

CONSTRUCTION PLANS FOR SAN REMO SHORES WATER MAIN REPLACEMENT

MANATEE COUNTY, FLORIDA

MAY 2019

MANATEE COUNTY PROJECTS #6091970



PROJECT TEAM:

OWNER:
MANATEE COUNTY
1022 26TH AVE. E.
BRADENTON, FL 34208
CONTACT: ALEJANDRO GONZALEZ, P.E.
941-708-7450 ext. 7338

SURVEYOR:
HYATT SURVEY SERVICES, INC.
11007 8TH AVENUE EAST,
BRADENTON, FL 34212
CONTACT: RUSSELL P. HYATT, PSM
941-748-4693

ENGINEER:
KIMLEY-HORN AND ASSOCIATES, INC.
100 2ND AVENUE SOUTH, SUITE 300S
ST. PETERSBURG, FL 33701
CONTACT: W. WADE WOOD, P.E.
727-498-3853

UTILITY CONTACTS:

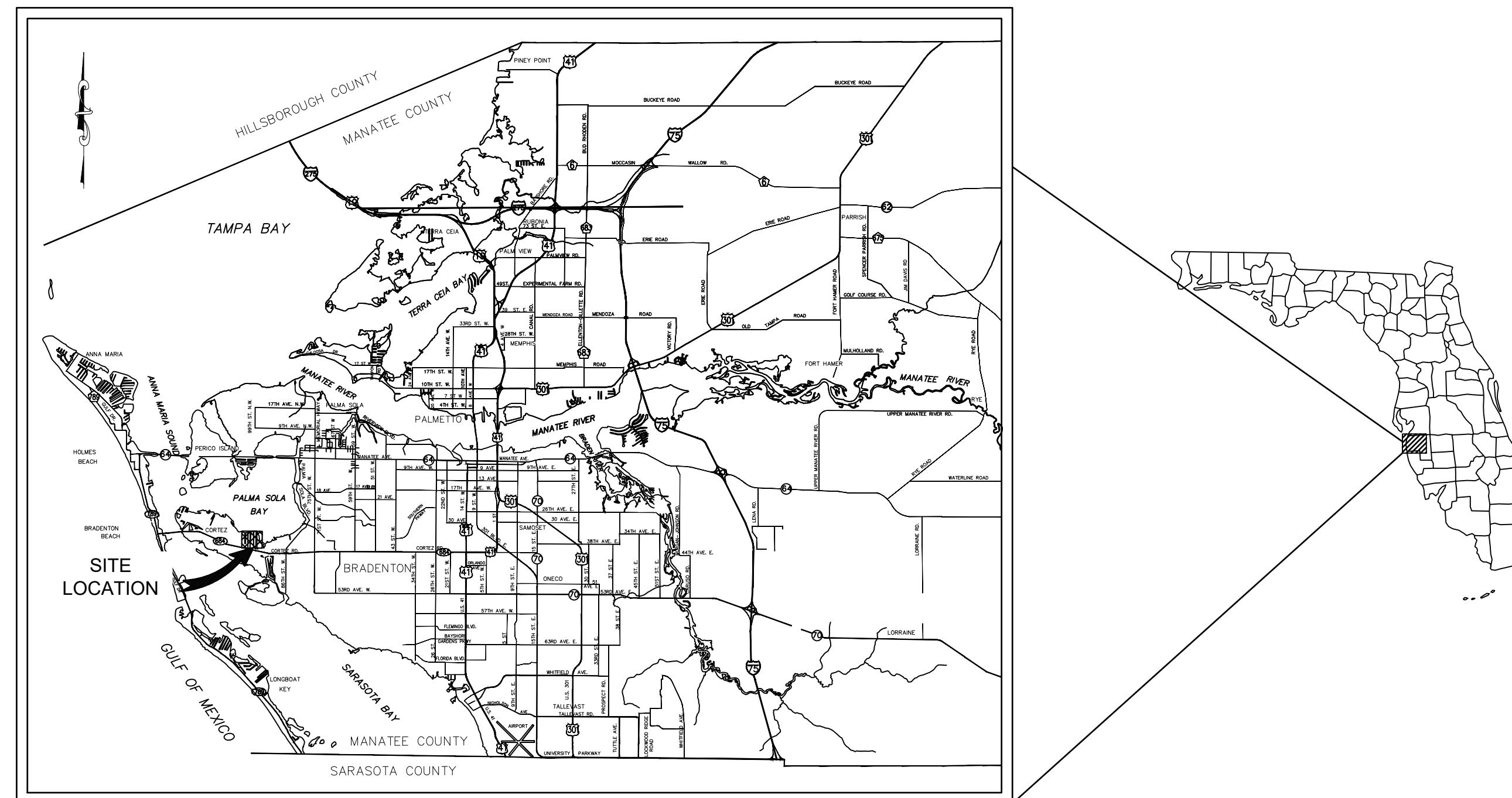
MANATEE COUNTY UTILITIES
KATHY MCMAHON
4520- 66TH STREET W
BRADENTON, FL 34210
941-792-8811 EXT. 5002

CHARTER COMMUNICATIONS
JIM CRUZAN
5413 S.R. 64 EAST
BRADENTON, FL 34208
727-329-2846

FRONTIER COMMUNICATIONS
TONNI CANNON
3712 W WALNUT ST
TAMPA, FL 33607
813-875-1014

MCI COMMUNICATIONS
DEAN BOYERS
400 INTERNATIONAL PKWY
RICHARDSON, TX 75081
469-886-4238

FLORIDA POWER & LIGHT
JOEL BRAY
4215 UP THE GROVE LANE
WEST PALM BEACH, FL. 33407
386-586-6403



PROJECT VICINITY MAP
N.T.S.

100% PLANS

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28-30	CONSTRUCTION DETAILS

PREPARED BY
Kimley»Horn

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PHONE (727) 547-2899
WWW.KIMLEY-HORN.COM CA 00000696

No.	REVISIONS	DATE	BY

THE SITE CONSTRUCTION STAKEOUT SHALL BE PERFORMED UNDER THE DIRECTION OF A FLORIDA REGISTERED SURVEYOR. AUTOCAD FILES WILL BE FURNISHED TO AID IN THE SITE CONSTRUCTION STAKEOUT. ANY DISCREPANCIES FOUND BETWEEN AUTOCAD FILES AND SITE CONSTRUCTION PLANS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR CLARIFICATION PRIOR TO THAT STAKEOUT.

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DATE May, 2019	KHA PROJECT NO. 148400025	SHEET NUMBER 1
W. WADE WOOD, P.E. FLORIDA LICENSE NUMBER: 69051		
DATE:		

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GENERAL

- 1. ALL CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH THE PROJECT MANAGEMENT DIVISION. THE PROJECT MANAGER IS: ALEX GONZALEZ, P.E. AND CAN BE REACHED AT (941) 708-7450 X7338... 2. IF THE CONTRACTOR WANTS A SITE VISIT PRIOR TO BIDDING, THESE SHALL BE ARRANGED THROUGH THE COUNTY'S PURCHASING DIVISION... 3. ALL CONSTRUCTION ON THIS PROJECT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF MANATEE COUNTY UTILITY AND TRANSPORTATION STANDARDS AND/OR FDOT "STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION" UNLESS OTHERWISE INDICATED ON THE PLANS...

- 32. CONTRACTOR SHALL PROVIDE PROTECTIVE MATTING, FUEL CONTAINMENT AND ALL OTHER MATERIALS, EQUIPMENT AND LABOR TO PROTECT THE STAGING AREA DURING CONSTRUCTION... 33. CONTRACTOR SHALL, PRIOR TO BEGINNING CONSTRUCTION, SUBMIT A "FUELING SPILL PREVENTION PLAN" THAT SHALL CLEARLY INDICATE HOW FUEL SPILLS WILL BE PREVENTED WHEN FUELING BOTH WITHIN AND OUTSIDE OF THE STAGING AREA... RIGHT-OF-WAY... 34. ALL CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO WITHIN THE MANATEE COUNTY RIGHT-OF-WAY, OTHER PUBLIC RIGHT-OF-WAYS OR EASEMENTS SHOWN ON THE DRAWINGS...

- 63. ALL FITTINGS FOR PRESSURE CLASS-RATED PIPE SHALL BE RESTRAINED DUCTILE IRON. RESTRAINED LENGTHS OF PIPE SHALL ADHERE TO THE REQUIREMENTS AS SHOWN ON THE DETAIL SHEETS... 64. WHERE IT IS NECESSARY TO DEFLECT PIPE EITHER HORIZONTALLY OR VERTICALLY, PIPE DEFLECTION SHALL NOT EXCEED 75% OF THE MANUFACTURER'S MAXIMUM ALLOWABLE RECOMMENDED DEFLECTION... 65. ALL ROCKS OR STONES LARGER THAN SIX INCH DIAMETER SHALL BE REMOVED FROM THE BACKFILL MATERIAL... 66. ONLY MANATEE COUNTY UTILITY OPERATIONS STAFF ARE AUTHORIZED TO OPERATE VALVES AND PUMP STATIONS ON COUNTY OWNED AND MAINTAINED UTILITY SYSTEMS...

FOOT NOTES

- 1. ALL WORK PERFORMED WITHIN THE FDOT R/W SHALL CONFORM TO: 1. FDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION (2016) (A.K.A. STANDARD SPECS)... 2. FDOT STANDARD PLANS FOR ROAD CONSTRUCTION 2019, (A.K.A. STANDARD PLANS)... 3. FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY PLANS PREPARATION MANUAL, VOLUME 1, CHAPTERS 2 AND 25. (REVISED 2013)...

SURVEYOR NOTES

- 1. THE FOLLOWING NGS VERTICAL CONTROL MONUMENTS WERE RECOVERED AND UTILIZED FOR THE ELEVATIONS INDICATED HEREIN: "BROADVIEW PARK" NAVD 1988 ELEVATION 4.08' "BROWARDALE NAVD 1988 ELEVATION 4.83" A VALUE OF +0.99' SHOULD BE APPLIED TO ALL ELEVATIONS FOR A CONVERSION TO NGVD 1929... 2. THIS SURVEY IS REFERENCED TO A GRID PROJECTION OF THE FLORIDA STATE PLANE COORDINATE SYSTEM (WEST ZONE NAD 1983/2011 ADJUSTMENT)...

ABBREVIATIONS

Table with 2 columns: Abbreviation and Full Name. Examples include RJ - RESTRAINED JOINT, R/W - RIGHT-OF-WAY, HDD - HORIZONTAL DIRECTIONAL DRILL, RCP - REINFORCED CONCRETE PIPE, ARV - AIR RELEASE VALVE, HDPE - HIGH DENSITY POLYETHYLENE, POLY - POLYETHYLENE, PVC - POLYVINYL CHLORIDE, ST - STORM DRAIN, EX - EXISTING, BT - BURIED TELEPHONE, UC - UNDERGROUND CONDUIT, DBC - DIRECT BURIED CABLE, FOC - FIBER OPTIC CABLE, SS - SANITARY SEWER, FM - FORCE MAIN, WM - WATER MAIN, RW - RECLAIM WATER MAIN, ECP - ELLIPTICAL CONCRETE PIPE.

KIMLEY HORN LEGEND

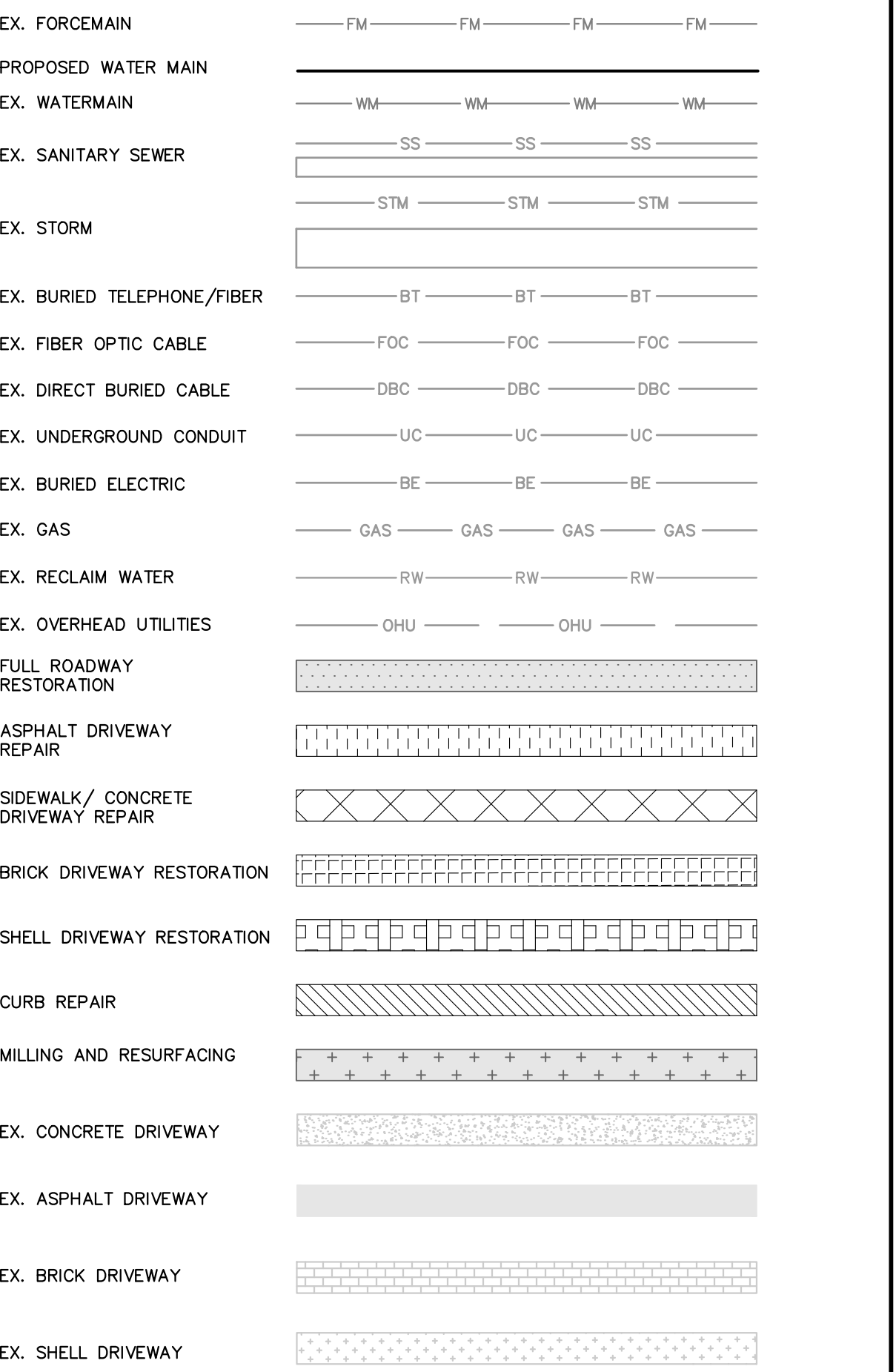


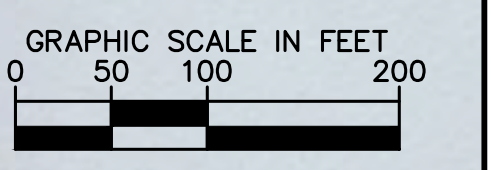
Table with 4 columns: No., REVISIONS, DATE, BY. This is a table for tracking revisions to the drawing.

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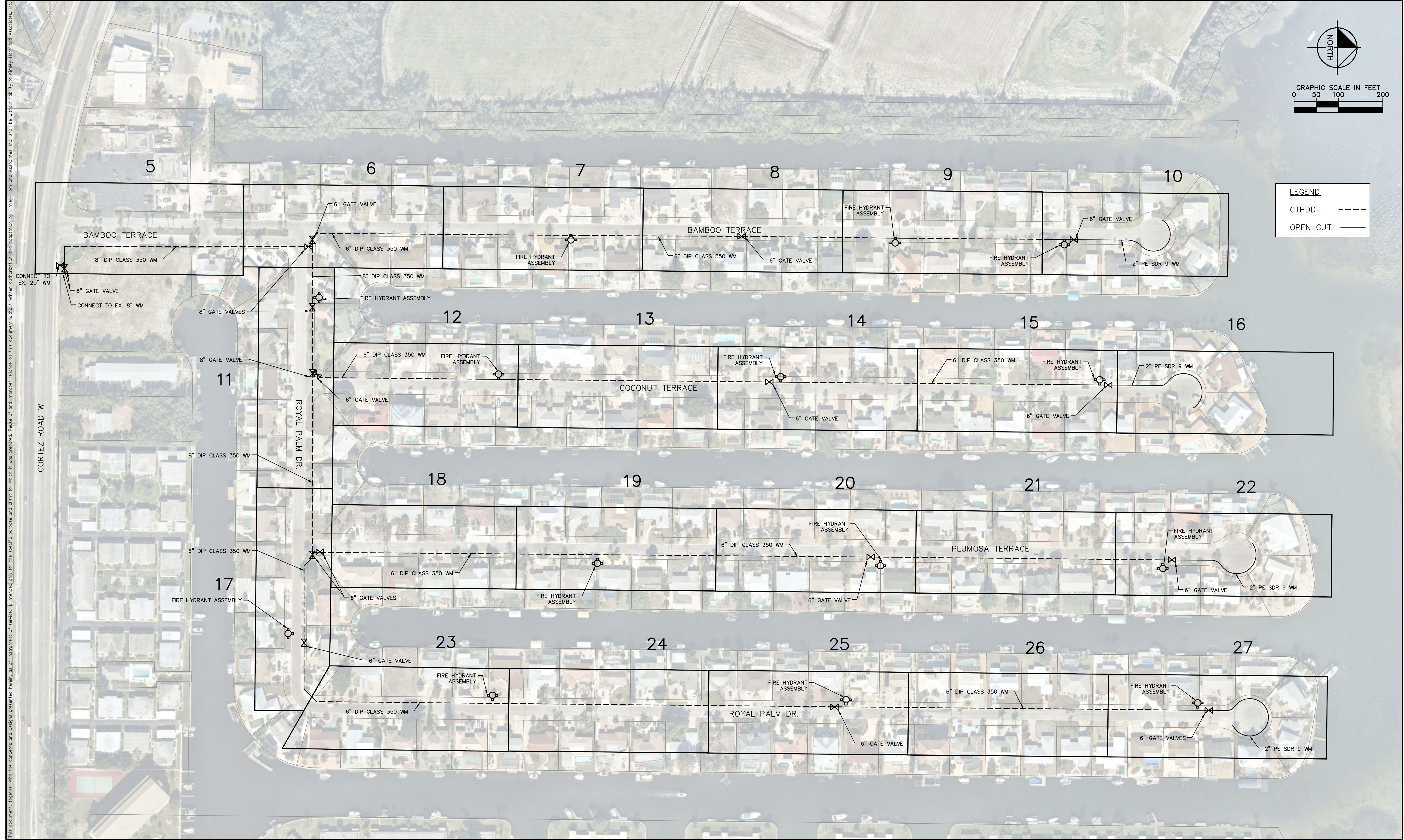
Table with 2 columns: Project/Date Information and Scale/Author Information. Includes KHA PROJECT 148400025, DATE 5/3/2019, SCALE AS SHOWN, DESIGNED BY WWW, DRAWN BY LMB, CHECKED BY SNR.

END OF SERVICE LIFE: FY-18 SAN REMO SHORES WM REPLACEMENT MANATEE COUNTY. Includes Manatee County Florida logo, licensed professional information for W. WADE WOOD, P.E. (FL LICENSE NUMBER 69051), and SHEET NUMBER 2.

Table with 2 columns: Project Information and Sheet Information. Includes LICENSED PROFESSIONAL W. WADE WOOD, P.E., FL LICENSE NUMBER 69051, SHEET NUMBER 2.



LEGEND	
CTHDD	----
OPEN CUT	——



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Manatee County
FLORIDA

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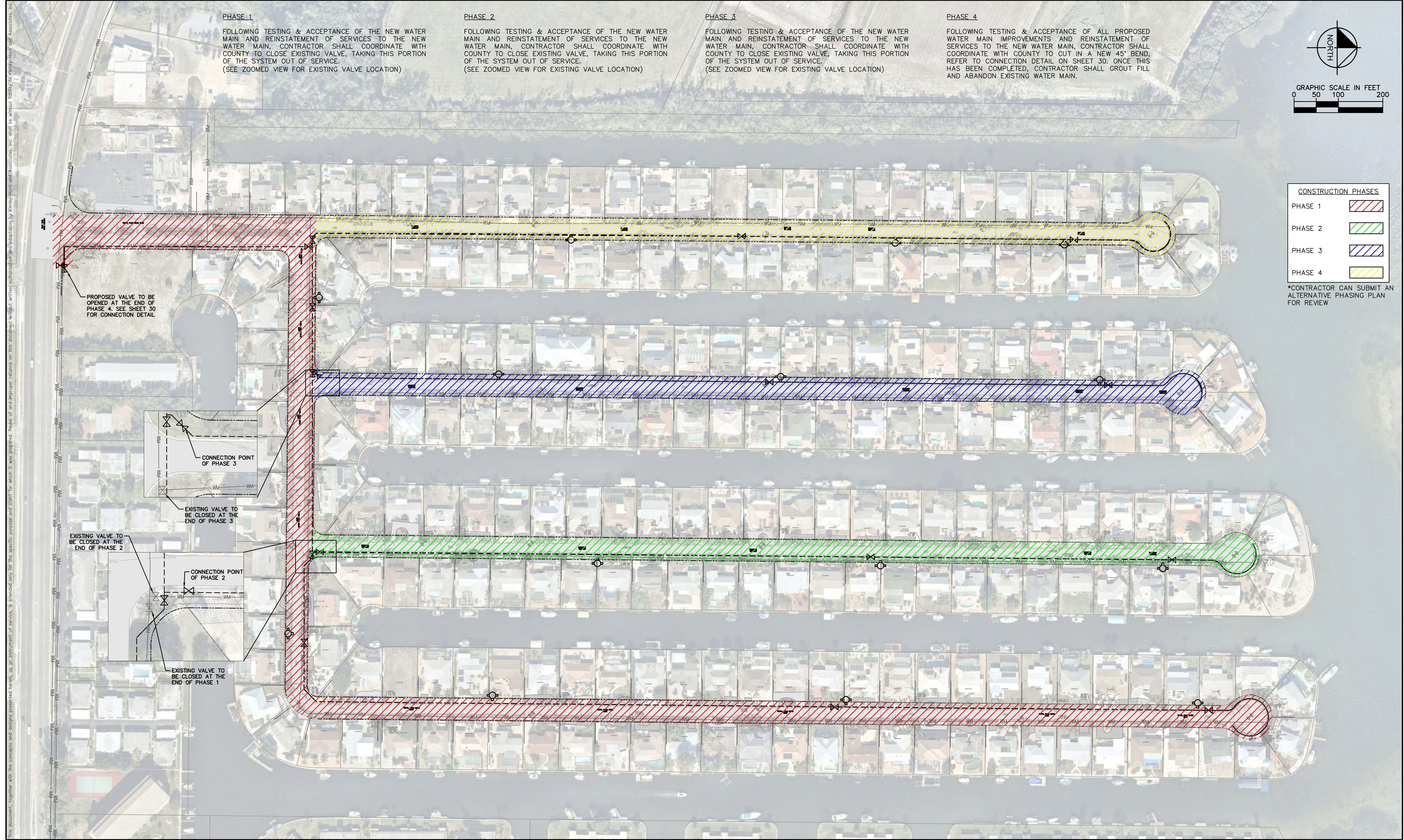
MANATEE COUNTY FL

LICENSED PROFESSIONAL
 W. WADE WOOD, P.E.
 FL LICENSE NUMBER
 69051

KEY SHEET

SHEET NUMBER
3

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PHASE 1

FOLLOWING TESTING & ACCEPTANCE OF THE NEW WATER MAIN AND REINSTATEMENT OF SERVICES TO THE NEW WATER MAIN, CONTRACTOR SHALL COORDINATE WITH COUNTY TO CLOSE EXISTING VALVE, TAKING THIS PORTION OF THE SYSTEM OUT OF SERVICE.
(SEE ZOOMED VIEW FOR EXISTING VALVE LOCATION)

PHASE 2

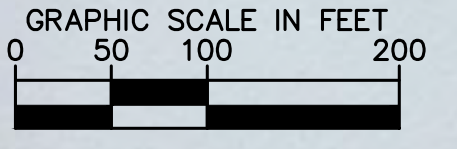
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(SEE ZOOMED VIEW FOR EXISTING VALVE LOCATION)

PHASE 3

FOLLOWING TESTING & ACCEPTANCE OF THE NEW WATER MAIN AND REINSTATEMENT OF SERVICES TO THE NEW WATER MAIN, CONTRACTOR SHALL COORDINATE WITH COUNTY TO CLOSE EXISTING VALVE, TAKING THIS PORTION OF THE SYSTEM OUT OF SERVICE.
(SEE ZOOMED VIEW FOR EXISTING VALVE LOCATION)

PHASE 4

FOLLOWING TESTING & ACCEPTANCE OF ALL PROPOSED WATER MAIN IMPROVEMENTS AND REINSTATEMENT OF SERVICES TO THE NEW WATER MAIN, CONTRACTOR SHALL COORDINATE WITH COUNTY TO CUT IN A NEW 45° BEND, REFER TO CONNECTION DETAIL ON SHEET 30. ONCE THIS HAS BEEN COMPLETED, CONTRACTOR SHALL GROUT FILL AND ABANDON EXISTING WATER MAIN.



CONSTRUCTION PHASES	
PHASE 1	
PHASE 2	
PHASE 3	
PHASE 4	

*CONTRACTOR CAN SUBMIT AN ALTERNATIVE PHASING PLAN FOR REVIEW

No.	REVISIONS	DATE	BY

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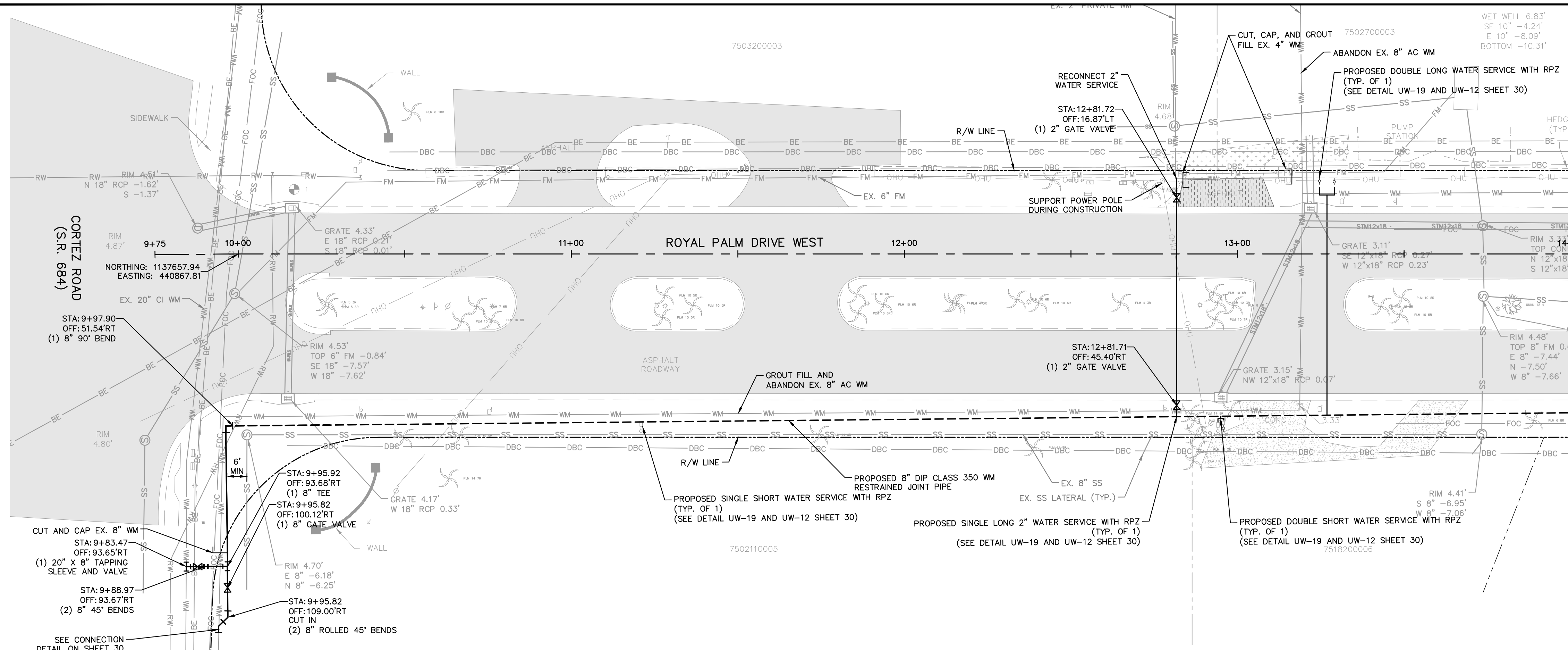
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PHASING PLAN

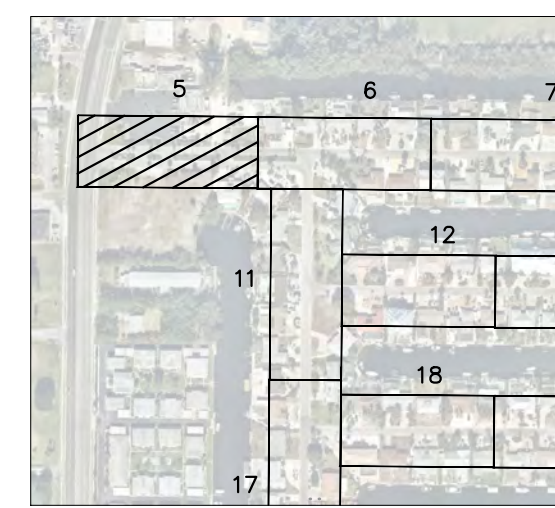
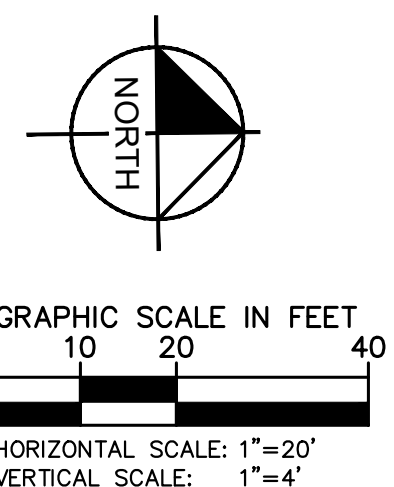
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MATCH LINE STA 14+00
SEE SHEET 6 FOR CONTINUATION



LEGEND

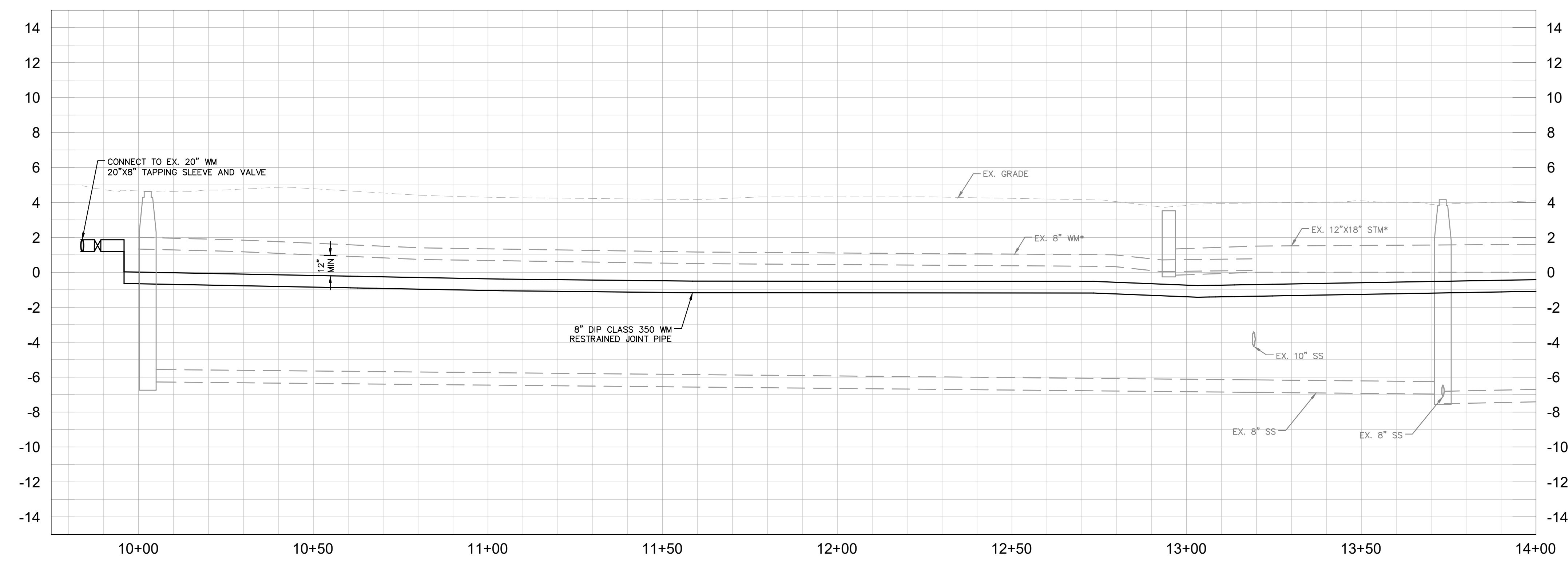
CTHDD	---
OPEN CUT	---
ASPHALT DRIVEWAY RESTORATION	[Hatched pattern]
SIDEWALK/CONCRETE DRIVEWAY RESTORATION	[Cross-hatched pattern]
BRICK DRIVEWAY RESTORATION	[Brick pattern]
SHELL DRIVEWAY RESTORATION	[Shell pattern]
FULL ROADWAY RESTORATION	[Dotted pattern]
MILLING AND RESURFACING	[+ + + pattern]
REMOVE & REPLACE CURB	[Diagonal hatched pattern]

- NOTES:**
- CONTRACTOR TO FOLLOW RESTRAINED LENGTHS SET IN RESTRAIN LENGTH DETAILS ON SHEET 29.
 - CONSTRUCTION DEWATERING SHALL BE CONDUCTED IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS INCLUDING BUT NOT LIMITED TO CHAPTERS 62-621.300 AND 62-620 OF THE FLORIDA ADMINISTRATIVE CODE (FAC).
 - CTHDD SITE HOLES (CALIBRATION BORE HOLES) TO BE PERFORMED IN SOFT SOILS WITH A 2' MIN CLEARANCE FROM CURB
 - REFER TO DETAIL UG-12 SHEET 28 FOR COUNTY ROADWAY REPAIR REQUIREMENTS

***NOTES:**
THE ELEVATIONS OF THE UTILITIES MARKED WITH AN ASTERISK (*) HAVE BEEN ASSUMED ON THE BASIS OF TYPICAL ANTICIPATED SOIL COVERAGE. CONTRACTOR SHALL NOT RELY ON THIS INFORMATION FOR CONSTRUCTION, BUT SHALL BE RESPONSIBLE FOR FIELD LOCATIONS (HORIZONTAL AND VERTICAL) OF ALL UTILITIES CROSSING THE PROPOSED FORCE MAIN. CONTRACTOR SHALL INCLUDE IN THE UNIT COST OF THE SUBJECT FORCE MAIN CONSTRUCTION, THE COST OF UTILITY ADJUSTMENTS NECESSARY TO ATTAIN DESIGN MINIMUM SEPARATION FOR UTILITIES CONFLICTING WITH THE CONSTRUCTION OF THE PROPOSED FORCE MAIN. INTERRUPTIONS OF ANY EXISTING UTILITY SERVICES SHALL BE NOTICED TO AFFECTED CUSTOMERS A MINIMUM OF 48 HOURS IN ADVANCE AND SHALL NOT EXCEED 4 HOURS IN DURATION.

