

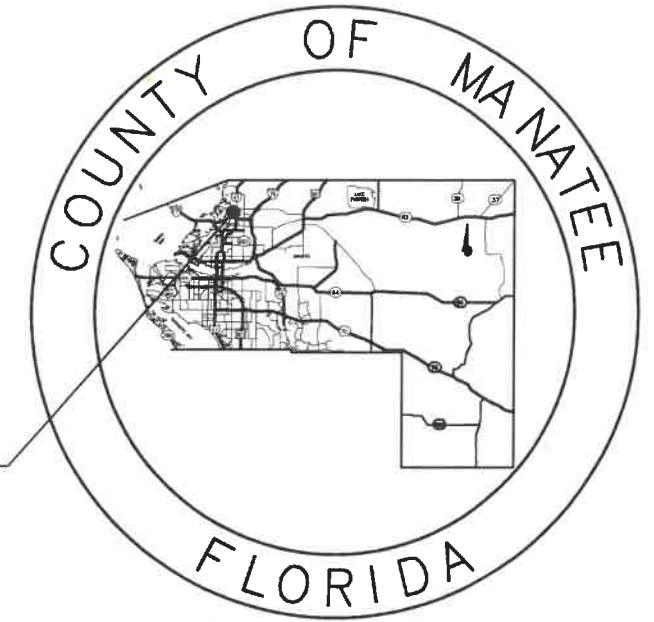
CONTRACT PLAN COMPONENTS

DRAINAGE PLANS
SURVEY PLANS

STATE OF FLORIDA
COUNTY OF MANATEE

PLANS OF PROPOSED DRAINAGE REHABILITATION
RUBONIA
PALMETTO, FLORIDA

MANATEE COUNTY PROJECT No: 304-6093460



INDEX OF ROADWAY PLANS

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DECEMBER 2019



PROJECT LOCATION



GOVERNING DESIGN STANDARDS:
MANATEE COUNTY HIGHWAY, TRAFFIC & STORMWATER
STANDARDS DATED JUNE 2015.

GOVERNING DESIGN STANDARDS:
MANATEE COUNTY UTILITY SPECIFICATIONS DATED APRIL 2019.

GOVERNING DESIGN STANDARDS:
FLORIDA DEPARTMENT OF TRANSPORTATION, FY 2019-20 DESIGN
STANDARDS eBOOK (DSeB) AND APPLICABLE DESIGN STANDARDS
REVISIONS (DSRs) AT THE FOLLOWING WEBSITE:
<http://www.fdot.gov/rddesign/DesignStandards/Standards.shtml>

GOVERNING STANDARD SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION, JANUARY 2020
STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE
CONSTRUCTION AS THE FOLLOWING WEBSITE:
<http://www.fdot.gov/programmanagement/Implemented/SpecBooks>



Know what's below
Call before you dig


DATE	DESCRIPTION	DATE	PROJECT #	304-6093460	SURVEYED	FDC	03/08/18	 JOHN PAHL, P.E. FLORIDA P.E. # 56368 3/3/20 Signature & Date	 PUBLIC WORKS DEPARTMENT ENGINEERING SERVICES 1022 26th Avenue East, Bradenton, FL 34208	DRAINAGE REHABILITATION RUBONIA COVER SHEET	SHEET NO.			
			SURVEY #	0577-0036	DESIGNED	XXX	XX/XXXX							
			SEC./TWN./RGE	25/33S/17E	DRAWN	KHL	03/13/18							
			SCALE	N.T.S.	CHECKED	XXX	XX/XXXX							01

LINE NO.	ITEM NO.	DESCRIPTION	EST. QTY	U/M
1	101-1	Mobilization	1.00	LS
2	102-1	Maintenance of Traffic	1.00	LS
3	104-10-3	Slaked Silt Fence (Type III)	16,600.00	LF
4	104-11	Flowline Turbidity Barrier (Type III)	825.00	CY
5	104-15	Soil Erosion Prevention Device	2.00	EA
6	104-18	Sheet Pile Protection System	170.00	EA
7	119-1.MC	Cleaning & Grubbing, incl. trees, pipes, wood / conc. structures, Brazilian Peppers	1.75	AC
8	120-1	Regular Excavation	14,200.00	CV
9	120-6	Excavation Subsoil	100.00	CV
10	120-6	Embankment (Regular)	500.00	CV
11	927-70-16	Milling Exst. Asph. Pavement (1/2" Avg. Depth)	20,680.00	SY
12	934-1.MC1	1/2" Type S-III Asphalt Concrete	620.00	TN
13	400-1-2	Concrete Class I Formwork	30.00	CV
14	400-1-11	Concrete Class I Retaining Walls	20.00	CV
15	400-1-15	Concrete Class I Miscellaneous	4.00	CV
16	416-1.MC1	Helical screw anchors (A2000 Pipe)	34.00	EA
17	425-1-711	inlets, Ditch Bot. Type C, < 10'	4.00	EA
18	425-1-521	inlets, Ditch Bot. Type C, < 10'	57.00	EA
19	425-1-523	inlets, Ditch Bot. Type C, J-Box (Ø) < 10'	3.00	EA
20	425-1-541	inlets, Ditch Bot. Type D, < 10'	26.00	EA
21	425-1-551	inlets, Ditch Bot. Type E, < 10'	9.00	EA
22	425-1.MC1	Diversion Box (9'x9')	1.00	EA
23	425-1.MC2	Diversion Box (5'x7')	1.00	EA
24	425-1.MC3	Diversion Box (7'x8')	1.00	EA
25	425-1.MC4	Control Structures (5'x5')	2.00	EA
26	425-1.MC5	M.C. Junction Box	2.00	EA
27	425-1.MC6	Concrete Block Box 4' x 5' w/ C.I. Grate	2.00	EA
28	425-1.MC7	Concrete Block Box 4' x 6' w/ C.I. Grate	1.00	EA
29	425-1.MC8	Concrete Block Box 4' x 7' w/ C.I. Grate	3.00	EA
30	425-1.MC9	Concrete Block Box 5' x 7' w/ C.I. Grate	2.00	EA
31	425-1.MC10	Concrete Block Box 6' x 7' w/ C.I. Grate	2.00	EA
32	425-1.MC11	Concrete Block Box 4' x 8' w/ C.I. Grate	1.00	EA
33	425-1.MC12	Concrete Block Box 2' x 2' w/ C.I. Grate	41.00	EA
34	425-1.MC13	M.C. Drop Inlet w/ French Drain	9.00	EA
35	425-1.MC14	M.C. Drop Inlet	8.00	EA
36	425-1.MC15	Baffle Box #1 w/ Uplow Filter & Food & Cold media	2.00	EA
37	430-174-215	Pipe Culvert, 12" x 18" ERCP	408.00	LF
38	430-174-218	Pipe Culvert, 14" x 23" ERCP	502.00	LF
39	430-174-224	Pipe Culvert, 15" x 30" ERCP	750.00	LF
40	430-174-230	Pipe Culvert, 24" x 30" ERCP	408.00	LF
41	430-174-236	Pipe Culvert, 25" x 25" ERCP	205.00	LF
42	430-175-115	Pipe Culvert, 15" RCP	711.00	LF
43	430-175-115	Pipe Culvert, 15" A2000	1,908.00	LF
44	430-175-118	Pipe Culvert, 18" RCP	256.00	LF
45	430-175-118	Pipe Culvert, 18" A2000	2,161.00	LF
46	430-175-121	Pipe Culvert, 21" A2000	274.00	LF
47	430-175-124	Pipe Culvert, 24" RCP	623.00	LF
48	430-175-124	Pipe Culvert, 24" A2000	1,920.00	LF
49	430-175-130	Pipe Culvert, 30" RCP	1,244.00	LF
50	430-175-130	Pipe Culvert, 30" A2000	1,511.00	LF
51	430-175-136	Pipe Culvert, 36" RCP	1,208.00	LF
52	430-175-136	Pipe Culvert, 36" A2000	543.00	LF
53	430-175-142	Pipe Culvert, 42" RCP	69.00	LF
54	430-175-148	Pipe Culvert, 48" RCP	219.00	LF
55	430-175-MC1	Pipe Culvert, 10" PVC, Incl. MES	40.00	LF
56	430-880-MC1	30" Check Valve (storm outlet pipe)	8.00	EA
57	430-880-MC2	42" Check Valve (storm outlet pipe)	2.00	EA
58	430-982-124	MES (Cross Drain) 15'	2.00	EA
59	430-982-133	MES (Cross Drain) 30'	3.00	EA
60	430-982-141	MES (Cross Drain) 48'	1.00	EA
61	430-984-124	MES (Side Drain) 15'	1.00	EA
62	430-984-624	MES (Side Drain) (12"x18")	4.00	EA
63	440-1-10	Underdrain, Type 1, 8" Dia.	1,420.00	LF
64	445-1-33-3	Steel Sheet Piling, F & T Permanent	200.00	SF
65	515-2-311	Pedestrian / Bicycle Railing, Aluminum, 42" Type 1	310.00	LF
66	520-2.MC1	Type A Miami Curb & Gutter	185.00	LF
67	520-2-4	Concrete Curb, Type D	1,019.00	EA
68	522-1	4" Concrete Sidewalk	4,050.00	SY
69	522-2	6" Concrete Sidewalk	4,440.00	SY
70	522-MC1	Brick Paver Drive (incl. Conc. Base)	600.00	SF
71	522-2	Decorative Walkways	20.00	EA
72	530-3-4	Riprap, RUBBLE, F & T, Drain Lining	150.00	TN
73	550-10-220	Fencing, Type B, 6'-6.0", Standard Features	1,013.00	LF
74	550-60-212	Fence Gate, Type B, Single, 6'-12.0" Opening	2.00	EA
75	570-1-2	Sodding (Performance Turf, Bahia)	24,000.00	SY
76	570-1.MC1	Line Protection	40.00	EA
77	570-1.MC2	Replant trees (Up to 6" Caliper)	20.00	EA
78	700-1-11	Single Post Sign, F & T GM < 12 SF	2.00	EA
79	700-1-50	Single Post Sign (Hexagon)	5.00	EA
80	711-1-1-23	Thermoplastic (Standard) (White) (Solid) (12")	820.00	LF
81	711-1-1-25	Thermoplastic (Standard) (White) (Solid) (24")	150.00	LF

LINE NO.	ITEM NO.	DESCRIPTION	EST. QTY	U/M
U2		12" DIP (CL 350) Water Main	60	LF
U3		8" DIP (CL 350) Water Main	200	LF
U4		4" DIP (CL 350) Water Main	310	LF
U5		6" PVC DR-18 C900	380	LF
U6		12" x Smaller Pipe Restraints	100	EA
U7		8" Gate Valve for Water Main, MJ	3	EA
U8		6" Gate Valve for Water Main, MJ	6	EA
U9		4" Gate Valve for Water Main, MJ	3	EA
U10		Adjust Gate Valve to grade	20	EA
U11		Relocate 8" Water Meter Assembly	49	EA
U12		Extend & Adjust Water Service	13	EA
U13		Adjust Water Meter to Grade & Lock Cover	3	EA
U14		Install Single Water Service, Long Side	3	EA
U15		Install Single Water Service, Short Side	3	EA
U16		Install Double Water Service, Long Side	2	EA
U17		Install Double Water Service, Short Side	2	EA
U18		12" - 45 degree MJ bend	4	EA
U19		8" - 45 degree MJ bend	2	EA
U20		6" - 45 degree MJ bend	38	EA
U21		4" - 45 degree MJ bend	14	EA
U22		6" - 22.5 degree MJ bend	4	EA
U23		4" - 22.5 degree MJ bend	4	EA
U24		6" - 11.25 degree MJ bend	4	EA
U25		8" x 8" Tee MJ	1	EA
U26		8" x 6" Tee MJ	3	EA
U27		8" x 4" Tee MJ	1	EA
U28		8" x 6" Reducer	1	EA
U29		8" x 4" Reducer	1	EA
U30		8" x 4" Reducer	1	EA
U31		8" x 4" Reducer	1	EA
U32		8" Cross MJ	1	EA
U33		12" PVC to DI Adapter	2	EA
U34		8" PVC to DI Adapter	8	EA
U35		6" PVC to DI Adapter	22	EA
U36		4" PVC to DI Adapter	11	EA
U37		Miscellaneous Concrete	400	CV
U38		Asphalt Road Restoration (Base & Resurface)	300	SY
U39		Mobilization (% of Water Subtotal)	2.00%	
U40		Contract Contingency (% of Water subtotal)	5.00%	
U41		Re-Connect Sewer Service	48	EA
U42		Adjust Cleanout to grade	4	EA
U43		Install New Clean Out	2	EA
U44		Proposed Sanitary Sewer Manhole	1	EA
U45		8 inch SDR 35 Gravity Sewer	133	LF
U46		Modify Existing Sanitary Sewer Manhole	1	EA
U47		Asphalt Road Restoration (Base & Resurface)	300	SY
U48		Mobilization (% of Sewer Subtotal)	2.00%	
U49		Contract Contingency (% of Sewer subtotal)	5.00%	

DATE	DESCRIPTION	DATE	PROJECT #	SURVEYED	FDC	03/08/18
			04-609346			
			0577-0036	DESIGNED	XXX	XX/XXXX
			25/335/17E	DRAWN	KHL	03/13/18
			N.T.S.	CHECKED	XXX	XX/XXXX

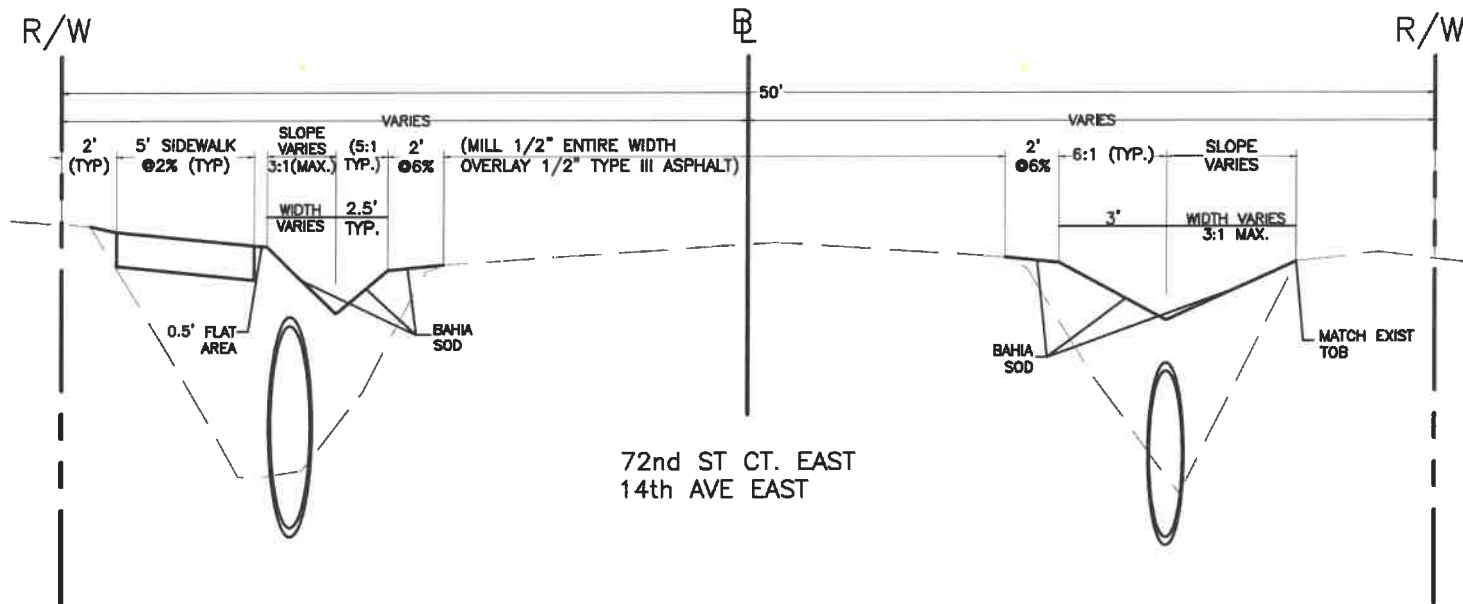
JOHN PARI, P.E.
 FLORIDA P.E. # 36368
 Signature & Date: 7/16/20



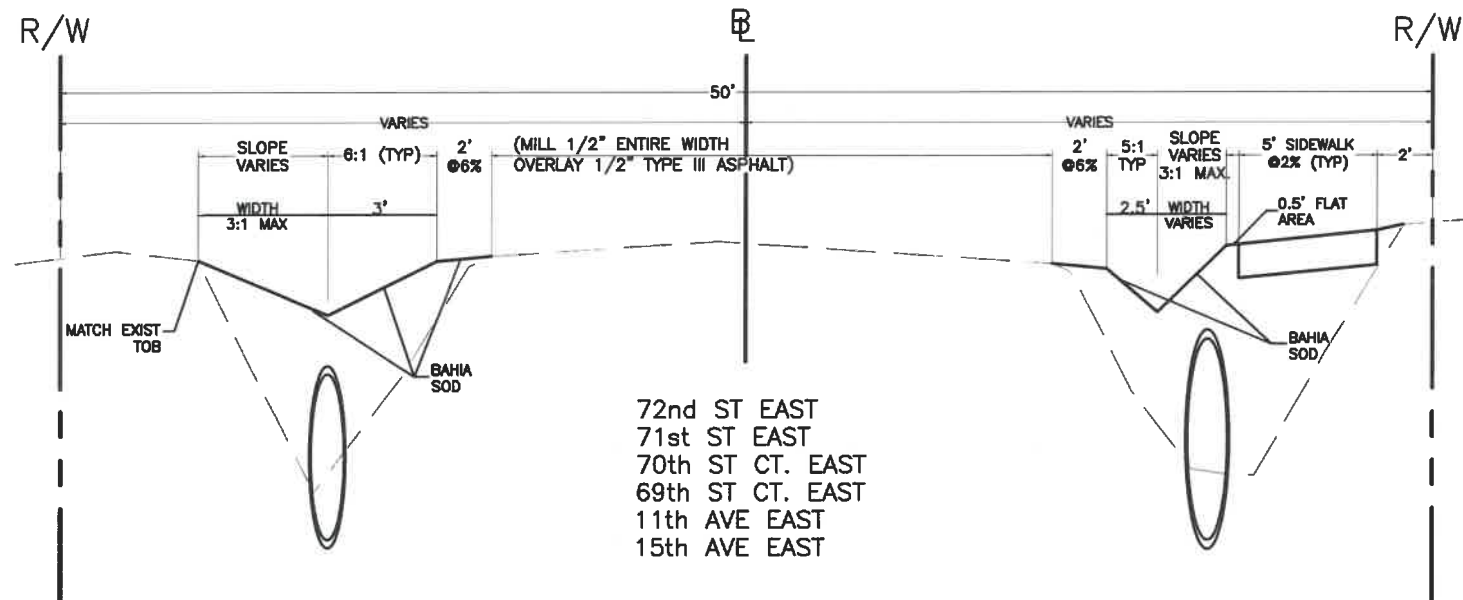
Manatee County
 FLORIDA

PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
 1022 26th Avenue East, Bradenton, FL 34208

DRAINAGE REHABILITATION
RUBONIA
SUMMARY OF QUANTITIES



72nd ST CT. EAST
14th AVE EAST



72nd ST EAST
71st ST EAST
70th ST CT. EAST
69th ST CT. EAST
11th AVE EAST
15th AVE EAST

TEST HOLE	UTILITY	FIELD MARKING	GROUND EL.	TOP OF PIPE EL.	NOTES PER REPORT
TH-06 STA 1004+29	6" WATER MAIN	FOUND HUB AT GRN LEVEL CUT -3.68	3.88	0.20	FND 6" WATER MAIN
TH-07 STA 1004+75	6" WATER MAIN	FOUND HUB AT GRN LEVEL CUT -2.81	4.09	1.28	FND 6" WATER MAIN
TH-08 STA 1009+26	10" FORCE MAIN	FOUND HUB AT GRN LEVEL CUT -4.85	3.22	-1.63	FND 10" FORCE MAIN
TH-09 STA 1009+60	10" FORCE MAIN	FOUND HUB AT GRN LEVEL CUT -4.17	3.12	-1.05	FND 10" FORCE MAIN
TH-10 STA 1009+32	6" WATER MAIN	FOUND HUB AT GRN LEVEL CUT -3.11	3.33	0.22	FND 6" WATER MAIN
TH-11 STA 1009+60	6" WATER MAIN	FOUND HUB AT GRN LEVEL CUT -2.50	2.31	-0.19	FND 6" WATER MAIN
TH-12 STA 1013+20	10" FORCE MAIN	FOUND HUB AT GRN LEVEL CUT -3.30	3.50	0.20	FND 10" FORCE MAIN
TH-13 STA 1015+20	10" FORCE MAIN	FOUND HUB AT GRN LEVEL CUT -3.96	4.30	0.34	FND 10" FORCE MAIN
TH-14 STA 1016+75	10" FORCE MAIN	FOUND HUB AT GRN LEVEL CUT -6.40	5.43	-0.97	FND 10" FORCE MAIN
TH-15 STA 1016+79	6" WATER MAIN	FOUND HUB AT GRN LEVEL CUT -3.91	5.36	1.45	FND 6" WATER MAIN
TH-16 STA 1017+10	4" WATER MAIN	FOUND HUB AT GRN LEVEL CUT -3.58	5.26	1.68	FND 4" WATER MAIN
TH-17 STA 1019+30	4" WATER MAIN	FOUND HUB AT GRN LEVEL CUT -2.45	4.75	2.30	FND 4" WATER MAIN
TH-18 STA 1217+48	10" FORCE MAIN	FOUND HUB AT GRN LEVEL CUT -6.14	5.90	-0.24	FND 10" FORCE MAIN
TH-19 STA 603+50	6" WATER MAIN	FOUND HUB AT GRN LEVEL CUT -3.12	3.67	0.55	FND 6" WATER MAIN
TH-20 STA 604+37	6" WATER MAIN	FOUND HUB AT GRN LEVEL CUT -4.36	3.90	-0.46	FND 6" WATER MAIN
TH-21 STA 604+75	6" WATER MAIN	FOUND HUB AT GRN LEVEL CUT -4.40	3.83	-0.57	FND 6" WATER MAIN
TH-22 STA 605+70	6" WATER MAIN	FOUND HUB AT GRN LEVEL CUT -2.96	3.38	0.42	FND 6" WATER MAIN
TH-23 STA 607+27	6" WATER MAIN	FOUND HUB AT GRN LEVEL CUT -3.41	2.50	-0.91	FND 6" WATER MAIN
TH-24 STA 609+40	6" WATER MAIN	FOUND HUB AT GRN LEVEL CUT -4.59	2.76	-1.83	FND 6" WATER MAIN
TH-25 STA 802+03	6" WATER MAIN	FOUND HUB AT GRN LEVEL CUT -3.69	3.63	-0.06	FND 6" WATER MAIN
TH-26 STA 802+38	6" WATER MAIN	FOUND HUB AT GRN LEVEL CUT -4.12	4.21	0.09	FND 6" WATER MAIN
TH-27 STA 804+27	4" WATER MAIN	FOUND HUB AT GRN LEVEL CUT -3.35	4.01	0.66	FND 4" WATER MAIN
TH-28 STA 203+22	6" WATER MAIN	FOUND HUB AT GRN LEVEL CUT -4.84	2.70	-2.14	FND 6" WATER MAIN
TH-29 STA 205+32	6" WATER MAIN	FOUND HUB AT GRN LEVEL CUT -3.15	2.90	-0.25	FND 6" WATER MAIN

TEST HOLE	UTILITY	FIELD MARKING	GROUND EL.	TOP OF PIPE EL.	NOTES PER REPORT
TH-01 STA 1205+00	12" PVC WATER	FOUND HUB AT GRN LEVEL CUT -4.08	5.13	1.05	FND 12" PVC WATER
TH-02 STA 1208+66	12" PVC WATER	FOUND HUB AT GRN LEVEL CUT -3.63	4.73	1.10	FND 12" PVC WATER
TH-03 STA 1212+50	12" PVC WATER	FOUND HUB AT GRN LEVEL CUT -3.35	4.91	1.56	FND 12" PVC WATER
TH-04 STA 1214+15	12" PVC WATER	FOUND HUB AT GRN LEVEL CUT -2.97	4.82	1.85	FND 12" PVC WATER
TH-05 STA 1219+00	12" PVC WATER	FOUND HUB AT GRN LEVEL CUT -3.15	5.85	2.70	FND 12" PVC WATER

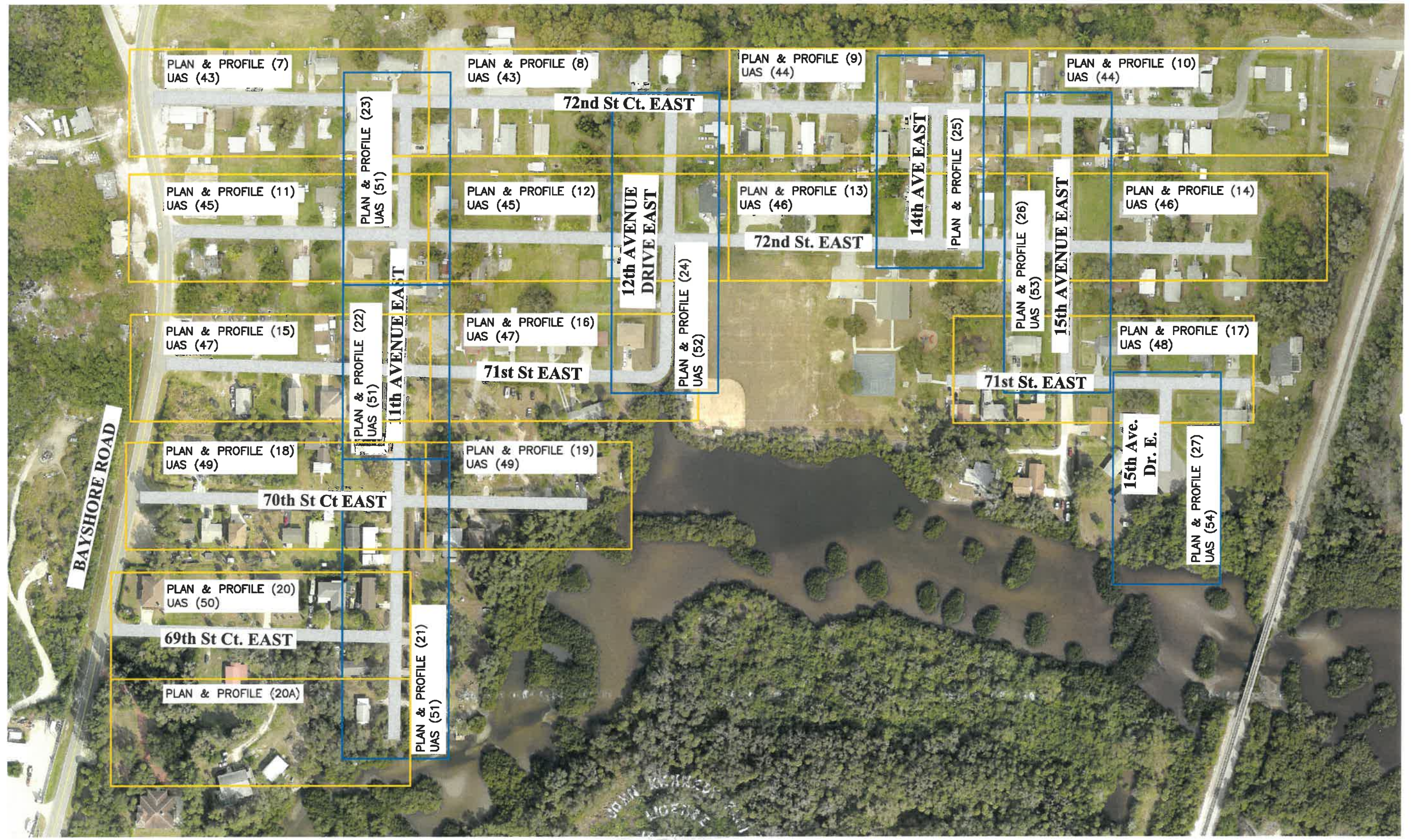
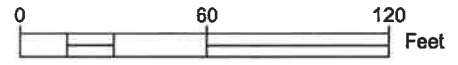
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JOHN PARI, P.E.
FLORIDA P.E. # 56368
John Parri
3/3/20

Manatee County
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

**DRAINAGE REHABILITATION
RUBONIA
TYPICAL SECTIONS**

DATE	DESCRIPTION	DATE	PROJECT #	SURVEYED	FDC	13/08/18
			604-6093460		XXX	XX/XXXX
				DESIGNED	KHL	13/13/18
				DRAWN	XXX	XX/XXXX
				CHECKED		



DATE	DESCRIPTION	DATE	PROJECT #	SURVEYED	FDC
			304-6093460	03/08/18	
			0577-0036	DESIGNED	XXX XX/XXXX
			25/33S/17E	DRAWN	KHL 03/13/18
			N.T.S.	CHECKED	XXX XX/XXXX

JOHN PARI, P.E.
 FLORIDA P.E. # 56368

 Signature & Date 3/3/20

PUBLIC WORKS DEPARTMENT
 ENGINEERING SERVICES
 1022 26th Avenue East, Bradenton, FL 34208

DRAINAGE REHABILITATION
 RUBONIA
 PROJECT LAYOUT

SHEET NO.
 04

GENERAL NOTES

- ALL CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH THE PROJECT MANAGEMENT DIVISION. THE PROJECT MANAGER IS: MIKE STURM AND CAN BE REACHED AT (841) 708-7450; EXT. 7332.
- SITE VISITS ARE MANDATORY FOR ALL BIDDERS. THESE SITE VISITS CAN BE ARRANGED THROUGH THE PROJECT MANAGER.
- ALL CONSTRUCTION ON THIS PROJECT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF MANATEE COUNTY UTILITY AND TRANSPORTATION STANDARDS AND/OR FDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" UNLESS OTHERWISE INDICATED ON THE PLANS.
- THE FOLLOWING NGS VERTICAL CONTROL MONUMENT WAS RECOVERED AND UTILIZED FOR THE ELEVATIONS SHOWN HEREIN: "COB 1049" NAVD 1988 ELEVATION 23.94' A VALUE OF (+0.98') SHOULD BE APPLIED TO ALL ELEVATIONS FOR A CONVERSION TO NGVD 1928.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL CONDITIONS AND REQUIREMENTS OF ALL PERMITS AND ALL GOVERNING FEDERAL, STATE, AND LOCAL AGENCIES. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS THAT ARE NOT PROVIDED IN THE BID DOCUMENTS, AT NO ADDITIONAL COST TO THE OWNER.
- THE INFORMATION PROVIDED IN THESE PLANS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF THE CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF WORK. ALL CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATION THEY MAY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH THEIR BIDS WILL BE BASED.
- THE CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS ON THE PLANS AND REVIEW ALL FIELD CONDITIONS THAT MAY AFFECT CONSTRUCTION. SHOULD DISCREPANCIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO OBTAIN THE ENGINEER'S CLARIFICATION BEFORE COMMENCING WITH CONSTRUCTION.
- AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT SUNSHINE STATE ONE CALL OF FLORIDA AT 1-800-432-4770 OR THE NATIONAL 811 ONE CALL NUMBER WHEN APPLICABLE FOR UTILITY LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL UTILITIES FOR THE POSSIBLE RELOCATION OR THE TEMPORARY MOVEMENT OF ANY EXISTING UTILITIES WITHIN THE RIGHTS-OF-WAY.
- ALL STATIONS AND OFFSETS REFER TO BASELINE OF CONSTRUCTION, UNLESS OTHERWISE NOTED.
- THE CONSTRUCTION LENGTHS IN THESE PLANS ARE APPROXIMATE. ACTUAL LIMITS MAY BE SET IN THE FIELD AS DIRECTED BY THE ENGINEER.
- SEPARATE PAYMENT SHALL BE MADE ONLY FOR THE ITEMS OF WORK LISTED AND IDENTIFIED BY APPROPRIATE PAY ITEM ON THE BID FORM. THE COST OF ANY RELATED WORK NOT SPECIFICALLY IDENTIFIED, BUT WHICH IS REQUIRED FOR SATISFACTORY COMPLETION OF THE WORK, SHALL BE CONSIDERED TO BE INCLUDED IN THE CONTRACT PRICE FOR THE APPROPRIATE BID ITEM.
- THE CONTRACTOR SHALL HAVE A FOREMAN, OR RESPONSIBLE PARTY, ON SITE AT ALL TIMES WHEN WORK IS BEING PERFORMED. ALL WORKERS ON THE JOB SITE WILL BE COURTEOUS TO THE PUBLIC AT ALL TIMES, AND SHALL REFER ANY QUESTIONS OR CONCERNS TO THE CONTRACTOR'S FOREMAN OR THE COUNTY INSPECTOR. THE FOREMAN SHALL SPEAK AND UNDERSTAND ENGLISH AND SHALL BE AVAILABLE AT ALL TIMES FOR TIMELY RESOLUTION OF PROJECT-RELATED ISSUES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE COORDINATION OF CONSTRUCTION SCHEDULING BETWEEN CONTRACTOR AND ALL UTILITY AGENCIES.
NOTE:
THIS INCLUDED MEETING WITH UTILITY AGENCIES PRIOR TO THE PRE-CONSTRUCTION CONFERENCE TO ADJUST THEIR SCHEDULES TO COINCIDE WITH THE CONTRACTOR CONSTRUCTION SCHEDULE. (REFERENCE CONTRACT DOCUMENTS)
- ANY DAMAGE TO STATE, COUNTY, OR LOCAL ROADS CAUSED BY THE CONTRACTOR'S HAULING OR EXCAVATION EQUIPMENT SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTORY OF THE COUNTY PROJECT MANAGER. PAYMENT SHALL NOT BE MADE FOR THIS WORK.
- ALL CONSTRUCTION WITHIN FDOT RIGHT-OF-WAY IS TO BE IN ACCORDANCE WITH CURRENT FDOT STANDARD SPECIFICATIONS FOR ROADWAY CONSTRUCTION AND THE DESIGN STANDARDS.
- ALL SIGNING, STRIPING AND RPM PLACEMENT WITHIN THE FDOT RIGHT-OF-WAY IS TO BE IN ACCORDANCE WITH FDOT STANDARD INDEX 17346.

SAFETY

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE FLORIDA TRENCH SAFETY ACT, 90-96, LAWS OF FLORIDA EFFECTIVE OCTOBER 1, 1990 AND THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION EXCAVATION SAFETY STANDARDS, 29 CFR 1926.650 SUBPART P, AS AMENDED. THE CONTRACTOR SHALL INCLUDE IN THE TOTAL BID PRICE ALL COSTS FOR COMPLIANCE WITH THESE REGULATIONS.
- THE CONTRACTOR SHALL USE SHEET PILING, SHEETING, BRACING, ETC., AS REQUIRED IN ALL EXCAVATION AREAS AND CONFORM TO ALL OSHA REQUIREMENTS.
- THE CONTRACTOR SHALL USE ALL NECESSARY SAFETY PRECAUTIONS TO AVOID CONTACT WITH OVERHEAD AND UNDERGROUND UTILITIES, POWER LINES, ETC.
- THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. THIS EXCLUSION DOES NOT ALLEVIATE THE CONTRACTOR FOR PROVIDING A CONTINUOUS SAFE WORKSPACE.

ENVIRONMENTAL

- CONTRACTOR IS RESPONSIBLE FOR INSTALLATION ALL SEDIMENT AND EROSION CONTROL (SEC) DEVICES (E.G., BARRIERS, SEDIMENT TRAPS/BASINS, VEGETATIVE BUFFERS, ETC.) AS SPECIFIED IN THE FINAL APPROVED PLANS FOR THE PROJECT. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL SEC DEVICES UTILIZED DURING THE PROJECT, AS WELL AS INSTALLATION & MAINTENANCE OF ANY ADDITIONAL MEASURES DEEMED NECESSARY DURING PROJECT IMPLEMENTATION, TO PREVENT EROSION AND OFF-SITE SEDIMENT MIGRATION. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR REMOVAL AND PROPER DISPOSAL OF ALL SEC DEVICES UPON CONCLUSION OF THE PROJECT, AND UPON ADEQUATE STABILIZATION OF DISTURBED SOILS.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY STORM WATER, EROSION, AND SEDIMENTATION CONTROL MEASURES IN ACCORDANCE WITH THE FDEP "FLORIDA STORM WATER, EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL". IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTROL AND PREVENT EROSION AND TRANSPORT OF SEDIMENT TO SURFACE DRAINS AND TO DITCHES DURING CONSTRUCTION.
- STOCKPILES SHALL BE PROTECTED AT ALL TIMES BY ON-SITE DRAINAGE CONTROLS WHICH PREVENT EROSION OF THE STOCKPILED MATERIAL. CONTROL OF DUST FROM SUCH STOCKPILES IS REQUIRED, DEPENDING UPON THEIR LOCATION AND THE EXPECTED LENGTH OF TIME THE STOCKPILES WILL BE PRESENT. IN NO CASE SHALL ANY STOCKPILED MATERIAL REMAIN AFTER THIRTY (30) CALENDAR DAYS.
- STORM WATER INLETS IN THE VICINITY OF THE PROJECT SHALL BE PROTECTED BY SEDIMENT TRAPS SUCH AS SECURED HAY BALES, SOD, STONING, ETC., WHICH SHALL BE MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS, AND WHICH MUST BE APPROVED BY THE ENGINEER BEFORE INSTALLATION. THIS WILL BE MAINTAINED TO PREVENT DEGRADATION OF THE WATERS OF THE COUNTY AND STATE.
- SEDIMENT BASINS AND TRAPS, PERIMETER BERMS, SEDIMENT BARRIERS, VEGETATIVE BUFFERS, AND OTHER MEASURES INTENDED TO TRAP SEDIMENT AND/OR PREVENT THE TRANSPORT OF SEDIMENT ONTO ADJACENT PROPERTIES, OR INTO EXISTING BODIES OF WATER, MUST BE INSTALLED, CONSTRUCTED, OR IN THE CASE OF VEGETATIVE BUFFERS, PROTECTED FROM DISTURBANCE AS A FIRST STEP IN THE LAND ALTERATION PROCESS. SUCH SYSTEMS SHALL BE FULLY OPERATIVE BEFORE ANY OTHER DISTURBANCE OF THE SITE BEGINS. EARTHEN STRUCTURES INCLUDING BUT NOT LIMITED TO BERMS, EARTH FILTERS, DAMS OR DIKES SHALL BE STABILIZED AND PROTECTED FROM DRAINAGE DAMAGE OR EROSION WITHIN ONE (1) WEEK OF INSTALLATION.
- ALL SWALES, DITCHES, AND CHANNELS LEADING FROM THE SITE SHALL BE PROTECTED FROM SILTATION AND EROSION DURING CONSTRUCTION AND BE SODDED WITHIN THREE (3) DAYS OF EXCAVATION.
- SOIL DISPLACED BY CONSTRUCTION WILL BE REMOVED. EROSION CONTROL SHALL BE IMPLEMENTED IN AREAS WHICH ARE CONSIDERED ENVIRONMENTALLY SENSITIVE. EROSION CONTROL SYSTEMS SHALL BE REQUIRED FOR ALL WORK WITHIN JURISDICTIONAL AREAS. THESE SYSTEMS MAY INCLUDE STAKED HAY BALES, SILT SCREENS, FILTER FABRIC, AND TURBIDITY SCREENS.

- ALL EROSION AND POLLUTION CONTROL DEVICES SHALL BE CHECKED REGULARLY, ESPECIALLY AFTER EACH RAINFALL AND SHALL BE CLEANED OUT AND/OR REPAIRED AS REQUIRED.
 - THE CONTRACTOR SHALL NOT ENTER UPON OR IN ANY WAY ALTER WETLAND AREAS THAT MAY BE ON OR NEAR THE CONSTRUCTION SITE. ALL WORK IN THE VICINITY OF OPEN WATER AND/OR WETLANDS IS TO BE PERFORMED IN COMPLIANCE WITH THE ENVIRONMENTAL REGULATIONS AND/OR PERMITS FOR THE SITE. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY FINES RESULTING FROM HIS VIOLATION OF ANY REGULATIONS OR PERMIT CONDITIONS.
 - FOR MORE INFORMATION, SEE THE EROSION CONTROL DETAIL SHEET INCLUDED IN THE PLANS.
- RIGHT-OF-WAY**
- ALL CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO WITHIN THE MANATEE COUNTY/FDOT RIGHT-OF-WAY AND/OR EASEMENTS SHOWN ON THE DRAWINGS.
 - THE CONTRACTOR SHALL EMPLOY A LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA TO REFERENCE AND RESTORE PROPERTY CORNER MONUMENTS, PINS, AND LANDMARKS THAT MAY BE DISTURBED BY CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
 - THE CONTRACTOR, PRIOR TO CONSTRUCTION AND RESTRICTING ANY TRAFFIC, MUST OBTAIN A RIGHTS-OF-WAY USE PERMIT AND A TRAFFIC CONTROL PLAN. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS FROM OTHER GOVERNMENTAL AGENCIES HAVING RELEVANT JURISDICTION. ALL MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF THE CURRENT FLORIDA DEPARTMENT OF TRANSPORTATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)". A TRAFFIC CONTROL PLAN SHALL BE SUPPLIED BY THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL DAMAGED STORM WATER STRUCTURES, PIPING, ENTRANCE PIPE AND HEADWALLS, THAT ARE TO REMAIN, WHETHER SHOWN ON THE PLANS OR NOT.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH IN THE FIELD THE RIGHT-OF-WAY LINES, BASE LINES, BENCH MARKS (ELEV.), CENTER LINES, AND STATIONING AS REQUIRED TO CONSTRUCT THIS PROJECT. ROADWAY PLANS AND PROPOSED DESIGN ARE BASED ON TOPOGRAPHIC SURVEYS PROVIDED BY MANATEE COUNTY PROJECT MANAGEMENT AND FLORIDA DESIGN CONSULTANTS, INC. REFER TO THE ORIGINAL SIGNED AND SEALED SURVEY CONTROL SHEETS IN THE PROJECT FILE.
 - THE CONTRACTOR SHALL COORDINATE THE CUTTING OF DRIVEWAYS WITH THE PROPERTY OWNER PRIOR TO CUT. ALL DRIVEWAYS WILL BE PASSABLE CONDITION AT THE END OF THE WORK DAY AND FULLY RESTORED PER PLAN. THE CONTRACTOR SHALL COORDINATE WITH THE AFFECTED UTILITY COMPANY FOR THE ADJUSTMENT OF ANY EXISTING UTILITIES AND STRUCTURES IN ORDER TO MATCH THE PROPOSED ELEVATIONS AND ALIGNMENTS.
 - A RIGHT OF ENTRY AGREEMENT SHALL BE OBTAINED BY THE PROJECT MANAGER FROM THE PROPERTY OWNER BEFORE ANY DRIVEWAY CONSTRUCTION WORK IS DONE OUTSIDE OF THE RIGHT-OF-WAY OR EASEMENT.

UTILITIES

- LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. THERE MAY BE OTHER IMPROVEMENTS, UTILITIES, ETC. WHICH ARE WITHIN THE PROJECT AREA AND WHICH HAVE NOT BEEN LOCATED OR IDENTIFIED. MAY NOT BE IN THE EXACT LOCATION SHOWN OR RELOCATED SINCE THE PREPARATION OF THESE PLANS. THE CONTRACTOR SHALL VERIFY, PRIOR TO CONSTRUCTION, THE LOCATIONS, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES STRUCTURES AND OTHER FEATURES (WHETHER OR NOT SHOWN ON THE PLANS) THAT MAY AFFECT HIS WORK. ALL EXISTING UTILITIES TO BE EXTENDED, CROSSED OR CONNECTION POINTS SHALL BE EXPOSED PRIOR TO CONSTRUCTION TO VERIFY LOCATION AND ELEVATION. ANY DISCREPANCIES OR CONFLICTS FOUND SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR RESOLUTION. UTILITIES DESIGNATED VV, VH, AND VWH ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY. THE VERIFIED LOCATIONS/ELEVATIONS APPLY ONLY AT THE POINTS SHOWN. INTERPOLATIONS BETWEEN THESE POINTS HAVE NOT BEEN VERIFIED. EXTREME CAUTION SHALL BE EXERCISED WHEN WORKING NEAR THE 24" WATERLINE.
- THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, WATER AND SEWER LINES, STORM DRAINS, UTILITIES, DRIVEWAYS, SIDEWALKS, SIGNS, MAIL BOXES, FENCES, TREES, LANDSCAPING, AND ANY OTHER IMPROVEMENT OR FACILITY IN THE CONSTRUCTION AREA. THE CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY DAMAGED ITEM DUE TO HIS CONSTRUCTION ACTIVITIES TO EQUAL OR BETTER THAN PRE-CONSTRUCTION CONDITIONS AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL USE APPROPRIATE TECHNIQUES, AS APPROVED, RECOMMENDED OR OFFERED BY FLORIDA POWER AND LIGHT TO PREVENT UNDERMINING OF POWER POLES DURING CONSTRUCTION. IF HOLDING OF POWER POLES IS REQUIRED OR REQUIRED BY THE UTILITY, THE CONTRACTOR SHALL COORDINATE THIS ACTIVITY WITH THE UTILITY AND BEAR ALL RELATED COSTS.
- EXCEPT WHERE THE PLANS AND SPECIFICATIONS PROVIDE THAT SUCH WORK SHALL BE PERFORMED UNDER THE CONTRACT FOR THIS PROJECT, ALL UTILITIES INTERFERING WITH CONSTRUCTION SHALL BE REMOVED, RELOCATED OR ADJUSTED BY THEIR OWNERS, AT THEIR EXPENSE. THE CONTRACTOR SHALL ARRANGE HIS SCHEDULE TO ALLOW UTILITY OWNERS TIME FOR THE NECESSARY RELOCATION AND ADJUSTMENT OF UTILITIES AND RELATED STRUCTURES.
- A FLORIDA POWER AND LIGHT SPECIAL PROVISION IS THAT THE TYPE OF EQUIPMENT USED IN THE INSTALLATION OF MAST ARMS/FOUNDATIONS, OVERHEAD/CANTILEVER SIGNS/FOUNDATIONS, AND THE MOVEMENT AND ADJACENT PROTECT LINES AS SHALL MEET THE FOLLOWING REQUIREMENTS: 1) OVERHEAD LINES SHALL STAY IN PLACE BOTH VERTICALLY AND HORIZONTALLY 2) CONTRACTOR SHALL MEET ALL APPLICABLE OSHA REQUIREMENTS (SEPARATION SHALL FOLLOW FFL GUIDELINES). ANY COST ASSOCIATED WITH THIS TYPE OF EQUIPMENT REQUIRED FOR THIS INSTALLATION IS INCLUDED IN THE RELATED PAY ITEMS. PLEASE REFER TO THE SPECIAL CONDITIONS IN THE UTILITY WORK SCHEDULE AND UTILITY COORDINATION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL UTILITY COMPANIES FOR THE RELOCATION AND ADJUSTMENT OF ALL UTILITIES, INCLUDING, ANY EXISTING POWER POLES AND/OR UTILITY CONDUITS WITHIN RIGHT-OF-WAY.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH THE APPROPRIATE PARTIES TO DETERMINE THE COUNTY'S FIBER COMMUNICATION NETWORK, KNOWN AS ATMS (COUNTY ISD, SCHOOL BOARD, AND TRAFFIC MANAGEMENT CENTER) IN THE AREA TO ACCOMMODATE ANY POTENTIAL CONFLICTS. AS-BUILT INFORMATION FOR EXISTING COMMUNICATION CONDUIT AND FIBER IS AVAILABLE FROM FRANK CONETTA, WITH UTILITY RECORDS (941-792-8811 EXT. 5027).

DRAINAGE AND GRADING

- ALL CONSTRUCTION IS TO BE STAKED IN THE FIELD BY OR UNDER THE SUPERVISION OF A FLORIDA REGISTERED LAND SURVEYOR.
- THE CONTRACTOR IS TO PROVIDE THE ENGINEER OF RECORD WITH REPRODUCIBLE RECORD DRAWINGS SHOWING ALL IMPROVEMENT LOCATIONS AND ELEVATIONS IN ACCORDANCE WITH LATEST MANATEE COUNTY TRANSPORTATION DEPARTMENT STANDARDS AND SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SFWMD) STANDARDS. THE CONTRACTOR SHALL ALSO PROVIDE FIVE SETS OF PRINTS, SIGNED AND SEALED BY A PROFESSIONAL LAND SURVEYOR, OF THE RECORD DRAWINGS TO THE ENGINEER OF RECORD. THESE RECORD DRAWINGS SHALL BE CERTIFIED TO THE OWNER, APPROPRIATE GOVERNMENTAL AGENCIES. RECORD DRAWINGS SHALL SPECIFICALLY INCLUDE STORMWATER FACILITY LOCATIONS, INCLUDING TOP OF BANK, UNDERDRAIN AND CONTROL STRUCTURES, SHALL BE PERFORMED BY A REGISTERED LAND SURVEYOR AND REVIEWED BY THE ENGINEER OF RECORD PRIOR TO ACCEPTANCE AND PAYMENT. BENCH MARKS WITH THE ELEVATION CLEARLY AND PROMINENTLY MARKED TO BE PLACED ON THE TOP OF ALL PROPOSED OUTFALL CONTROL STRUCTURES. RECORD DRAWINGS OF ALL MITIGATION AREAS INCLUDING ELEVATIONS, ZONES AND LIMITS SHALL BE PERFORMED BY A REGISTERED LAND SURVEYOR AND REVIEWED BY THE ENGINEER OF RECORD PRIOR TO ACCEPTANCE AND PAYMENT. THE RECORD DRAWINGS SHALL SPECIFICALLY INCLUDE THE SURFACE AREA OF STORMWATER FACILITY AREAS AT NORMAL WATER), TOP OF BANK AND ELEVATION (HWL), AT HIGH WATER ELEVATION (HWL ALL MITIGATION AND/OR LITTORAL SHELF AREAS.
- TO PREVENT SEDIMENTARY RUNOFF DURING CONSTRUCTION, STAKED HAY BALES, STAKED SILT SCREENS OR INLET DEBRIS CONTROL SCREENS ARE TO BE PLACED AT STORM INLETS, OUTFALL LOCATIONS AND ADJACENT PROPERTY LINES AS REQUIRED PRIOR TO ANY CONSTRUCTION ACTIVITIES. SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSTALLED AND THEN VERIFIED/INSPECTED BY MANATEE COUNTY INFRASTRUCTURE INSPECTIONS RESOURCES DIVISION (708-7450) PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE SEDIMENTATION BARRIERS IN A WORKING MANNER FOR THE DURATION OF CONSTRUCTION AND SHOULD BE CHECKED DAILY. SILTATION ACCUMULATIONS GREATER THAN THE LESSER OF 12 INCHES OR ONE-HALF OF THE DEPTH OF THE SEDIMENTATION BARRIER SHALL BE IMMEDIATELY REMOVED AND REPLACED IN UPLAND AREAS. IN ADDITION TO SPECIFIED EROSION CONTROL LOCATIONS, THE CONTRACTOR SHALL PERFORM DAILY SITE INSPECTIONS FOR POTENTIAL EROSION PROBLEMS. IF PROBLEMS OCCUR, THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING APPROPRIATE EROSION CONTROL IMMEDIATELY. AN INSPECTION

- LOG SHALL BE MAINTAINED AND AVAILABLE ONSITE AT ALL TIMES. STORMWATER TREATMENT FACILITIES INCLUDING OUTFALL PER DETAIL ARE TO BE CONSTRUCTED EARLY IN SITE DEVELOPMENT, WITH NO OFF-SITE UNTREATED RUN-OFF OCCURRING DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING TEMPORARY EROSION CONTROL DEVICES FOLLOWING COMPLETION OF ALL CONSTRUCTION AND FINAL STABILIZATION.
- ALL PIPE LENGTHS SHOWN ON PLAN VIEW ARE TO THE END OF THE MITERED END SECTION. REFER TO MITERED END SECTION DETAIL FOR LENGTH OF PIPE TO BE INCLUDED IN PRICE FOR MITERED END SECTION.
 - TOPOGRAPHIC AND PROPERTY SURVEYS GIVING LOT SIZE, GROUND ELEVATIONS, OBSTRUCTIONS ON SITE, LOCATIONS AND DEPTHS OF SEWERS, CONDUITS, PIPES, EXISTING STRUCTURES, CURBS, PAVEMENTS, TRACTS, AND SOIL BORING DATA GIVING THE NATURE OF GROUND AND SUBSURFACE CONDITIONS HAVE BEEN OBTAINED FROM RELIABLE SOURCES. THE ACCURACY OF THIS DATA IS NOT GUARANTEED, AND IS FURNISHED SOLELY AS AN ACCOMMODATION TO THE CONTRACTOR. USE OF THIS DATA SHALL BE MADE AT THE CONTRACTOR'S DISCRETION. NO ADDITIONAL COMPENSATION WILL BE GRANTED DUE TO THE CONTRACTOR'S LACK OF KNOWLEDGE OF SITE CONDITIONS. PRIOR TO BID SUBMISSION, THE CONTRACTOR SHALL CONDUCT ANY ADDITIONAL SURVEYS AND SOILS TESTS HE MAY DEEM NECESSARY TO VERIFY THE ACCURACY OF THE INFORMATION PROVIDED.
 - THE CONTRACTOR SHALL VERIFY TOPOGRAPHY AND SATISFY HIMSELF AS TO THE EXTENT OF FILL NECESSARY TO ACHIEVE FINISHED GRADE PRIOR TO AWARD OF CONTRACT. THERE SHALL BE NO CLAIM FOR EXTRAS NOTWITHSTANDING SITE PLAN REVISIONS PROMULGATED SUBSEQUENT TO AWARD OF CONTRACT.
 - ROADSIDE UNDERDRAIN SHOWN ON PLAN IS MINIMUM AND EXTENSION SHALL BE REQUIRED AS DETERMINED NECESSARY BY THE ENGINEER OF RECORD AND/OR MCMWD INSPECTION DEPARTMENT DURING THE COURSE OF CONSTRUCTION.
 - SUITABLE FILL MATERIAL FROM EXCAVATION SHALL BE UTILIZED FOR PROJECT FILL PER GRADING SPECIFICATIONS. UNSUITABLE MATERIAL SHALL BE PLACED IN OPEN AREAS ONLY AS DIRECTED BY THE PROJECT ENGINEER AND SOILS ENGINEER IN ACCORDANCE WITH FDOT INDEX 505.
 - THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL STRUCTURES PRIOR TO INSTALLATIONS.
 - REFER TO CONSTRUCTION TECHNICAL SPECIFICATIONS FOR COMPACTION REQUIREMENTS, GRASSING/SODDING REQUIREMENTS, AND PAVING CONSTRUCTION MATERIAL SPECIFICATIONS.
 - ALL FILL AREAS ARE TO BE CONSTRUCTED IN 12" MAXIMUM LIFTS.
 - DURING POND CONSTRUCTION, IF THERE IS A BREACH IN THE CONFINING CLAY LAYER, THE CONTRACTOR MUST STOP ALL EXCAVATION RELATED ACTIVITIES.



