

Addendum No. 5 - Bid Attachment 4 - Plan Set

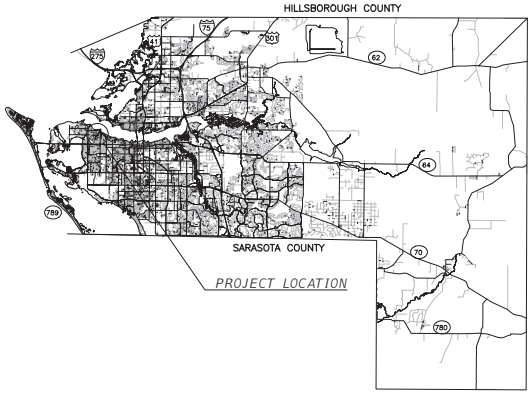
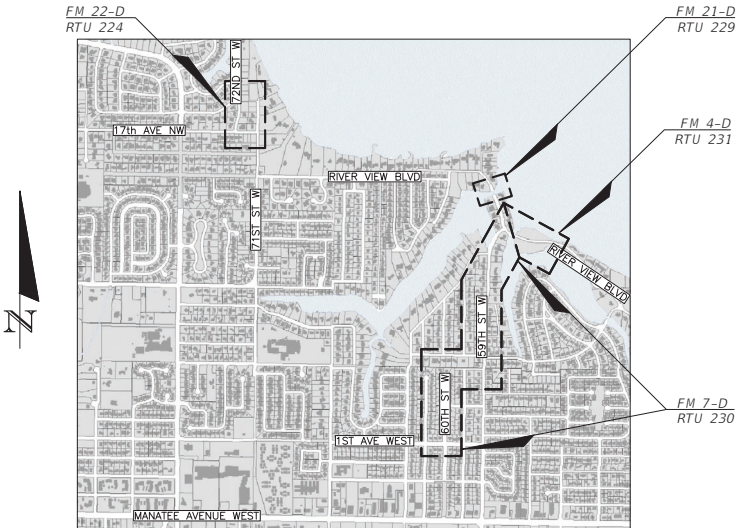
MANATEE COUNTY
UTILITY ENGINEERING SECTION

SOUTHWEST SERVICE AREA D
FORCE MAIN REPLACEMENT

404-6089781

JULY 2024

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BID PLANS

PRE-BUILDER SUBMITTAL 4/22/24



THIS ITEM HAS BEEN DIGITALLY
SIGNED AND SEALED BY
Digitally signed by John S Shoun
Date: 2024.10.24 13:12:36 -04'00'
ON THE DATE ADJACENT TO THE SEAL,
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UTILITY PLANS
PROFESSIONAL OF RECORD:
J. SHEA SHOUN, P.E.
FL LICENSE No: 60923

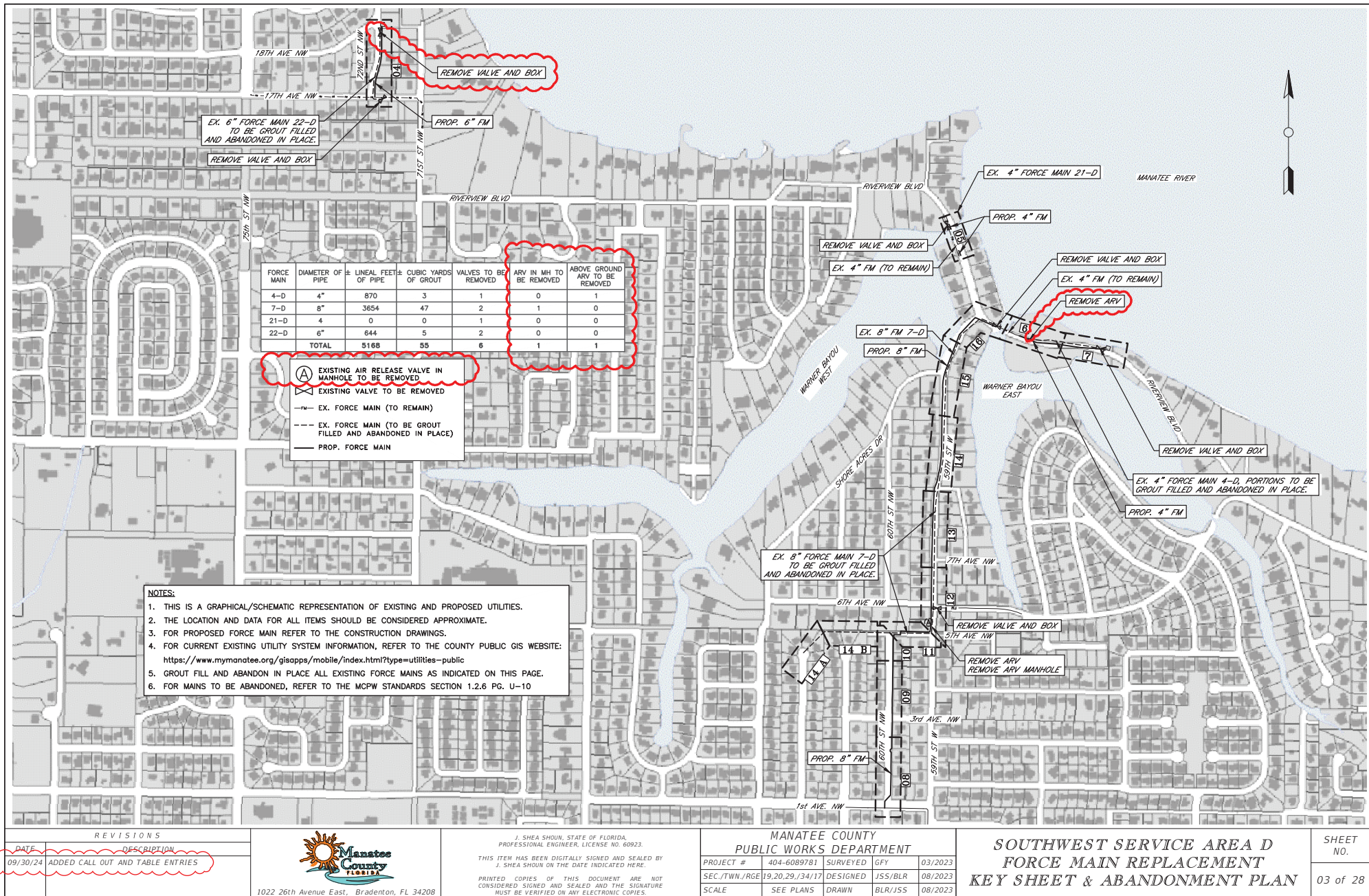
MANATEE COUNTY PUBLIC WORKS
1022 26th AVENUE EAST
BRADENTON, FL 34208

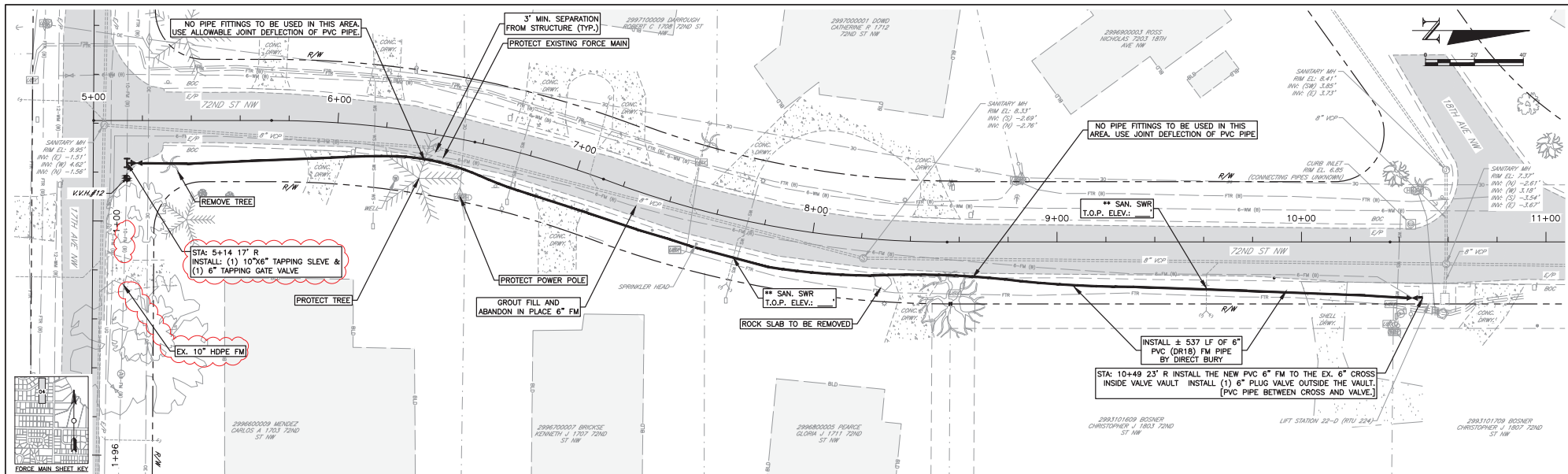
PROJECT DESCRIPTION
INSTALL APPROXIMATELY A TOTAL OF 5,700
LF OF 4, 6 & 8-INCH REPLACEMENT SEWAGE
FORCE MAINS FOR VARIOUS LIFT STATIONS.



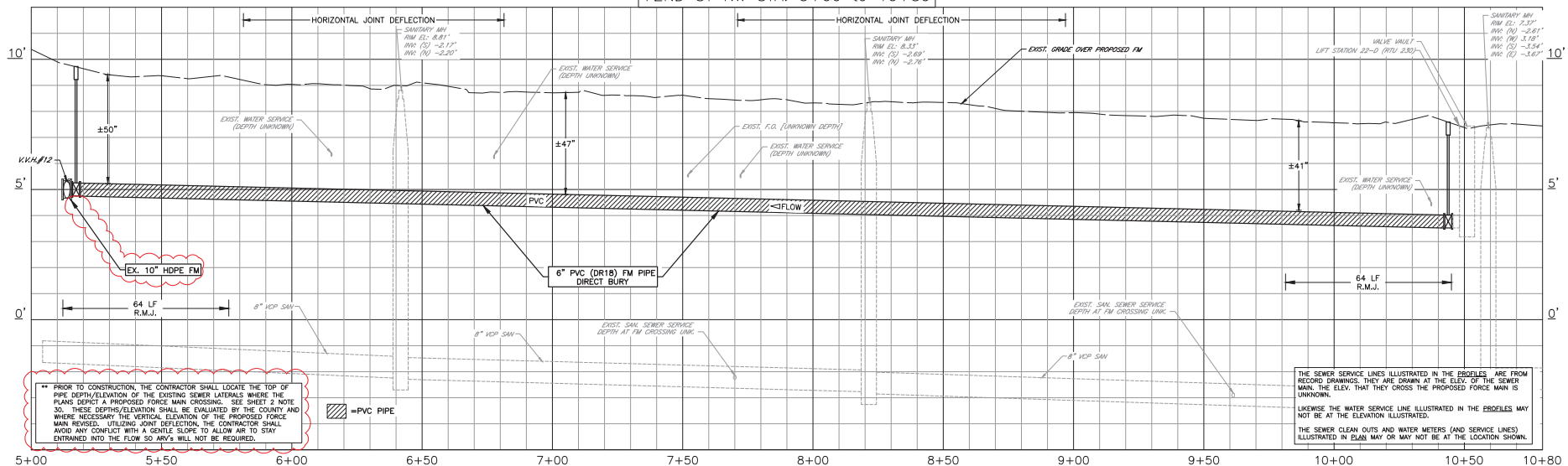
ATTENTION IS DIRECTED TO THE FACT THAT
THESE PLANS MAY HAVE BEEN REDUCED IN
SIZE BY REPRODUCTION. THIS MUST BE
CONSIDERED WHEN OBTAINING SCALED DATA.

FISCAL YEAR	SHEET NO.
2024	01 of 28





72ND ST NW STA: 5+00 to 10+80



REVISIONS	
DATE	DESCRIPTION
09/30/24	CORRECTED RECEIVING PIPE SIZE FROM 8" TO 10"
09/30/24	REVISED NOTE



1022 26th Avenue East, Bradenton, FL 34208

J. SHEA SHOUN, STATE OF FLORIDA,
PROFESSIONAL ENGINEER, LICENSE NO. 60923.
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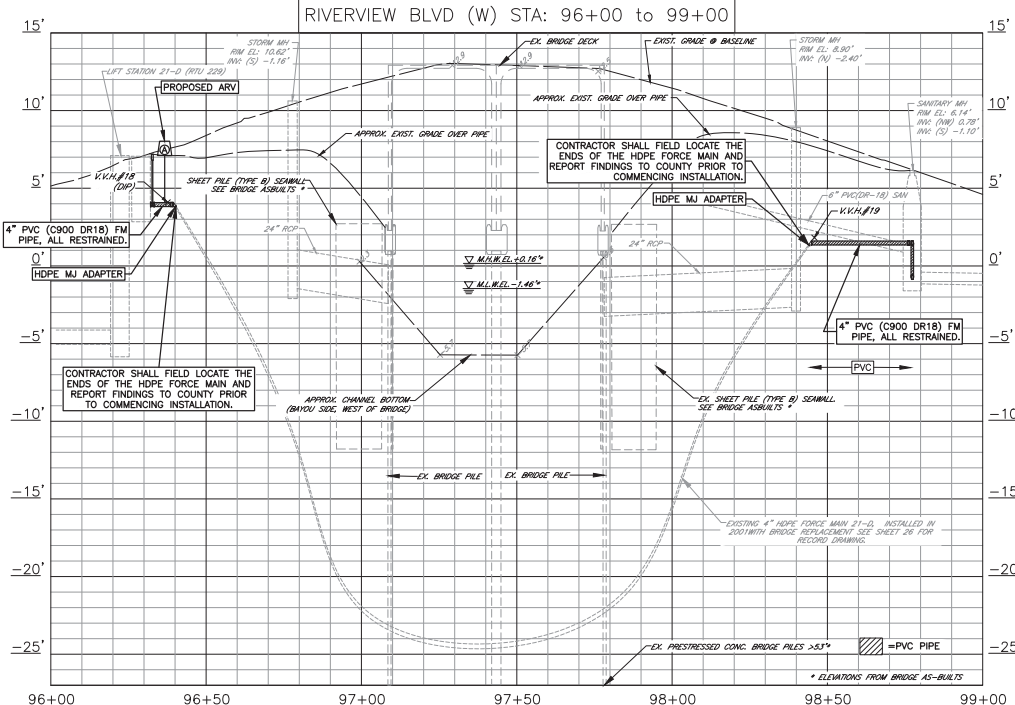
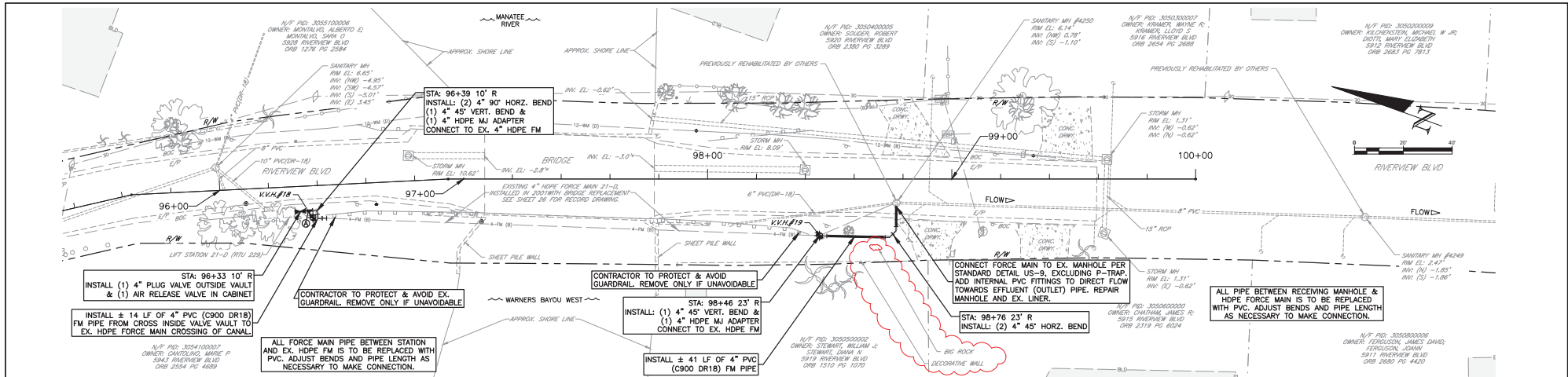
MANATEE COUNTY PUBLIC WORKS DEPARTMENT			
PROJECT #	404-6089781	SURVEYED	GFY 03/2023
SEC./TWN./RGE	19/34/17	DESIGNED	JSS/BLR 08/2023
SCALE	SEE PLANS	DRAWN	BLR/JSS 08/2023

**SOUTHWEST SERVICE AREA D
FORCE MAIN REPLACEMENT
72ND AVE NW [FM 22-D, RTU 224]**


SHEET
NO.
04 of 28

Originally plotted by Bruce Robertson at 1:1 scale on 10/24/2024 at 10:36:11 AM on ANSI full bleed D (34.00 x 22.00 inches) paper using MC-2016.STB. File Name: FM-AREA D_P_DESIGN.DWG