WHERE CONCRETE REPAIRS ARE NECESSARY AND EXPANSION JOINTS ARE PRESENT, CONTRACTOR TO REMOVE AND REPLACE CONCRETE UP TO THE NEXT EXPANSION JOINT; OTHERWISE, REPLACE CONCRETE AS NECESSARY.

GROUNDWATER / DEWATERING NOTE:
THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED ON THIS PROJECT. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR THIS ISSUE. WHEN PERFORMING GRADING OPERATIONS DURING PERIODS OF WET WEATHER, PROVIDE ADEQUATE DEWATERING, DRAINAGE AND GROUND WATER MANAGEMENT TO CONTROL MOISTURE OF SOILS.



No.	REVISIONS	DATE	BY

Kimley & Horn

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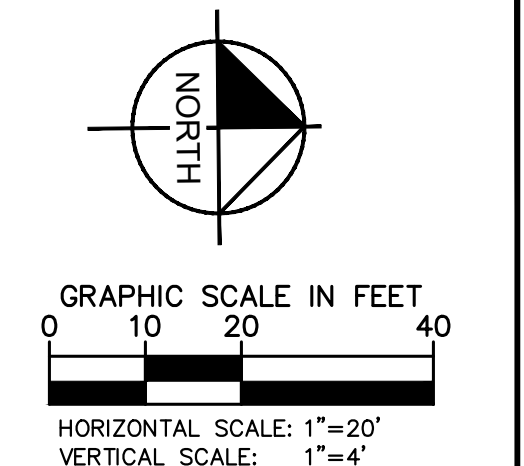
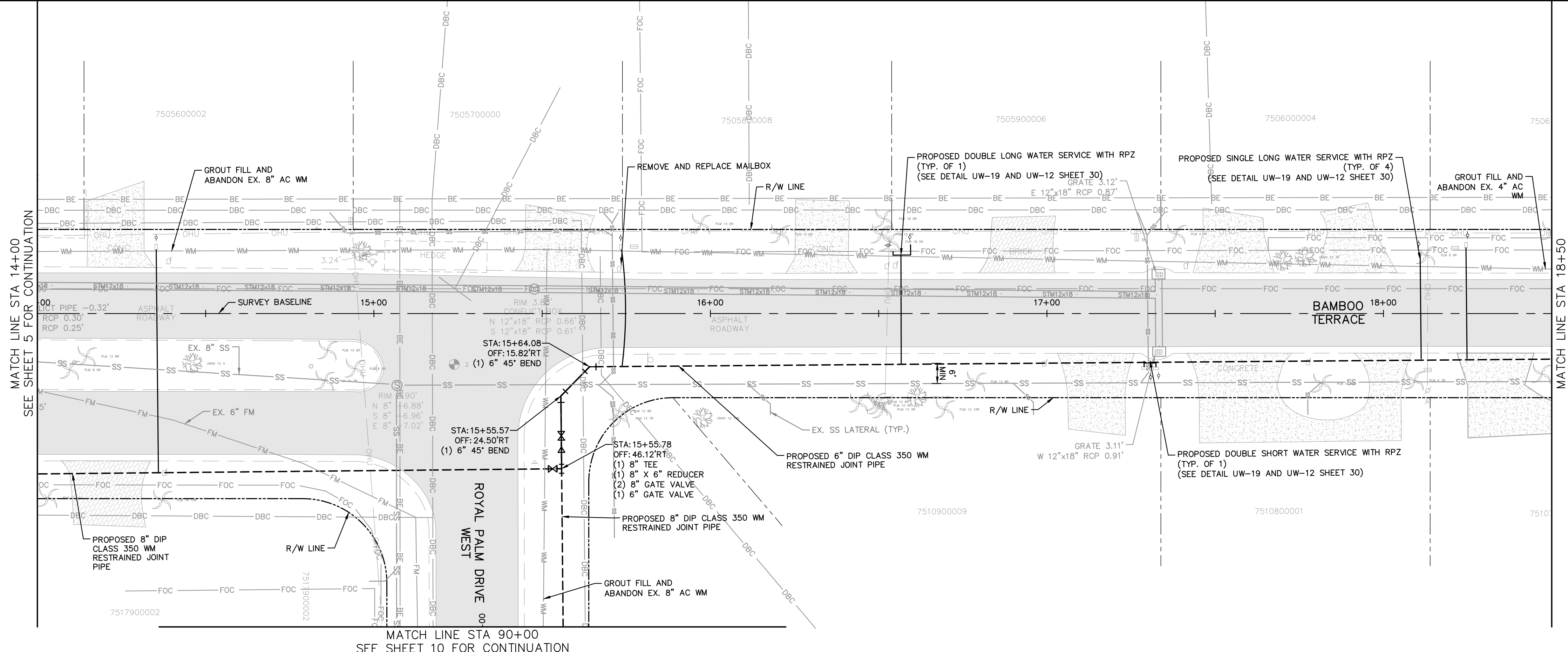
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PLAN & PROFILE
BAMBOO TERRACE

SHEET NUMBER
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LEGEND

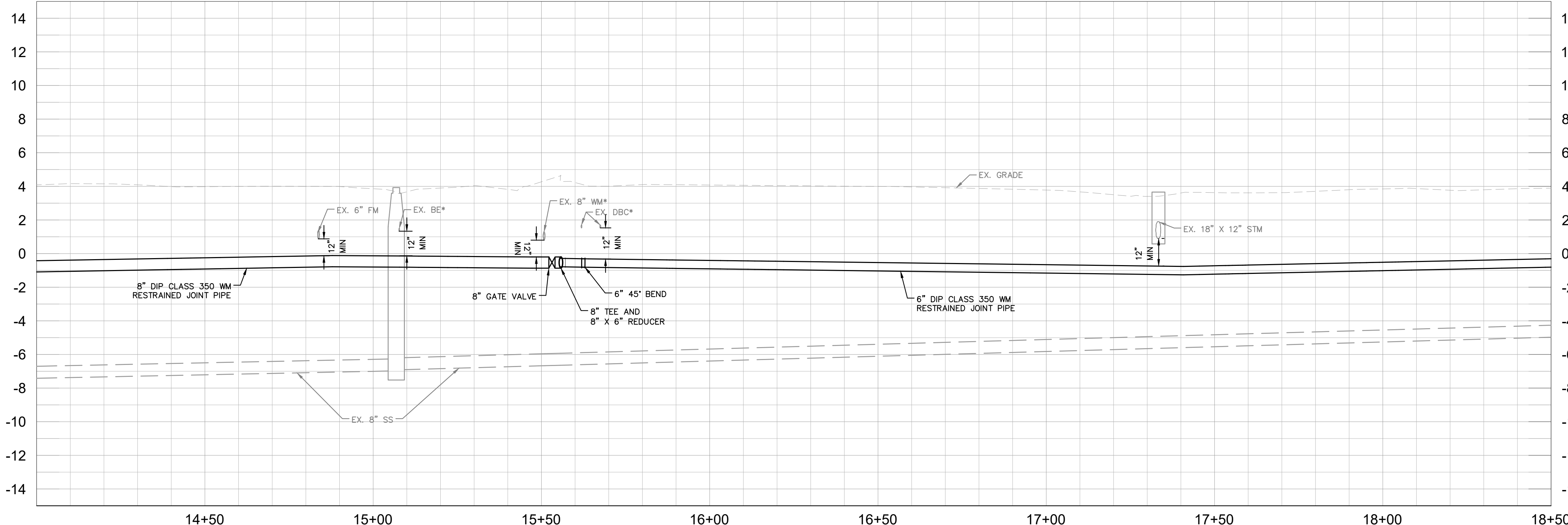
CTHDD	
OPEN CUT	
ASPHALT DRIVEWAY RESTORATION	
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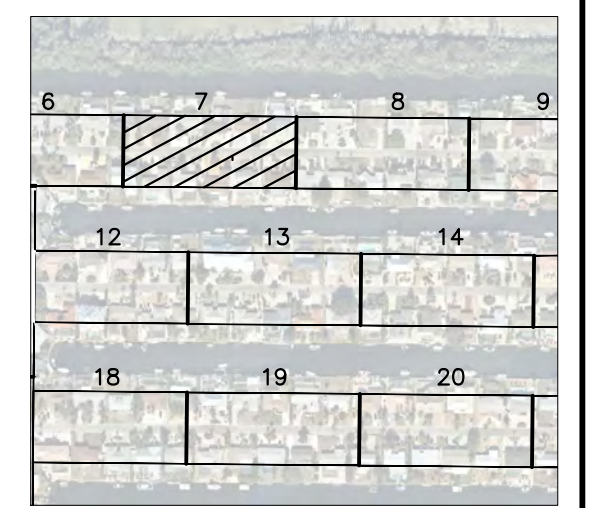
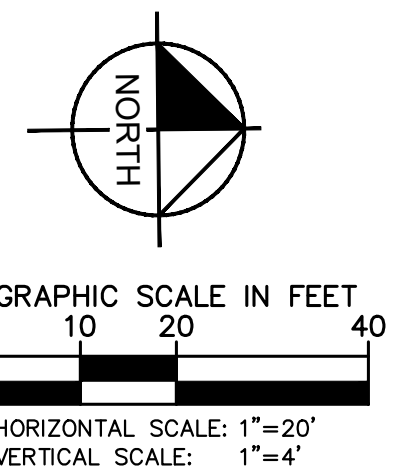
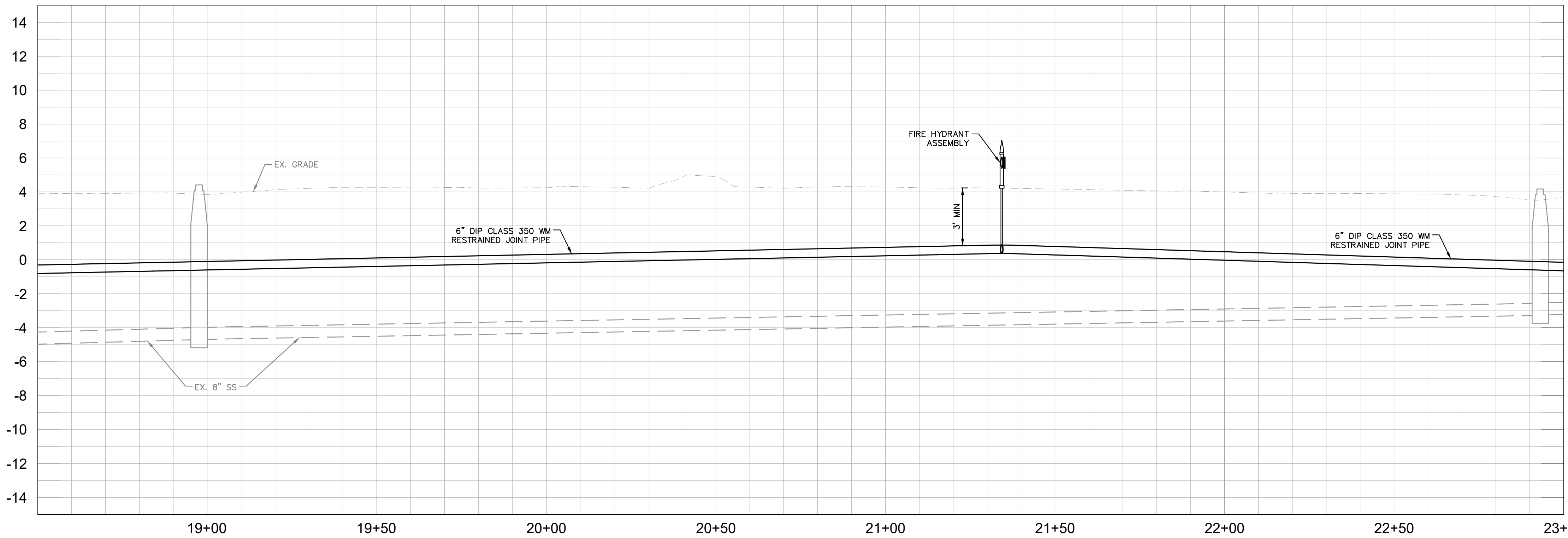
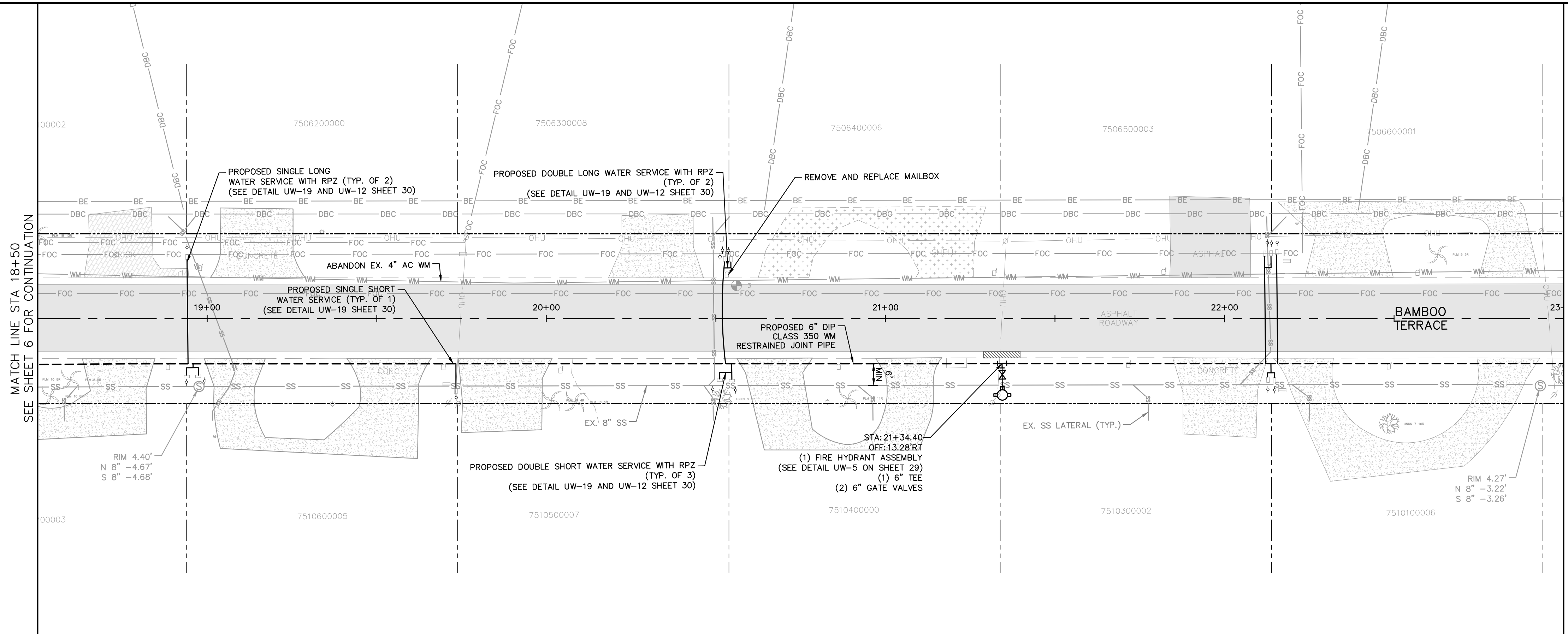
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- LEGEND**
- CTHDD
 - OPEN CUT
 - ASPHALT DRIVEWAY RESTORATION
 - SIDEWALK/CONCRETE DRIVEWAY RESTORATION
 - BRICK DRIVEWAY RESTORATION
 - SHELL DRIVEWAY RESTORATION
 - FULL ROADWAY RESTORATION
 - MILLING AND RESURFACING
 - REMOVE & REPLACE CURB

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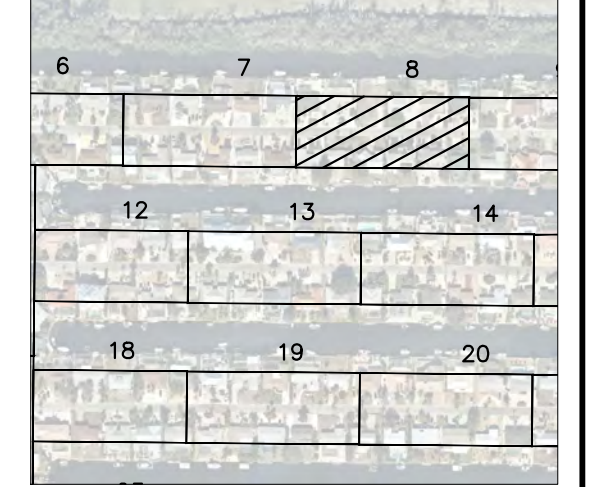
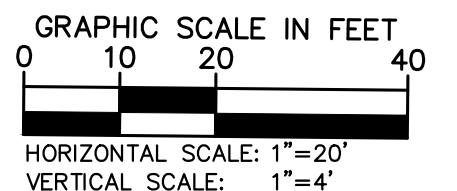
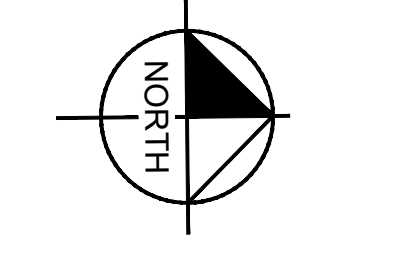
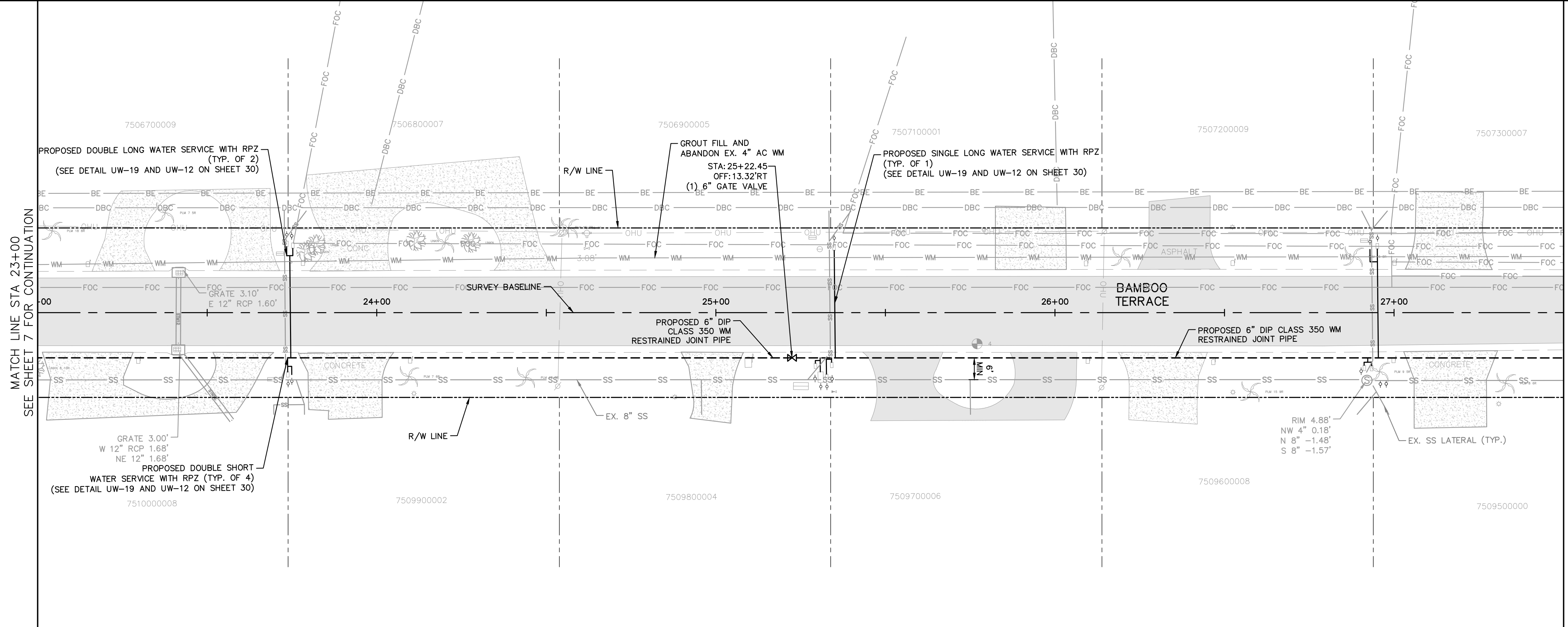
END OF SERVICE LIFE: FY-18
SAN REMO SHORES WM REPLACEMENT
MANATEE COUNTY

LICENSED PROFESSIONAL
W. WADE WOOD, P.E.
FL LICENSE NUMBER 69051

**PLAN & PROFILE
BAMBOO TERRACE**

SHEET NUMBER
7

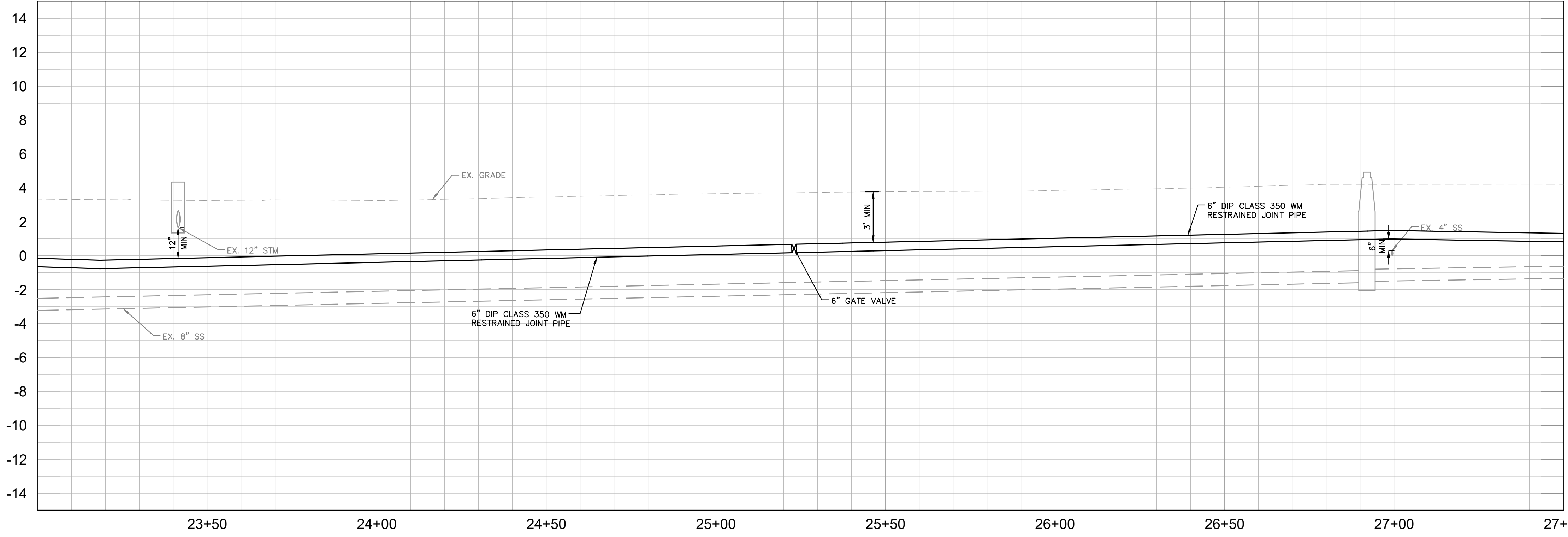
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No.	REVISIONS	DATE	BY

Kimley-Horn

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 100 2ND AVENUE SOUTH, SUITE 300S, ST. PETERSBURG, FL 33701
 PHONE: 727-547-3999
 WWW.KIMLEY-HORN.COM CA 00000696

KHA PROJECT
 148400025
 DATE
 5/3/2019
 SCALE AS SHOWN
 DESIGNED BY WWW
 DRAWN BY LMB
 CHECKED BY SNR

Manatee County Florida

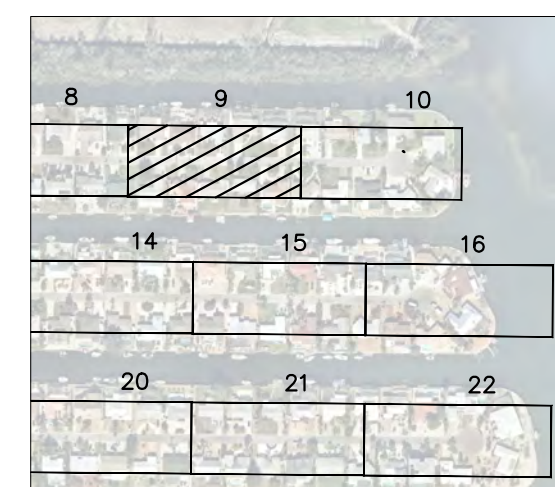
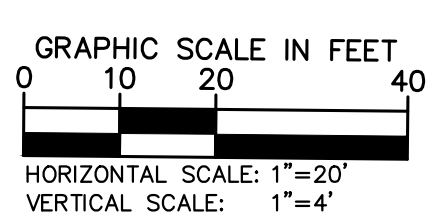
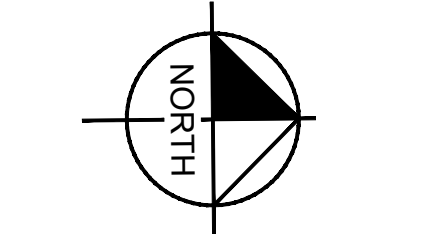
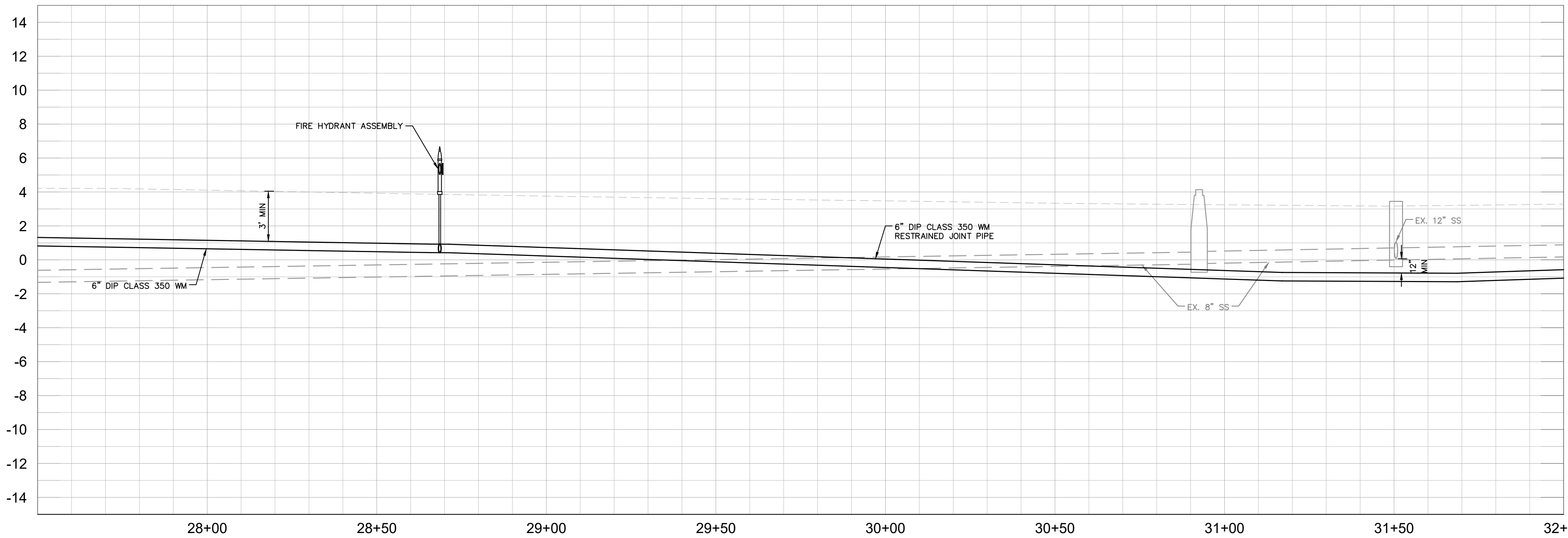
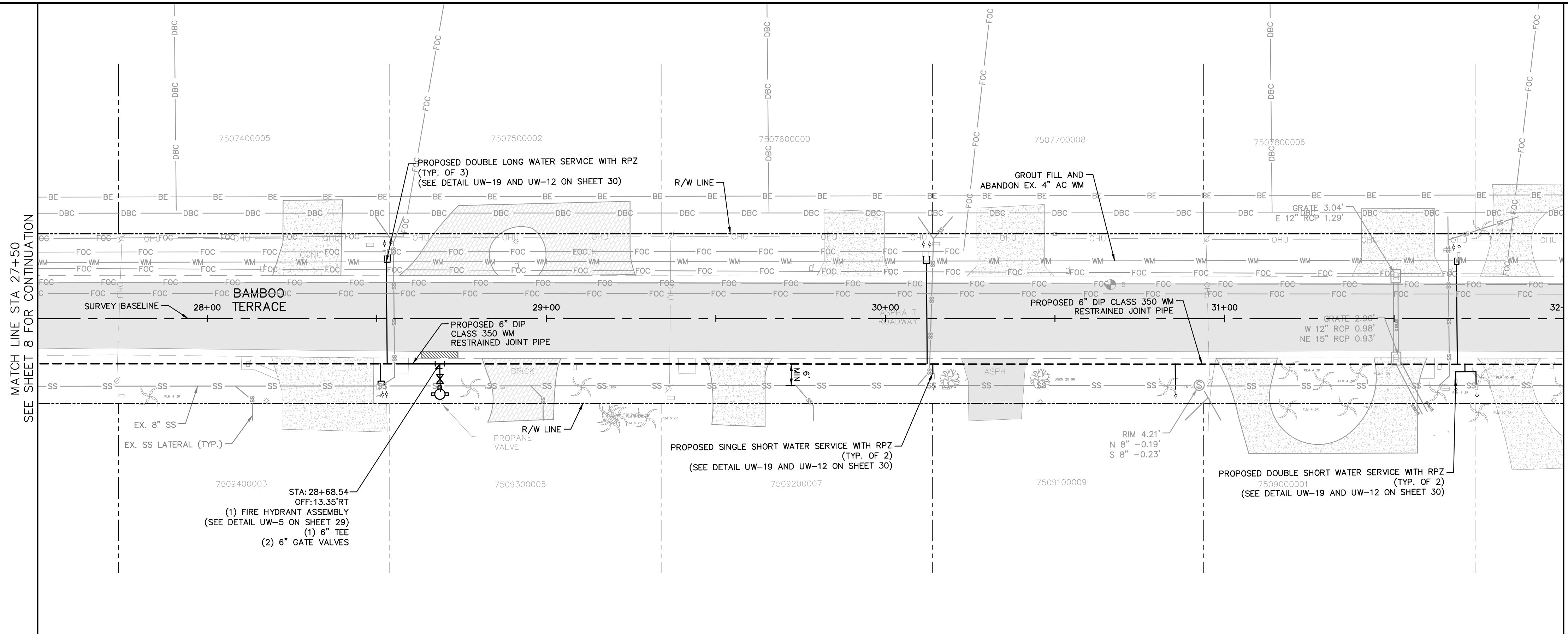
END OF SERVICE LIFE: FY-18
 SAN REMO SHORES WM REPLACEMENT
 MANATEE COUNTY

LICENSED PROFESSIONAL
 W. WADE WOOD, P.E.
 FL LICENSE NUMBER
 69051

**PLAN & PROFILE
 BAMBOO TERRACE**

SHEET NUMBER
8

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LEGEND

CTHDD	---
OPEN CUT	---
ASPHALT DRIVEWAY RESTORATION	[Pattern]
SIDEWALK/CONCRETE DRIVEWAY RESTORATION	[Pattern]
BRICK DRIVEWAY RESTORATION	[Pattern]
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KHA PROJECT 148400025
DATE 5/3/2019
SCALE AS SHOWN
DESIGNED BY WWW
DRAWN BY LMB
CHECKED BY SNR