**VERTICAL DATUM
NAVD 88**

EMERGENCY CONTACTS

- | | | | |
|--|---|---|--|
| <p>MANATEE COUNTY PUBLIC WORKS DEPT.
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Dreg_coker@fl.com</p> <p>FLORIDA POWER & LIGHT TRANSMISSION
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BLACK & NEARH / OVERLAND CONTRACTING
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13051 N. HIGHLAND PKWY
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|--|---|---|--|

LEGEND

EXISTING	PROPOSED	ABBREVIATIONS
<p>BM ● BENCH MARK</p> <p>CM ○ CONCRETE MONUMENT</p> <p>IP ○ IRON PIPE</p> <p>IR ○ IRON ROD</p> <p>HUB ○ HUB</p> <p>N&D ○ MAIL & DISK ELEVATION</p> <p>PARCEL ID NO. ○</p> <p>LOT NO. ○</p> <p>GW ○ GUY WIRE</p> <p>PP ○ POWER POLE</p> <p>LP ○ LIGHT POLE</p> <p>MB ○ MAIL BOX</p> <p>SN ○ SIGN</p> <p>REF ○ REFLECTOR</p> <p>SPRK ○ SPRINKLER</p> <p>GM ○ GAS MARKER</p> <p>BFP ○ BACKFLOW PREVENTER</p> <p>BO ○ BLOW OFF VALVE</p> <p>FH ○ FIRE HYDRANT</p> <p>WV ○ WATER VALVE</p> <p>ARV ○ AIR RELEASE VALVE</p> <p>WM ○ WATER METER</p> <p>SMH ○ SANITARY SEWER MANHOLE</p> <p>SC ○ SANITARY SEWER CLEAN OUT</p> <p>SB#1 ○ SOIL BORING LOCATION</p> <p>TEL ○ TELEPHONE SERVICE BOX</p> <p>UTL ○ UTILITY BOX</p> <p>UTL ○ UTILITY RISER</p> <p>FD ○ FLOW DIRECTION</p> <p>GI ○ GRATE INLET</p> <p>MI ○ MITERED END SECTION</p> <p>SS ○ STORM SEWER MANHOLE</p>	<p>○ CHAIN LINK FENCE</p> <p>□ WOOD FENCE</p> <p>X BARBED WIRE FENCE</p> <p>FW FORCE MAIN</p> <p>FW POTABLE WATER</p> <p>FW RECLAIMED WATER</p> <p>SS SANITARY SEWER</p> <p>SD STORM DRAIN</p> <p>○ GAS LINE</p> <p>○ OVERHEAD TV</p> <p>○ UNDERGROUND TV</p> <p>○ UNDERGROUND ELECTRIC</p> <p>○ UNDERGROUND ELECTRIC</p> <p>○ OVERHEAD VERIZON</p> <p>○ UNDERGROUND VERIZON</p> <p>○ VERIZON</p> <p>○ UNDERGROUND UTILITY</p> <p>○ OVERHEAD UTILITY</p> <p>○ RAIL ROAD TRACKS</p> <p>○ EDGE OF CONCRETE</p> <p>○ EDGE OF ROAD</p> <p>○ TOE OF SLOPE</p> <p>○ TOP OF BANK</p> <p>○ PROPERTY LINE</p> <p>○ RIGHT OF WAY</p>	<p>R/W RIGHT OF WAY</p> <p>CONC CONCRETE</p> <p>ASPH ASPHALT</p> <p>DRWY DRIVEWAY</p> <p>SKM SIDEWALK</p> <p>EP EDGE OF PAVEMENT</p> <p>BOC BACK OF CURB</p> <p>MAN SERVICE LINE</p> <p>PROPOSED EASEMENT</p> <p>FIRE HYDRANT</p> <p>VALVE</p> <p>SANITARY SEWER MANHOLE</p> <p>BLOW OFF ASSEMBLY</p> <p>REDUCER</p> <p>TEE</p> <p>HORIZONTAL BEND</p> <p>VERTICAL BEND</p> <p>PLUG</p> <p>MASTER METER ASSEMBLY</p> <p>SERVICE LINE & METER</p> <p>DOUBLE SERVICE</p>

DATE	DESCRIPTION	DATE	PROJECT #	004-609346C	SURVEYED	FDC	3/08/18			PUBLIC WORKS DEPARTMENT ENGINEERING SERVICES 1022 26th Avenue East, Bradenton, FL 34208	DRAINAGE REHABILITATION RUBONIA GENERAL NOTES & LEGEND	SHEET NO. 05
	SURVEY #		0577-0036	DESIGNED	XXX	XX/XXXX						
	SEC./TWN./RGE		25/33S/17E	DRAWN	KHL	03/13/18						
	SCALE			CHECKED	XXX	XX/XXXX						

57. ON SLOPES GREATER THAN 3:1 PEGGING OR PINNING OF SOO MAY BE REQUIRED.
58. STATION LOCATIONS AND OFFSETS FOR STORM DRAIN INLETS AND MANHOLES REFERENCE THE CENTER OF THE SPECIFIED STRUCTURE BOTTOM. STATION LOCATION IS CENTER OF STRUCTURE BOTTOM FOR JUNCTION BOXES, CENTER OF RISER FOR CURB INLETS. FOR PIPES WITH MITERED END SECTIONS, THE PROPOSED LENGTHS SHOWN ON THE PLANS INCLUDE THE LENGTH OF THE MITERED END SECTION. PAYMENT FOR PIPE SHALL NOT INCLUDE THE LENGTH OF THE MITERED END SECTION. AS SPECIFIED BY DIMENSION "F" AS SHOWN IN FOOT INDEX 272 AND 273. PAYMENT SHALL BE FROM INSIDE STRUCTURE WALL TO INSIDE STRUCTURE WALL. ANY EXTRA PIPE LENGTH LISTED SHALL BE CONSIDERED CONTINGENT.
59. ALL CURB INLET AND JUNCTION BOX STORMWATER STRUCTURES SHALL HAVE HEAVY DUTY RING AND COVER MANHOLE ACCESS. ALL DRAINAGE BOX DETAIL SHALL FOLLOW MANATEE COUNTY CURRENT STANDARD 202 UNLESS IT IS DESIGNATED IN THE PLAN. ALL DRAINAGE BOXES SHALL HAVE A WALL THICKNESS OF 8" MINIMUM.
60. DURING DEMATERING OPERATIONS, THE CONTRACTOR SHALL NOT DISCHARGE DIRECTLY TO RECEIVING WATERS, EXISTING CONVEYANCES TO RECEIVING WATERS, OR WETLAND SYSTEMS. TEMPORARY SEDIMENT BASINS, TRAPS, OR SILTATION REDUCTION DEVICES SHALL BE UTILIZED TO COLLECT THE DISCHARGE FROM DEMATERING ACTIVITIES TO ELIMINATE THE POTENTIAL FOR OFFSITE SEDIMENT TRANSPORT AND TO ENSURE THAT DIRECT DISCHARGE DOES NOT OCCUR.

RESTORATION

61. ALL RESTORATION WORK PERFORMED THROUGHOUT THE PROJECT SHALL CONFORM TO EXISTING LINES AND GRADES UNLESS SHOWN OTHERWISE.
62. ALL DISTURBED GRASSED AREAS SHALL BE SODDED. THE TYPE OF SOD USED TO REPLACE OWNER MAINTAINED AREAS IN RIGHT-OF-WAY SHALL BE COORDINATED WITH THE PROPERTY OWNER. ALL EXISTING SHRUBS, TREES, PLANTINGS AND OTHER VEGETATION, OUTSIDE OF RIGHT-OF-WAY DISTURBED DURING CONSTRUCTION SHALL BE REPLACED WITH EQUIVALENT MATERIAL BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
63. CONCRETE DRIVEWAYS OR SIDEWALKS THAT ARE CUT SHALL BE RESTORED TO MATCH EXISTING ACCORDING TO MANATEE COUNTY PUBLIC WORKS STANDARDS. THE MINIMUM LENGTH OF CURB RESTORATION IS 10 FEET.
64. WHENEVER A PERMANENT ROADWAY SURFACE IS NOT PLACED IMMEDIATELY AFTER BACKFILLING AND COMPACTION OF THE NEWLY INSTALLED PIPE LINE IN AREAS WHERE TRAFFIC MUST PASS, THE CONTRACTOR SHALL INSTALL A TEMPORARY SURFACE CONSISTING OF NINE INCHES OF COMPACTED LINE ROCK BASE AND A COAT OF ASPHALT EMULSION. PERMANENT ROADWAY REPAIR SHALL BE PERFORMED A MAXIMUM OF TWENTY-ONE CALENDAR DAYS AFTER THE INITIAL OPEN CUTTING.
65. RESTORATION OF CURBS, DRIVEWAYS, SIDEWALKS, AND PLACEMENT OF SOO SHALL BE COMPLETED WITHIN FORTY-FIVE CALENDAR DAYS OF INITIAL DISTURBANCE, OR TWENTY-ONE CALENDAR DAYS OF SUBSTANTIAL COMPLETION, WHICHEVER OCCURS FIRST.

CONSTRUCTION

66. THE EXHAUST SYSTEM OF ALL GASOLINE AND DIESEL ENGINES SHALL BE EQUIPPED WITH MUFFLERS THAT MEET THE EQUIPMENT MANUFACTURER'S REQUIREMENTS FOR NOISE SUPPRESSION. THE CONTRACTOR SHALL INSTALL NOISE ABATEMENT BARRIERS POSITIONED TO BREAK LINE-OF-SITE FROM THE NOISE SOURCE TO AFFECTED RESIDENCES, AS APPROVED BY THE ENGINEER.
67. NO MATERIAL SHALL BE STOCKPILED IN ROADWAYS. ALL DIRT AND DEBRIS SHALL BE REMOVED FROM THE JOB SITE DAILY. ROADS SHALL BE SWEEPED DAILY AS PART OF DAILY CLEAN UP.
68. THE CONTRACTOR IS TO CONTROL ALL FUGITIVE DUST ORIGINATING ON THIS PROJECT BY WATERING OR OTHER METHODS AS REQUIRED.
69. INGRESS AND EGRESS TO ALL THE PROPERTIES IN THE CONSTRUCTION AREA SHALL BE MAINTAINED AT ALL TIMES.
70. PRIOR APPROVAL WILL BE REQUIRED FOR REMOVAL OF ANY TREE WITHIN THE CONSTRUCTION AREA, UNLESS OTHERWISE NOTED ON THE PLANS.
71. THE CONTRACTOR SHALL PROVIDE ALL DEMATERING EQUIPMENT NECESSARY TO KEEP ALL EXCAVATIONS DRY. DEMATERING IS REQUIRED TO 18" BELOW TRENCH BOTTOM. THE CONTRACTOR SHALL SUBMIT DEMATERING PLAN TO DISTRICT FOR APPROVAL PRIOR TO CONSTRUCTION.
72. ALL PIPING AND FITTINGS USED ON THIS PROJECT SHALL BE AS NOTED ON THE PLANS AND IN THE CONTRACT DOCUMENT AND SHALL BE INSTALLED TO THE LINES AND GRADES SHOWN ON THE PLANS AND PROFILES.
73. ALL PIPE LENGTHS ARE PLUS OR MINUS AND MAY BE ADJUSTED IN THE FIELD AS REQUIRED. PIPE MEASUREMENTS AND STATION OFFSETS ARE TO CENTER OF STRUCTURES OR FITTINGS. REFER TO DETAIL SHEET FOR ALL REFERENCE POINTS.
74. ALL ROCKS OR STONES LARGER THAN SIX INCH DIAMETER SHALL BE REMOVED FROM THE BACKFILL MATERIAL. BACKFILL MATERIAL PLACED WITHIN ONE FOOT OF PIPING AND APPURTENANCES SHALL NOT CONTAIN ANY STONES LARGER THAN TWO INCH DIAMETER.
75. ALL PENETRATION OF EXISTING STRUCTURES SHALL BE BY THE MECHANICAL ROTARY CORE BORING METHOD.
76. ALL CONCRETE AND REBAR PENETRATED OR DISTURBED SHALL BE COATED WITH TWO COATS OF EPOXY.
77. CONTRACTOR IS RESPONSIBLE FOR ALL UNSUITABLE MATERIAL REMOVAL WITHIN PROJECT LIMITS. EXCAVATION, EMBANKMENT, INCLUDING UTILIZATION, AND UNSUITABLE MATERIAL REMOVAL SHALL BE IN ACCORDANCE WITH FDOT DESIGN STANDARDS, LATEST VERSION.
78. WHERE EXCAVATION IS REQUIRED FOR CONSTRUCTION OF SIDEWALK, ALL STUMPS, ROOTS, ETC. SHALL BE REMOVED COMPLETELY FROM THE SIDEWALK AREA. ALL STUMPS WITHIN THE PROJECT LIMITS SHALL BE REMOVED COMPLETELY AND REPLACED WITH COMPACTED BACKFILL BEFORE THE AREA IS FILLED. TREE ROOTS IN AREA OF PROPOSED SIDEWALK, RAMP, OR DRIVEWAY REPLACEMENT SHALL BE GROUND OUT TO A DEPTH OF 6" BELOW BOTTOM OF NEW SIDEWALK OR DRIVEWAY. ALL PRUNED ROOT DEBRIS SHALL BE REMOVED FROM THE SUB-BASE MATERIAL PRIOR TO POURING CONCRETE, ASPHALT, OR APPLICATION OF OTHER SPECIFIED MATERIALS. THIS WORK SHALL BE INCLUDED IN AND PAID FOR UNDER THE PAY ITEM FOR CLEARING AND GRUBBING.
79. ALL STUMPS, ROOTS, AND OTHER DEBRIS PROJECTING THROUGH OR APPEARING ON THE SURFACE OF THE GROUND SHALL BE REMOVED TO A DEPTH OF 1-FOOT BELOW THE COMPLETED SURFACE. THIS WORK SHALL BE INCLUDED IN AND PAID FOR UNDER THE PAY ITEM FOR CLEARING AND GRUBBING.
80. ALL MATERIALS NOT CLAIMED BY THE COUNTY SHALL BECOME PROPERTY OF THE CONTRACTOR, AND SHALL BE DISPOSED OF BY THE CONTRACTOR IN AREAS PROVIDED BY THE CONTRACTOR. THIS WORK SHALL BE INCLUDED IN AND PAID UNDER THE PAY ITEM CLEARING AND GRUBBING.
81. THE CONTRACTOR SHALL PROVIDE ALL SHEETING, SHORING, AND BRACING REQUIRED TO PROTECT ADJACENT STRUCTURES OR TO MINIMIZE TRENCH WIDTH. WHERE A SEPARATE PAY ITEM IS NOT PROVIDED, THE COST OF ALL SHEETING, SHORING, AND BRACING REQUIRED SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE ITEM OF WORK FOR WHICH SHEETING, SHORING, AND BRACING IS REQUIRED.
82. THE CONTRACTOR SHALL DISTURB NO MORE GROUND THAN WHAT IS NECESSARY FOR CONSTRUCTION. NO OPEN EXCAVATED TRENCH, OR OTHER UNSAFE CONDITION WILL BE LEFT OVERNIGHT. ALL WORK SITES WILL BE COMPLETELY RESTORED WITHIN SEVEN (7) CALENDAR DAYS OF THE CONCRETE POUR FOR SIDEWALK. THE INTENT OF THIS PROVISION IS TO "SAFE-UP" THE PROJECT SITE AS WORK PROGRESSES, AND SHALL INCLUDE REMOVING FORMS, FILLING HOLES, GRADING, AND REMOVAL OF DEBRIS.
83. ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL REMAIN UNLESS OTHERWISE NOTED IN THE PLANS, OR AS DIRECTED BY THE ENGINEER.
84. ANY EXISTING SIGN TO REMAIN THAT IS DISTURBED OR RELOCATED DURING CONSTRUCTION SHALL BE RESET TO CURRENT STANDARDS FOR HEIGHT, OFFSET, AND METHOD OF INSTALLATION AT NO ADDITIONAL COST TO THE COUNTY.
85. ALL EXISTING SWALES NOT DESIGNATED FOR REDCONSTRUCTION SHALL BE REGRADED TO PROMOTE POSITIVE DRAINAGE AND MATCH PROPOSED CENTERLINE SWALE ELEVATION AND ALIGNMENT.

86. ALL STORM DRAINS AND STRUCTURES TO REMAIN SHALL BE CLEANED OF DEBRIS, DIRT, VEGETATION AND OTHER MATERIAL. STORM SEWER INLETS SHALL BE MODIFIED (RAISED/LOWERED) TO MATCH PROPOSED FINISHED GRADE.
87. ALL EXISTING FENCES DISTURBED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED AND REINSTALLED BY THE CONTRACTOR AT NO ADDITIONAL COST. (EXISTING FENCES WITHIN R/W TAKING LIMITS SHALL BE RECONSTRUCTED TO THE NEW R/W LINE AND ARE TO BE REIMBURSED UNDER THE MISCELLANEOUS BID ITEM).
88. ALL EXISTING TREES LOCATED WITHIN CONSTRUCTION LIMITS SHALL REMAIN UNLESS NOTED OTHERWISE.
89. THE EXISTING STORM DRAINAGE STRUCTURES SHALL BE REMOVED UNLESS NOTED OTHERWISE.
90. ALL EXISTING BUILDINGS SHALL REMAIN UNLESS OTHERWISE NOTED.
91. REMOVE AND REPLACE BASE AND SUB-BASE ACCORDING TO MANATEE COUNTY PUBLIC WORKS STANDARDS.
92. IF EXISTING SEAWALL TIE-BACKS ARE ENCOUNTERED DURING POND EXCAVATION, THE CONTRACTOR SHALL CONTACT MANATEE COUNTY.

UTILITIES

92. LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. THERE MAY BE OTHER IMPROVEMENTS, UTILITIES, ETC. WHICH ARE WITHIN THE PROJECT AREA AND WHICH HAVE NOT BEEN LOCATED OR IDENTIFIED, MAY NOT BE IN THE EXACT LOCATION SHOWN OR RELOCATED SINCE THE PREPARATION OF THESE PLANS. THE CONTRACTOR SHALL VERIFY, PRIOR TO CONSTRUCTION, THE LOCATIONS, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES STRUCTURES AND OTHER FEATURES (WHETHER OR NOT SHOWN ON THE PLANS) THAT MAY AFFECT HIS WORK. ALL EXISTING UTILITIES TO BE EXTENDED, CROSSED OR CONNECTION POINTS SHALL BE EXPOSED PRIOR TO CONSTRUCTION TO VERIFY LOCATION AND ELEVATION. ANY DISCREPANCIES OR CONFLICTS FOUND SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR RESOLUTION.
93. THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, WATER AND SEWER LINES, STORM DRAINS, UTILITIES, DRIVEWAYS, SIDEWALKS, SIGNS, MAIL BOXES, FENCES, TREES, LANDSCAPING, AND ANY OTHER IMPROVEMENT OR FACILITY IN THE CONSTRUCTION AREA. THE CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY DAMAGED ITEM DUE TO HIS CONSTRUCTION ACTIVITIES TO EQUAL OR BETTER THAN PRE-CONSTRUCTION CONDITIONS AT NO ADDITIONAL COST TO THE OWNER.
94. THE CONTRACTOR SHALL USE APPROPRIATE TECHNIQUES, AS APPROVED, RECOMMENDED OR OFFERED BY FLORIDA POWER AND LIGHT TO PREVENT UNDERMINING OF POWER POLES DURING CONSTRUCTION. IF HOLDING OF POWER POLES IS RECOMMENDED OR REQUIRED BY THE UTILITY, THE CONTRACTOR SHALL COORDINATE THIS ACTIVITY WITH THE UTILITY AND BEAR ALL RELATED COSTS.
95. ANY TEMPORARY SHUTDOWNS FOR MODIFICATIONS OF EXISTING UTILITY SYSTEMS THAT MUST REMAIN IN SERVICE DURING CONSTRUCTIONS SHALL BE KEPT TO A MINIMUM AND SHALL BE COORDINATED WITH AND APPROVED BY THE MANATEE COUNTY UTILITY OPERATIONS DEPARTMENT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. IT IS NOTED THAT TEMPORARY SHUTDOWNS MAY BE RESTRICTED TO CERTAIN HOURS AT ANY TIME OF THE DAY OR NIGHT AND WILL BE COMPLETED AT NO ADDITIONAL COST TO THE OWNER.
96. FOR WORK BEING DONE ON EXISTING SANITARY SEWER LINES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE FLOW OF ALL SEWAGE DURING CONSTRUCTION, WHICH MAY REQUIRE BY-PASS PUMPING AND/OR PUMPER TRUCKS. THE CONTRACTOR SHALL SUBMIT A DETAILED BY-PASS PUMPING PLAN PER SECTION 02720.

**VERTICAL DATUM
NAVD 88**

EMERGENCY CONTACTS

- MANATEE COUNTY PUBLIC WORKS DEPT. INFRASTRUCTURE ENGINEERING
SCOTT WAY, P.E.
1022 26TH AVENUE EAST
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FAX: (941) 708-7431
- TECO/PEOPLES GAS CO.
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(941) 342-4030
FAX: (941) 342-4011
EMERGENCY: 1-877-832-6911
dshanahan@teconenergy.com
- SUNSHINE STATE ONE CALL OF FLORIDA
1-(800) 432-4770
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denise.hutton@frc.com
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PALMETTO, FL 34221
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FAX: (941) 723-4444
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Greg.Coker@fl.com
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FLORIDA GAS TRANSMISSION
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james.cruzon@hchs.state.fl.us
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louisimone@ccorm.com
- SOUTHWEST FLORIDA WATER
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(941) 377-3722
FAX: (941) 373-7660
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- CHARIETTER COMMUNICATIONS
JAMES CRUZON
5413 E. STATE ROAD 64
BRADENTON, FL 34208-5535
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james.cruzon@charter.com
- MANATEE COUNTY
PUBLIC WORKS DEPT.
TRAITO ENGINEERING
MUKUNDA GOPALAKRISHNA, P.E.
(941) 748-3500 EXT. 7815
FAX: (941) 748-3571
- DEPARTMENT OF ENVIRONMENTAL
PROTECTION
ED WATSON
13051 N. TELECOM PKWY
TEMPLE TERRACE, FL 33637
PHONE: (813) 470-5875
FAX: (813) 470-5863
- PEACE RIVER ELECTRIC
COOPERATIVE, INC.
P.O. BOX 1310
WADSWORTH, FL 33873
DAVID MCCLINTOCK
KENDALL COVER
(863) 267-4622
(863) 767-4660
david.mcclintock@preco.coop
kendall.cover@preco.coop
- BLACK & VEATCH / OVERLAND
CONTRACTING
GREG BEES
5208 PEARLE TRAIL DRIVE
TAMPA, FL 33607
(813) 207-7609
rees@bv.com

LEGEND

EXISTING	LEGEND	ABBREVIATIONS
BM ● BENCH MARK	BUSH	R/W RIGHT OF WAY
CM ● CONCRETE MONUMENT	TREE	CONC CONCRETE
IP ● IRON PIPE	OAK TREE	ASPH ASPHALT
IR ● IRON ROD	PALM TREE	DRWAY DRIVEWAY
HUB ● HUB	PINE TREE	SWK SIDEWALK
N&D ● NAIL & DISK ELEVATION	EDGE OF VEGETATION	EP EDGE OF PAVEMENT
Parcel ID NO.	CHAIN LINK FENCE	BOC BACK OF CURB
LOT NO.	WOOD FENCE	
GW ● GUY WIRE	X BARBED WIRE FENCE	
PP ● POWER POLE	FM FORCE MAIN	
LP ● LIGHT POLE	PW POTABLE WATER	
MB ● MAIL BOX	RV RECLAIMED WATER	
SN ● SIGN	SB SANITARY SEWER	
REF ● REFLECTOR	SD STORM DRAIN	
SPRK ● SPRINKLER	SL GAS LINE	
GM ● GAS MARKER	OTV OVERHEAD TV	
BFP ● BACKFLOW PREVENTER	UTV UNDERGROUND TV	
BO ● BLOW OFF VALVE	OE OVERHEAD ELECTRIC	
FH ● FIRE HYDRANT	UE UNDERGROUND ELECTRIC	
WV ● WATER VALVE	OVZ OVERHEAD VERIZON	
ARV ● AIR RELEASE VALVE	UVZ UNDERGROUND VERIZON	
WM ● WATER METER	VER VERIZON	
SMH ● SANITARY SEWER MANHOLE	UG UNDERGROUND UTILITY	
SB#1 ● SOIL BORING LOCATION	OU OVERHEAD UTILITY	
TEL ● TELEPHONE SERVICE BOX	RR RAIL ROAD TRACKS	
UTB ● UTILITY BOX	EC EDGE OF CONCRETE	
UR ● UTILITY RISER	ER EDGE OF ROAD	
FD ● FLOW DIRECTION	TS TOE OF SLOPE	
GI ● GRATE INLET	TB TOP OF BANK	
ME ● MITERED END SECTION	PL PROPERTY LINE	
SM ● STORM SEWER MANHOLE	RL RIGHT OF WAY	

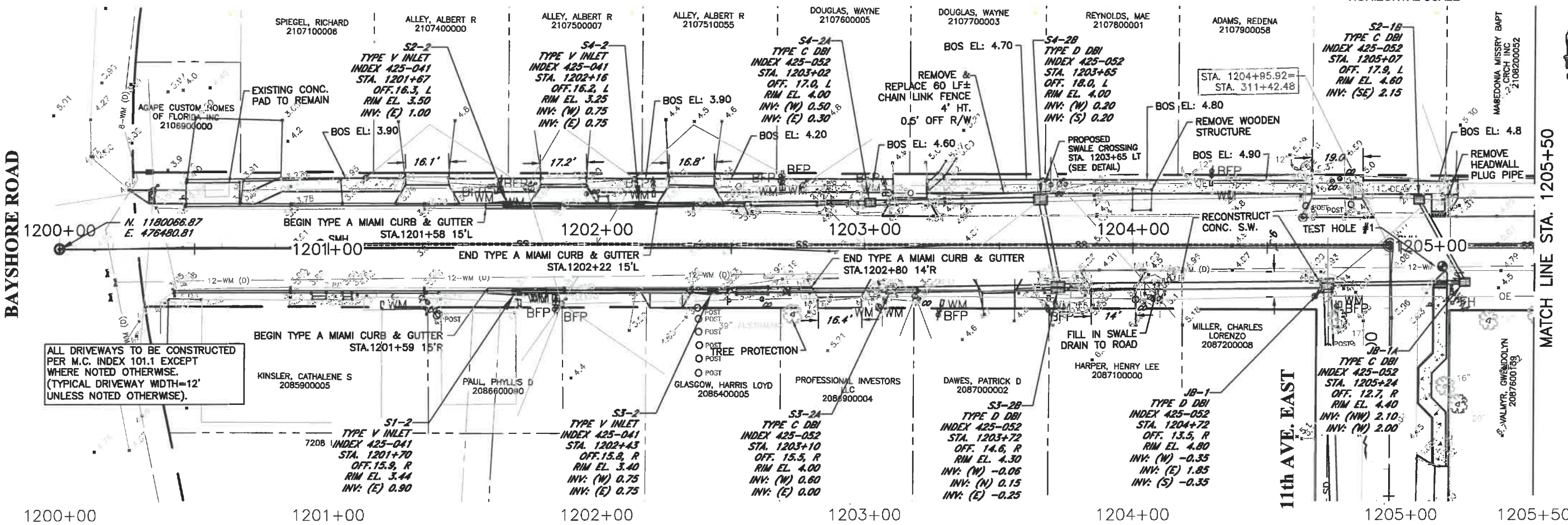
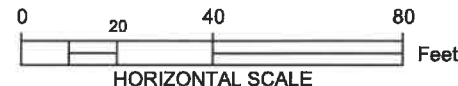
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			SCALE		CHECKED	XXX	XX/XXXX

JOHN FARZ, P.E.
FLORIDA P.E. # 56368
Signature
3/3/20



**DRAINAGE REHABILITATION
RUBONIA
GENERAL NOTES & LEGEND
CONTINUED**

72nd ST. CT. EAST



ELEVATIONS BASED UPON NAVD 1988

JOHN PARI
 FLORIDA P.E. # 56368
 Signature & Date 3/3/20



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 1022 26th Avenue East, Bradenton, FL 34208

RUBONIA
 72nd STREET COURT EAST
 PLAN & PROFILE

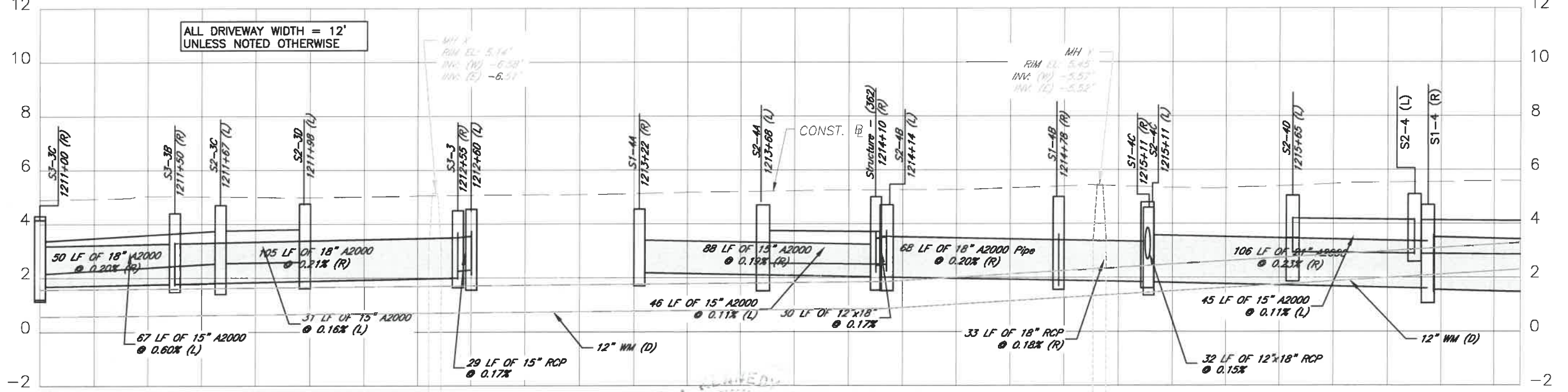
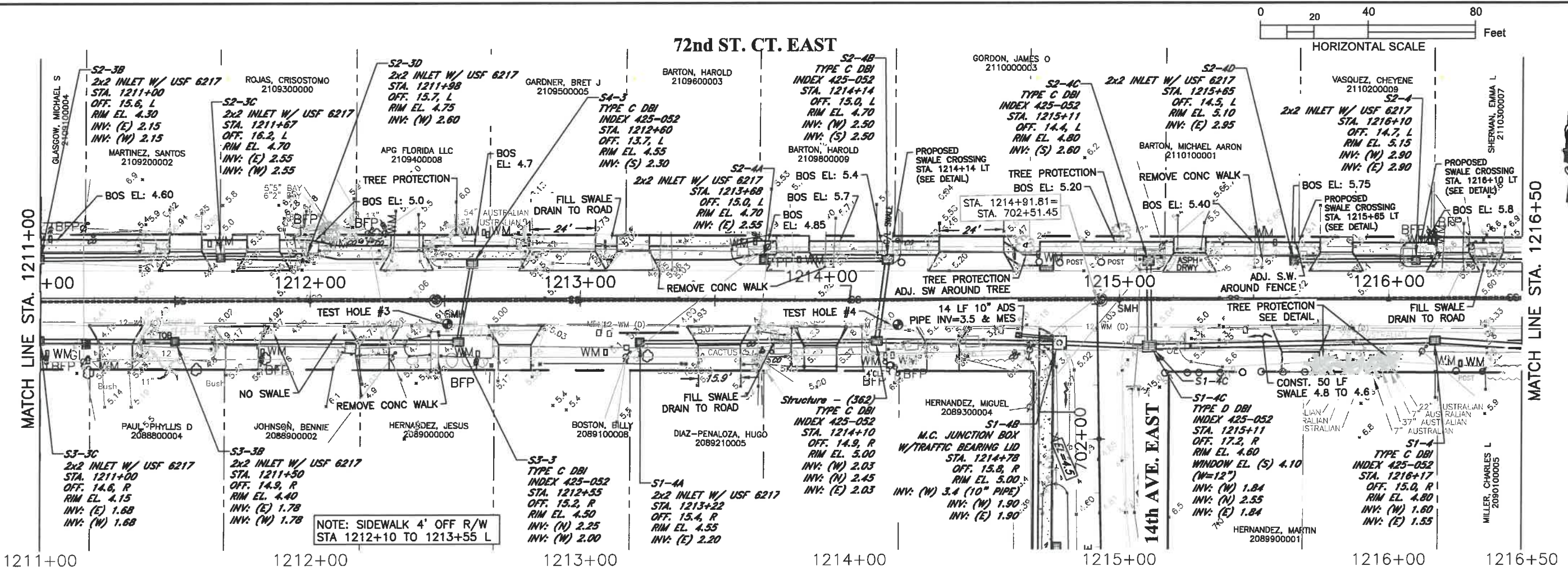
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SURVEY #	0577-0036	DESIGNED	JKP	06/2018
SEC./TWN./RGE	25/33S/17E	DRAWN	KHL	06/2018
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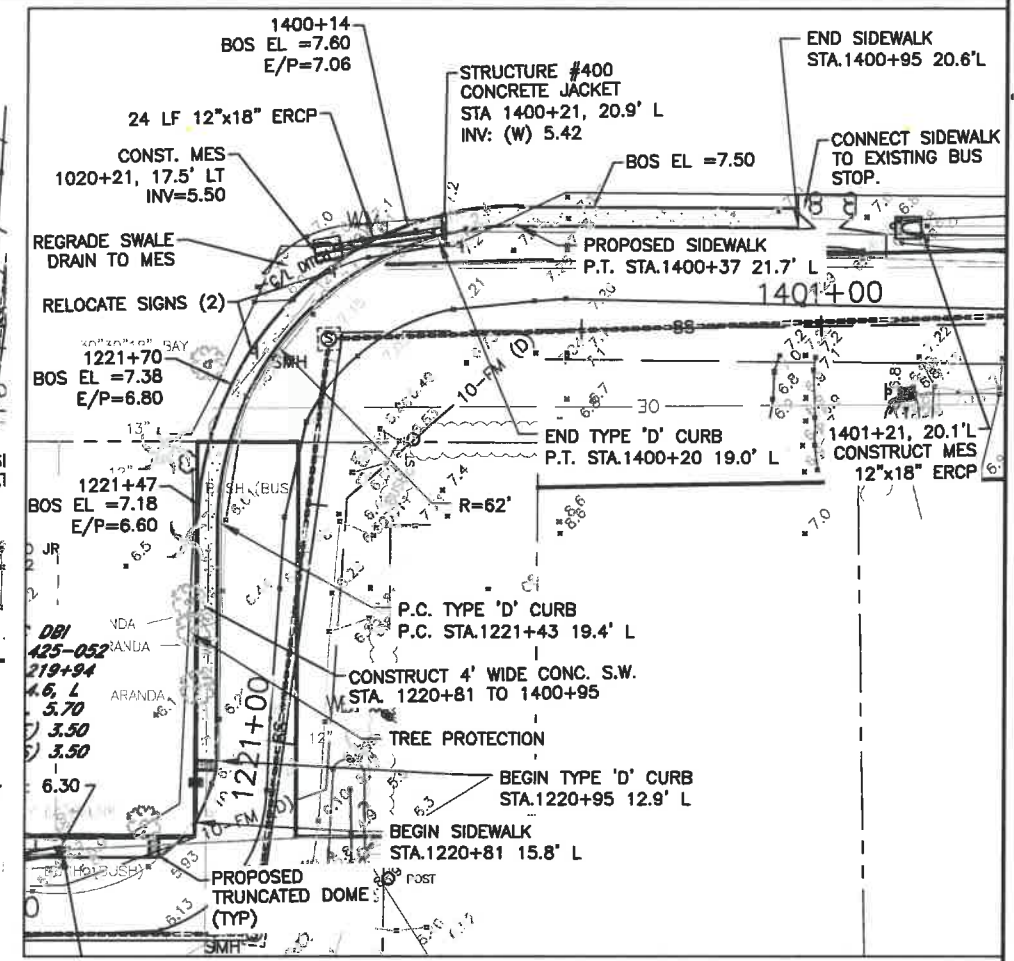
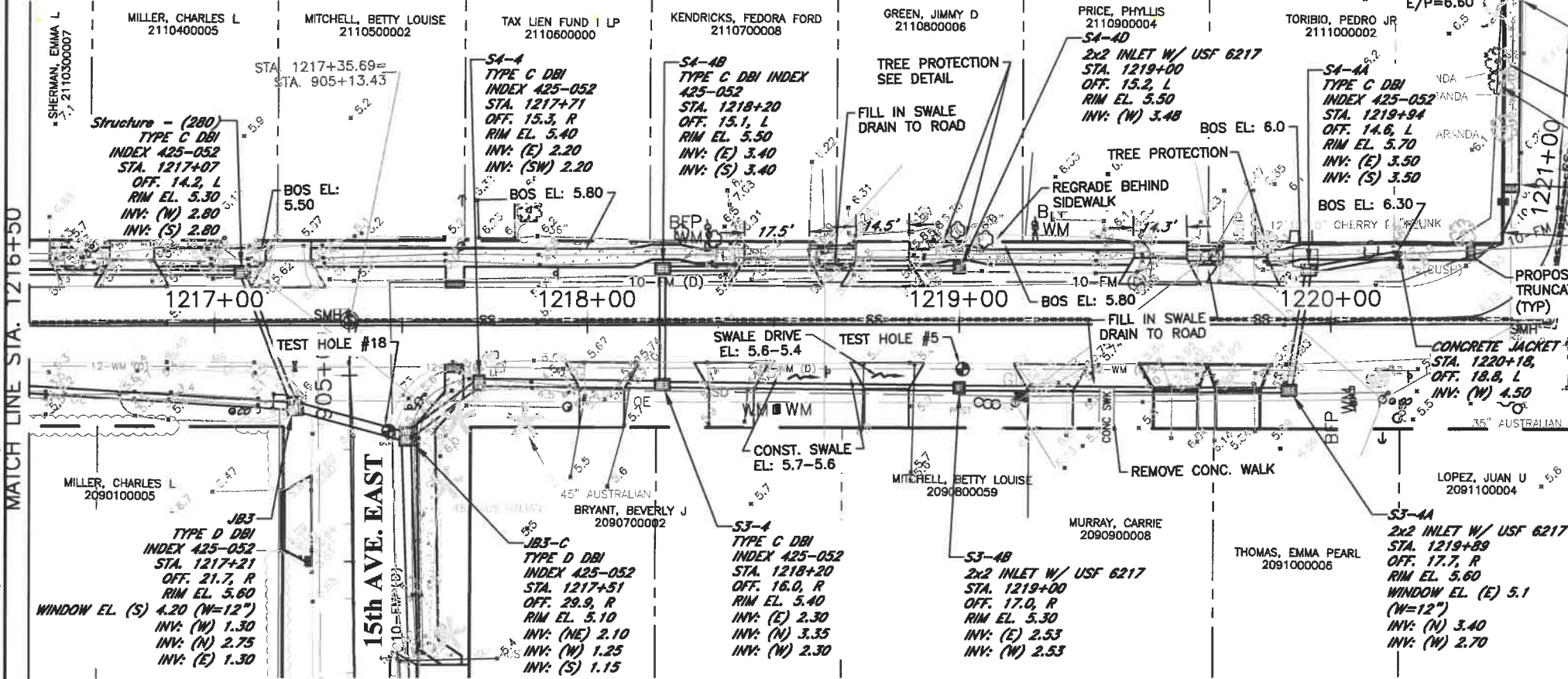
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JOHN PAUL
 FLORIDA P.E. # 56368
 Signature & Date 3/3/20

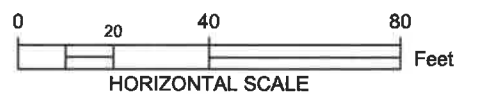
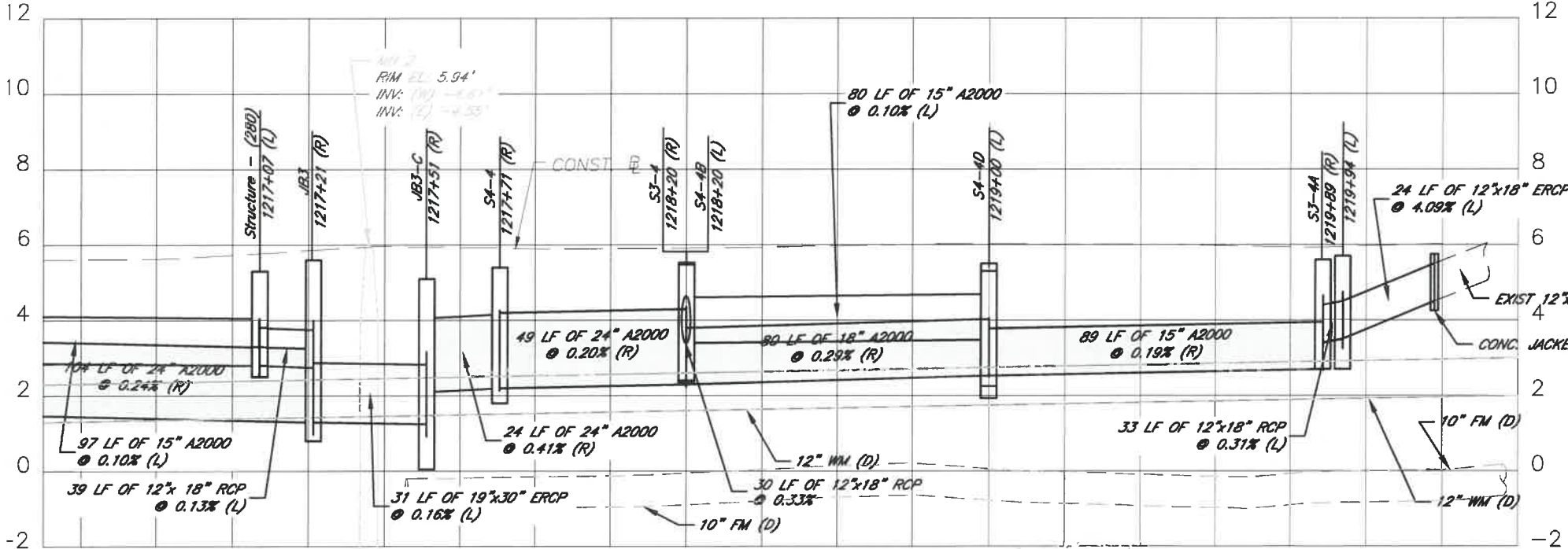
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RUBONIA
 72nd STREET COURT EAST
 PLAN & PROFILE

72nd ST. CT. EAST



216+50 1217+00 1218+00 1219+00 1220+00 1220+40



STA: 1218+17 TO 1220+40 LT
SIDEWALK WIDTH=4'

SIDEWALK 1' OFF R/W AT STATIONS
STA. 1218+20 LT; STA. 1219+00 LT;
STA. 1219+94 LT

ELEVATIONS BASED UPON NAVD 1988

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			0577-0036	DESIGNED	KJP 06/2018
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JOHN PARI
FLORIDA P.E. # 56368
Signature
3/3/20

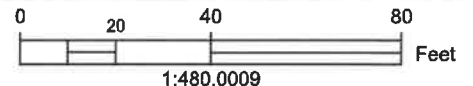


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RUBONIA
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PLAN & PROFILE

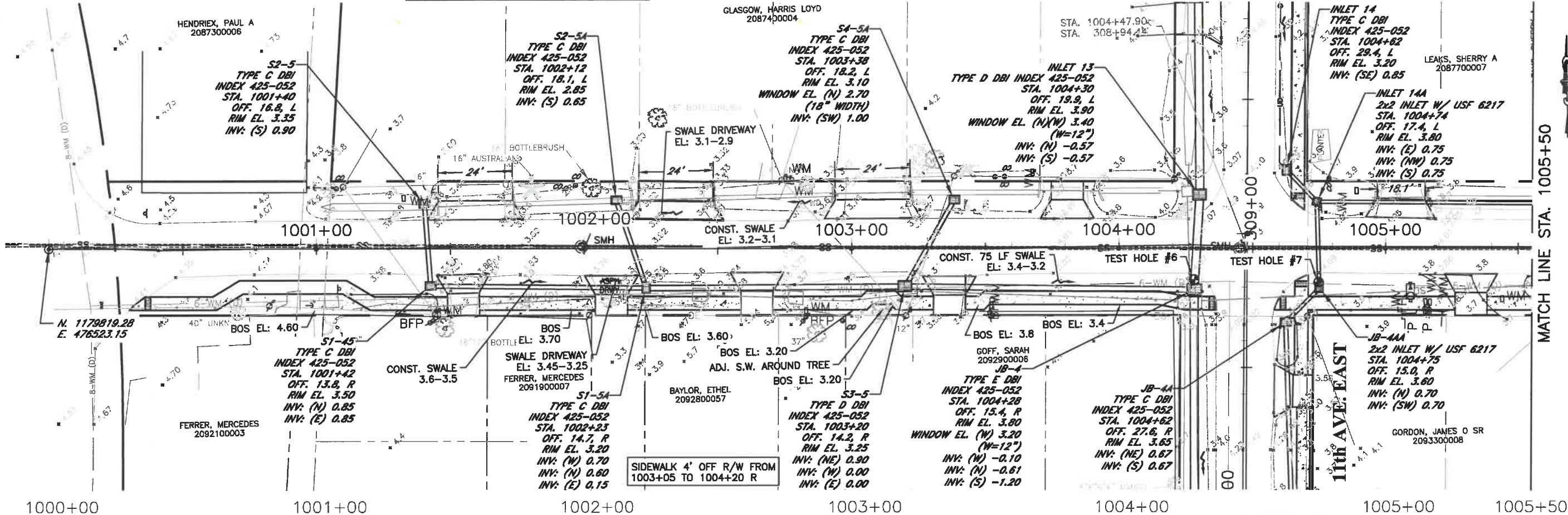
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72nd ST. EAST

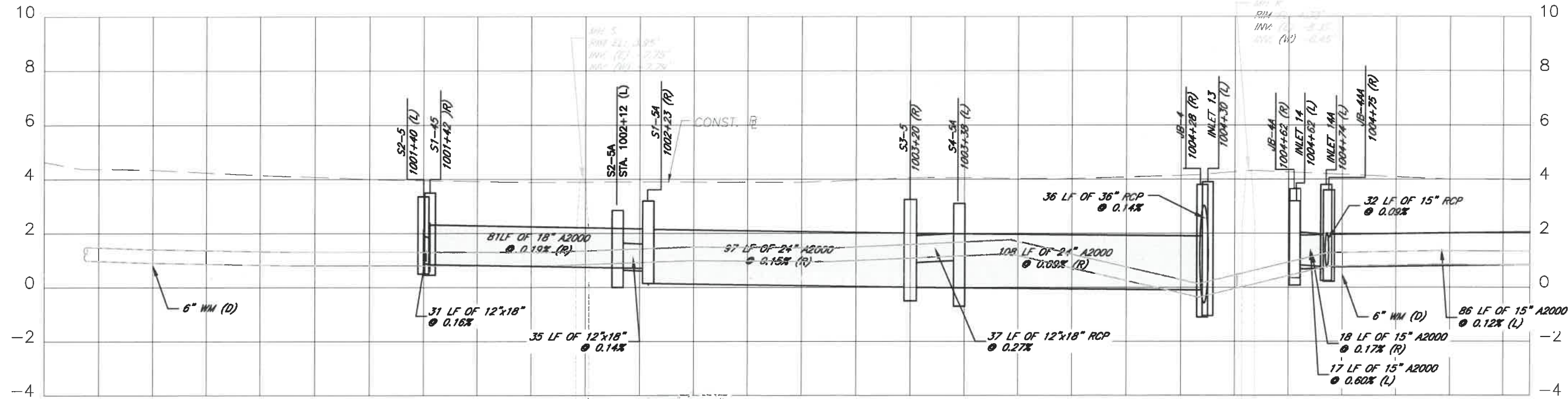


BAYSHORE ROAD

MATCH LINE STA. 1005+50



1000+00 1001+00 1002+00 1003+00 1004+00 1005+00 1005+50



ELEVATIONS BASED UPON NAVD 1988

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JOHN PARI
FLORIDA P.E. # 56368
Signature & Date 3/3/20

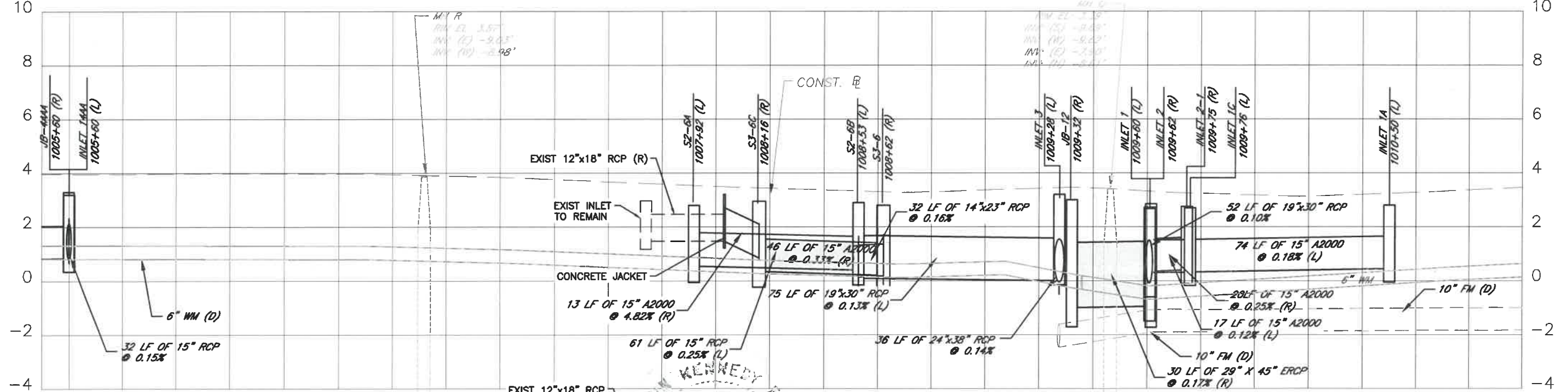
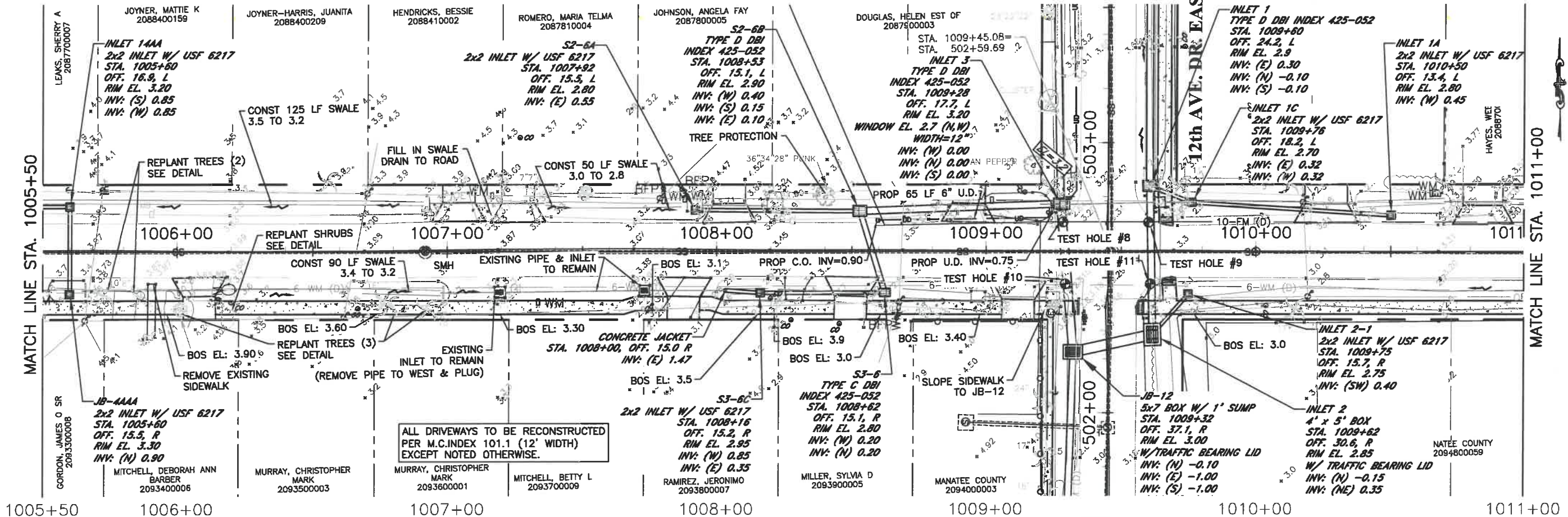
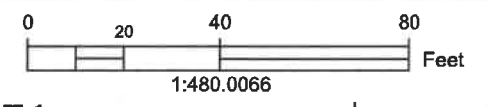
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RUBONIA
72nd STREET EAST
PLAN & PROFILE

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72nd ST. EAST



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			0577-0036	DESIGNED	JKP 06/2018
			25/33S/17E	DRAWN	KHL 06/2018
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JOHN PARI
 FLORIDA P.E. # 56368
 Signature & Date 3/3/20

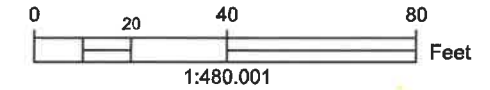


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RUBONIA
 72nd STREET EAST
 PLAN & PROFILE

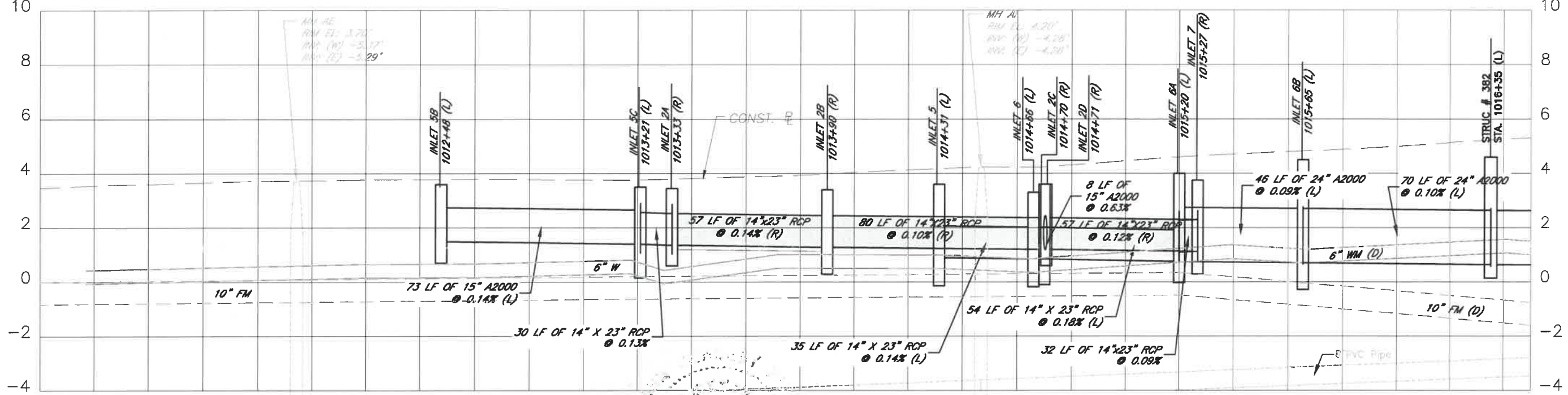
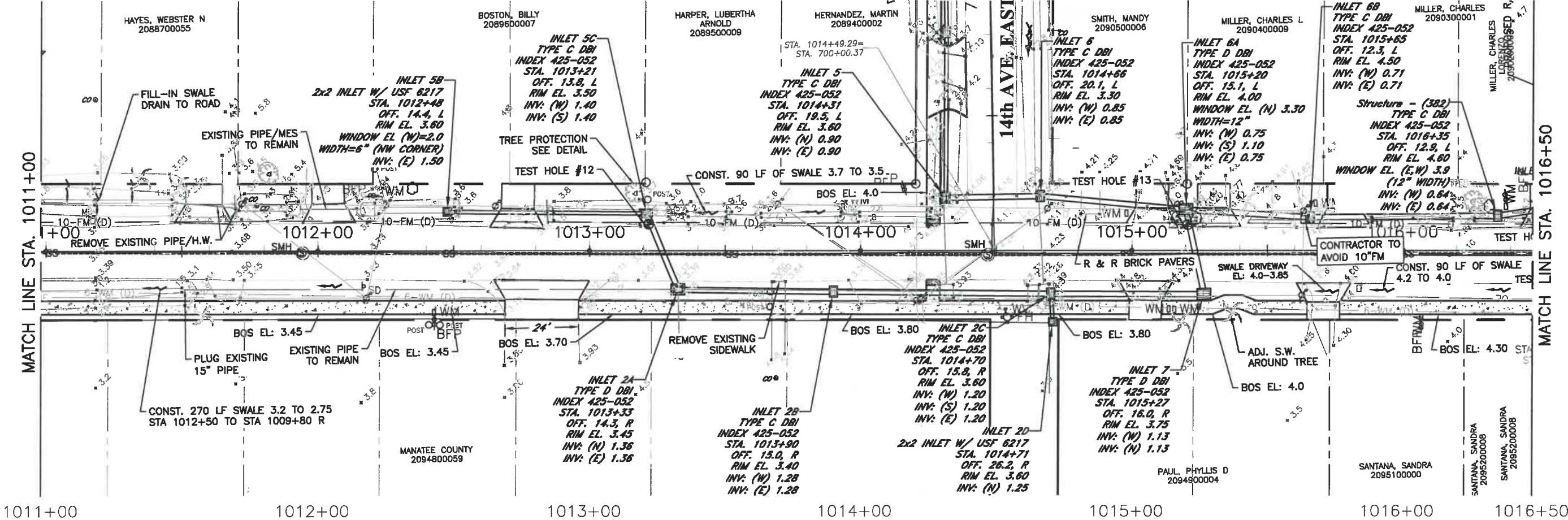
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72nd ST. EAST