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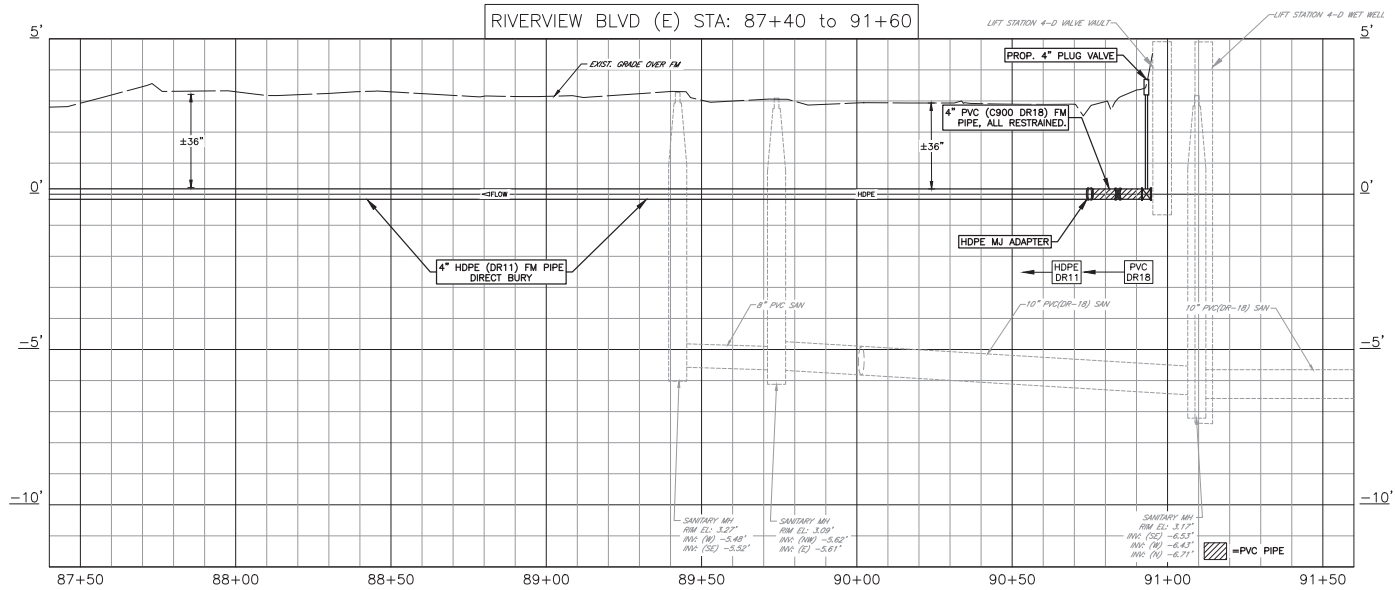
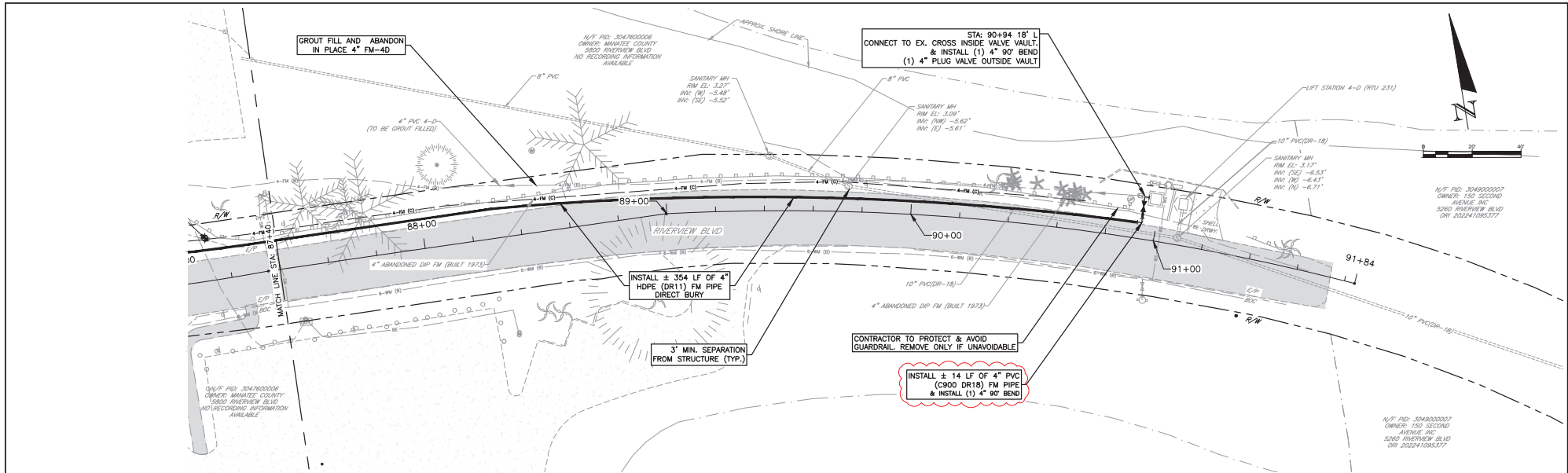


- CONSTRUCTION NOTES (APPLICABLE TO ALL PLAN AND PROFILE SHEETS):
1. ANY MAINTENANCE OF TRAFFIC (MOT) PLAN MUST FOLLOW FDOT 102-600 SERIES STANDARDS. NO FULL OR LANE CLOSURES WITHOUT FULL MOT PLAN AND COUNTY DIRECTOR APPROVAL. WORK MAY REQUIRE NIGHT ONLY WORK TO BE APPROVED.
 2. LOCATION OF EXISTING SEWER SERVICE LATERALS ARE APPROXIMATE. PRIOR TO INSTALLATION OF THE PROPOSED FORCE MAIN, THE CONTRACTOR SHALL LOCATE AND PROVIDE RECORD OF THE TOP OF PIPE ELEVATION OF THE EXISTING SEWER LATERALS, AND OTHER CONFLICTS AT THE PROPOSED MAIN CROSSING TO THE COUNTY. DEPENDING ON THE POTENTIAL CONFLICTS DISCOVERED, THE PROPOSED MAIN OR SEWER LATERAL(S) MAY BE VERTICALLY ADJUSTED AT THE SOLE-DISCRETION OF THE COUNTY TO AVOID THE NEED FOR THE INSTALLATION OF AIR RELEASE VALVES (ARV). ALL ADJUSTMENTS SHALL BE PER COUNTY STANDARDS AND/OR PLUMBING CODE; WHICHEVER IS MORE STRINGENT. THE CONTRACTOR SHALL RECORD THE SANITARY SEWER LATERAL ELEVATIONS AND/OR ALL RELOCATIONS IN THE PROJECT RECORD DRAWINGS. REFER TO SHEET 2 NOTE 30 AND SECTION 01150 PART I. 6-INCH MIN. VERTICAL CLEARANCE IS REQUIRED FROM THE MAIN. IF DURING EXPLORATORY DIGGING THE EXISTING SEWER LATERALS CAN NOT BE FOUND WITH 24-INCHES OF THE PROPOSED BOTTOM OF THE FORCE MAIN, THEN NOTE "≥24".
 3. INSTALLATION OF THE PROPOSED PIPE SHALL BE AS SHOWN IN THE PLAN AND PROFILE VIEWS. THE DEPTH OF BURY OR TOP OF PIPE ELEVATION ARE TO BE AS INDICATED BY THE ELEVATION GRID, UNLESS OTHERWISE STATED ON THE PLANS BY ELEVATION CALLOUTS OR SPOT GRADES. IT IS EXPECTED THE INSTALLATION OF THE PIPE OR APPURTENANCES MATCH THE ELEVATIONS SHOWN IN THE CONSTRUCTION PLANS.
 4. ALL NECESSARY DEVIATIONS BEYOND THE ACCEPTED TOLERANCES WILL NOT BE ACCEPTED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE COUNTY.
 5. INSTALLATION VERTICAL AND HORIZONTAL TOLERANCES SHALL BE AS STATED IN THE SPECIFICATION DOCUMENT, SECTION 02617, 3.03.H. PIPE PLACED OUT OF TOLERANCE IS SUBJECT TO REMOVAL AND REPLACEMENT AT NO COST TO THE COUNTY. OUT OF TOLERANCE PIPES THAT REQUIRE AN ARV SHALL BE AT THE SOLE-EXPENSE OF THE CONTRACTOR.
 6. CONTRACTOR SHALL SURVEY THE EXISTING TOP OF "PIPE" ELEVATION WHEN EXPOSED AT ALL PROPOSED UTILITY CROSSINGS. THIS INFORMATION SHALL BE PROVIDED ON THE RECORD DRAWINGS.
 7. CONTRACTOR SHALL USE A TAPE MEASURE AND PROVIDE PHOTOGRAPHIC EVIDENCE THAT ALL MINIMUM REQUIRED VERTICAL DISTANCES HAVE BEEN PROVIDED. THESE PHOTOS SHALL BECOME PART OF THE PROJECT FILE. PHOTOS SHALL BE LABELED WITH THE BASELINE STATION NUMBERING AND UPLOADED TO eBUILDER WITHIN 1 TO 2 DAYS OF THE CROSSING INSTALLATIONS. THIS REQUIREMENTS SHALL APPLY TO ALL CROSSINGS.
 8. CONTRACTOR SHALL NOT USE LEVERAGE OR MECHANICAL MEANS TO ALIGN THE PIPE AND/OR FITTINGS FOR ATTACHMENT. THE PIPE SHALL NOT BE "SPRING-LOADED".
 9. ALL DISTURBED EX. DRAINAGE DITCHES/SWALES SHALL BE RE-GRADED TO ORIGINAL CONDITION TO PROVIDE POSITIVE DRAINAGE.
 10. ALL COST TO RESTORE PROPERTY IN THE ROW DURING PIPE INSTALLATION SHALL BE INCLUDED IN THE COST OF THE PIPE BID ITEM, IF NOT SPECIFICALLY ADDRESSED BY OTHER BID ITEMS.
 11. ANY PROPOSED AIR RELEASE VALVES (ARV) SHALL BE INSTALLED AFTER THE FIRST DRAFT OF THE RECORD DRAWINGS ARE REVIEWED TO ENSURE THE ARVS ARE INSTALLED AT THE ACTUAL HIGH POINTS OF THE NEWLY INSTALLED MAINS.

REVISIONS		 J. SHEA SHOUN, STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO. 60923. THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY J. SHEA SHOUN ON THE DATE INDICATED HERE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.	MANATEE COUNTY PUBLIC WORKS DEPARTMENT		SOUTHWEST SERVICE AREA D FORCE MAIN REPLACEMENT RIVERVIEW BLVD WARNERS BAYOU WEST [FM 21-D, RTU 229]		SHEET NO. 05 of 28
DATE	DESCRIPTION		PROJECT #	SURVEYED	DESIGNED	DRAWN	
09/30/24	CALLED OUT WALL AND ROCK		404-6089781	03/2023	08/2023	08/2023	
			SEC./TWN./RGE	20/34/17	JSS/BLR	BLR/JSS	
			SCALE	SEE PLANS			

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SOUTHWEST SERVICE AREA D
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REVISIONS	
DATE	DESCRIPTION
10/03/24	REVISED CALL OUT TEXT


 1022 26th Avenue East, Bradenton, FL 34208

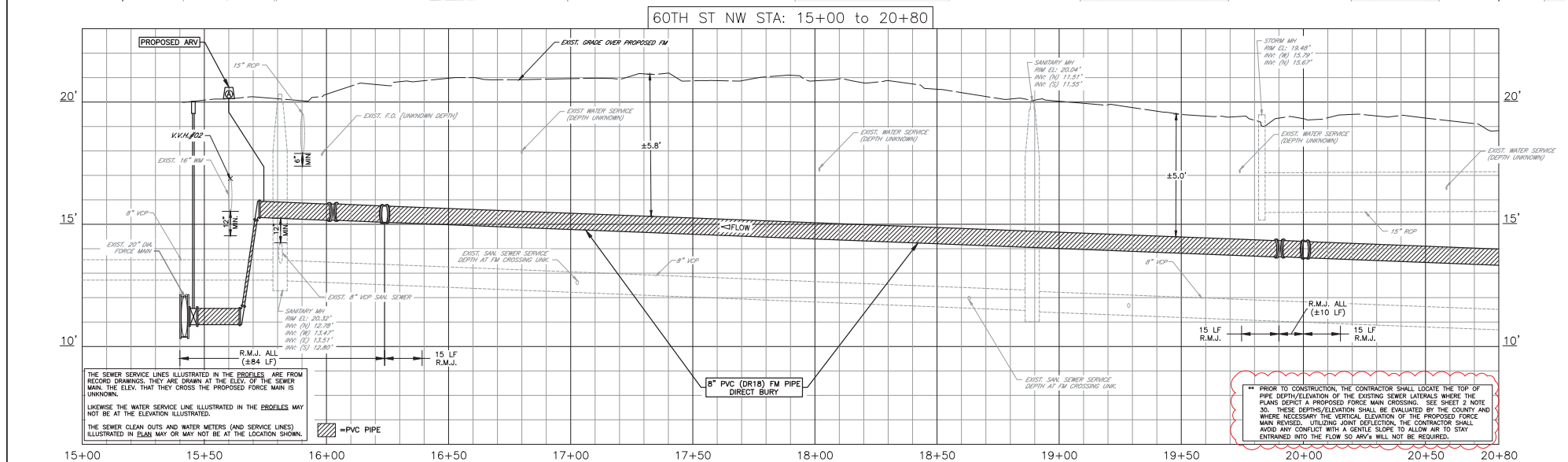
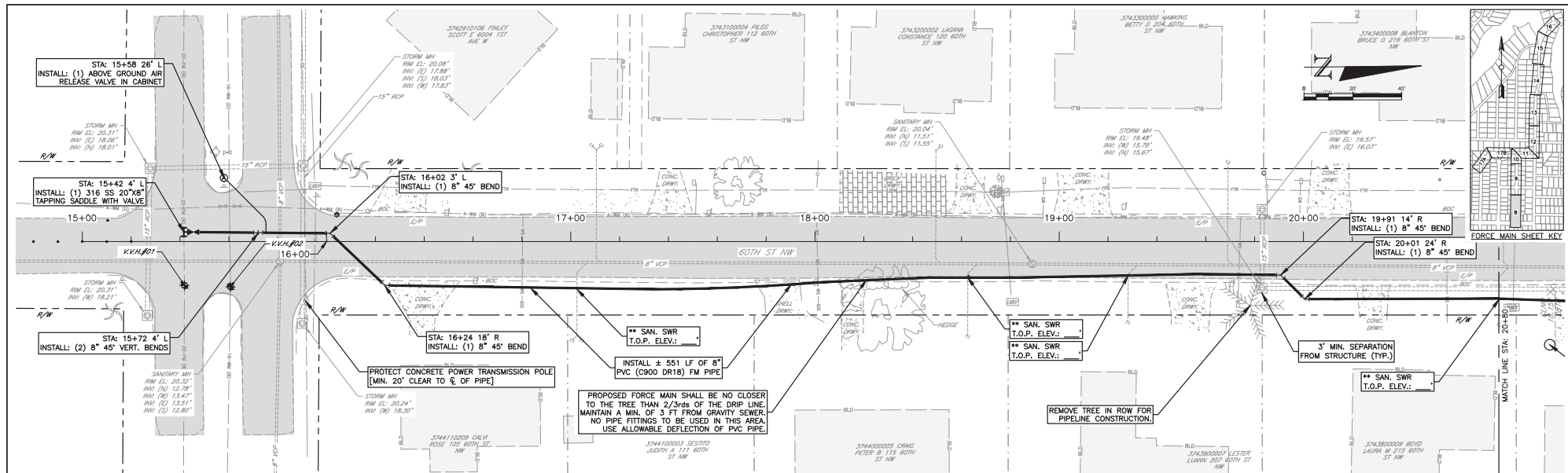
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PROJECT #	404-6089781	SURVEYED	GFY 03/2023
SEC./TWN./RGE	20/34/17	DESIGNED	JSS/BLR 08/2023
SCALE	SEE PLANS	DRAWN	BLR/JSS 08/2023

SOUTHWEST SERVICE AREA D FORCE MAIN REPLACEMENT RIVERVIEW BLVD WARNERS BAYOU EAST [FM 4-D, RTU 251]	
SHEET NO.	07 of 28

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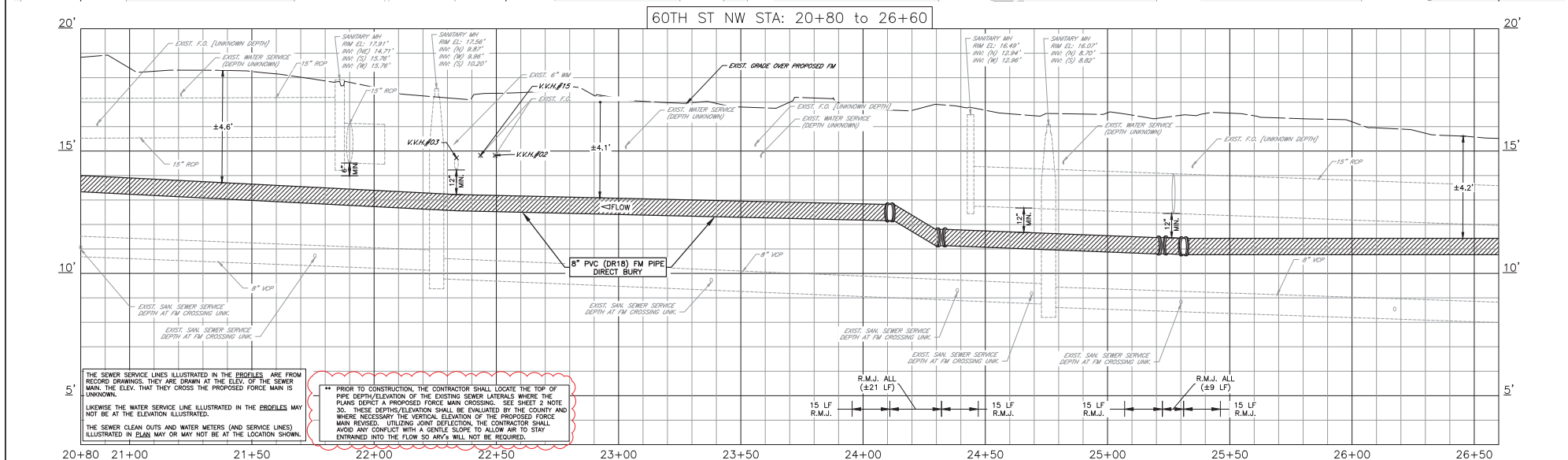
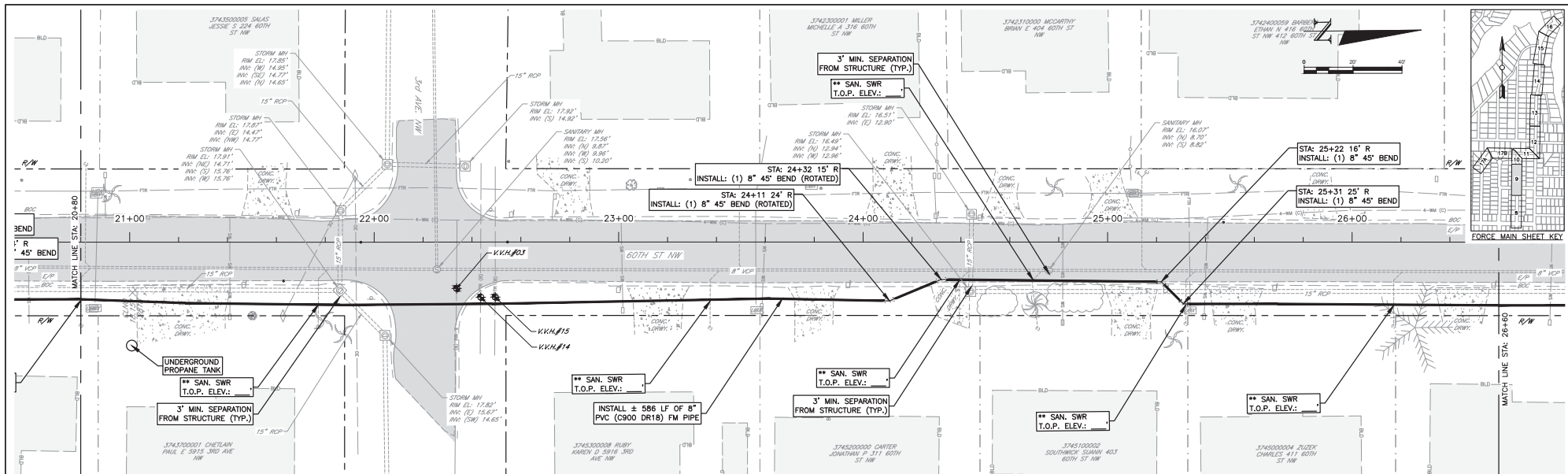
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DATE	DESCRIPTION			PROJECT #	404-6089781	SURVEYED	GFY	03/2023	
09/30/24	REVISED NOTE			SEC./TWN./RGE	29/34/17	DESIGNED	JSS/BLR	08/2023	
				SCALE	SEE PLANS	DRAWN	BLR/JSS	08/2023	