Manatee County Florida

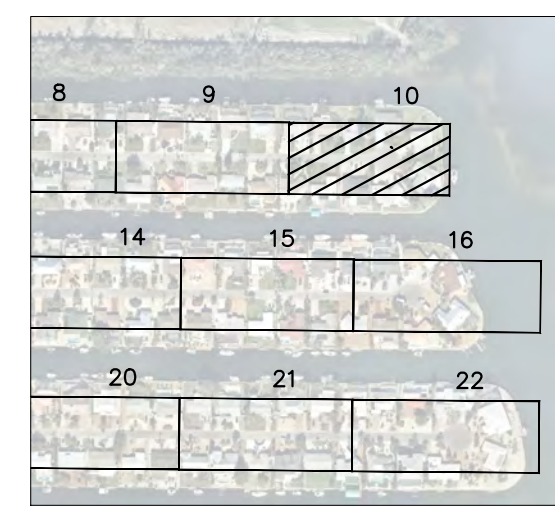
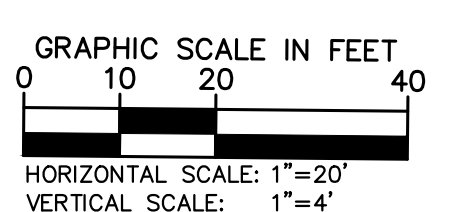
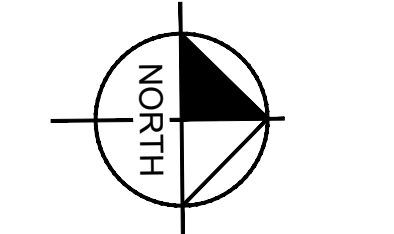
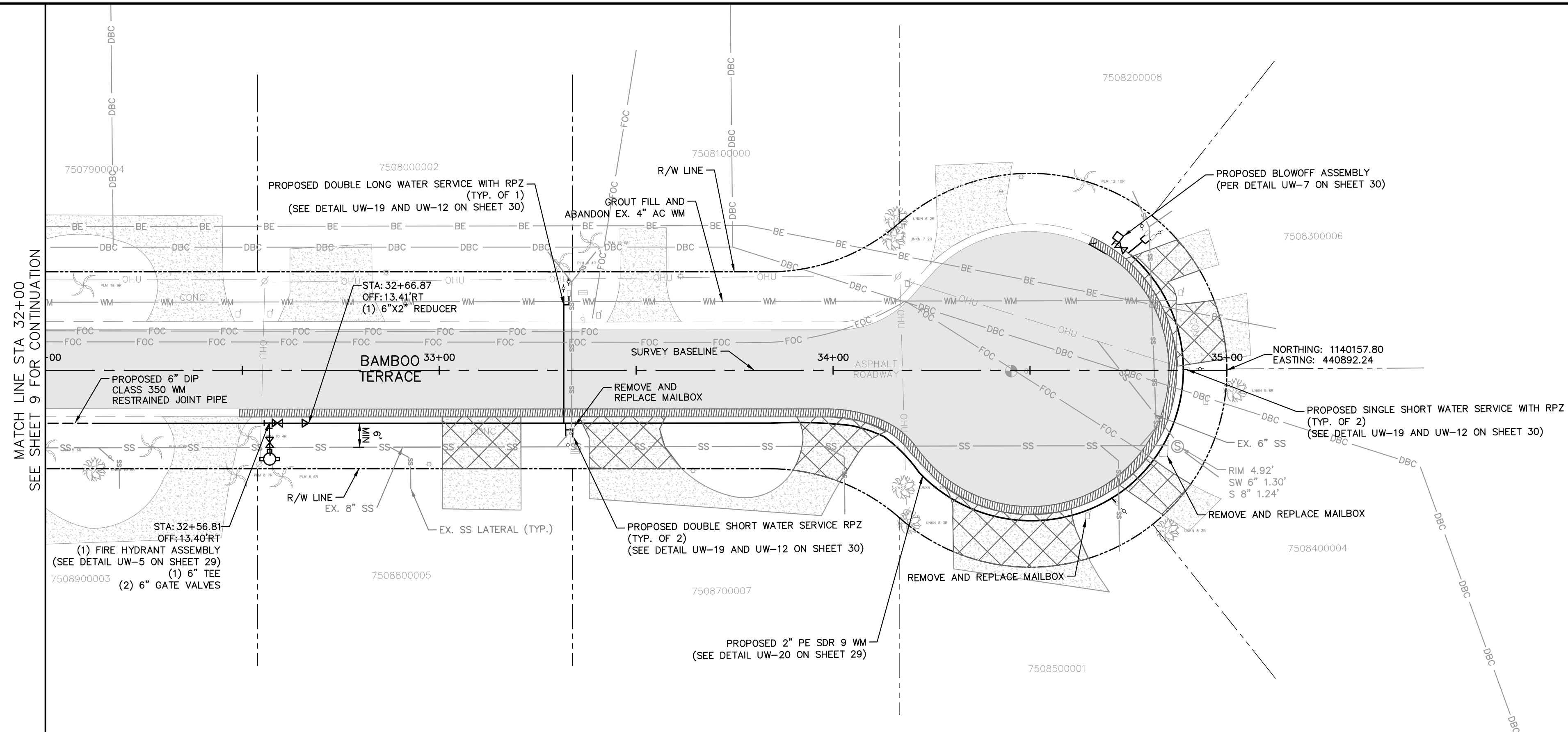
END OF SERVICE LIFE: FY-18
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MANATEE COUNTY

LICENSED PROFESSIONAL
W. WADE WOOD, P.E.
FL LICENSE NUMBER 69051

PLAN & PROFILE BAMBOO TERRACE

SHEET NUMBER
9

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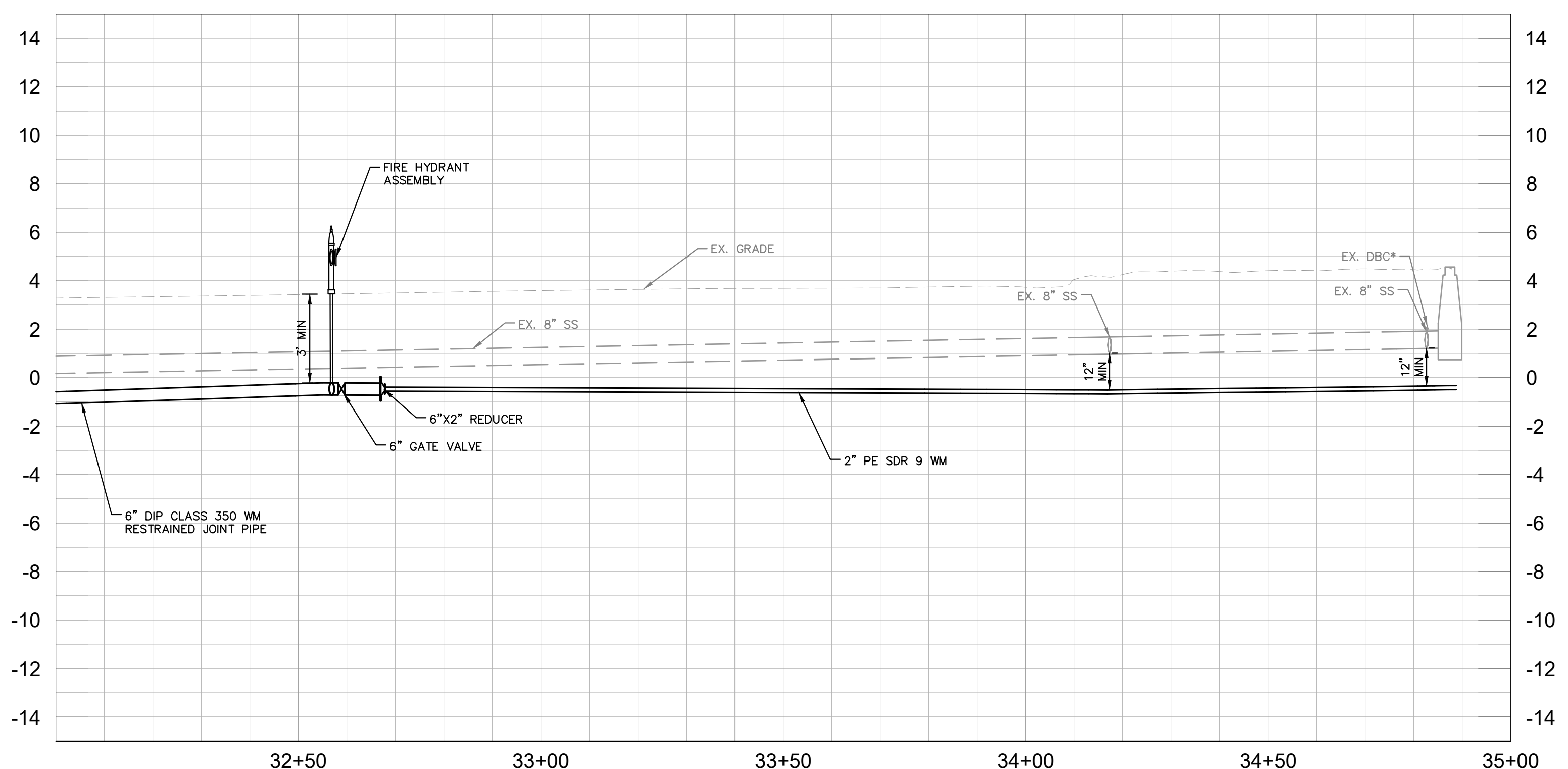


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Manatee County
FLORIDA

**END OF SERVICE LIFE: FY-18
SAN REMO SHORES WM REPLACEMENT**

MANATEE COUNTY

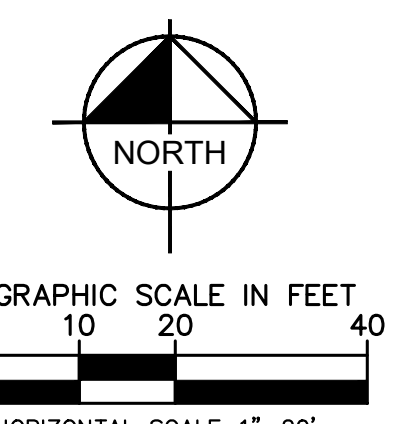
LICENSED PROFESSIONAL
W. WADE WOOD, P.E.
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**PLAN & PROFILE
BAMBOO TERRACE**

SHEET NUMBER
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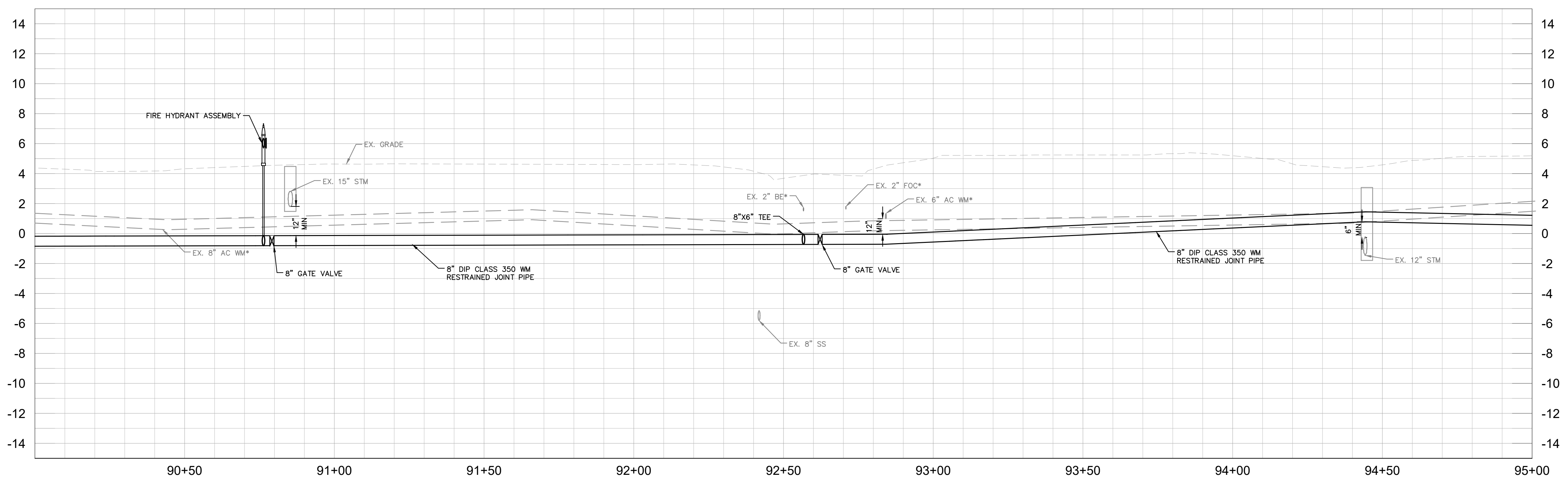
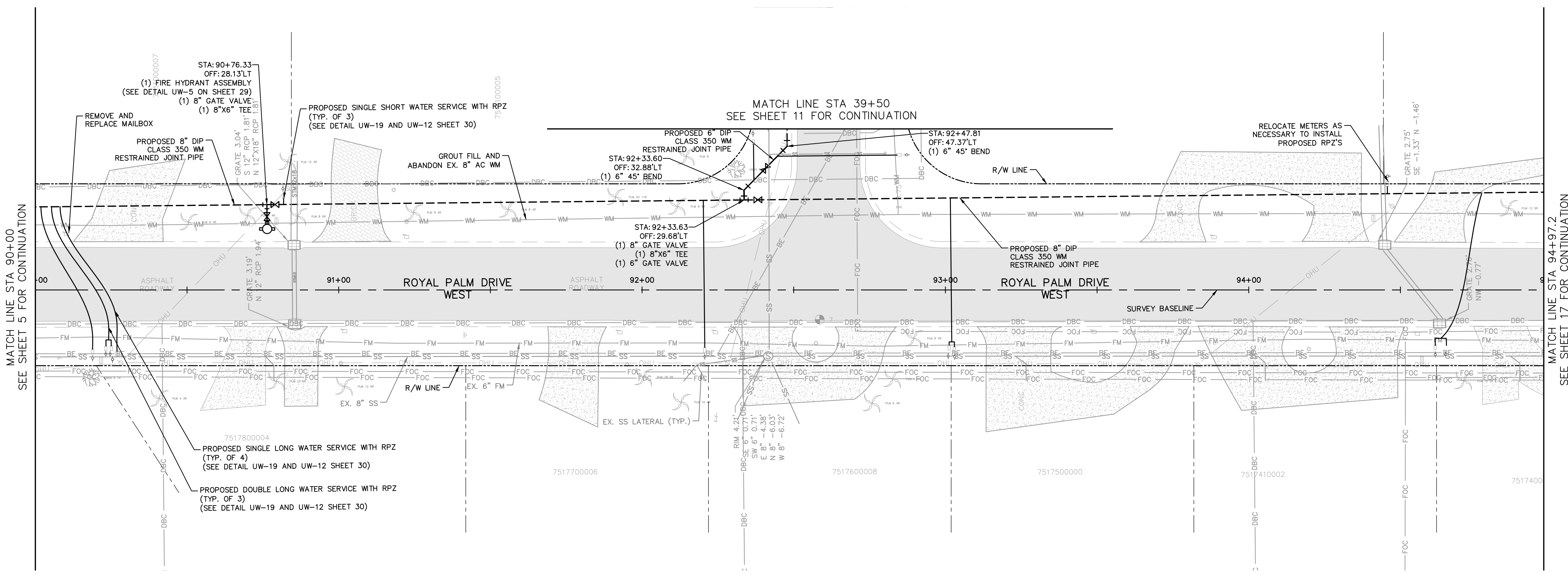


- LEGEND**
- CTHDD
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 - ASPHALT DRIVEWAY RESTORATION
 - SIDEWALK/CONCRETE DRIVEWAY RESTORATION
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Manatee County Florida

END OF SERVICE LIFE: FY-18
SAN REMO SHORES WM REPLACEMENT

MANATEE COUNTY

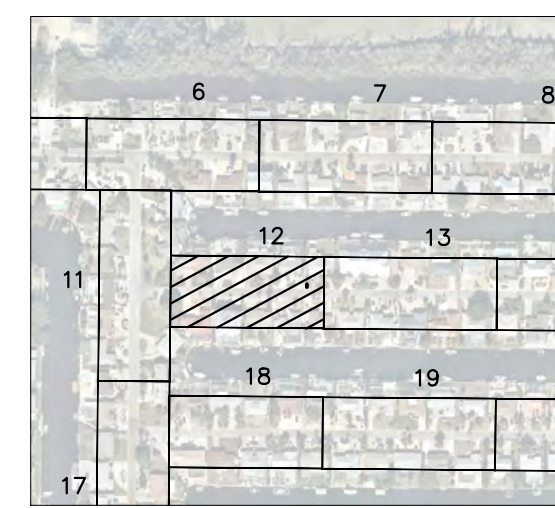
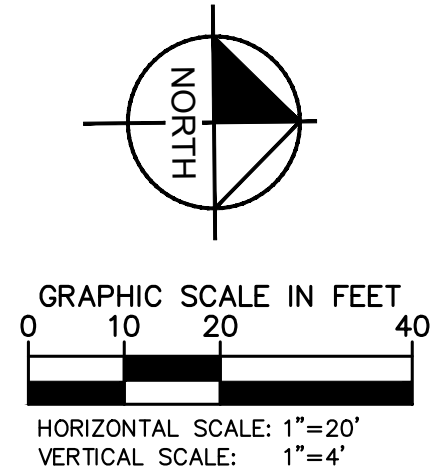
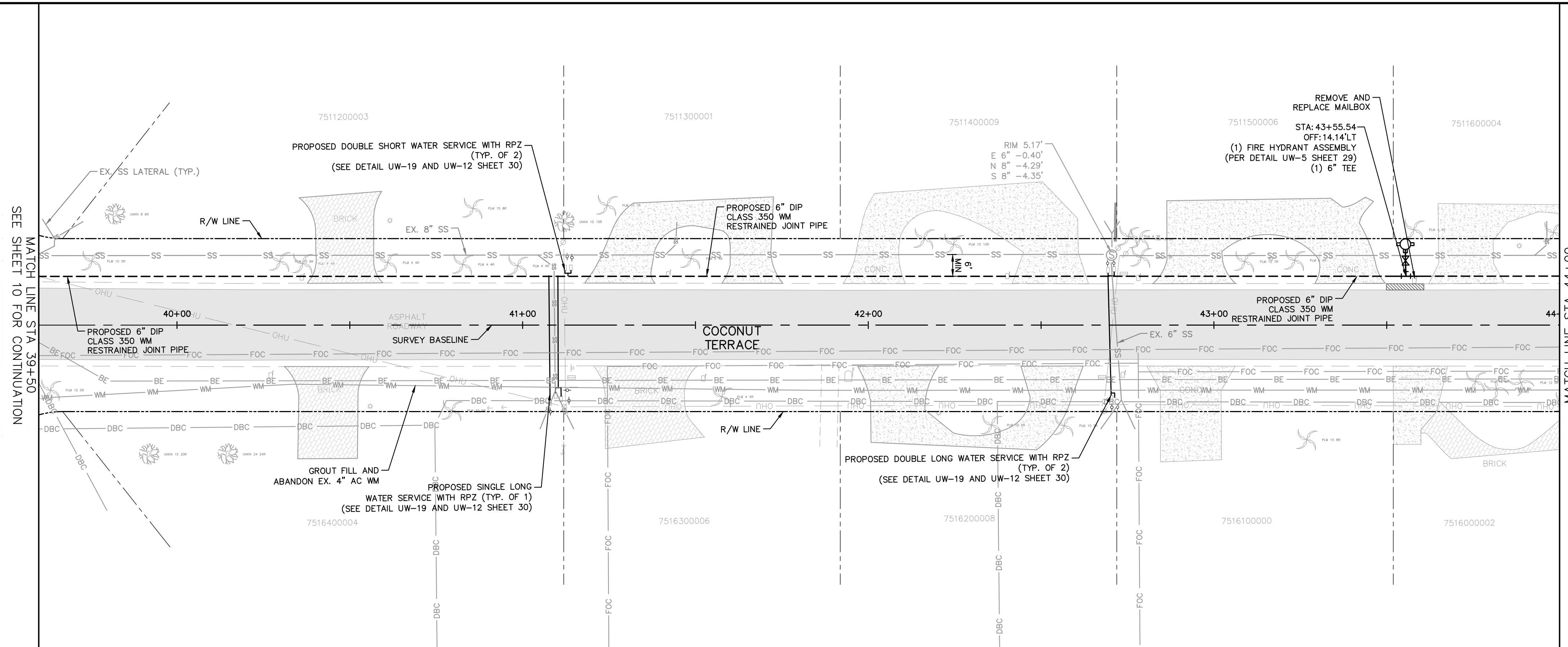
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PLAN & PROFILE ROYAL PALM DRIVE

FL DATE:

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11

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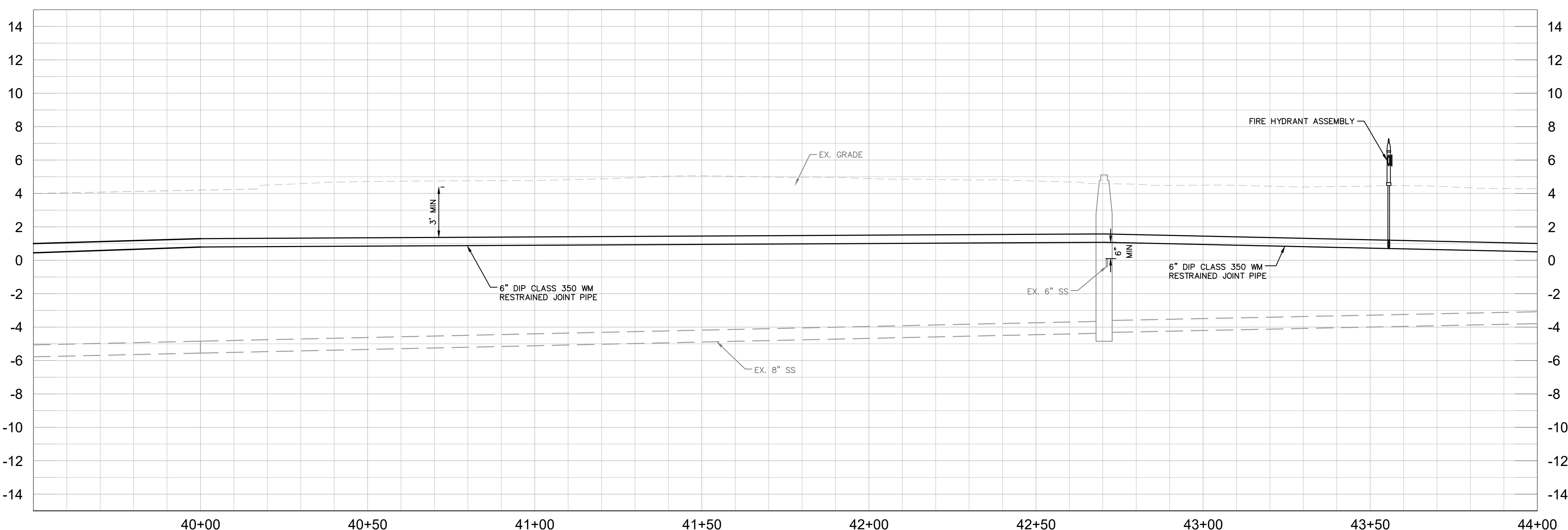
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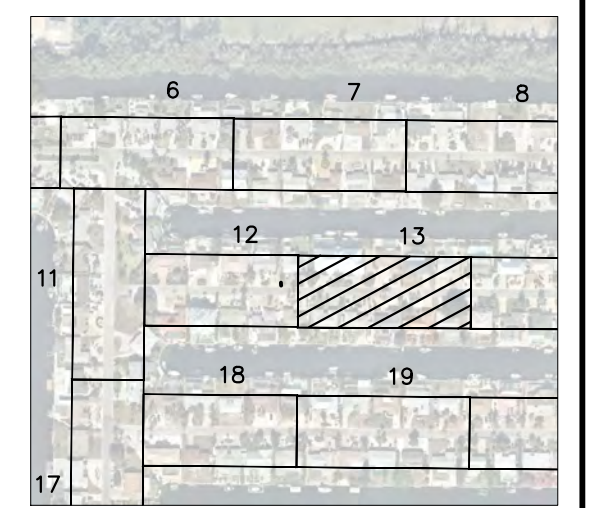
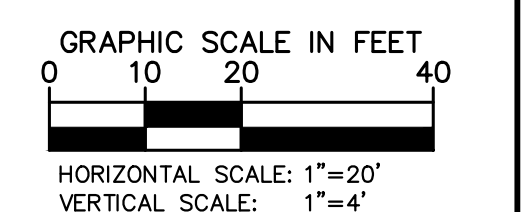
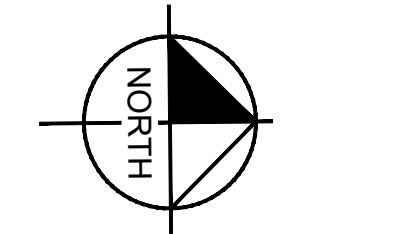
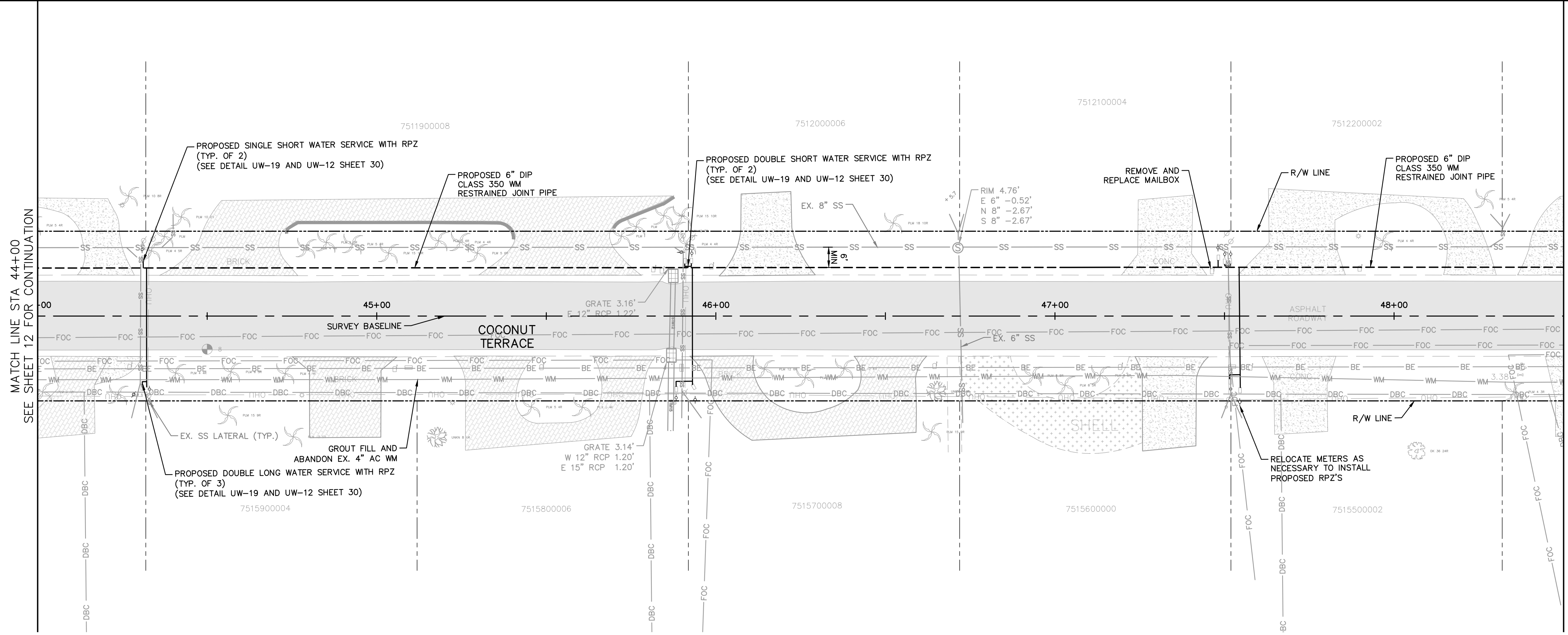
Manatee County
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 MANATEE COUNTY

LICENSED PROFESSIONAL	W. WADE WOOD, P.E.
FL LICENSE NUMBER	69051
FL DATE:	

**PLAN & PROFILE
 COCONUT TERRACE**

SHEET NUMBER	12
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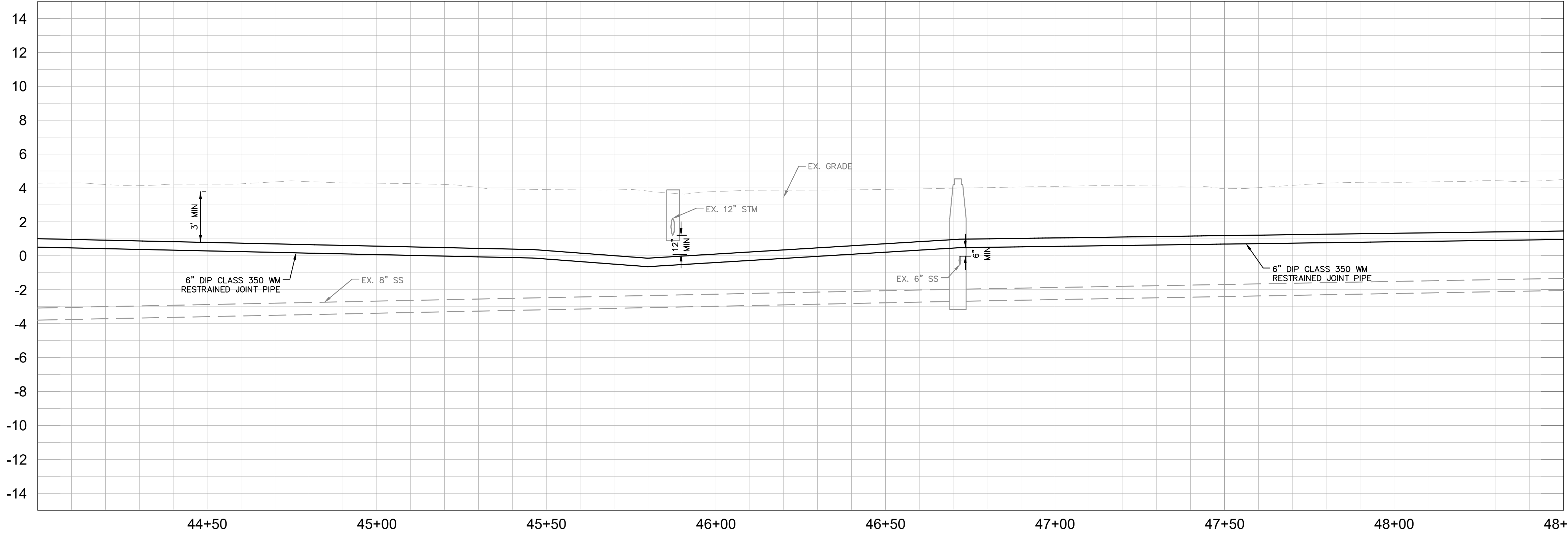
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FLORIDA

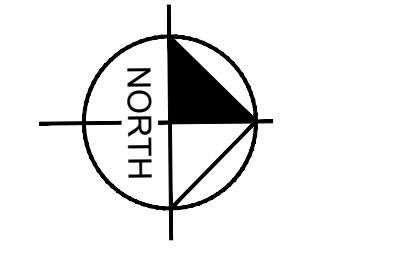
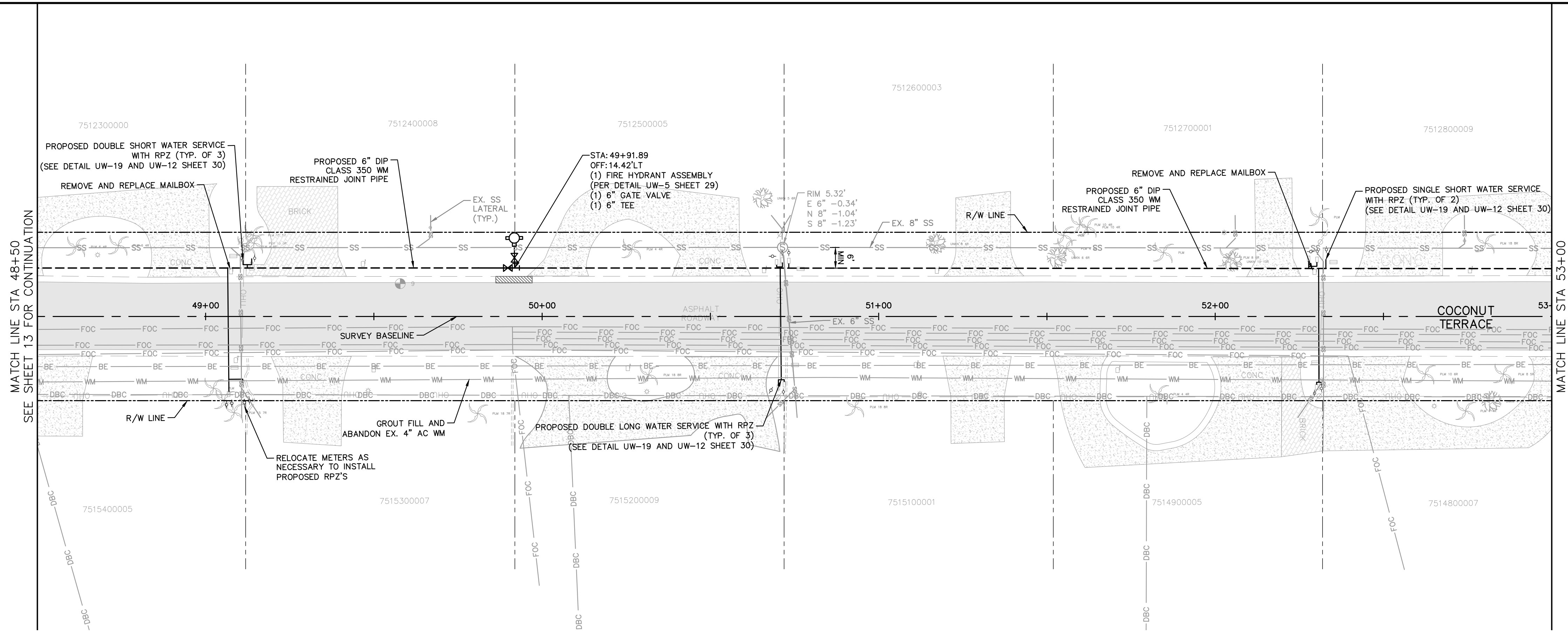
END OF SERVICE LIFE: FY-18
SAN REMO SHORES WM REPLACEMENT
MANATEE COUNTY

LICENSED PROFESSIONAL
W. WADE WOOD, P.E.
FL LICENSE NUMBER 69051

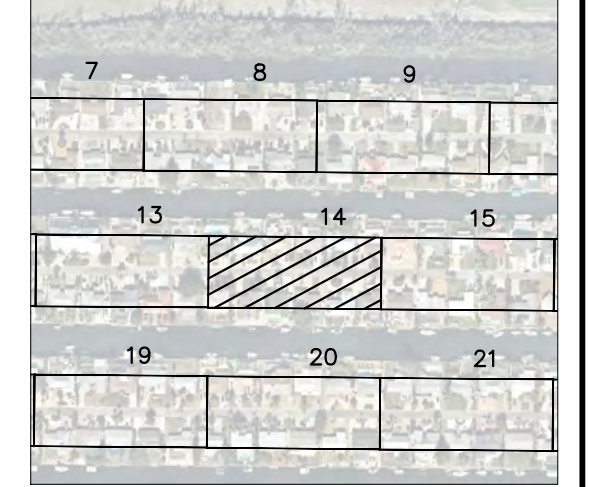
PLAN & PROFILE
COCONUT TERRACE

SHEET NUMBER
13

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GRAPHIC SCALE IN FEET
 0 10 20 40
 HORIZONTAL SCALE: 1"=20'
 VERTICAL SCALE: 1"=4'



