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SW

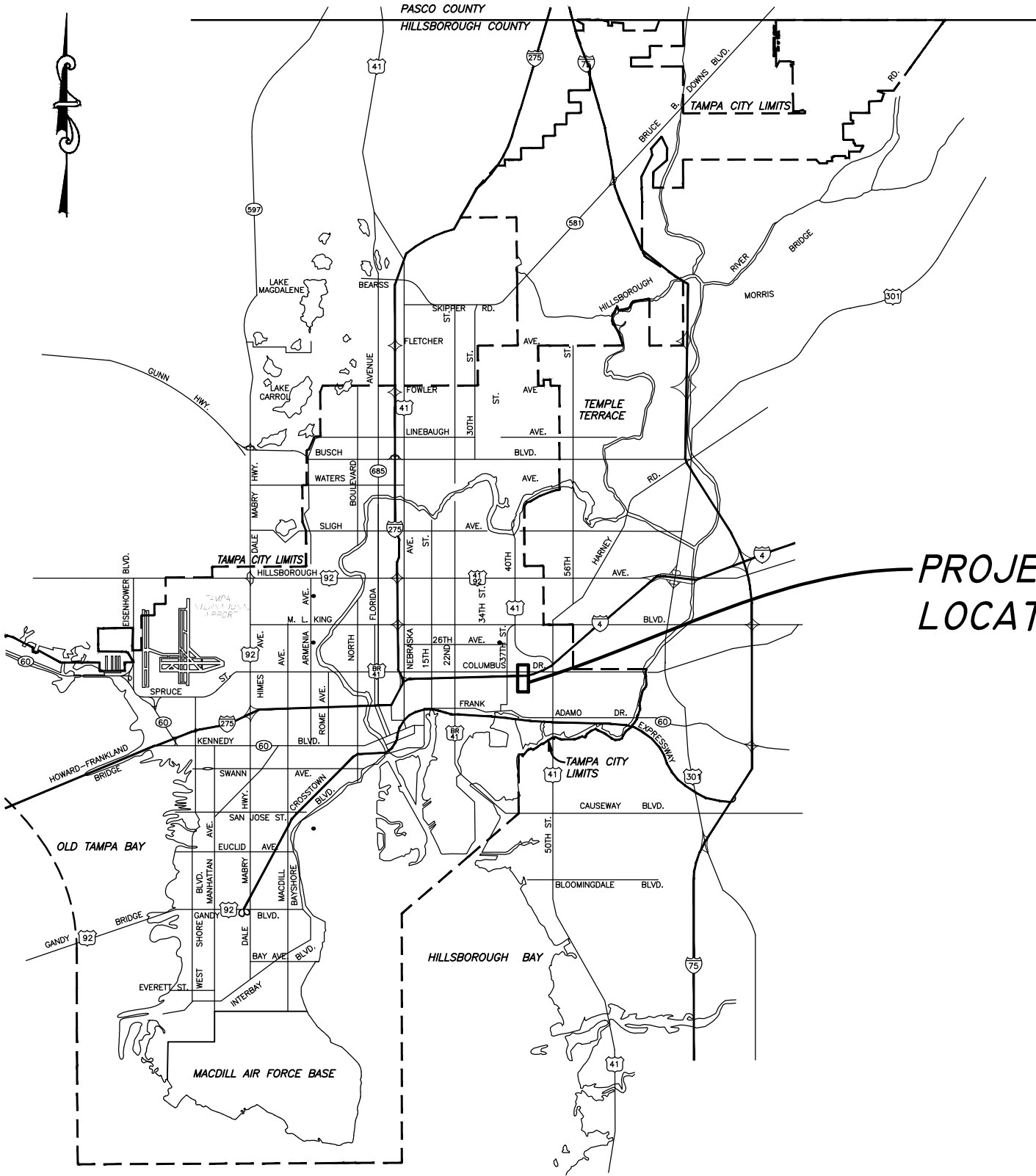
CITY of TAMPA



*DEPARTMENT OF
TRANSPORTATION AND STORMWATER SERVICES
STORMWATER ENGINEERING DIVISION*

FINAL PLANS FOR
43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
CITY PROJECT # 18-C-00009
FDOT PERMIT # 2017-D-796-58

SR 569 (N. 40TH ST.) (SECTION 10005) (MP 0.558 TO MP 0.830)



*PROJECT
LOCATION*

FINAL PLANS

No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE _____ P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS COVER SHEET	SHEET /

SHEET LIST TABLE	
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1	COVER SHEET
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4	STORMWATER AND ROADWAY PLAN KEY MAPS
5	SANITARY SEWER AND WATER SYSTEMS KEY MAPS
6	LEGEND AND ABBREVIATIONS
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8	LAYOUT PLAN ALIGNMENTS B AND C
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10	TYPICAL SECTIONS (2)
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12	TYPICAL SECTIONS (4)
13	TYPICAL SECTIONS (5)
14	GENERAL AND CONSTRUCTION NOTES (1)
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29	STORMWATER CONSTRUCTION PLAN STA 21+75 TO STA 24+25
30	STORMWATER PROFILE STA 21+75 TO STA 24+25
31	STORMWATER CONSTRUCTION PLAN STA 24+25 TO STA 26+75
32	STORMWATER PROFILE STA 24+25 TO STA 26+75
33	STORMWATER CONSTRUCTION PLAN STA 26+75 TO STA 29+25
34	STORMWATER PROFILE STA 26+75 TO STA 29+25
35	STORMWATER CONSTRUCTION PLAN STA 29+25 TO STA 31+75
36	STORMWATER PROFILE STA 29+25 TO STA 31+75
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SHEET LIST TABLE	
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43	STORMWATER CONSTRUCTION PLAN STA 39+25 TO STA 41+75
44	STORMWATER PROFILE STA 39+25 TO STA 41+75
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55	STORMWATER CONSTRUCTION PLAN STA 54+00 TO STA 56+00
56	STORMWATER PROFILE STA 54+00 TO STA 56+00
57	STORMWATER CONSTRUCTION PLAN STA 56+00 TO STA 58+50
58	STORMWATER PROFILE STA 56+00 TO STA 58+50
59	STORMWATER CONSTRUCTION PLAN STA 58+50 TO STA 61+00
60	STORMWATER PROFILE STA 58+50 TO STA 61+00
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SHEET LIST TABLE	
SHEET No	SHEET TITLE
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87	EROSION CONTROL DETAILS
88	EROSION CONTROL NOTES (1)
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90	ROADWAY PLAN STA 19+50 TO STA 21+75
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95	ROADWAY PLAN STA 31+75 TO STA 34+25
96	ROADWAY PLAN STA 34+25 TO STA 36+75
97	ROADWAY PLAN STA 36+75 TO STA 39+25
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108	ROADWAY PLAN STA 63+50 TO STA 64+80
109	SIGNING AND PAVEMENT PARKING PLAN (1)
110	SIGNING AND PAVEMENT PARKING PLAN (2)

M:\PROJECTS\TMP\TMPA15001-43RD_STREET\DESIGN_PUBLISH\BID SET\1102 SHEET INDEX.DWG
PLOTTED: 11/19/2018 5:44:59 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI.NCS,STB, PROJECT STATUS: ---

SHEET LIST TABLE	
SHEET No	SHEET TITLE
III	SIGNING AND PAVEMENT PARKING PLAN (3)
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II3	TRAFFIC CONTROL PLAN - TYPICAL SECTION (2)
II4	TRAFFIC CONTROL PLAN -TYPICAL SECTION (3)
II5	TRAFFIC CONTROL PLAN (4) TYPICAL SECTION (4)
II6	TRAFFIC CONTROL PLAN (4) SHEET LAYOUT
II7	TRAFFIC CONTROL PLAN (5) FROM E. 7TH AVE. TO STA 126+00
II8	TRAFFIC CONTROL PLAN (6) FROM STA. 126+00 TO STA. 131+20
II9	TRAFFIC CONTROL PLAN (7) FROM STA. 131+20 TO STA. 136+00
I20	TRAFFIC CONTROL PLAN (8) FROM STA. 136+60 TO STA. 31+00
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I23	TRAFFIC CONTROL PLAN (II) EXIST PAVEMENT MARKING REMOVAL (1)
I24	TRAFFIC CONTROL PLAN (I2) EXIST PAVEMENT MARKING REMOVAL (2)
I25	TRAFFIC CONTROL PLAN (I3) EXIST PAVEMENT MARKING REMOVAL (3)
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WW4	SANITARY SEWER PROFILE STA 26+75 TO STA 29+25
WW5	SANITARY SEWER PLAN STA 34+25 TO STA 36+75
WW6	SANITARY SEWER PLAN STA 36+75 TO STA 39+25
WW7	SANITARY SEWER PROFILE STA 36+75 TO STA 39+25
WW8	SANITARY SEWER PLAN STA 39+25 TO STA 41+75
WW9	SANITARY SEWER PROFILE STA 39+25 TO STA 41+75
WW10	SANITARY SEWER PLAN STA 41+75 TO STA 44+25
WW11	SANITARY SEWER PROFILE STA 41+75 TO STA 44+25
WW12	SANITARY SEWER PLAN STA 44+25 TO STA 46+75
WW13	SANITARY SEWER PROFILE STA 44+25 TO STA 46+75
WW14	SANITARY SEWER PLAN STA 46+75 TO STA 49+00
WW15	SANITARY SEWER PROFILE STA 46+75 TO STA 49+00
WW16	SANITARY SEWER PLAN STA 51+50 TO STA 54+00
WW17	SANITARY SEWER PROFILE STA 51+50 TO STA 54+00
WW18	SANITARY SEWER PLAN STA 54+00 TO STA 56+00
WW19	SANITARY SEWER PROFILE STA 54+00 TO STA 56+00

SHEET LIST TABLE	
SHEET No	SHEET TITLE
WW20	SANITARY SEWER PLAN STA 61+00 TO STA 63+50
WW21	SANITARY SEWER PROFILE STA 61+00 TO STA 63+50
WW22	SANITARY SEWER CROSS SECTIONS E. 7TH AVE - E. BROADWAY
WW23	SANITARY SEWER CROSS SECTIONS EAST 10TH AVE
WW24	SANITARY SEWER CROSS SECTIONS NORTH 40TH ST (1)
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WW26	MISCELLANEOUS GRAVITY DETAILS
WW27	LATERAL CONNECTIONS
WW28	LATERAL CONNECTIONS (UTILITY CONFLICT REPLACEMENT)
WW29	STANDARD MANHOLE 8" TO 24"
WW30	DOGHOUSE MANHOLE
W-1	WATER CONSTRUCTION AND TESTING NOTES
W-2	WATER CLEARANCE NOTES
W-3	WATER CONSTRUCTION PLAN STA 22+00 TO STA 25+00
W-4	WATER PROFILE STA 22+00 TO STA 25+00
W-5	WATER CONSTRUCTION PLAN STA 26+75 TO STA 29+25
W-6	WATER PROFILE STA 26+25 TO STA 29+25
W-7	WATER CONSTRUCTION PLAN STA 29+25 TO STA 31+75
W-8	WATER PROFILE STA 29+25 TO STA 31+75
W-9	WATER CONSTRUCTION PLAN STA 31+75 TO STA 34+25
W-10	WATER PROFILE STA 31+75 TO STA 34+25
W-11	WATER CONSTRUCTION PLAN STA 34+25 TO STA 36+75
W-12	WATER PROFILE STA 34+25 TO STA 36+75
W-13	WATER CONSTRUCTION PLAN STA 36+75 TO STA 39+25
W-14	WATER PROFILE STA 36+75 TO STA 39+25
W-15	WATER CONSTRUCTION PLAN STA 39+25 TO STA 41+75
W-16	WATER PROFILE STA STA 39+25 TO STA 41+75
W-17	WATER CONSTRUCTION PLAN STA 41+75 TO STA 44+25
W-18	WATER PROFILE STA STA 41+75 TO STA 44+25
W-19	WATER CONSTRUCTION PLAN STA 44+25 TO STA 46+75
W-20	WATER PROFILE STA 44+25 TO STA 46+75
W-21	WATER CONSTRUCTION PLAN STA 46+75 TO STA 49+00
W-22	WATER CONSTRUCTION PLAN STA 49+00 TO STA 51+50
W-23	WATER PROFILE STA 48+00 TO STA 50+50

SHEET LIST TABLE	
SHEET No	SHEET TITLE
W-24	WATER CONSTRUCTION PLAN STA 51+50 TO STA 54+00
W-25	WATER CONSTRUCTION PLAN STA 54+00 TO STA 56+00
W-26	WATER CONSTRUCTION PLAN STA 61+00 TO STA 63+50
W-27	WATER CONSTRUCTION PLAN STA 63+50 TO STA 64+80
W-28	WATER PROFILE STA 63+50 TO STA 64+80
W-29	WATER CROSS SECTIONS NORTH 43RD ST
W-30	WATER CROSS SECTIONS EAST 10TH AVE NORTH 40TH ST
W-31	WATER CROSS SECTIONS NORTH 40TH ST
W-32	WATER DETAILS (1)
W-33	WATER DETAILS (2)
W-34	WATER DETAILS (3)
W-35	WATER DETAILS (4)
W-36	WATER DETAILS (5)
W-37	WATER DETAILS (6)
W-38	WATER DETAILS (7)
W-39	WATER DETAILS (8)
W-40	WATER DETAILS (9)
W-41	WATER DETAILS (10)
W-42	WATER DETAILS (11)
W-43	WATER DETAILS (12)
W-44	WATER DETAILS (13)
W-45	WATER DETAILS (14)
W-46	WATER DETAILS (15)

No.	DATE	REVISIONS



PENNONI ASSOCIATES INC.
2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL STORMWATER
IMPROVEMENTS

SHEET INDEX (2)

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PLOTTED: 11/19/2018 5:45:06 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---

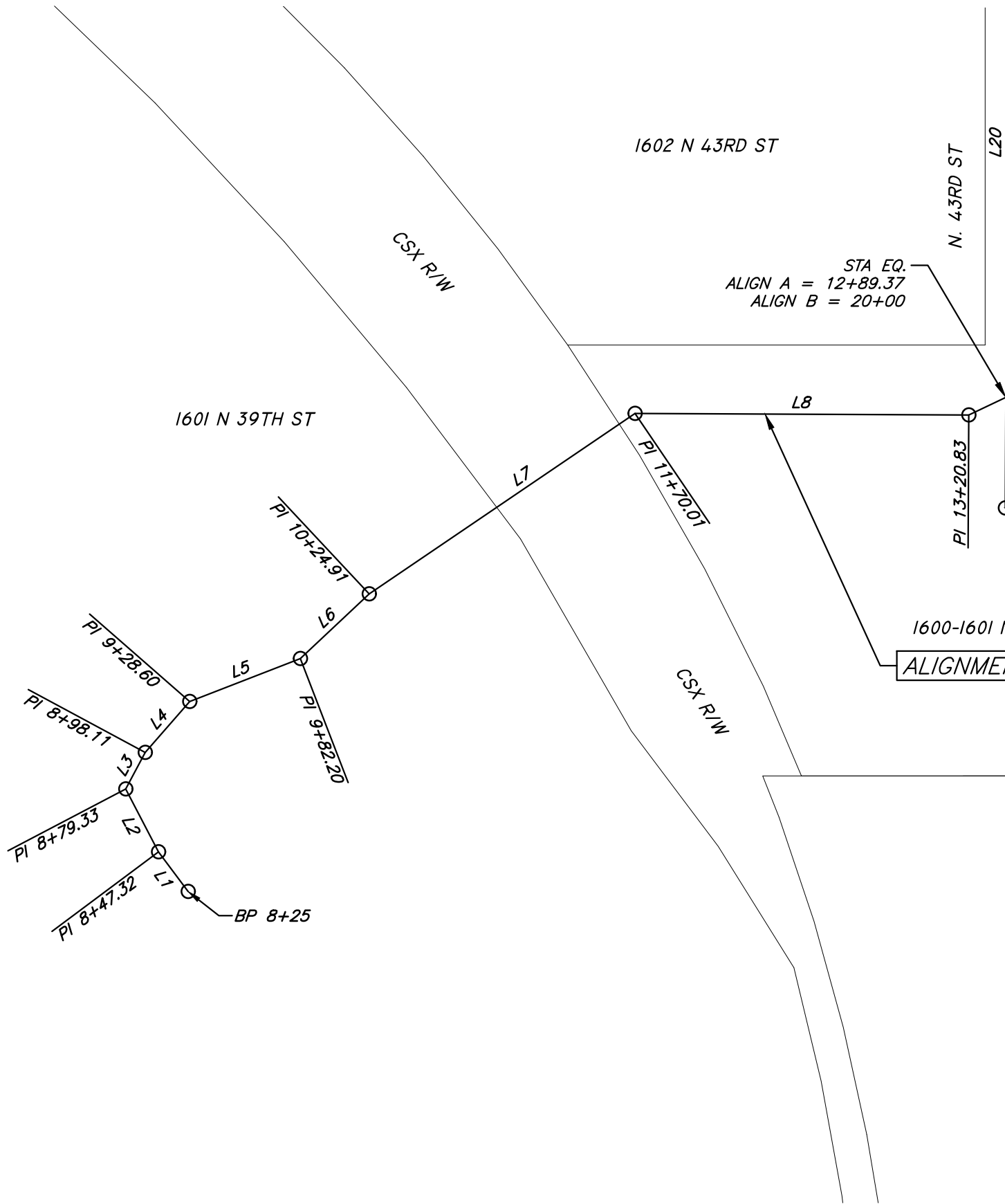
BFO	BURIED FIBER OPTIC
BTV	BURIED TELEVISION CABLE
(C)	CALCULATED
C/B	CONCRETE BLOCK
CIP	CAST IRON PIPE
CLF	CHAIN LINK FENCE
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CONST	CONSTRUCT
COT	CITY OF TAMPA
(D)	DESCRIPTION
DIA.	DIAMETER
DBI	DITCH BOTTOM INLET
DCV	DOUBLE CHECK VALVE
DIP	DUCTILE IRON PIPE
(E)	EAST
EOP	EDGE OF PAVEMENT
EL.	ELEVATION
ERCP	ELLIPTICAL REINFORCED CONCRETE PIPE
EXIST	EXISTING
(F)	FIELD MEASURED
FCG	F-TYPE CURB AND GUTTER
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION
FDEP	FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
FM	FORCE MAIN
FND	FOUND
FCIP	FOUND CAPPED IRON PIPE (SIZE NOTED)
FCIR	FOUND CAPPED IRON ROD (SIZE NOTED)
FCM	FOUND CONCRETE MONUMENT (SIZE NOTED)
FIP	FOUND IRON PIPE (SIZE NOTED)
FIR	FOUND IRON ROD (SIZE NOTED)
FN&D	FOUND NAIL & BRASS DISK
FOC	FIBER OPTIC CABLE
FPP	FOUND PINCHED PIPE (SIZE NOTED)
FRR	FOUND RAILROAD SPIKE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HERCP	HORIZONTAL ELLIPTICAL REINFORCED CONCRETE PIPE
INV	INVERT
IE	INVERT ELEVATION
JB	JUNCTION BOX
LF	LINEAR FEET
MES	MITERED END SECTION
MH	MANHOLE
(N)	NORTH
No.	NUMBER
NSBB	NUTRIENT SEPERATING BAFFLE BOX
OHW	OVERHEAD WIRES (CABLE, TELEPHONE, ELECTRICAL)
POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
(P.I.)	POINT OF INTERSECTION
PK	PARKER KAYLON NAIL
P.O.T.	POINT ON TANGENT
PVC	POLYVINYL CHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
R/W	RIGHT OF WAY
(S)	SOUTH
SF	SQUARE FEET
SPT	STANDARD PENETRATION TEST
SS	SANITARY SEWER
STA.	STATION
ST	STORMWATER
STL	STEEL
S/W	SIDEWALK
TBM	TEMPORARY BENCHMARK
TOB	TOP OF BANK
TOS	TOE OF SLOPE
TYP	TYPICAL
UG	UNDERGROUND
UNK	UNKNOWN
WDF	WOOD PANEL FENCE
WM	WM
VCG	VALLEY CURB AND GUTTER
VCP	VITRIFIED CLAY PIPE
(W)	WEST

	BENCHMARK	EXIST MANHOLE AND SANITARY SEWER 24" DIA AND LARGER
	BOLLARD/POST	
	BURIED CATV MARKER POST	EXIST MANHOLE AND SANITARY SEWER LESS THAN 24" DIA
	CABLE TV BOX	
	CONCRETE LIGHT POLE	PROP MANHOLE AND SANITARY SEWER
	CONCRETE UTILITY POLE	
	CLEANOUT	EXIST MANHOLE AND STORM SEWER 24" DIA AND LARGER
	DECORATIVE LIGHT	
	ELECTRIC BOX	EXIST MANHOLE AND STORM SEWER LESS THAN 24" DIA
	ELECTRIC MANHOLE	
	ELECTRIC METER	PROP MANHOLE AND STORM SEWER 24" DIA AND LARGER
	FIBER OPTIC CABLE BOX	
	FIRE HYDRANT	PROP MANHOLE AND STORM SEWER LESS THAN 24" DIA
	GAS MARKER POST	EXIST WATER LINE 8" DIA. AND LARGER
	GAS METER/REGULATOR	
	GAS VALVE	EXIST WATER LINE UP TO 8" DIA.E
	GREASE-TRAP MANHOLE	
	GUY WIRE	PROP WATER PIPES AND VALVES
	IRRIGATION CONTROL VALVE	
	MAIL BOX	EXIST GAS LINE
	METAL LIGHT POLE	EXIST TELEPHONE, CABLE, FOC
	METAL UTILITY POLE	
	MONITOR WELL	
	RECLAIMED WATER METER BOX	
	RECLAIMED WATER VALVE	
	ROOF DRAIN	
	SANITARY MANHOLE	
	SANITARY VALVE	
	SIGN	
	SOIL BORING LOCATION	
	STREET LIGHT ACCESS BOX	
	TELECOMMUNICATIONS MANHOLE	
	TELEPHONE BOX	
	TELEPHONE LINE MARKER POST	
	TRAFFIC SIGNAL ACCESS BOX	
	TRAFFIC SIGNAL POLE	
	VERIZON ACCESS BOX	
	WATER MANHOLE	
	WATER VALVE	
	WATER METER BOX	
	WELL	
	WOOD LIGHT POLE	
	WOOD UTILITY POLE	

Handwriting practice sheet for the letter 'S'. The page contains several rows of lines for tracing and writing. The first row shows a dashed 'S' for tracing, followed by a solid 'S' for tracing, and then a solid 'S' for writing. The second row shows a dashed 'S' for tracing, followed by a solid 'S' for tracing, and then a solid 'S' for writing. The third row shows a dashed 'S' for tracing, followed by a solid 'S' for tracing, and then a solid 'S' for writing. The fourth row shows a dashed 'S' for tracing, followed by a solid 'S' for tracing, and then a solid 'S' for writing. The fifth row shows a dashed 'S' for tracing, followed by a solid 'S' for tracing, and then a solid 'S' for writing. The sixth row shows a dashed 'S' for tracing, followed by a solid 'S' for tracing, and then a solid 'S' for writing. The seventh row shows a dashed 'S' for tracing, followed by a solid 'S' for tracing, and then a solid 'S' for writing. The eighth row shows a dashed 'S' for tracing, followed by a solid 'S' for tracing, and then a solid 'S' for writing. The ninth row shows a dashed 'S' for tracing, followed by a solid 'S' for tracing, and then a solid 'S' for writing. The tenth row shows a dashed 'S' for tracing, followed by a solid 'S' for tracing, and then a solid 'S' for writing. The eleventh row shows a dashed 'S' for tracing, followed by a solid 'S' for tracing, and then a solid 'S' for writing. The twelfth row shows a dashed 'S' for tracing, followed by a solid 'S' for tracing, and then a solid 'S' for writing. The thirteenth row shows a dashed 'S' for tracing, followed by a solid 'S' for tracing, and then a solid 'S' for writing. The fourteenth row shows a dashed 'S' for tracing, followed by a solid 'S' for tracing, and then a solid 'S' for writing. The fifteenth row shows a dashed 'S' for tracing, followed by a solid 'S' for tracing, and then a solid 'S' for writing. The sixteenth row shows a dashed 'S' for tracing, followed by a solid 'S' for tracing, and then a solid 'S' for writing. The seventeenth row shows a dashed 'S' for tracing, followed by a solid 'S' for tracing, and then a solid 'S' for writing. The eighteenth row shows a dashed 'S' for tracing, followed by a solid 'S' for tracing, and then a solid 'S' for writing. The nineteenth row shows a dashed 'S' for tracing, followed by a solid 'S' for tracing, and then a solid 'S' for writing. The twentieth row shows a dashed 'S' for tracing, followed by a solid 'S' for tracing, and then a solid 'S' for writing.

No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS LEGEND AND ABBREVIATIONS	SHEET 6

M:\PROJECTS\TMP\TMA16001-43RD_STREET\DESIGN_PUBLISH\BID SET\T105 ALIGNMENT A LAYOUT.DWG
PLOTTED: 11/19/2018 5:47:59 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---



ALIGNMENT B

ALIGNMENT A

SW

ALIGNMENT LINE TABLE

LINE #	BEARING	LENGTH	START STATION	START NORTHING	START EASTING	END STATION	END NORTHING	END EASTING
L1	N 36°43'39.71" W	22.32'	8+25	1317484.63	523429.6791	8+47.32	1317502.52	523416.33
L2	N 27°41'37.12" W	32.01'	8+47.32	1317502.52	523416.3304	8+79.33	1317530.86	523401.45
L3	N 28°13'00.12" E	18.78'	8+79.33	1317530.86	523401.4535	8+98.11	1317547.41	523410.33
L4	N 41°07'26.21" E	30.50'	8+98.11	1317547.41	523410.3306	9+28.60	1317570.38	523430.39
L5	N 68°48'52.36" E	53.60'	9+28.60	1317570.38	523430.3874	9+82.20	1317589.75	523480.36
L6	N 46°50'58.66" E	42.71'	9+82.20	1317589.75	523480.3619	10+24.91	1317618.96	523511.52
L7	N 55°49'43.02" E	145.11'	10+24.91	1317618.96	523511.5188	11+70.01	1317700.46	523631.57
L8	S 89°44'03.88" E	150.82'	11+70.01	1317700.46	523631.5736	13+20.83	1317699.76	523782.39
L9	N 64°34'25.25" E	65.64'	13+20.83	1317699.76	523782.3930	13+86.47	1317727.94	523841.67
L10	S 88°36'32.69" E	35.53'	13+86.47	1317727.94	523841.6707	14+22	1317727.08	523877.19

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E. PETER NIKOLOV, P.E.
P.E. NO. 38766

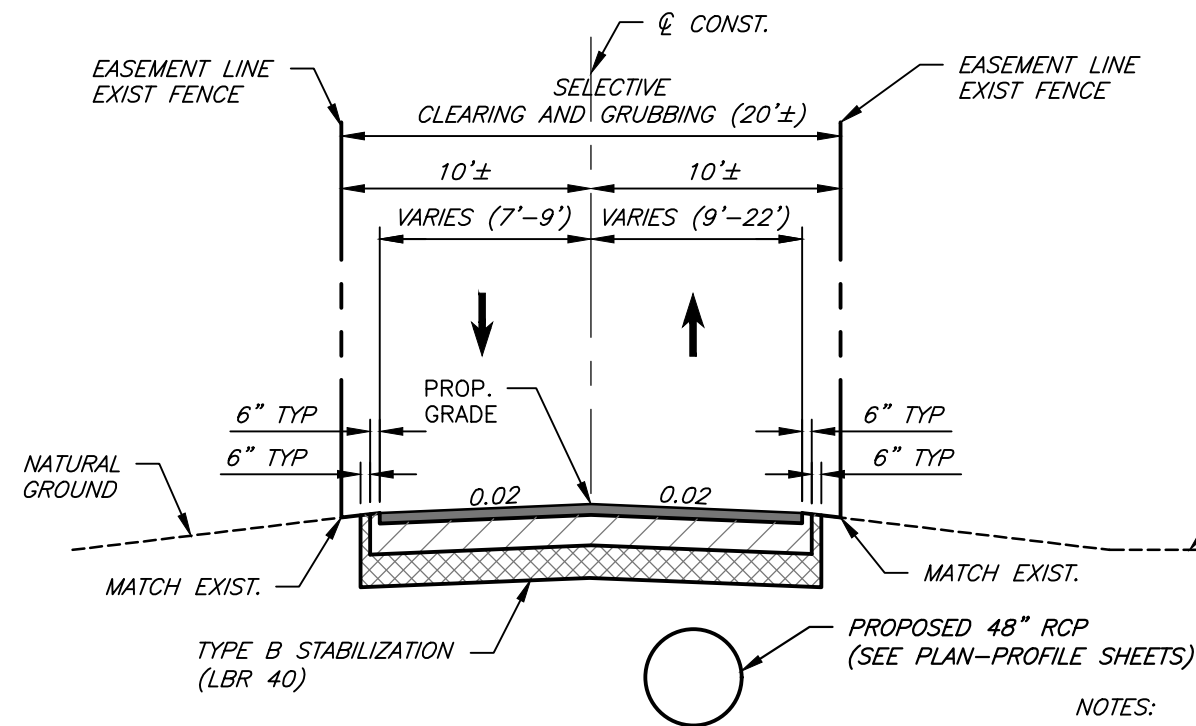
DATE

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
LAYOUT PLAN
ALIGNMENT A

SHEET
7

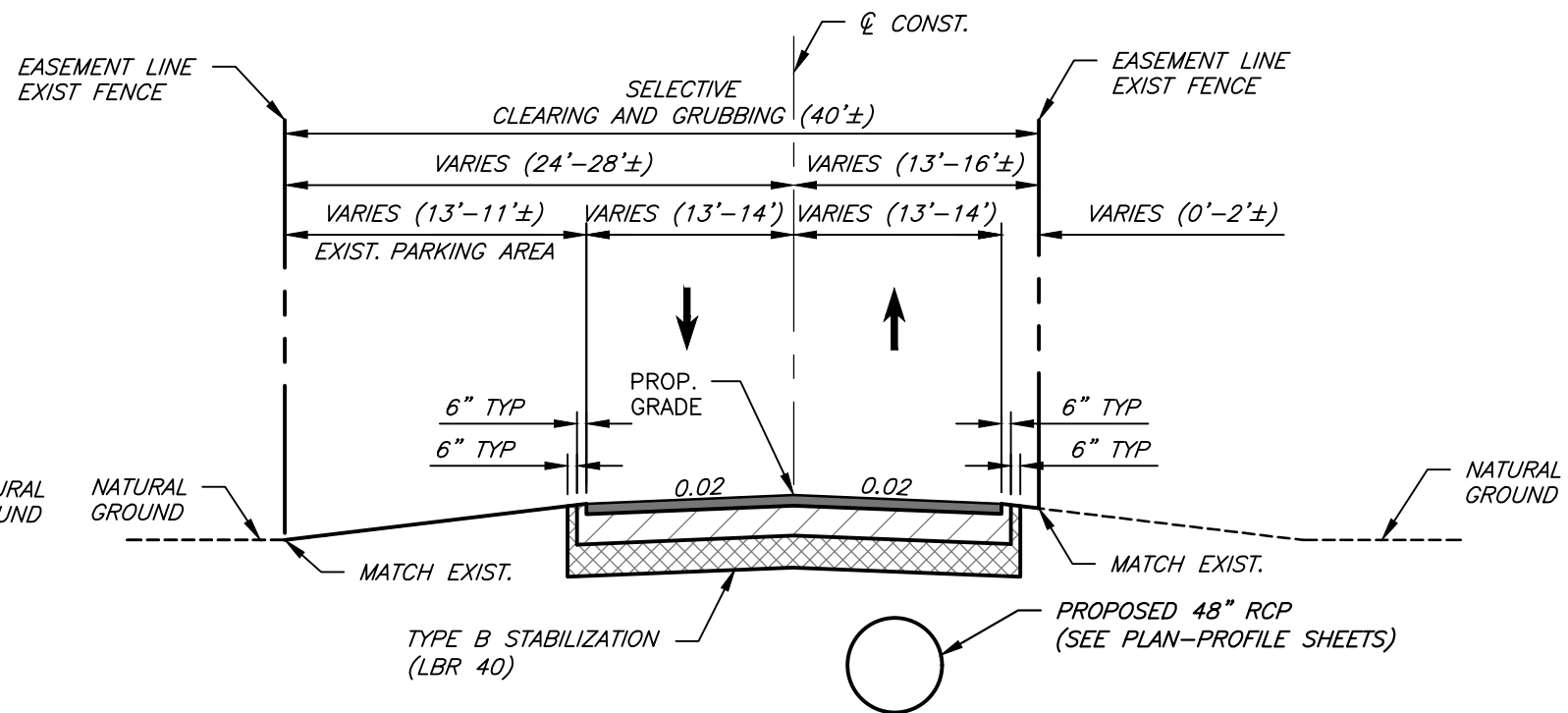


TYPICAL SECTION NO. 1

N. 43RD ST.
STA. 19+50± TO STA. 24+52±
2 LANE SOUTH OF CSX RR TRACKS

RECONSTRUCTION

3" TYPE SP-12.5 ASPHALTIC CONCRETE SURFACE COURSE
OPTIONAL BASE GROUP 6 (8" CRUSHED CONC.) (LBR 150)
12" TYPE B STABILIZED SUBGRADE (LBR 40)



TYPICAL SECTION NO. 2

N. 43RD ST.
STA. 25+66± TO STA. 27+16±
2 LANE FROM CSX RR TRACKS TO E. 7TH AVE.

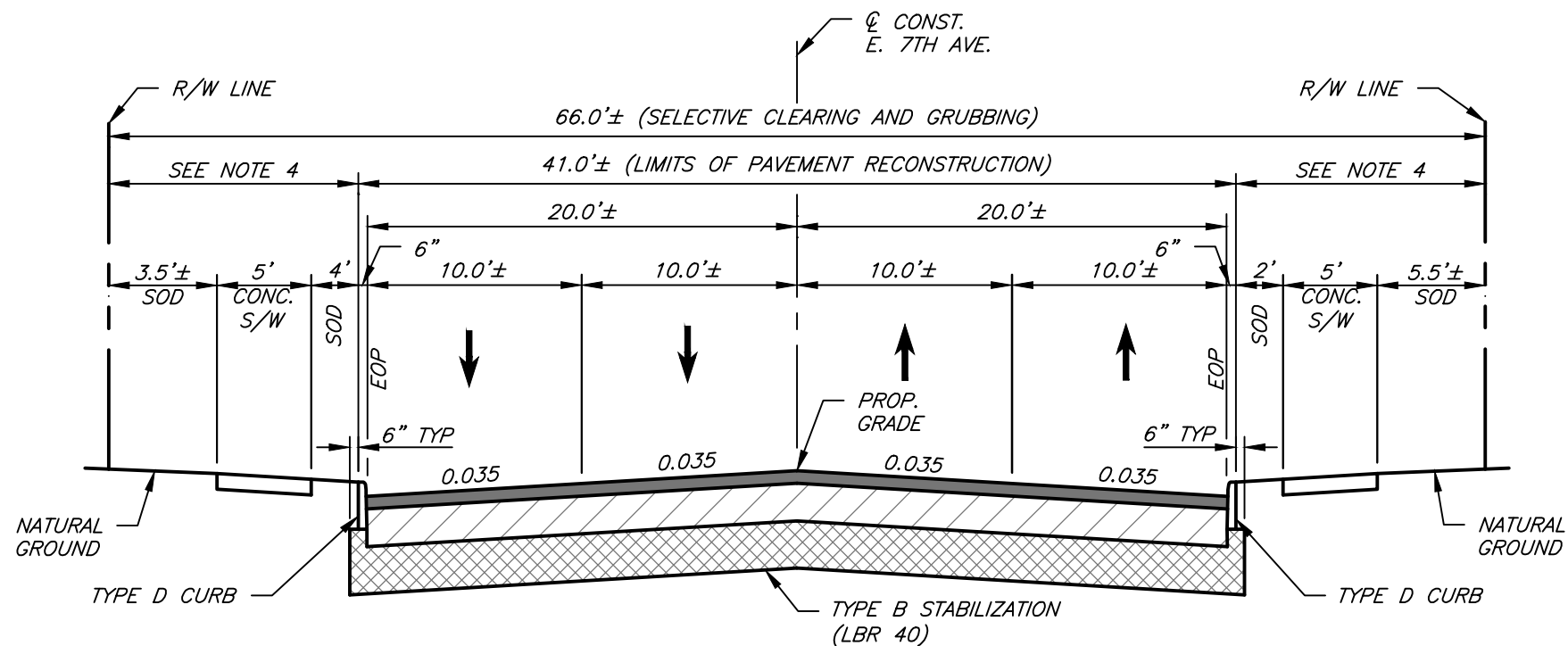
RECONSTRUCTION

3" TYPE SP-12.5 ASPHALTIC CONCRETE SURFACE COURSE
OPTIONAL BASE GROUP 6 (8" CRUSHED CONC.) (LBR 150)
12" TYPE B STABILIZED SUBGRADE (LBR 40)

NOTES:

1. SEE ROADWAY PLAN SHEETS AND CROSS SECTIONS FOR LOCATION AND LIMITS OF EXISTING DRIVEWAYS AND FENCING.
2. SEE STORMWATER PLAN-PROFILE SHEETS AND CROSS SECTIONS FOR LOCATION AND LIMITS OF MICRO-TUNNELING PIPE ALIGNMENT AND SHAFT PITS.
3. POSTED SPEED LIMIT = 30 MPH.
DESIGN SPEED LIMIT = 30 MPH.
4. OVERHEAD LINES ARE NOT SHOWN ON PLANS IN THIS AREA. CONTRACTOR SHALL BE AWARE, PROTECT AND ASSURE PROPER MEASURES ARE TAKEN WHEN WORKING IN THE VICINITY OF ALL AERIAL OVERHEAD LINES.
5. RED BRICK MAY BE ENCOUNTERED DURING EXCAVATION FOR ROADWAY RECONSTRUCTION.

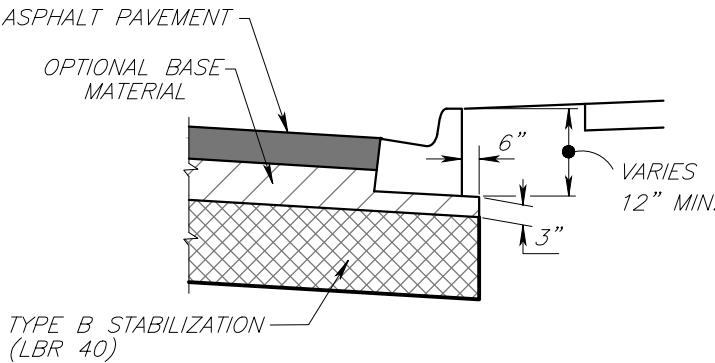
No.	DATE	REVISIONS	PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS TYPICAL SECTIONS (I)	SHEET 9



- NOTES:
1. PAVEMENT RESTORATION FOR LIMITS ALONG E. 7TH AVE. AND E. BROADWAY IS DUE TO THE UNDER GROUND UTILITY WORK FOR THE CITY OF TAMPA.
 2. SEE STORMWATER, WATER AND SANITARY SEWER SHEETS AND DETAILS FOR LOCATION AND LIMITS OF PROPOSED UTILITY PIPING.
 3. NOTE GRASS MOW STRIPS AND SIDEWALK WIDTHS VARY. SIDEWALK, DRIVEWAY AND GRASS AREA DIMENSIONS BEHIND PROP. CURB ARE TO BE FIELD VERIFIED TO MATCH EXIST. CONDITIONS.
 4. POSTED SPEED LIMIT = 40 MPH. DESIGN SPEED LIMIT = 40 MPH.
 5. OVERHEAD LINES ARE NOT SHOWN ON PLANS IN THIS AREA. CONTRACTOR SHALL BE AWARE, PROTECT AND ASSURE PROPER MEASURES ARE TAKEN WHEN WORKING IN THE VICINITY OF ALL AERIAL OVERHEAD LINES.
 6. RED BRICK MAY BE ENCOUNTERED DURING EXCAVATION FOR ROADWAY RECONSTRUCTION.

TYPICAL SECTION NO. 3
E. 7TH AVE./ E. BROADWAY
STA. 71+62± TO STA. 72+58±
4 LANE SECTION AT N. 43RD ST. INTERSECTION
RECONSTRUCTION

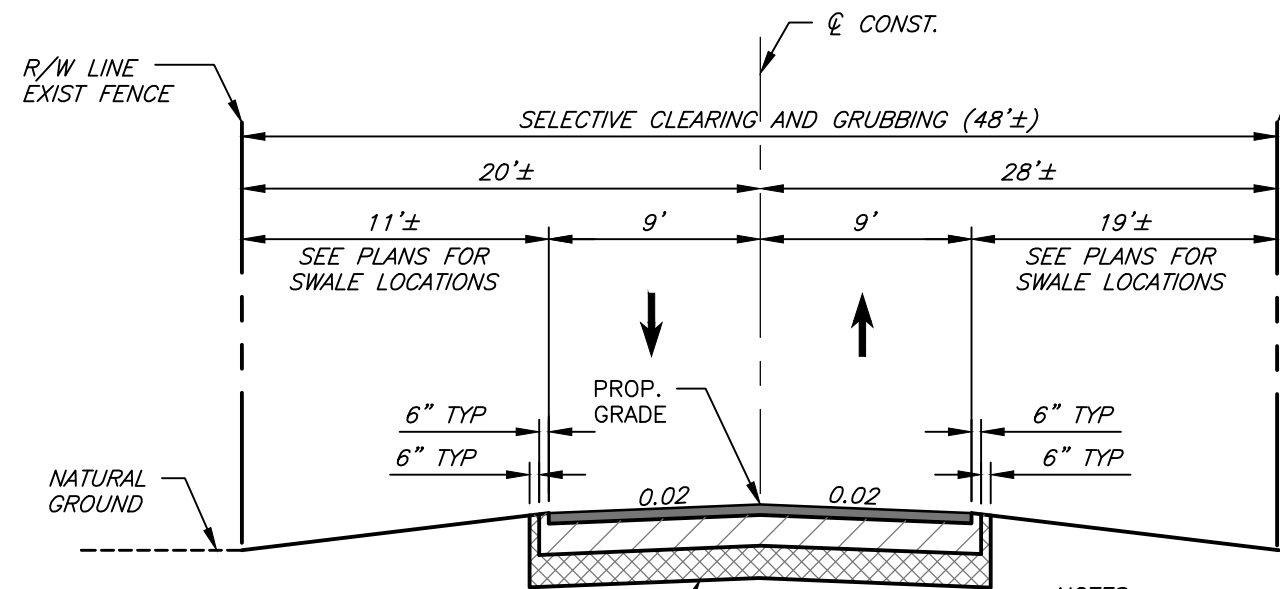
3" TYPE SP-12.5 ASPHALTIC CONCRETE SURFACE COURSE
OPTIONAL BASE GROUP 6 (8" CRUSHED CONC.) (LBR 150)
12" TYPE B STABILIZED SUBGRADE (LBR 40)



CURB PAD DETAIL AT
RADIUS RETURNS

M:\PROJECTS\TAMPA\15001-43RD ST\DESIGN\15001-43RD ST\TYPICAL SECTION.DWG
PLOT: 11/19/2018 5:48:59 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB PROJECT STATUS: ---

No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS TYPICAL SECTIONS (2)	SHEET 10



TYPE B STABILIZATION
(LBR 40)

PROPOSED 8" PVC WM

PROPOSED 48" RCP
(SEE PLAN-PROFILE SHEETS)

TYPICAL SECTION NO. 4

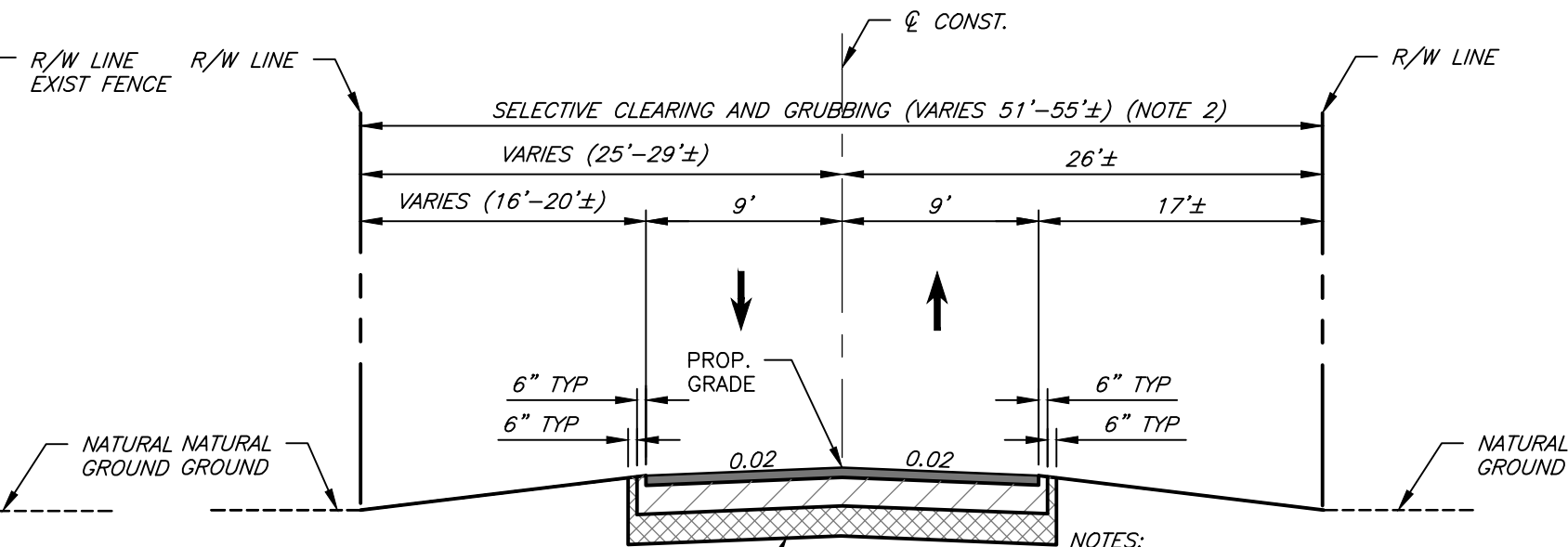
N. 43RD ST.
STA. 28+00± TO STA. 36+70±
2 LANE FROM E. 7TH AVE. TO E. 10TH AVE.

RECONSTRUCTION

3" TYPE SP-12.5 ASPHALTIC CONCRETE SURFACE COURSE
OPTIONAL BASE GROUP 6 (8" CRUSHED CONC.) (LBR 150)
12" TYPE B STABILIZED SUBGRADE (LBR 40)

NOTES:

1. SEE ROADWAY PLAN SHEETS AND CROSS SECTIONS FOR LOCATION AND LIMITS OF EXISTING DRIVEWAYS AND SWALES.
2. POSTED SPEED LIMIT = 30 MPH.
DESIGN SPEED LIMIT = 30 MPH.
3. AT AREAS WHERE CULVERT MANHOLES ARE LOCATED AT THE EDGE OF PAVEMENT, THE CONTRACTOR SHALL EXTEND STABILIZED SUB-GRADE AND SUB-BASE 2 FEET BEYOND FACE OF INLET BOX.
4. OVERHEAD LINES ARE NOT SHOWN ON PLANS IN THIS AREA. CONTRACTOR SHALL BE AWARE, PROTECT AND ASSURE PROPER MEASURES ARE TAKEN WHEN WORKING IN THE VICINITY OF ALL AERIAL OVERHEAD LINES.



