERSIFIED PIN SLA-230-ASA, 8 PIN WITH N.O. AND N.C. CONTACTS WIRE TO TERMINAL FOR RTU EQUIPMENT.
9. HIGH WATER ALARM: RED, LEXAN, WIND EXTERNAL SCREWS.
10. HIGH WATER RELAY: 30 AMP, 8 PIN DOUBLE POLE, DOUBLE THROW WIRED TO RTU TERMINAL.
11. ALARM HORN: RED, WHEELCOX PIN 31T-115 MOUNTED TO RED WEATHER PROOF CAST BOX ON EXTERIOR OF ENCLOSURE.
12. ALARM RELAY: SQUARE D OR OMRON, 8 PIN DOUBLE POLE, DOUBLE THROW WIRED TO RTU TERMINAL.
13. ALARM RESET/SL: SQUARE D, WEATHER PROOF MOUNTED ON EXTERIOR OF ENCLOSURE.
14. ENCL. BACKPLATE: ALUMINUM, 1/2 GAUGE
15. TERMINAL STRIP: BUCHANON PIN 0625
16. GROUND LUG: BUCHANON PIN 824
17. NEUTRAL LUG: BUCHANON PIN 824
18. MAIN LOAD LUG: SQUARE D PIN L13
19. LABELS: ALL BREAKERS AND SWITCHES TO BE IDENTIFIED BY PERMANENTLY ATTACHED LABEL, TO PANEL DOOR INTERIOR
20. MOUNTING SCREWS: STAINLESS STEEL 304
21. SCHEMATIC DWGS.: PROTECTED BY PLASTIC COATING AND ATTACHED TO PANEL DOOR INTERIOR.
22. MANUFACTURER: STACON, ECS OR CITY OF DELAND APPROVAL
23. R.T.U. : (DATA FLOW MELBOURNE FLA. (R.T.U. 204) OR EQUAL TO BE INSTALLED BY CITY- DEVELOPER TO BEAR ALL COSTS.
24. PROVIDE SPARE PARTS - SEE SPARE PARTS LIST
25. WET WELL TO BE COATED INSIDE AND OUT WITH MIN. 24 MILS OF COAL/TAR EPOXY
26. EQUIVALENT PRODUCTS CAN ONLY BE APPROVED UPON RECEIPT OF WRITTEN AUTHORIZATION FROM THE CITY OF DELAND.



SIZE CHART

STEP #1: DETERMINE LIFT STATION SIZE & SPECIFICATIONS FROM THE UTILITY CONTRACTOR OR CITY OF DELAND ENGINEERING DEPT.

STEP #2: MAKE NOTE OF THE FOLLOWING: THE VOLTAGE FOR THE STATION, THE NUMBER OF PUMPS (2 OR 3) & THE HORSEPOWER OF PUMPS.

STEP #3: REFER TO THE ELECTRICAL SERVICE DATA CHARTS FOR THE STANDARD 2 PUMP OR 3 PUMP STATION (FOUND ON SHEET 3 OF 3).

STEP #4: USE THE VOLTAGE COLUMN AND THE HORSEPOWER ROW TO FIND THE TOTAL STATION FULL LOAD AMPS.

STEP #5: UPON DETERMINING THE FULL LOAD AMPS OF THE STATION, THE SERVICE ENTRANCE SIZE SHALL NOT BE SMALLER THAN 100 AMPS.

STATIONS THAT REQUIRE A SERVICE SIZE LARGER THAN 100 AMPS SHALL BE SIZED CLOSEST TO THE STANDARD SIZES LISTED BELOW.

SERVICE SIZE	CONDUIT SIZE	WIRE SIZE	BREAKER OR FUSE RATING
100 AMP	1-1/2"	#3 THHN CU	100 AMP
125 AMP	1-1/2"	#2 THHN CU	125 AMP
150 AMP	2"	#1 THHN CU	150 AMP
200 AMP	2"	3/0 THHN CU	200 AMP
225 AMP	2-1/2"	4/0 THHN CU	225 AMP

Index No.
30800
REVISED 11/05/21
SHEET 2 OF 3

City of DeLand, Engineering Services
1102 S. Garfield Avenue, DeLand, Florida 32724

DATE: 11/07/2022

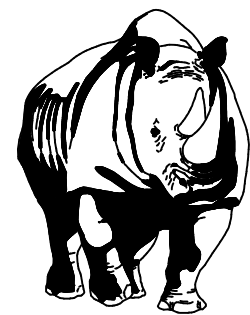
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DRAWN BY: *ERIC SAMPSON*

SANITARY LIFT STATION

TITLE:
PAGE 4 OF 5

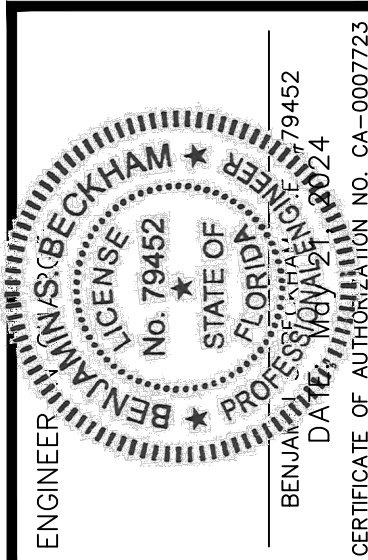
FILE: LIFT STATION DETAILS A B.dwg



MADDEN
CIVIL ENGINEERS
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Maitland, Florida 32751
(407) 629-8330

CITY DETAILS
FOR
SUMMIT PLACE
CITY OF DELAND
FLORIDA

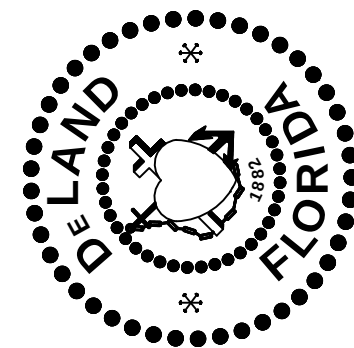
DR HORTON
10192 DOWDEN ROAD
ORLANDO, FL 32832
(407) 850-5200



NO.	DATE	REVISIONS
1	07/19/2024	ISSUED FOR PERMIT
2	07/19/2024	REVISED FOR CITY REVIEW
3	07/19/2024	REVISED FOR CITY REVIEW
4	07/19/2024	REVISED FOR CITY REVIEW
5	07/19/2024	REVISED FOR CITY REVIEW
6	07/19/2024	REVISED FOR CITY REVIEW
7	07/19/2024	REVISED FOR CITY REVIEW
8	07/19/2024	REVISED FOR CITY REVIEW
9	07/19/2024	REVISED FOR CITY REVIEW
10	07/19/2024	REVISED FOR CITY REVIEW
11	07/19/2024	REVISED FOR CITY REVIEW

JOB # 21886
DATE: 02/20/23
SCALE: N/A
DESIGNED BY: JTT
DRAWN BY: JTT
APPROVED BY: BSB

C916



City of Deland, Engineering Services
1102 S. Garfield Avenue, DeLand, Florida 32724

DATE: 11/07/2022
CHECKED BY:
SCALE: NOT TO SCALE
DRAWN BY: ERIC SAMPSON

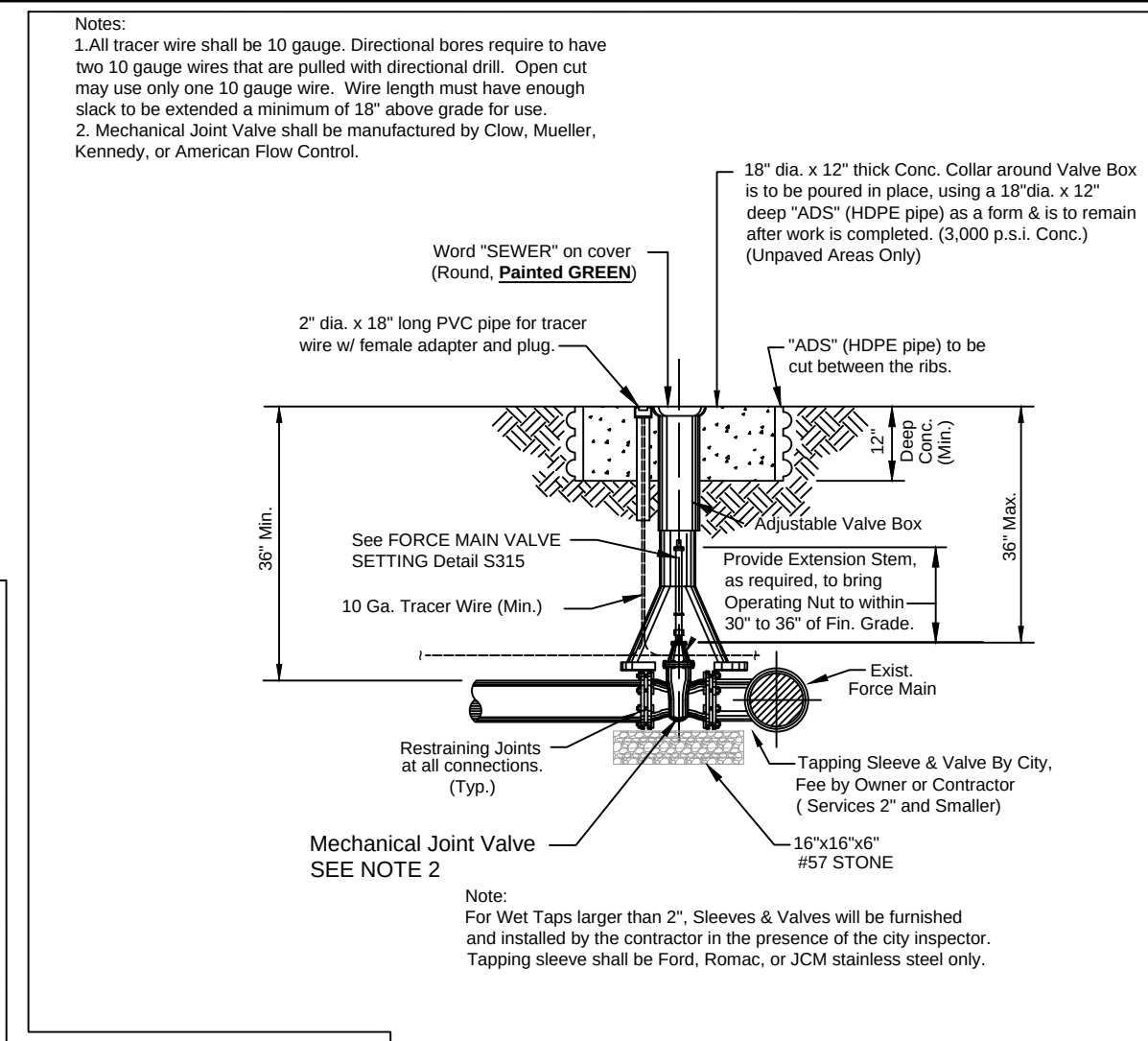
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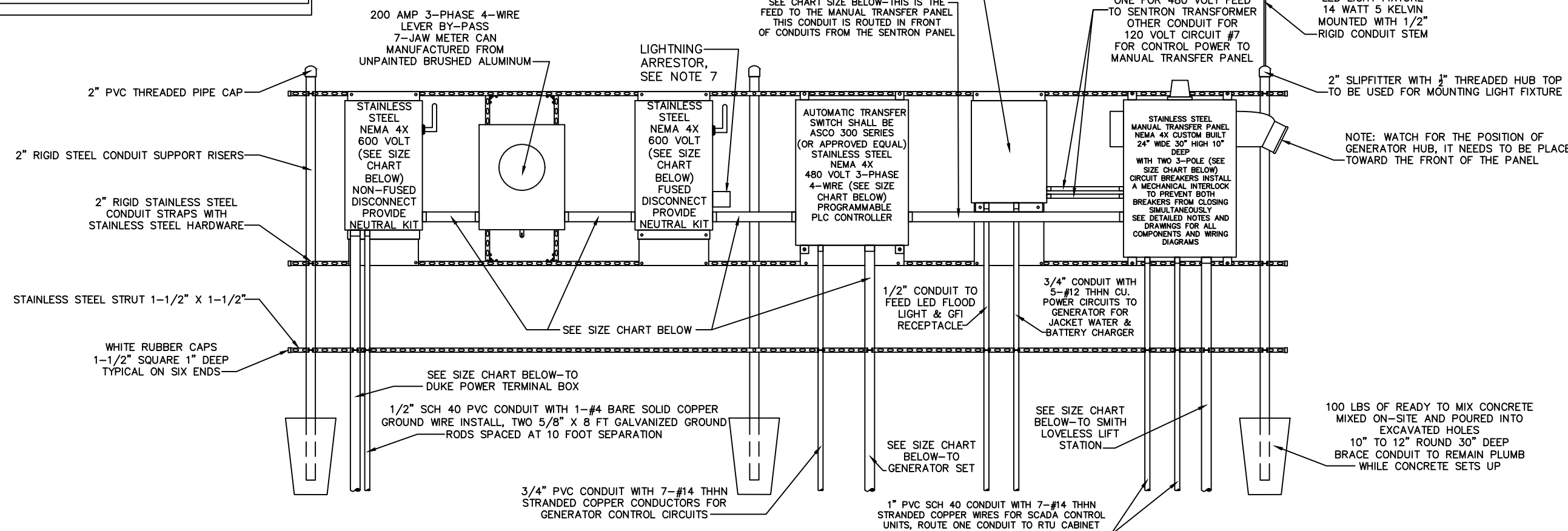
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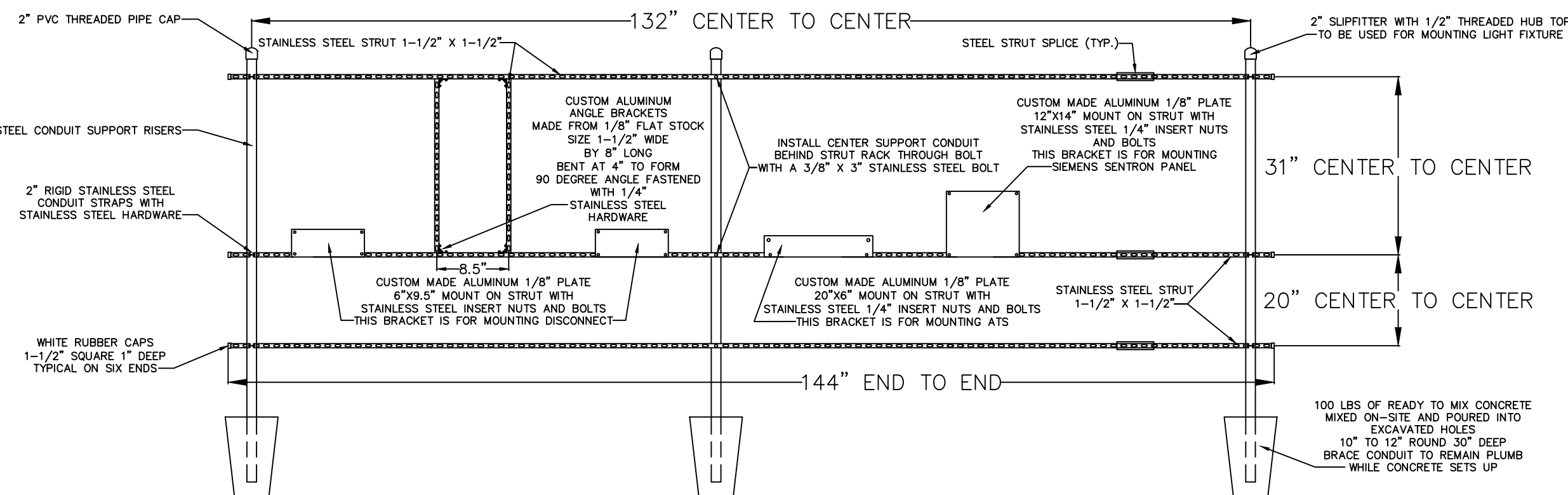
Index No.
30800
REVISED 11/07/22
SHEET 3 OF 3



FORCE MAIN TAPPING SLEEVE & VALVE
City of DeLand - Standard Details



480 VOLT POWER RACK WITH GENERATOR
WITH AUTOMATIC TRANSFER SWITCH



RACK FRAMING DETAILS
480 VOLT WITH AUTOMATIC TRANSFER SWITCH

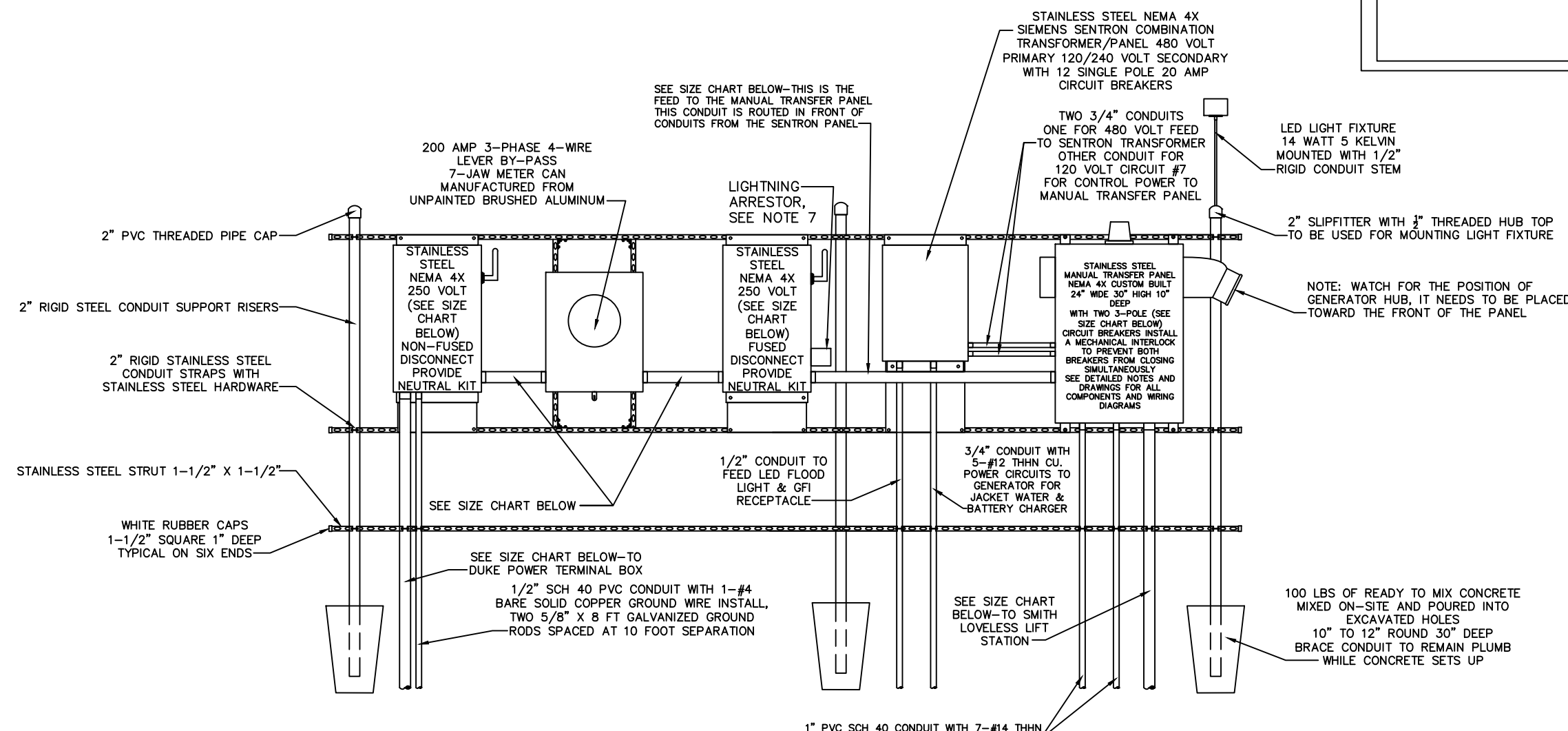
ELECTRICAL SERVICE DATA
STANDARD 2-PUMP WET WELL MOUNTED PUMP STATION

MAIN PUMP MOTOR SIZE	TOTAL STATION FULL LOAD AMPS		
	RATED HP EACH	208 VOLT	230 VOLT
1	1	17.6	15.3
1-1/2	1-1/2	21.8	18.9
2	2	25.9	22.5
3	3	33.1	28.8
5	5	47.7	41.4
7-1/2	7-1/2	65.3	56.7
10	10	80.8	70.2
15	15	117.0	101.7
20	20	148.1	128.7
25	25	190.44	160.2
30	30	215.3	187.2
40	40	---	---
50	50	---	---

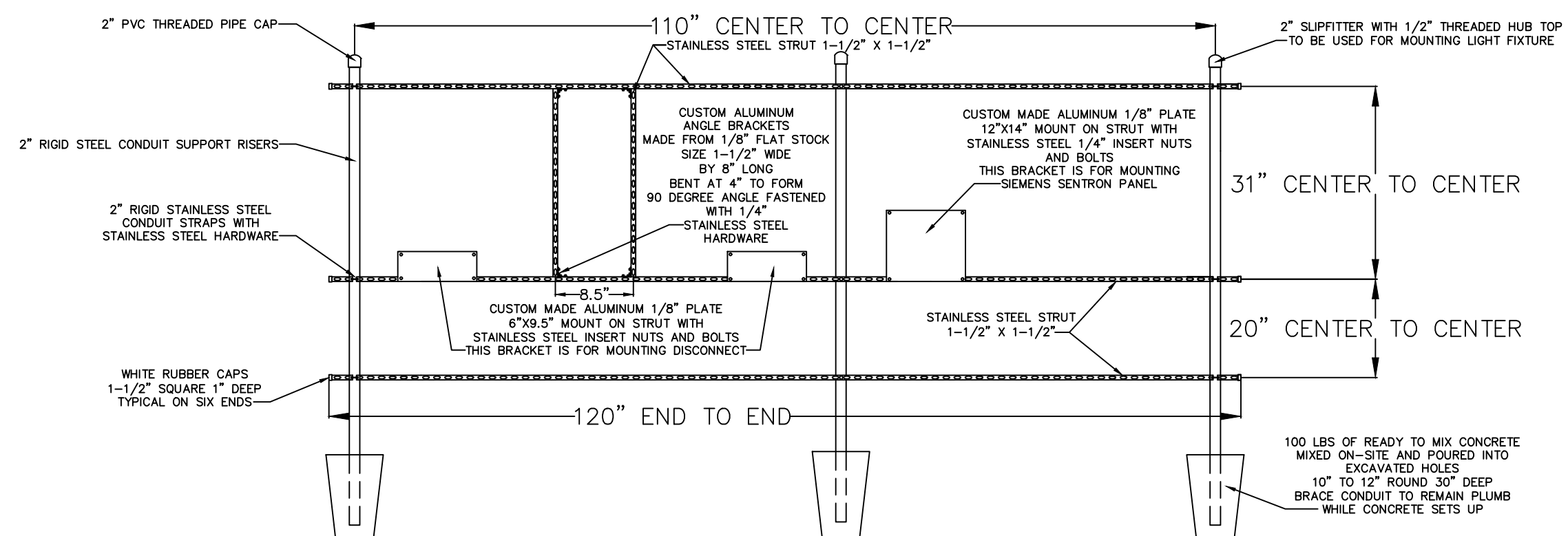
ELECTRICAL SERVICE DATA
STANDARD 3-PUMP WET WELL MOUNTED PUMP STATION

MAIN PUMP MOTOR SIZE	TOTAL STATION FULL LOAD AMPS		
	RATED HP EACH	208 VOLT	230 VOLT
1	1	27.3	23.7
1-1/2	1-1/2	33.3	28.9
2	2	39.3	34.1
3	3	49.6	43.2
5	5	70.6	61.4
7-1/2	7-1/2	96.1	83.5
10	10	118.5	103.0
15	15	170.9	148.5
20	20	215.7	187.5
25	25	---	---
30	30	---	---
40	40	---	---
50	50	---	---

DETAIL 'C'



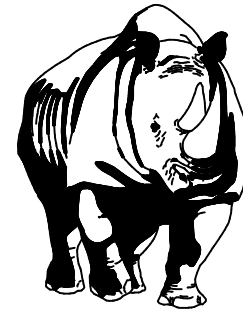
480 VOLT POWER RACK WITHOUT GENERATOR
AUTOMATIC TRANSFER SWITCH



RACK FRAMING DETAILS
480 VOLT WITHOUT AUTOMATIC TRANSFER SWITCH

CONTROL GENERATOR RECEPTACLE PANEL

- ENCLOSURE: NEMA 4X STAINLESS, 304 GRADE, 14 GAUGE, GASKETED, #4 BRUSHED FINISH, U.L. AND CSA APPROVED, HASP AND STAPLE FOR PADLOCKING, INSIDE PRINT POCKET, STAINLESS STEEL HINGE, MIN. SIZE 24" X 24" IF FOR UP TO 15 H.P.
- MAIN BREAKER: SQUARE D HEAVY DUTY SIZED PROPERLY FOR FULL LOAD OF STATION PLUS 25%.
- EMERGENCY BKR.: SQUARE D HEAVY DUTY SIZED PROPERLY FOR FULL LOAD OF STATION PLUS 25%.
- MECH. INTERLOCK: ALL ALUMINUM AND STAINLESS STEEL WIPOSSITIVE MEANS OF LOCKING OFF BREAKER NOT IN USE. THE BREAKERS WILL PROTRUDE THROUGH INNER DOOR.
- RECEPTACLE: RUSSELL STOLL JRS1044FR (230 VOLT ONLY), MELTRIC PART #37-98047 (480 VOLT ONLY)
- ANGLE ADAPTER: RUSSELL STOLL J4AB-10, 20 DEG. ADAPTER
- LIGHTNING ARRESTOR: HEAVY DUTY, SQUARE D PIN SDASA3650, OR INTERMATIC AG503C 600V.
- PHASE MONITOR: DIVERSIFIED PIN SLA-230-ASA, 8 PIN WITH N.O. AND N.C. CONTACTS WIRE TO TERMINAL FOR RTU EQUIPMENT.
- HIGH WATER ALARM: RED, LEXAN, W/NO EXTERNAL SCREWS.
- HWA RELAY: SQUARE D OR OMRON, 8 PIN DOUBLE POLE, DOUBLE THROW WIRED TO RTU TERMINAL.
- ALARM HORN: RED, WHEELLOCK PIN 31T-115 MOUNTED TO RED WEATHER PROOF CAST BOX ON EXTERIOR OF ENCLOSURE.
- ALARM RELAY: SQUARE D OR OMRON, 8 PIN DOUBLE POLE, DOUBLE THROW WIRED TO RTU TERMINAL.
- ALARM RESET/TEST: SQUARE D, WEATHER PROOF MOUNTED ON EXTERIOR OF ENCLOSURE.
- ENCL. BACKPLATE: ALUMINUM, 12 GAUGE
- TERMINAL STRIP: BUCHANON PIN 0625
- GROUND LUG: BUCHANON PIN 824
- NEUTRAL LUG: BUCHANON PIN 824
- MAIN LOAD LUG: SQUARE D PIN U3
- LABELS: ALL BREAKERS AND SWITCHES TO BE IDENTIFIED BY PERMANENTLY ATTACHED LABEL TO PANEL DOOR INTERIOR
- MOUNTING SCREWS: STAINLESS STEEL 304
- SCHEMATIC DWG.: PROTECTED BY PLASTIC COATING AND ATTACHED TO PANEL DOOR INTERIOR.
- MANUFACTURER: STACON, ECS OR CITY OF DELAND APPROVAL
- R.T.U.: (DATA FLOW MELBOURNE FLA. (R.T.U. 204) OR EQUAL TO BE INSTALLED BY CITY-DEVELOPER TO BEAR ALL COSTS.
- PROVIDE SPARE PARTS - SEE SPARE PARTS LIST
- WET WELL TO BE COATED INSIDE AND OUT WITH MIN. 24 MILS OF COALTAR EPOXY
- EQUIVALENT PRODUCTS CAN ONLY BE APPROVED UPON RECEIPT OF WRITTEN AUTHORIZATION FROM THE CITY OF DELAND.

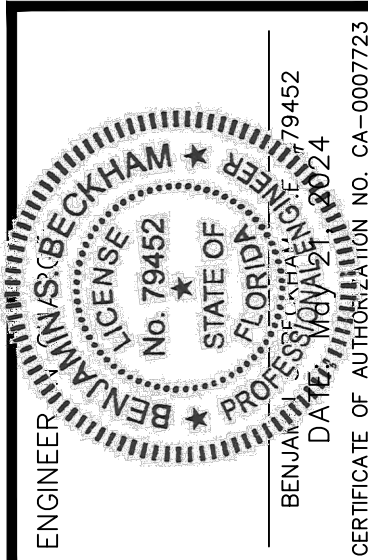


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CIVIL ENGINEERS

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CITY DETAILS
FOR
SUMMIT PLACE
CITY OF DELAND

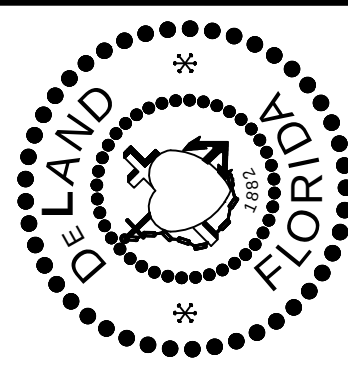
DR. HORTON
10192 DOWNEY ROAD
ORLANDO, FL 32832
(407) 850-5200



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07/2024	4
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SCALE: N/A
DESIGNED BY: JTT
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APPROVED BY: BSB

C917

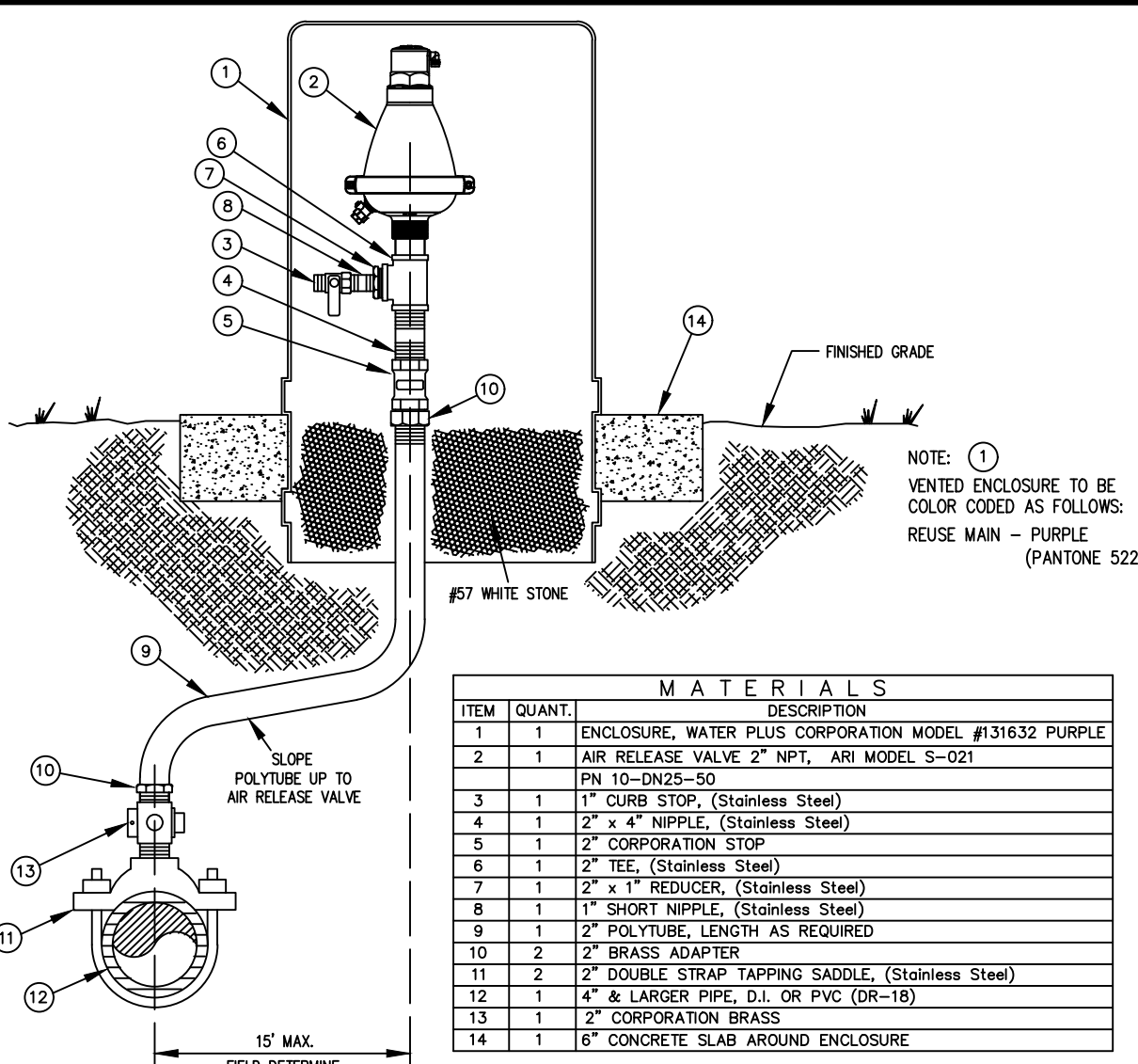


CITY OF DELAND, FLORIDA
1102 S. GARFIELD AVENUE, DELAND, FLORIDA 32724

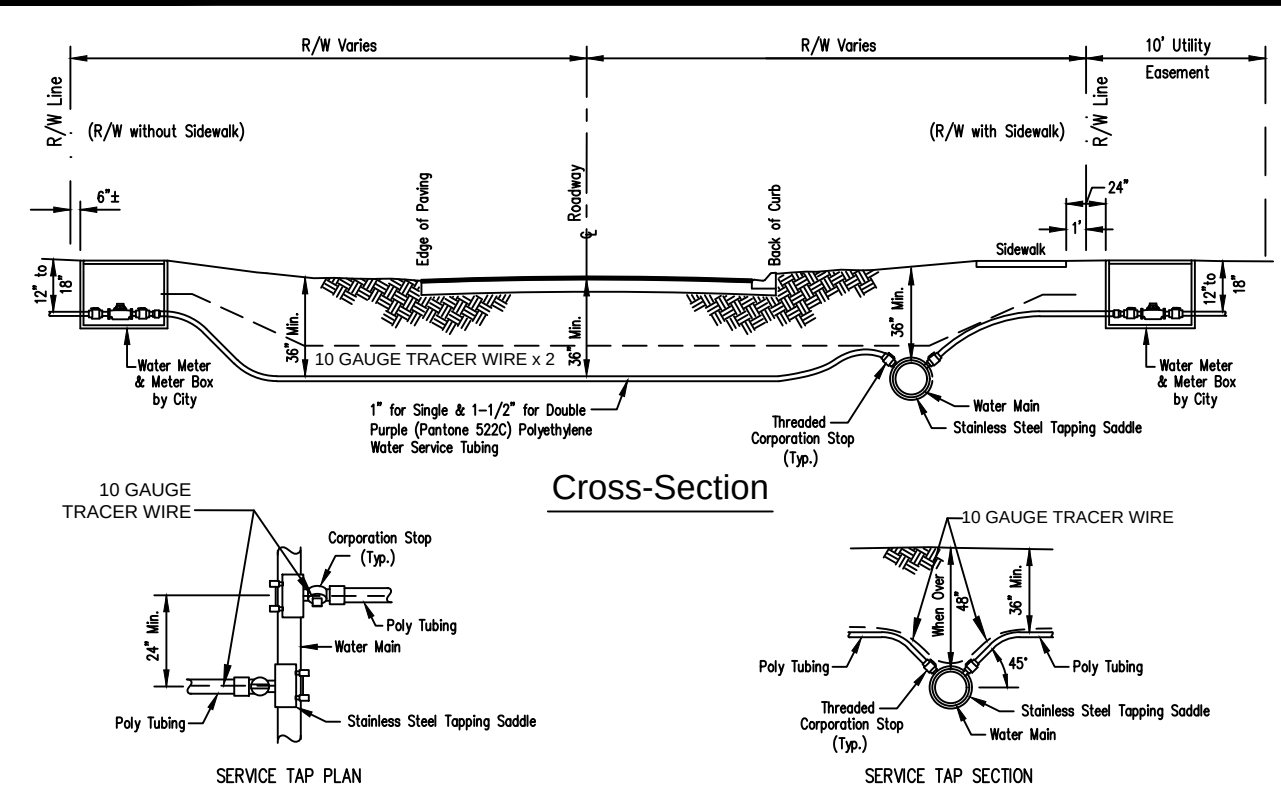
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drive letter/details locations

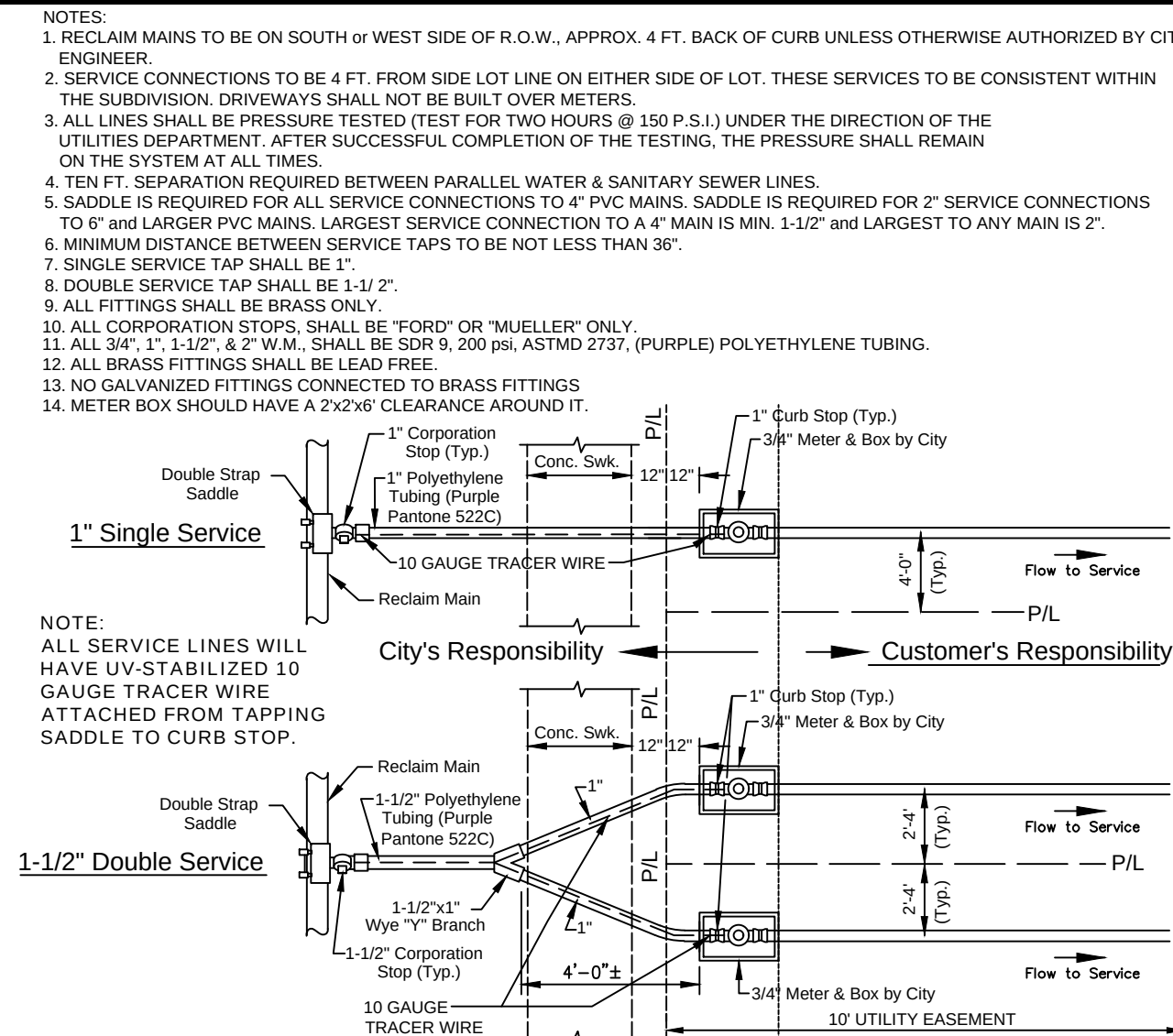
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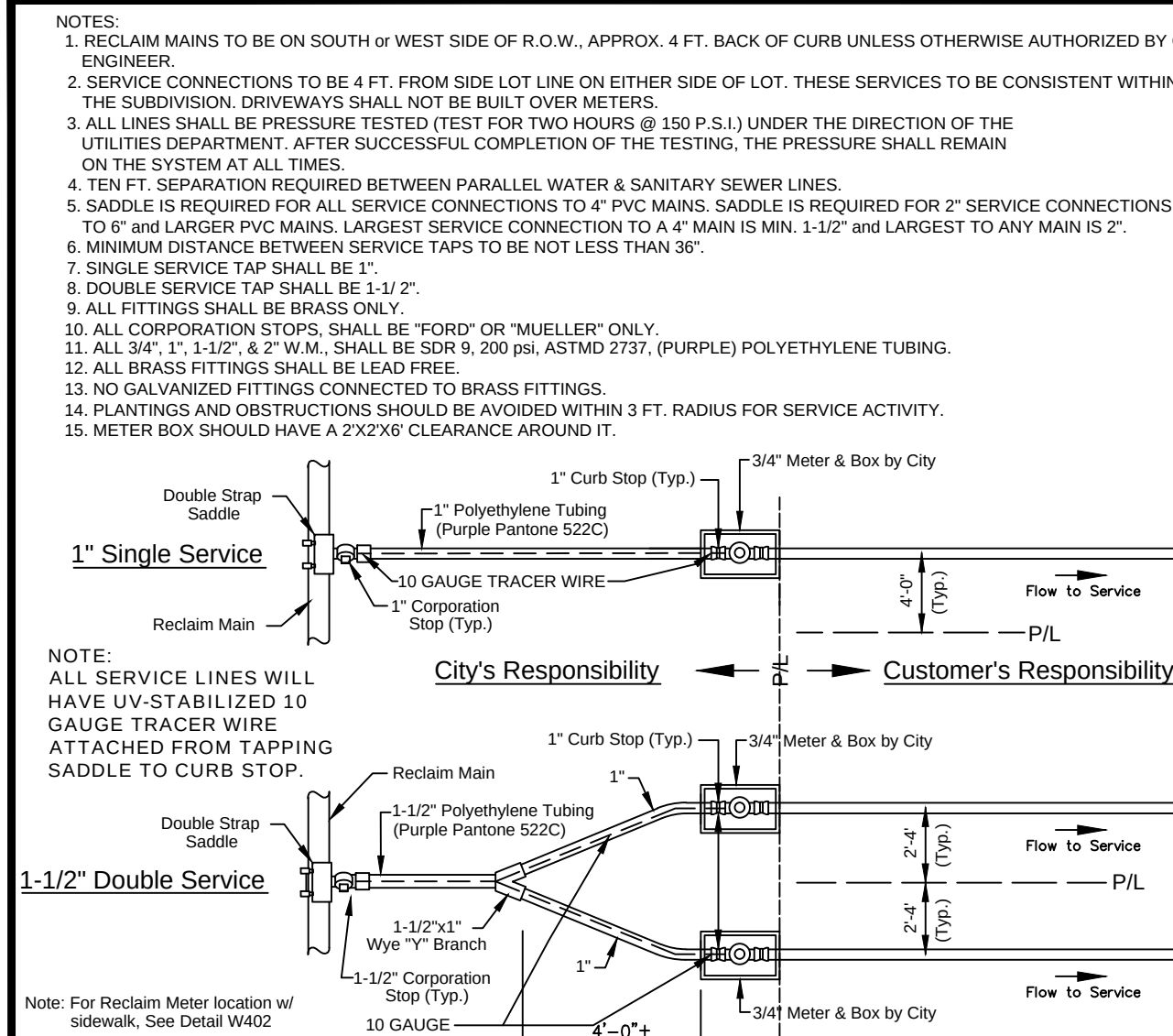
R421
City of Deland - Standard Details