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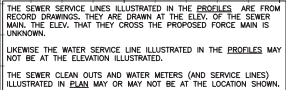
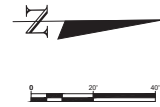


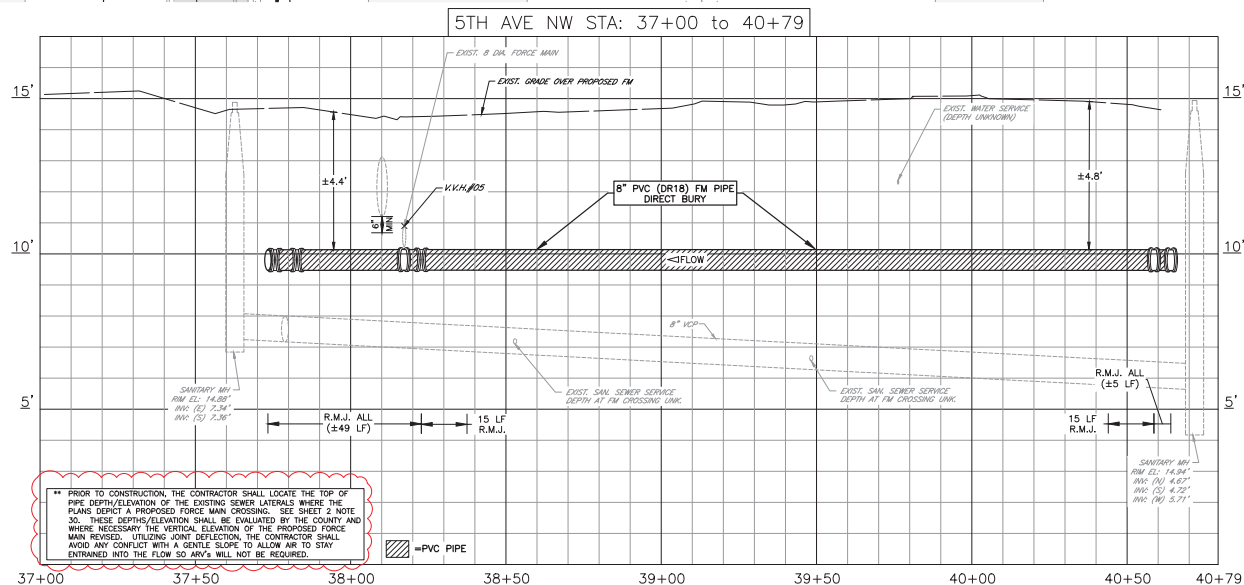
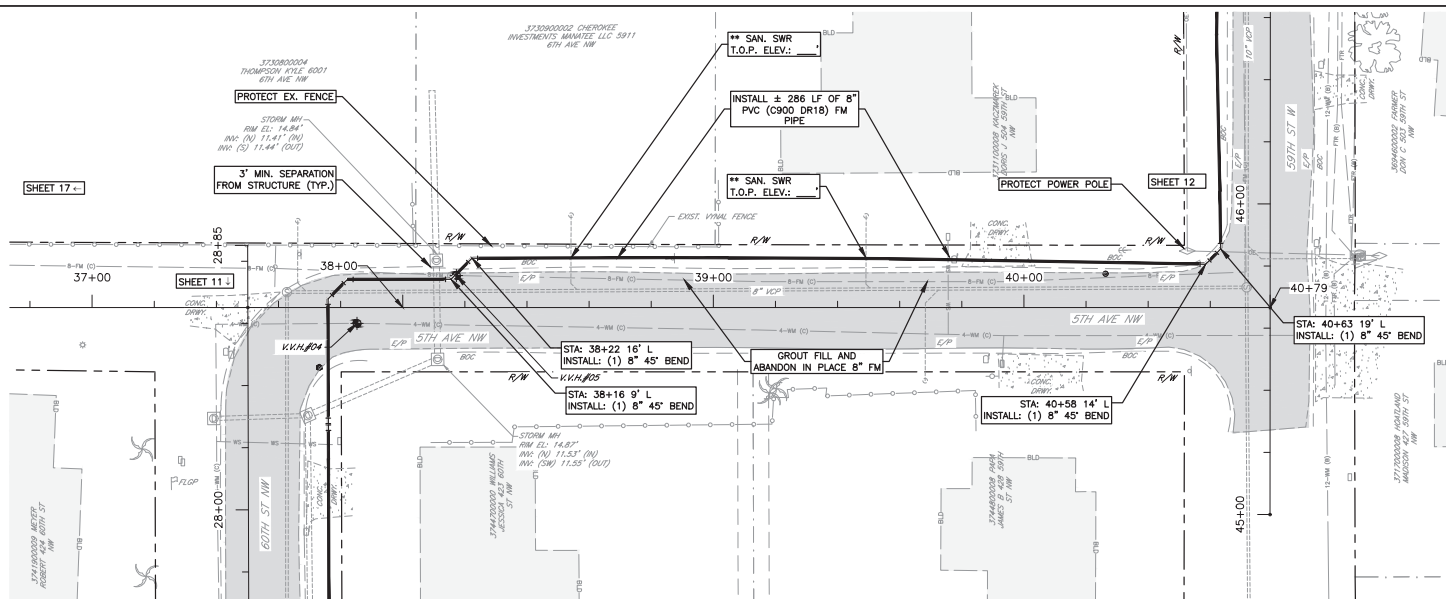
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DATE	DESCRIPTION			PROJECT #	SURVEYED	GFY			
09/30/24	REVISED NOTE			404-6089781	29/34/17	DESIGNED	JSS/BLR	03/2023	
				SCALE	SEE PLANS	DRAWN	BLR/JSS	08/2023	

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SOUTHWEST SERVICE AREA D





REVISIONS	
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09/30/24	REVISED NOTE



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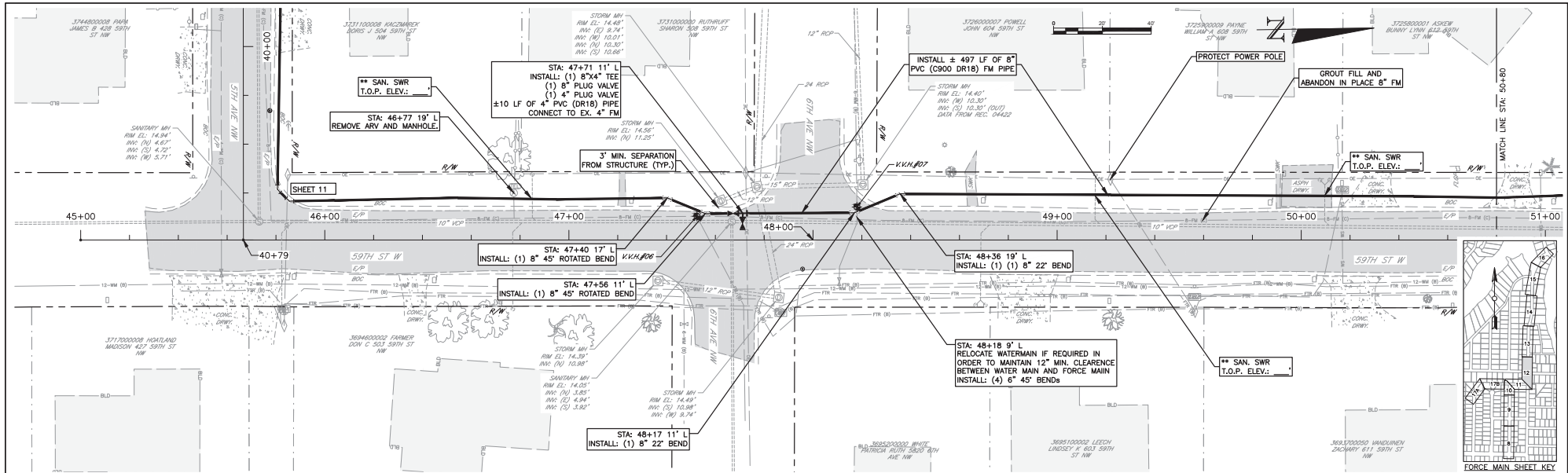
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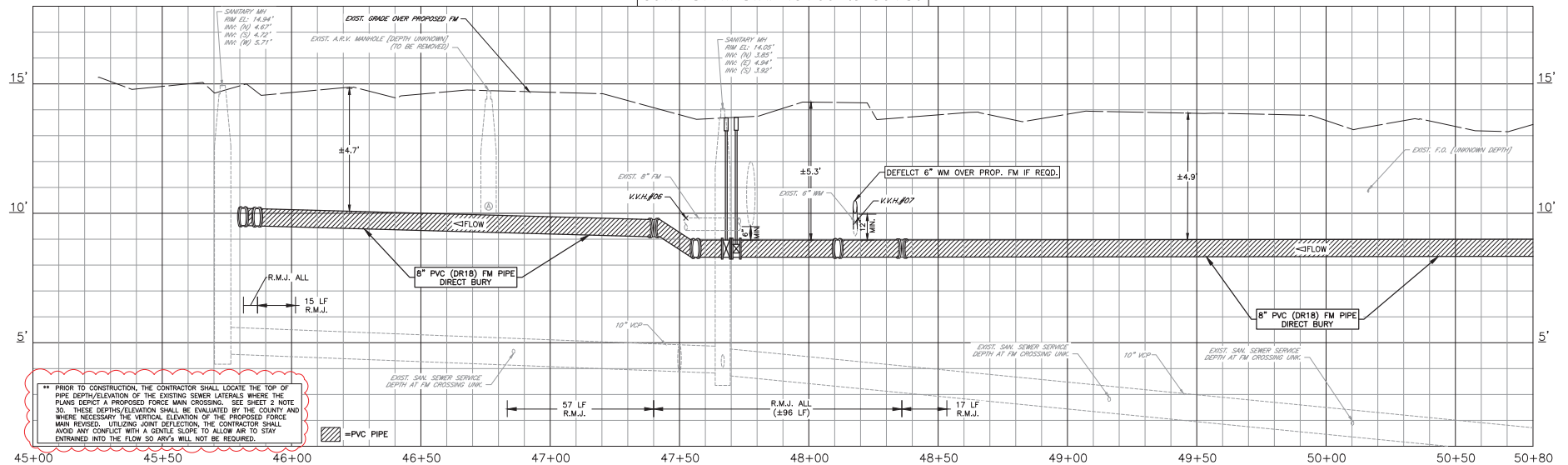
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*SOUTHWEST SERVICE AREA D
FORCE MAIN REPLACEMENT
59TH ST W [FM 7-D, RTU 230]*

SHEET
NO.
11 of 28



59TH ST W STA: 45+00 to 50+80



** PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL LOCATE THE TOP OF PIPE DEPTH/ELEVATION OF THE EXISTING SEWER LATERALS WHERE THE PLANS DEPICT A PROPOSED FORCE MAIN CROSSING. SEE SHEET 2 NOTE 30. THESE DEPTHS/ELEVATIONS SHALL BE EVALUATED BY THE COUNTY AND WHERE NECESSARY THE VERTICAL ELEVATION OF THE PROPOSED FORCE MAIN REDUCED. UTILIZING JOINT DEFLECTION, THE CONTRACTOR SHALL AVOID ANY CONFLICT WITH A GENTLE SLOPE TO ALLOW AIR TO STAY ENTRAPPED INTO THE FLOW SO AIRS WILL NOT BE REQUIRED.

REVISIONS	
DATE	DESCRIPTION
09/30/24	REVISED NOTE



1022 26th Avenue East, Bradenton, FL 34208

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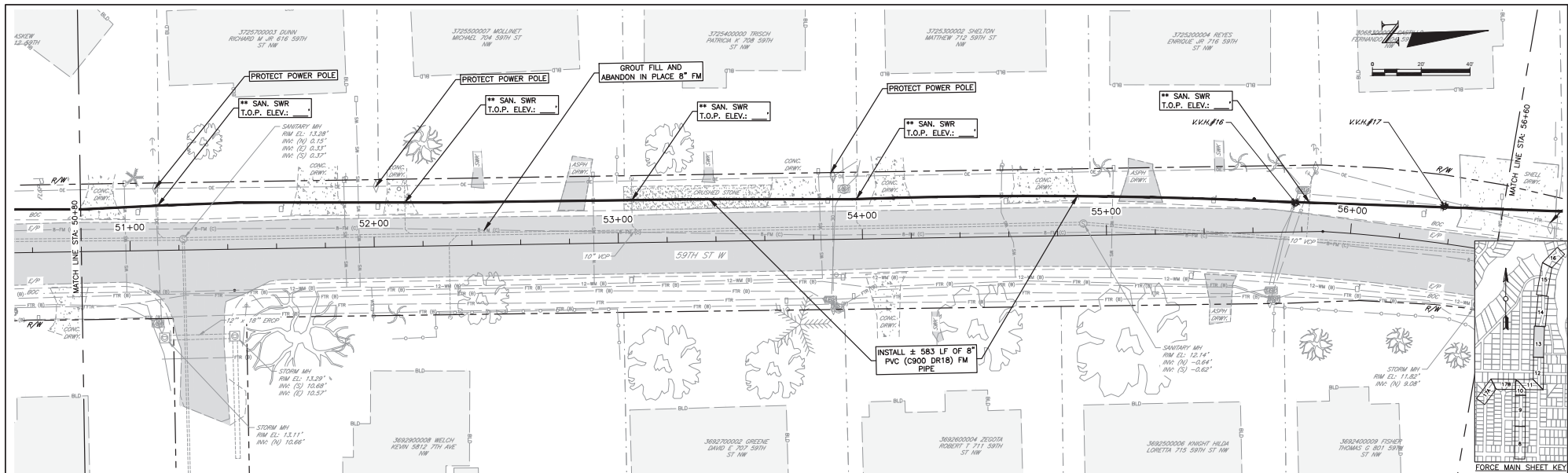
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PROJECT #	404-6089781	SURVEYED GFY	03/2023
SEC./TWN./RGE	29/34/17	DESIGNED	JSS/BLR 08/2023
SCALE	SEE PLANS	DRAWN	BLR/JSS 08/2023

**SOUTHWEST SERVICE AREA D
FORCE MAIN REPLACEMENT
59TH ST W [FM 7-D, RTU 230]**

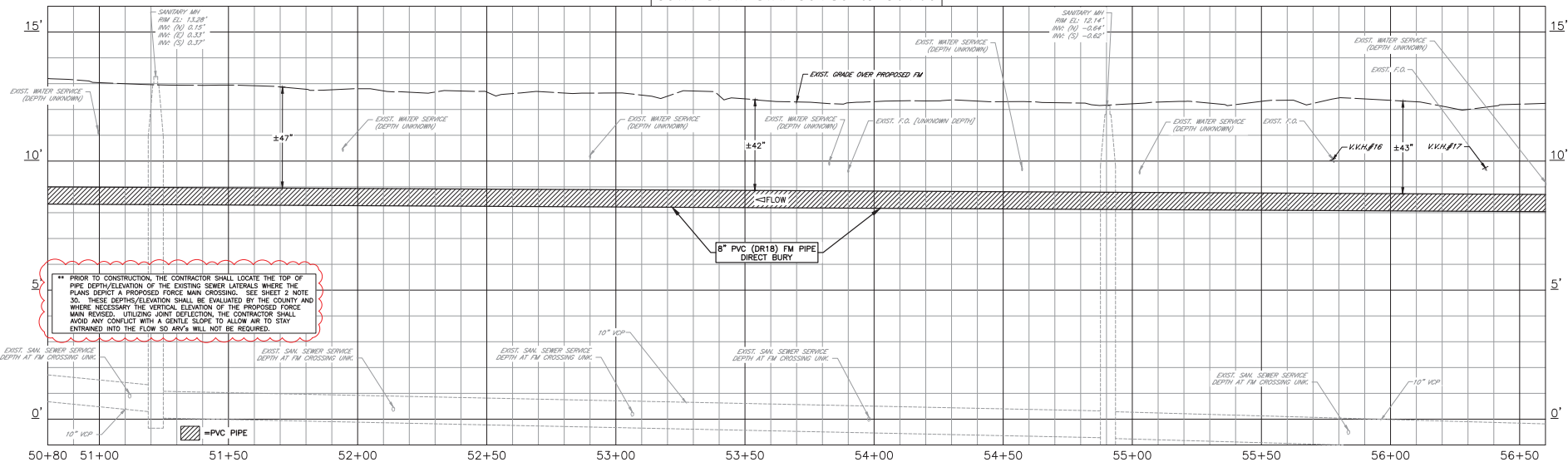
SHEET
NO.
12 of 28

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59TH ST W STA: 50+80 TO 56+60