TYPE B STABILIZATION
(LBR 40)

PROPOSED 8" PVC SS
(E. 10TH AVE ONLY)

PROPOSED 48" RCP
(SEE PLAN-PROFILE SHEETS)

TYPICAL SECTION NO. 5

E. 10TH AVE.
STA. 36+63± TO STA. 48+97±
2 LANE FROM N. 43RD ST. TO N. 40TH ST.

N. 40TH ST.
E. 49+88± TO STA. 51+36±
2 LANE FROM E. 10TH AVE. TO E. 11TH AVE.

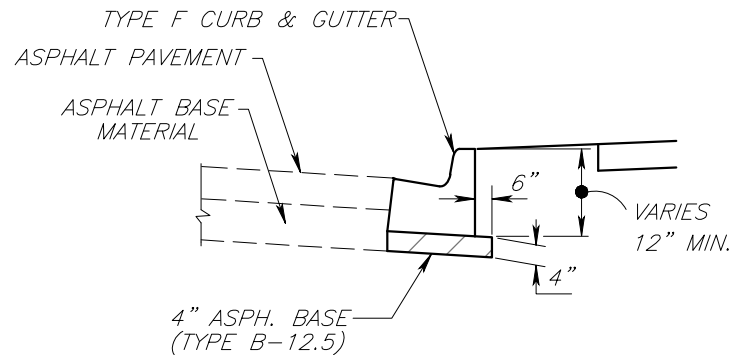
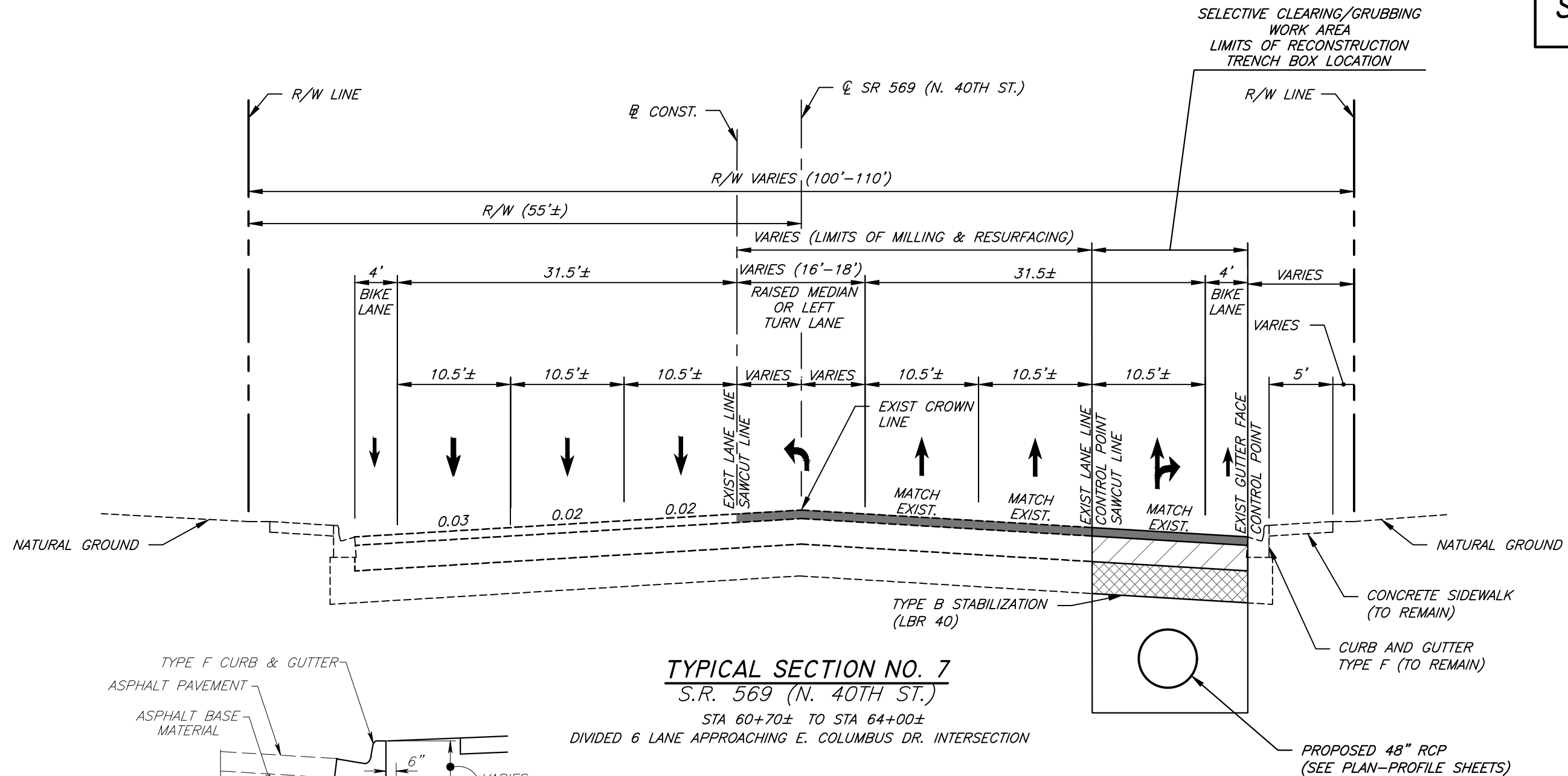
RECONSTRUCTION

3" TYPE SP-12.5 ASPHALTIC CONCRETE SURFACE COURSE
OPTIONAL BASE GROUP 6 (8" CRUSHED CONC.) (LBR 150)
12" TYPE B STABILIZED SUBGRADE (LBR 40)

NOTES:

1. SEE ROADWAY PLAN SHEETS AND CROSS SECTIONS FOR LOCATION AND LIMITS OF EXISTING DRIVEWAYS AND SWALES.
2. N. 40TH ST. R/W WIDTH IS 55 FEET, NB LANE IS 12 FEET WIDE AND SB LANE IS 11 FEET WIDE.
3. POSTED SPEED LIMIT = 30 MPH.
DESIGN SPEED LIMIT = 30 MPH.
4. AT AREAS WHERE CULVERT MANHOLES ARE LOCATED AT THE EDGE OF PAVEMENT, THE CONTRACTOR SHALL EXTEND STABILIZED SUB-GRADE AND SUB-BASE 2 FEET BEYOND FACE OF INLET BOX.
5. OVERHEAD LINES ARE NOT SHOWN ON PLANS IN THIS AREA. CONTRACTOR SHALL BE AWARE, PROTECT AND ASSURE PROPER MEASURES ARE TAKEN WHEN WORKING IN THE VICINITY OF ALL AERIAL OVERHEAD LINES.
6. RED BRICK MAY BE ENCOUNTERED DURING EXCAVATION FOR ROADWAY RECONSTRUCTION.

No.	DATE	REVISIONS	PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS TYPICAL SECTIONS (3)	SHEET 11



**CURB PAD DETAIL
AT CURBED MEDIAN**

TYPICAL SECTION NO. 7
S.R. 569 (N. 40TH ST.)

STA 60+70± TO STA 64+00±
DIVIDED 6 LANE APPROACHING E. COLUMBUS DR. INTERSECTION

RECONSTRUCTION

- 1.5" TYPE FC-12.5 FRICTION COURSE (TRAFFIC C)
- 2.5" TYPE SP-12.5 STRUCTURAL COURSE (TRAFFIC C)
- 6" OPTIONAL BASE GROUP 9 (TYPE B-12.5 ONLY)
- 12" TYPE B STABILIZED SUBGRADE (LBR 40)

MILLING AND RESURFACING

MILL EXIST. ASPHALT PAVEMENT (1.5" AVG)
RESURFACE WITH 1.5" TYPE FC-12.5 FRICTION COURSE (TRAFFIC C)

POSTED SPEED LIMIT = 40 MPH
DESIGN SPEED LIMIT = 40 MPH

NOTES:

- CONTRACTOR SHALL USE APPROPRIATE SHORING/SHEETING AND TRENCH BOX PLACEMENT METHODS TO PROTECT EXIST. CURB & GUTTER AND CONCRETE SIDEWALK/DRIVEWAYS.
- CONTRACTOR SHALL BE AWARE, PROTECT AND ASSURE PROPER MEASURES ARE TAKEN WHEN WORKING IN THE VICINITY OF ALL AERIAL OVERHEAD LINES.

No.	DATE	REVISIONS	PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819		E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766
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M:\PROJECTS\TAMPA\15001-43RD STREET\DESIGN\ PUBLISH\BID SET\1401 TYPICAL SECTION.DWG
PLOT: 11/19/2018 5:49:14 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI NCS.STB, PROJECT STATUS: ---

GENERAL AND CONSTRUCTION NOTES:

1. PRIOR TO THE CONTRACT PRE-BID MEETING, THE CONTRACTOR SHALL VISIT THE PROJECT LOCATION AND REVIEW THE PROPOSED CONSTRUCTION AND CONSTRUCTION SEQUENCING.
2. THE PRE-CONSTRUCTION MEETING SHALL BE HELD PRIOR TO THE ORDERING OF MATERIALS AND TO INITIATING CONSTRUCTION. AT THIS MEETING, THE NOTICE TO PROCEED DATE WILL BE ESTABLISHED.
3. ANY FIELD CHANGES TO THE CONSTRUCTION PLANS WITHOUT WRITTEN DOCUMENTATION AND APPROVAL BY THE ENGINEER, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. THE CONTRACTOR SHALL MAINTAIN A CURRENT APPROVED SET OF CONSTRUCTION PLANS AND CONTRACT DOCUMENTS ON SITE AT ALL TIMES.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STAGING EQUIPMENT AND MATERIALS WITHIN AN APPROVED STAGING AREA.
6. THE CONTRACTOR SHALL NOTIFY SUNSHINE STATE ONE CALL OF FLORIDA (1-800-432-4770) 72 HOURS IN ADVANCE OF CONSTRUCTION. PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH FLORIDA STATUTE 553-851 FOR THE PROTECTION OF UNDERGROUND GAS PIPE LINES.
7. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL PROPOSED ELEVATIONS FOR STORM SEWER STRUCTURES PRIOR TO CONSTRUCTION STAKE OUT. SHOULD ANY DISCREPANCIES EXIST, THE CONTRACTOR SHALL CONTACT THE ENGINEER.
8. NO REPRESENTATION IS MADE REGARDING BALANCED EARTHWORK. ANY EXCESS MATERIAL, OR MATERIAL NOT SUITABLE FOR USE AS BACKFILL, SHALL BE REMOVED FROM THE SITE IN ACCORDANCE WITH THE SPECIFICATION NO MATERIAL SHALL BE REMOVED FROM SITE WITHOUT APPROVAL.
9. UNLESS NOTED, ALL REINFORCED CONCRETE STORM SEWER PIPE SHALL BE CLASS III.
10. UNLESS NOTED, ALL CONCRETE SHALL CONFORM TO ASTM C-150, AND MUST ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
11. UNLESS NOTED, ALL PAVING, DRAINAGE, AND PERMANENT AND TEMPORARY TRAFFIC CONTROL, SHALL CONFORM THE FDOT DESIGN STANDARDS (LATEST VERSION), STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST VERSION), FDOT FLEXIBLE PAVEMENT DESIGN MANUAL, AND MANUAL OF UNIFORM TRAFFIC CONTROL TO DEVICES (LATEST VERSION).
12. ALL SIDEWALK CONSTRUCTION AND ASSOCIATED WORK SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT (ADA).
13. ALL WORK PERFORMED SHALL COMPLY WITH THE REGULATIONS AND ORDINANCES OF THE VARIOUS GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE WORK.
14. ALL PERMANENT PAVEMENT MARKINGS SHALL BE LEAD-FREE, NON-SOLVENT BASED THERMOPLASTIC, AND SHALL BE PLACED IN ACCORDANCE WITH THE CONSTRUCTION PLANS.
15. THE CONTRACTOR SHALL HAVE A REGISTERED PROFESSIONAL LAND SURVEYOR RESET ALL RIGHT-OF-WAY MARKERS AND PROPERTY CORNER MARKERS REMOVED OR DISTURBED DURING CONSTRUCTION.
16. UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY ALL UTILITY RELOCATION PRIOR TO CONSTRUCTION.
17. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY AND PROVIDE A COPY OF THE PLANS TO ALL UTILITIES ONE WEEK IN ADVANCE OF PROPOSED CONSTRUCTION AND FIELD VERIFY, INCLUDING UTILITIES NOT SHOWN ON THE PLANS. THE CONTRACTOR MUST ALSO NOTIFY UTILITIES OR AGENCIES NO LESS THAN 48 HOURS PRIOR TO CONSTRUCTION, OF ALL ABOVE GROUND AND UNDERGROUND THAT MUST BE NOTIFIED AND/OR PROTECTED AS NEEDED.
18. THE CONTRACTOR SHALL NOTIFY ALL UTILITIES OF THE RELOCATION OF UTILITIES SHALL BE COORDINATED BY THE CONTRACTOR WITH THE APPROPRIATE COT UTILITY.
19. THE CONTRACTOR SHALL SCHEDULE INSPECTIONS AND TESTS WITH THE COT'S FIELD REPRESENTATIVE A MINIMUM OF 72 HOURS IN ADVANCE. ANY SANITARY SEWER AND/OR POTABLE WATER SERVICES RELOCATED INCIDENTAL TO THIS CONSTRUCTION, SHALL BE RELOCATED IN ACCORDANCE WITH ALL APPLICABLE CITY AND COUNTY STANDARDS.
20. THE CONTRACTOR SHALL NOT DISTURB EXISTING GRAVITY OR PRESSURIZED MAINS AND/OR STRUCTURES WITHOUT THE PRESENCE OF THE COT'S FIELD REPRESENTATIVE. THE UTILITY SYSTEM VALVES AND APPURTENANCES MAY ONLY BE OPERATED BY APPROVED PERSONNEL.
21. ALL BACK FILL OVER PIPES (STORM AND SANITARY SEWER, WATERLINE, ETC.) INSTALLED UNDER ROADWAYS OR WITHIN EMBANKMENTS, SHALL BE COMPACTED PER FDOT SPECIFICATIONS, SECTION 125.8.3, LATEST EDITION.
22. ALL UTILITIES TO BE PROTECTED UNLESS OTHERWISE NOTED.
23. WHEN IN CONFLICT, UTILITY POLES, GAS LINES, UNDERGROUND ELECTRIC, TELEPHONE AND OTHER COMMUNICATION CABLES AND CONDUIT WILL BE RELOCATED BY THE RESPECTIVE UTILITY OWNERS AT THEIR OWN EXPENSE AS DIRECTED BY THE ENGINEER.
24. TREE REMOVAL CONTRACTOR IS RESPONSIBLE FOR OBTAINING SITE CLEARING PERMIT PRIOR TO START OF ANY CONSTRUCTION.
25. NECESSARY ROOT PRUNING AND TRIMMING OF BRANCHES SHALL BE DONE BY A CERTIFIED ARBORIST.
26. THE CONTRACTOR SHALL COMPLY WITH THE PROVISIONS OF THE CITY OF TAMPA CODE REGARDING THE PRUNING, TRIMMING, REMOVAL AND DISPOSAL OF TREES.
27. MAILBOXES SHALL BE REMOVED AND REPLACED AS NECESSARY.
28. DRIVEWAYS SHALL BE RECONSTRUCTED IN ACCORDANCE WITH TAMPA CITY CODE CHAPTER 25 AND TRANSPORTATION TECHNICAL MANUAL. DEVIATIONS REQUIRE APPROVAL BY THE CITY'S TRAFFIC ENGINEER.
29. ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE ORDINANCES AND REGULATIONS OF THE CITY OF TAMPA.
30. COMPACTION FOR PIPE BACKFILL SHALL COMPLY WITH AASHTO T-99.
31. EXISTING DRAINAGE STRUCTURES TO REMAIN IN PLACE UNLESS OTHERWISE NOTED OR DIRECTED BY THE ENGINEER.
32. TEMPORARY PAINT SHALL BE APPLIED WITHIN SEVEN (7) DAYS & THERMOPLASTIC SHALL BE INSTALLED THIRTY (30) DAYS AFTER THE PLACEMENT OF ASPHALT TO ALLOW FOR ASPHALT CURING.
33. THE CONTRACTOR SHALL REMOVE AND RESET ALL MAILBOXES AT ADJUSTED DRIVEWAY LOCATIONS TO MAINTAIN MAIL SERVICE AS DIRECTED BY THE ENGINEER IN THE PLANS. MAILBOX LOCATION SHALL BE INCLUDED IN THE UNIT COST FOR CLEARING AND GRUBBING.
34. ALL DISTURBED IRRIGATION SHALL BE RE-ESTABLISHED TO ORIGINAL OR BETTER CONDITION AND SHALL BE INCLUDED IN THE UNIT COST FOR CLEARING AND GRUBBING.
35. ALL AREAS (STRUCTURES, UTILITIES, STORM SEWERS, SANITARY SEWERS, SIDEWALK, PAVEMENT, GROUND COVER OR GRASSED AREAS) DISTURBED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE REPAIRED TO ITS ORIGINAL CONDITION OR BETTER.
36. ALL SODDING, SEEDING, AND MULCHING SHALL INCLUDE WATERING AND FERTILIZATION, PER FDOT STD. INDEX NUMBER 105.
37. ALL FINISHED SLOPES SHALL BE 3H:1V OR FLATTER, UNLESS OTHERWISE SPECIFIED.

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GENERAL AND CONSTRUCTION NOTES CONT'D:

38. ALL EMBANKMENT (FILL) AND/OR EXCESS MATERIAL REQUIRED FOR CONSTRUCTION AND GRADING SHALL BE SUPPLIED AND/OR DISPOSED OF BY THE CONTRACTOR. ALL COSTS ASSOCIATED WITH EARTHWORK REQUIREMENTS NECESSARY TO COMPLETE CONSTRUCTION AND GRADING SHALL BE INCLUDED IN THE COSTS OF THE APPROPRIATE PAY ITEMS. THE CONTRACTOR SHALL MAINTAIN EXISTING DRAINAGE AND FLOW PATTERNS.
39. UPON PROJECT COMPLETION, AN AS-BUILT SURVEY SHALL BE PREPARED BY A PROFESSIONAL LAND SURVEYOR, REGISTERED IN THE STATE OF FLORIDA, AND SHALL BE SUBMITTED BY THE CONTRACTOR TO THE COT'S FIELD REPRESENTATIVE FOR PRELIMINARY REVIEW. UPON APPROVAL BY THE COT'S FIELD REPRESENTATIVE, SIX SIGNED AND SEALED HARD COPIES SHALL BE SUBMITTED TO THE COT'S FIELD REPRESENTATIVE ALONG WITH ALL CADD FILES ON A CD IN A FORMAT APPROVED BY THE COT'S FIELD REPRESENTATIVE. THE AS-BUILT SURVEY SHALL GIVE SUFFICIENT INFORMATION FOR ADA, SWFWMD, AND OTHER COMPLIANCE STANDARDS THROUGHOUT THE LIMITS OF THE PROJECT. ALL CONSTRUCTION ACTIVITY AND ANY UTILITY RELOCATION PERFORMED DURING CONSTRUCTION SHALL BE LOCATED ON THE AS-BUILT SURVEY. ALL EXPENSES REQUIRED TO PERFORM AN AS-BUILT SURVEY ACCEPTABLE TO SWFWMD AND THE COT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
40. RECORD DRAWINGS TO BE PREPARED, SIGNED AND SEALED BY A P.L.S. COORDINATES SHALL BE IN STATE PLANE GRID NORTH AMERICAN DATUM 1983/90.

SURVEY NOTES:

1. NO INSTRUMENTS OF RECORD REFLECTING EASEMENTS, RIGHT OF WAY AND/OR OWNERSHIP WERE FURNISHED EXCEPT AS SHOWN.
2. THERE MAY BE ITEMS DRAWN OUT OF SCALE TO GRAPHICALLY SHOW THEIR LOCATION.
3. BUILDING LINES AND PARCEL LOT LINES WERE TAKEN FROM HILLSBOROUGH COUNTY GIS WEBSITE, EXCEPT FOR SOUTH OF EAST 7th STREET WHERE RIGHT-OF-WAY AND BOUNDARY LINES WERE PROVIDED BY CITY OF TAMPA SURVEY DEPARTMENT.
4. THE HORIZONTAL DATUM IS BASED ON STATE PLANE VALUES ARE TIED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM (GRID), WEST ZONE NORTH AMERICAN DATUM 1983-1991, ADJUSTMENT 1990, AND IS DERIVED FROM COORDINATES PUBLISHED BY THE NGS.
- a. HORIZONTAL CONTROL POINT No.1: "FS16", N=1,319,602.54, E=527,606.48
- b. HORIZONTAL CONTROL POINT No.2: "Q 18", N=1,317,808.14, E=512,276.46
5. ELEVATIONS SHOWN ARE IN FEET AND REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988. (N.A.V.D.)
- a. REFERENCE BENCHMARK No.1: CITY OF TAMPA BENCHMARK "HV-02 0275" ELEVATION = 32.71'
- b. REFERENCE BENCHMARK No.2: HILLSBOROUGH COUNTY BENCHMARK "VA-915" ELEVATION = 30.99'
6. SURVEY DATE: JANUARY 18, 2017.

UTILITY - FACILITY CONTACT LIST

COMPANY	CONTACT NAME	TELEPHONE NO.	EMAIL
ATT (SDT)	STEVE HAMER	352-279-3238	shamer@sdt-1.com
SPECTRUM	RANDY LYLE	813-684-6100 ext. 32143	Randy.Lyle@charter.com
CSX	ANTHONY GILMORE	904-279-3842	anthony_gilmore@csx.com
FDOT	JAMES MEYER	813-612-3355	james.meyer@state.dot.fl.us
FRONTIER NETWORK	RANDALL JAMES	813-892-9692	randall.james@ftr.com
CENTURY LINK / LEVEL 3	MICHAEL NUNEZ	720-888-0916	centurylinknationalosprelocations@centurylink.com
MCI / VERIZON BUSINESS	DEAN BOYERS	469-886-4238	investigations@verizon.com
TECO PEOPLE GAS	JACK EVERIDGE	813-275-3729	jeveridge@tecoenergy.com
TAMPA WATER	ROY MCKENZIE	813-274-7096	Roy.McKenzie@tampagov.net
TAMPA WASTEWATER	JACK FERRAS	813-274-8095	jack.ferras@tampagov.net
HC SHERIFF'S OFFICE	JEFFREY KEITH	813-290-2270	jkeith@hcsa.tampa.fl.us

M:\PROJECTS\TAMPA\15001-43RD STREET\DESIGN\ PUBLISH\BID SET\11402 GENERAL NOTES.DWG
PLOT DATE: 11/19/2018 5:49:24 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI NCS.STB PROJECT STATUS: ---

SW



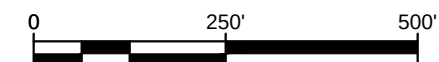
BORING LOCATION PLAN



BORING LOCATION PLAN

- LEGEND

-  APPROXIMATE SPT BORING LOCATION
 APPROXIMATE PAVEMENT CORE AND
HAND AUGER BORING LOCATION
 APPROXIMATE PAVEMENT CORE AND
SPT BORING LOCATION



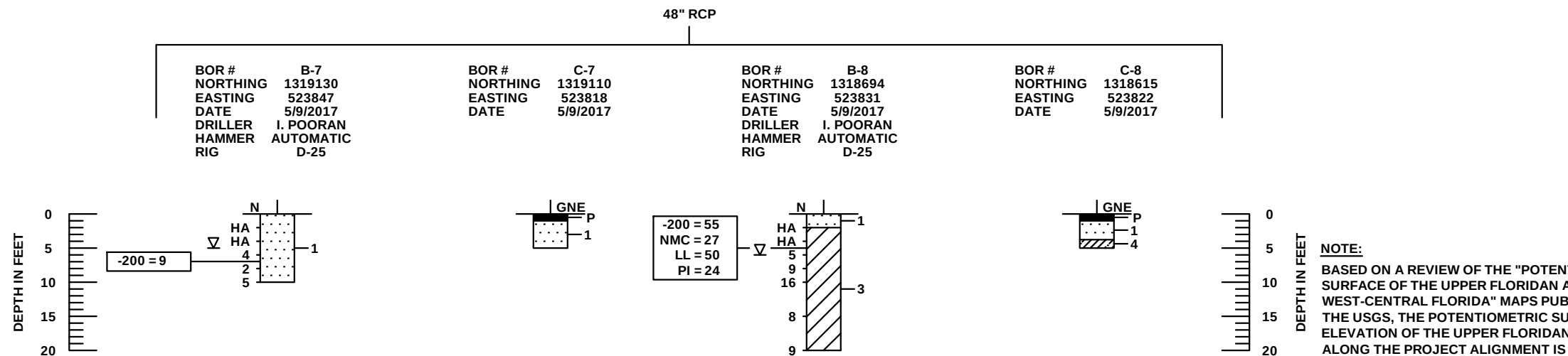
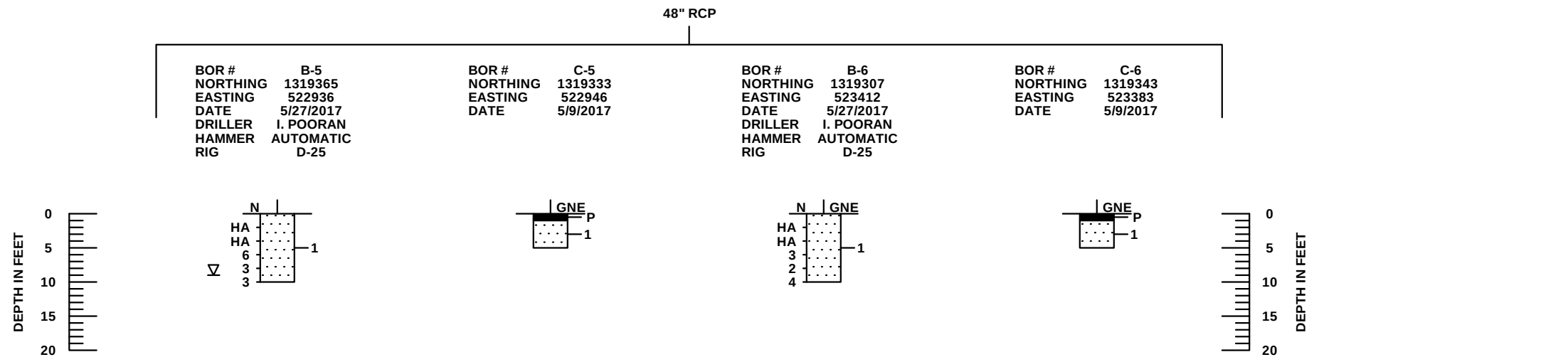
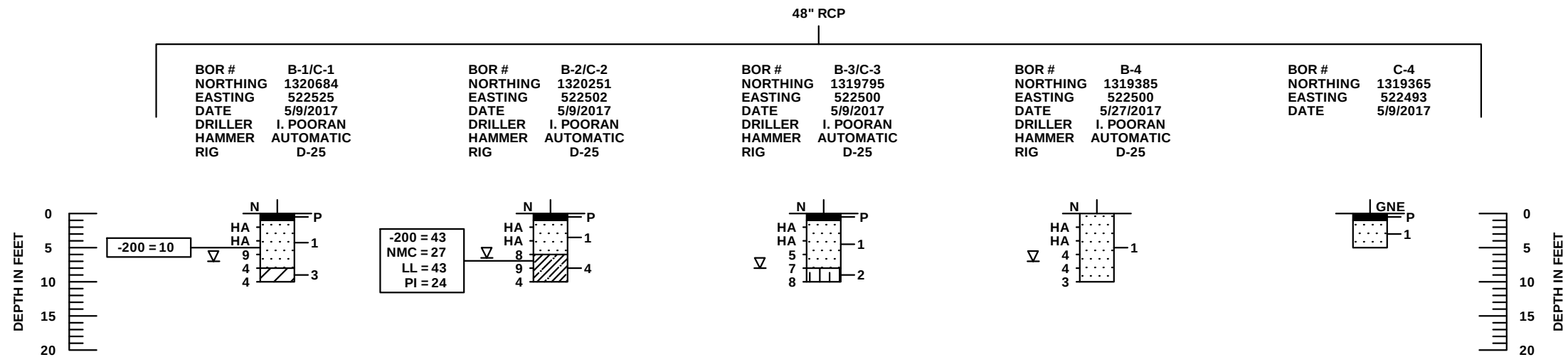
THE GEOTECHNICAL SOILS INFORMATION SHOWN IN THE PLANS ARE FOR INFORMATIONAL PURPOSES ONLY. SUBSURFACE CONDITIONS MAY VARY IN THE FIELD. THE GEOTECHNICAL ENGINEERING SERVICES WERE COMPLETED AND PREPARED BY TIERRA. THE GEOTECHNICAL ENGINEER IS WILLIAM P. ROVIRA IV, PE.

No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA <i>Department of Transportation and Stormwater Services Stormwater Engineering Division</i>	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS BORING LOCATION PLANS	SHEET 16

\\projects\TMPA\TMPA15001-43RD_STREET\DESIGN_PUBLISH\BID SET\T407 GEOTECHNICAL MAP.DWG
 PLOTTED: 11/19/2018 5:50:17 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB PROJECT STATUS: ---

SOIL PROFILES

LEGEND



THE GEOTECHNICAL SOILS INFORMATION SHOWN IN THE PLANS ARE FOR INFORMATIONAL PURPOSES ONLY. SUBSURFACE CONDITIONS MAY VARY IN THE FIELD. THE GEOTECHNICAL ENGINEERING SERVICES WERE COMPLETED AND PREPARED BY TIERRA. THE GEOTECHNICAL ENGINEER IS WILLIAM P. ROVIRA IV, PE.

NOTE:

BASED ON A REVIEW OF THE "POTENTIOMETRIC SURFACE OF THE UPPER FLORIDAN AQUIFER, WEST-CENTRAL FLORIDA" MAPS PUBLISHED BY THE USGS, THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER ALONG THE PROJECT ALIGNMENT IS APPROXIMATELY +10 TO +20 FEET NGVD 29. THE CONTRACTOR SHOULD BE PREPARED TO HANDLE A POTENTIOMETRIC LEVEL UP TO +20 FEET, NGVD 29, AT NO ADDITIONAL COST TO THE CITY.

	PALE BROWN TO BROWN SAND TO SAND WITH SILT (SP/SP-SM)
	BROWN SILTY SAND (SM)
	GRAY TO BROWN SANDY CLAY TO CLAY (CL/CH)
	GRAY TO BROWN CLAYEY SAND (SC)
	PAVEMENT AND BASE MATERIAL
	GROUNDWATER LEVEL ENCOUNTERED DURING INVESTIGATION
N	SPT N-VALUE IN BLOWS/FOOT FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED)
SP	UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2488) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW
GNE	GROUNDWATER TABLE NOT ENCOUNTERED
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCES
EASTING	EASTING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83 DETERMINED USING HAND-HELD GARMIN ETREX EQUIPMENT WITH A REPORTED ACCURACY OF 10 FEET
NORTHING	NORTHING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83 DETERMINED USING HAND-HELD GARMIN ETREX EQUIPMENT WITH A REPORTED ACCURACY OF 10 FEET
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)

SOIL TEST RESULTS:	
RESISTIVITY	6,500 TO 35,000 OHM-CM
CHLORIDES	15 TO 30 PPM
SULFATES	<5 TO 110 PPM
pH	6.6 TO 10.2

RECOMMENDED ENVIRONMENTAL CLASSIFICATION:
SUBSTRUCTURE STEEL: MODERATELY AGGRESSIVE (SOIL-pH=6.6)
SUBSTRUCTURE CONCRETE: SLIGHTLY AGGRESSIVE

	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS- RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE LOOSE MEDIUM DENSE DENSE VERY DENSE	LESS THAN 4 4 to 10 10 to 30 30 to 50 GREATER THAN 50	LESS THAN 3 3 to 8 8 to 24 24 to 40 GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY SOFT SOFT FIRM STIFF VERY STIFF HARD	LESS THAN 2 2 to 4 4 to 8 8 to 15 15 to 30 GREATER THAN 30	LESS THAN 1 1 to 3 3 to 6 6 to 12 12 to 24 GREATER THAN 24

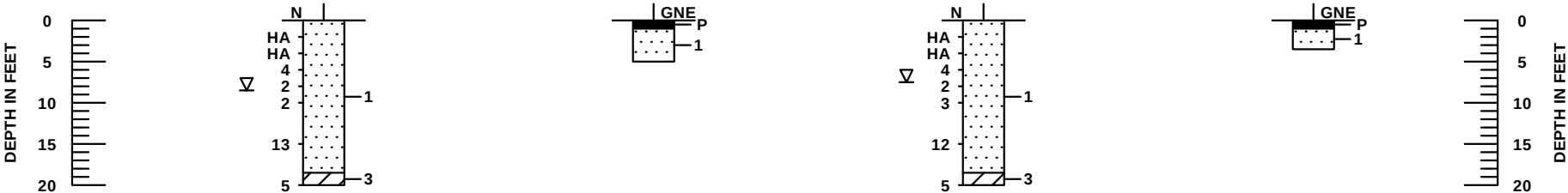
No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA <i>Department of Transportation and Stormwater Services Stormwater Engineering Division</i>	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS SOIL PROFILES (I)	SHEET 17

M:\PROJECTS\TMA\TMA15001-43RD_STREET\DESIGN\ Publish\BID SET\T406 GEOTECHNICAL.DWG
 PLOTTED: 11/19/2018 5:50:21 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB PROJECT STATUS: ---

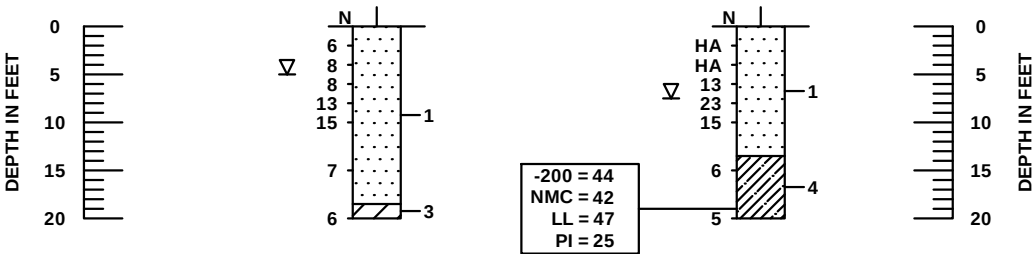
SOIL PROFILES

LEGEND

BOR # B-9				BOR # C-9				BOR # B-10				BOR # C-10			
NORTHING 1318303				NORTHING 1318319				NORTHING 1318047				NORTHING 1318067			
EASTING 523782				EASTING 523801				EASTING 523803				EASTING 523803			
DATE 5/27/2017				DATE 5/9/2017				DATE 5/27/2017				DATE 5/9/2017			
DRILLER I. POORAN				DRILLER I. POORAN				DRILLER I. POORAN				DRILLER I. POORAN			
HAMMER AUTOMATIC				HAMMER AUTOMATIC				HAMMER AUTOMATIC				HAMMER AUTOMATIC			
RIG D-25				RIG D-25				RIG D-25				RIG D-25			



BOR # BC-1				BOR # BC-2			
NORTHING 1317688				NORTHING 1317722			
EASTING 523662				EASTING 523806			
DATE 5/9/2017				DATE 5/9/2017			
DRILLER I. POORAN				DRILLER I. POORAN			
HAMMER AUTOMATIC				HAMMER AUTOMATIC			
RIG D-25				RIG D-25			



- 1 PALE BROWN TO BROWN SAND TO SAND WITH SILT (SP/SP-SM)
- 2 BROWN SILTY SAND (SM)
- 3 GRAY TO BROWN SANDY CLAY TO CLAY (CL/CH)
- 4 GRAY TO BROWN CLAYEY SAND (SC)
- P PAVEMENT AND BASE MATERIAL
- ▽ GROUNDWATER LEVEL ENCOUNTERED DURING INVESTIGATION
- N SPT N-VALUE IN BLOWS/FOOT FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED)
- SP UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2488) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW
- GNE GROUNDWATER TABLE NOT ENCOUNTERED
- HA HAND AUGERED TO VERIFY UTILITY CLEARANCES
- EASTING EASTING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83 DETERMINED USING HAND-HELD GARMIN ETREX EQUIPMENT WITH A REPORTED ACCURACY OF 10 FEET
- NORTHING NORTHING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83 DETERMINED USING HAND-HELD GARMIN ETREX EQUIPMENT WITH A REPORTED ACCURACY OF 10 FEET
- 200 PERCENT PASSING #200 SIEVE
- NMC NATURAL MOISTURE CONTENT (%)
- LL LIQUID LIMIT (%)
- PI PLASTICITY INDEX (%)

SOIL TEST RESULTS:	
RESISTIVITY	6,500 TO 35,000 OHM-CM
CHLORIDES	15 TO 30 PPM
SULFATES	<5 TO 110 PPM
pH	6.6 TO 10.2

RECOMMENDED ENVIRONMENTAL CLASSIFICATION:
SUBSTRUCTURE STEEL: MODERATELY AGGRESSIVE (SOIL-pH=6.6)
SUBSTRUCTURE CONCRETE: SLIGHTLY AGGRESSIVE

	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS- RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

NOTE:
BASED ON A REVIEW OF THE "POTENTIOMETRIC SURFACE OF THE UPPER FLORIDAN AQUIFER, WEST-CENTRAL FLORIDA" MAPS PUBLISHED BY THE USGS, THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER ALONG THE PROJECT ALIGNMENT IS APPROXIMATELY +10 TO +20 FEET NGVD 29. THE CONTRACTOR SHOULD BE PREPARED TO HANDLE A POTENTIOMETRIC LEVEL UP TO +20 FEET, NGVD 29, AT NO ADDITIONAL COST TO THE CITY.

THE GEOTECHNICAL SOILS INFORMATION SHOWN IN THE PLANS ARE FOR INFORMATIONAL PURPOSES ONLY. SUBSURFACE CONDITIONS MAY VARY IN THE FIELD. THE GEOTECHNICAL ENGINEERING SERVICES WERE COMPLETED AND PREPARED BY TIERRA. THE GEOTECHNICAL ENGINEER IS WILLIAM P. ROVIRA IV, PE.

No.	DATE	REVISIONS	PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS SOIL PROFILES (2)	SHEET 18

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PLOTTED: 11/19/2018 5:02:24 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---

EXISTING STORM SEWER DATA

EXISTING STORM SEWER STRUCTURE TABLE			
ID	RIM ELEVATION	INV IN	INV OUT
st-5	30.89	26.67 (E) 26.67 (SE) 27.67 (NE)	26.44 (W)
st-6	30.81		28.05 (NW)
st-7	30.74		26.52 (W)
st-8	30.77	28.07 (NW) 27.76 (E)	27.79 (SW)
st-9	30.83	28.18 (NE)	27.94 (W)
st-10	32.69		28.44 (SW)
st-11	32.01	28.01 (N)	27.97 (SE)
st-12	31.65	28.60 (NW)	28.42 (S)
st-32	32.10	30.32 (W)	29.97 (E)
st-42	33.28	31.27 (N)	31.26 (E)
st-43	31.39	26.57 (E)	
st-44	33.06	27.15 (E)	27.12 (W)
st-45	32.74	28.24 (S)	27.19 (W)

EXISTING STORM SEWER STRUCTURE TABLE			
ID	RIM ELEVATION	INV IN	INV OUT
st-48	32.62	27.62 (N) 28.05 (SW)	27.00 (E)
st-49	32.23		28.19 (NE)
st-50	32.39	28.05 (W)	27.72 (S)
st-51	31.90		28.15 (E)
st-53	31.66	26.88 (S) 26.03 (W)	26.03 (E)
st-54	31.58	28.87 (W)	28.19 (N)
st-56	31.60		28.39 (E)
st-58	31.84	27.40 (W)	27.51 (SE)
st-59	31.85		27.81 (E)
st-60	31.19	27.29 (SE)	27.29 (E)
st-61	31.46		27.72 (NW)
st-64	31.40		25.85 (E)

No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA <i>Department of Transportation and Stormwater Services Stormwater Engineering Division</i>	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS EXISTING STORM SEWER DATA	SHEET 19

\\m:\projects\tpm\tpm\15001-43RD_STREET\DESIGN_PUBLISH\BID SET\1405 UTILITY TABLES.DWG
 PLOTTED: 11/19/2018 5:50:46 PM. BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB: PROJECT STATUS: ---

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PLOTTED: 11/19/2018 5:50:53 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI.NCS,STB, PROJECT STATUS: ---

SW

STORM SEWER STRUCTURE TABLE

ID	TYPE	STATION	OFFSET	RIM EL.	INV IN	INV OUT	SUMP EL
ST-47	CONC ENDWALL FDOT INDEX 251	10+33.87	0.00'	0.00	5.75 (NE)		
ST-48	MH RISER ON BOX CULVERT	11+65.77	0.01' LT	17.78			12.00
ST-49	5'X13' J-BOX TYPE J7 FDOT INDEX 200	12+12.42	0.00'	17.96			4.72
ST-50	MH RISER ON BOX CULVERT	13+15.37	0.00'	19.02			13.28
ST-51	COT TYPE T INLET RISER ON BOX CULVERT	13+28.27	0.00' LT	19.03			16.41
ST-52	MH RISER ON BOX CULVERT	13+39.35	0.00'	19.03	11.14 (NE)	11.14 (SW)	16.63
ST-53	COT TYPE T INLET RISER ON BOX CULVERT	13+50.24	0.00' RT	18.94			16.55
ST-54	5'X27' TYPE J7 J-BOX WITH WEIR FDOT INDEX 200 (MOD)	13+78.44	0.02' LT	18.59		11.35 (SW)	
ST-55	MH TYPE J7 (7' DIA') FDOT INDEX NO. 200, 201	20+36.97	0.60' RT	19.44	12.00 (N)	11.95 (S)	11.95
ST-56	MH TYPE J7 (7' DIA') FDOT INDEX NO. 200, 201	23+65.58	1.43' RT	24.26	14.45 (N)	14.45 (S)	13.95
ST-57	COT TYPE T INLET	25+67.01	0.00' RT	28.26		23.85 (N)	23.85
ST-58	MH TYPE J7 (7' DIA') FDOT INDEX NO. 200, 201	26+16.44	3.90' RT	28.60	16.78 (N) 23.59 (S)	16.23 (S)	15.73
ST-59	MH TYPE J7 (7' DIA') FDOT INDEX NO. 200, 201	27+35.50	8.38' RT	30.60	17.05 (N) 26.89 (E)	16.97 (S)	16.97
ST-60	COT TYPE T INLET	27+39.30	29.61' RT	30.81		27.05 (W)	27.05
ST-61	MH TYPE J7 (6'X20') (CONFLICT, MOD) FDOT INDEX NO. 200, 201	27+66.48	5.79' RT	30.95	20.10 (N) 18.38 (E)	17.09 (S) 18.39 (W)	15.59
ST-62	COT TYPE T INLET	27+79.87	41.32' RT	30.74		26.52 (NW)	26.52
ST-63	COT TYPE T INLET	28+03.84	23.50' RT	30.82	28.18 (NE) 26.67 (SE)	26.67 (W)	26.67
ST-64	COT TYPE T INLET	28+00.78	6.34' LT	30.77	27.95 (NW)	27.79 (SW)	27.79
ST-65	MH TYPE J7T (6' DIA') FDOT INDEX NO. 200, 201	28+01.92	2.70' RT	31.06	21.79 (N) 26.54 (E)	20.12 (S)	20.12
ST-66	SUNTREE NSBB MODEL NO NSSB-8-14	29+12.30	6.89' RT	32.43	21.92 (N)	21.85 (S)	17.85

STORM SEWER STRUCTURE TABLE

ID	TYPE	STATION	OFFSET	RIM EL.	INV IN	INV OUT	SUMP EL
ST-67	MH TYPE J7 (6' DIA') FDOT INDEX NO. 200, 201	31+56.57	6.43' RT	31.92	22.03 (N)	22.03 (S)	22.03
ST-68	MH TYPE J7 (6' DIA') FDOT INDEX NO. 200, 201	33+35.27	5.71' RT	31.07	22.12 (N)	22.12 (S)	22.12
ST-72	MH TYPE J7 (7' DIA') FDOT INDEX NO. 200, 201	35+89.67	8.08' RT	30.23	22.31 (NW)	22.25 (S)	22.25
ST-73	MH TYPE J7 (6' DIA') FDOT INDEX NO. 200, 201	36+44.93	9.22' RT	30.10	22.34 (W)	22.34 (SE)	22.34
ST-75	MH TYPE J7 (6' DIA') FDOT INDEX NO. 200, 201	38+83.82	8.11' RT	31.70	22.46 (W)	22.45 (E)	22.45
ST-76	COT TYPE T INLET	40+39.01	21.01' RT	32.10	30.32 (W)	28.10 (S)	28.10
ST-77	MH TYPE J7 (6' DIA') FDOT INDEX NO. 200, 201	40+38.80	8.04' RT	32.35	22.54 (W) 28.00 (N)	22.54 (E)	22.54
ST-80	MH TYPE J7 (6' DIA') FDOT INDEX NO. 200, 201	43+57.36	7.73' RT	32.96	22.70 (W)	22.70 (E)	22.70
ST-83	MH TYPE J7T (6'X6') (CONFLICT) FDOT INDEX NO. 200, 201	46+82.19	6.36' RT	33.33	22.86 (W) 27.36 (N)	22.86 (E) 27.31 (S)	22.86
ST-84	MH TYPE J7 (6' DIA') FDOT INDEX NO. 200, 201	48+93.53	6.38' RT	33.18	24.16 (W) 28.10 (S) 28.15 (N)	22.97 (E)	22.97
ST-85	DBI TYPE C W/ TRAVERSABLE SLOT FDOT INDEX NO. 232	48+93.50	17.93' LT	33.49		28.20 (N)	28.20
ST-86	DBI TYPE C W/ TRAVERSABLE SLOT FDOT INDEX NO. 232	48+93.71	18.10' RT	33.34		28.20 (S)	28.20
ST-87	MH TYPE J7 (7' DIA') FDOT INDEX NO. 200, 201	49+36.21	6.41' RT	33.17	24.18 (N)	24.18 (E)	24.18
ST-88	MH TYPE J7 (6'X6') (CONFLICT) FDOT INDEX NO. 200, 201	52+02.72	9.46' RT	33.09	24.31 (N) 22.58 (E)	24.30 (S) 22.55 (W)	21.99
ST-89	MH TYPE J7 (6'X6') (CONFLICT) FDOT INDEX NO. 200, 201	52+21.35	9.82' RT	33.02	24.32 (N) 27.16 (E)	24.32 (S) 27.16 (W)	23.17
ST-90	MH TYPE J7 (7'X6') (CONFLICT) FDOT INDEX NO. 200, 201	53+36.58	18.17' RT	33.44	24.39 (N) 28.08 (E)	24.38 (S) 28.05 (W)	24.38
ST-91	MH TYPE J7 (6' DIA') FDOT INDEX NO. 200, 201	53+84.94	30.79' RT	33.40	24.41 (N)	24.41 (S)	24.41

No.	DATE	REVISIONS



PENNONI ASSOCIATES INC.
2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
PROPOSED STORM SEWER DATA (I)

SHEET
20

STORM SEWER STRUCTURE TABLE							
ID	TYPE	STATION	OFFSET	RIM EL.	INV IN	INV OUT	SUMP EL
ST-92	MH TYPE J7 (6'X6') (CONFLICT) FDOT INDEX NO. 200, 201	54+42.38	30.93' RT	33.11	24.44 (N) 22.68 (E)	24.44 (S) 22.67 (W)	22.17
ST-93	MH TYPE J7T (6'X7') (CONFLICT) FDOT INDEX NO. 200, 201	56+24.25	31.38' RT	32.41	24.55 (N) 28.07 (SW)	24.53 (S) 28.06 (NE)	24.03
ST-94	MH TYPE J7T (6'X7') (CONFLICT) FDOT INDEX NO. 200, 201	56+93.71	31.33' RT	32.16	24.59 (N) 28.06 (W)	24.58 (S) 28.06 (E)	24.08
ST-96	MH TYPE J7T (7'X10') (CONFLICT) (MOD) FDOT INDEX NO. 200, 201	60+33.97	33.36' RT	31.46	24.77 (N) 26.05 (W)	24.76 (S) 26.04 (E)	22.10
ST-97	MH TYPE J7 (6' DIA') FDOT INDEX NO. 200, 201	62+22.56	41.40' RT	31.57	24.87 (N)	24.87 (S)	24.83
ST-98	MH TYPE J7T (6'X6') (CONFLICT) FDOT INDEX NO. 200, 201 (MOD)	63+08.49	39.77' RT	31.86	24.91 (N) 27.19 (E)	24.91 (S) 26.91 (W)	24.91
ST-99	MH TYPE J7 (7' DIA') FDOT INDEX NO. 200, 201	64+60.11	36.99' RT	31.90	23.96 (N)	24.98 (S)	23.96
ST-104	MES (4:1) FDOT INDEX 272	34+47.50	16.50' RT	30.14		28.93 (N)	
ST-105	MES (4:1) FDOT INDEX 272	34+90	16.50' RT	30.06	28.85 (S)		
ST-106	MES (4:1) FDOT INDEX 272	35+30.51	16.50' RT	29.56		28.35 (N)	
ST-107	MES (4:1) FDOT INDEX 272	36+04.07	16.50' RT	29.52	28.31 (S)		
ST-108	SAND-CEMENT ENDWALL FDOT INDEX 258 (MOD)	36+38.37	16.85' LT	29.87		27.91 (N)	
ST-109	SAND-CEMENT ENDWALL FDOT INDEX 258 (MOD)	36+40.23	22.98' RT	29.58	27.62 (S)		
ST-110	SAND-CEMENT ENDWALL FDOT INDEX 258 (MOD)	41+43.53	21.58' RT	32.35		30.43 (E)	
ST-112	SAND-CEMENT ENDWALL FDOT INDEX 258 (MOD)	41+98.89	22.34' RT	31.78	30.70 (W)		
ST-113	SAND-CEMENT ENDWALL FDOT INDEX 258 (MOD)	42+79.06	19.82' RT	1.08		31.03 (E)	
ST-114	SAND-CEMENT ENDWALL FDOT INDEX 258 (MOD)	43+59.64	20.51' RT	33.24	31.32 (W)		
ST-115	SAND-CEMENT ENDWALL FDOT INDEX 258 (MOD)	43+83.81	19.90' RT	33.32		31.40 (E)	

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PLOT: 11/19/2018 5:50:58 PM, BY: MICHAEL HENDERSON, PLOT STYLE: PENNONI NCS.STB, PROJECT STATUS: ---

No.	DATE	REVISIONS



PENNONI ASSOCIATES INC.
2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE _____
P.E. NO. 38766

DES: MCH
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DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS

PROPOSED STORM SEWER DATA (2)