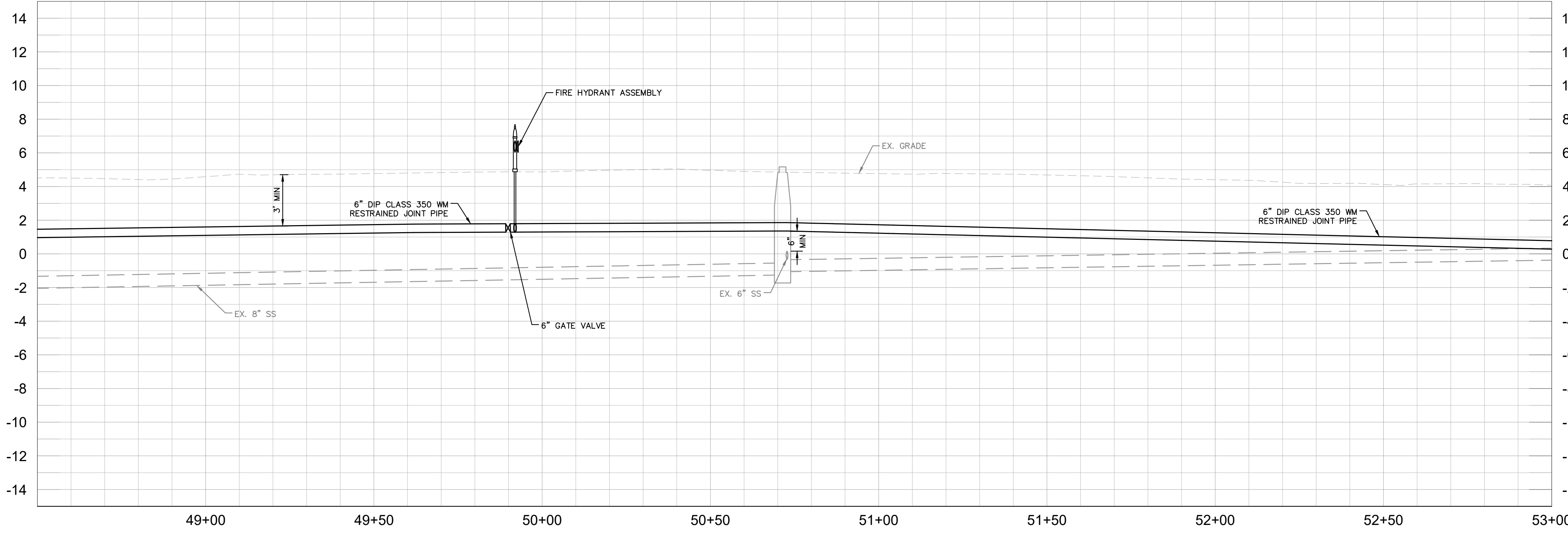
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- CTHDD
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No.	REVISIONS	DATE	BY

Kimley & Horn

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 100 2ND AVENUE SOUTH, SUITE 300S, ST. PETERSBURG, FL 33701
 PHONE: 727-547-3999
 WWW.KIMLEY-HORN.COM CA 00000696

KHA PROJECT
 148400025
 DATE
 5/3/2019
 SCALE AS SHOWN
 DESIGNED BY WWW
 DRAWN BY LMB
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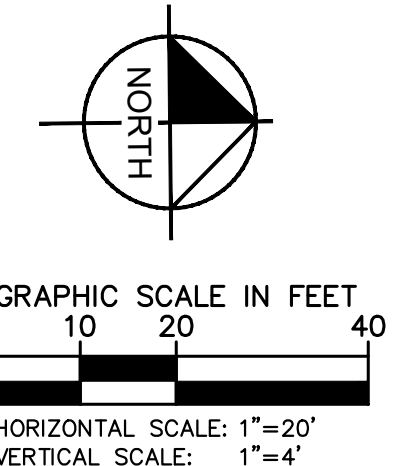
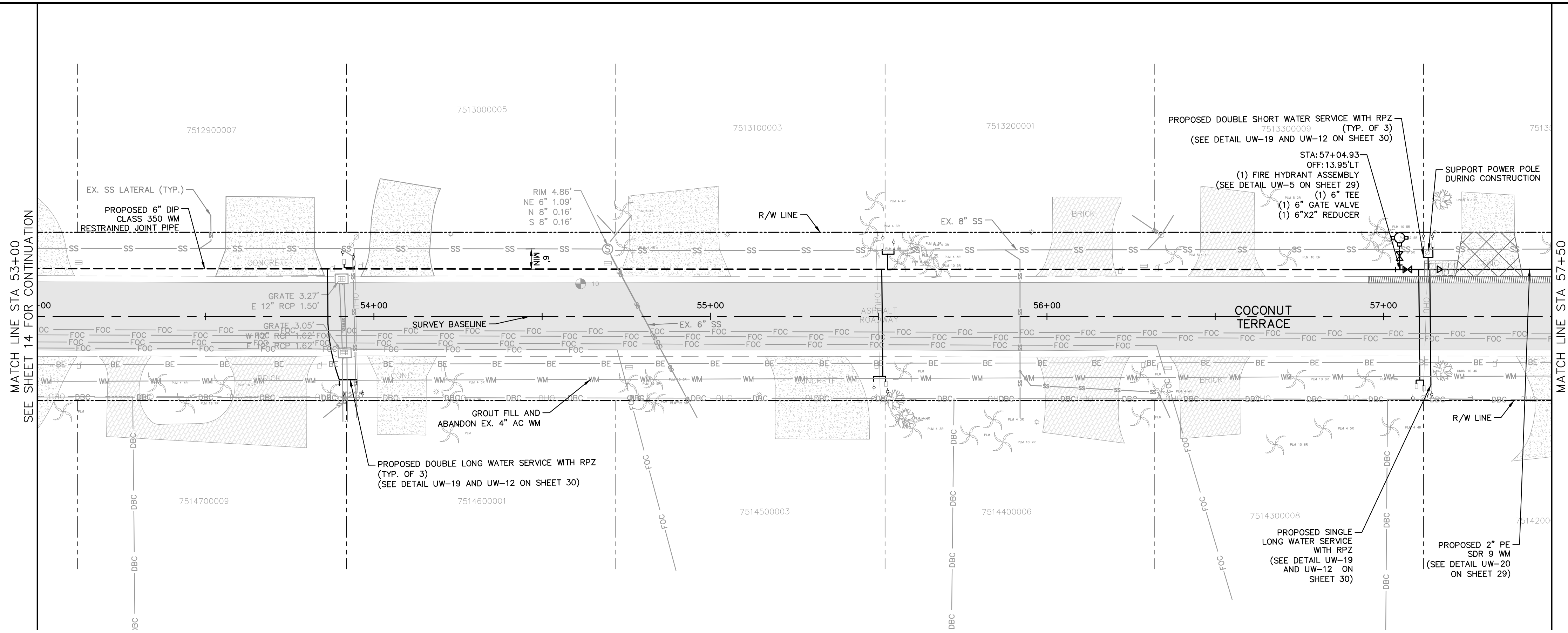
Manatee County
 END OF SERVICE LIFE: FY-18
SAN REMO SHORES WM REPLACEMENT
 MANATEE COUNTY

LICENSED PROFESSIONAL
 W. WADE WOOD, P.E.
 FL LICENSE NUMBER
 69051

**PLAN & PROFILE
 COCONUT TERRACE**

SHEET NUMBER
14

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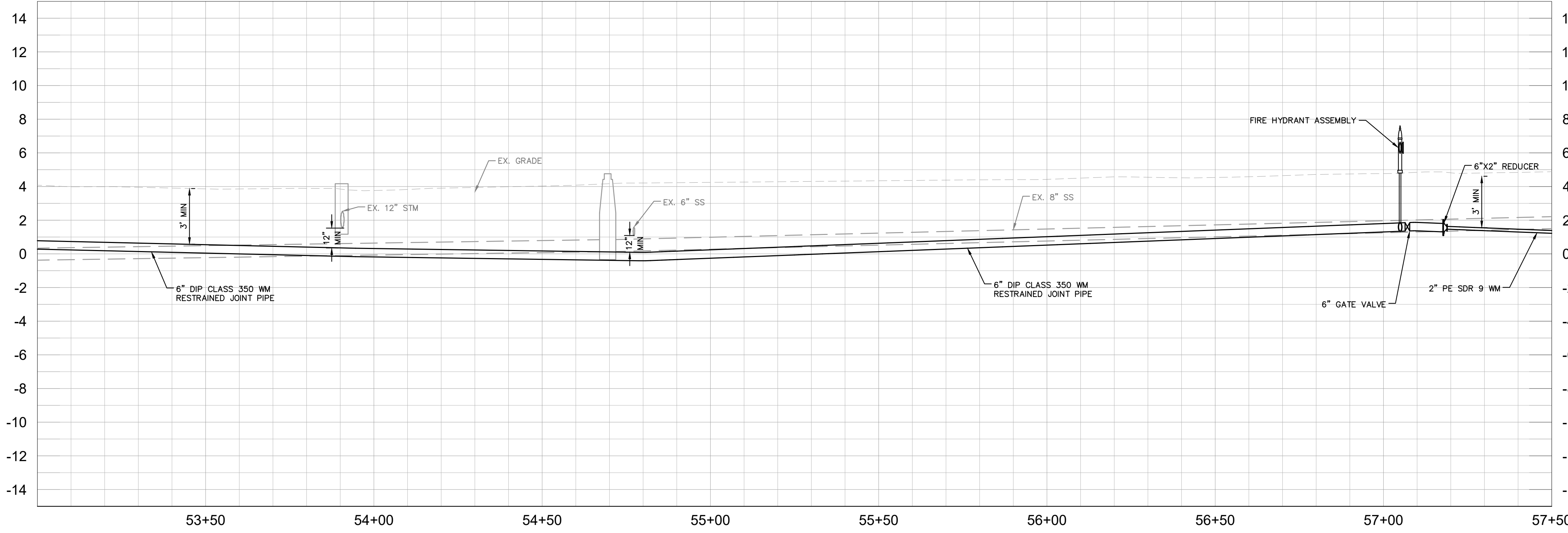
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KHA PROJECT
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Manatee County
 FLORIDA

END OF SERVICE LIFE: FY-18
SAN REMO SHORES WM REPLACEMENT

FLORIDA
 MANATEE COUNTY

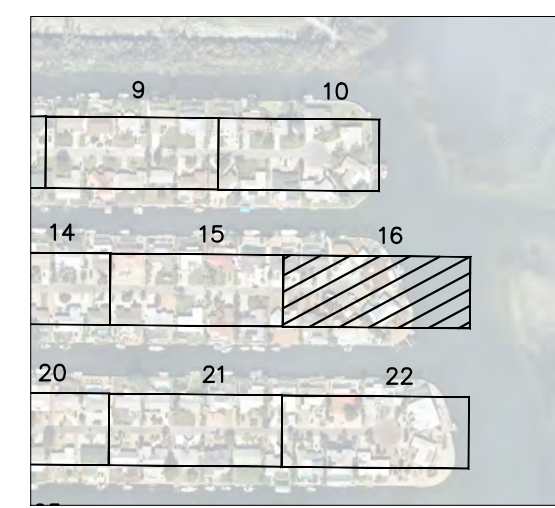
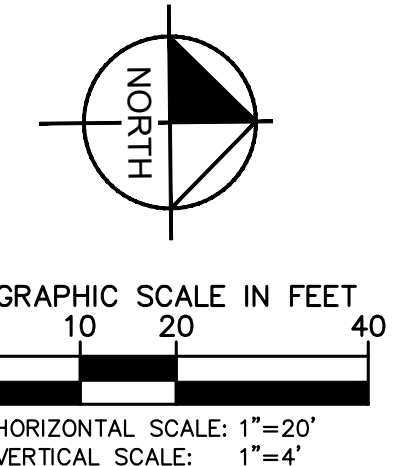
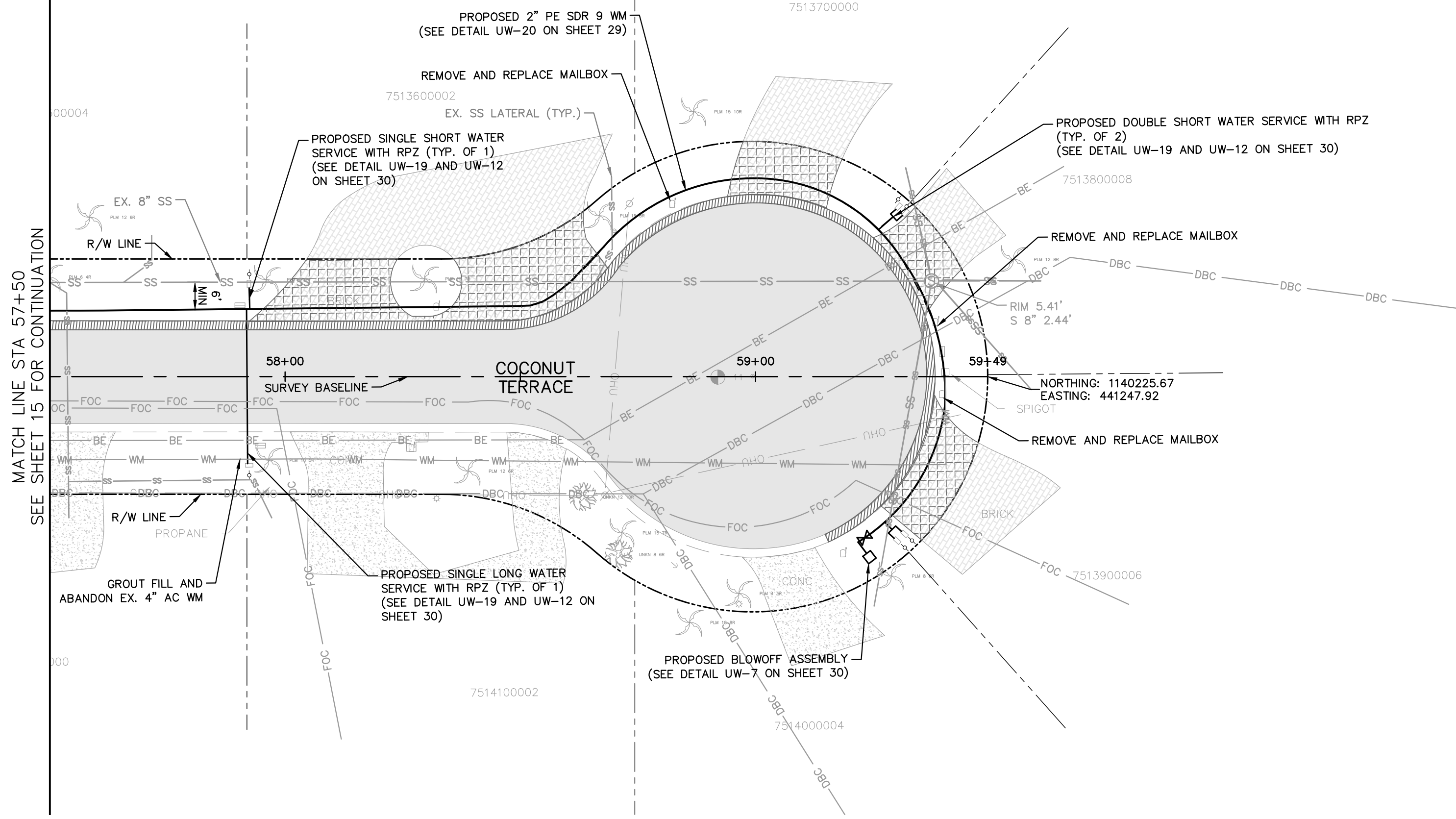
LICENSED PROFESSIONAL
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PLAN & PROFILE
COCONUT TERRACE

SHEET NUMBER
15



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LEGEND

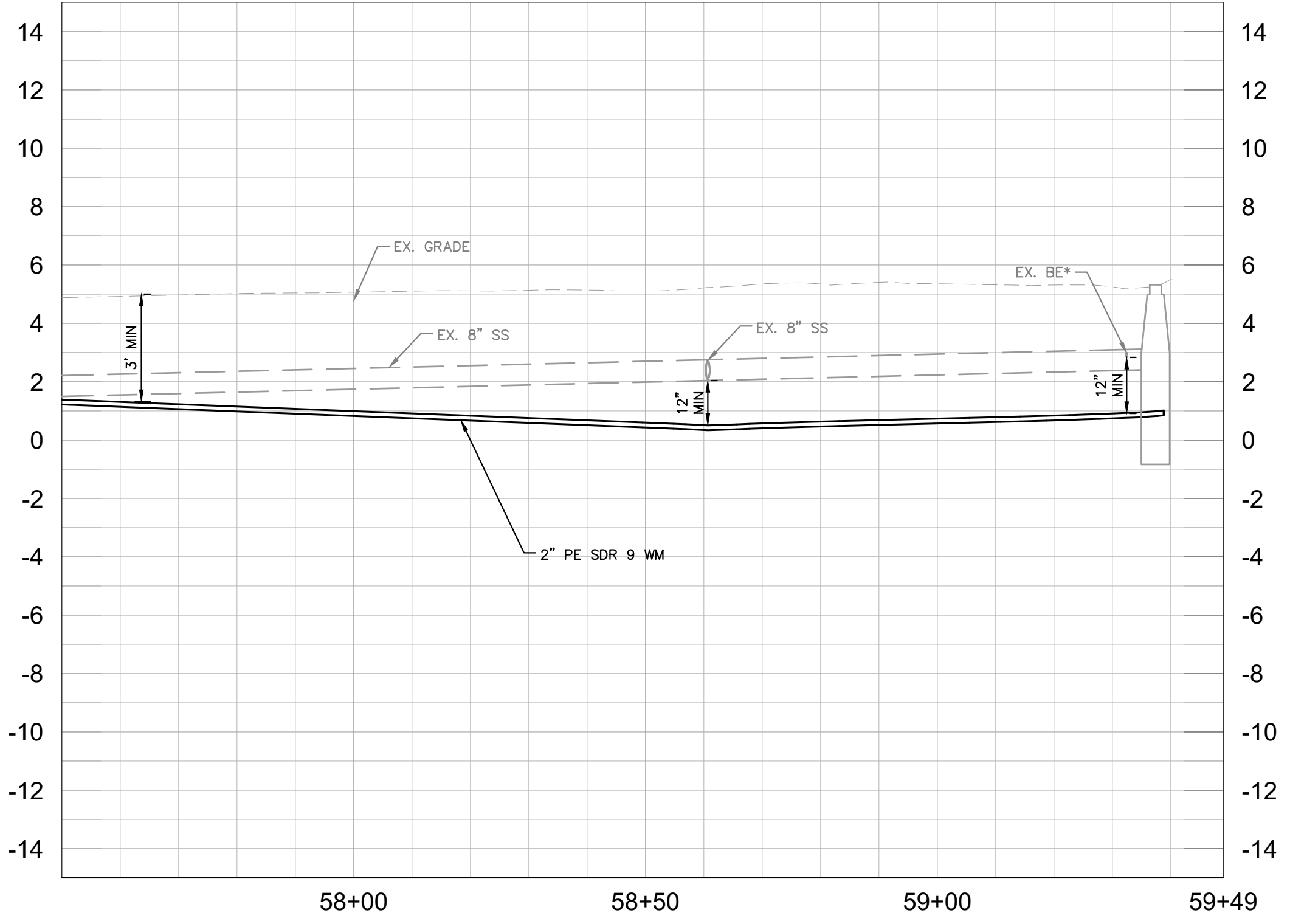
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KHA PROJECT	148400025
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SCALE	AS SHOWN
DESIGNED BY	WWW
DRAWN BY	LMB
CHECKED BY	SNR

Manatee County Florida

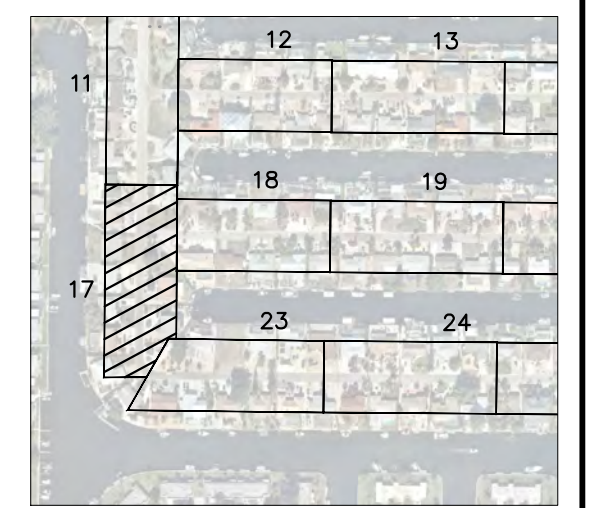
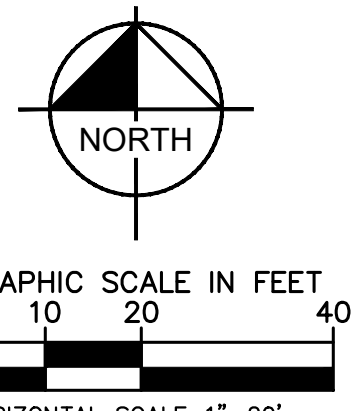
END OF SERVICE LIFE: FY-18
SAN REMO SHORES WM REPLACEMENT

MANATEE COUNTY

LICENSED PROFESSIONAL	W. WADE WOOD, P.E.
FL LICENSE NUMBER	69051

PLAN & PROFILE
COCONUT TERRACE

SHEET NUMBER	16
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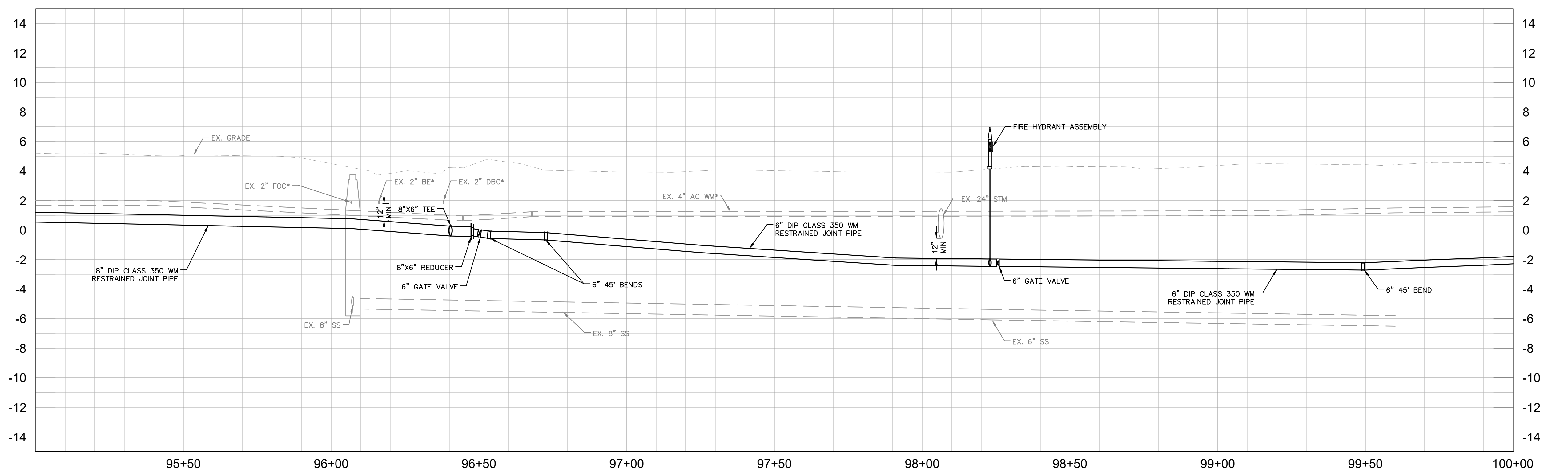
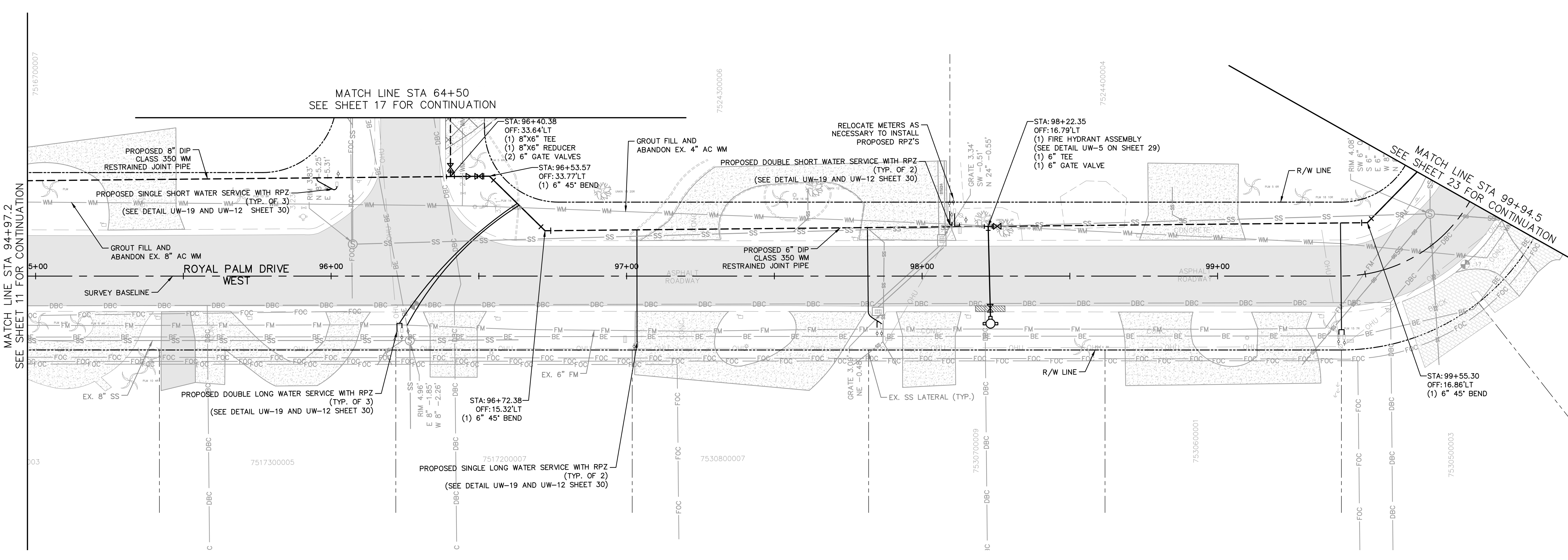
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Kimley Horn

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Manatee County Florida

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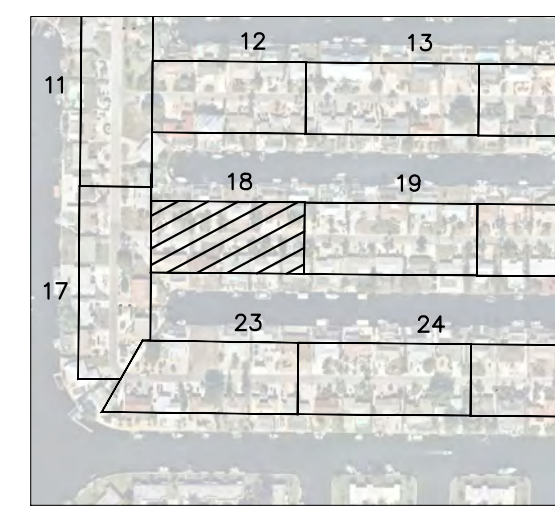
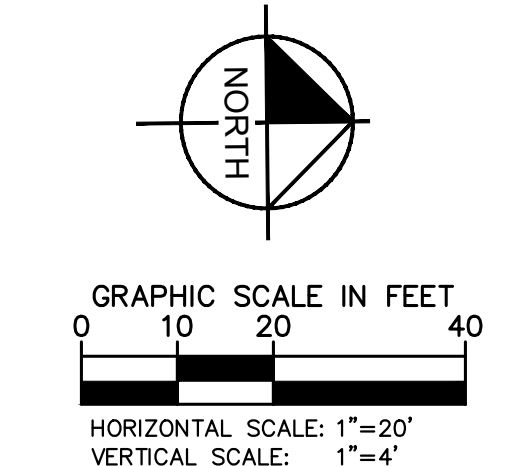
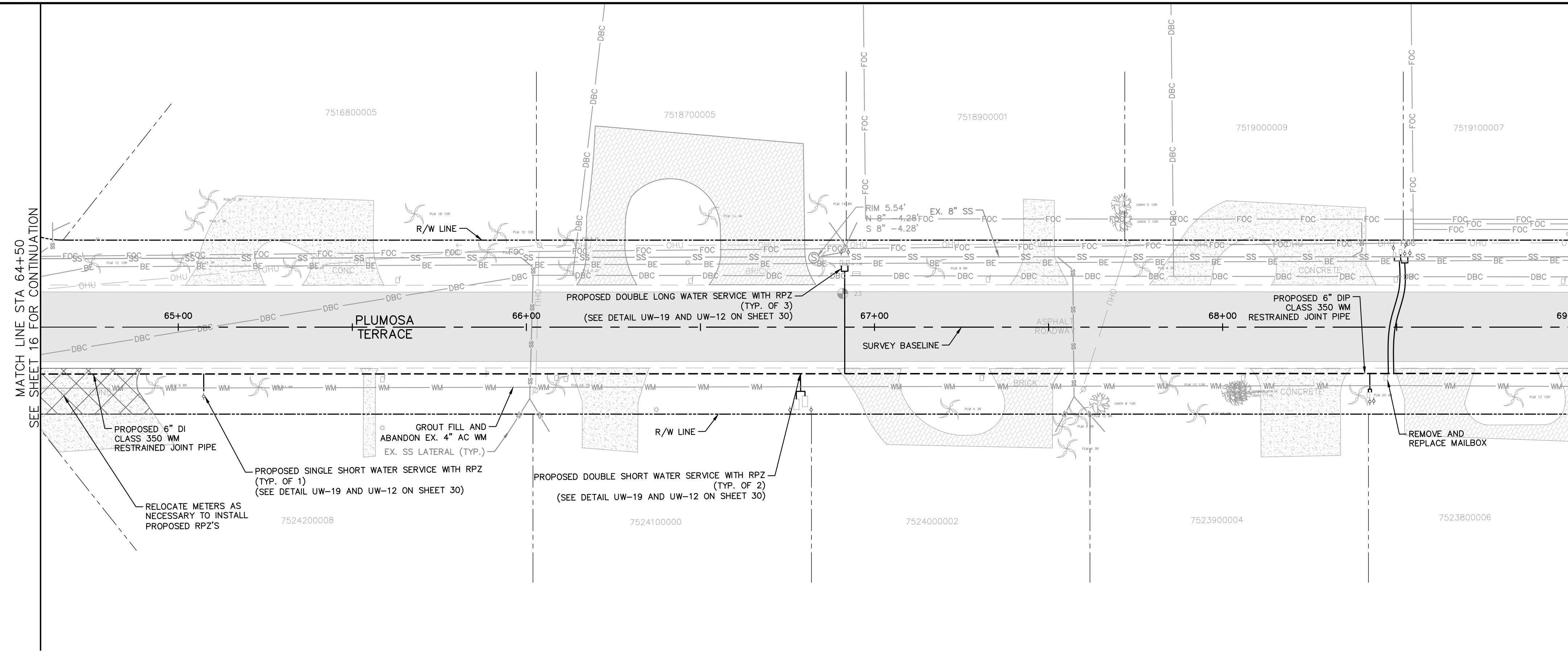
MANATEE COUNTY

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PLAN & PROFILE ROYAL PALM DRIVE

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17

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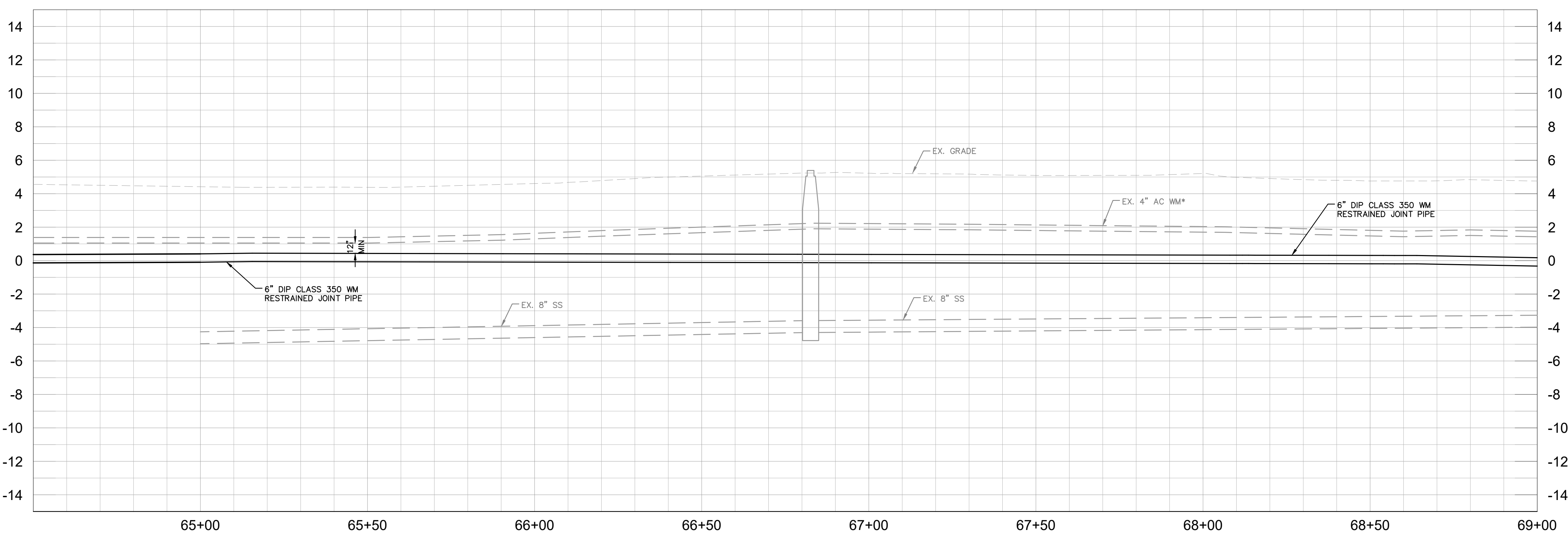
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Manatee County Florida