REVISIONS	
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09/30/24	REVISED NOTE



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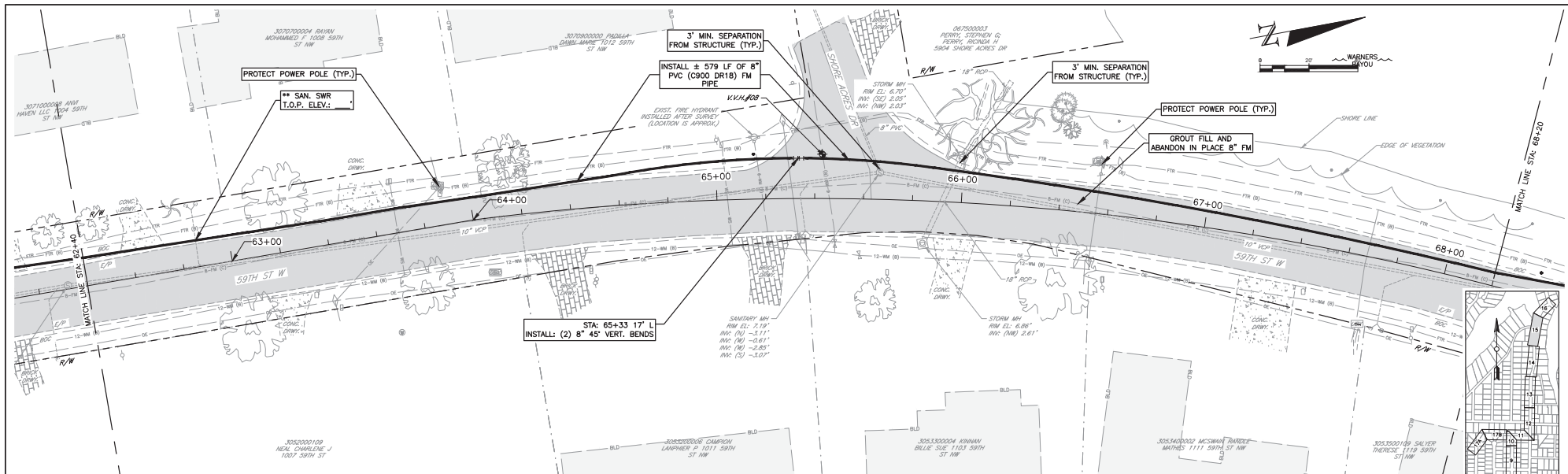
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SOUTHWEST SERVICE AREA D
FORCE MAIN REPLACEMENT
59TH ST W [FM 7-D, RTU 230]

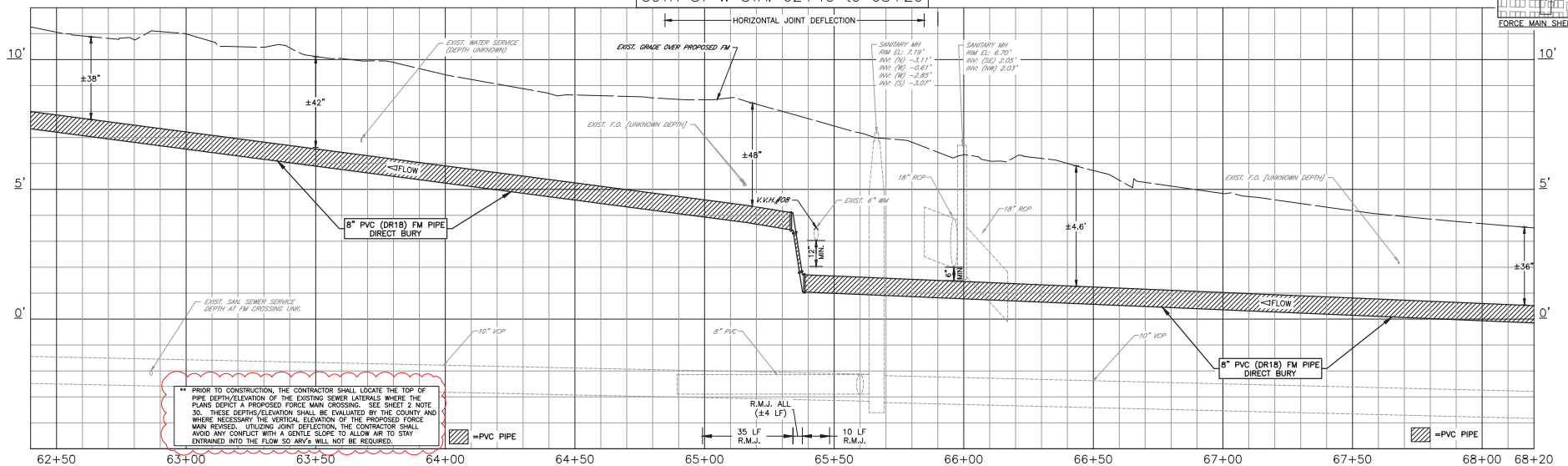
SHEET
NO.
13 of 28

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59TH ST W STA: 62+40 TO 68+20



REVISIONS	
DATE	DESCRIPTION
09/30/24	REVISED NOTE



1022 26th Avenue East, Bradenton, FL 34208

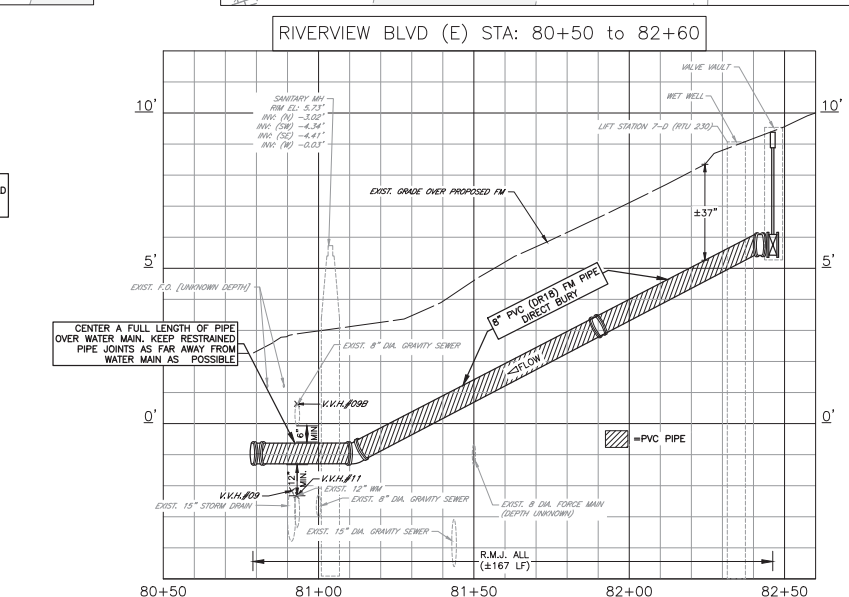
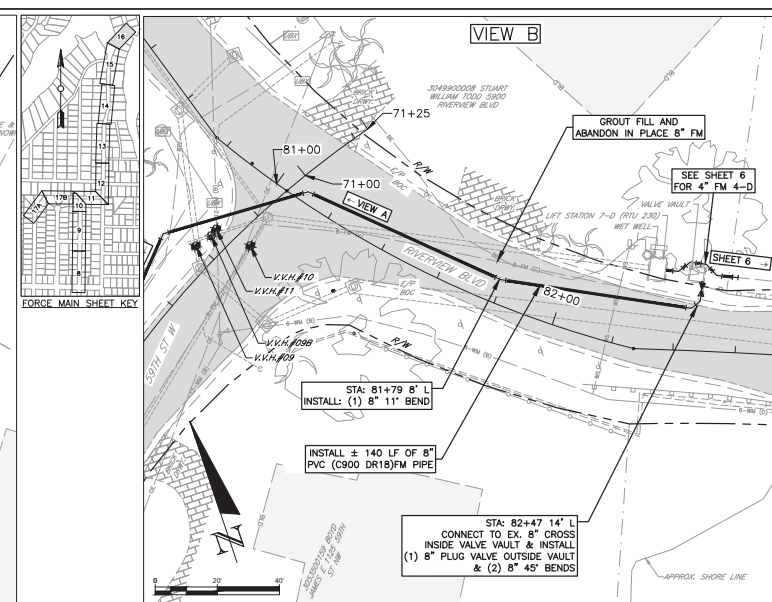
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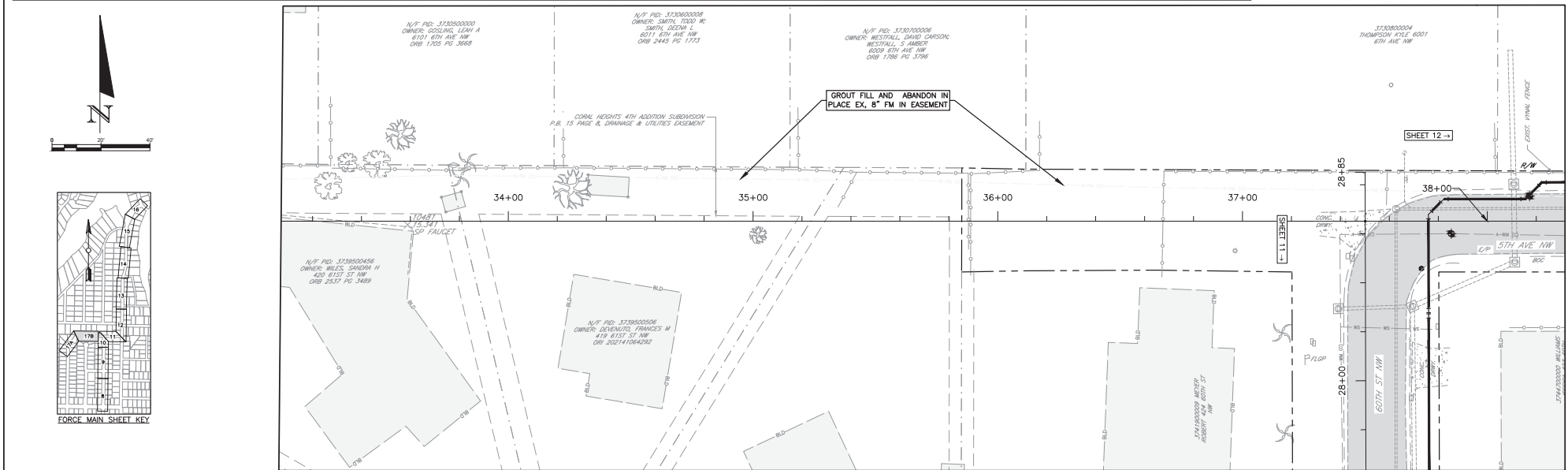
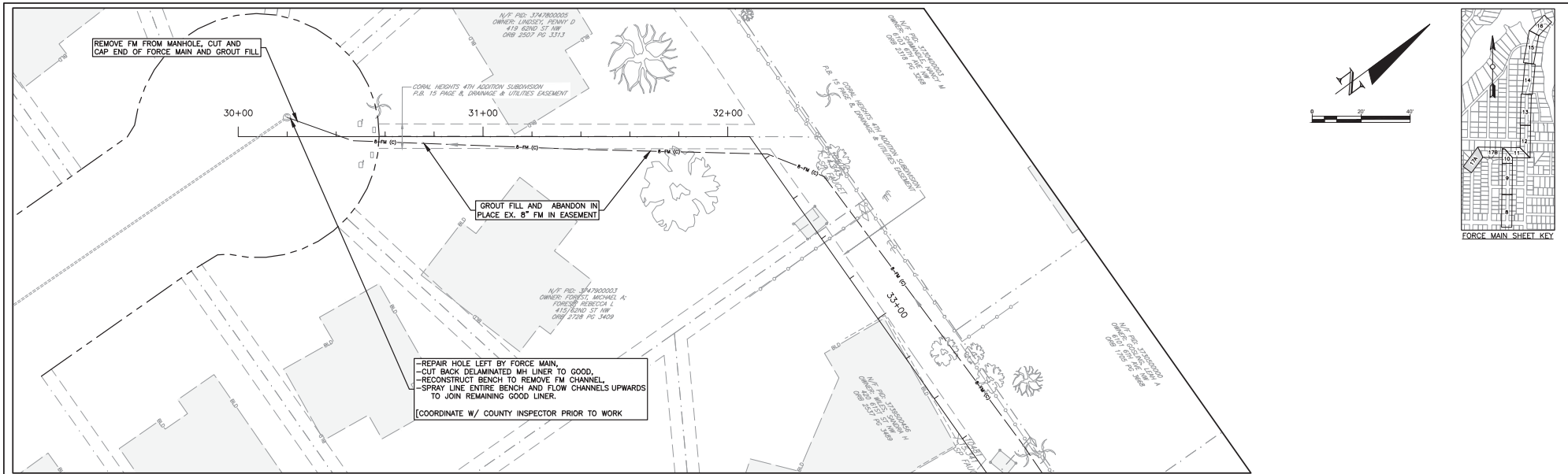
MANATEE COUNTY PUBLIC WORKS DEPARTMENT			
PROJECT #	404-6089781	SURVEYED GFY	03/2023
SEC./TWN./RGE	20/34/17	DESIGNED JSS/BLR	08/2023
SCALE	SEE PLANS	DRAWN BLR/JSS	08/2023


**SOUTHWEST SERVICE AREA D
FORCE MAIN REPLACEMENT
59TH ST W [FM 7-D, RTU 230]**

SHEET
NO.
15 of 28

Originally plotted by Bruce Robertson at 1:1 scale on 10/24/2024 at 10:38:25 AM on ANSI full bleed D (34.00 x 22.00 Inches) paper using MC-2016.STB. File Name: FM-AREA D P_DESIGN.DWG



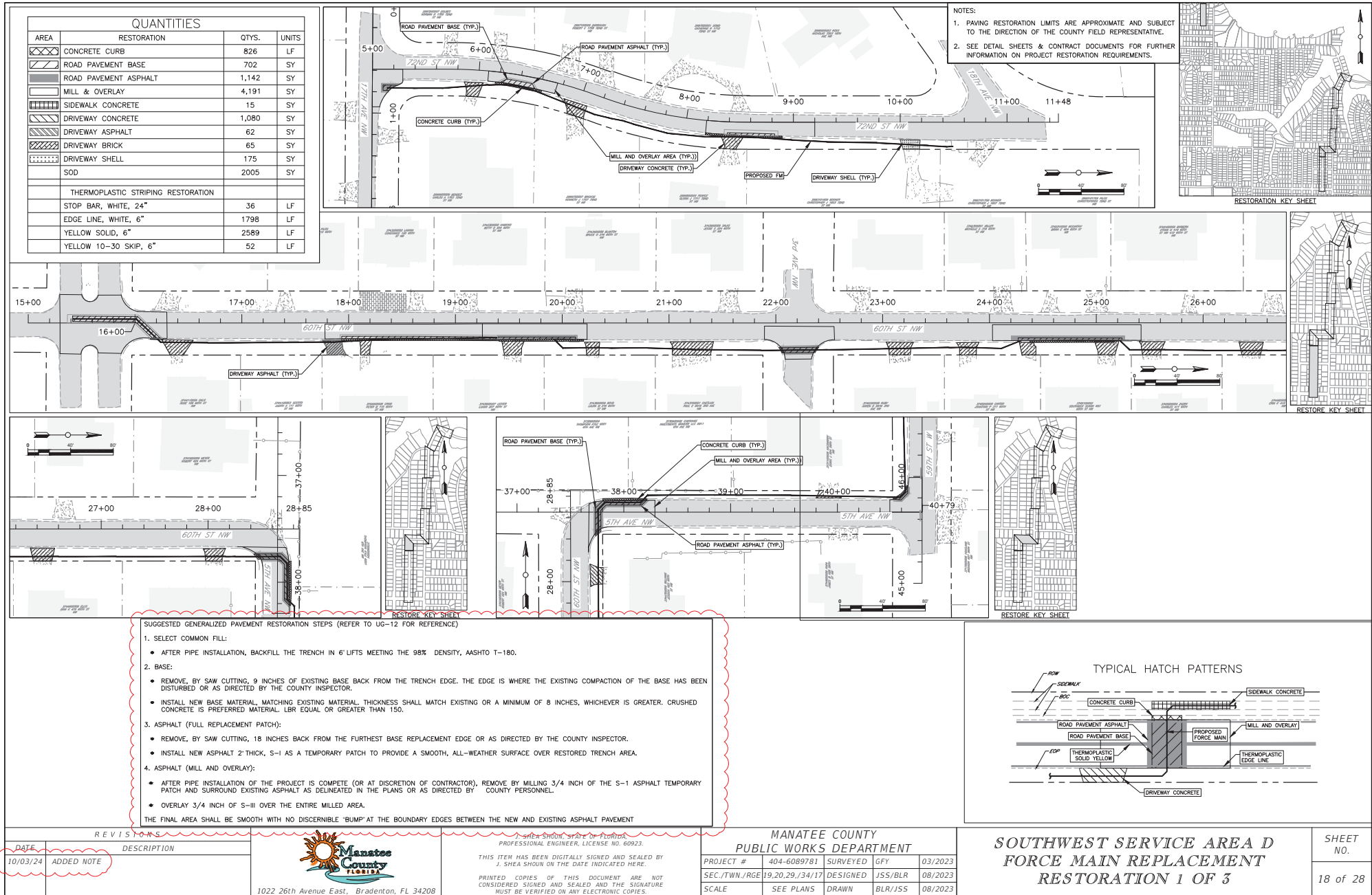


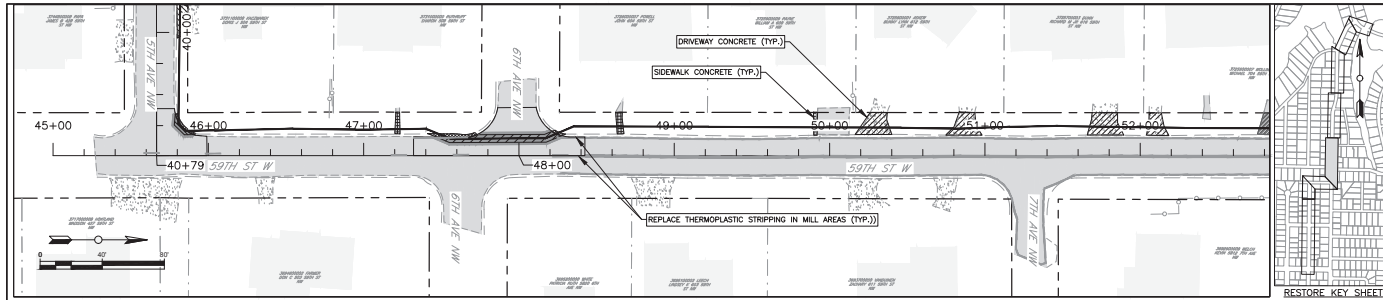
REVISIONS		 1022 26th Avenue East, Bradenton, FL 34208	<p>J. SHEA SHOUN, STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO. 60923.</p> <p>THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY J. SHEA SHOUN ON THE DATE INDICATED HERE.</p> <p>PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.</p>	MANATEE COUNTY PUBLIC WORKS DEPARTMENT					SOUTHWEST SERVICE AREA D FORCE MAIN REPLACEMENT GROUT FILL FM 7-D, IN EASEMENT			SHEET NO.
DATE	DESCRIPTION			PROJECT #	404-6089781	SURVEYED	GFY	03/2023	JSS/BLR	08/2023	17 of 28	
				SEC./TWN./RGE	19.20.29./34/17	DESIGNED						
				SCALE	SEE PLANS	DRAWN	BLR/JSS	08/2023				