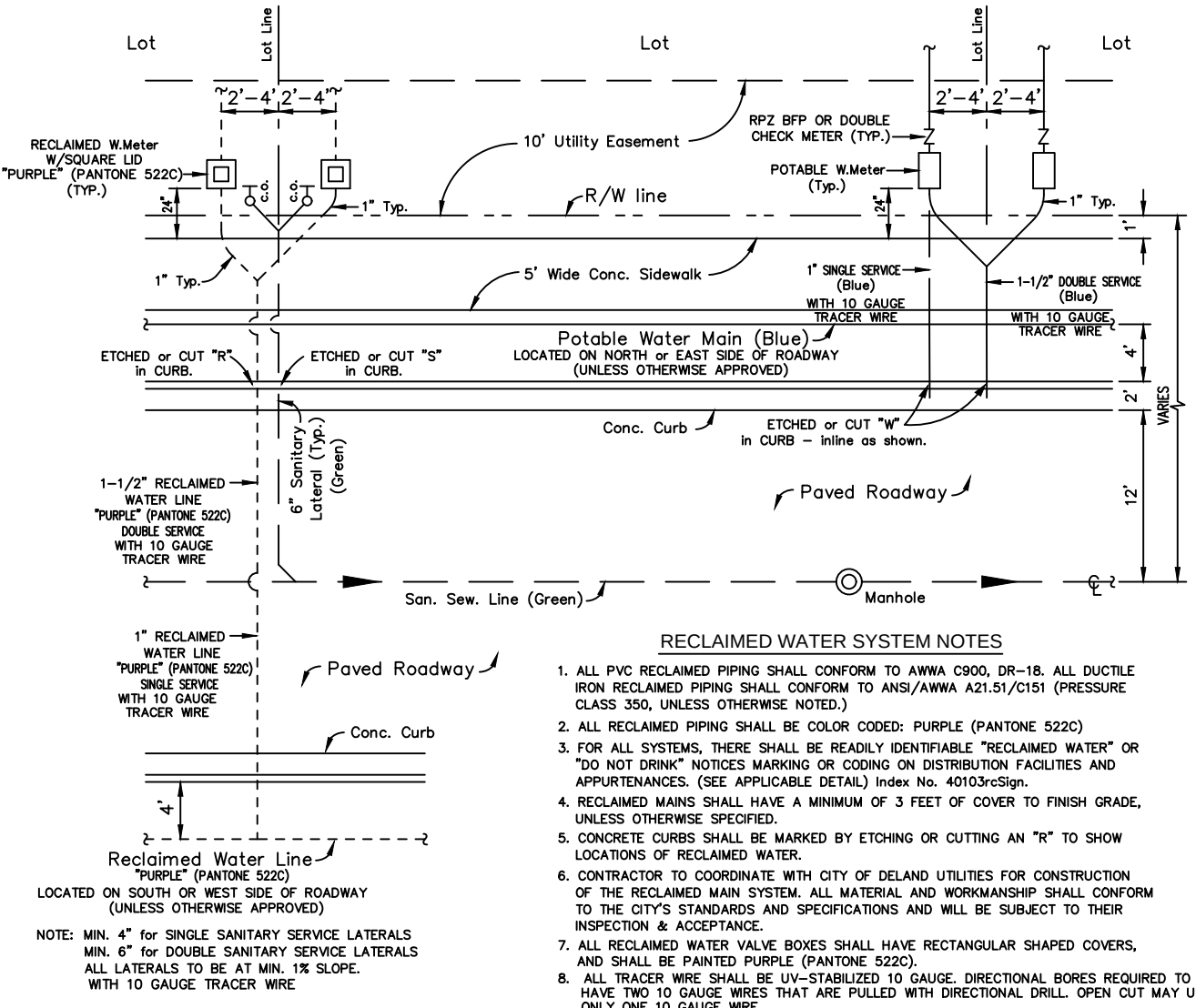
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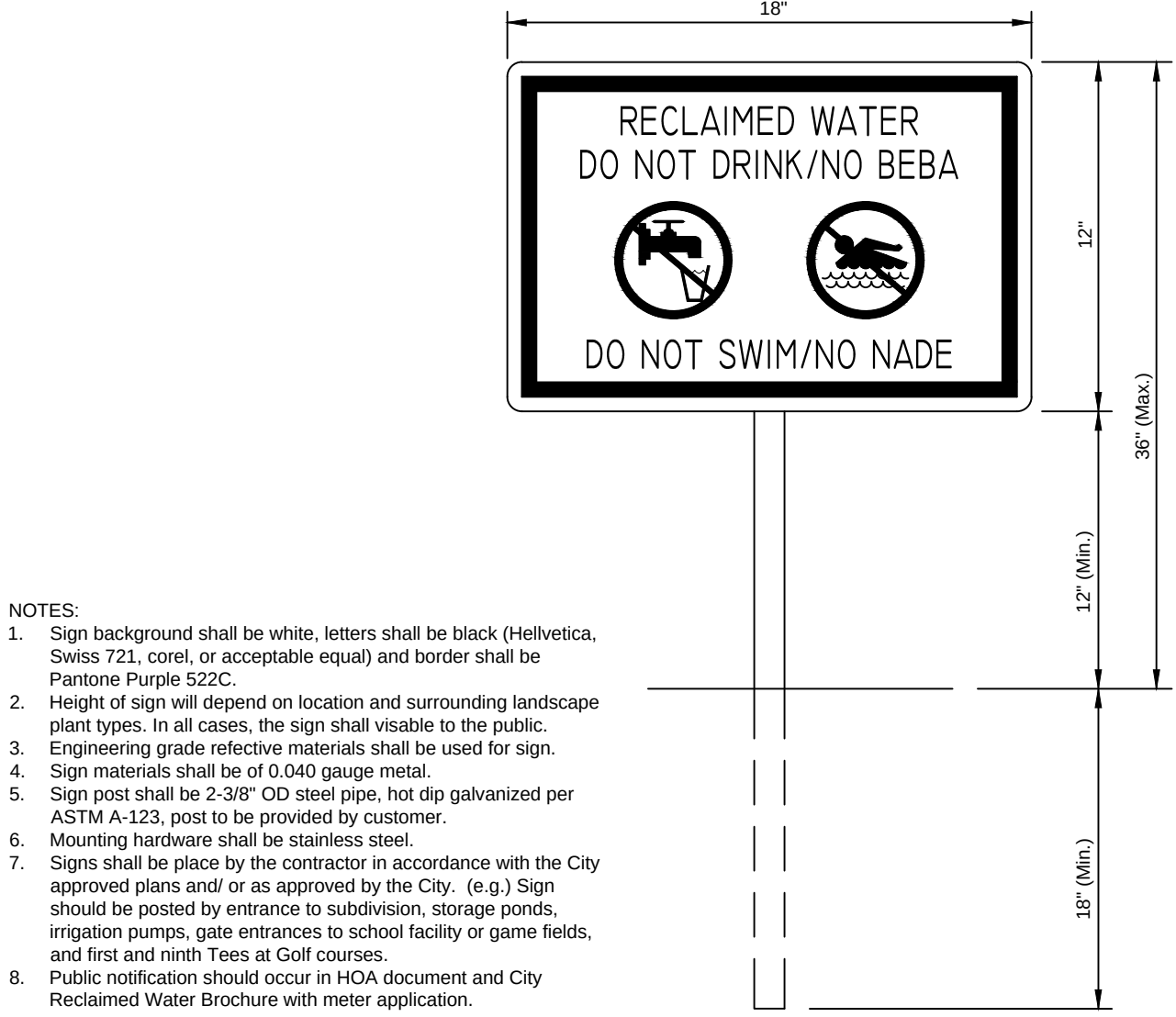
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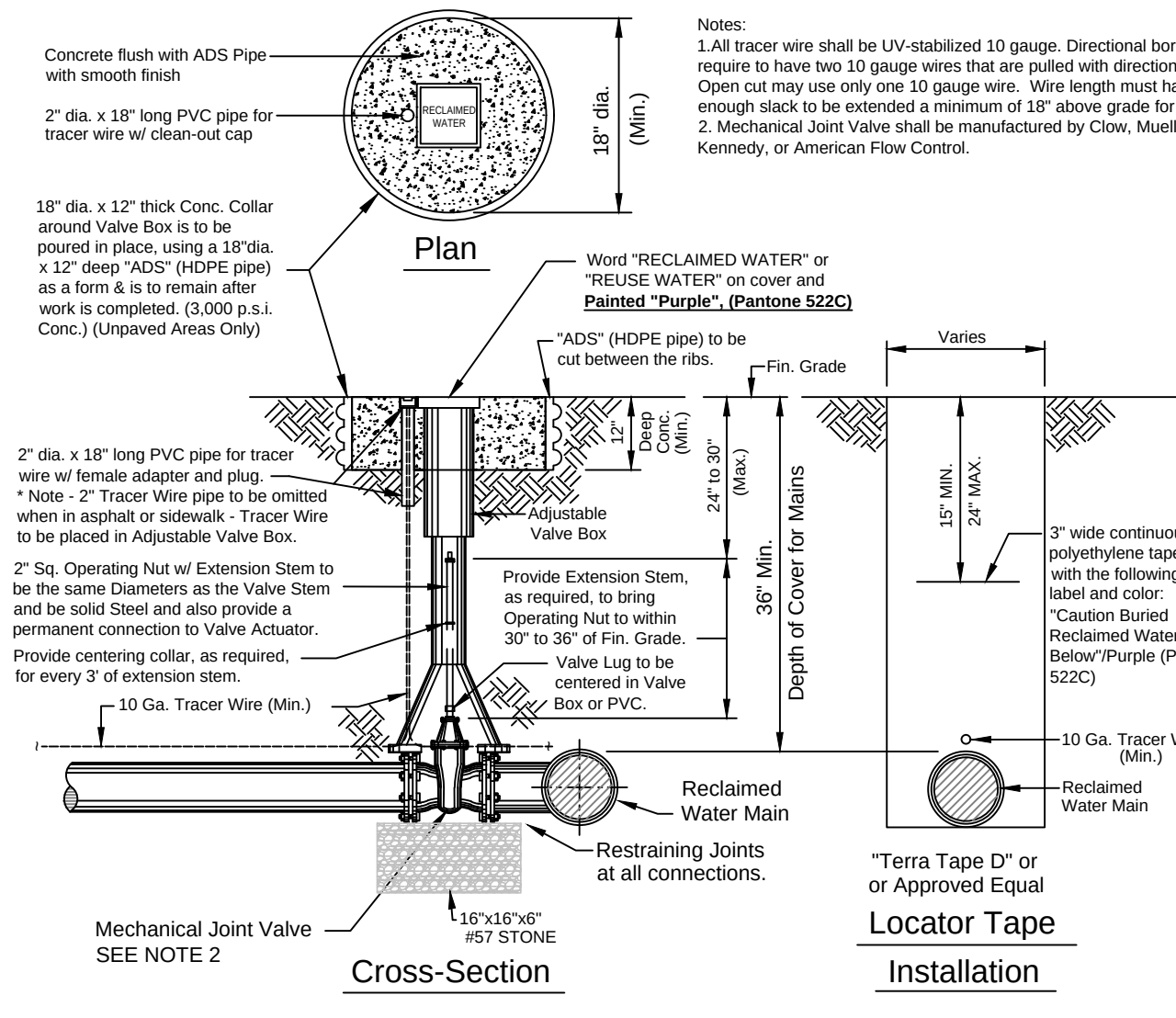
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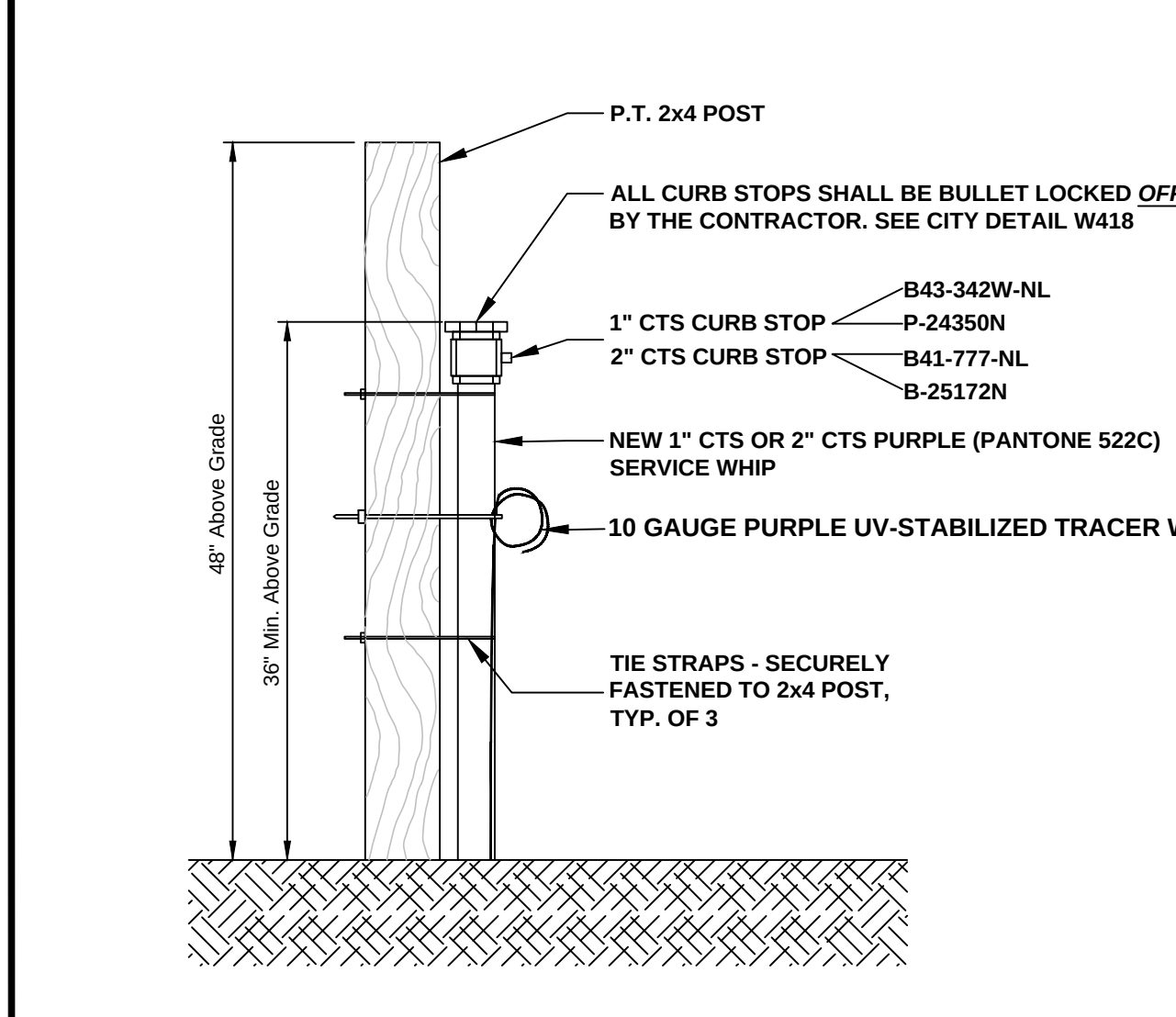
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City of Deland - Standard Details



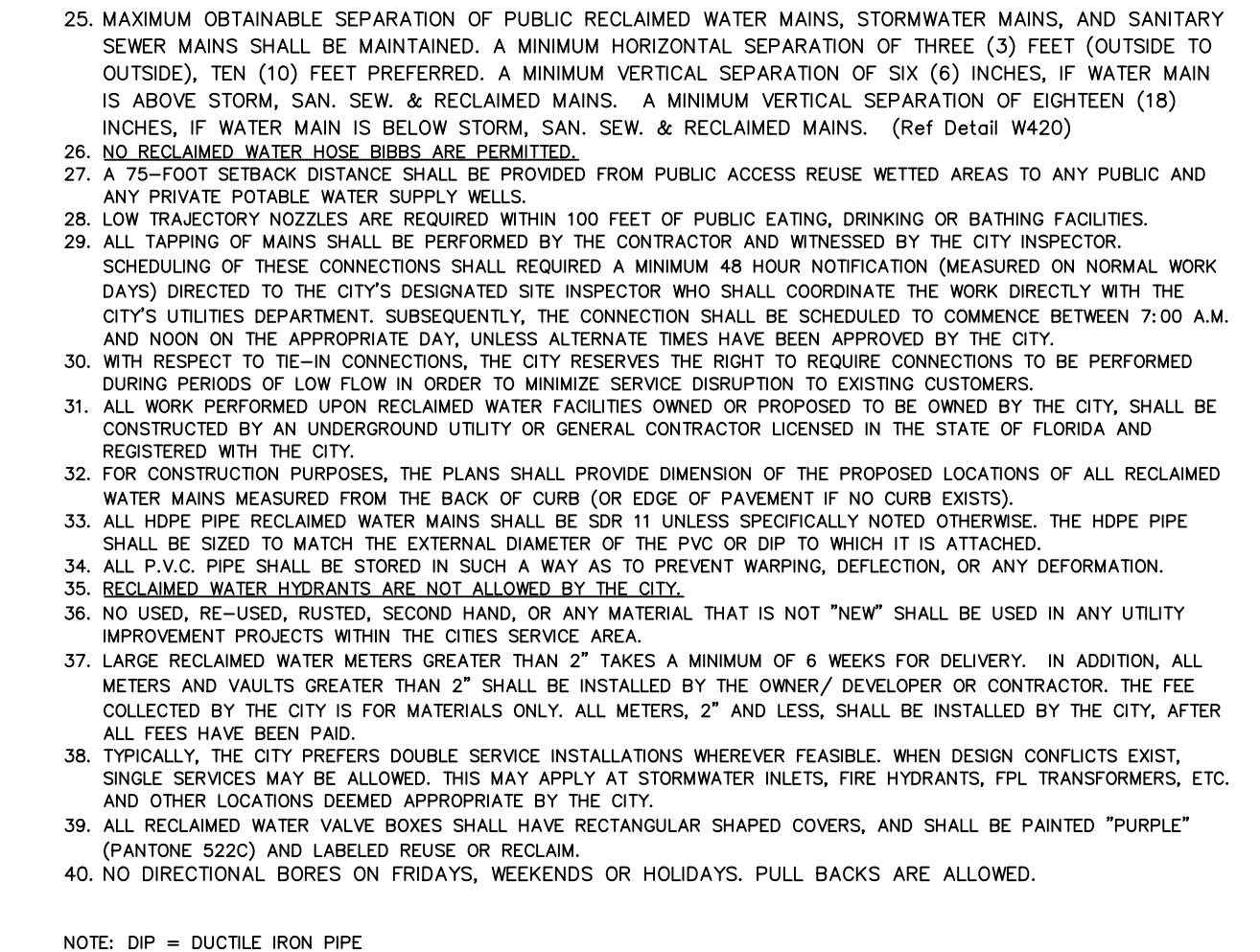
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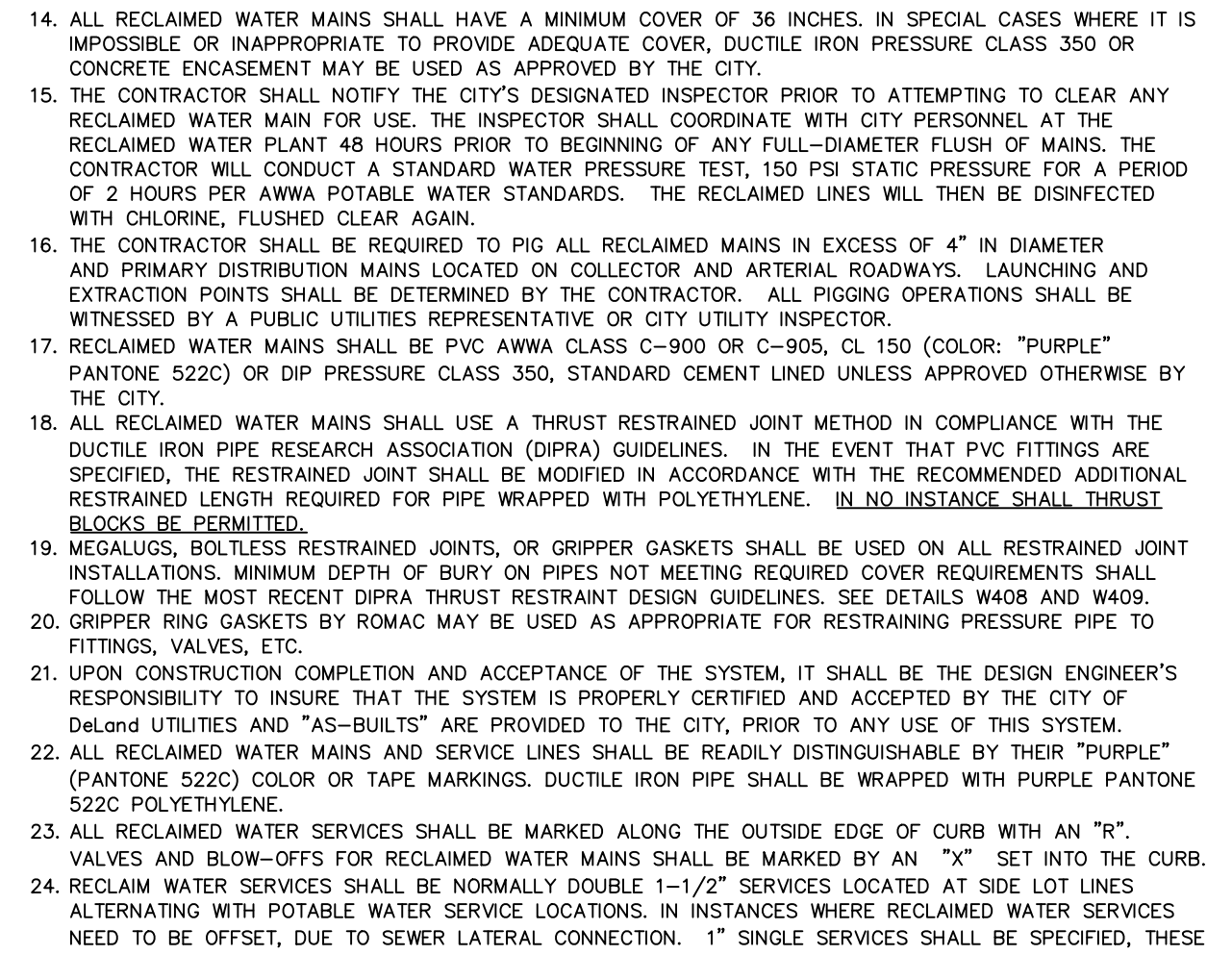
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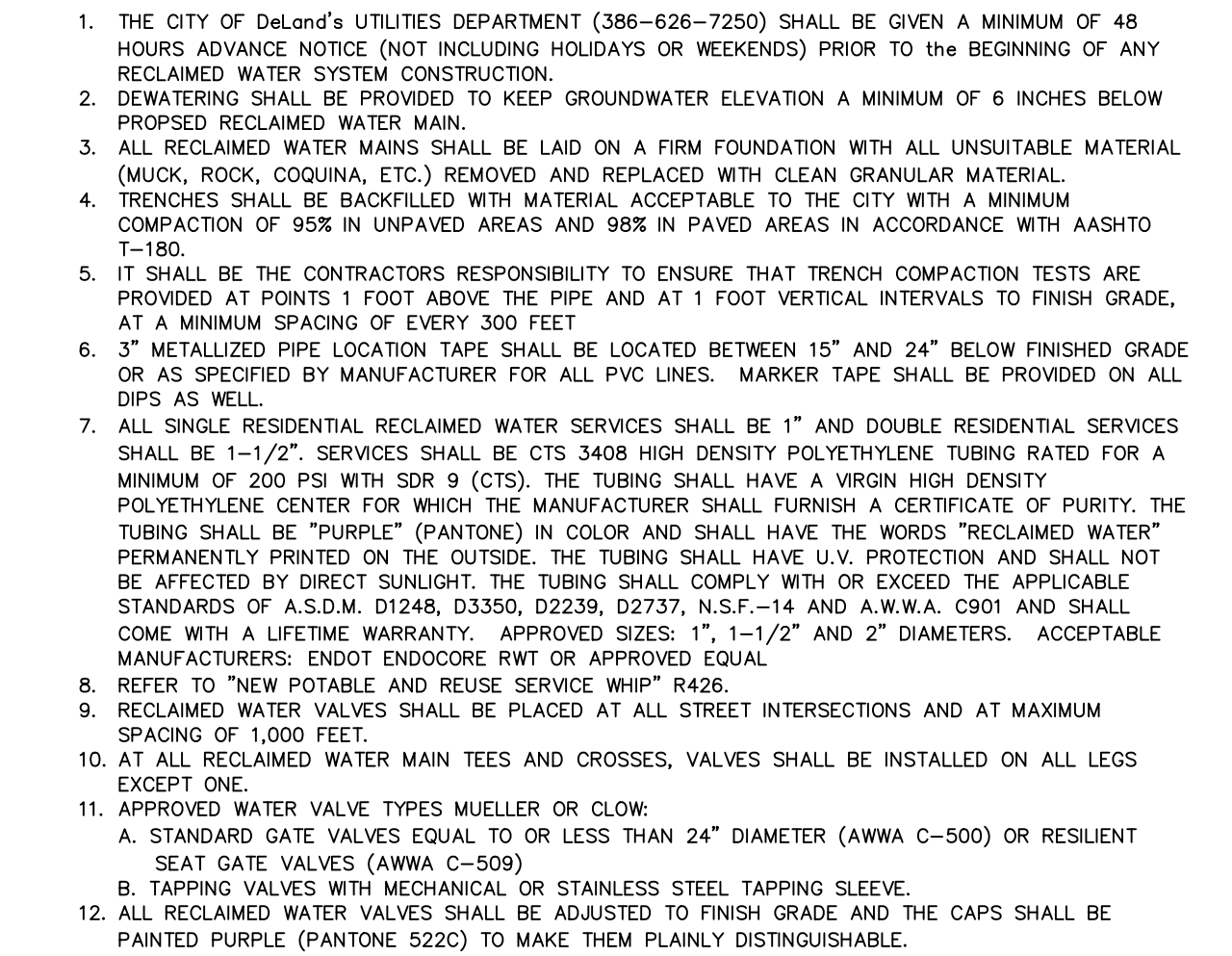
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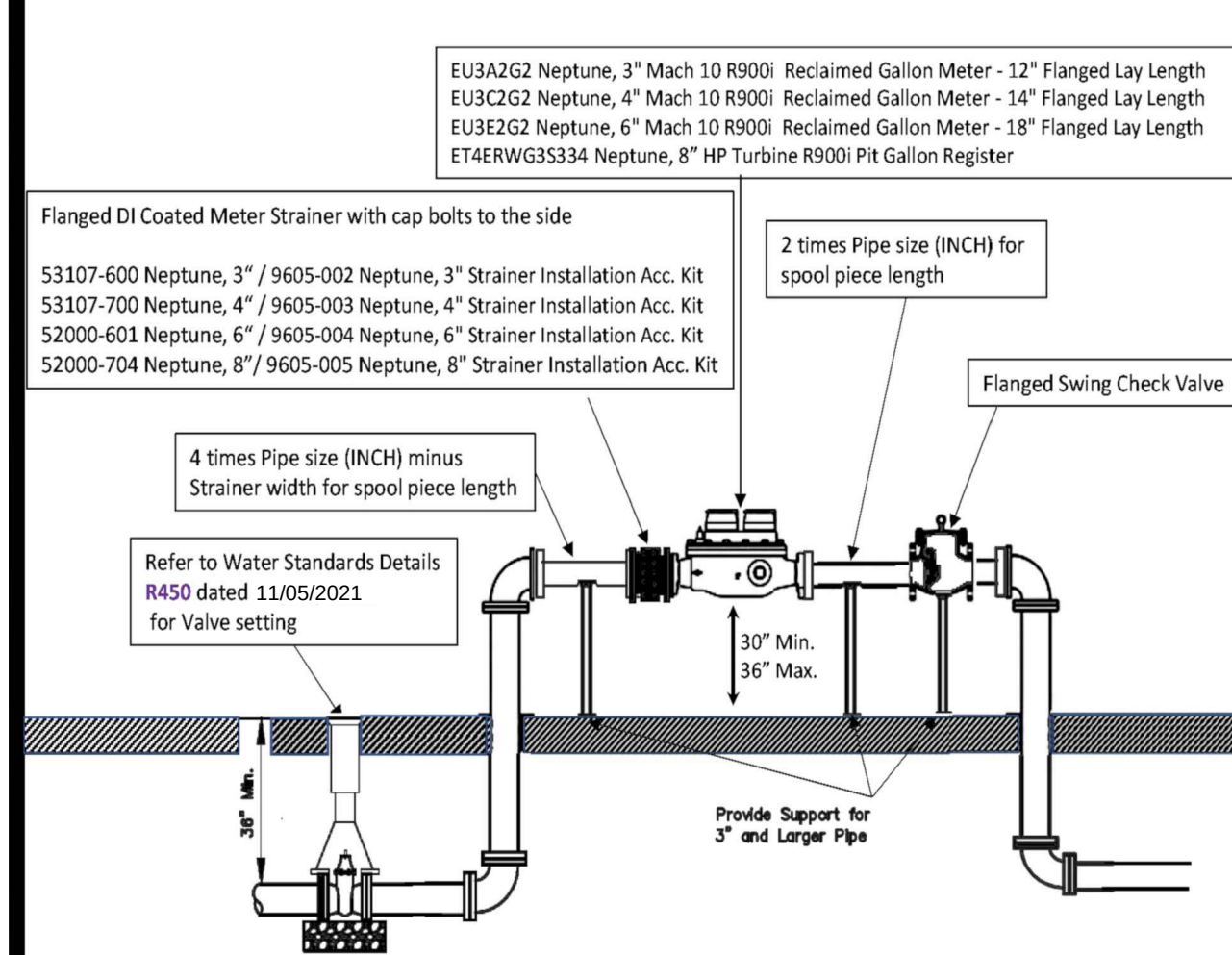
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City of Deland - Standard Details



R461
City of Deland - Standard Details



R460
City of Deland - Standard Details

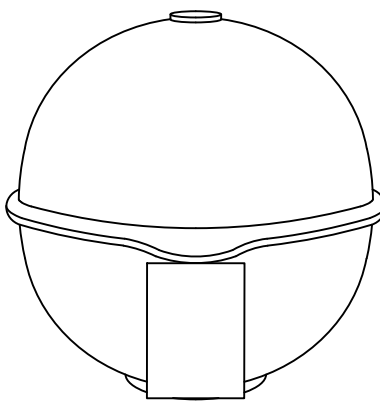


R453
City of Deland - Standard Details

3M LOCATING MARKER BALLS PROGRAMMABLE AND NON-PROGRAMMABLE NOTES:

- Programmable and Non-Programmable Marking Balls will be used on all Sewer, Potable and Reclaim projects
- For information on the Programmable and Non-Programmable Balls that the City requires see spec sheet for details
- Programmable Balls will be placed at all fittings ie. Tees, Couplings, 90, 45, and 22.
- Information will be recorded on a spread sheet. For information that needs to be recorded see spec sheet for an example template for the 3M Marker Balls
- Non-Programmable Marking Balls will be used as follows:
- Potable: End of Service Line when buried
- Wastewater: Ball will be placed at the curb line to mark lateral location prior to end of service.
- Reclaim: End of Service Line when buried
- Desired bury depth is 1.5 feet to 3 feet. Five foot is the maximum depth for these devices

1423-XR/ID-POTABLE



The 3M™ EMS Extended-Range Ball Markers have a self-leveling design providing accurate, horizontal position regardless of how it is placed in the ground, making the job of precisely locating underground facilities easier.

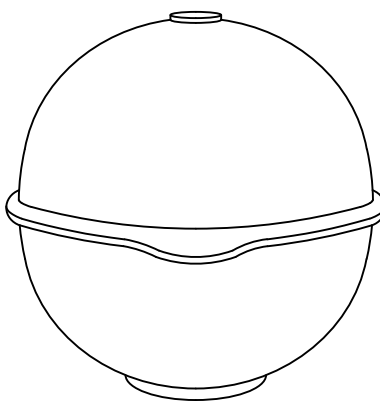
Featured Benefits

- Positive identification of underground water facilities
- iD Marker allows for programming of customer specific information
- Unique self leveling design simplifies installation
- No external power source needed
- Resistant to elements
- 5 foot (1.5 meter) detection distance
- Color conforms to APWA standards

SPECIFICATIONS:

COLOR: BLUE
DIAMETER (METRIC): 10.4 CM
EMS CAUTION TAPE FINDING CAPABILITY: N/A
MARKER DEPTH: 5 FEET (1.5M)
MARKER DIMENSION (INCH): 4 INCH DIAMETER
MARKER TYPE: BALL
PROGRAMMABLE/PASSIVE: PROGRAMMABLE
RANGE: 0 TO 5 LINEAR FOOT
RoHS 2011/65/EU Compliant: UNDETERMINED
RoHS EU Comments: ACCESS NETWORK: FTTH/FTTB/CATV
ACCESS NETWORK: xDSL, LONG-HAUL/METRO
LOOP NETWORK: OUTDOOR
WIRELESS NETWORK: BACKHAUL

1403-XR-POTABLE



The 3M™ EMS Extended-Range Ball Markers have a self-leveling design providing accurate, horizontal position regardless of how it is placed in the ground, making the job of precisely locating underground facilities easier.

Featured Benefits

- Positive identification of underground water facilities
- Unique self leveling design simplifies installation
- No external power source needed
- Resistant to elements
- 5 foot (1.5 meter) detection distance
- Color conforms to APWA standards

SPECIFICATIONS:

COLOR: BLUE
DIAMETER (METRIC): 10.4 CM
EMS CAUTION TAPE FINDING CAPABILITY: N/A
MARKER DEPTH: 5 FEET (1.5M)
MARKER DIMENSION (INCH): 4 INCH DIAMETER
MARKER TYPE: BALL
NUMBER OF FREQUENCIES: N/A
PROGRAMMABLE/PASSIVE: PASSIVE
RANGE: 0 TO 5 LINEAR FOOT
RoHS 2011/65/EU Compliant: UNDETERMINED
RoHS EU Comments: ACCESS NETWORK: FTTH/FTTB/CATV
ACCESS NETWORK: xDSL, LONG-HAUL/METRO
LOOP NETWORK: OUTDOOR
WIRELESS NETWORK: BACKHAUL

1420-LOCATER FOR MARKER BALLS

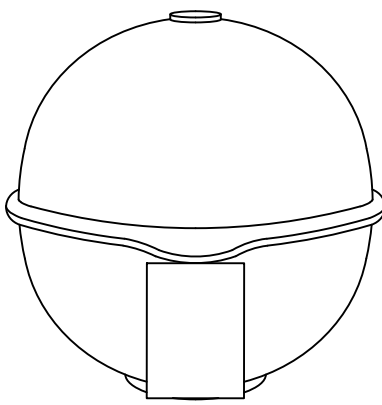
3M™ Dynatel™ Electronic Marker System (EMS) Marker Locators 1420 series is microprocessor-based systems that quickly and efficiently locate underground markers—years after construction or maintenance. -

The 3M™ Dynatel™ 1420 Marker Locators are designed to be accurate, fast and integrated allowing you to accurately and easily:

- Locate, read and write to 3M iD markers
- Pinpoint the depth and location of all existing models of properly installed underground passive EMS markers
- Conduct direct depth reading of markers
- Locate two different marker frequencies simultaneously

3M DYNATEL LOCATING AND MARKING ELECTRONIC MARKER SYSTEM:

1424-XR/ID-SEWER



The 3M™ EMS Extended-Range Ball Markers have a self-leveling design providing accurate, horizontal position regardless of how it is placed in the ground, making the job of precisely locating underground facilities easier.

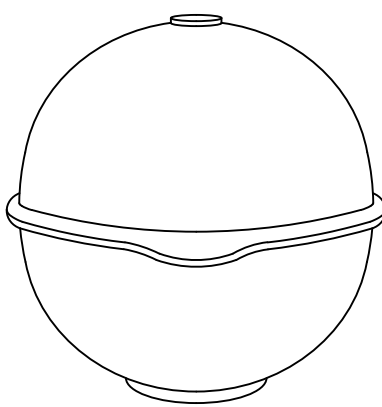
Featured Benefits

- Positive identification of underground wastewater facilities
- iD Marker allows for programming of customer specific information
- Unique self leveling design simplifies installation
- No external power source needed
- Resistant to elements
- 5 foot (1.5 meter) detection distance
- Color conforms to APWA standards

SPECIFICATIONS:

COLOR: GREEN
DIAMETER (METRIC): 10.4 CM
EMS CAUTION TAPE FINDING CAPABILITY: N/A
MARKER DEPTH: 5 FEET (1.5M)
MARKER DIMENSION (INCH): 4 INCH DIAMETER
MARKER TYPE: BALL
NUMBER OF FREQUENCIES: N/A
PROGRAMMABLE/PASSIVE: PROGRAMMABLE
RANGE: 0 TO 5 LINEAR FOOT
RoHS 2011/65/EU Compliant: UNDETERMINED
RoHS EU Comments: ACCESS NETWORK: FTTH/FTTB/CATV
ACCESS NETWORK: xDSL, LONG-HAUL/METRO
LOOP NETWORK: OUTDOOR
WIRELESS NETWORK: BACKHAUL

1404-XR-SEWER



The 3M™ EMS Extended-Range Ball Markers have a self-leveling design providing accurate, horizontal position regardless of how it is placed in the ground, making the job of precisely locating underground facilities easier.

Featured Benefits

- Positive identification of underground wastewater facilities
- Unique self leveling design simplifies installation
- No external power source needed
- Resistant to elements
- 5 foot (1.5 meter) detection distance
- Color conforms to APWA standards

SPECIFICATIONS:

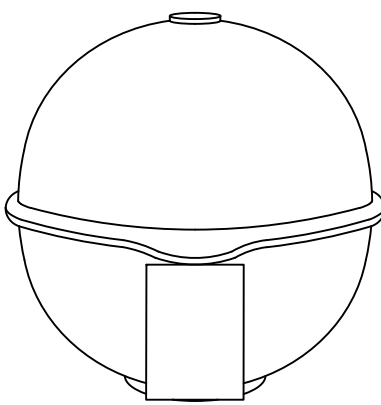
COLOR: GREEN
DIAMETER (METRIC): 10.4 CM
EMS CAUTION TAPE FINDING CAPABILITY: N/A
MARKER DEPTH: 5 FEET (1.5M)
MARKER DIMENSION (INCH): 4 INCH DIAMETER
MARKER TYPE: BALL
NUMBER OF FREQUENCIES: N/A
PROGRAMMABLE/PASSIVE: PASSIVE
RANGE: 0 TO 5 LINEAR FOOT
RoHS 2011/65/EU Compliant: UNDETERMINED
RoHS EU Comments: ACCESS NETWORK: FTTH/FTTB/CATV
ACCESS NETWORK: xDSL, LONG-HAUL/METRO
LOOP NETWORK: OUTDOOR
WIRELESS NETWORK: BACKHAUL

Specifications

2200RB Rechargeable Battery Not Included
Cable/Pipe Locate No
Carrying Bag Included No
Coupler Size No Coupler
Direct Connect Cable N/A
EMS Caution Tape Finding Capability No
Family 1420 Series
Fault Finding Capability No

2200RB Rechargeable Battery Not Included
Cable/Pipe Locate No
Carrying Bag Included No
Coupler Size No Coupler
Direct Connect Cable N/A
EMS Caution Tape Finding Capability No
Family 1420 Series
Fault Finding Capability No
Locator Type Marker

1428-XR/ID-RECLAIMED



The 3M™ EMS Extended-Range Ball Markers have a self-leveling design providing accurate, horizontal position regardless of how it is placed in the ground, making the job of precisely locating underground facilities easier.

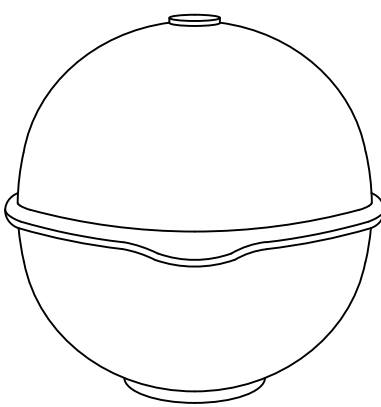
Featured Benefits

- Positive identification of underground general purpose / reclaimed water facilities
- iD Marker allows for programming of customer specific information
- Unique self leveling design simplifies installation
- No external power source needed
- Resistant to elements
- 5 foot (1.5 meter) detection distance
- Color conforms to APWA standards

SPECIFICATIONS:

COLOR: PURPLE
DIAMETER (METRIC): 10.4 CM
EMS CAUTION TAPE FINDING CAPABILITY: N/A
MARKER DEPTH: 5 FEET (1.5M)
MARKER DIMENSION (INCH): 4 INCH DIAMETER
MARKER TYPE: BALL
NUMBER OF FREQUENCIES: N/A
PROGRAMMABLE/PASSIVE: PROGRAMMABLE
RANGE: 0 TO 5 LINEAR FOOT
RoHS 2011/65/EU Compliant: UNDETERMINED
RoHS EU Comments: ACCESS NETWORK: FTTH/FTTB/CATV
ACCESS NETWORK: xDSL, LONG-HAUL/METRO
LOOP NETWORK: OUTDOOR
WIRELESS NETWORK: BACKHAUL

1408-XR-RECLAIMED



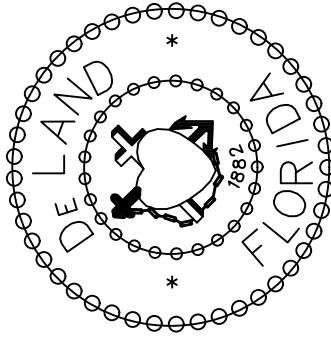
The 3M™ EMS Extended-Range Ball Markers have a self-leveling design providing accurate, horizontal position regardless of how it is placed in the ground, making the job of precisely locating underground facilities easier.