END OF SERVICE LIFE: FY-18
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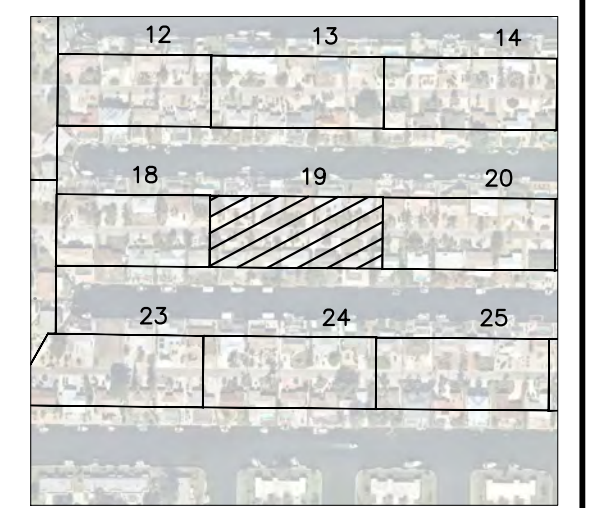
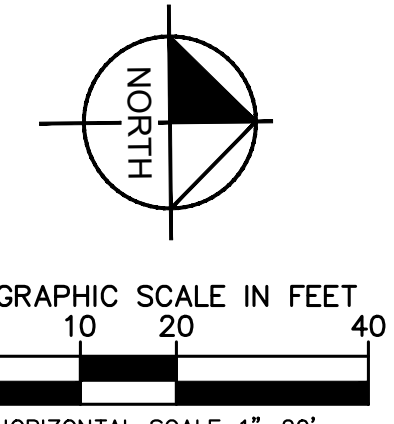
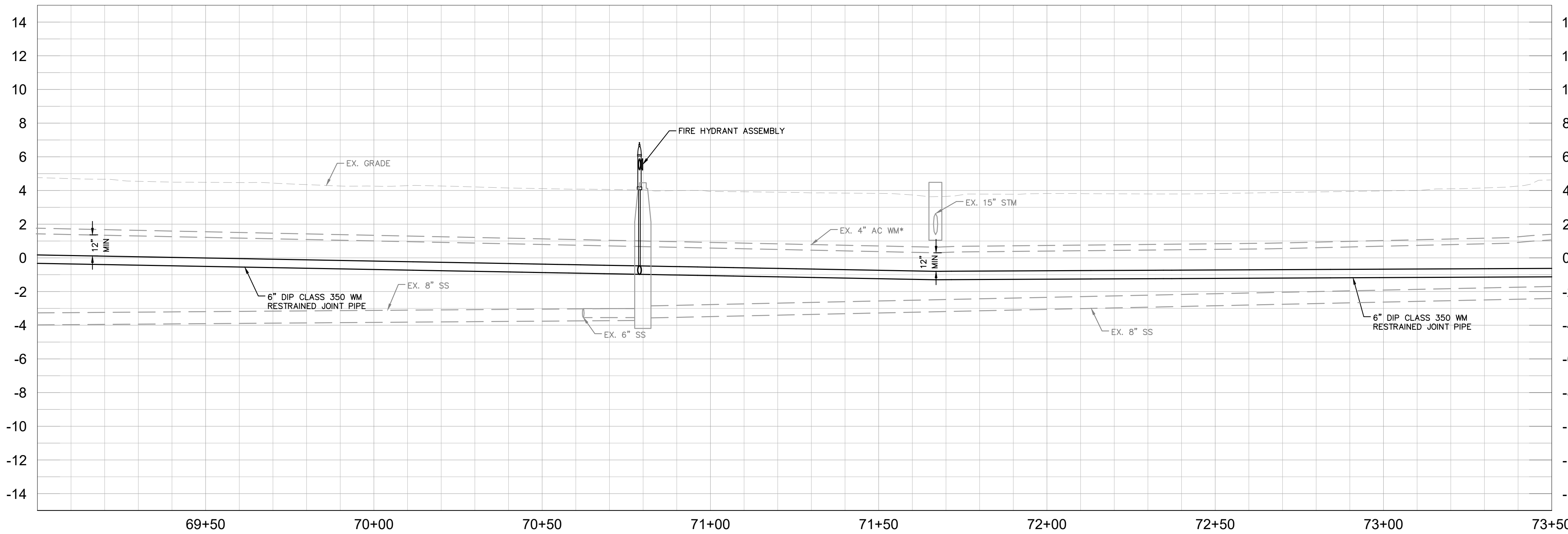
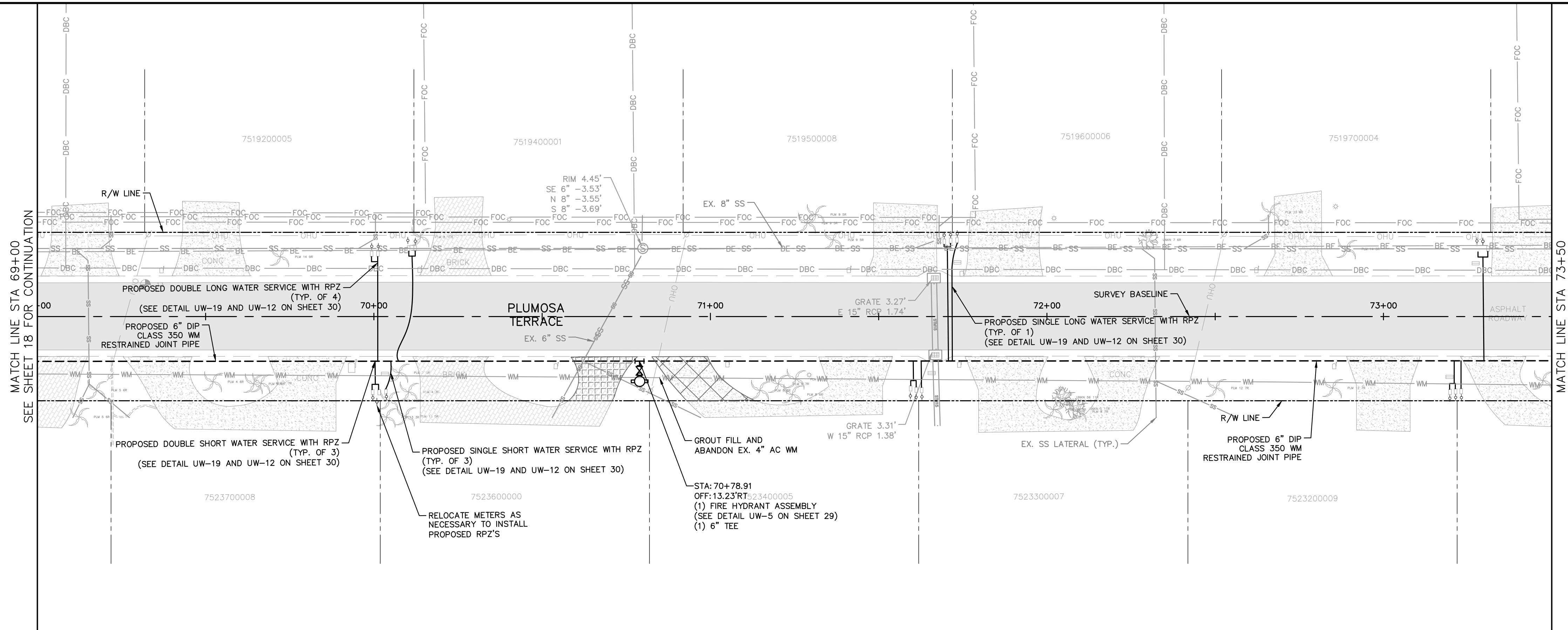
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PLAN & PROFILE
PLUMOSA TERRACE

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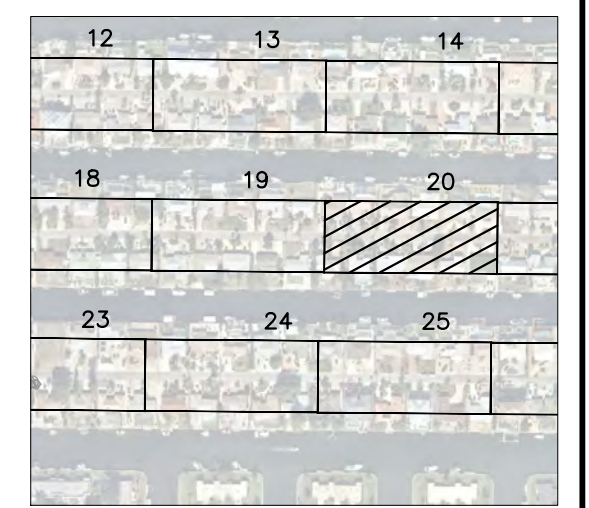
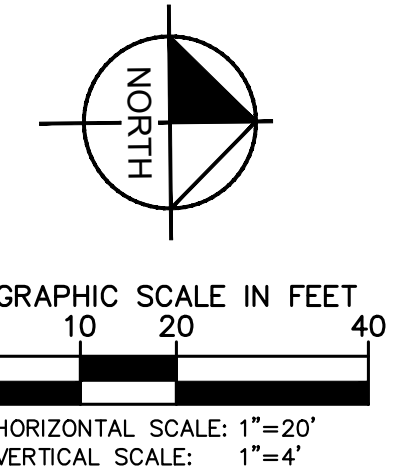
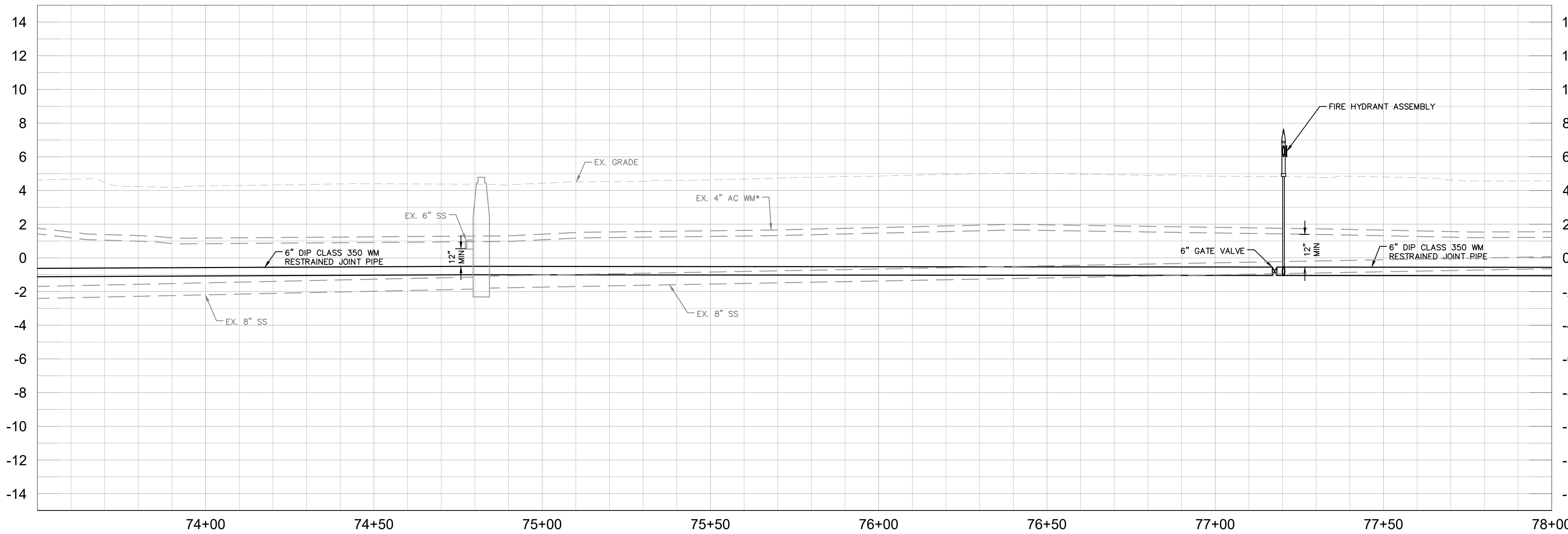
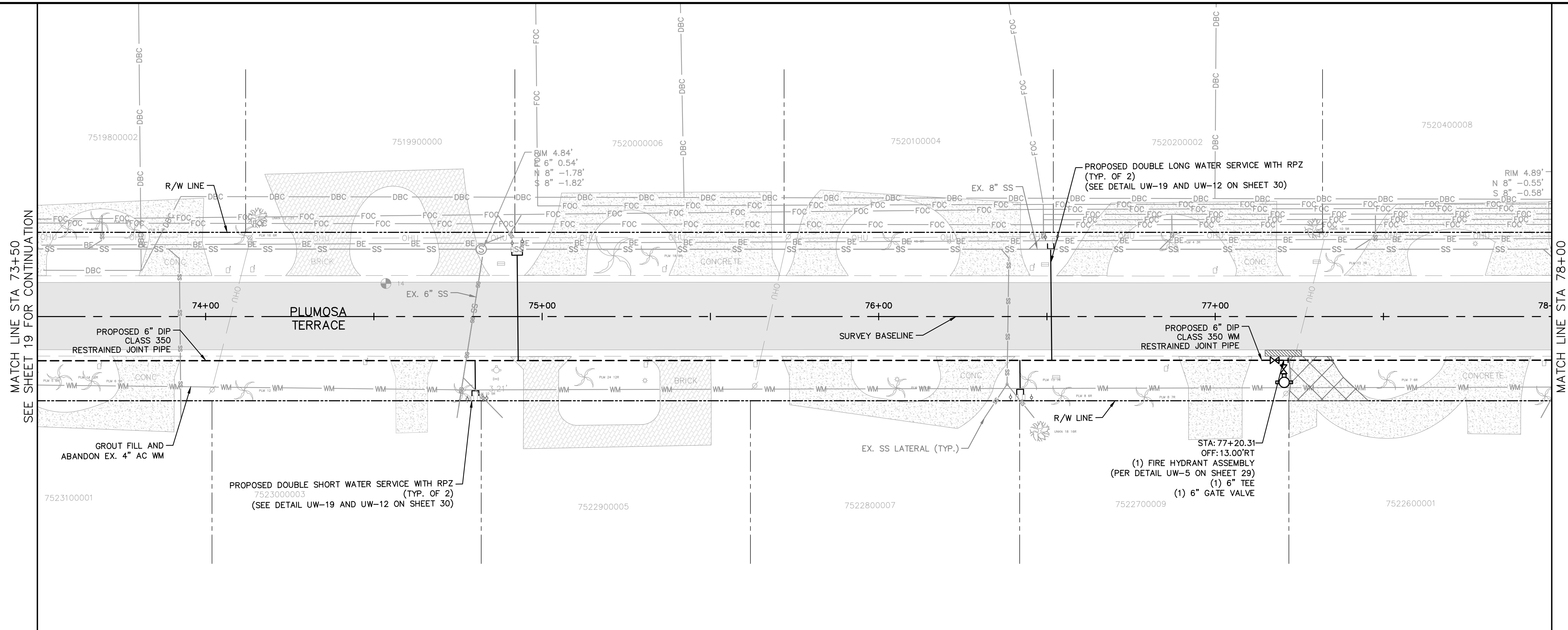
MANATEE COUNTY

LICENSED PROFESSIONAL
 W. WADE WOOD, P.E.
 FL LICENSE NUMBER
 69051

PLAN & PROFILE
PLUMOSA TERRACE

SHEET NUMBER
19

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LEGEND

CTHDD	---
OPEN CUT	---
ASPHALT DRIVEWAY RESTORATION	[Pattern]
SIDEWALK/CONCRETE DRIVEWAY RESTORATION	[Pattern]
BRICK DRIVEWAY RESTORATION	[Pattern]
SHELL DRIVEWAY RESTORATION	[Pattern]
FULL ROADWAY RESTORATION	[Pattern]
MILLING AND RESURFACING	[Pattern]
REMOVE & REPLACE CURB	[Pattern]

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Kimley & Horn

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 100 2ND AVENUE SOUTH, SUITE 300S, ST. PETERSBURG, FL 33701
 PHONE: 727-547-3999
 WWW.KIMLEY-HORN.COM CA 00000696

KHA PROJECT 148400025
DATE 5/3/2019
SCALE AS SHOWN
DESIGNED BY WWW
DRAWN BY LMB
CHECKED BY SNR

Manatee County Florida

END OF SERVICE LIFE: FY-18
SAN REMO SHORES WM REPLACEMENT

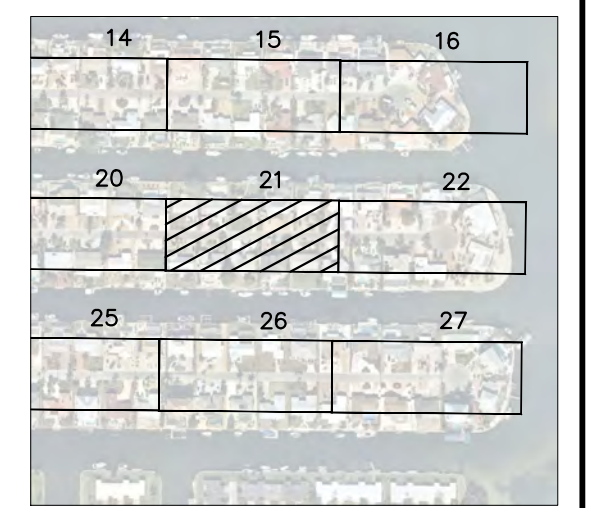
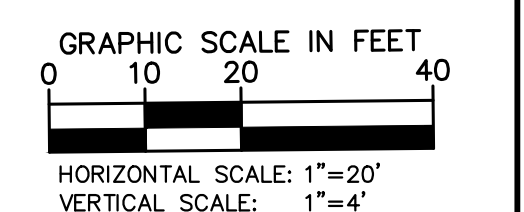
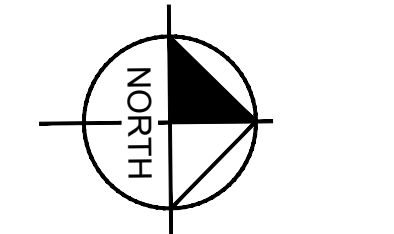
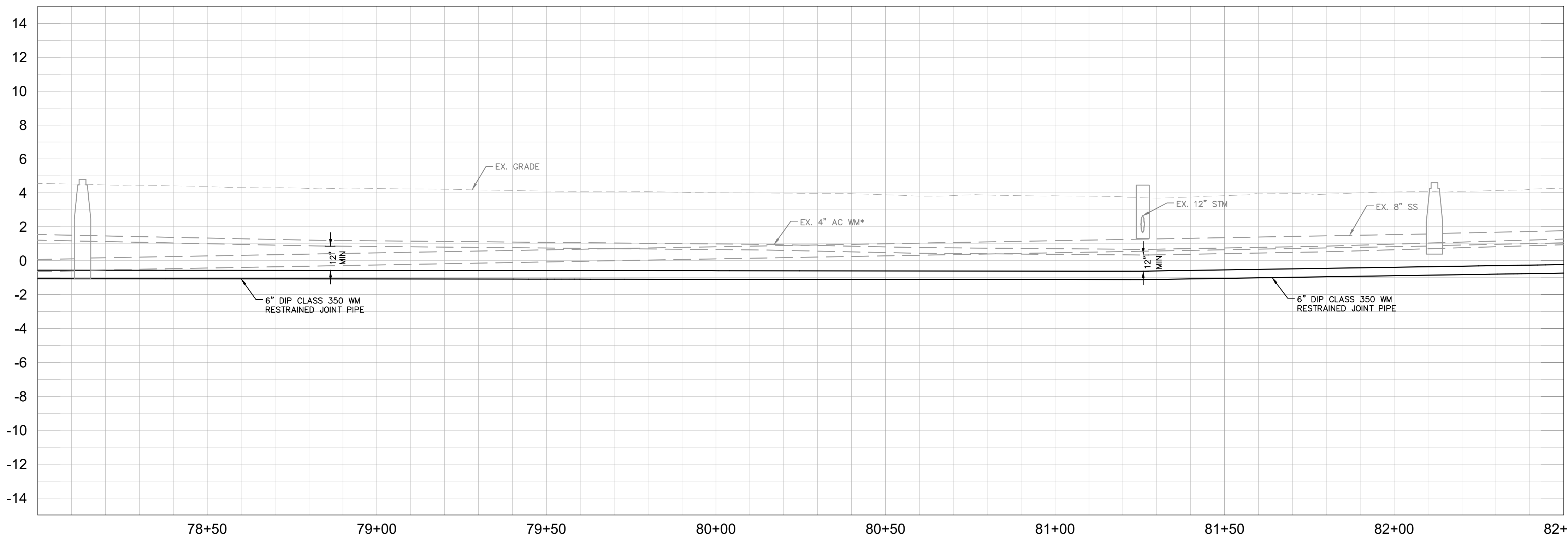
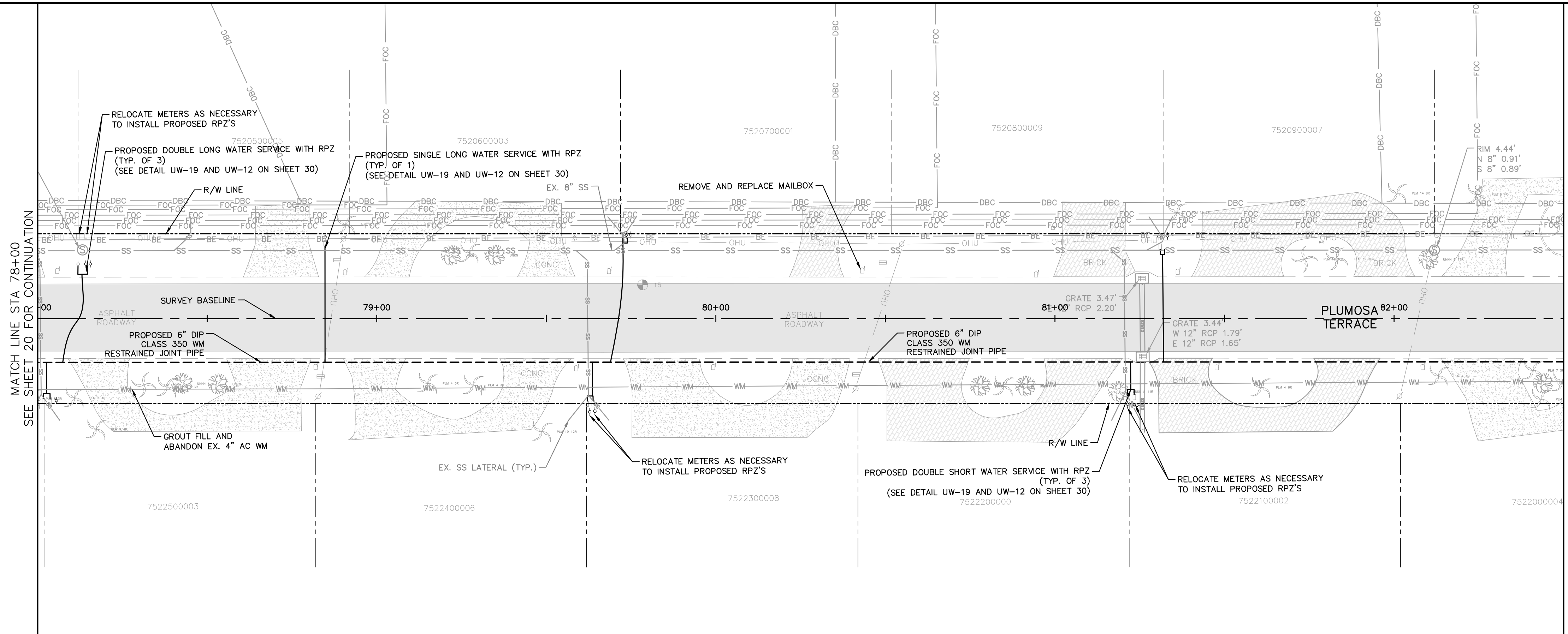
MANATEE COUNTY

LICENSED PROFESSIONAL
W. WADE WOOD, P.E.
FL LICENSE NUMBER 69051
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LEGEND

CTHDD	
OPEN CUT	
ASPHALT DRIVEWAY RESTORATION	
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KHA PROJECT	148400025
DATE	5/3/2019
SCALE	AS SHOWN
DESIGNED BY	WWW
DRAWN BY	LMB
CHECKED BY	SNR

Manatee County Florida

END OF SERVICE LIFE: FY-18
SAN REMO SHORES WM REPLACEMENT

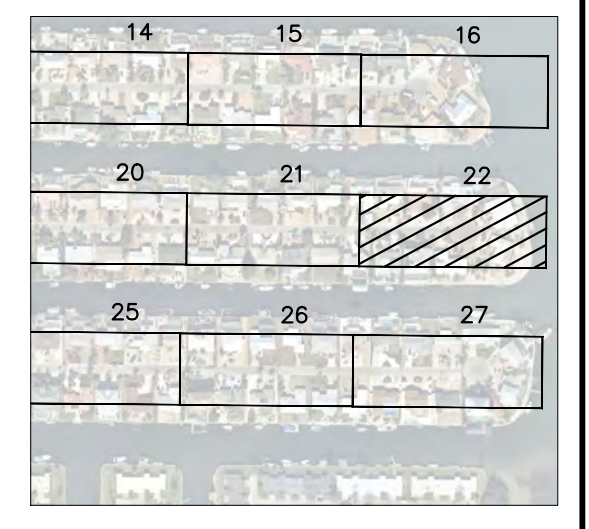
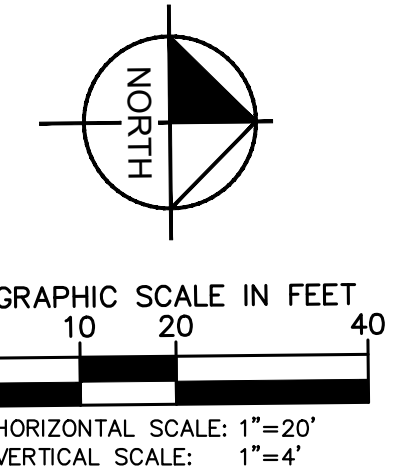
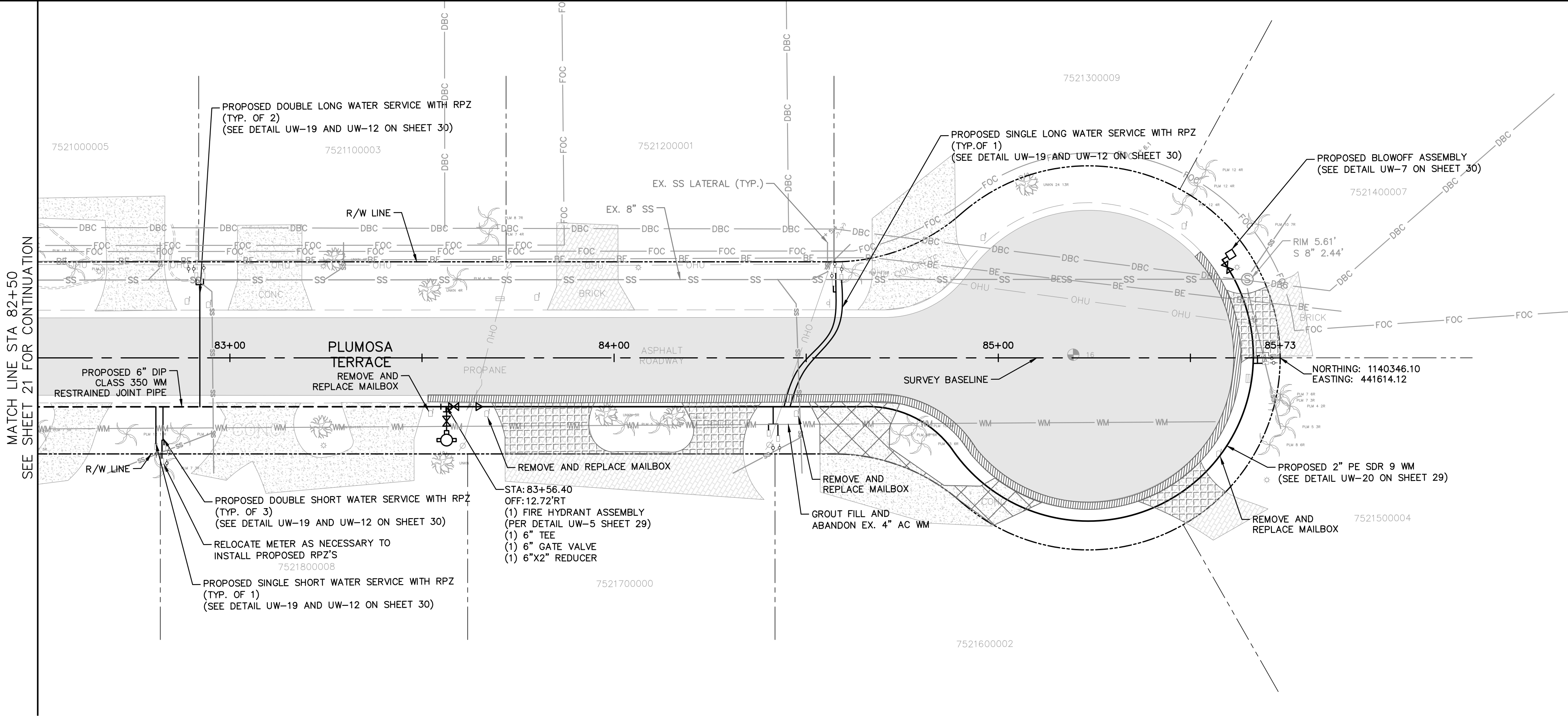
MANATEE COUNTY

LICENSED PROFESSIONAL	W. WADE WOOD, P.E.
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PLAN & PROFILE
PLUMOSA TERRACE

SHEET NUMBER	21
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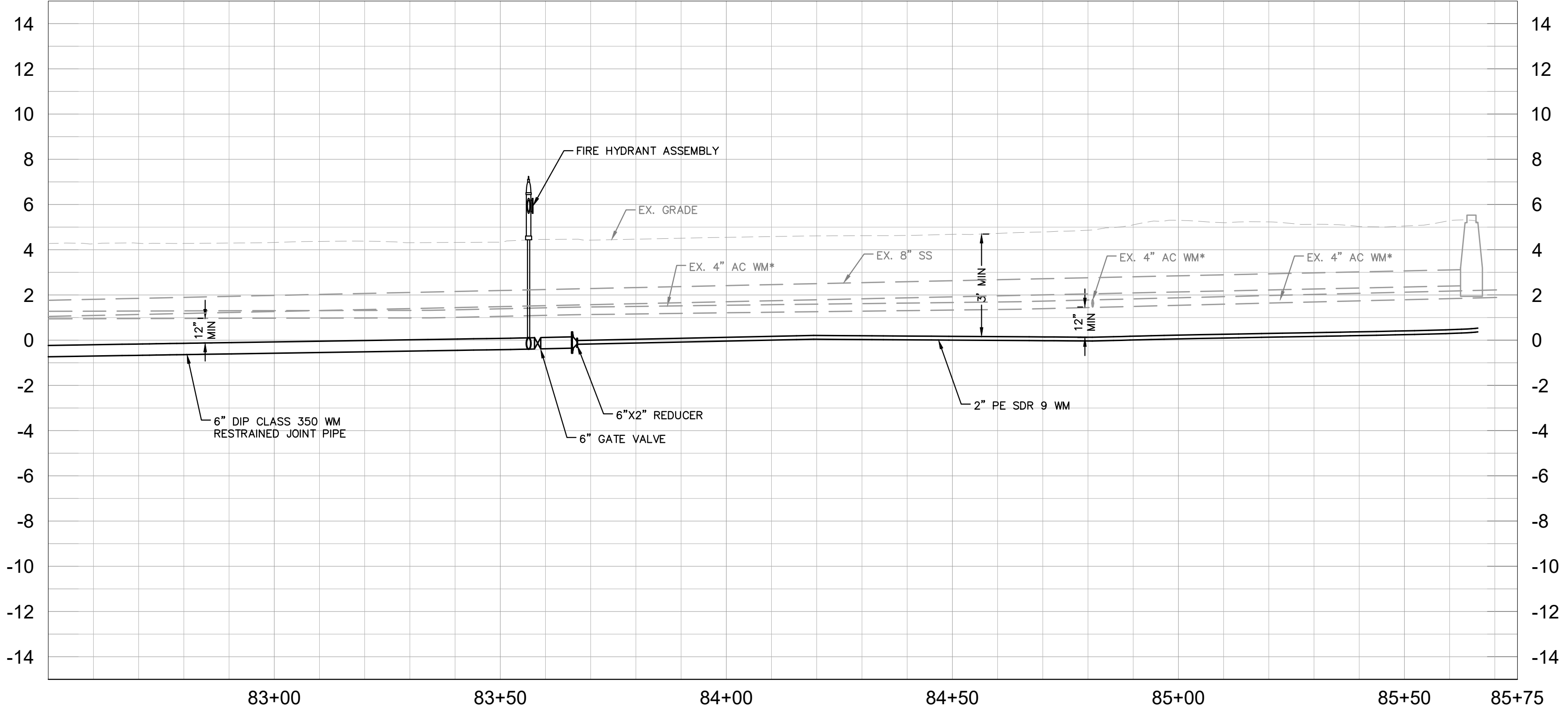
- LEGEND**
- CTHDD
 - OPEN CUT
 - ASPHALT DRIVEWAY RESTORATION
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 - FULL ROADWAY RESTORATION
 - MILLING AND RESURFACING
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Manatee County Florida

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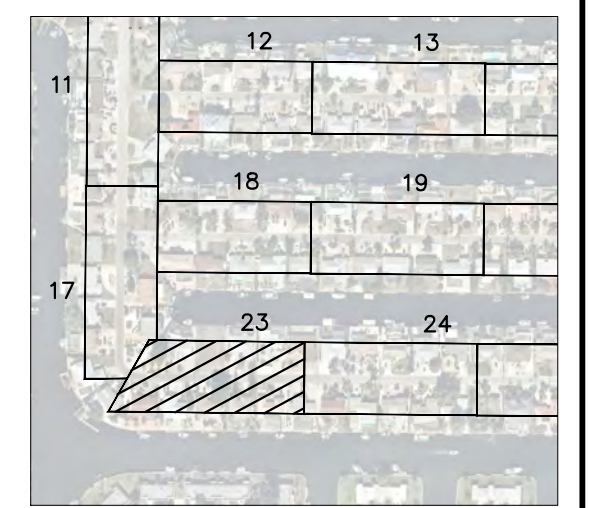
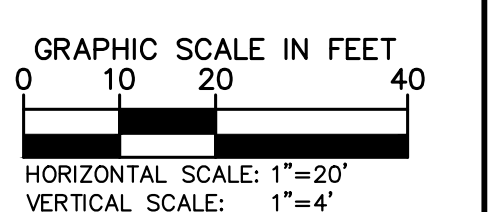
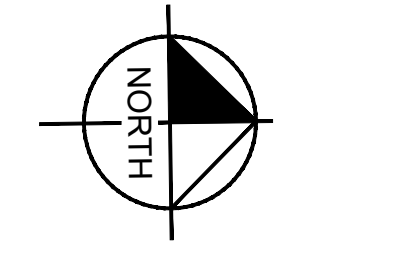
MANATEE COUNTY

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PLAN & PROFILE
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LEGEND