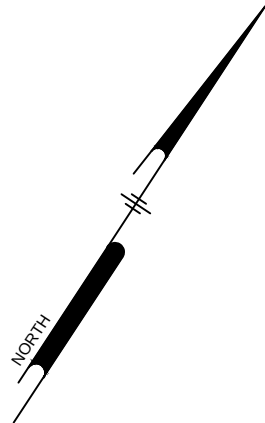
STORM SEWER PIPE TABLE					
STRUC. START	INV OUT	STRUC. END	INV IN	SIZE AND MATERIAL	LENGTH
ST-115	31.40	ST-114	31.32	12" RCP	24'
ST-113	31.03	ST-112	30.70	8" PVC	80'
ST-110	30.43	ST-76	30.32	12" RCP	105'
ST-108	27.91	ST-109	27.62	12"x18" ERCP	40'
ST-106	28.35	ST-107	28.31	12"x18" ERCP	74'
ST-104	28.93	ST-105	28.85	12"x18" ERCP	42'
ST-99	24.98	ST-98	24.91	48" RCP	152'
ST-98	24.91	ST-97	24.87	48" RCP	86'
ST-97	24.87	ST-96	24.77	48" RCP	189'
ST-96	24.76	ST-95	24.72	48" RCP	86'
ST-95	24.71	ST-94	24.59	48" RCP	255'
ST-94	24.58	ST-93	24.55	48" RCP	69'
ST-93	24.53	ST-92	24.44	48" RCP	182'
ST-92	24.44	ST-91	24.41	48" RCP	57'
ST-91	24.41	ST-90	24.39	48" RCP	50'
ST-90	24.38	ST-89	24.32	48" RCP	116'
ST-89	24.32	ST-88	24.31	48" RCP	19'
ST-88	24.30	ST-87	24.18	48" RCP	252'
ST-87	24.18	ST-84	24.16	48" RCP	43'
ST-86	28.20	ST-84	28.15	18" RCP	12'
ST-85	28.20	ST-84	28.10	18" RCP	24'
ST-84	22.97	ST-83	22.86	48" RCP	211'

STORM SEWER PIPE TABLE					
STRUC. START	INV OUT	STRUC. END	INV IN	SIZE AND MATERIAL	LENGTH
ST-83	22.86	ST-80	22.70	48" RCP	325'
ST-80	22.70	ST-77	22.54	48" RCP	319'
ST-77	22.54	ST-75	22.46	48" RCP	155'
ST-76	28.10	ST-77	28.00	18" RCP	13'
ST-75	22.45	ST-73	22.34	48" RCP	239'
ST-73	22.34	ST-72	22.31	48" RCP	52'
ST-72	22.25	ST-68	22.12	48" RCP	254'
ST-68	22.12	ST-67	22.03	48" RCP	179'
ST-67	22.03	ST-66	21.92	48" RCP	244'
ST-66	21.85	ST-65	21.79	48" RCP	111'
ST-65	20.12	ST-61	20.10	48" RCP	36'
ST-63	26.67	ST-65	26.54	18" RCP	21'
ST-62	26.52	ST-63	26.67	15" RCP	30'
ST-61	17.09	ST-59	17.05	48" RCP	31'
ST-60	27.05	ST-59	26.89	12" RCP	22'
ST-59	16.97	ST-58	16.78	48" RCP	118'
ST-58	16.23	ST-56	14.45	48" HDPE	251'
ST-57	23.85	ST-58	23.59	15" RCP	50'
ST-56	14.45	ST-55	12.00	48" RCP	329'
ST-55	11.95		11.55	38"x60" ERCP	32'
	23.96	ST-99	23.96	38"x60" ERCP	13'

No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE _____ P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS PROPOSED STORM SEWER DATA (3)	SHEET 22

M:\PROJECTS\MPA\TPA15001-43RD_STREET\DESIGN_PUBLISH\BID SET\1405 UTILITY TABLES.DWG
PLOTTED: 11/19/2018 5:51:03 PM, BY: MICHAEL HENDERSON PLOTSTYLE: PENNON\NCS.STB, PROJEC

M:\PROJECTS\TMP\TAMPA\15001-43RD_STREET\DESIGN_PUBLISH\BID SET\11381 ALIGN A STORMWATER PLAN.DWG
PLOTTED: 11/19/2018 5:51:26 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI.NCS,STB, PROJECT STATUS: ---



REGRADE BANK
3'H:1'V MAX (TYP)

REGRADE BANK
3'H:1'V MAX (TYP)

STA 10+29.86
OFF 23.7' LT
REMOVE EXIST
HEADWALL

REMOVE 2-EXIST
36" RCP

36" RCP

CONST 10'x4'
BOX CULVERT

ST-47

STA 10+37.67
OFF 22.4' RT

REGRADE BANK
3'H:1'V MAX (TYP)

CONST 2' THICK (MIN)
RUBBLE RIP-RAP OVER
FILTER FABRIC
±782 CY

ST-47

STA. 10+33.87, 0.00'
CONST CONC ENDWALL
FDOT INDEX 251
IE: 10'x4' CONC BOX CULVERT (NE) = 5.75
WALL: 13.41



SW

MATCH LINE STA. 11+00

CSX RAILROAD
RIGHT-OF-WAY VARIES

Exist R/W Line

No.	DATE	REVISIONS



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E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

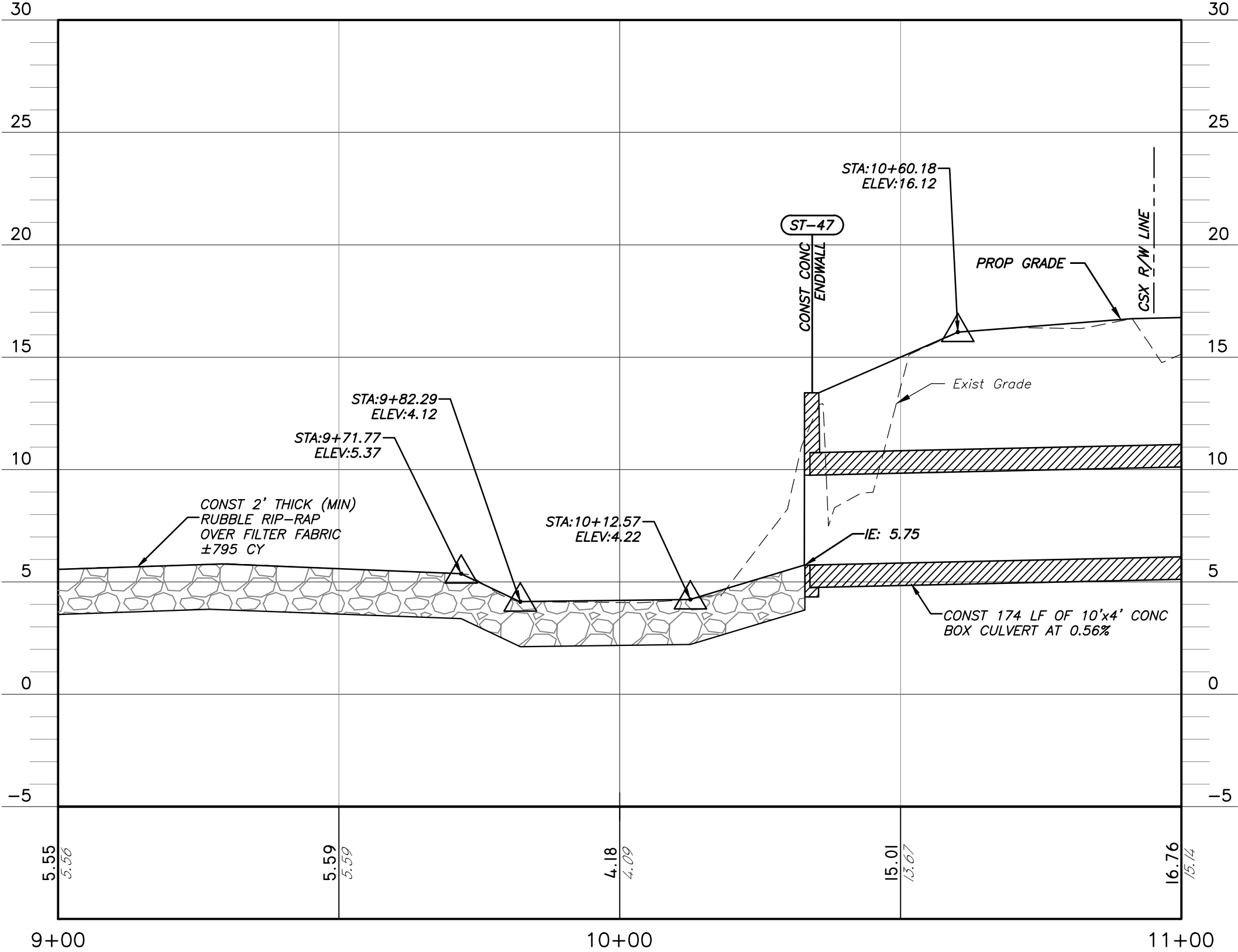
DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
STORMWATER CONSTRUCTION PLAN
STA 8+25 TO STA 11+00

SHEET
23

SW



VERT SCALE: 1" = 5'
HORIZ SCALE: 1" = 20'

M:\PROJECTS\TAMPA\15001-43RD STREET\DESIGN\ PUBLISH\BID SET\1501-1617 STORMWATER PROFILE.DWG
PLOT: 11/19/2018 5:51:41 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI.NCS,STB, PROJECT STATUS: ---

No.	DATE	REVISIONS

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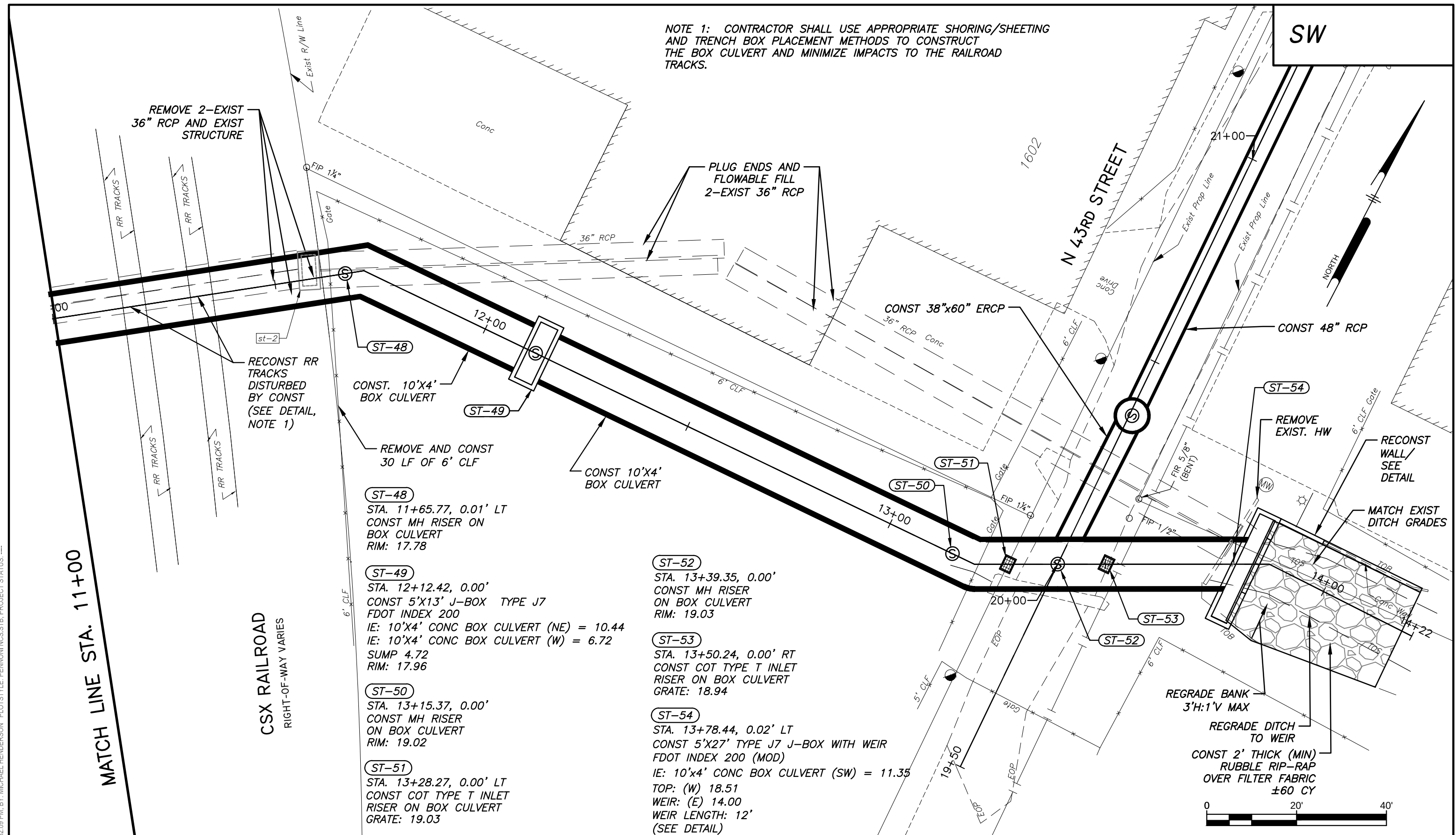
E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

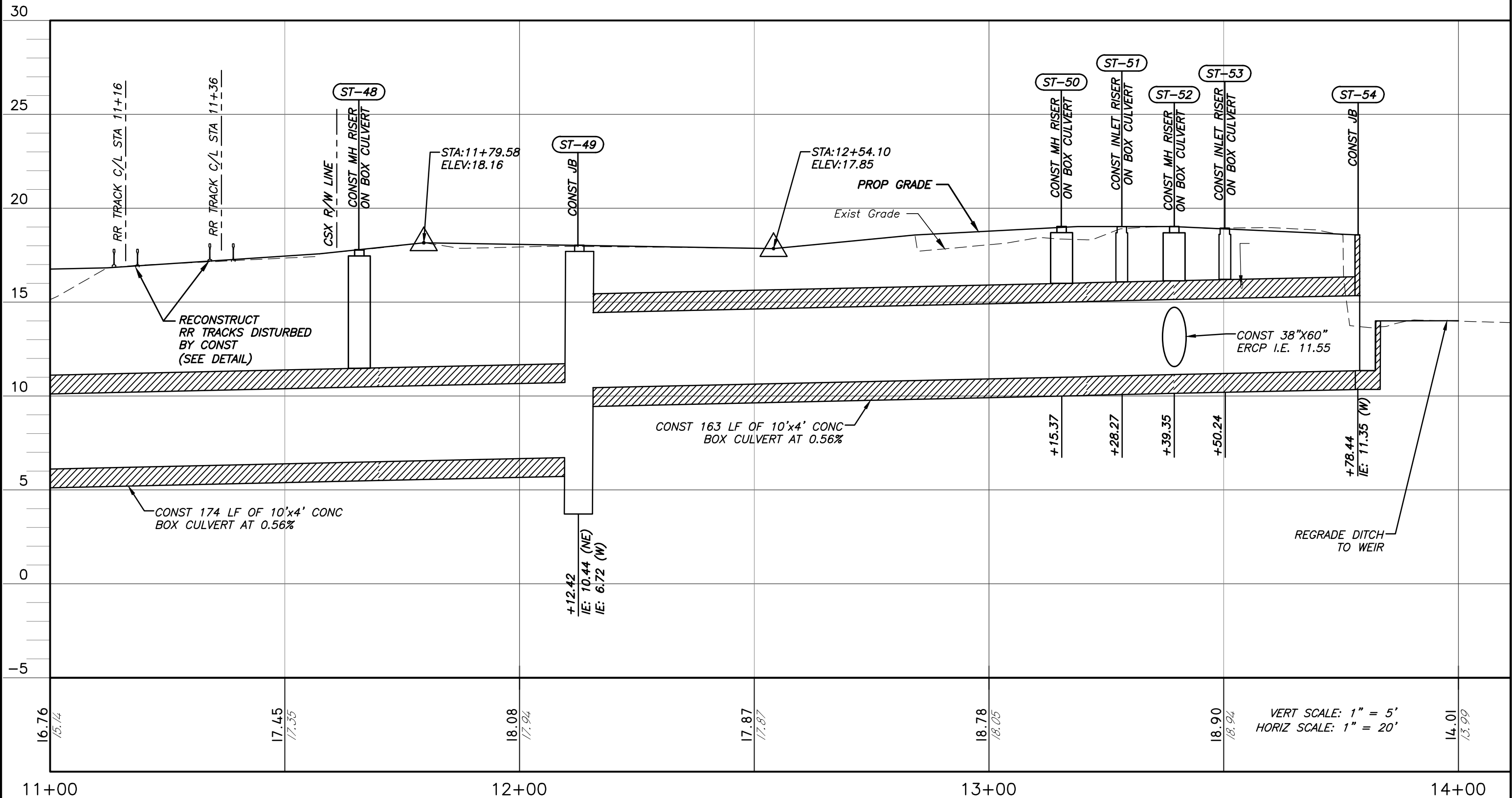
43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
STORMWATER PROFILE STA 9+00 TO
STA 11+00

SHEET
24



No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA <i>Department of Transportation and Stormwater Services Stormwater Engineering Division</i>	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS STORMWATER CONSTRUCTION PLAN STA 11+00 TO STA 14+22	SHEET 25

SW



M:\PROJECTS\TAMPA\15001-43RD_STREET\DESIGN\ PUBLISH\BID SET\11+00 TO 14+00\STORMWATER PROFILE.DWG
PLOT DATE: 11/19/2018 5:22:28 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI.NCS.STB PROJECT STATUS: ---

No.	DATE	REVISIONS

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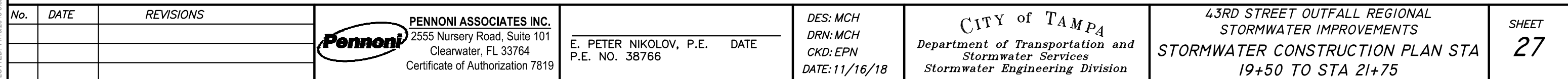
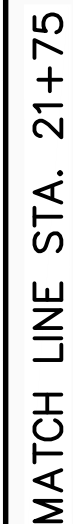
E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

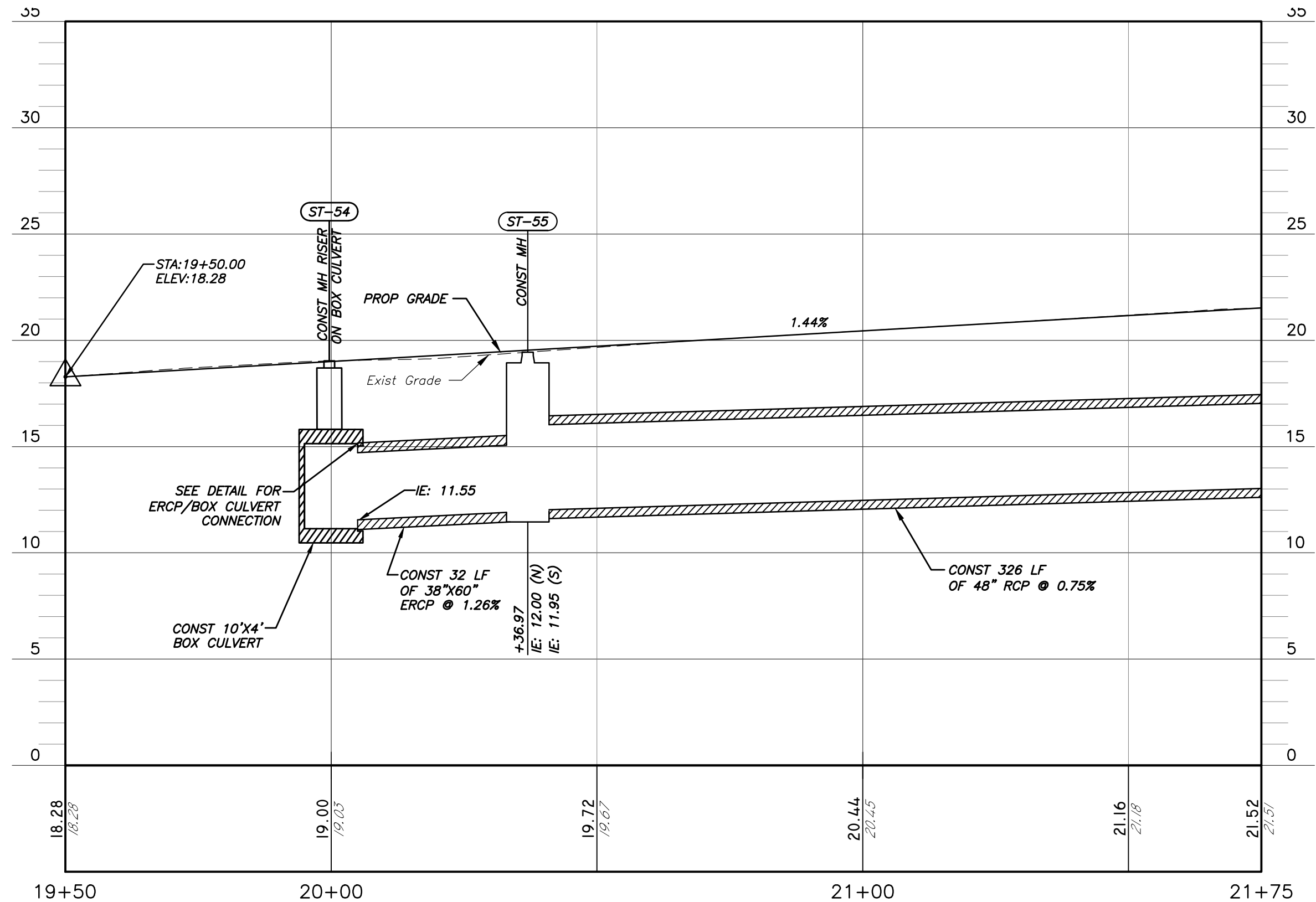
43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
STORMWATER PROFILE STA 11+00 TO
STA 14+22

SHEET
26



PROJECTS\TMPTA\TMPTA15001-43RD_STREET\DESIGN_PUBLISH\BID SET\T582 ALIGN B STORMWATER PLANS.DWG
 LOTTED: 11/19/2018 5:52:54 PM. BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI.NCS.STB. PROJECT STATUS: ---

SW



VERT SCALE: 1" = 5'
HORIZ SCALE: 1" = 20'

No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
Pennoni 2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

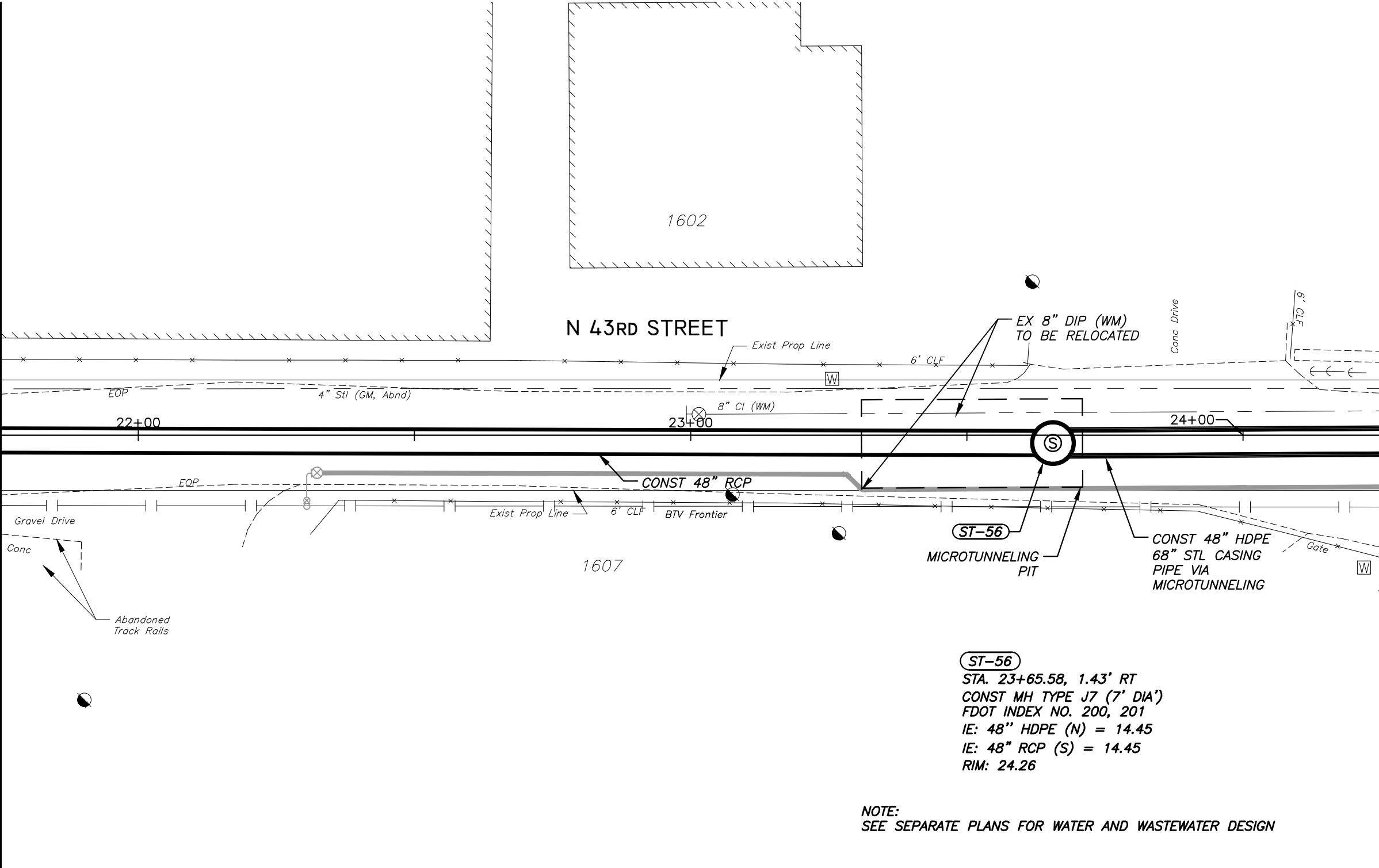
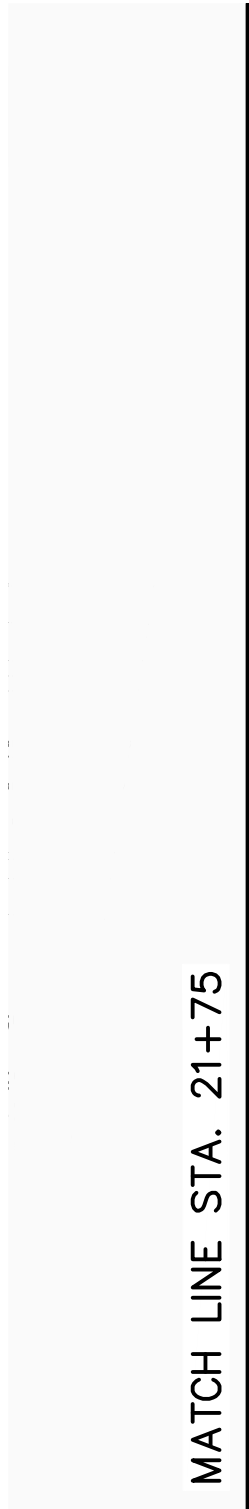
43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
STORMWATER PROFILE STA 19+50 TO
STA 21+75

SHEET
28

M:\PROJECTS\TAMPA\15001-43RD_STREET\DESIGN_PUBLISH\BID SET\1601-T617 STORMWATER PROFILE.DWG
PLOT: 11/19/2018 5:53:13 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI NCS.STB, PROJECT STATUS: ---

SW

MATCH LINE STA. 24+25

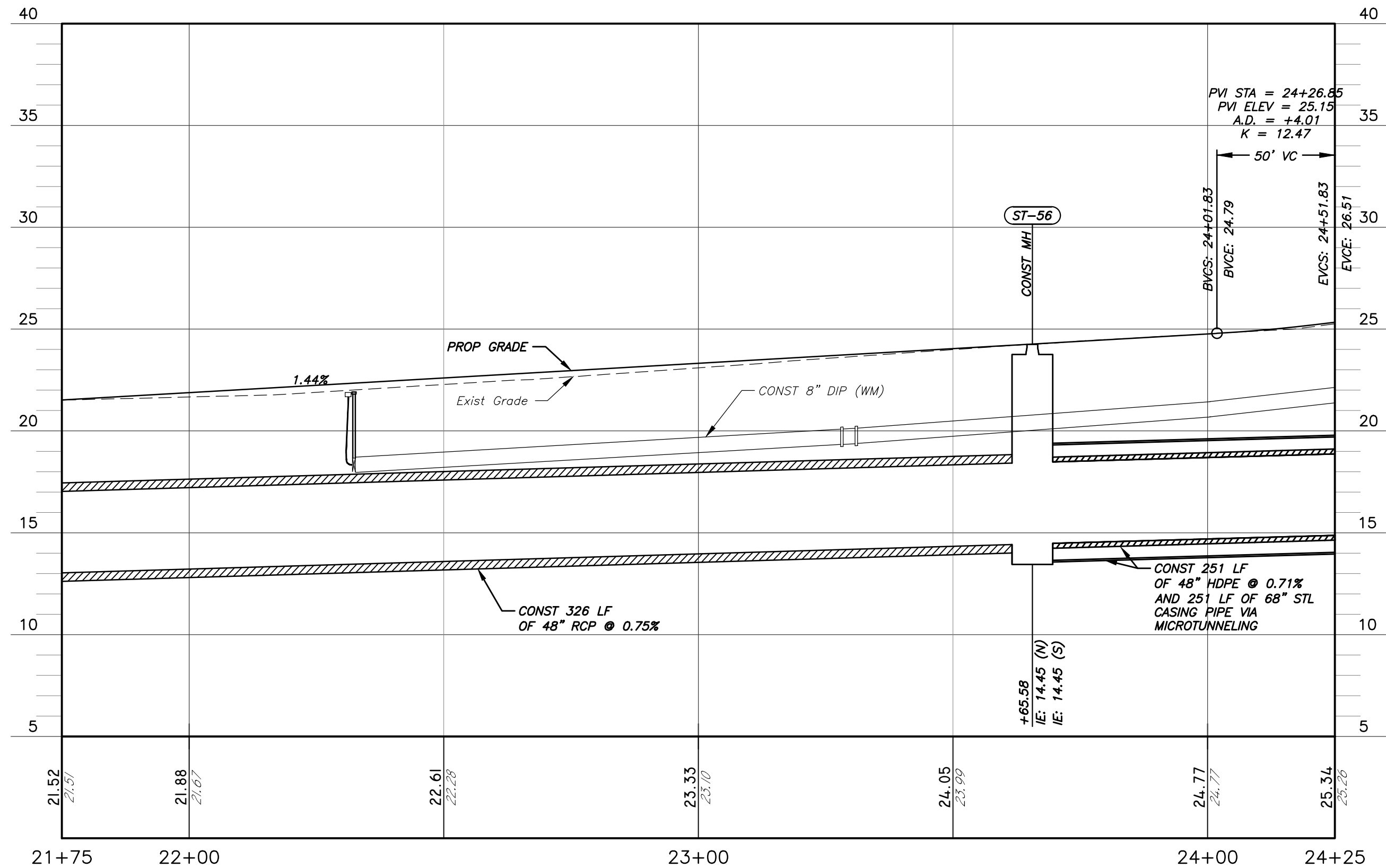


NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN



No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE _____ P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS STORMWATER CONSTRUCTION PLAN STA 21+75 TO STA 24+25	SHEET 29

SW



VERT SCALE: 1" = 5'
HORIZ SCALE: 1" = 20'

No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
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Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

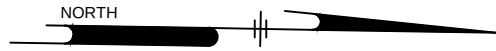
CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
STORMWATER PROFILE STA 21+75 TO
STA 24+25

SHEET
30

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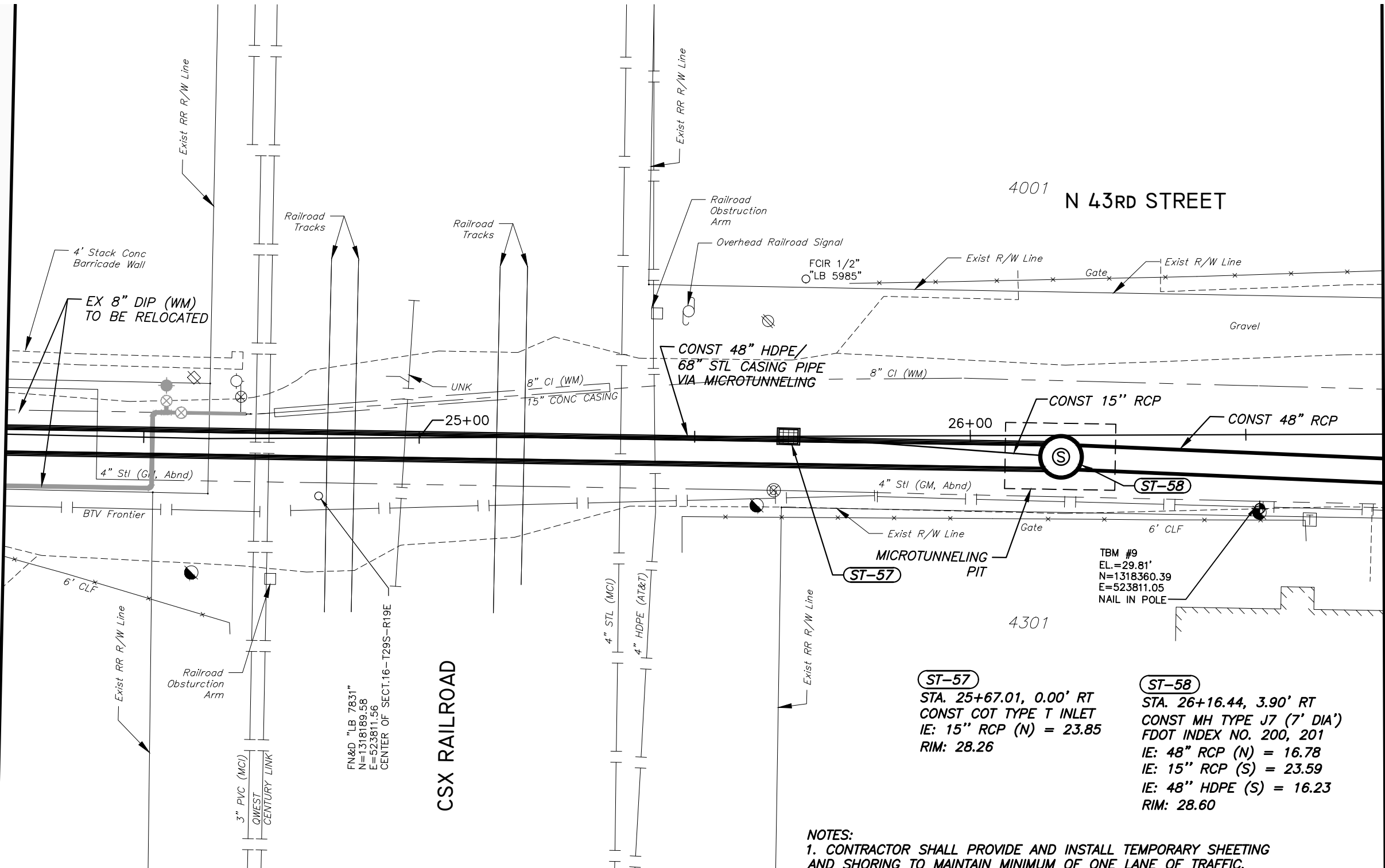
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PLOTTED: 11/19/2018 5:54:24 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI.NCS.STB, PROJECT STATUS: ---



SW

MATCH LINE STA. 24+25

MATCH LINE STA. 26+75



NOTES:
1. CONTRACTOR SHALL PROVIDE AND INSTALL TEMPORARY SHEETING AND SHORING TO MAINTAIN MINIMUM OF ONE LANE OF TRAFFIC.

2. SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN



No.	DATE	REVISIONS



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P.E. NO. 38766

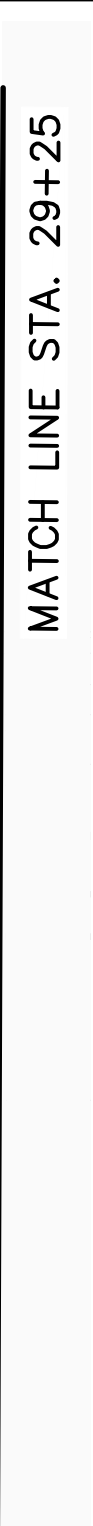
DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
**STORMWATER CONSTRUCTION PLAN STA
24+25 TO STA 26+75**

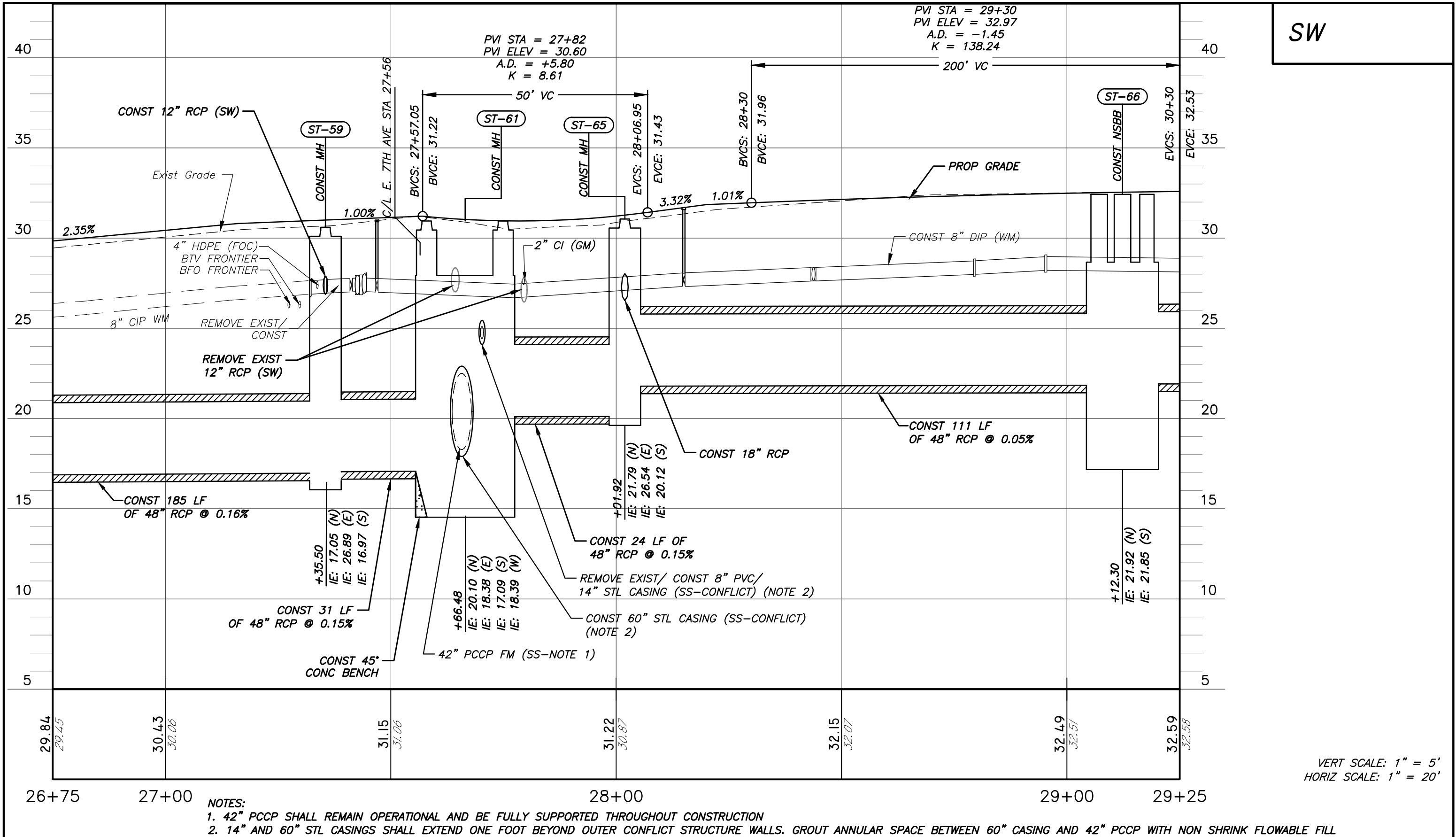
SHEET
31

SW



\\P:\PROJECTS\TMPA\TMPA15001-4\3RD_STREET\DESIGN_PUBLISH\BID SET\1582 ALIGN B STORMWATER PLANS.DWG
 PLOTTED: 11/19/2018 5:55:12 PM BY: MICHAEL HENDERSON PI OTSY1 E- PENNONI NCS STR PROJECT STATIS: ----

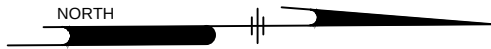
M:\PROJECTS\TWPATPA15001-43RD_STREET\DESIGN_PUBLISH\BID SET\T601-T617 STORMWATER PROFILE.DWG
PLOTTED: 11/19/2018 5:55:28 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI.NCS.STB PROJECT STATUS: ---



- NOTES:
- 42" PCCP SHALL REMAIN OPERATIONAL AND BE FULLY SUPPORTED THROUGHOUT CONSTRUCTION
 - 14" AND 60" STL CASINGS SHALL EXTEND ONE FOOT BEYOND OUTER CONFLICT STRUCTURE WALLS. GROUT ANNULAR SPACE BETWEEN 60" CASING AND 42" PCCP WITH NON SHRINK FLOWABLE FILL

No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819		DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA <i>Department of Transportation and Stormwater Services Stormwater Engineering Division</i>	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS STORMWATER PROFILE STA 26+75 TO STA 29+25	SHEET 34
				E. PETER NIKOLOV, P.E. DATE				
				P.E. NO. 38766				

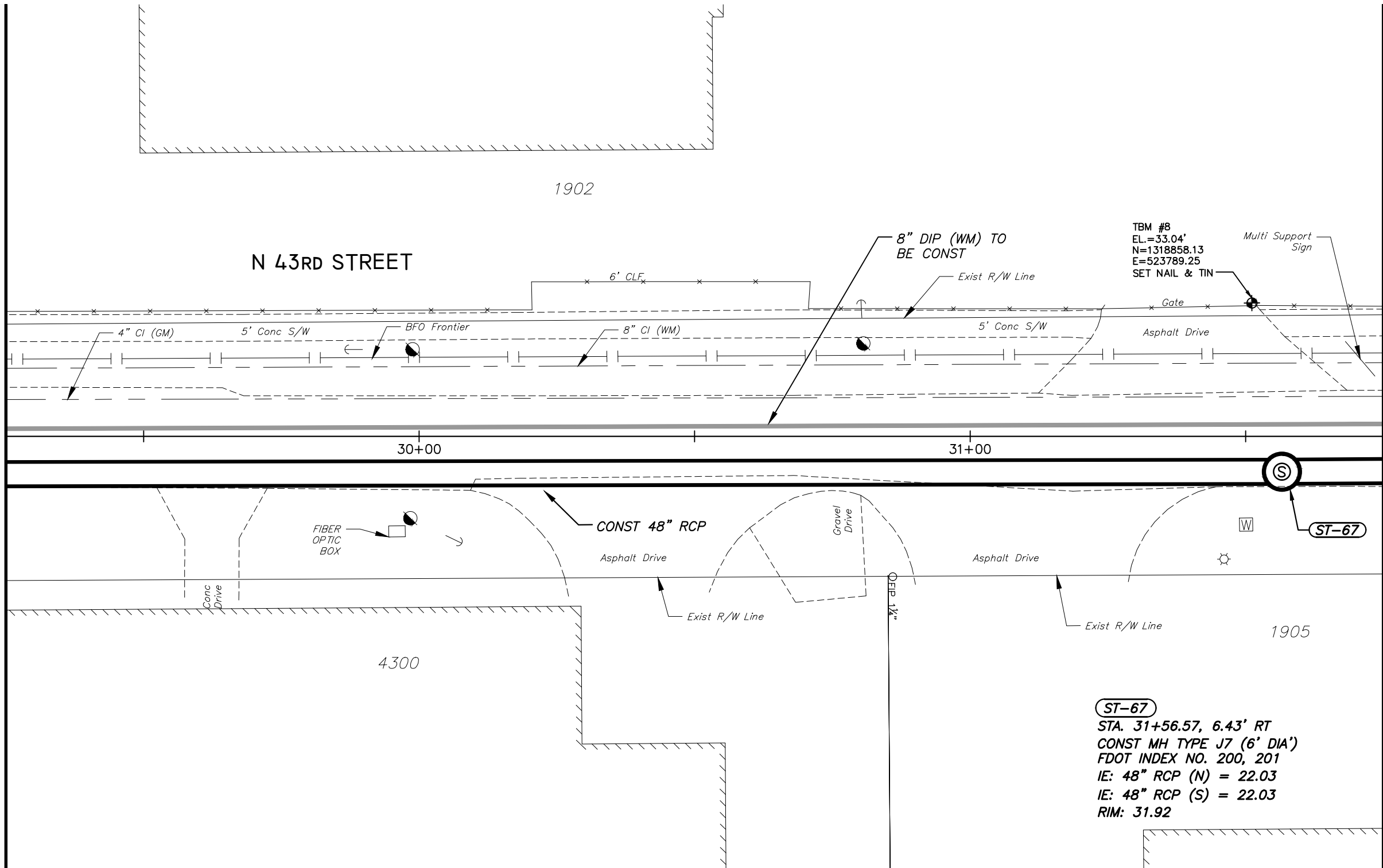
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PLOTTED: 11/19/2018 5:55:54 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---



SW

MATCH LINE STA. 29+25

MATCH LINE STA. 31+75



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Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

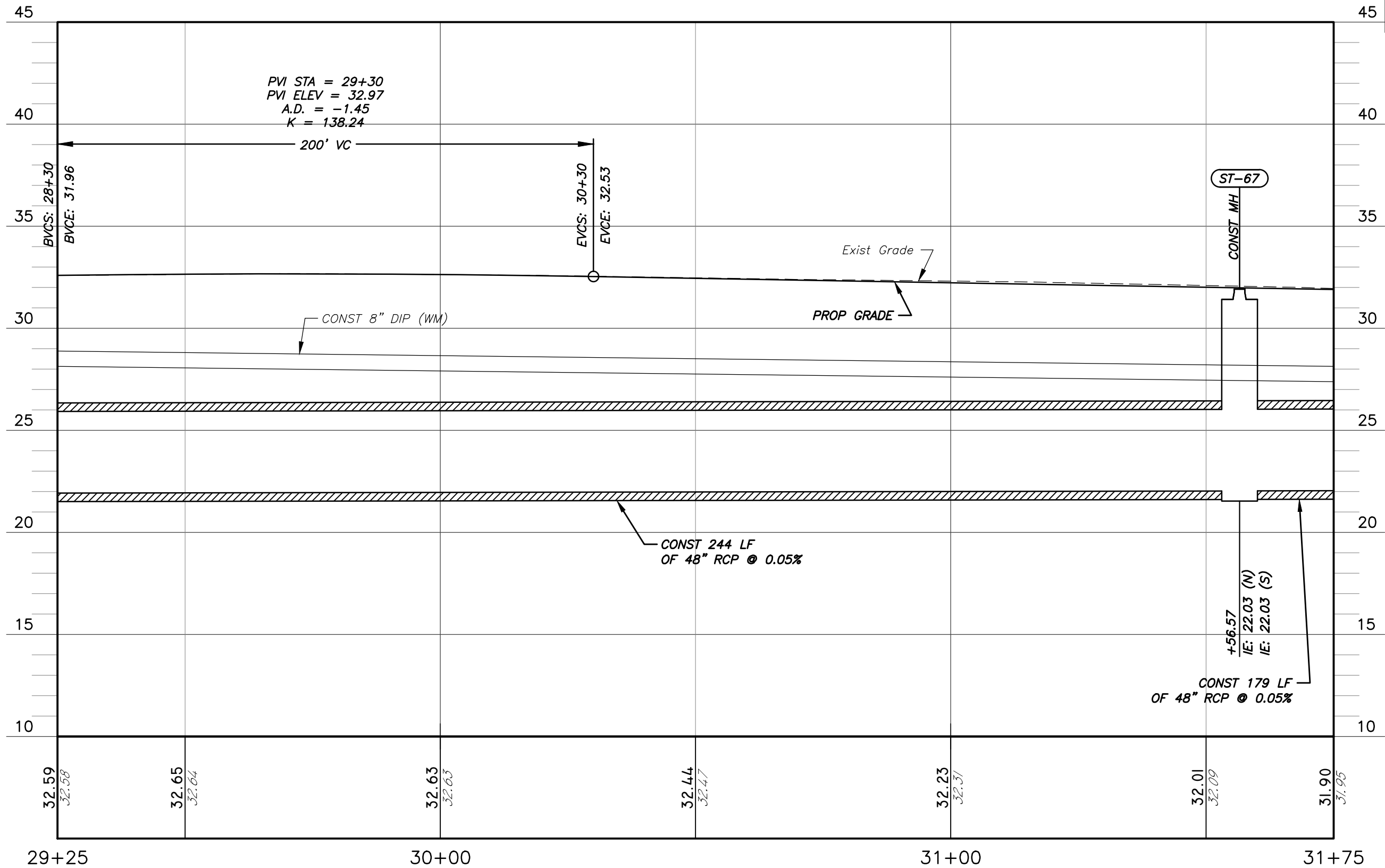
DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
STORMWATER CONSTRUCTION PLAN
STA 29+25 TO STA 31+75

SHEET
35

SW



VERT SCALE: 1" = 5'
HORIZ SCALE: 1" = 20'

No.	DATE	REVISIONS

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E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
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Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
STORMWATER PROFILE STA 29+25 TO
STA 31+75