Originally plotted by Bruce Robertson at 1:1 scale on 7/11/2024 at 12:40:43 PM on ANSI Full bleed D (34.00 x 22.00 Inches) paper using MC-2016.STB. File Name: FM-AREA D P_DESIGN.DWG

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

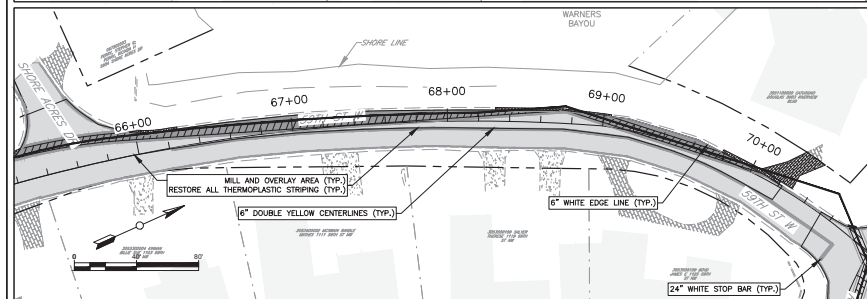
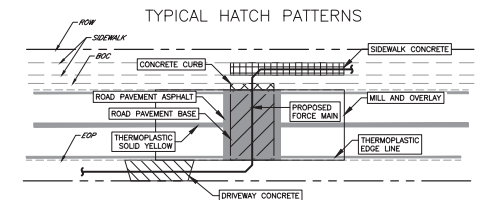
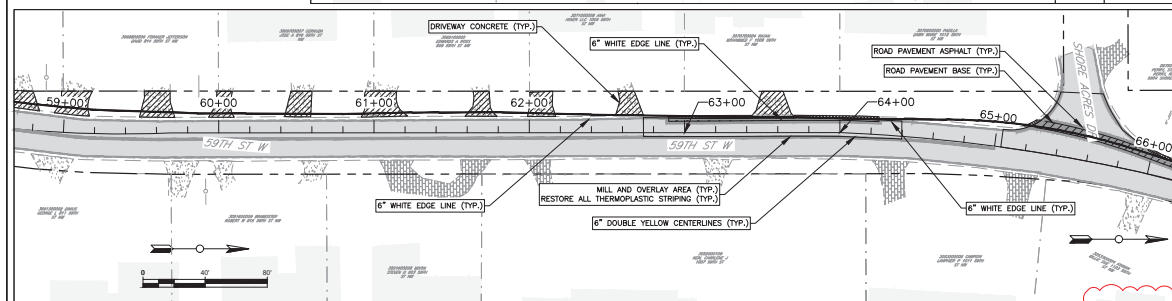
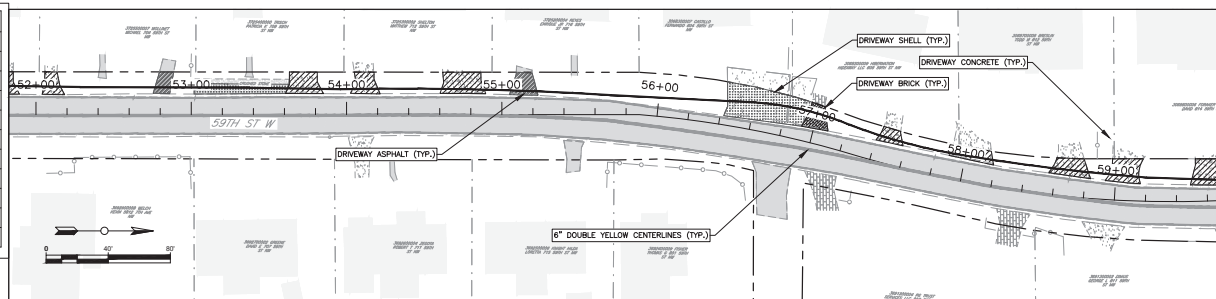
SOUTHWEST SERVICE AREA D





- NOTES:
- PAVING RESTORATION LIMITS ARE APPROXIMATE AND SUBJECT TO THE DIRECTION OF THE COUNTY FIELD REPRESENTATIVE.
 - SEE DETAIL SHEETS & CONTRACT DOCUMENTS FOR FURTHER INFORMATION ON PROJECT RESTORATION REQUIREMENTS.

AREA	RESTORATION
	CONCRETE CURB
	ROAD PAVEMENT BASE
	ROAD PAVEMENT ASPHALT
	MILL & OVERLAY
	SIDEWALK CONCRETE
	DRIVEWAY CONCRETE
	DRIVEWAY ASPHALT
	DRIVEWAY BRICK
	DRIVEWAY SHELL
	SOD



- SUGGESTED GENERALIZED PAVEMENT RESTORATION STEPS (REFER TO UG-12 FOR REFERENCE)
- SELECT COMMON FILL:
 - AFTER PIPE INSTALLATION, BACKFILL THE TRENCH IN 6" LIFTS MEETING THE 98% DENSITY, AASHTO T-180.
 - BASE:
 - REMOVE, BY SAW CUTTING, 9 INCHES OF EXISTING BASE BACK FROM THE TRENCH EDGE. THE EDGE IS WHERE THE EXISTING COMPACTION OF THE BASE HAS BEEN DISTURBED OR AS DIRECTED BY THE COUNTY INSPECTOR.
 - INSTALL NEW BASE MATERIAL, MATCHING EXISTING MATERIAL THICKNESS SHALL MATCH EXISTING OR A MINIMUM OF 8 INCHES, WHICHEVER IS GREATER. CRUSHED CONCRETE IS PREFERRED MATERIAL. LBR EQUAL OR GREATER THAN 150.
 - ASPHALT (FULL REPLACEMENT PATCH):
 - REMOVE, BY SAW CUTTING, 18 INCHES BACK FROM THE FURTHEST BASE REPLACEMENT EDGE OR AS DIRECTED BY THE COUNTY INSPECTOR.
 - INSTALL NEW ASPHALT 2" THICK, S-1 AS A TEMPORARY PATCH TO PROVIDE A SMOOTH, ALL-WEATHER SURFACE OVER RESTORED TRENCH AREA.
 - ASPHALT (MILL AND OVERLAY):
 - AFTER PIPE INSTALLATION OF THE PROJECT IS COMPLETE (OR AT DISCRETION OF CONTRACTOR), REMOVE BY MILLING 3/4 INCH OF THE S-1 ASPHALT TEMPORARY PATCH AND SURROUND EXISTING ASPHALT AS DELINEATED IN THE PLANS OR AS DIRECTED BY COUNTY PERSONNEL.
 - OVERLAY 3/4 INCH OF S-III OVER THE ENTIRE MILLED AREA.
- THE FINAL AREA SHALL BE SMOOTH WITH NO DISCERNIBLE "BUMP" AT THE BOUNDARY EDGES BETWEEN THE NEW AND EXISTING ASPHALT PAVEMENT

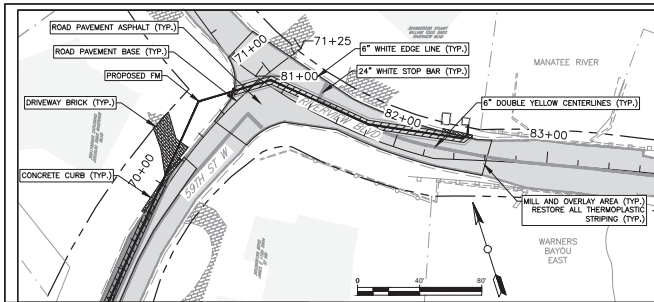
DATE	DESCRIPTION
10/03/24	ADDED NOTE



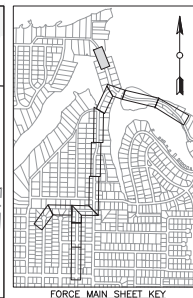
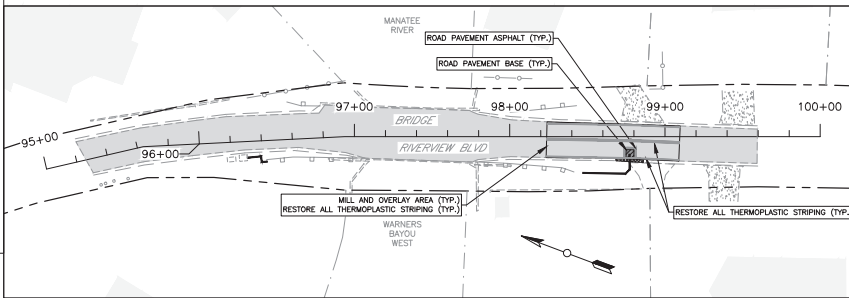
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MANATEE COUNTY PUBLIC WORKS DEPARTMENT			
PROJECT #	404-6089781	SURVEYED	GFY
SEC./TWN./RGE	19.20.29./34/17	DESIGNED	JSS/BLR
SCALE	SEE PLANS	DRAWN	BLR/JSS
			08/2023

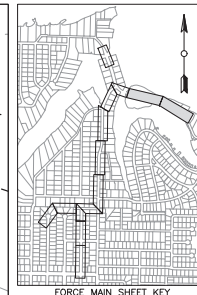
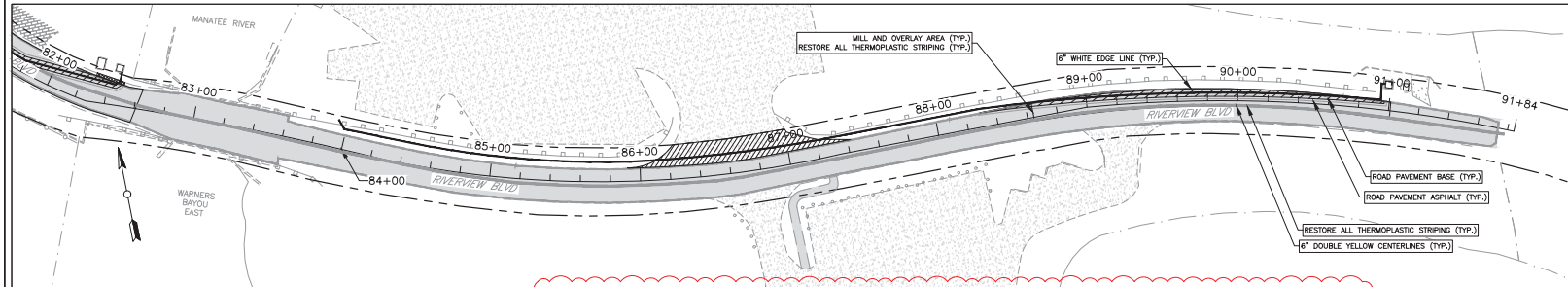
SOUTHWEST SERVICE AREA D FORCE MAIN REPLACEMENT RESTORATION 2 OF 3		SHEET NO.
		19 of 28



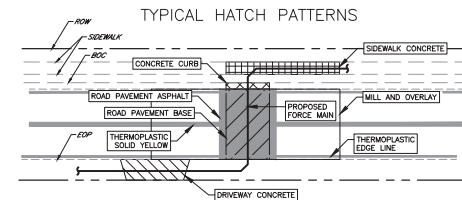
QUANTITIES	
AREA	RESTORATION
	CONCRETE CURB
	ROAD PAVEMENT BASE
	ROAD PAVEMENT ASPHALT
	MILL & OVERLAY
	SIDEWALK CONCRETE
	DRIVEWAY CONCRETE
	DRIVEWAY ASPHALT
	DRIVEWAY BRICK
	DRIVEWAY SHELL
	SOD



NOTES:
1. PAVING RESTORATION LIMITS ARE APPROXIMATE AND SUBJECT TO THE DIRECTION OF THE COUNTY FIELD REPRESENTATIVE.
2. SEE DETAIL SHEETS & CONTRACT DOCUMENTS FOR FURTHER INFORMATION ON PROJECT RESTORATION REQUIREMENTS.



- SUGGESTED GENERALIZED PAVEMENT RESTORATION STEPS (REFER TO UG-12 FOR REFERENCE)
1. SELECT COMMON FILL:
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 2. BASE:
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 3. ASPHALT (FULL REPLACEMENT PATCH):
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 - INSTALL NEW ASPHALT 2\"
 4. ASPHALT (MILL AND OVERLAY):
 - AFTER PIPE INSTALLATION OF THE PROJECT IS COMPLETE (OR AT DISCRETION OF CONTRACTOR), REMOVE BY MILLING 3/4 INCH OF THE S-1 ASPHALT TEMPORARY PATCH AND SURROUND EXISTING ASPHALT AS DELINEATED IN THE PLANS OR AS DIRECTED BY COUNTY PERSONNEL.
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- THE FINAL AREA SHALL BE SMOOTH WITH NO DISCERNIBLE \"BUMP\" AT THE BOUNDARY EDGES BETWEEN THE NEW AND EXISTING ASPHALT PAVEMENT



REVISIONS	
DATE	DESCRIPTION
10/03/24	ADDED NOTE



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MANATEE COUNTY PUBLIC WORKS DEPARTMENT			
PROJECT #	404-6089781	SURVEYED	GFY 03/2023
SEC./TWN./RGE	19.20.29./34/17	DESIGNED	JSS/BLR 08/2023
SCALE	SEE PLANS	DRAWN	BLR/JSS 08/2023

SOUTHWEST SERVICE AREA D FORCE MAIN REPLACEMENT RESTORATION 3 OF 3

SHEET
NO.
20 of 28

BASELINE HORIZONTAL CONTROL TABLES

72nd St NW									
SEGMENT	LENGTH	RADIUS	DELTA ANGLE	LINE/CHORD	CHORD LENGTH	START STATION	START NORTHING	START EASTING	END STATION
L1	72.79			N00° 00' 00.00"E		5+00.00	1156668.23	450811.46	5+72.79
C1	83.84	396.98	012.10	N08° 03' 00.96"E	83.68	5+72.79	1156741.02	450811.46	6+56.63
C2	54.73	396.98	007.90	N18° 02' 59.43"E	54.68	6+56.63	1156824.24	450820.38	7+11.36
C3	41.57	396.98	006.00	N17° 43' 47.41"E	41.55	7+11.36	1156876.79	450835.40	7+52.93
C4	102.08	396.98	014.73	N07° 21' 53.66"E	101.78	7+52.93	1156916.37	450846.05	8+54.99
L2	181.21			N00° 00' 00.00"E		8+54.99	1157017.31	450861.10	10+36.20
L3	111.93			N00° 00' 00.00"E		10+36.20	1157198.52	450861.10	11+48.13

17th Ave NW									
SEGMENT	LENGTH	RADIUS	DELTA ANGLE	LINE/CHORD	CHORD LENGTH	START STATION	START NORTHING	START EASTING	END STATION
L4	195.71			S89° 37' 00.00"E		0+00.00	1156666.62	450752.54	1+95.71

Riverview Blvd (W)									
SEGMENT	LENGTH	RADIUS	DELTA ANGLE	LINE/CHORD	CHORD LENGTH	START STATION	START NORTHING	START EASTING	END STATION
L7	63.86			S32° 47' 33.16"E		95+00.00	1155841.80	455143.35	95+63.86
L6	129.82			S22° 37' 45.62"E		95+63.86	1155786.11	455177.94	96+93.68
L5	306.20			S19° 46' 31.80"E		96+93.68	1155666.29	455227.89	99+99.88

Riverview Blvd (E)									
SEGMENT	LENGTH	RADIUS	DELTA ANGLE	LINE/CHORD	CHORD LENGTH	START STATION	START NORTHING	START EASTING	END STATION
L8	75.73			S17° 54' 48.62"E		80+00.00	1155104.79	455407.18	80+75.73
C5	151.58	339.81	025.56	S44° 40' 50.35"E	150.32	80+75.73	1155032.74	455430.47	84+33.48
C6	206.18	2086.66	005.66	S66° 46' 47.00"E	206.09	82+27.30	1154925.85	455536.17	84+33.48
C7	301.65	708.26	024.40	S78° 52' 15.12"E	299.38	84+33.48	1154844.60	455725.57	87+35.13
L9	164.54			S88° 43' 23.97"E		87+35.13	1154786.81	456019.32	88+99.67
C8	284.59	934.20	017.45	S74° 43' 50.83"E	283.49	88+99.67	1154783.14	456183.82	91+84.26

59th St WEST									
SEGMENT	LENGTH	RADIUS	DELTA ANGLE	LINE/CHORD	CHORD LENGTH	START STATION	START NORTHING	START EASTING	END STATION
L10	1088.61			N00° 51' 02.51"E		45+00.00	1152520.03	455077.98	55+88.61
C9	145.00	663.09	012.53	N11° 38' 00.96"E	144.71	55+88.61	1153608.52	455094.14	57+33.61
C10	235.28	715.37	018.84	N07° 46' 30.48"E	234.22	57+33.61	1153750.26	455123.32	59+68.89
C11	431.52			N00° 49' 18.23"E		59+68.89	1153982.33	455155.01	64+00.41
C11	499.08	1101.63	025.96	N16° 16' 42.80"E	494.80	64+00.41	1154413.80	455161.20	68+99.47
C12	225.57	314.00	041.16	N53° 31' 18.66"E	220.75	68+99.47	1154888.77	455299.89	71+25.03

5th Ave NW									
SEGMENT	LENGTH	RADIUS	DELTA ANGLE	LINE/CHORD	CHORD LENGTH	START STATION	START NORTHING	START EASTING	END STATION
L12	208.96			N35° 58' 03.34"E		30+00.00	1152429.91	454086.01	32+08.96
L13	870.31			S89° 11' 12.80"E		32+08.96	1152599.03	454208.74	40+79.28

60th St NW									
SEGMENT	LENGTH	RADIUS	DELTA ANGLE	LINE/CHORD	CHORD LENGTH	START STATION	START NORTHING	START EASTING	END STATION
L14	694.55			N00° 38' 58.32"E		15+00.00	1151226.31	454734.48	21+94.55
L15	60.00			N00° 33' 14.90"E		21+94.55	1151920.82	454742.35	22+54.55
L16	630.58			N00° 38' 58.50"E		22+54.55	1151980.81	454742.93	28+85.13

THE INFORMATION BELOW IS EXTRACTED FROM GEORGE F YOUNG SURVEYORS REPORT FOR THE PURPOSE OF CONSTRUCTION. THE FULL SURVEYORS REPORT AND CAD DELIVERABLES ARE AVAILABLE UPON REQUEST, FROM THE MANATEE COUNTY, PUBLIC WORKS DEPARTMENT, CIP DESIGN & REVIEW DIVISION, UTILITY ENGINEERING SECTION.

- THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE COMMITMENT. THIS IS NOT A BOUNDARY SURVEY.
- THIS SURVEY WAS PREPARED WITH THE BENEFIT OF THE RECORD DOCUMENTS AS SHOWN AND STATED HEREON, ALL OF THE PUBLIC RECORDS OF MANATEE COUNTY, FLORIDA.
- THE OWNERS AND RECORDING INFORMATION FOR ADJACENT PROPERTIES ARE PER THE MANATEE COUNTY PROPERTY APPRAISER'S WEBSITE ON 8/16/2021. PROPERTY LINES, RIGHT OF WAY LINES AND EASEMENTS SHOWN HEREON SHOULD BE CONSIDERED APPROXIMATE.
- THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1" = 40' OR SMALLER.
- RIGHT-OF-WAY LINES SHOWN ARE TO BE CONSIDERED APPROXIMATE BASED ON LAST DEED OF RECORD OR PLAT RECORD(S) OF ADJOINING PROPERTIES. THE PURPOSE OF THIS SURVEY WAS NOT INTENDED TO BE CONSTRUED AS DETERMINATION OF THE RIGHT-OF-WAY.
- BEARINGS AND COORDINATES (IN U.S. SURVEY FEET) ARE BASED ON NATIONAL GEODETIC SURVEY (NGS), FLORIDA STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83) 2011 ADJUSTMENT.
- ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988. ELEVATIONS ARE RELATIVE TO MANATEE COUNTY SURVEY DEPARTMENT BENCHMARK "DESOTO" HAVING AN ELEVATION OF 18.77 FEET.
- GEORGE F. YOUNG, INC. AND THE UNDERSIGNED MAKE NO REPRESENTATIONS OR GUARANTEES PERTAINING TO EASEMENTS, RIGHTS-OF-WAY, SET BACK LINES, RESERVATIONS AND/OR AGREEMENTS.
- THE SURVEY BASELINES SHOWN HEREON ARE MONUMENTED EVERY 100 FOOT STATION WITH A NAIL AND DISK LABELED "GFY BASELINE". THE BEGINNING, END AND CHANGE IN DIRECTIONS OF THE BASELINE ARE MONUMENT WITH REFERENCES. THESE REFERENCES CAN BE FOUND ON SHEET 6.
- THE PRINTED DIMENSIONS SHOWN ON THIS SURVEY SUPERSEDE ANY SCALED DIMENSIONS; THERE MAY BE ITEMS DRAWN OUT OF SCALE TO GRAPHICALLY SHOW THEIR LOCATION.
- THIS SURVEY HAS BEEN EXCLUSIVELY PREPARED FOR THE NAMED ENTITIES SHOWN HEREON AND IS NOT TRANSFERABLE. NO OTHER PERSON OR ENTITY IS ENTITLED TO RELY UPON AND/OR RE-USE THIS SURVEY FOR ANY PURPOSE WITHOUT THE EXPRESSED, WRITTEN CONSENT OF GEORGE F. YOUNG, INC. AND THE UNDERSIGNED PROFESSIONAL SURVEYOR AND MAPPER.
- UNAUTHORIZED COPIES AND/OR REPRODUCTIONS VIA ANY MEDIUM OF THIS SURVEY OR ANY PORTIONS THEREOF ARE EXPRESSLY PROHIBITED WITHOUT THE WRITTEN CONSENT OF GEORGE F. YOUNG, INC. AND THE UNDERSIGNED PROFESSIONAL SURVEYOR AND MAPPER.
- ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES ARE PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.
- THIS SURVEY IS VALID AS TO THE LAST DATE OF FIELD SURVEY AND NOT THE SIGNATURE DATE (IF ANY).
- THERE MAY BE ADDITIONAL EASEMENTS, RESERVATIONS, RESTRICTIONS AND/OR OTHER MATTERS OF RECORD AFFECTING THIS PROPERTY THAT ARE NOT SHOWN HEREON THAT MAY (OR MAY NOT) BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY. THE UNDERSIGNED HAS NOT PERFORMED AN INDEPENDENT SEARCH FOR ADDITIONAL RECORDS.
- THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL SEAL OF A FLORIDA PROFESSIONAL SURVEYOR AND MAPPER.

SUE / VVH TABLE

Organization: GFY
Project Name: 22Y04102LS
Project Date: 12/12/2023
Book: 259

V.V.H	Description	Diameter (in)	Material	Utility Type	XY Source	Easting (ft)	Northing (ft)	Ex. Ground Elevation (ft)	T.O.P. Elevation (ft)	Measure Down (ft)	Utility Owner	SHEET	GPY's #
#01	Force Main	20	unk	FM	RTK/GPS	452349.5	1132445.9	20.1	12.1	8.0	Manatee Co	8	201
#02	Water Main	16"	CIP	WM	RTK/GPS	454753.7	1151286.8	20.1	16.9	3.2	Manatee Co	8	202
#03	Water Main	6"	AC	WM	RTK/GPS	454751.7	1151959.8	17.2	14.7	2.4	Manatee Co	9	203
#04	Water Main	4"	AC	WM	RTK/GPS	454784.9	1152585.8	14.6	11.4	3.2	Manatee Co	10	206
#05	Force Main	8"	DIP	FM	RTK/GPS	454817.1	1152600.7	14.2	10.9	3.3	Manatee Co	10	207
#06	Force Main	unk	unk	FM	RTK/GPS	455072.0	1152772.6	13.8	9.8	4.0	Manatee Co	12	208
#07	Water Main	6"	CIP	WM	RTK/GPS	455069.2	1152838.2	13.6	9.7	4.0	Manatee Co	12	209
#08	Water Main	6"	AC	WM	RTK/GPS	455100.8	1154538.6	7.5	3.5	4.0	Manatee Co	12	212
#09	Storm Water	unk	unk	STORM	RTK/GPS	455413.0	1155001.9	2.6	-2.2	4.8	Manatee Co	16A	213
#98	Sanitary Sewer	8"	PVC	SS	RTK/GPS	455418.8	1155003.4	2.5	0.6	1.9	Manatee Co	16A	214
#10	Force Main	unk	unk	FM	RTK/GPS	455429.7	1154996.3	2.1	-9.4	11.5	Manatee Co	16A	216
#11	Water Main	unk	unk	WM	RTK/GPS	455421.0	1155004.9	2.5	-2.3	4.8	Manatee Co	16A	215
#12	Force Main	8"	POLY	FM	RTK/GPS	450835.0	1156681.9	10.0	5.3	4.6	Manatee Co	4	217
#14	Cable	1"	LEAD	BT	RTK/GPS	454765.4	1151989.6	17.5	14.8	2.7	Verizon	9	204
#15	Cable	1"	DIR BUR	BT	RTK/GPS	454765.4	1151975.6	17.5	14.8	2.7	Verizon	9	205
#16	Cable	1 1/4"	SUB DUCT (X2)	FOC	RTK/GPS	455082.1	1153997.7	12.3	10.1	2.2	Verizon	13	210
#17	Cable	1 1/4"	SUB DUCT	FOC	RTK/GPS	455085.4	1153658.7	12.4	9.7	2.6	Verizon	13	211
#18	Force Main	4"	DIP	FM	RTK/GPS	455194.3	1155715.0	7.4	4.1	3.3	Manatee Co	5	105
#19	Force Main	4"	HDPE	FM	RTK/GPS	455237.5	1155517.3	8.1	1.8	6.3	Manatee Co	5	106
#20	Force Main	4"	PVC	FM	RTK/GPS	455779.0	1154848.3	4.8	1.3	3.5	Manatee Co	6	108
#21	Force Main	4"	UNK	FM	RTK/GPS	455796.7	1154840.8	3.9	-6.1	10.0	Manatee Co	6	103
#22	Force Main	4"	UNK	FM	RTK/GPS	455793.8	1154831.6	4.3	-5.7	10.0	Manatee Co	6	104
#23	Force Main	4"	DIP	FM	RTK/GPS	455900.8	1154811.8	3.1	-0.6	3.7	Manatee Co	7	102
#24	Force Main	4"	PVC	FM	RTK/GPS	455919.0	1154829.8	3.1	0.1	3.1	Manatee Co	7	107
#25	Force Main	4"	DIP	FM	RTK/GPS	455995.8	1154804.4	2.7	-0.8	3.6	Manatee Co	7	101

REVISIONS	
DATE	DESCRIPTION



1022 26th Avenue East, Bradenton, FL 34208

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SEC./TWN./RGE	19.20,29./34/17	DESIGNED	JSS/BLR
SCALE	SEE PLANS	DRAWN	BLR/JSS

**SOUTHWEST SERVICE AREA D
FORCE MAIN REPLACEMENT
SURVEY CONTROL, SUE & VVH
TABLES**

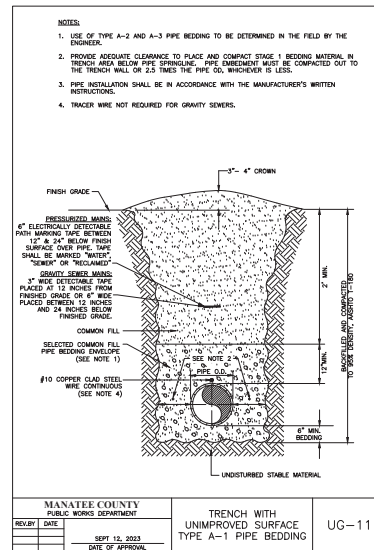
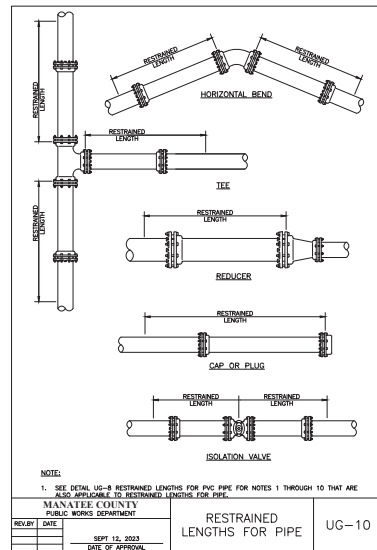
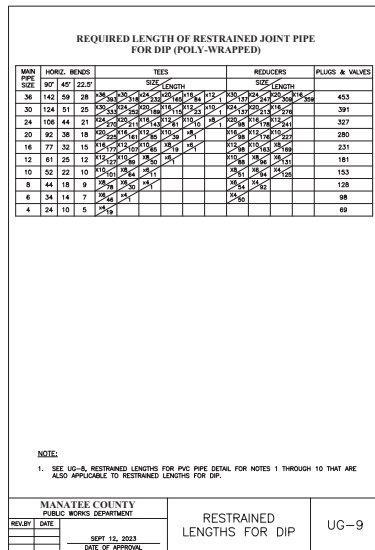
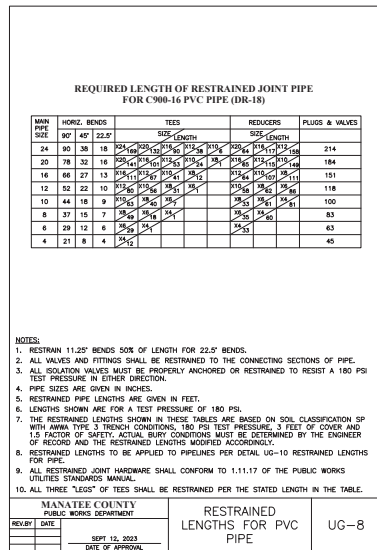
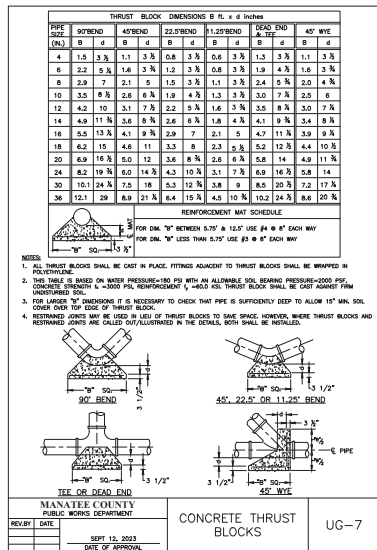
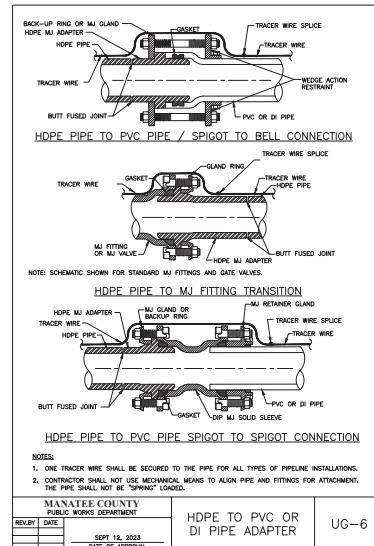
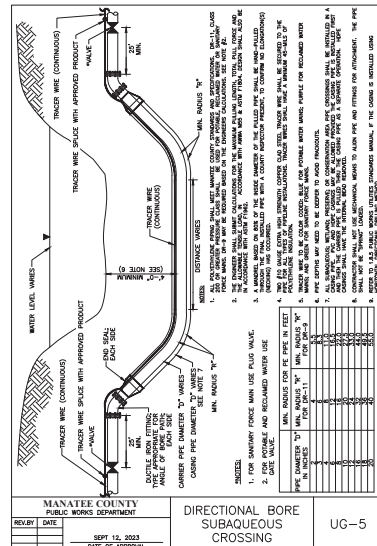
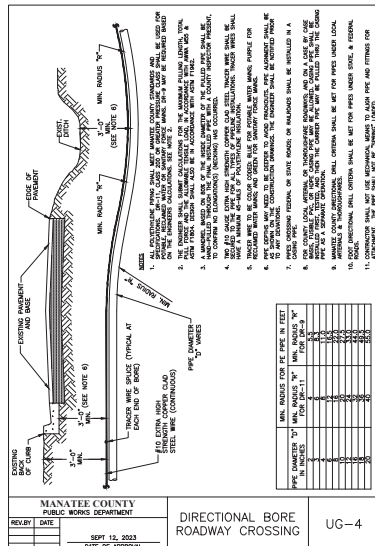
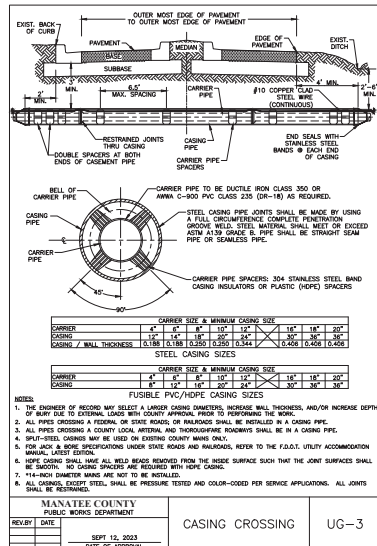
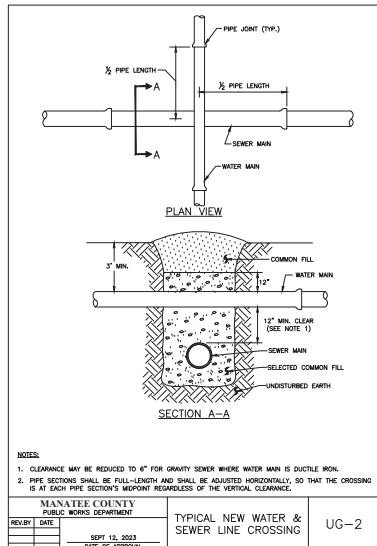
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21 of 28

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SOUTHWEST SERVICE AREA D

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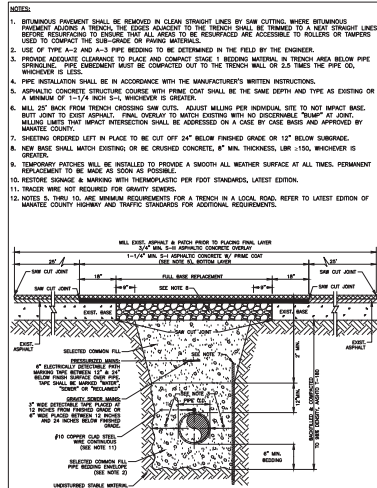
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PROJECT #	404-6089781	SURVEYED	GFY	03/2023
SEC./TWN./RGE	19,20,29./34/17	DESIGNED	JSS/BLR	08/2023
SCALE	SEE PLANS	DRAWN	BLR/JSS	08/2023