14th AVE. EAST



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 V. FARI
 FLORIDA P.E. # 56368
 Signature & Date 3/3/20

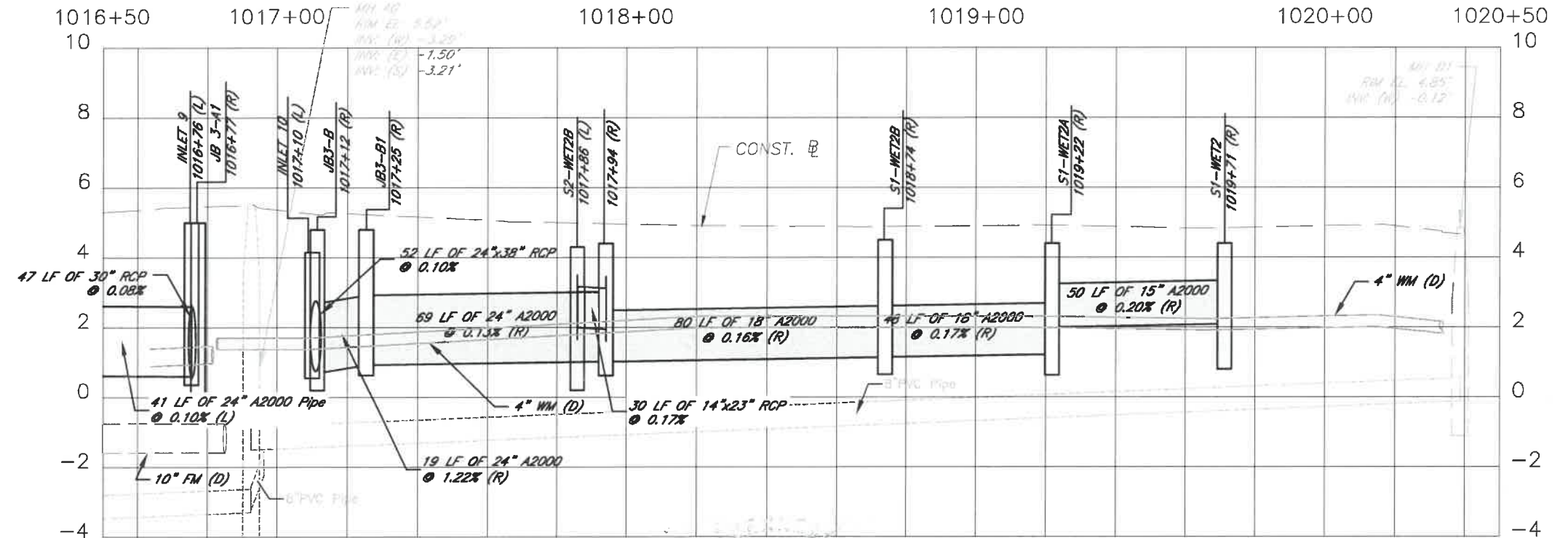
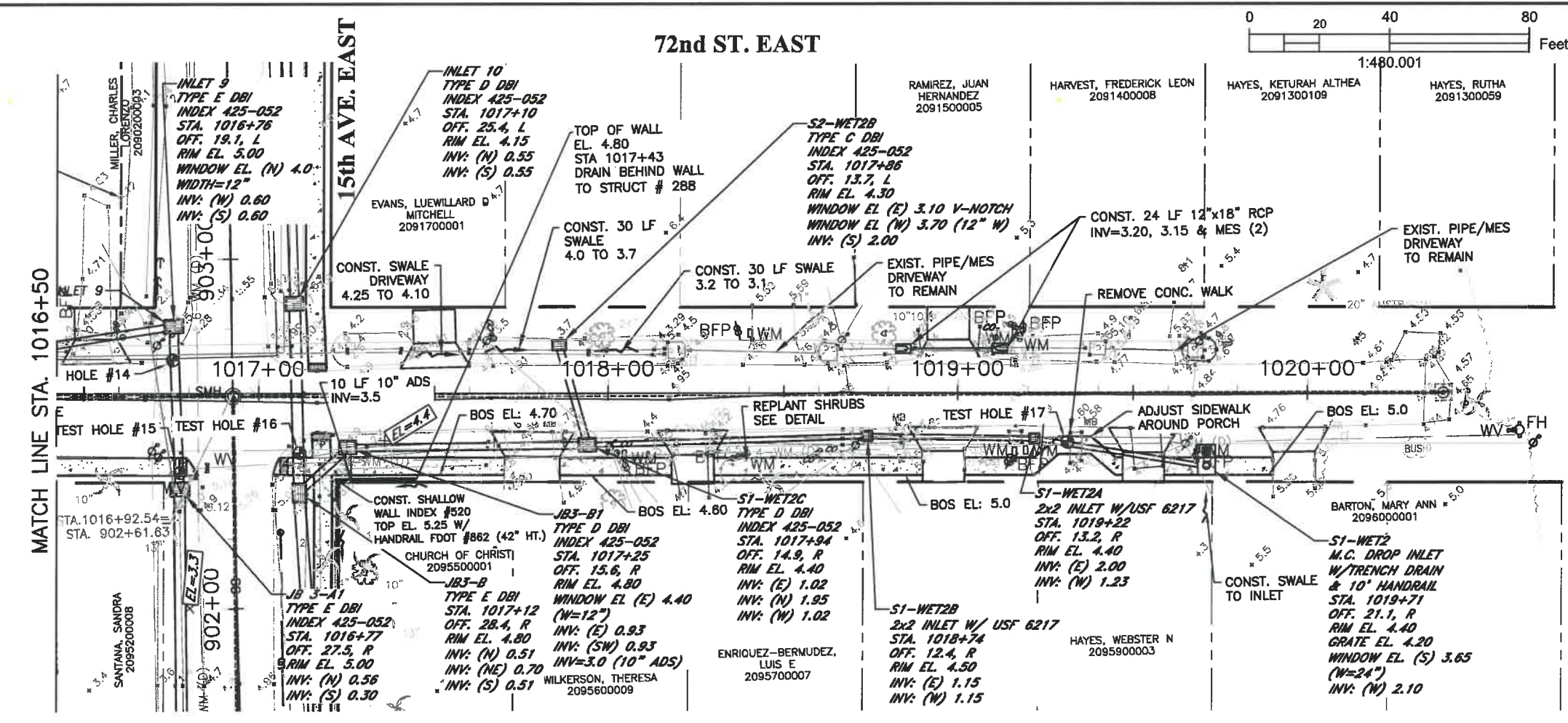


Manatee County
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RUBONIA
72nd STREET EAST
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DATE	DESCRIPTION	DATE	PROJECT #	SURVEYED	FDC
			304-6093460		4-11-18
			0577-0036	DESIGNED	JKP 06/2018
			25/335/17E	DRAWN	KHL 06/2018
			SCALE 1"=40'	CHECKED	XXX XX/XXXX

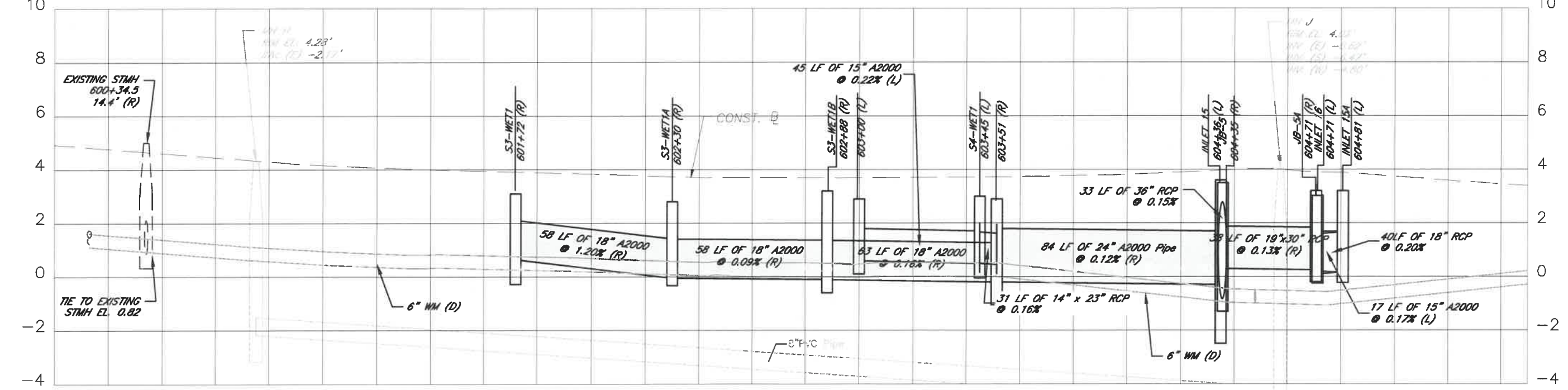
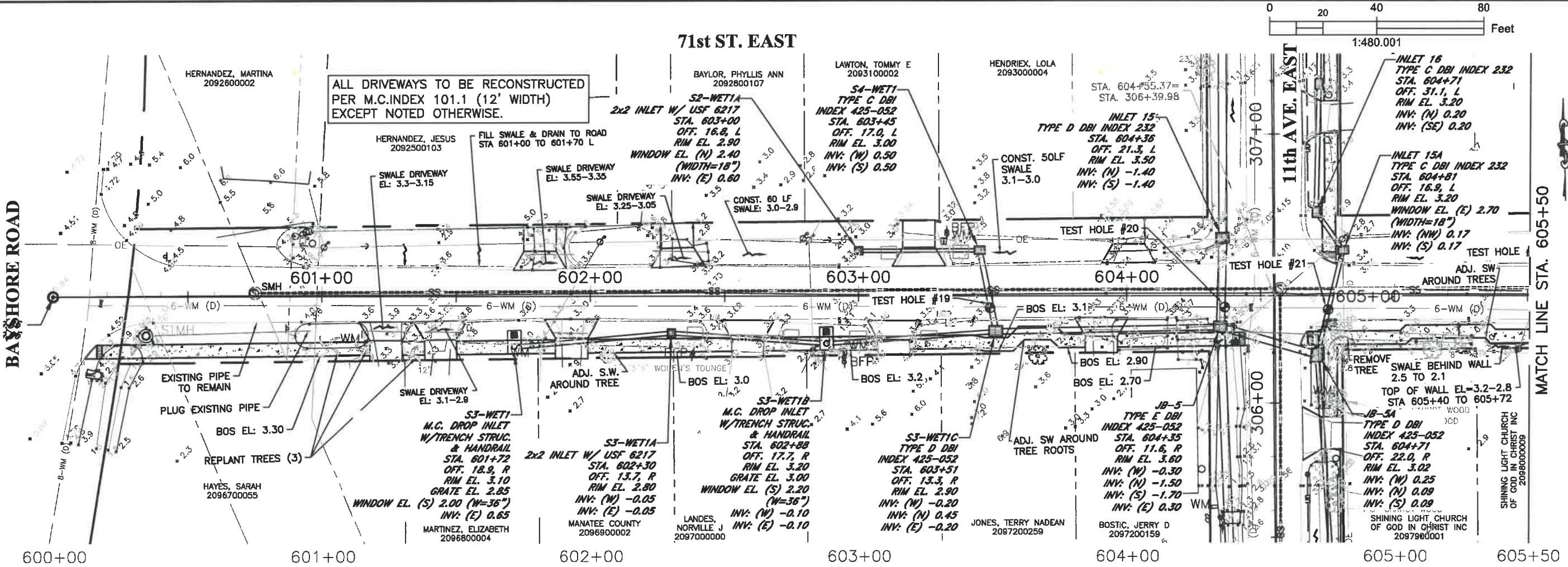
JOHN PARI
 FLORIDA P.E. # 56368
 Signature & Date *[Signature]* 3/3/20

Manatee County
 FLORIDA
 PUBLIC WORKS DEPARTMENT
 ENGINEERING SERVICES
 1022 26th Avenue East, Bradenton, FL 34208

RUBONIA
72nd STREET EAST
PLAN & PROFILE

SHEET NO. 14

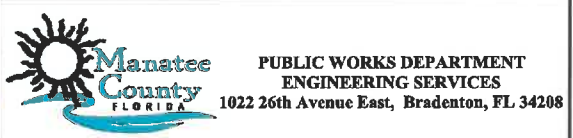
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ELEVATIONS BASED UPON NAVD 1988

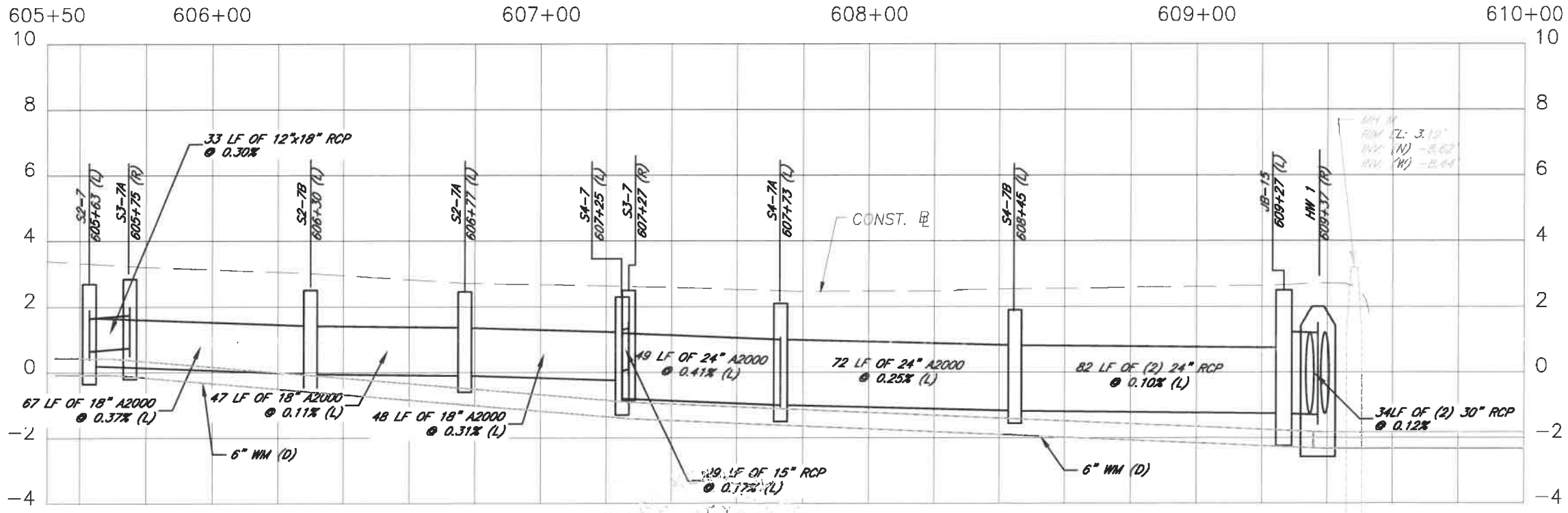
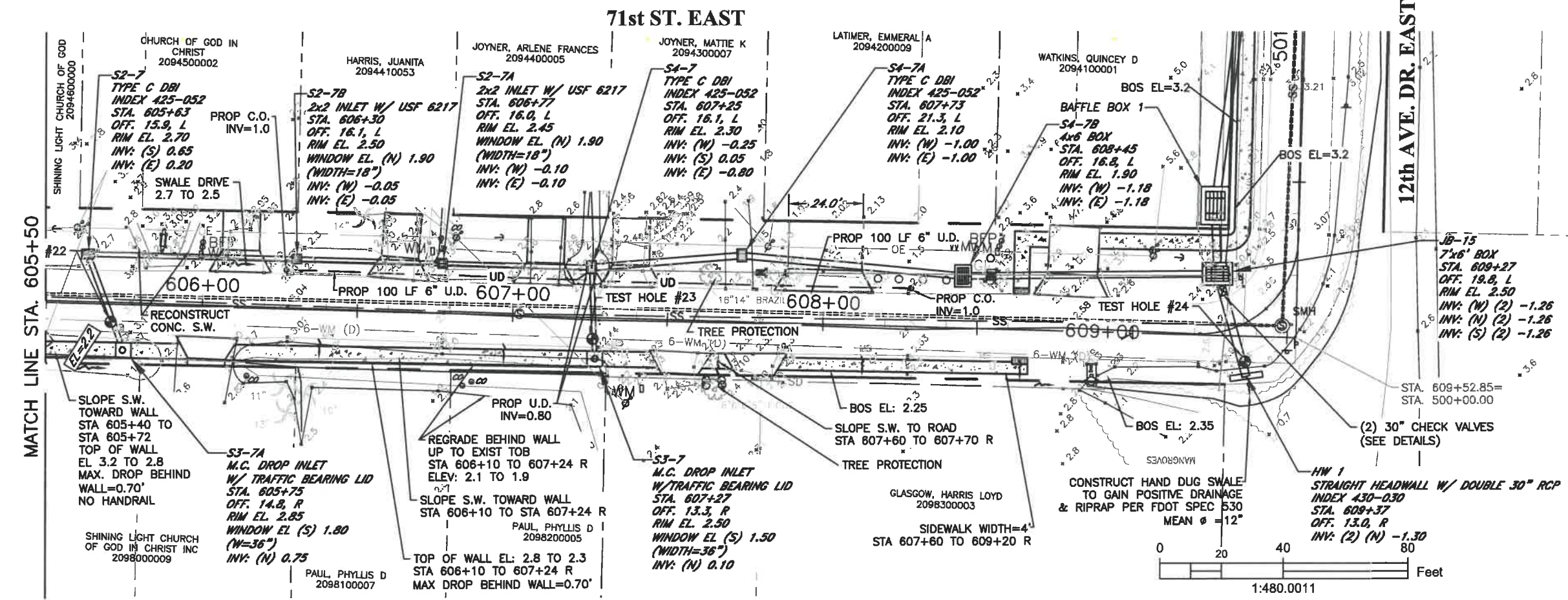
DATE	DESCRIPTION	DATE	PROJECT #	SURVEYED	FDC	4-11-18
			304-6093460			
			0577-0036	DESIGNED	JKP	06/2018
			25/33S/17E	DRAWN	KHL	06/2018
			1\"/>			

JOHN PARI
 FLORIDA P.E. # 56368
[Signature]
 Signature & Date 3/3/20



RUBONIA
 71st STREET EAST
 PLAN & PROFILE

\\bocd\fd\pvd_Engineering_Share\Highway_Engineering\PROJ\SIDEWALKS\Rubonia\DWG\Rubonia_PP.dwg 4/15/2020 4:08 PM ANSI FULL BLEED B (11.00 X 17.00 INCHES)



ELEVATIONS BASED UPON NAVD 1988

DATE	DESCRIPTION	DATE	PROJECT #	SURVEYED	FDC
			304-6093460	4-11-18	
			0577-0038	DESIGNED	JKP 06/2018
			25/33S/17E	DRAWN	KHL 06/2018
			SCALE 1"=40'	CHECKED	XXX XX/XXXX

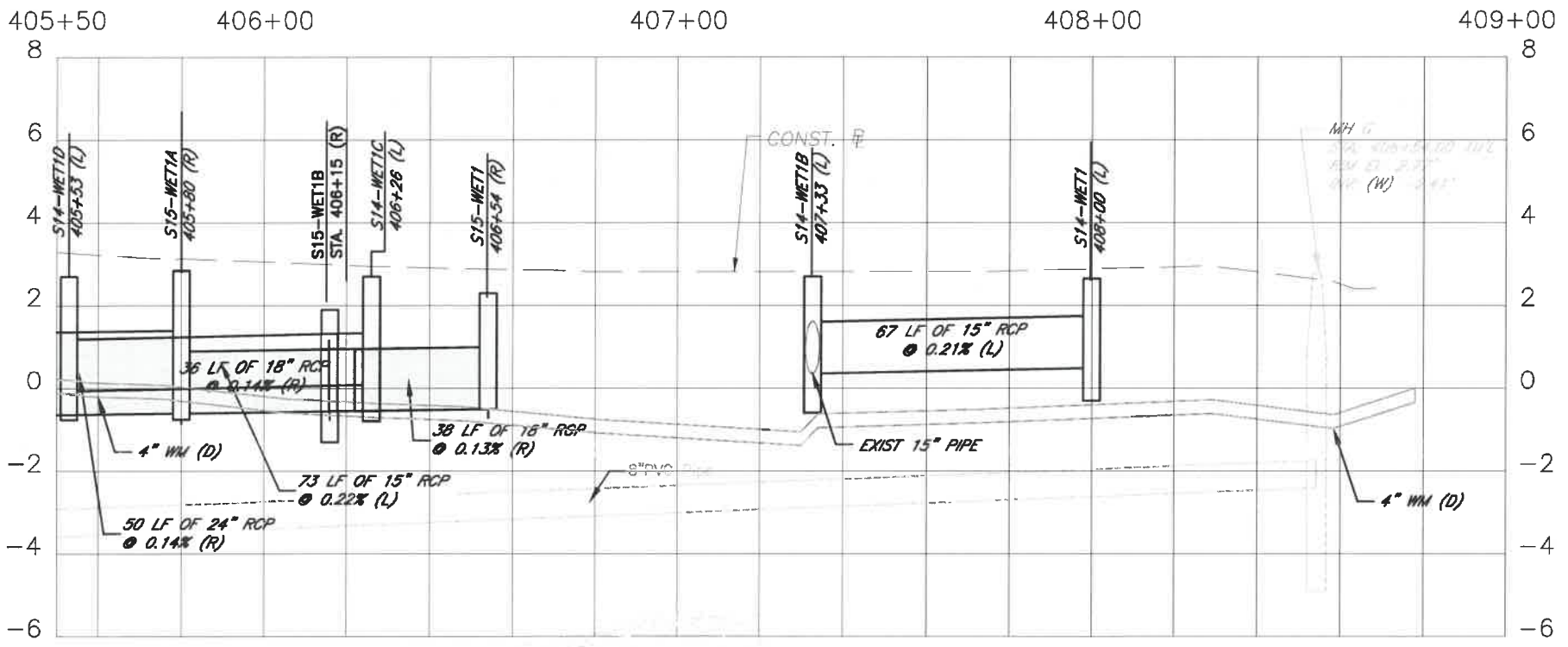
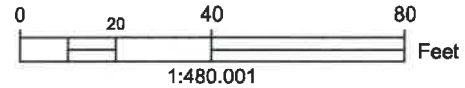
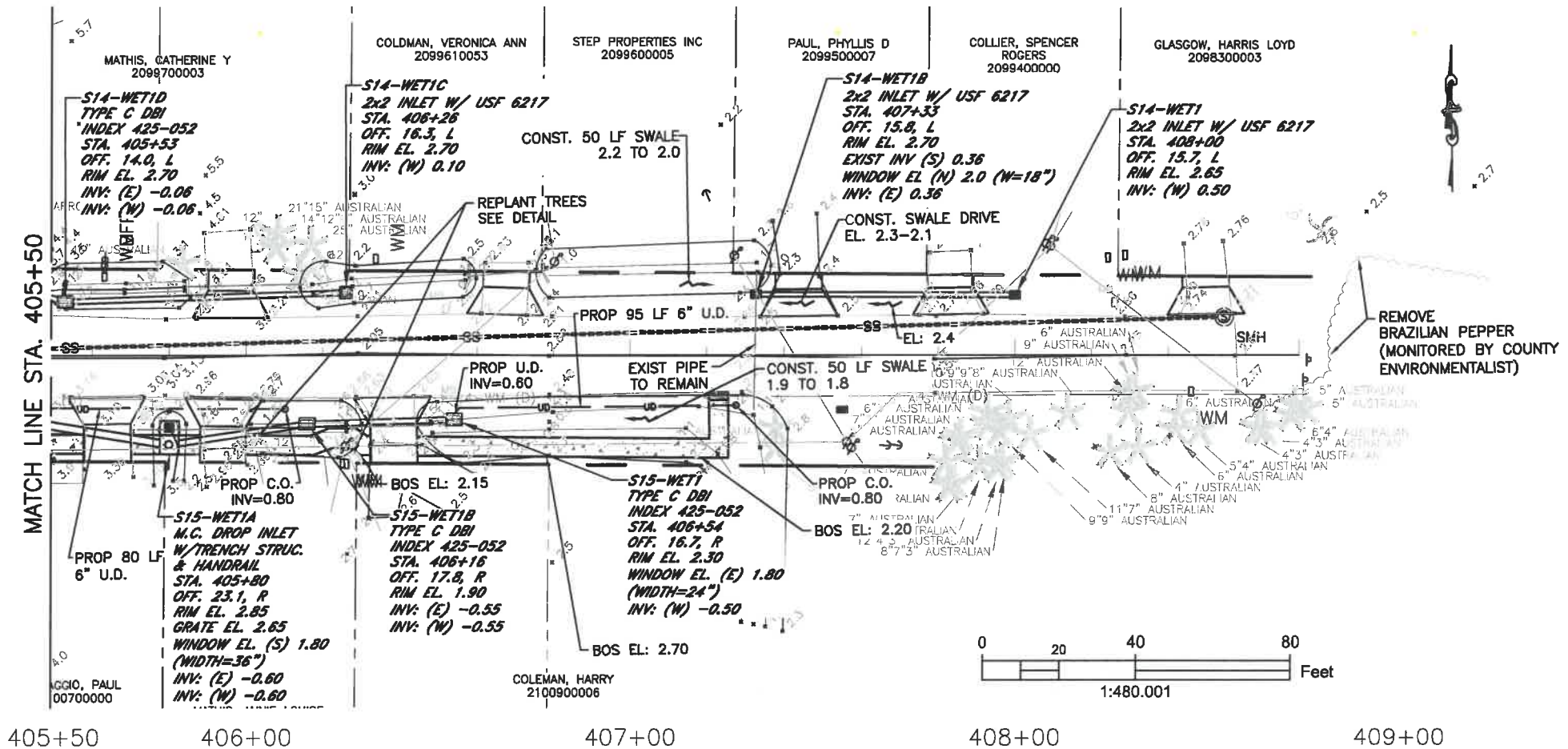
JOHN PARI
 FLORIDA P.E. # 86368
(Signature)
 Signature & Date 3/3/20

Manatee County
 PUBLIC WORKS DEPARTMENT
 ENGINEERING SERVICES
 1022 26th Avenue East, Bradenton, FL 34208

RUBONIA
 71st STREET EAST
 PLAN & PROFILE

SHEET NO.
 16

70th ST. CT. EAST



ELEVATIONS BASED UPON NAVD 1988

DATE	DESCRIPTION	DATE	PROJECT #	SURVEYED	FDC	4-11-18
			304-8093460			
			0577-0036	DESIGNED	JKP	06/2018
			25/33S/17E	DRAWN	KHL	06/2018
			SCALE 1"=40'	CHECKED	XXX	XX/XXXX

JOHN PARI
FLORIDA P.E. # 56368
Signature & Date 3/3/20

Manatee County
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

RUBONIA
70th STREET COURT EAST
PLAN & PROFILE

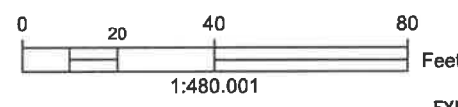
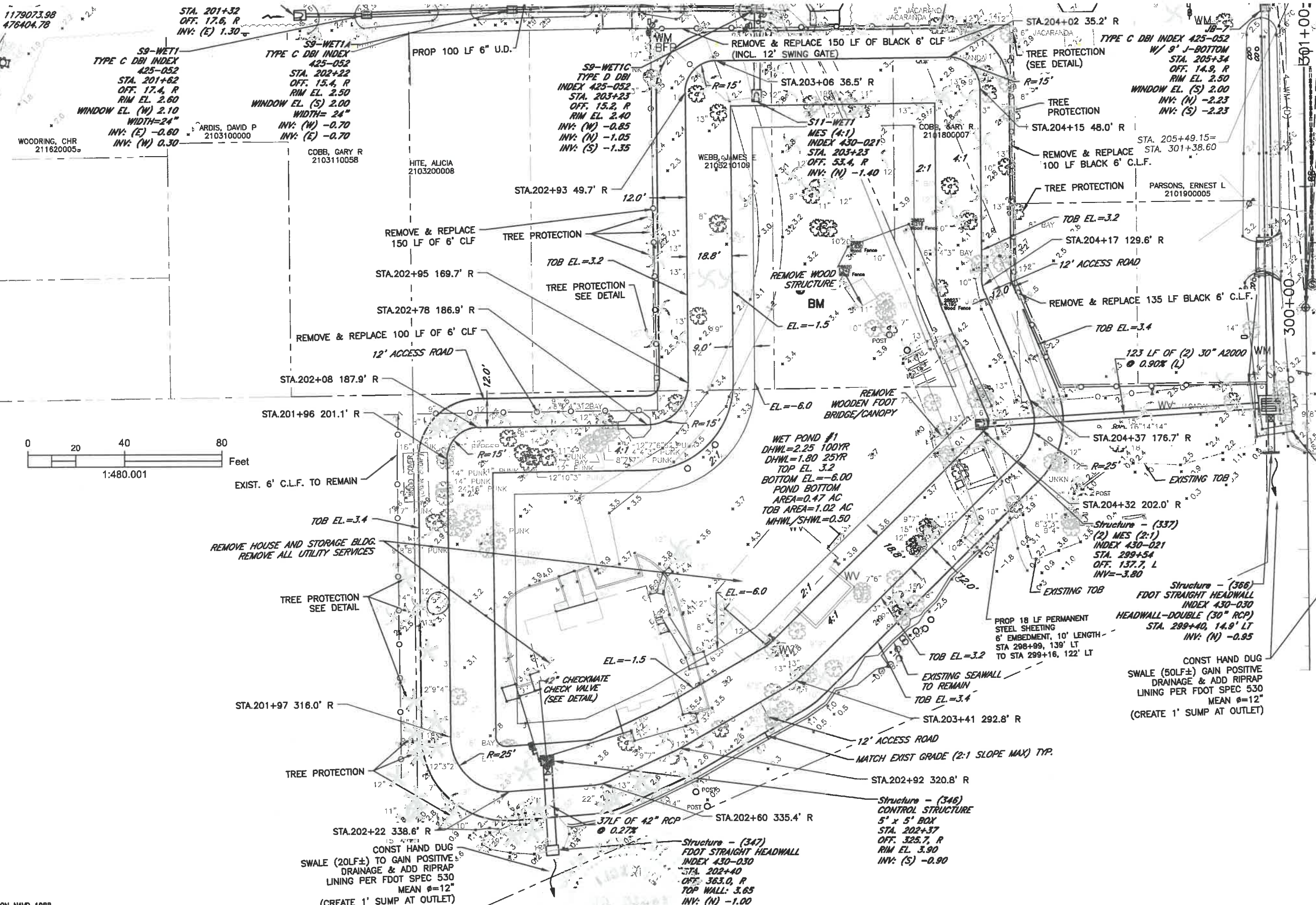
SHEET NO.
19

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69th ST. CT. EAST

BAYSHORE ROAD

11th AVE. EAST



ELEVATIONS BASED UPON NAVD 1988

I:\boc\dlis\p\dwg\Engineering_Share\Highway_Engineering\PROJECTS\WALKSIRubonia\DWG\Rubonia_PP.dwg 4/22/2020 6:35 PM ANSI FULL BLEED B (11.00 X 17.00 INCHES)

DATE	DESCRIPTION	DATE	PROJECT #	SURVEYED	FDC	4-11-18
			304-6093460			
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			25/335/17E	DRAWN	KHL	06/2018
			1"=40'	CHECKED	XXX	XX/XXXX

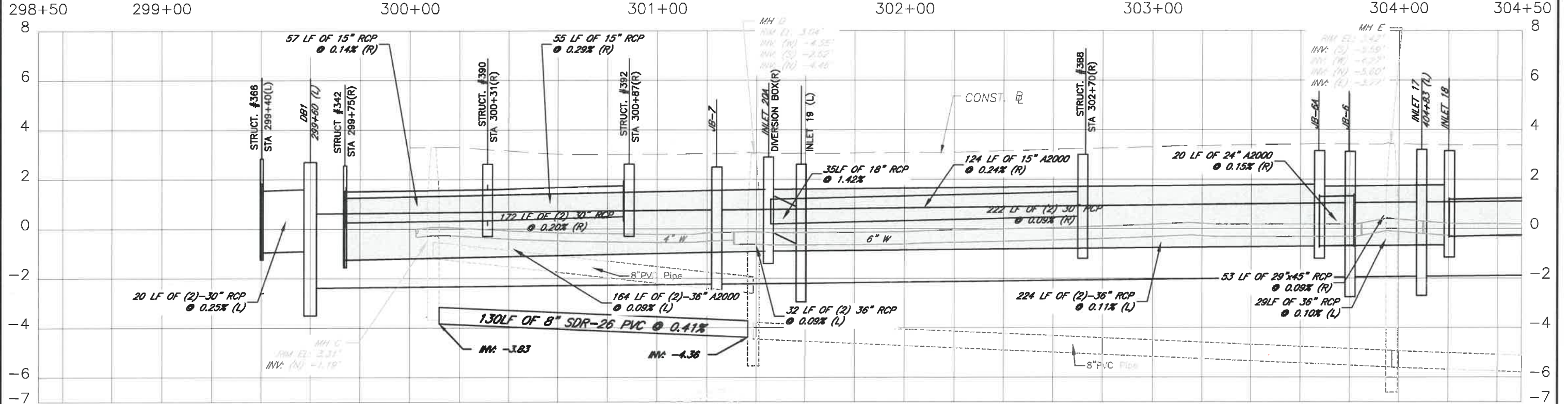
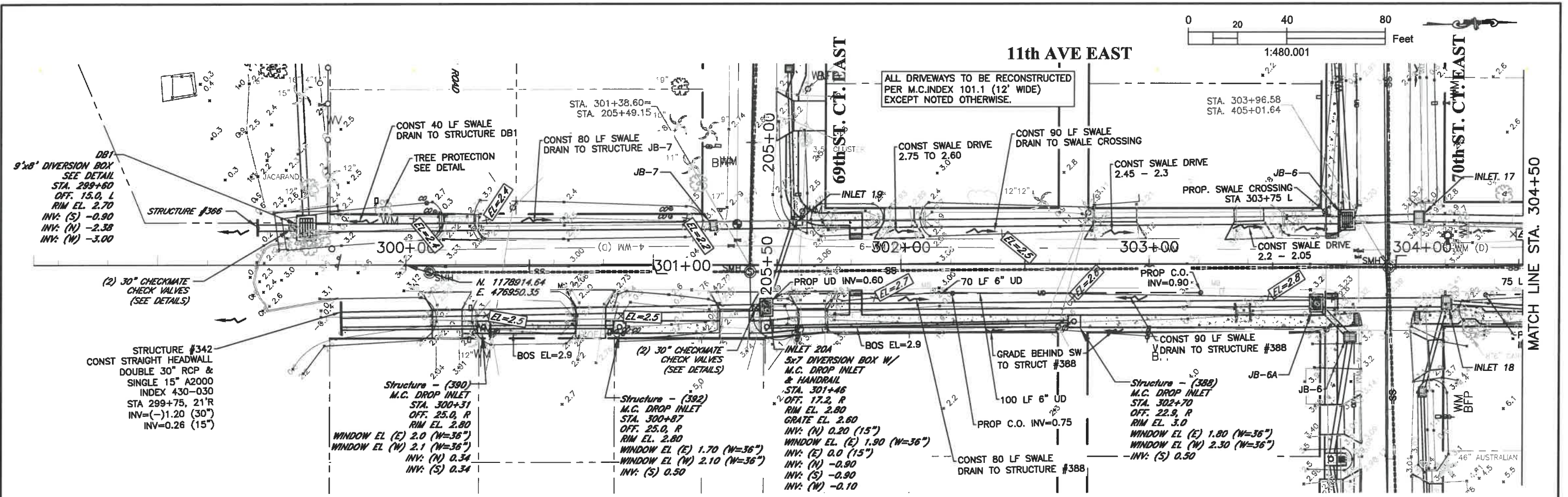
JOHN PARI
FLORIDA P.E. # 59368
[Signature]
Signature & Date: 4/22/20

PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

RUBONIA
69th STREET COURT EAST
POND DETAIL

SHEET NO.
20A

I:\cc\ids\p\dw\Engineering_Share\Highway_Engineering\PROJ\IDS\DEWALKS\Rubonia\DWG\18Rubonia_PP.dwg 4/5/2020 4:40 PM ANS\ FULL BLEED B (11.00 X 17.00 INCHES)



ELEVATIONS BASED UPON NAVD 1988

DATE	DESCRIPTION	DATE	PROJECT #	SURVEYED	FDC
			304-6093460		4-11-18
			0577-0036	DESIGNED	JKP 06/2018
			25/33S/17E	DRAWN	KHL 06/2018
			SCALE 1"=40'	CHECKED	XXX XX/XXXX

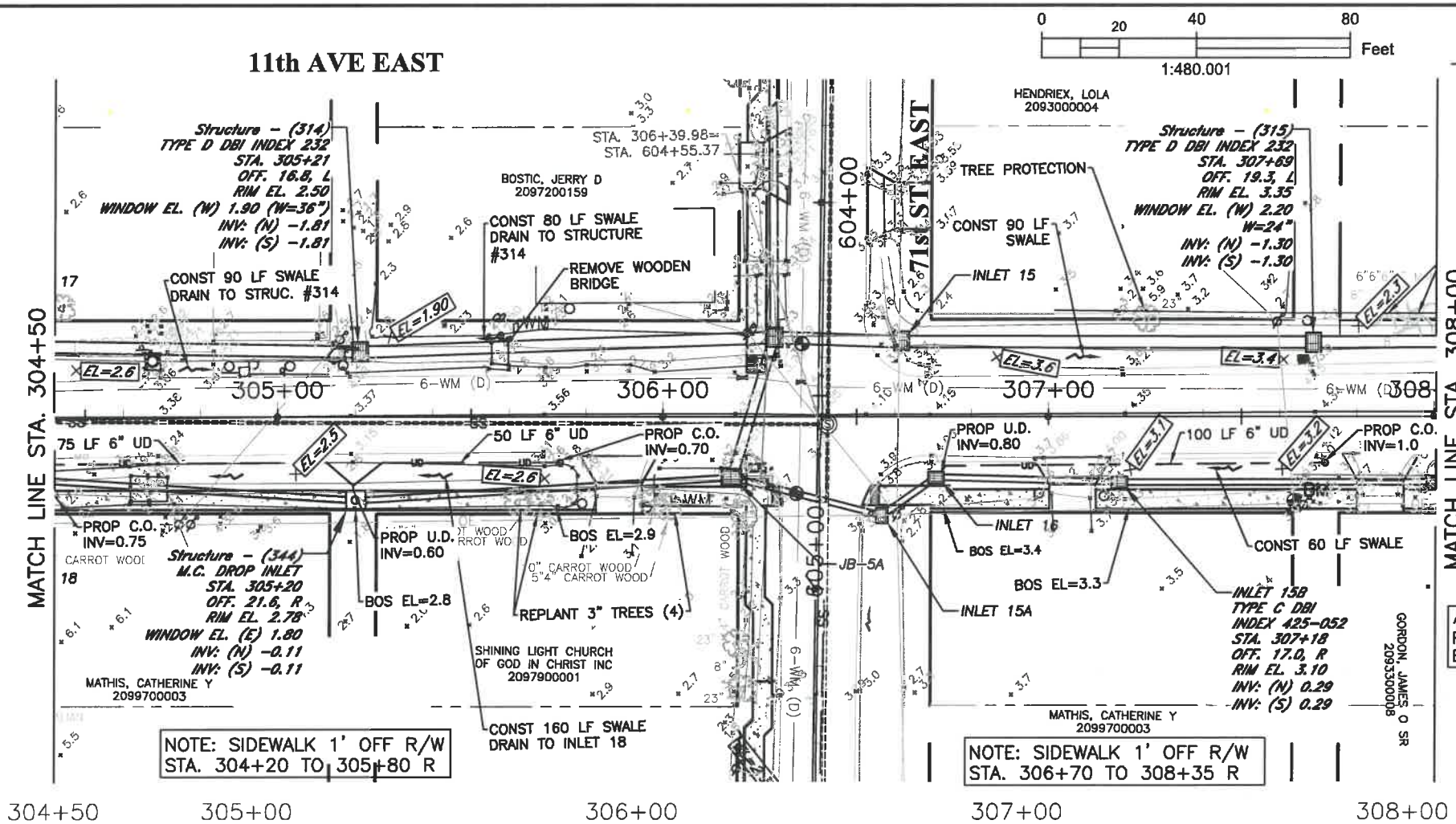
JOHN PARI
FLORIDA P.E. # 56368
[Signature] 3/3/20
Signature & Date

PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

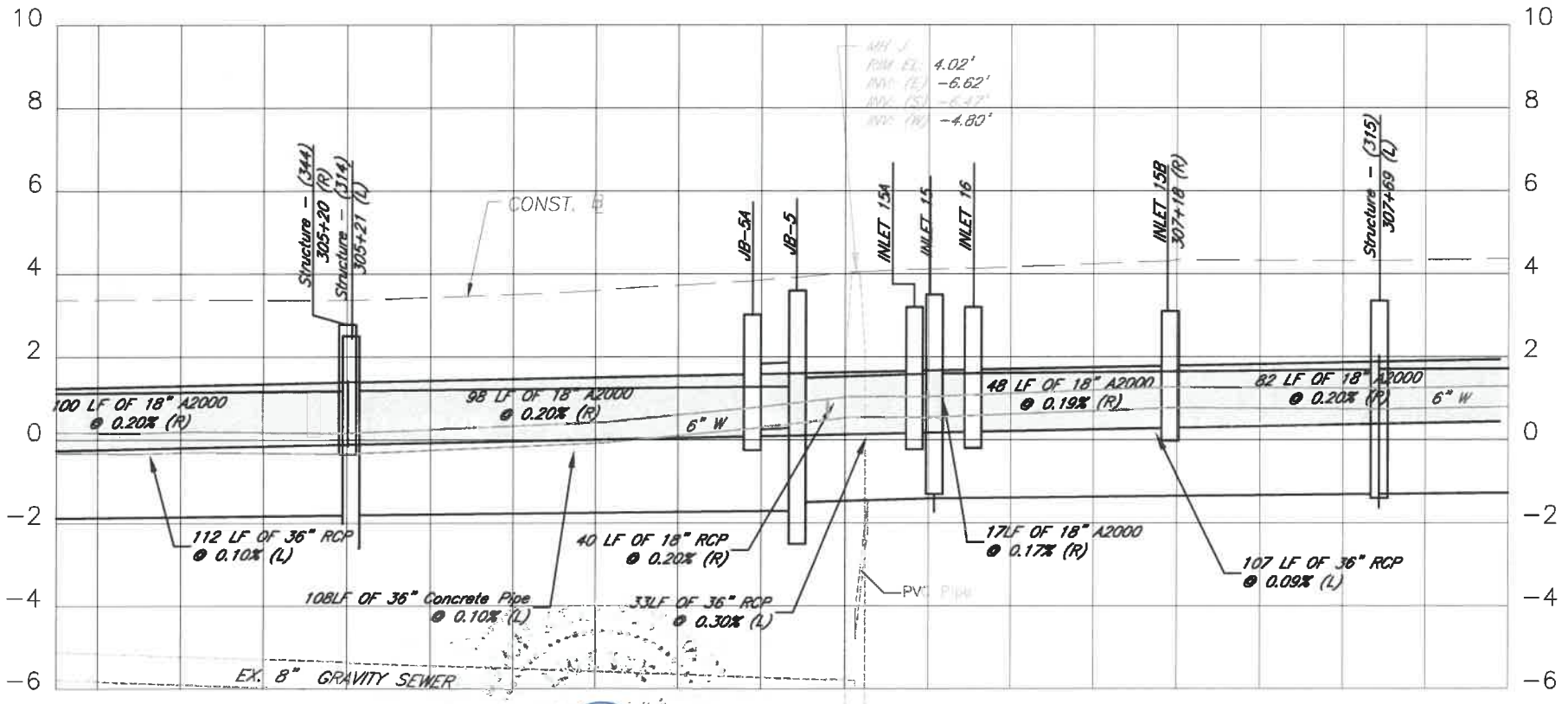
RUBONIA
11th AVENUE EAST
PLAN & PROFILE

SHEET NO. 21

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ALL DRIVEWAYS TO BE RECONSTRUCTED PER M.C. INDEX 101.1 (12' WIDTH) EXCEPT NOTED OTHERWISE.



DATE	DESCRIPTION	DATE	PROJECT #	SURVEYED	FDC	4-11-18
			304-6093460			
			0577-0036	DESIGNED	JKP	06/2018
			25/33S/17E	DRAWN	KHL	06/2018
			1"=40'	CHECKED	XXX	XX/XXXX

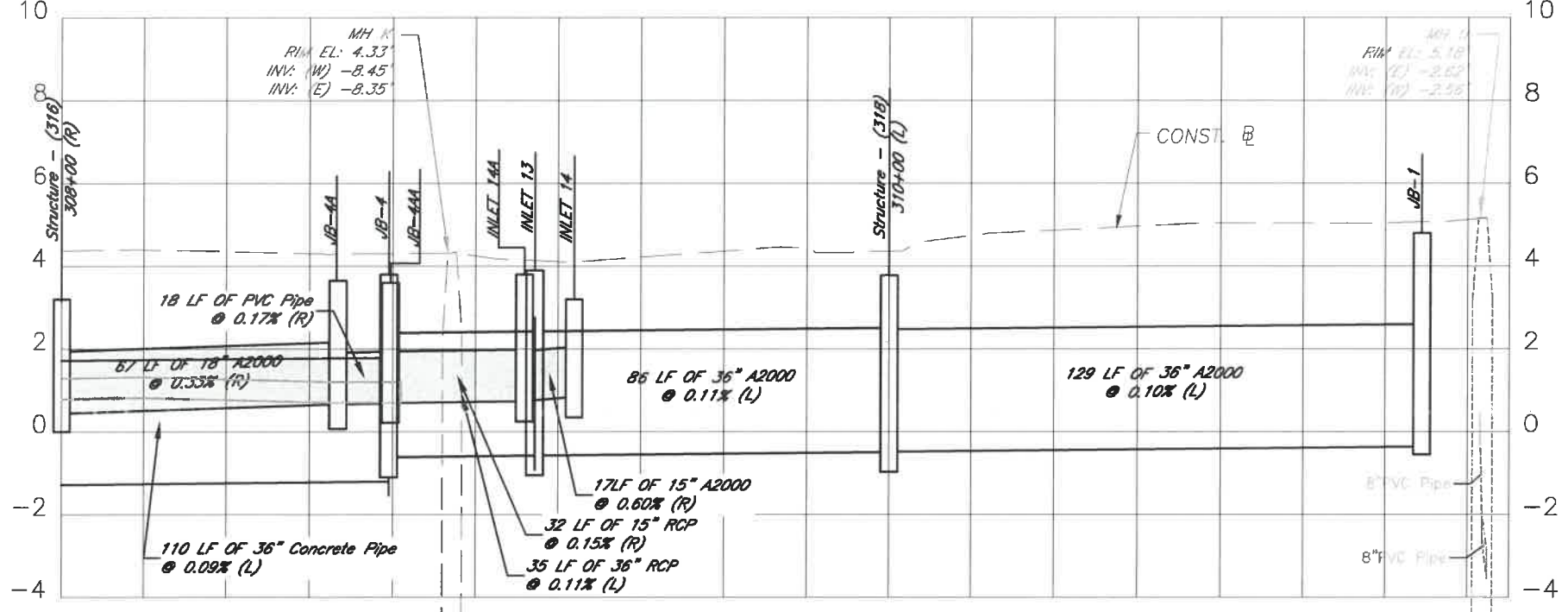
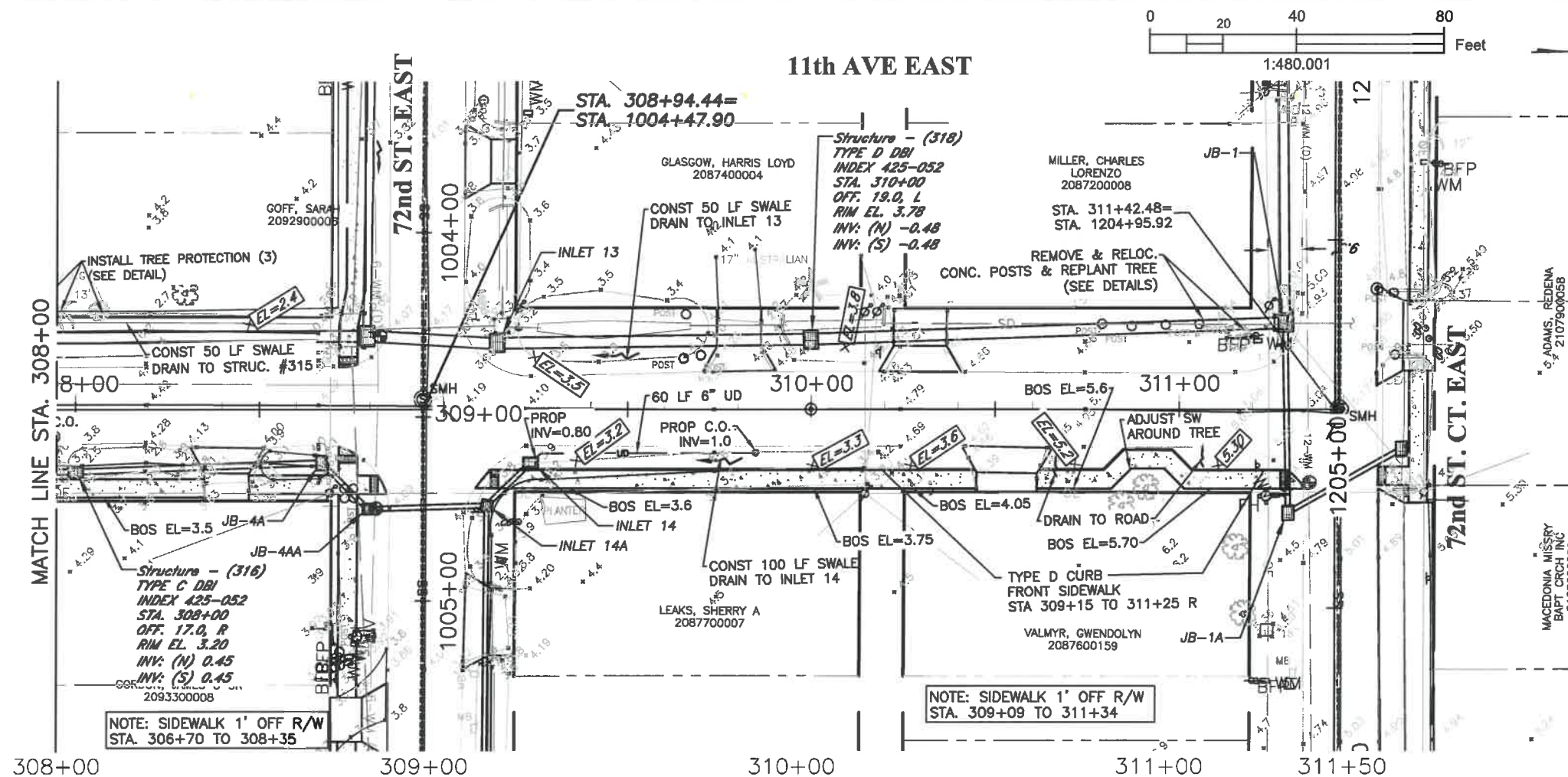
JOHN PARI
FLORIDA P.E. # 56368
[Signature]
3/3/20
Signature & Date

Manatee County
 PUBLIC WORKS DEPARTMENT
 ENGINEERING SERVICES
 1022 26th Avenue East, Bradenton, FL 34208

RUBONIA
11th AVENUE EAST
PLAN & PROFILE

SHEET NO.
22

\\bocd\is\p\wd_Engineering_Share\Highway_Engineering\PROJ\IS\DEWALKS\Rubonia\DWG\Rubonia_PP.dwg 4/5/2020 4:45 PM ANSI FULL BLEED B (11.00 X 17.00 INCHES)



ELEVATIONS BASED UPON NAVD 1988

DATE	DESCRIPTION	DATE	PROJECT #	SURVEYED	FDC
			304-6093460	4-11-18	
			0577-0036	DESIGNED	JKP 06/2018
			25/33S/17E	DRAWN	KHL 06/2018
			1"=40'	CHECKED	XXX XX/XXXX

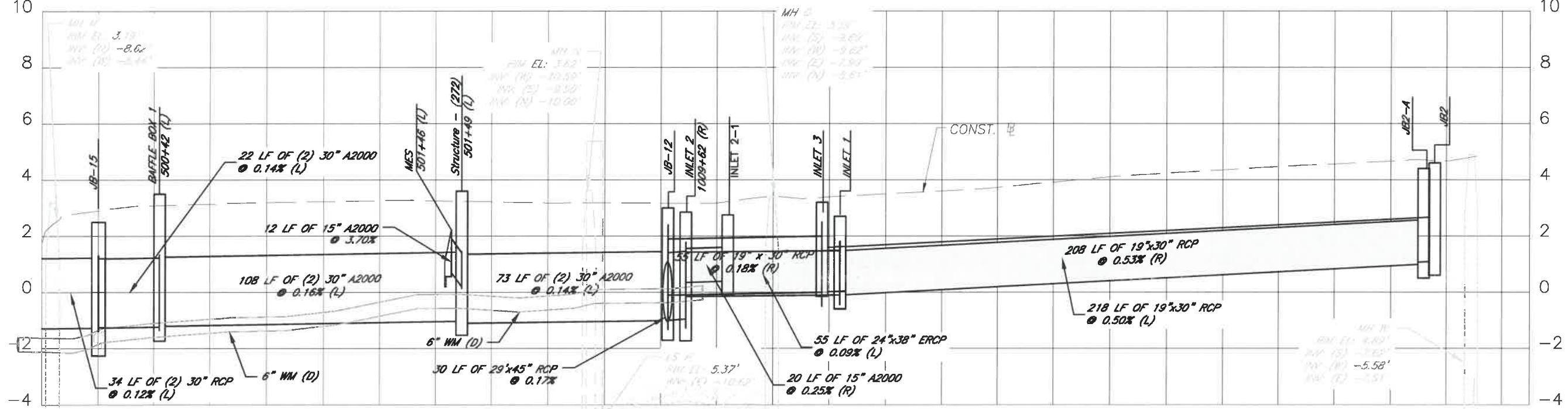
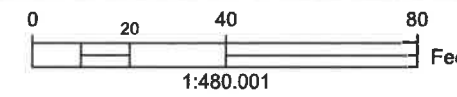
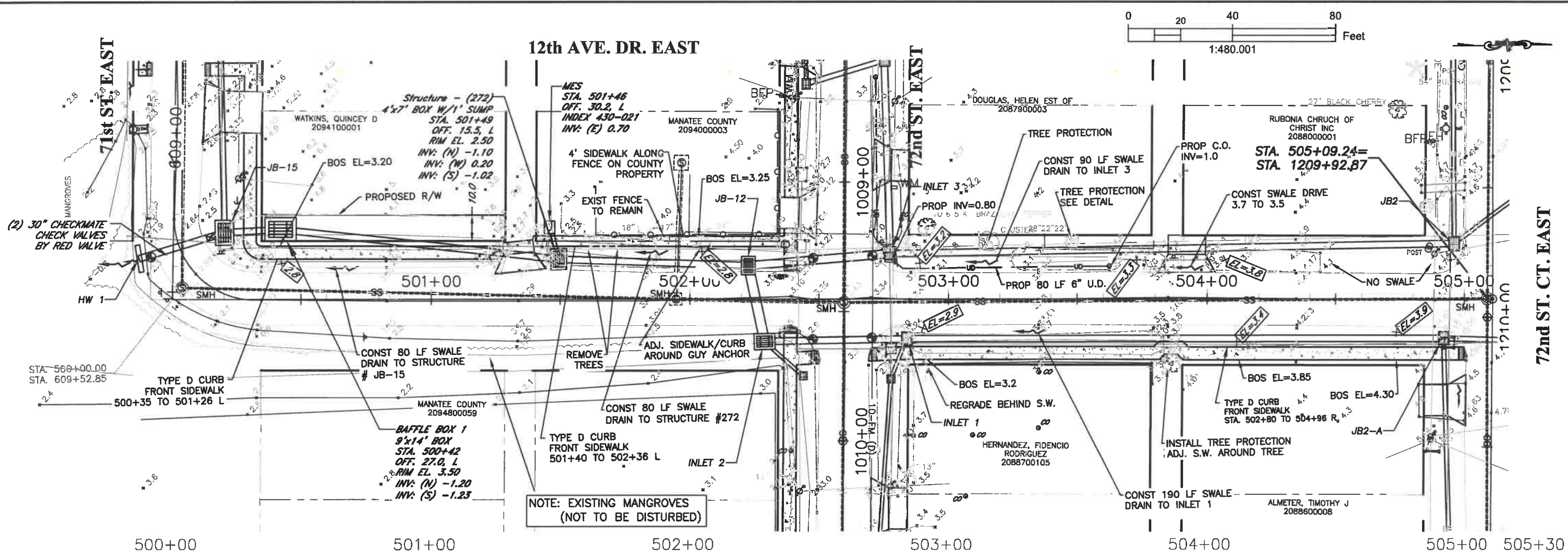
KVIN TABI
 FLORIDA P.E. # 56368
 Signature & Date: *[Signature]* 3/3/20