Featured Benefits

- Positive identification of underground general purpose facilities
- Unique self leveling design simplifies installation
- No external power source needed
- Resistant to elements
- 5 foot (1.5 meter) detection distance
- Color conforms to APWA standards

SPECIFICATIONS:

COLOR: PURPLE
DIAMETER (METRIC): 10.4 CM
EMS CAUTION TAPE FINDING CAPABILITY: N/A
MARKER DEPTH: 5 FEET (1.5M)
MARKER DIMENSION (INCH): 4 INCH DIAMETER
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NUMBER OF FREQUENCIES: N/A
PROGRAMMABLE/PASSIVE: PASSIVE
RANGE: 0 TO 5 LINEAR FOOT
RoHS 2011/65/EU Compliant: UNDETERMINED
RoHS EU Comments: ACCESS NETWORK: FTTH/FTTB/CATV
ACCESS NETWORK: xDSL, LONG-HAUL/METRO
LOOP NETWORK: OUTDOOR
WIRELESS NETWORK: BACKHAUL



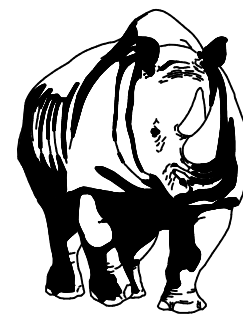
CITY OF DELAND, FLORIDA
1102 S. GARFIELD AVENUE, DELAND, FLORIDA 32724

DATE: 11/07/2022
CHECKED BY: ERIC M. SAMPSON
SCALE: NOT TO SCALE
DRAWN BY: MARK LA GRECA

UTILITY MARKER BALL LOCATORS

TITLE:

FILE: drive letter/details locations



MADDEN
CIVIL ENGINEERS

431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

CITY DETAILS

FOR

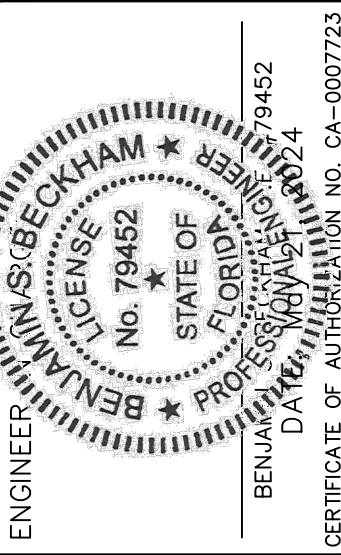
SUMMIT PLACE

FLORIDA

CITY OF DELAND

DR. HORTON

10192 DOWEN ROAD
ORLANDO, FL 32832
(407) 850-5200



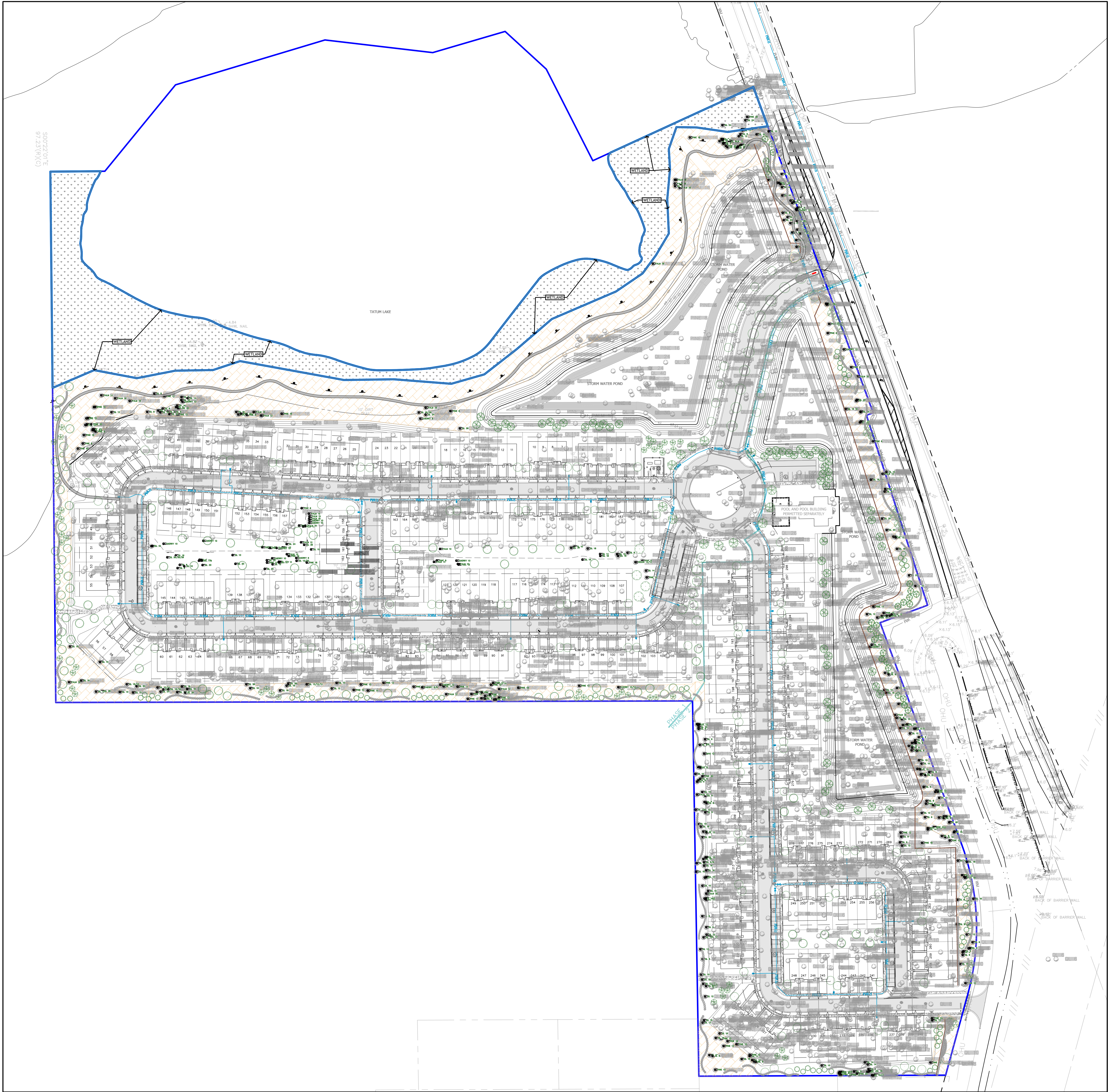
1	2	3	4	5	6	7	8	9	10	11	DATE	REVISIONS
3/16/23												
REV. PER CITY OF DELAND COMMENTS DATED:												

JOB # 21886
DATE: 02/20/23
SCALE: N/A
DESIGNED BY: JTT
DRAWN BY: JTT
APPROVED BY: BSB

C918

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5/21/2024 9:02:26 AM



INDEX OF DRAWINGS

SHEET NO.	DESCRIPTION
L0	OVERALL PLAN AND SHEET INDEX
TP 1	TREE PROTECTION PLAN'
TP 2	TREE PROTECTION PLAN'
TP 3	TREE PROTECTION PLAN'
H1	HARDSCAPE PLAN
H2	HARDSCAPE PLAN
H3	HARDSCAPE PLAN
H4	HARDSCAPE DETAILS
L1	LANDSCAPE PLAN
L2	LANDSCAPE PLAN
L3	LANDSCAPE PLAN
L4	LANDSCAPE PLAN
L5	LANDSCAPE PLAN
L6	LANDSCAPE PLAN
L7	LANDSCAPE PLAN
L8	LANDSCAPE PLAN
L9	LANDSCAPE NOTES AND SCHEDULE
L10	LANDSCAPE DETAILS
IR1	IRRIGATION PLAN
IR2	IRRIGATION PLAN
IR3	IRRIGATION PLAN
IR4	IRRIGATION PLAN
IR5	IRRIGATION PLAN
IR6	IRRIGATION PLAN
IR7	IRRIGATION PLAN
IR8	IRRIGATION PLAN
IR9	IRRIGATION SCHEDULES AND CHARTS
IR10	IRRIGATION SCHEDULES AND CHARTS
IR11	IRRIGATION DETAILS
IR12	IRRIGATION DETAILS

IRRIGATION PLANS INCLUDED



THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY MARY KATHERINE MAGLEY ON THE DATE AND TIME SPECIFIED USING A DIGITAL SIGNATURE. PRINTED COPIES OF THE DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

MARY KATHERINE MAGLEY, RLA #0001375



Digitally signed

by MARY K
MAGLEY

Date:

2024.05.21

09:07:15 -04'00'

REVISIONS		
REVISION NUMBER	REVISION DESCRIPTION	REVISION DATE
1	CITY COMMENTS	02/20/2024
2	CITY COMMENTS	05/21/2024

ISSUED	
FEBRUARY 17, 2023 FEBRUARY 20, 2024 APRIL 30, 2024	CITY OF DELAND CITY OF DELAND CITY OF DELAND

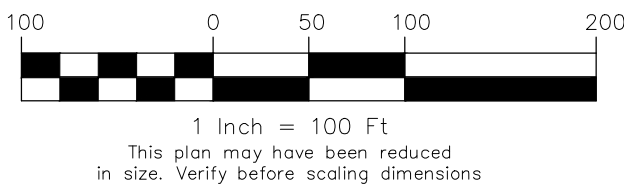
SUMMIT PLACE
DeLand/DR Horton

OVERALL PLAN

PROJECT NUMBER:	MD#2303
DATE:	JANUARY 17, 2023
DRAWN BY:	MD
CHECKED BY:	MD

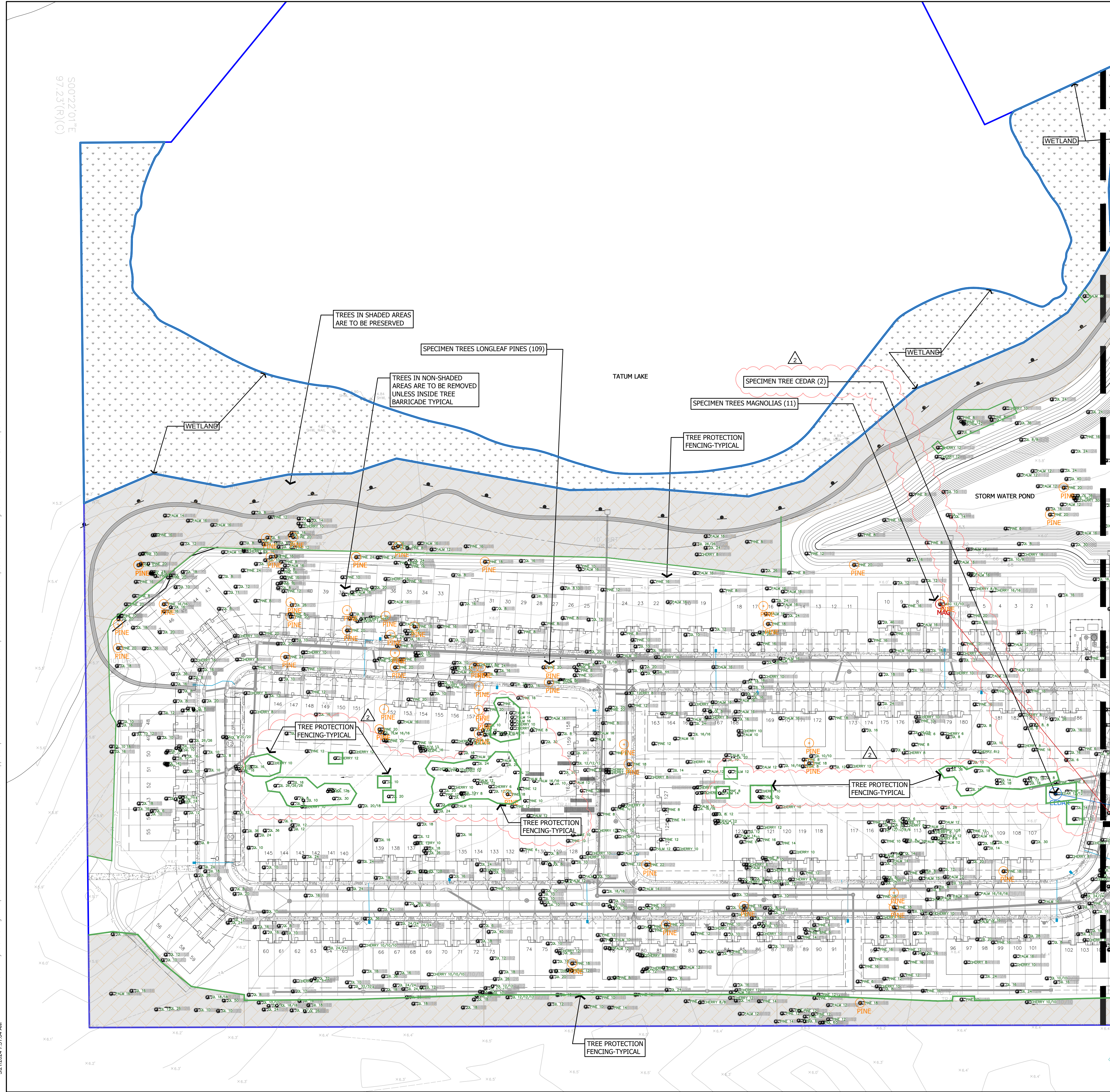
SCALE AS INDICATED

L0



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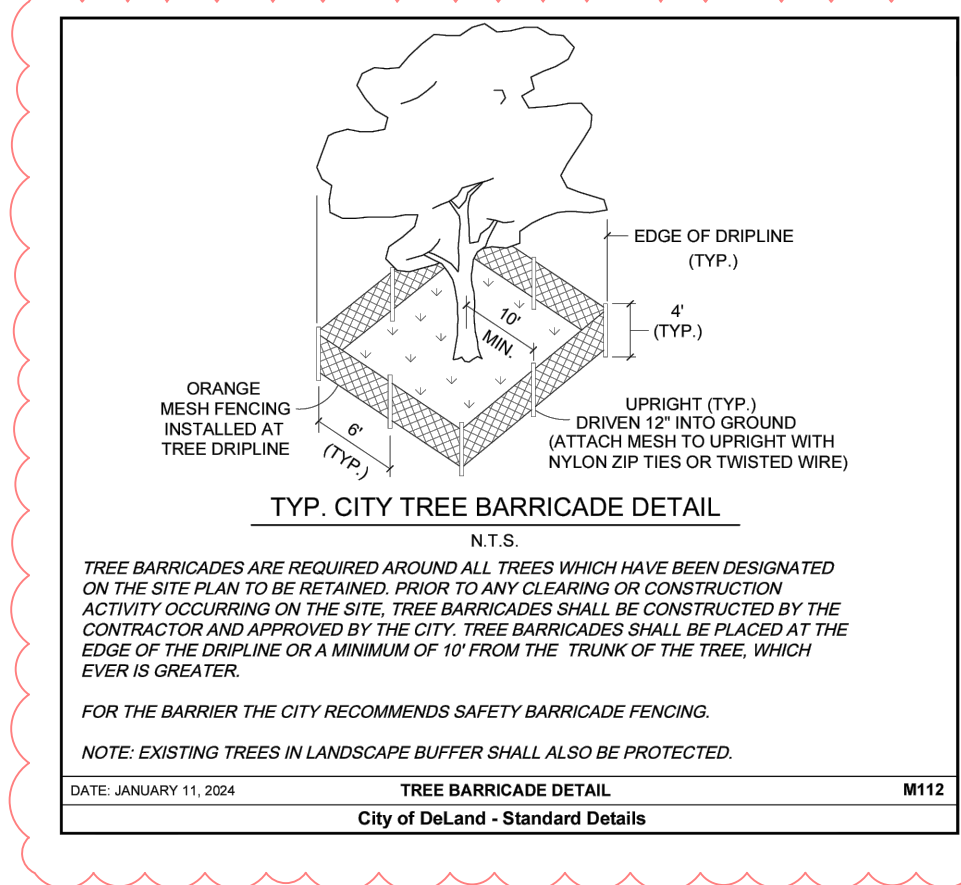
5/21/2024 7:51:04 AM



- TREE PROTECTION REQUIREMENTS**
~Per City of DeLand Land Development Code, Section 33-57.05,
~Protected trees are considered to be:
6" DBH and greater
Palm (5' clear trunk)
~And replaced at 1/3 of DBH inches
~Specimen trees are considered to be:
Live Oak (min. 10" DBH and greater)
Sand Live Oak (min. 10" DBH and greater)
Turkey Oak (min. 12" DBH and greater)
Loblolly Bay (min. 12" DBH and greater)
Longleaf Pine (min. 18" DBH and greater)
Magnolia (min. 12" DBH and greater)
Cedar, Eastern Red (min. 12" DBH and greater)
Cedar, Southern Red (min. 12" DBH and greater)
~And replaced at 50% of DBH inches
~Historic trees are considered to be:
Live Oak (min. 25" DBH and greater)
Sand Live Oak (min. 25" DBH and greater)
Bald Cypress (min. 20" DBH and greater)
Red Cedar (min. 25" DBH and greater)
~And replaced at 100% of DBH inches
~Laurel Oaks = > than 20" DBH and in deteriorating condition will be replaced at 1:1 with a 2" min DBH tree

THE TREE PRESERVATION AREAS MAY REQUIRE SELECTIVE PRUNING OF DEAD AND BROKEN BRANCHES AND THE REMOVAL OF UNSAFE BRANCHES/TREES. THE OWNER'S REPRESENTATIVE WILL COORDINATE WITH THE CONTRACTOR ANY REQUIRED TREE PRESERVATION WORK.

PINE STRAW MULCH (6" THICK LOOSE) SHALL BE PLACED AT THE BASE OF ALL SINGLE EXISTING TREES IN A 4' DIAMETER. AT CLUSTERS OF EXISTING TREES THE PINE STRAW SHALL BE PLACED IN A LARGER AREA TO INCLUDE THE TREE TRUNKS AND THE PINE STRAW AREA SHALL BE A NATURAL SHAPE.
BAHIA SOD IS REQUIRED IN ALL OPEN AREAS.



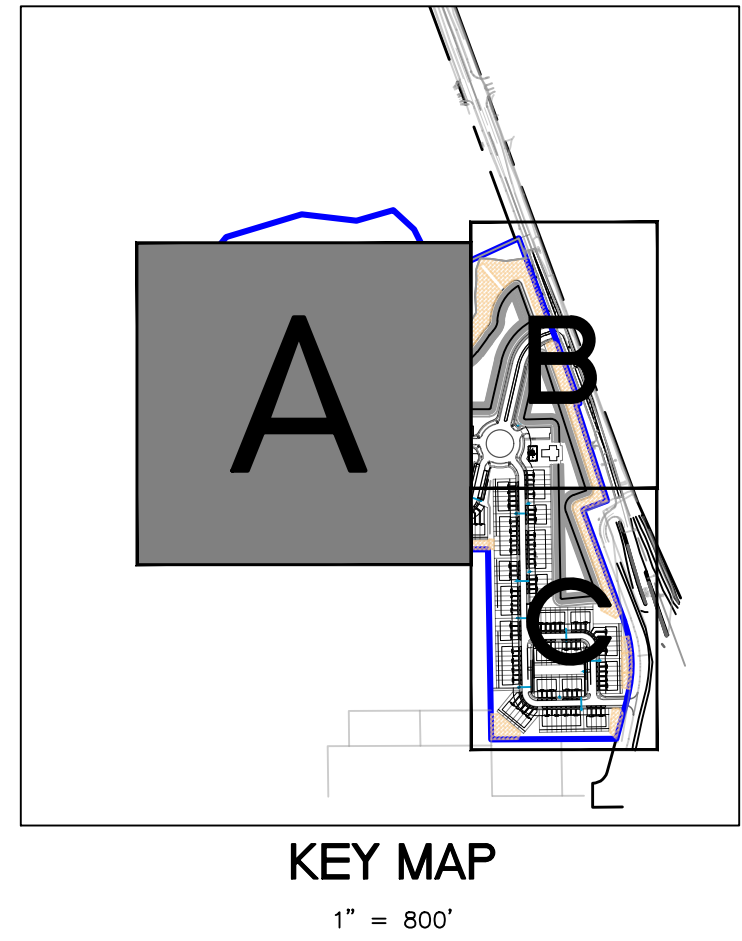
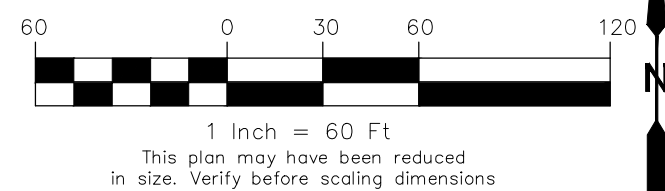
LEGEND

- TREE BARRICADE-TYPICAL**
REFER TO DETAIL
- PINE 14**
EXISTING TREE/SPECIES/DBH TO REMAIN SHOWN IN SHADED AREA ON THE PLAN OR INSIDE TREE BARRICADE FENCING
- HISTORIC TREE (0 ON SITE)**
- SPECIMEN MAGNOLIA TREES (11 ON SITE)/10 REMOVED**
- SPECIMEN OAK TREES (2 SAND LIVE) (2 TOTAL)/2 REMOVED**
- SPECIMEN LONG LEAF PINE TREES (109 ON SITE)/83XXXXX REMOVED**
- SPECIMEN CEDAR TREES (2 ON SITE)/1 REMOVED**
- QL 12**
EXISTING TREE/SPECIES/DBH REMOVED
- WETLANDS**
- TREE PROTECTION AREA**

NOTES:

- NO CONSTRUCTION ACTIVITY CAN TAKE PLACE WITHIN 1.5 TIMES THE DRIP LINE OF PRESERVED HISTORIC TREES.

"SUNSHINE STATE ONE CALL OF FLORIDA, INC."
1-800-432-4770
WWW.CALLSUNSHINE.COM
REQUIRED BY FLORIDA STATUTE 553.80
A MIN. OF 2 DAYS AND A MAX. OF 5 DAYS
BEFORE YOU EXCAVATE, YOU ARE TO NOTIFY
SUNSHINE STATE ONE CALL OF FLORIDA
SEE EXCAVATION GUIDE, LATEST EDITION



Seal

Mary Katherine Magley
State of Florida Lic. No.: LA 0001375

REVISIONS		
REVISION NUMBER	REVISION DESCRIPTION	REVISION DATE
1	CITY COMMENTS	02/20/2024
2	CITY COMMENTS	05/21/2024

ISSUED
FEBRUARY 17, 2023
FEBRUARY 20, 2024
APRIL 30, 2024
CITY OF DELAND
CITY OF DELAND

SUMMIT PLACE
DeLand/DR Horton

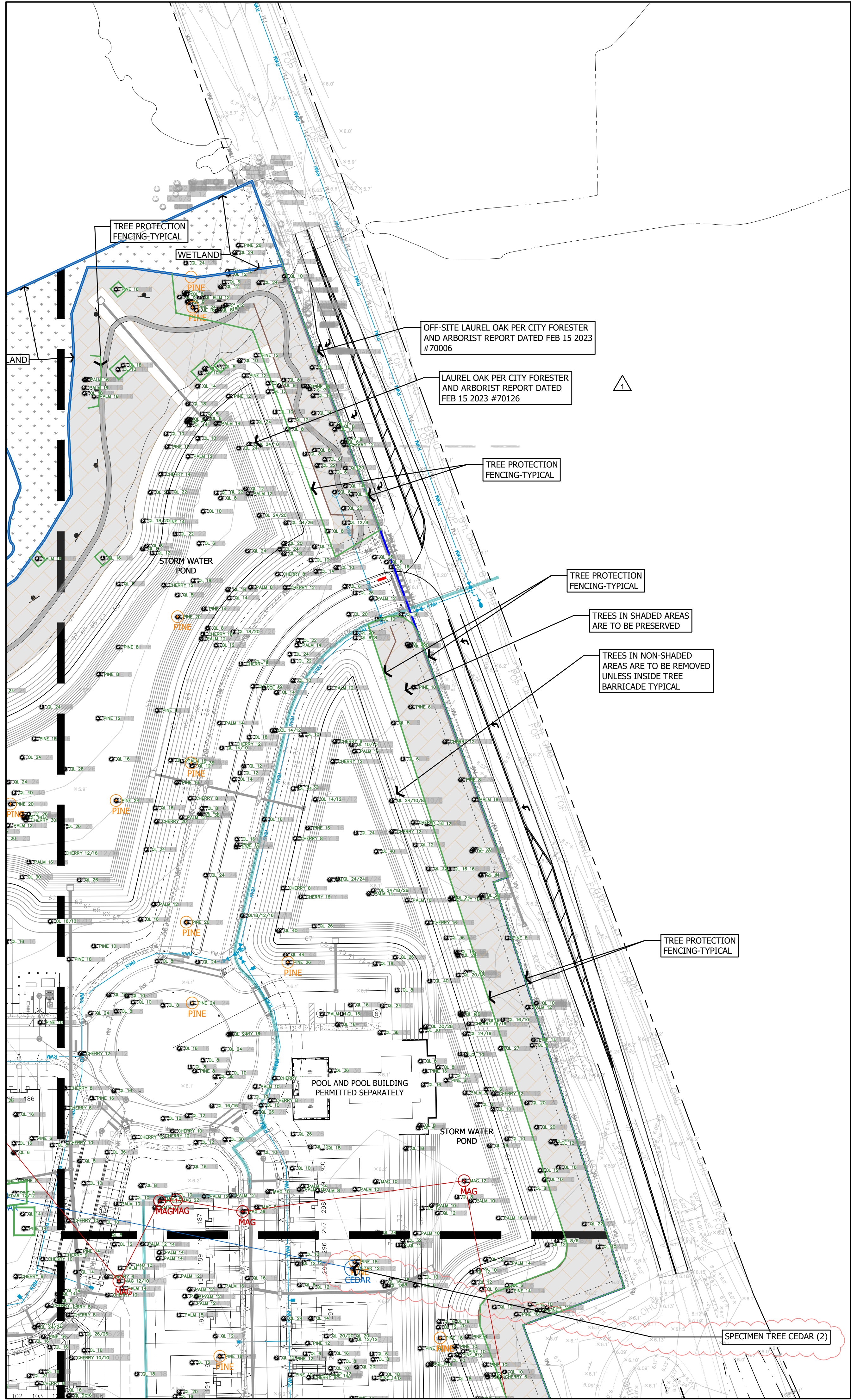
TREE PROTECTION PLAN

PROJECT NUMBER: MD#2303
DATE: JANUARY 17, 2023
DRAWN BY: MD
CHECKED BY: MKM

SCALE AS INDICATED

T1

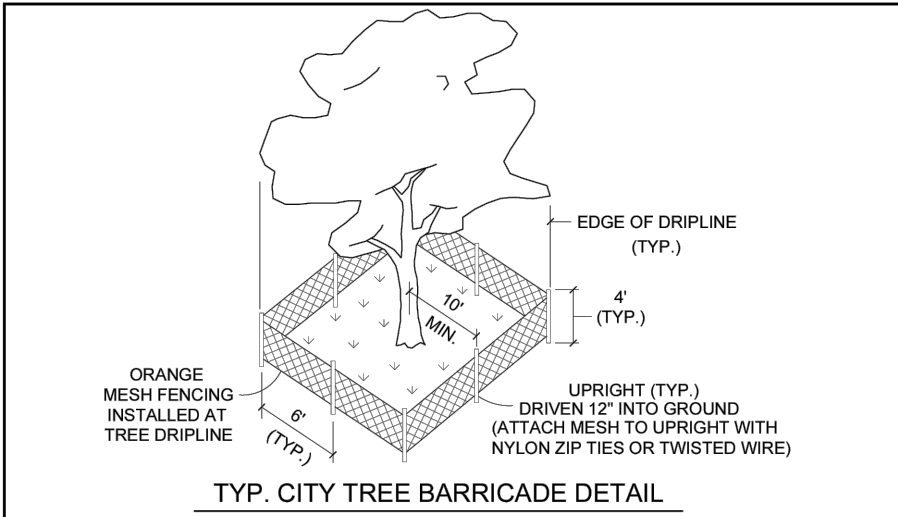
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TREE PROTECTION REQUIREMENTS
~Per City of DeLand Land Development Code, Section 33-57.05,
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6" DBH and greater
Palm (5' clear trunk)
~And replaced at 1/3 of DBH inches
~Specimen trees are considered to be:
Live Oak (min. 10" DBH and greater)
Sand Live Oak (min. 10" DBH and greater)
Turkey Oak (min. 12" DBH and greater)
Loblolly Bay (min. 12" DBH and greater)
Longleaf Pine (min. 18" DBH and greater)
Magnolia (min. 12" DBH and greater)
Cedar, Eastern Red (min. 12" DBH and greater)
Cedar, Southern Red (min. 12" DBH and greater)
~And replaced at 50% of DBH inches
~Historic trees are considered to be:
Live Oak (min. 25" DBH and greater)
Sand Live Oak (min. 25" DBH and greater)
Bald Cypress (min. 20" DBH and greater)
Red Cedar (min. 25" DBH and greater)
~And replaced at 100% of DBH inches
~Laurel Oaks = > than 20" DBH and in deteriorating condition will be replaced at 1:1 with a 2" min DBH tree

THE TREE PRESERVATION AREAS MAY REQUIRE SELECTIVE PRUNING OF DEAD AND BROKEN BRANCHES AND THE REMOVAL OF UNSAFE BRANCHES/TREES. THE OWNER'S REPRESENTATIVE WILL COORDINATE WITH THE CONTRACTOR ANY REQUIRED TREE PRESERVATION WORK.

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BAHIA SOD IS REQUIRED IN ALL OPEN AREAS.



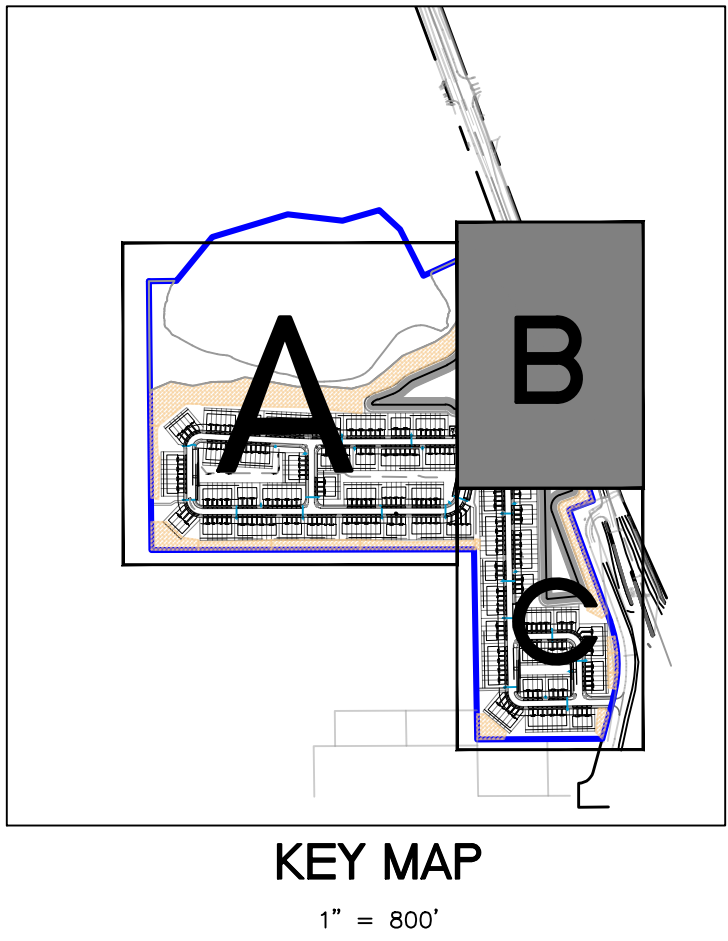
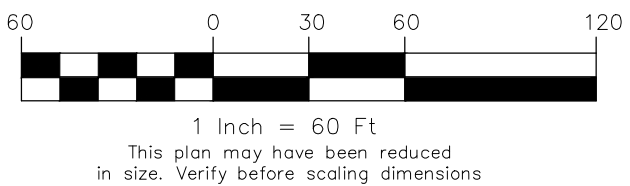
NOTE: EXISTING TREES IN LANDSCAPE BUFFER SHALL ALSO BE PROTECTED.
DATE: JANUARY 11, 2024
City of DeLand - Standard Details

LEGEND

- TREE BARRICADE-TYPICAL
REFER TO DETAIL
- PINE 14 EXISTING TREE/SPECIES/DBH TO REMAIN SHOWN IN SHADED AREA ON THE PLAN OR INSIDE TREE BARRICADE FENCING
- HISTORIC TREE (0 ON SITE)
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- SPECIMEN OAK TREES (2 SAND LIVE) (2 TOTAL)/2 REMOVED
- SPECIMEN LONG LEAF PINE TREES (109 ON SITE)/83XXXXX REMOVED
- SPECIMEN CEDAR TREES (2 ON SITE)/1 REMOVED
- QL 12 EXISTING TREE/SPECIES/DBH REMOVED
- WETLANDS
- TREE PROTECTION AREA

NOTES:
1. NO CONSTRUCTION ACTIVITY CAN TAKE PLACE WITHIN 1.5 TIMES THE DRIP LINE OF PRESERVED HISTORIC TREES.

"SUNSHINE STATE ONE CALL OF FLORIDA, INC."
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SUNSHINE STATE ONE CALL OF FLORIDA
SEE EXCAVATION GUIDE, LATEST EDITION



1" = 800'

MDMagleyDesign

Landscape Architecture

Site Planning

Project Management

18174, Washington Street • Orlando, FL 32803 • 407.756.9656

Seal

Mary Katherine Magley

State of Florida Lic. No.: LA 0001375

REVISIONS		
REVISION NUMBER	REVISION DESCRIPTION	REVISION DATE
1	CITY COMMENTS	02/20/2024
2	CITY COMMENTS	05/21/2024

ISSUED

FEBRUARY 17, 2023
FEBRUARY 20, 2024
APRIL 30, 2024

CITY OF DELAND
CITY OF DELAND
CITY OF DELAND

SUMMIT PLACE

DeLand/DR Horton

TREE PROTECTION PLAN

PROJECT NUMBER: MD#2303

DATE: JANUARY 17, 2023

DRAWN BY: MD

CHECKED BY: MKM

SCALE AS INDICATED

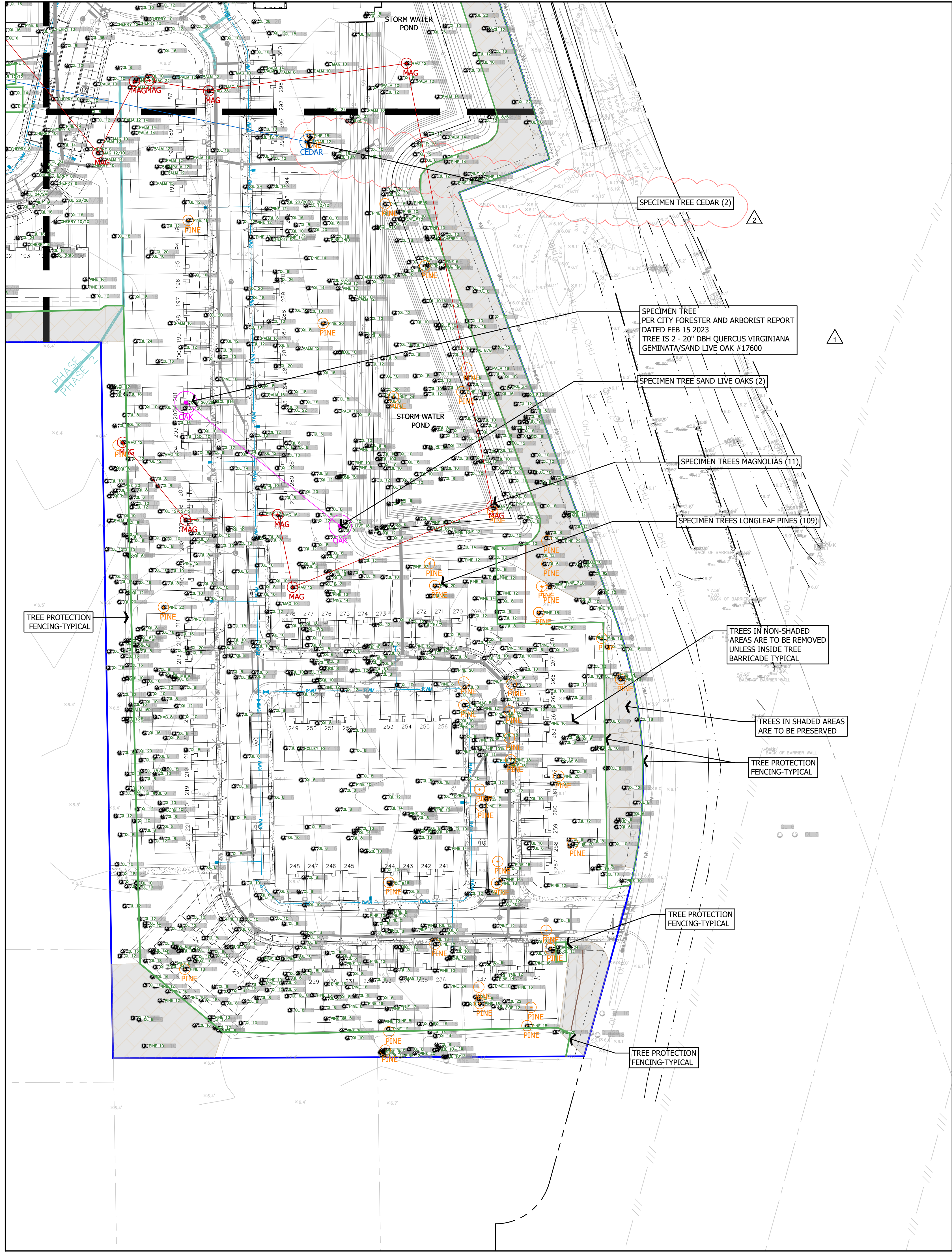
T2

G:\My Drive\Projects\2303 Summit Place DeLand\Acad\Draws\2303 Landscape Set.dwg

Page 80 of 107

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5/21/2024 7:52:14 AM

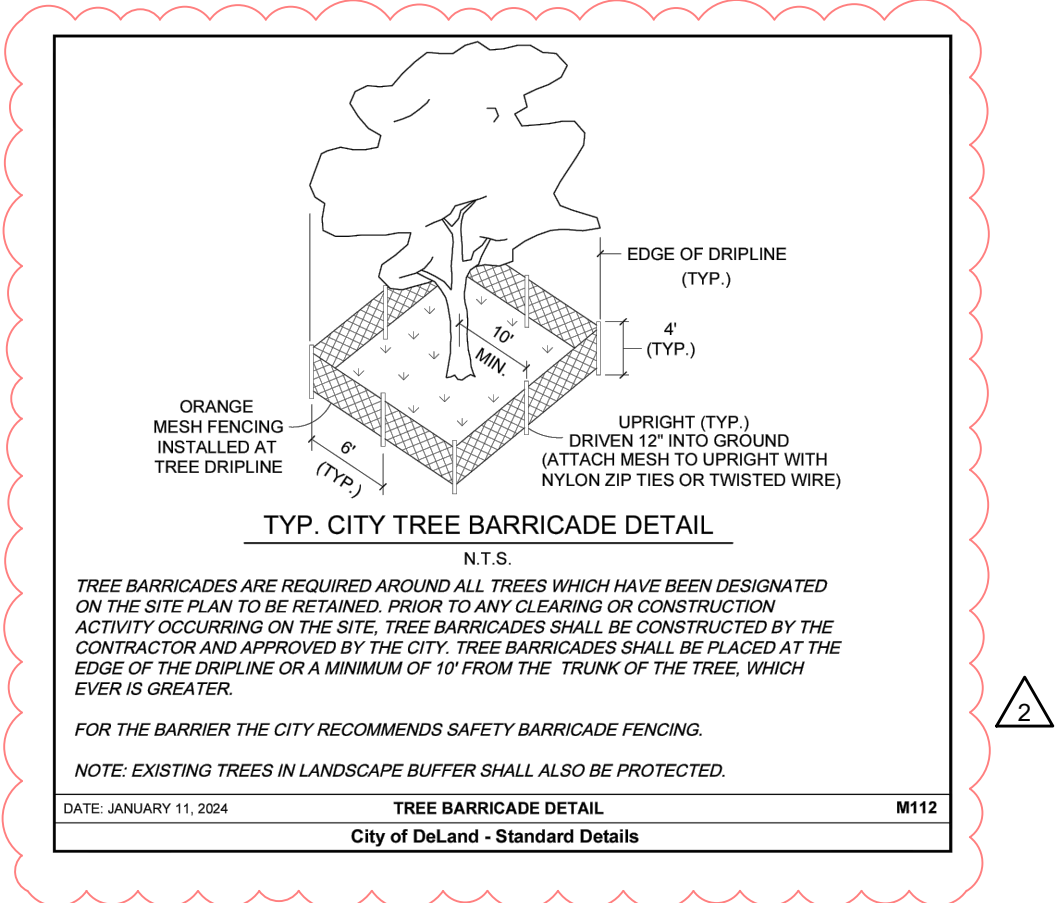


TREE PROTECTION REQUIREMENTS
~Per City of Deland Land Development Code, Section 33-57.05,
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Longleaf Pine (min. 18" DBH and greater)
Magnolia (min. 12" DBH and greater)
Cedar, Eastern Red (min. 12" DBH and greater)
Cedar, Southern Red (min. 12" DBH and greater)
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~Historic trees are considered to be:
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Sand Live Oak (min. 25" DBH and greater)
Bald Cypress (min. 20" DBH and greater)
Red Cedar (min. 25" DBH and greater)
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~Laurel Oaks = > than 20" DBH and in deteriorating condition will be replaced at 1:1 with a 2" min DBH tree

THE TREE PRESERVATION AREAS MAY REQUIRE SELECTIVE PRUNING OF DEAD AND BROKEN BRANCHES AND THE REMOVAL OF UNSAFE BRANCHES/TREES. THE OWNER'S REPRESENTATIVE WILL COORDINATE WITH THE CONTRACTOR ANY REQUIRED TREE PRESERVATION WORK.

PINE STRAW MULCH (6" THICK LOOSE) SHALL BE PLACED AT THE BASE OF ALL SINGLE EXISTING TREES IN A 4' DIAMETER. AT CLUSTERS OF EXISTING TREES THE PINE STRAW SHALL BE PLACED IN A LARGER AREA TO INCLUDE THE TREE TRUNKS AND THE PINE STRAW AREA SHALL BE A NATURAL SHAPE.

BAHIA SOD IS REQUIRED IN ALL OPEN AREAS.

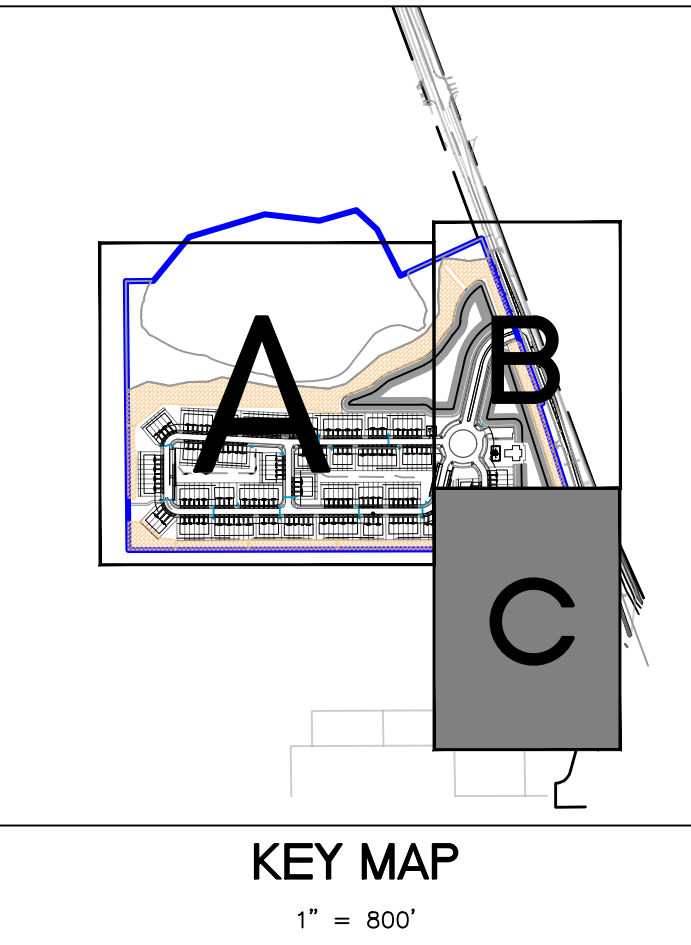
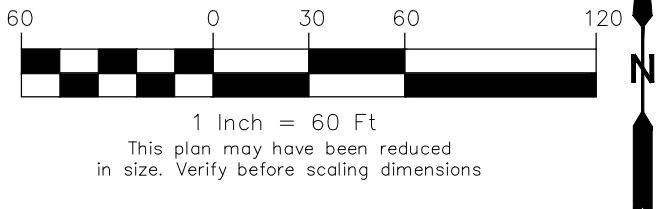


LEGEND

- TREE BARRICADE-TYPICAL
REFER TO DETAIL
- EXISTING TREE/SPECIES/DBH TO REMAIN
SHOWN IN SHADED AREA ON THE PLAN OR
INSIDE TREE BARRICADE FENCING
- HISTORIC TREE
(0 ON SITE)
- SPECIMEN MAGNOLIA TREES
(11 ON SITE)/10 REMOVED
- SPECIMEN OAK TREES (2 SAND LIVE)
(2 TOTAL)/2 REMOVED
- SPECIMEN LONG LEAF PINE TREES
(109 ON SITE)/83XXXXX REMOVED
- SPECIMEN CEDAR TREES
(2 ON SITE)/1 REMOVED
- EXISTING TREE/SPECIES/DBH REMOVED
- WETLANDS
- TREE PROTECTION AREA

NOTES:
1. NO CONSTRUCTION ACTIVITY CAN TAKE PLACE WITHIN 1.5 TIMES THE DRIP LINE OF PRESERVED HISTORIC TREES.