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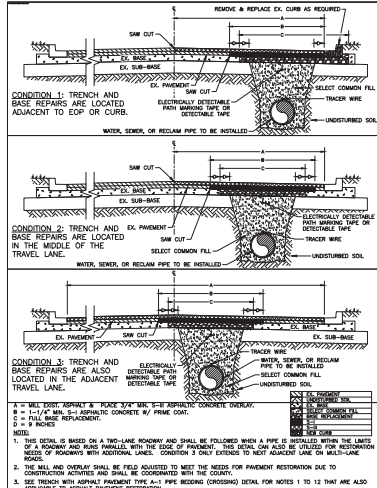
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DETAILS*

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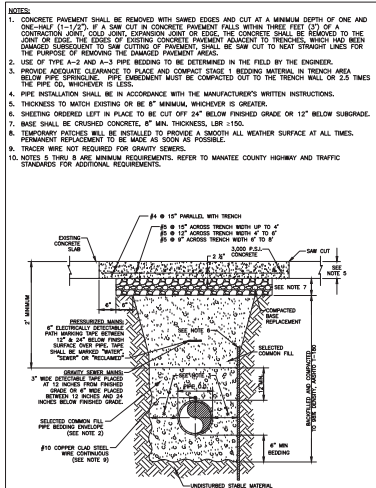
22 of 28



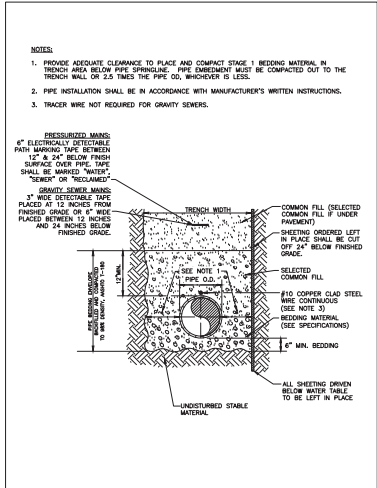
MANATEE COUNTY PUBLIC WORKS DEPARTMENT
TRENCH WITH ASPHALT PAVEMENT SURFACE
TYPE A-1 PIPE BEDDING (CROSSING)
UG-12
REVIEW DATE: SEPT 15, 2023
DATE OF APPROVAL:



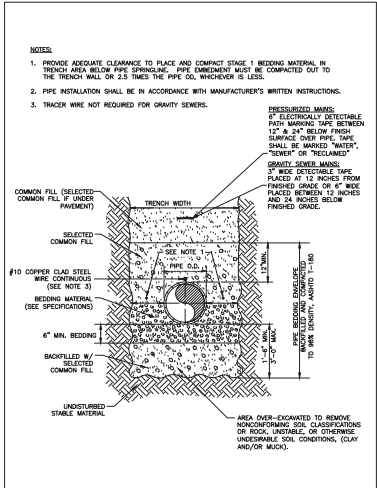
MANATEE COUNTY PUBLIC WORKS DEPARTMENT
TRENCH WITH ASPHALT PAVEMENT SURFACE
TYPE A-1 PIPE BEDDING (LONGITUDINAL)
UG-13
REVIEW DATE: SEPT 15, 2023
DATE OF APPROVAL:



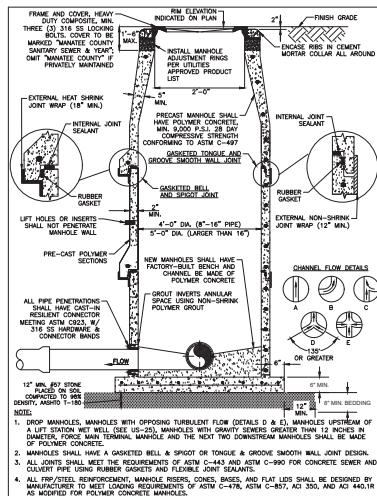
MANATEE COUNTY PUBLIC WORKS DEPARTMENT
TRENCH WITH CONCRETE PAVEMENT SURFACE
TYPE A-1 PIPE BEDDING
UG-14
REVIEW DATE: SEPT 15, 2023
DATE OF APPROVAL:



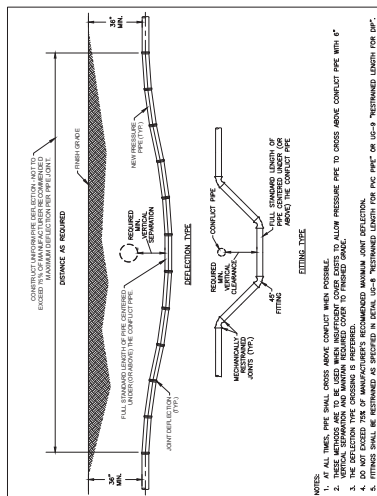
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TRENCH WITH TYPE A-2 PIPE BEDDING
UG-16
REVIEW DATE: SEPT 15, 2023
DATE OF APPROVAL:



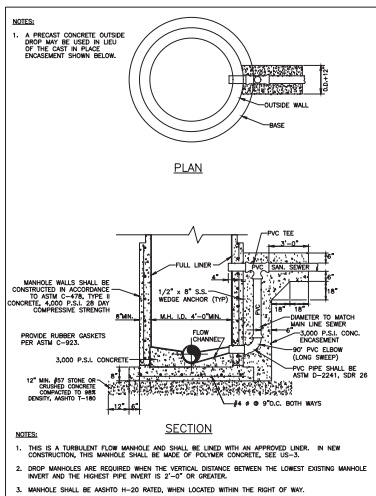
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TRENCH WITH TYPE A-3 PIPE BEDDING
UG-17
REVIEW DATE: SEPT 15, 2023
DATE OF APPROVAL:



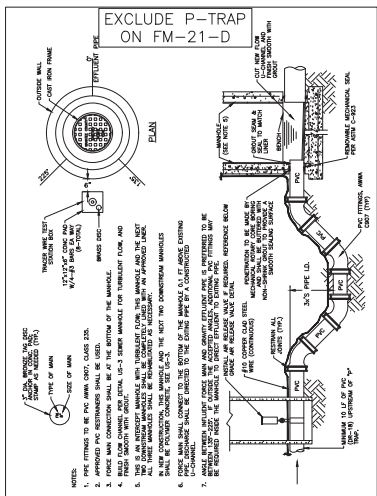
MANATEE COUNTY PUBLIC WORKS DEPARTMENT
STANDARD PRECAST POLYMER CONCRETE SANITARY SEWER MANHOLE FOR TURBULENT FLOW
US-3
REVIEW DATE: SEPT 15, 2023
DATE OF APPROVAL:



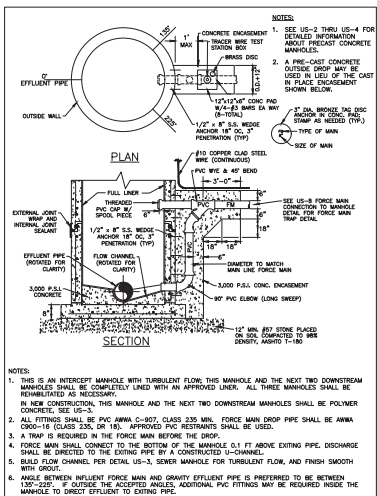
MANATEE COUNTY PUBLIC WORKS DEPARTMENT
PRESSURE PIPE DEFLECTION AT UTILITY CROSSING
UG-19
REVIEW DATE: SEPT 15, 2023
DATE OF APPROVAL:



MANATEE COUNTY PUBLIC WORKS DEPARTMENT
OUTSIDE DROP CONNECTION TO EX. PORTLAND CEMENT MANHOLE
US-6
REVIEW DATE: SEPT 15, 2023
DATE OF APPROVAL:



MANATEE COUNTY PUBLIC WORKS DEPARTMENT
FORCE MAIN CONNECTION TO EX. PORTLAND CONCRETE MANHOLE (3-6 FEET DEEP)
US-8
REVIEW DATE: SEPT 15, 2023
DATE OF APPROVAL:



MANATEE COUNTY PUBLIC WORKS DEPARTMENT
FORCE MAIN CONNECTION TO EX. PORTLAND CONCRETE MANHOLE (>6 FEET DEEP)
US-9
REVIEW DATE: SEPT 15, 2023
DATE OF APPROVAL:

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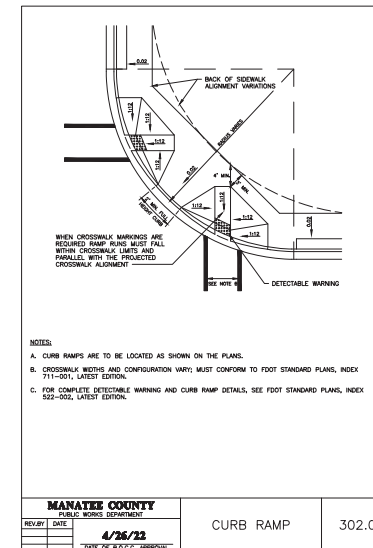
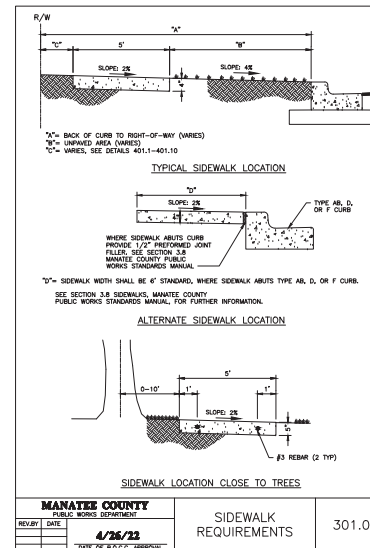
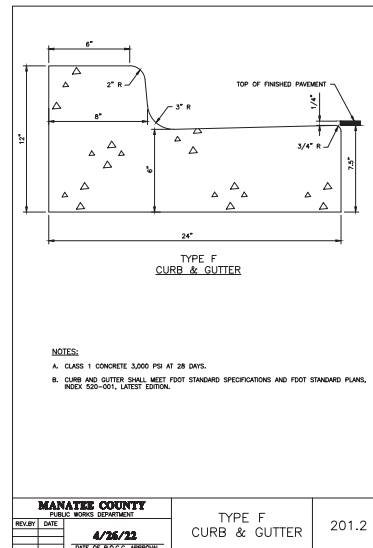
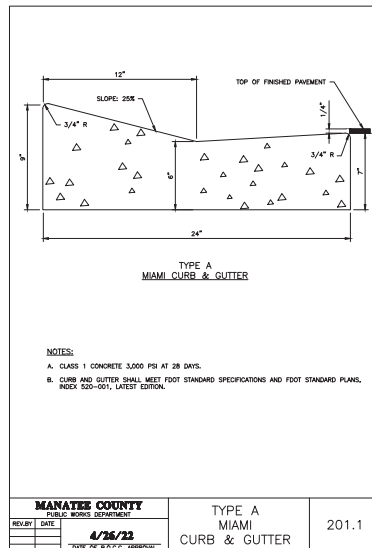
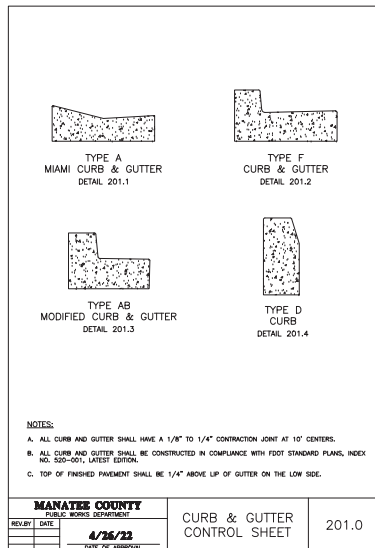
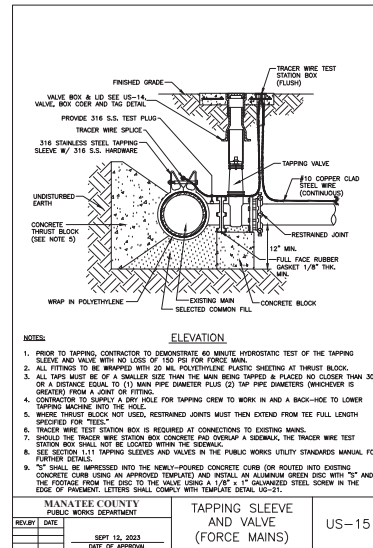
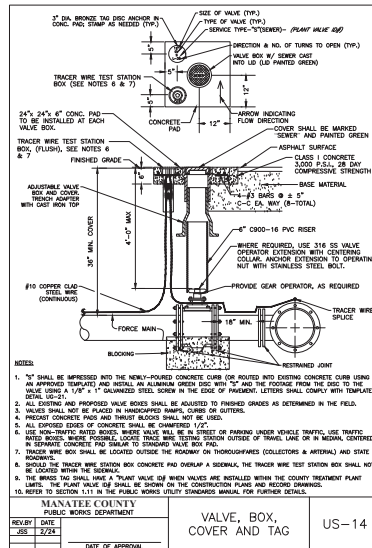
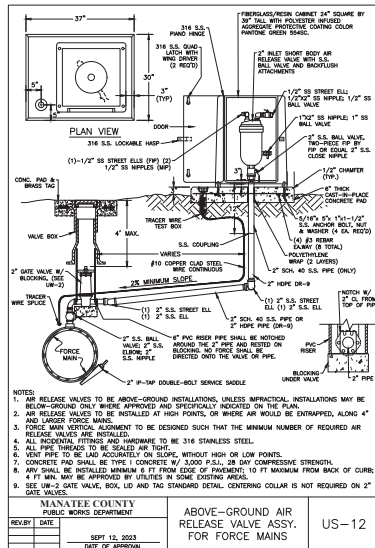


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SCALE	SEE PLANS	DRAWN	BLR/JSS	08/2023

SOUTHWEST SERVICE AREA D FORCE MAIN REPLACEMENT DETAILS

SHEET NO.
23 of 28



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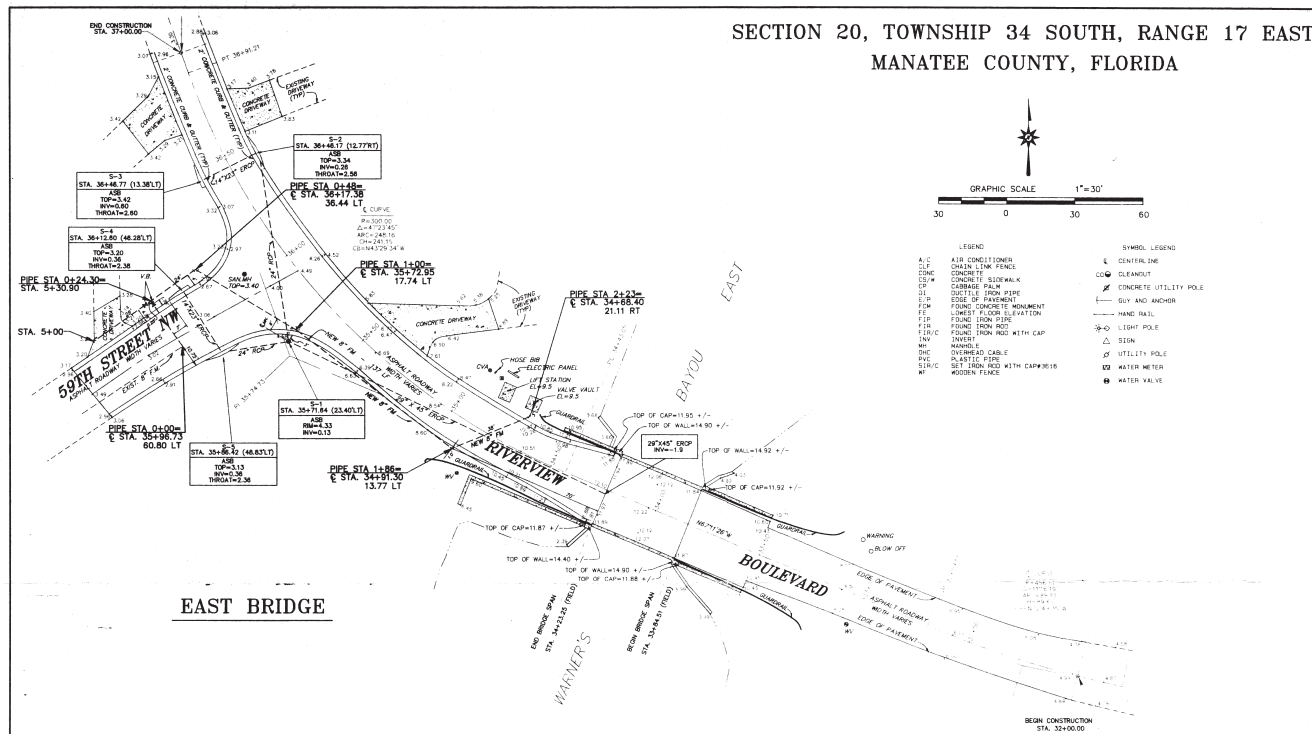
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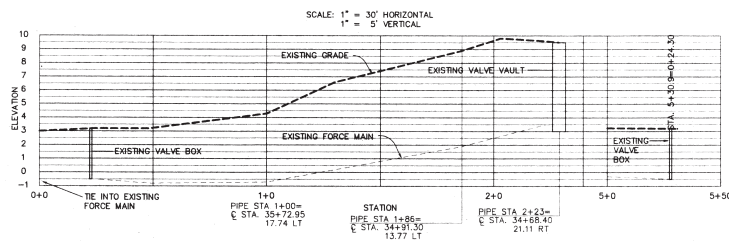
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*SOUTHWEST SERVICE AREA D
FORCE MAIN REPLACEMENT
DETAILS*

<i>SHEET</i> <i>NO.</i>
<i>24 of 28</i>



EAST BRIDGE



NOTES:

1. SITE BENCHMARK PROVIDED BY CONTRACTOR.
2. REFERENCE BENCH MARK: 16d NAIL SET IN UTILITY POLE # 5919 AT RIVERVIEW BOULEVARD ELEVATION = 5.179
3. ALL ELEVATIONS ARE BASED ON NATIONAL GEODETIC VERTICAL DATUM OF 1929 MEAN SEA LEVEL - 0.00 FEET.
4. FIELD WORK COMPLETED 08/09/01.
5. THIS SURVEY MADE WITHOUT THE BENEFIT OF AN OWNERSHIP AND ENCUMBRANCE REPORT, TITLE BINDER OR OTHER SIMILAR INSTRUMENTS. CAMPBELL CONSULTANTS, INC. THEREFORE MAKES NO REPRESENTATIONS OR GUARANTEES PERTAINING TO EASEMENTS, RIGHTS OF WAY, SET BACK LINES, RESERVATIONS, AGREEMENTS OR OTHER SIMILAR MATTERS.
6. PIPE SIZES SHOWN HEREON ARE FROM PLANS, NOT FIELD VERIFIED.
7. SOME OF THE INFORMATION SHOWN HEREON WAS PROVIDED BY CONTRACTOR.