Manatee County
 PUBLIC WORKS DEPARTMENT
 ENGINEERING SERVICES
 1022 26th Avenue East, Bradenton, FL 34208

RUBONIA
 11th AVENUE EAST
 PLAN & PROFILE

SHEET NO.
 23

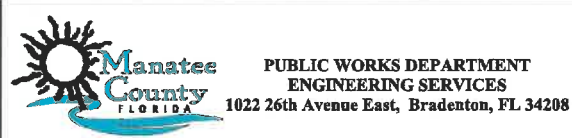
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ELEVATIONS BASED UPON NAVD 1988

DATE	DESCRIPTION	DATE	PROJECT #	SURVEYED	FDC	4-11-18
			304-6093460			
			0577-0036	DESIGNED	JKP	06/2018
			25/33S/17E	DRAWN	KHL	06/2018
			1"=40'	CHECKED	XXX	XX/XXXX

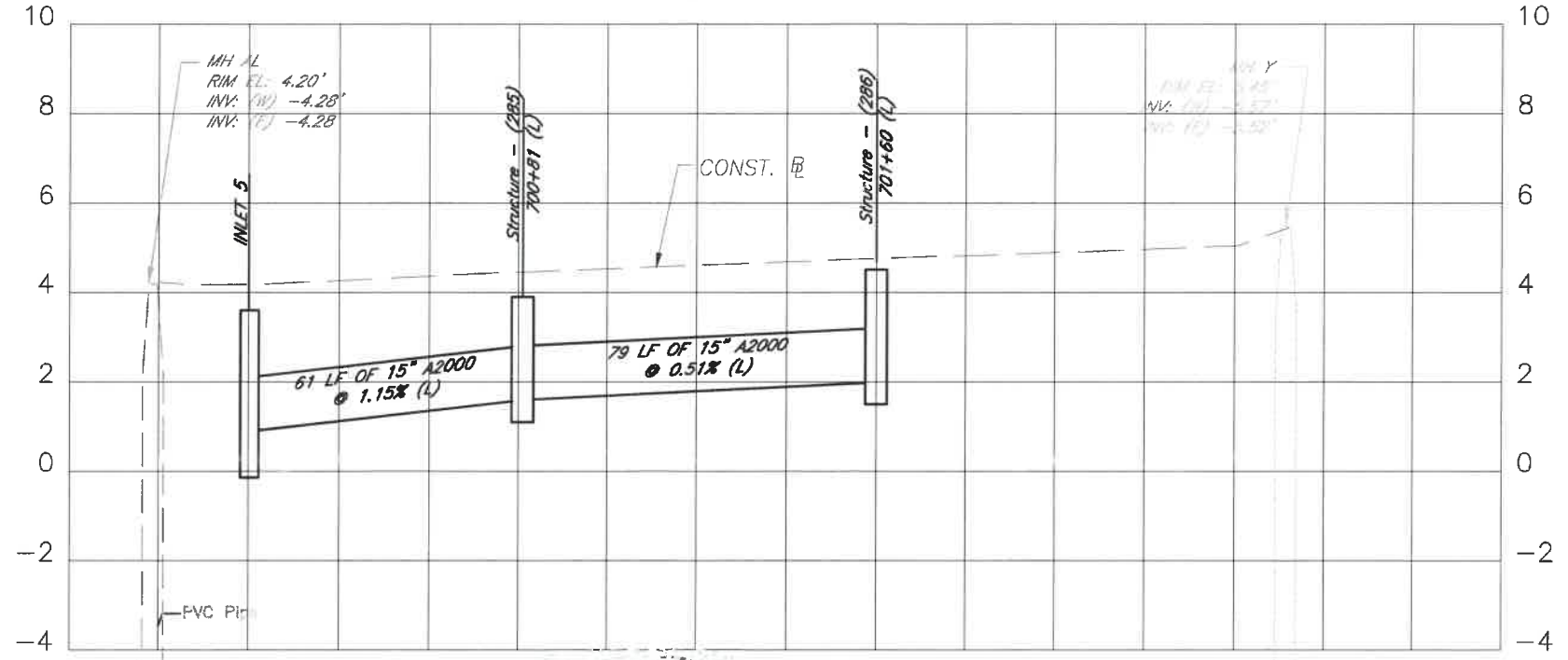
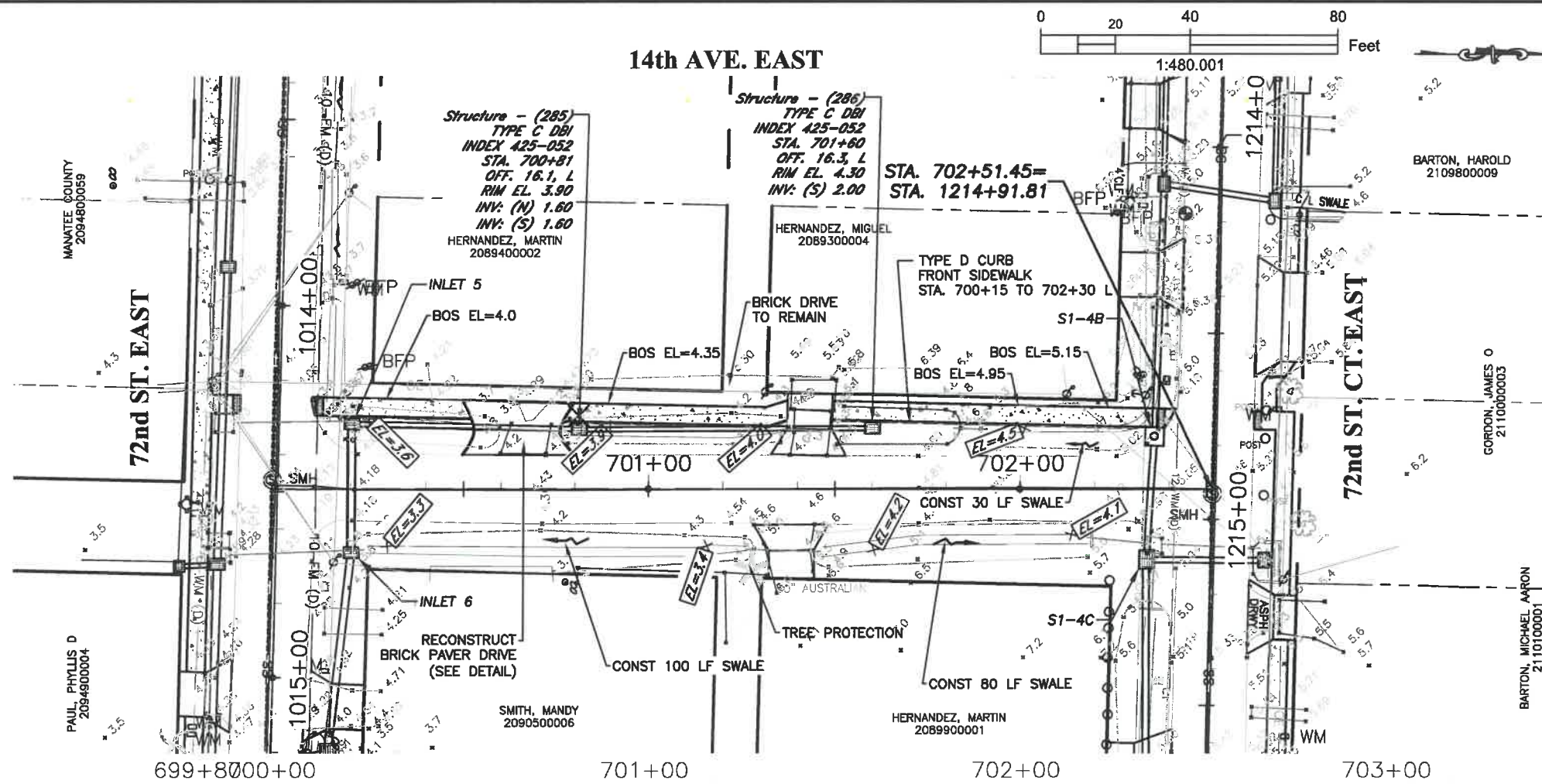
JOHN PARI
 FLORIDA P.E. # 56368
[Signature]
 Signature & Date 3/3/20



RUBONIA
 12th AVENUE DRIVE EAST
 PLAN & PROFILE

SHEET NO.
 24

\\bca\dfs\PWD_Engineering_Share\Highway_Engineering\PROJECTS\SIDEWALKS\Rubonia\DWG\Rubonia_PP.dwg 3/12/2020 2:57 PM ANSI FULL BLEED B (11.00 X 17.00 INCHES)



NOTE: SIDEWALK 4' OFF R/W
STA 700+10 TO STA 701+30

ELEVATIONS BASED UPON NAVD 1988

DATE	DESCRIPTION	DATE	PROJECT #	304-6093460	SURVEYED	FDC	4-11-18
			SURVEY #	0577-0036	DESIGNED	JKP	06/2018
			SEC./TWN./RGE	25/33S/17E	DRAWN	KHL	06/2018
			SCALE	1"=40'	CHECKED	XXX	XX/XXXX

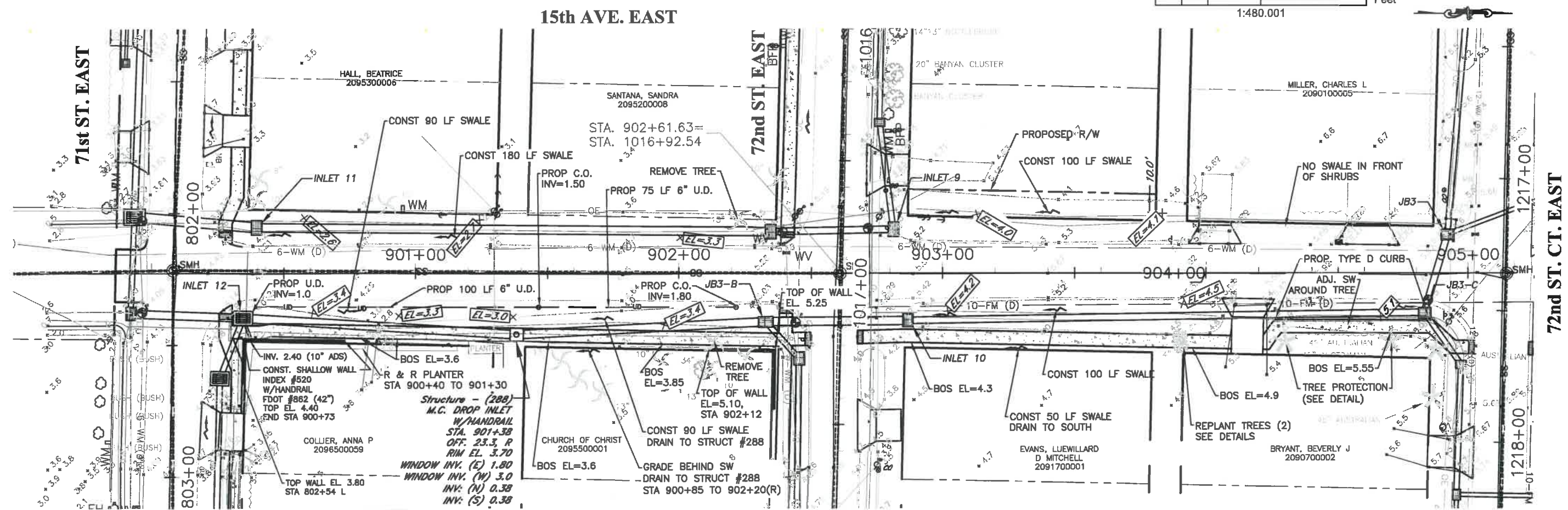
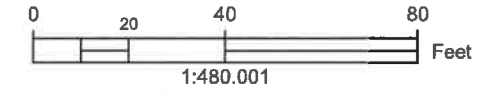
JOHN PARI
FLORIDA P.E. # 56368
John Pari
Signature & Date 3/3/20

Manatee County
FLORIDA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

RUBONIA
14th AVENUE EAST
PLAN & PROFILE

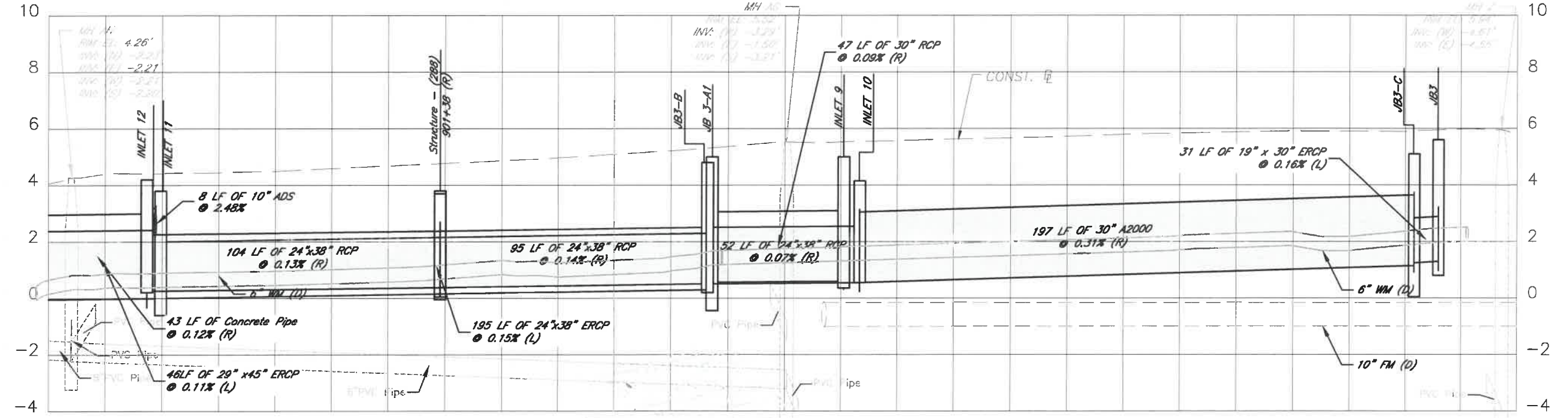
SHEET NO.
25

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NOTE: SIDEWALK IS 4' WIDE & 1.0' OFF R/W FROM STA. 900+30 TO 900+40 RT

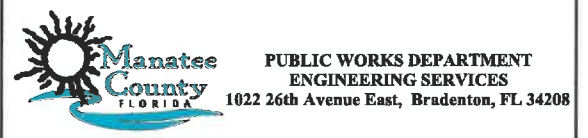
900+00 901+00 902+00 903+00 904+00 905+00 905+20



ELEVATIONS BASED UPON NAVD 1988

DATE	DESCRIPTION	DATE	PROJECT #	SURVEYED	FDC
			304-6093460	4-11-18	
			0577-0036	DESIGNED	JKP 06/2018
			25/33S/17E	DRAWN	KHL 06/2018
			1"=40'	CHECKED	XXX XX/XXXX

JOHN PARI
FLORIDA P.E. # 56368
[Signature]
3/3/20
Signature & Date

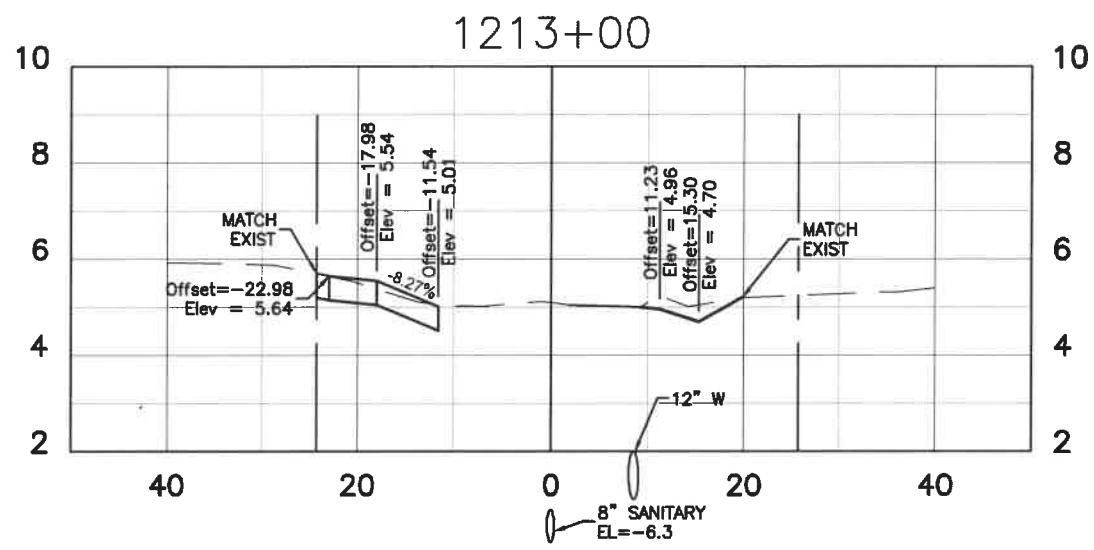


RUBONIA
15th AVENUE EAST
PLAN & PROFILE

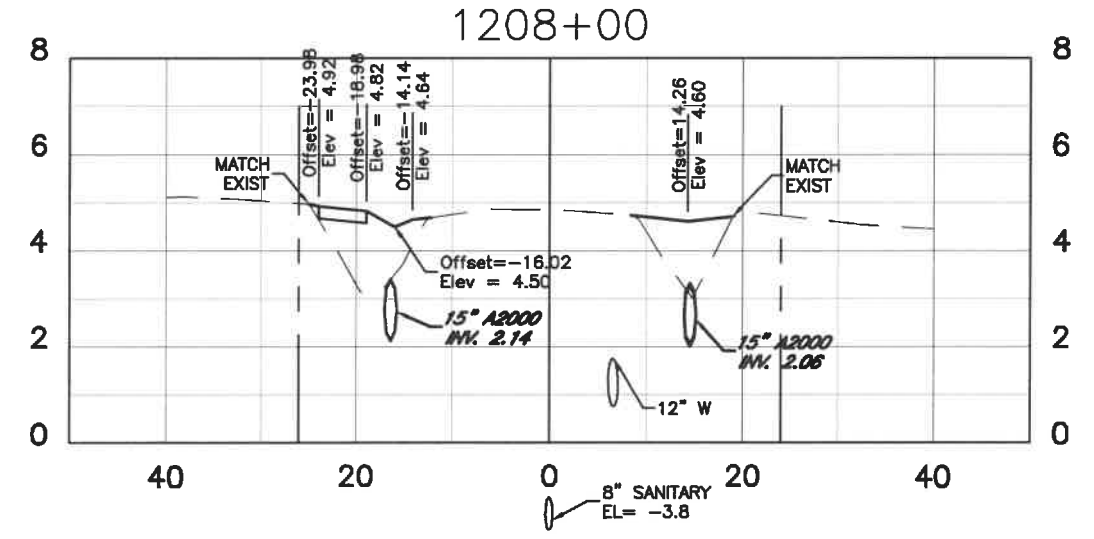
Regular Exc.		Embankment	
A ft ²	V ft ³	A ft ²	V ft ³



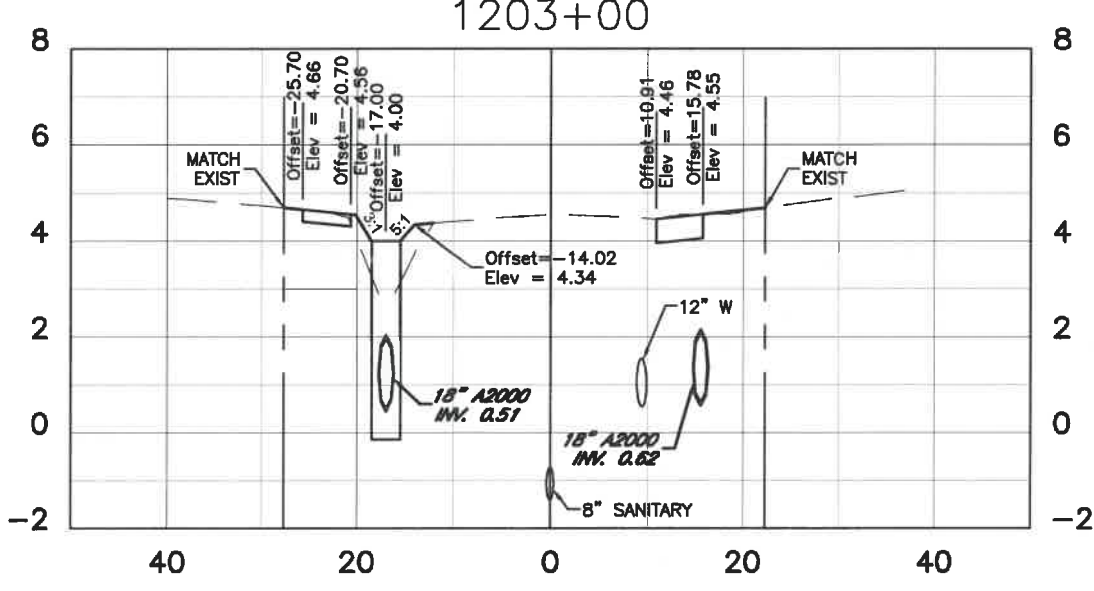
Regular Exc.		Embankment	
A ft ²	V ft ³	A ft ²	V ft ³



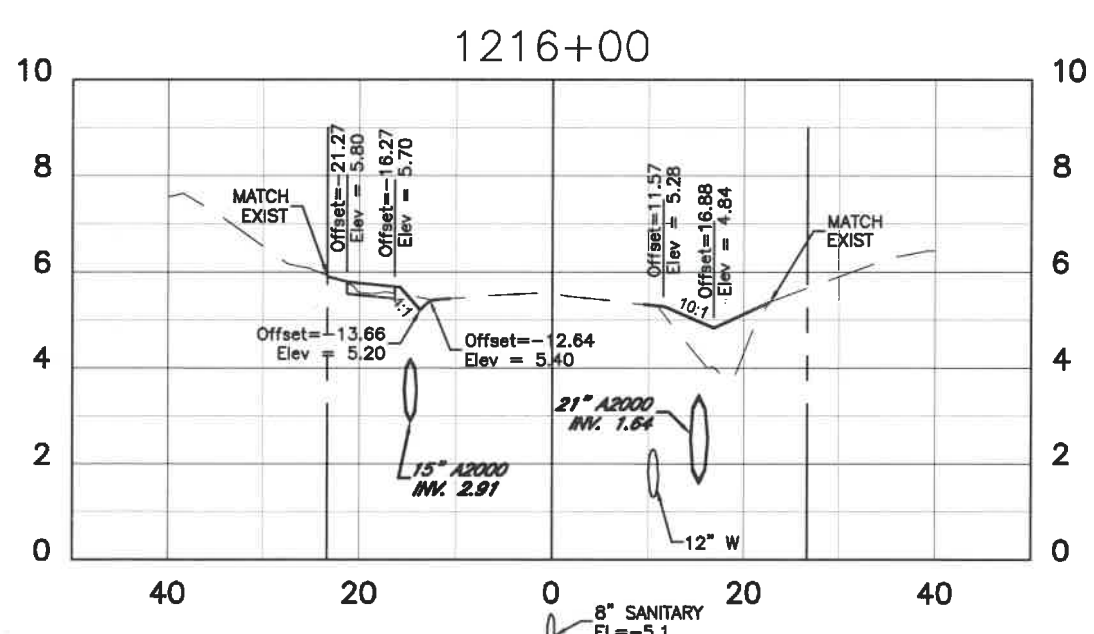
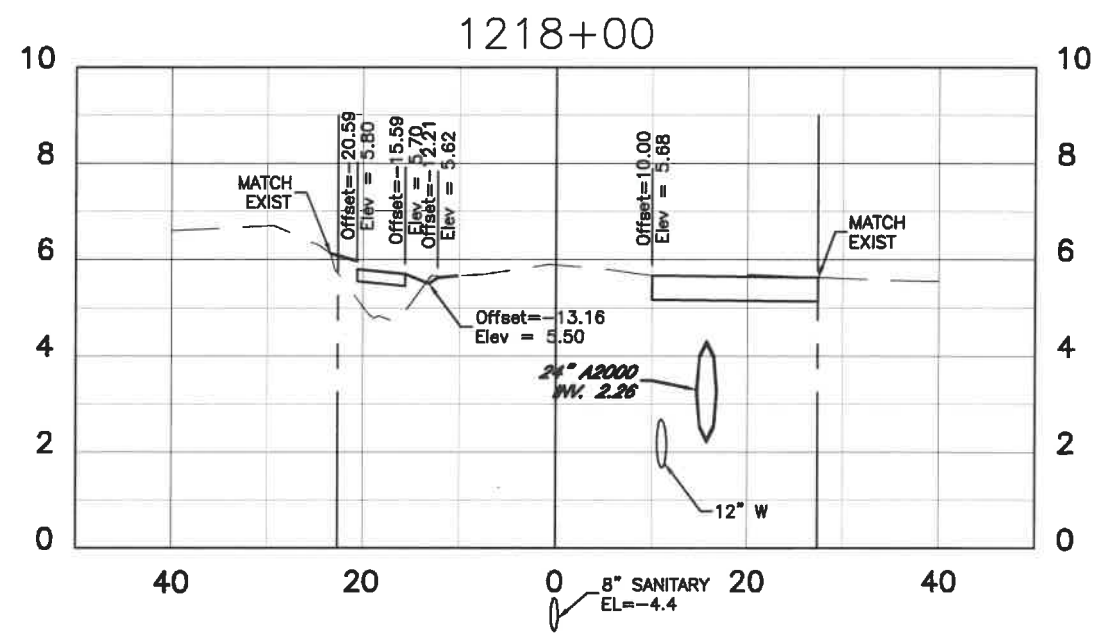
0	0	0	0
0	0	0	0



0	0	0	0
0	0	0	0



0	0	0	0
0	0	0	0



0	0	0	0
0	0	0	0

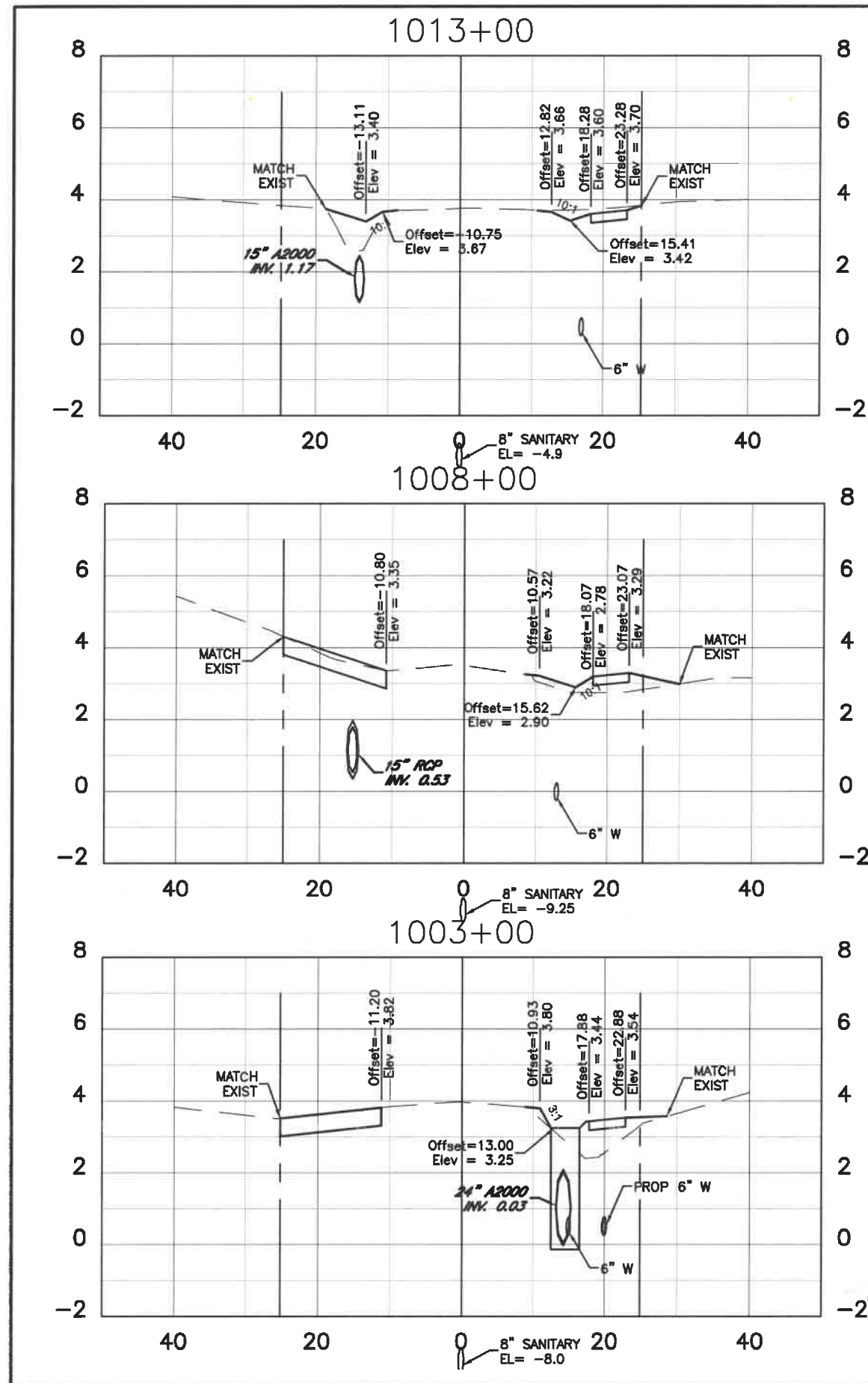
C:\Manatee\Inquiry\manatee\Public Works\manatee\1213+00\1213+00\1213+00.dwg

JOHN K. PARI
 P. ENGINEER, P.E. # 56368
 Signature & Date 3/3/20

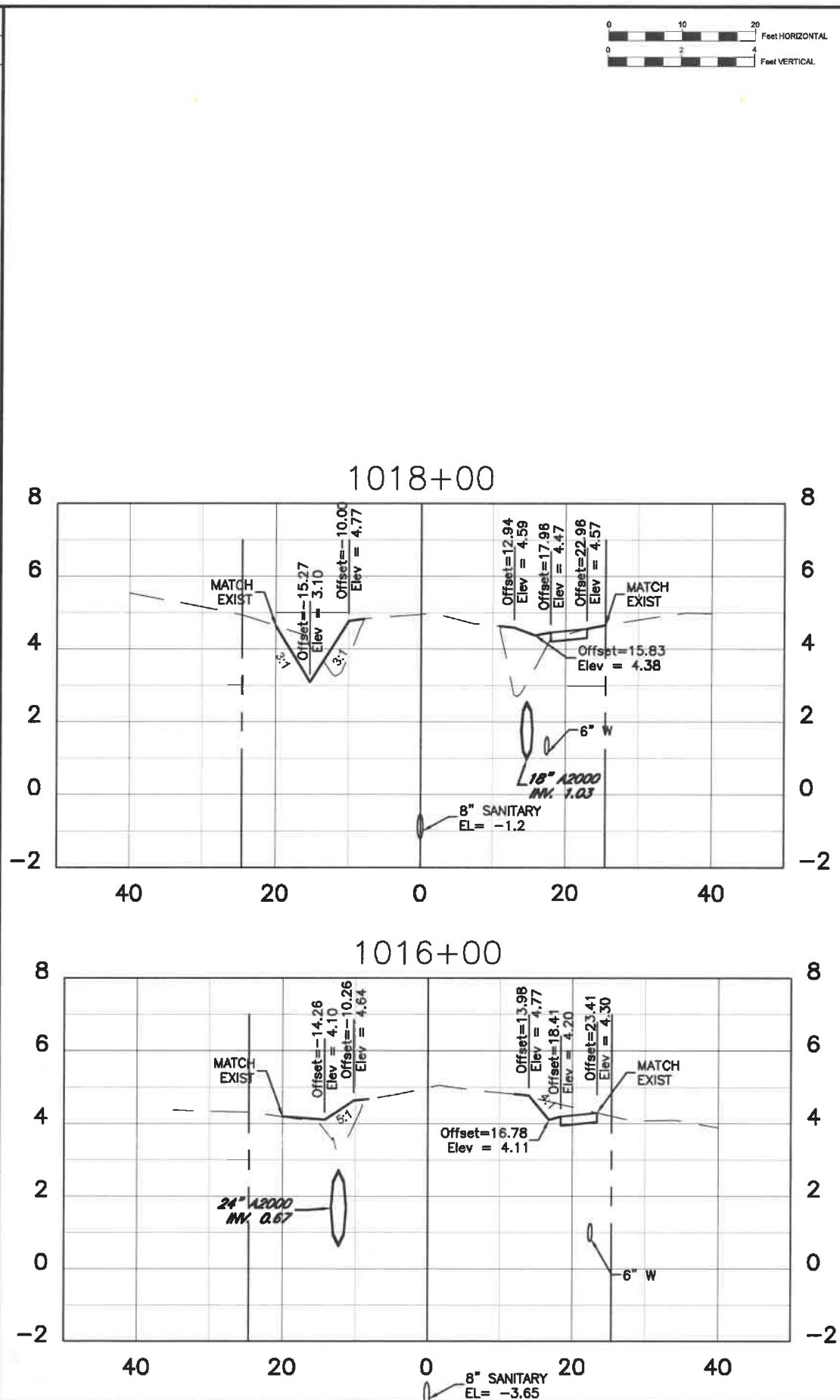


RUBONIA
 72nd Street Court East
 CROSS SECTION

DATE	DESCRIPTION	DATE	PROJECT #	304-6093460	SURVEYED	FDC	4-11-18
			SURVEY #	0577-0036	DESIGNED	JKP	06/2018
			SEC./TWN./RGE	25/33S/17E	DRAWN	KHL	06/2018
			SCALE	AS SHOWN	CHECKED	###	#####



Regular		Exc.		Embankment	
A	V	A	V	A	V
ft ²	ft ³	ft ²	ft ³	ft ²	ft ³
0		0		0	
0		0		0	
0		0		0	
0		0		0	
0		0		0	
0		0		0	



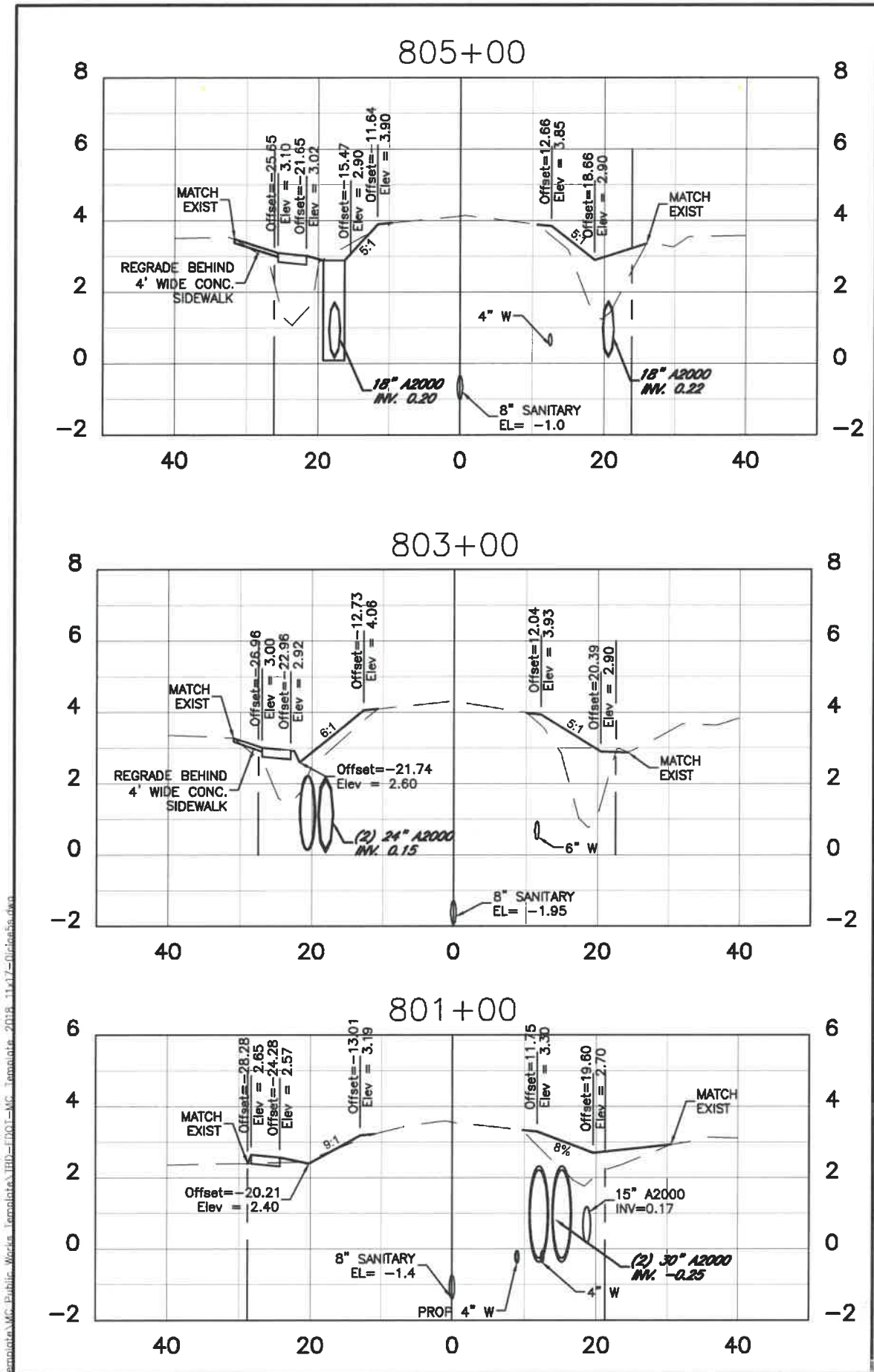
Regular		Exc.		Embankment	
A	V	A	V	A	V
ft ²	ft ³	ft ²	ft ³	ft ²	ft ³
0		0		0	
0		0		0	
0		0		0	
0		0		0	
0		0		0	
0		0		0	

DATE	DESCRIPTION	DATE	PROJECT #	304-6093460	SURVEYED	FDC	4-11-18
			SURVEY #	0577-0036	DESIGNED	JKP	06/2018
			SEC./TWN./RGE	25/33S/17E	DRAWN	KHL	06/2018
			SCALE	AS SHOWN	CHECKED	###	#####

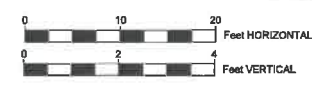
JOHN K. PARI
FLORIDA S.E. # 56354
[Signature]
3/3/20

Manatee County Florida
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

RUBONIA
72nd Street East
CROSS SECTION
SHEET NO. 29



Regular Exc.		Embankment	
A ft ²	V ft ³	A ft ²	V ft ³
0		0	
0	0	0	0
0		0	
0	0	0	0
0		0	
0	0	0	0



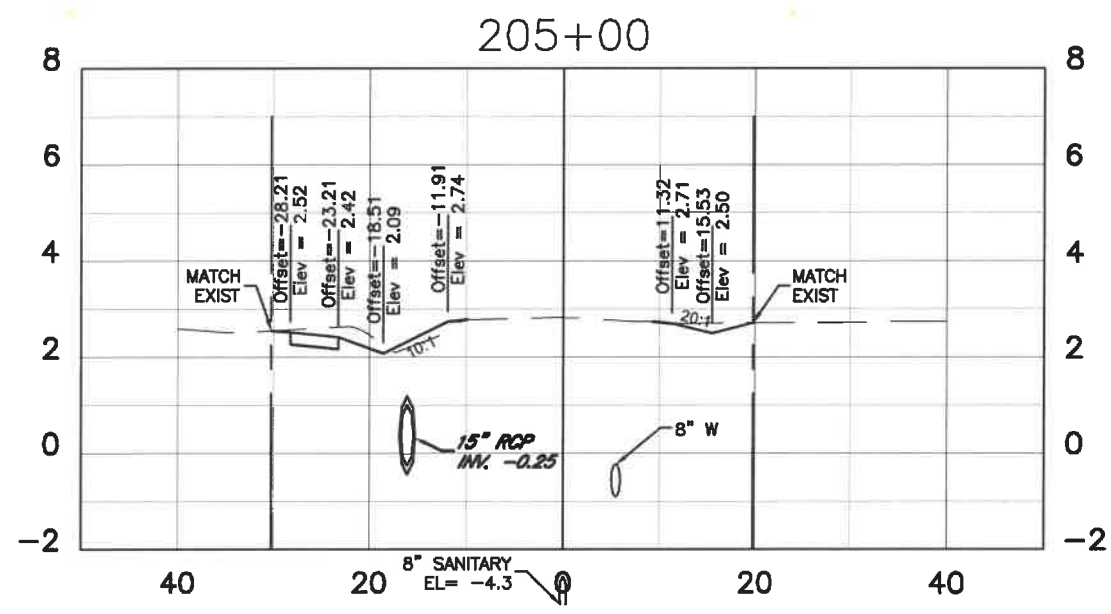
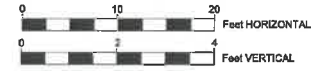
Regular Exc.		Embankment	
A ft ²	V ft ³	A ft ²	V ft ³
0		0	
0	0	0	0
0		0	
0	0	0	0
0		0	
0	0	0	0

DATE	DESCRIPTION	DATE	PROJECT #	SURVEYED	FDC
			304-6083460		4-11-18
			0577-0036	DESIGNED	JKP 06/2018
			25/335/17E	DRAWN	KHL 06/2018
			AS SHOWN	CHECKED	###

Signature & Date
 JOHN K. PARI
 FLORIDA P.E. # 56368
 3/3/20

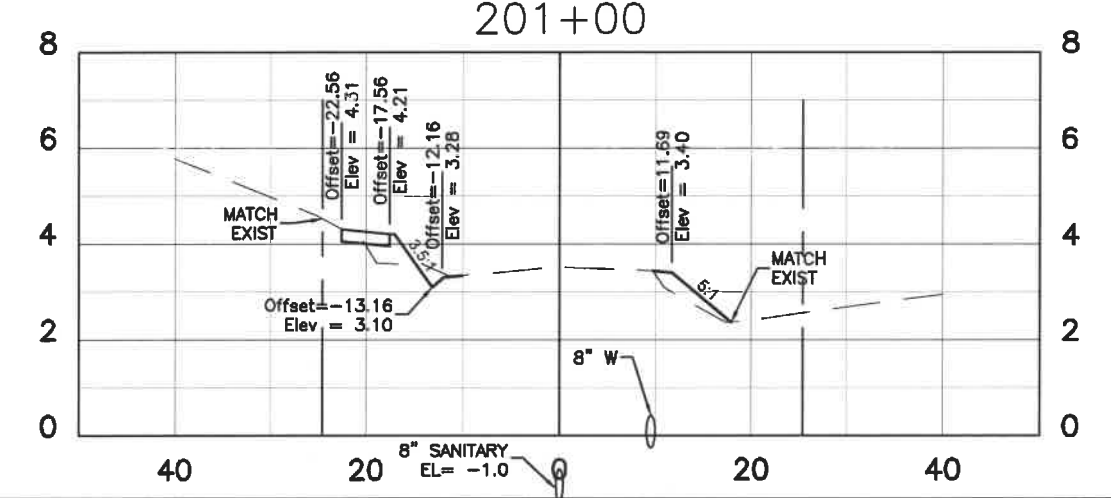
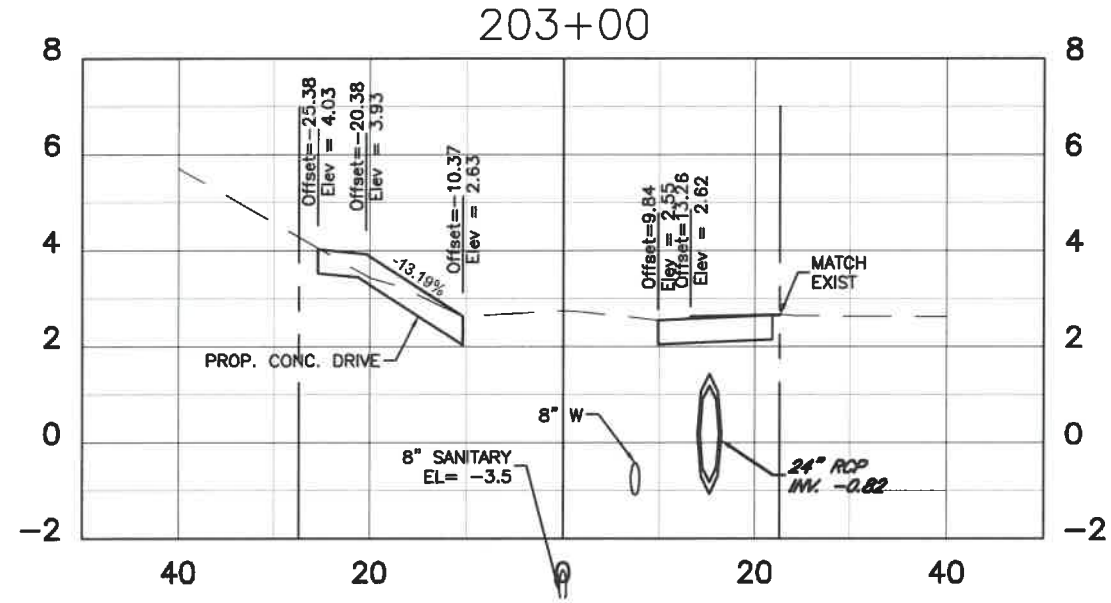
Manatee County
 PUBLIC WORKS DEPARTMENT
 ENGINEERING SERVICES
 1022 26th Avenue East, Bradenton, FL 34208

RUBONIA
 71st Street East (2)
 CROSS SECTION



Regular Exc.		Embankment	
A ft ²	V ft ³	A ft ²	V ft ³
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

Regular Exc.		Embankment	
A ft ²	V ft ³	A ft ²	V ft ³
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



JOHN K. PARI
FLORIDA E. # 56368.
[Signature]
Signature & Date 3/3/2

Manatee County
FLORIDA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

RUBONIA
69th Street Court East
CROSS SECTION

DATE	DESCRIPTION	DATE	PROJECT #	304-6093460	SURVEYED	FDC	4-11-18
			SURVEY #	0577-0036	DESIGNED	JKP	06/2018
			SEC./TWN./RGE	25/33S/17E	DRAWN	KHL	06/2018
			SCALE	AS SHOWN	CHECKED	###	#####

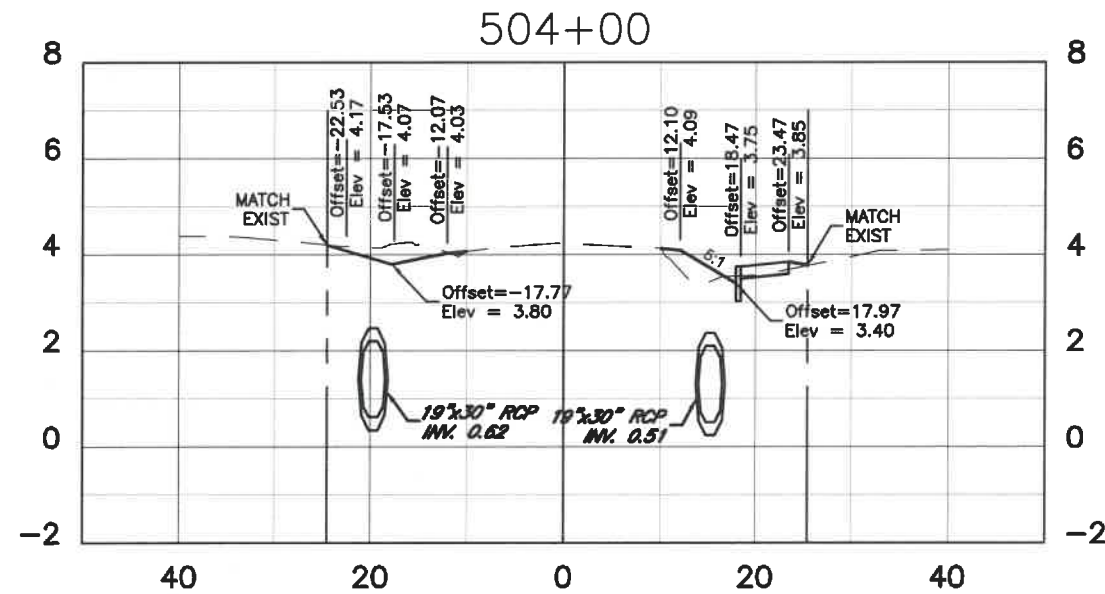


Regular Exc. Embankment

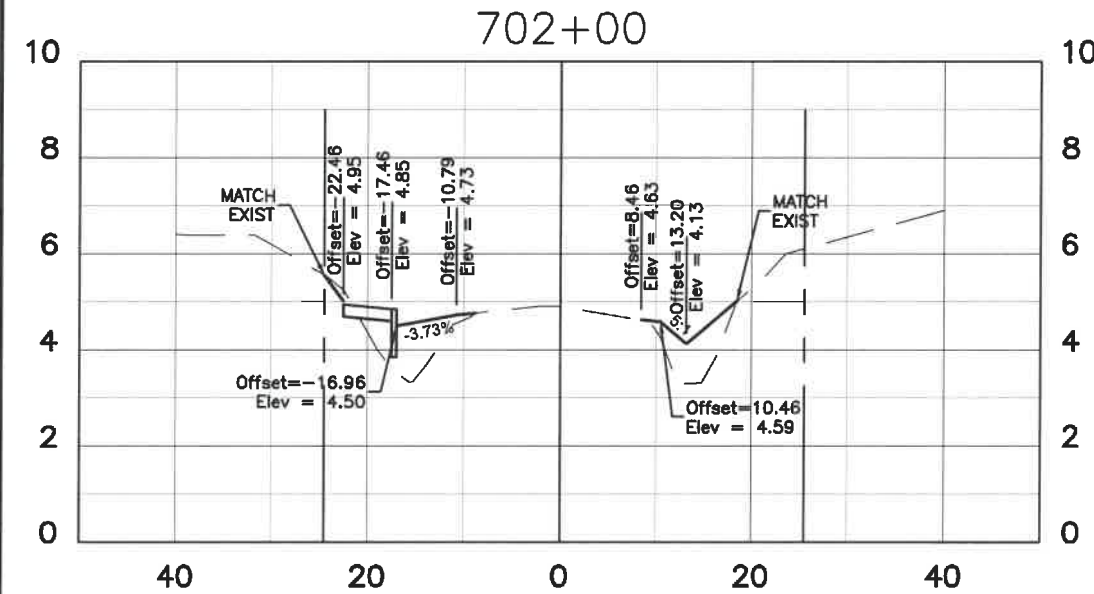
A ft² V ft³ A ft² V ft³

Regular Exc. Embankment

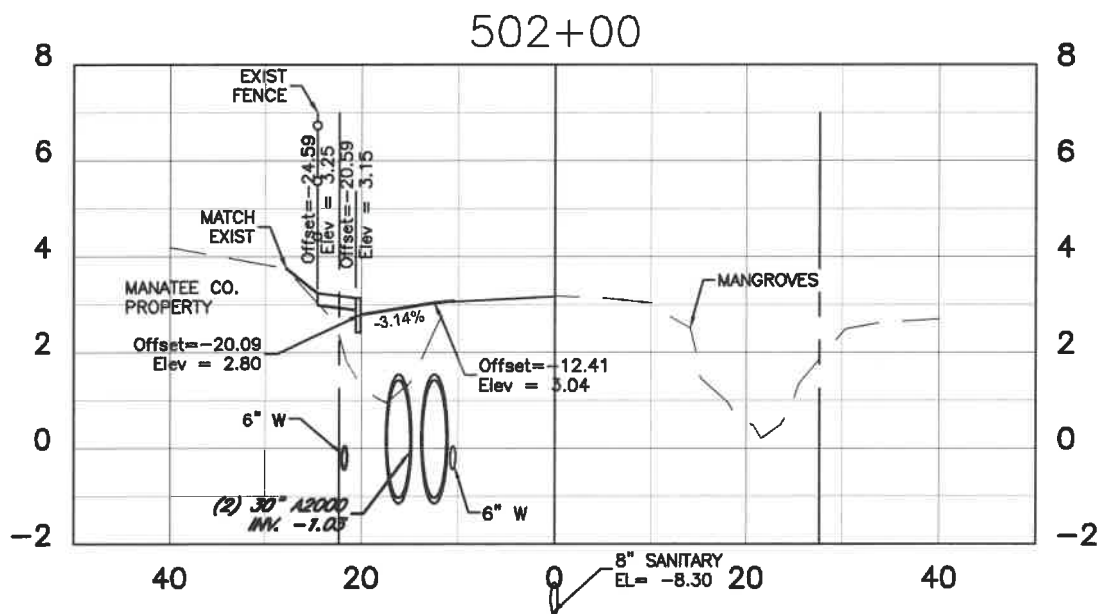
A ft² V ft³ A ft² V ft³



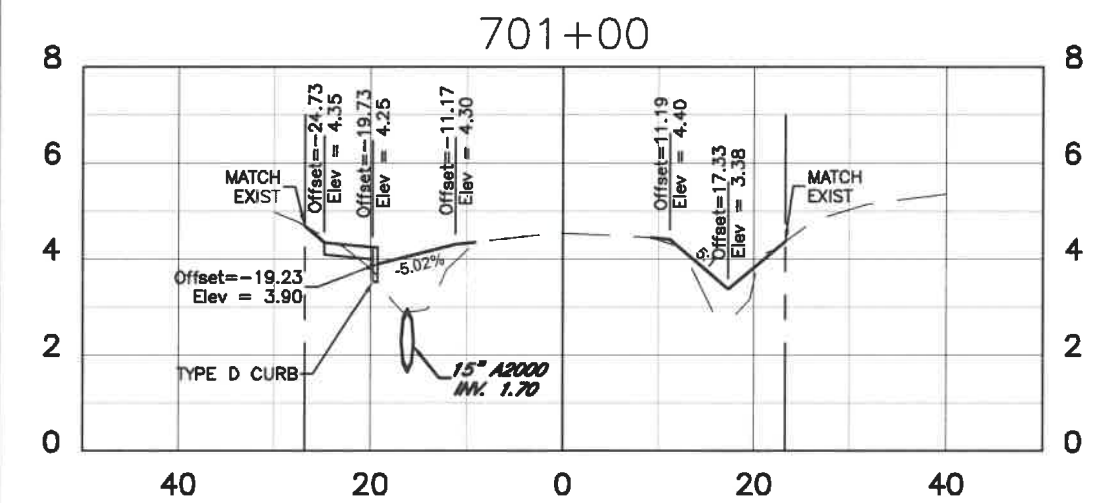
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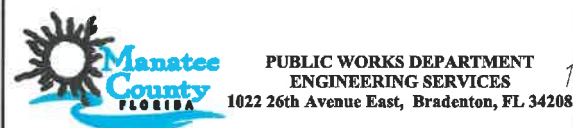
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12th Avenue Drive East