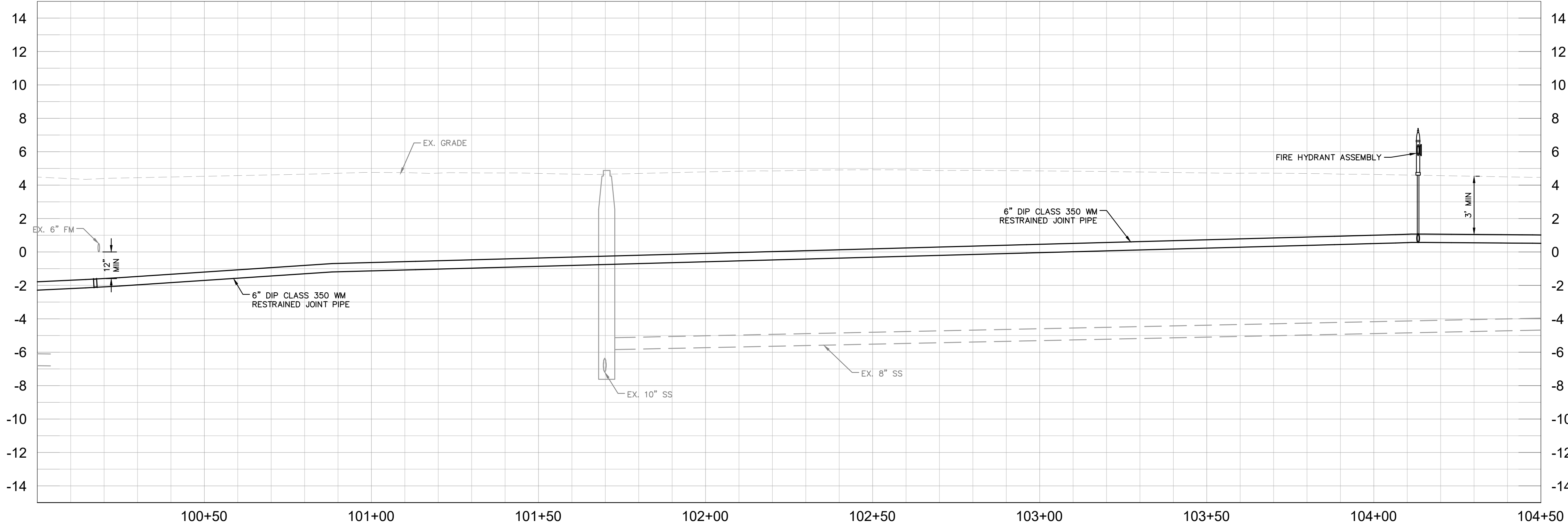
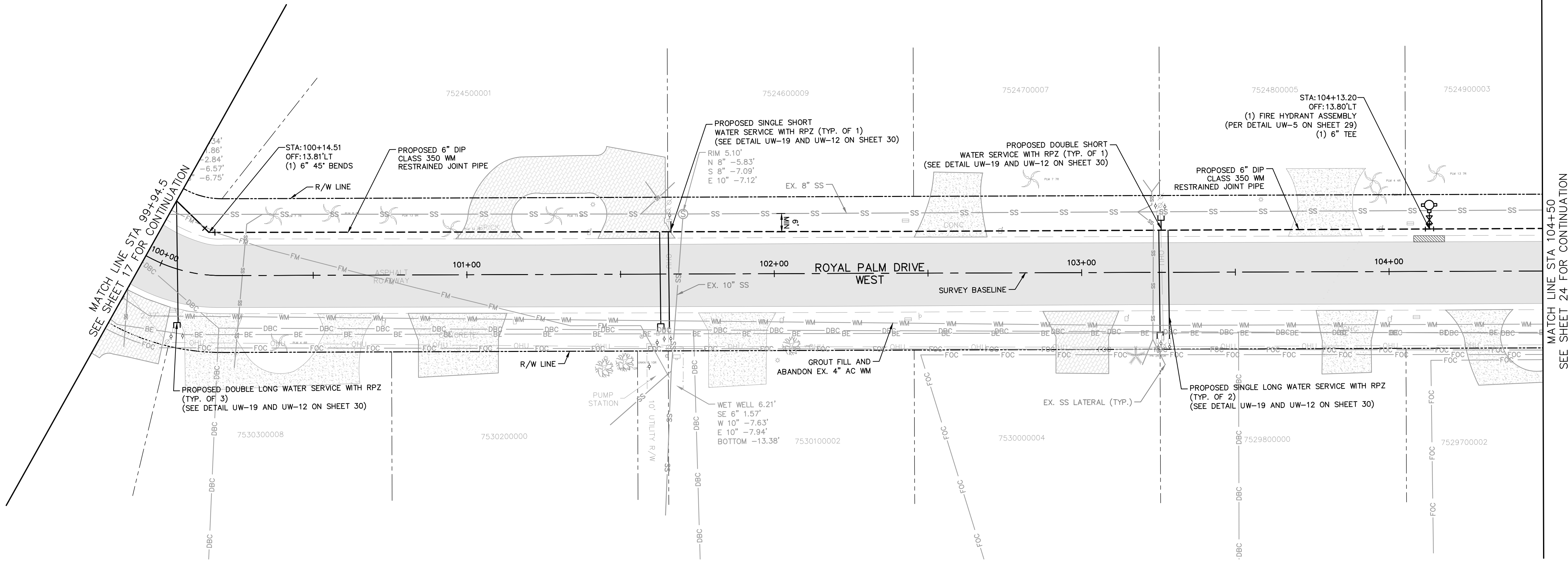
CTHDD	---
OPEN CUT	---
ASPHALT DRIVEWAY RESTORATION	[Hatched pattern]
SIDEWALK/CONCRETE DRIVEWAY RESTORATION	[Cross-hatched pattern]
BRICK DRIVEWAY RESTORATION	[Grid pattern]
SHELL DRIVEWAY RESTORATION	[Stippled pattern]
FULL ROADWAY RESTORATION	[Dotted pattern]
MILLING AND RESURFACING	[+ + + pattern]
REMOVE & REPLACE CURB	[Diagonal lines]

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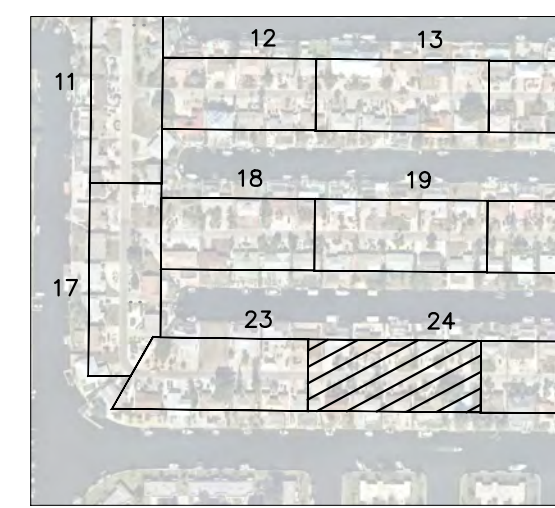
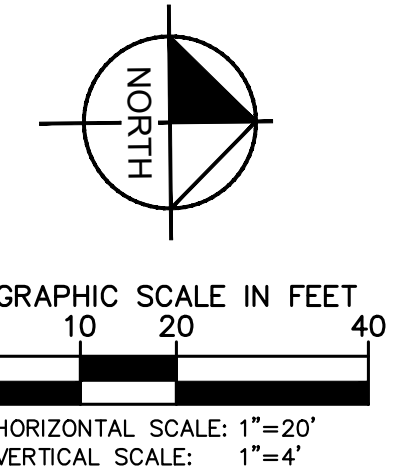
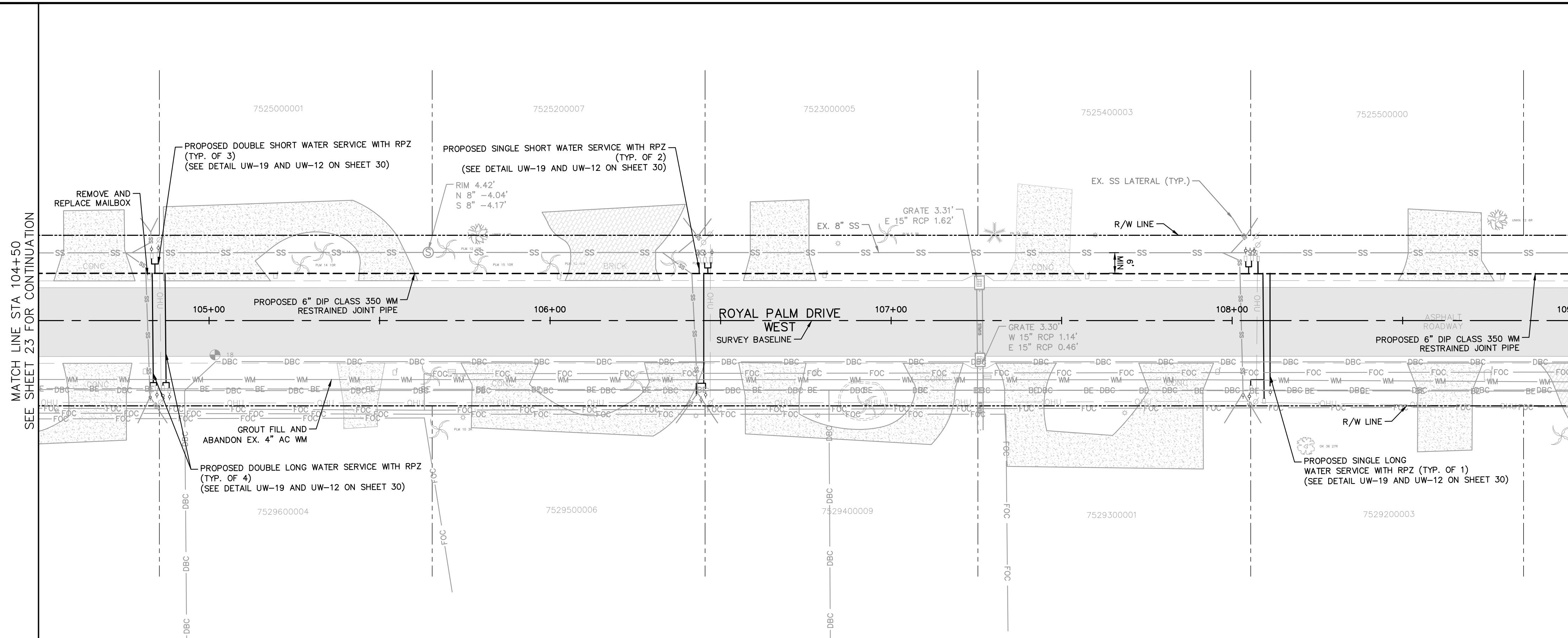
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PLAN & PROFILE ROYAL PALM DRIVE

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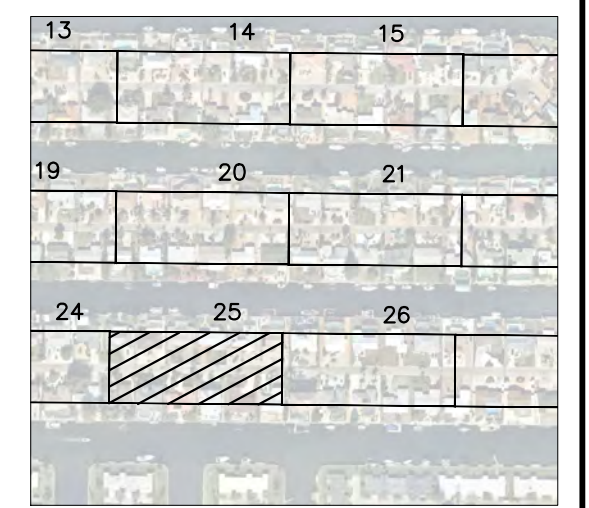
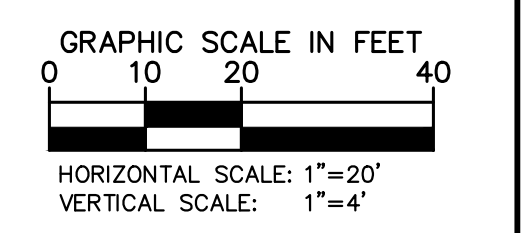
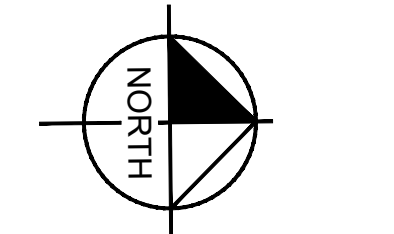
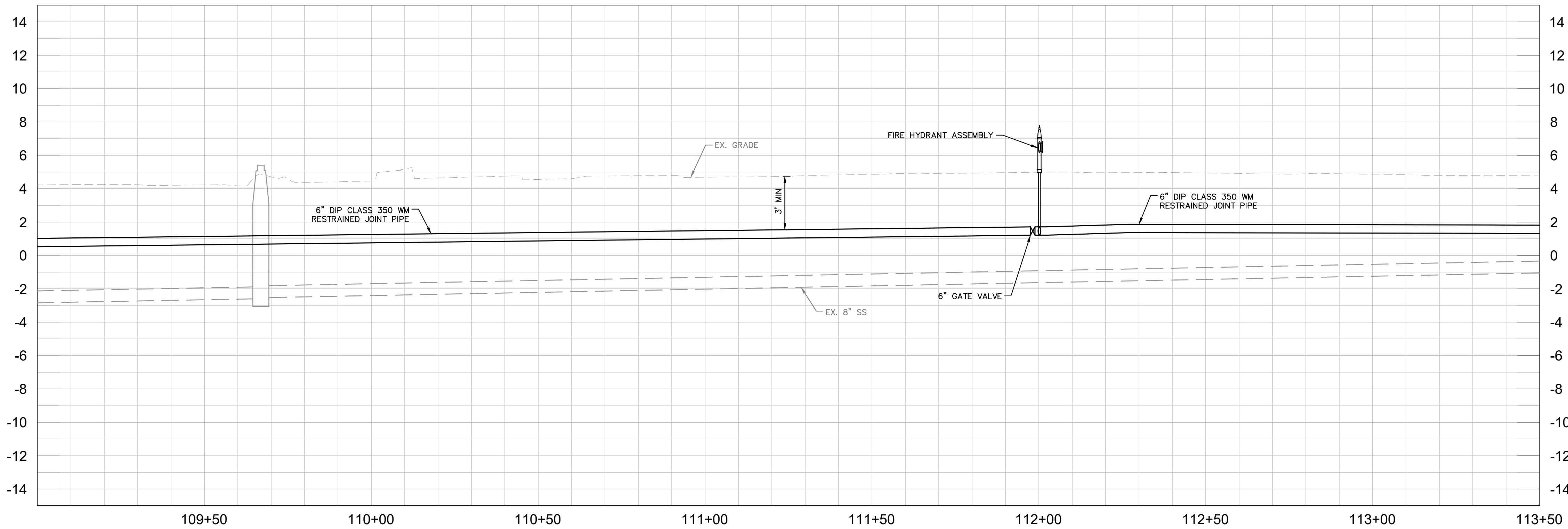
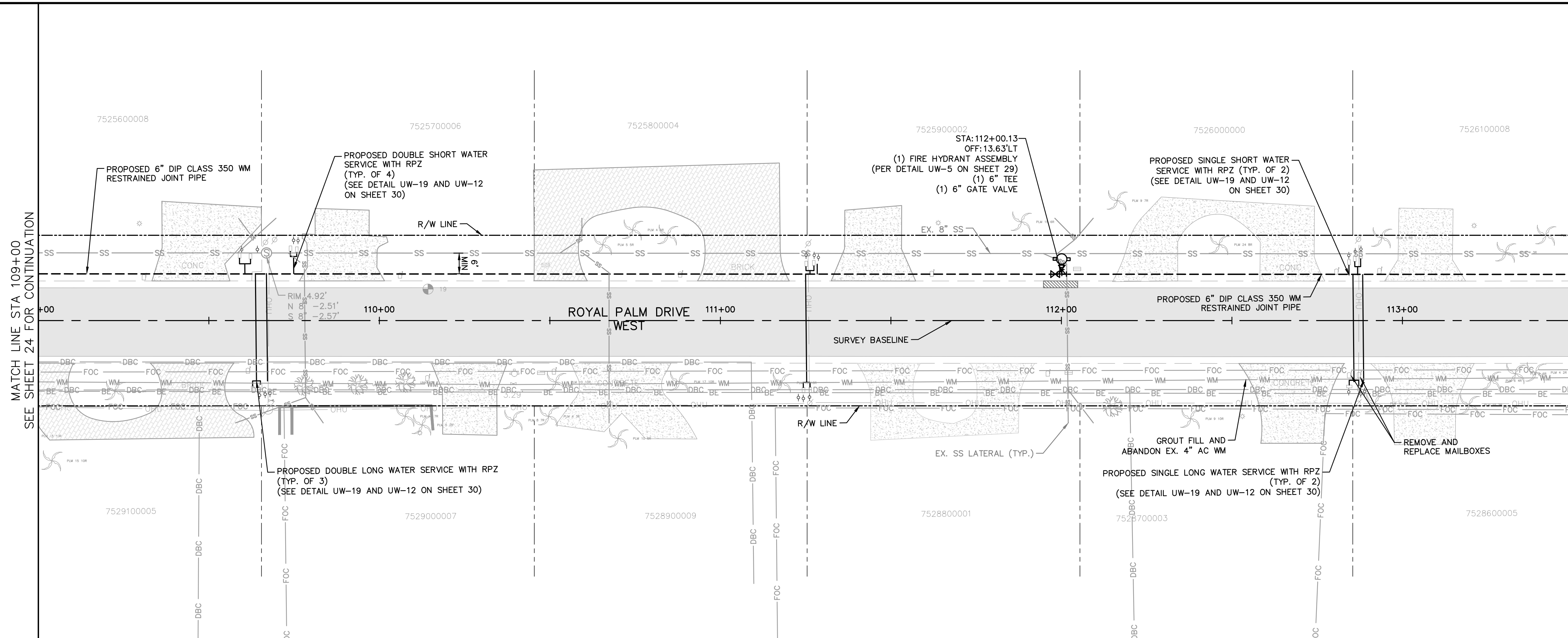
MANATEE COUNTY

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PLAN & PROFILE ROYAL PALM DRIVE

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 100 2ND AVENUE SOUTH, SUITE 300S, ST. PETERSBURG, FL 33701
 PHONE: 727-547-3999
 WWW.KIMLEY-HORN.COM CA 00000696

KHA PROJECT
 148400025
 DATE
 5/3/2019
 SCALE AS SHOWN
 DESIGNED BY WWW
 DRAWN BY LMB
 CHECKED BY SNR

Manatee County FLORIDA

**END OF SERVICE LIFE: FY-18
 SAN REMO SHORES WM REPLACEMENT**

MANATEE COUNTY

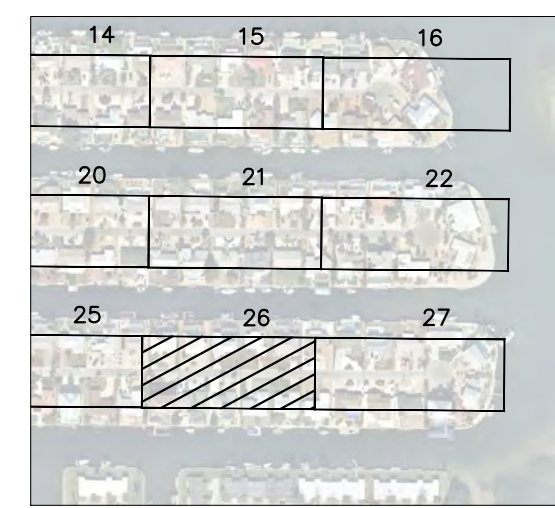
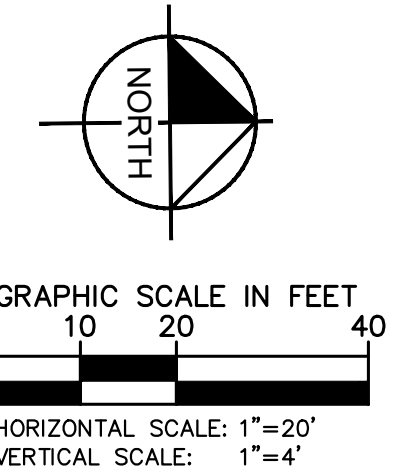
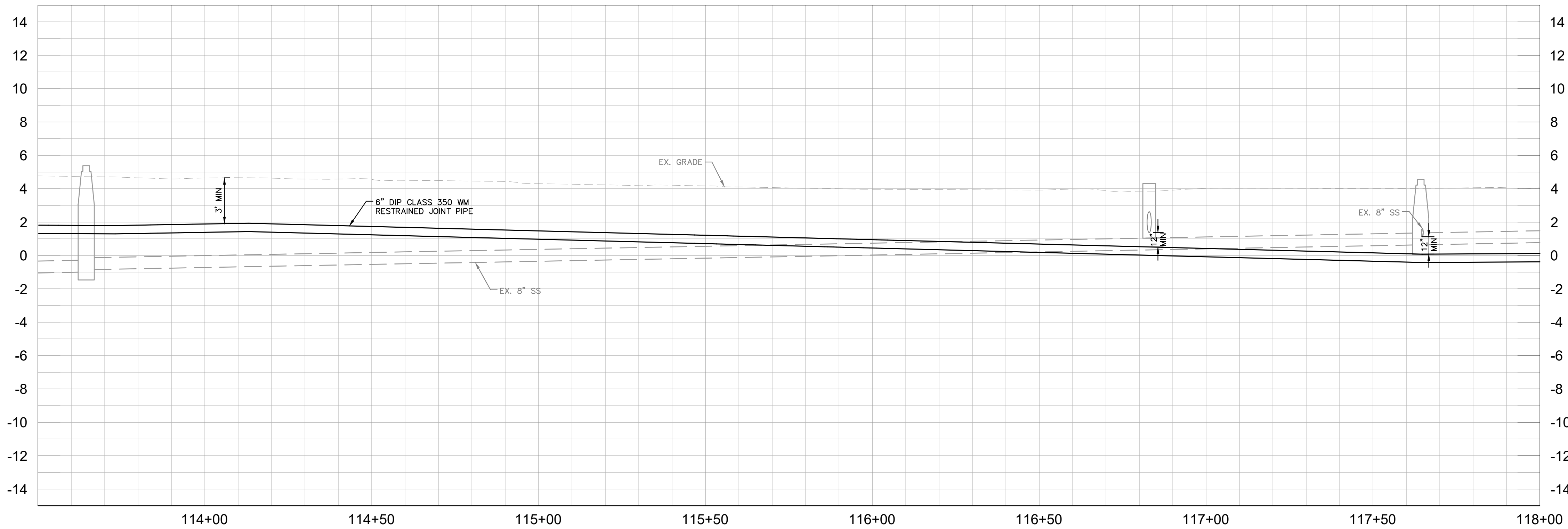
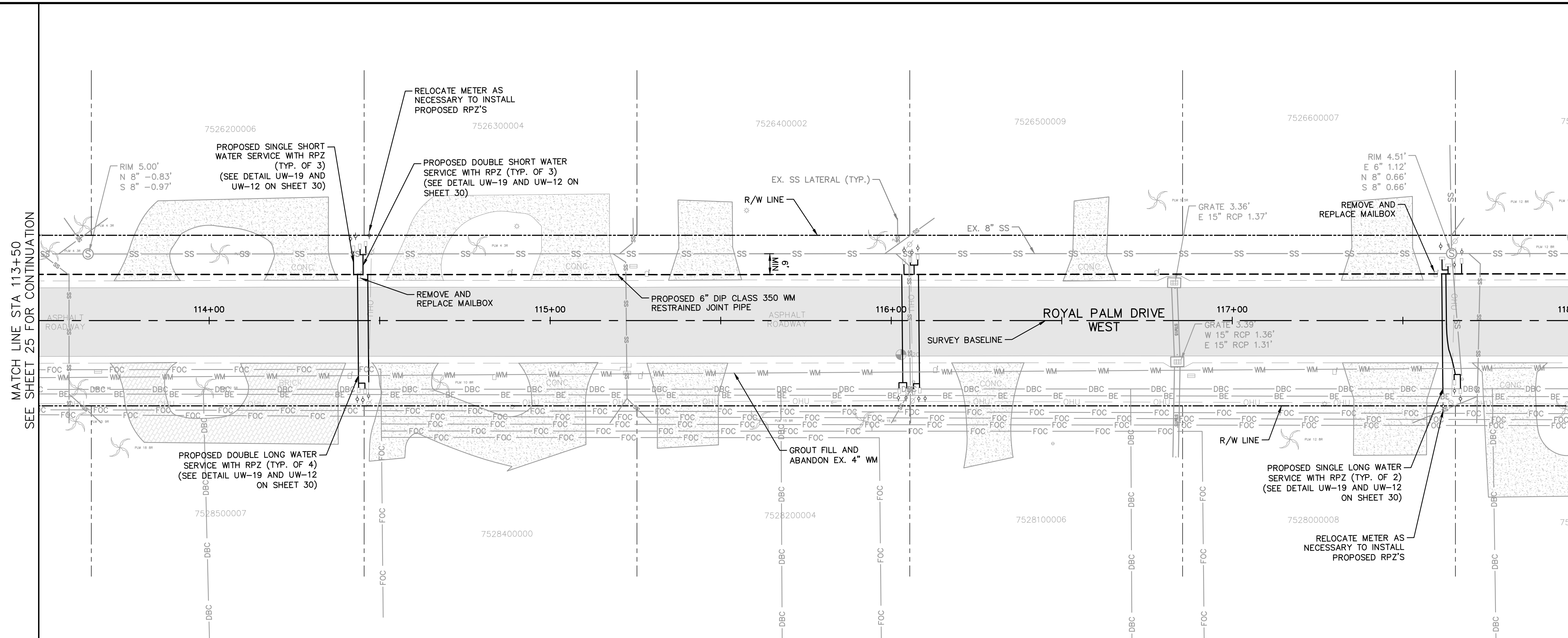
LICENSED PROFESSIONAL
 W. WADE WOOD, P.E.
 FL LICENSE NUMBER
 69051

PLAN & PROFILE ROYAL PALM DRIVE

FL DATE:

SHEET NUMBER
25

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LEGEND

CTHDD	---
OPEN CUT	---
ASPHALT DRIVEWAY RESTORATION	[Pattern]
SIDEWALK/CONCRETE DRIVEWAY RESTORATION	[Pattern]
BRICK DRIVEWAY RESTORATION	[Pattern]
SHELL DRIVEWAY RESTORATION	[Pattern]
FULL ROADWAY RESTORATION	[Pattern]
MILLING AND RESURFACING	[Pattern]
REMOVE & REPLACE CURB	[Pattern]

- NOTES:**
- CONTRACTOR TO FOLLOW RESTRAINED LENGTHS SET IN RESTRAIN LENGTH DETAILS ON SHEET 29.
 - CONSTRUCTION DEWATERING SHALL BE CONDUCTED IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS INCLUDING BUT NOT LIMITED TO CHAPTERS 62-621.300 AND 62-620 OF THE FLORIDA ADMINISTRATIVE CODE (FAC).
 - CTHDD SITE HOLES (CALIBRATION BORE HOLES) TO BE PERFORMED IN SOFT SOILS WITH A 2' MIN CLEARANCE FROM CURB
 - REFER TO DETAIL UG-12 SHEET 28 FOR COUNTY ROADWAY REPAIR REQUIREMENTS

***NOTES:**
 THE ELEVATIONS OF THE UTILITIES MARKED WITH AN ASTERISK (*) HAVE BEEN ASSUMED ON THE BASIS OF TYPICAL ANTICIPATED SOIL COVERAGE. CONTRACTOR SHALL NOT RELY ON THIS INFORMATION FOR CONSTRUCTION, BUT SHALL BE RESPONSIBLE FOR FIELD LOCATIONS (HORIZONTAL AND VERTICAL) OF ALL UTILITIES CROSSING THE PROPOSED FORCE MAIN. CONTRACTOR SHALL INCLUDE IN THE UNIT COST OF THE SUBJECT FORCE MAIN CONSTRUCTION, THE COST OF UTILITY ADJUSTMENTS NECESSARY TO ATTAIN DESIGN MINIMUM SEPARATION FOR UTILITIES CONFLICTING WITH THE CONSTRUCTION OF THE PROPOSED FORCE MAIN. INTERRUPTIONS OF ANY EXISTING UTILITY SERVICES SHALL BE NOTICED TO EFFECTED CUSTOMERS A MINIMUM OF 48 HOURS IN ADVANCE AND SHALL NOT EXCEED 4 HOURS IN DURATION.

WHERE CONCRETE REPAIRS ARE NECESSARY AND EXPANSION JOINTS ARE PRESENT, CONTRACTOR TO REMOVE AND REPLACE CONCRETE UP TO THE NEXT EXPANSION JOINT; OTHERWISE, REPLACE CONCRETE AS NECESSARY.

GROUNDWATER / DEWATERING NOTE:
 THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED ON THIS PROJECT. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR THIS ISSUE. WHEN PERFORMING GRADING OPERATIONS DURING PERIODS OF WET WEATHER, PROVIDE ADEQUATE DEWATERING, DRAINAGE AND GROUND WATER MANAGEMENT TO CONTROL MOISTURE OF SOILS.



No.	REVISIONS	DATE	BY

Kimley & Horn

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KHA PROJECT 148400025
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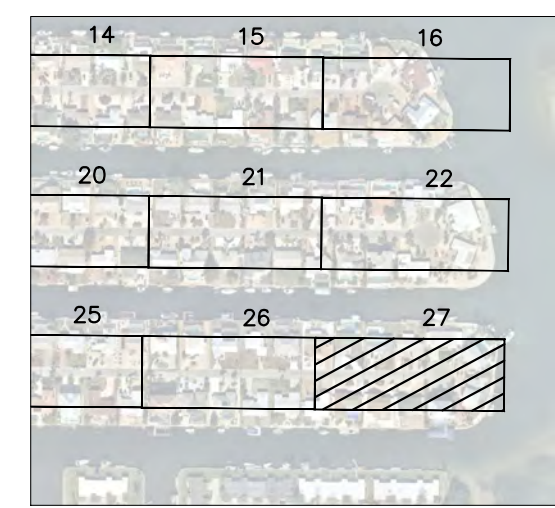
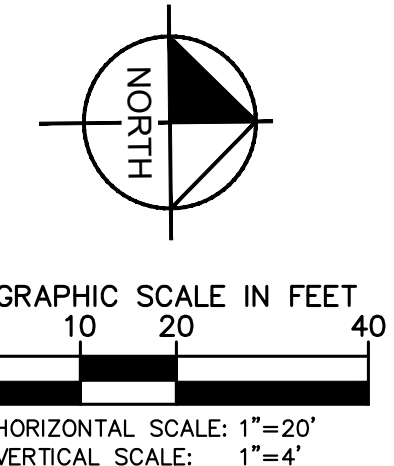
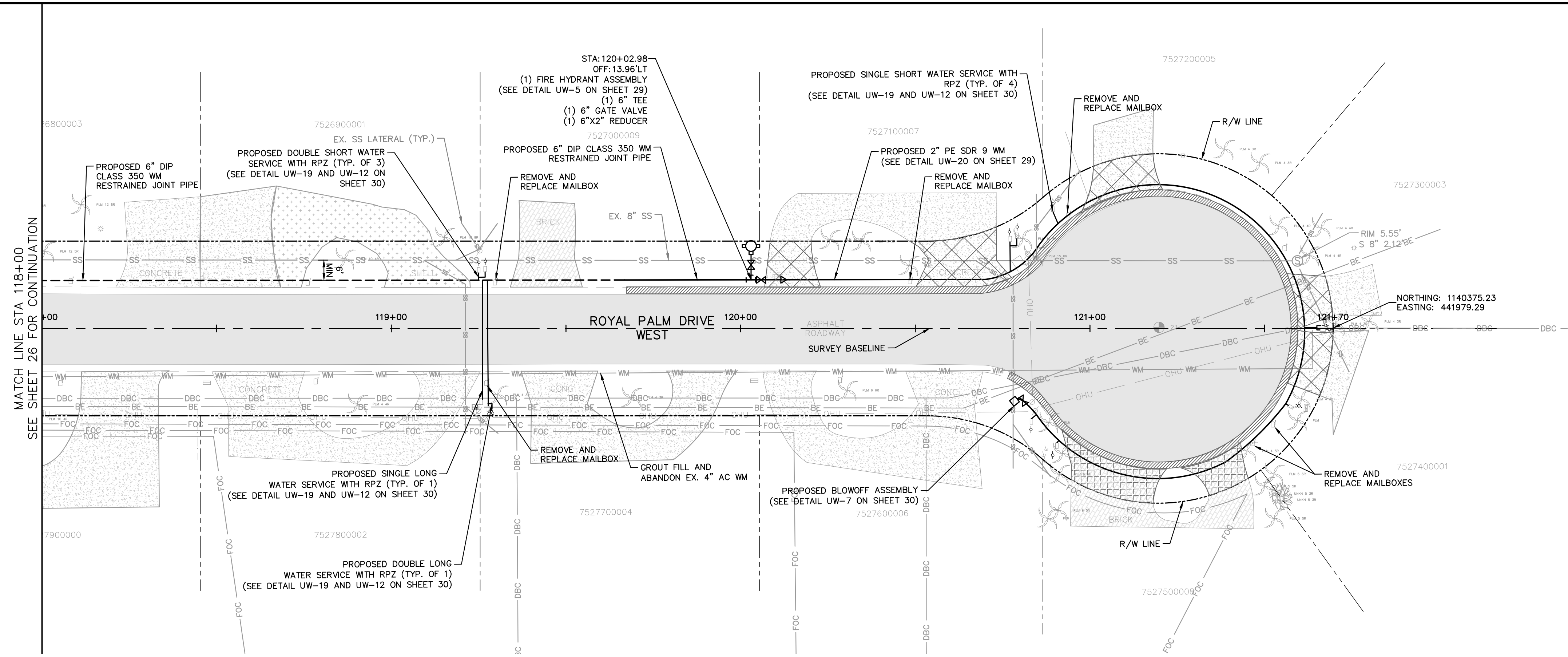
Manatee County
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 MANATEE COUNTY

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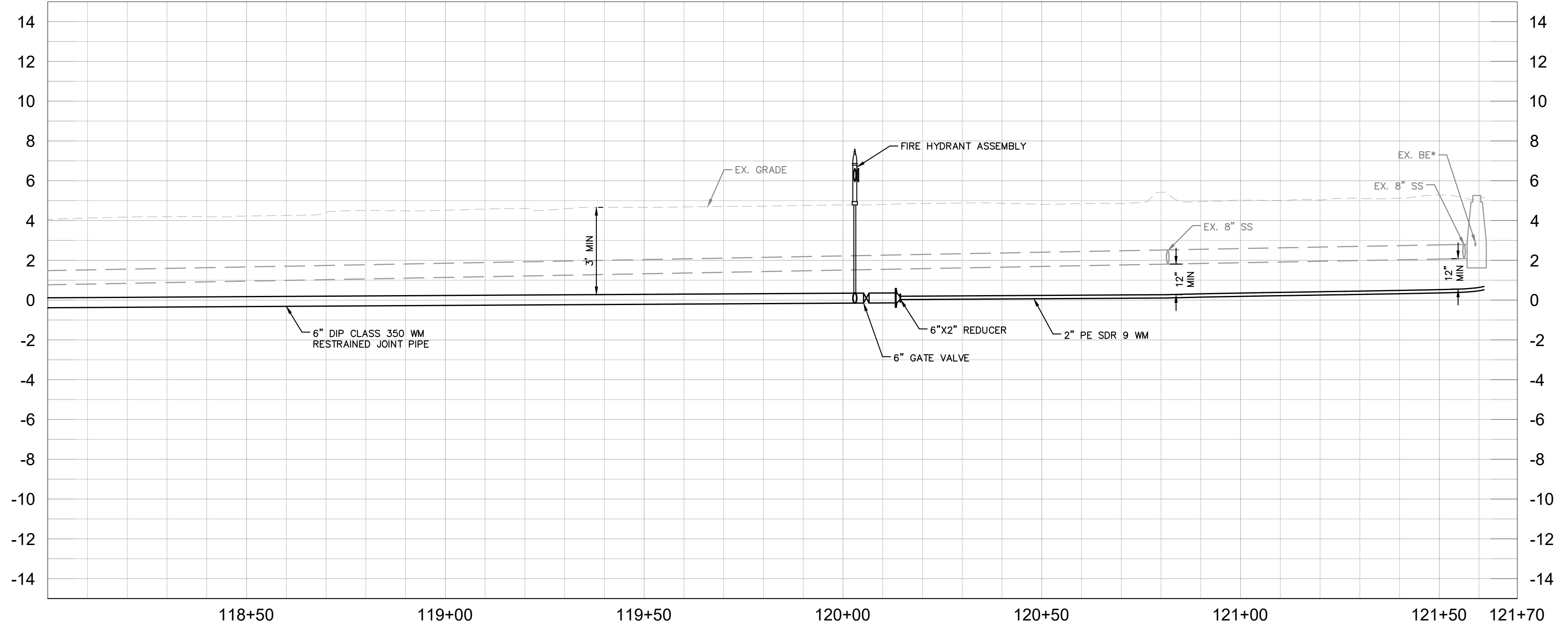
LEGEND