SHEET
36

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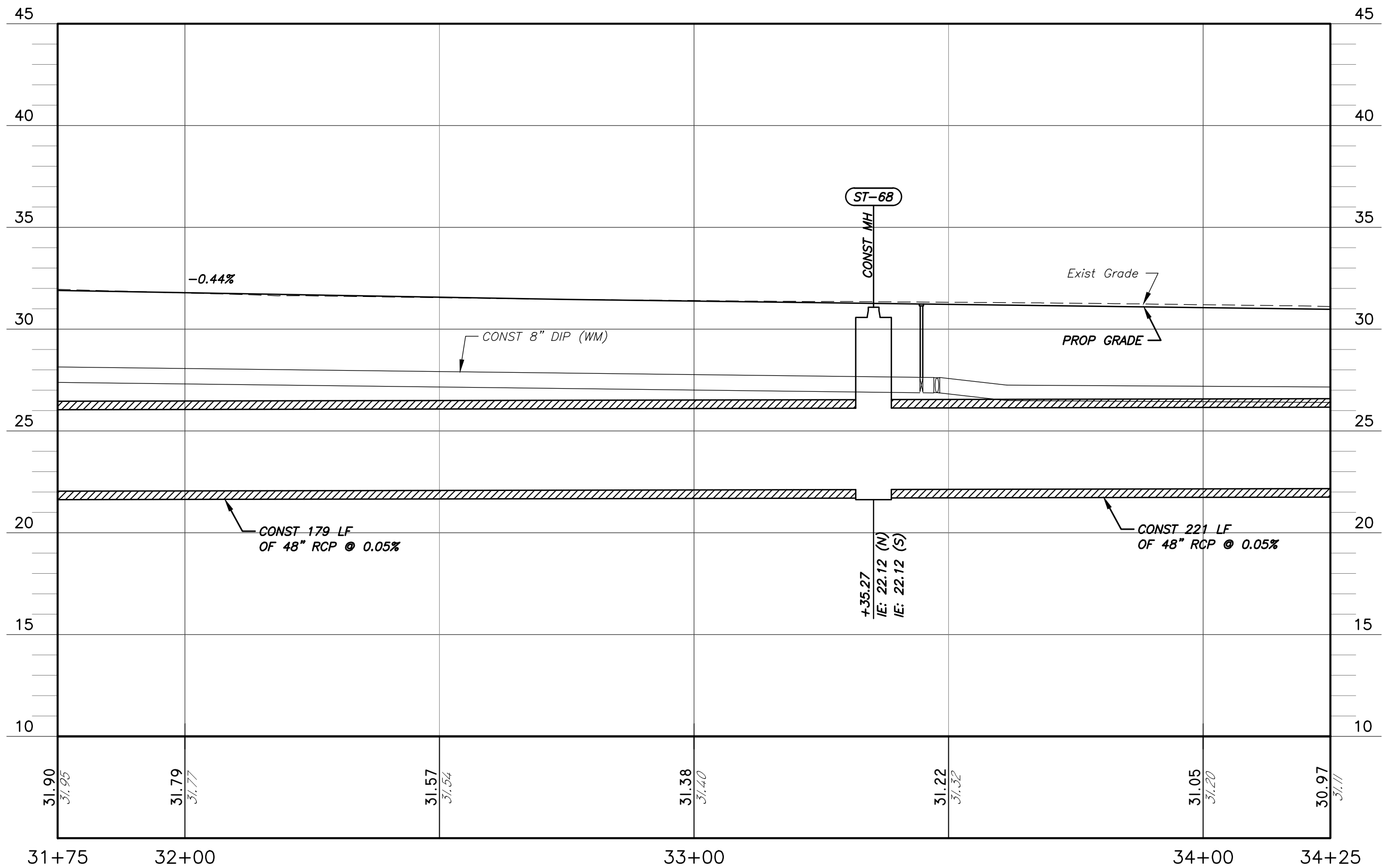
SW

MATCH LINE STA. 34+25



M:\PROJECTS\TWP\ATM\PA15001-4\3RD_STREET\DESIGN_PUBLISH\BID SET\T582 ALIGN B STORMWATER PLANS.DWG
PLOTTED: 11/19/2018 5:56:39 PM; BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI.NCS,STB, PROJECT STATUS: ---

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PLOTTED: 11/19/2018 5:56:59 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI.NCS,STB, PROJECT STATUS: ---



SW

VERT SCALE: 1" = 5'
HORIZ SCALE: 1" = 20'

No.	DATE	REVISIONS



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E. PETER NIKOLOV, P.E.
P.E. NO. 38766

DATE

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA

Department of Transportation and
Stormwater Services
Stormwater Engineering Division

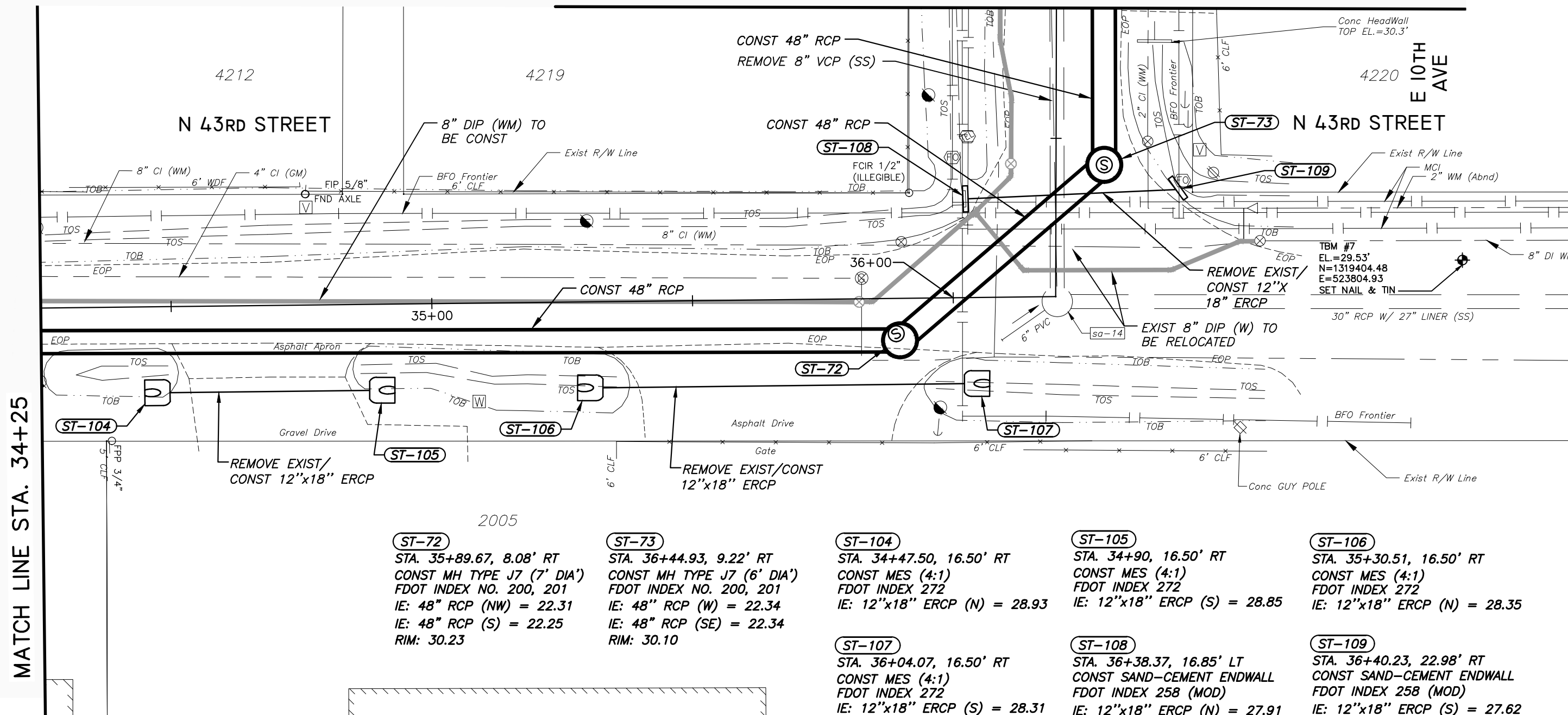
43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
STORMWATER PROFILE STA 31+75 TO
STA 34+25

SHEET
38

NORTH

SW

MATCH LINE STA. 36+75

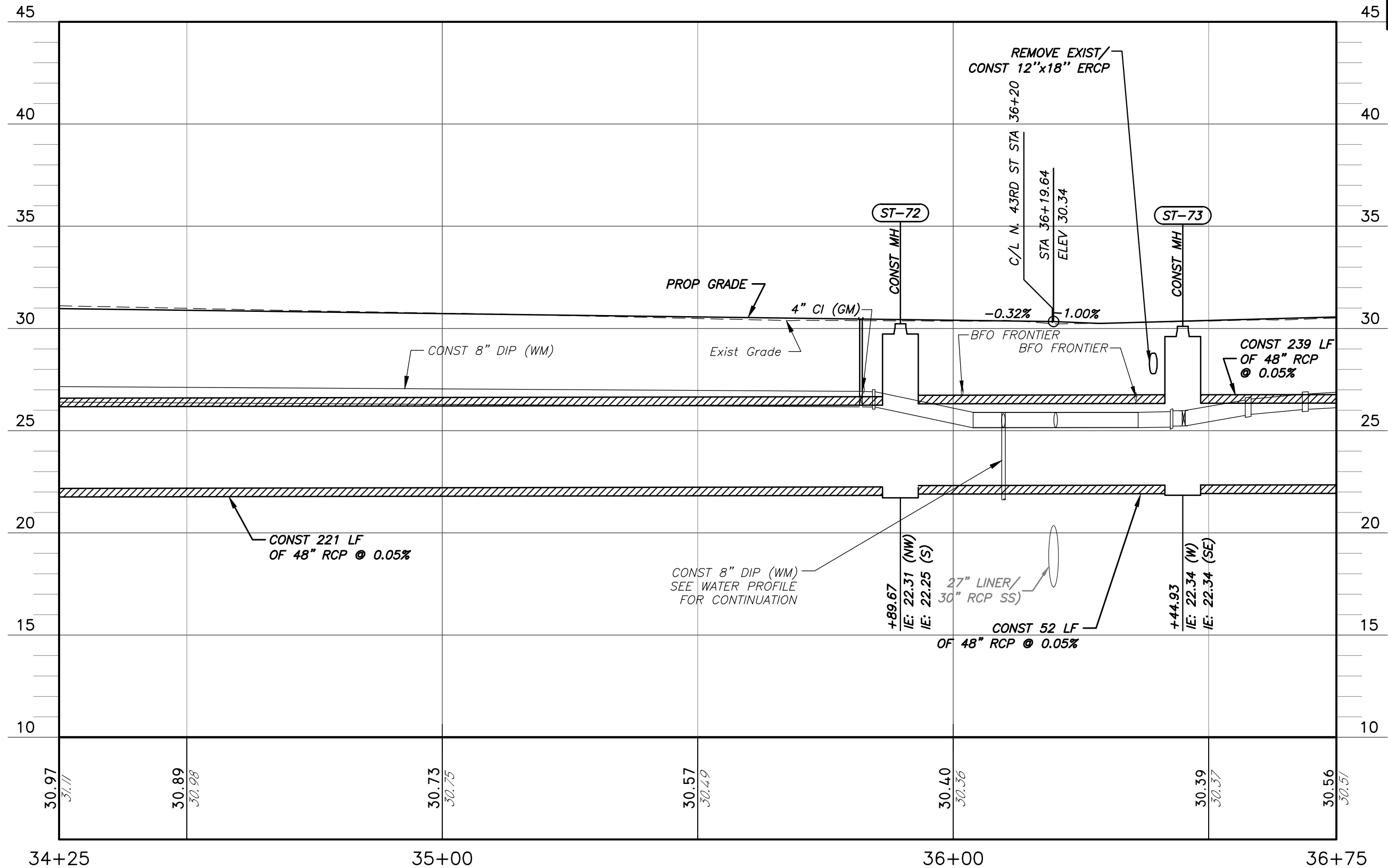


NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN



No.	DATE	REVISIONS	PENNONI ASSOCIATES INC.  2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819		DES: MCH	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS STORMWATER CONSTRUCTION PLAN STA 34+25 TO STA 36+75	SHEET 39
					DRN: MCH			
					CKD: EPN			
					DATE: 11/16/18			
					E. PETER NIKOLOV, P.E. DATE			
					P.E. NO. 38766			

SW

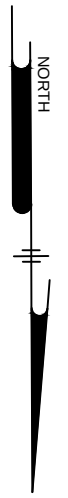


VERT SCALE: 1" = 5'
HORIZ SCALE: 1" = 20'

No.	DATE	REVISIONS	PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819		E. PETER NIKOLOV, P.E. P.E. NO. 38766 DATE		CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division		43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS STORMWATER PROFILE STA 34+25 TO STA 36+75		SHEET 40

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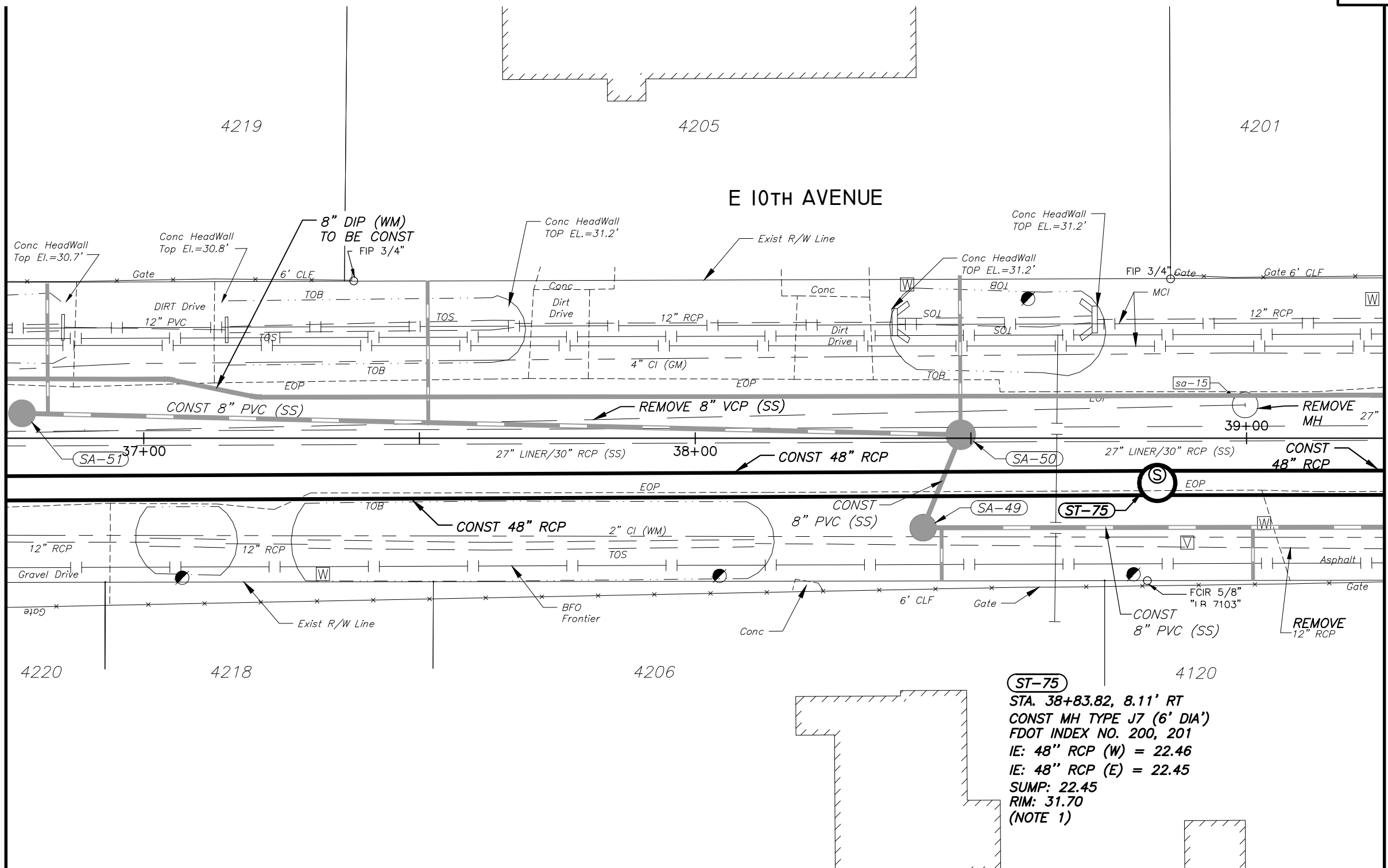
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PLOTTED: 11/19/2018 5:58:14 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB PROJECT STATUS: ---



SW

MATCH LINE STA. 36+75

MATCH LINE STA. 39+25



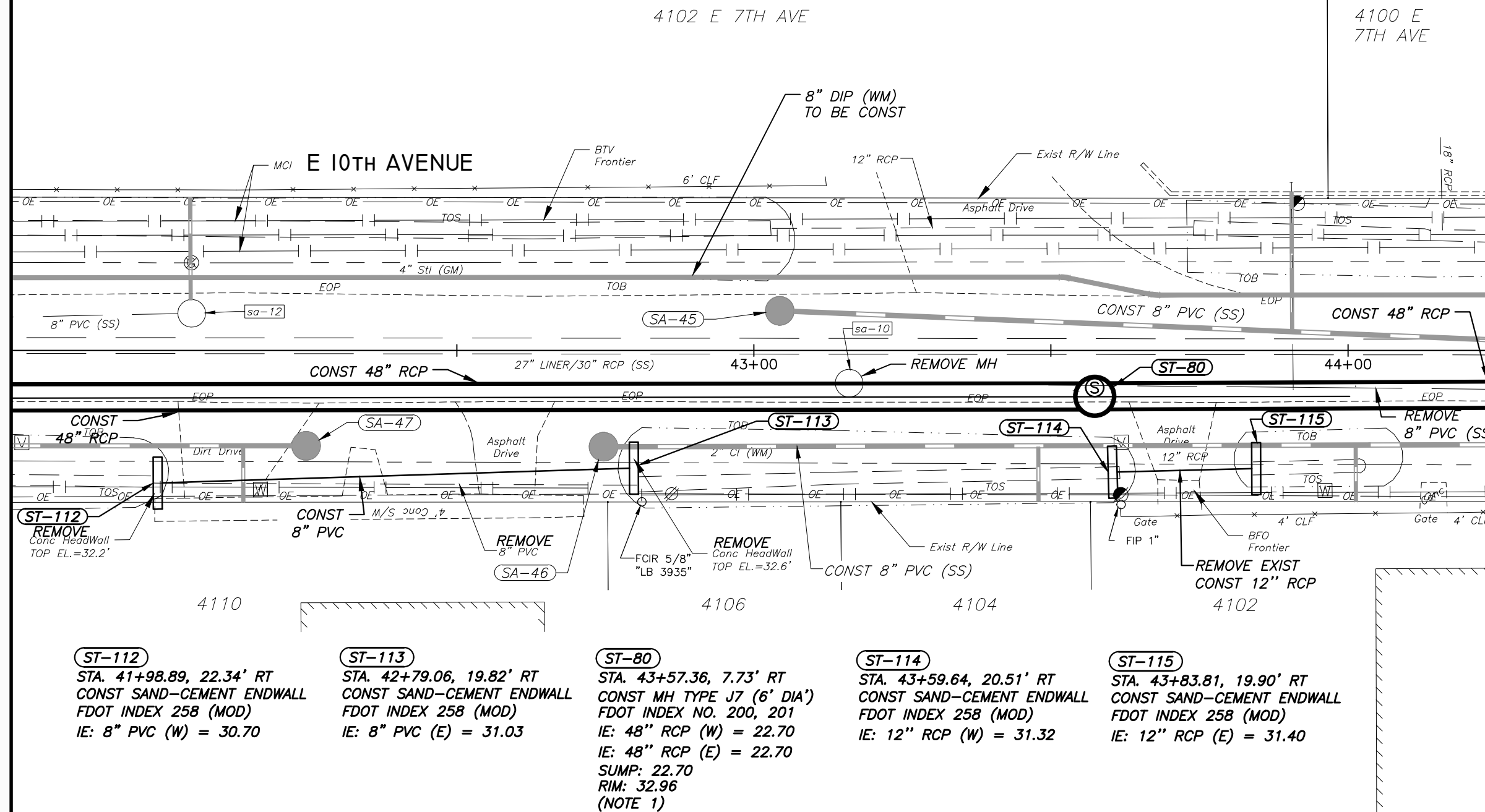
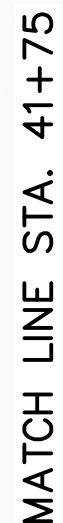
- NOTE:
1. PROVIDE 12" MINIMUM COVER OVER TOP SLAB
 2. SEE SEPARATE SHEETS FOR WATER AND WASTEWATER DESIGN

ST-75
STA. 38+83.82, 8.11' RT
CONST MH TYPE J7 (6' DIA')
FDOT INDEX NO. 200, 201
IE: 48" RCP (W) = 22.46
IE: 48" RCP (E) = 22.45
SUMP: 22.45
RIM: 31.70
(NOTE 1)



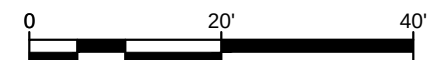
REVISIONS			 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS STORMWATER CONSTRUCTION PLAN STA 36+75 TO STA 39+25	SHEET 41
No.	DATE							

MATCH LINE STA. 44+25



NOTE:

1. PROVIDE 12" MINIMUM COVER OVER TOP SLAB
2. SEE SEPARATE SHEETS FOR WATER AND WASTEWATER DESIGN

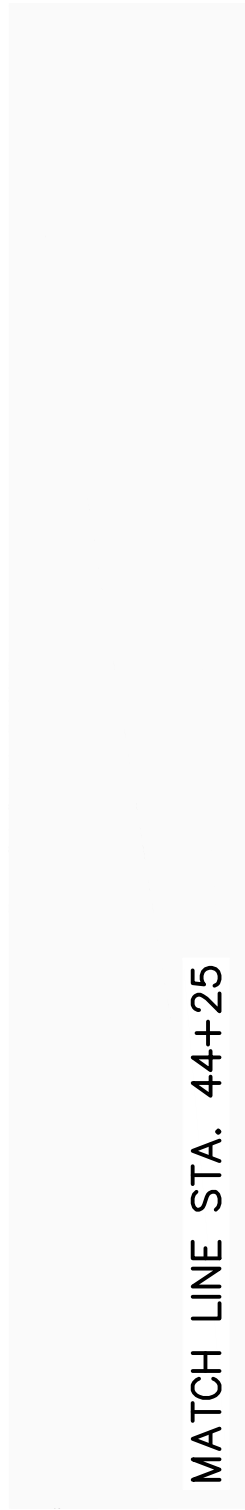


No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS STORMWATER CONSTRUCTION PLAN STA 41+75 TO STA 44+25	SHEET 45

PROJECTS\TMA\TPA\15001-43RD_STREET\DESIGN_PUBLISH\BID SET\7582 ALIGN B STORMWATER PLANS.DWG
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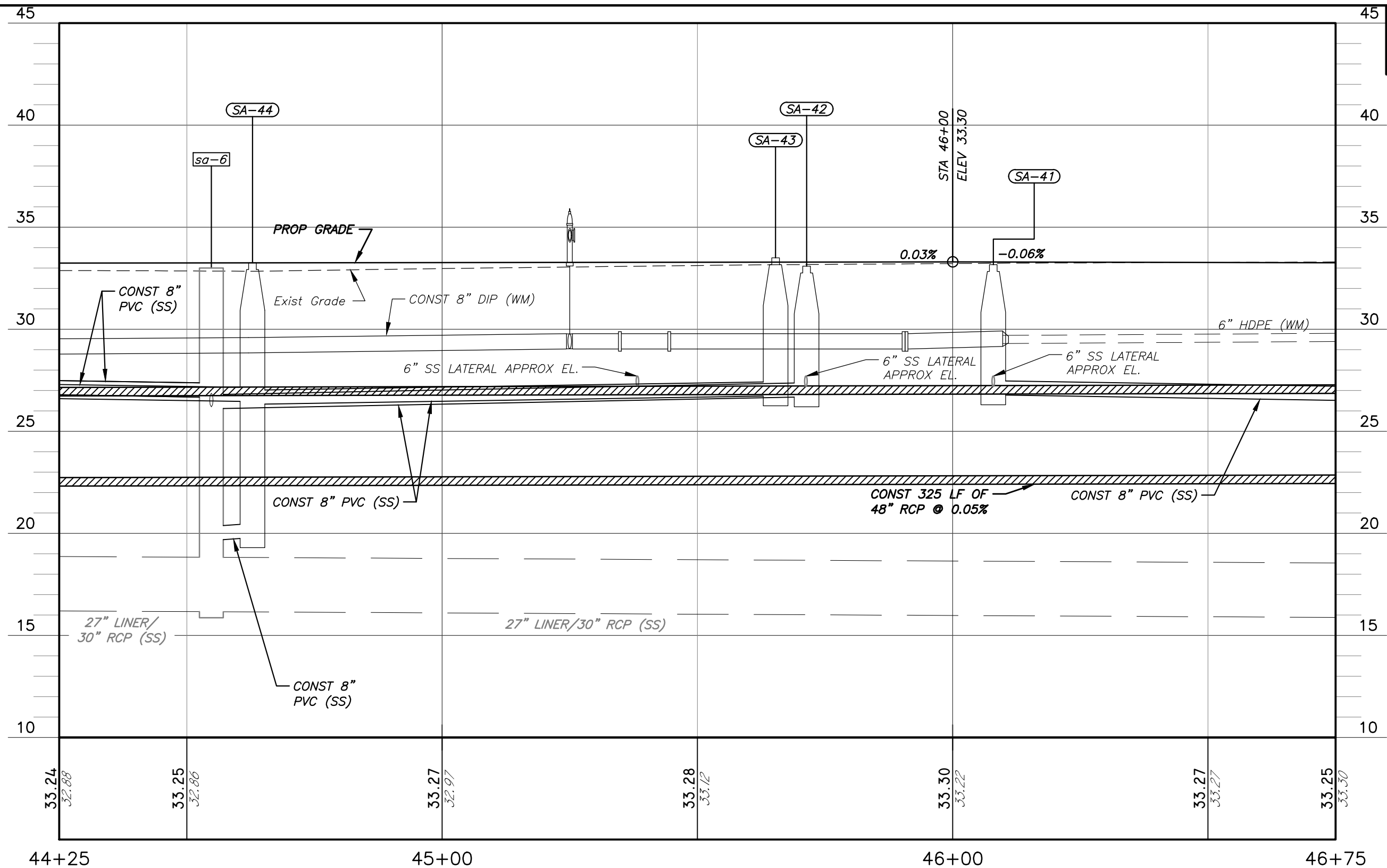
SW

MATCH LINE STA. 46+75



No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS STORMWATER CONSTRUCTION PLAN STA 44+25 TO STA 46+75	SHEET 47

M:\PROJECTS\TAMPA\15001-43RD_STREET\DESIGN_PUBLISH\DWG SET\1601-T617 STORMWATER PROFILE.DWG
PLOT DATE: 11/19/2018 6:00:48 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI.NCS.STB PROJECT STATUS: ---



SW

VERT SCALE: 1" = 5'
HORIZ SCALE: 1" = 20'

No.	DATE	REVISIONS

**PENNONI ASSOCIATES INC.**
2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

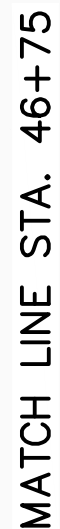
43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
STORMWATER PROFILE STA 44+25 TO
STA 46+75

SHEET
48

SW

MATCH LINE STA. 49+00

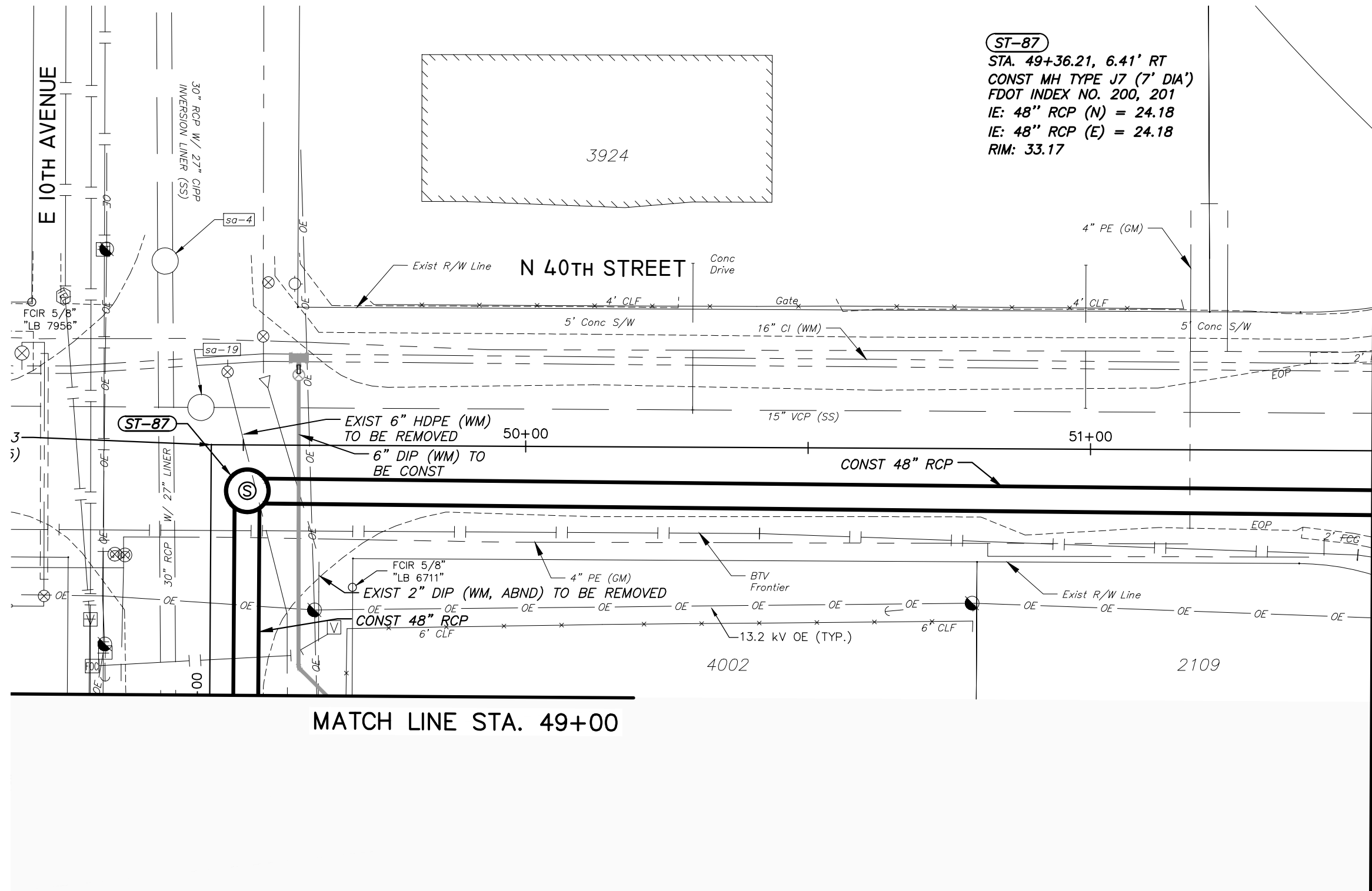
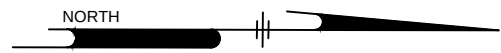
2021



No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS STORMWATER CONSTRUCTION PLAN STA 46+75 TO STA 49+00	SHEET 49

 PLOTTED: 11/19/2018 6:01:15 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI.NCS.STB PROJECT STATUS: ---
 I:\PROJECTS\TMPA\TMPA15001-43RD_STREET\DESIGN_PUBLISH\BID SET\582 ALIGN B STORMWATER PLANS.DWG

SW



ST-87
STA. 49+36.21, 6.41' RT
CONST MH TYPE J7 (7' DIA')
FDOT INDEX NO. 200, 201
IE: 48" RCP (N) = 24.18
IE: 48" RCP (E) = 24.18
RIM: 33.17

MATCH LINE STA. 51+50

MATCH LINE STA. 49+00

NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN



M:\PROJECTS\TAMPA\15001-43RD STREET\DESIGN\ PUBLISH\BID SET\15001-43RD STREET\DESIGN\ PENNONI NCS.STB, PROJECT STATUS: ---
PLOT: 11/19/2018 6:02:04 PM, BY: MICHAEL HENDERSON

No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
Pennoni 2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

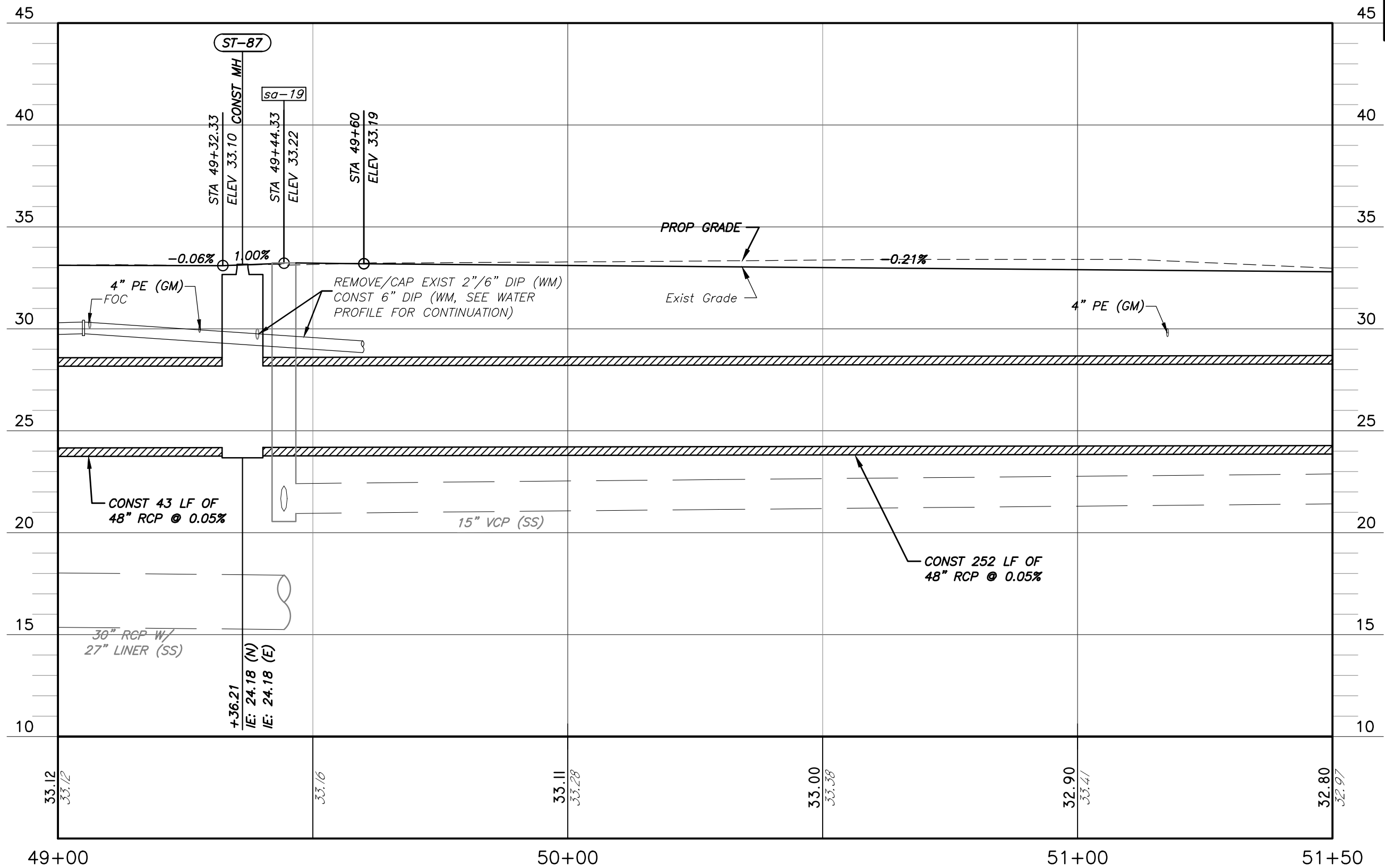
DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
STORMWATER CONSTRUCTION PLAN STA
49+00 TO STA 51+50

SHEET
51

M:\PROJECTS\TAMPA\15001-43RD_STREET\DESIGN_PUBLISH\BID SET\1501-1617 STORMWATER PROFILE.DWG
PLOT: 11/19/2018 6:02:23 PM, BY: MICHAEL HENDERSON, PLOT STYLE: PENNONI.NCS, STB, PROJECT STATUS: ---



SW

VERT SCALE: 1" = 5'
HORIZ SCALE: 1" = 20'

No.	DATE	REVISIONS



PENNONI ASSOCIATES INC.
2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E.
P.E. NO. 38766

DATE

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
STORMWATER PROFILE STA 49+00 TO
STA 51+50

SHEET
52

M:\PROJECTS\TWPATMPA15001-43RD_STREET\DESIGN_PUBLISH\BID SET\T82 ALIGN B STORMWATER PLANS.DWG
PLOTTED: 11/19/2018 6:02:54 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---

NORTH

SW

MATCH LINE STA. 51+50

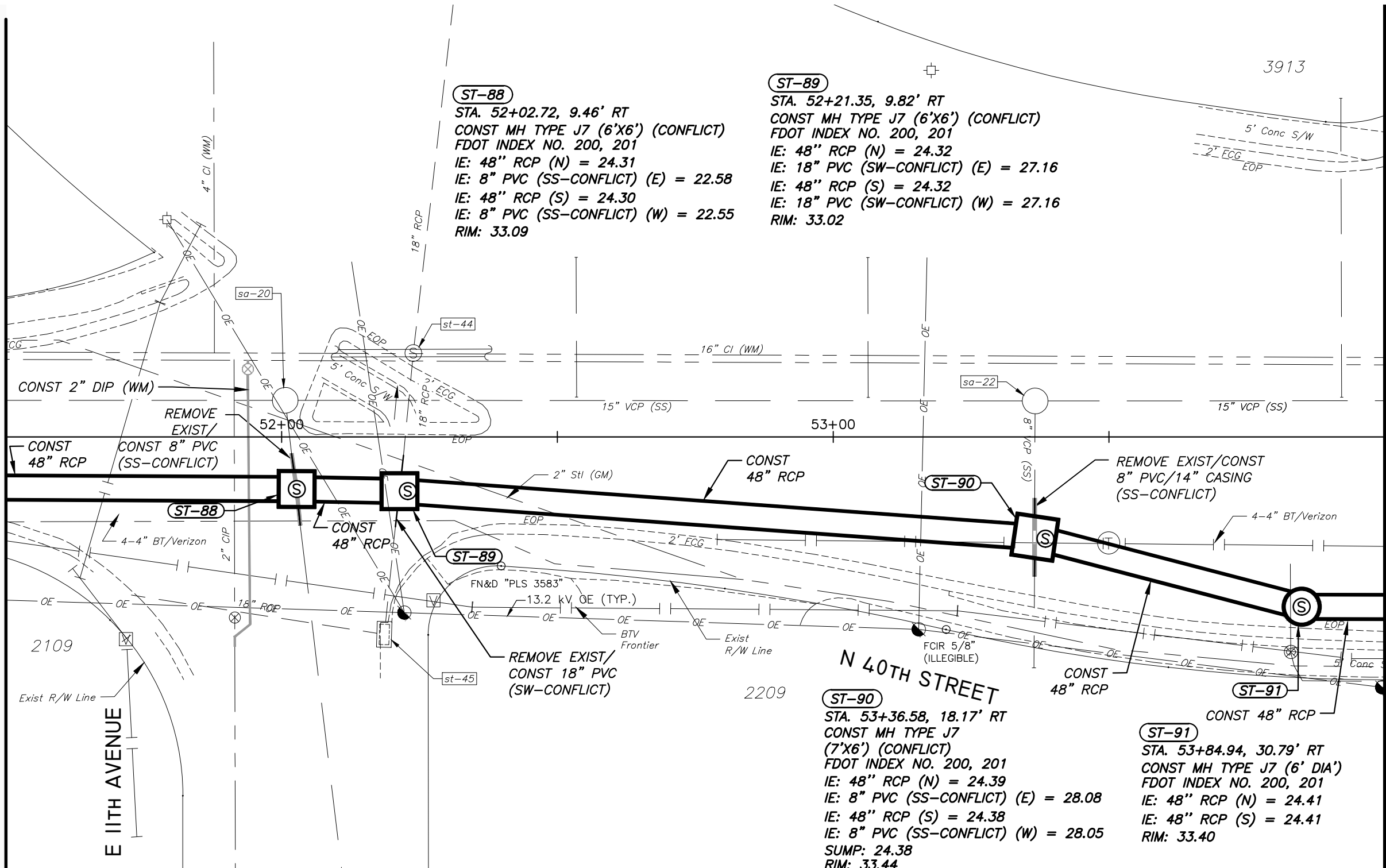
E IITH AVENUE

MATCH LINE STA. 54+00

- NOTES:
1. VERIFY EXISTING SS PIPE SIZE AND INVERTS PRIOR TO ORDERING STRUCTURE
2. SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN



No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. P.E. NO. 38766 DATE	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS STORMWATER CONSTRUCTION PLAN STA 51+50 TO STA 54+00	SHEET 53



ST-88

STA. 52+02.72, 9.46' RT
CONST MH TYPE J7 (6'X6') (CONFLICT)
FDOT INDEX NO. 200, 201
IE: 48" RCP (N) = 24.31
IE: 8" PVC (SS-CONFLICT) (E) = 22.58
IE: 48" RCP (S) = 24.30
IE: 8" PVC (SS-CONFLICT) (W) = 22.55
RIM: 33.09

ST-89

STA. 52+21.35, 9.82' RT
CONST MH TYPE J7 (6'X6') (CONFLICT)
FDOT INDEX NO. 200, 201
IE: 48" RCP (N) = 24.32
IE: 18" PVC (SW-CONFLICT) (E) = 27.16
IE: 48" RCP (S) = 24.32
IE: 18" PVC (SW-CONFLICT) (W) = 27.16
RIM: 33.02

ST-90

ST-90

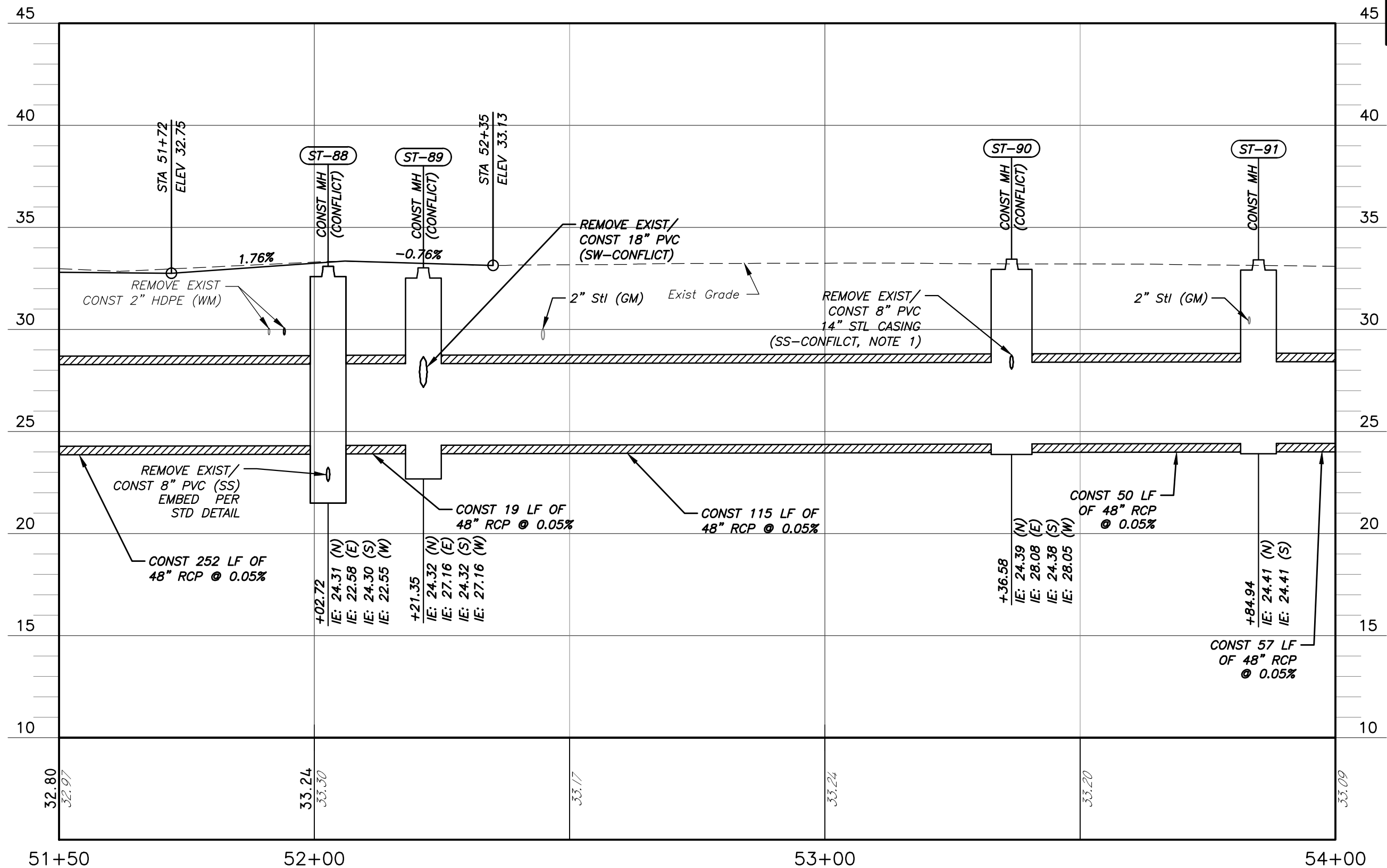
STA. 53+36.58, 18.17' RT
CONST MH TYPE J7 (7'X6') (CONFLICT)
FDOT INDEX NO. 200, 201
IE: 48" RCP (N) = 24.39
IE: 8" PVC (SS-CONFLICT) (E) = 28.08
IE: 48" RCP (S) = 24.38
IE: 8" PVC (SS-CONFLICT) (W) = 28.05
SUMP: 24.38
RIM: 33.44
(NOTE 1)

ST-91

ST-91

STA. 53+84.94, 30.79' RT
CONST MH TYPE J7 (6' DIA')
FDOT INDEX NO. 200, 201
IE: 48" RCP (N) = 24.41
IE: 48" RCP (S) = 24.41
RIM: 33.40

M:\PROJECTS\TAMPA\15001-43RD_STREET\DESIGN_PUBLISH\SET1\601-T617 STORMWATER PROFILE.DWG
PLOT DATE: 11/19/2018 6:03:13 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI.NCS.STB PROJECT STATUS: ---



No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
Pennoni 2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

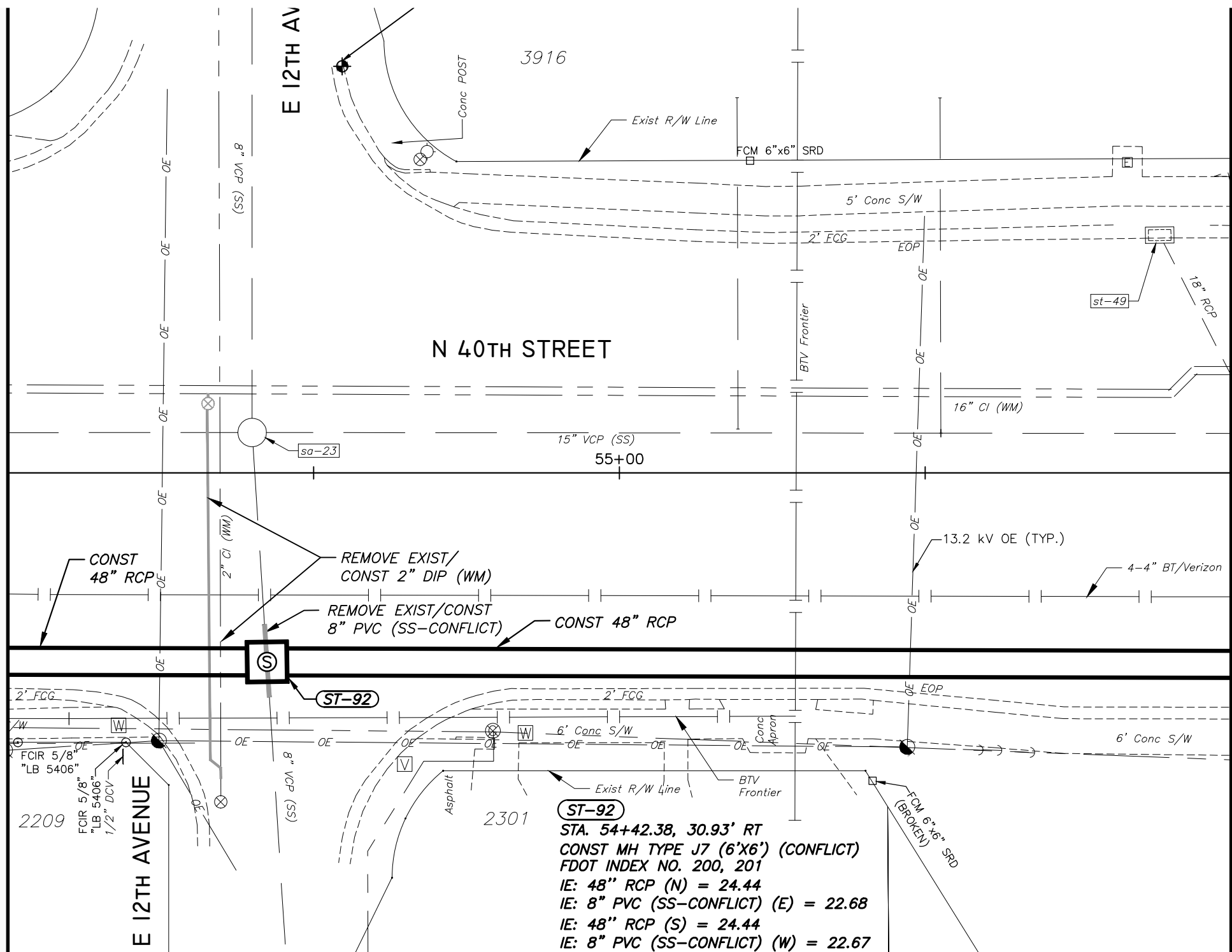
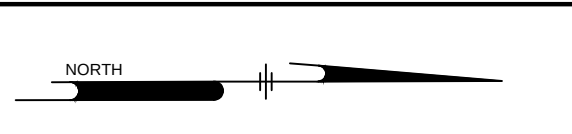
DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
STORMWATER PROFILE STA 51+50 TO
STA 54+00