14th Avenue East

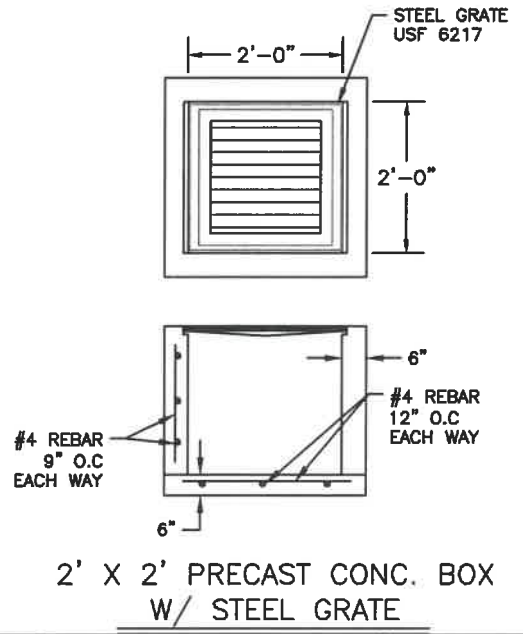
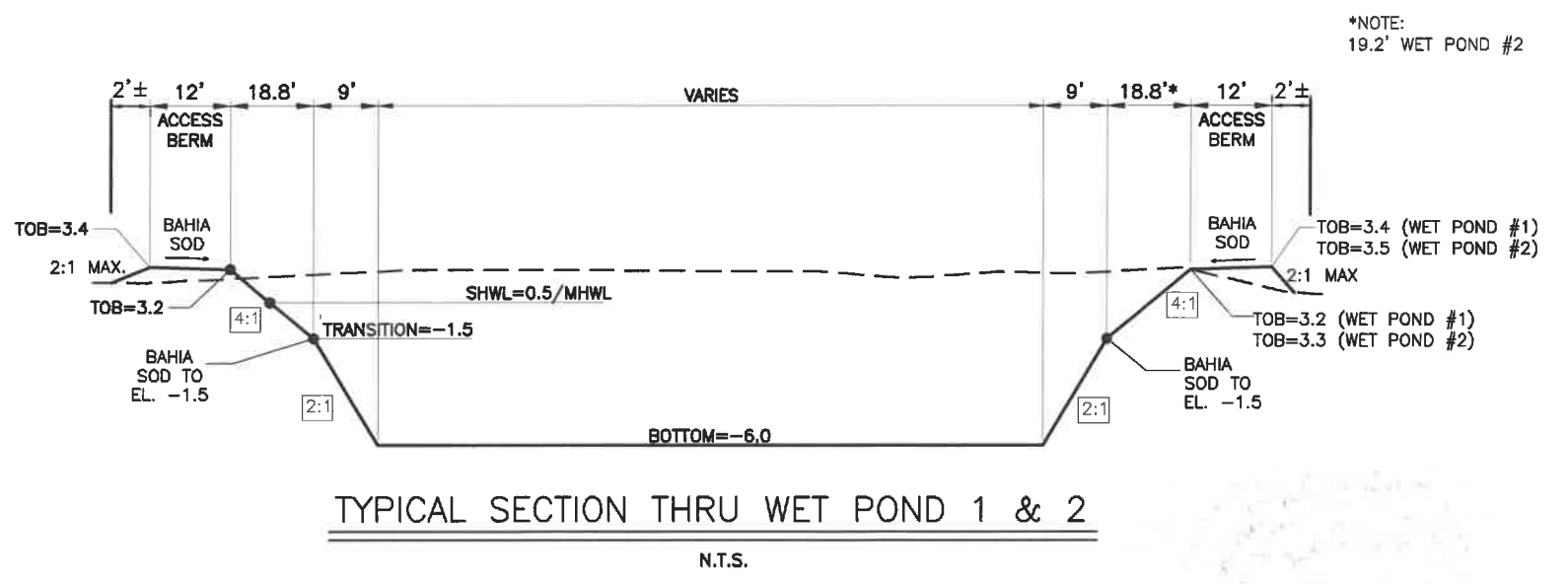
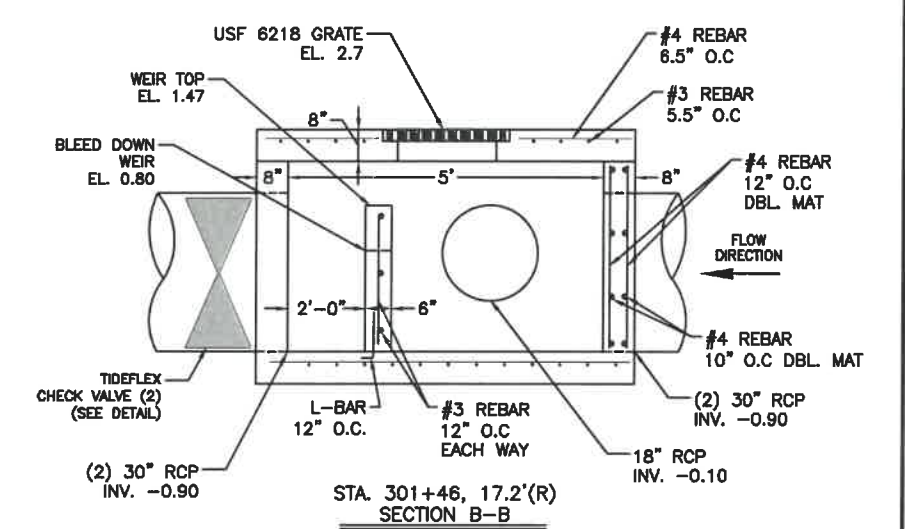
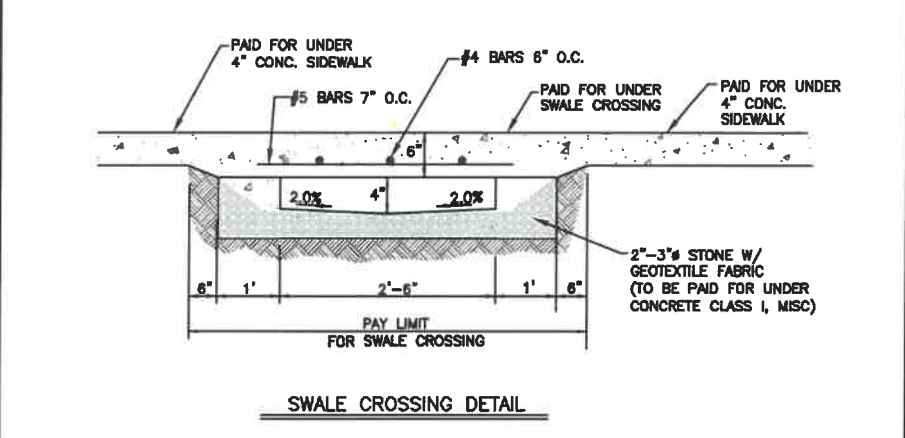
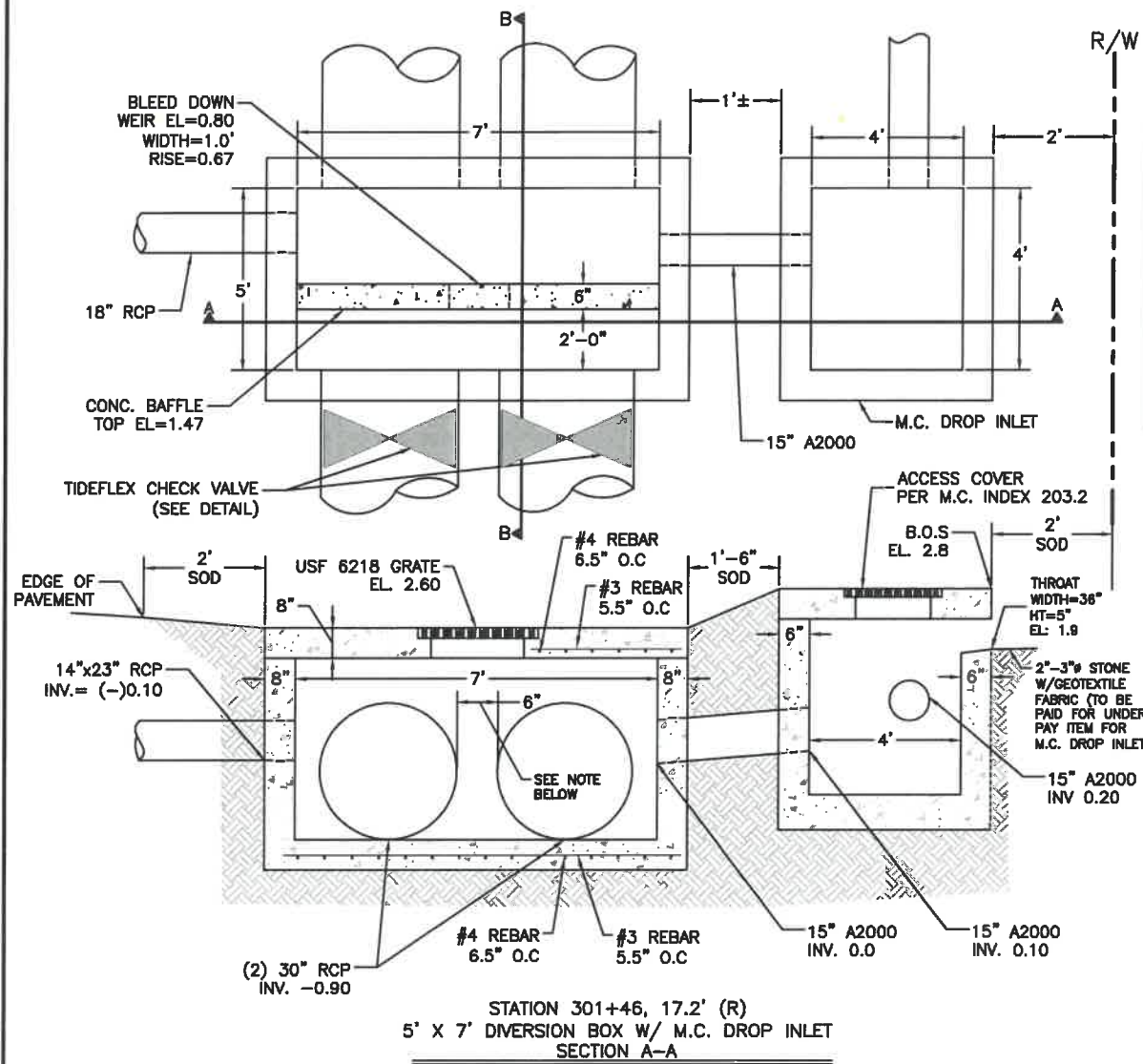
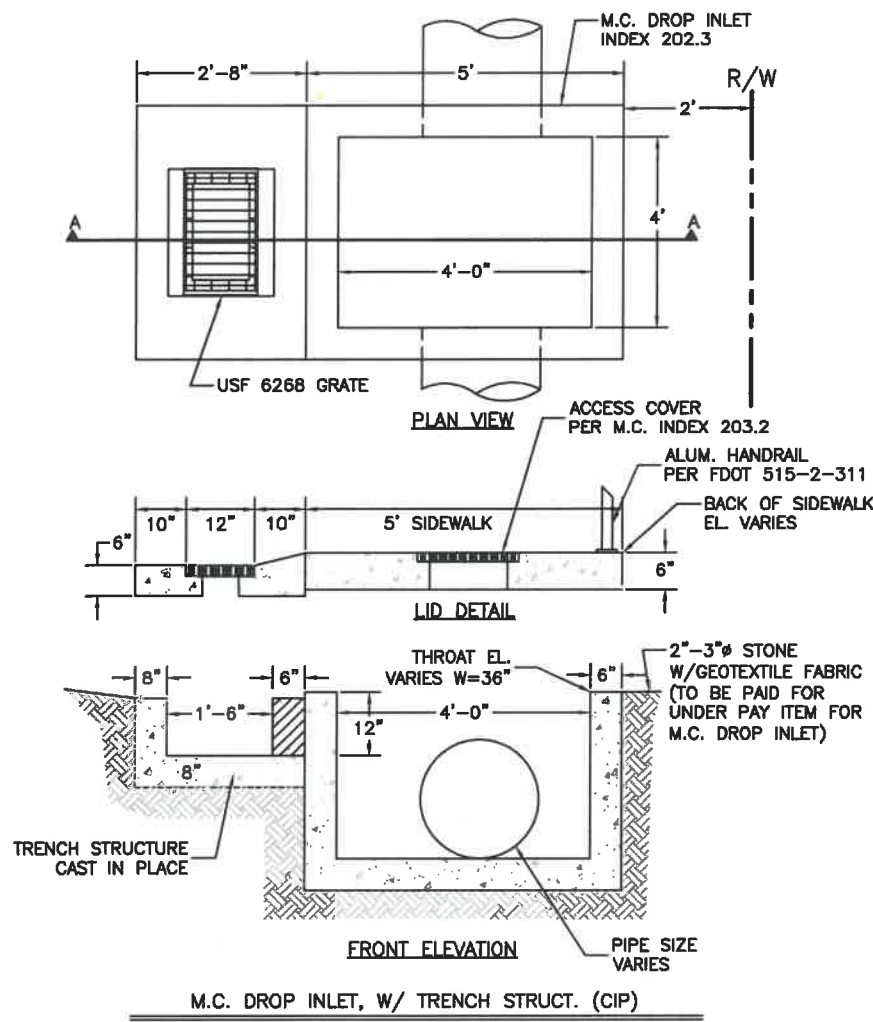
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			SURVEY #	0577-0036	DESIGNED	JKP	06/2018
			SEC./TWN./RGE	25/33S/17E	DRAWN	KHL	06/2018
			SCALE	AS SHOWN	CHECKED	###	#####

JOHN K. RAB
 JOHN K. RAB
 3/3/20
 Signature & Date



RUBONIA
 12th Avenue Drive East & 14th Avenue East
 CROSS SECTION

SHEET NO.
 35

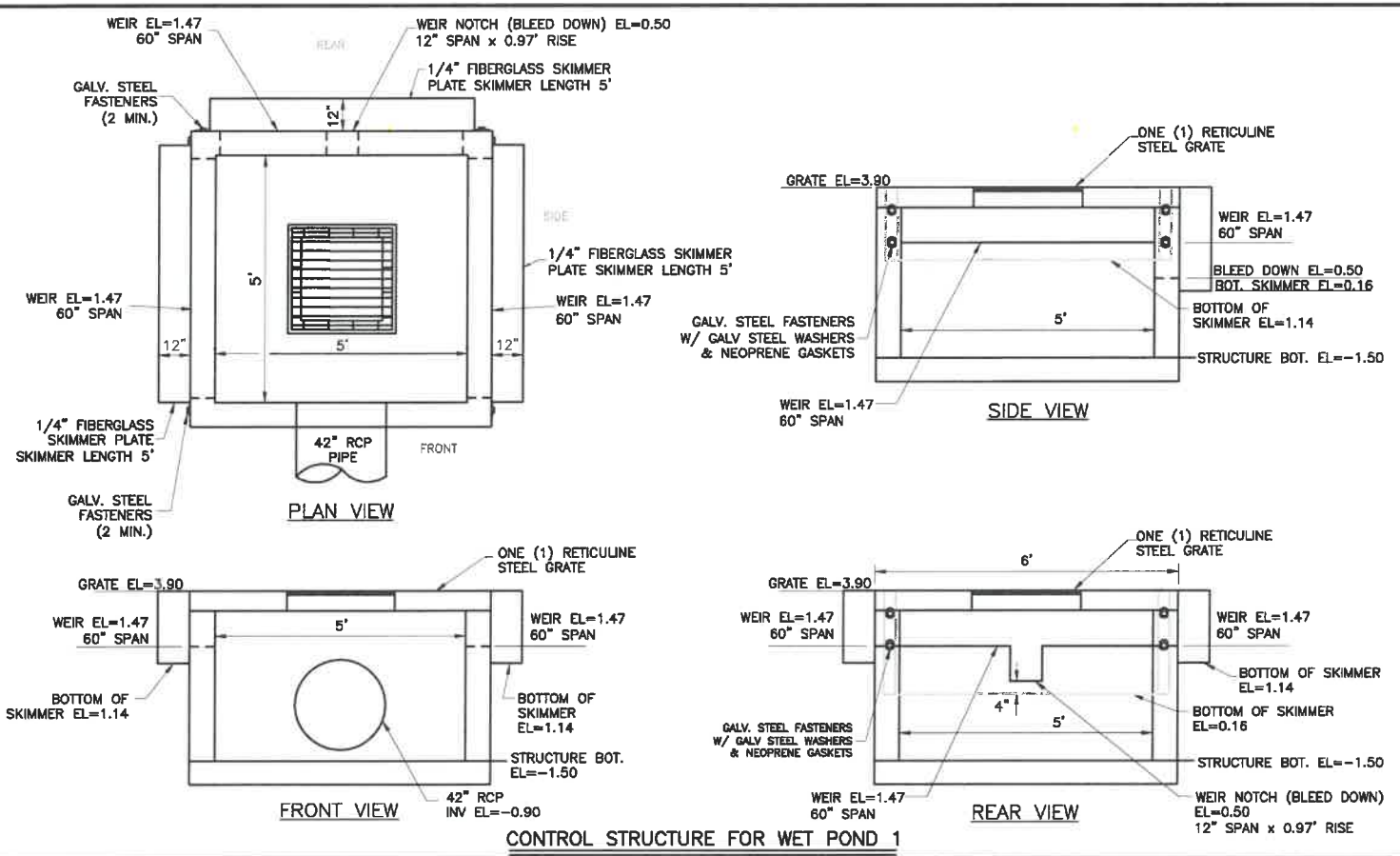


NOTE:
 *DISTANCE DECREASES TO 6" AT CONNECTION TO STORM STRUCTURE AT THE FOLLOWING STATIONS:
 799+88(R); 802+62(L); 804+23(L);
 608+45(L); 609+27(L); 405+17(R);
 804+30(R); 802+39(L)

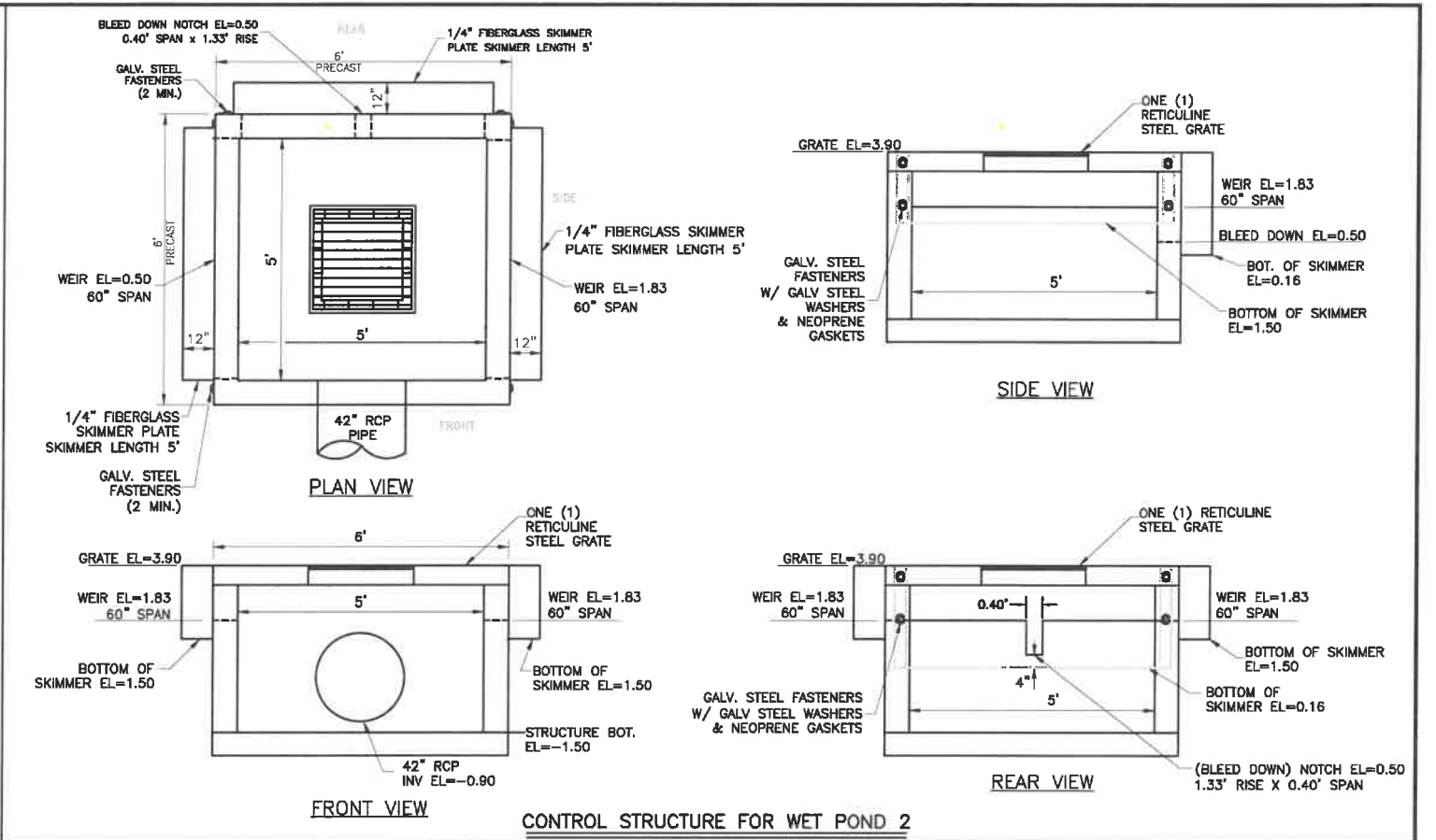
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			SURVEY #	0577-0036	DESIGNED	XXX	XX/XXXX
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			SCALE	N.T.S.	CHECKED	XXX	XX/XXXX

JOHN PAR, P.E.
 FLORIDA P.E. # 56368
 Signature & Date 3/3/20

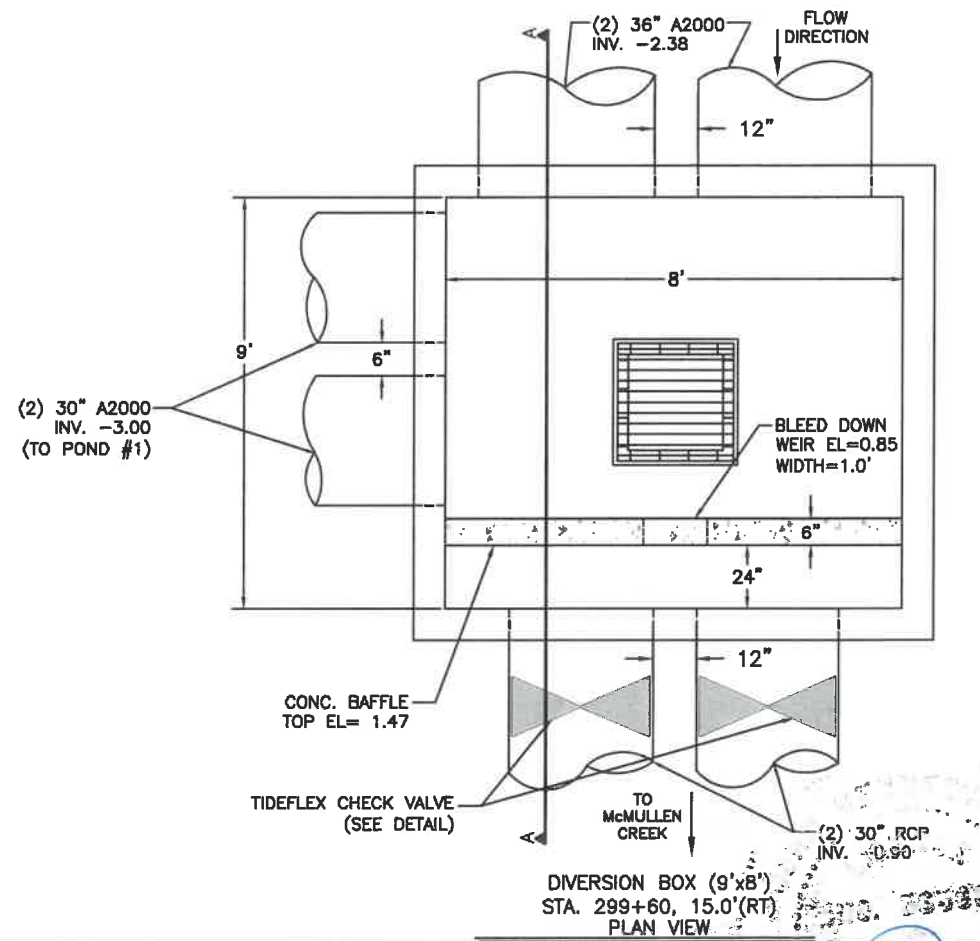
Manatee County Florida
 PUBLIC WORKS DEPARTMENT
 ENGINEERING SERVICES
 1022 26th Avenue East, Bradenton, FL 34208



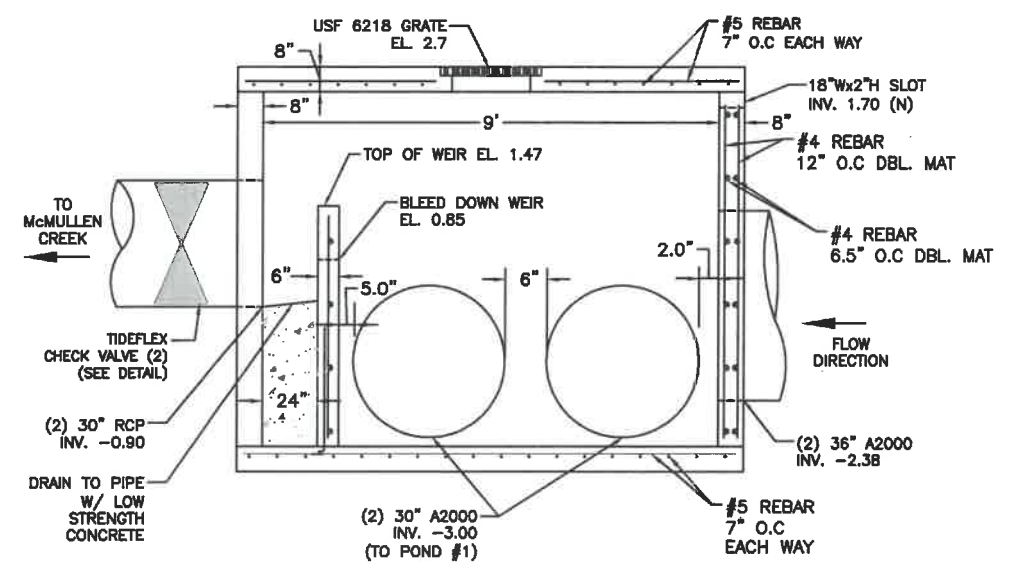
CONTROL STRUCTURE FOR WET POND 1



CONTROL STRUCTURE FOR WET POND 2



DIVERSION BOX (9'x8')
STA. 299+60, 15.0'(RT)
PLAN VIEW



DB1
DIVERSION BOX (9'x8')
STA. 299+60, 15.0'(RT)
SECTION A-A

\\bccc\dfs\pww\Engineering\Share\Highway Engineering\PROJ\SIDEWALKS\Rubonia\DWG\Rubonia_Details\recover.dwg

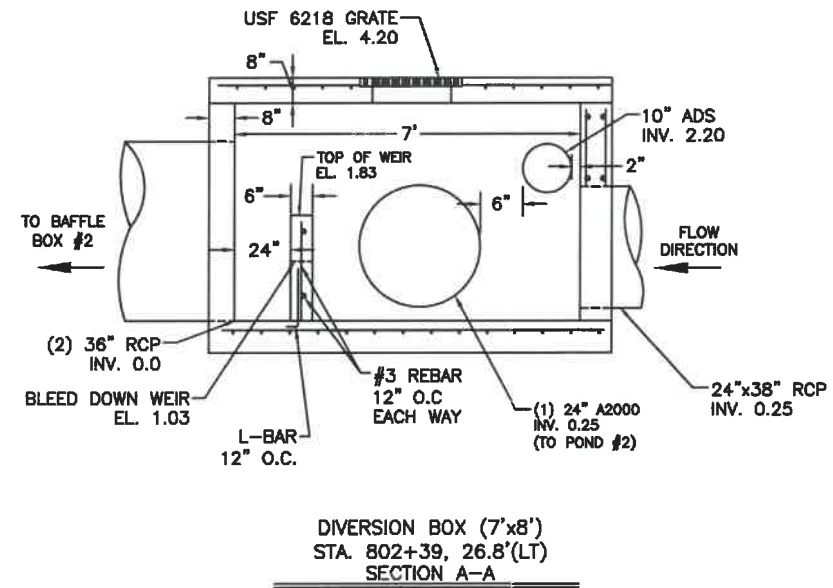
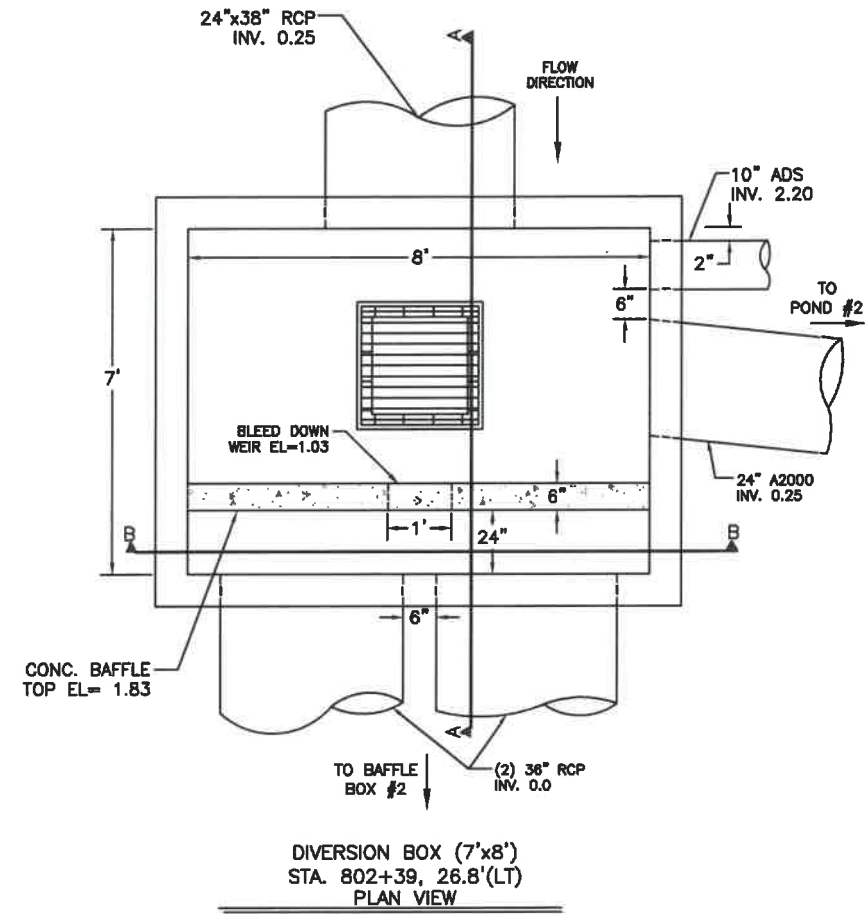
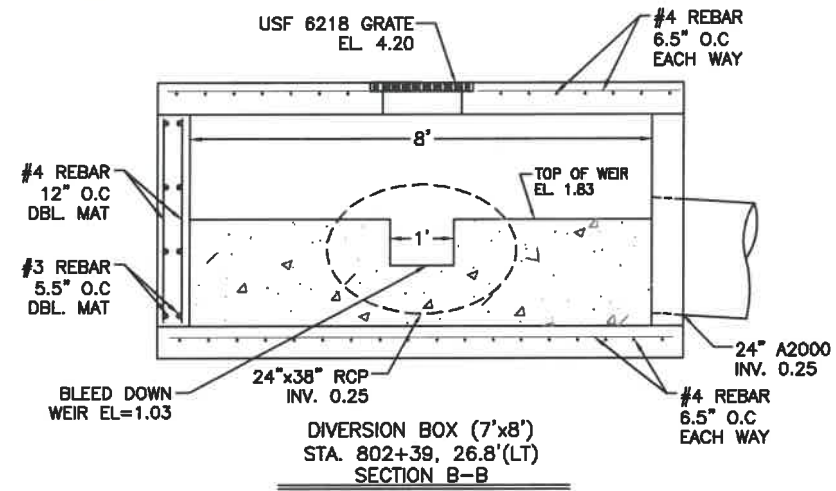
DATE	DESCRIPTION	DATE	PROJECT #	000-0000000	SURVEYED	FDC	03/08/18
			SURVEY #	0577-0036	DESIGNED	XXX	XX/XXXX
			SEC./TWN./RGE	25/33S/17E	DRAWN	KHL	03/13/18
			SCALE	N.T.S.	CHECKED	XXX	XX/XXXX

JOHN PARI, P.E.
FLORIDA P.E. # 56368
[Signature]
Signature & Date 4/22/20

Manatee County
FLORIDA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

DRAINAGE REHABILITATION
RUBONIA
DRAINAGE DETAILS

SHEET NO.
37A



\\bec\dfs\PIWD_Engineering_Share\Highway_Engineering\PROJ\SIDEWALKS\Rubonia\DWG\Rubonia_Details_recover.dwg

DATE	DESCRIPTION	DATE	PROJECT #	000-0000000	SURVEYED	FDC	03/08/18
			SURVEY #	0577-0036	DESIGNED	XXX	XX/XXXX
			SEC./TWN./RGE	25/33S/17E	DRAWN	KHL	03/13/18
			SCALE	N.T.S.	CHECKED	XXX	XX/XXXX

JOHN PAUL P.E.
 FLORIDA P.E. # 56365

 Signature & Date 3/3/20

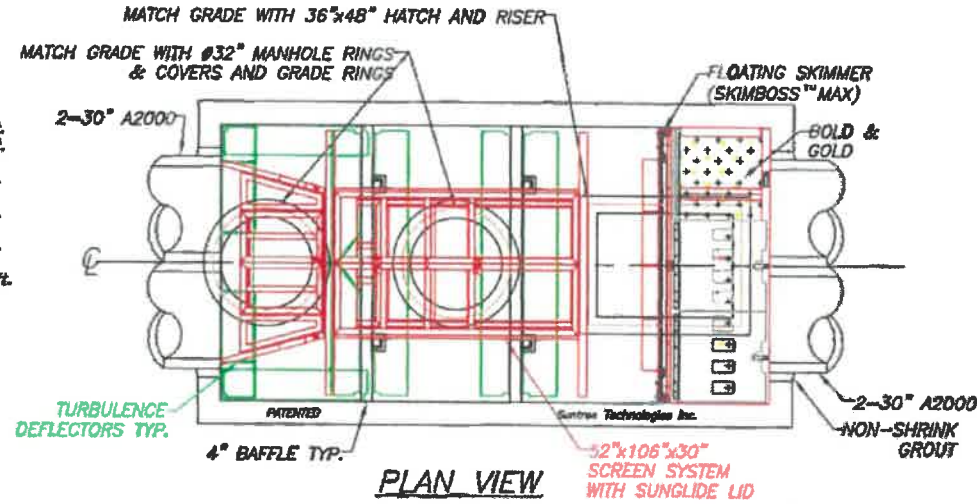
PUBLIC WORKS DEPARTMENT
 ENGINEERING SERVICES
 1022 26th Avenue East, Bradenton, FL 34208

DRAINAGE REHABILITATION
RUBONIA
DRAINAGE DETAILS

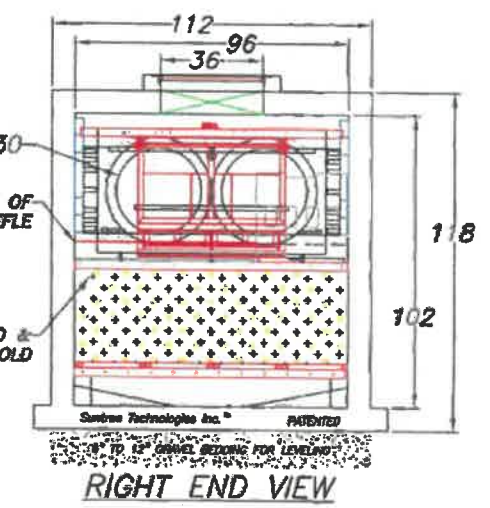
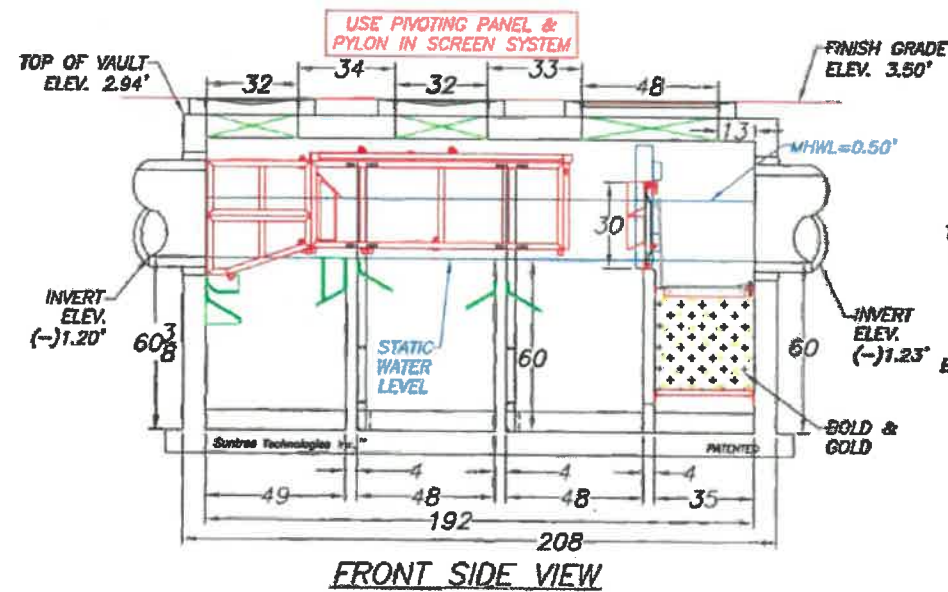
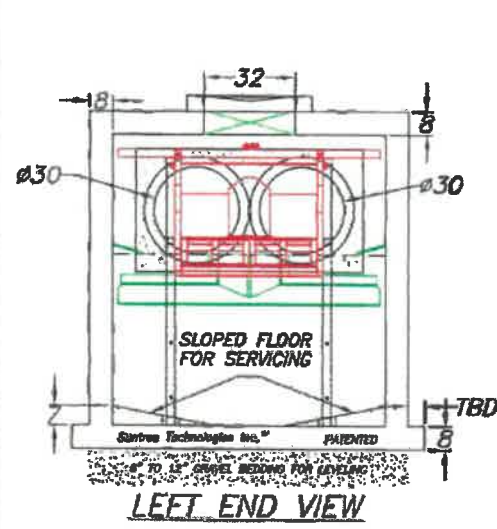
SUNTREE TECHNOLOGIES INC.™ NUTRIENT SEPARATING BAFFLE BOX™ MODEL NO: NSBB+UFF-8-16

- FLOW & BY-PASS SPECIFICATIONS FOR BIOMASS SEPARATING SCREEN SYSTEM AND MEDIA SPECIFICATIONS**
1. Pipe Inflow area (Drawn as 2-30" A2000) — 9.81 sq.ft.
- SCREEN SPECIFICATIONS:**
2. Open orifice area in screen system — 59.95 sq.ft.
 3. Open orifice area in screen system with 50% blockage — 29.97 sq.ft.
 4. Open orifice area in screen system with 75% blockage — 14.98 sq.ft.
 5. Minimum by-pass through screen system below the ceiling of the pipe — 17.40 sq.ft.
 6. Minimum by-pass around screen system below the ceiling of the pipe — 17.66 sq.ft.
 7. Screen system storage volume — 102.87 cu.ft.
- MEDIA SPECIFICATIONS:**
8. Volume of media — 63.00 cu.ft.

PATENTED AND PATENTS PEND.
 Suntree Technologies Inc.
 798 Clearlake Road, Cocoa, Florida 32922
 PH: 321-637-7552 Fax: 321-637-7554



- INSTALLATION NOTES:**
1. INFLOW AND OUTFLOW PIPES ARE TO BE FLUSH WITH THE INSIDE SURFACE OF THE CONCRETE STRUCTURE. (CAN NOT INTRUDE BEYOND FLUSH)
 2. INVERT OF OUTFLOW PIPE SHOULD BE EVEN WITH THE TOP OF THE BAFFLES.
 3. BAFFLES SHOULD BE SEALED WITH GROUT.
 4. THE BOTTOM OF THE SKIMMER SHOULD REST ON TOP OF LAST BAFFLE.
 5. INVERT OF THE INFLOW PIPE SHOULD NOT BE BELOW THE INVERT OF THE OUTFLOW PIPE.



- NOTES:**
1. CONCRETE 28 DAY COMPRESSIVE STRENGTH FC=5000 PSI
 2. REINFORCING: ASTM A-615 GRADE 60
 3. SUPPORTS AN H2O LOADING AS INDICATED BY AASHTO.
 4. JOINT SEALANT: BUTYL RUBBER SS-S-00210
 5. ALL WALLS TO BE 8" THICK, BOTTOM TO BE 8" THICK, AND TOP TO BE 8" THICK.
 6. TREATMENT DESIGN FLOW FOR 80% REMOVAL EFFICIENCY OF TSS IS 32 CFS.
 7. INFLOW AND OUTFLOW PIPES ARE TO BE FLUSH WITH THE INSIDE SURFACE OF THE CONCRETE STRUCTURE. (CAN NOT INTRUDE BEYOND FLUSH)
 8. BAFFLES ARE TO BE SEALED WITH GROUT TO FORM 4 WATER TIGHT CHAMBERS.

SUNTREE TECHNOLOGIES INC.™ 798 CLEARLAKE RD. SUITE #2 COCOA, FL 32922		PROJECT LOC: FLORIDA FERGUSON	CAD: D.B.S.	REVISIONS ELEVATIONS: BOX TO 8-18;	DATE 06/30/19
NUTRIENT SEPARATING BAFFLE BOX MODEL NO: NSBB+UFF-8-16		PROJECT NAME: RUBONIA SUBDIVISION BOX 1			
START DATE: 11/26/18	SCALE: N/A				
DRAFTER: TH4	UNITS: INCHES				
CHECKED BY: DB5	PO #: 00000				
		04-11-25-18-01			

\\bccc\dfs\pww\Engineering\Share\Highway_Engineering\PROJ\SIDEWALKS\Rubonia\DWG\Rubonia_Details.dwg

DATE	DESCRIPTION	DATE	PROJECT #	000-000000	SURVEYED	FDC	03/08/18
			SURVEY #	0577-0036	DESIGNED	XXX	XX/XXXX
			SEC./TWN./RGE	25/33S/17E	DRAWN	KHL	03/13/18
			SCALE	N.T.S.	CHECKED	XXX	XX/XXXX

JOHN PARI, P.E.
 FLORIDA P.E. # 56368

 Signature & Date 3/3/20

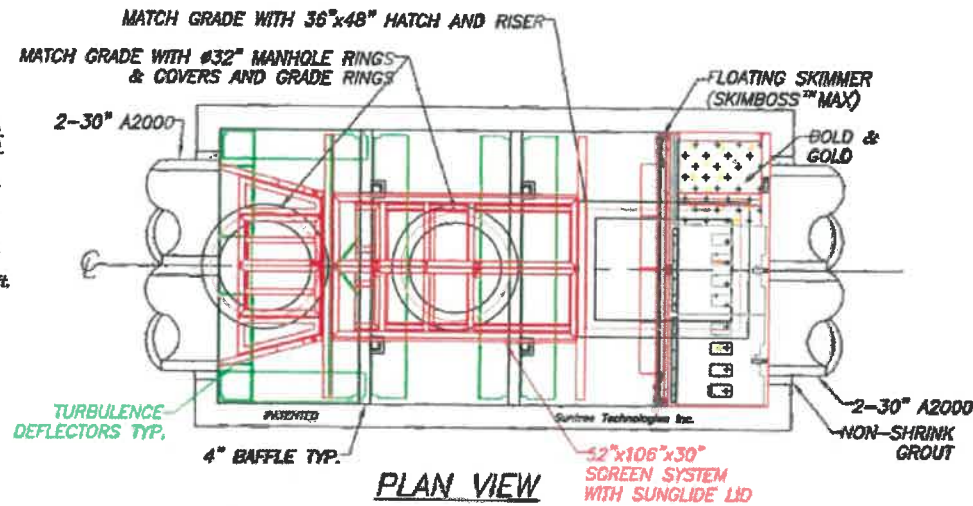
Manatee County
 PUBLIC WORKS DEPARTMENT
 ENGINEERING SERVICES
 1022 26th Avenue East, Bradenton, FL 34208

**DRAINAGE REHABILITATION
 RUBONIA
 DRAINAGE DETAILS 2**

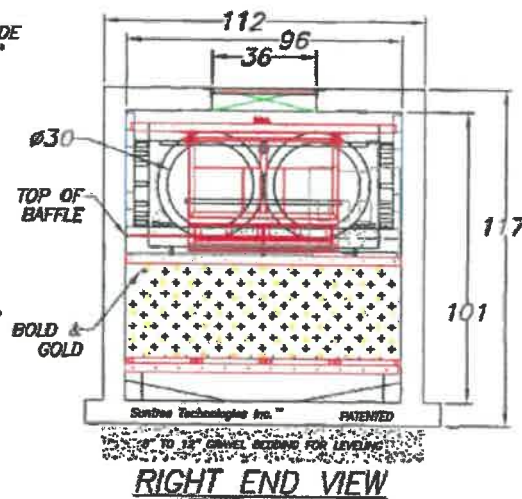
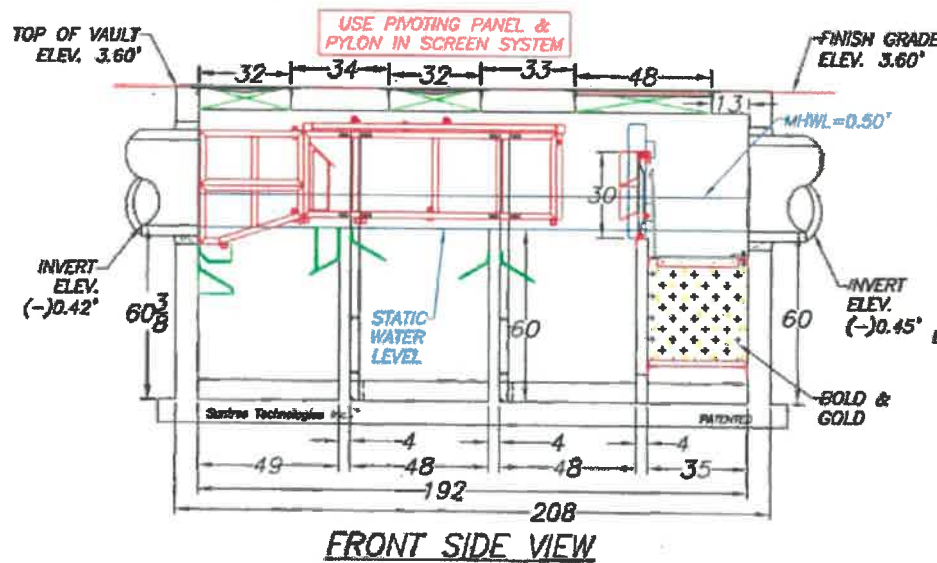
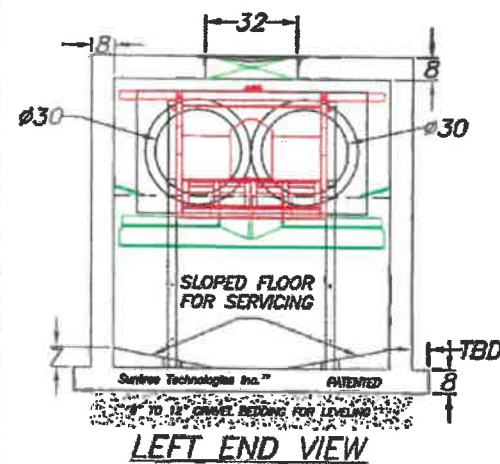
SUNTREE TECHNOLOGIES INC.™ NUTRIENT SEPARATING BAFFLE BOX™ MODEL NO: NSBB+UFF-8-16

- FLOW & BY-PASS SPECIFICATIONS FOR BIOMASS SEPARATING SCREEN SYSTEM AND MEDIA SPECIFICATIONS**
1. Pipe inflow area (Drawn as 2-30" A2000) — 9.81 sq.ft.
- SCREEN SPECIFICATIONS:**
2. Open orifice area in screen system — 59.95 sq.ft.
 3. Open orifice area in screen system with 50% blockage — 29.97 sq.ft.
 4. Open orifice area in screen system with 75% blockage — 14.98 sq.ft.
 5. Minimum by-pass through screen system below the ceiling of the pipe — 17.40 sq.ft.
 6. Minimum by-pass around screen system below the ceiling of the pipe — 17.66 sq.ft.
 7. Screen system storage volume — 102.87 cu.ft.
- MEDIA SPECIFICATIONS:**
8. Volume of media — 63.00 cu.ft.

PATENTED AND PATENTS PENDING.
 Suntree Technologies Inc.
 798 Clearlake Road, Cocoa, Florida 32922
 PH: 321-637-7552 Fax: 321-637-7554



- INSTALLATION NOTES:**
1. INFLOW AND OUTFLOW PIPES ARE TO BE FLUSH WITH THE INSIDE SURFACE OF THE CONCRETE STRUCTURE. (CAN NOT INTRUDE BEYOND FLUSH)
 2. INVERT OF OUTFLOW PIPE SHOULD BE EVEN WITH THE TOP OF THE BAFFLES.
 3. BAFFLES SHOULD BE SEALED WITH GROUT.
 4. THE BOTTOM OF THE SKIMMER SHOULD REST ON TOP OF LAST BAFFLE.
 5. INVERT OF THE INFLOW PIPE SHOULD NOT BE BELOW THE INVERT OF THE OUTFLOW PIPE.



- NOTES:**
1. CONCRETE 28 DAY COMPRESSIVE STRENGTH FC=5000 PSI
 2. REINFORCING: ASTM A-615 GRADE 60
 3. SUPPORTS AN H2O LOADING AS INDICATED BY AASHTO.
 4. JOINT SEALANT: BUTYL RUBBER SS-S-00210
 5. ALL WALLS TO BE 8" THICK, BOTTOM TO BE 8" THICK, AND TOP TO BE 8" THICK.
 6. TREATMENT DESIGN FLOW FOR 80% REMOVAL EFFICIENCY OF TSS IS 32 CFS.
 7. INFLOW AND OUTFLOW PIPES ARE TO BE FLUSH WITH THE INSIDE SURFACE OF THE CONCRETE STRUCTURE. (CAN NOT INTRUDE BEYOND FLUSH)
 8. BAFFLES ARE TO BE SEALED WITH GROUT TO FORM 4 WATER TIGHT CHAMBERS.