CTHDD	---
OPEN CUT	---
ASPHALT DRIVEWAY RESTORATION	[Pattern]
SIDEWALK/CONCRETE DRIVEWAY RESTORATION	[Pattern]
BRICK DRIVEWAY RESTORATION	[Pattern]
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MANATEE COUNTY

LICENSED PROFESSIONAL

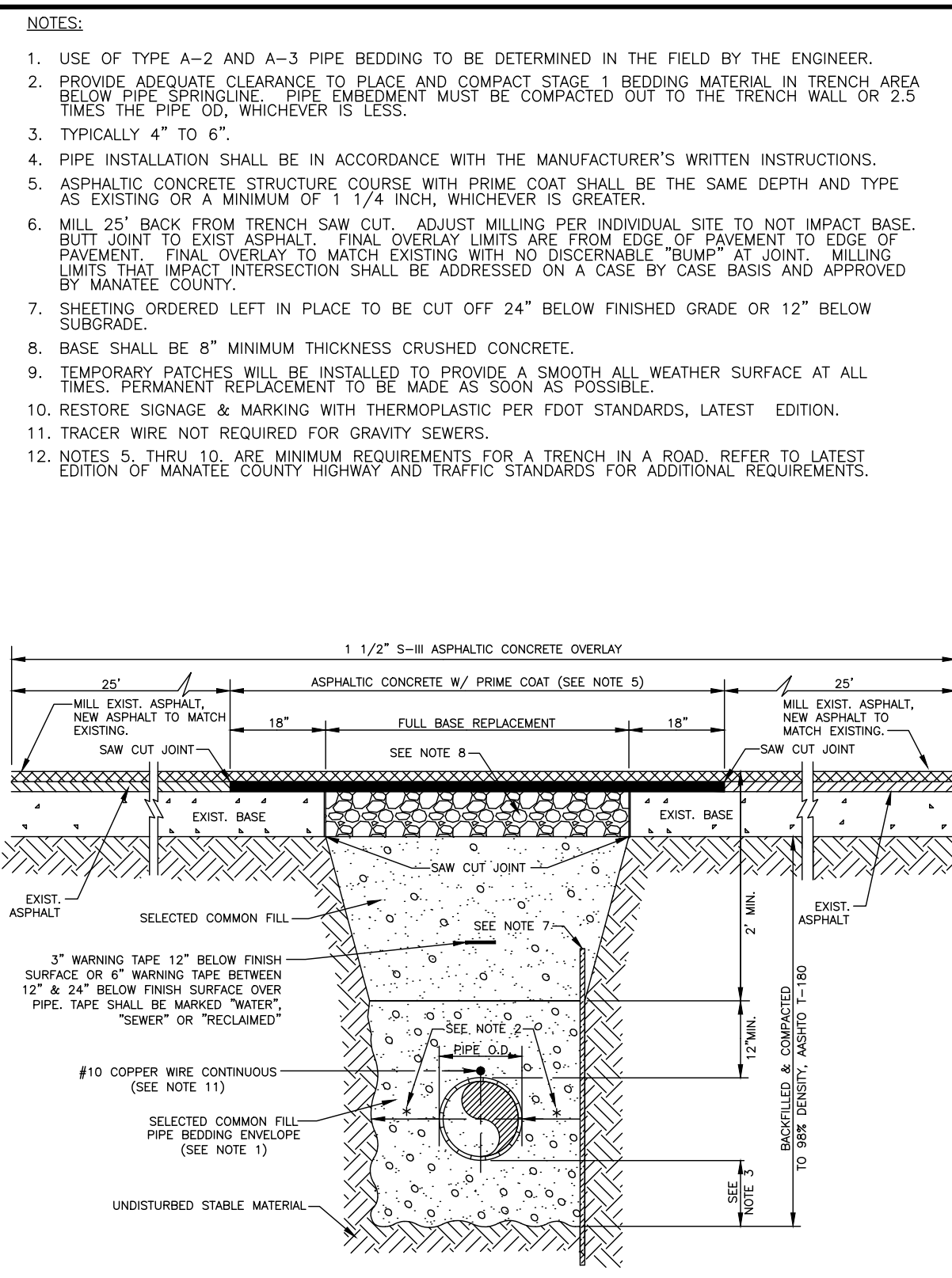
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PLAN & PROFILE ROYAL PALM DRIVE

SHEET NUMBER
27

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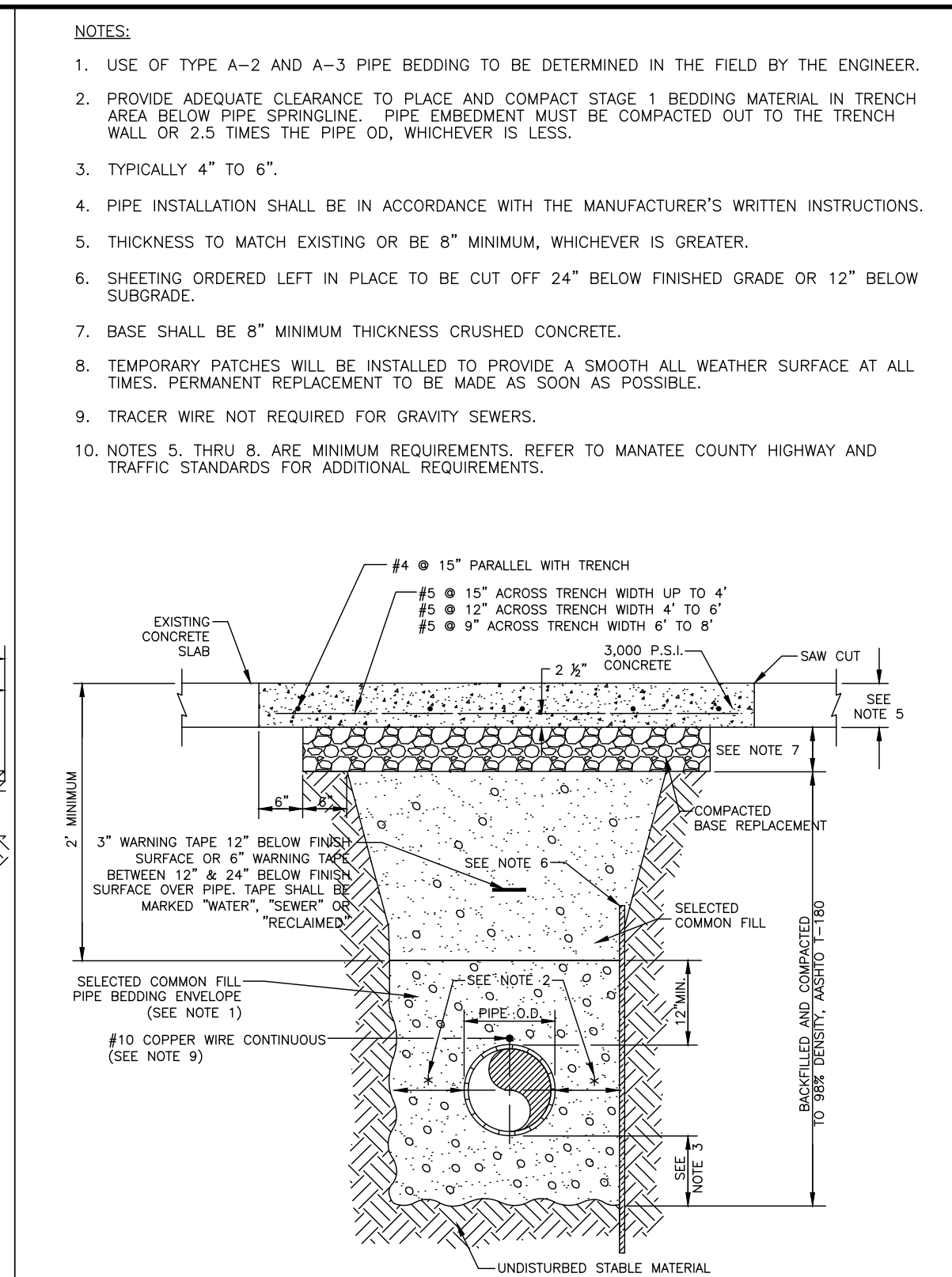
MANATEE COUNTY PUBLIC WORKS DEPARTMENT		TRENCH WITH ASPHALT PAVEMENT SURFACE TYPE A-1 PIPE BEDDING	UG-12
REV. BY WRT/KE	DATE 03/11	MAY 10, 2011	PAGE 112
DATE OF APPROVAL			

GENERAL NOTES

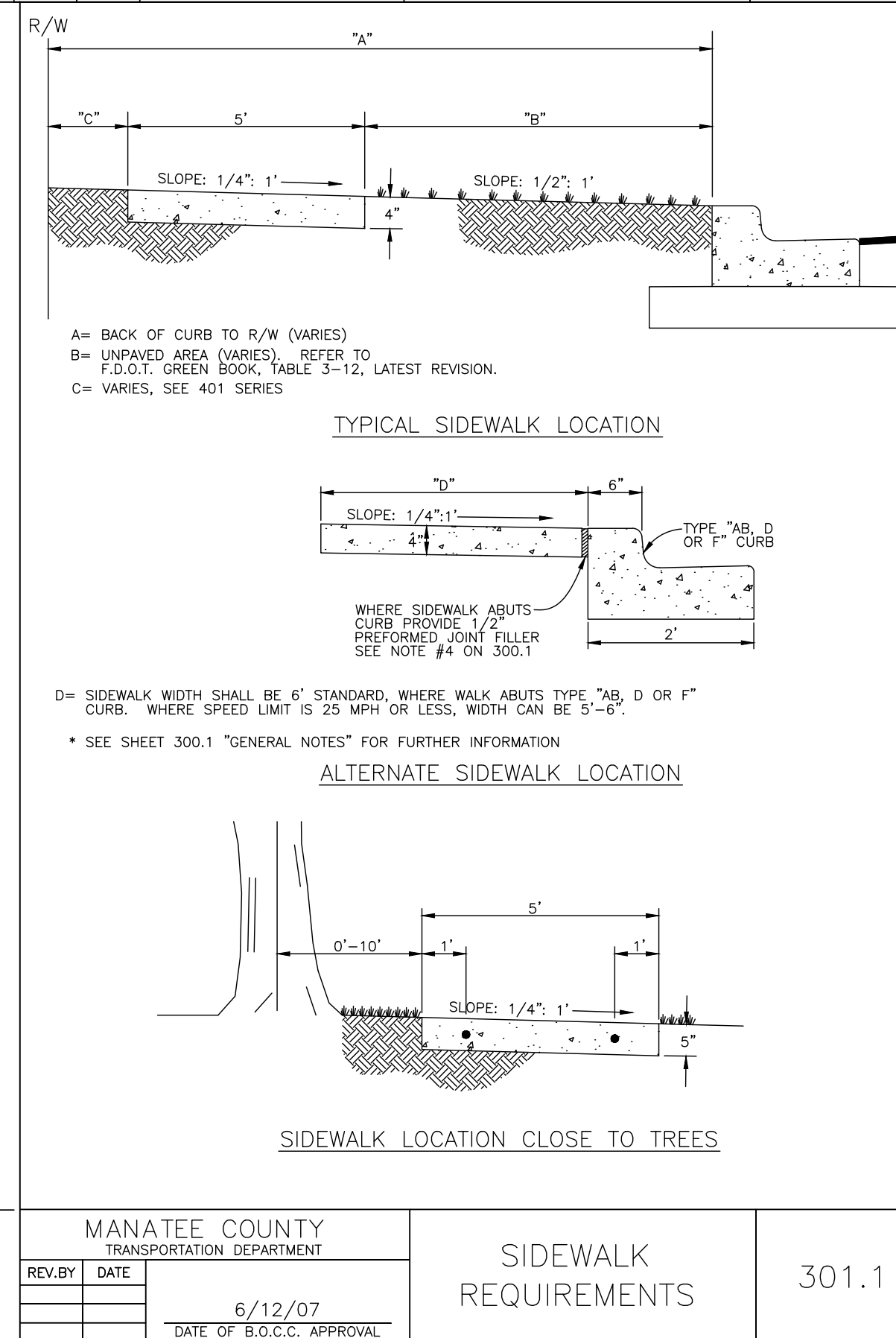
- SIDEWALK SHALL BE CONSTRUCTED A MINIMUM OF 4" THICK, USING 3000 PSI CONCRETE. WHERE SIDEWALK BISECTS A DRIVEWAY, THE MINIMUM SHALL BE 6" OF CLASS I CONCRETE REINFORCED WITH 6"x6" #10 WIRE MESH.
 - SEE SHEETS #101.2 & 101.3.
- ALL SIDEWALKS SHALL BE CONSTRUCTED TO THE SPECIFICATIONS OF THE MANATEE COUNTY LAND DEVELOPMENT CODE, SECTION 722. A MINIMUM (5) FOOT WIDE SIDEWALK SHALL BE INSTALLED ALONG THE NORTH AND WEST SIDES OF ALL NEW LOCAL STREETS WHICH ARE CONSTRUCTED IN CONJUNCTION WITH A NEW RESIDENTIAL DEVELOPMENT. A SIDEWALK A MINIMUM OF (5) FEET IN WIDTH SHALL BE INSTALLED ON BOTH SIDES OF ALL THOROUGHFARES. REFER TO F.D.O.T. ROADWAY AND TRAFFIC STANDARDS, LATEST REVISION FOR CURB CUT RAMP SPECIFICATIONS.
- THE CONCRETE SHALL BE GIVEN A BROOM FINISH. THE SURFACE VARIATIONS SHALL NOT BE MORE THAN 1/4" UNDER A TEN FOOT STRAIGHTEDGE, NOR MORE THAN 1/8" ON A FIVE-FOOT TRAVERSE SECTION. THE EDGE OF THE SIDEWALK SHALL BE CAREFULLY FINISHED WITH AN EDGING TOOL HAVING A RADIUS OF 1/2".
- EXPANSION JOINT: EXPANSION JOINTS BETWEEN THE SIDEWALKS AND THE CURB OR DRIVEWAY OR AT FIXED OBJECTS AND SIDEWALK INTERSECTIONS SHALL BE 1/2" MATERIAL SHALL MEET THE REQUIREMENTS OF AASHTO M153 OR AASHTO M213. FOR LONG POORS, AN EXPANSION JOINT SHALL BE PLACED AT INTERVALS NOT TO EXCEED 120'.
- CONTRACTION JOINTS:
OPEN TYPE JOINTS
OPEN TYPE CONSTRUCTION JOINTS SHALL BE FORMED BY STAKING A METAL BULKHEAD IN PLACE AND DEPOSITING THE CONCRETE ON BOTH SIDES. AFTER THE CONCRETE HAS SET SUFFICIENTLY TO PRESERVE THE WIDTH AND THE SHAPE OF THE JOINT, THE BULKHEAD SHALL BE REMOVED. AFTER THE SIDEWALK HAS BEEN FINISHED OVER THE JOINT, THE SLOT SHALL BE FINISHED WITH A TOOL HAVING A 1/2" RADIUS.
SAWED JOINTS
A SLOT APPROXIMATELY 3/16" WIDE AND NOT LESS THAN 1" DEEP AT 10' CENTERS SHALL BE CUT WITH A CONCRETE SAW AFTER THE CONCRETE HAS SET.
- SIDEWALKS ALONG OTHER STREETS SHALL BE CONSTRUCTED AND DEDICATED AS REQUIRED BY THE APPROVING AUTHORITY WHEN NECESSARY TO CONTINUE AN EXISTING OR PROPOSED SIDEWALK.
- HANDICAP RAMPS SHALL MEET FLORIDA ACCESSIBILITIES STANDARDS, AND SECTIONS 301.0, 301.1 AND 301.2.
- ALL SIDEWALKS ON R/W WITHIN 10' OF AN EXISTING OR PROPOSED TREE THAT WILL EXCEED 6" IN DIAMETER AT MATURITY SHALL BE 5" THICK AND CONTAIN 2-#3 REBAR CENTERED VERTICALLY AND SPACED 3' ON CENTER. PALMS ARE NOT CONSIDERED TREES.

*NOTE: FOR COMPLETE SIDEWALK DETAILS, SEE F.D.O.T. DESIGN STANDARDS, 2006 EDITION, INDEX 304, SHEETS 1 THROUGH 6 AND INDEX 310, SHEETS 1 & 2.

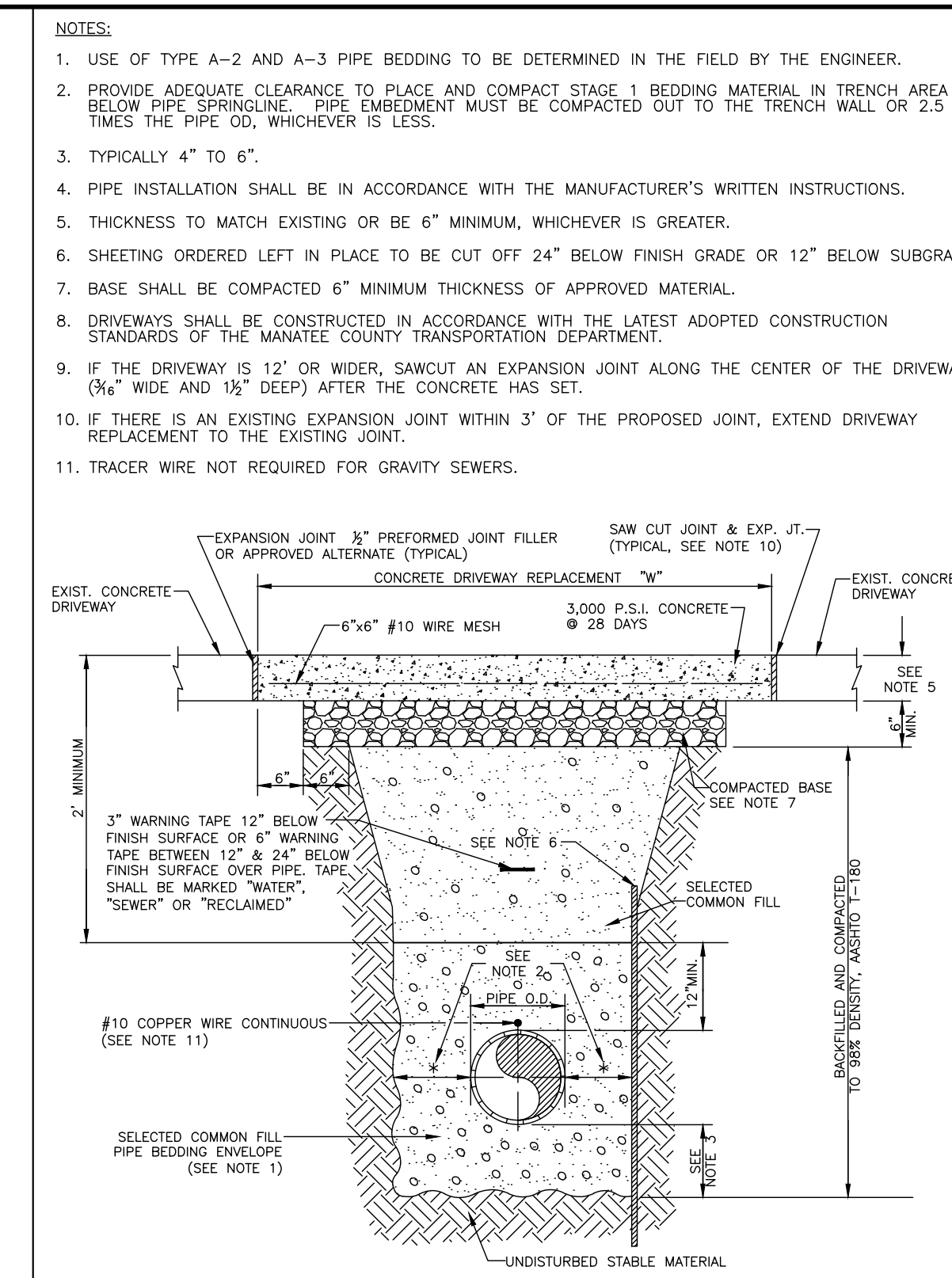
MANATEE COUNTY TRANSPORTATION DEPARTMENT		SIDEWALKS GENERAL NOTES	301.0
REV. BY DATE	6/12/07		
DATE OF B.O.C.C. APPROVAL			



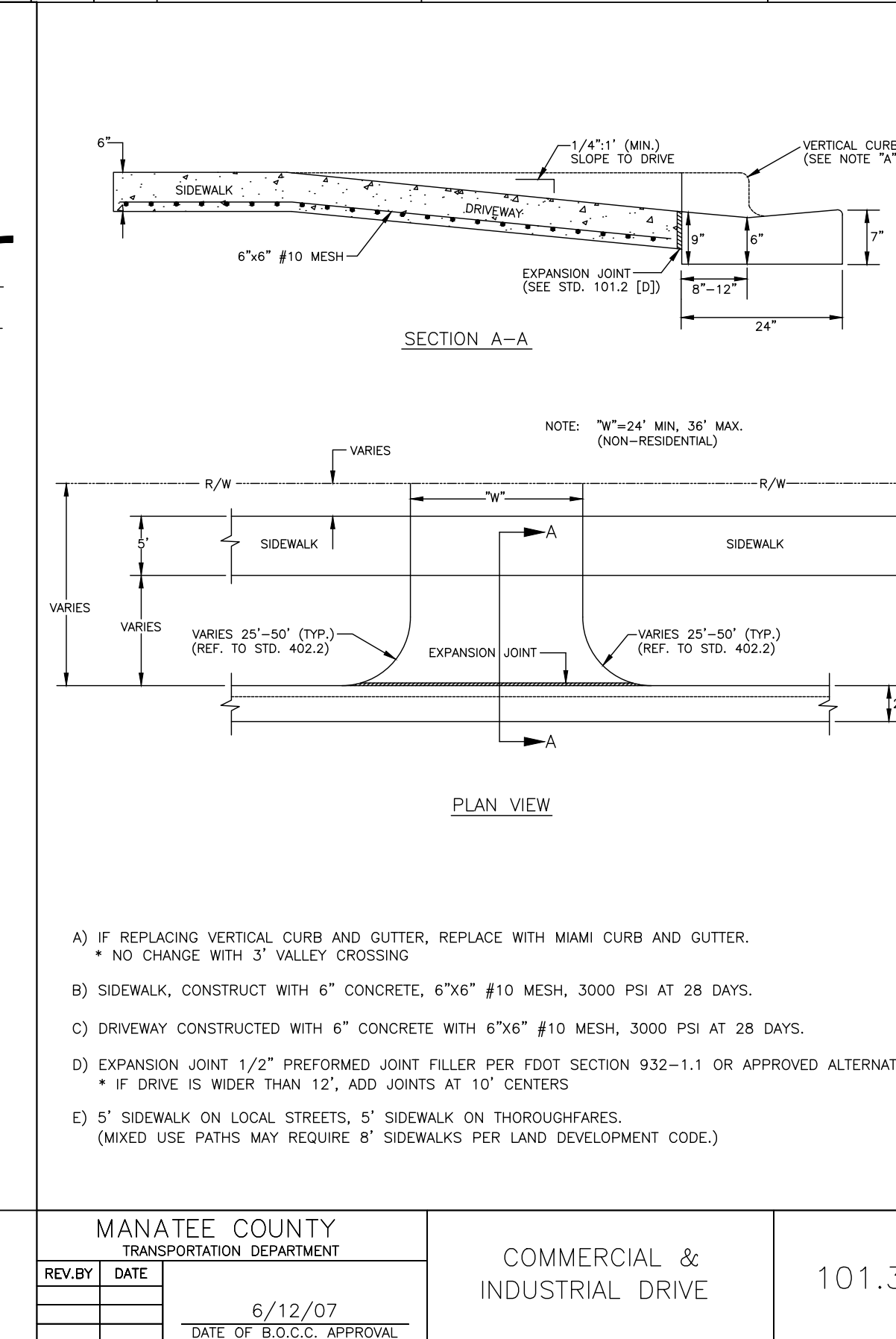
MANATEE COUNTY PUBLIC WORKS DEPARTMENT		TRENCH WITH CONCRETE PAVEMENT SURFACE TYPE A-1 PIPE BEDDING	UG-13
REV. BY CLB/BR	DATE 11/10	MAY 10, 2011	PAGE 113
DATE OF APPROVAL			



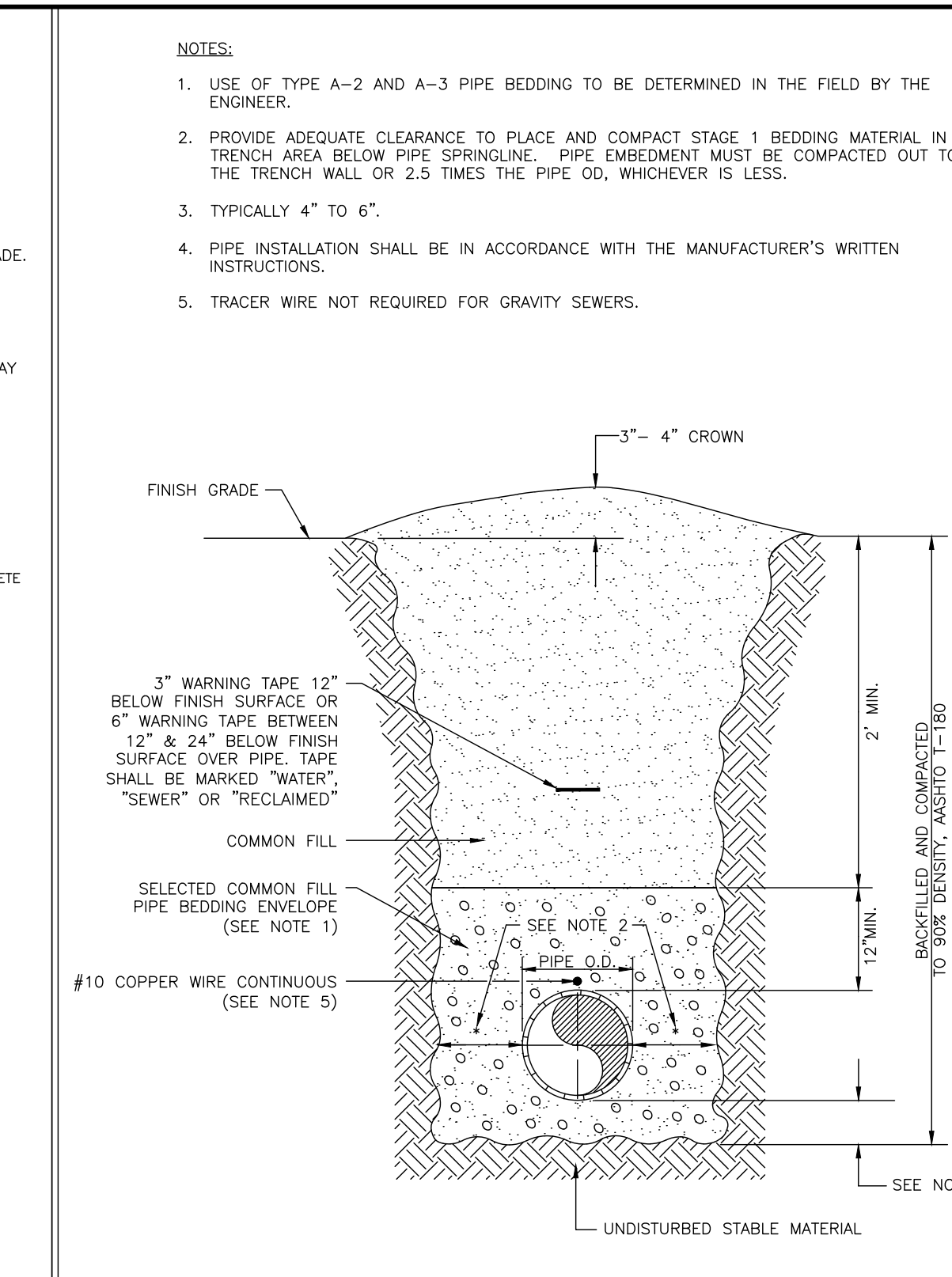
MANATEE COUNTY TRANSPORTATION DEPARTMENT		SIDEWALK REQUIREMENTS	301.1
REV. BY DATE	6/12/07		
DATE OF B.O.C.C. APPROVAL			



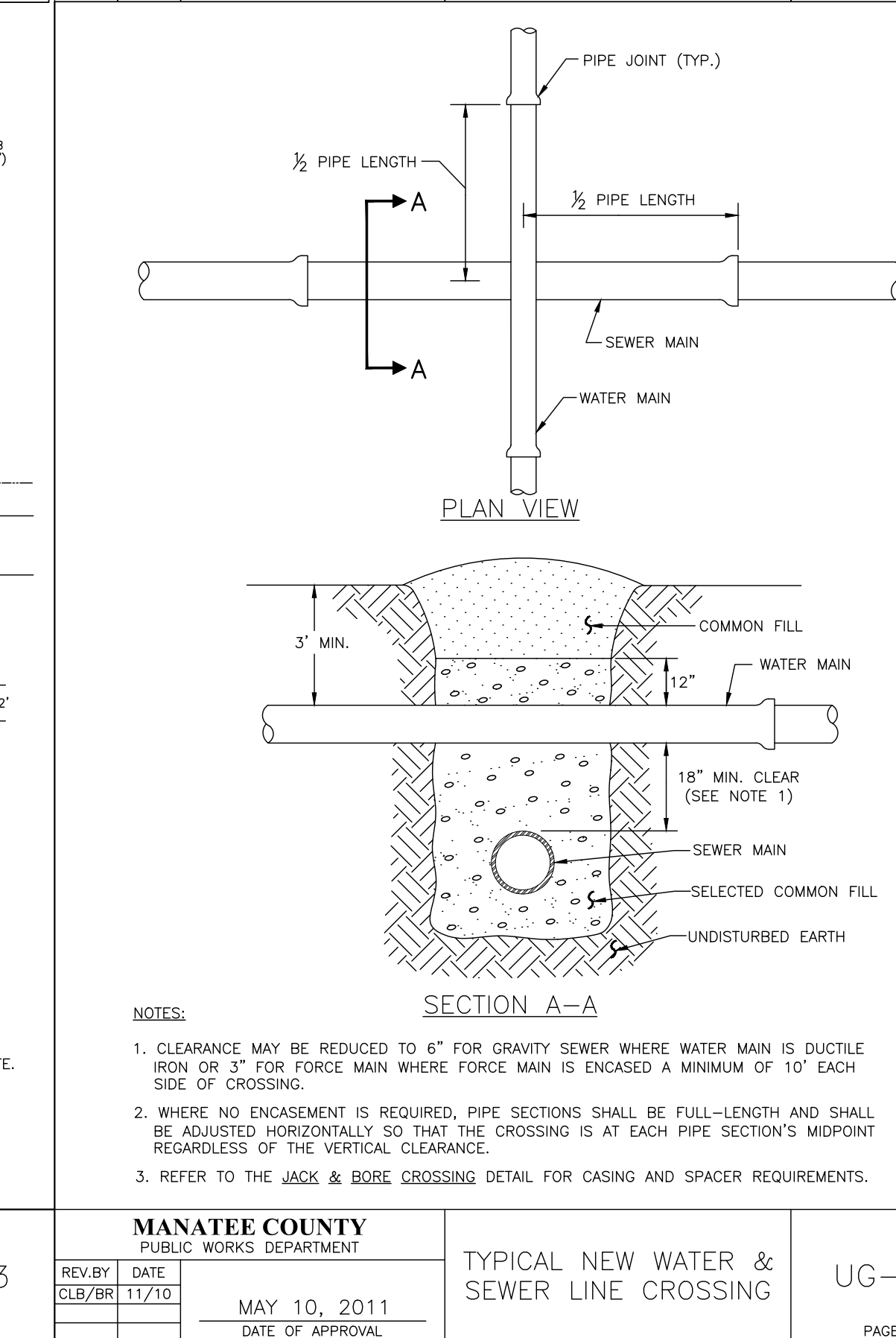
MANATEE COUNTY PUBLIC WORKS DEPARTMENT		TRENCH WITH CONCRETE DRIVEWAY SURFACE TYPE A-1 PIPE BEDDING	UG-14
REV. BY CLB/BR	DATE 11/10	MAY 10, 2011	PAGE 114
DATE OF APPROVAL			



MANATEE COUNTY TRANSPORTATION DEPARTMENT		COMMERCIAL & INDUSTRIAL DRIVE	101.3
REV. BY DATE	6/12/07		
DATE OF B.O.C.C. APPROVAL			



MANATEE COUNTY PUBLIC WORKS DEPARTMENT		TRENCH WITH UNIMPROVED SURFACE TYPE A-1 PIPE BEDDING	UG-11
REV. BY WRT/KE	DATE 03/11	MAY 10, 2011	PAGE 111
DATE OF APPROVAL			



MANATEE COUNTY PUBLIC WORKS DEPARTMENT		TYPICAL NEW WATER & SEWER LINE CROSSING	UG-2
REV. BY CLB/BR	DATE 11/10	MAY 10, 2011	PAGE 102
DATE OF APPROVAL			