SHEET
54

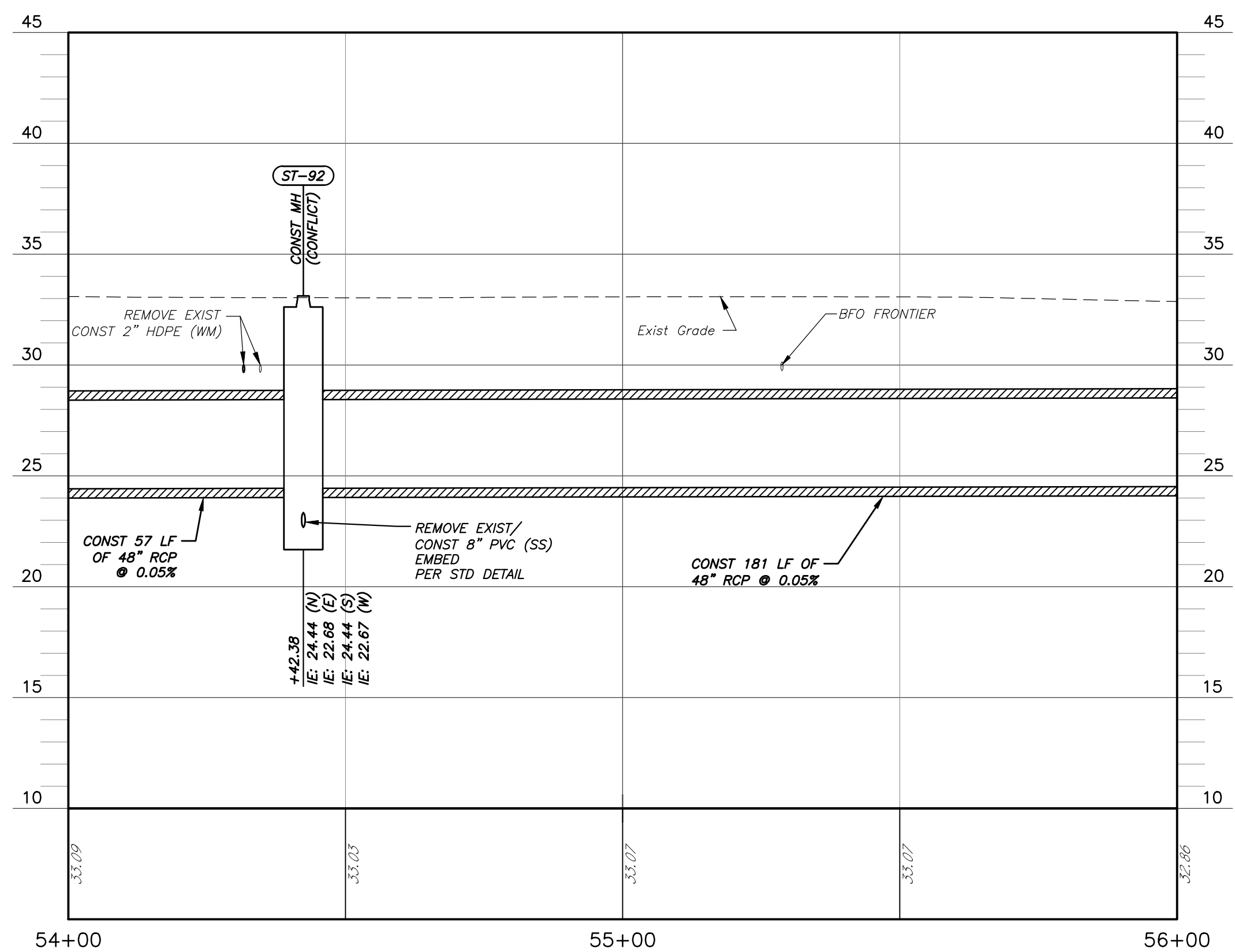
SW



NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN

No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS STORMWATER CONSTRUCTION PLAN STA 54+00 TO STA 56+00	SHEET 55

SW



VERT SCALE: 1" = 5'
HORIZ SCALE: 1" = 20'

M:\PROJECTS\TAMPA\15001-43RD_STREET\DESIGN_PUBLISH\BID SET\1601-T617 STORMWATER PROFILE.DWG
PLOTTED: 11/19/2018 6:03:58 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---

No.	DATE	REVISIONS

**PENNONI ASSOCIATES INC.**
2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
STORMWATER PROFILE STA 54+00 TO
STA 56+00

SHEET
56

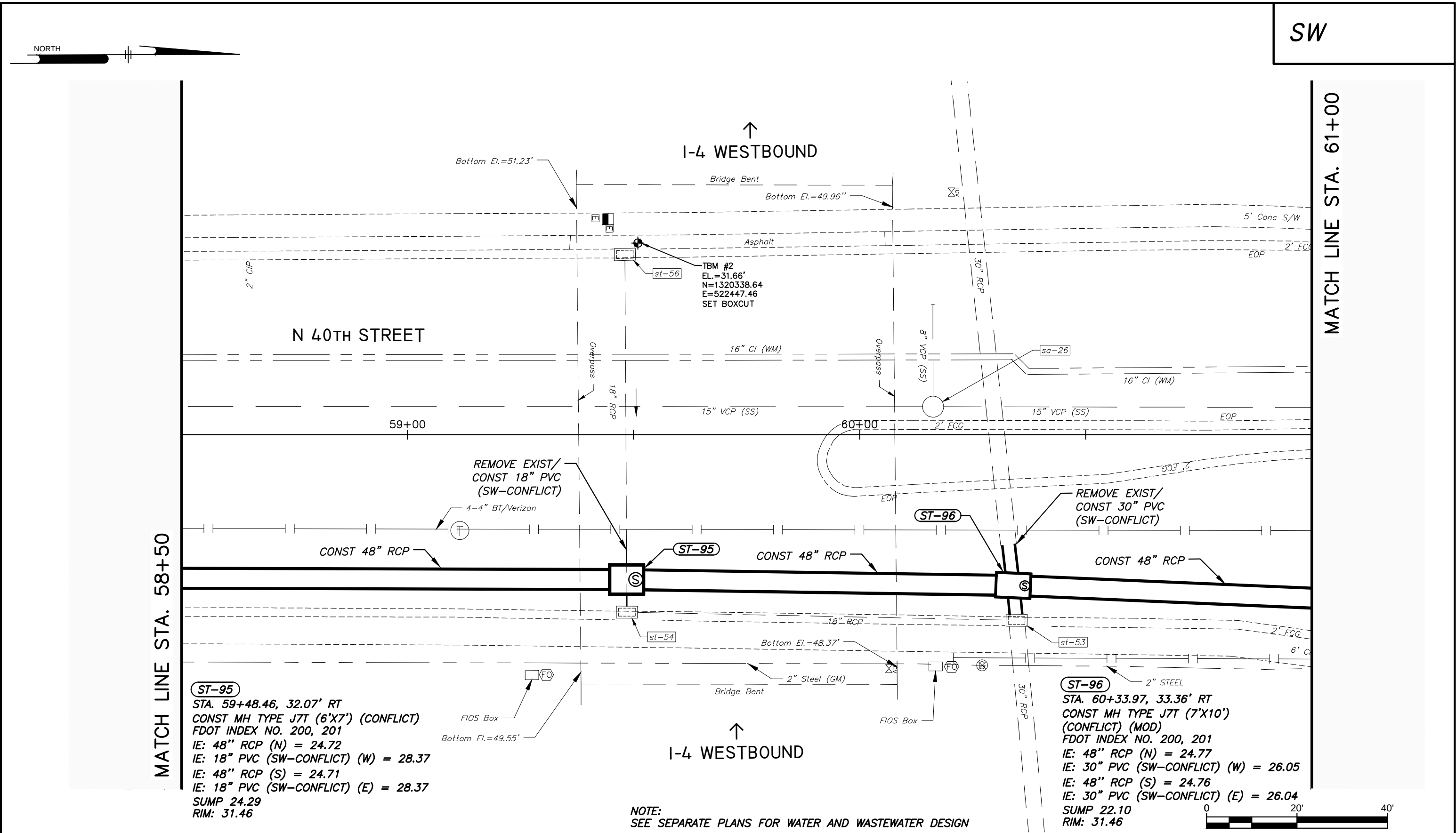
MATCH LINE STA. 58+50



No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS STORMWATER CONSTRUCTION PLAN STA 56+00 TO STA 58+50	SHEET 57

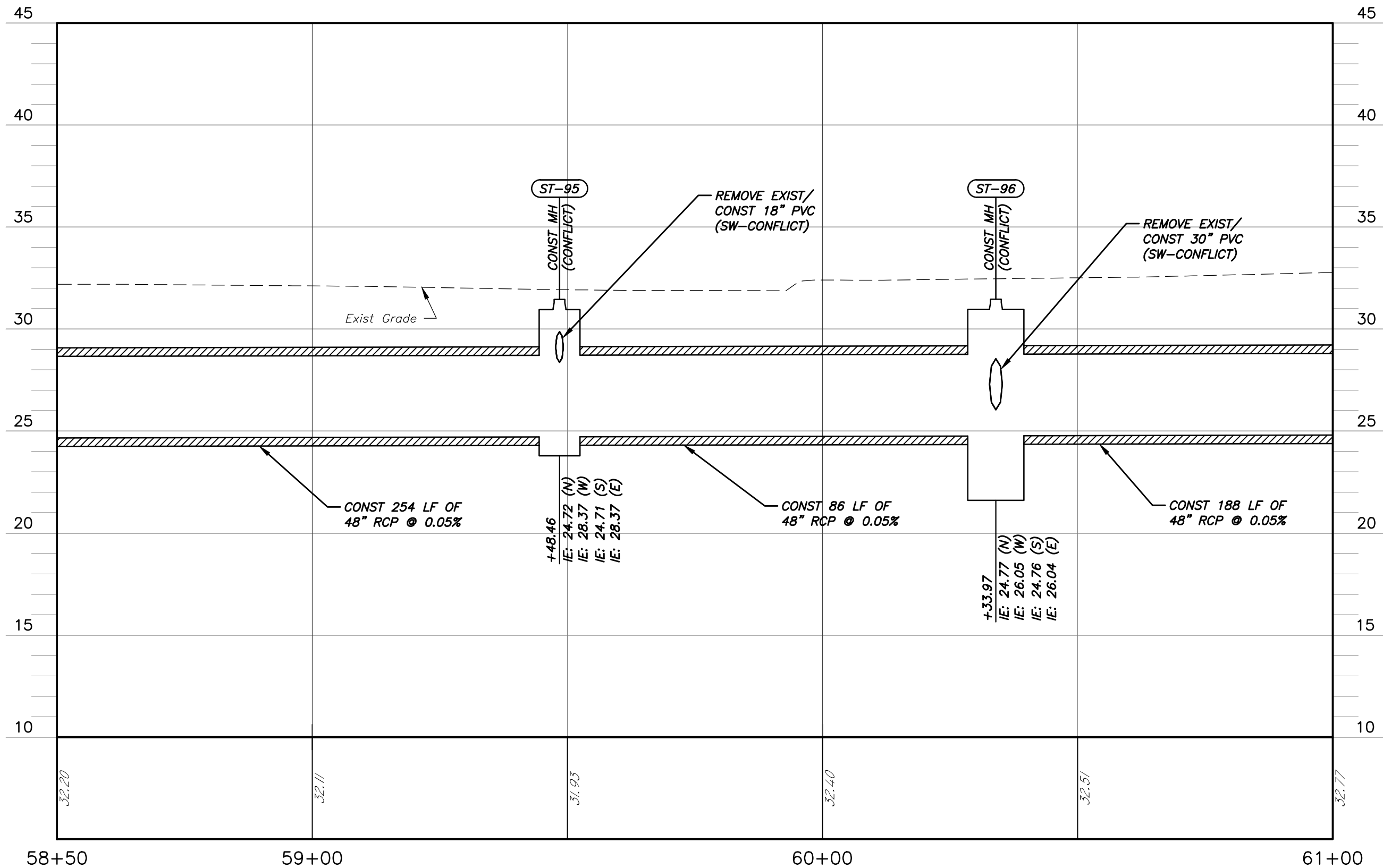
\\ms01\projects\TMA\TPA15001\43RD_STREET\DESIGN_PUBLISH\BID SET\1582 ALIGN B STORMWATER PLANS.DWG
 PLOTTED: 11/19/2018 6:04:24 PM, BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---

M:\PROJECTS\TMP\TMA15001-43RD_STREET\DESIGN_PUBLISH\BID SET\T582 ALIGN B STORMWATER PLANS.DWG
PLOT: 11/19/2018 6:05:09 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB PROJECT STATUS: ---



REVISIONS			PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS STORMWATER CONSTRUCTION PLAN STA 58+50 TO STA 61+00	SHEET 59
No.	DATE							

M:\PROJECTS\TAMPA\TAMPA15001-43RD_STREET\DESIGN_PUBLISH\BID SET\T1601-T617 STORMWATER PROFILE.DWG
PLOTTED: 11/19/2018 6:05:28 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---



No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
Pennoni 2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

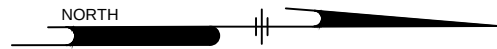
DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
STORMWATER PROFILE STA 58+50 TO
STA 61+00

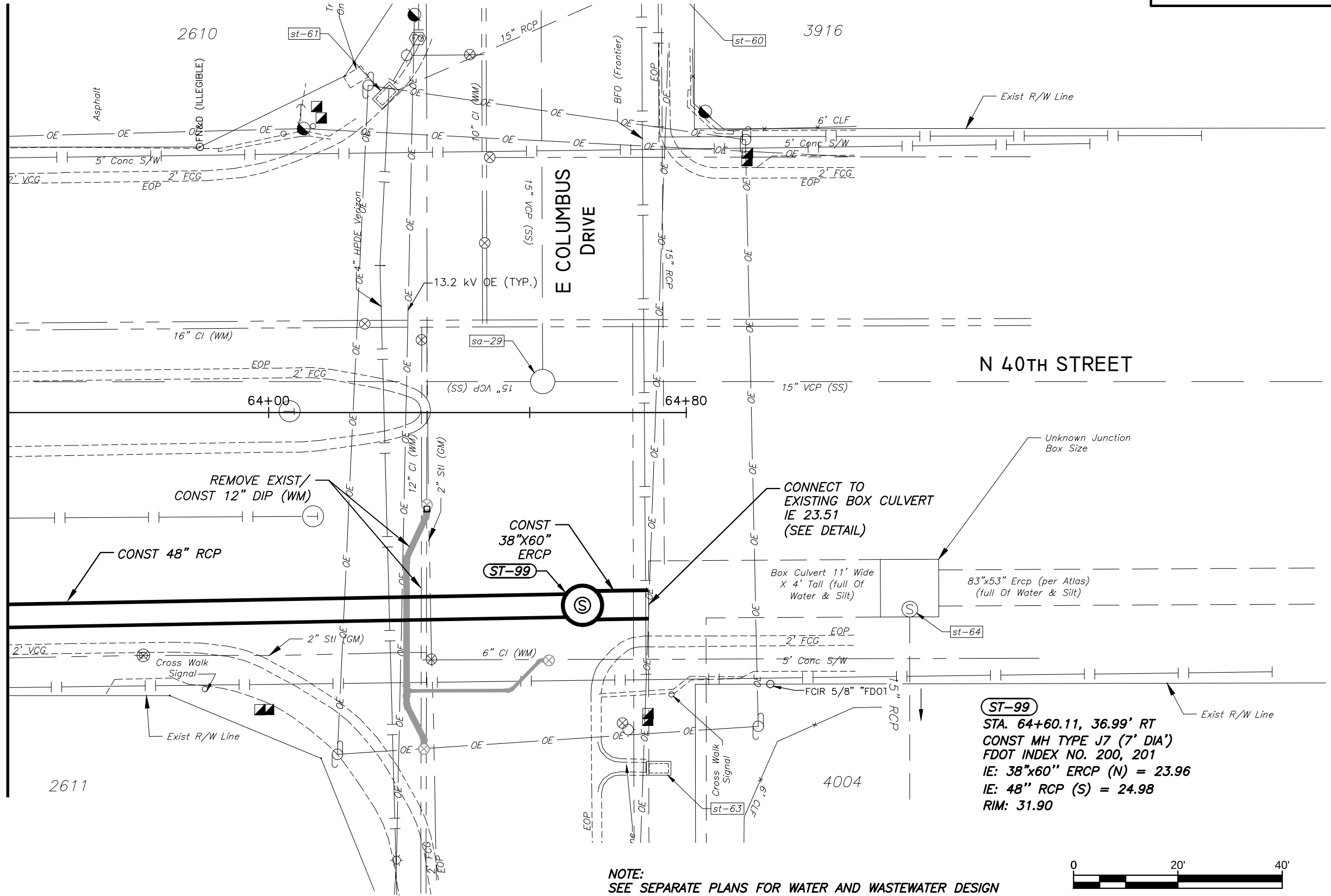
SHEET
60

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PLOT: 11/19/2018 6:06:33 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI NCS.STB PROJECT STATUS: ---



SW

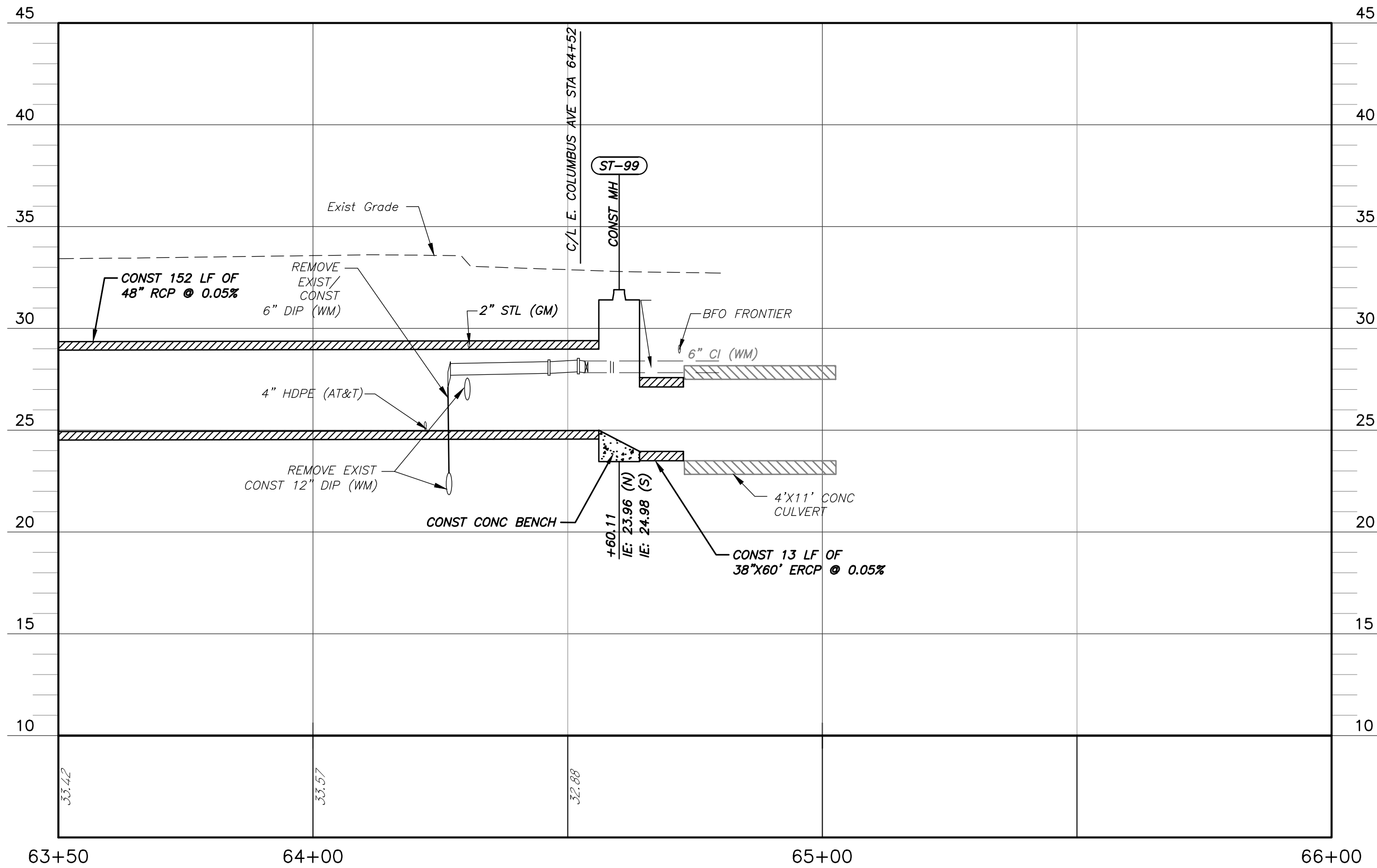
MATCH LINE STA. 63+50



NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN

No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. P.E. NO. 38766 DATE	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS STORMWATER CONSTRUCTION PLAN STA 63+50 TO STA 64+80	SHEET 63

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PLOTTED: 11/19/2018 6:06:53 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---

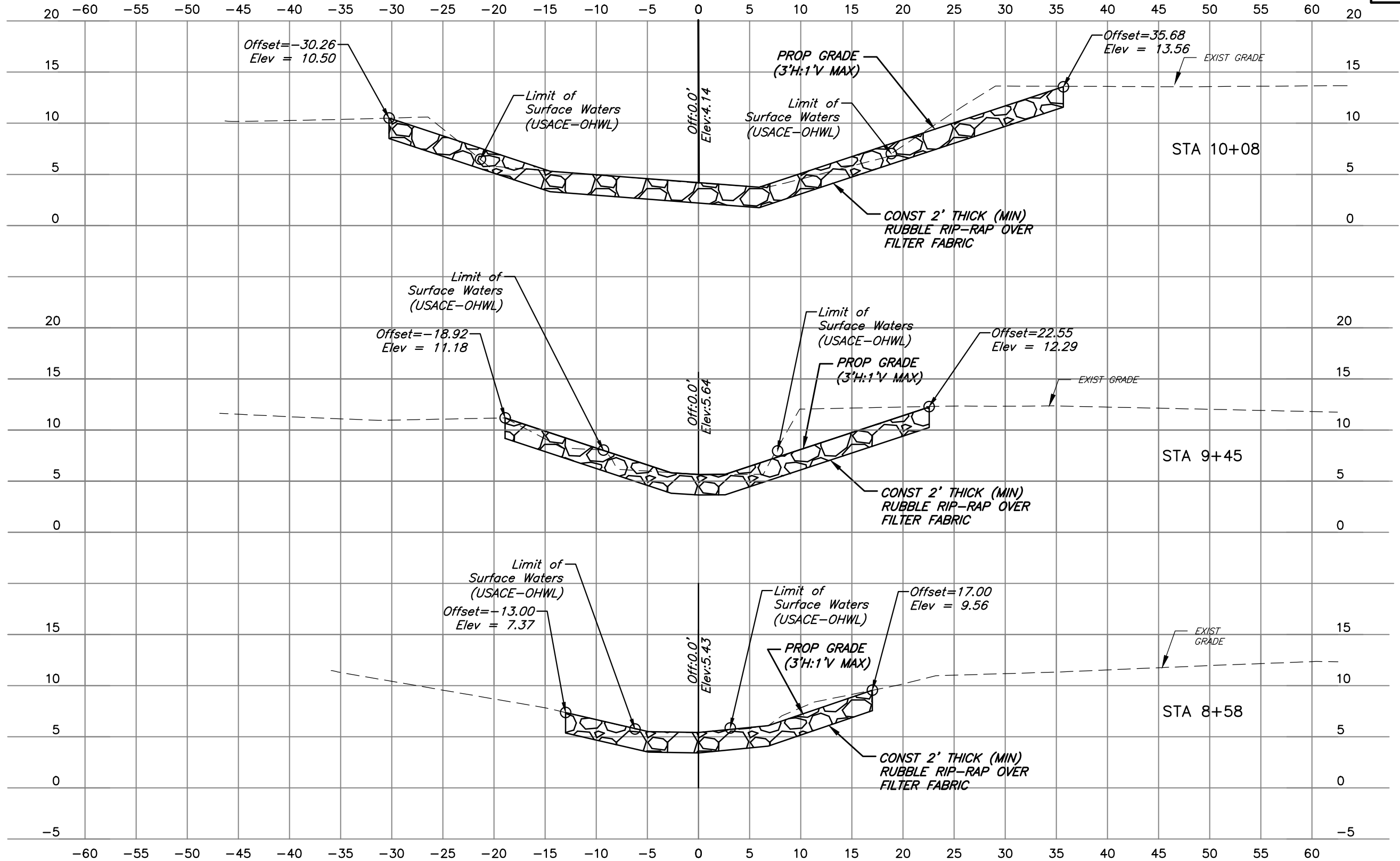


SW

VERT SCALE: 1" = 5'
HORIZ SCALE: 1" = 20'

No.	DATE	REVISIONS	PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. P.E. NO. 38766 DATE	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS STORMWATER PROFILE STA 63+50 TO STA 64+80	SHEET 64

SW



No.	DATE	REVISIONS

Pennoni **PENNONI ASSOCIATES INC.**
2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

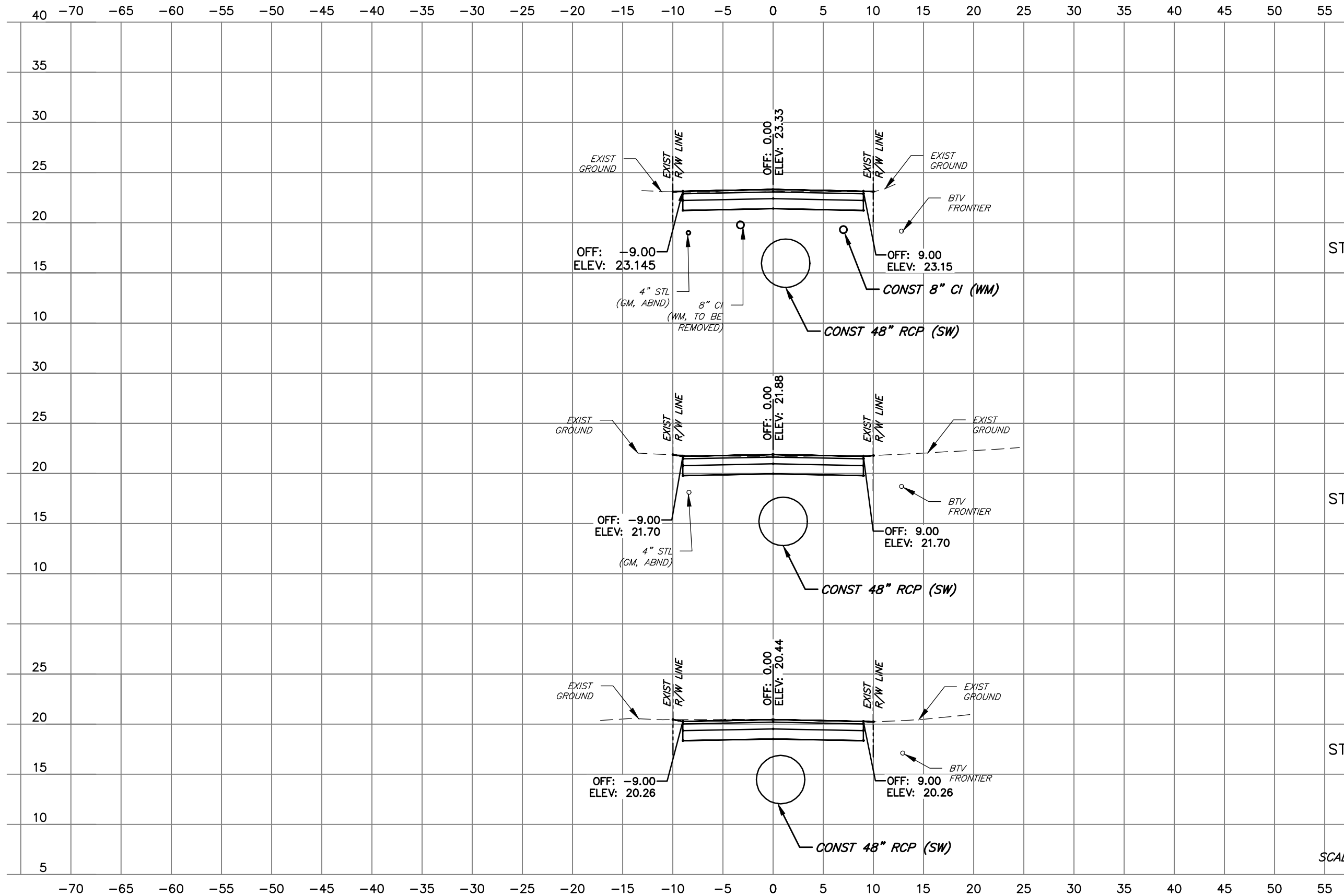
DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

43RD STREET OUTFALL REGIONAL STORMWATER
IMPROVEMENTS
CROSS SECTIONS OUTFALL

SHEET
65

M:\PROJECTS\TWP\TWP15001-43RD_STREET\DESIGN\ PUBLISH\BID SET\1920 CROSS SECTIONS.DWG
PLOT: 11/19/2018 6:07:13 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI NCS.STB PROJECT STATUS: ---

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PLOTTED: 11/19/2018 6:07:20 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---



SW

STA 23+00

STA 22+00

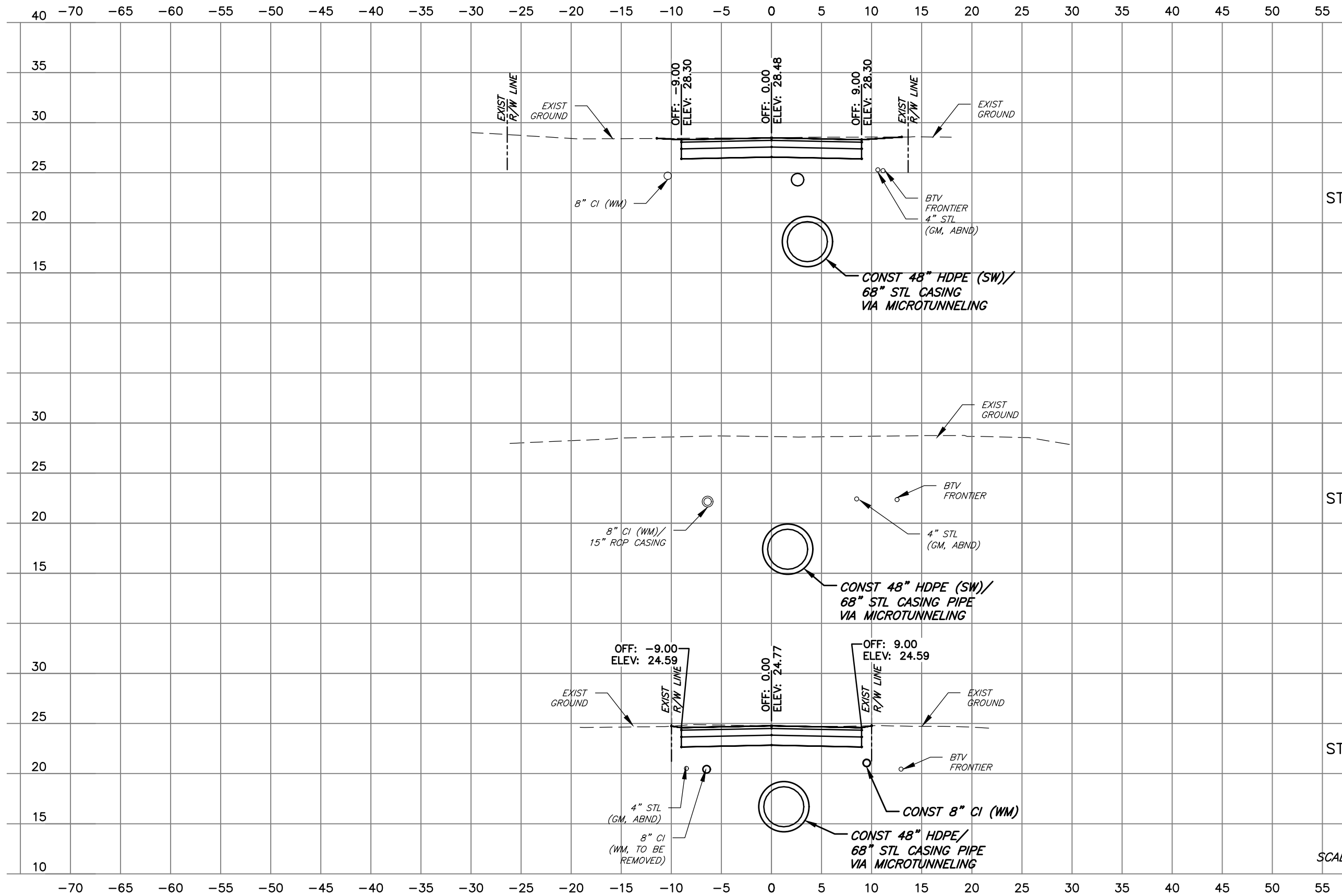
STA 21+00

SCALE: 1" = 10'

No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. P.E. NO. 38766 DATE	DES: MCH	CITY of TAMPA <i>Department of Transportation and Stormwater Services</i> <i>Stormwater Engineering Division</i>	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS CROSS SECTIONS NORTH 43RD ST (I)	SHEET 66
					DRN: MCH			
					CKD: EPN			
					DATE: 11/16/18			

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

M:\PROJECTS\TAMPA\15001-43RD_STREET\DESIGN\ PUBLISH\BID SET\1920_CROSS_SECTIONS.DWG
PLOTTED: 11/19/2018 6:07:29 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI.NCS,STB, PROJECT STATUS: ---



SW

STA 26+00

STA 25+00

STA 24+00

SCALE: 1" = 10'

No.	DATE	REVISIONS

**PENNONI ASSOCIATES INC.**
2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

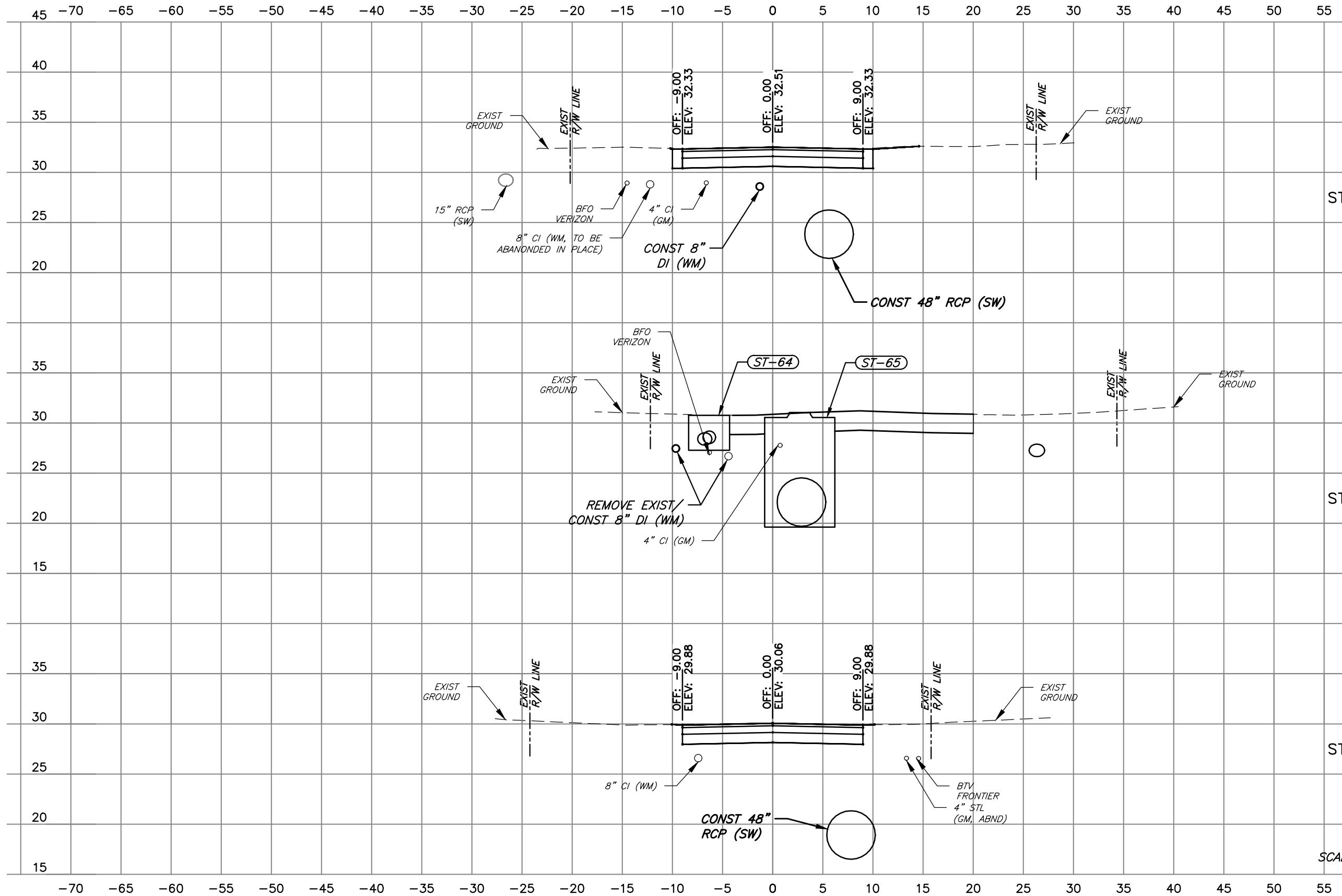
DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
CROSS SECTIONS NORTH 43RD ST (2)

SHEET
67

M:\PROJECTS\TAMPA\15001-43RD_STREET\DESIGN\ PUBLISH\BID SET\1920 CROSS SECTIONS.DWG
PLOTTED: 11/19/2018 6:07:39 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---



SW

STA 29+00

STA 28+00

STA 27+00

SCALE: 1" = 10'

No.	DATE	REVISIONS

**PENNONI ASSOCIATES INC.**
2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

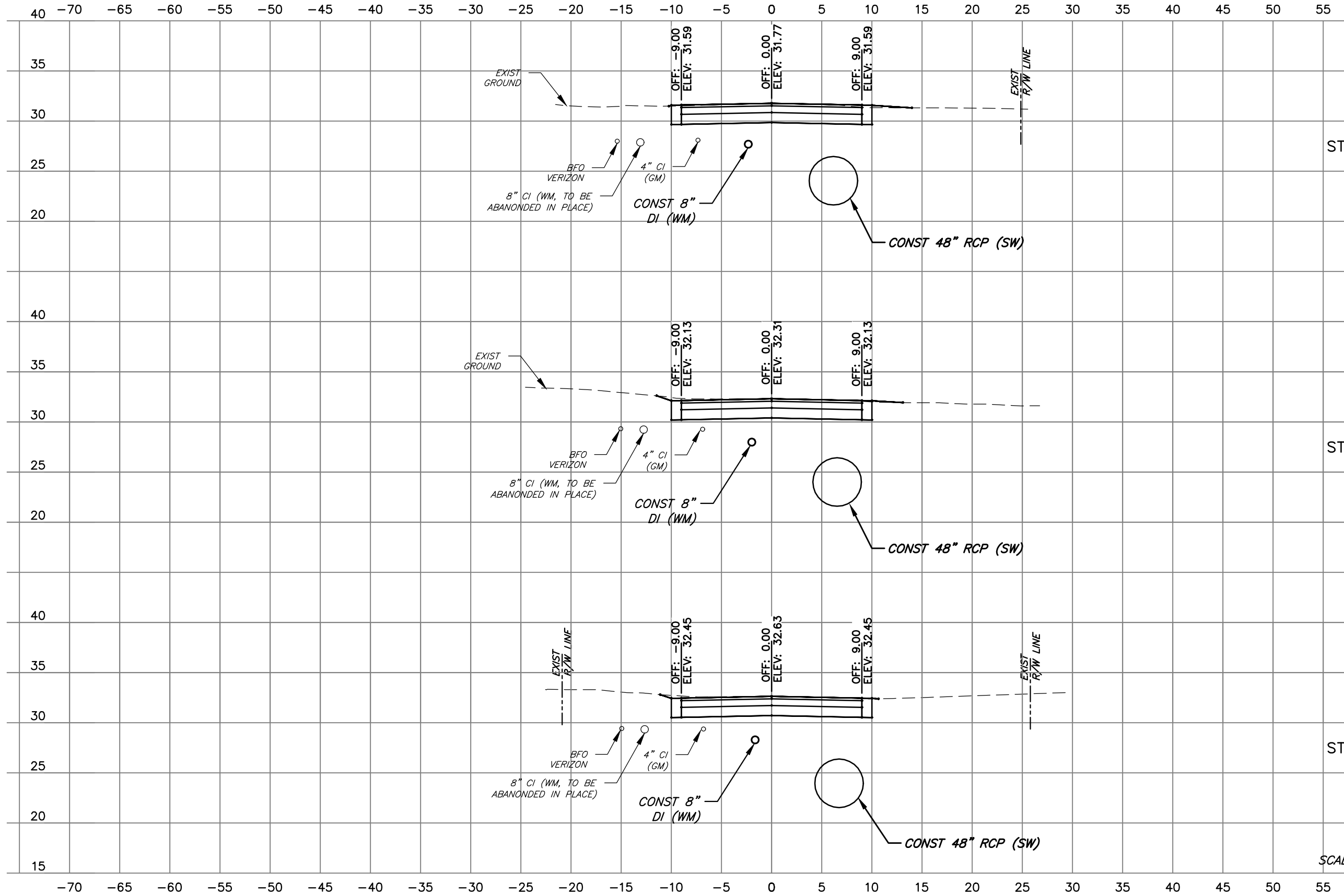
DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
CROSS SECTIONS NORTH 43RD ST (3)

SHEET
68

M:\PROJECTS\TAMPA\15001-43RD_STREET\DESIGN\ PUBLISH\BID SET\1920 CROSS SECTIONS.DWG
PLOT DATE: 11/19/2018 6:07:49 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI.NCS,STB. PROJECT STATUS: ---



SW

STA 32+00

STA 31+00

STA 30+00

SCALE: 1" = 10'

No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
Pennonni 2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

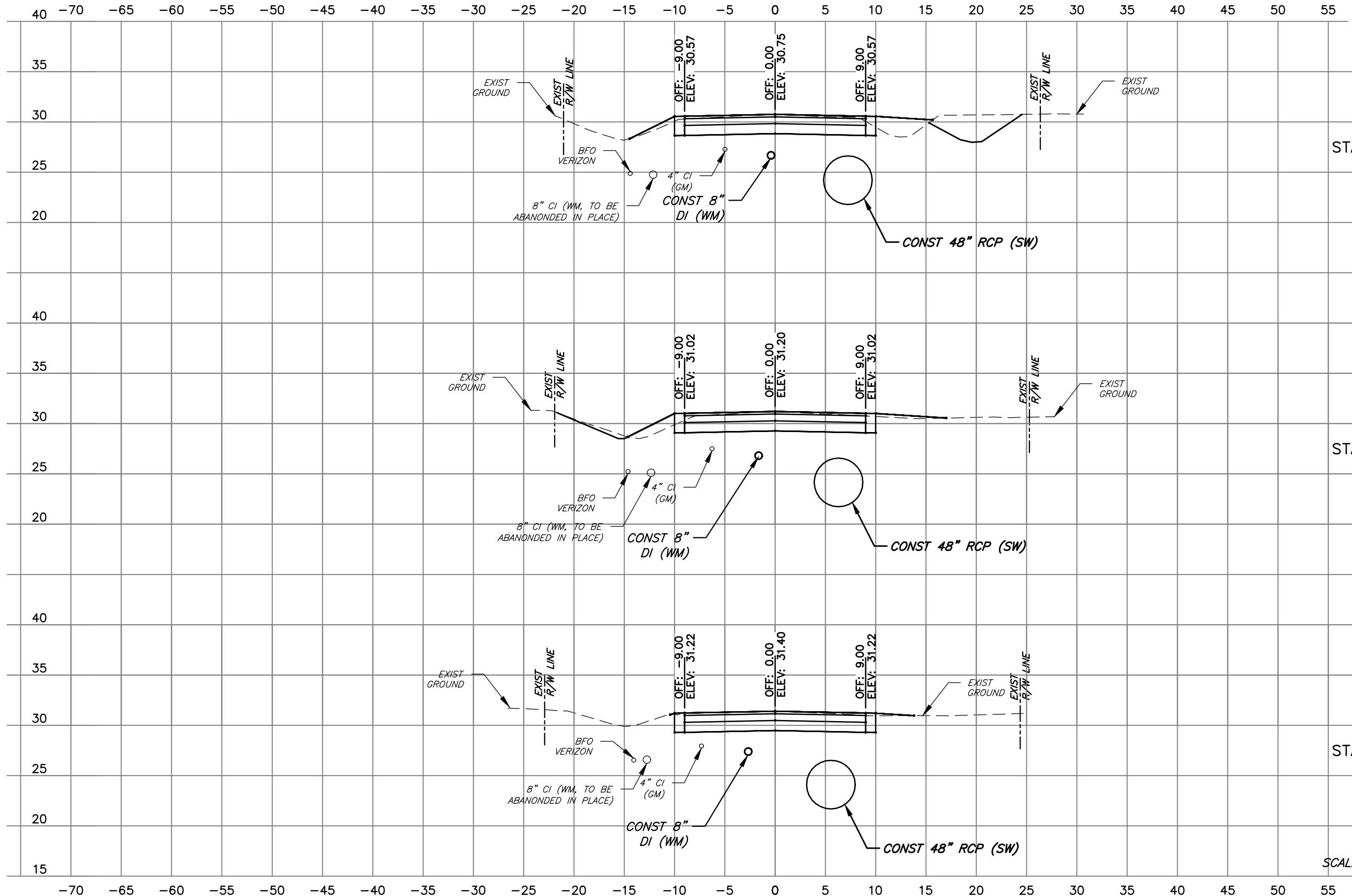
DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
CROSS SECTIONS NORTH 43RD ST (4)

SHEET
69

M:\PROJECTS\TAMPA\15001-43RD_STREET\DESIGN\ PUBLISH\BID SET\1920 CROSS SECTIONS.DWG
PLOTTED: 11/19/2018 6:07:59 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---



No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
Pennonni 2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