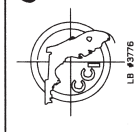
I HEREBY CERTIFY THAT THIS SURVEY WAS PERFORMED UNDER MY DIRECTION AND THAT IT MEETS THE APPLICABLE PORTIONS OF THOSE TECHNICAL STANDARDS FOR SURVEYS AS SET FORTH BY THE FLORIDA BOARD OF SURVEYORS AND MAPPERS, PURSUANT TO CHAPTER 61G17-6, OF THE FLORIDA ADMINISTRATIVE CODE.

DATE 01-04-02

William R. De Long
WILLIAM R. DE LONG, P.S. & M.
FLORIDA SURVEYORS REG. NO. 3616
NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA SURVEYOR AND MAPPER.

**AS - BUILT
SURVEY**

**CAMPBELL CONSULTANTS, INC.
LAND SURVEYORS**
5022 73RD AVENUE NORTH
PINELLAS PARK, FLORIDA 33781
PHONE (727) 548-0584 ~ FAX (727) 548-0545



CERTIFIED TO:
**MANATEE COUNTY, FLORIDA
EAST AND WEST WARNER'S
BAYOU BRIDGES REPLACEMENT
COUNTY PROJECT NO. 7169**

DWG. DATE: 08/16/01
DRAWN BY: D.J.D.
CHECKED BY: W.R.D.
SCALE: 1" = 30'
JOB NUMBER: 2000-71-8B

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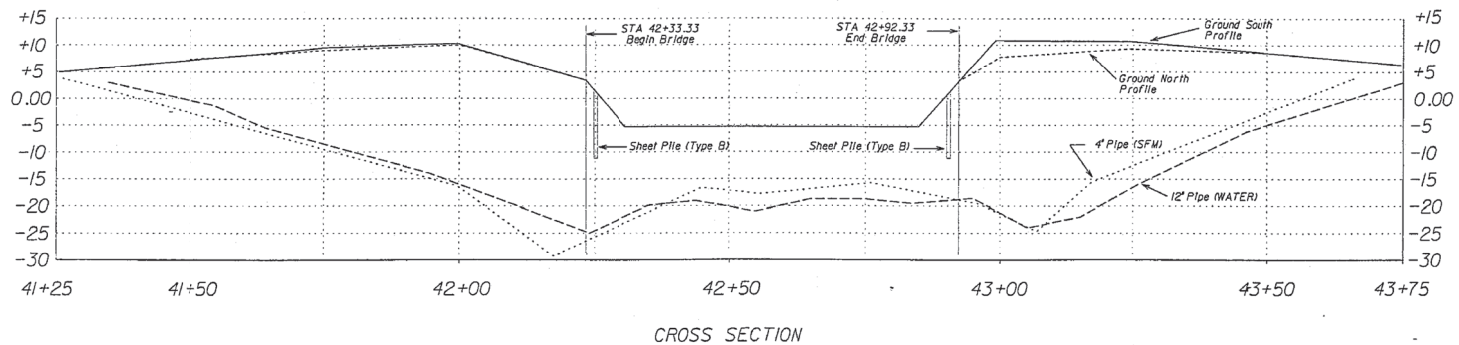
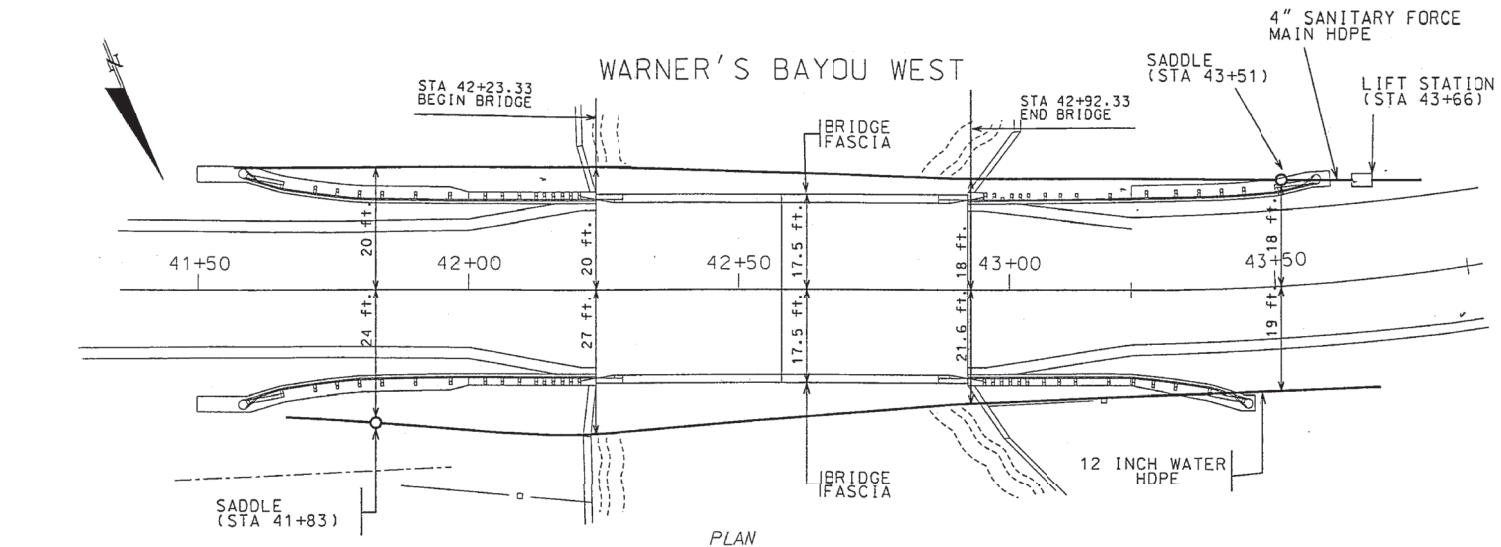
MANATEE COUNTY PUBLIC WORKS DEPARTMENT			
PROJECT #	404-6089781	SURVEYED	GFY 03/2023
SEC./TWN./RGE	19.20.29./34/17	DESIGNED	JSS/BLR 08/2023
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**SOUTHWEST SERVICE AREA D
FORCE MAIN REPLACEMENT
RIVERVIEW & 59TH ST W
ROADWAY ASBUILT**

SHEET
NO.


25 of 28

G-14



REVISIONS			PUBLIC WORKS DEPARTMENT		ENGINEER OF RECORD:		LOGO:		SEA:		UTILITY LOCATIONS		DRAWING NO.	
DATE	BY	DESCRIPTION			Drawn by	KS	6-13-01			TJN 7.8.01	RIVERVIEW BOULEVARD OVER WARNIER'S BAYOU WEST BRIDGE NO. 134013 MANATEE COUNTY, FLORIDA	UTILITY LOCATIONS	U-1	
			Checked by	JRY	6-13-01	HARDESTY & HANDOVER, LLP CONSULTING ENGINEERS MIAMI LAKES, FLORIDA								
			Designed by	JRY	6-13-01									
			Created by	TW	6-13-01									
			Approved by	TIMOTHY J. NILES										

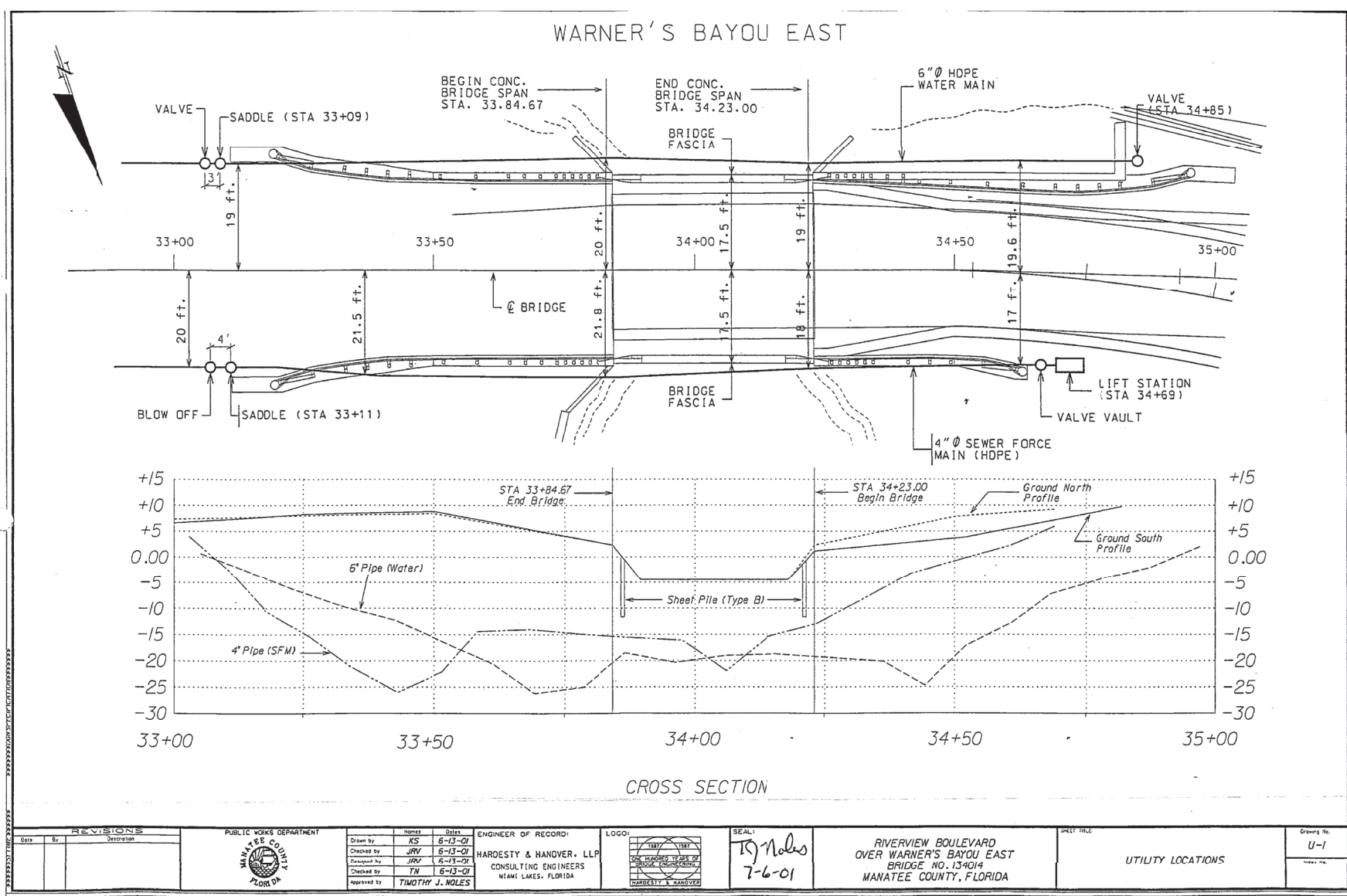
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DATE	DESCRIPTION			PROJECT #	404-6089781	SURVEYED	GFY	03/2023	SEC./TWN./RGE	19.20.29./34/17	DESIGNED	JSS/BLR	08/2023	26 of 28
				SCALE	SEE PLANS	DRAWN	BLR/JSS	08/2023						


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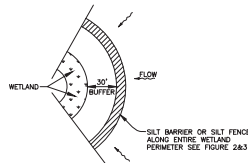


G-14

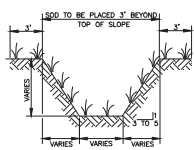
REVISIONS		 1022 26th Avenue East, Bradenton, FL 34208	<p>J. SHEA SHOUN, STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO. 60923.</p> <p>THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY J. SHEA SHOUN ON THE DATE INDICATED HERE.</p> <p>PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.</p>	MANATEE COUNTY PUBLIC WORKS DEPARTMENT				SOUTHWEST SERVICE AREA D FORCE MAIN REPLACEMENT WARNERS BAYOU EAST BRIDGE UTILITY ASBUILT			SHEET NO.
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Originals plotted by: Rynga Robertson on: 11/13/2024 at: 12:42:54 PM on ANSI plot bleed 11.0x17.0 (24" x 36") color, uspcr C116-232 STR. File Name: FM-AREA D COVER C NOTES.DWG

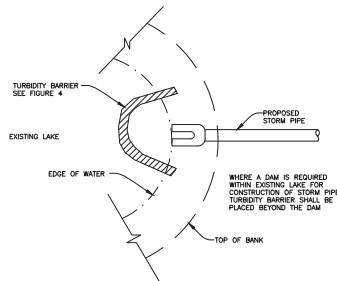
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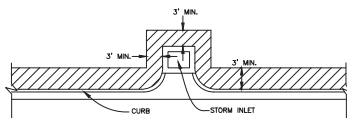
WETLAND BUFFER
FIGURE 1



TYPICAL SWALE SECTION
FIGURE 5

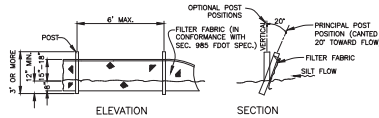


TURBIDITY BARRIER AT CONNECTION OF
STORM PIPE TO EXISTING LAKE
FIGURE 9

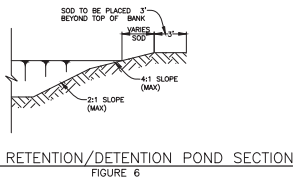


SOD ALONG CURB
AND AROUND INLET
FIGURE 14

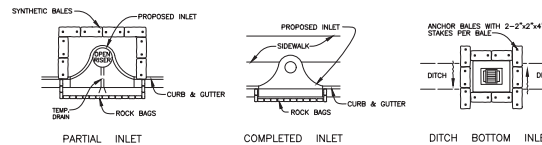
NOTE:
REFERENCE THE STATE OF FLORIDA
EROSION AND SEDIMENT CONTROL DESIGNER AND
REVIEWER MANUAL, LATEST EDITION, FOR ALL
TEMPORARY EROSION CONTROL MEASURES



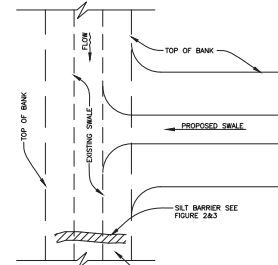
TYPICAL SILT FENCE
FIGURE 2



TYPICAL RETENTION/DETENTION POND SECTION
FIGURE 6

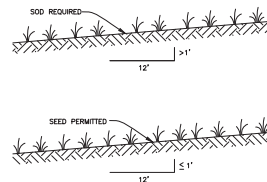


SYNTHETIC BALE PROTECTION AROUND
INLETS OR SIMILAR STRUCTURES
FIGURE 7

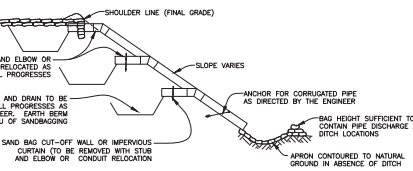


SILT BARRIER AT CONNECTION
OF SWALE TO EXISTING SWALE
FIGURE 11

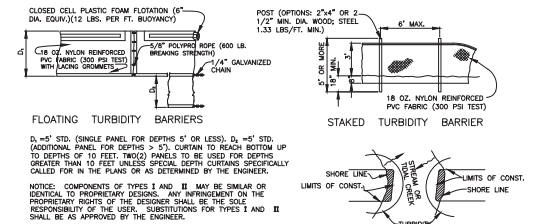
SILT BARRIER AT CONNECTION OF
STORM PIPE TO EXISTING SWALE
FIGURE 10



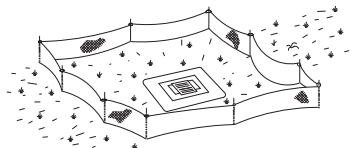
GRASS SLOPES
FIGURE 13



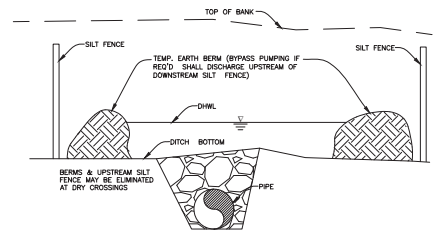
SECTION AA
TEMPORARY SLOPE DRAIN
FIGURE 15



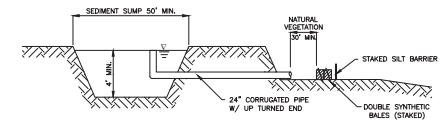
TURBIDITY BARRIERS
FIGURE 4



TYPE III SILT FENCE PROTECTION
AROUND DITCH BOTTOM INLETS
STAKED SILT BARRIER OR SILT FENCE
PROTECTION AROUND DITCH BOTTOM INLETS
FIGURE 8



UNDERGROUND PIPE CROSSING
FIGURE 12



SEDIMENT SUMP SECTION
FIGURE 16

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PROJECT #	404-6089781	SURVEYED	GFY 03/2023
SEC./TWN./RGE	19.20.29./34/17	DESIGNED	JSS/BLR 08/2023
SCALE	SEE PLANS	DRAWN	BLR/JSS 08/2023

SOUTHWEST SERVICE AREA D
FORCE MAIN REPLACEMENT
EROSION CONTROL

SHEET
NO.
28 of 28

Originally plotted by Bruce Robertson at 1:1 scale on 7/11/2024 at 12:42:34 PM on ANSI full bleed D (34.00 x 22.00 inches) paper using CIP-2023.STB. File Name: FM-AREA D COVER & NOTES.DWG