GROUNDWATER / DEWATERING NOTE:
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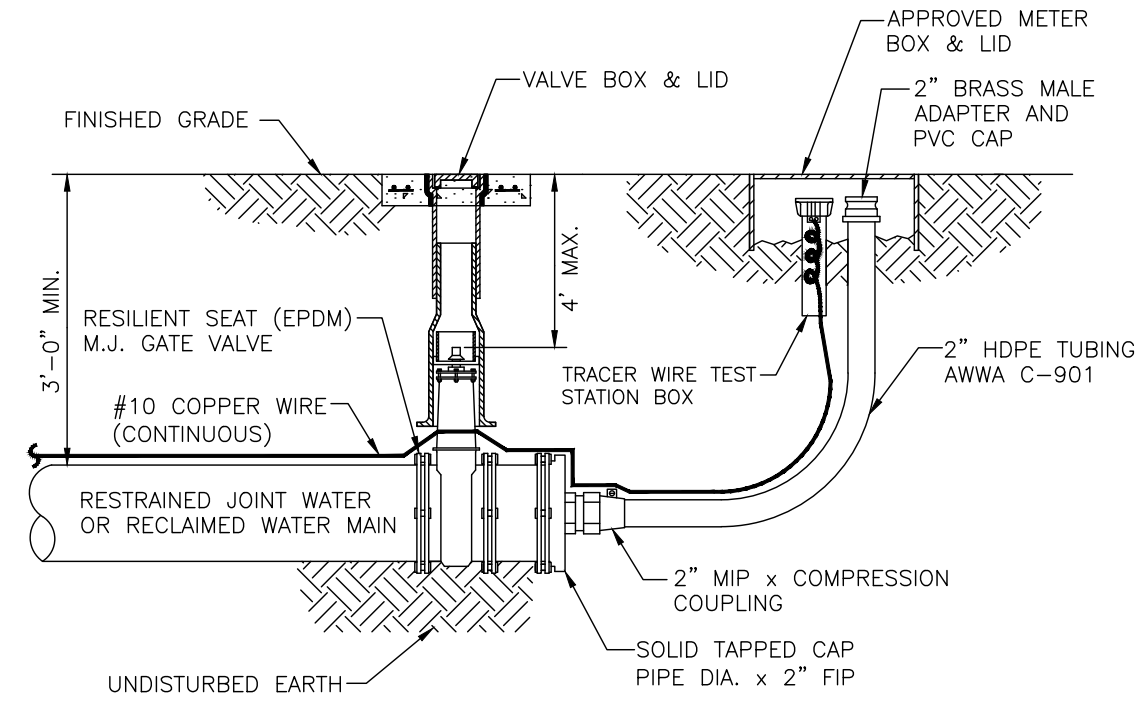
LICENSED PROFESSIONAL
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CONSTRUCTION DETAILS

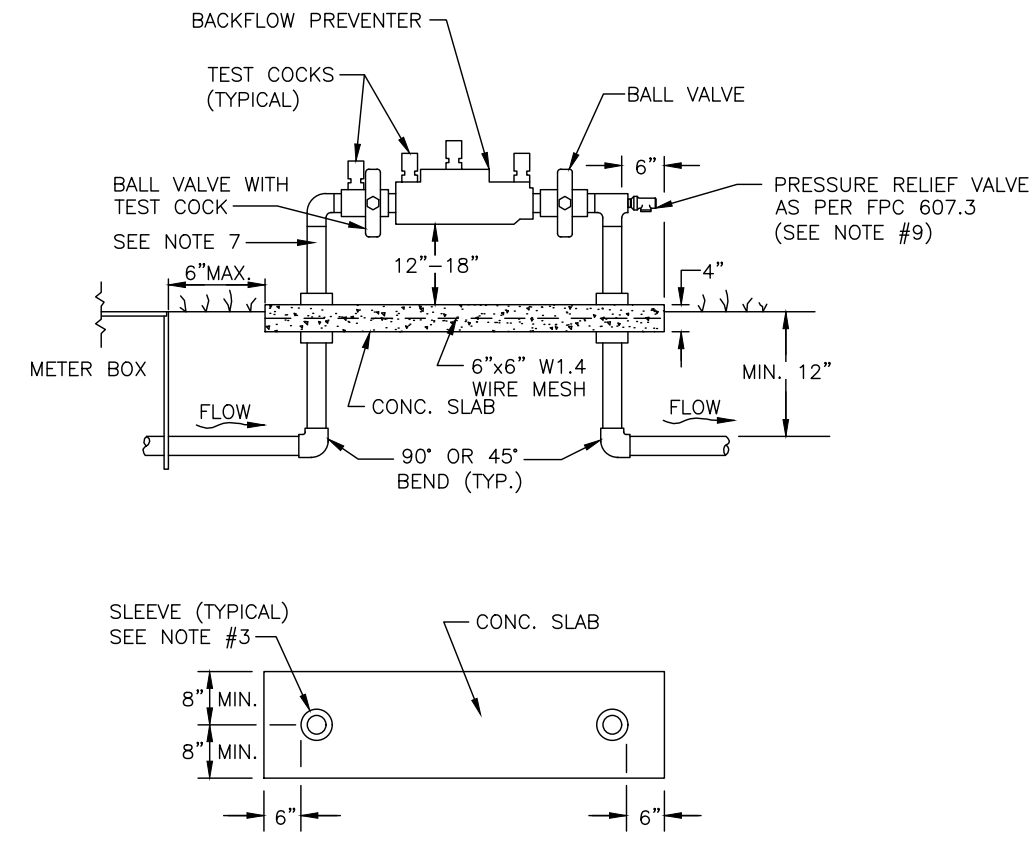
SHEET NUMBER 28

No.	REVISIONS	DATE	BY

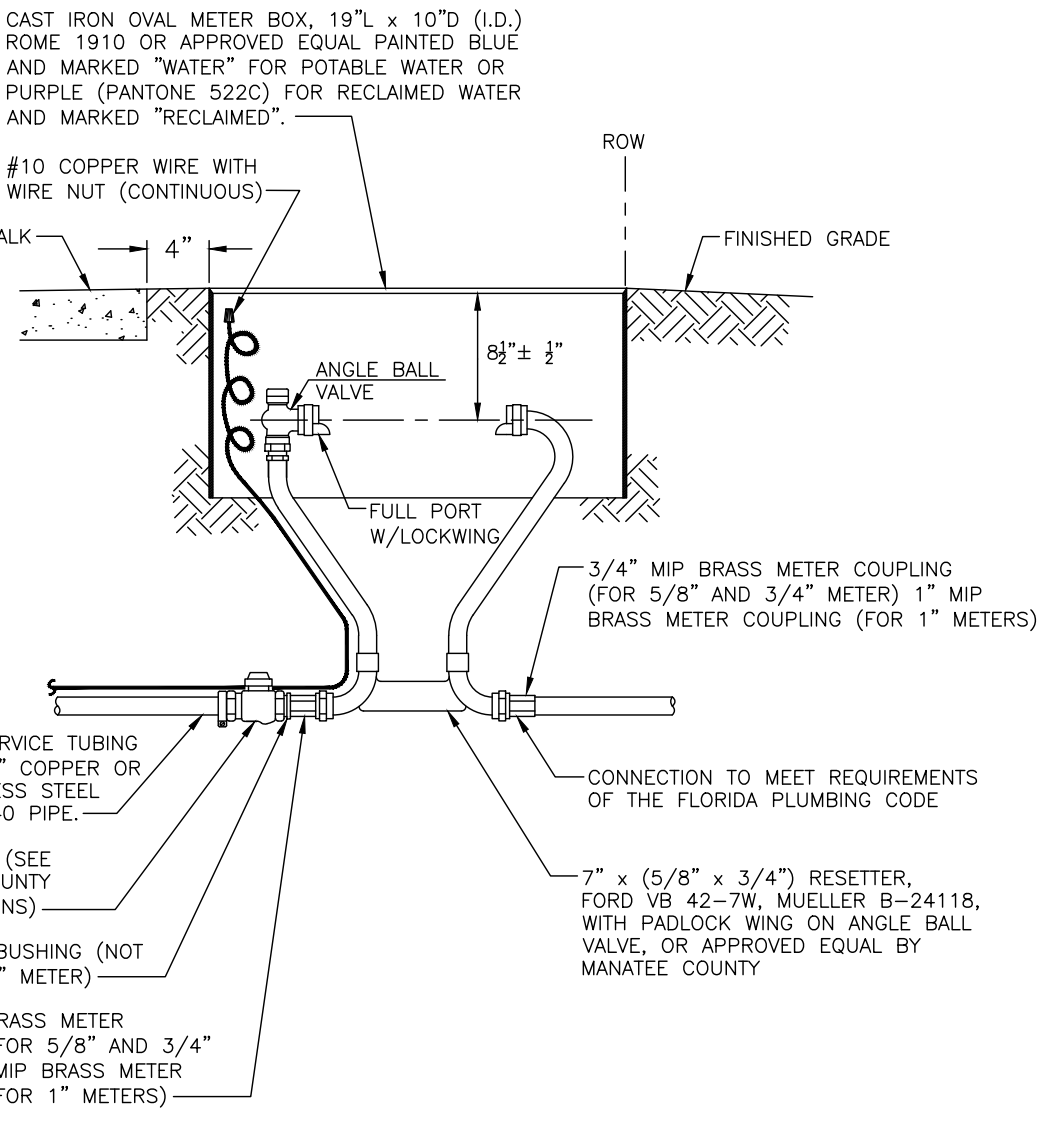
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- NOTE:
- SEE STANDARD DETAIL GATE VALVE, BOX, LID AND TAG.



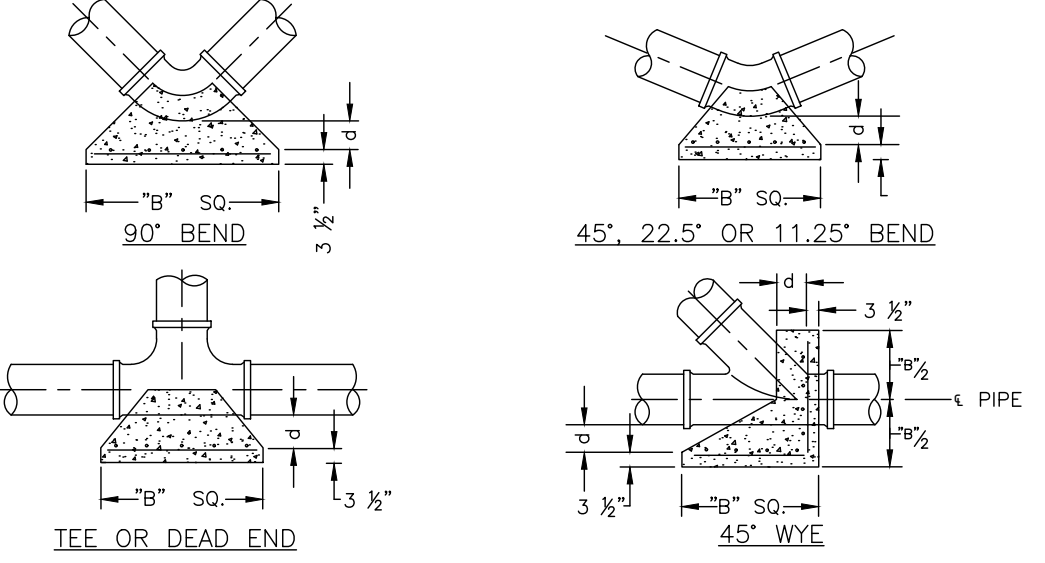
- NOTES:
- BACKFLOW DEVICE MUST BE INSTALLED IMMEDIATELY DOWNSTREAM OF METER, AS SHOWN ABOVE
 - COPPER PIPE TYPE "K" OR BRASS PIPE MINIMUM SCHEDULE 40 SHALL BE USED TO A MINIMUM DEPTH OF 12" BELOW GRADE.
 - PIPES PASSING THROUGH OR ENCASED IN CONCRETE MUST BE PROPERLY PROTECTED AND SLEEVED.
 - THE SYSTEM MUST MEET ALL REQUIREMENTS OF THE FLORIDA PLUMBING CODE (LATEST EDITION) AND THE MANATEE COUNTY BACKFLOW PREVENTION ORDINANCE (LATEST EDITION).
 - ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/2".
 - BACKFLOW PREVENTER SHALL BE TESTED AT THE TIME OF INSTALLATION.
 - PRESSURE REDUCING VALVE REQUIRED UPSTREAM OF BACKFLOW IF SYSTEM PRESSURE EXCEEDS 80 PSI.
 - 3' MINIMUM CLEARANCE FROM LANDSCAPING PLANTS TO EDGE OF CONCRETE SLAB AND CLEAR OPENING FOR ACCESS FROM STREET.
 - IN ADDITION TO THE PRV, THE BUILDING DEPT. MAY REQUIRE AN APPROVED DEVICE FOR THERMAL EXPANSION CONTROL.
 - REFER TO DETAIL WATER METER & BACKFLOW PREVENTER FOR LIFT STATIONS FOR WATER SERVICE AT SEWAGE PUMPING STATION.



- NOTES:
- FORD 40 SERIES RESETTERS VB43 AND VB44 OR EQUAL FOR 3/4" OR 1" METERS ALSO ALLOWED.
 - METER BOX AND RESETTER ARE TO BE INSTALLED BY THE INFRASTRUCTURE CONTRACTOR AND SHALL NOT BE SET IN DRAINAGE SWALES, SIDEWALKS OR DRIVEWAYS.
 - FOR COMPLETE SERVICE CONNECTION ASSEMBLY, SEE DETAIL TYPICAL SERVICE CONNECTION.
 - WHEN THE DISTANCE BETWEEN THE EDGE OF THE SIDEWALK AND THE R/W IS ONE FOOT (CUL-DE-SAC W/ MEDIAN) A 10-FOOT-WIDE PUBLIC UTILITY EASEMENT SHALL BE LOCATED IN THE FRONT OF THE LOTS, ADJACENT TO THE ROW.
 - 3' MINIMUM CLEARANCE FROM LANDSCAPING PLANTS TO EDGE OF METER, CLEAR ACCESS OPENING TO STREET.

PIPE SIZE (N.)	90° BEND		45° BEND		22.5° BEND		11.25° BEND		DEAD END		45° WYE	
	B	d	B	d	B	d	B	d	B	d	B	d
4	1.5	3 1/2	1.1	3 1/2	0.8	3 1/2	0.6	3 1/2	1.3	3 1/2	1.1	3 1/2
6	2.2	5 1/2	1.6	3 3/4	1.2	3 3/4	0.8	3 3/4	1.9	4 1/2	1.6	3 3/4
8	2.9	7	2.1	5	1.5	3 3/4	1.1	3 3/4	2.4	5 3/4	2.0	4 3/4
10	3.5	8 1/2	2.6	6 1/4	1.9	4 1/2	1.3	3 3/4	3.0	7 1/4	2.5	6
12	4.2	10	3.1	7 1/2	2.2	5 1/4	1.6	3 3/4	3.5	8 1/4	3.0	7 1/4
14	4.9	11 3/4	3.6	8 3/4	2.6	6 1/4	1.8	4 1/4	4.1	9 3/4	3.4	8 1/4
16	5.5	13 1/4	4.1	9 3/4	2.9	7	2.1	5	4.7	11 1/4	3.9	9 1/4
18	6.2	15	4.6	11	3.3	8	2.3	5 1/2	5.2	12 1/2	4.4	10 1/2
20	6.9	16 1/2	5.0	12	3.6	8 3/4	2.6	6 1/4	5.8	14	4.9	11 3/4
24	8.2	19 3/4	6.0	14 1/2	4.3	10 1/4	3.1	7 1/2	6.9	16 1/2	5.8	14
30	10.1	24 1/4	7.5	18	5.3	12 3/4	3.8	9	8.5	20 1/2	7.2	17 1/4
36	12.1	29	8.9	21 1/4	6.4	15 1/4	4.5	10 1/4	10.2	24 1/2	8.6	20 3/4

- REINFORCEMENT MAT SCHEDULE
- FOR DIM. "B" BETWEEN 5.75' & 12.5' USE #4 @ 8" EACH WAY
 FOR DIM. "B" LESS THAN 5.75' USE #3 @ 8" EACH WAY

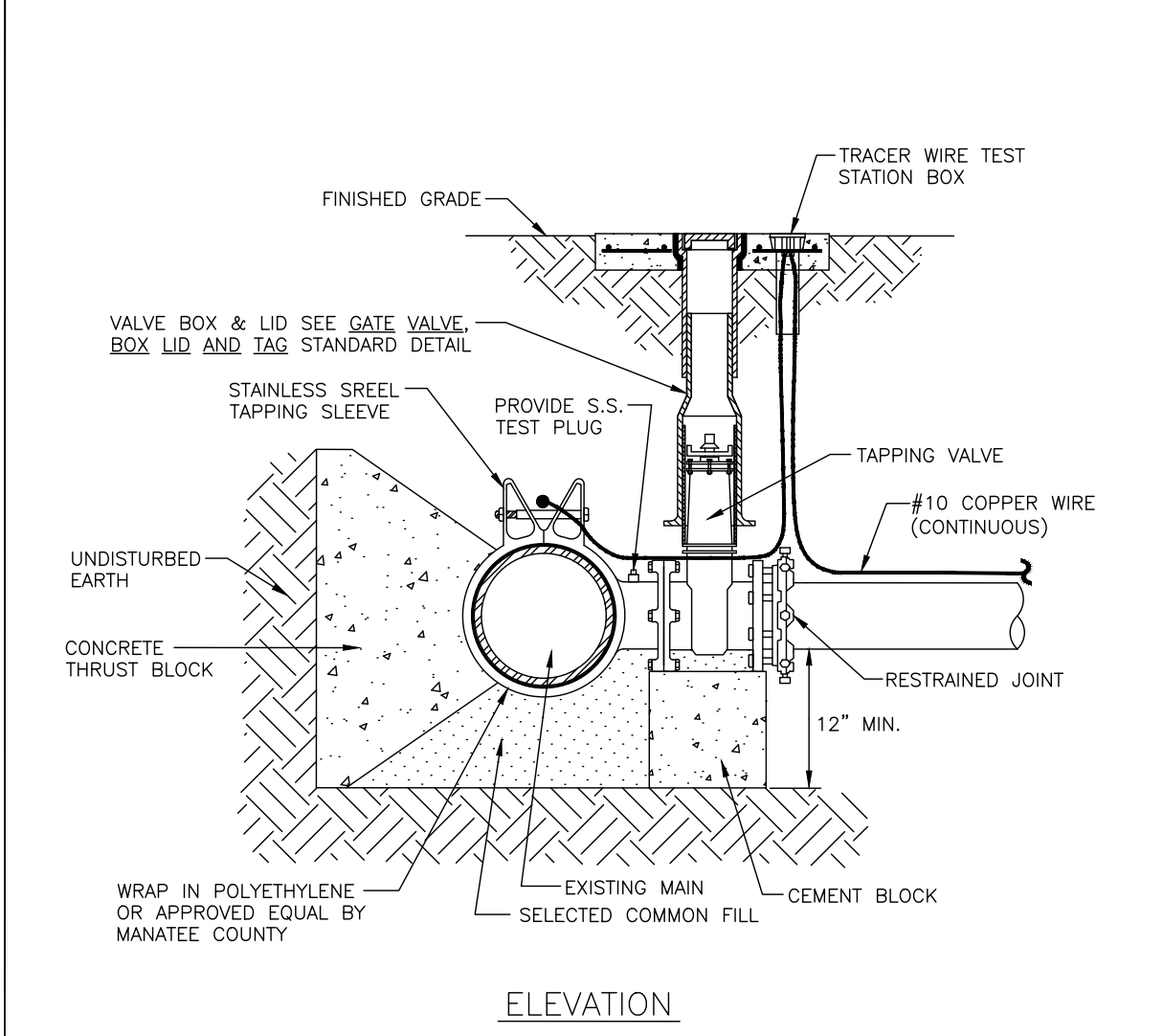
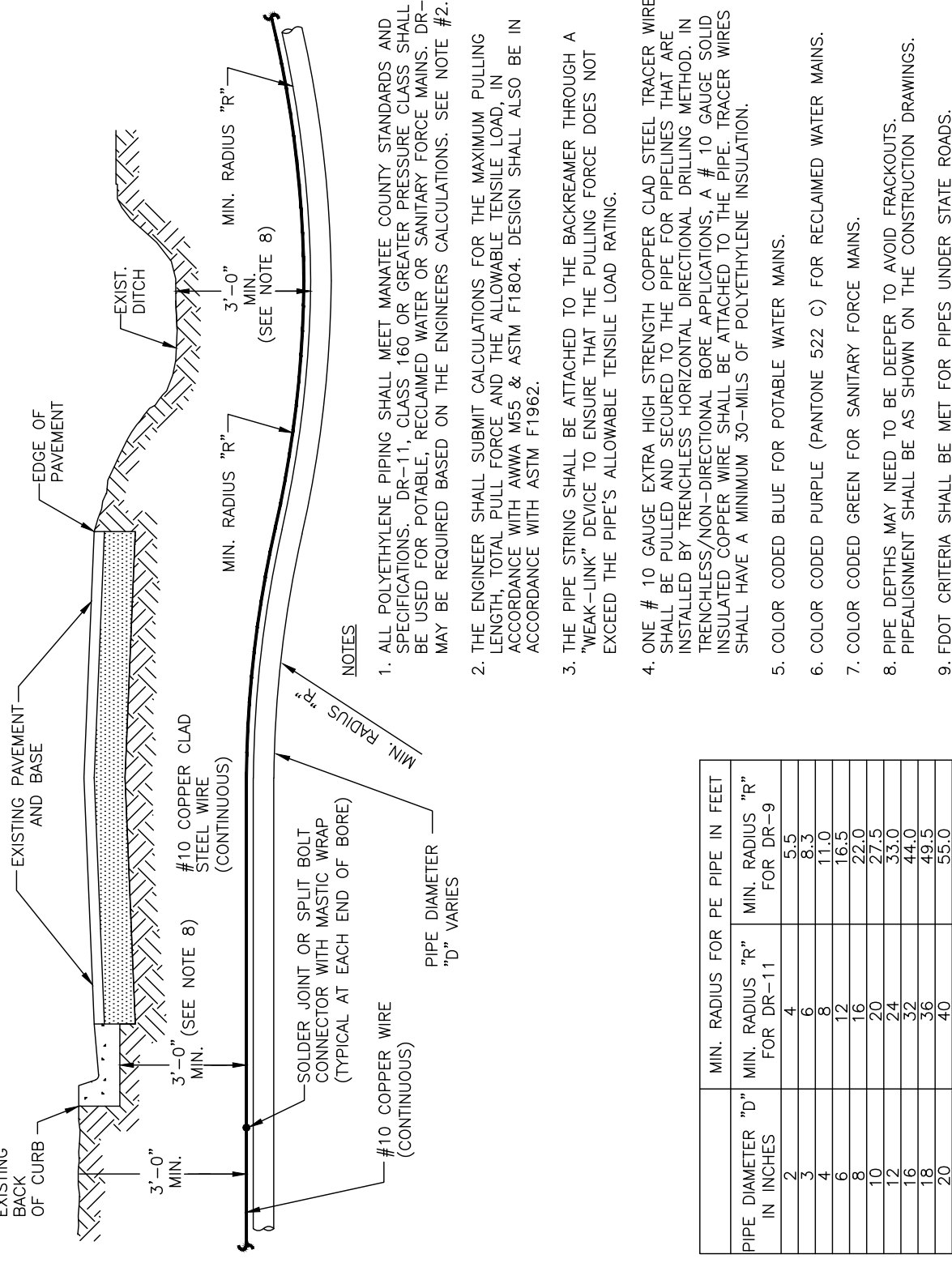


MANATEE COUNTY PUBLIC WORKS DEPARTMENT		2" BLOW-OFF ASSEMBLY FOR 10" MAINS AND SMALLER	UW-7	PAGE 125
REV. BY	DATE			
CLB/KE	11/10	MAY 10, 2011 DATE OF APPROVAL		

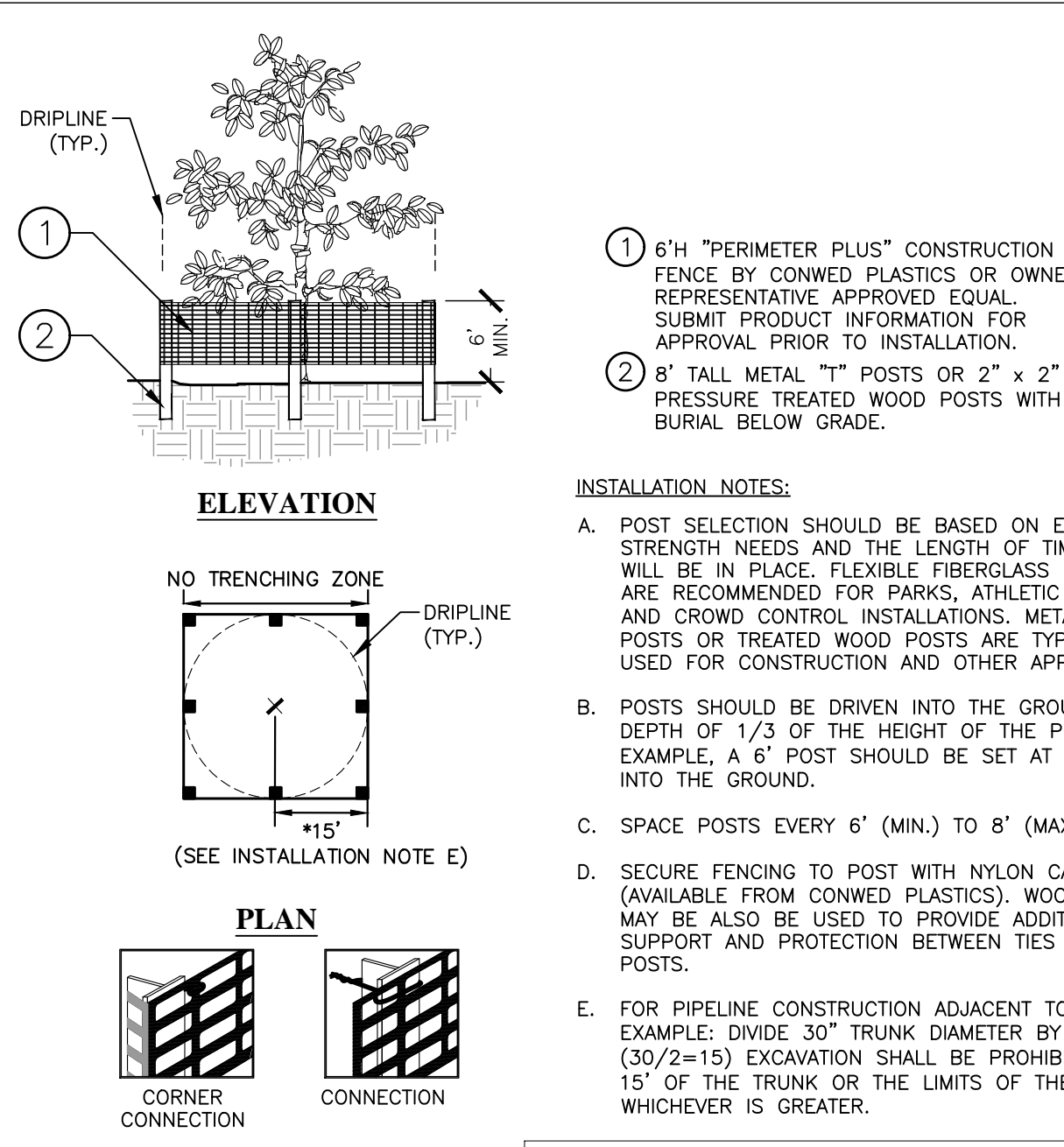
MANATEE COUNTY PUBLIC WORKS DEPARTMENT		3/4" & 1" BACKFLOW PREVENTER	UW-12	PAGE 130
REV. BY	DATE			
CLB/BR	11/10	MAY 10, 2011 DATE OF APPROVAL		

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		METER BOX ASSEMBLY FOR 5/8" x 3/4", 3/4" & 1" METERS	UW-17	PAGE 135
REV. BY	DATE			
CLB/BR	11/10	MAY 10, 2011 DATE OF APPROVAL		

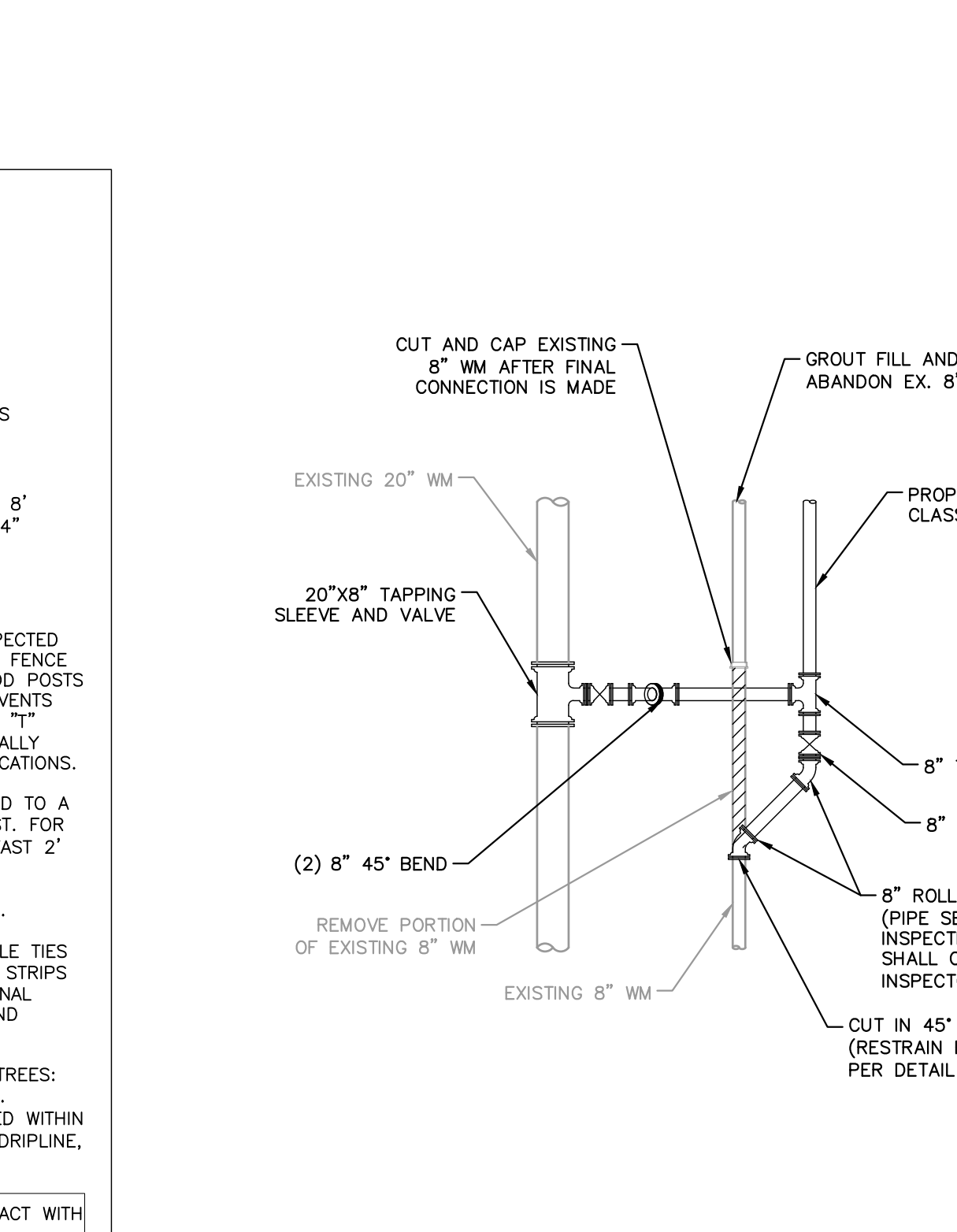
MANATEE COUNTY PUBLIC WORKS DEPARTMENT		CONCRETE THRUST BLOCKS	UG-7	PAGE 107
REV. BY	DATE			
CLB/BR	11/10	MAY 10, 2011 DATE OF APPROVAL		



- NOTES:
- PRIOR TO TAPPING, CONTRACTOR TO DEMONSTRATE 60 MINUTE HYDROSTATIC TEST OF THE TAPPING SLEEVE AND VALVE WITH NO LOSS OF 180 PSI PRESSURE FOR WATER AND RECLAIMED WATER OR 150 PSI FOR FORCE MAIN.
 - ALL FITTINGS TO BE WRAPPED WITH 20 MIL VISQUEEN AT THRUST BLOCK.
 - ALL TAPS ON CONCRETE WATER MAINS AND LARGER THAN 12" ARE TO BE MADE BY A MANATEE COUNTY APPROVED TAPPING COMPANY. ALL MATERIALS TO BE SUPPLIED BY THE CONTRACTOR.
 - ALL TAPS MUST BE OF A SMALLER SIZE THAN THE MAIN BEING TAPPED & PLACED NO CLOSER THAN 30" OR A DISTANCE EQUAL TO (1) MAIN PIPE DIAMETER PLUS (2) TAP PIPE DIAMETERS (WHICHEVER IS GREATER) FROM A JOINT OR FITTING.
 - CONTRACTOR TO SUBMIT A DRY HOLE FOR TAPPING CREW TO WORK IN AND A BACK-HOE TO LOWER TAPPING MACHINE INTO THE HOLE.
 - WHERE THRUST BLOCK NOT USED, RESTRAINED JOINTS MUST THEN EXTEND FROM TEE FULL LENGTH SPECIFIED FOR TEES.
 - TRACER WIRE TEST STATION BOX IS REQUIRED AT CONNECTIONS TO EXISTING MAINS.



- NOTE: IF WIRE TIES ARE USED, AVOID DIRECT CONTACT WITH FENCE. WIRE MAY DAMAGE FENCE OVER TIME.
- 1 TREE PROTECTION FENCING ELEVATION / PLAN
- 2 WATER MAIN CONNECTION DETAIL SCALE: 1-1/2"=1'



GROUNDWATER / DEWATERING NOTE:
 THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED ON THIS PROJECT. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR THIS ISSUE. WHEN PERFORMING GRADING OPERATIONS DURING PERIODS OF WET WEATHER, PROVIDE ADEQUATE DEWATERING, DRAINAGE AND GROUND WATER MANAGEMENT TO CONTROL MOISTURE OF SOILS.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		DIRECTIONAL BORE ROADWAY CROSSING	UG-4	PAGE 104
REV. BY	DATE			
CLB/BR	11/10	MAY 10, 2011 DATE OF APPROVAL		

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		TAPPING SLEEVE AND VALVE	UW-4	PAGE 122
REV. BY	DATE			
CLB/KE	11/10	MAY 10, 2011 DATE OF APPROVAL		

No.	REVISIONS	DATE	BY

Kimley-Horn

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 WWW.KIMLEY-HORN.COM CA 0000696

KHA PROJECT 148400025
 DATE 5/3/2019
 SCALE AS SHOWN
 DESIGNED BY WWW
 DRAWN BY LMB
 CHECKED BY SNR

Manatee County Florida

END OF SERVICE LIFE: FY-18
 SAN REMO SHORES WM REPLACEMENT
 MANATEE COUNTY

LICENSED PROFESSIONAL

W. WADE WOOD, P.E.

FL LICENSE NUMBER 69051

FL DATE:

SHEET NUMBER

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CONSTRUCTION DETAILS

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