SUNTREE TECHNOLOGIES INC. 798 CLEARLAKE RD. SUITE #2 COCOA FL. 32922		PROJECT LOC: FLORIDA FERGUSON	CAD D.B.S.	REVISIONS	DATE
NUTRIENT SEPARATING BAFFLE BOX MODEL NO: NSBB+UFF-8-16		PROJECT NAME: RUBONIA SUBDIVISION BOX 2			
START DATE: 11/26/18	SCALE: N/A				
DRAFTER: TH4	UNITS: INCHES				
CHECKED BY: DB5	PO #: 00000	04-11-26-18-02			

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DATE	DESCRIPTION	DATE	PROJECT #	SURVEYED	FDC
			000-0000000	03/08/18	
			0577-0036	XX/XXXX	
			25/33S/17E	03/13/18	
			N.T.S.	XX/XXXX	

JOHN PARI P.E.
 FLORIDA P.E. # 58368

 Signature & Date 3/3/20

PUBLIC WORKS DEPARTMENT
 ENGINEERING SERVICES
 1022 26th Avenue East, Bradenton, FL 34208

**DRAINAGE REHABILITATION
 RUBONIA
 DRAINAGE DETAILS 3**

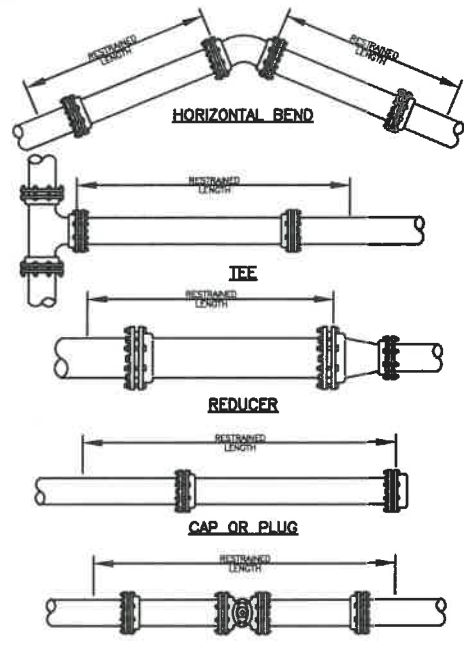
SHEET NO.
39

REQUIRED LENGTH OF RESTRAINED JOINT PIPE FOR DR-18 PVC PIPE

MAIN PIPE SIZE	HORIZ. BENDS			TEES				REDUCERS				PLUGS & VALVES
	90°	45°	22.5°	SIZE		LENGTH		SIZE		LENGTH		
24	90	38	18	X24	X20	X18	X16	X12	X10	X8	X6	214
20	78	32	16	X20	X16	X14	X12	X10	X8	X6	184	
16	66	27	13	X16	X12	X10	X8	X6	X4	X3	151	
12	52	22	10	X12	X10	X8	X6	X4	X3	X2	118	
10	44	18	8	X10	X8	X6	X4	X3	X2	X1	100	
8	37	15	7	X8	X6	X4	X3	X2	X1	X0	83	
6	29	12	6	X6	X4	X3	X2	X1	X0	X0	63	
4	21	8	4	X4	X3	X2	X1	X0	X0	X0	45	

- NOTES:**
1. RESTRAIN 11.25' BENDS 50% OF LENGTH FOR 22.5° BENDS.
 2. ALL VALVES AND FITTINGS SHALL BE RESTRAINED TO THE CONNECTING SECTIONS OF PIPE.
 3. ALL ISOLATION VALVES MUST BE PROPERLY ANCHORED OR RESTRAINED TO RESIST A 180 PSI TEST PRESSURE IN EITHER DIRECTION.
 4. PIPE SIZES ARE GIVEN IN INCHES.
 5. RESTRAINED PIPE LENGTHS ARE GIVEN IN FEET.
 6. LENGTHS SHOWN ARE FOR A TEST PRESSURE OF 180 PSI.
 7. THE RESTRAINED LENGTHS SHOWN IN THESE TABLES ARE BASED ON SOIL CLASSIFICATION SP WITH AWWA TYPE 3 TRENCH CONDITIONS, 180 PSI TEST PRESSURE, 3 FEET OF COVER AND 1.5 FACTOR OF SAFETY. ACTUAL BURY CONDITIONS MUST BE DETERMINED BY THE ENGINEER OF RECORD AND THE RESTRAINED LENGTHS MODIFIED ACCORDINGLY.
 8. RESTRAINED LENGTHS TO BE APPLIED TO PIPELINES PER DETAIL RESTRAINED LENGTHS FOR PIPE.
 9. ALL RESTRAINED JOINT HARDWARE SHALL CONFORM TO 1.11.18.E OF THE PUBLIC WORKS UTILITIES STANDARDS MANUAL.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		RESTRAINED LENGTHS FOR PVC PIPE	UG-8
REV. BY	DATE		
DATE OF APPROVAL			



NOTE:
1. SEE RESTRAINED LENGTHS FOR PVC PIPE DETAIL FOR NOTES 1 THROUGH 9 THAT ARE ALSO APPLICABLE TO RESTRAINED LENGTHS FOR PIPE.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		RESTRAINED LENGTHS FOR PIPE	UG-10
REV. BY	DATE		
DATE OF APPROVAL			

REQUIRED LENGTH OF RESTRAINED JOINT PIPE FOR DIP (POLY-WRAPPED)

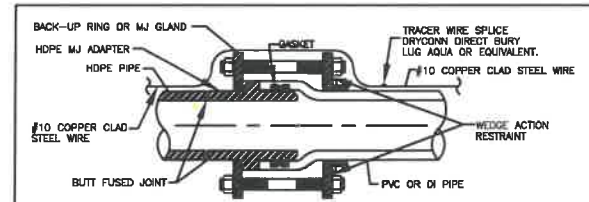
MAIN PIPE SIZE	HORIZ. BENDS			TEES				REDUCERS				PLUGS & VALVES
	90°	45°	22.5°	SIZE		LENGTH		SIZE		LENGTH		
36	142	59	28	X36	X30	X24	X20	X16	X12	X10	X8	453
30	124	51	25	X30	X24	X20	X16	X12	X10	X8	X6	391
24	106	44	21	X24	X20	X16	X12	X10	X8	X6	X4	327
20	92	38	18	X20	X16	X12	X10	X8	X6	X4	X3	280
16	77	32	15	X16	X12	X10	X8	X6	X4	X3	X2	231
12	61	25	12	X12	X10	X8	X6	X4	X3	X2	X1	181
10	52	22	10	X10	X8	X6	X4	X3	X2	X1	X0	153
8	44	18	9	X8	X6	X4	X3	X2	X1	X0	X0	128
6	34	14	7	X6	X4	X3	X2	X1	X0	X0	X0	98
4	24	10	5	X4	X3	X2	X1	X0	X0	X0	X0	69

REQUIRED LENGTH OF RESTRAINED JOINT PIPE FOR DIP (NON-WRAPPED)

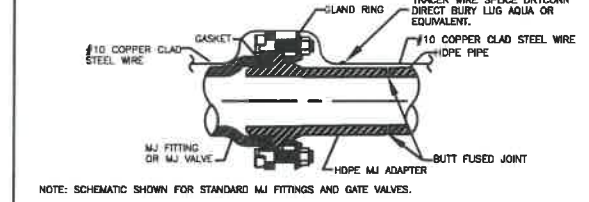
MAIN PIPE SIZE	HORIZ. BENDS			TEES				REDUCERS				PLUGS & VALVES
	90°	45°	22.5°	SIZE		LENGTH		SIZE		LENGTH		
36	100	42	20	X36	X30	X24	X20	X16	X12	X10	X8	188
30	88	37	18	X30	X24	X20	X16	X12	X10	X8	X6	162
24	75	31	15	X24	X20	X16	X12	X10	X8	X6	X4	135
20	65	27	13	X20	X16	X12	X10	X8	X6	X4	X3	116
16	54	22	11	X16	X12	X10	X8	X6	X4	X3	X2	96
12	43	18	8	X12	X10	X8	X6	X4	X3	X2	X1	75
10	37	15	7	X10	X8	X6	X4	X3	X2	X1	X0	63
8	30	13	6	X8	X6	X4	X3	X2	X1	X0	X0	53
6	24	10	5	X6	X4	X3	X2	X1	X0	X0	X0	41
4	17	7	3	X4	X3	X2	X1	X0	X0	X0	X0	29

NOTE:
1. SEE RESTRAINED LENGTHS FOR PVC PIPE DETAIL FOR NOTES 1 THROUGH 9 THAT ARE ALSO APPLICABLE TO RESTRAINED LENGTHS FOR DIP.

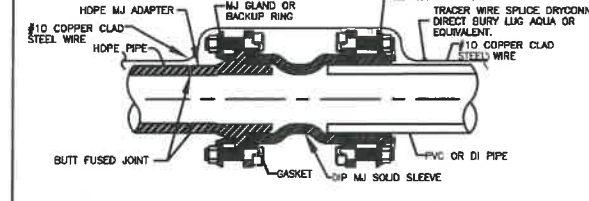
MANATEE COUNTY PUBLIC WORKS DEPARTMENT		RESTRAINED LENGTHS FOR DIP	UG-9
REV. BY	DATE		
DATE OF APPROVAL			



HDPE PIPE TO PVC PIPE / SPIGOT TO BELL CONNECTION



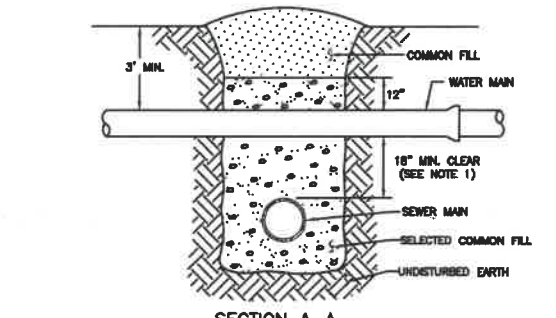
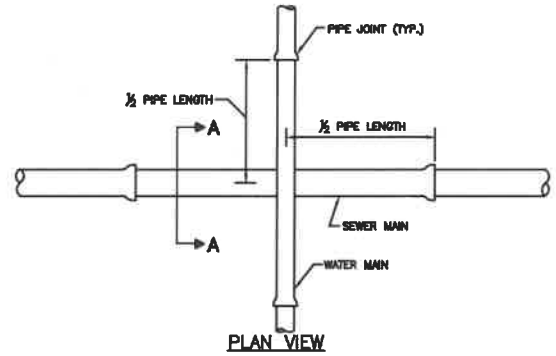
HDPE PIPE TO MJ FITTING TRANSITION



HDPE PIPE TO PVC PIPE SPIGOT TO SPIGOT CONNECTION

1. ONE #10 GAUGE EXTRA HIGH STRENGTH COPPER CLAD STEEL TRACER WIRE SHALL BE SECURED TO THE PIPE FOR ALL TYPES OF PIPELINE INSTALLATIONS. THE TRACER WIRE SHALL HAVE A MINIMUM 30-MILS OF POLYETHYLENE INSULATION.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		HDPE TO PVC OR DI PIPE ADAPTER	UG-6
REV. BY	DATE		
DATE OF APPROVAL			



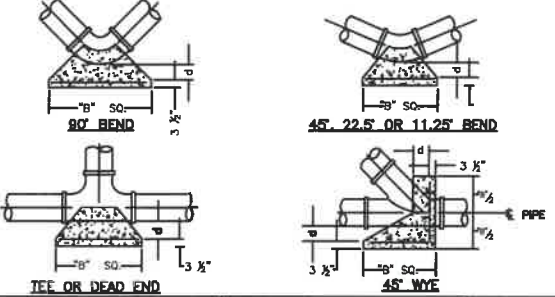
NOTES:
1. CLEARANCE MAY BE REDUCED TO 6" FOR GRAVITY SEWER WHERE WATER MAIN IS DUCTILE IRON OR 3" FOR FORCE MAIN WHERE FORCE MAIN IS ENCASED A MINIMUM OF 10" EACH SIDE OF CROSSING.
2. WHERE NO ENCASEMENT IS REQUIRED, PIPE SECTIONS SHALL BE FULL-LENGTH AND SHALL BE ADJUSTED HORIZONTALLY SO THAT THE CROSSING IS AT EACH PIPE SECTION'S MIDPOINT REGARDLESS OF THE VERTICAL CLEARANCE.
3. REFER TO THE CASING CROSSING DETAIL FOR CASING AND SPACER REQUIREMENTS.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		TYPICAL NEW WATER & SEWER LINE CROSSING	UG-2
REV. BY	DATE		
DATE OF APPROVAL			

PIPE SIZE (IN.)	THRUST BLOCK DIMENSIONS B ft. x d inches					
	90° BEND	45° BEND	22.5° BEND	1.25" BEND	DEAD END & TEE	45° WYE
4	1.5	3 1/2	1.1	3 1/2	0.8	3 1/2
6	2.2	5 1/2	1.6	3 1/2	0.8	3 1/2
8	2.9	7	2.1	5	1.5	3 1/2
10	3.5	8 1/2	2.6	6 1/2	1.9	4 1/2
12	4.2	10	3.1	7 1/2	2.2	5 1/2
14	4.9	11 1/2	3.6	8 1/2	2.6	6 1/2
16	5.5	13 1/2	4.1	9 1/2	2.9	7
18	6.2	15	4.6	11	3.3	8
20	6.9	16 1/2	5.0	12	3.6	8 1/2
24	8.2	19 1/2	6.0	14 1/2	4.3	10 1/2
30	10.1	24 1/2	7.5	18	5.3	12 1/2
36	12.1	29	8.9	21 1/2	6.4	15 1/2

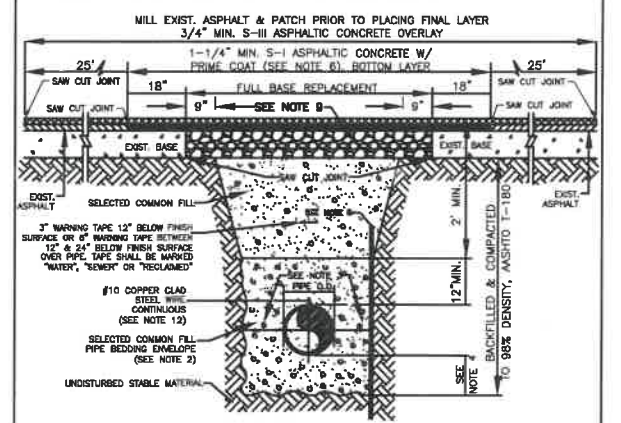
REINFORCEMENT MAT SCHEDULE	
FOR DIM. "B" BETWEEN 5.75' & 12.5'	USE #4 @ 8" EACH WAY
FOR DIM. "B" LESS THAN 5.75'	USE #3 @ 8" EACH WAY

- NOTES:**
1. ALL THRUST BLOCKS SHALL BE CAST IN PLACE. FITTINGS ADJACENT TO THRUST BLOCKS SHALL BE WRAPPED IN POLYETHYLENE.
 2. THIS TABLE IS BASED ON WATER PRESSURE=180 PSI WITH AN ALLOWABLE SOIL BEARING PRESSURE=2000 PSF. CONCRETE STRENGTH f_c =3000 PSI, REINFORCEMENT f_y =60,000 KSI. THRUST BLOCK SHALL BE CAST AGAINST FIRM UNDISTURBED SOIL.
 3. FOR LARGER "B" DIMENSIONS IT IS NECESSARY TO CHECK THAT PIPE IS SUFFICIENTLY DEEP TO ALLOW 15" MIN. SOIL COVER OVER TOP EDGE OF THRUST BLOCK.
 4. RESTRAINED JOINTS MAY BE USED IN LIEU OF THRUST BLOCKS TO SAVE SPACE. THRUST BLOCKS SHALL BE USED IN SITUATIONS WHERE THRUST BLOCKS AND RESTRAINED JOINTS ARE BOTH REQUIRED.



MANATEE COUNTY PUBLIC WORKS DEPARTMENT		CONCRETE THRUST BLOCKS	UG-7
REV. BY	DATE		
DATE OF APPROVAL			

- NOTES:**
1. BITUMINOUS PAVEMENT SHALL BE REMOVED IN CLEAN STRAIGHT LINES BY SAW CUTTING. WHERE BITUMINOUS PAVEMENT ADJACENT TO A TRENCH, THE EDGES ADJACENT TO THE TRENCH SHALL BE TRIMMED TO A NEAT STRAIGHT LINE BEFORE REPAVING TO ENSURE THAT ALL AREAS TO BE RESURFACED ARE ACCESSIBLE TO ROLLERS OR TAMPERS USED TO COMPACT THE SUB-GRADE OR PAVING MATERIALS.
 2. USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
 3. PROVIDE ADEQUATE CLEARANCE TO PLACE AND COMPACT STAGE 1 BEDDING MATERIAL IN TRENCH AREA BELOW PIPE SPRINGLINE. PIPE BEDDING MUST BE COMPACTED OUT TO THE TRENCH WALL OR 2.5 TIMES THE PIPE OD, WHICHEVER IS LESS.
 4. TYPICALLY 4" TO 6".
 5. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
 6. ASPHALTIC CONCRETE STRUCTURE COURSE WITH PRIME COAT SHALL BE THE SAME DEPTH AND TYPE AS EXISTING OR A MINIMUM OF 1-1/4" INCH S-I, WHICHEVER IS GREATER.
 7. HILL 25' BACK FROM TRENCH CROSSING SAW CUTS. ADJUST MILLING PER INDIVIDUAL SITE TO NOT IMPACT BASE. BUTT JOINT TO EXIST ASPHALT. FINAL OVERLAY TO MATCH EXISTING WITH NO DISCRETE "BUMP" AT JOINT. MILLING LIMITS THAT IMPACT INTERSECTION SHALL BE ADDRESSED ON A CASE BY CASE BASIS AND APPROVED BY MANATEE COUNTY.
 8. SHEETING ORDERED LEFT IN PLACE TO BE CUT OFF 24" BELOW FINISHED GRADE OR 12" BELOW SUBGRADE.
 9. NEW BASE SHALL MATCH EXISTING; OR BE CRUSHED CONCRETE, 6" MIN. THICKNESS, LBR ≥150, WHICHEVER IS GREATER.
 10. TEMPORARY PATCHES WILL BE INSTALLED TO PROVIDE A SMOOTH ALL WEATHER SURFACE AT ALL TIMES. PERMANENT REPLACEMENT TO BE MADE AS SOON AS POSSIBLE.
 11. RESTORE SIGNAGE & MARKING WITH THERMOPLASTIC PER FDOT STANDARDS, LATEST EDITION.
 12. TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.
 13. NOTES 6, THRU 10, ARE MINIMUM REQUIREMENTS FOR A TRENCH IN A LOCAL ROAD. REFER TO LATEST EDITION OF MANATEE COUNTY HIGHWAY AND TRAFFIC STANDARDS FOR ADDITIONAL REQUIREMENTS.



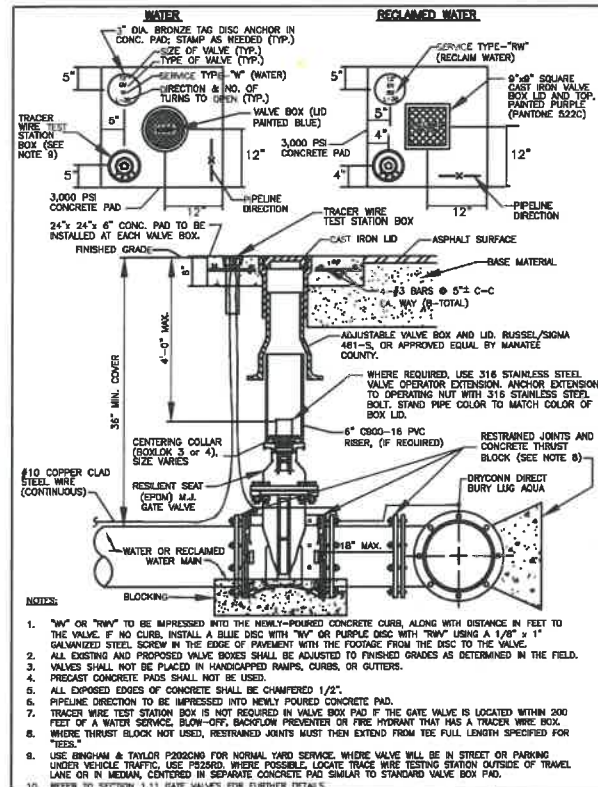
MANATEE COUNTY PUBLIC WORKS DEPARTMENT		TRENCH CROSSING WITH ASPHALT PAVEMENT SURFACE TYPE A-1 PIPE BEDDING	UG-12
REV. BY	DATE		
DATE OF APPROVAL			

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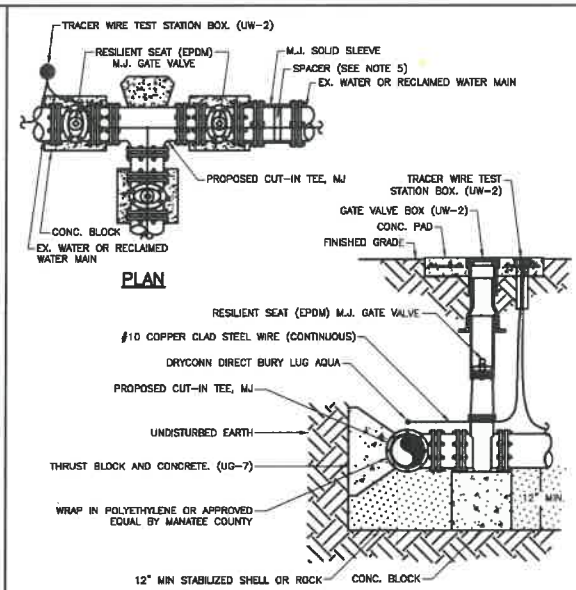
DATE	DESCRIPTION	DATE	PROJECT #	000-000000	SURVEYED	FDC	03/08/18
			SURVEY #	0577-0036	DESIGNED	XXX	XX/XXXX
			SEC./TWN./RGE	25/33S/17E	DRAWN	KHL	03/13/18
			SCALE	N.T.S.	CHECKED	XXX	XX/XXXX

JOHN PARI, P.E.
FLORIDA P.E. # 56366
[Signature]
3/3/20
Signature & Date

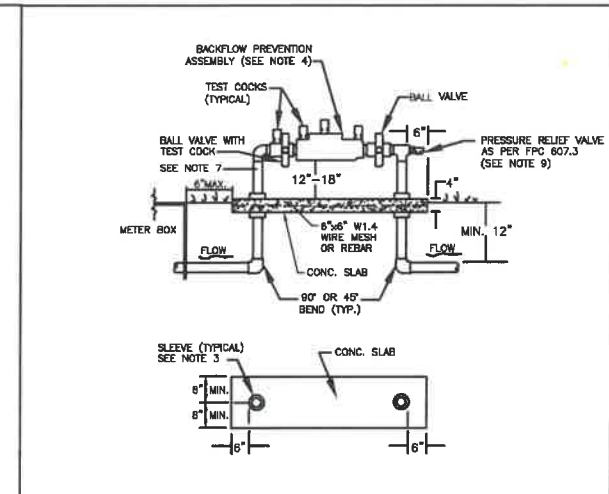
Manatee County Florida
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208



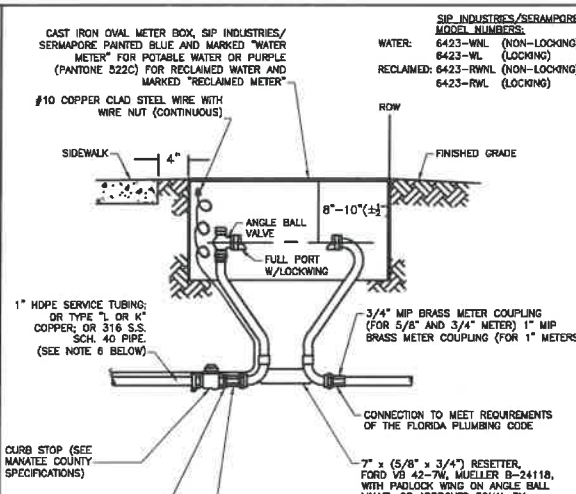
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	GATE VALVE, BOX, LID AND TAG	UW-2
REVISION DATE		
DATE OF APPROVAL		



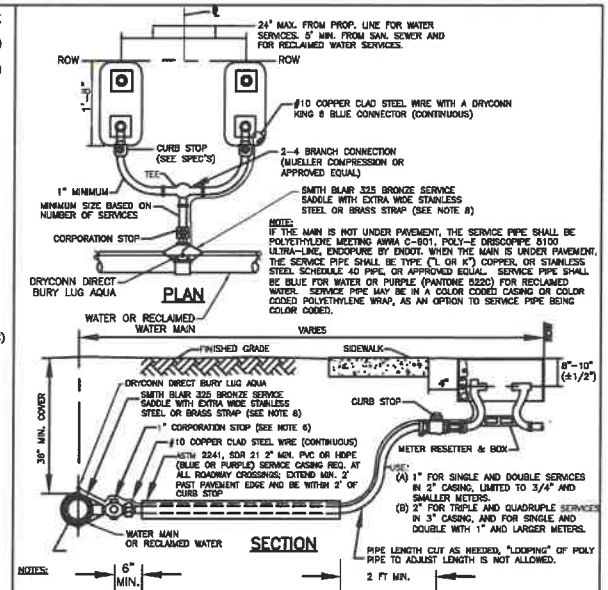
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	CUT-IN TEE	UW-4
REVISION DATE		
DATE OF APPROVAL		



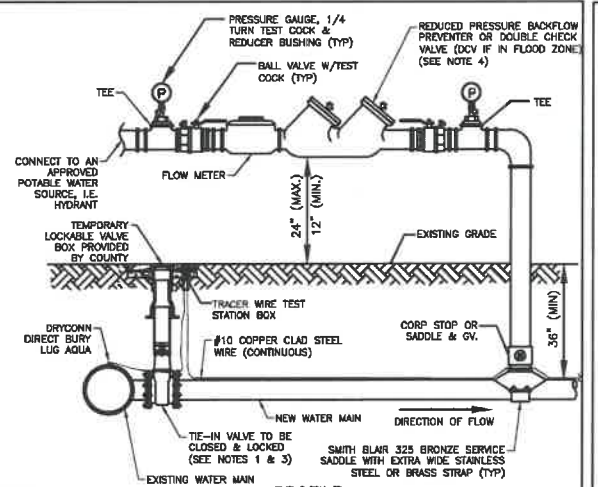
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	3/4" & 1" BACKFLOW PREVENTER	UW-12
REVISION DATE		
DATE OF APPROVAL		



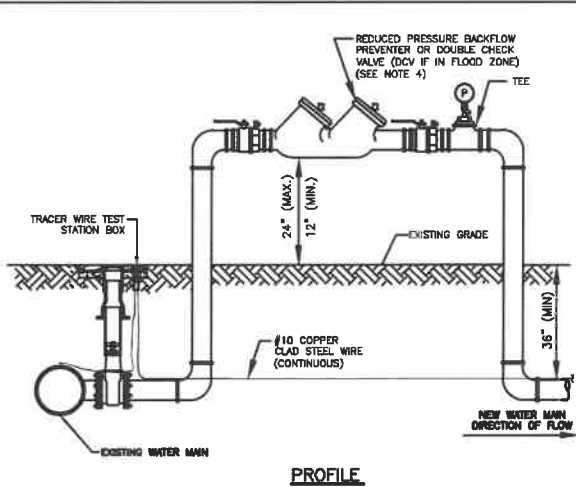
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	METER BOX ASSEMBLY FOR 5/8" X 3/4", 3/4" & 1" METERS	UW-17
REVISION DATE		
DATE OF APPROVAL		



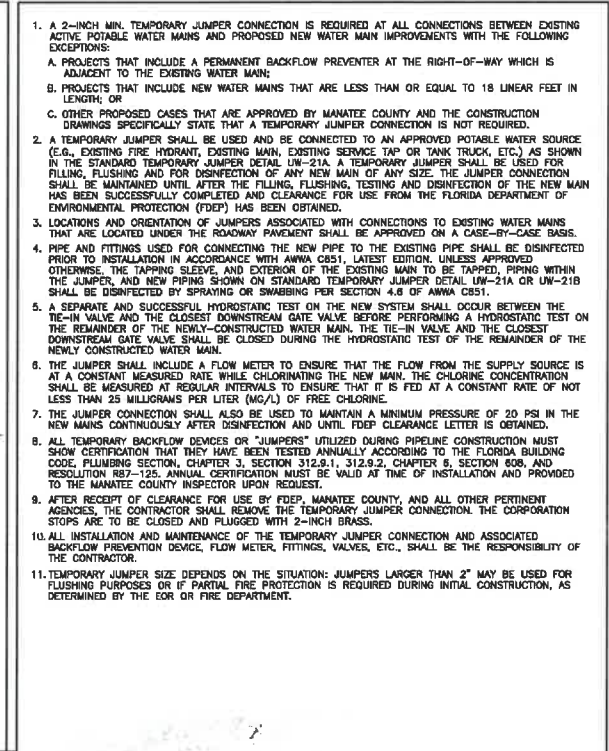
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	TYPICAL SERVICE CONNECTION	UW-19
REVISION DATE		
DATE OF APPROVAL		



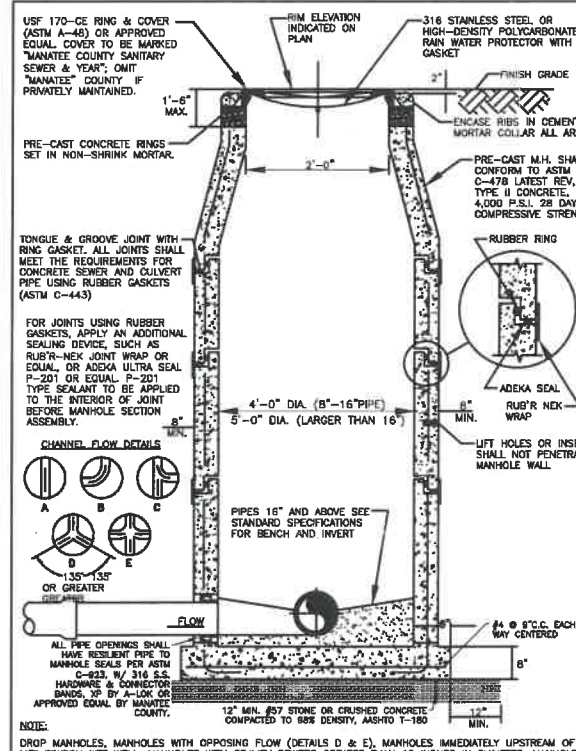
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	TEMPORARY JUMPER CONNECTION - HYDRANT AVAILABLE	UW-21A
REVISION DATE		
DATE OF APPROVAL		



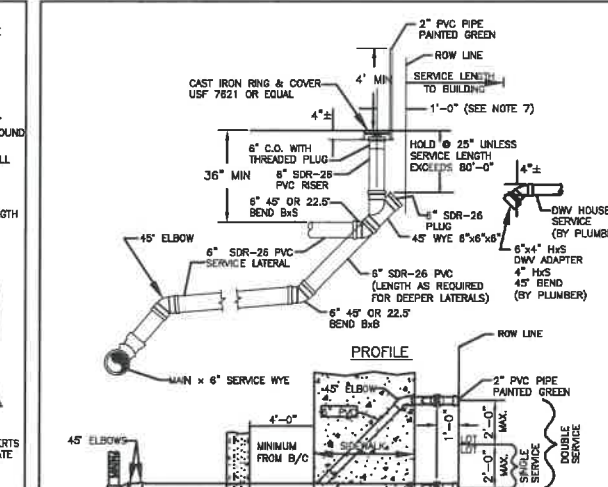
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	TEMPORARY JUMPER CONNECTION - NO HYDRANT AVAILABLE	UW-21B
REVISION DATE		
DATE OF APPROVAL		



MANATEE COUNTY PUBLIC WORKS DEPARTMENT	TEMPORARY JUMPER CONNECTION NOTES	UW-22
REVISION DATE		
DATE OF APPROVAL		



MANATEE COUNTY PUBLIC WORKS DEPARTMENT	STANDARD PRE-CAST SANITARY SEWER MANHOLE FOR UNDISTURBED FLOW	US-2
REVISION DATE		
DATE OF APPROVAL		



MANATEE COUNTY PUBLIC WORKS DEPARTMENT	SINGLE AND DOUBLE SERVICE CONNECTION	US-13A
REVISION DATE		
DATE OF APPROVAL		

DATE	DESCRIPTION	DATE	PROJECT #	000-000000	SURVEYED	FDC	03/08/18
			SURVEY #	0577-0036	DESIGNED	XXX	XX/XXXX
			SEC./TWN./RGE	25/33S/17E	DRAWN	KHL	03/13/18
			SCALE	N.T.S.	CHECKED	XXX	XX/XXXX

DATE	DESCRIPTION	DATE	PROJECT #	000-000000	SURVEYED	FDC	03/08/18
			SURVEY #	0577-0036	DESIGNED	XXX	XX/XXXX
			SEC./TWN./RGE	25/33S/17E	DRAWN	KHL	03/13/18
			SCALE	N.T.S.	CHECKED	XXX	XX/XXXX

JOHN BARI, P.E.
FLORIDA P.E. # 56368
Signature & Date 3/3/20

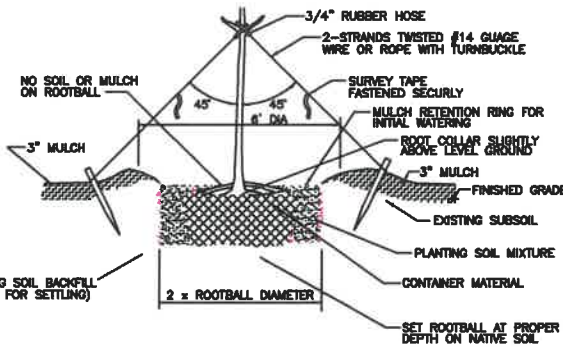
Manatee County
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

DRAINAGE REHABILITATION
RUBONIA
UTILITY DETAILS
SHEET NO. 41

GENERAL NOTES

- (1) Right-of-way permits use must be obtained and landscape plans approved prior to commencing landscape installation. The landscape plan must be legible, to scale, and show the following: right-of-way locations and dimensions, north arrow, signs, all utilities (overhead and underground), existing vegetation to be retained, and all plant species specified, quantities, sizes, locations, and spacings.
- (2) Random soil sampling is encouraged prior to design and species selection.
- (3) Plant species must be adaptable to the site conditions. Nuisance, invasive species are not permitted (see Florida Exotic Pest Plant Council, Category I and II listings). Canopy tree species notorious for drooping branches shall not be specified next to traffic lanes and sidewalks. Shrub species notorious for encroaching into infrastructure shall not be specified.
- (4) Where canopy trees are proposed, sufficient space for large root zones must be available or provided.
- (5) All trees, shrubs, and palms must be quality grade Florida #1 or better (Florida Fancy) per the most recent edition of Grades and Standards for Nursery Plants, published by the Florida Division of Plant Industry of the Department of Agriculture and consumer services or a comparable quality rating system acceptable to the Transportation Department.
- (6) Planting operations for trees, shrubs, and palms shall follow the details contained herein on sheet nos. 600.2 thru 600.5, and shall be supervised by a "certified arborist", International Society of Arboriculture or National Arborist Association.
- (7) Trees, shrubs, and palms shall not be allowed to encroach on sight windows for traffic as shown in details nos. 600.7 thru 600.9. Unless waived by the department the FDOT Roadway and Traffic Design Standards, Index 546, site distance at intersections and Index 700, design criteria related to highway safety, most recent revision, shall be followed.
- (8) All landscapes permitted to be installed in rights-of-way shall be maintained per the "best management practices" (bmp) for landscape maintenance, horticulture and arboriculture as identified in the American National Standards Institute (ANSI) A300 standards and the International Society of Arboriculture.
- (9) The maintenance of right-of-way landscapes shall include at a minimum the following: annual pruning of trees and shrubs per bmp, semiannual pruning and fertilizing of palms (see details 600.4 & 600.5), fertilizing of trees and shrubs as necessary per bmp. Control of damaging insect attacks, notification to the department or Cooperative Extension Service of suspected plant diseases, and monthly removal of weeds and debris. Canopy tree pruning activities shall be supervised by a certified arborist. Dead and overly-stressed plant material shall be replaced with like species and size in timely fashion.
- (10) All turf utilized shall be properly mowed, edged, and maintained per season. Mulch shall be kept in a neat appearance, replenished as necessary, and removed from streets and gutters.
- (11) Any color of survey tape is approved, provided it does not conflict with the tape used on any utility locates.

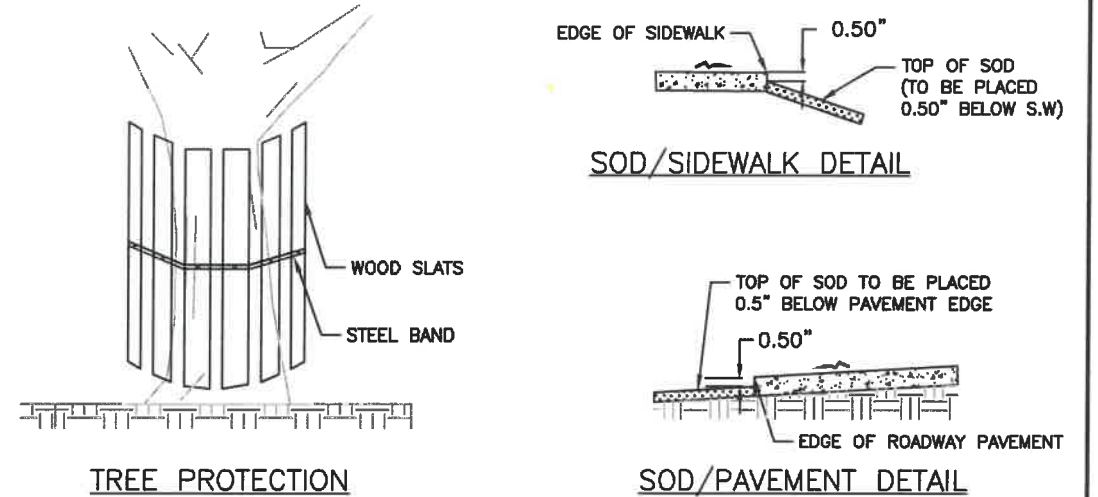
MANATEE COUNTY TRANSPORTATION DEPARTMENT		GENERAL NOTES	600.2
REV. BY	DATE		
	6/12/07		
	DATE OF B.O.C.C. APPROVAL		



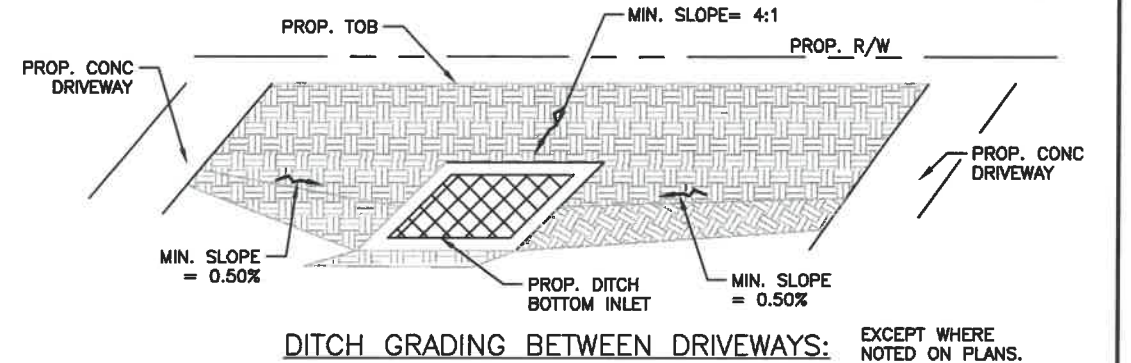
TREE PLANTING DETAIL

- Use only high quality specimens that have rigid branches and healthy foliage; large specimens must be "hardened off".
- Check for physical damage and root system quality prior to planting:
 - No large wounds on trunks and major branches; prune minor damage.
 - No large encircling roots; prune small encircling roots.
 - Trunk must be solid in rootball, not loose.
 - Remove any stem sprouts to first tier of branches.
- Remove any container material, including wires, strings, plastic, etc.
- Tree must be set at proper depth—root collar at or higher than soil level with allowance for settling; never lower. No soil or mulch should be placed on top of the rootball.
- Prepare water retention ring with mulch, repair as necessary to contain water. Initial watering should totally saturate soil and remove air pockets. Water daily for two weeks at a minimum; reduce scope of watering depending on weather and season.
- Stake tree only if it cannot support its crown vertically in moderate winds, follow detail, remove stakes when trunk is able to support crown.
- Mulch rings shall be 2' width and must be of the same mulch variety throughout the project.

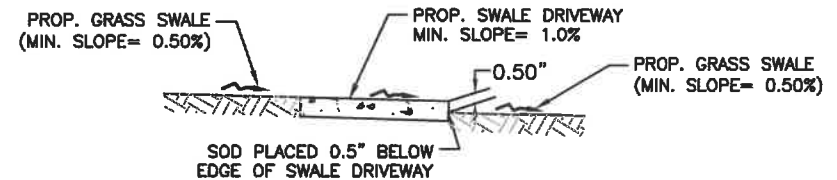
MANATEE COUNTY TRANSPORTATION DEPARTMENT		TREE PLANTING DETAIL	600.3
REV. BY	DATE		
	6/12/07		
	DATE OF B.O.C.C. APPROVAL		



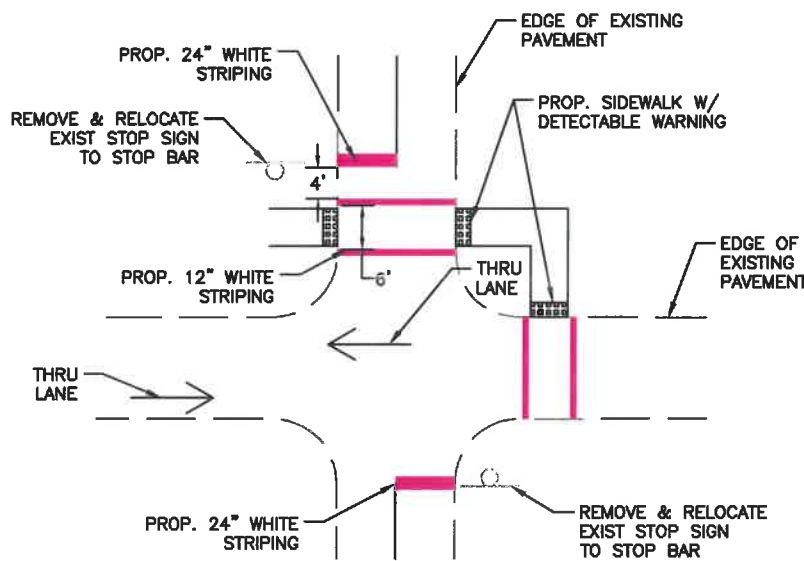
TREE PROTECTION



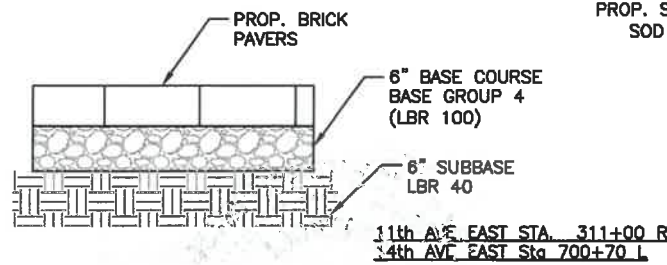
DITCH GRADING BETWEEN DRIVEWAYS: EXCEPT WHERE NOTED ON PLANS.



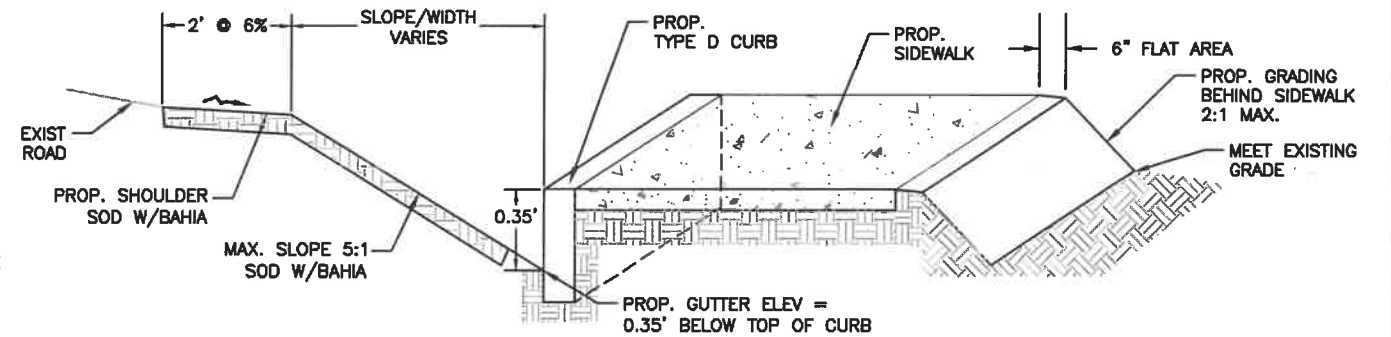
GRADING ADJACENT TO SWALE DRIVEWAYS:



SIGNING & STRIPING DETAIL



BRICK PAVER DETAIL



**PROP SIDEWALK/
TYPE 'D' CURB DETAIL**

11th AVE EAST: STA: 309+20 TO 311+25 R	14th ST EAST: STA: 700+15 TO 700+60 L
12th AVE DR EAST: STA: 500+30 TO 501+26 L	14th ST EAST: STA: 700+72 TO 701+37 L
12th AVE DR EAST: STA: 501+40 TO 502+36 L	14th ST EAST: STA: 701+50 TO 702+30 L
12th AVE DR EAST: STA: 502+80 TO 504+96 R	15th ST EAST: STA: 904+26 TO 904+84 R

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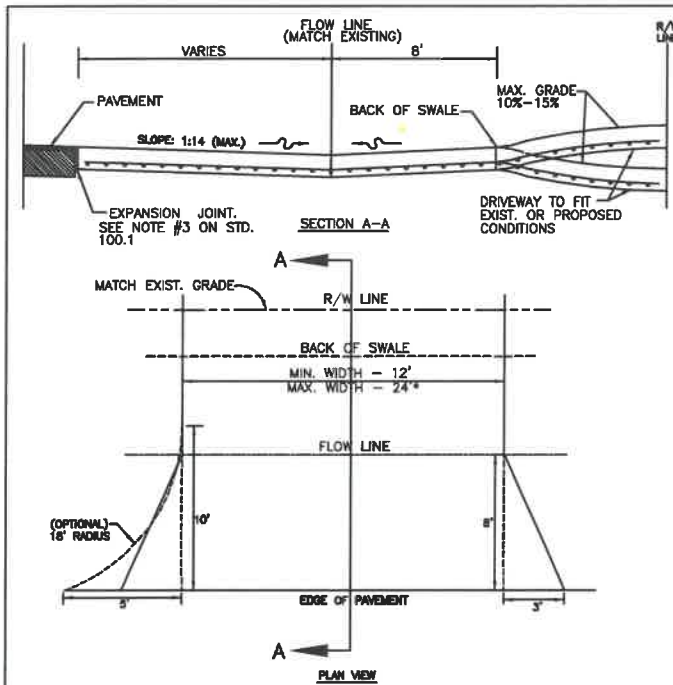
DATE	DESCRIPTION	DATE	PROJECT #	000-000000	SURVEYED	FDC	03/08/18
			SURVEY #	0577-0036	DESIGNED	JP	7/29/19
			SEC./TWN./RGE	25/33S/17E	DRAWN	JP	7/29/19
			SCALE	N.T.S.	CHECKED	XXX	XX/XXXX

JOHN PARI, P.E.
FLORIDA P.E. # 56368
[Signature]
3/3/20

Manatee County
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

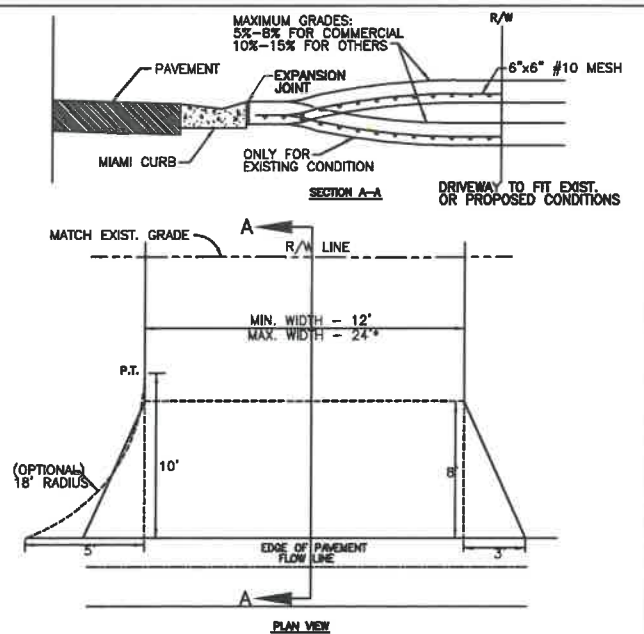
**DRAINAGE REHABILITATION
RUBONIA
MISCELLANEOUS DETAILS**

SHEET NO. 42



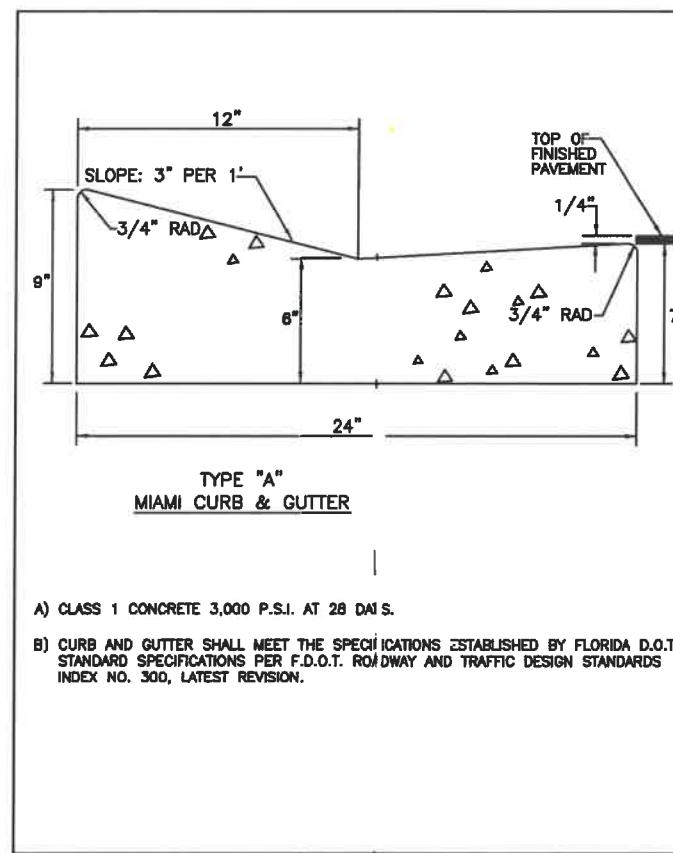
- * For driveways that can demonstrate the need for additional width, the width may not be greater than the LESSER of:
- a.) 30' total at the R/W line
 - b.) 30% of the front footage as defined on the survey (or field measurements, 36' max.)
- (A) CONSTRUCT WITH 6" REINFORCED CONCRETE (3,000 psi @ 28 DAYS) WITH 6"x6" #10 MESH FROM EDGE OF PAVEMENT TO THE RIGHT-OF-WAY LINE.
- (B) DRIVEWAYS ADJACENT TO A PAVED ROADWAY MUST HAVE THE APRON CONSTRUCTED IN COMPLIANCE WITH THE NOTE (A) ABOVE.
- (C) EXISTING DRAINAGE FLOWLINE TO BE MAINTAINED. PIPING MAY BE REQUIRED AT THE COUNTY'S DISCRETION.
- (D) 3"x6" FLARED APRON IS MINIMAL, OR 18" RADIUS.
- (E) ENGINEERING DIVISION MANAGER MAY APPROVE THE USE OF A SWALE DRIVE, IF ON-SITE CONDITIONS ARE FAVORABLE.

MANATEE COUNTY TRANSPORTATION DEPARTMENT		RURAL RESIDENTIAL (SWALE DRIVE)	101.0
REV. BY	DATE		
	6/12/07		
DATE OF B.O.C.C. APPROVAL			

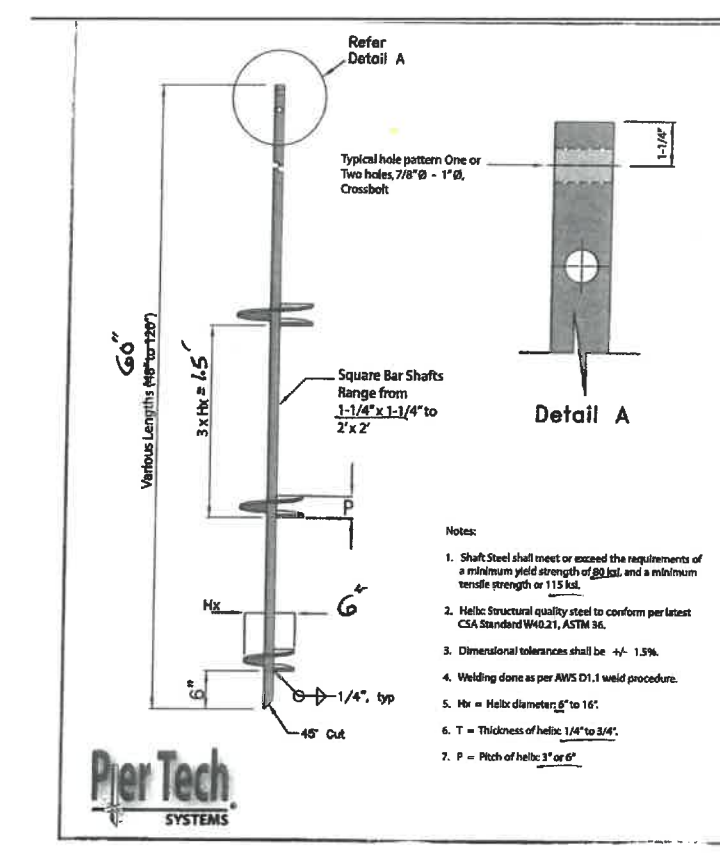


- * For driveways that can demonstrate the need for additional width, the width may not be greater than the LESSER of:
- a.) 30' total at the R/W line
 - b.) 30% of the front footage as defined on the survey (or field measurement, 36' max.)
- (A) CONSTRUCT WITH 6" REINFORCED CONCRETE 3000 PSI @ 28 DAYS, 6"x6" #10 WIRE MESH FROM BACK OF CURB- TO R/W LINE.
- (B) DRIVEWAYS ADJACENT TO A PAVED ROADWAY MUST HAVE THE APRON CONSTRUCTED IN COMPLIANCE WITH THE NOTE (A) ON PREVIOUS PAGE (STD. 101.0)
- (C) MAINTAIN EXISTING DRAINAGE FLOWLINE. FOR PIPING SPECIFICATIONS REFER TO F.D.O.T. STANDARD SPECIFICATIONS SECTION 430. SEE NOTE 4, PAGE 100.1. SEE SECTION 200- DRAINAGE (STD. 200.0, 202.5).
- (D) 3"x6" FLARE OR 18" RADIUS WITH CURB TRANSITION (TRANSITION FROM TYPE "A" CURB TO MIAMI CURB) SEE STD. 102.2. NO CHANGE WITH 3' VALLEY CROSSINGS - SEE STDS. 201.0, 201.1, 201.2, 201.4, 201.5, 201.6.
- (E) EXPANSION JOINT 0.50" PREFORMED JOINT FILLER OR APPROVED ALTERNATE, DRIVES WIDER THAN 12" (BEYOND FLARE) PLACE JOINT ON 10' CENTER.
- (F) LATERAL ALIGNMENT 45 DEGREES FOR DOUBLE DRIVE PER LOT, 90 DEGREES FOR SINGLE DRIVE, OFF CENTER LINE.