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TREE PROTECTION PLAN

PROJECT NUMBER: MD#2303
DATE: JANUARY 17, 2023
DRAWN BY: MD
CHECKED BY: MKM

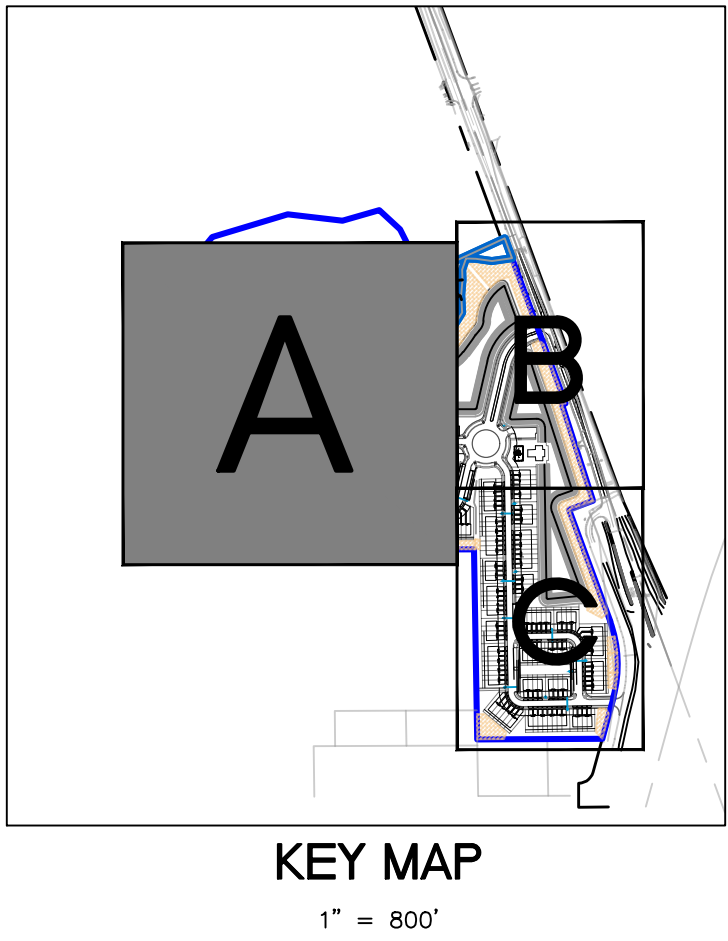
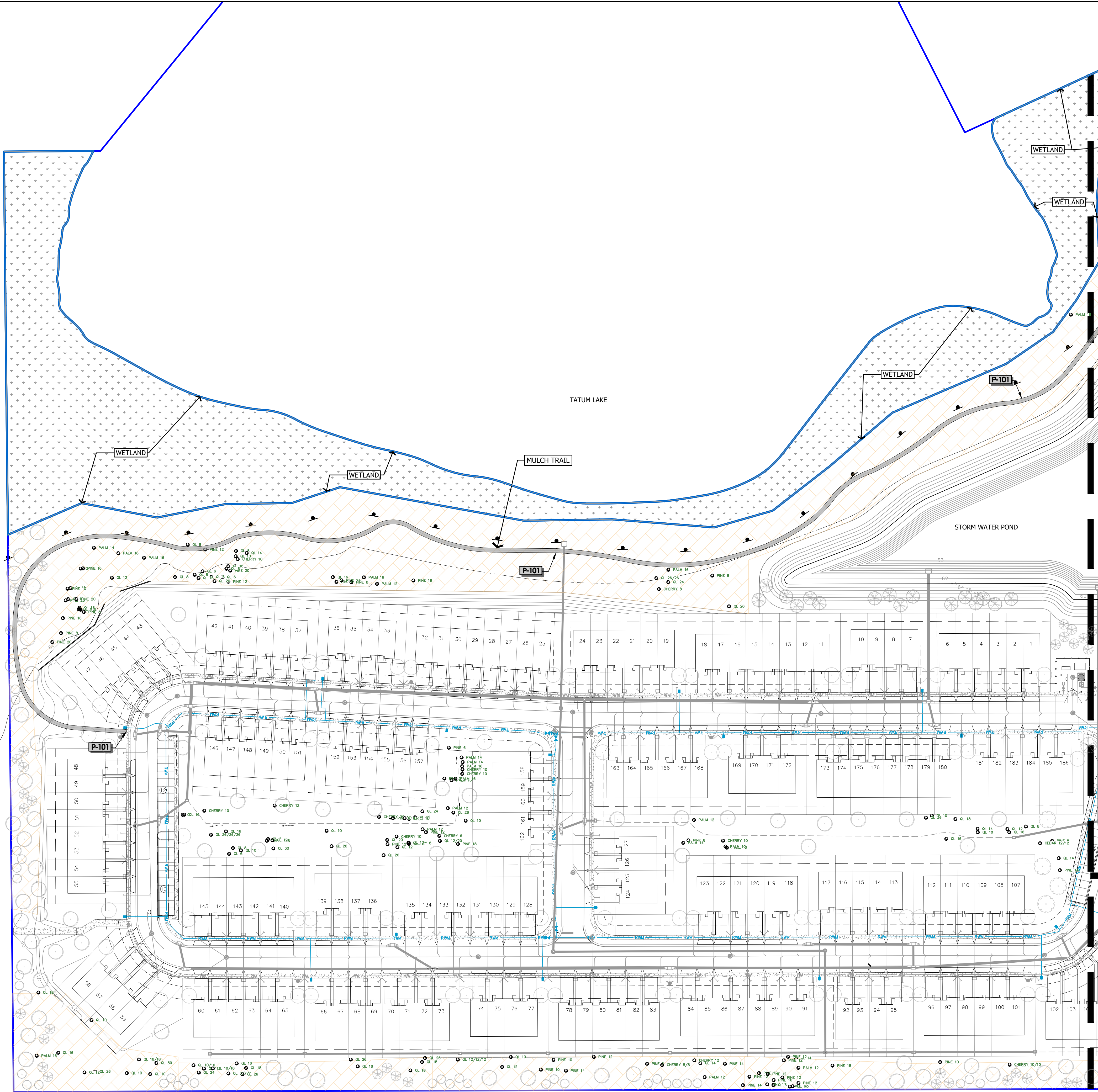
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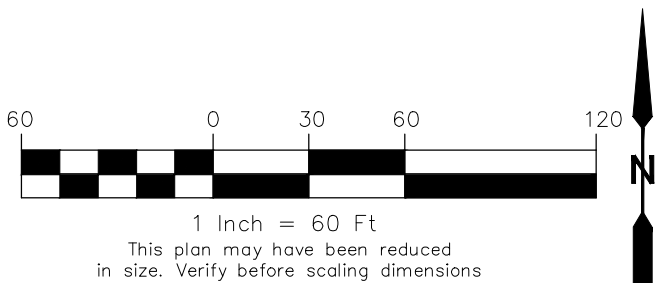
G:\My Drive\Projects\2303 Summit Place DeLand\Acad\Draws\2303 Landscape Set.dwg



REFERENCE NOTES SCHEDULE	
SYMBOL	DESCRIPTION
(F-101)	6' HT PVC FENCE DESIGN BUILD AS DIRECTED BY DEVELOPER COLOR AND STYLE TBD
SYMBOL	DESCRIPTION
(P-101)	5' WIDE MULCH TRAIL SEE DETAIL AVOID EXISTING TREES WHEN LAYING OUT TRAIL

- NOTES:
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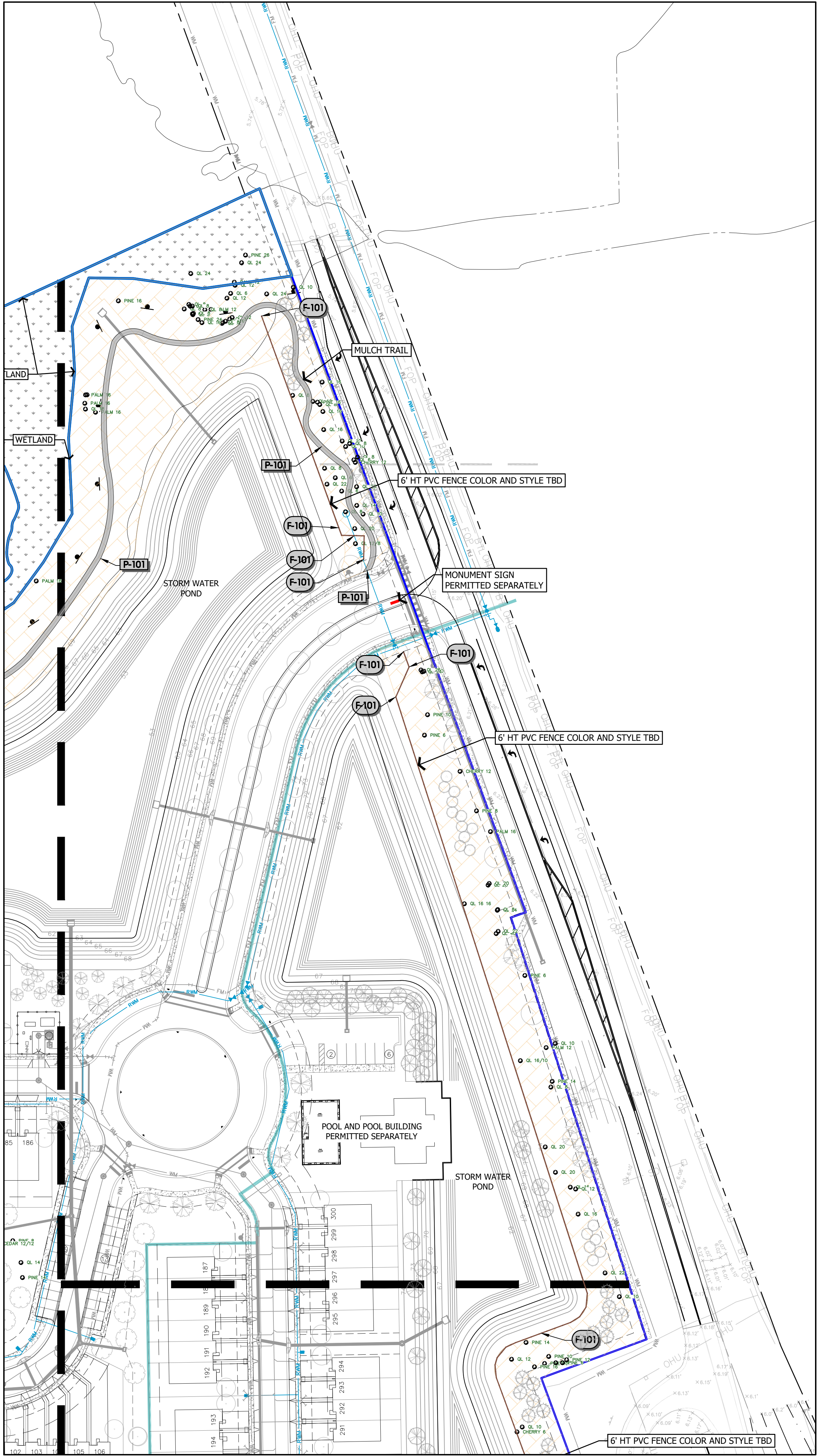
HARDSCAPE PLAN

PROJECT NUMBER: MD#2303
DATE: JANUARY 17, 2023
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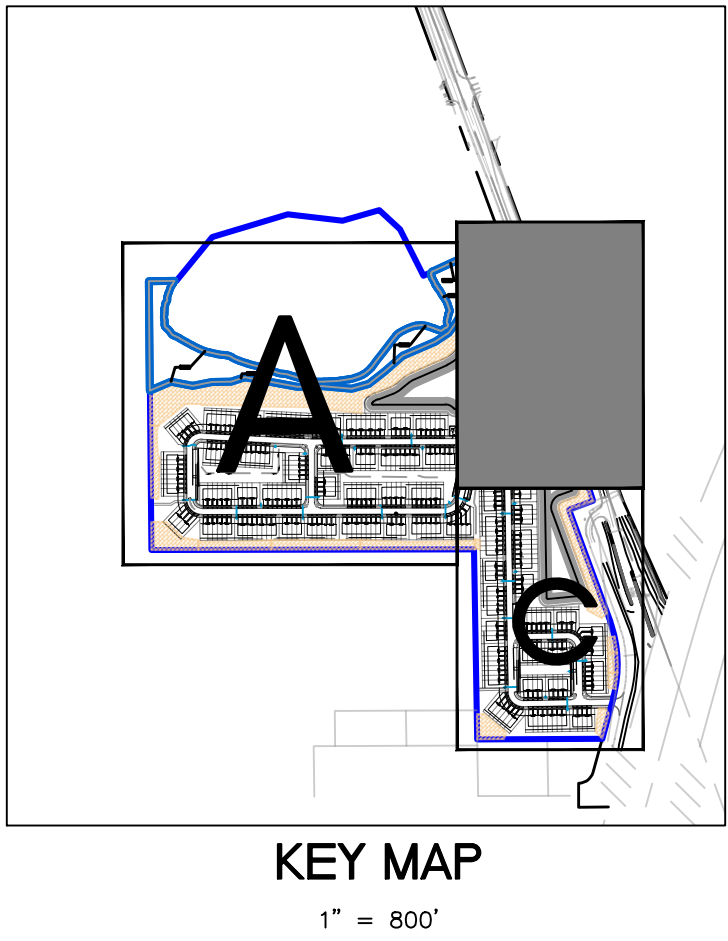
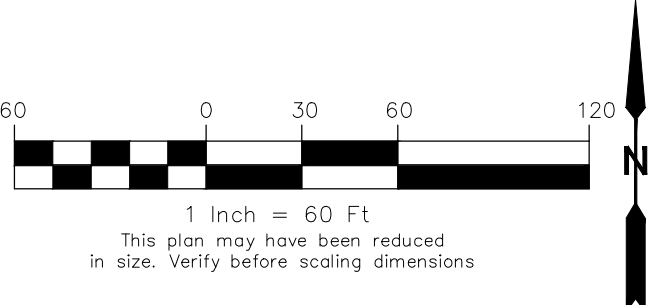


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REFERENCE NOTES SCHEDULE	
SYMBOL	FURNISHINGS
(F-101)	DESCRIPTION 6' HT PVC FENCE DESIGN BUILD AS DIRECTED BY DEVELOPER COLOR AND STYLE TBD
	PAVEMENTS
(P-101)	DESCRIPTION 5' WIDE MULCH TRAIL SEE DETAIL AVOID EXISTING TREES WHEN LAYING OUT TRAIL

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**SUMMIT PLACE
DeLand/DR Horton**

HARDSCAPE PLAN

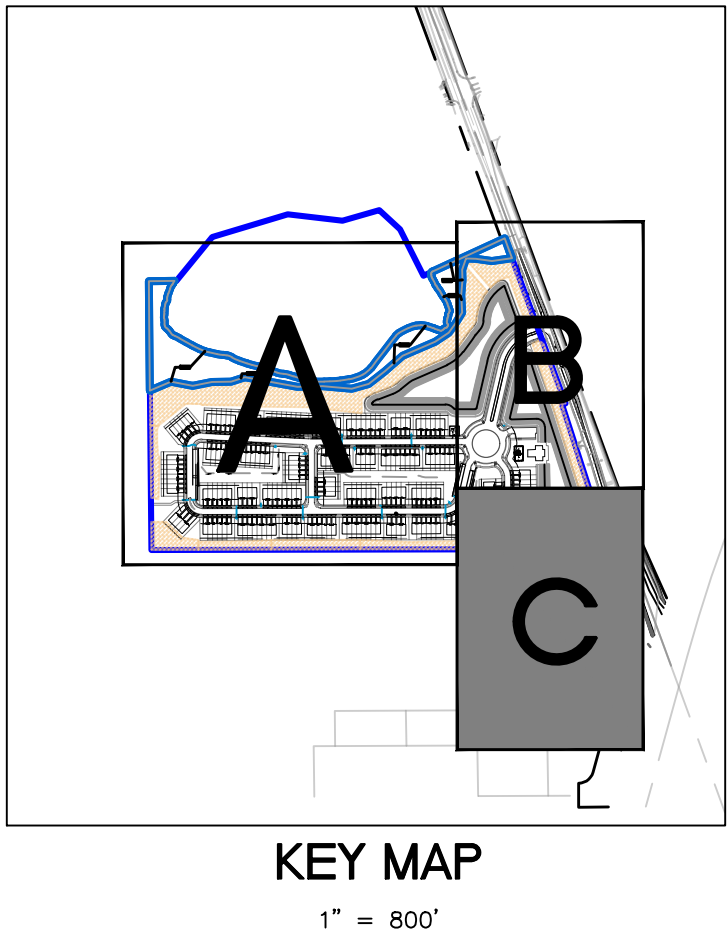
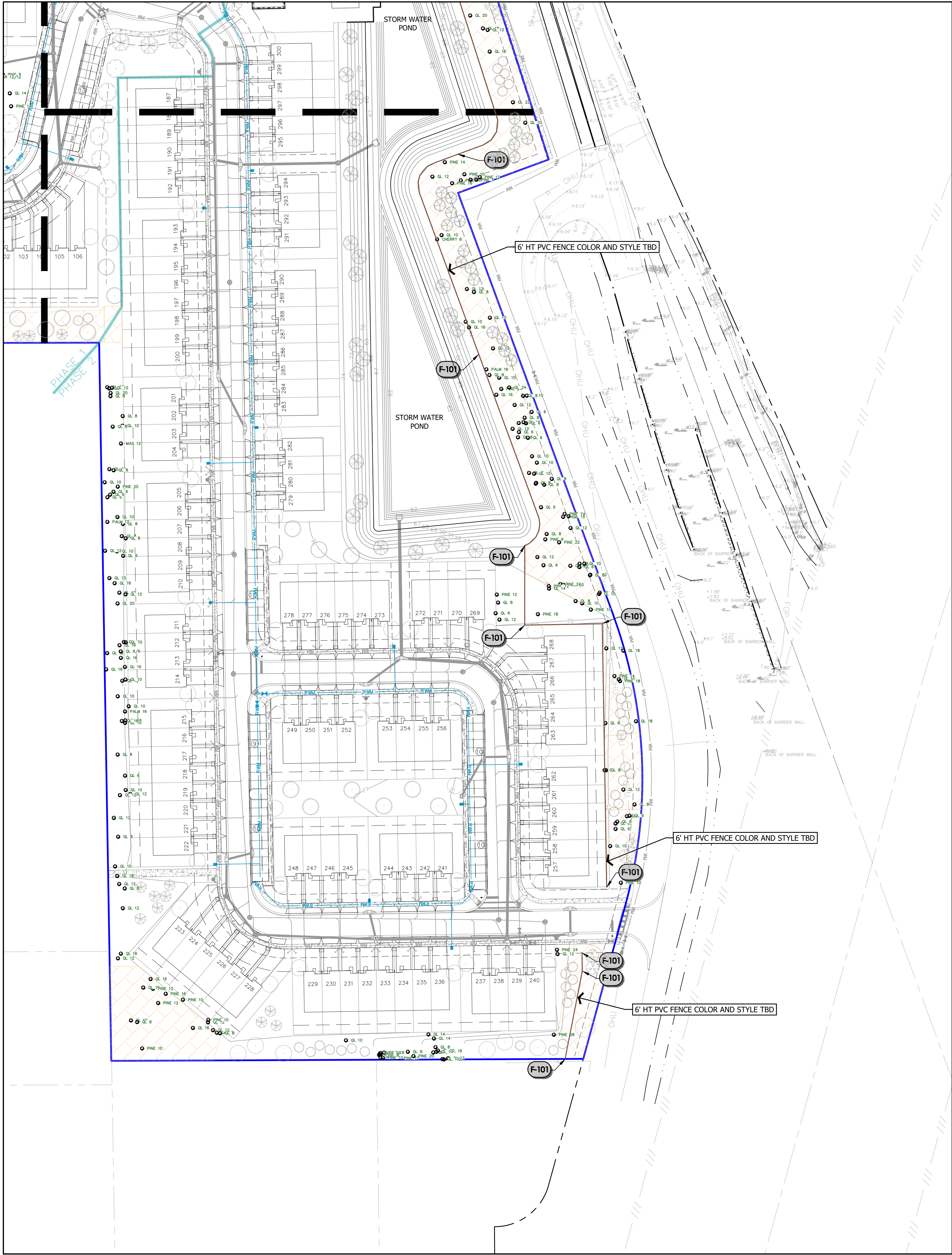
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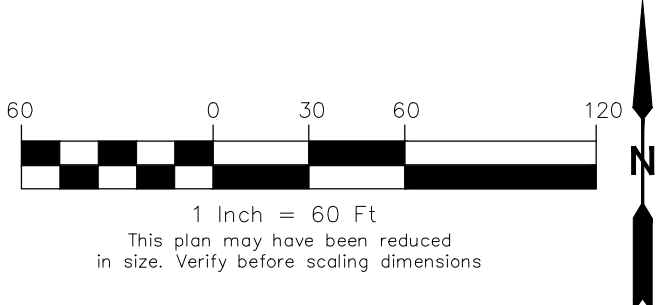
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REFERENCE NOTES SCHEDULE	
FURNISHINGS	
SYMBOL	DESCRIPTION
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PAVEMENTS	
SYMBOL	DESCRIPTION
[P-101]	5' WIDE MULCH TRAIL SEE DETAIL AVOID EXISTING TREES WHEN LAYING OUT TRAIL

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SUMMIT PLACE
DeLand/DR Horton

HARDSCAPE PLAN

PROJECT NUMBER: MD#2303
DATE: JANUARY 17, 2023
DRAWN BY: MD
CHECKED BY: MKM

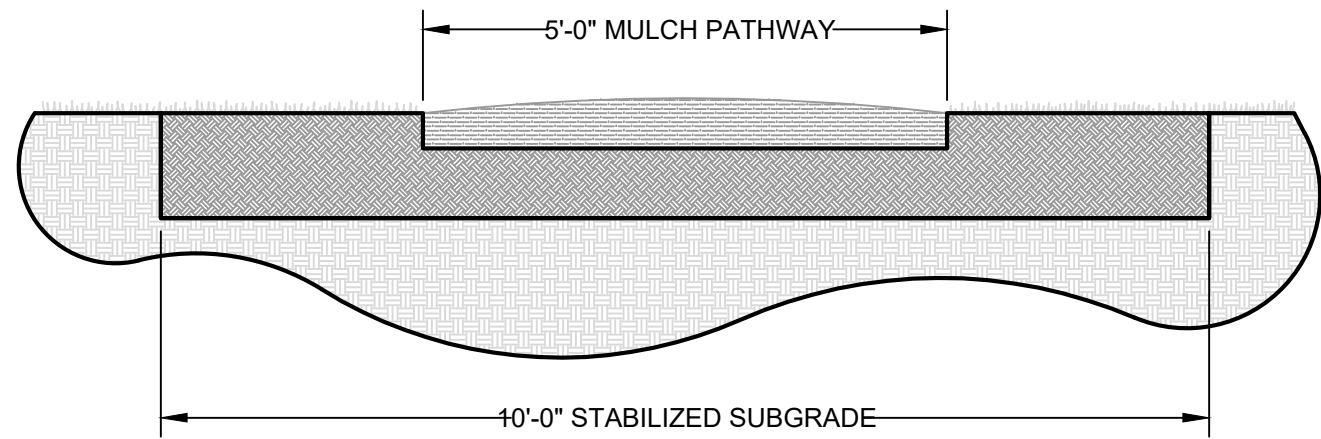
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1 TYPICAL MULCH TRAIL DETAIL

Scale: N.T.S.



2 TYPICAL FENCE

Scale: N.T.S.



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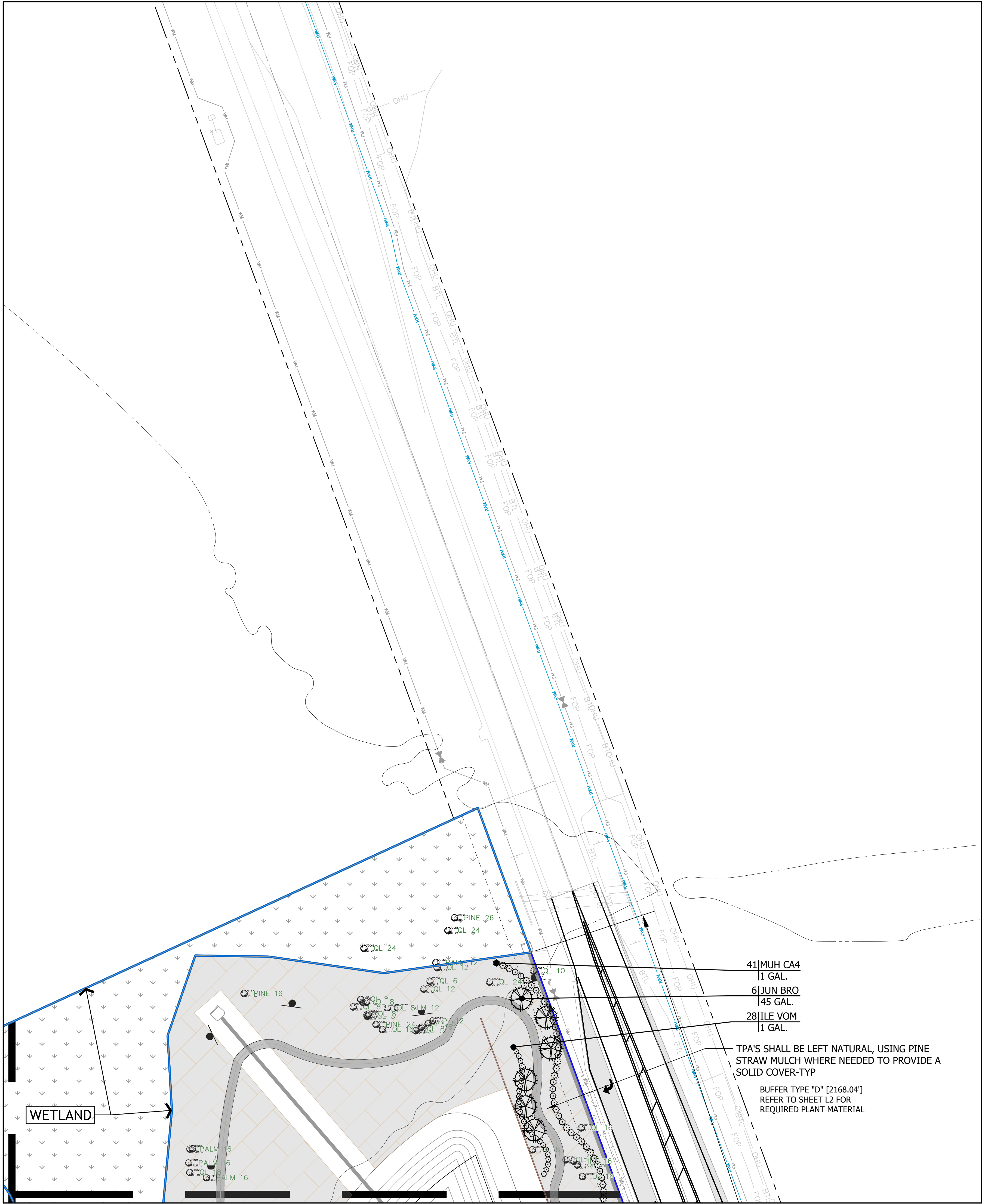
HARDSCAPE DETAILS

PROJECT NUMBER:	MD#2303
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CHECKED BY:	MM

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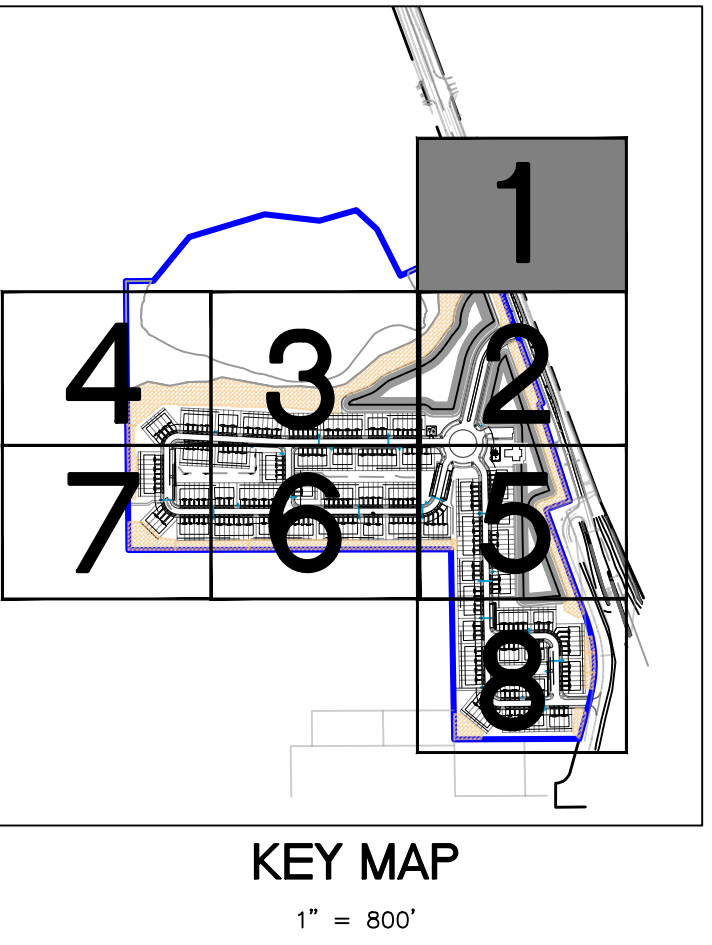
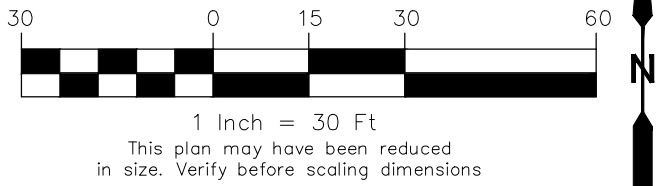


41|MUH CA4
1 GAL.
6|JUN BRO
145 GAL.
28|ILE VOM
1 GAL.
TPA'S SHALL BE LEFT NATURAL, USING PINE
STRAW MULCH WHERE NEEDED TO PROVIDE A
SOLID COVER-TYP
BUFFER TYPE "D" [2168.04']
REFER TO SHEET L2 FOR
REQUIRED PLANT MATERIAL

SUMMIT PLACE BUFFER CALCULATIONS						05/21/2024
WEST PROPERTY LINE						2
BUFFER TYPE C						
663.43 LF						
2" DBH MIN CANOPY TREES						
CANOPY TREES REQUIRED	6.2/100 LF	41.13	43 PROVIDED (2 EXISTING + 41 NEW)			
UNDERSTORY TREES REQD	1.8/100 LF	11.94	12 PROVIDED			
SHRUBS REQUIRED	18/100 LF	119.42	120 PROVIDED			
SOUTH PROPERTY LINE						
BUFFER TYPE C						
1342.83 LF						
2" DBH MIN CANOPY TREES						
CANOPY TREES REQUIRED	6.2/100 LF	83.26	83 PROVIDED (51 EXISTING + 32 NEW)			
UNDERSTORY TREES REQD	1.8/100 LF	24.17	24 PROVIDED			
SHRUBS REQUIRED	18/100 LF	241.71	242 PROVIDED			
WEST PROPERTY LINE						
BUFFER TYPE C						
791.66 LF						
4" DBH MIN CANOPY TREES						
CANOPY TREES REQUIRED	5.2/100 LF	41.17	41 PROVIDED (60 EXISTING)			
UNDERSTORY TREES REQD	2.2/100 LF	17.42	17 PROVIDED (USING EXCESS EXISTING TREES)			
SHRUBS REQUIRED	22/100 LF	174.17	174 PROVIDED			
SOUTH PROPERTY LINE						
BUFFER TYPE C						
520.33 LF						
3" DBH MIN CANOPY TREES						
CANOPY TREES REQUIRED	5.6/100 LF	29.14	29 PROVIDED (23 EXISTING + 6 NEW)			
UNDERSTORY TREES REQD	2.0/100 LF	10.41	10 PROVIDED			
SHRUBS REQUIRED	20/100 LF	104.07	104 PROVIDED			
EAST PROPERTY LINE						
BUFFER TYPE D						
2168.04 LF (1064.9+106.54+496.16+323.13+177.31)						
4" DBH MIN CANOPY TREES						
CANOPY TREES REQUIRED	7.2/100 LF	156.10	156 PROVIDED (149 EXISTING + 7 NEW)			
UNDERSTORY TREES REQD	4.0/100 LF	86.72	87 PROVIDED			
SHRUBS REQUIRED	30/100 LF	650.41	650 PROVIDED			

SUMMIT PLACE TREE COVERAGE CALCULATIONS						5/21/2024
SUMMIT PLACE						05/21/2024
TREE COVERAGE						
PROJECT AREA	59.90 AC					
LAKE	13.57 AC					(Deducting Lake area)
WETLAND	3.54 AC					(Deducting Wetland area per City Forester and Code Section 33-57.07(b)(7.4.)
LOT SIZE	42,799 AC					
	1,863,932 SF					TREE COVERAGE AREA
TREE PRESERVATION (15% REQUIRED)	6.4185 AC	% MIN REQUIRED (15%)	7.17 AC PROVIDED			
	279,590 SF	% MIN REQUIRED (15%)	312,325 SF PROVIDED			
MINIMUM TREE COVERAGE WHEN SITE CONTAINS AN INSUFFICIENT AMOUNT OF EXISTING TREES 1 TREE/2500 SF OF LOT/PARCEL						
	1,863,932 SF	/ 2500 SF	=	746 TREES REQUIRED		
	746 X	6 INCHES	=	4476 DBH INCHES REQUIRED FOR MINIMUM COVERAGE		
TREES			DBH INCHES			
RETAINED (CREDIT):						
72 LONG LEAF PINE			1250 LONG LEAF PINE			
1 MAGNOLIA			12 MAGNOLIA			
1 CEDAR			12 CEDAR			
19 CHERRY			174 CHERRY			
34 PALM			478 PALM			
265 LAUREL OAK			3544 LAUREL OAK			
392 TOTAL RETAINED TREES			5470 TOTAL RETAINED INCHES			
PROPOSED:						
506			1255			
506 TOTAL PROPOSED TREES			1255 TOTAL DBH INCHES PROPOSED			
TREE COVERAGE:						
746 REQUIRED TREES			4476 REQUIRED DBH			
392 TOTAL RETAINED TREES (SITE)			5470 TOTAL RETAINED DBH (SITE)			
506 TOTAL PROPOSED TREES (SITE)			1255 TOTAL DBH INCHES PROPOSED			
152 ABOVE MIN TREES			2249 ABOVE MIN DBH			
PROPOSED AND RETAINED:						
898 (WHERE 746 ARE REQUIRED)			6725 (WHERE 4476 ARE REQUIRED)			

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SUMMIT PLACE
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PLANTING PLAN

PROJECT NUMBER: MD#2303
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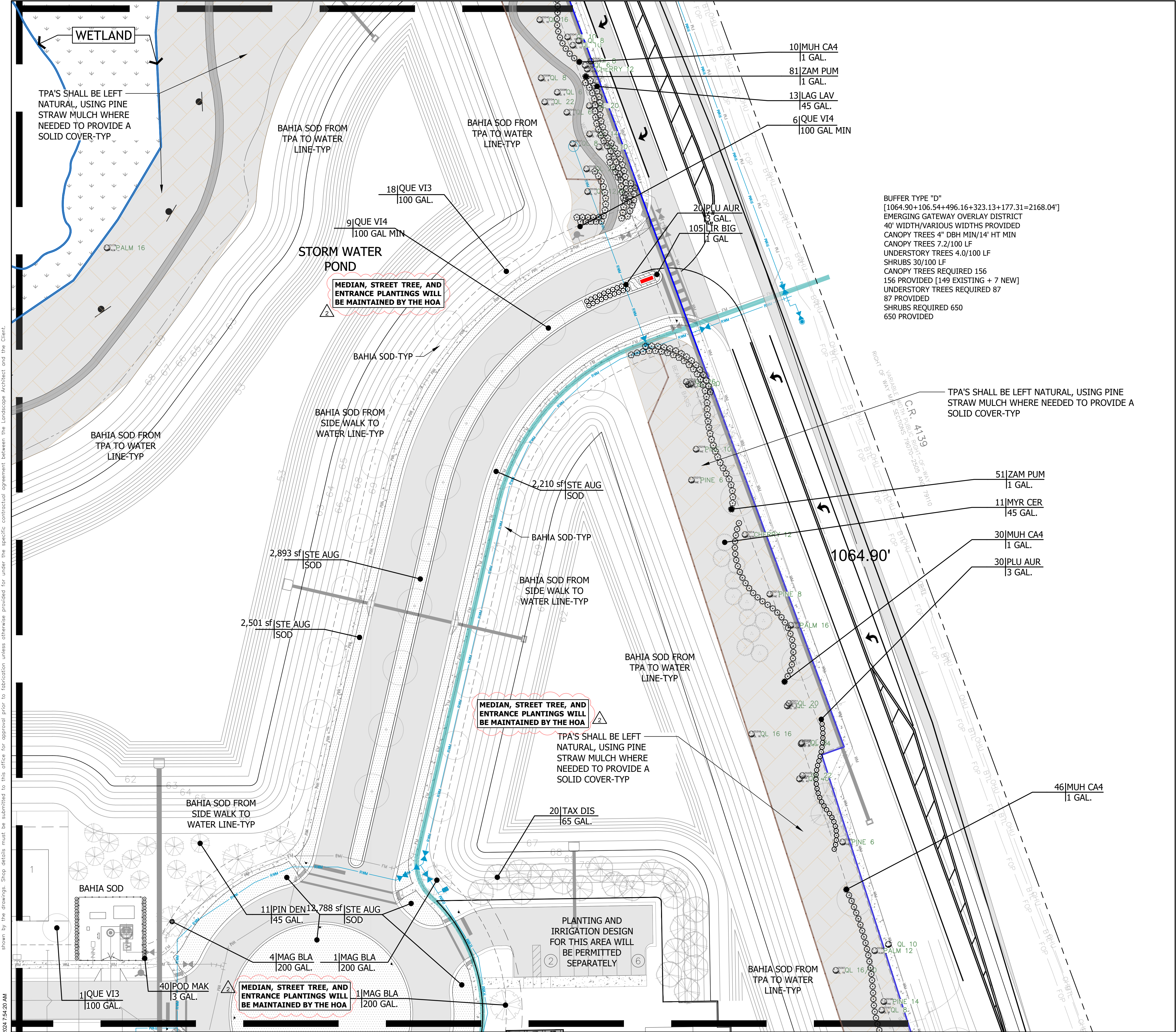
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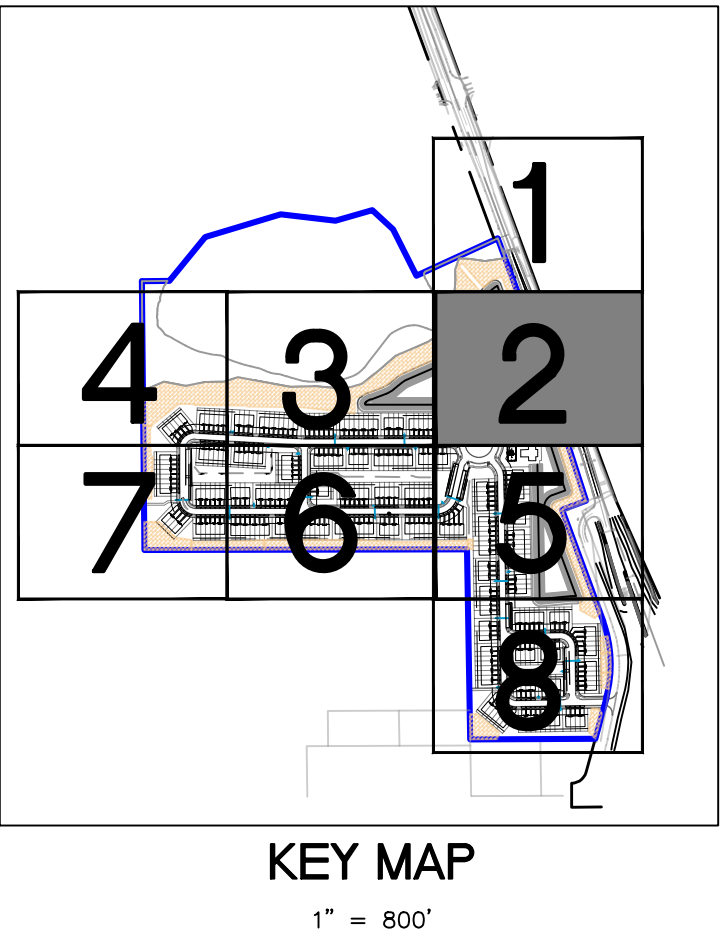
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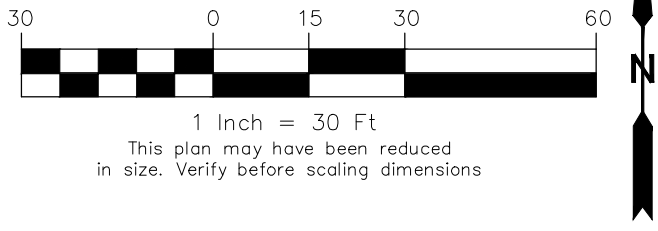
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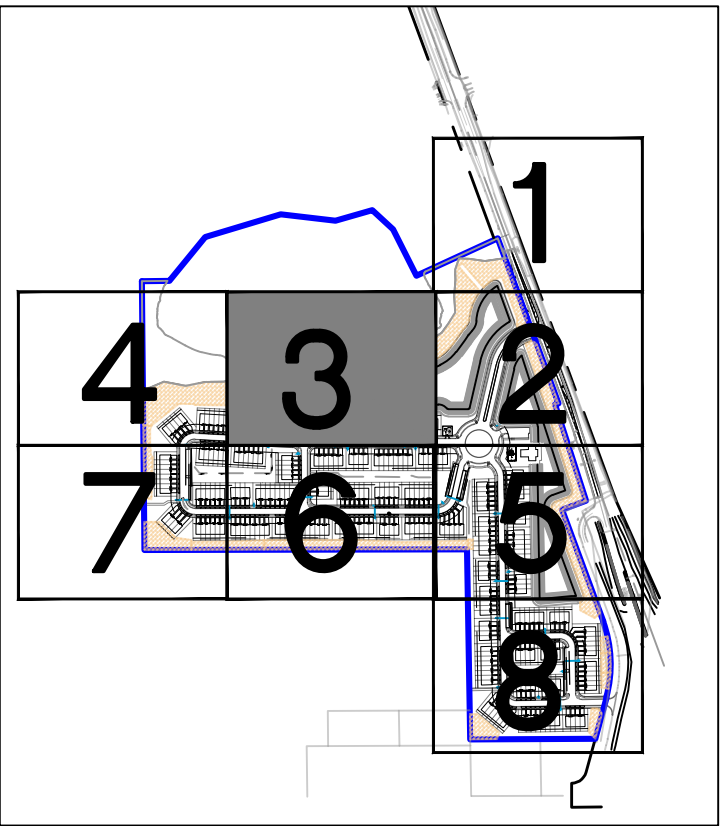
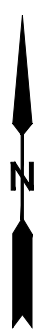
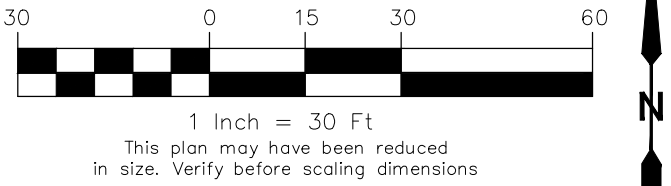
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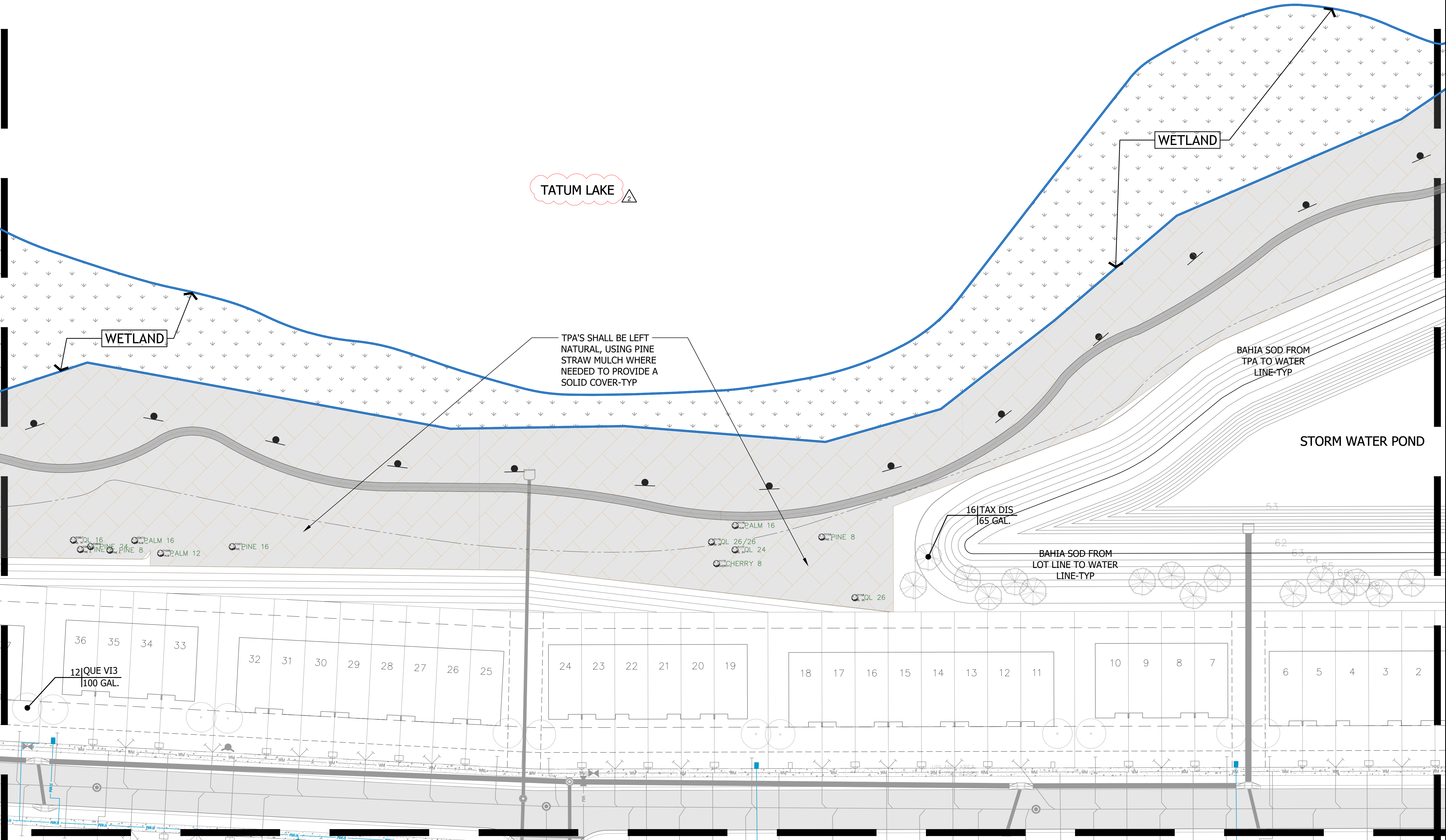
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KEY MAP
1" = 800'