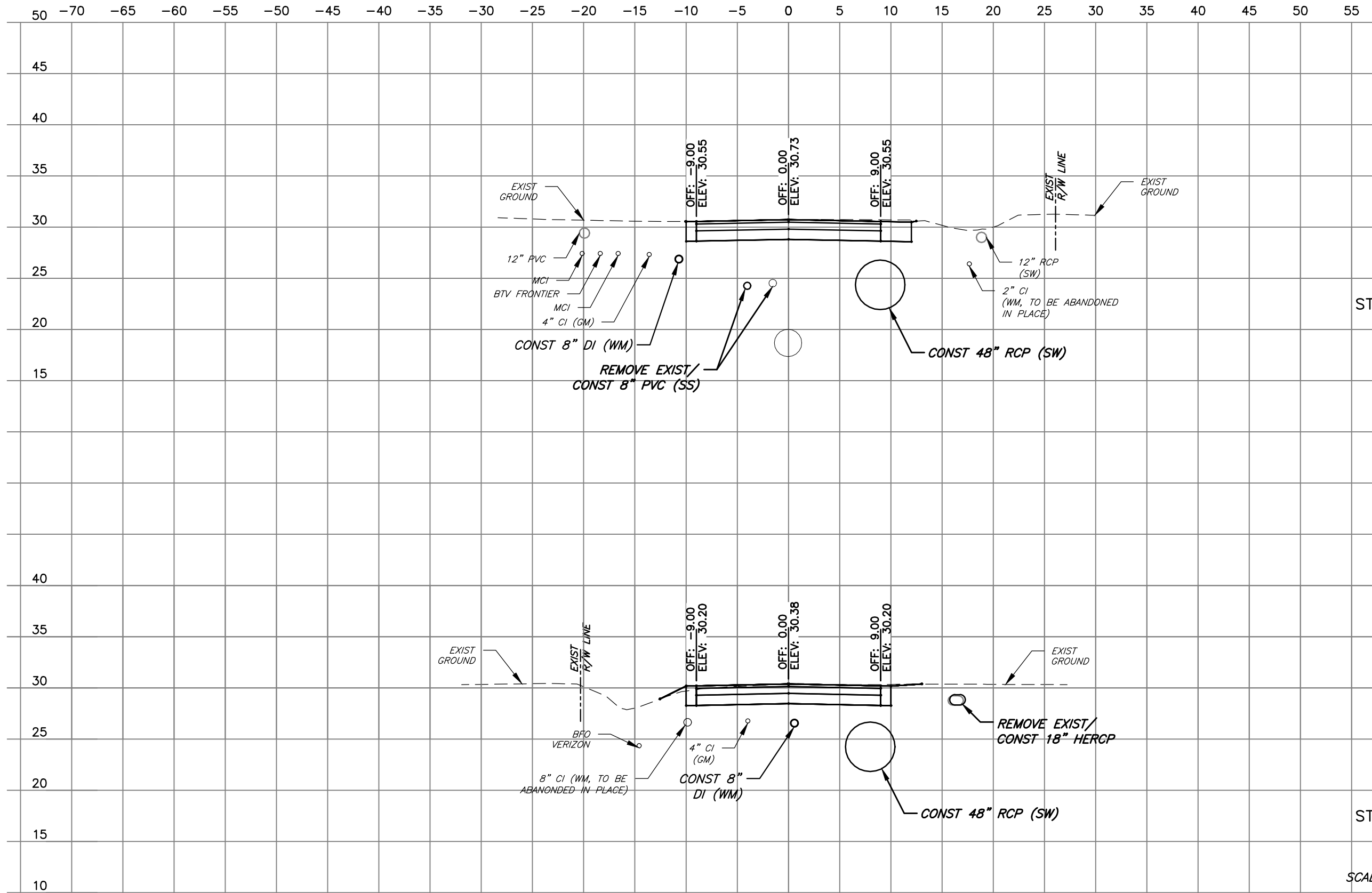
DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
CROSS SECTIONS NORTH 43RD ST (5)

SHEET
70

M:\PROJECTS\TAMPA\15001-43RD_STREET\DESIGN_PUBLISH\BID SET\1920_CROSS SECTIONS.DWG
PLOTTED: 11/19/2018 6:08:09 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---



SW

STA 37+00

STA 35+80

SCALE: 1" = 10'

No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
Pennonni 2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

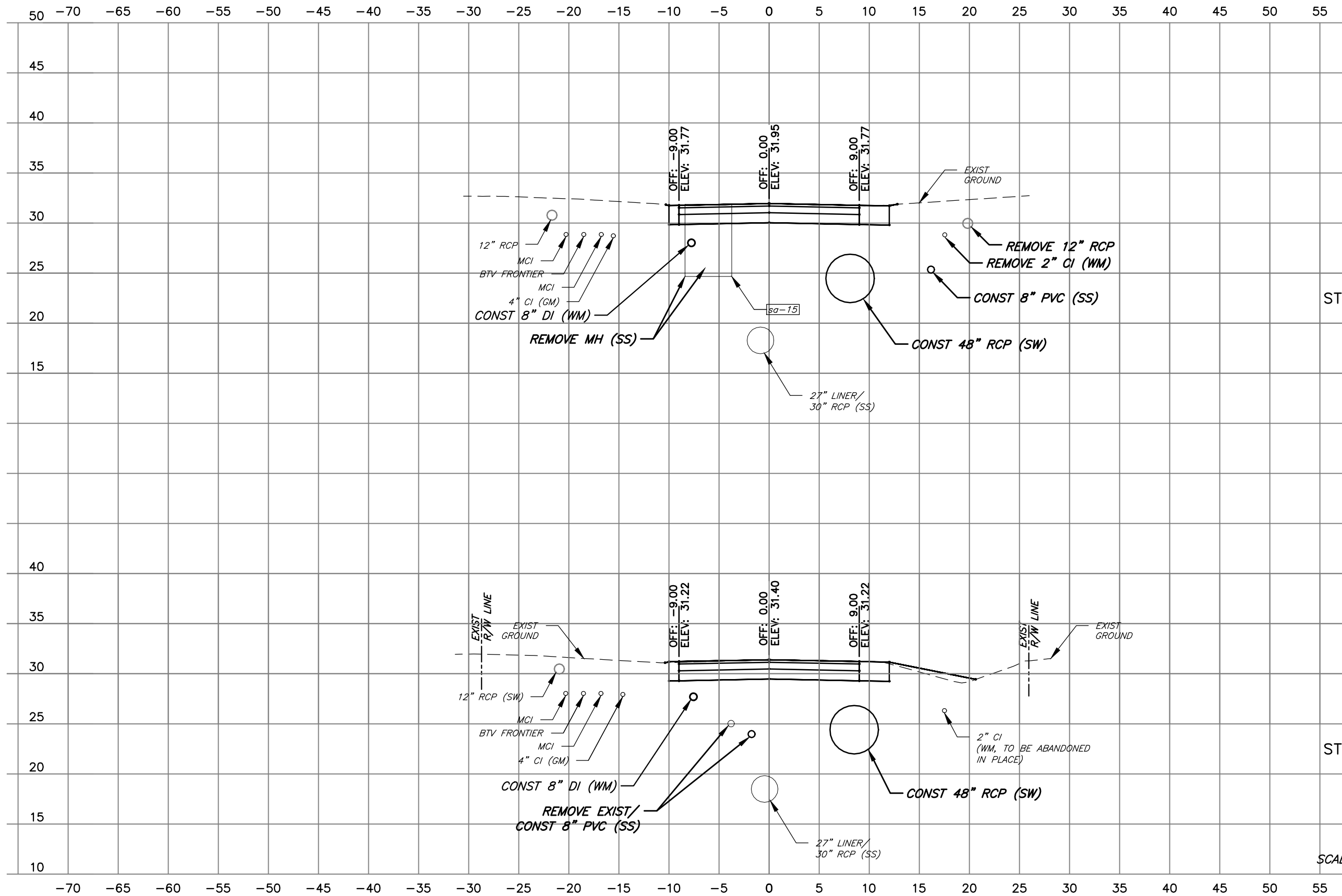
DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
CROSS SECTIONS NORTH 43RD ST (6)
EAST 10TH AVE (I)

SHEET
71

M:\PROJECTS\TAMPA\15001-43RD STREET\DESIGN\ PUBLISH\BID SET\1920 CROSS SECTIONS.DWG
PLOTTED: 11/19/2018 6:08:19 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---



SW

STA 39+00

STA 38+00

SCALE: 1" = 10'

No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
Pennoni 2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

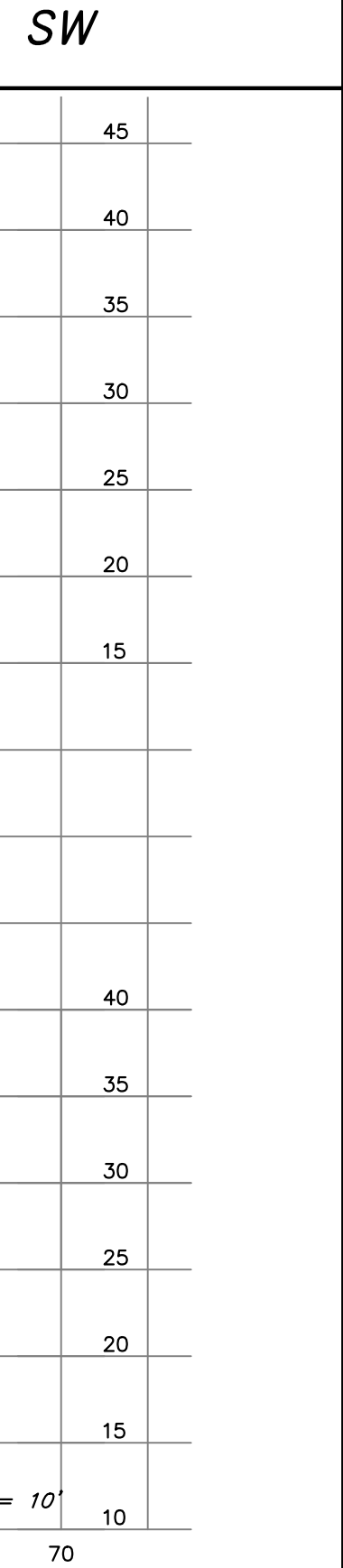
E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

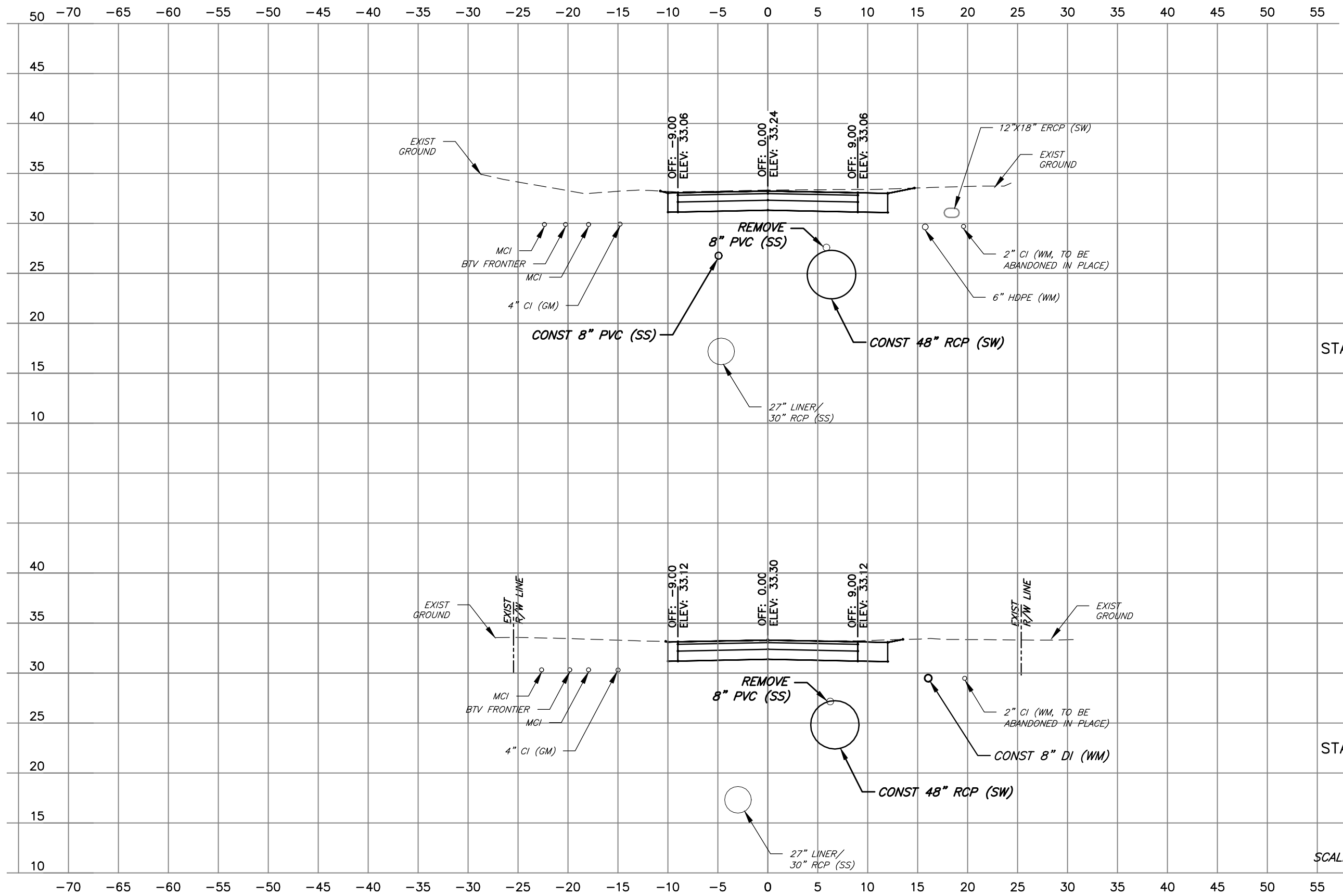
43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
CROSS SECTIONS EAST 10TH AVE (2)

SHEET
72



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PLOTTED: 11/19/2018 6:08:29 PM, BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB. PROJECT STATUS: ---

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PLOT DATE: 11/19/2018 6:08:59 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI NCS.STB PROJECT STATUS: ---



SW

No.	DATE	REVISIONS



PENNONI ASSOCIATES INC.
2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E.

DATE

P.E. NO. 38766

DES: MCH

DRN: MCH

CKD: EPN

DATE: 11/16/18

CITY of TAMPA

Department of Transportation and Stormwater Services

Stormwater Engineering Division

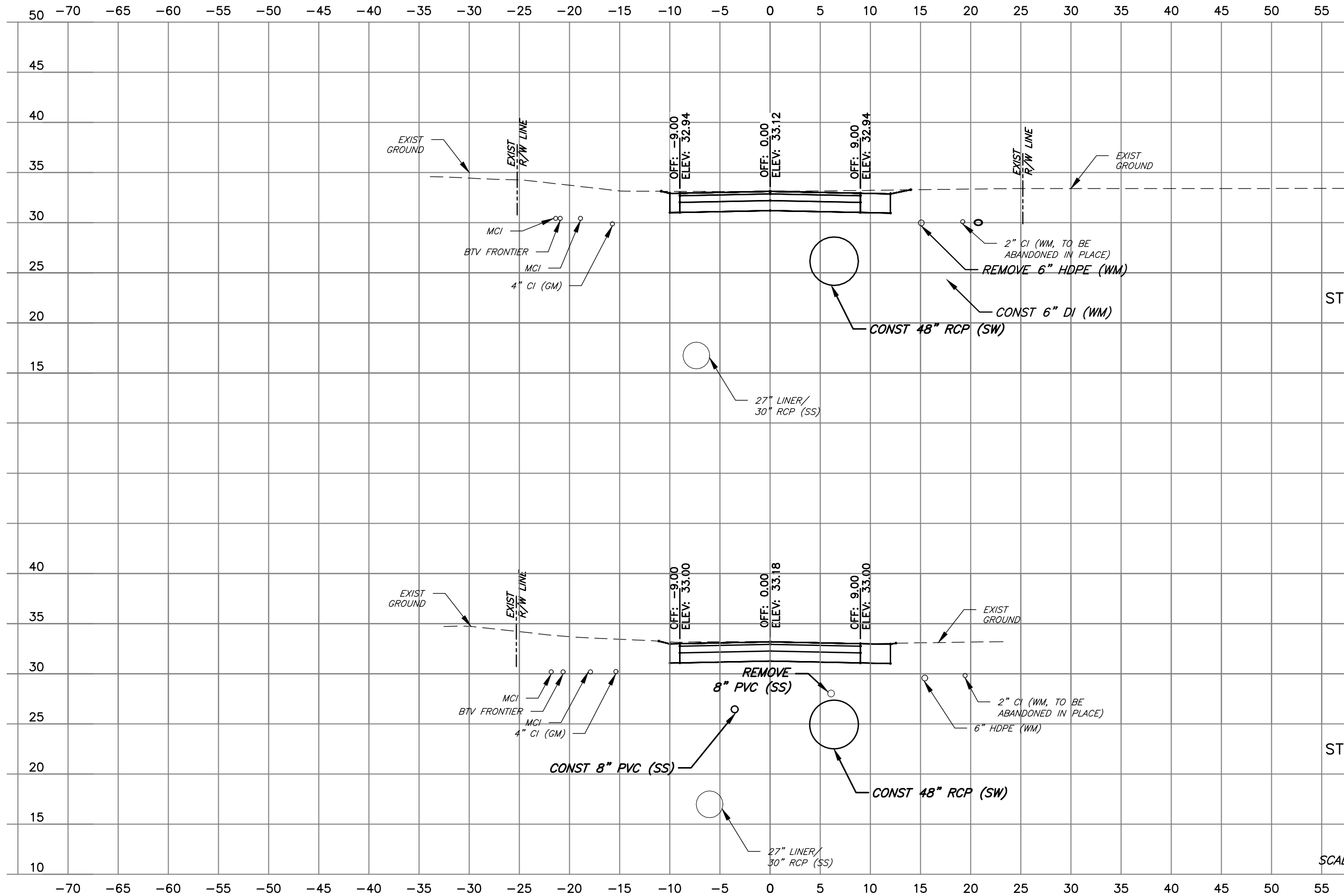
43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS

CROSS SECTIONS EAST 10TH AVE (6)

SHEET

76

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PLOTTED: 11/19/2018 6:09:09 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---



SW

STA 49+00

STA 48+00

SCALE: 1" = 10'

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PENNONI ASSOCIATES INC.
Pennoni 2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

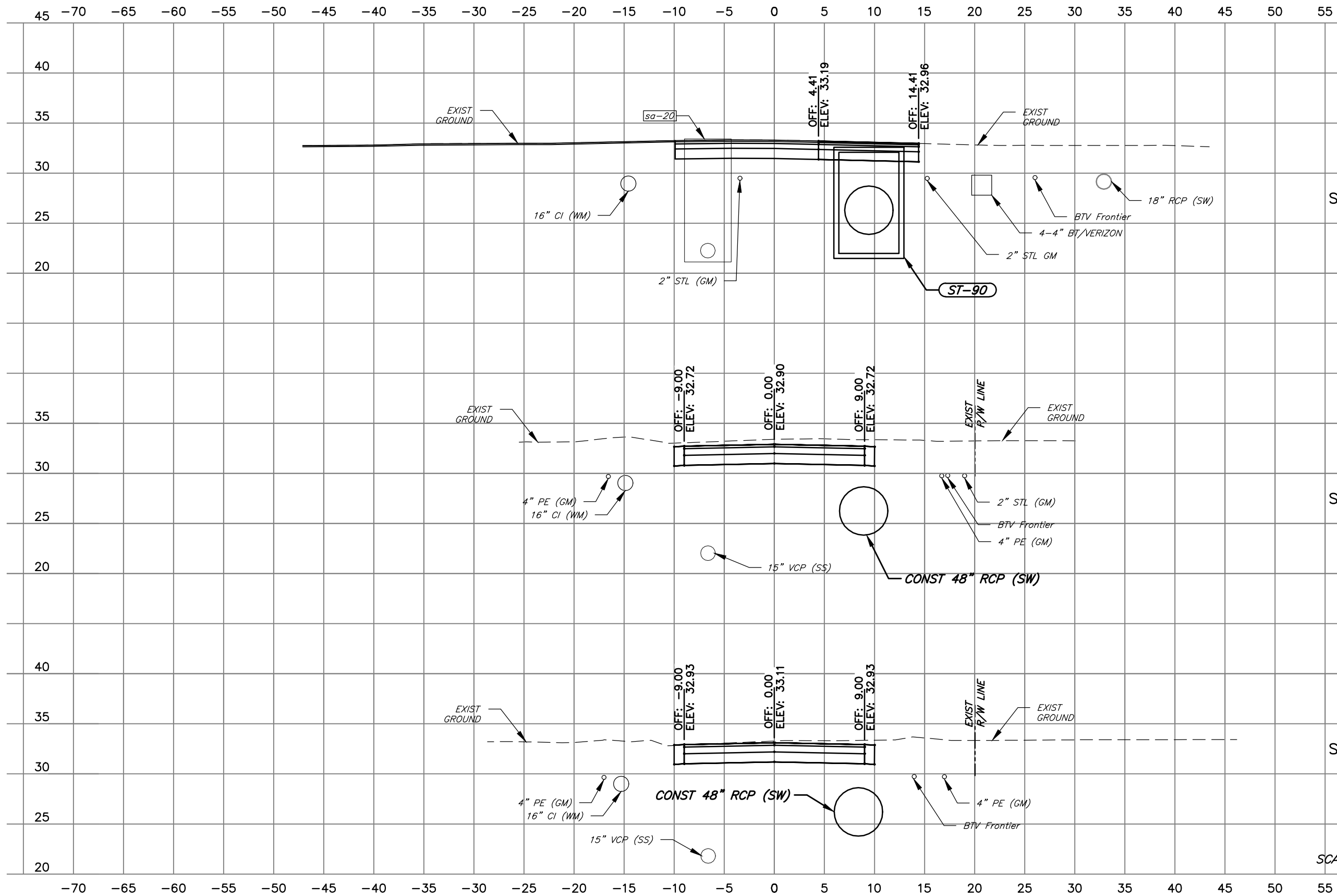
DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
CROSS SECTIONS EAST 10TH AVE (7)

SHEET
77

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PLOTTED: 11/19/2018 6:09:19 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---



SW

STA 52+00

STA 51+00

STA 50+00

SCALE: 1" = 10'

No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
Pennoni 2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
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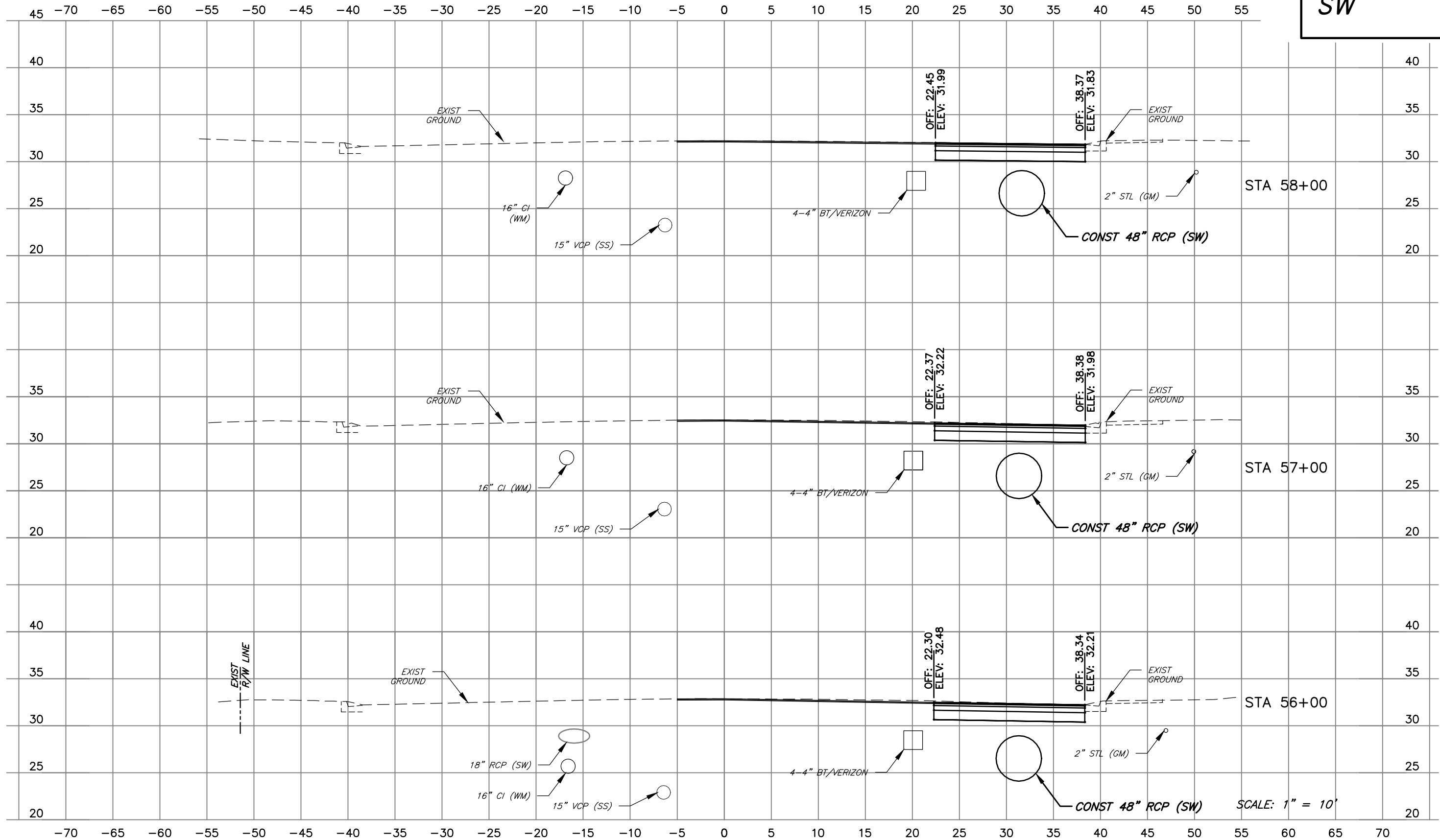
DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
CROSS SECTIONS NORTH 40TH ST (I)

SHEET
78

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PLOTTED: 11/19/2018 6:09:39 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---



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PENNONI ASSOCIATES INC.
Pennonni 2555 Nursery Road, Suite 101
Clearwater, FL 33764
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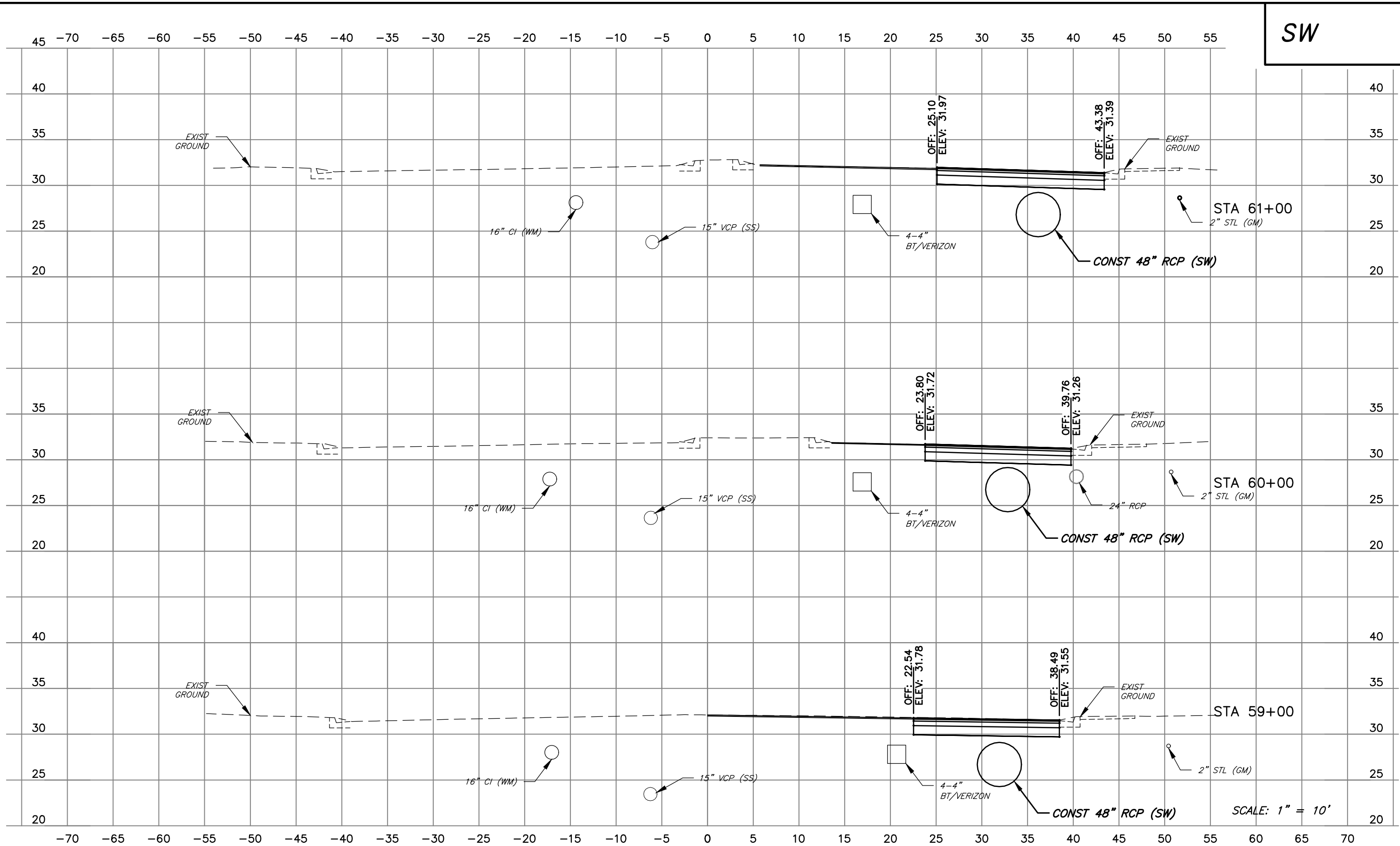
DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
CROSS SECTIONS NORTH 40TH ST (3)

SHEET
80

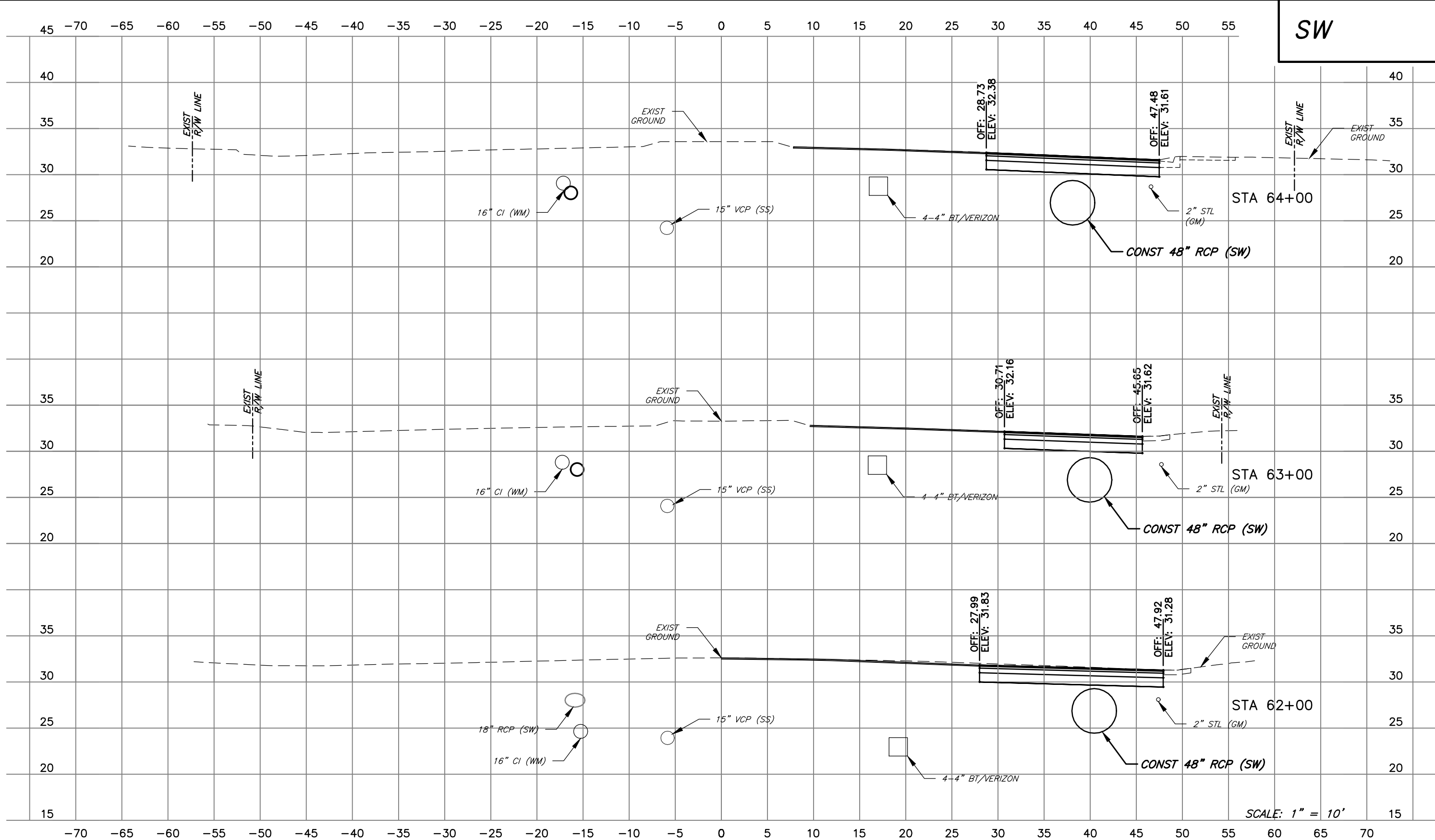
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PLOT DATE: 11/19/2018 6:09:49 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI.NCS,STB, PROJECT STATUS: ---



SW

No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. P.E. NO. 38766 DATE		DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS CROSS SECTIONS NORTH 40TH ST (4)	SHEET 81

M:\PROJECTS\TMP\TMA15001-43RD_STREET\DESIGN_PUBLISH\BID SET\1920 CROSS SECTIONS.DWG
PLOT: 11/19/2018 6:09:59 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI NCS.STB PROJECT STATUS: ---



No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
Pennoni 2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

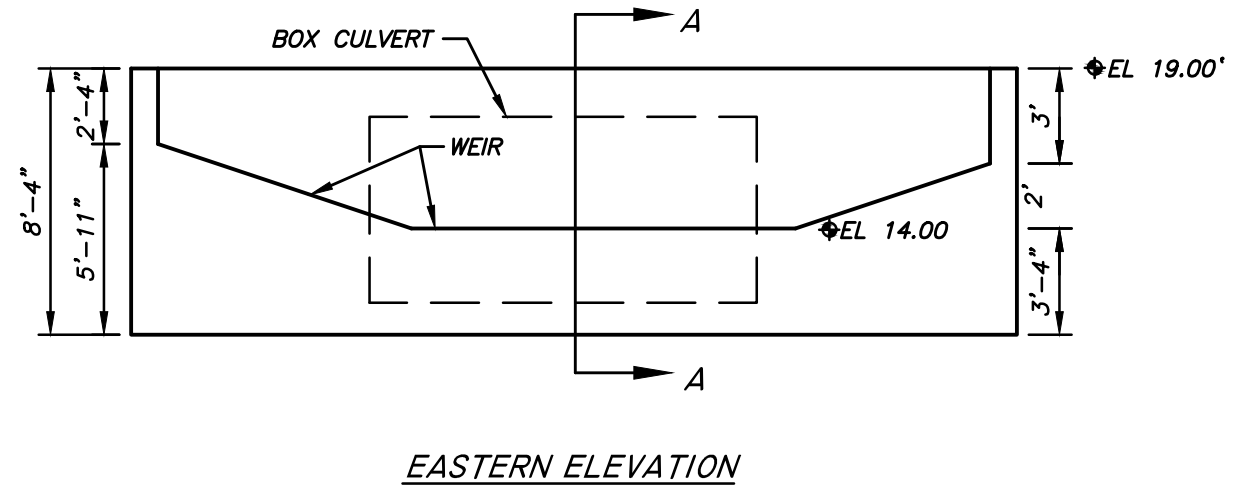
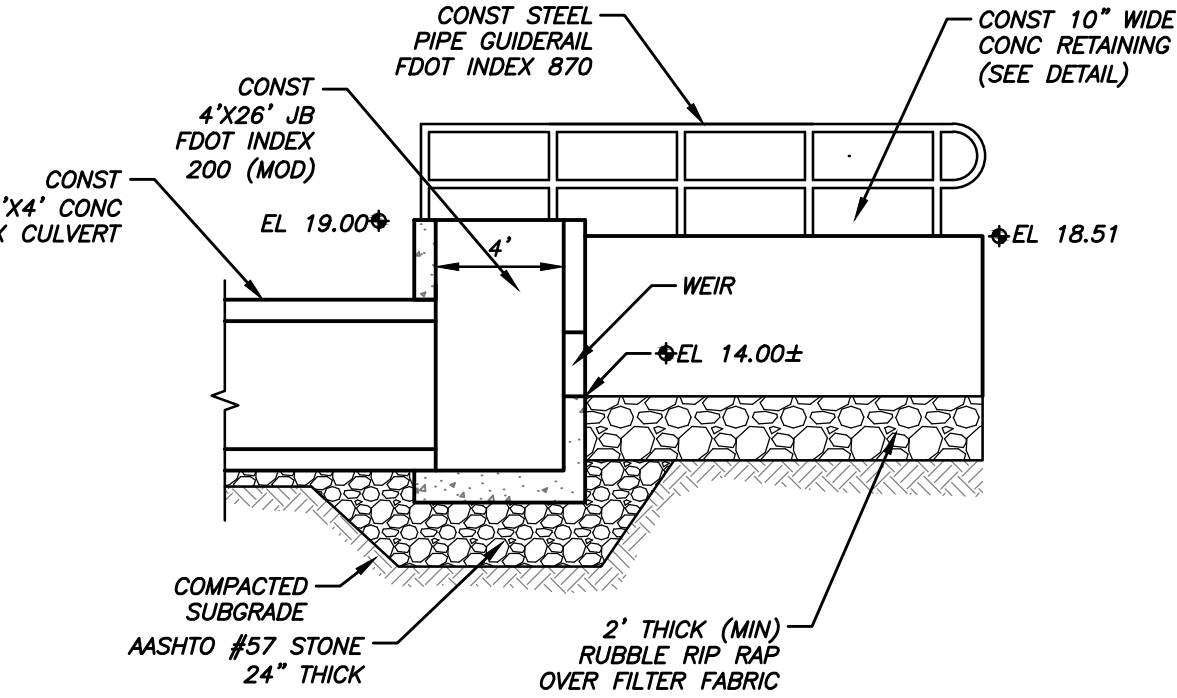
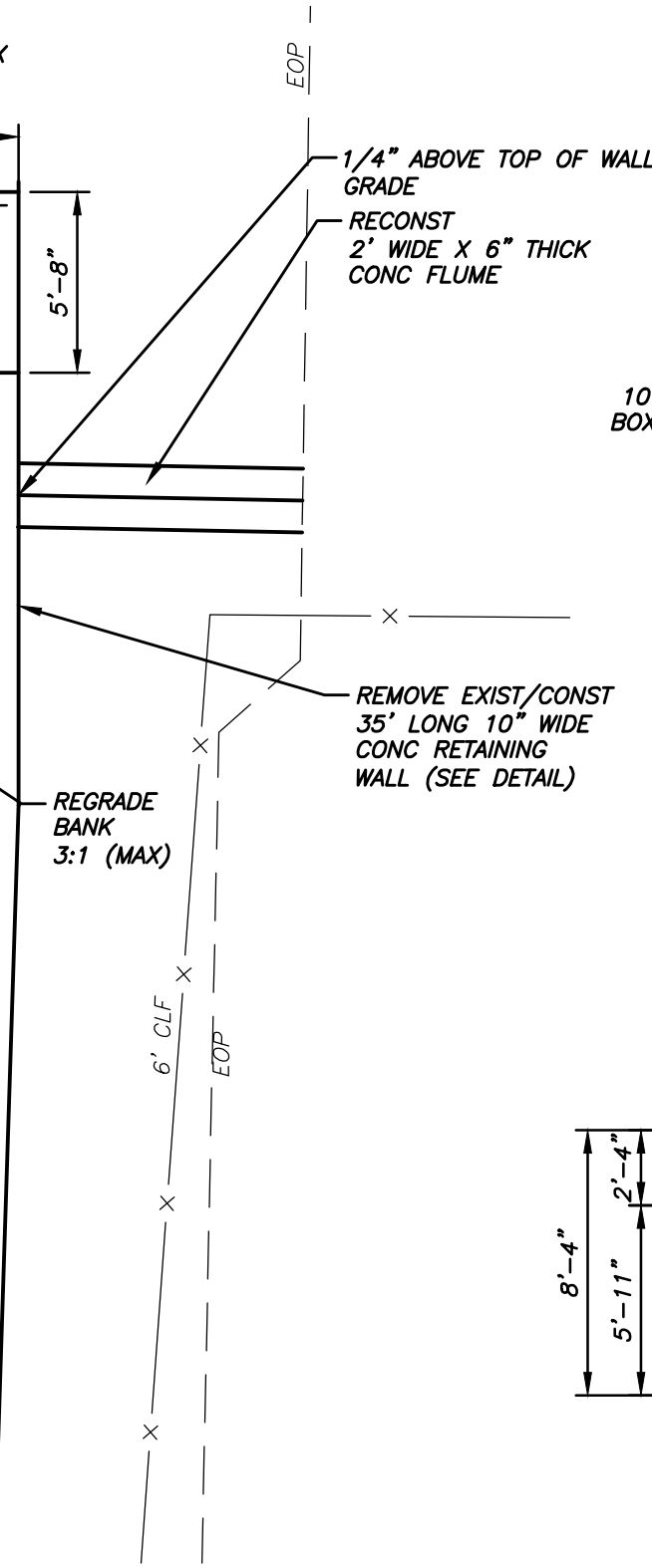
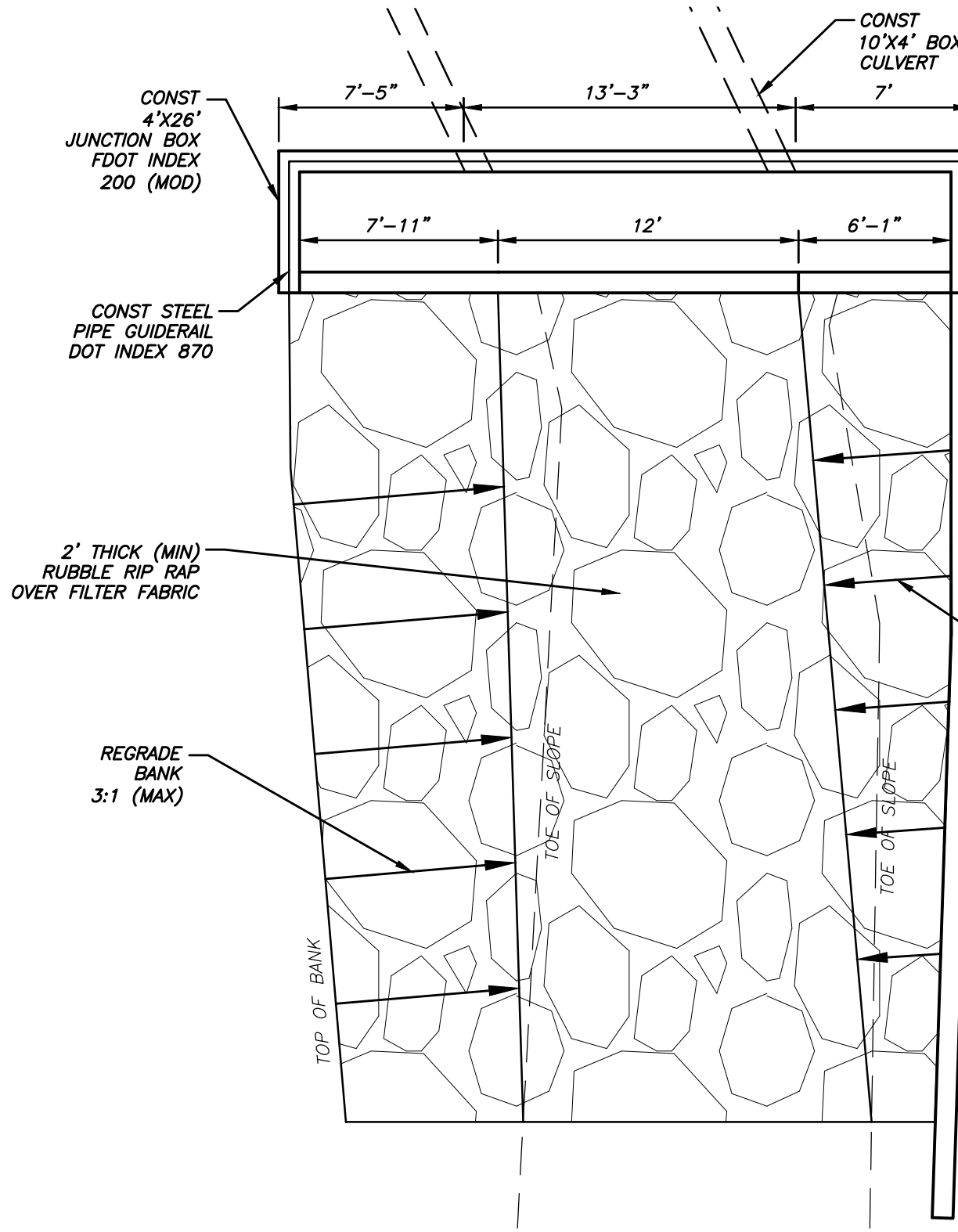
DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
CROSS SECTIONS NORTH 40TH ST (5)

SHEET
82

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PLOTTED: 11/19/2018 6:00:05 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI.NCS,STB, PROJECT STATUS: ---



No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
Pennoni 2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

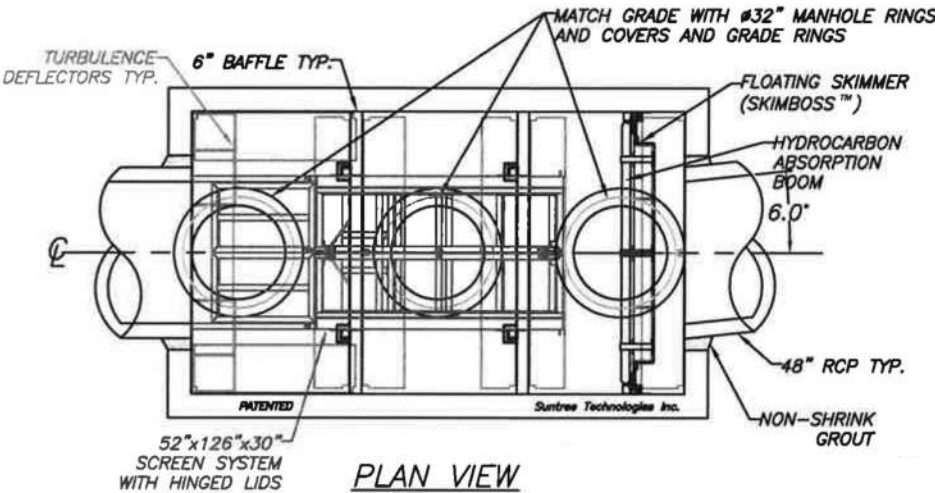
43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
STORMWATER DETAILS (I)

SHEET
83

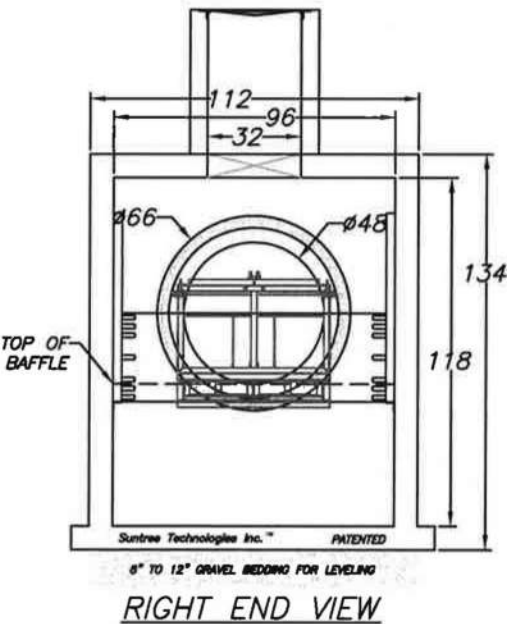
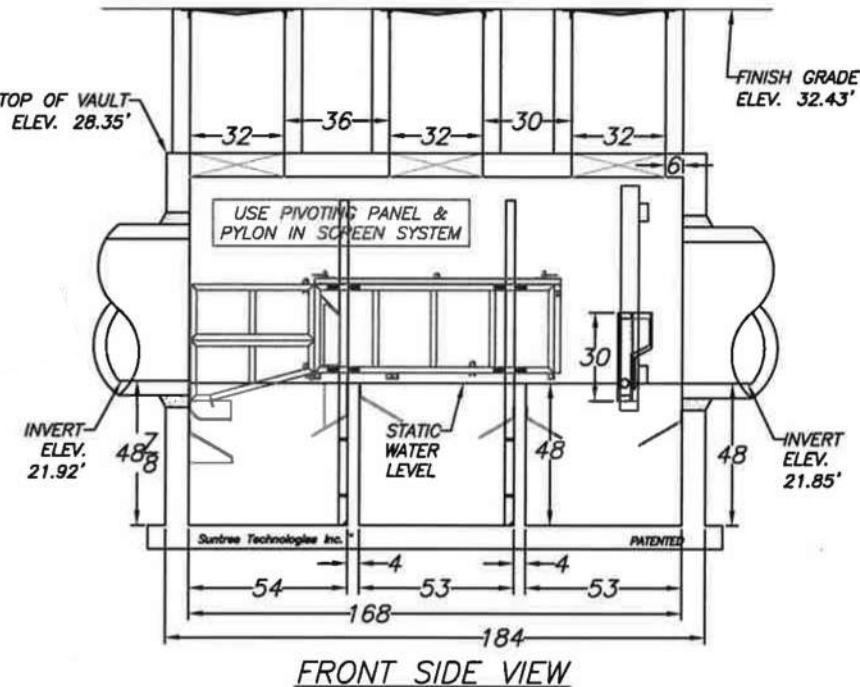
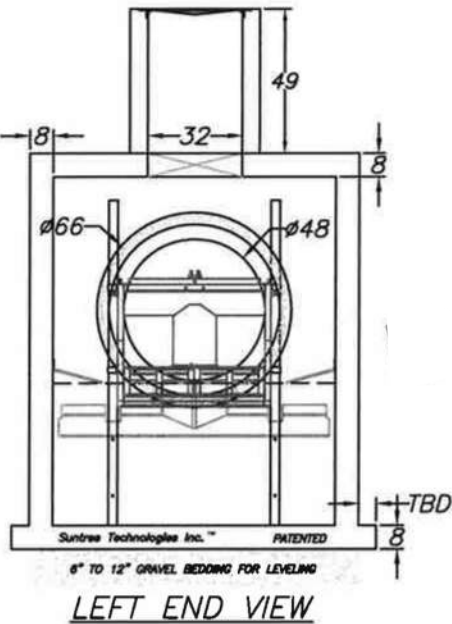
SUNTREE TECHNOLOGIES INC.™ NUTRIENT SEPARATING BAFFLE BOX™ MODEL NO: NSBB-8-14

- FLOW & BY-PASS SPECIFICATIONS FOR BIOMASS SEPARATING SCREEN SYSTEM SPECIFICATIONS
1. Pipe inflow area (Drawn as 48" RCP) — 12.57 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 — 17.86 sq.ft.
7. Screen system storage volume — 102.87 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. HEAVIEST PICK POINT TO BE 46,000 LBS.
5. INVERT OF THE INFLOW PIPE SHOULD NOT BE BELOW THE INVERT OF THE OUTFLOW PIPE.
- SITE SPECIFIC ANTI-FLOATATION CALCULATIONS HAVE NOT BEEN PERFORMED ON THE CONCRETE VAULT SHOWN. THEREFORE THE ANTI-FLOATATION LEDGE AROUND THE BASE MAY CHANGE IN SIZE. IN ADDITION, THE ANTI-FLOATATION LEDGE MAY ALSO BE REQUIRED TO BE POURED IN PLACE BY INSTALLATION CONTRACTOR.