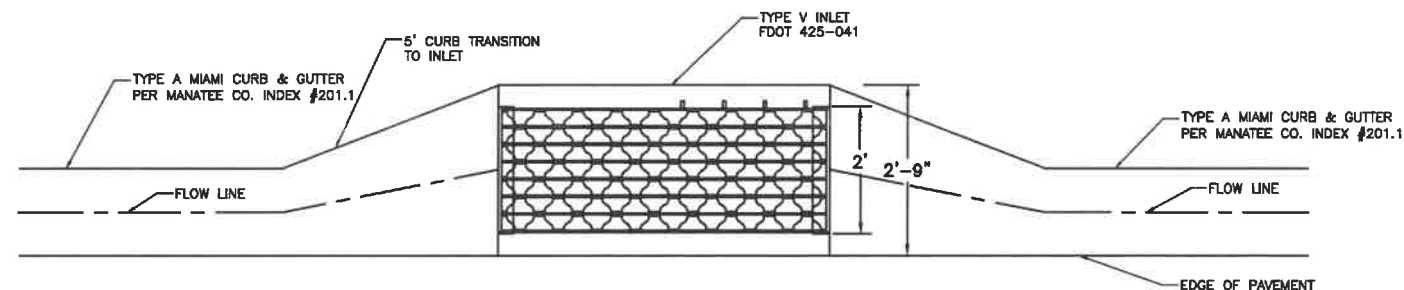
MANATEE COUNTY TRANSPORTATION DEPARTMENT		URBAN DRIVES	101.1
REV. BY	DATE		
	6/12/07		
DATE OF B.O.C.C. APPROVAL			



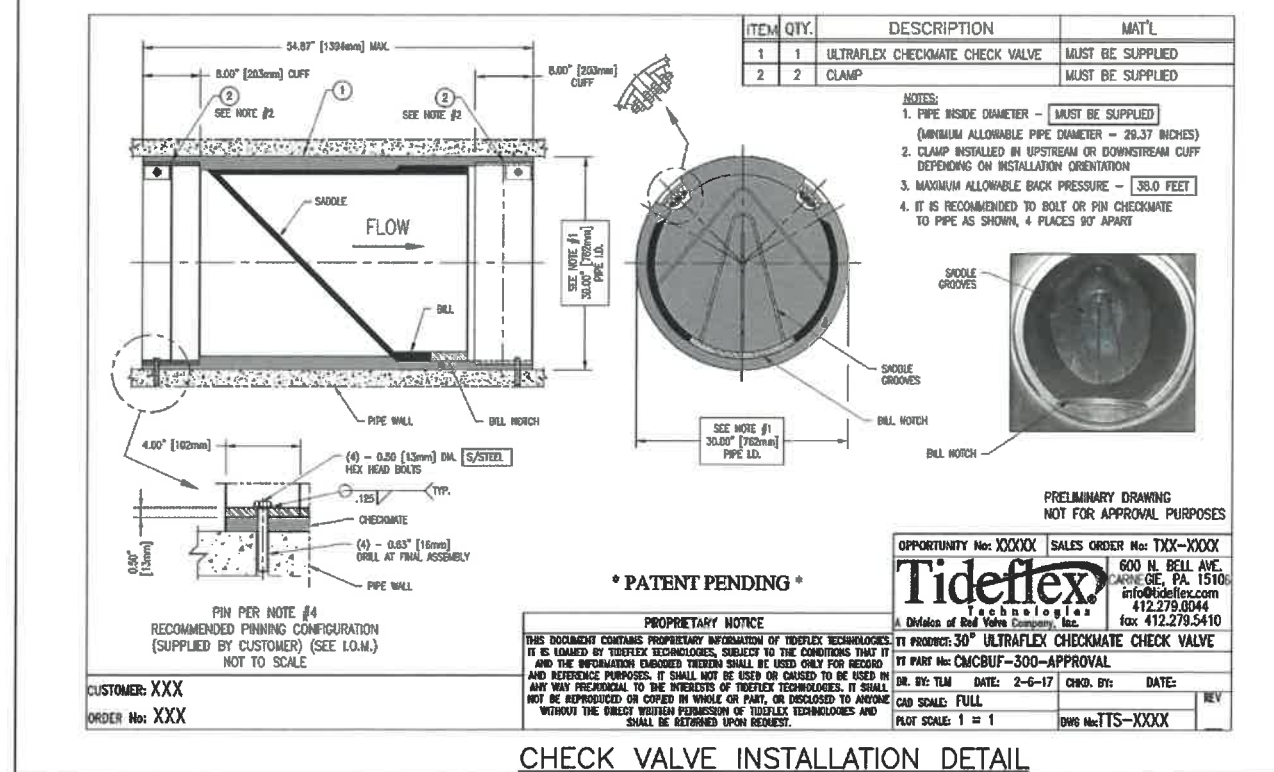
MANATEE COUNTY TRANSPORTATION DEPARTMENT		TYPE A MIAMI CURB & GUTTER	201.1
REV. BY	DATE		
	6/12/07		
DATE OF B.O.C.C. APPROVAL			



MANATEE COUNTY TRANSPORTATION DEPARTMENT		TYPE A MIAMI CURB & GUTTER	201.1
REV. BY	DATE		
	6/12/07		
DATE OF B.O.C.C. APPROVAL			



TYPE V INLET / TYPE A MIAMI CURB & GUTTER DETAIL



ITEM	QTY.	DESCRIPTION	MAT'L
1	1	ULTRAFLEX CHECKMATE CHECK VALVE	MUST BE SUPPLIED
2	2	CLAMP	MUST BE SUPPLIED

NOTES:

- PIPE INSIDE DIAMETER - MUST BE SUPPLIED (MINIMUM ALLOWABLE PIPE DIAMETER - 28.37 INCHES)
- CLAMP INSTALLED IN UPSTREAM OR DOWNSTREAM CLIFF DEPENDING ON INSTALLATION ORIENTATION
- MAXIMUM ALLOWABLE BACK PRESSURE - 38.0 FEET
- IT IS RECOMMENDED TO BOLT OR PIN CHECKMATE TO PIPE AS SHOWN, 4 PLACES 90° APART

PRELIMINARY DRAWING
NOT FOR APPROVAL PURPOSES

OPPORTUNITY No: XXXXX SALES ORDER No: TXX-XXXX
Tidelflex TECHNOLOGIES
 600 N. BELL AVE.
 CARLE, PA. 15106
 info@tidelflex.com
 412.279.0044
 fax: 412.279.5410

TI PRODUCT: 30" ULTRAFLEX CHECKMATE CHECK VALVE
 TI PART No: CMCBUF-300-APPROVAL
 DR. BY: TLM DATE: 2-6-17 CHKD. BY: DATE:
 CAD SCALE: FULL
 PLOT SCALE: 1 = 1 DWG No: TTS-XXXX

* PATENT PENDING *

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CUSTOMER: XXX
 ORDER No: XXX

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DATE	DESCRIPTION	DATE	PROJECT #	000-0000000	SURVEYED	FDC	03/08/18
			SURVEY #	0577-0036	DESIGNED	JP	7/29/19
			SEC./TWN./RGE	25/33S/17E	DRAWN	JP	7/29/19
			SCALE	N.T.S.	CHECKED	XXX	XX/XXXX

JOHN PARI, P.E.
 FLORIDA P.E. # 56368
 Signature & Date 3/3/20

Manatee County
 PUBLIC WORKS DEPARTMENT
 ENGINEERING SERVICES
 1022 26th Avenue East, Bradenton, FL 34208

**DRAINAGE REHABILITATION
 RUBONIA
 MISCELLANEOUS DETAILS**

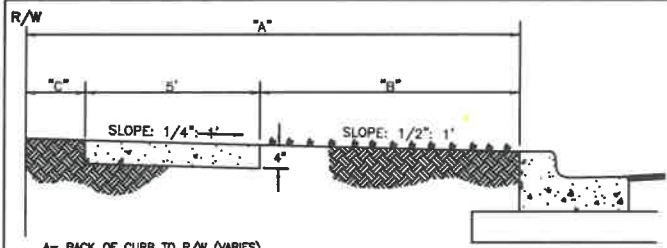
SHEET NO.
 42A

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 JOINTS. AN EXPANSION JOINT SHALL BE PLACED AT INTERVALS NOT TO EXCEED 120'.
- CONTRACTION JOINTS:
 - OPEN TYPE JOINTS: OPEN TYPE CONTRACTION 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.

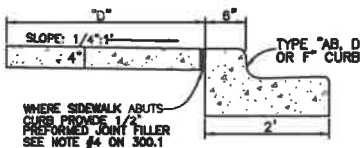
*NOTE: FOR COMPLETE SIDEWALK DETAILS, SEE F.D.O.T. DESIGN STANDARDS, 2006 EDITION, INDEX 304, SHEETS 1 THROUGH 6 AND INDEX 310, SHEETS 1 & 2.

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



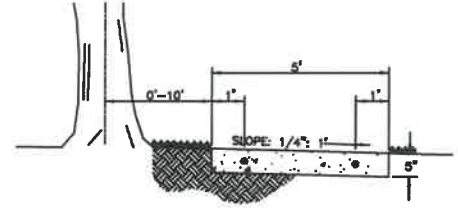
A= BACK OF CURB TO R/W (VARIES)
B= UNPAVED AREA (VARIES). REFER TO F.D.O.T. GREEN BOOK, TABLE 3-12, LATEST REVISION.
C= VARIES, SEE 401 SERIES

TYPICAL SIDEWALK LOCATION



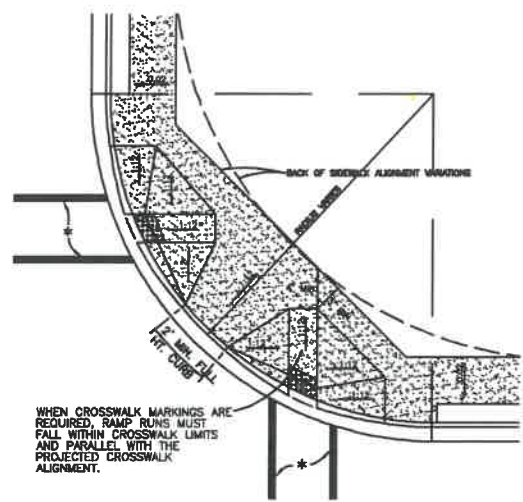
D= SIDEWALK WIDTH SHALL BE 6' STANDARD, WHERE WALK ABUTS TYPE "AB, D OR F" CURB. WHERE SPEED LIMIT IS 25 MPH OR LESS, WIDTH CAN BE 5'-8".

ALTERNATE SIDEWALK LOCATION



SIDEWALK LOCATION CLOSE TO TREES

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

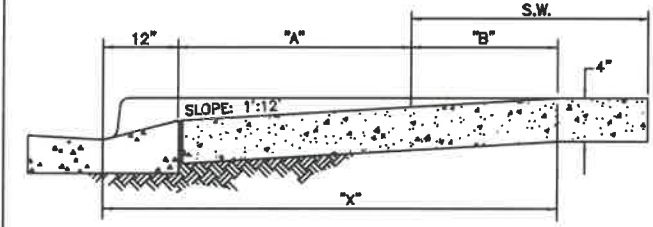


* CROSSWALK WIDTHS AND CONFIGURATION VARY; MUST CONFORM TO FDOT INDEX NO. 17344 AND 17346.

- CURB CUT RAMPS ARE TO BE LOCATED AS SHOWN ON PLANS.
- SEE SHEETS # 300.1 "GENERAL NOTES" & # 301.2 "HANDICAPPED RAMP" SHT 2 FOR FURTHER REQUIREMENTS.
- RADIUS OF CURB VARIES AS FOLLOWS:
 - A) 25' RAD. LOCAL STREET WITH ALLEY.
 - B) 25' RAD. LOCAL STREET WITH LOCAL STREET.
 - C) 35' RAD. LOCAL STREET WITH THOROUGHFARE OR COLLECTOR.
 - D) 50' RAD. THOROUGHFARE WITH THOROUGHFARE.
- CURB RADIUS SHOULD BE A MINIMUM OF 50' WHERE INDUSTRIAL AND BUS TRAFFIC (5% OR MORE) IS ANTICIPATED ON LOWER CLASSIFICATION ROADWAYS.
- BOTH LOCATION OPTIONS FOR HANDICAPPED RAMP ARE SHOWN. ENGINEER MAY SELECT EITHER, WHICHEVER FITS THE SITUATION.

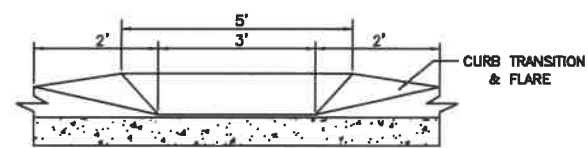
*NOTE: FOR COMPLETE HANDICAP, PUBLIC SIDEWALK AND CURB RAMP DETAILS, SEE F.D.O.T. DESIGN STANDARDS, 2006 EDITION, INDEX 304, SHEETS 1 THROUGH 6.

MANATEE COUNTY TRANSPORTATION DEPARTMENT		HANDICAPPED RAMP SHEET 1	302.1
REV. BY	DATE		
	6/12/07		
	DATE OF B.O.C.C. APPROVAL		



SECTION A-A
(SEE SHEET 301.0)

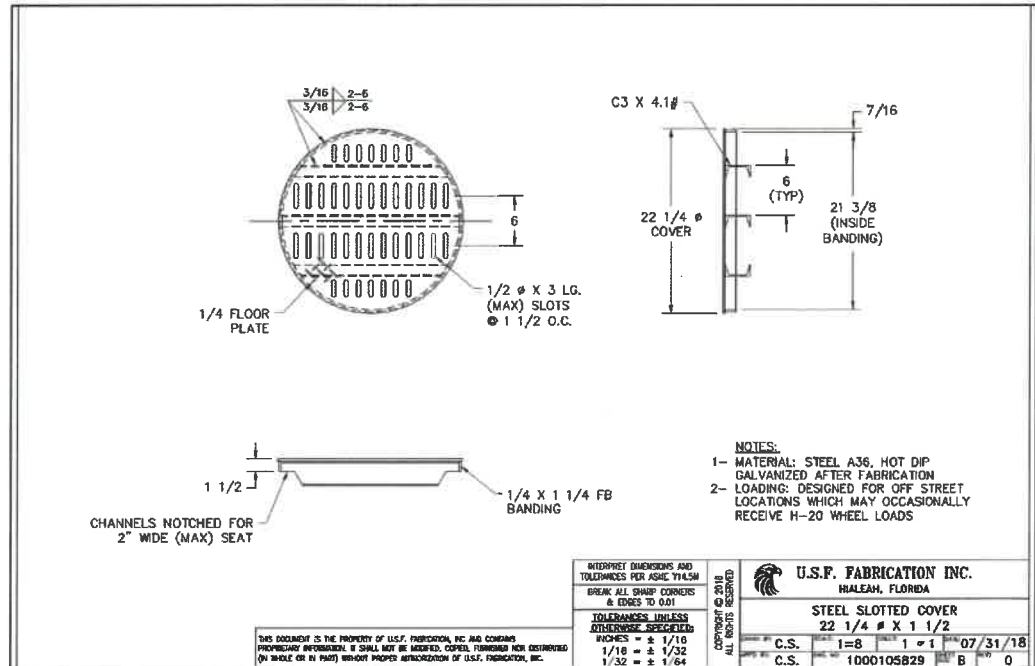
S.W.- SIDEWALK	"A"	S.W.+ A + 10"	"X"	"B"
5'-0"	5.8'	5.8'	5'	
6'-0"	6.8'	6.8'	6'	
7'-0"	7.8'	7.3'	6.5'	
8'-0"	8.8'	7.3'	6.5'	
5'-2"	7.8'	7.8'	5'	
5'-2.5"	8.3'	8.1'	4.8'	
5'-3"	8.8'	8.2'	4.4'	
5'-3.5"	9.3'	8.4'	4.1'	
5'-4"	9.8'	8.6'	3.8'	
5'-4.5"	10.3'	8.7'	3.4'	
5'-5"	10.8'	9.1'	3.1'	



SECTION B-B
(SEE SHEET 301.0)

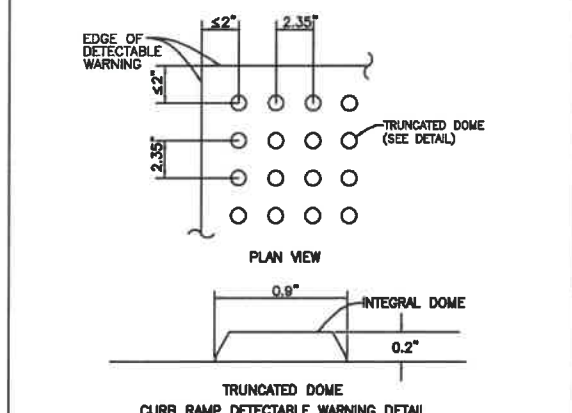
*NOTE: FOR COMPLETE HANDICAP, PUBLIC SIDEWALK AND CURB RAMP DETAILS, SEE F.D.O.T. DESIGN STANDARDS, 2006 EDITION, INDEX 304, SHEETS 1 THROUGH 6.

MANATEE COUNTY TRANSPORTATION DEPARTMENT		HANDICAPPED RAMP SHEET 2	302.2
REV. BY	DATE		
	6/12/07		
	DATE OF B.O.C.C. APPROVAL		



- NOTES:**
- MATERIAL: STEEL A36, HOT DIP GALVANIZED AFTER FABRICATION
 - LOADING: DESIGNED FOR OFF STREET LOCATIONS WHICH MAY OCCASIONALLY RECEIVE H-20 WHEEL LOADS

U.S.F. FABRICATION INC. HALEAH, FLORIDA	
STEEL SLOTTED COVER 22 1/4" X 1 1/2"	
C.S.	1=8 1=1 07/31/18
C.S.	1000105829 B 0



NOTES:

DETECTABLE WARNINGS ON WALKING SURFACES

THE DETECTABLE WARNING SHALL EXTEND THE FULL WIDTH AND DEPTH OF THE CURB RAMP.

DETECTABLE WARNINGS SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9 INCH, A HEIGHT OF NOMINAL 0.2 INCH AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35 INCH AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT.

THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. DETECTABLE WARNINGS USED ON INTERIOR SURFACES SHALL DIFFER FROM ADJOINING WALKING SURFACES IN RESILIENCY OR SOUND-ON-CANE CONTACT.

THE MATERIAL USED TO PROVIDE CONTRAST SHOULD CONTRAST BY AT LEAST 70%. CONTRAST IN PERCENT IS DETERMINED BY:
CONTRAST = [(B1-B2)/B1] x 100

WHERE B1 = LIGHT REFLECTANCE VALUE (LRV) OF THE LIGHTER AREA AND B2 = LIGHT REFLECTANCE VALUE (LRV) OF THE DARKER AREA.

NOTE THAT IN ANY APPLICATION BOTH WHITE AND BLACK ARE NEVER ABSOLUTE; THIS, B1 NEVER EQUALS 100 AND B2 IS ALWAYS GREATER THAN 0.

MANATEE COUNTY TRANSPORTATION DEPARTMENT		CURB RAMP DETECTABLE WARNINGS	302.3
REV. BY	DATE		
	6/12/07		
	DATE OF B.O.C.C. APPROVAL		

UNDERDRAIN

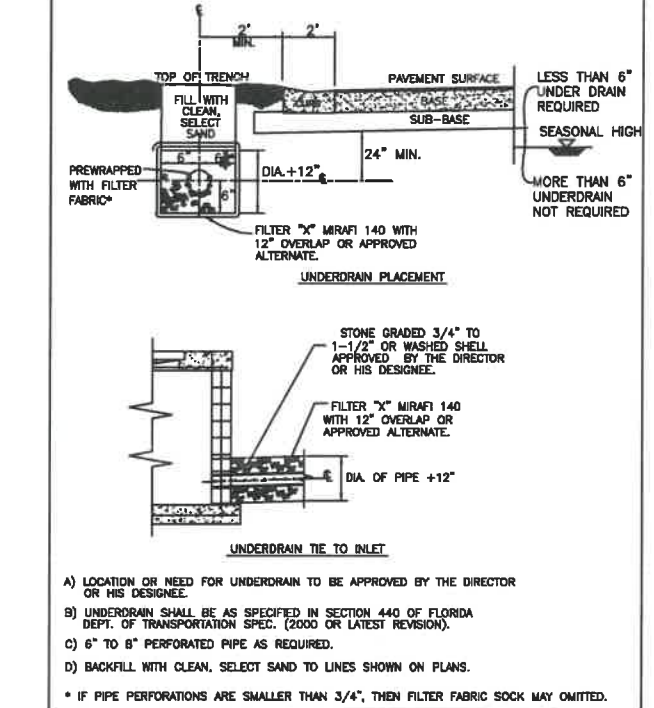
- CORRUGATED POLYETHYLENE TUBING

CORRUGATED POLYETHYLENE TUBING WITH A FILTER FABRIC WRAP. UNLESS OTHERWISE NOTED, MAY BE USED FOR UNDERDRAIN APPLICATIONS ASSOCIATED WITH ROADWAY CONSTRUCTION PROVIDING THE FOLLOWING SPECIFICATIONS ARE MET:

- THE CORRUGATED POLYETHYLENE TUBING SHALL MEET THE REQUIREMENTS OF ASTM F-405.
- THE CORRUGATED POLYETHYLENE TUBING SHALL HAVE A FILTER FABRIC SOCK MEETING F.D.O.T. SPEC. 944-3, LATEST REVISION. IF PERFORATIONS IN PIPE ARE LESS THAN 3/4", THEN FILTER FABRIC SOCK MAY BE OMITTED.
- THE ENVELOPE MATERIAL SURROUNDING THE TUBING SHALL BE CRUSHED STONE OR WASHED SHELL. THE THICKNESS OF THE ENVELOPE MATERIAL SHALL BE EQUAL TO OR GREATER THAN THE DIAMETER OF THE TUBING, PLUS 12".
- CORRUGATED POLYETHYLENE TUBING SHALL NOT BE ACCEPTABLE UNDER ROADWAYS.
- EXTRA CARE SHALL BE TAKEN DURING PLACEMENT TO MAINTAIN PROPER LINE AND GRADE, TO BE PLACED W/ SLOPE OF ROAD.
- A CLEAN-OUT SHALL BE CONSTRUCTED AT THE END OF EACH RUN OF UNDERDRAIN. MAXIMUM SPACING EVERY 100 FEET.
- SOD 3' AROUND 18" CONC. SQUARE.

*NOTE: TRANSPORTATION DIRECTOR OR HIS DESIGNEE'S APPROVAL IS REQUIRED FOR THE USE OF FLEXIBLE UNDERDRAIN PIPE.

MANATEE COUNTY TRANSPORTATION DEPARTMENT		UNDERDRAIN GENERAL NOTES	204.0
REV. BY	DATE		
	6/12/07		
	DATE OF B.O.C.C. APPROVAL		



MANATEE COUNTY TRANSPORTATION DEPARTMENT		TYPICAL UNDERDRAIN LAYOUT	204.1
REV. BY	DATE		
	6/12/07		
	DATE OF B.O.C.C. APPROVAL		

DATE	DESCRIPTION	DATE	PROJECT #	000-000000	SURVEYED	FDC	03/08/18
			SURVEY #	0577-0036	DESIGNED	JP	7/29/19
			SEC./TWN./RGE	25/33S/17E	DRAWN	JP	7/29/19
			SCALE	N.T.S.	CHECKED	XXX	XX/XXXX

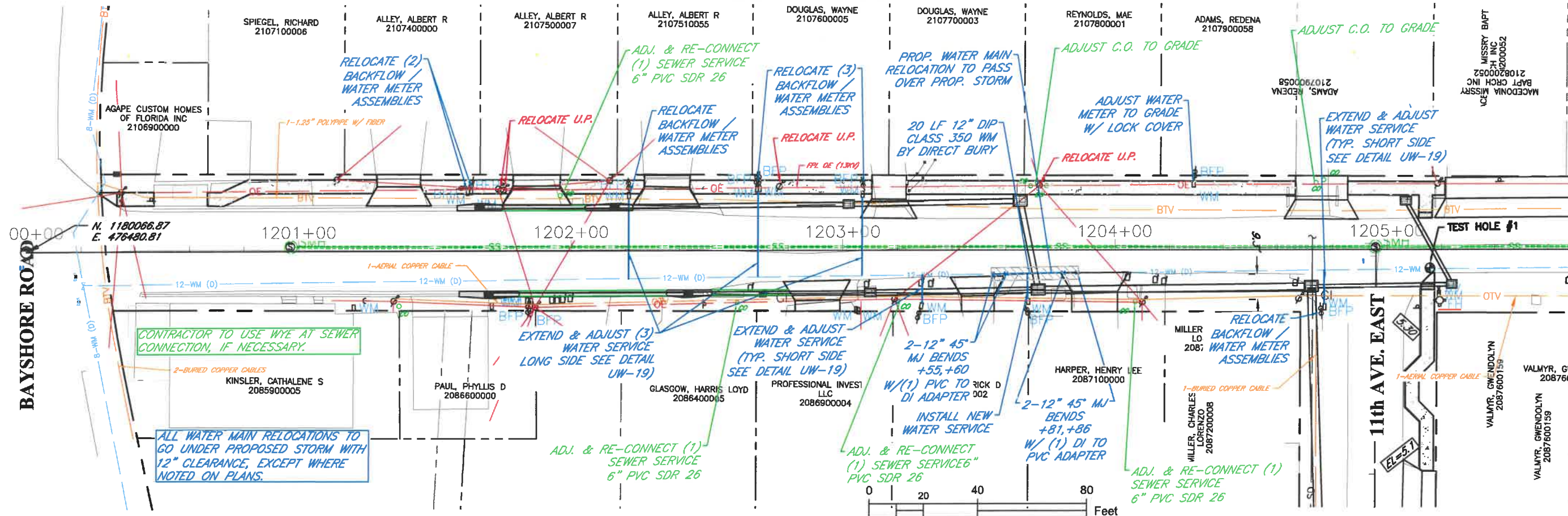
JOHN PARI, P.E.
FLORIDA P.E. # 56368
Signature & Date 7/3/20

Manatee County
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

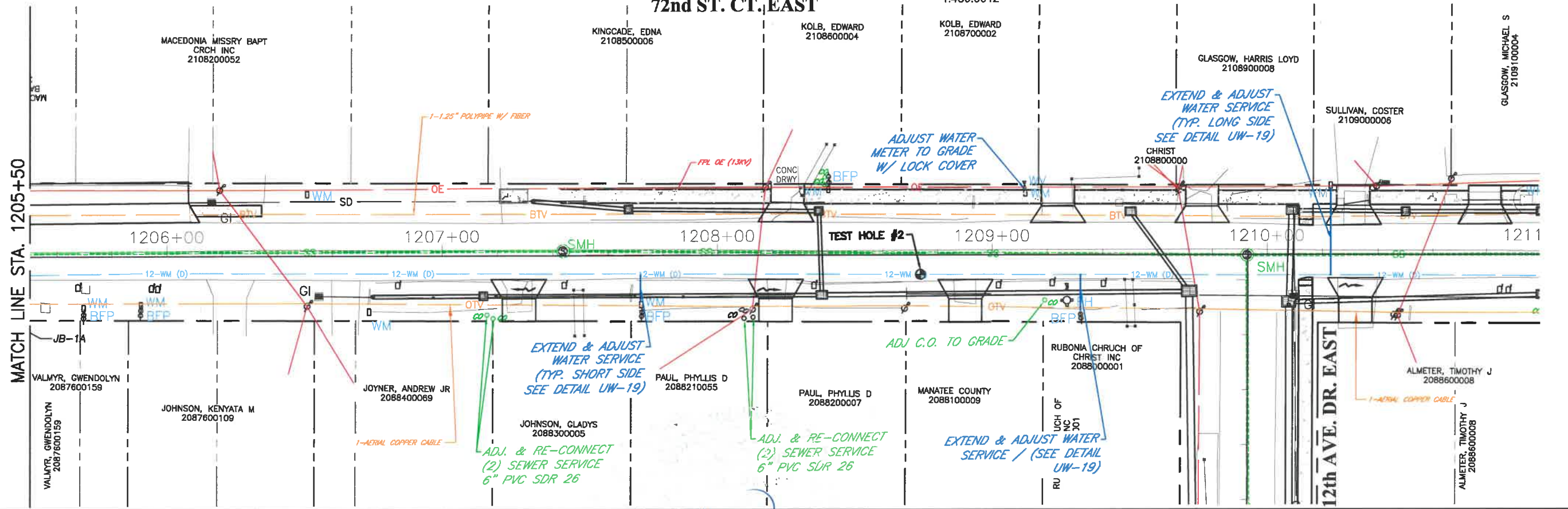
**DRAINAGE REHABILITATION
RUBONIA
MISCELLANEOUS DETAILS**



SHEET NO.
42B

72nd ST. CT. EAST

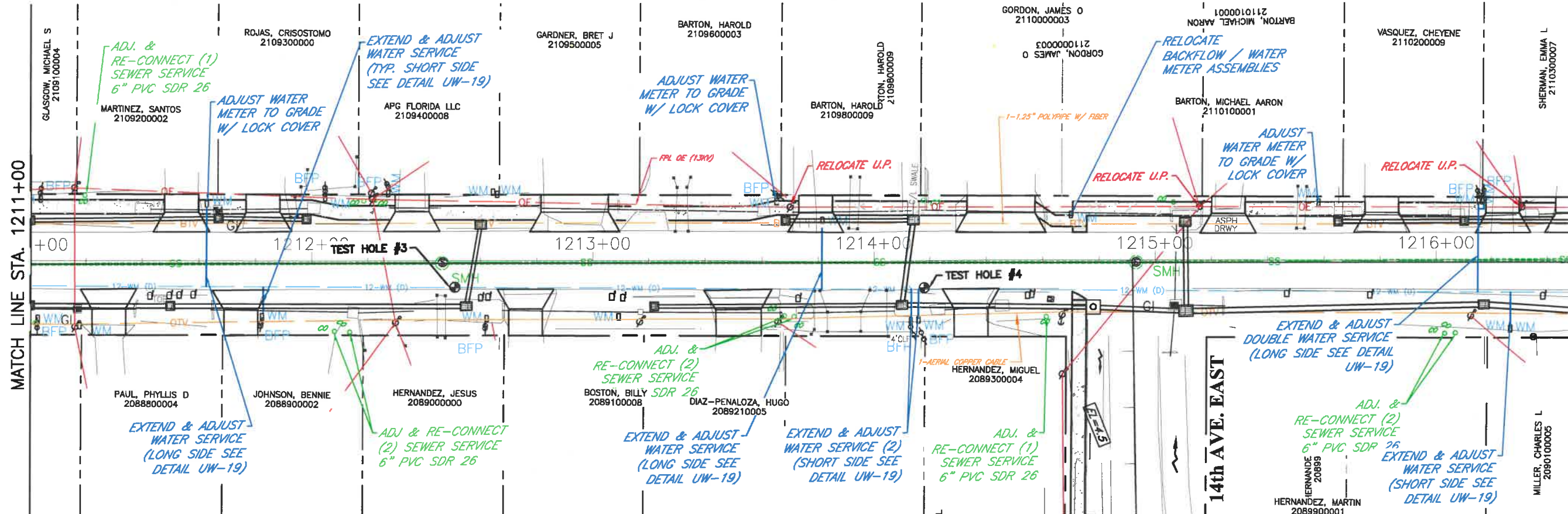


72nd ST. CT. EAST

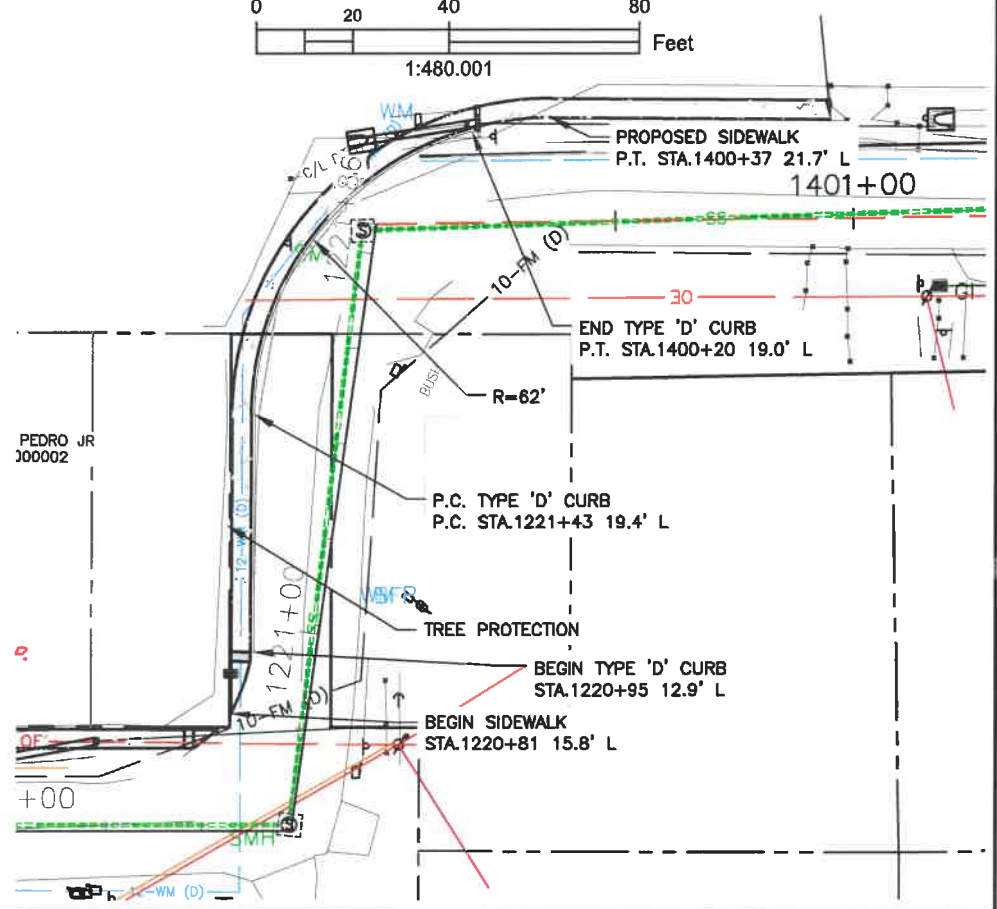
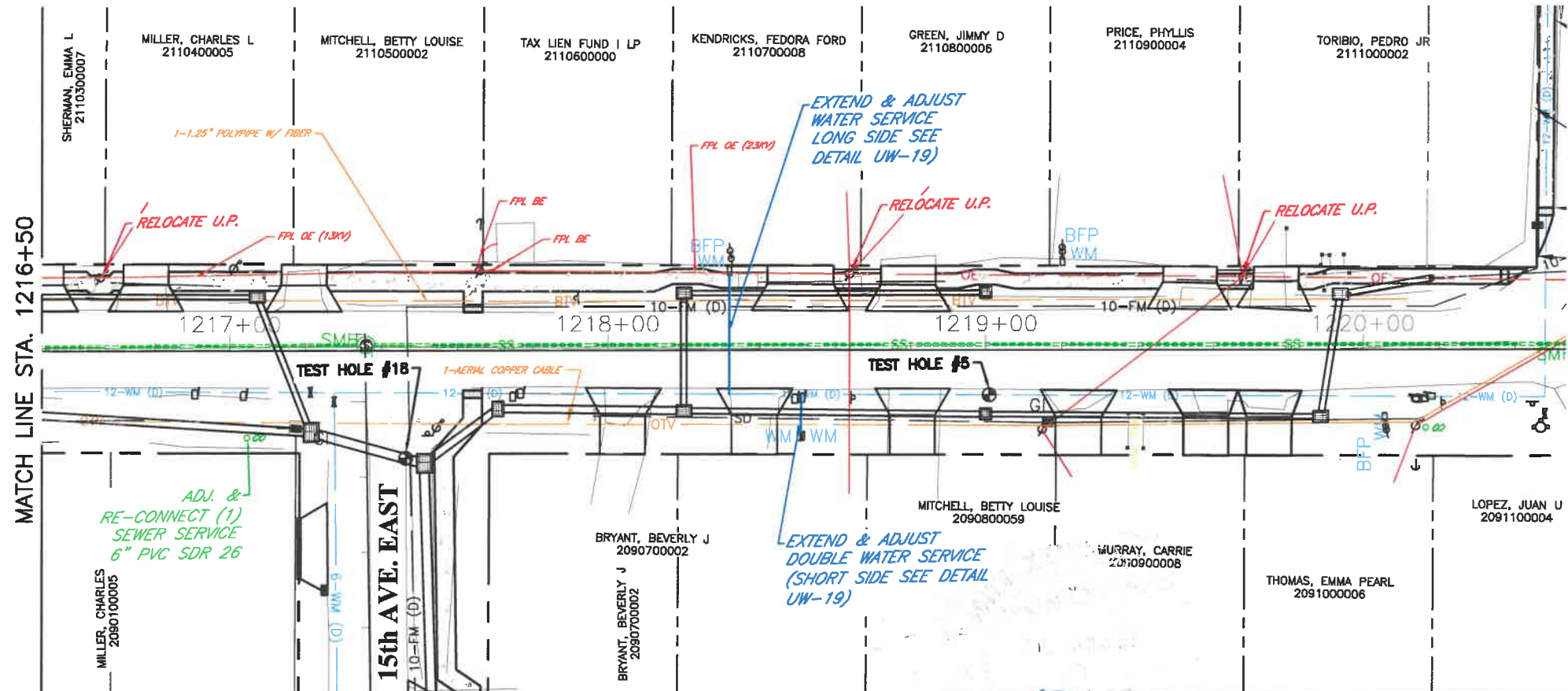


DATE	DESCRIPTION	DATE	PROJECT #	###	SURVEYED	FDC	4-11-18	 JOHN PARIS FLORIDA P.E. # 56368 Signature & Date 3/3/20	 Manatee County PUBLIC WORKS DEPARTMENT ENGINEERING SERVICES 1022 26th Avenue East, Bradenton, FL 34208	RUBONIA 72nd STREET COURT EAST UTILITY ADJUSTMENT SHEETS	SHEET NO.
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			SEC./TWN./RGE	VARIABLES	DRAWN	KHL	06/2018				
			SCALE	1"=40'	CHECKED	XXX	XX/XXXX				

72nd ST. CT. EAST



72nd ST. CT. EAST



DATE	DESCRIPTION	DATE	PROJECT #	###	SURVEYED	FDC	4-11-18
			SURVEY #	0577-0036	DESIGNED	JKP	06/2018
			SEC./TWN./RGE	VARIES	DRAWN	KHL	06/2018
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JOHN PARI
 FLORIDA P.E. # 56368
 Signature & Date 3/3/20

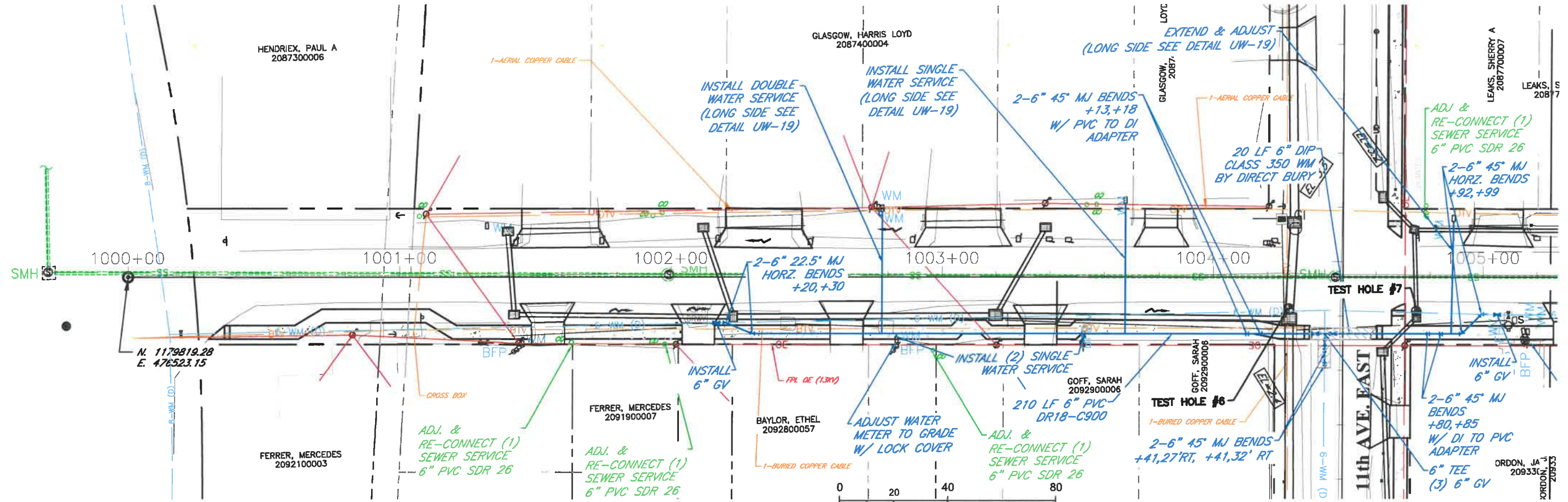
Manatee County
 PUBLIC WORKS DEPARTMENT
 ENGINEERING SERVICES
 1022 26th Avenue East, Bradenton, FL 34208

RUBONIA
 72nd STREET COURT EAST
 UTILITY ADJUSTMENT SHEETS

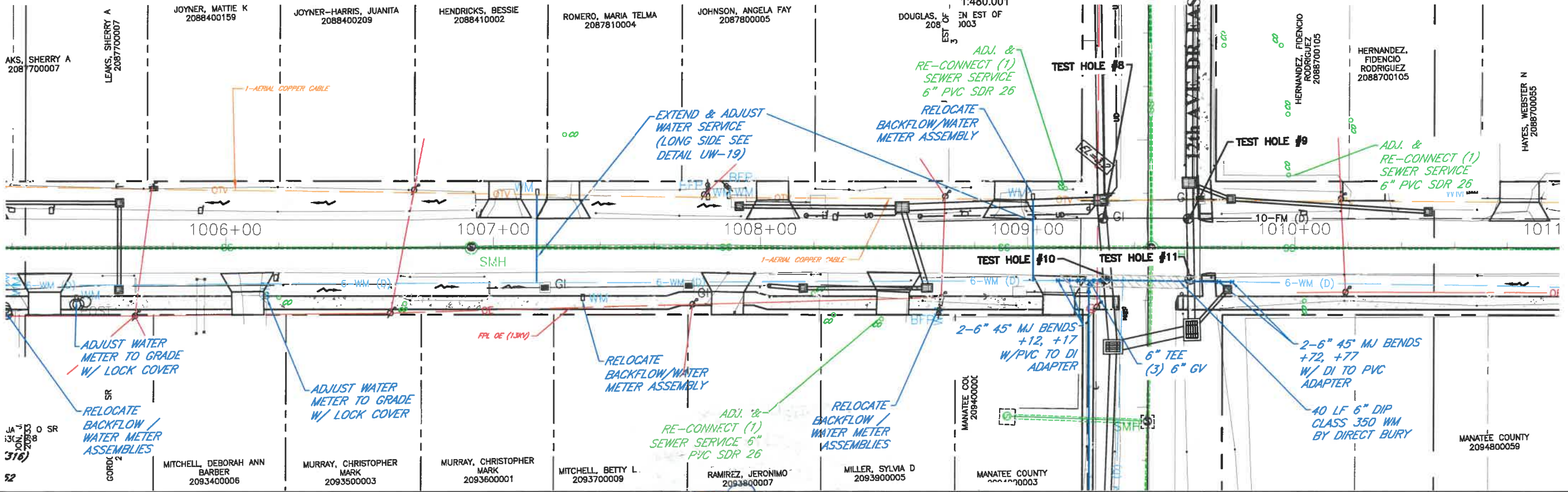
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72nd ST. EAST

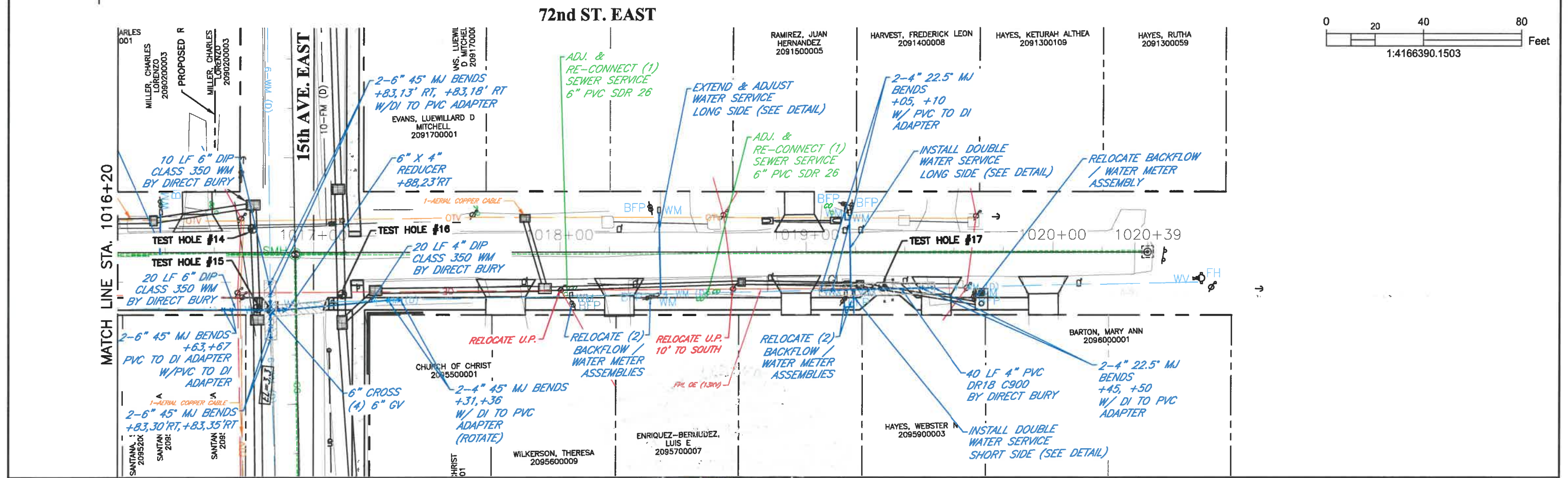
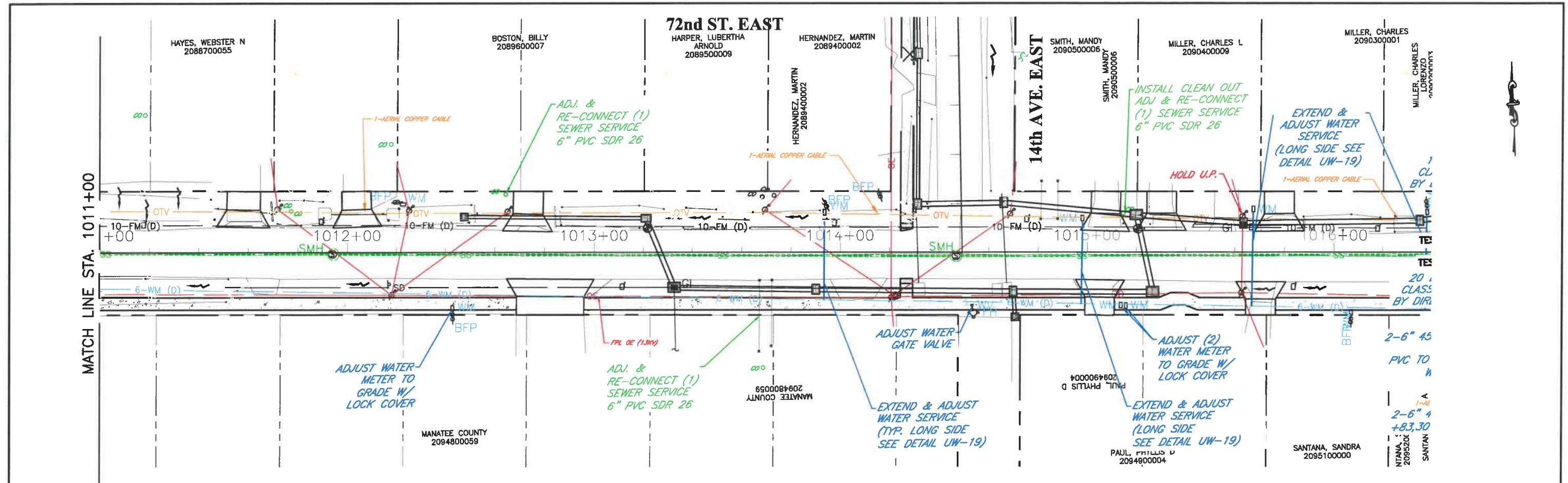
BAYSHORE ROAD



72nd ST. EAST



DATE	DESCRIPTION	DATE	PROJECT #	###	SURVEYED	FDC	4-11-18	<p>JOHN PARI FLORIDA P.E. # 56368</p> <p><i>[Signature]</i> 3/3/20</p> <p>Signature & Date</p>	<p>Manatee County PUBLIC WORKS DEPARTMENT ENGINEERING SERVICES 1022 26th Avenue East, Bradenton, FL 34208</p>	<p>RUBONIA 72nd STREET EAST UTILITY ADJUSTMENT SHEETS</p>	SHEET NO.
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DATE	DESCRIPTION	DATE	PROJECT #	###	SURVEYED	FDC	4-11-18
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			SEC./TWN./RGE	VARIABLES	DRAWN	KHL	06/2018
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JOHN PARI
FLORIDA P.E. # 56368

[Signature] 3/3/20

Signature & Date

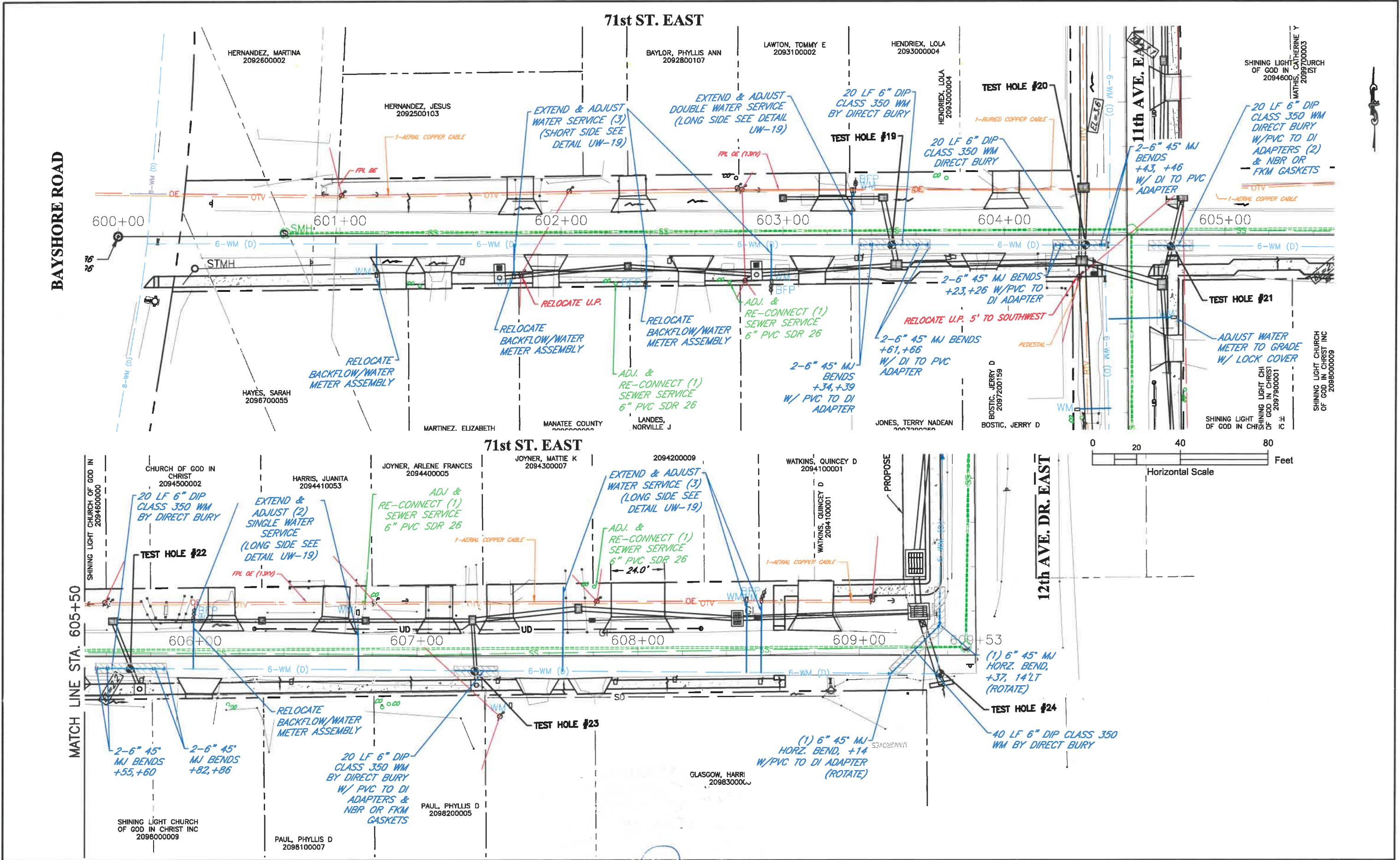


Manatee County
FLORIDA

PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

RUBONIA
72nd STREET EAST
UTILITY ADJUSTMENT SHEETS


SHEET NO.
46



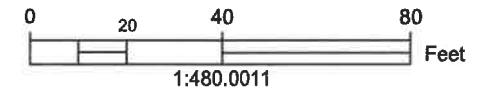
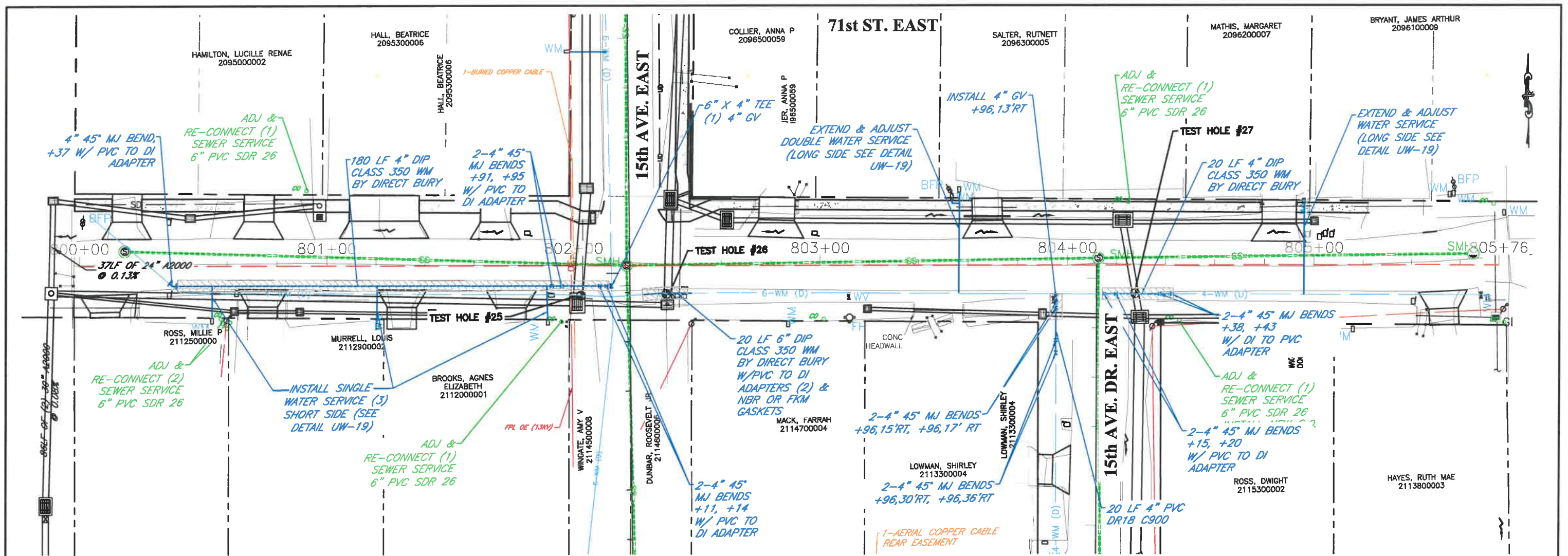
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		CHECKED	XXX XX/XXXX

JOHN PARI
 FLORIDA P.E. # 56368
 Signature & Date 3/3/20


Manatee County
 PUBLIC WORKS DEPARTMENT
 ENGINEERING SERVICES
 1022 26th Avenue East, Bradenton, FL 34208


RUBONIA
 71st STREET EAST
 UTILITY ADJUSTMENT SHEETS



DATE	DESCRIPTION	DATE	PROJECT #	###	SURVEYED	FDC	4-11-18
			SURVEY #	0577-0036	DESIGNED	JKP	06/2018
			SEC./TWN./RGE	VARIES	DRAWN	KHL	06/2018
			SCALE	1"=40'	CHECKED	XXX	XX/XXXX

JOHN PARI
 FLORIDA P.E. # 56368

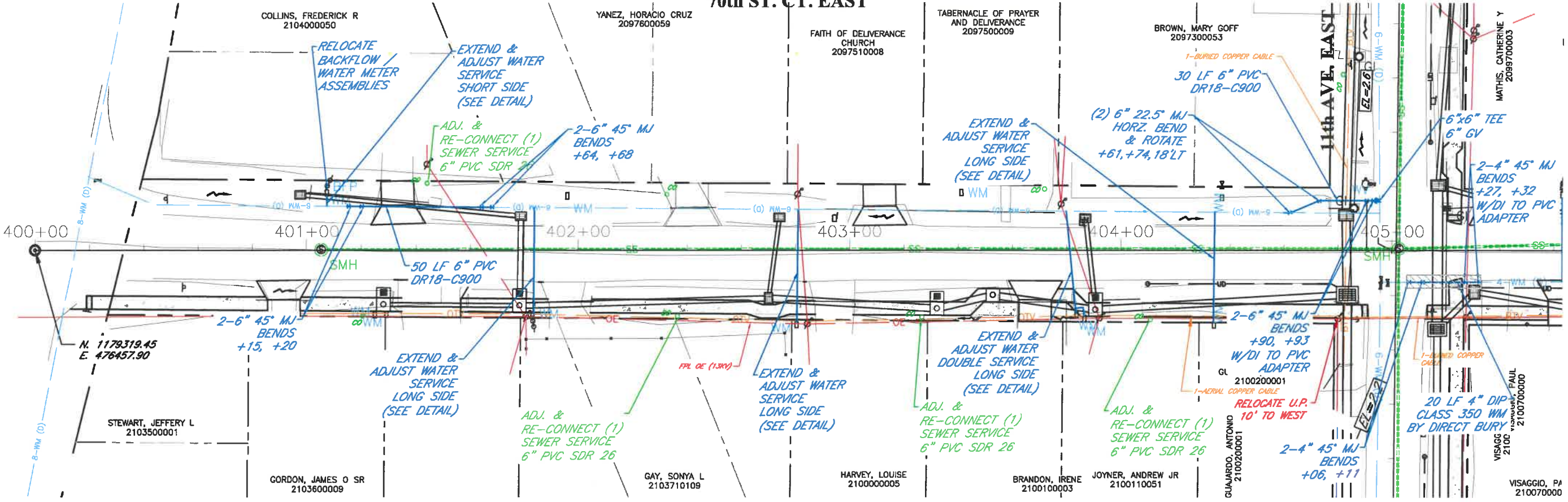
 Signature & Date 3/3/20


Manatee County
 PUBLIC WORKS DEPARTMENT
 ENGINEERING SERVICES
 1022 26th Avenue East, Bradenton, FL 34208