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**SUMMIT PLACE
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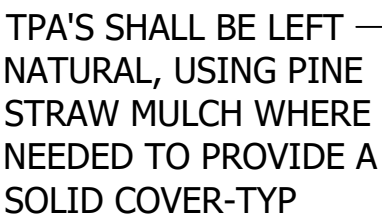
PLANTING PLAN

PROJECT NUMBER: MD#2303
DATE: JANUARY 17, 2023
DRAWN BY: MD
CHECKED BY: MKM

SCALE AS INDICATED

L3

5/21/2024 7:54:57 AM



BUFFER TYPE "C" [663.43']
35' MIN WIDTH/40' PROVIDED
CANOPY TREES 2" DBH MIN
CANOPY TREES 6.2/100 LF
UNDERSTORY TREES 1.8/100 LF
SHRUBS 18/100 LF
CANOPY TREES REQUIRED 41
43 PROVIDED [2 EXISTING + 41 NEW]
UNDERSTORY TREES REQUIRED 12
12 PROVIDED
SHRUBS REQUIRED 120
120 PROVIDED

3	MYR CER
	45 GAL.

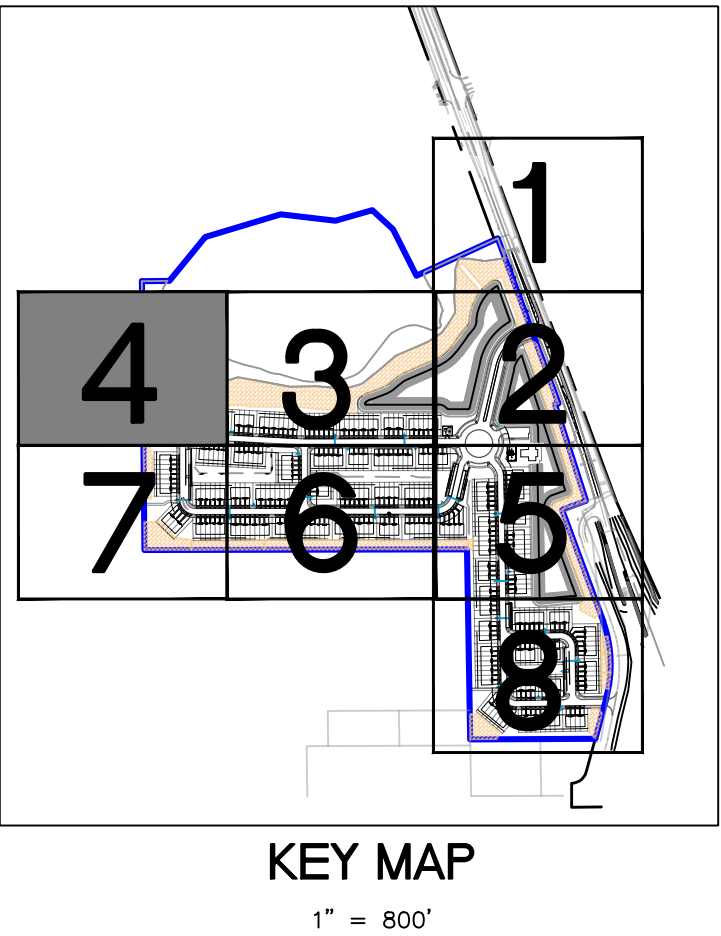
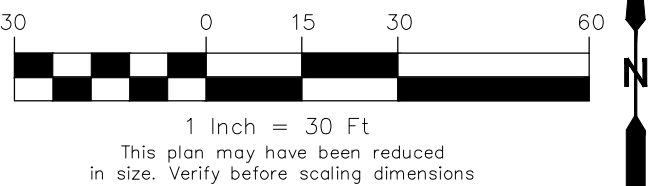
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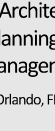
BAHIA SOD

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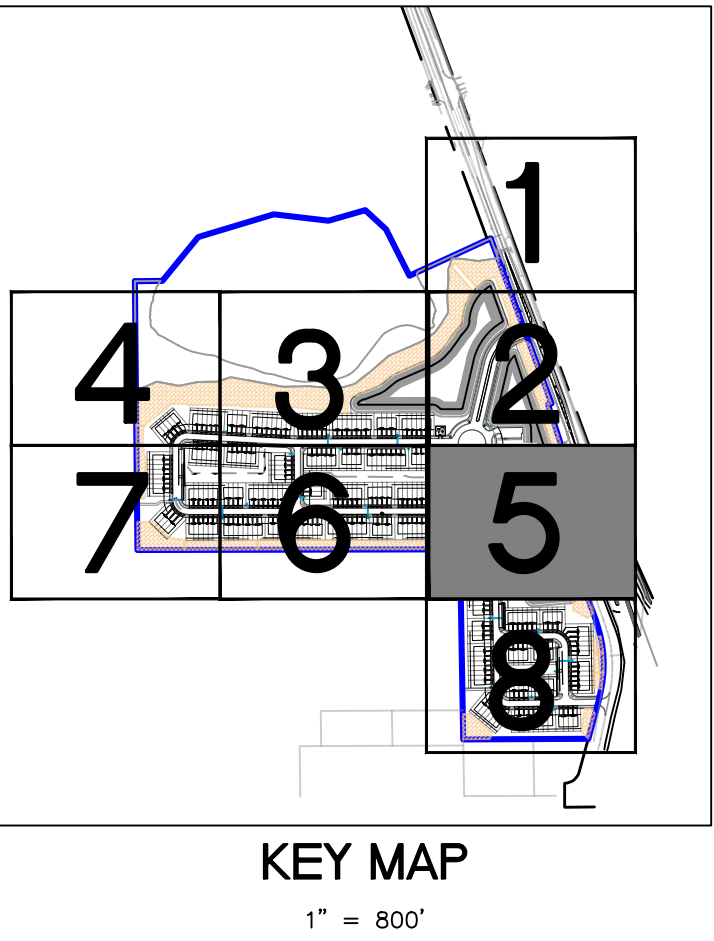
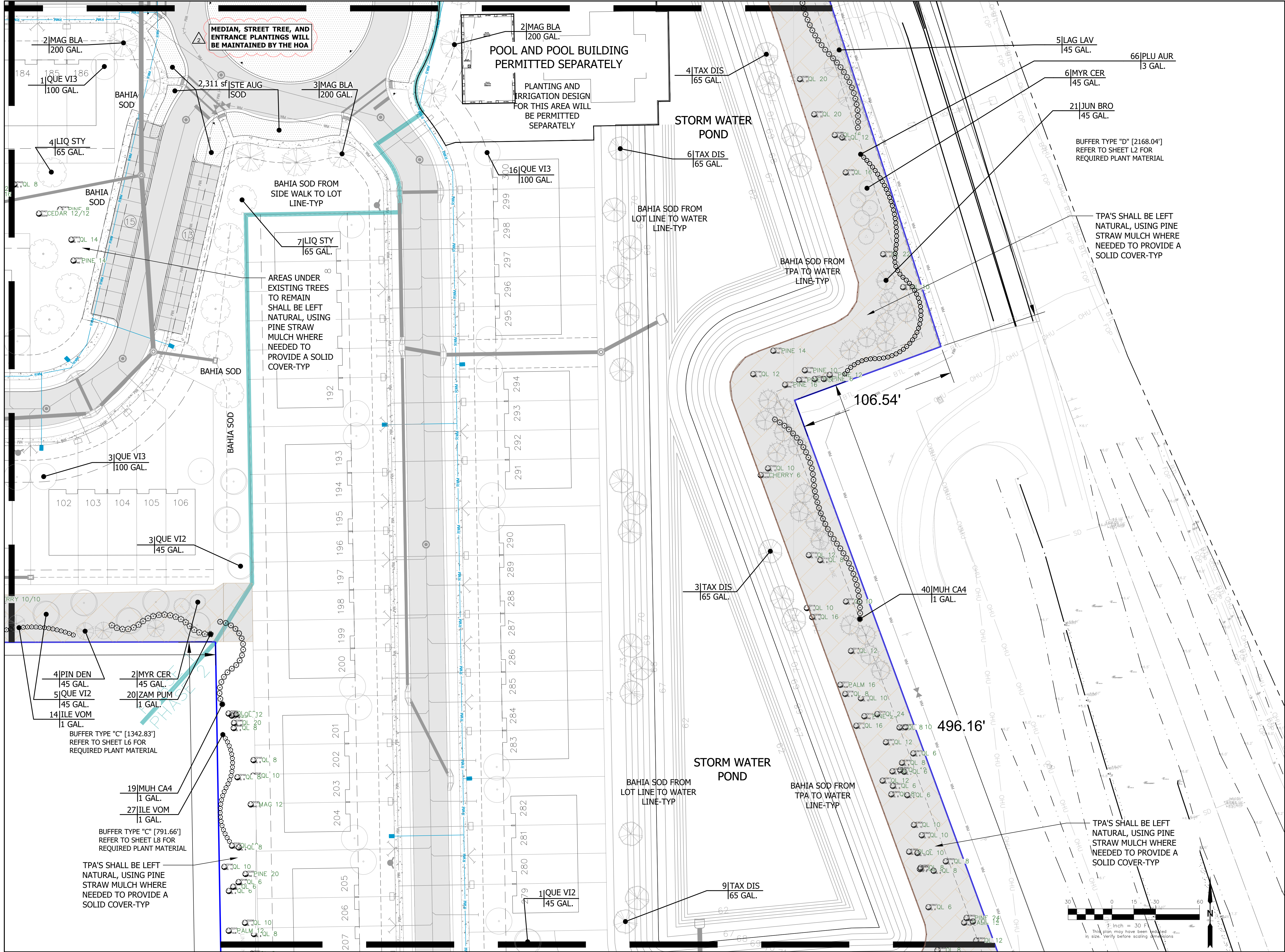
3	QUE VI3
	100 GAL.

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REVISION NUMBER	REVISION DESCRIPTION	REVISION DATE
1	CITY COMMENTS	02/20/2024
2	CITY COMMENTS	05/21/2024
ISSUED		
FEBRUARY 17, 2023 FEBRUARY 20, 2024 APRIL 30, 2024	CITY OF DELAND CITY OF DELAND CITY OF DELAND	
SUMMIT PLACE DeLand/DR Horton		
PLANTING PLAN		
PROJECT NUMBER: DATE: DRAWN BY: CHECKED BY: MD# 2303 JANUARY 17, 2023 MD MKM		
SCALE AS INDICATED		
L4		

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SUMMIT PLACE
DeLand/DR Horton

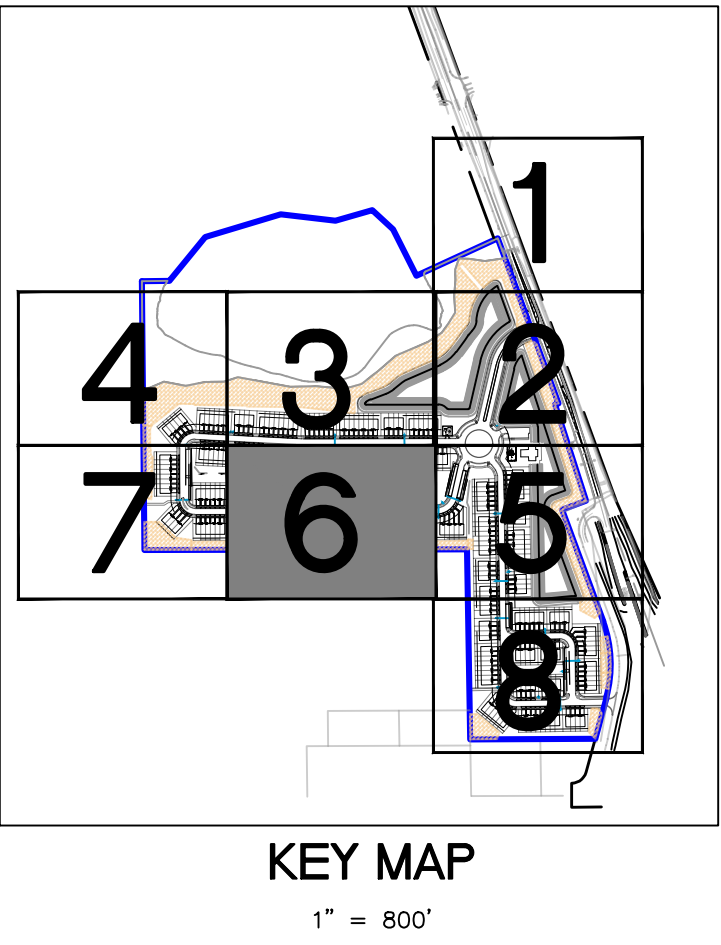
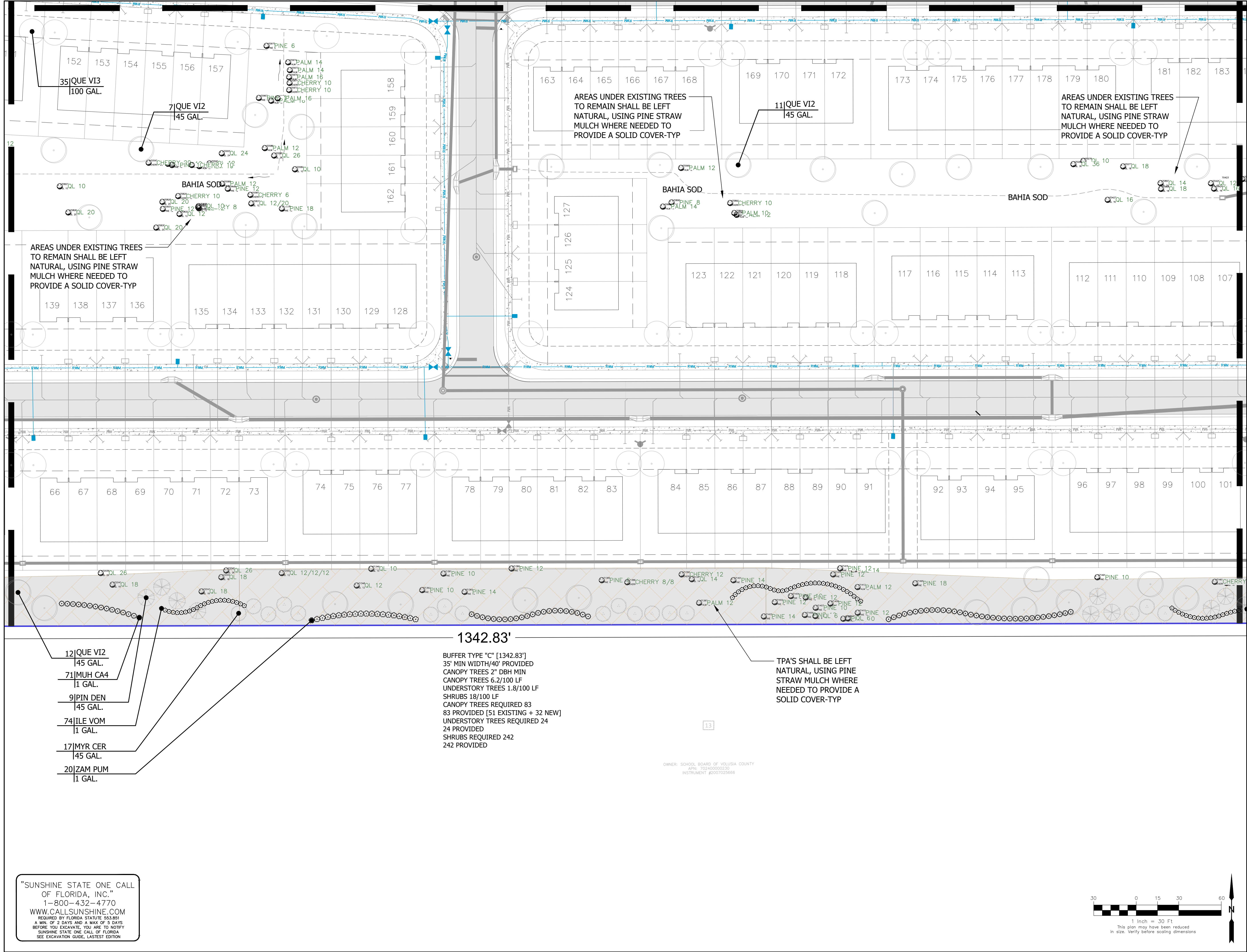
PLANTING PLAN

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**SUMMIT PLACE
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PLANTING PLAN

PROJECT NUMBER: MD#2303
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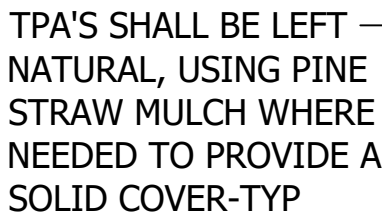
SCALE AS INDICATED

L6

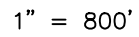


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BUFFER TYPE "C" [1342.83']
REFER TO SHEET L6 FOR
REQUIRED PLANT MATERIAL



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FEBRUARY 20, 2024	CITY OF DELAND
APRIL 30, 2024	CITY OF DELAND

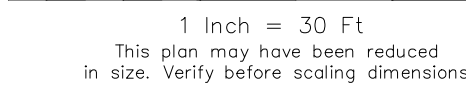
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PLANTING PLAN

PROJECT NUMBER:	MD#2303
DATE:	JANUARY 17, 2023
DRAWN BY:	MD
CHECKED BY:	MKM

SCALE AS INDICATED

L7

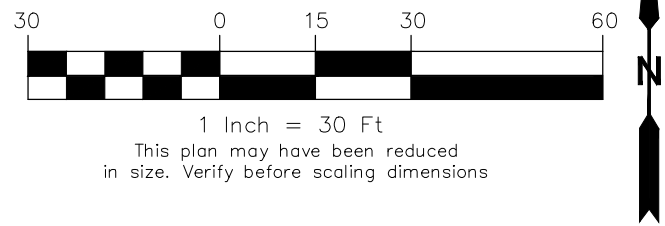


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APR: 702400000259
INSTRUMENT #2016132243



TPA'S SHALL BE LEFT
NATURAL, USING PINE
STRAW MULCH WHERE
NEEDED TO PROVIDE A
SOLID COVER-TYP

BUFFER TYPE "C" [791.66']
25' MIN WIDTH/25' PROVIDED
CANOPY TREES 4" DBH MIN
CANOPY TREES 5.2/100 LF
UNDERSTORY TREES 2.2/100 LF
SHRUBS 22/100 LF
CANOPY TREES REQUIRED 41
41 PROVIDED [60 EXISTING]
UNDERSTORY TREES REQUIRED 17
17 PROVIDED [USING EXCESS
EXISTING EXTRA TREES]
SHRUBS REQUIRED 174
174 PROVIDED

41|ILE VOM
1 GAL.

27|ZAM PUM
1 GAL.

60|MUH CA4
1 GAL.

29|QUE V13
100 GAL.

3|QUE V12
145 GAL.

4|TAX DIS
165 GAL.

6|QUE V12
145 GAL.

3|PIN DEN
145 GAL.

520.33'

BUFFER TYPE "C" [520.33']
30' MIN WIDTH/30' PROVIDED
CANOPY TREES 3" DBH MIN
CANOPY TREES 5.6/100 LF
UNDERSTORY TREES 2.0/100 LF
SHRUBS 20/100 LF
CANOPY TREES REQUIRED 29
29 PROVIDED [23 EXISTING + 6 NEW]
UNDERSTORY TREES REQUIRED 10
10 PROVIDED
SHRUBS REQUIRED 104
104 PROVIDED

15|ZAM PUM
1 GAL.
28|ILE VOM
1 GAL.

TPA'S SHALL BE LEFT
NATURAL, USING PINE
STRAW MULCH WHERE
NEEDED TO PROVIDE A
SOLID COVER-TYP

TPA'S SHALL BE LEFT
NATURAL, USING PINE
STRAW MULCH WHERE
NEEDED TO PROVIDE A
SOLID COVER-TYP

50|MUH CA4
1 GAL.
19|MYR CER
145 GAL.

49|HAM FI3
13 GAL.

19|ZAM PUM
1 GAL.
6|LAG LAV
145 GAL.

27|HAM FI3
13 GAL.

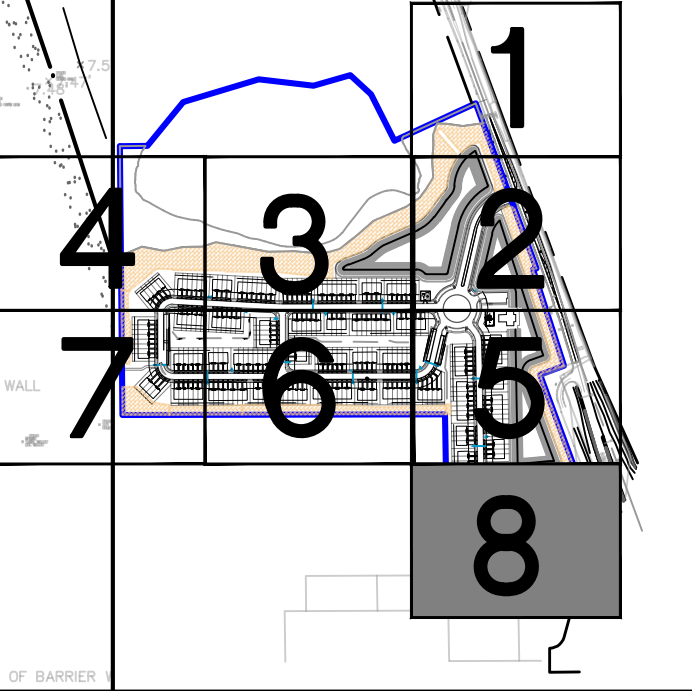
23|ZAM PUM
1 GAL.

32|MUH CA4
1 GAL.

1|QUE V14
100 GAL MIN

TPA'S SHALL BE LEFT
NATURAL, USING PINE
STRAW MULCH WHERE
NEEDED TO PROVIDE A
SOLID COVER-TYP

BUFFER TYPE "D" [2168.04']
REFER TO SHEET L2 FOR
REQUIRED PLANT MATERIAL



KEY MAP
1" = 800'

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**SUMMIT PLACE
DeLand/DR Horton**

PLANTING PLAN

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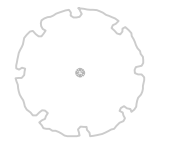
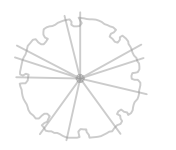
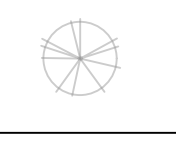
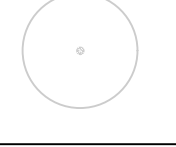
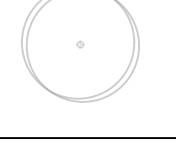
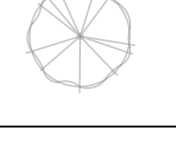
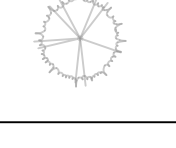
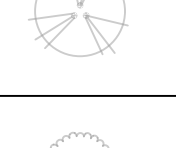
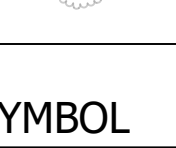
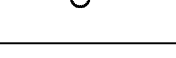
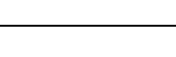
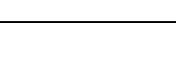
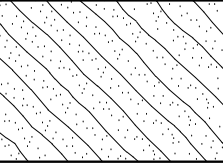
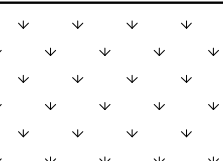
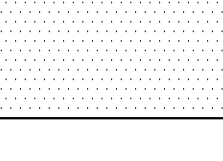
TYPICAL LANDSCAPE NOTES:

- ALL TREE "DBH" SIZES NOTED ARE MINIMUM. INCREASE SIZE OR ANY OTHER SPECIFICATIONS AS REQUIRED, PROVIDING MINIMUM PLANT SIZE AND SPECIFICATIONS.
- ALL CONTAINER SIZES NOTED ARE MINIMUM. INCREASE SIZE OF POT AS REQUIRED, PROVIDING MINIMUM PLANT SIZE AND SPECIFICATIONS. ALL HEIGHT AND SPREAD SPECIFICATIONS ARE MINIMUM.
- SHRUB AND GROUNDCOVER BED QUANTITIES ARE INDICATED FOR EACH PLANT BED. ALL PLANT QUANTITIES FOR PROPOSALS SHALL BE DERIVED SOLELY FROM DRAWINGS AND SPECIFICATIONS.
- SHRUB AND GROUND COVER SPACING IS INDICATED ON THE PLANT LIST AND SHALL APPLY FOR ALL "MASS PLANTING" BEDS.
- OWNERS REPRESENTATIVE MUST TAG AN EXAMPLE OF EACH PALM SPECIES ACCORDING TO THE SPECIFICATIONS IN THE PLANT LIST.
- SEE PLANT LIST DETAILS AND SPECIFICATIONS FOR FURTHER PLANTING INFORMATION.
- LOCATION OF ALL UTILITIES AND BASE INFORMATION IS APPROXIMATE. CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES AND OBSTRUCTIONS AND COORDINATE WITH OWNER'S REPRESENTATIVE PRIOR TO INITIATING INSTALLATION WORK. CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR OR REPLACE ANY DAMAGE COMMITTED TO EXISTING ELEMENTS ABOVE OR BELOW GROUND TO ITS ORIGINAL CONDITION AND TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.
- CONTRACTOR SHALL FIELD ADJUST LOCATION OF PLANT MATERIAL AS NECESSARY TO AVOID DAMAGE TO EXISTING UNDERGROUND UTILITIES AND/OR EXISTING ABOVE GROUND ELEMENTS. ALL CHANGES REQUIRED SHALL BE COMPLETED AT THE CONTRACTOR'S EXPENSE AND SHALL BE COORDINATED WITH THE OWNER'S REPRESENTATIVE.
- CONTRACTOR SHALL FIELD STAKE THE LOCATION OF ALL PLANT MATERIAL PRIOR TO INITIATING INSTALLATION FOR THE REVIEW AND APPROVAL OF THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE. THE LOCATION OF ALL PLANT MATERIAL IS SUBJECT TO FIELD CHANGE.
- LANDSCAPE CONTRACTOR SHALL COORDINATE THEIR WORK WITH THE IRRIGATION CONTRACTOR AND ALL OTHER TRADES.
- LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL HAND WATERING AS REQUIRED UNTIL PLANT MATERIALS ARE WELL ESTABLISHED, TO SUPPLEMENT IRRIGATION WATERING AND RAINFALL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAND WATERING IN ALL LANDSCAPE AREAS WHERE THE EXISTING OR PROPOSED IRRIGATION IS FOR WHATEVER REASON NOT OPERATING OR NOT OPERATING CORRECTLY.
- CONTRACTOR SHALL CLEAN THE WORK AREAS AT THE END OF EACH WORKING DAY. RUBBISH AND DEBRIS SHALL BE COLLECTED AND DEPOSITED AS DIRECTED DAILY. ALL MATERIALS, PRODUCTS, AND EQUIPMENT SHALL BE STORED IN AN ORGANIZED FASHION AS DIRECTED BY THE OWNER OR OWNERS REPRESENTATIVE.
- ALL PLANT MATERIAL SHALL BE IN FULL AND STRICT ACCORDANCE WITH FLORIDA NO. 1 GRADE, ACCORDING TO THE "GRADES AND STANDARDS FOR NURSERY PLANTS" PUBLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, CURRENT EDITION.
- CONTRACTOR SHALL REMOVE EXISTING SOD AND/OR VEGETATION IN ALL AREAS TO BE PLANTED WITH SHRUB/GROUNDCOVERS AND/OR ALL AREAS TO BE MULCHED.
- CONTRACTOR SHALL REPLACE SOD IN ALL AREAS WHERE EXISTING VEGETATION IS REMOVED OR RELOCATED, WHERE EXISTING LAWN AREAS ARE DAMAGED BY HIS WORK, AND WHERE NEW VEGETATION IS INSTALLED (UNLESS OTHERWISE NOTED ON PLANS) WITH SAME GRASS SPECIES TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE. CONTRACTOR SHALL BE RESPONSIBLE FOR FINISH GRADING ALL SUCH AREAS TO BLEND BOTH ELEVATIONS AND SOD INTO EXISTING SURROUNDING LAWN AREAS.
- THE CONTRACTOR SHALL BEAR ALL COSTS OF TESTING OF SOILS, AMENDMENTS, ETC. ASSOCIATED WITH THE WORK AND INCLUDED IN THE SPECIFICATIONS. PRIOR TO COMMENCEMENT OF THE LANDSCAPING WORK, FOR EVERY BLOCK SECTION OF STREET THE CONTRACTOR SHALL PROVIDE COMPLETE SOIL TESTS FOR AT LEAST THREE AREAS UNDISTURBED BY PREVIOUS WORK AND TWO AREAS DISTURBED AND/OR REFILLED. SEE SPECIFICATIONS FOR ADDITIONAL TESTING REQUIREMENTS.
- THE CONTRACTOR SHALL PROVIDE UNIT PRICES AS REQUESTED WHICH INCLUDE THE TOTAL COST OF THE WORK INCLUDING BUT NOT LIMITED TO ANY AND ALL COSTS FOR EQUIPMENT, MATERIAL, PRODUCTS, OVERHEAD, PROFIT, GUARANTEES, LABOR, INSTALLATION, ETC. TO PROVIDE A COMPLETE JOB AS OUTLINED ON THE DRAWINGS. THE OWNER SHALL HAVE THE OPTION TO ADD OR DEDUCT FROM THE LUMP SUM BID CONTRACT AMOUNT, BASED ON THE QUOTED UNIT PRICES FOR ANY OR THE ITEMS LISTED IN THE "PLANT LIST".
- CONTRACTOR SHALL PROTECT EXISTING VEGETATION TO REMAIN BY MEANS APPROVED BY THE OWNER/OWNER'S REPRESENTATIVE AND AS DETAILED IN THE DRAWINGS.
- CONTRACTOR SHALL CLEAN, PRUNE, AND SHAPE EDGES OF EXISTING VEGETATION AS DIRECTED BY OWNER'S REPRESENTATIVE. CREATE SMOOTH BED LINES AROUND EXISTING VEGETATION.
- CONTRACTOR AND EMPLOYEE VEHICLE PARKING SHALL BE COORDINATED WITH THE OWNER OR OWNERS REPRESENTATIVE. SHUTTLING OF EMPLOYEES TO THE PROJECT AREAS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL NOT DISRUPT OR CONFLICT IN ANY WAY WITH EXISTING TRAFFIC.
- CONSTRUCTION ACCESS SHALL BE INDICATED BY THE OWNER. COORDINATION OF HEAVY EQUIPMENT AND MATERIALS SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING AND COORDINATION OF WORK WITH OTHER TRADES AND THE OWNER OR OWNER'S REPRESENTATIVE.
- THE CONTRACTOR SHALL TAKE WHATEVER MEANS THAT MAY BE NECESSARY TO FULLY UNDERSTAND ALL THE ACCESS ROUTES AND CONSTRUCTION SCHEDULES IN ORDER TO PROVIDE A COMPLETE AND FINISHED PROJECT ON SCHEDULE.
- MINI PINE BARK NUGGET MULCH OR APPROVED EQUAL SHALL BE USED (CYPRESS MULCH NOT ALLOWED).

LANDSCAPE NOTES

N.T.S.

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT.	DBH	SPECIFICATION	WATER USAGE	NATIVE		REMARKS
CANOPY TREES											
	LIQ STY	11	LIQUIDAMBAR STYRACIFLUA	AMERICAN SWEET GUM	65 GAL.	2.5" DBH	9` H X 5` S	LOW-MEDIUM	YES		SINGLE, STRAIGHT TRUNK, FULL
	MAG BLA	13	MAGNOLIA GRANDIFLORA `D.D. BLANCHARD` TM	SOUTHERN MAGNOLIA	200 GAL.	5" DBH	17` H X 10` S	LOW-MEDIUM	YES		SINGLE, STRAIGHT TRUNK, FULL
	PIN DEN	49	PINUS ELLIOTTI `DENSE`	SLASH PINE	45 GAL.	2" DBH	8` H X 3` S	LOW-MEDIUM	YES		SINGLE, STRAIGHT TRUNK, FULL
	QUE VI4	16	QUERCUS VIRGINIANA	SOUTHERN LIVE OAK	100 GAL MIN	4" DBH MIN.	14` H X 8` S	LOW-MEDIUM	YES		SINGLE, STRAIGHT TRUNK, FULL
	QUE VI3	135	QUERCUS VIRGINIANA	SOUTHERN LIVE OAK	100 GAL.	3" DBH	10` H X 6` S	LOW-MEDIUM	YES		SINGLE, STRAIGHT TRUNK, FULL
	QUE VI2	87	QUERCUS VIRGINIANA	SOUTHERN LIVE OAK	45 GAL.	2" DBH	8` H X 48" S MIN	LOW-MEDIUM	YES		SINGLE, STRAIGHT TRUNK, FULL
	TAX DIS	62	TAXODIUM DISTICHUM	BALD CYPRESS	65 GAL.	2.5" DBH	9` H X 30" S	LOW-HIGH	YES		SINGLE, STRAIGHT TRUNK, FULL
UNDERSTORY TREES											
	JUN BRO	27	JUNIPERUS VIRGINIANA `BRODIE`	SOUTHERN RED CEDAR	45 GAL.	2" DBH	8` H X 42" S	LOW	YES		FULL
	LAG LAV	24	LAGERSTROEMIA INDICA `LAVENDER`	CRAPE MYRTLE	45 GAL.	2" MIN DBH COMB	8` H X 42" S	LOW-MEDIUM	NO		MULTI-TRUNK, 4 TRUNK MIN, FULL
	MYR CER	82	MYRICA CERIFERA	WAX MYRTLE	45 GAL.	2" DBH	8` H X 42" S	LOW-HIGH	YES		MULTI-TRUNK, FULL
SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT.	-	SPECIFICATION	WATER USAGE	NATIVE		REMARKS
SHRUBS											
	HAM FI3	76	HAMELIA PATENS	FIRE BUSH	3 GAL.		10" OA	LOW-MEDIUM	YES		FULL
	ILE VOM	212	ILEX VOMITORIA	YAUPON HOLLY	1 GAL.		8" OA	LOW-HIGH	YES		FULL
	MUH CA4	535	MUHLenbergia CAPILLARIS	MUHLY GRASS	1 GAL.		10" OA	LOW-HIGH	YES		FULL
	PLU AUR	116	PLUMBAGO AURICULATA	BLUE PLUMBAGO	3 GAL.		10" OA	LOW	NO		FULL
	POD MAK	40	PODOCARPUS MACROPHYLLUS MAKI	SHRUBBY YEW	3 GAL.		12" OA	LOW-MEDIUM	NO		FULL
	ZAM PUM	343	ZAMIA PUMILA	COONTIE	1 GAL.		8" OA	LOW	YES		FULL
SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT.	-	SPECIFICATION	WATER USAGE	NATIVE	SPACING	REMARKS
GROUND COVERS											
	LIR BIG	105	LIRIOPE MUSCARI `TIDWELLS BIG BLUE`	BIG BLUE LILYTURF	1 GAL		8" OA	MEDIUM	NO	12" o.c.	FULL
SOD											
	PAS ARG		PASPALUM NOTATUM `ARGENTINE`	BAHIA GRASS	SOD		CLEAN AND WEED FREE	N/A	NO		CLEAN AND WEED FREE
	STE AUG		STENOTAPHRUM SECUNDATUM `FLORITAM`	FLORITAM ST. AUGUSTINE SOD	SOD		PALLET	MEDIUM	NO		CLEAN AND WEED FREE

NOTES:

- ALL TREES PLANTED SHALL MEET THE CRITERIA FOR A FLORIDA #1, OR BETTER IN THE CURRENT EDITION OF THE FLORIDA GRADES AND STANDARDS FOR NURSERY PLANTS. CITY INSPECTORS USE DBH MEASUREMENTS NOT CAL AT INSPECTIONS.
- STREET TREES WILL BE INSTALLED BY THE HOME BUILDER AFTER THE DRIVEWAY IS INSTALLED.

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REVISION NUMBER	REVISION DESCRIPTION	REVISION DATE
1	CITY COMMENTS	02/20/2024
2	CITY COMMENTS	05/21/2024

ISSUED

FEBRUARY 17, 2023
FEBRUARY 20, 2024
APRIL 30, 2024

CITY OF DELAND
CITY OF DELAND
CITY OF DELAND

SUMMIT PLACE
DeLand/DR Horton

LANDSCAPE SCHEDULE
AND NOTES

PROJECT NUMBER: MD#2303
DATE: JANUARY 17, 2023
DRAWN BY: MD
CHECKED BY: MKM

SCALE AS INDICATED

L9

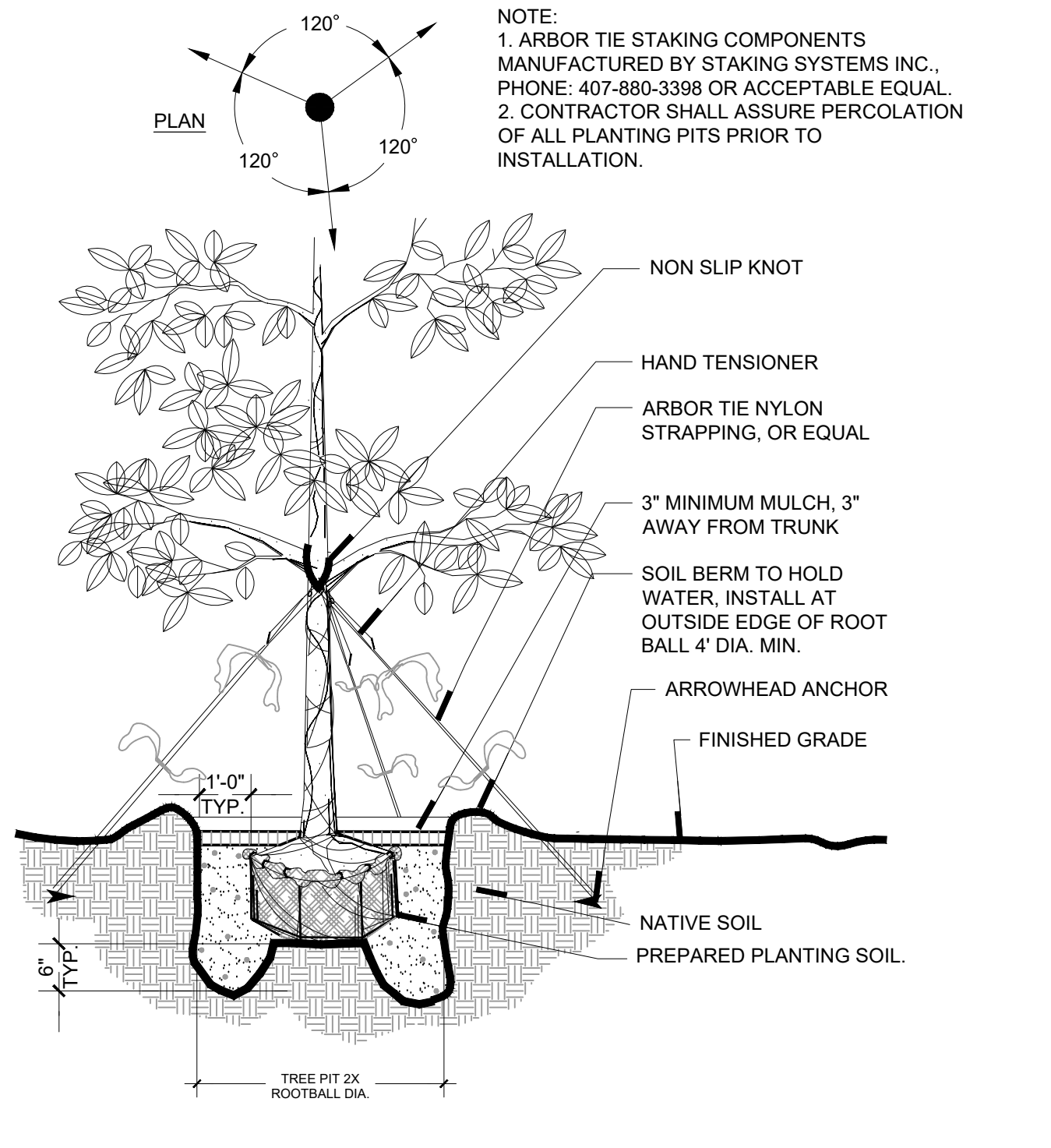
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Page 94 of 107