- NOTES:
1. CONCRETE 28 DAY COMPRESSIVE STRENGTH FC=5000 PSI
2. REINFORCING: ASTM A-815 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\"/>

SUNTREE TECHNOLOGIES INC.™ 798 CLEARLAKE RD. SUITE #2 COCOA, FL. 32922 NUTRIENT SEPARATING BAFFLE BOX MODEL NO: NSBB-8-14		PROJECT LOG: FERGUSON FLORIDA PROJECT NAME: 43RD ST OUTFALL-TAMPA	CAD DB5	REVISIONS INFLOW STRAIGHT; OUTFLOW ANGLED;	DATE 11/16/18
START DATE: 11/15/18	SCALE: N/A				
DRAFTER: TH4	UNITS: INCHES				
CHECKED BY: DB5	PO #: 00000	04-11-15-18-01			

No.	DATE	REVISIONS

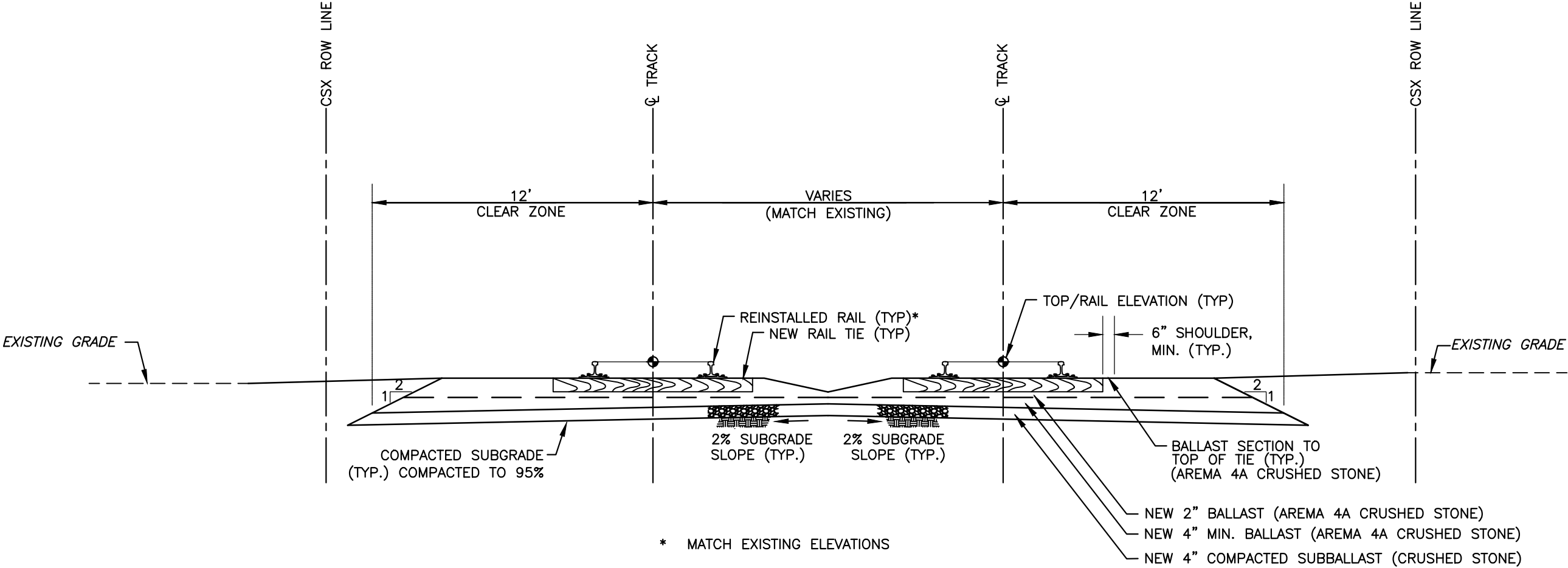
PENNONI ASSOCIATES INC.
Pennoni 2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

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CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
STORMWATER DETAILS (3)



RAILROAD SECTION DETAL
NTS

- NOTES:
- 1. CONTRACTOR SHALL USE APPROPRIATE SHORING/SHEETING AND TRENCH BOX PLACEMENT METHODS TO CONSTRUCT THE BOX CULVERT AND MINIMIZE IMPACTS TO THE RAILROAD TRACKS.
 - 2. CONTRACTOR SHALL SURVEY AND MATCH EXISTING RAILROAD TRACK ELEVATIONS.
 - 3. PROPOSED GRADING SHALL MATCH EXISTING GRADES.

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PLOTTED: 11/19/2018 6:00:26 PM, BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---

No.	DATE	REVISIONS

**PENNONI ASSOCIATES INC.**
2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

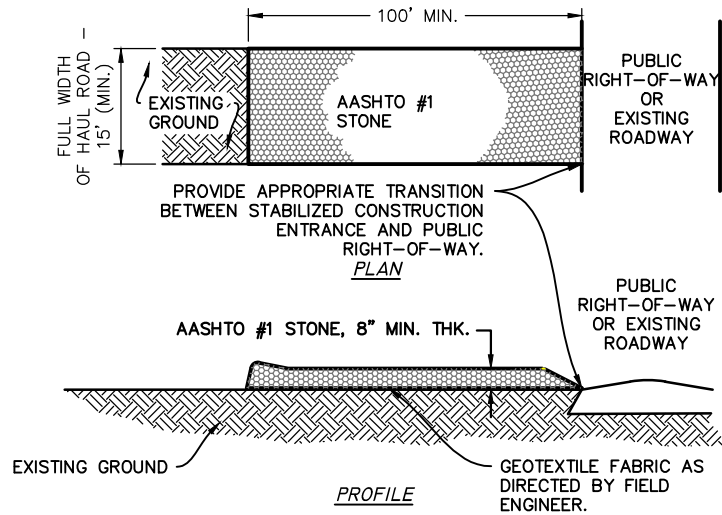
E. PETER NIKOLOV, P.E. DATE
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CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

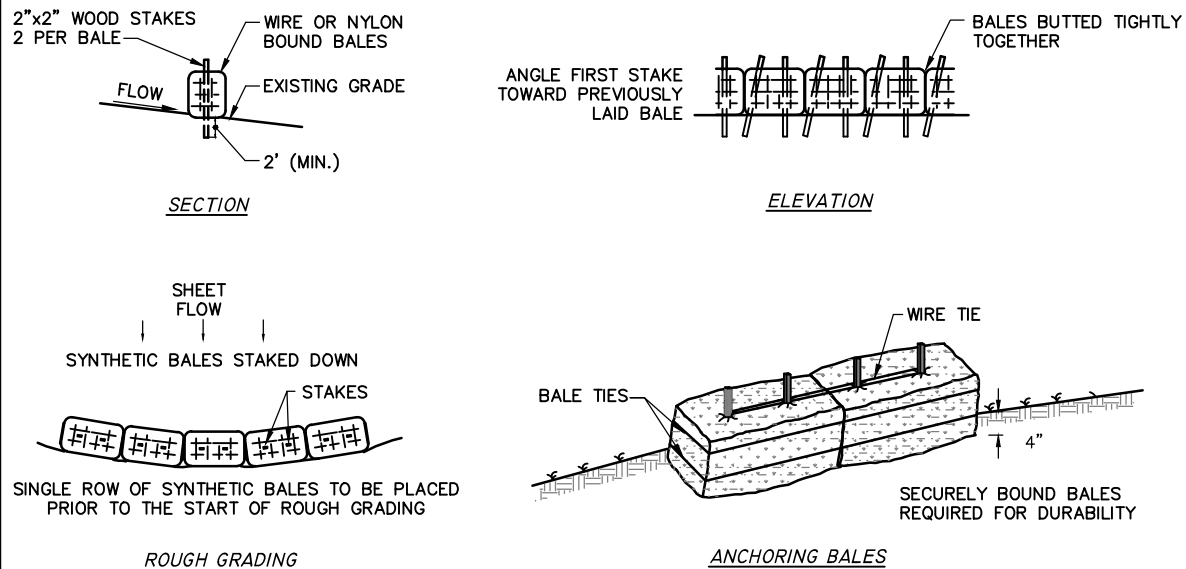
43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
RAILROAD SECTION DETAIL

M:\PROJECTS\TMP\TMA15001-43RD_STREET\DESIGN\ PUBLISH\BID SET\T403 EROSION CONTROL DETAILS.DWG
PLOTTED: 11/19/2018 6:10:32 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI NCS.STB, PROJECT STATUS: ---

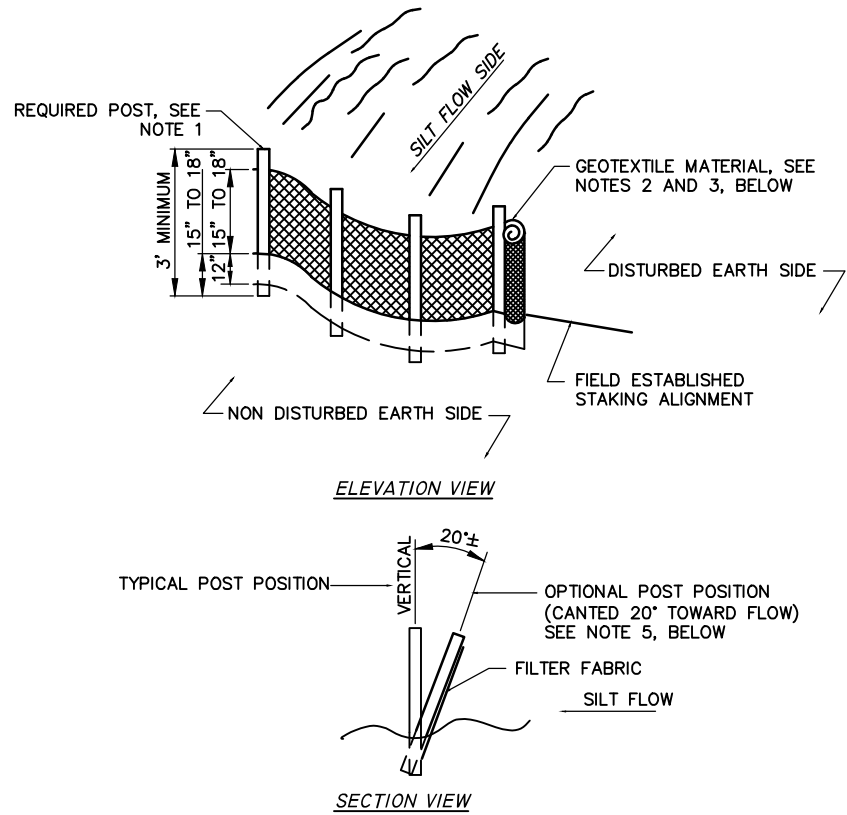


MAINTENANCE :
THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.

ROCK CONSTRUCTION ENTRANCE DETAIL
N.T.S.

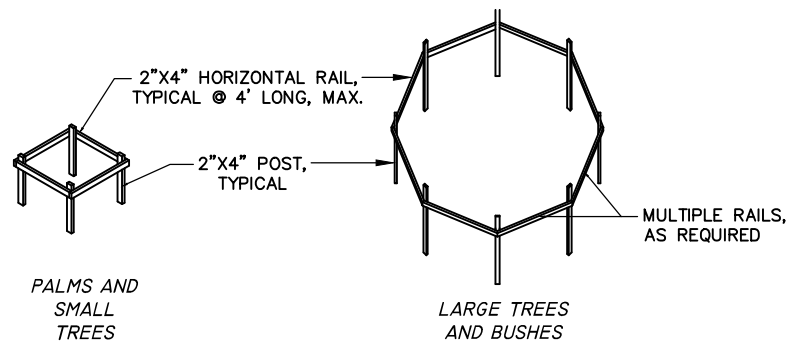


SYNTHETIC BALES AND ROCK BAG BARRIERS
N.T.S.



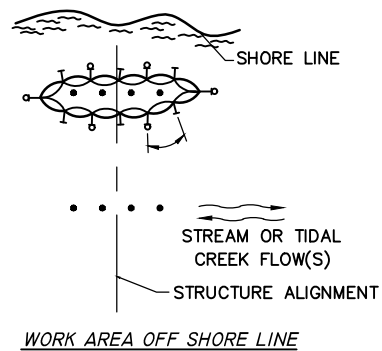
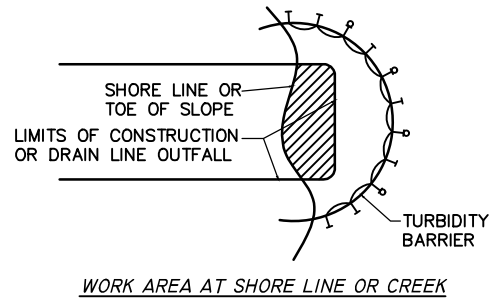
- NOTES:**
1. POST: 2"x2" WOOD, P.T. OR 2-1/2" Ø STEEL AT 6'-0" CENTERS MAXIMUM.
 2. GEOTEXTILE; GRAB TENSILE AT 90 LBS, TRAPEZOIDAL TEAR AT 35 LBS., MULLEN BURST AT 180 PSI.
 3. GEOTEXTILE MATERIAL SHALL BE BURIED IN THE GROUND A MINIMUM OF 12" AND BACK FILLED.
 4. ALSO SEE FDOT INDEX 199, "GEOTEXTILE CRITERIA", EROSION CLASS. 5. OPTIONAL POST POSITION REQUIRED WHEN SLOPE IS GREATER THAN 1:2.

STAKED SILT BARRIER DETAIL
N.T.S.



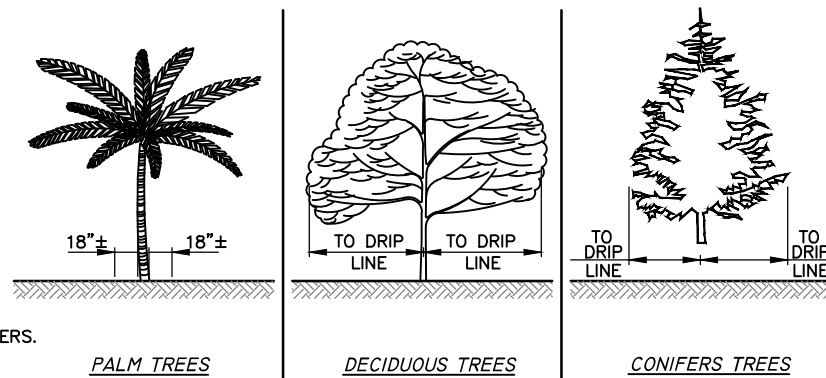
- NOTES:**
1. NO TRUCKS OR HEAVY EQUIPMENT ALLOWED WITHIN BARRIERS, ONLY HAND LABOR ALLOWED.
 2. NO CONSTRUCTION MATERIALS, SOILS DEPOSITS, OR SOLVENTS SHALL BE ALLOWED WITHIN BARRIERS.
 3. BARRIERS ARE TO IN PLACE PRIOR TO ANY CONSTRUCTION ACTIVITIES WITH-IN TREE AREA.
 4. BARRIERS ARE TO STAY IN PLACE UNTIL ALL PAVING, CONSTRUCTION, AND HEAVY EQUIPMENT IS REMOVED FROM THE AREA.

TREE PROTECTION BARRIERS DETAIL
N.T.S.



- NOTES:**
1. CURTAIN TO REACH THE BOTTOM UP TO DEPTHS OF 10'. 2 PANELS ARE TO BE USED FOR DEPTHS GREATER THAN 10' UNLESS SPECIAL DEPTH CURTAINS SPECIFICALLY ARE CALLED FOR IN THE PLANS OR AS DIRECTED BY THE ENGINEER.
 2. COMPONENTS OF TYPES I AND TYPES II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND/OR TYPE II SHALL BE AS APPROVED BY THE ENGINEER.
 3. TRUBIDITY BARRIERS SHALL BE USED IN ALL PERMANENT BODIES OF WATER REGARDLESS OF WATER DEPTH.
 4. NUMBER AND SPACING OF ANCHORS DEPENDENT ON CURRENT VELOCITIES.
 5. DEPLOYMENT OF BARRIER AROUND PILE LOCATIONS MAY VARY TO ACCOMMODATE CONSTRUCTION OPERATIONS.
 6. NAVIGATION MAY REQUIRE SEGMENTING BARRIER DURING CONSTRUCTION ACTIVITIES
 7. FOR ADDITIONAL INFORMATION, SEE SECTION 104 OF THE STANDARD FDOT SPECIFICATIONS.

FLOATING TURBIDITY BARRIER DETAIL
N.T.S.



No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
 2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Water Department
306 East Jackson St
Tampa, FL 33602

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
EROSION CONTROL DETAILS

SHEET
87

NPDES/FDEP NOTICE OF INTENT AND REPORTING NOTES:

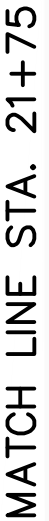
1. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREPARATION OF THE EROSION AND SEDIMENTATION CONTROL PLAN TO BE SUBMITTED TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION. THE PLAN SHALL INCLUDE THE FOLLOWING:
 - a. NARRATIVE: A BRIEF DESCRIPTION OF THE OVERALL STRATEGY FOR EROSION AND SEDIMENT CONTROL.
 - b. MAP/SITE PLAN: SITE PLAN WHICH SHOWS THE EXISTING AND FINAL ELEVATION CONTOURS, CRITICAL AREAS WITHIN OR NEAR THE PROJECT AREA, EXISTING VEGETATION, LIMITS OF CLEARING AND GRADING, AND LOCATIONS AND NAMES OF EROSION AND SEDIMENT CONTROL MEASURES, WITH DIMENSIONS.
 - c. EROSION CONTROL CONSTRUCTION DETAILS
 - d. CALCULATIONS: INCLUDE CALCULATIONS USED TO SIZE THE CONTROL MEASURES.
2. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED BEFORE AND AFTER EACH RAIN EVENT OF 1/4 INCH OR MORE.
3. DISTURBED AREAS WHICH HAVE BEEN BROUGHT TO FINAL GRADE OR WHICH WILL REMAIN AT ROUGH GRADE FOR 14 DAYS OR MORE SHALL RECEIVE PERMANENT STABILIZATION IMMEDIATELY.
4. CONTRACTOR SHALL MAINTAIN ON-GOING INSPECTION REPORTS FOR EROSION AND SEDIMENT CONTROL INSPECTIONS AND MAINTENANCE.
5. CONTRACTOR SHALL HAVE A CERTIFIED INSPECTOR ON STAFF AND BE RESPONSIBLE FOR ALL NPDES REPORTING.
6. ANY AREAS SUBJECT TO EROSION MUST BE ADEQUATELY STABILIZED WITH VEGETATIVE MATERIAL THAT WILL, WITHIN A REASONABLE TIME FRAME, DETER SOIL DISTURBANCE. PLUGGING, SPRIGGING, OR SEEDING IS ACCEPTABLE FOR STABILIZATION; HOWEVER SODDING MAY BE REQUIRED IN AREAS OF EROSION-PRONE SOILS OR WHERE SLOPES ARE GREATER THAN 5:1. VEGETATION OTHER THAN GRASS IS ACCEPTABLE UNLESS OTHERWISE SPECIFIED.
7. THE CONTRACTOR SHALL SUBMIT THE REQUIRED NPDES/FDEP NOTICE OF INTENT 30 DAYS PRIOR TO STARTING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL RAINFALL AND DISCHARGE LOGS DURING CONSTRUCTION. UPON COMPLETION OF CONSTRUCTION A NOTICE OF TERMINATION SHALL BE FILED WITH FDEP.
8. OR PROPERLY MAINTAINED REQUIRED EROSION CONTROL WILL RESULT IN ENFORCEMENT ACTION. ALL EROSION CONTROL MEASURES, SAND, SILT, AND DEBRIS SHALL BE REMOVED FROM ALL DRAINAGE PIPES AND STRUCTURES AFTER CONSTRUCTION HAS BEEN COMPLETED AND PRIOR TO FINAL WALK-THROUGH.
4. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SILT/TURBIDITY BARRIERS TO CONTROL EROSION AND SEDIMENT FROM TAKING PLACE OUTSIDE THE PROJECT LIMITS. THE SILT/TURBIDITY BARRIERS SHALL BE PLACED IN ACCORDANCE WITH REQUIREMENTS OF FLORIDA STORMWATER EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL, 2008, STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL, LATEST EDITION A THROUGHOUT THE DURATION OF THE PROJECT AND ALL ASPECTS OF CONSTRUCTION. ALL DAMAGED OR INEFFECTIVE EROSION CONTROL DEVICES SHALL BE REPLACED AT NO ADDITIONAL COST TO THE COT.
5. EROSION CONTROL PLAN – ANY MODIFICATIONS TO THIS PLAN MUST BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REPRESENTING THE CONTRACTOR. THESE MODIFICATIONS MUST BE APPROVED BY THE COT AND THE PERMITTING AGENCY. NO CONTRACT DELAYS WILL BE ALLOWED FOR SUCH MODIFICATIONS OR APPROVALS.
6. OUTFALL PROTECTION – PROJECT PIPE OR DITCH DISCHARGES INTO OFF-SITE OUTFALLS SHALL BE INSPECTED DAILY FOR POSSIBLE SEDIMENT BUILDUP OR TRANSPORT. OUTFALLS SHALL BE PROTECTED THROUGH USE OF EROSION CONTROL FEATURES AS NECESSARY TO CONTAIN ANY SEDIMENT LOSS TO THE IMMEDIATE AREA OF THE PROJECT. ANY SEDIMENT BUILDUP OR TRANSPORT OFF-SITE SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REMEDY. THE CONTRACTOR SHALL USE APPROPRIATE MEASURES AS DIRECTED BY THE PROJECT ENGINEER FOR OUTFALL PROTECTION.
7. APPROVED BARRIERS (OR OTHER APPROVED SEDIMENT CONTROL DEVICES) – THESE SHALL BE PLACED AT THE BASE OF ANY SLOPE WHERE A RAINFALL EVENT COULD ERODE A SLOPE AND TRANSPORT SEDIMENTS OFF-SITE. APPROVED BARRIERS SHALL BE DOUBLE STAKED IN ACCORDANCE WITH FLORIDA STORMWATER EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL, 2008, AND STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL, LATEST EDITION. ANY DAMAGED OR INEFFECTIVE APPROVED BARRIERS ARE TO BE REPLACED WITH NEW ONES. THE LOCATION AND INSTALLATION OF APPROVED BARRIERS SHALL BE AS DIRECTED BY THE PROJECT ENGINEER.
8. STOCKPILED MATERIALS SHALL BE PROTECTED BY COVER, APPROVED BARRIERS OR OTHER APPROVED SEDIMENT CONTROL DEVICES.
9. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 3 DAYS AFTER 1/4" RAIN EVENT DISTURBANCE

EROSION/TURBIDITY CONTROL NOTES

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTROL AND PREVENT EROSION AND THE TRANSPORTATION OF SEDIMENT TO SURFACE DRAINS AND OUTFALLS USING BEST MANAGEMENT PRACTICES. REFER TO CONSTRUCTION PLANS, DETAILS, SPECIFICATIONS AND APPROVED PERMITS FOR DETAILS. SEDIMENT DEPOSITS SHALL BE REMOVED WHEN THEY REACH ONE HALF THE HEIGHT ON AN EROSION DEVICE OR AS DIRECTED BY THE ENGINEER.
2. DURING THE CONSTRUCTION OF DRAINAGE STRUCTURES, AND OTHER STRUCTURES REQUIRING EXCAVATION, THE CONTRACTOR SHALL PLACE APPROVED BARRIERS OR OTHER APPROVED DEVICES AROUND SUCH STRUCTURES TO PREVENT EROSION AND THE MIGRATION OF SEDIMENT TO POINTS OUTSIDE THE CONSTRUCTION AREA. THE APPROVED BARRIERS OR OTHER APPROVED DEVICES SHALL BE PLACED IN ACCORDANCE WITH REQUIREMENTS OF FLORIDA STORMWATER EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL, 2008, STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL, LATEST EDITION OR AS DIRECTED BY THE ENGINEER.

No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE _____ P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS EROSION CONTROL NOTES (I)	SHEET 88

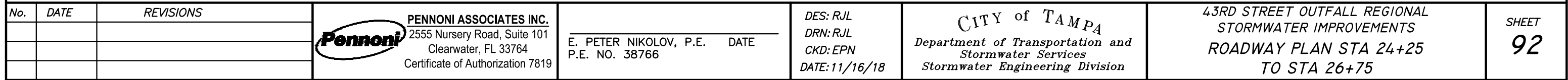
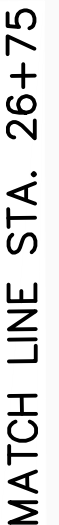
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 PLOTTED: 11/19/2018 6:10:37 PM. BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI.NCS.STB. PROJECT STATUS: ---



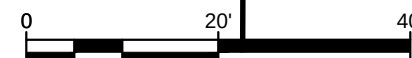
1. ALL EXIST. ROADWAY ASPHALT AND BASE IS TO BE REMOVED AND RECONSTRUCTED DUE TO THE PROP. 48" RCP CONSTRUCTION. SEE TYPICAL SECTION AND PAVEMENT DESIGN FOR RECONSTRUCTION DEPTHS AND DETAILS.
2. SEE STORMWATER CONSTRUCTION PLANS FOR PROPOSED PROFILE.

*DENOTES LIMITS OF
PAVEMENT RECONST.*





MATCH LINE STA. 29+25



No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: RJL DRN: RJL CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS ROADWAY PLAN STA 26+75 TO STA 29+25	SHEET 93

I:\PROJECTS\TMA\TMA15001-43RD_STREET\DESIGN\ PUBLISH\BID SET\T520 ROADWAY PLAN.DWG
 PLOTTED: 11/19/2018 6:11:35 PM; BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB. PROJECT STATUS: ---

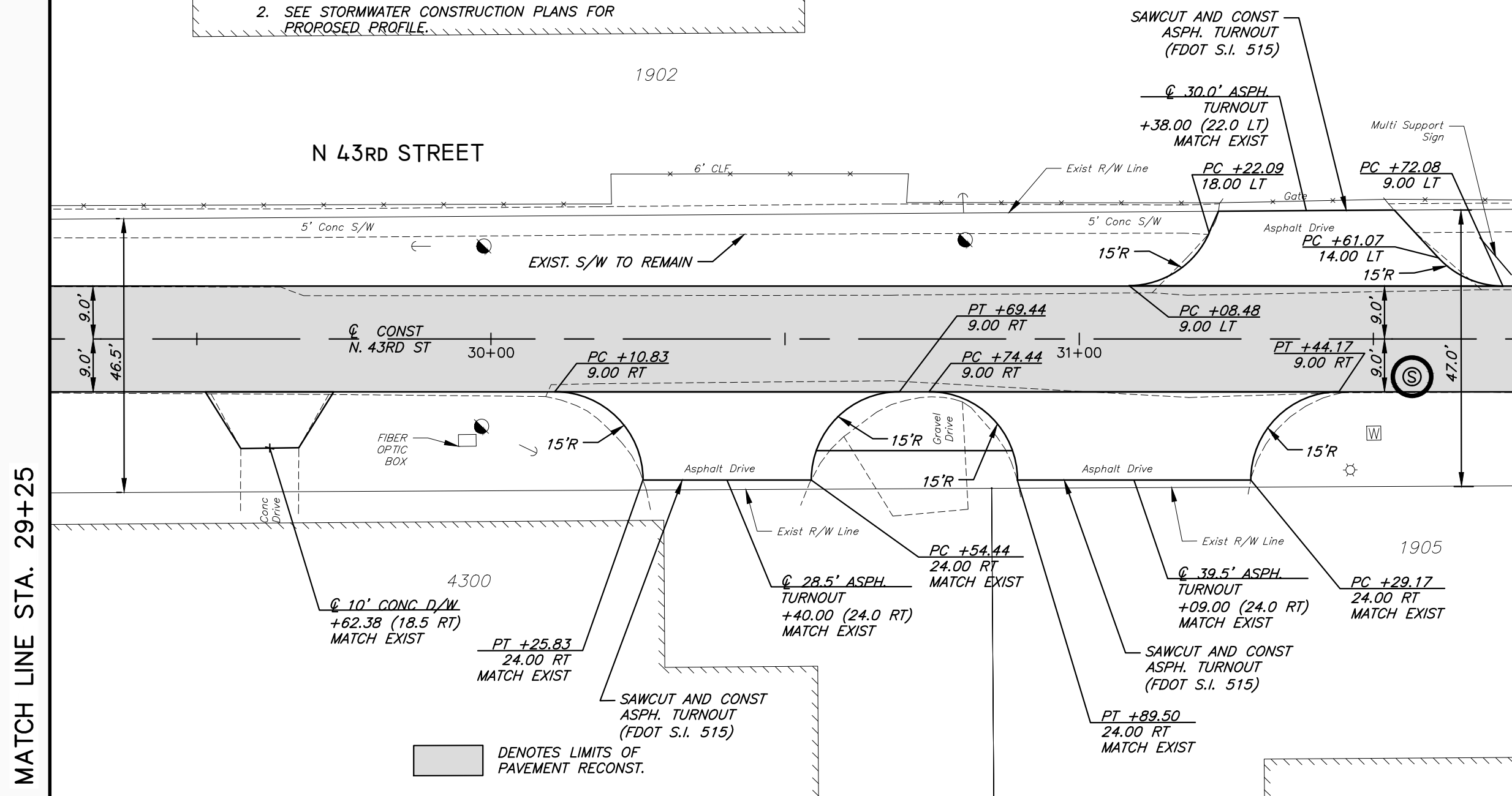
MATCH LINE STA. 31+75



1. ALL EXIST. ROADWAY ASPHALT AND BASE IS TO BE REMOVED AND RECONSTRUCTED DUE TO THE PROP. 48" RCP CONSTRUCTION. SEE TYPICAL SECTION AND PAVEMENT DESIGN FOR RECONSTRUCTION DEPTHS AND DETAILS.
2. SEE STORMWATER CONSTRUCTION PLANS FOR PROPOSED PROFILE.

1902

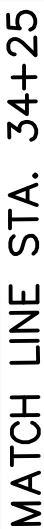
N 43RD STREET



No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: RJL DRN: RJL CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS ROADWAY PLAN STA 29+25 TO STA 31+75	SHEET 94

---: PROJECTS\TMPA\TMPA15001-43RD_STREET\DESIGN_PUBLISH\BID SET\T520 ROADWAY PLAN.DWG
 LOTTED: 11/19/2018 6:11:44 PM, BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---

SW



MATCH LINE STA. 31+75

1. ALL EXIST. ROADWAY ASPHALT AND BASE IS TO BE REMOVED AND RECONSTRUCTED DUE TO THE PROP. 48" RCP CONSTRUCTION. SEE TYPICAL SECTION AND PAVEMENT DESIGN FOR RECONSTRUCTION DEPTHS AND DETAILS.
2. SEE STORMWATER CONSTRUCTION PLANS FOR PROPOSED PROFILE.

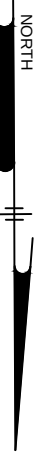
SAWCUT AND CONST
ASPH. TURNOUT
(FDOT S.I. 515)

EXIST. PP
(TO BE RELOC-
ATED BEYOND
GRADED SWALE,
BY OTHERS)



M:\PROJECTS\TWP\ATM\PA15001-43RD_STREET\DESIGN_PUBLISH\BID SET\T520 ROADWAY PLAN.DWG
 PLOTTED: 11/19/2018 6:11:54 PM; BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI.NCS,STB, PROJECT STATUS: ---

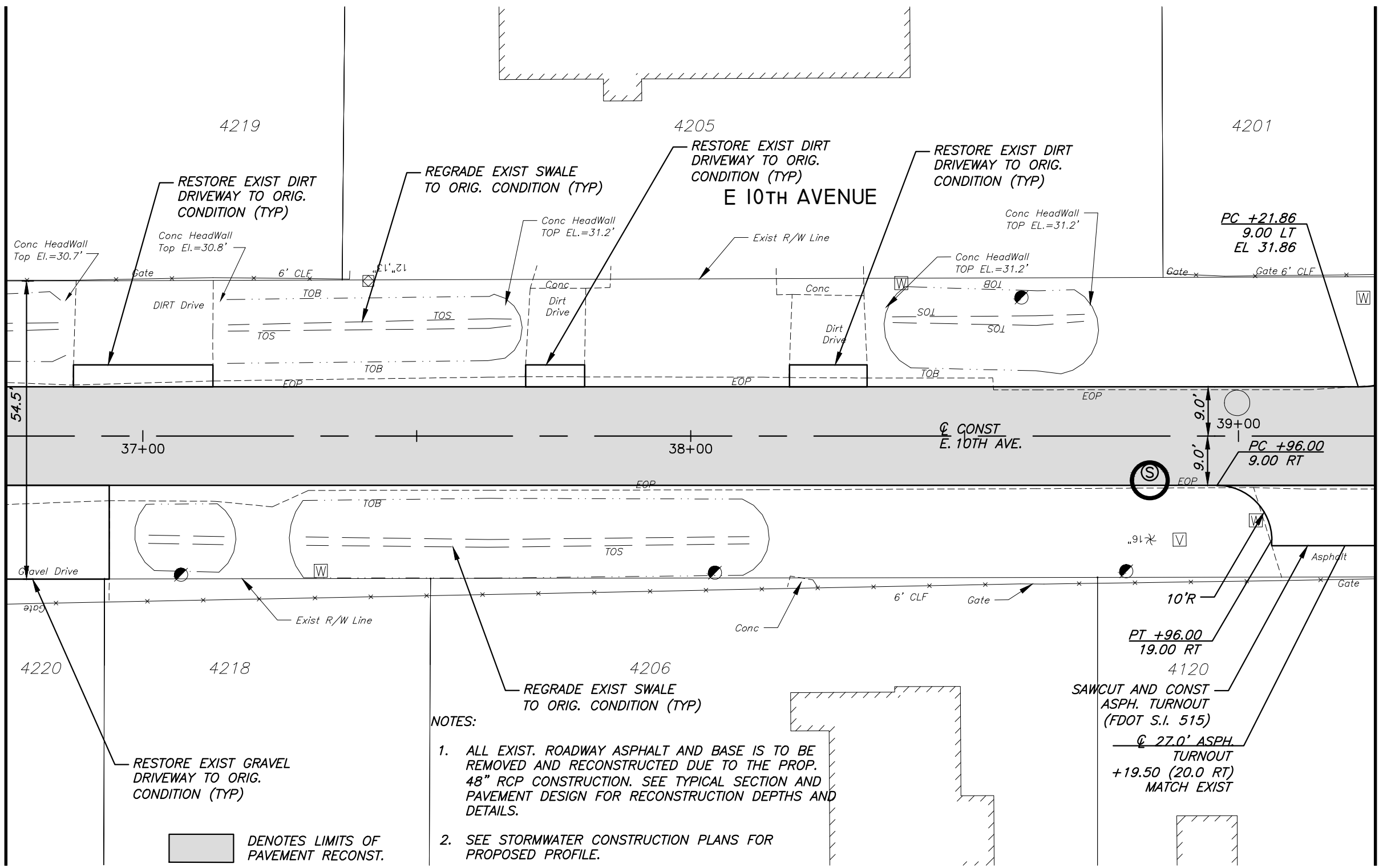
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PLOTTED: 11/19/2018 6:12:14 PM BY: MICHAEL HENDERSON



SW

MATCH LINE STA. 36+75

MATCH LINE STA. 39+25



NOTES:

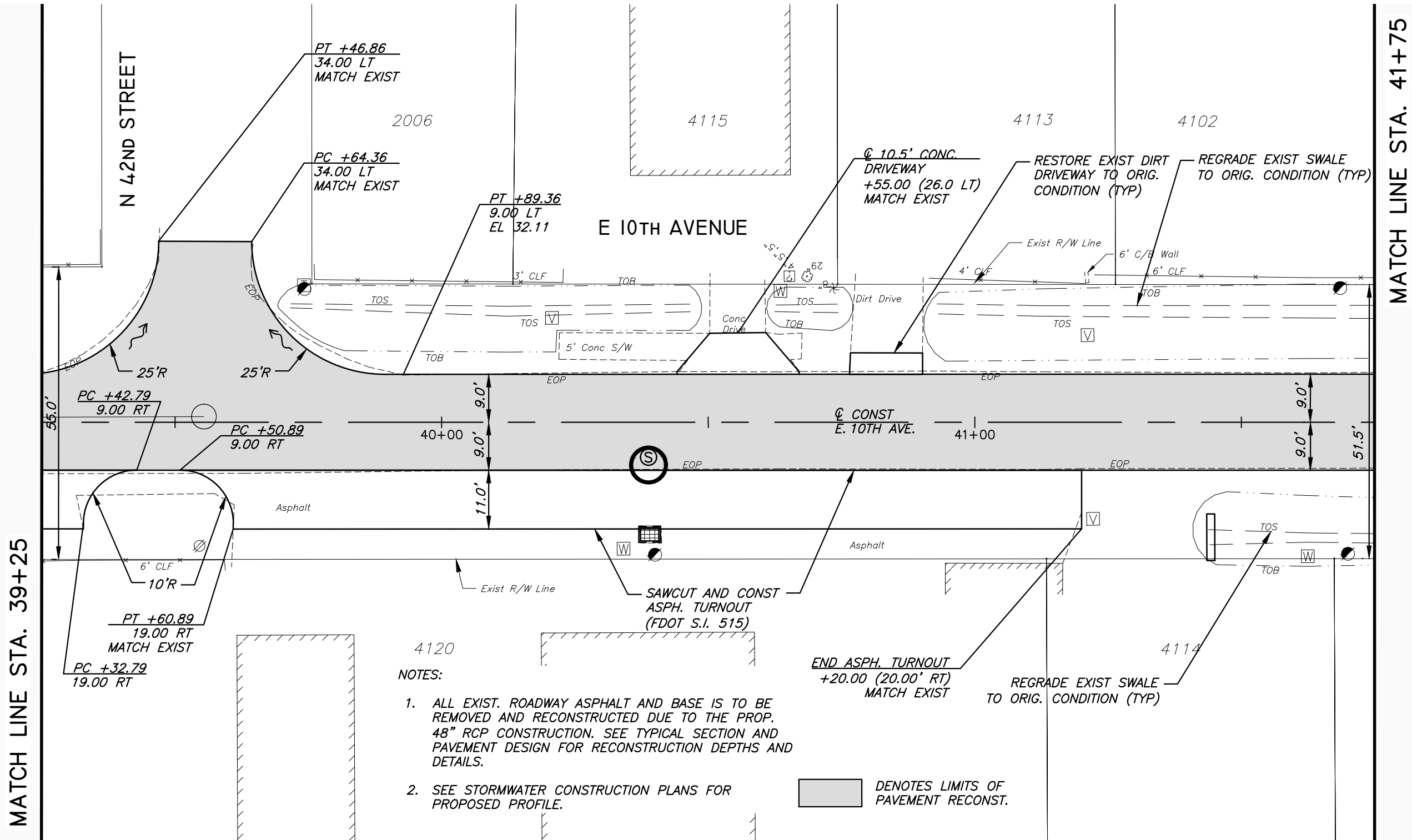
1. ALL EXIST. ROADWAY ASPHALT AND BASE IS TO BE REMOVED AND RECONSTRUCTED DUE TO THE PROP. 48" RCP CONSTRUCTION. SEE TYPICAL SECTION AND PAVEMENT DESIGN FOR RECONSTRUCTION DEPTHS AND DETAILS.
2. SEE STORMWATER CONSTRUCTION PLANS FOR PROPOSED PROFILE.

 DENOTES LIMITS OF PAVEMENT RECONST.



REVISIONS			 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: RJL DRN: RJL CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS ROADWAY PLAN STA 36+75 TO STA 39+25	SHEET 97
No.	DATE							

SW



NOTES:

1. ALL EXIST. ROADWAY ASPHALT AND BASE IS TO BE REMOVED AND RECONSTRUCTED DUE TO THE PROP. 48" RCP CONSTRUCTION. SEE TYPICAL SECTION AND PAVEMENT DESIGN FOR RECONSTRUCTION DEPTHS AND DETAILS.
2. SEE STORMWATER CONSTRUCTION PLANS FOR PROPOSED PROFILE.

DENOTES LIMITS OF PAVEMENT RECONST.



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PLOT DATE: 11/19/2018 6:22:24 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI.NCS,STB, PROJECT STATUS: ---

No.	DATE	REVISIONS	PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: RJL DRN: RJL CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS ROADWAY PLAN STA 39+25 TO STA 41+75	SHEET 98

SW

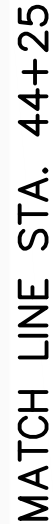
MATCH LINE STA. 44+25



M:\PROJECTS\TMPA\TMPA15001\43RD_STREET\DESIGN_PUBLISH\BID SET\T520 ROADWAY PLAN.DWG
 COTTED: 11/19/2018 6:12:34 PM BY: MICHAEL HENDERSON PI OTSTYLF: PENNONI NCS STR PROJECT STATUS: ----

SW

MATCH LINE STA. 46+75



No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: RJL
DRN: RJL
CKD: EPN
DATE: 11/16/18

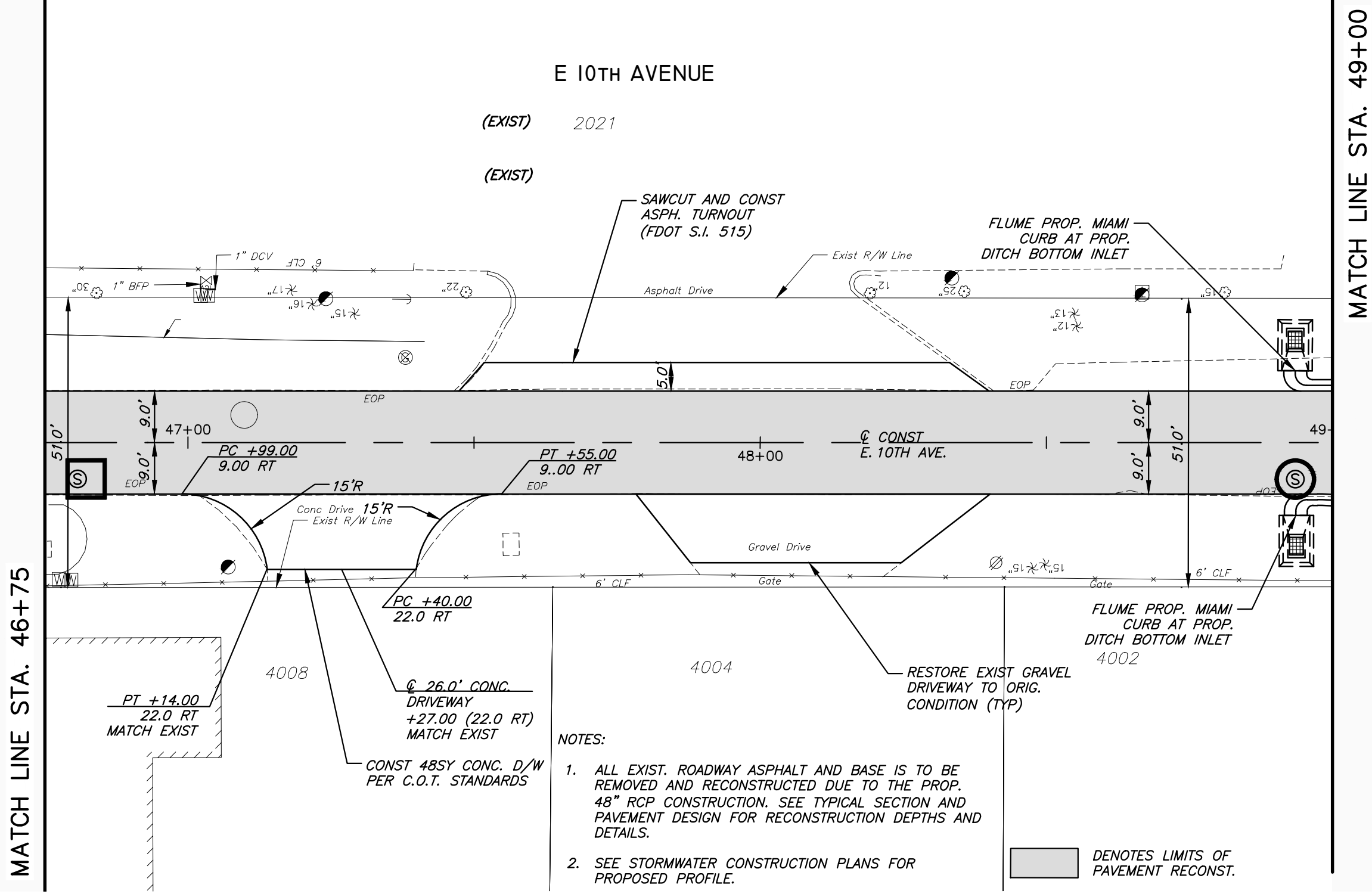
CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
ROADWAY PLAN STA 44+25
TO STA 46+75

SHEET
100

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PLOTTED: 11/19/2018 6:12:44 PM. BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI.NCS,STB,PROJECT

SW



NOTES:

1. ALL EXIST. ROADWAY ASPHALT AND BASE IS TO BE REMOVED AND RECONSTRUCTED DUE TO THE PROP. 48" RCP CONSTRUCTION. SEE TYPICAL SECTION AND PAVEMENT DESIGN FOR RECONSTRUCTION DEPTHS AND DETAILS.
2. SEE STORMWATER CONSTRUCTION PLANS FOR PROPOSED PROFILE.

DENOTES LIMITS OF PAVEMENT RECONST.



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PLOT DATE: 11/19/2018 6:12:54 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI.NCS,STB, PROJECT STATUS: ---

No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: RJL DRN: RJL CKD: EPN DATE: 11/16/18 CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS ROADWAY PLAN STA 46+75 TO STA 49+00	SHEET 101



No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: RJL DRN: RJL CKD: EPN DATE: 11/16/18	CITY of TAMPA <i>Department of Transportation and Stormwater Services Stormwater Engineering Division</i>	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS ROADWAY PLAN STA 49+00 TO STA 51+50	SHEET 102

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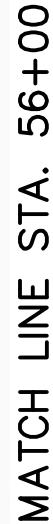


No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: RJL DRN: RJL CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS ROADWAY PLAN STA 51+50 TO STA 54+00	SHEET 103

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PLOTTED: 11/19/2018 6:13:14 PM, BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI.NCS.STB, PROJECT STATUS: ---

SW

MATCH LINE STA. 58+50



1. ALL EXIST. ROADWAY ASPHALT AND BASE IS TO BE REMOVED AND RECONSTRUCTED DUE TO THE PROP. 48" RCP CONSTRUCTION. SEE TYPICAL SECTION AND PAVEMENT DESIGN FOR RECONSTRUCTION DEPTHS AND DETAILS.
2. SEE STORMWATER CONSTRUCTION PLANS FOR PROPOSED PROFILE.

Q CONST.
N. 40th ST.

27.5' (LIMITS OF
MILL. & RESURF.)
TO SB INSIDE
LANE LINE (TYP)

26.0' (LIMITS OF
MILL. & RESURF.)
TO SB INSIDE
LANE LINE (TYP)

16.0'

160'

I-4 EASTBOUND

- Bottom Fl.=51.61'

[illegible]

DENOTES LIMITS OF
PAVEMENT RECONST.