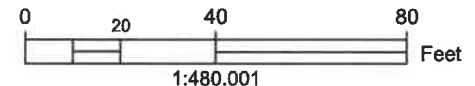
RUBONIA
 71st STREET EAST
 UTILITY ADJUSTMENT SHEETS

BAYSHORE ROAD

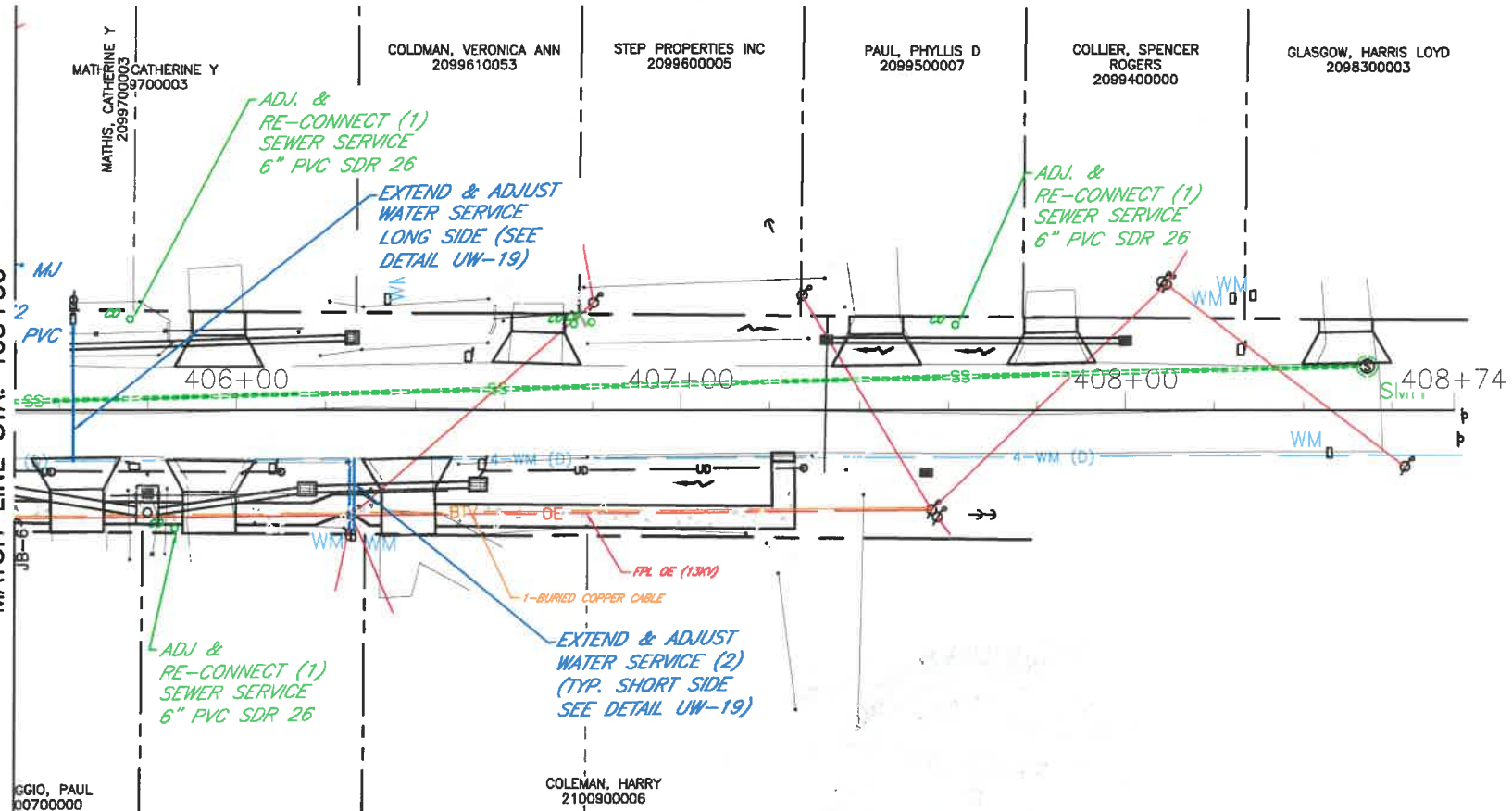
70th ST. CT. EAST



70th ST. CT. EAST



MATCH LINE STA. 405+50



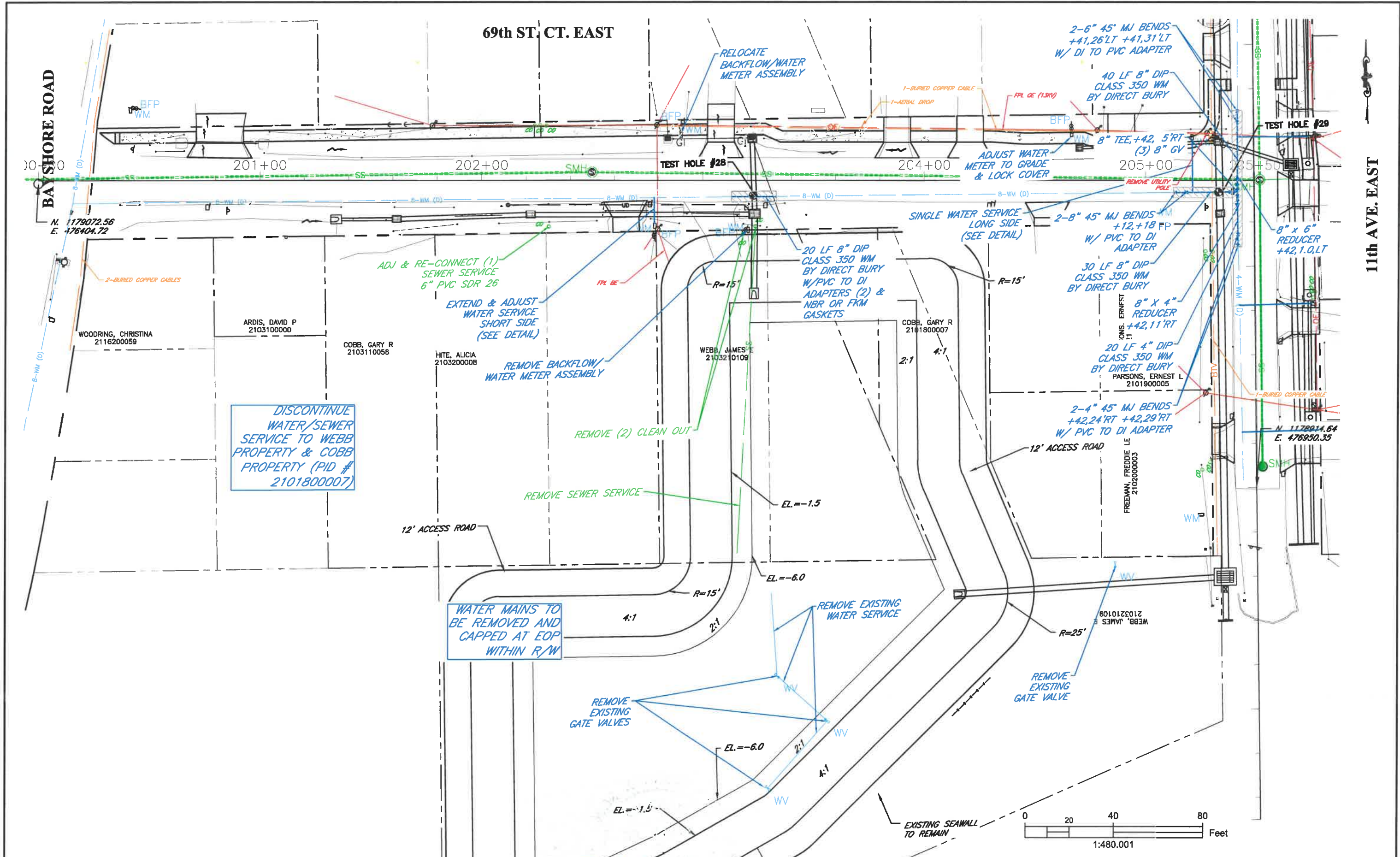
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			0577-0036		DESIGNED	JKP	06/2018
			VARIES		DRAWN	KHL	06/2018
			1"=40'		CHECKED	XXX	XX/XXXX

Signature & Date: *[Signature]* 3/3/20

PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
 1022 26th Avenue East, Bradenton, FL 34208

RUBONIA
 70th STREET COURT EAST
 UTILITY ADJUSTMENT SHEETS

SHEET NO. 49



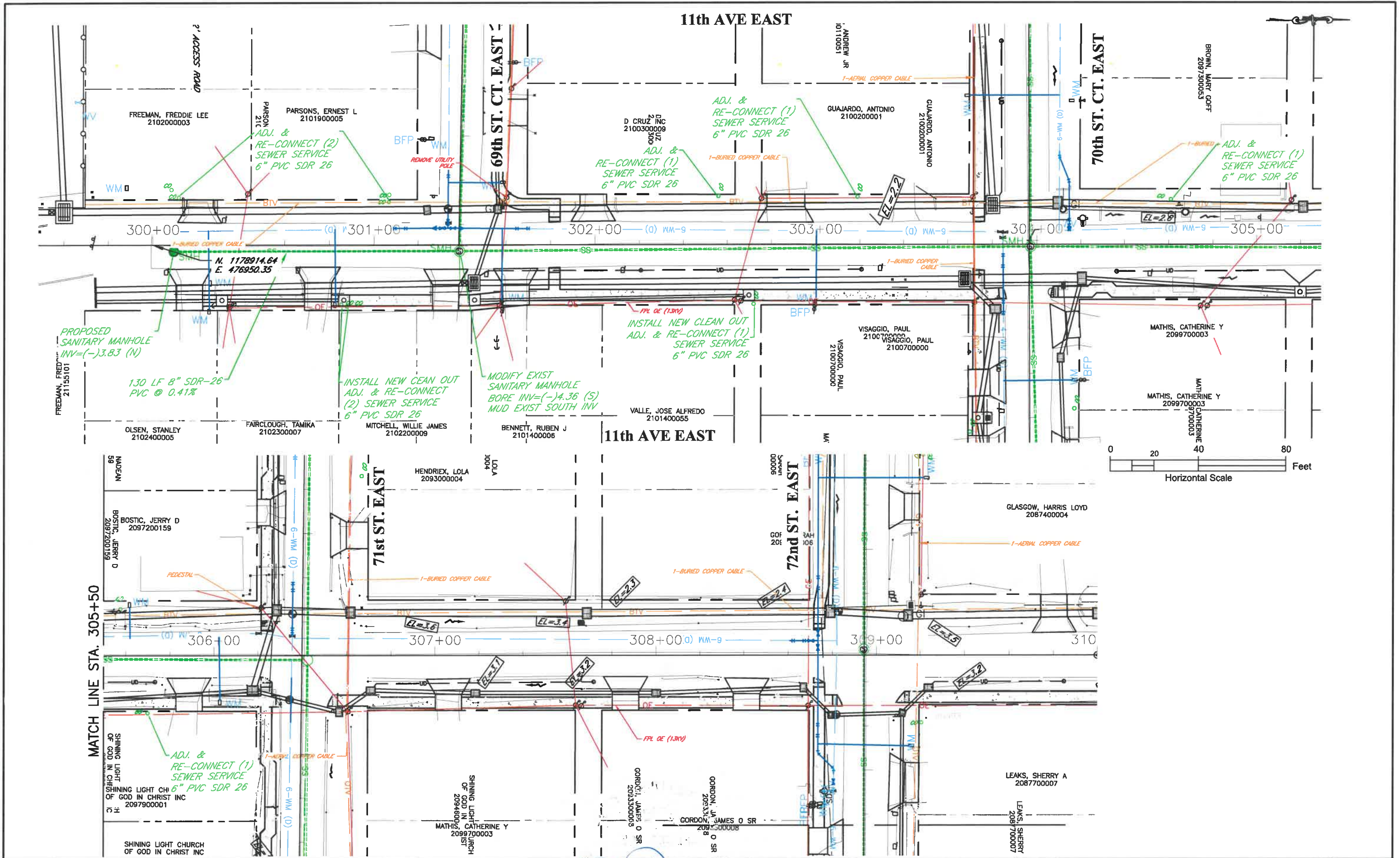
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					CHECKED	XXX	XX/XXXX

JHY PAN
 FLORIDA P.E. # 56366
 Signature & Date 3/3/20

Manatee County
 FLORIDA
 PUBLIC WORKS DEPARTMENT
 ENGINEERING SERVICES
 1022 26th Avenue East, Bradenton, FL 34208

RUBONIA
 69th STREET COURT EAST
 UTILITY ADJUSTMENT SHEETS

SHEET NO.
 50



DATE	DESCRIPTION	DATE

PROJECT #	###	SURVEYED	FDC	4-11-18
SURVEY #	0577-0036	DESIGNED	JKP	06/2018
SEC./TWN./RGE	VARIABLES	DRAWN	KHL	06/2018
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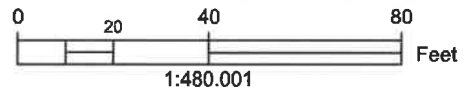
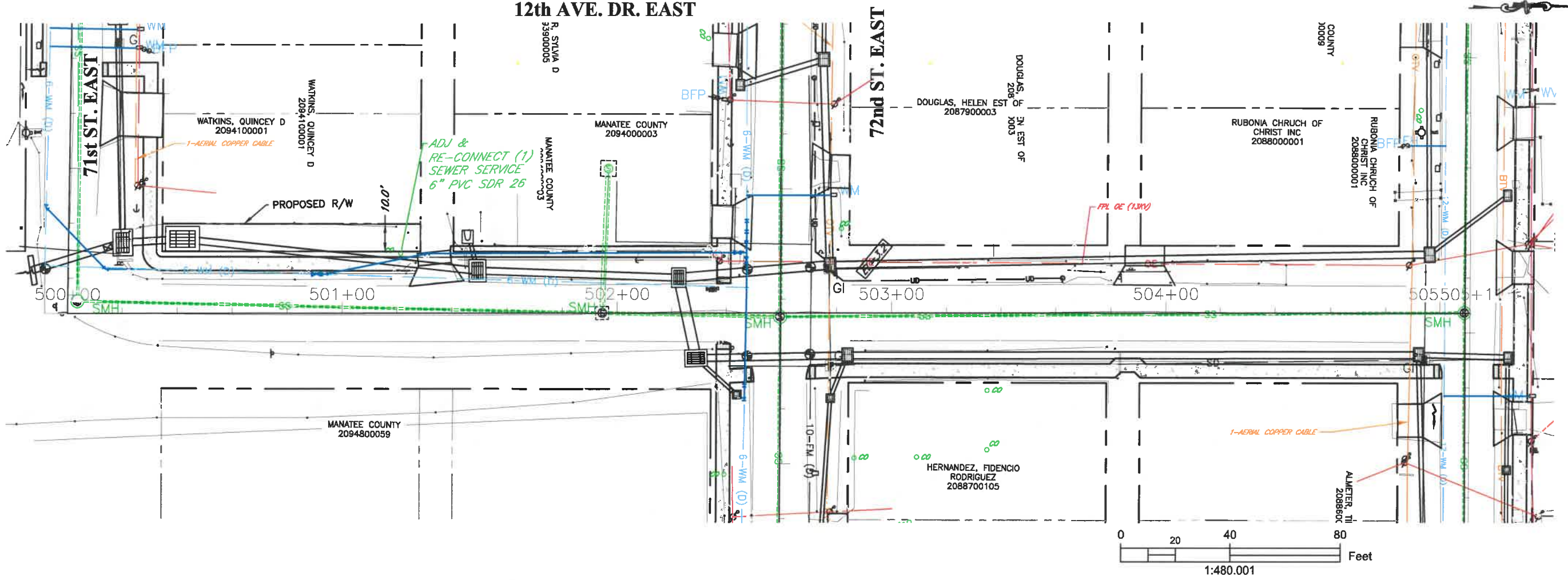
JOHN PARI
 FLORIDA P.E. # 56368
 Signature & Date 3/3/20

Manatee County
 PUBLIC WORKS DEPARTMENT
 ENGINEERING SERVICES
 1022 26th Avenue East, Bradenton, FL 34208

RUBONIA
 11th AVENUE EAST
 UTILITY ADJUSTMENT SHEETS

SHEET NO. 51

12th AVE. DR. EAST




72nd ST. CT. EAST

DATE	DESCRIPTION	DATE	PROJECT #	###	SURVEYED	FDC	4-11-18
			SURVEY #	0577-0036	DESIGNED	JKP	06/2018
			SEC./TWN./RGE	VARIES	DRAWN	KHL	06/2018
			SCALE	1"=40'	CHECKED	XXX	XX/XXXX

JOHN PARI
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 ENGINEERING SERVICES
 1022 26th Avenue East, Bradenton, FL 34208

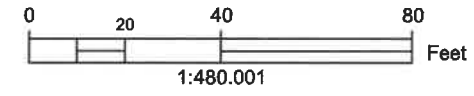
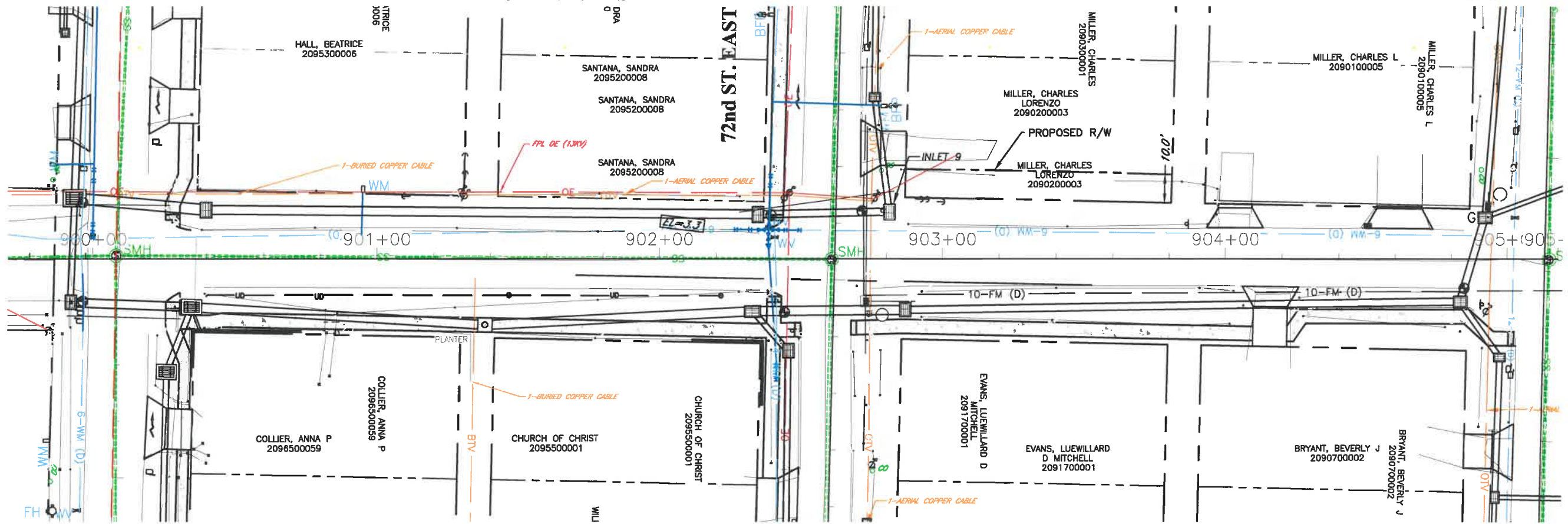
RUBONIA
 12th AVENUE DRIVE EAST
 UTILITY ADJUSTMENT SHEETS

15th AVE. EAST

71st ST. EAST

72nd ST. EAST

72nd ST. CT. EAST



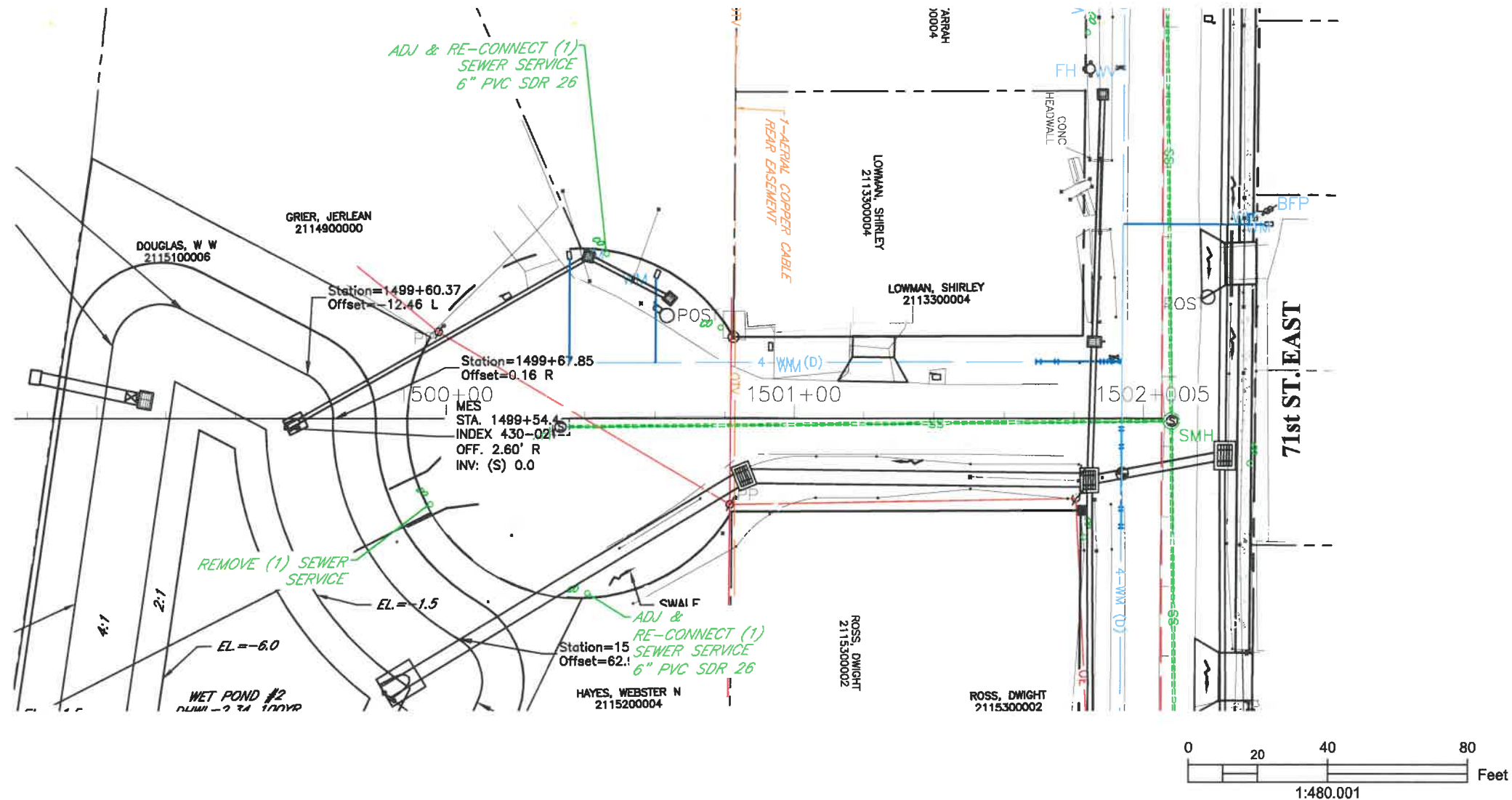
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			SURVEY #	0577-0036	DESIGNED	JKP	06/2018
			SEC./TWN./RGE	VARIES	DRAWN	KHL	06/2018
			SCALE	1"=40'	CHECKED	XXX	XX/XXXX

JOHN PARI
 FLORIDA P.E. # 56368
 Signature & Date 3/3/20

PUBLIC WORKS DEPARTMENT
 ENGINEERING SERVICES
 1022 26th Avenue East, Bradenton, FL 34208

RUBONIA
 15th AVENUE EAST
 UTILITY ADJUSTMENT SHEETS

15th AVE. DR. EAST

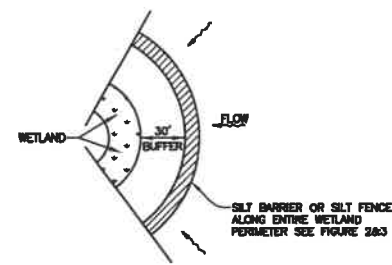


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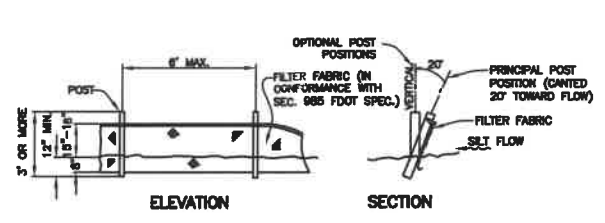
JOHN FARI
 FLORIDA P.E. # 56368
[Signature] 3/3/20
 Signature & Date

Manatee County
 PUBLIC WORKS DEPARTMENT
 ENGINEERING SERVICES
 1022 26th Avenue East, Bradenton, FL 34208

RUBONIA
 15th AVENUE DRIVE EAST
 UTILITY ADJUSTMENT SHEETS

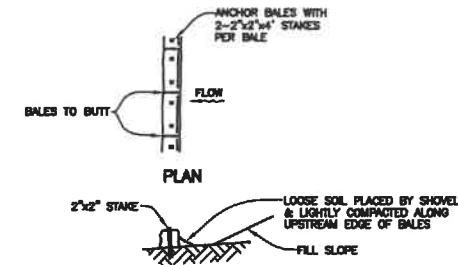


WETLAND BUFFER
FIGURE 1

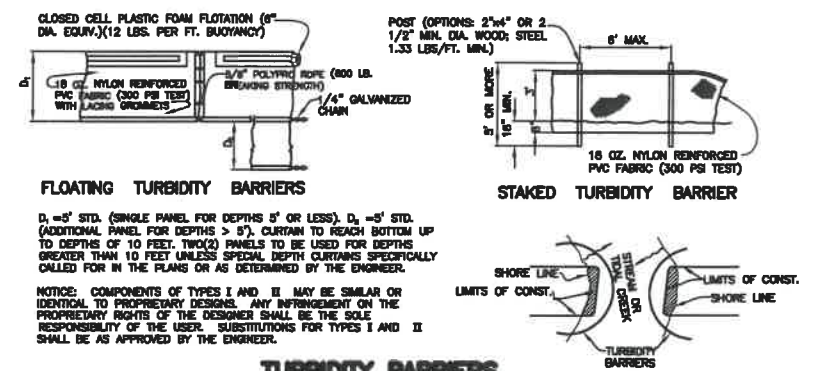


TYPICAL SILT FENCE
FIGURE 2

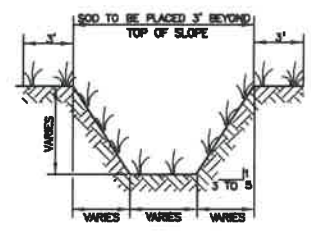
NOTE: SILT FENCE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED SILT FENCE (L.F.).



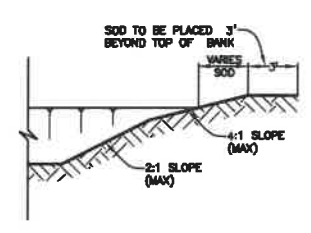
TYPICAL BALE SILT BARRIER
FIGURE 3



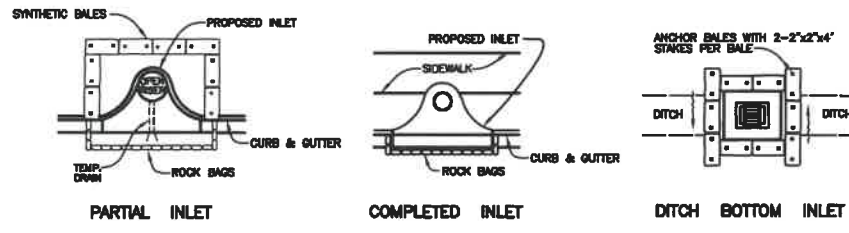
TURBIDITY BARRIERS
FIGURE 4



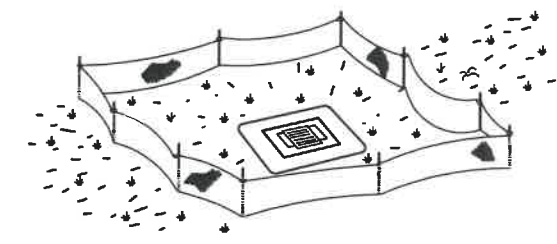
TYPICAL SWALE SECTION
FIGURE 5



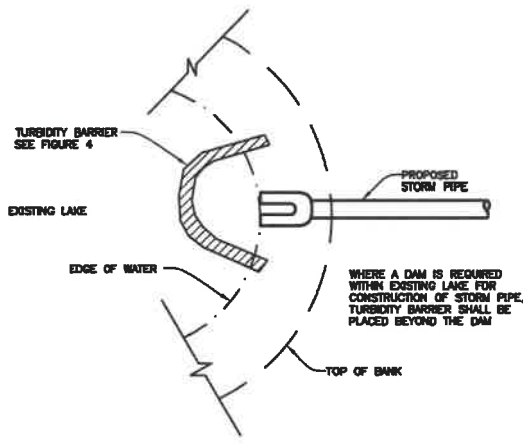
TYPICAL RETENTION/DETENTION POND SECTION
FIGURE 6



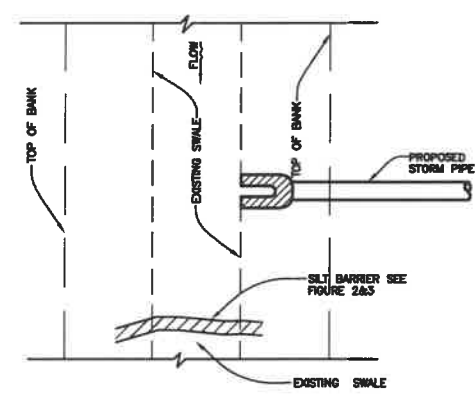
SYNTHETIC BALE PROTECTION AROUND INLETS OR SIMILAR STRUCTURES
FIGURE 7



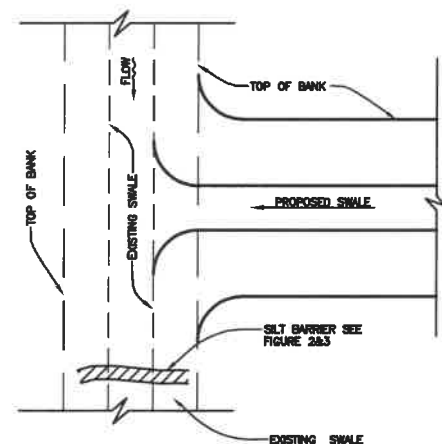
TYPE III SILT FENCE PROTECTION AROUND DITCH BOTTOM INLETS
STAKED SILT BARRIER OR SILT FENCE PROTECTION AROUND DITCH BOTTOM INLETS
FIGURE 8



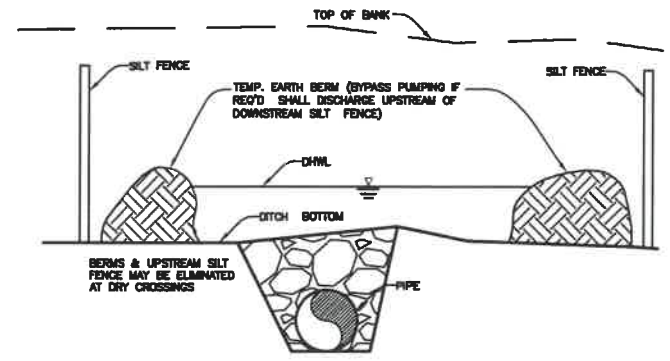
TURBIDITY BARRIER AT CONNECTION OF STORM PIPE TO EXISTING LAKE
FIGURE 9



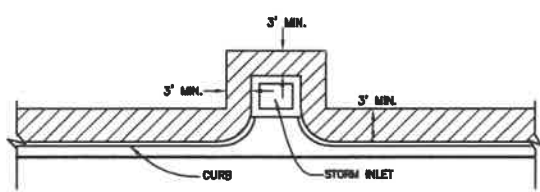
SILT BARRIER AT CONNECTION OF STORM PIPE TO EXISTING SWALE
FIGURE 10



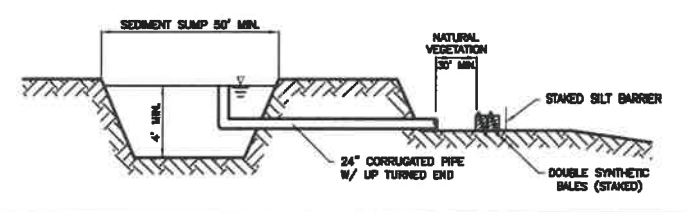
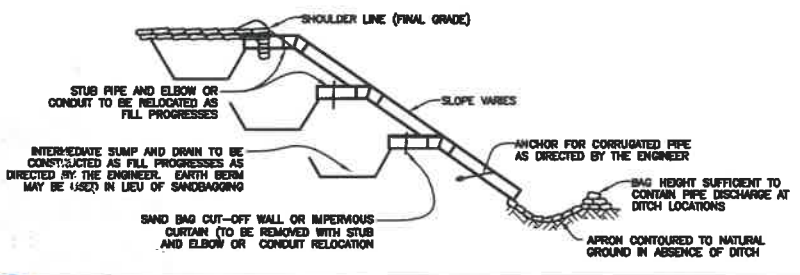
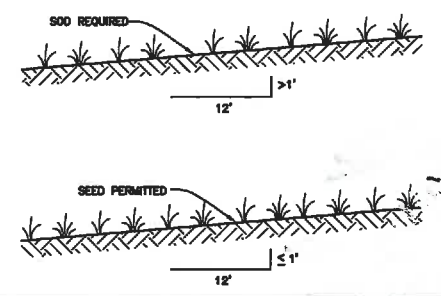
SILT BARRIER AT CONNECTION OF SWALE TO EXISTING SWALE
FIGURE 11



UNDERGROUND PIPE CROSSING
FIGURE 12

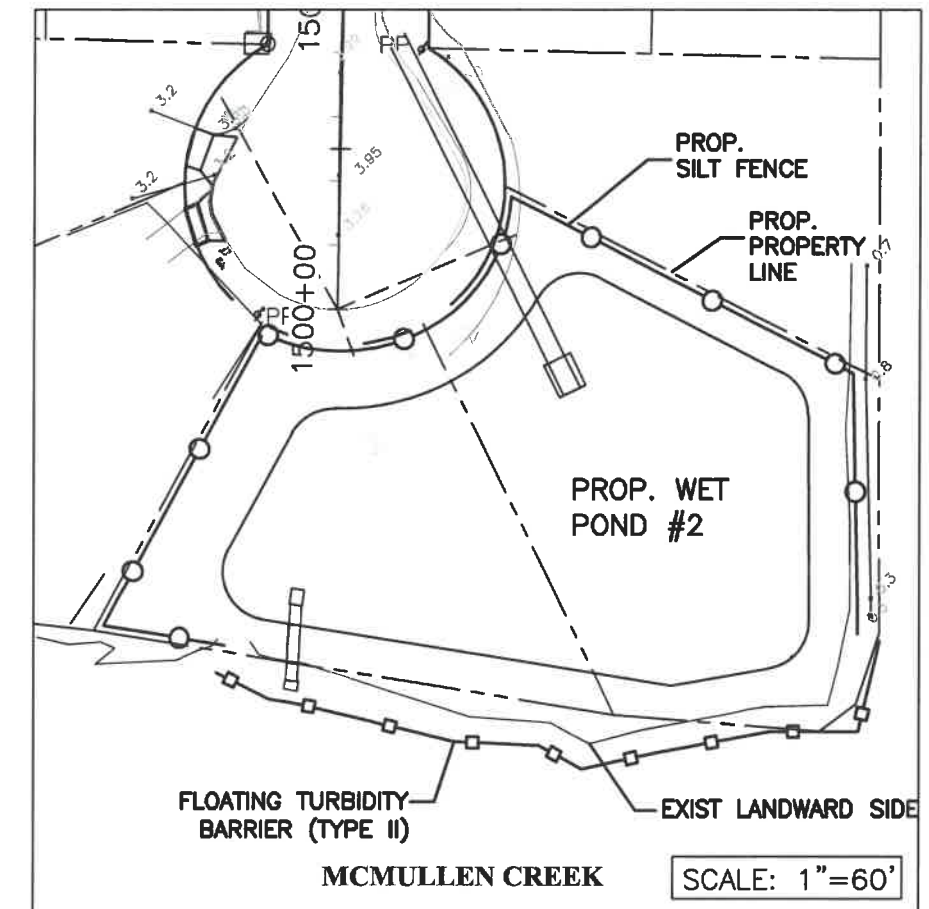
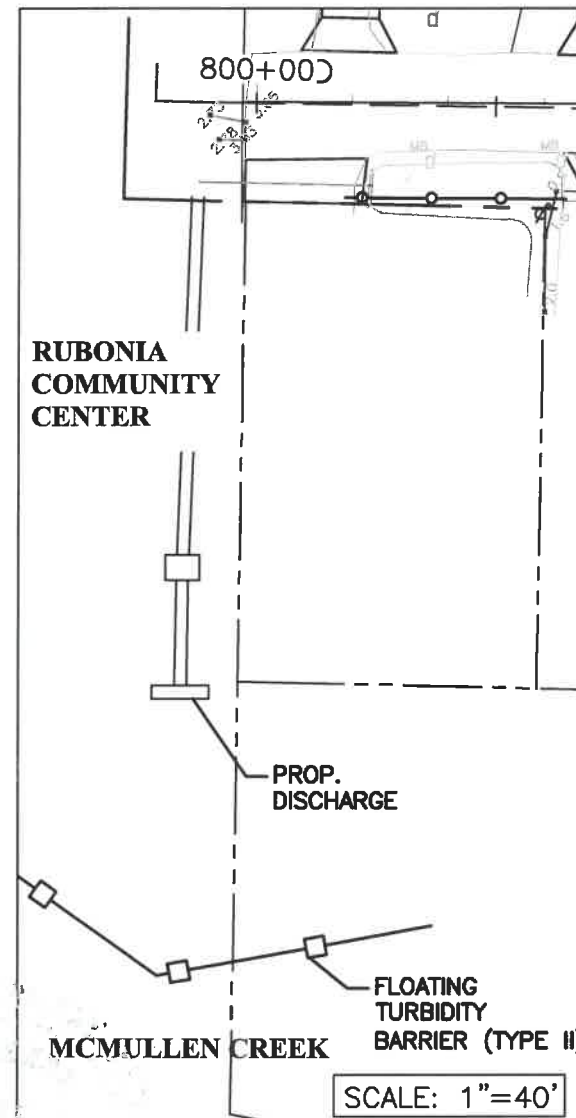
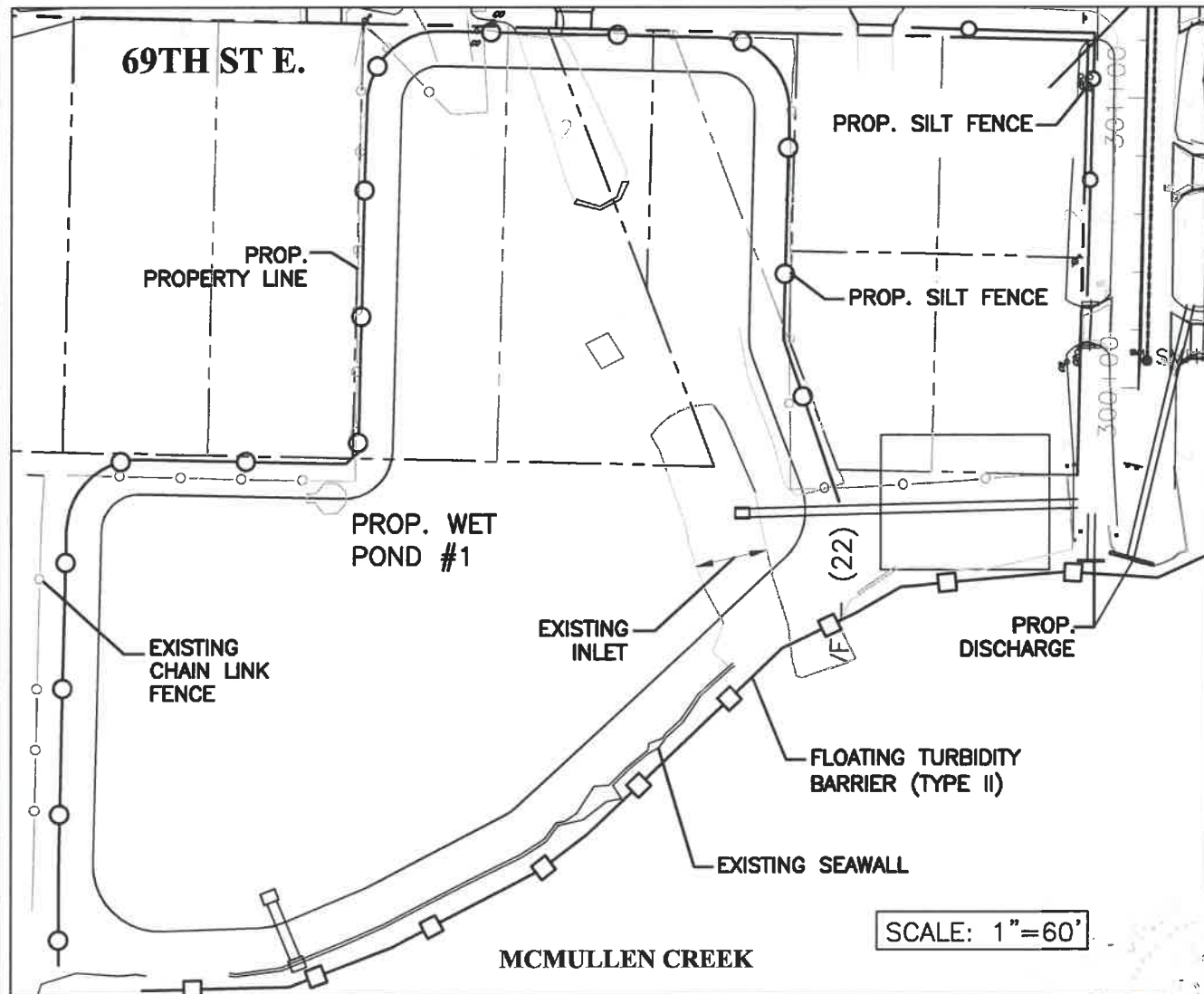
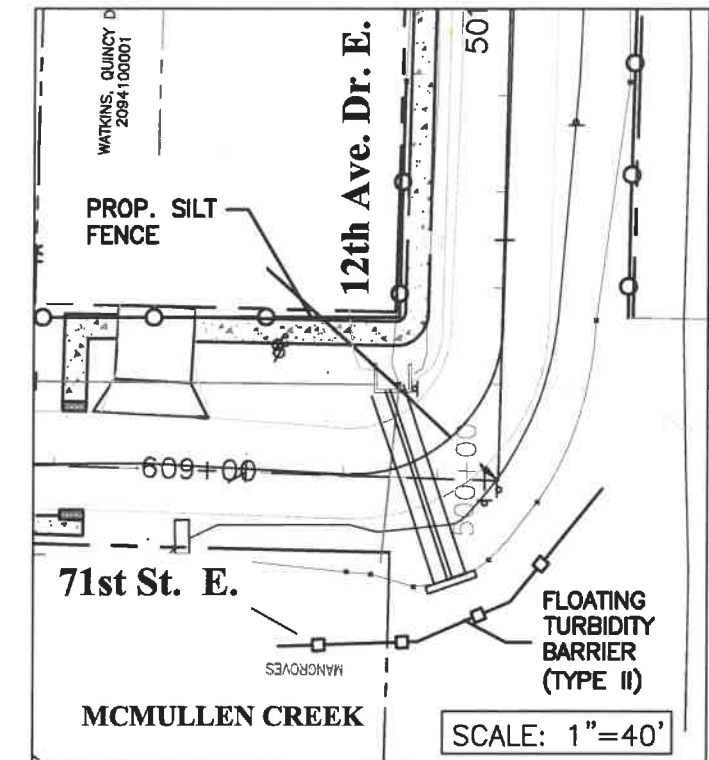
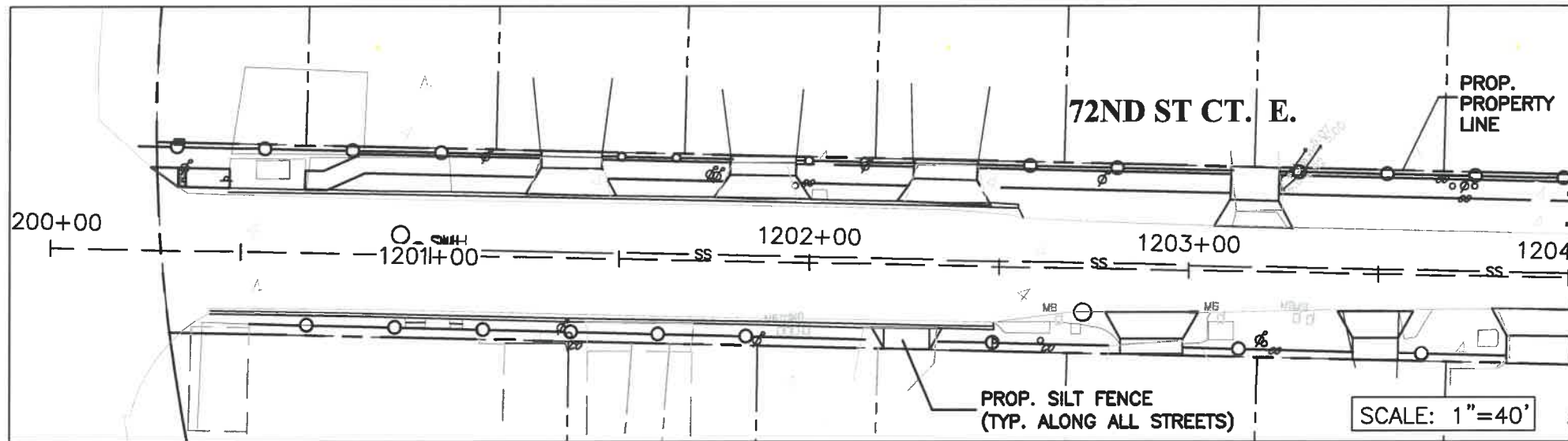


SOD ALONG CURB AND AROUND INLET
FIGURE 14



NOTE:

DATE	DESCRIPTION	DATE	PROJECT #	SURVEYED		 Signature & Date	 PUBLIC WORKS DEPARTMENT ENGINEERING SERVICES 1022 26th Avenue East, Bradenton, FL 34208	RUBONIA EROSION CONTROL DETAILS	SHEET NO. 55
			SURVEY #	DESIGNED					
			SEC./TWN./RGE	DRAWN	JKP 08/22/19				
			SCALE	CHECKED	JKP 08/22/19				

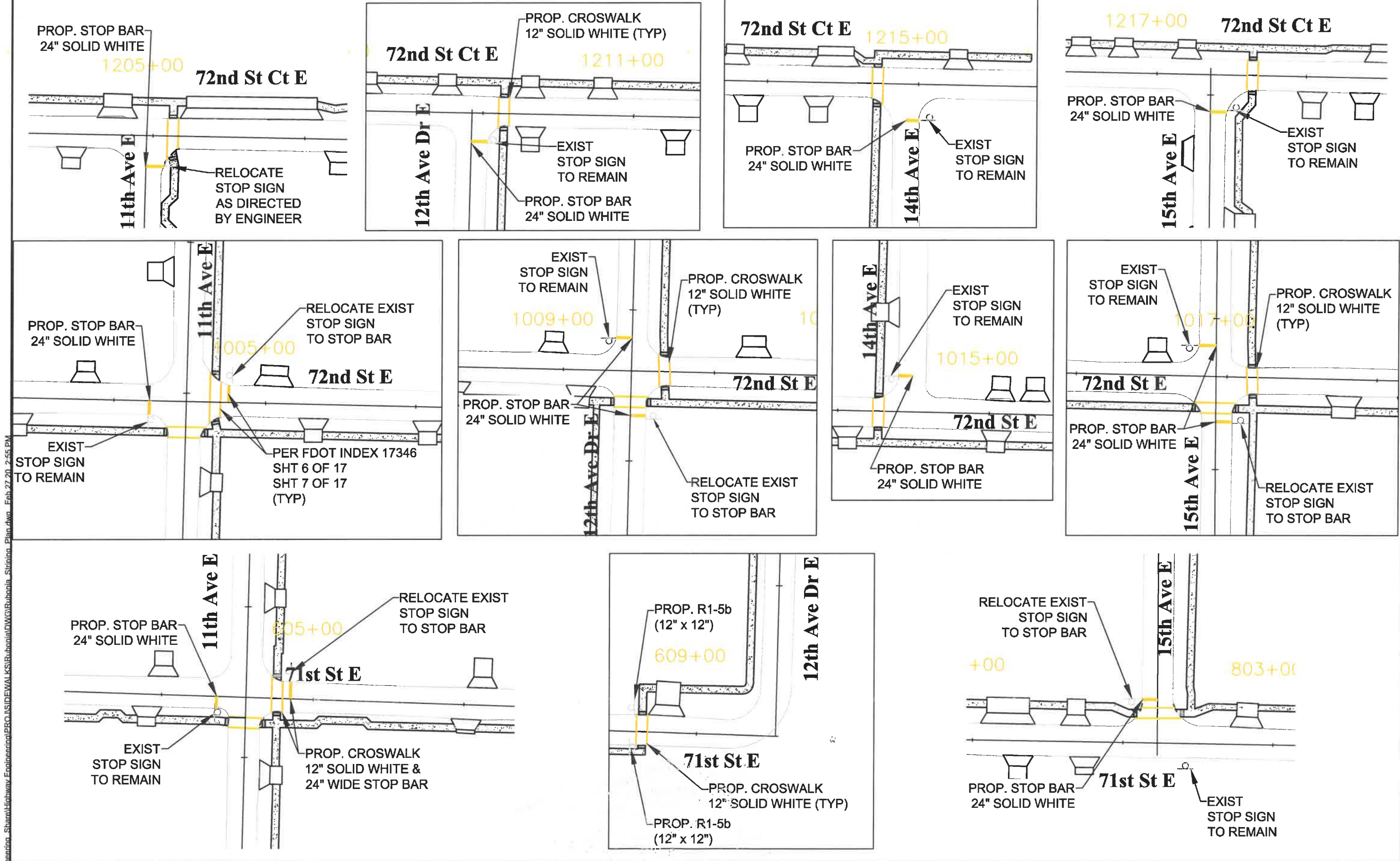


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DATE	DESCRIPTION	DATE	PROJECT #	SURVEYED	FLORIDA DESIGN
			----	03/2018	
			----	DESIGNED	JKP 08/16/19
			01/01S/00E	DRAWN	JKP 08/16/19
			AS SHOWN	CHECKED	JKP 01/01/01

FLORIDA P.E. # 56368
 JOHN PARK
John Park 3/3/20
 Signature & Date


Manatee County
 FLORIDA
 PUBLIC WORKS DEPARTMENT
 ENGINEERING SERVICES
 1022 26th Avenue East, Bradenton, FL 34208



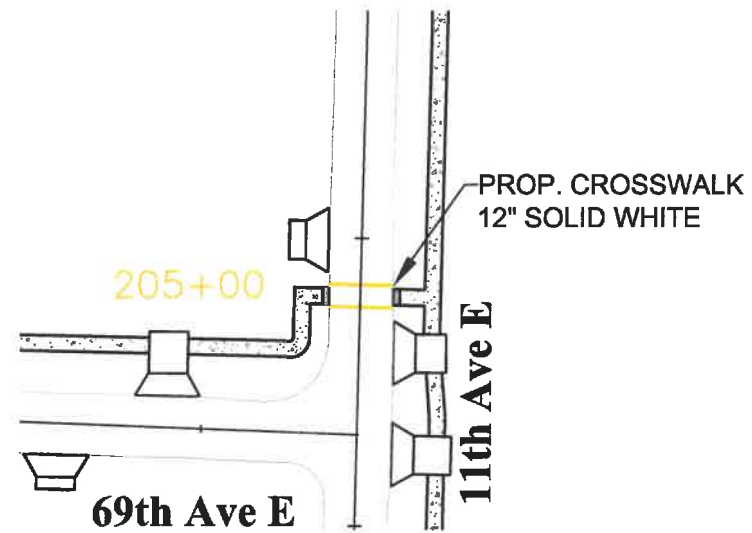
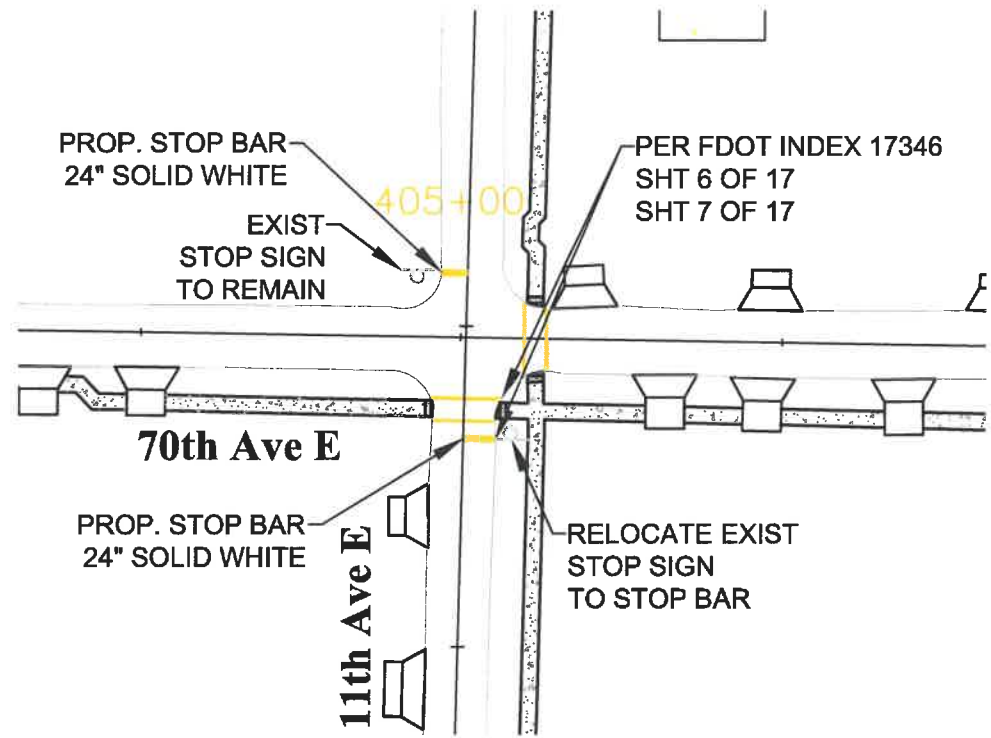
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			SURVEY #	####	DESIGNED	JKP	7/28/19
			SEC./TWN./RGE	#####	DRAWN	JKP	7/28/19
			SCALE	1"=60'	CHECKED	MM	9/2/19

JOHN FARI
 FLORIDA P.E. #56368
[Signature] 3/3/20
 Signature & Date



RUBONIA
SIGNING & STRIPING PLAN

\\brd\dfs\p\dwg\Engineering\Subarea\Highway\Engineering\PROJ\SIDEWALK\SR\Rubonia\DWG\Rubonia_Signing_Plan.dwg_Feb 27 20 2:54 PM



DATE	DESCRIPTION	DATE	PROJECT #	#####	SURVEYED	###	#####
			SURVEY #	####	DESIGNED	JKP	7/28/19
			SEC./TWN./RGE	#####	DRAWN	JKP	7/28/19
			SCALE	1"=60'	CHECKED	MM	#####

JOHN PARI
 FLORIDA P.E. #56368

 Signature & Date 3/3/20



PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
 1022 26th Avenue East, Bradenton, FL 34208

RUBONIA
SIGNING & STRIPING PLAN

SHEET NO.
 58