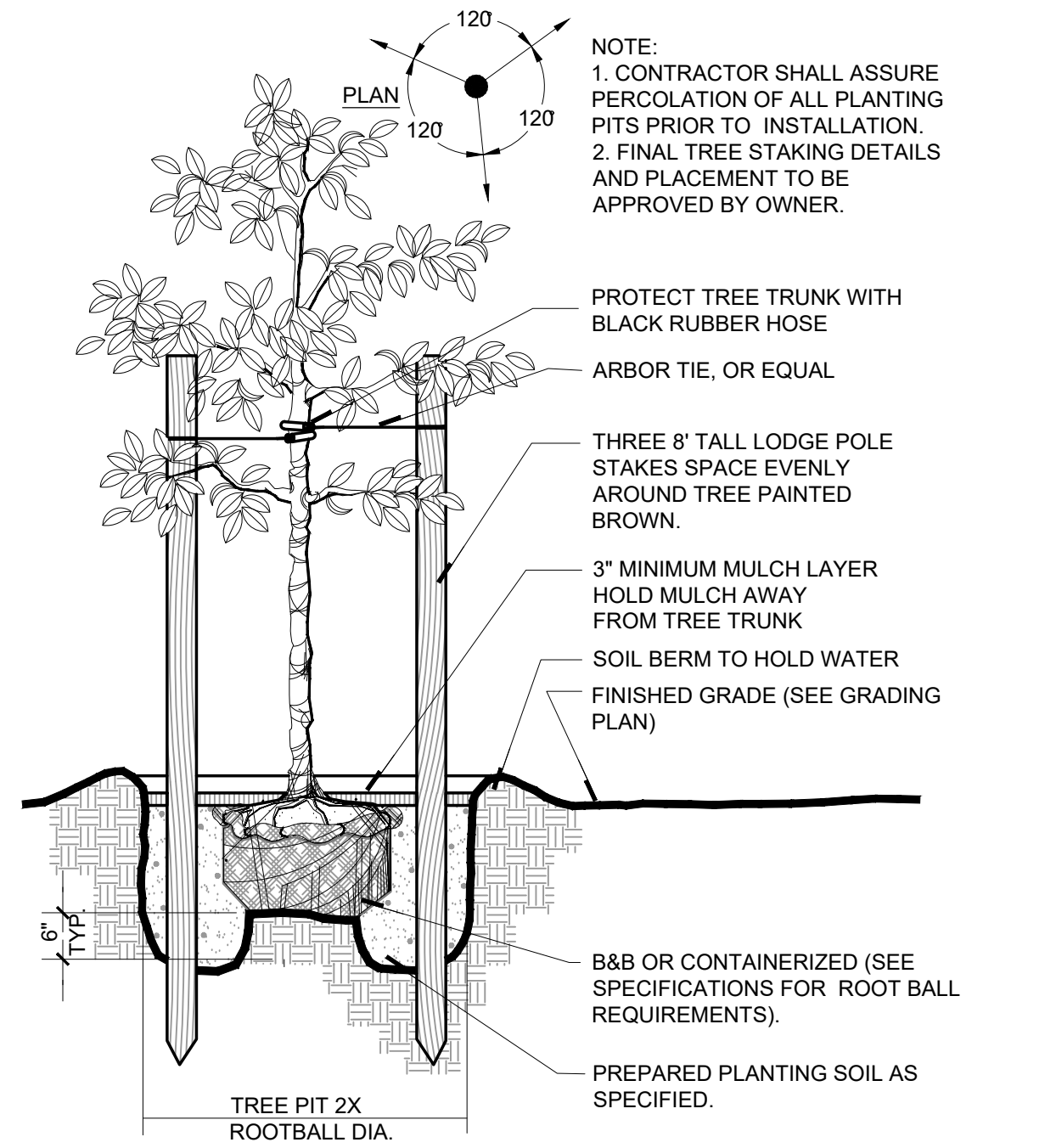
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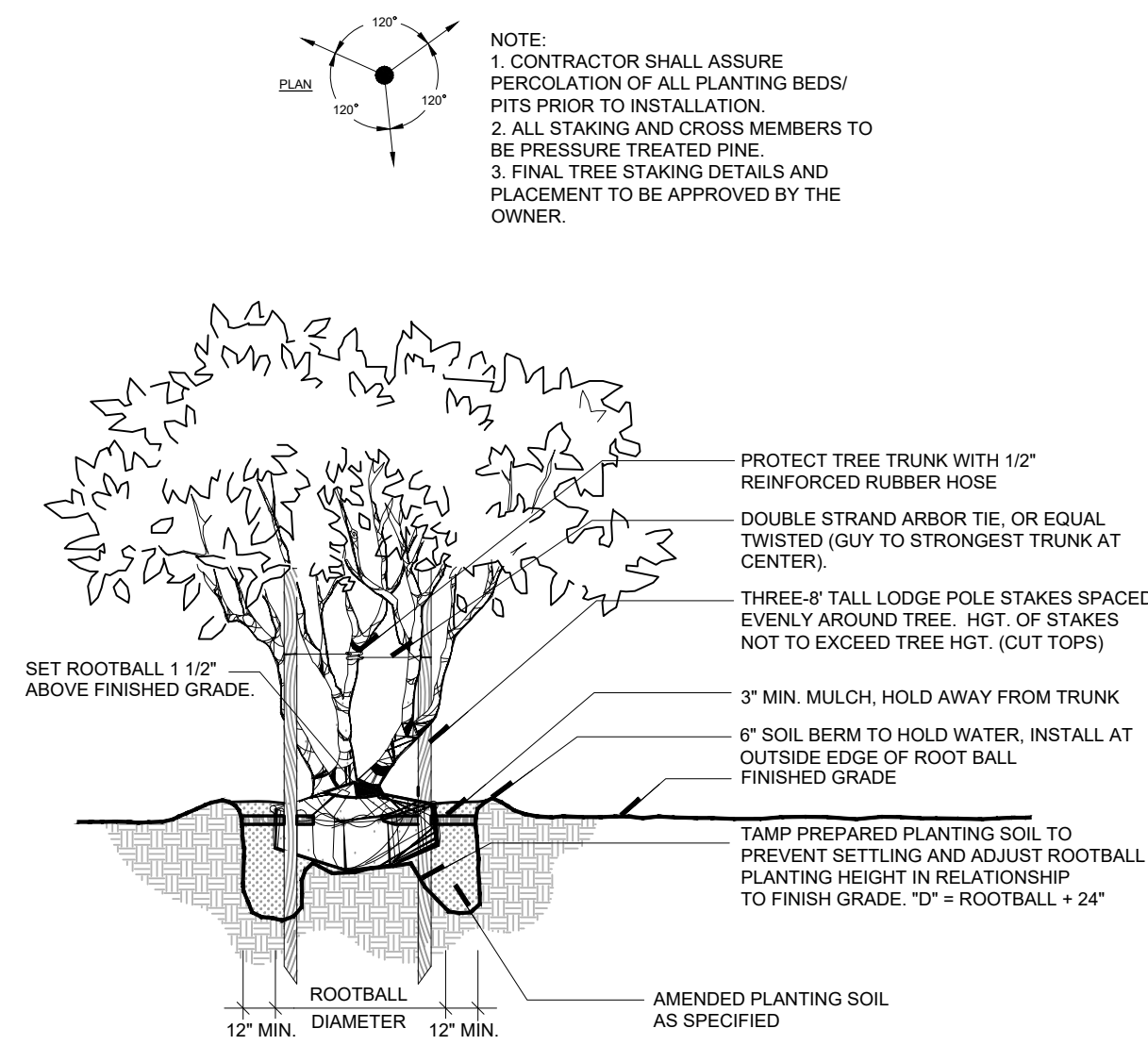
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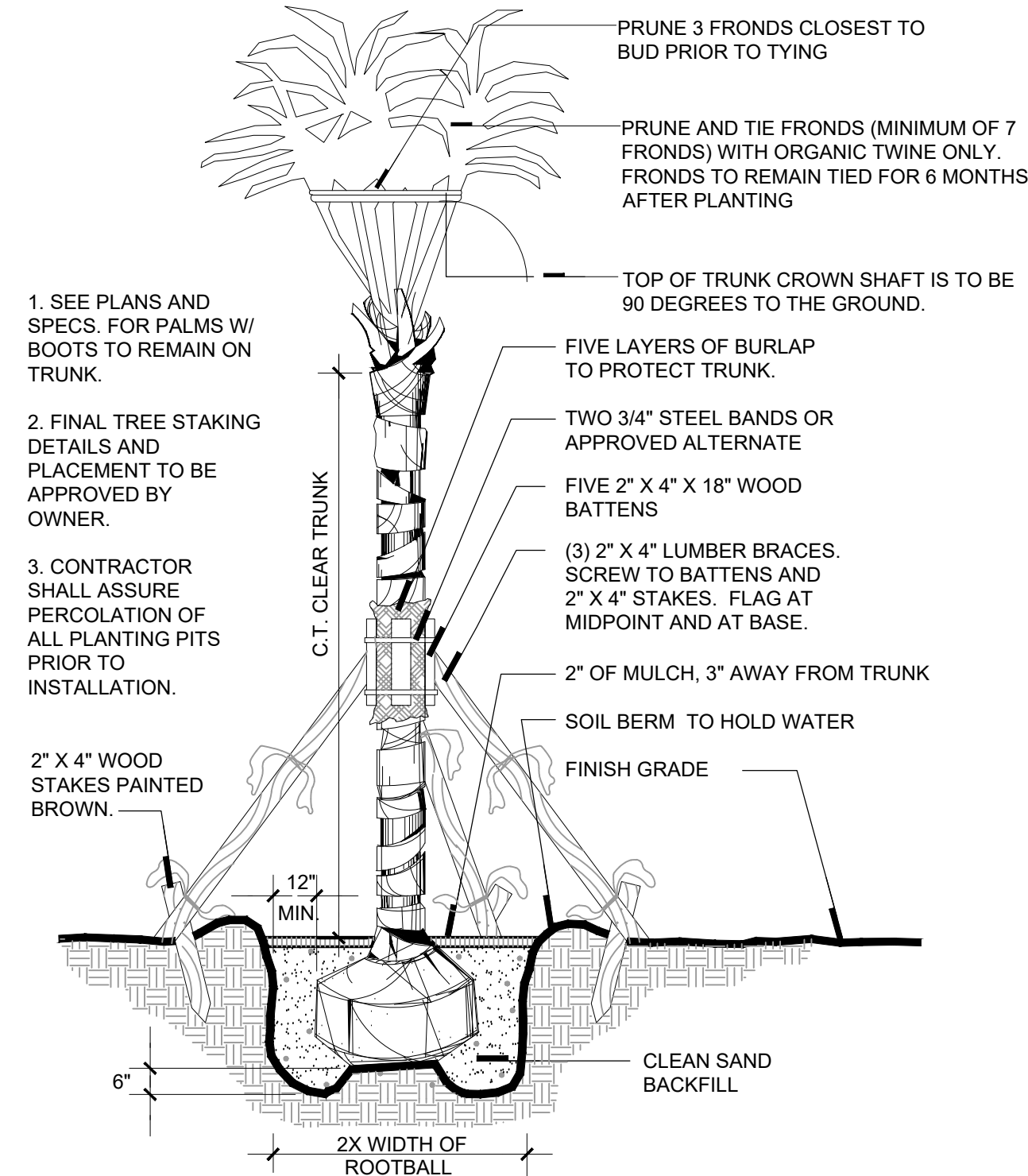
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1/2" = 1'-0" P-CO-1B



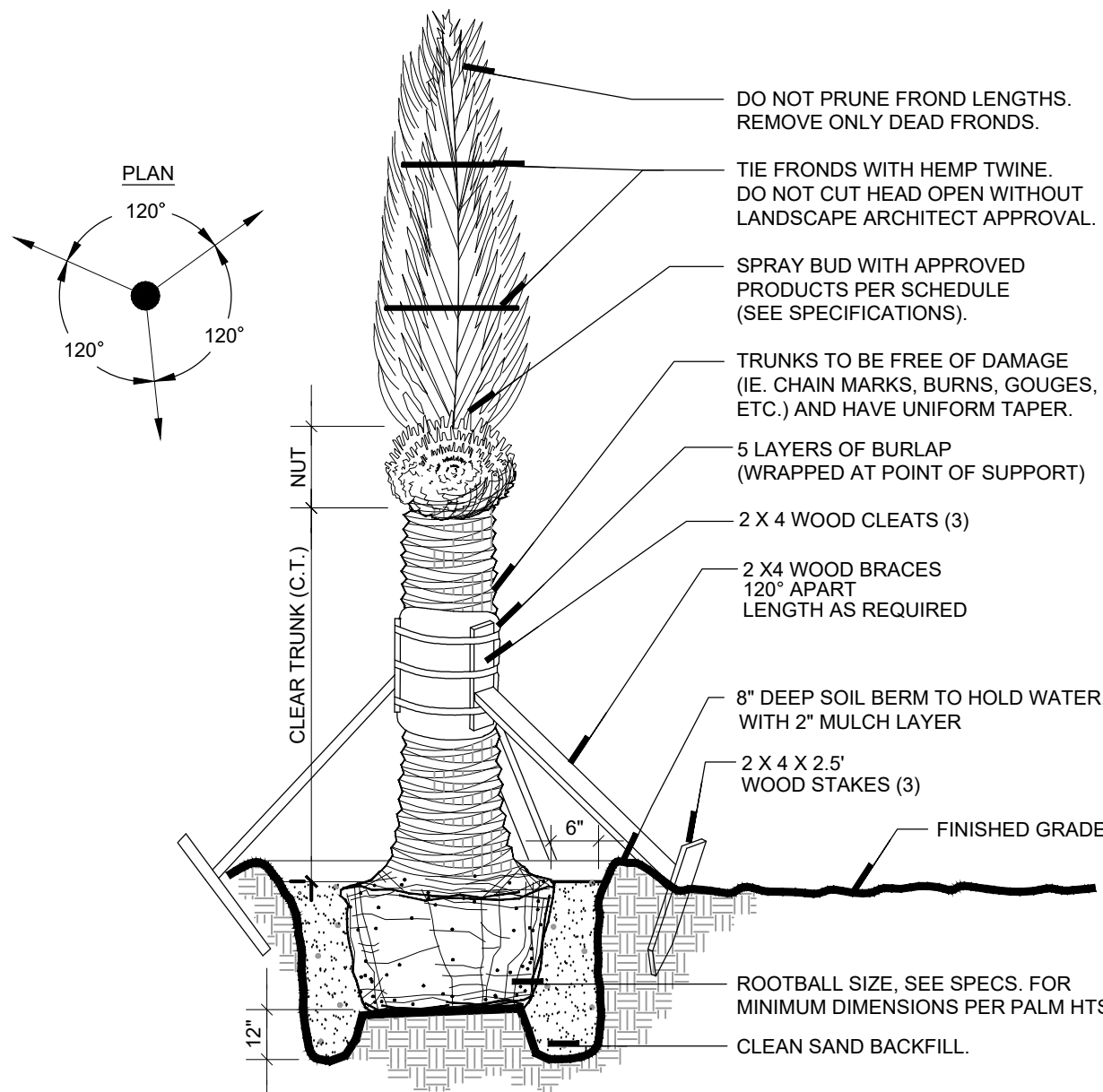
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1/2" = 1'-0" P-CO-0B



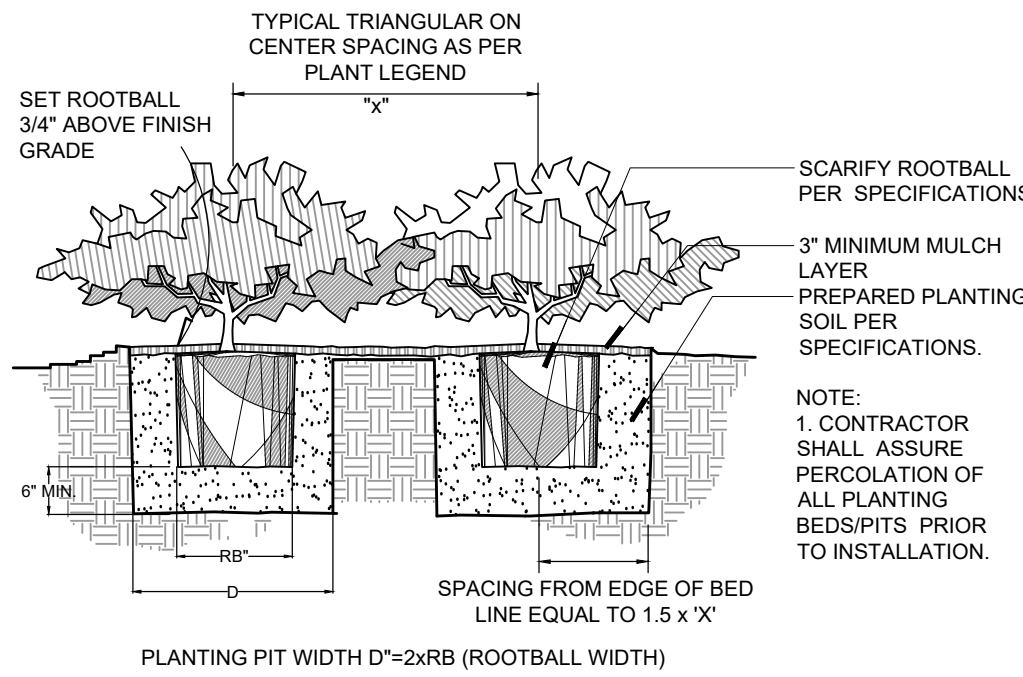
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1/2" = 1'-0" P-CO-15



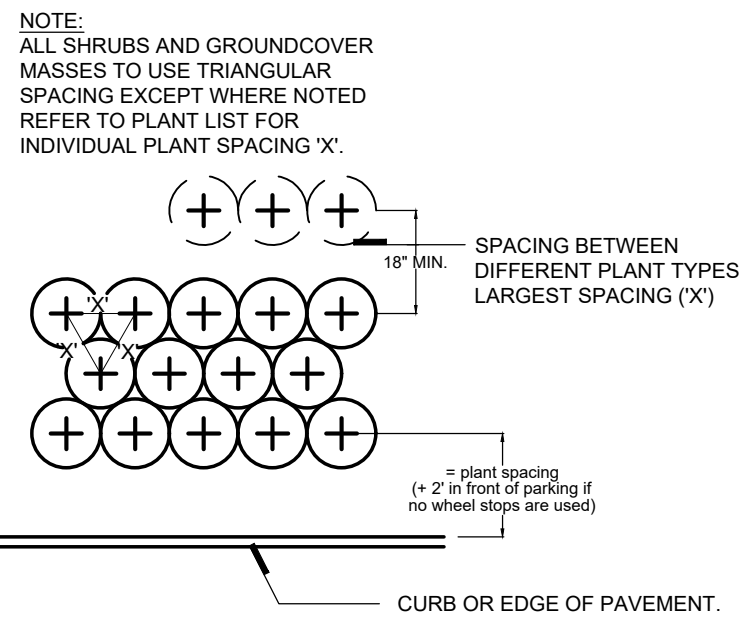
4 TYPICAL PALM PLANTING DETAIL
1/2" = 1'-0" P-CO-1B



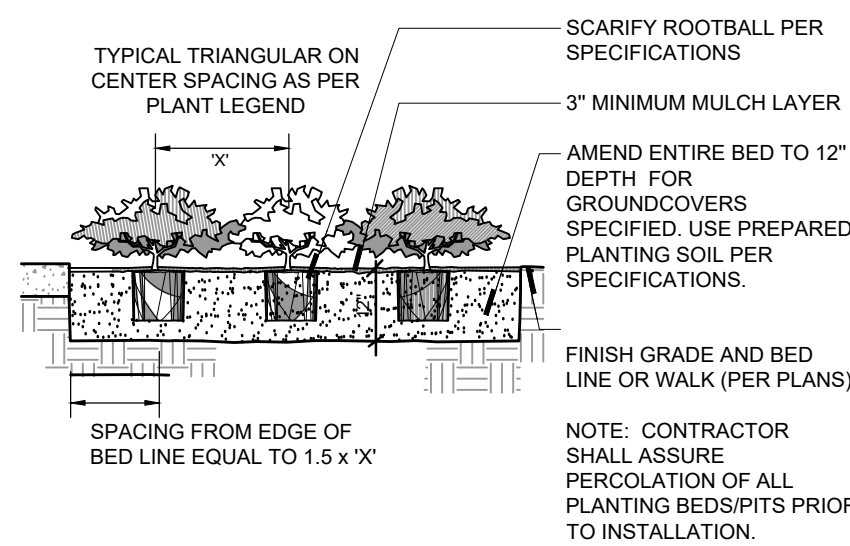
5 TYPICAL SPECIALTY PALM PLANTING DETAIL
1/2" = 1'-0" P-CO-21



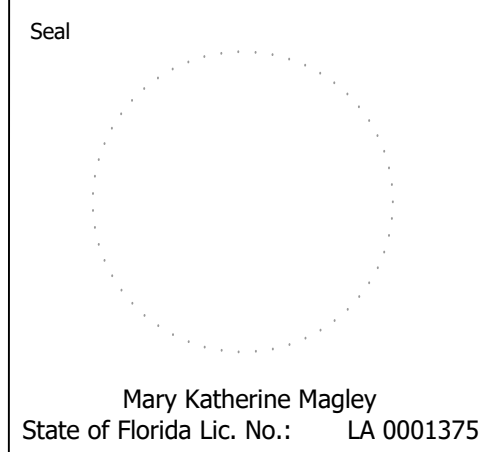
6 TYPICAL SHRUB PLANTING DETAIL
1/2" = 1'-0" P-CO-25



7 TYPICAL PLANT SPACING DETAIL
1/2" = 1'-0" P-CO-27



8 TYPICAL GROUNDCOVER PLANTING DETAIL
1/2" = 1'-0" P-CO-26



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1	CITY COMMENTS	02/20/2024
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SUMMIT PLACE
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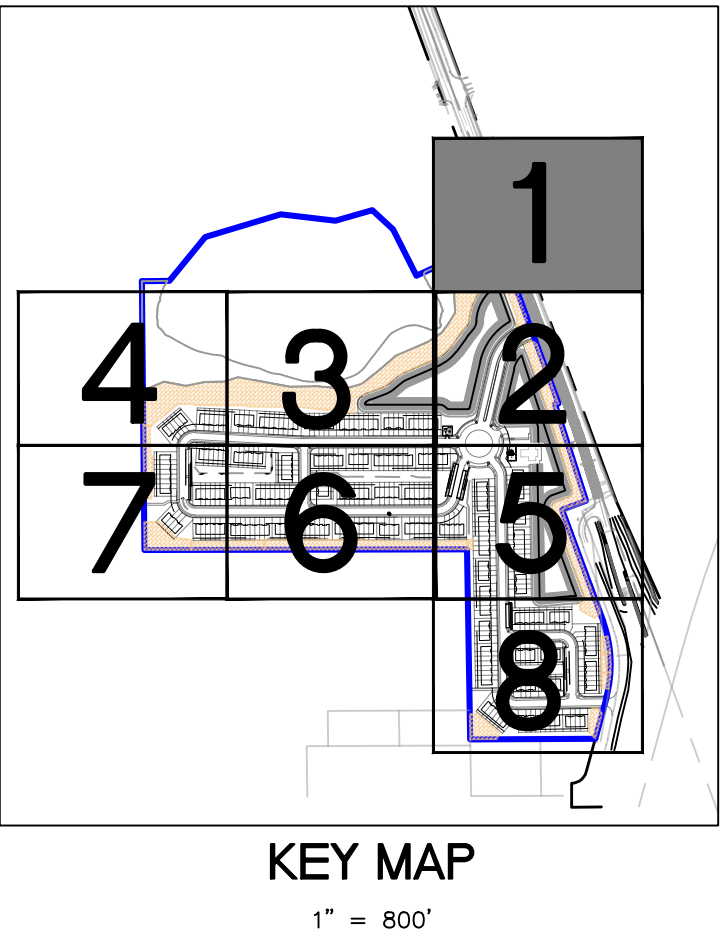
LANDSCAPE DETAILS

PROJECT NUMBER: MD#2303
DATE: JANUARY 17, 2023
DRAWN BY: MD
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SCALE AS INDICATED

L10

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KEY MAP

1" = 800'

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REVISIONS		
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FEBRUARY 17, 2023 FEBRUARY 20, 2024 APRIL 30, 2024	CITY OF DELAND CITY OF DELAND CITY OF DELAND
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SUMMIT PLACE
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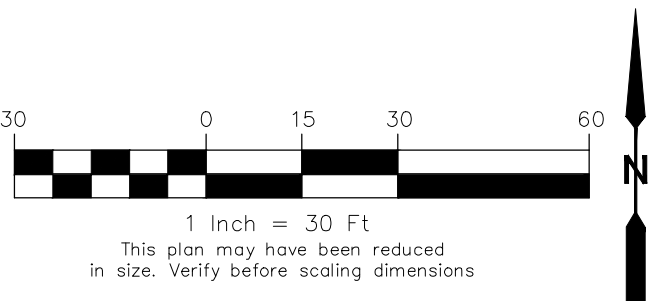
IRRIGATION PLAN

PROJECT NUMBER: MD#2303
DATE: JANUARY 17, 2023
DRAWN BY: MD
CHECKED BY: MKM

SCALE AS INDICATED

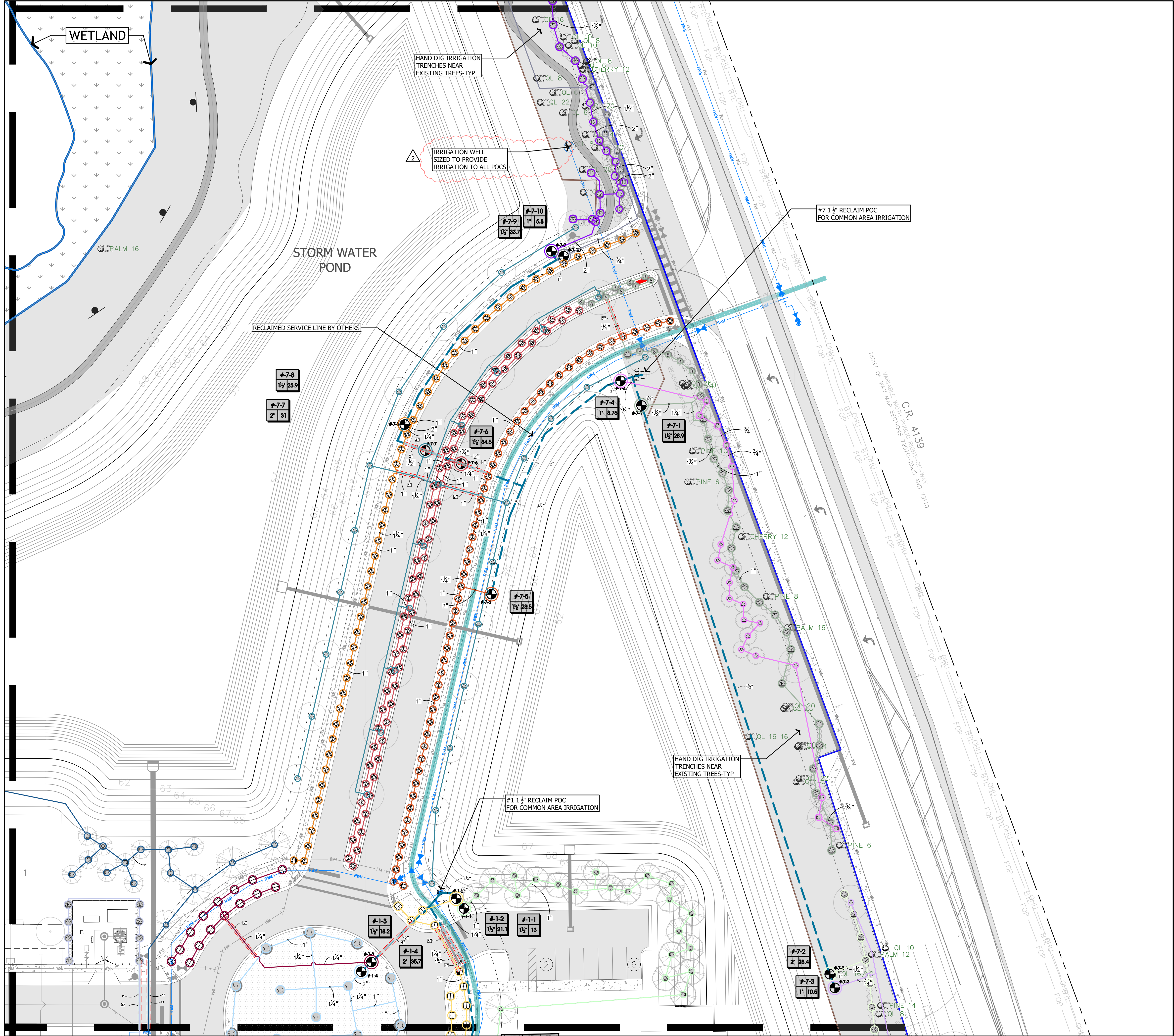
IR1

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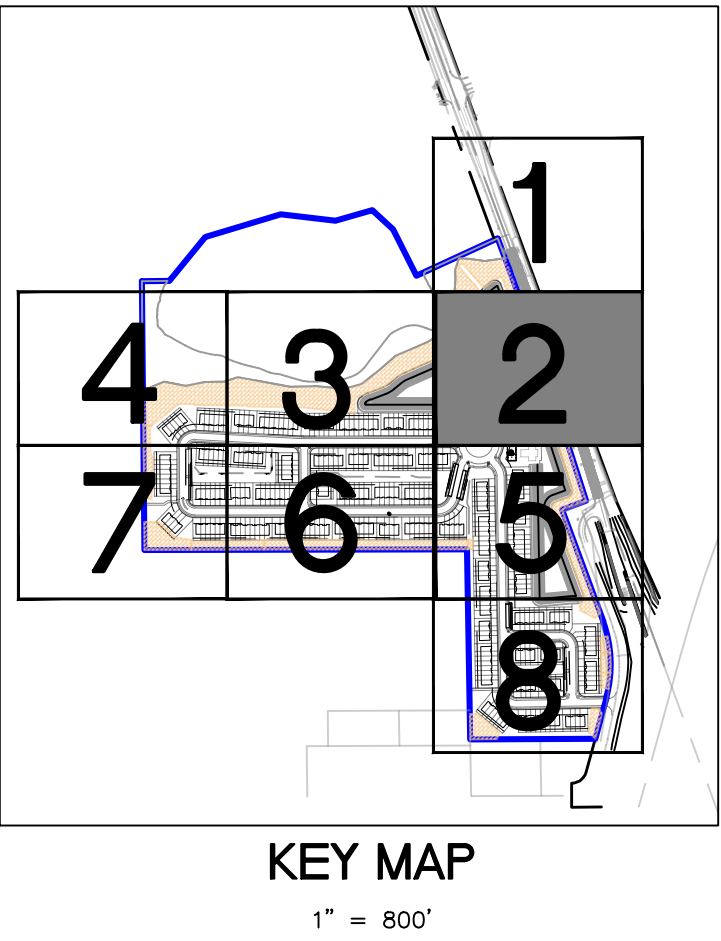


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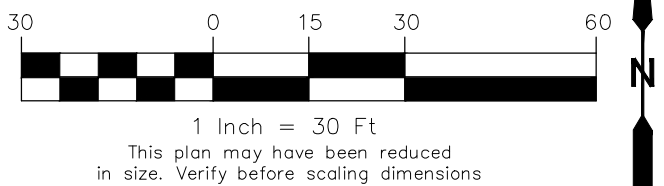
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PROJECT NUMBER: MD#2303
DATE: JANUARY 17, 2023
DRAWN BY: MD
CHECKED BY: MKM

SCALE AS INDICATED

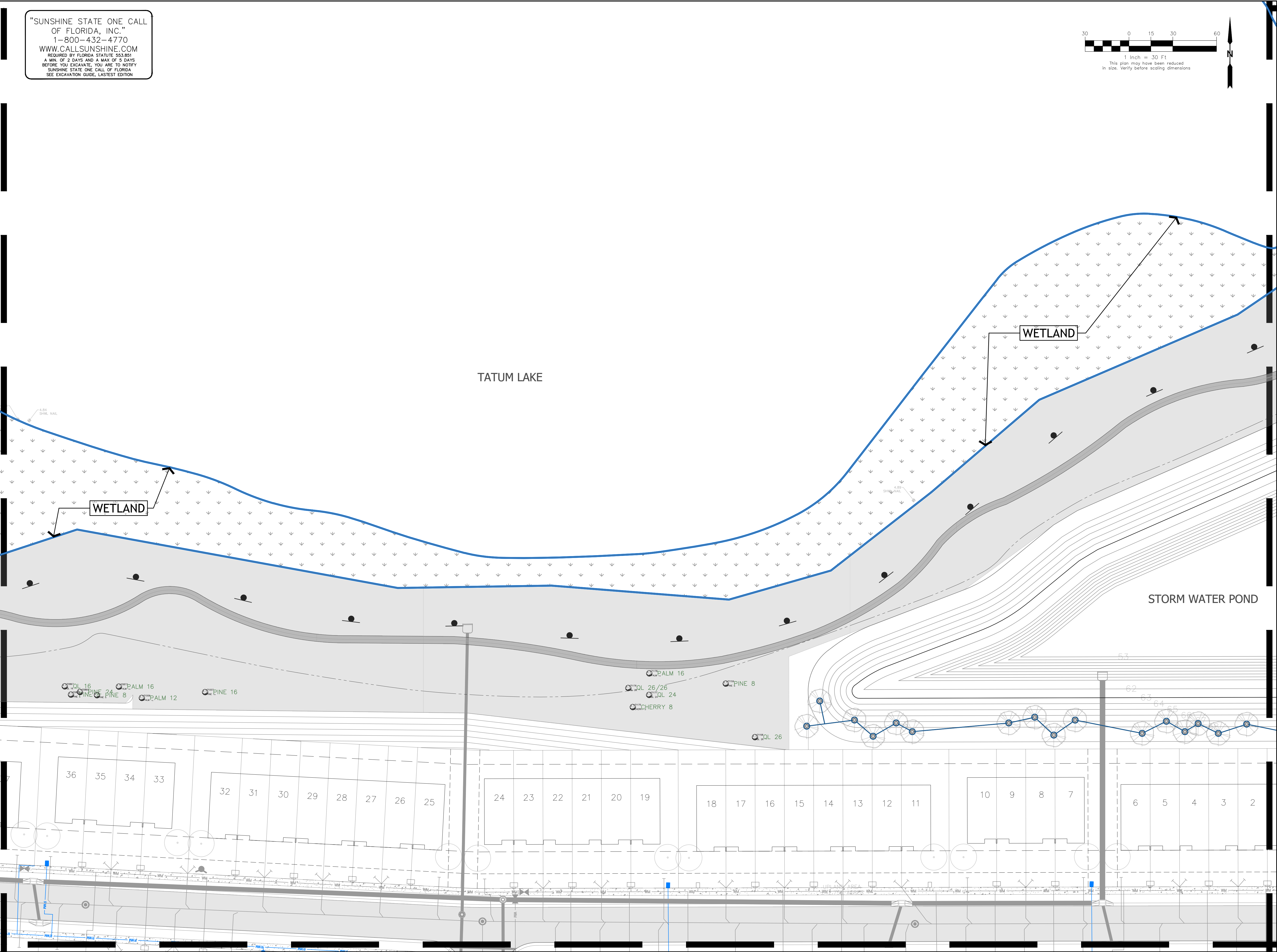
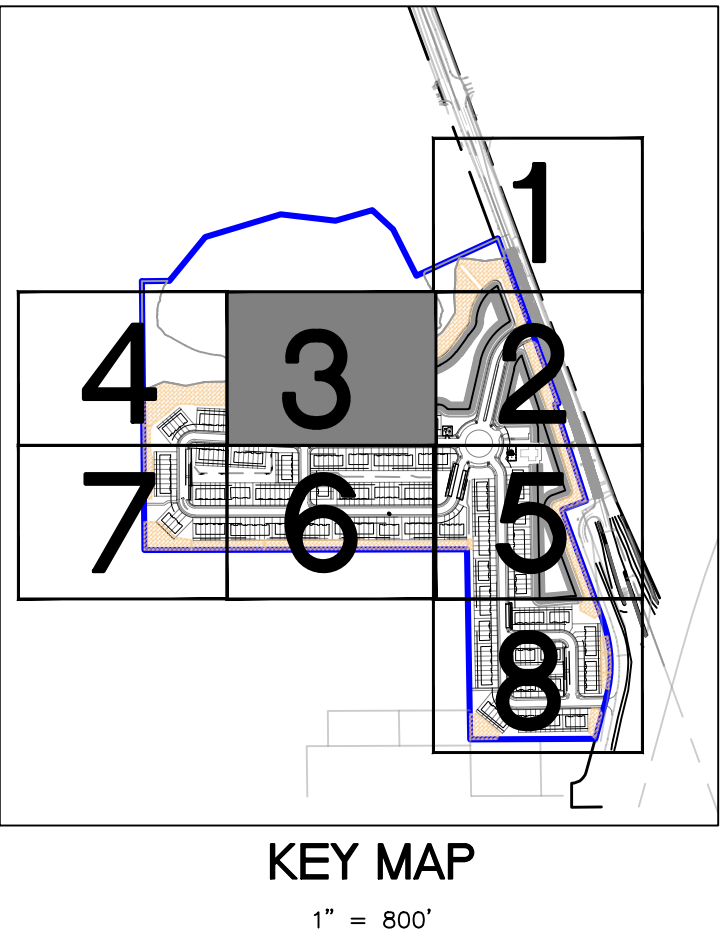
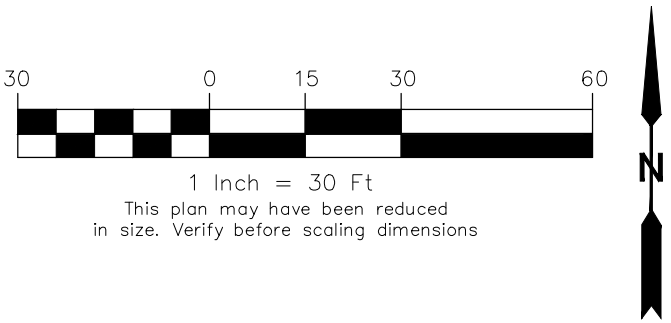
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IRRIGATION PLAN

PROJECT NUMBER:	MD#2303
DATE:	JANUARY 17, 2023
DRAWN BY:	MD
CHECKED BY:	MD

SCALE AS INDICATED

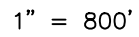
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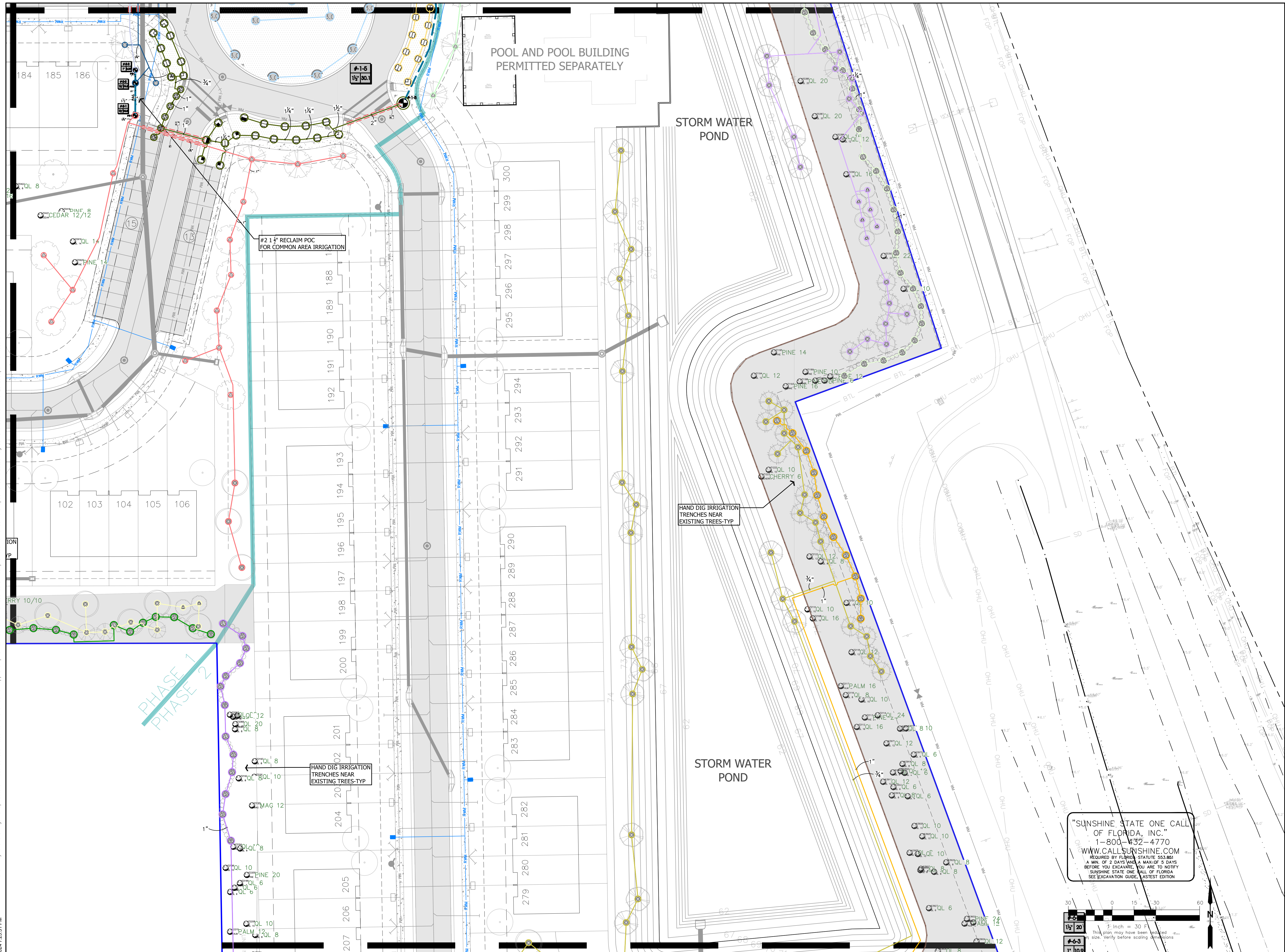
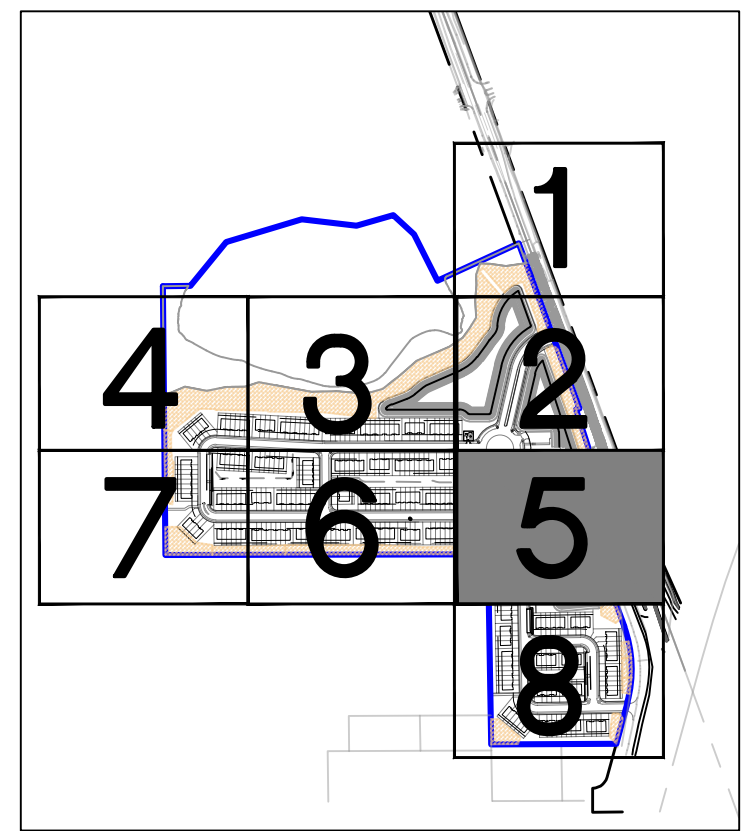
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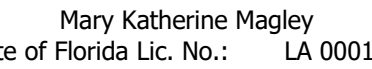
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SCALE AS INDICATED

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JARY 20, 2024	CITY OF DELAND
30, 2024	CITY OF DELAND

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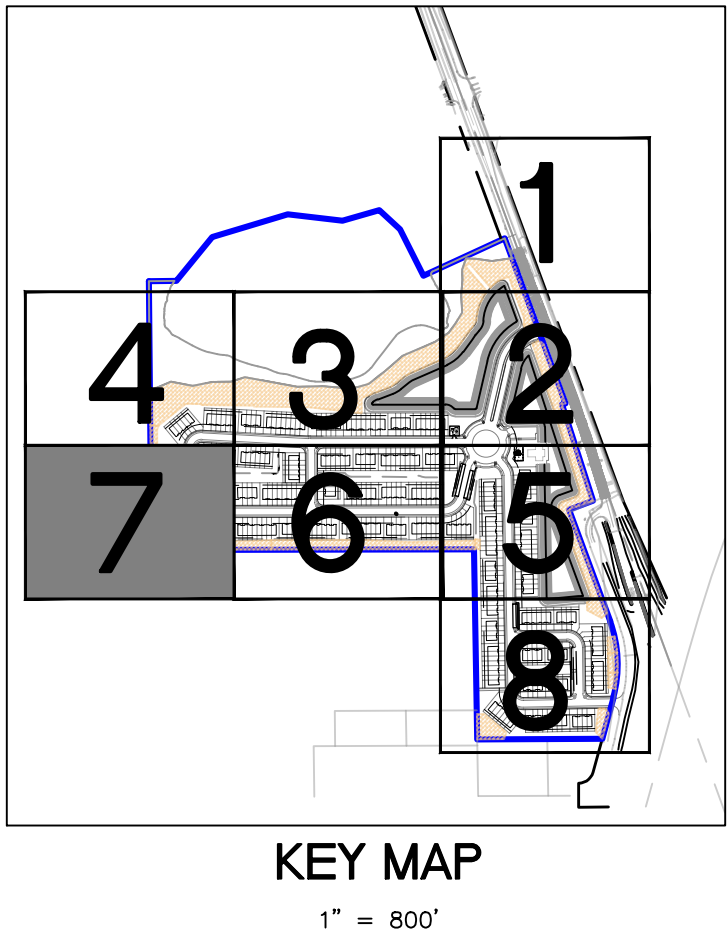
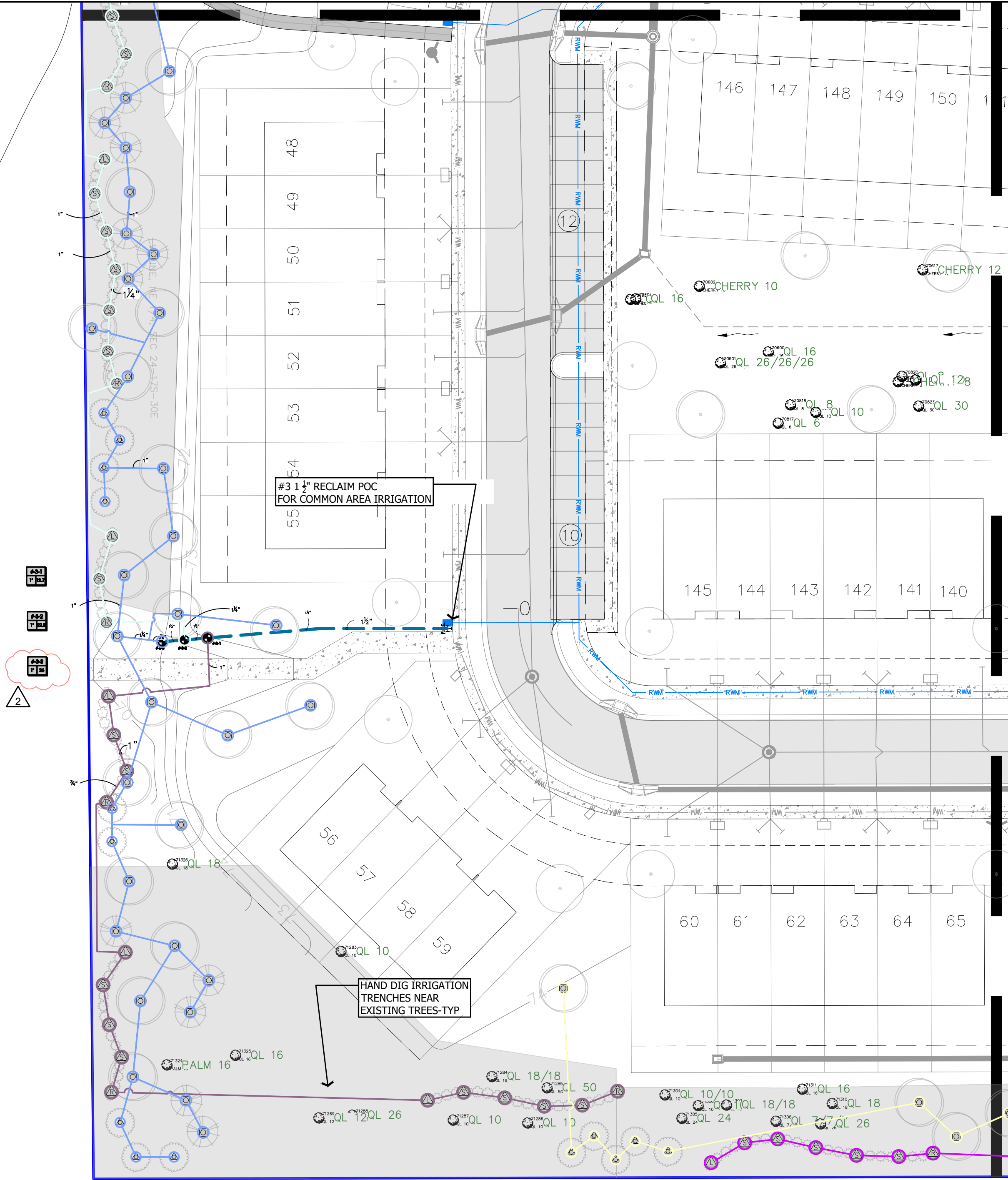
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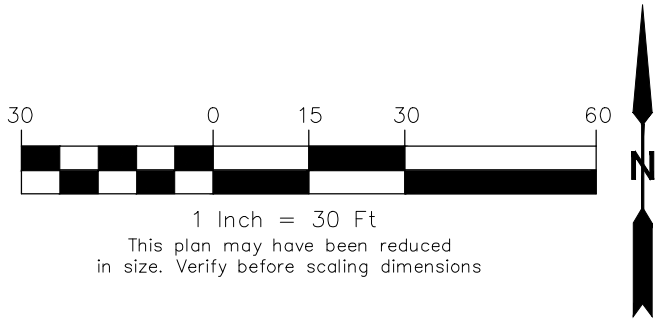
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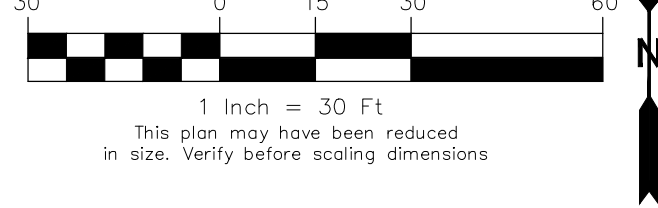
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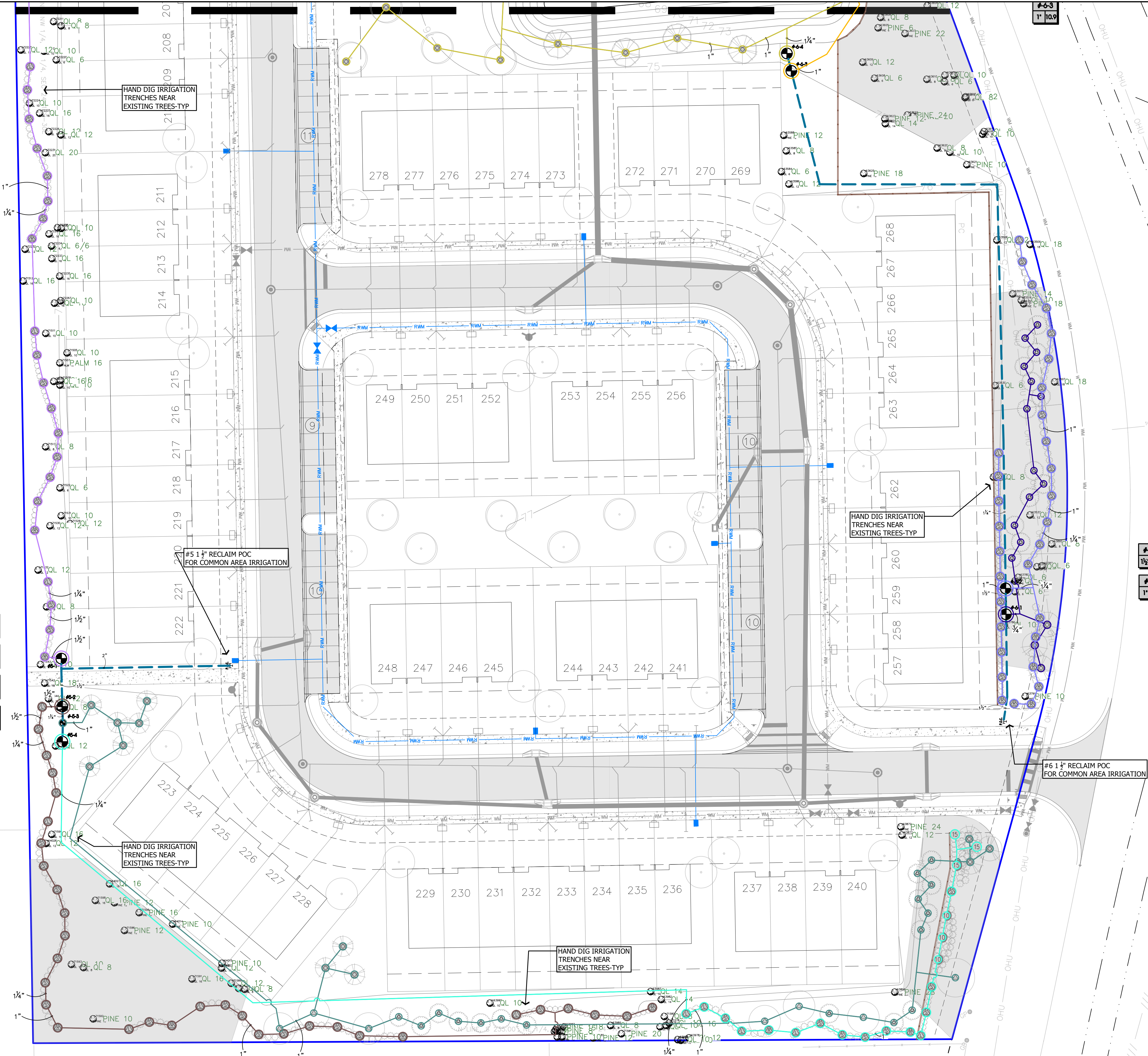
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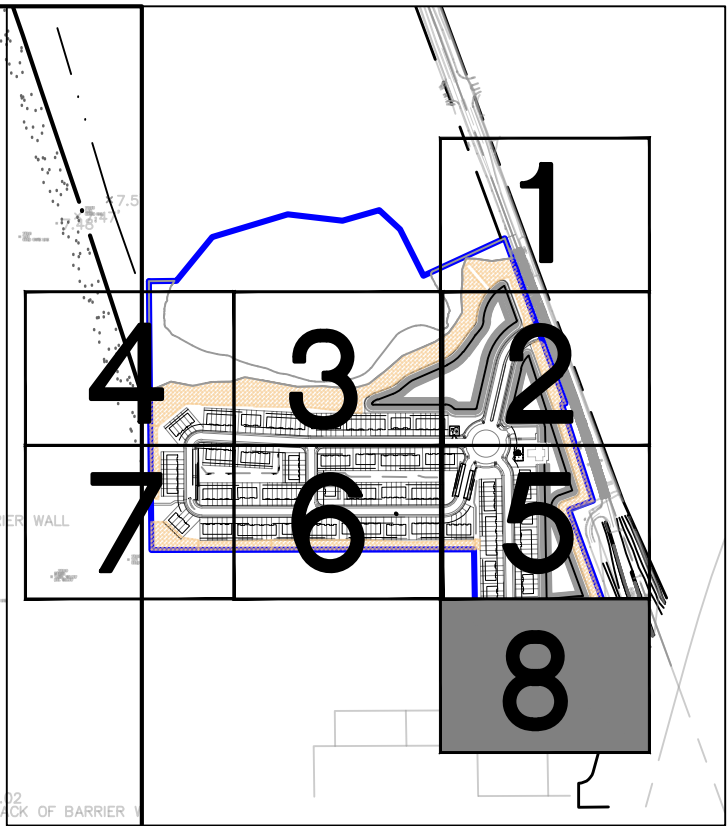


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INSTRUMENT #2016132243

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1 1/2" 80.0
- #5-3
1 1/2" 17
- #5-4
1 1/2" 17.8



- #6-2
1 1/2" 27.8
- #6-1
1" 4.76



KEY MAP
1" = 800'



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SUMMIT PLACE
DeLand/DR Horton

IRRIGATION PLAN

PROJECT NUMBER: MD#2303
DATE: JANUARY 17, 2023
DRAWN BY: MD
CHECKED BY: MKM

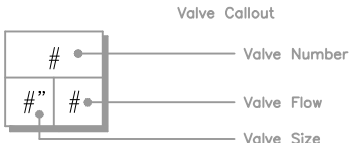
SCALE AS INDICATED

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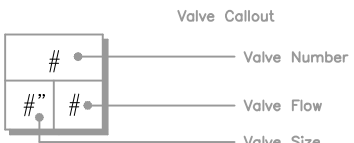
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IRRIGATION SCHEDULE					
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	ARC	GPM	RADIUS
Ⓐ	RAIN BIRD PA-85-PRS-NP-MPR 15LCS SHRUB SPRAY ON FIXED RISER WITH THE PA-85-PRS-NP 30 PSI PURPLE PRESSURE REGULATING SHRUB ADAPTER, USE WITH 1/2IN. MPT THREADED RISERS.	15	LCS	0.45	4x15'
Ⓑ	RAIN BIRD PA-85-PRS-NP-MPR 15RCS SHRUB SPRAY ON FIXED RISER WITH THE PA-85-PRS-NP 30 PSI PURPLE PRESSURE REGULATING SHRUB ADAPTER, USE WITH 1/2IN. MPT THREADED RISERS.	12	RCS	0.45	4x15'
Ⓒ	RAIN BIRD PA-85-PRS-NP-MPR 15SST SHRUB SPRAY ON FIXED RISER WITH THE PA-85-PRS-NP 30 PSI PURPLE PRESSURE REGULATING SHRUB ADAPTER, USE WITH 1/2IN. MPT THREADED RISERS.	55	SST	1.11	4x30'
Ⓓ	RAIN BIRD PA-85-PRS-NP-MPR 10H SHRUB SPRAY ON FIXED RISER WITH THE PA-85-PRS-NP 30 PSI PURPLE PRESSURE REGULATING SHRUB ADAPTER, USE WITH 1/2IN. MPT THREADED RISERS.	3	180	0.72	9'
Ⓔ	RAIN BIRD PA-85-PRS-NP-MPR 15H SHRUB SPRAY ON FIXED RISER WITH THE PA-85-PRS-NP 30 PSI PURPLE PRESSURE REGULATING SHRUB ADAPTER, USE WITH 1/2IN. MPT THREADED RISERS.	1	180	1.65	14'
Ⓕ	RAIN BIRD PA-85-PRS-NP-MPR 15V SHRUB SPRAY ON FIXED RISER WITH THE PA-85-PRS-NP 30 PSI PURPLE PRESSURE REGULATING SHRUB ADAPTER, USE WITH 1/2IN. MPT THREADED RISERS.	2	ADJ	≤ 3.28	14'
Ⓖ	RAIN BIRD 1800-1400 FLOOD 1401 FIXED FLOW RATE (0.25-2.0GPM), FULL CIRCLE BUBBLER, 1/2" FIPT.	16	360	0.25	3'
Ⓗ	RAIN BIRD 1800-1400 FLOOD 1402 FIXED FLOW RATE (0.25-2.0GPM), FULL CIRCLE BUBBLER, 1/2" FIPT.	12	360	0.5	3'
Ⓙ	RAIN BIRD 1800-1400 FLOOD 1404 FIXED FLOW RATE (0.25-2.0GPM), FULL CIRCLE BUBBLER, 1/2" FIPT.	7	360	1	3'
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY			
⊕	RAIN BIRD PESB-NP-HAN-PRS-D 1-1/2" 1IN., 1-1/2IN., 2IN. DURABLE CHLORINE-RESISTANT REMOTE CONTROL VALVE FOR RECLAIMED WATER APPLICATIONS. WITH SCRUBBER MECHANISM TECHNOLOGY, PURPLE FLOW CONTROL HANDLE, AND PRESSURE REGULATOR MODULE.	4			
Ⓜ	POINT OF CONNECTION 1 1/2" CITY RECLAIMED/MASTER VALVE @ ENTRANCE/RWM ROUTED THROUGH SITE-SEE CIVIL/1 1/4" POC FOR COMMON AREA IRRIGATION/TOWNHOME IRRIGATION BY OTHERS	1			
—	IRRIGATION LATERAL LINE: PVC CLASS 160 SDR 26-NP	11.1	L.F.		
—	IRRIGATION LATERAL LINE: PVC CLASS 160 SDR 26-NP 3/4"	1,226	L.F.		
—	IRRIGATION LATERAL LINE: PVC CLASS 160 SDR 26-NP 1"	708.8	L.F.		
—	IRRIGATION LATERAL LINE: PVC CLASS 160 SDR 26-NP 1 1/4"	862.5	L.F.		
—	IRRIGATION LATERAL LINE: PVC CLASS 160 SDR 26-NP 1 1/2"	72.1	L.F.		
—	IRRIGATION MAINLINE: PVC SCHEDULE 40-NP 1 1/4"	19.9	L.F.		
—	IRRIGATION MAINLINE: PVC SCHEDULE 40-NP 1 1/2"	21.4	L.F.		
—	IRRIGATION MAINLINE: PVC SCHEDULE 40-NP 2"	101.2	L.F.		



IRRIGATION SCHEDULE					
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	ARC	GPM	RADIUS
Ⓐ	RAIN BIRD PA-85-PRS-NP-MPR 15LCS SHRUB SPRAY ON FIXED RISER WITH THE PA-85-PRS-NP 30 PSI PURPLE PRESSURE REGULATING SHRUB ADAPTER, USE WITH 1/2IN. MPT THREADED RISERS.	3	LCS	0.45	4x15'
Ⓑ	RAIN BIRD PA-85-PRS-NP-MPR 15RCS SHRUB SPRAY ON FIXED RISER WITH THE PA-85-PRS-NP 30 PSI PURPLE PRESSURE REGULATING SHRUB ADAPTER, USE WITH 1/2IN. MPT THREADED RISERS.	9	RCS	0.45	4x15'
Ⓒ	RAIN BIRD PA-85-PRS-NP-MPR 15SST SHRUB SPRAY ON FIXED RISER WITH THE PA-85-PRS-NP 30 PSI PURPLE PRESSURE REGULATING SHRUB ADAPTER, USE WITH 1/2IN. MPT THREADED RISERS.	30	SST	1.11	4x30'
Ⓖ	RAIN BIRD 1800-1400 FLOOD 1401 FIXED FLOW RATE (0.25-2.0GPM), FULL CIRCLE BUBBLER, 1/2" FIPT.	13	360	0.25	3'
Ⓗ	RAIN BIRD 1800-1400 FLOOD 1402 FIXED FLOW RATE (0.25-2.0GPM), FULL CIRCLE BUBBLER, 1/2" FIPT.	43	360	0.5	3'
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY			
⊕	RAIN BIRD PESB-NP-HAN-PRS-D 1-1/2" 1IN., 1-1/2IN., 2IN. DURABLE CHLORINE-RESISTANT REMOTE CONTROL VALVE FOR RECLAIMED WATER APPLICATIONS. WITH SCRUBBER MECHANISM TECHNOLOGY, PURPLE FLOW CONTROL HANDLE, AND PRESSURE REGULATOR MODULE.	2			
Ⓜ	POINT OF CONNECTION 1 1/2" CITY RECLAIMED/MASTER VALVE @ ENTRANCE/RWM ROUTED THROUGH SITE-SEE CIVIL/1 1/4" POC FOR COMMON AREA IRRIGATION/TOWNHOME IRRIGATION BY OTHERS	1			
—	IRRIGATION LATERAL LINE: PVC CLASS 160 SDR 26-NP 3/4"	2,119	L.F.		
—	IRRIGATION LATERAL LINE: PVC CLASS 160 SDR 26-NP 1"	480.2	L.F.		
—	IRRIGATION LATERAL LINE: PVC CLASS 160 SDR 26-NP 1 1/4"	71.8	L.F.		
—	IRRIGATION MAINLINE: PVC SCHEDULE 40-NP 1 1/4"	405.6	L.F.		
—	IRRIGATION MAINLINE: PVC SCHEDULE 40-NP 1 1/2"	75.4	L.F.		



CRITICAL ANALYSIS

Generated: 2024-02-20 19:42

P.O.C. NUMBER: 01
Water Source Information:
IRRIGATION WELL/MASTER VALVE @
ENTRANCE/PROJECT MAINLINE ROUTED THROUGH
SITE-SEE CIVIL/1 1/2" POC FOR COMMON AREA
IRRIGATION/TOWNHOME IRRIGATION BY OTHERS

FLOW AVAILABLE
Point of Connection Size: 1 1/2"
Flow Available: 46.59 GPM

PRESSURE AVAILABLE
Static Pressure at POC: 50 PSI
Pressure Available: 50 PSI

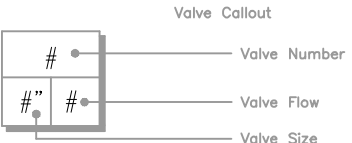
DESIGN ANALYSIS
Maximum Station Flow: 31.14 GPM
Flow Available at POC: 46.59 GPM
Residual Flow Available: 15.45 GPM

Critical Station: #5-3
Design Pressure: 20 PSI
Friction Loss: 16.5 PSI
Fittings Loss: 1.65 PSI
Elevation Loss: 0 PSI
Loss through Valve: 3.5 PSI
Pressure Req. at Critical Station: 41.6 PSI
Loss for Fittings: 0.06 PSI
Loss for Main Line: 0.58 PSI
Loss for POC to Valve Elevation: 0 PSI
Loss for Backflow: 0 PSI
Critical Station Pressure at POC: 42.3 PSI
Pressure Available: 50 PSI
Residual Pressure Available: 7.71 PSI

IRRIGATION SCHEDULE POC

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	ARC	GPM	RADIUS
Ⓐ	RAIN BIRD 1806-SAM-PRS-NP 08H TURF SPRAY 6.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL, 1/2" NPT FEMALE THREADED INLET, WITH SEAL-A-MATIC CHECK VALVE, PRESSURE REGULATING, AND NON POTABLE PURPLE CAP.	168	180	0.52	8'
Ⓒ	RAIN BIRD 1806-SAM-PRS-NP 08Q TURF SPRAY 6.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL, 1/2" NPT FEMALE THREADED INLET, WITH SEAL-A-MATIC CHECK VALVE, PRESSURE REGULATING, AND NON POTABLE PURPLE CAP.	1	90	0.26	8'
Ⓓ	RAIN BIRD 1806-SAM-PRS-NP 10Q TURF SPRAY 6.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL, 1/2" NPT FEMALE THREADED INLET, WITH SEAL-A-MATIC CHECK VALVE, PRESSURE REGULATING, AND NON POTABLE PURPLE CAP.	2	90	0.39	10'
Ⓔ	RAIN BIRD 1806-SAM-PRS-NP 08V TURF SPRAY 6.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL, 1/2" NPT FEMALE THREADED INLET, WITH SEAL-A-MATIC CHECK VALVE, PRESSURE REGULATING, AND NON POTABLE PURPLE CAP.	1	ADJ	≤ 1.19	8'
Ⓕ	RAIN BIRD PA-85-PRS-NP-MPR 15LCS SHRUB SPRAY ON FIXED RISER WITH THE PA-85-PRS-NP 30 PSI PURPLE PRESSURE REGULATING SHRUB ADAPTER, USE WITH 1/2IN. MPT THREADED RISERS.	10	LCS	0.45	4x15'
Ⓖ	RAIN BIRD PA-85-PRS-NP-MPR 15RCS SHRUB SPRAY ON FIXED RISER WITH THE PA-85-PRS-NP 30 PSI PURPLE PRESSURE REGULATING SHRUB ADAPTER, USE WITH 1/2IN. MPT THREADED RISERS.	10	RCS	0.45	4x15'
Ⓒ	RAIN BIRD PA-85-PRS-NP-MPR 15SST SHRUB SPRAY ON FIXED RISER WITH THE PA-85-PRS-NP 30 PSI PURPLE PRESSURE REGULATING SHRUB ADAPTER, USE WITH 1/2IN. MPT THREADED RISERS.	58	SST	1.11	4x30'
Ⓓ	RAIN BIRD PA-85-PRS-NP-MPR 10H SHRUB SPRAY ON FIXED RISER WITH THE PA-85-PRS-NP 30 PSI PURPLE PRESSURE REGULATING SHRUB ADAPTER, USE WITH 1/2IN. MPT THREADED RISERS.	15	180	0.47	7'
Ⓔ	RAIN BIRD PA-85-PRS-NP-MPR 08Q SHRUB SPRAY ON FIXED RISER WITH THE PA-85-PRS-NP 30 PSI PURPLE PRESSURE REGULATING SHRUB ADAPTER, USE WITH 1/2IN. MPT THREADED RISERS.	1	90	0.24	7'
Ⓕ	RAIN BIRD PA-85-PRS-NP-MPR 10H SHRUB SPRAY ON FIXED RISER WITH THE PA-85-PRS-NP 30 PSI PURPLE PRESSURE REGULATING SHRUB ADAPTER, USE WITH 1/2IN. MPT THREADED RISERS.	1	180	0.72	9'
Ⓖ	RAIN BIRD PA-85-PRS-NP-MPR 12H SHRUB SPRAY ON FIXED RISER WITH THE PA-85-PRS-NP 30 PSI PURPLE PRESSURE REGULATING SHRUB ADAPTER, USE WITH 1/2IN. MPT THREADED RISERS.	8	180	1.2	11'
Ⓖ	RAIN BIRD 1800-1400 FLOOD 1401 FIXED FLOW RATE (0.25-2.0GPM), FULL CIRCLE BUBBLER, 1/2" FIPT.	17	360	0.25	3'
Ⓗ	RAIN BIRD 1800-1400 FLOOD 1402 FIXED FLOW RATE (0.25-2.0GPM), FULL CIRCLE BUBBLER, 1/2" FIPT.	35	360	0.5	3'
Ⓙ	RAIN BIRD 1800-1400 FLOOD 1404 FIXED FLOW RATE (0.25-2.0GPM), FULL CIRCLE BUBBLER, 1/2" FIPT.	34	360	1	3'

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY			
⊕	RAIN BIRD PESB-NP-HAN-PRS-D 1-1/2" 1IN., 1-1/2IN., 2IN. DURABLE CHLORINE-RESISTANT REMOTE CONTROL VALVE FOR RECLAIMED WATER APPLICATIONS. WITH SCRUBBER MECHANISM TECHNOLOGY, PURPLE FLOW CONTROL HANDLE, AND PRESSURE REGULATOR MODULE.	5			
⊕	RAIN BIRD PESB-NP-HAN-PRS-D 1" 1IN., 1-1/2IN., 2IN. DURABLE CHLORINE-RESISTANT REMOTE CONTROL VALVE FOR RECLAIMED WATER APPLICATIONS. WITH SCRUBBER MECHANISM TECHNOLOGY, PURPLE FLOW CONTROL HANDLE, AND PRESSURE REGULATOR MODULE.	3			
⊕	RAIN BIRD PESB-NP-HAN-PRS-D 0.7" 1IN., 1-1/2IN., 2IN. DURABLE CHLORINE-RESISTANT REMOTE CONTROL VALVE FOR RECLAIMED WATER APPLICATIONS. WITH SCRUBBER MECHANISM TECHNOLOGY, PURPLE FLOW CONTROL HANDLE, AND PRESSURE REGULATOR MODULE.	2			
Ⓜ	POINT OF CONNECTION 1 1/2" IRRIGATION WELL/MASTER VALVE @ ENTRANCE/PROJECT MAINLINE ROUTED THROUGH SITE-SEE CIVIL/1 1/2" POC FOR COMMON AREA IRRIGATION/TOWNHOME IRRIGATION BY OTHERS	1			
—	IRRIGATION LATERAL LINE: PVC CLASS 160 SDR 26-NP 3/4"	4,415	L.F.		
—	IRRIGATION LATERAL LINE: PVC CLASS 160 SDR 26-NP 1"	833.5	L.F.		
—	IRRIGATION LATERAL LINE: PVC CLASS 160 SDR 26-NP 1 1/4"	313.8	L.F.		
—	IRRIGATION LATERAL LINE: PVC CLASS 160 SDR 26-NP 1 1/2"	132.3	L.F.		
—	IRRIGATION LATERAL LINE: PVC CLASS 160 SDR 26-NP 2"	155.0	L.F.		
—	IRRIGATION MAINLINE: PVC SCHEDULE 40-NP 1"	14.5	L.F.		
—	IRRIGATION MAINLINE: PVC SCHEDULE 40-NP 1 1/2"	466.1	L.F.		
—	IRRIGATION MAINLINE: PVC SCHEDULE 40-NP 2"	352.7	L.F.		
—	PIPE SLEEVE: PVC SCHEDULE 40 2" EXTEND SLEEVES 18" PAST HARDSCAPE AND PLACE A STAKE AT EACH END	53.8	L.F.		
—	PIPE SLEEVE: PVC SCHEDULE 40 3" EXTEND SLEEVES 18" PAST HARDSCAPE AND PLACE A STAKE AT EACH END	22.9	L.F.		
—	PIPE SLEEVE: PVC SCHEDULE 40 4" EXTEND SLEEVES 18" PAST HARDSCAPE AND PLACE A STAKE AT EACH END	51.4	L.F.		

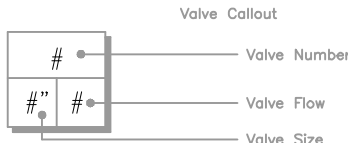


VALVE SCHEDULE

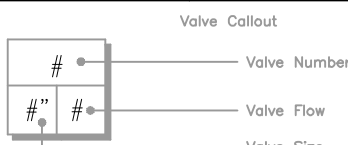
NUMBER	MODEL	SIZE	TYPE	GPM	HEADS	PIPE 3/4"	PIPE 1"	PIPE 1 1/4"	PIPE 1 1/2"	PIPE 2"	WIRE	DESIGN PSI	FRICTION LOSS	VALVE LOSS	PSI	PSI @ POC	PRECIP
#-1-1	RAIN BIRD PESB-NP-HAN-PRS-D	1-1/2"	BUBBLER	13	23	416.3	58.3				20	7.03	3.5		30.5	31.0	1.92 in/h
#-1-2	RAIN BIRD PESB-NP-HAN-PRS-D	1-1/2"	TURF SPRAY	21.07	18	168.4	11.7	81.2			30	2.49	3.46		35.9	36.3	1.28 in/h
#-1-3	RAIN BIRD PESB-NP-HAN-PRS-D	1-1/2"	TURF SPRAY	18.2	15	183.6		108.4			30	2.09	3.5		35.6	35.8	1.35 in/h
#-1-4	RAIN BIRD PESB-NP-HAN-PRS-D	2"	TURF ROTOR	35.68	16	346.5	75.4	74.2		12.1	25	2.12	3.7		30.8	31.6	0.48 in/h
#-1-5	RAIN BIRD PESB-NP-HAN-PRS-D	1-1/2"	TURF SPRAY	30.13	30	231.4	60.5	79.2	24.8	51.6	30	2.92	3.09		36.0	40.1	1.15 in/h
#-2-1	RAIN BIRD PESB-NP-HAN-PRS-D	1-1/2"	BUBBLER	15.5	17	498.1	57.2	95.5			20	1.89	3.5		25.4	25.6	3.1 in/h
#-2-2	RAIN BIRD PESB-NP-HAN-PRS-D	1-1/2"	BUBBLER	19.5	33	594.7	183.8	31.8			20	13.2	3.5		36.7	37.0	2.01 in/h
#-2-3	RAIN BIRD PESB-NP-HAN-PRS-D	1"	SHRUB SPRAY	6.24	8	210.5					25	2.34	2.9		30.2	30.4	1.72 in/h
#-3-1	RAIN BIRD PESB-NP-HAN-PRS-D	1"	SHRUB SPRAY	12.69	15	339.1	90.2				25	9.38	2.82		37.2	37.7	1.2 in/h
#-3-2	RAIN BIRD PESB-NP-HAN-PRS-D	1"	SHRUB SPRAY	22.26	26	244.7	126.6	187.9			25	10.5	3.32		38.8	40.3	1.15 in/h
#-3-3	RAIN BIRD PESB-NP-HAN-PRS-D	1"	BUBBLER	26	58	1,013	220.2	17.0			20	12.5	4.52		37.0	39.2	1.53 in/h
#-4-1	RAIN BIRD PESB-NP-HAN-PRS-D	1-1/2"	SHRUB SPRAY	21.57	23	178.9	187.5	434.2			25	15.5	3.44		44.0	46.8	1.32 in/h
#-4-2	RAIN BIRD PESB-NP-HAN-PRS-D	1-1/2"	SHRUB SPRAY	16.02	18	213.5	241.0				25	11.4	3.25		39.9	41.7	1.39 in/h
#-4-3	RAIN BIRD PESB-NP-HAN-PRS-D	1-1/2"	SHRUB SPRAY	19.35	21	327.5	84.2	27.7			25	8.11	3.5		36.6	39.3	1.35 in/h
#-4-4	RAIN BIRD PESB-NP-HAN-PRS-D	1-1/2"	BUBBLER	22.5	57	949.0	433.3	4.5			20	14.8	3.4		38.2	42.1	1.34 in/h
#5-1	RAIN BIRD PESB-NP-HAN-PRS-D	1-1/2"	SHRUB SPRAY	31.14	34	146.3	200.3	236.6	42.8		25	12.9	3.01		40.9	41.8	1.32 in/h
#5-2	RAIN BIRD PESB-NP-HAN-PRS-D	1-1/2"	SHRUB SPRAY	30.03	33	265.5	143.6	164.6	29.3		25	12.1	3.1		40.2	41.5	1.23 in/h
#-5-3	RAIN BIRD PESB-NP-HAN-PRS-D	1-1/2"	BUBBLER	17	35	668.7	237.2				20	18.2	3.5		41.6	42.3	1.65 in/h
#5-4	RAIN BIRD PESB-NP-HAN-PRS-D	1-1/2"	SHRUB SPRAY	17.82	21	156.2	127.7	461.2			25	12.6	3.5		41.1	42.0	1.01 in/h
#-6-1	RAIN BIRD PESB-NP-HAN-PRS-D	1"	BUBBLER	4.75	16	240.5					20	0.6	2.83		23.4	23.5	1.01 in/h
#-6-2	RAIN BIRD PESB-NP-HAN-PRS-D	1-1/2"	SHRUB SPRAY	27.81	31	328.7	65.5	57.5			25	2.4	3.19		36.0	32.3	1.38 in/h
#-6-3	RAIN BIRD PESB-NP-HAN-PRS-D	1"	SHRUB SPRAY	10.89	11	153.5	349.4				25	7.32	2.87		35.2	38.9	1.36 in/h
#-6-4	RAIN BIRD PESB-NP-HAN-PRS-D	1-1/2"	BUBBLER	20	40	1,397	65.4	14.3			20	12.3	3.5		34.8	47.6	1.7 in/h
#-7-1	RAIN BIRD PESB-NP-HAN-PRS-D	1-1/2"	SHRUB SPRAY	28.86	39	385.7	87.9	41.7	31.5		25	6.45	3.15		34.6	35.1	1.19 in/h
#-7-2	RAIN BIRD PESB-NP-HAN-PRS-D	2"	SHRUB SPRAY	28.44	28	181.2	104.7	128.3			25	8.06	3.7		36.8	46.3	1.36 in/h
#-7-3	RAIN BIRD PESB-NP-HAN-PRS-D	1"	BUBBLER	10.5	23	569.3					20	7.43	2.89		30.3	32.1	1.55 in/h
#-7-4	RAIN BIRD PESB-NP-HAN-PRS-D	1"	BUBBLER	8.75	21	392.3					20	5.35	2.9		28.3	28.3	1.42 in/h
#-7-5	RAIN BIRD PESB-NP-HAN-PRS-D	1-1/2"	TURF SPRAY	28.47	55	240.7	150.7	39.7		21.2	30	2.88	3.16		36.0	38.5	0.82 in/h
#-7-6	RAIN BIRD PESB-NP-HAN-PRS-D	1-1/2"	TURF SPRAY	34.55	67	362.7	208.7	7.9		7.7	30	2.76	2.74		35.5	37	1.07 in/h
#-7-7	RAIN BIRD PESB-NP-HAN-PRS-D	2"	BUBBLER	31	31	1,214	81.6	7.5	17.2		20	3.21	3.7		26.9	28.3	3.4 in/h
#-7-8	RAIN BIRD PESB-NP-HAN-PRS-D	1-1/2"	TURF SPRAY	25.87	50	256.5	152.8	74.2			30	2.74	3.8		36.0	37.2	0.68 in/h
#-7-9	RAIN BIRD PESB-NP-HAN-PRS-D	1-1/2"	SHRUB SPRAY	33.69	36	256.6	47.1	14.6	83.5	122.3	25	2.51	2.8		30.3	33.7	1.17 in/h
#-7-10	RAIN BIRD PESB-NP-HAN-PRS-D	1"	BUBBLER	5.5	11	356.0					20	2.64	2.9		25.5	25.7	1.7 in/h

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IRRIGATION SCHEDULE POC					
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	ARC	GPM	RADIUS
	RAIN BIRD 1806-SAM-PRS-NP 081 TURF SPRAY 6.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL, 1/2" NPT FEMALE THREADED INLET, WITH SEAL-A-MATIC CHECK VALVE, PRESSURE REGULATING, AND NON POTABLE PURPLE CAP.	4	180	0.52	8'
	RAIN BIRD 1806-SAM-PRS-NP 082 TURF SPRAY 6.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL, 1/2" NPT FEMALE THREADED INLET, WITH SEAL-A-MATIC CHECK VALVE, PRESSURE REGULATING, AND NON POTABLE PURPLE CAP.	2	90	0.26	8'
	RAIN BIRD 1806-SAM-PRS-NP 121 TURF SPRAY 6.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL, 1/2" NPT FEMALE THREADED INLET, WITH SEAL-A-MATIC CHECK VALVE, PRESSURE REGULATING, AND NON POTABLE PURPLE CAP.	40	180	1.3	12'
	RAIN BIRD 1806-SAM-PRS-NP 122 TURF SPRAY 6.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL, 1/2" NPT FEMALE THREADED INLET, WITH SEAL-A-MATIC CHECK VALVE, PRESSURE REGULATING, AND NON POTABLE PURPLE CAP.	10	90	0.65	12'
	RAIN BIRD 1806-SAM-PRS-NP 151 TURF SPRAY 6.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL, 1/2" NPT FEMALE THREADED INLET, WITH SEAL-A-MATIC CHECK VALVE, PRESSURE REGULATING, AND NON POTABLE PURPLE CAP.	2	180	1.85	15'
	RAIN BIRD 1806-SAM-PRS-NP 150 TURF SPRAY 6.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL, 1/2" NPT FEMALE THREADED INLET, WITH SEAL-A-MATIC CHECK VALVE, PRESSURE REGULATING, AND NON POTABLE PURPLE CAP.	5	90	0.92	15'
	RAIN BIRD 1800-1400 FLOOD 1402 FIXED FLOW RATE (0.25-2.0GPM), FULL CIRCLE BUBBLER, 1/2" FIPT.	20	360	0.5	3'
	RAIN BIRD 1800-1400 FLOOD 1404 FIXED FLOW RATE (0.25-2.0GPM), FULL CIRCLE BUBBLER, 1/2" FIPT.	3	360	1	3'
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY		GPM	RADIUS
	RAIN BIRD 5006-PC-LA 3.0 TURF ROTOR, 6IN. POP-UP, PLASTIC RISER, ADJUSTABLE TO FULL CIRCLE, LOW ANGLE NOZZLE.	16		2.23	29'
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY			
	RAIN BIRD PESB-NP-HAN-PRS-D 1-1/2" 1IN., 1-1/2IN., 2IN. DURABLE CHLORINE-RESISTANT REMOTE CONTROL VALVE FOR RECLAIMED WATER APPLICATIONS, WITH SCRUBBER MECHANISM TECHNOLOGY, PURPLE FLOW CONTROL HANDLE, AND PRESSURE REGULATOR MODULE.	4			
	RAIN BIRD PESB-NP-HAN-PRS-D 2" 1IN., 1-1/2IN., 2IN. DURABLE CHLORINE-RESISTANT REMOTE CONTROL VALVE FOR RECLAIMED WATER APPLICATIONS, WITH SCRUBBER MECHANISM TECHNOLOGY, PURPLE FLOW CONTROL HANDLE, AND PRESSURE REGULATOR MODULE.	1			
	POINT OF CONNECTION 1 1/2" IRRIGATION WELL/MASTER VALVE @ ENTRANCE/PROJECT MAINLINE ROUTED THROUGH SITE-SEE CIVIL/1 1/2" POC FOR COMMON AREA IRRIGATION/TOWNHOMES IRRIGATION BY OTHERS	1			
	IRRIGATION LATERAL LINE: PVC CLASS 160 SDR 26-NP 3/4"	1,346 L.F.			
	IRRIGATION LATERAL LINE: PVC CLASS 160 SDR 26-NP 1"	205.9 L.F.			
	IRRIGATION LATERAL LINE: PVC CLASS 160 SDR 26-NP 1 1/4"	431.5 L.F.			
	IRRIGATION LATERAL LINE: PVC CLASS 160 SDR 26-NP 1 1/2"	24.8 L.F.			
	IRRIGATION LATERAL LINE: PVC CLASS 160 SDR 26-NP 2"	63.7 L.F.			
	IRRIGATION MAINLINE: PVC SCHEDULE 40-NP 1"	7.8 L.F.			
	IRRIGATION MAINLINE: PVC SCHEDULE 40-NP 1 1/4"	11.6 L.F.			
	IRRIGATION MAINLINE: PVC SCHEDULE 40-NP 1 1/2"	150.8 L.F.			
	IRRIGATION MAINLINE: PVC SCHEDULE 40-NP 2"	70.6 L.F.			
	PIPE SLEEVE: PVC SCHEDULE 40 2" EXTEND SLEEVES 18" PAST HARDSCAPE AND PLACE A STAKE AT EACH END	30.4 L.F.			
	PIPE SLEEVE: PVC SCHEDULE 40 3" EXTEND SLEEVES 18" PAST HARDSCAPE AND PLACE A STAKE AT EACH END	108.4 L.F.			
	PIPE SLEEVE: PVC SCHEDULE 40 4" EXTEND SLEEVES 18" PAST HARDSCAPE AND PLACE A STAKE AT EACH END	97.7 L.F.			



IRRIGATION SCHEDULE					
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	ARC	GPM	RADIUS
	RAIN BIRD PA-85-PRS-NP-MPR 15LCS SHRUB SPRAY ON FIXED RISER WITH THE PA-85-PRS-NP 30 PSI PURPLE PRESSURE REGULATING SHRUB ADAPTER, USE WITH 1/2IN. MPT THREADED RISERS.	8	LCS	0.45	4x15'
	RAIN BIRD PA-85-PRS-NP-MPR 15RCS SHRUB SPRAY ON FIXED RISER WITH THE PA-85-PRS-NP 30 PSI PURPLE PRESSURE REGULATING SHRUB ADAPTER, USE WITH 1/2IN. MPT THREADED RISERS.	8	RCS	0.45	4x15'
	RAIN BIRD PA-85-PRS-NP-MPR 15SST SHRUB SPRAY ON FIXED RISER WITH THE PA-85-PRS-NP 30 PSI PURPLE PRESSURE REGULATING SHRUB ADAPTER, USE WITH 1/2IN. MPT THREADED RISERS.	25	SST	1.11	4x30'
	RAIN BIRD 1800-1400 FLOOD 1401 FIXED FLOW RATE (0.25-2.0GPM), FULL CIRCLE BUBBLER, 1/2" FIPT.	12	360	0.25	3'
	RAIN BIRD 1800-1400 FLOOD 1402 FIXED FLOW RATE (0.25-2.0GPM), FULL CIRCLE BUBBLER, 1/2" FIPT.	46	360	0.5	3'
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY			
	RAIN BIRD PESB-NP-HAN-PRS-D 1-1/2" 1IN., 1-1/2IN., 2IN. DURABLE CHLORINE-RESISTANT REMOTE CONTROL VALVE FOR RECLAIMED WATER APPLICATIONS, WITH SCRUBBER MECHANISM TECHNOLOGY, PURPLE FLOW CONTROL HANDLE, AND PRESSURE REGULATOR MODULE.	3			
	POINT OF CONNECTION 1 1/2" IRRIGATION WELL/MASTER VALVE @ ENTRANCE/PROJECT MAINLINE ROUTED THROUGH SITE-SEE CIVIL/1 1/2" POC FOR COMMON AREA IRRIGATION/TOWNHOMES IRRIGATION BY OTHERS	1			
	IRRIGATION LATERAL LINE: PVC CLASS 160 SDR 26-NP 3/4"	1,597 L.F.			
	IRRIGATION LATERAL LINE: PVC CLASS 160 SDR 26-NP 1"	437.0 L.F.			
	IRRIGATION LATERAL LINE: PVC CLASS 160 SDR 26-NP 1 1/4"	204.9 L.F.			
	IRRIGATION MAINLINE: PVC SCHEDULE 40-NP 1 1/2"	107.0 L.F.			



CRITICAL ANALYSIS

Generated: 2024-04-23 21:27

P.O.C. NUMBER: 01
Water Source Information:
IRRIGATION WELL/MASTER VALVE @ ENTRANCE/PROJECT MAINLINE ROUTED THROUGH SITE-SEE CIVIL/1 1/2" POC FOR COMMON AREA IRRIGATION/TOWNHOMES IRRIGATION BY OTHERS

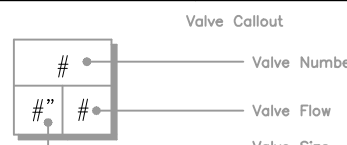
FLOW AVAILABLE
Point of Connection Size: 1 1/2"
Flow Available: 46.59 GPM

PRESSURE AVAILABLE
Static Pressure at POC: 50 PSI
Pressure Available: 50 PSI

DESIGN ANALYSIS
Maximum Station Flow: 35.68 GPM
Flow Available at POC: 46.59 GPM
Residual Flow Available: 10.91 GPM

Critical Station:
Design Pressure: 30 PSI
Friction Loss: 2.66 PSI
Fittings Loss: 0.26 PSI
Elevation Loss: 0 PSI
Loss through Valve: 3.09 PSI
Pressure Req. at Critical Station: 36.0 PSI
Loss for Fittings: 0.37 PSI
Loss for Main Line: 3.74 PSI
Loss for POC to Valve Elevation: 0 PSI
Loss for Backflow: 0 PSI
Critical Station Pressure at POC: 40.1 PSI
Pressure Available: 50 PSI
Residual Pressure Available: 9.87 PSI

IRRIGATION SCHEDULE					
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	ARC	GPM	RADIUS
	RAIN BIRD PA-85-PRS-NP-MPR 15LCS SHRUB SPRAY ON FIXED RISER WITH THE PA-85-PRS-NP 30 PSI PURPLE PRESSURE REGULATING SHRUB ADAPTER, USE WITH 1/2IN. MPT THREADED RISERS.	2	LCS	0.45	4x15'
	RAIN BIRD PA-85-PRS-NP-MPR 15RCS SHRUB SPRAY ON FIXED RISER WITH THE PA-85-PRS-NP 30 PSI PURPLE PRESSURE REGULATING SHRUB ADAPTER, USE WITH 1/2IN. MPT THREADED RISERS.	2	RCS	0.45	4x15'
	RAIN BIRD PA-85-PRS-NP-MPR 15SST SHRUB SPRAY ON FIXED RISER WITH THE PA-85-PRS-NP 30 PSI PURPLE PRESSURE REGULATING SHRUB ADAPTER, USE WITH 1/2IN. MPT THREADED RISERS.	4	SST	1.11	4x30'
	RAIN BIRD 1800-1400 FLOOD 1402 FIXED FLOW RATE (0.25-2.0GPM), FULL CIRCLE BUBBLER, 1/2" FIPT.	30	360	0.5	3'
	RAIN BIRD 1800-1400 FLOOD 1404 FIXED FLOW RATE (0.25-2.0GPM), FULL CIRCLE BUBBLER, 1/2" FIPT.	20	360	1	3'
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY			
	RAIN BIRD PESB-NP-HAN-PRS-D 1-1/2" 1IN., 1-1/2IN., 2IN. DURABLE CHLORINE-RESISTANT REMOTE CONTROL VALVE FOR RECLAIMED WATER APPLICATIONS, WITH SCRUBBER MECHANISM TECHNOLOGY, PURPLE FLOW CONTROL HANDLE, AND PRESSURE REGULATOR MODULE.	2			
	RAIN BIRD PESB-NP-HAN-PRS-D 1-1/2" 1IN., 1-1/2IN., 2IN. DURABLE CHLORINE-RESISTANT REMOTE CONTROL VALVE FOR RECLAIMED WATER APPLICATIONS, WITH SCRUBBER MECHANISM TECHNOLOGY, PURPLE FLOW CONTROL HANDLE, AND PRESSURE REGULATOR MODULE.	1			
	POINT OF CONNECTION 1 1/2" CITY RECLAIMED/MASTER VALVE @ ENTRANCE/RWM ROUTED THROUGH SITE-SEE CIVIL/1 1/4" POC FOR COMMON AREA IRRIGATION/TOWNHOMES IRRIGATION BY OTHERS	1			
	IRRIGATION LATERAL LINE: PVC CLASS 160 SDR 26-NP 3/4"	1,314 L.F.			
	IRRIGATION LATERAL LINE: PVC CLASS 160 SDR 26-NP 1"	241.0 L.F.			
	IRRIGATION LATERAL LINE: PVC CLASS 160 SDR 26-NP 1 1/4"	127.3 L.F.			
	IRRIGATION MAINLINE: PVC SCHEDULE 40-NP 1"	8.8 L.F.			
	IRRIGATION MAINLINE: PVC SCHEDULE 40-NP 1 1/4"	9.8 L.F.			
	IRRIGATION MAINLINE: PVC SCHEDULE 40-NP 1 1/2"	12.5 L.F.			



CRITICAL ANALYSIS

Generated: 2024-04-23 09:22

P.O.C. NUMBER: 01
Water Source Information:
IRRIGATION WELL/MASTER VALVE @ ENTRANCE/PROJECT MAINLINE ROUTED THROUGH SITE-SEE CIVIL/1 1/2" POC FOR COMMON AREA IRRIGATION/TOWNHOMES IRRIGATION BY OTHERS

FLOW AVAILABLE
Point of Connection Size: 1 1/2"
Flow Available: 46.59 GPM

PRESSURE AVAILABLE
Static Pressure at POC: 50 PSI
Pressure Available: 50 PSI

DESIGN ANALYSIS
Maximum Station Flow: 30.36 GPM
Flow Available at POC: 46.59 GPM
Residual Flow Available: 16.23 GPM

Critical Station:
Design Pressure: 30 PSI
Friction Loss: 12.0 PSI
Fittings Loss: 1.2 PSI
Elevation Loss: 0 PSI
Loss through Valve: 3.5 PSI
Pressure Req. at Critical Station: 36.7 PSI
Loss for Fittings: 0.02 PSI
Loss for Main Line: 0.23 PSI
Loss for POC to Valve Elevation: 0 PSI
Loss for Backflow: 0 PSI
Critical Station Pressure at POC: 37.0 PSI
Pressure Available: 50 PSI
Residual Pressure Available: 13.0 PSI

WATERING SCHEDULE

NUMBER	MODEL	TYPE	PRECIP	IN/WEEK	MIN/WEEK	GAL/WEEK	GAL/DAY
#-1-1	RAIN BIRD PESB-NP-HAN-PRS-D	BUBBLER	1.92 in/h	1	32	416	
#-1-2	RAIN BIRD PESB-NP-HAN-PRS-D	TURF SPRAY	1.28 in/h	1	47	990	
#-1-3	RAIN BIRD PESB-NP-HAN-PRS-D	TURF SPRAY	1.35 in/h	1	45	819	
#-1-4	RAIN BIRD PESB-NP-HAN-PRS-D	TURF ROTOR	0.48 in/h	1	126	4,496	
#-1-5	RAIN BIRD PESB-NP-HAN-PRS-D	TURF SPRAY	1.15 in/h	1	53	1,597	
#-2-1	RAIN BIRD PESB-NP-HAN-PRS-D	BUBBLER	3.1 in/h	1	20	310	
#-2-2	RAIN BIRD PESB-NP-HAN-PRS-D	BUBBLER	2.01 in/h	1	30	585	
#-2-3	RAIN BIRD PESB-NP-HAN-PRS-D	SHRUB SPRAY	1.72 in/h	1	35	218	
#-3-1	RAIN BIRD PESB-NP-HAN-PRS-D	SHRUB SPRAY	1.2 in/h	1	50	635	
#-3-2	RAIN BIRD PESB-NP-HAN-PRS-D	SHRUB SPRAY	1.15 in/h	1	53	1,180	
#-3-3	RAIN BIRD PESB-NP-HAN-PRS-D	BUBBLER	1.47 in/h	1	41	779	
#-4-1	RAIN BIRD PESB-NP-HAN-PRS-D	SHRUB SPRAY	1.32 in/h	1	46	992	
#-4-2	RAIN BIRD PESB-NP-HAN-PRS-D	SHRUB SPRAY	1.39 in/h	1	44	705	
#-4-3	RAIN BIRD PESB-NP-HAN-PRS-D	SHRUB SPRAY	1.35 in/h	1	45	871	
#-4-4	RAIN BIRD PESB-NP-HAN-PRS-D	BUBBLER	1.34 in/h	1	45	1,013	
#5-1	RAIN BIRD PESB-NP-HAN-PRS-D	SHRUB SPRAY	1.32 in/h	1	46	1,432	
#5-2	RAIN BIRD PESB-NP-HAN-PRS-D	SHRUB SPRAY	1.23 in/h	1	49	1,471	
#-5-3	RAIN BIRD PESB-NP-HAN-PRS-D	BUBBLER	1.65 in/h	1	37	629	
#5-4	RAIN BIRD PESB-NP-HAN-PRS-D	SHRUB SPRAY	1.01 in/h	1	60	1,069	
#-6-1	RAIN BIRD PESB-NP-HAN-PRS-D	BUBBLER	1.01 in/h	1	60	285	
#-6-2	RAIN BIRD PESB-NP-HAN-PRS-D	SHRUB SPRAY	1.38 in/h	1	44	1,224	
#-6-3	RAIN BIRD PESB-NP-HAN-PRS-D	SHRUB SPRAY	1.36 in/h	1	45	490	
#-6-4	RAIN BIRD PESB-NP-HAN-PRS-D	BUBBLER	1.7 in/h	1	36	720	
#-7-1	RAIN BIRD PESB-NP-HAN-PRS-D	SHRUB SPRAY	1.19 in/h	1	51	1,472	
#-7-2	RAIN BIRD PESB-NP-HAN-PRS-D	SHRUB SPRAY	1.36 in/h	1	45	1,280	
#-7-3	RAIN BIRD PESB-NP-HAN-PRS-D	BUBBLER	1.55 in/h	1	39	410	
#-7-4	RAIN BIRD PESB-NP-HAN-PRS-D	BUBBLER	1.42 in/h	1	43	376	
#-7-5	RAIN BIRD PESB-NP-HAN-PRS-D	TURF SPRAY	0.82 in/h	1	73	2,078	
#-7-6	RAIN BIRD PESB-NP-HAN-PRS-D	TURF SPRAY	1.07 in/h	1	57	1,969	
#-7-7	RAIN BIRD PESB-NP-HAN-PRS-D	BUBBLER	3.4 in/h	1	18	558	
#-7-8	RAIN BIRD PESB-NP-HAN-PRS-D	TURF SPRAY	0.68 in/h	1	89	2,302	
#-7-9	RAIN BIRD PESB-NP-HAN-PRS-D	SHRUB SPRAY	1.17 in/h	1	52	1,752	
#-7-10	RAIN BIRD PESB-NP-HAN-PRS-D	BUBBLER	1.7 in/h	1	36	198	
	TOTALS:			1,592	35,321		

CRITICAL ANALYSIS

Generated: 2024-05-20 17:25

P.O.C. NUMBER: 01
Water Source Information:
IRRIGATION WELL/MASTER VALVE @ ENTRANCE/PROJECT MAINLINE ROUTED THROUGH SITE-SEE CIVIL/1 1/2" POC FOR COMMON AREA IRRIGATION/TOWNHOMES IRRIGATION BY OTHERS

FLOW AVAILABLE
Point of Connection Size: 1 1/2"
Flow Available: 46.59 GPM

PRESSURE AVAILABLE
Static Pressure at POC: 50 PSI
Pressure Available: 50 PSI

DESIGN ANALYSIS
Maximum Station Flow: 26 GPM
Flow Available at POC: 46.59 GPM
Residual Flow Available: 20.59 GPM

Critical Station:
Design Pressure: 25 PSI
Friction Loss: 9.5 PSI
Fittings Loss: 0.95 PSI
Elevation Loss: 0 PSI
Loss through Valve: 3.32 PSI
Pressure Req. at Critical Station: 38.8 PSI
Loss for Fittings: 0.14 PSI
Loss for Main Line: 1.37 PSI
Loss for POC to Valve Elevation: 0 PSI
Loss for Backflow: 0 PSI
Critical Station Pressure at POC: 40.3 PSI
Pressure Available: 50 PSI
Residual Pressure Available: 9.72 PSI

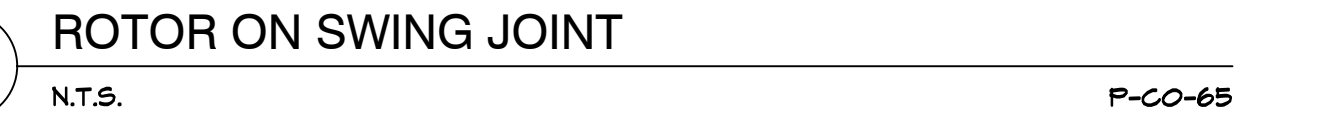
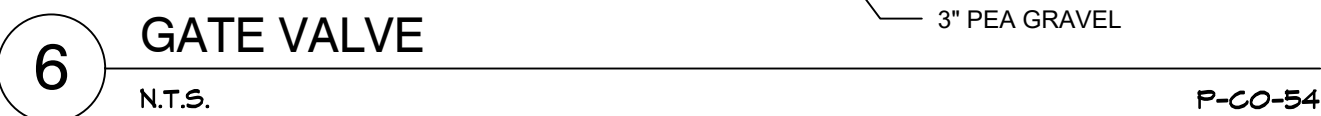
IRRIGATION SCHEDULE					
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	ARC	GPM	RADIUS
	RAIN BIRD PA-85-PRS-NP-MPR 15LCS SHRUB SPRAY ON FIXED RISER WITH THE PA-85-PRS-NP 30 PSI PURPLE PRESSURE REGULATING SHRUB ADAPTER, USE WITH 1/2IN. MPT THREADED RISERS.	9	LCS	0.45	4x15'
	RAIN BIRD PA-85-PRS-NP-MPR 15RCS SHRUB SPRAY ON FIXED RISER WITH THE PA-85-PRS-NP 30 PSI PURPLE PRESSURE REGULATING SHRUB ADAPTER, USE WITH 1/2IN. MPT THREADED RISERS.	9	RCS	0.45	4x15'
	RAIN BIRD PA-85-PRS-NP-MPR 15SST SHRUB SPRAY ON FIXED RISER WITH THE PA-85-PRS-NP 30 PSI PURPLE PRESSURE REGULATING SHRUB ADAPTER, USE WITH 1/2IN. MPT THREADED RISERS.	44	SST	1.11	4x30'
	RAIN BIRD 1800-1400 FLOOD 1401 FIXED FLOW RATE (0.25-2.0GPM), FULL CIRCLE BUBBLER, 1/2" FIPT.	24	360	0.25	3'
	RAIN BIRD 1800-1400 FLOOD 1402 FIXED FLOW RATE (0.25-2.0GPM), FULL CIRCLE BUBBLER, 1/2" FIPT.	33	360	0.5	3'
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY			
	RAIN BIRD PPSB-NP-HAN-PRS-D 1-1/2" 1IN., 1-1/2IN., 2IN. DURABLE CHLORINE-RESISTANT REMOTE CONTROL VALVE FOR RECLAIMED WATER APPLICATIONS, WITH SCRUBBER MECHANISM TECHNOLOGY, PURPLE FLOW CONTROL HANDLE, AND PRESSURE REGULATOR MOUNTLE.	4			
	POINT OF CONNECTION 1 1/2" CITY RECLAIMED-WATER VALVE & ENTRANCE/R/W ROUTED THROUGH SITE-SEE CIVIL/1 1/4\" POC FOR COMMON AREA IRRIGATION/TOWNHOME IRRIGATION BY OTHERS	1			
	IRRIGATION LATERAL LINE: PVC CLASS 160 SDR 26-NP 3/4"			1.669 L.F.	
	IRRIGATION LATERAL LINE: PVC CLASS 160 SDR 26-NP 1"			946.0 L.F.	
	IRRIGATION LATERAL LINE: PVC CLASS 160 SDR 26-NP 1 1/4"			466.4 L.F.	
	IRRIGATION MAINLINE: PVC SCHEDULE 40-NP 1 1/4"			116.5 L.F.	

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- 1 TYPICAL BACKFLOW PREVENTER DETAIL



2 TYPICAL IRRIGATION TRENCHING DETAIL



3 TYPICAL IRRIGATION NOTES

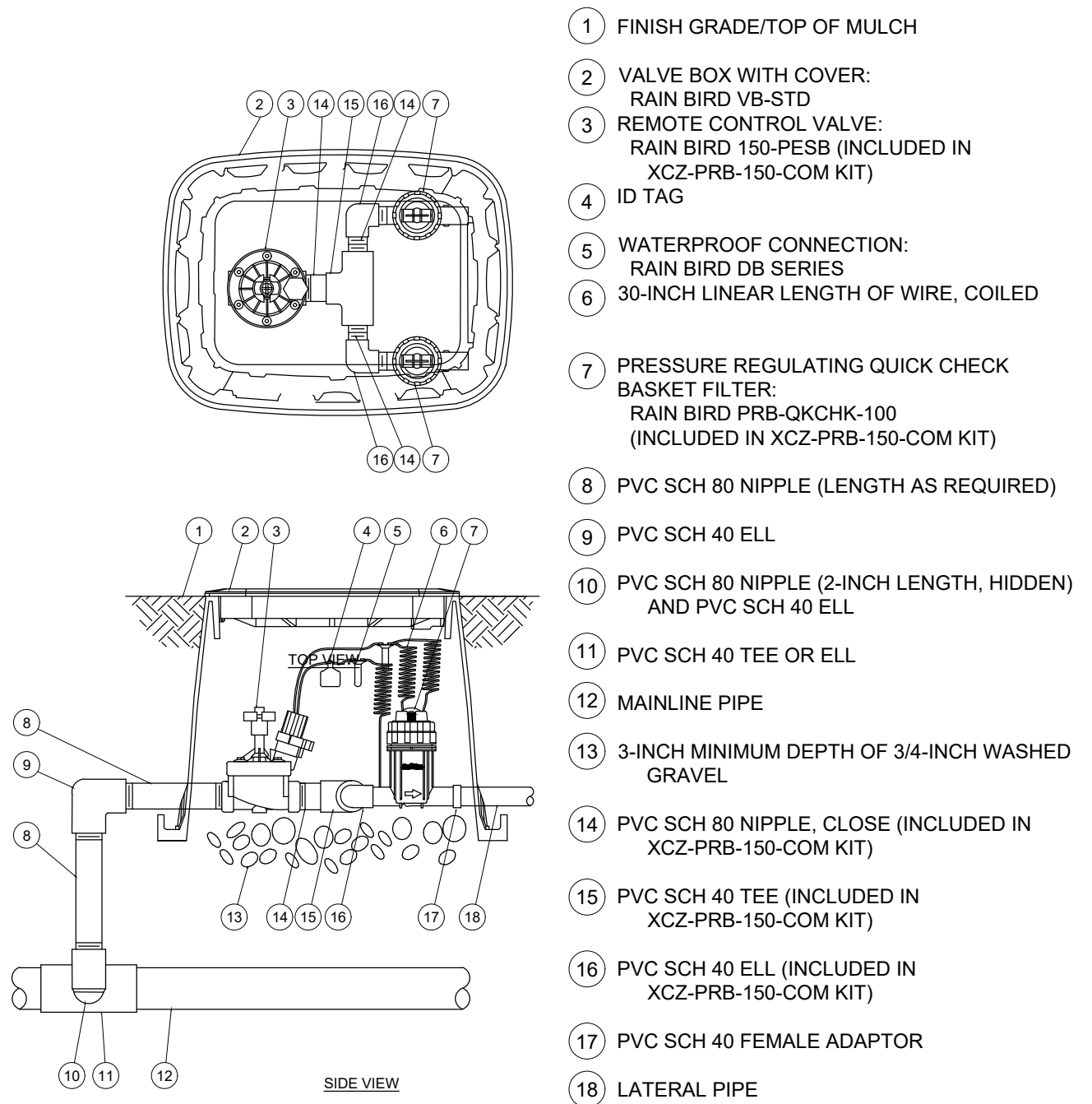


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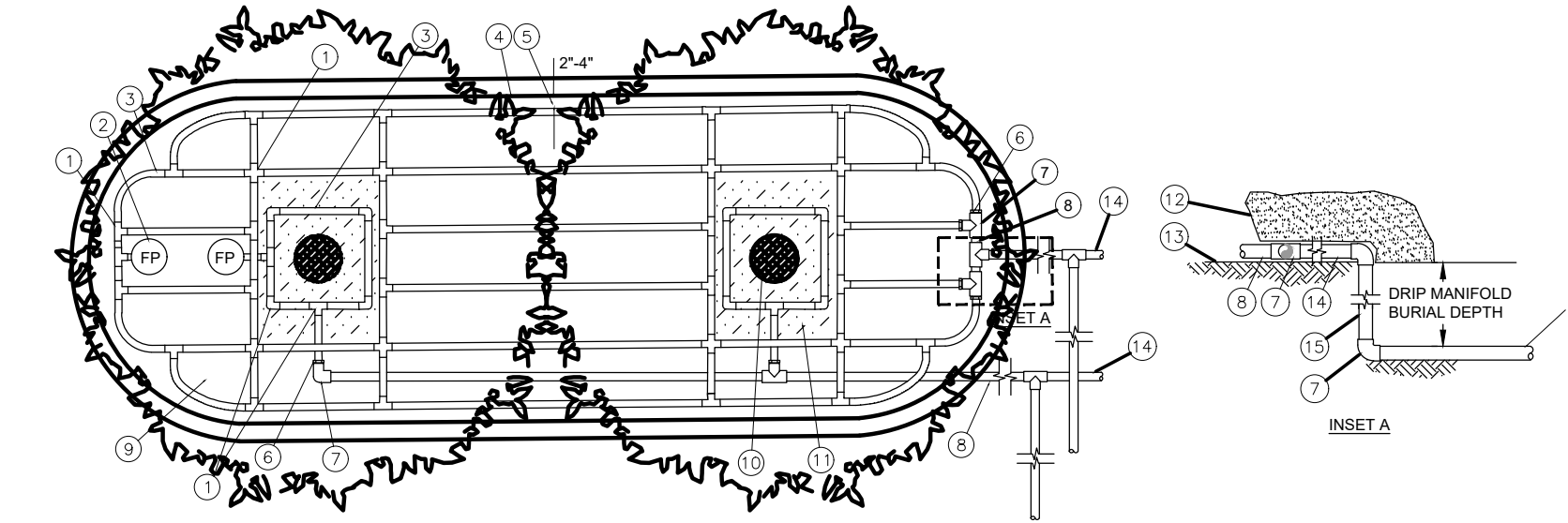
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1 DRIP ELECTRIC CONTROL VALVE

N.T.S. P-CO-68

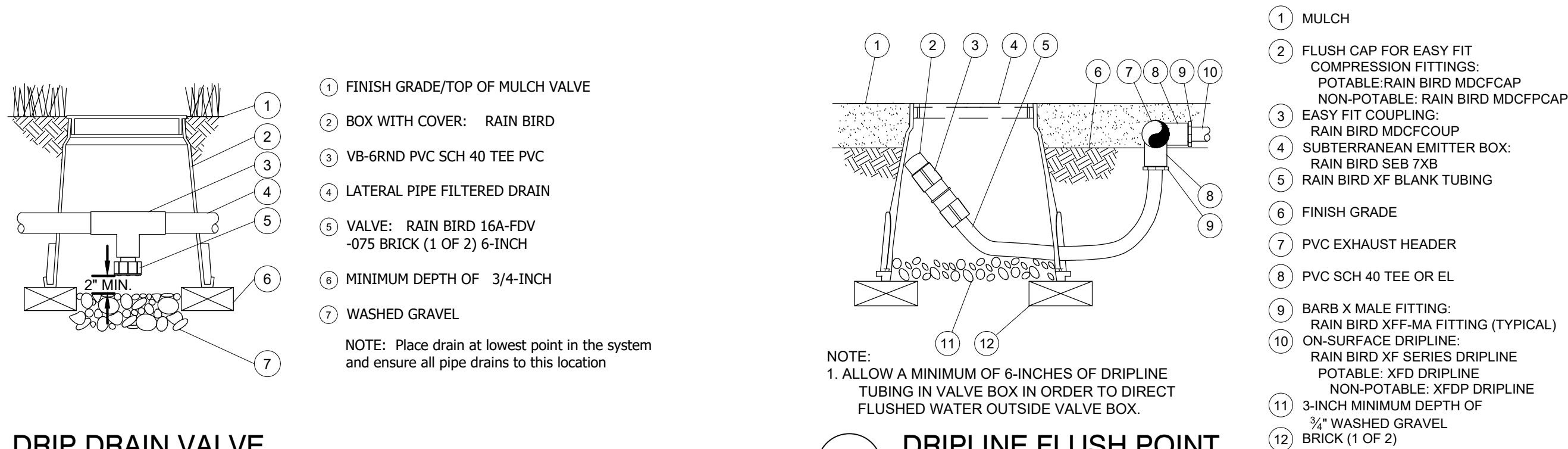


NOTES:
1. DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE INSTALLATION SPECIFICATIONS ON RAIN BIRD WEB SITE (WWW.RAINBIRD.COM) FOR SUGGESTED SPACING.
2. LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM SPACING SHOWN IN THE ACCOMPANYING TABLE.
3. PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
4. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.
5. WHEN USING 17MM INSERT FITTINGS WITH DESIGN PRESSURE OVER 50PSI, IT IS RECOMMENDED THAT STAINLESS STEEL CLAMPS BE INSTALLED ON EACH FITTING.

Inlet Pressure psi	12" Spacing			18" Spacing			24" Spacing		
	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)
15	273	155	314	250	424	322			
20	318	169	353	294	508	368			
30	369	229	413	360	680	414			
40	395	255	465	402	852	474			
50	417	285	528	420	920	498			
60	460	290	595	455	980	514			

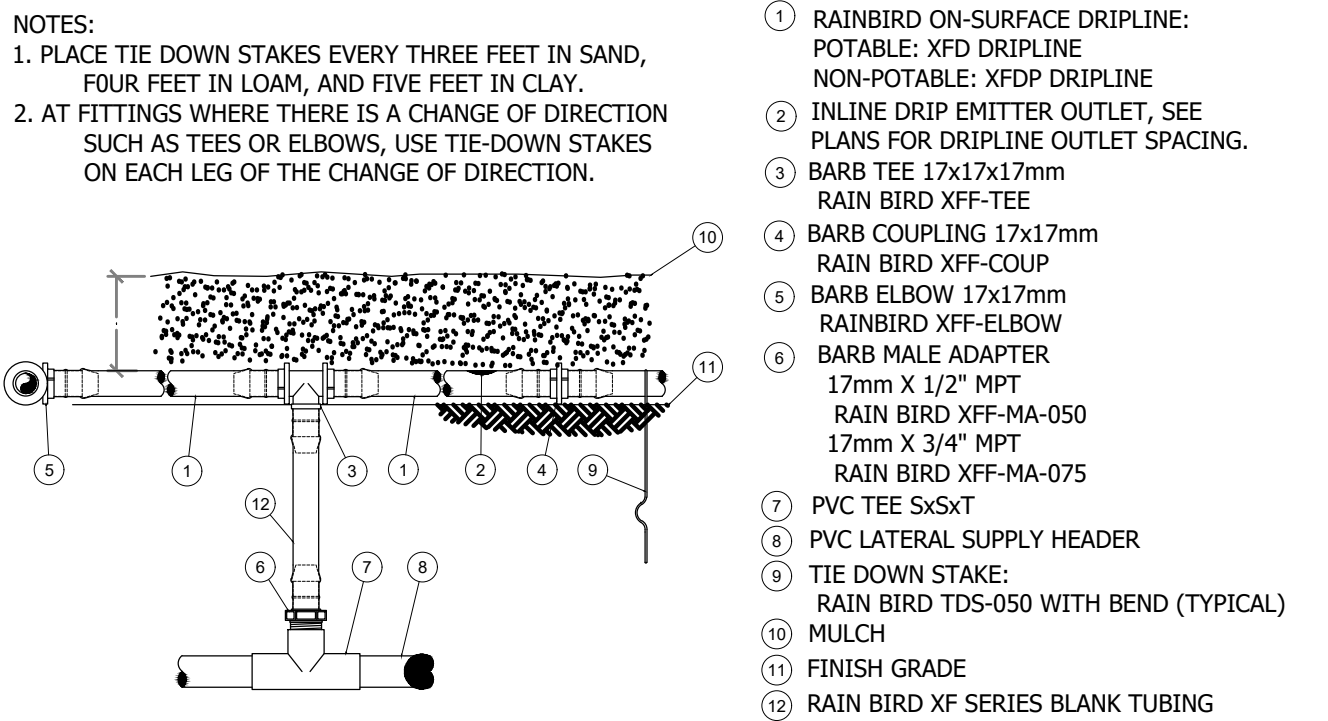
7 XFD ON-SURFACE DRIPLINE PARKING ISLAND WITH TREES

1/2" = 1'-0" P-TR-18



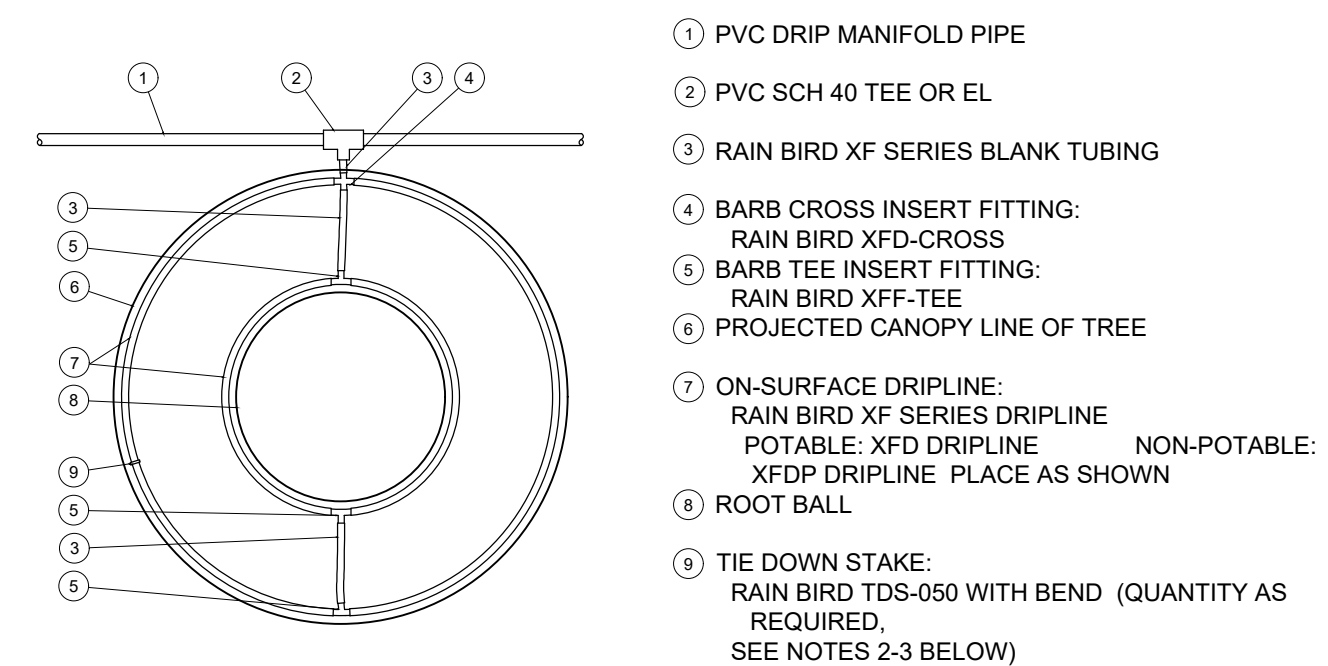
9 DRIP DRAIN VALVE

N.T.S. P-TR-22



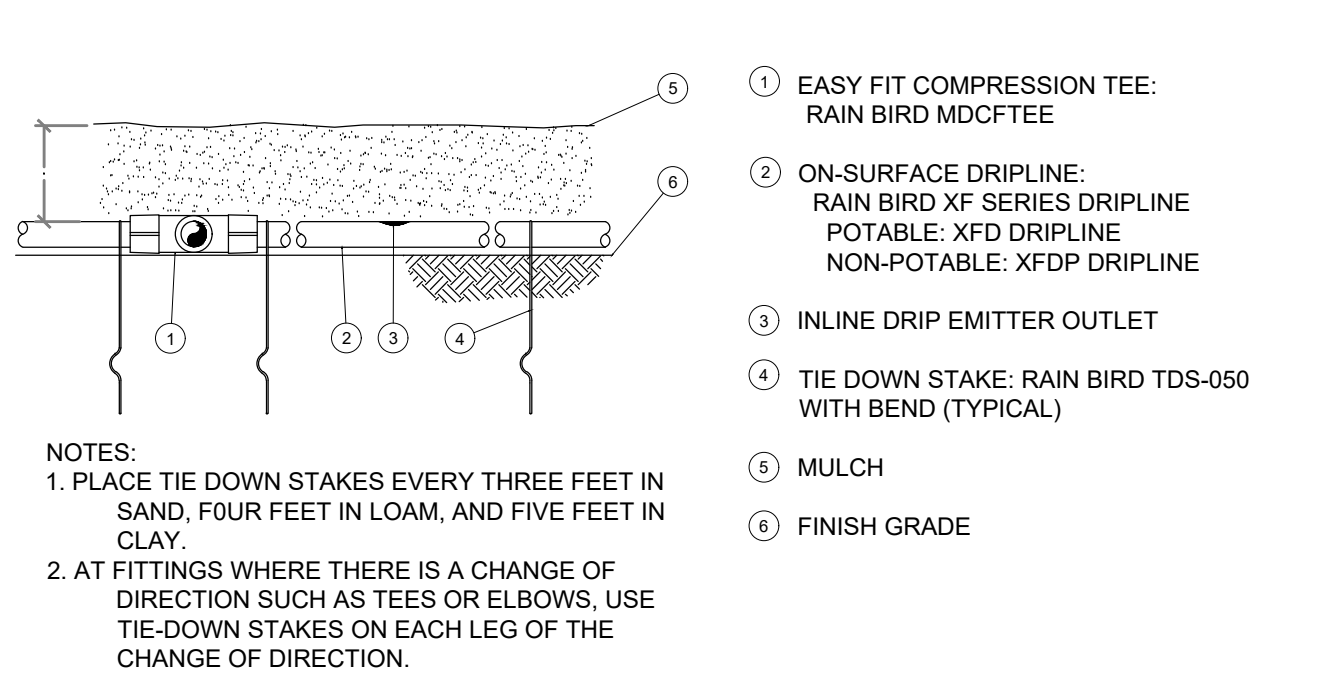
2 XFD ON-SURFACE DRIPLINE RISER ASSEMBLY

1/2" = 1'-0" P-CO-69



5 XFD ON-SURFACE DRIPLINE AROUND TREE

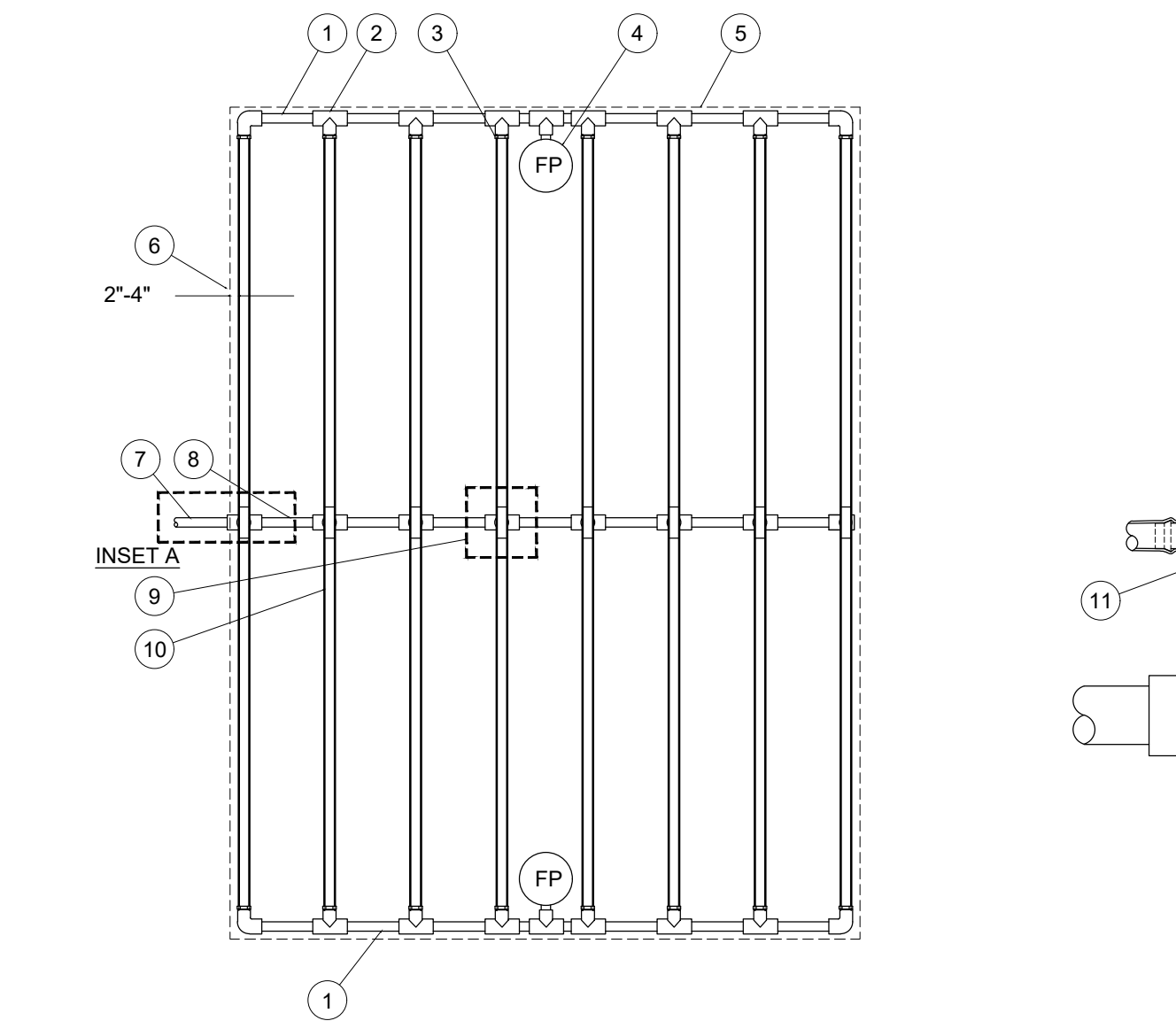
1/2" = 1'-0" P-TR-16



3 XFD ON-SURFACE DRIPLINE AT GRADE

N.T.S. P-TR-15

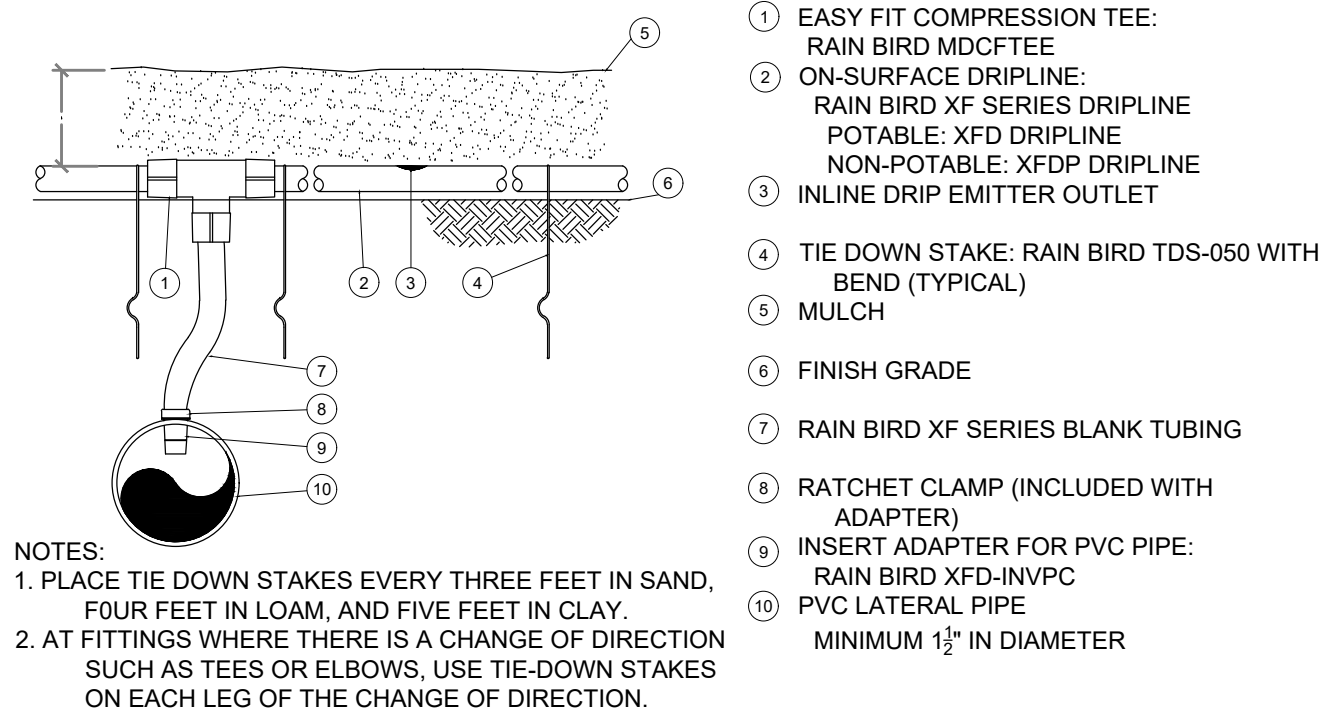
NOTES:
1. DISTANCE BETWEEN LATERAL RINGS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, AND TREE CANOPY. SEE INSTALLATION SPECIFICATIONS ON RAIN BIRD WEB SITE (WWW.RAINBIRD.COM) FOR SUGGESTED SPACING.
2. PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
3. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.



Inlet Pressure psi	12" Spacing			18" Spacing			24" Spacing		
	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)
15	273	155	314	250	424	322			
20	318	169	353	294	508	368			
30	369	229	413	360	680	414			
40	395	255	465	402	852	474			
50	417	285	528	420	920	498			
60	460	290	595	455	980	514			

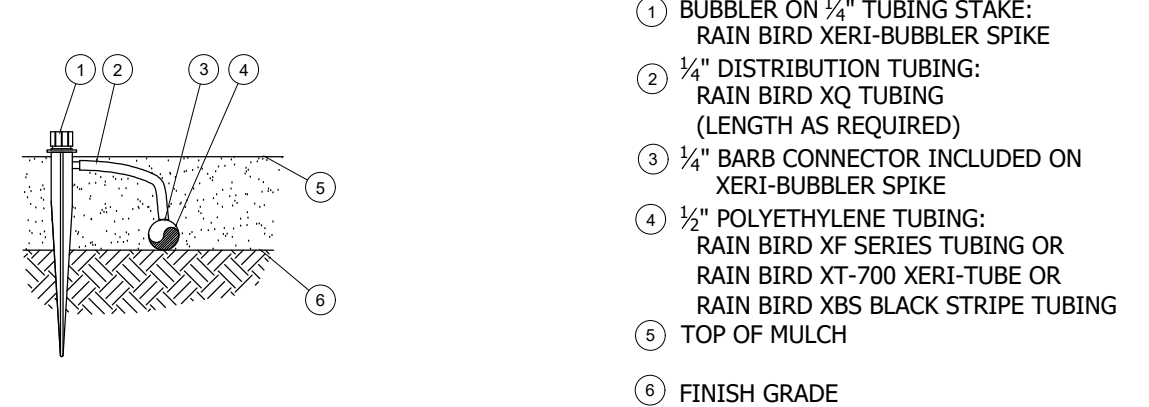
8 XFD ON-SURFACE DRIPLINE CENTER FEED LAYOUT

1/2" = 1'-0" P-TR-21



4 XFD ON-SURFACE DRIPLINE INSERT ADAPTER

N.T.S. P-TR-17

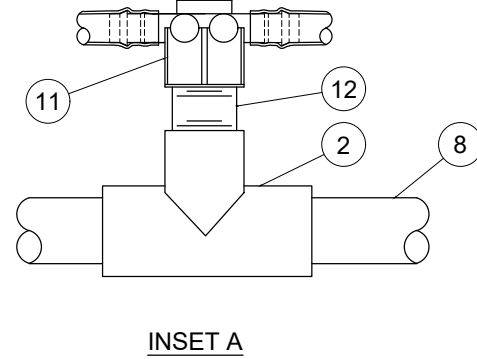


NOTES:
1. USE RAIN BIRD XERIMAN TOOL XM-TOOL TO INSERT BARB CONNECTOR DIRECTLY INTO 1/2-INCH POLYETHYLENE TUBING.
2. RAIN BIRD XERI-BUBBLER SPIKES AVAILABLE IN THE FOLLOWING MODELS:
SBX-180-SPYK - HALF CIRCLE - 5 STREAMS - 13 GPH MAX
SBX-360-SPYK - FULL CIRCLE - 8 STREAMS - 13 GPH MAX
UXB-360-SPYK - FULL CIRCLE - UMBRELLA - 35 GPH MAX

6 XERI-BUBBLER SPIKE ON 1/2" POLYETHYLENE TUBING

N.T.S. P-TR-19

- PVC EXHAUST HEADER
- PVC SCH 40 TEE OR EL (TYPICAL)
- BARB X MALE FITTING: RAIN BIRD XFF-MA FITTING (TYPICAL)
- FLUSH POINT (TYPICAL) SEE RAIN BIRD DETAIL "XFD FLUSH POINT"
- PERIMETER OF AREA
- PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA
- PVC SUPPLY PIPE FROM RAIN BIRD CONTROL ZONE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
- PVC SUPPLY MANIFOLD
- CONNECTION FROM SUPPLY MANIFOLD TO DRIPLINE (TYPICAL)- SEE INSET A
- ON-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE (TYPICAL) POTABLE: XFD DRIPLINE NON-POTABLE: XFD DRIPLINE
- BARB X FEMALE FITTING: RAIN BIRD XFD-TFA-075 FITTING
- 3/4" PVC NIPPLE, LENGTH AS NECESSARY



Seal

Mary Katherine Magley
State of Florida Lic. No.: LA 0001375

REVISIONS		
REVISION NUMBER	REVISION DESCRIPTION	REVISION DATE
1	CITY COMMENTS	02/20/2024
2	CITY COMMENTS	05/21/2024

ISSUED	
FEBRUARY 17, 2023 DATE: FEBRUARY 20, 2024 APRIL 30, 2024	CITY OF DELAND CITY OF DELAND CITY OF DELAND

SUMMIT PLACE
DeLand/DR Horton

IRRIGATION DETAILS

PROJECT NUMBER: MD#2303
DATE: JANUARY 17, 2023
DRAWN BY: MD
CHECKED BY: MKM

SCALE AS INDICATED

IR12