58+00

Q CONST.
N 40th ST

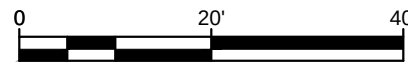
Bottom Fl. 10.00'

--	--

MULTI SUPPORT

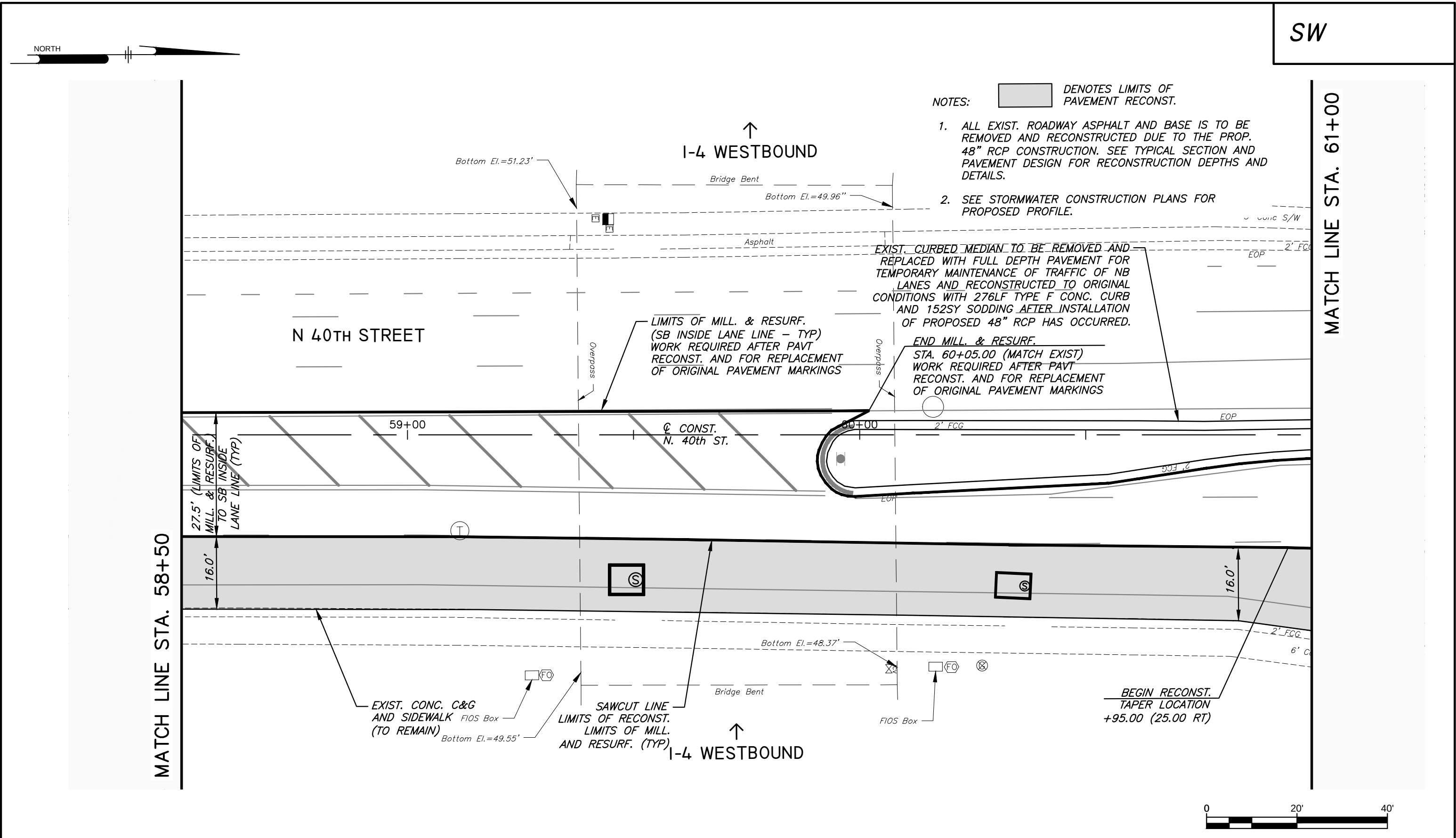
- SAWCUT LINE
LIMITS OF RECONST.
LIMITS OF MILL.
AND RESURF. (TYP)

- EXIST. CONC. C&G
AND SIDEWALK
(TO REMAIN)

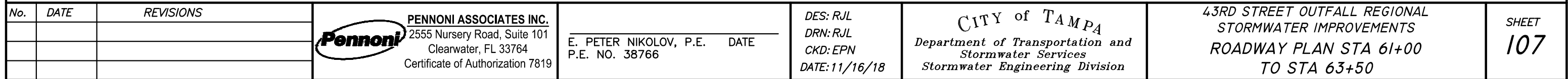
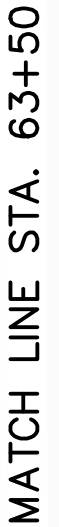


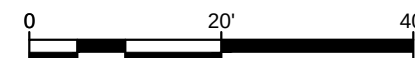
No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	DES: RJL DRN: RJL CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS ROADWAY PLAN STA 56+00 TO STA 58+50	SHEET 105

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PLOT: 11/19/2018 6:13:44 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI.NCS,STB, PROJECT STATUS: ---



No.	DATE	REVISIONS	PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819 E. PETER NIKOLOV, P.E. P.E. NO. 38766 DATE	DES: RJL DRN: RJL CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS ROADWAY PLAN STA 58+50 TO STA 61+00	SHEET 106

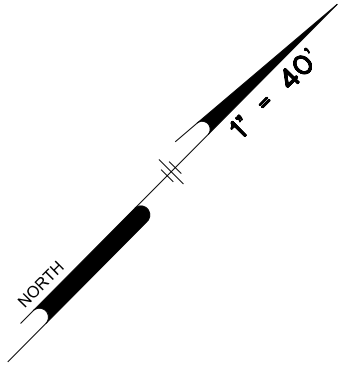




No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: RJL DRN: RJL CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS ROADWAY PLAN STA 63+50 TO STA 64+80	SHEET 108

I:\PROJECTS\TIP\TIPAT\TIPAT15001-43RD_STREET\DESIGN\ Publish\BID SET\T520 ROADWAY PLAN.DWG
 PLOTTED: 11/19/2018 6:14:04 PM. BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB. PROJECT STATUS: ---

SW



CURVE DATA 569-2

PI STA. = 135+39.20
DELTA = 63° 48' 50" (LT.)
D = 17° 55' 34"
T = 199.00'
L = 355.98'
R = 319.62'
PC STA. = 133+40.20
PT STA. = 136+96.18
e = 0.0156

CURVE DATA 569-1

PI STA. = 130+61.37
DELTA = 64° 02' 10" (RT.)
D = 17° 55' 34"
T = 199.86'
L = 357.22'
R = 319.62'
PC STA. = 128+61.51
PT STA. = 132+18.73
e = 0.0156

BEGIN PAVT MARKINGS
MATCH EXIST.
RESTORE TO ORIG. CONDITIONS
STA. 132+85 (10.0' RT)

6" DBL. YELLOW W/
A/A RPM's @ 20'oc
C/L CONST. SR 569

18" YELLOW @ 20'oc (TYP)

N. 39TH ST.

E. 11TH AVE.

KEEP
→
RIGHT

MATCHLINE STA. 136+60

18" WHITE @ 20'oc (TYP)

6" WHITE
8" WHITE W/
W/R RPM's @ 20'oc

DIR. ARROW (TYP)

6" SKIP (2'-4') WHITE

6" WHITE

6" SKIP (10'-30') WHITE
W/ W/R RPM's @ 40'oc

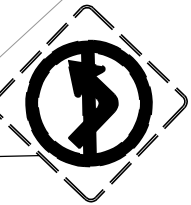
6" SKIP (6'-10') YELLOW
6" SKIP (2'-4') WHITE

6" DBL. YELLOW
ON CENTERLINE
(75 LF)

6" WHITE

12" WHITE (TYP.)
24" WHITE
TYP.

STOP



NOTE:
ALL FINAL PAVEMENT MARKINGS ARE
TO BE THERMOPLASTIC.

No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

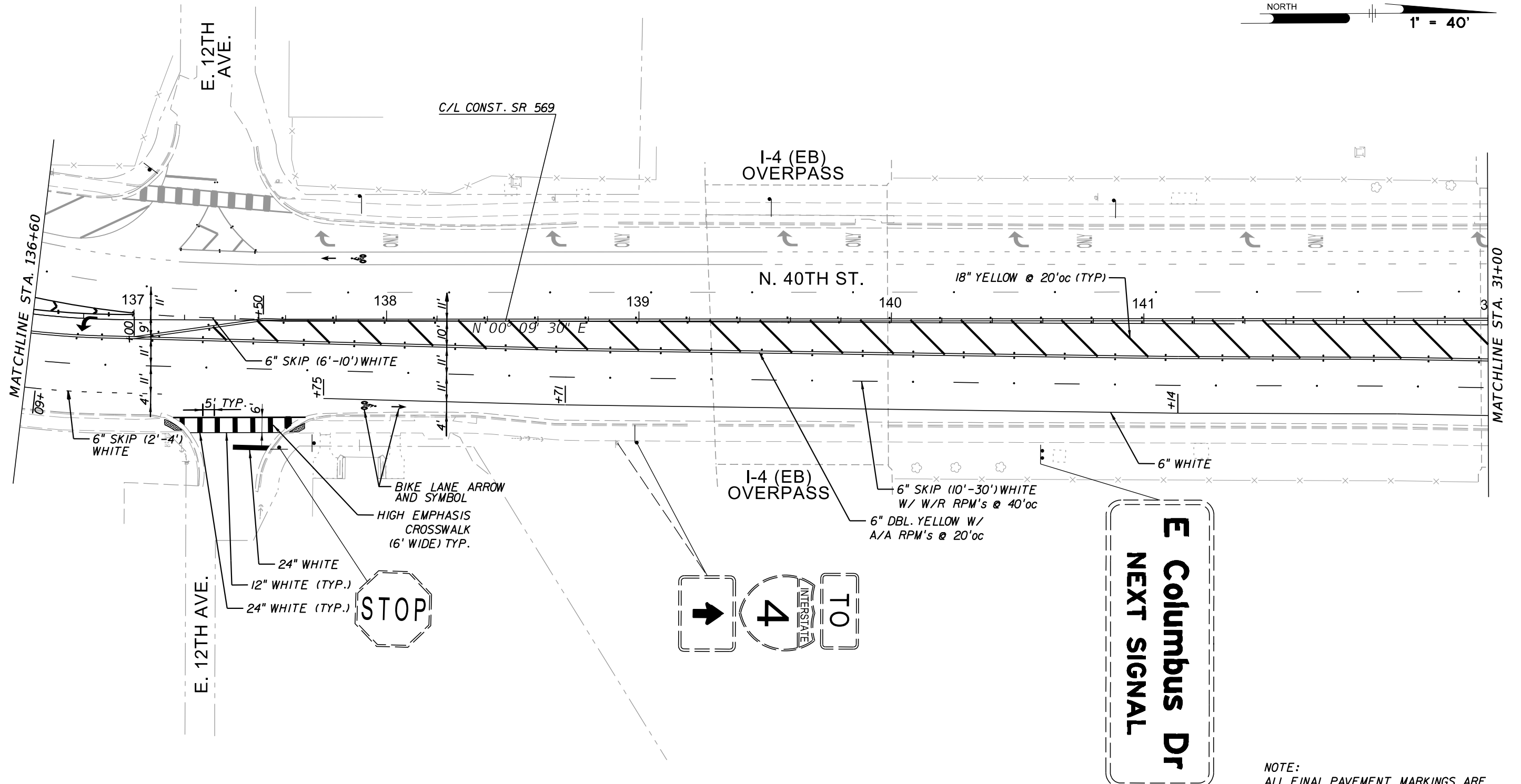
DES: RJL
DRN: RJL
CHK: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
SIGNING AND PAVEMENT
MARKING PLAN (I)

SHEET
109

SW



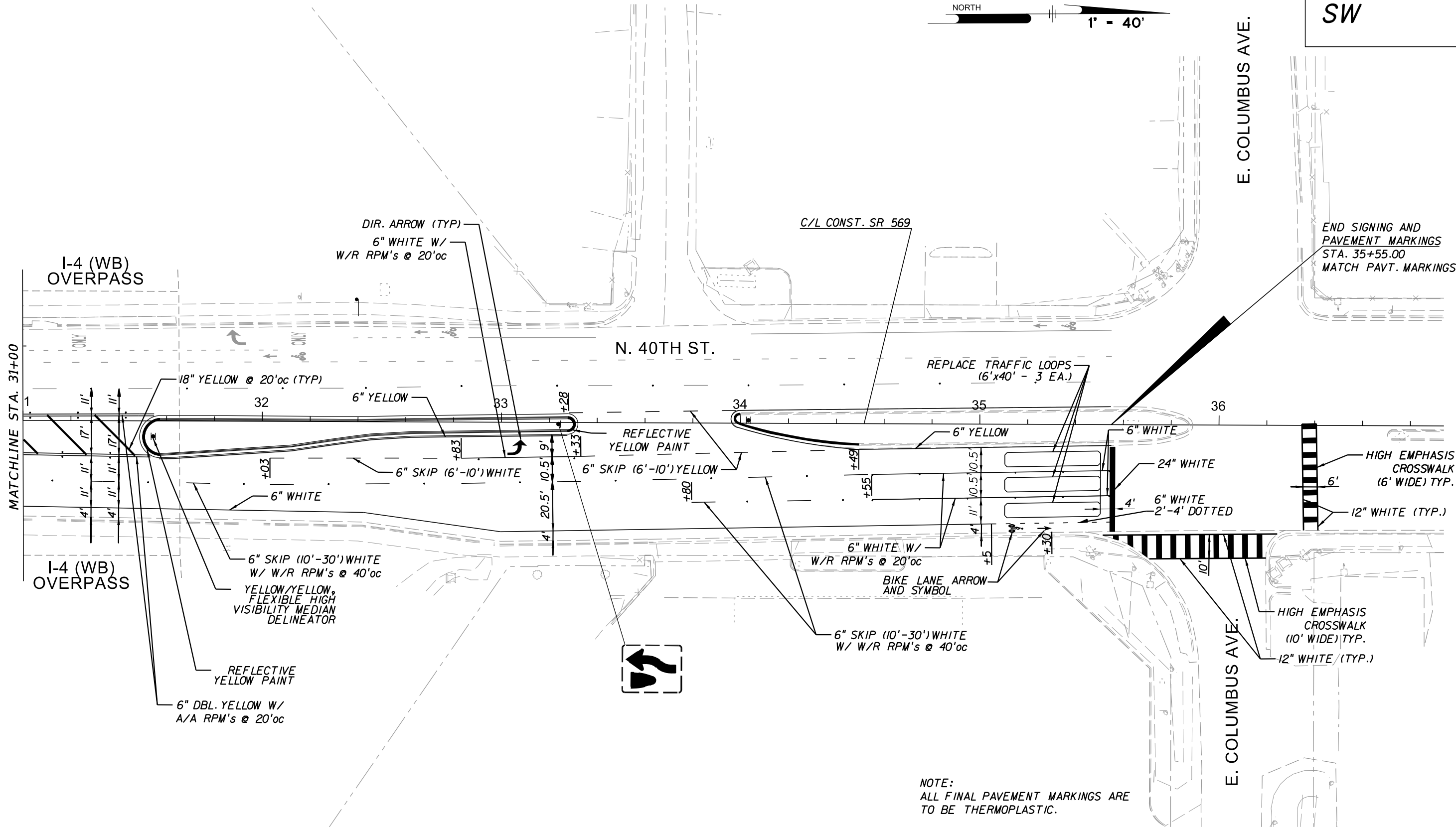
NOTE:
ALL FINAL PAVEMENT MARKINGS ARE
TO BE THERMOPLASTIC.

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No.	DATE	REVISIONS

PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: RJL DRN: RJL CHK: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS SIGNING AND PAVEMENT MARKING PLAN (2)	SHEET 110
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NOTE:
ALL FINAL PAVEMENT MARKINGS ARE
TO BE THERMOPLASTIC.

No.	DATE	REVISIONS



PENNONI ASSOCIATES INC.
2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E.	DATE
P.E. NO. 38766	

DES: RJL
DRN: RJL
CHK: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
SIGNING AND PAVEMENT
MARKING PLAN (3)

SHEET
111

TRAFFIC CONTROL NOTES

1. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE 2017 EDITION OF THE DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS, 600 SERIES. IT IS ANTICIPATED THAT INDEXES 600, 601, 602, 603, 604, 605, 613, 615 AND 616 WILL BE USED ON THIS PROJECT.

2. ALL EXISTING WARNING AND REGULATORY SIGNS SHALL BE MAINTAINED AT ALL TIMES. SIGNS SHALL BE RELOCATED, REMOVED OR COVERED AS APPROVED BY THE ENGINEER.

3. THE EXACT LOCATION OF ALL TRAFFIC CONTROL SIGNS AND BARRICADES SHALL BE DETERMINED IN THE FIELD, VERIFIED THAT SIGHT DISTANCE IS NOT OBSTRUCTED, AND APPROVED BY THE ENGINEER.

4. NO LANE CLOSURES ARE PERMITTED BETWEEN THE HOURS OF 6:30 AM TO 6:00 PM (PEAK HOURS) ALONG S.R. 569 (N. 40TH STREET). LANE CLOSURE MAY ONLY BE UTILIZED DURING ACTIVE WORK PERIODS.

5. THE CONTRACTOR IS REQUIRED TO SUBMIT A WRITTEN PLAN, WHICH DETAILS EACH ACTIVITY INVOLVED IN THE LANE CLOSURE. THE PLAN SHALL INCLUDE BACK-UP PLANS FOR ACTIVITIES CRITICAL TO RE-OPENING THE LANES TO TRAFFIC. THE BACK-UP PLAN SHALL INCLUDE THE ACTIVITIES OF ALL SUB-CONTRACTOR'S OPERATIONS, AS WELL AS THE PRIME CONTRACTORS; NO LANE CLOSURE WILL BE ALLOWED WITHOUT A PLAN TO ACHIEVE RE-OPENING. A DISCUSSION OF LANE CLOSURE OPERATIONS SHALL BE MADE PART OF ALL PRE-CONSTRUCTION CONFERENCES.
6. CONFLICTING EXISTING PAVEMENT MARKINGS SHALL BE REMOVED. COST FOR REMOVAL AND REPLACEMENT OF OF MARKINGS IS INCLUDED IN THE BID PRICE FOR MAINTENANCE OF TRAFFIC, 102-1.

7. ALL LANE CLOSURES SHALL BE REPORTED 48 HOURS IN ADVANCE TO THE LOCAL EMERGENCY AGENCIES, THE MEDIA AND DISTRICT SEVEN INFORMATION OFFICE.

8. AT THE DISCRETION OF THE ENGINEER, IF LANE CLOSING CAUSES EXTENDED CONGESTION, THE CONTRACTOR WILL BE DIRECTED TO RE-OPEN THE CLOSED LANE(S) UNTIL SUCH TIME AS TRAFFIC FLOW HAS RETURNED TO AN ACCEPTABLE LEVEL.

9. AT THE END OF EACH DAY THE RIGHT-OF-WAY (INCLUDING ALL TRAVEL LANES) SHALL BE RESTORED FOR SAFE VEHICULAR TRAFFIC. NO DROP-OFF CONDITIONS ARE ALLOWED TO REMAIN. NO MATERIALS, EQUIPMENT, ETC SHALL BE STORED WITHIN THE RIGHT-OF-WAY WHILE THE WORK ZONE IS INACTIVE.

10. THE POSTED SPEED LIMIT FOR ACTIVE WORK ZONES SHALL MATCH THE EXISTING POSTED SPEED LIMIT.

11. THE CONTRACTOR SHALL MAINTAIN EXISTING PEDESTRIAN ACCESS BY SEQUENCING CONSTRUCTION AND PROVIDING TEMPORARY WALKWAYS AND/OR DETOURING PEDESTRIANS BY UTILIZING INDEX 660.

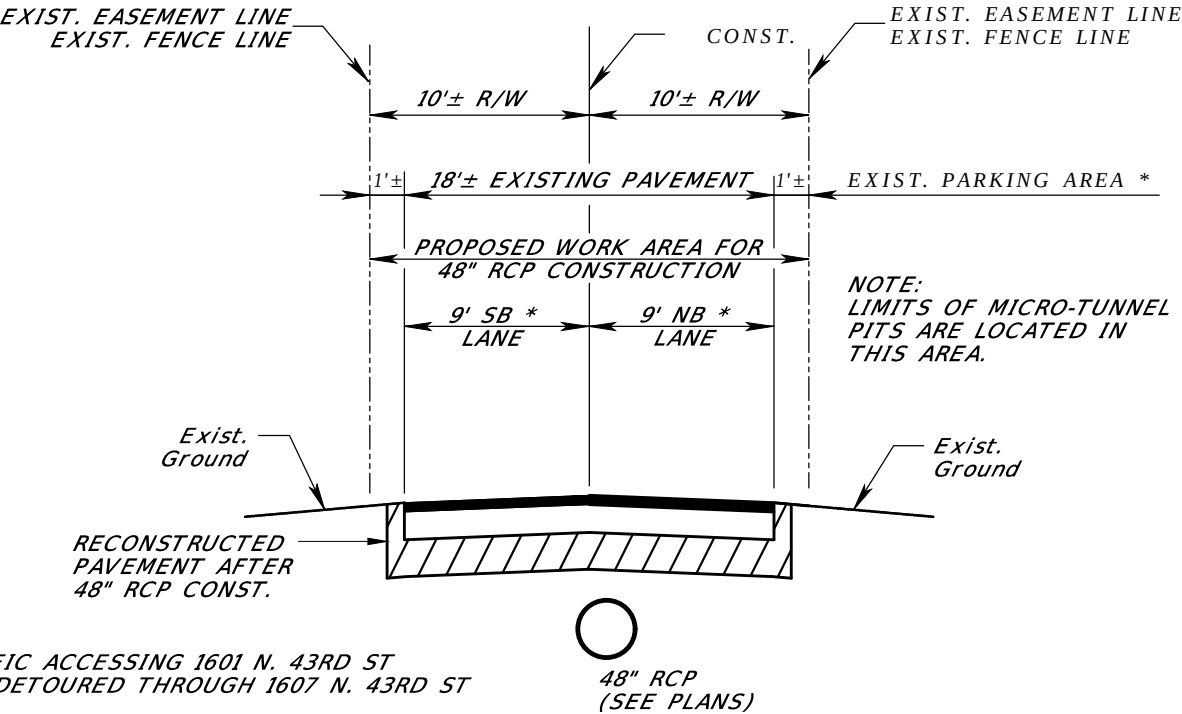
12. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES AND COORDINATE TIMING OF ANY CLOSURES WITH THE ENGINEER, IN CONJUNCTION WITH THE CITY, AND FDOT.
13. TRAFFIC CONTROL OFFICERS SHALL BE UTILIZED FOR TRAFFIC CONTROL THROUGH SIGNALIZED INTERSECTIONS, WHEN SIGNALS ARE NOT IN USE, AND SHALL BE PAID FOR UNDER PAY ITEM 102-1, MAINTENANCE OF TRAFFIC.

14. THE CONTRACTOR SHALL CONTACT THE PROPERTY OWNER 96 HOURS PRIOR TO CLEARING AND GRUBBING EXISTING SPRINKLER SYSTEMS, SIGNS OR LANDSCAPING TO BE REMOVED WITHIN THE PROJECT LIMITS.

15. THE CONTRACTOR SHALL NOTIFY ALL LOCAL LAW ENFORCEMENT, EMERGENCY/RESCUE AGENCIES LOCATED IN THE PROJECT VICINITY 24 HOURS IN ADVANCE OF PERFORMING ANY LANE CLOSURES OR DETOURS.

16. THE CONTRACTOR SHALL PROVIDE A PROPOSED TRAFFIC CONTROL PLAN PREPARED UNDER THE DIRECTION OF, AND SIGNED AND SEALED BY, A LICENSED FLORIDA PROFESSIONAL ENGINEER WHO IS EXPERIENCED IN PREPARING TRAFFIC CONTROL PLANS AND WHO IS CERTIFIED PER FDOT PROCEDURE, TOPIC NO. 625-010-010. FOR WORK WITHIN FDOT RIGHT-OF-WAY, THE FDOT REQUIRES DOCUMENTATION FOR SUCCESSFUL COMPLETION OF AN APPROVED WORK ZONE TRAFFIC CONTROL TRAINING COURSE FOR THE AGENCY, UTILITY, OR CONTRACTOR EMPLOYEE(S) DESIGNING, INSTALLING, AND/OR MAINTAINING THE APPROVED MAINTENANCE OF TRAFFIC PLAN IN ACCORDANCE WITH DEPARTMENT PROCEDURE, TOPIC NO. 625-010-010. ALL TEMPORARY TRAFFIC CONTROL DEVICES FOR THE FOLLOWING FACILITIES SHALL BE DESIGNED AND INSTALLED TO MEET THE EXISTING POSTED SPEEDS.

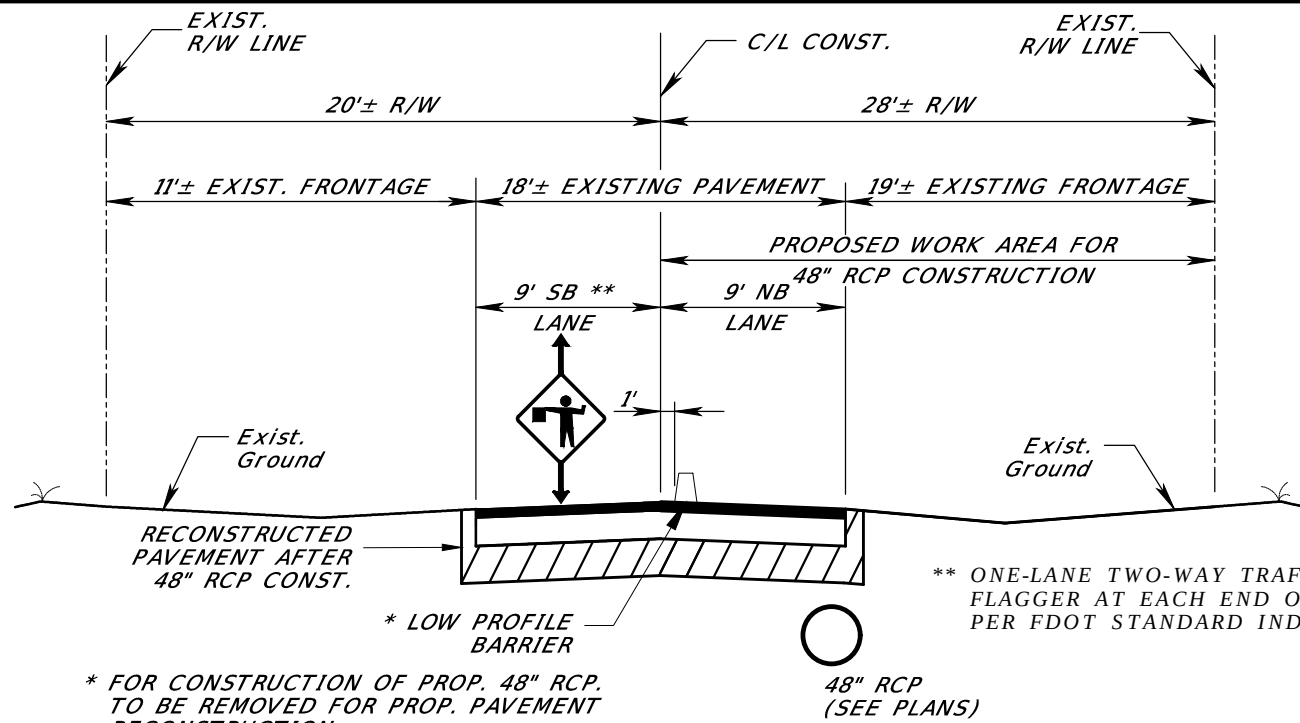
17. THE CONTRACTOR'S TRAFFIC CONTROL PLAN SHALL ACCOMMODATE THE CONTINUOUS 24-HOUR TRUCK TRAFFIC FROM/TO THE BUSINESSES SOUTH OF 7TH AVE.



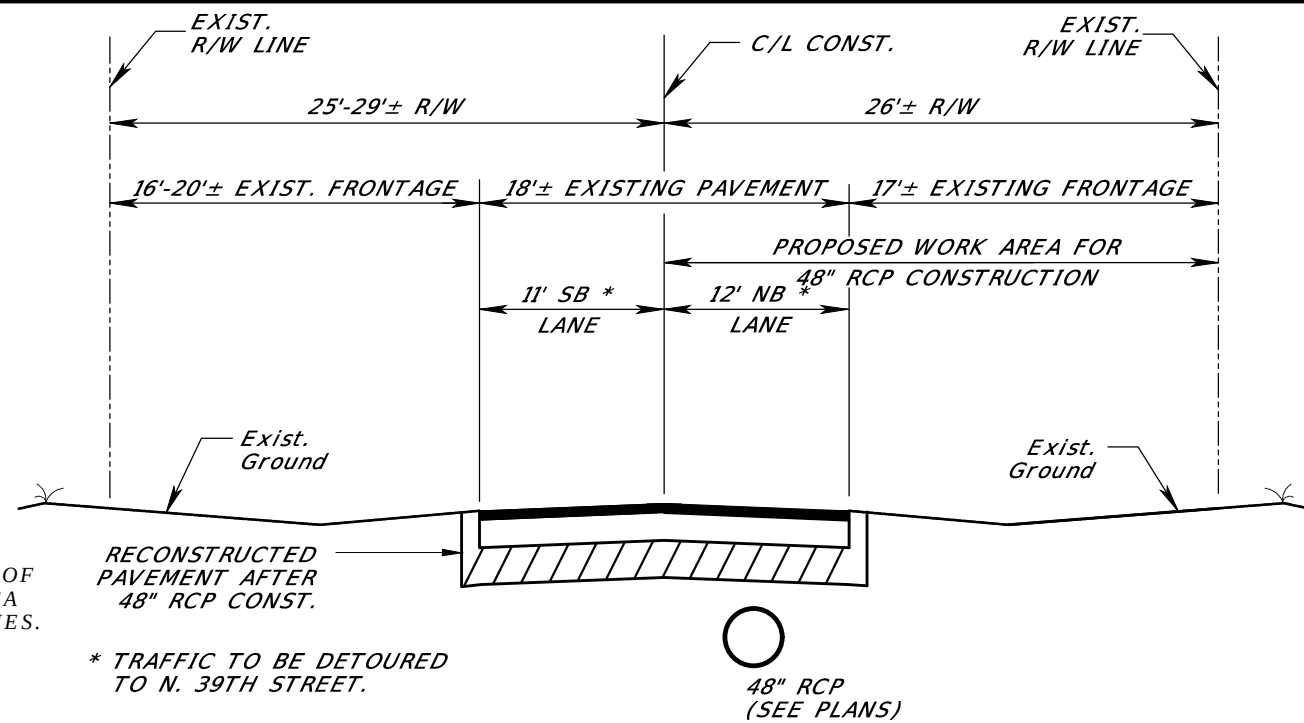
TRAFFIC CONTROL SECTION NO. 1 - N. 43RD STREET
WORK AREA SOUTH OF CSX RR
NO SCALE

M:\PROJECTS\TAMPATPA\1601-43RD_STREET\DESIGN_PUBLISH\BID SET\T1100 TRAFFIC CONTROL.DWG
PLOT: 11/19/2018 4:55:07 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI NCS.STB PROJECT STATUS: ---

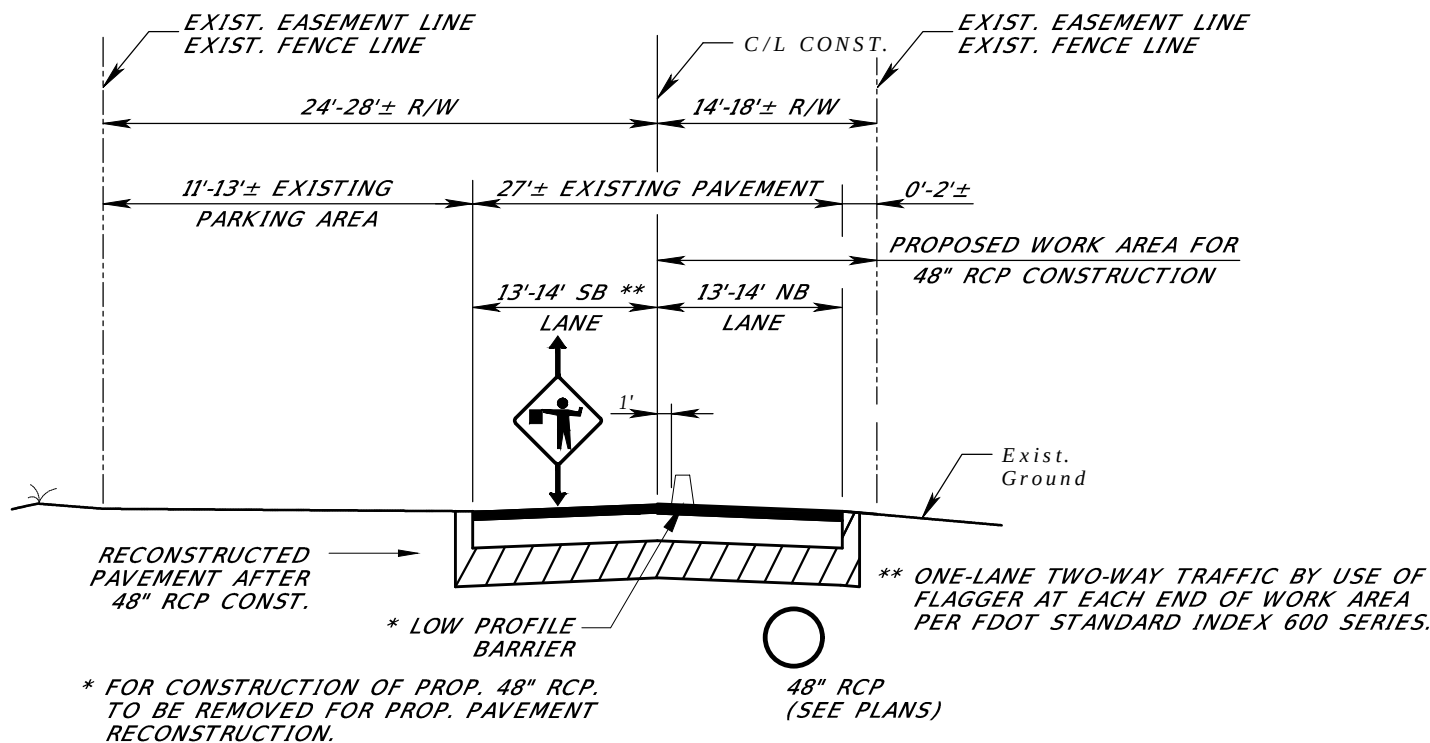
No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: RJL DRN: RJL CKD: EPN DATE: 11/16/18	CITY of TAMPA <i>Department of Transportation and Stormwater Services Stormwater Engineering Division</i>	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS TRAFFIC CONTROL PLAN - TYPICAL SECTION (I)	SHEET 112



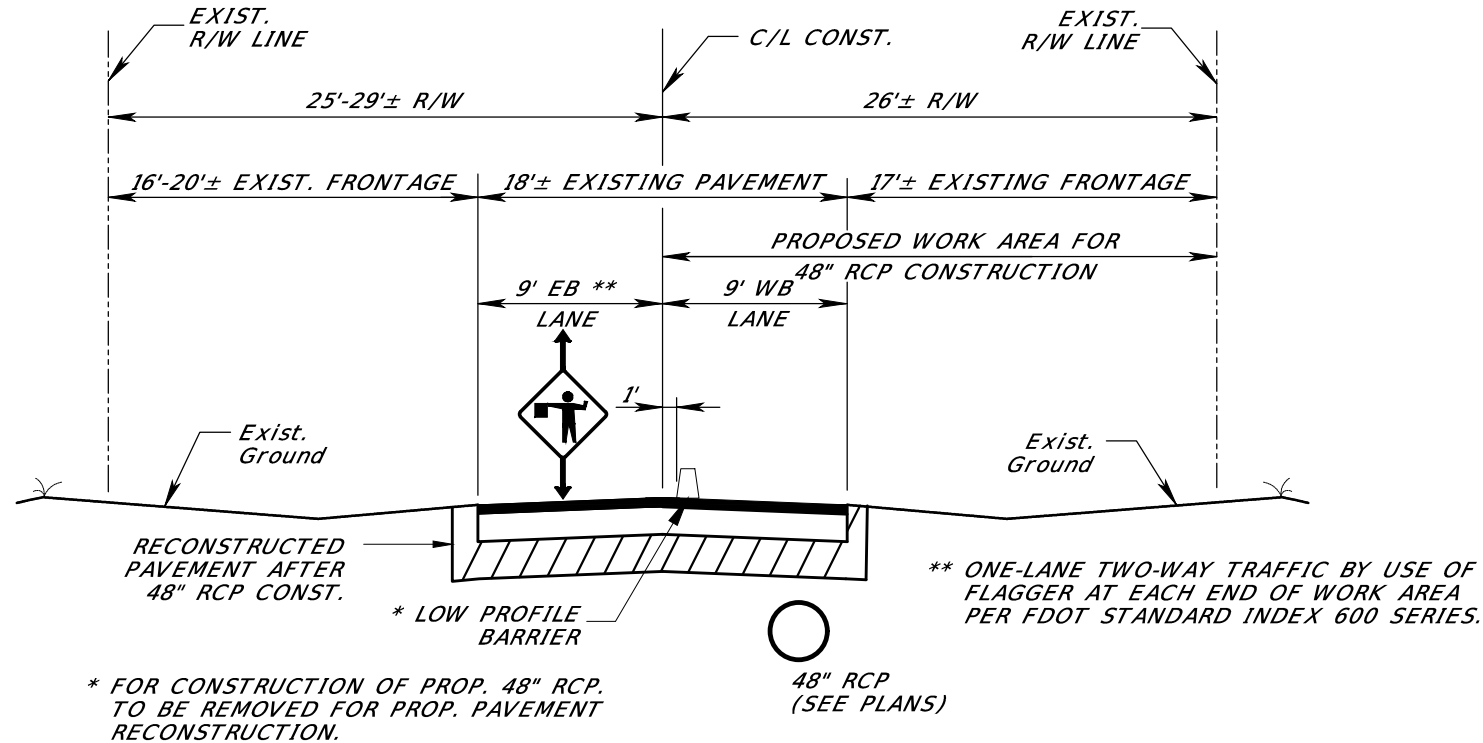
TRAFFIC CONTROL SECTION NO. 3 - N. 43RD STREET
EAST SIDE WORK AREA
NORTH OF E. 7TH AVE.
NO SCALE



TRAFFIC CONTROL SECTION NO. 5 - N. 40TH STREET
WORK AREA
BETWEEN E. 10TH AVE. AND E. 11TH AVE.
NO SCALE



TRAFFIC CONTROL SECTION NO. 2 - N. 43RD STREET
EAST SIDE WORK AREA
BETWEEN CSX RR AND E. 7TH AVE.
NO SCALE

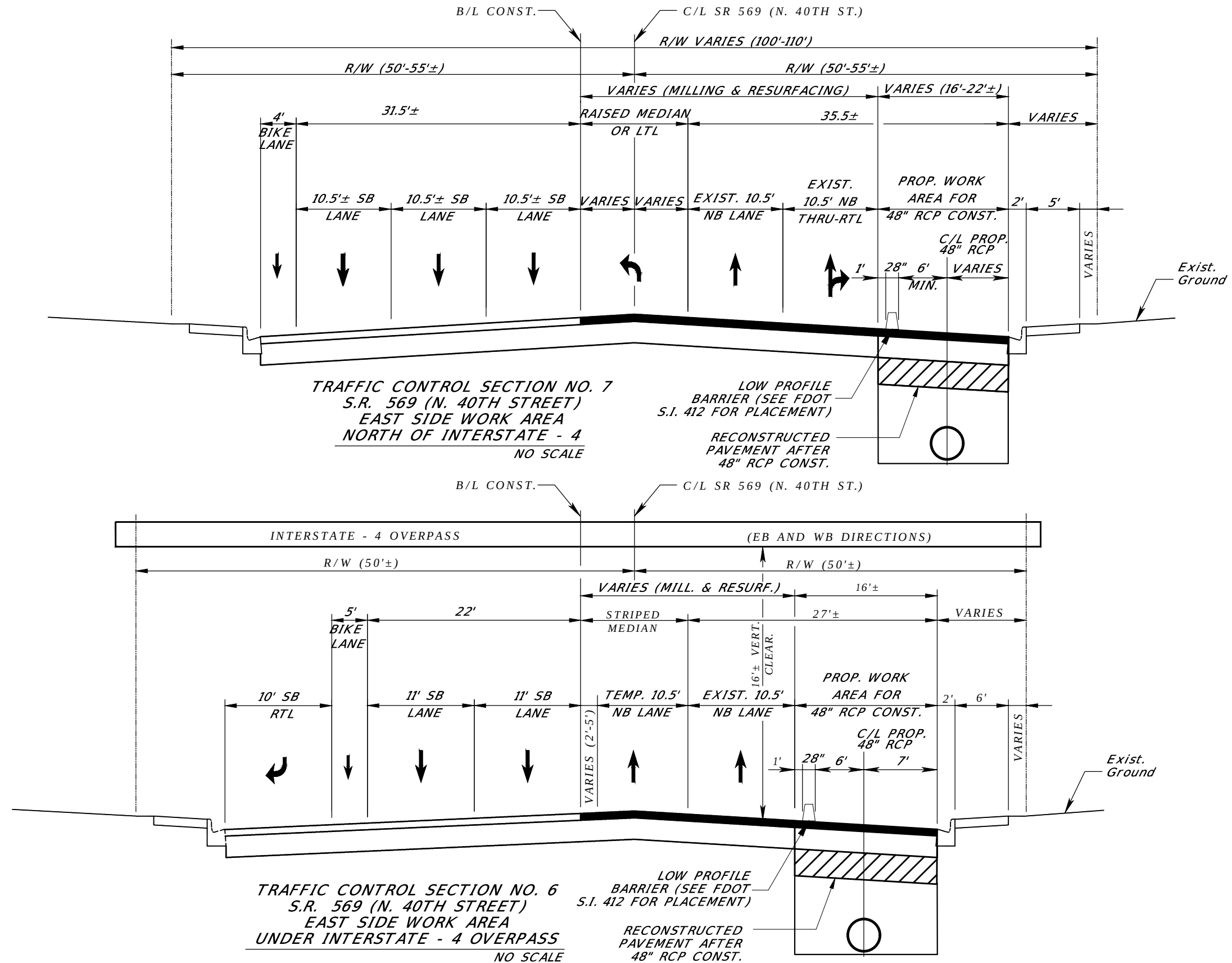


TRAFFIC CONTROL SECTION NO. 4 - E. 10TH AVENUE
NORTH SIDE WORK AREA
NO SCALE

No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: RJL DRN: RJL CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS TRAFFIC CONTROL PLAN - TYPICAL SECTION (2)	SHEET 113

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PLOT: 11/19/2018 4:55:10 PM BY: MICHAEL HENDERSON PLOT: PENNONI NCS.STB PROJECT STATUS: ---

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PLOT DATE: 11/19/2018 4:55:15 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI NCS.STB PROJECT STATUS: ---



No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
 2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

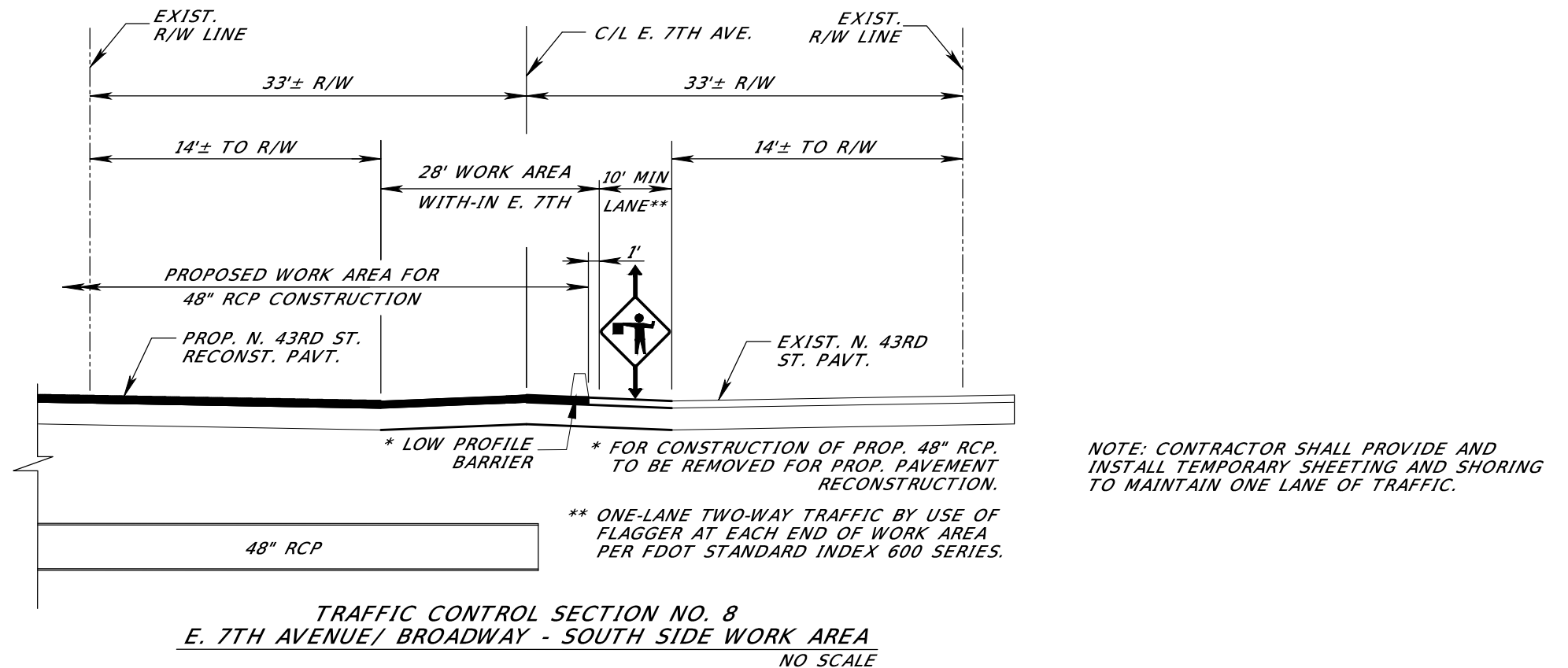
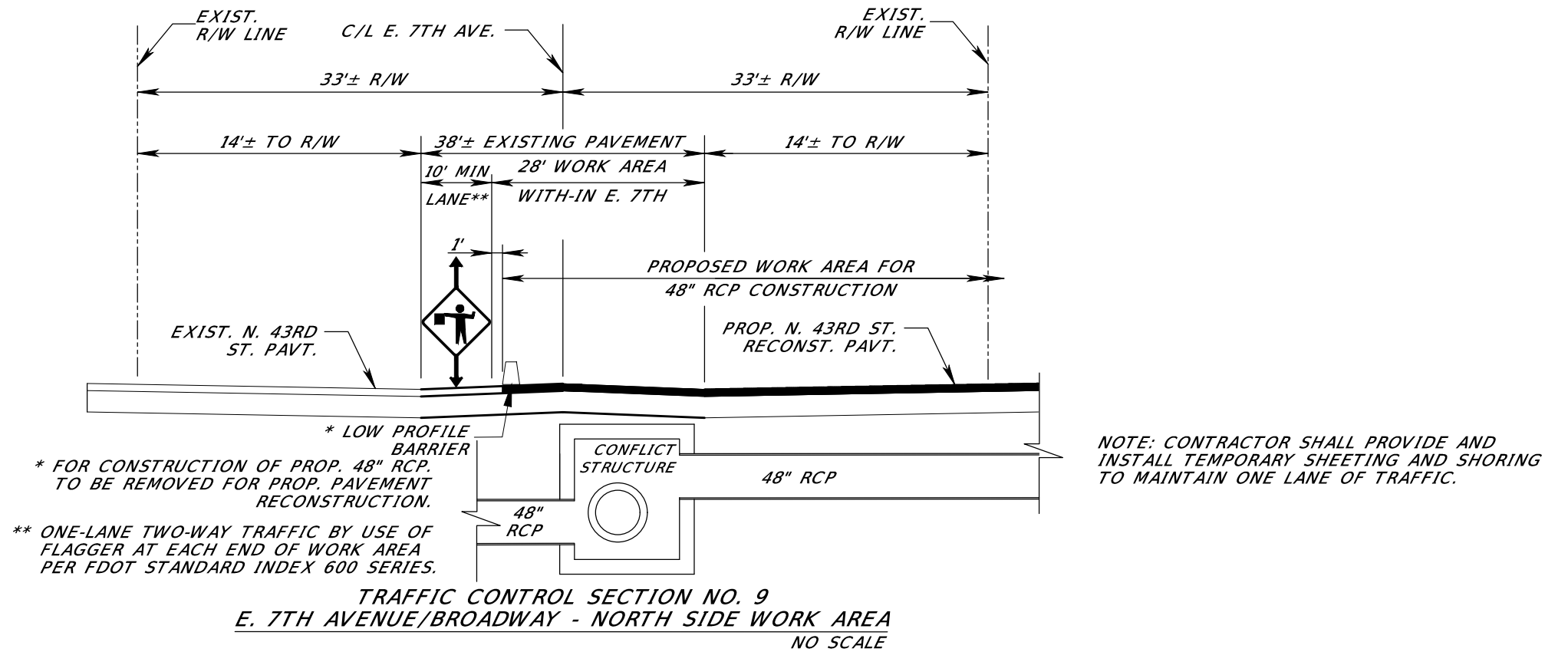
E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: RJL
DRN: RJL
CKD: EPN
DATE: 11/16/18

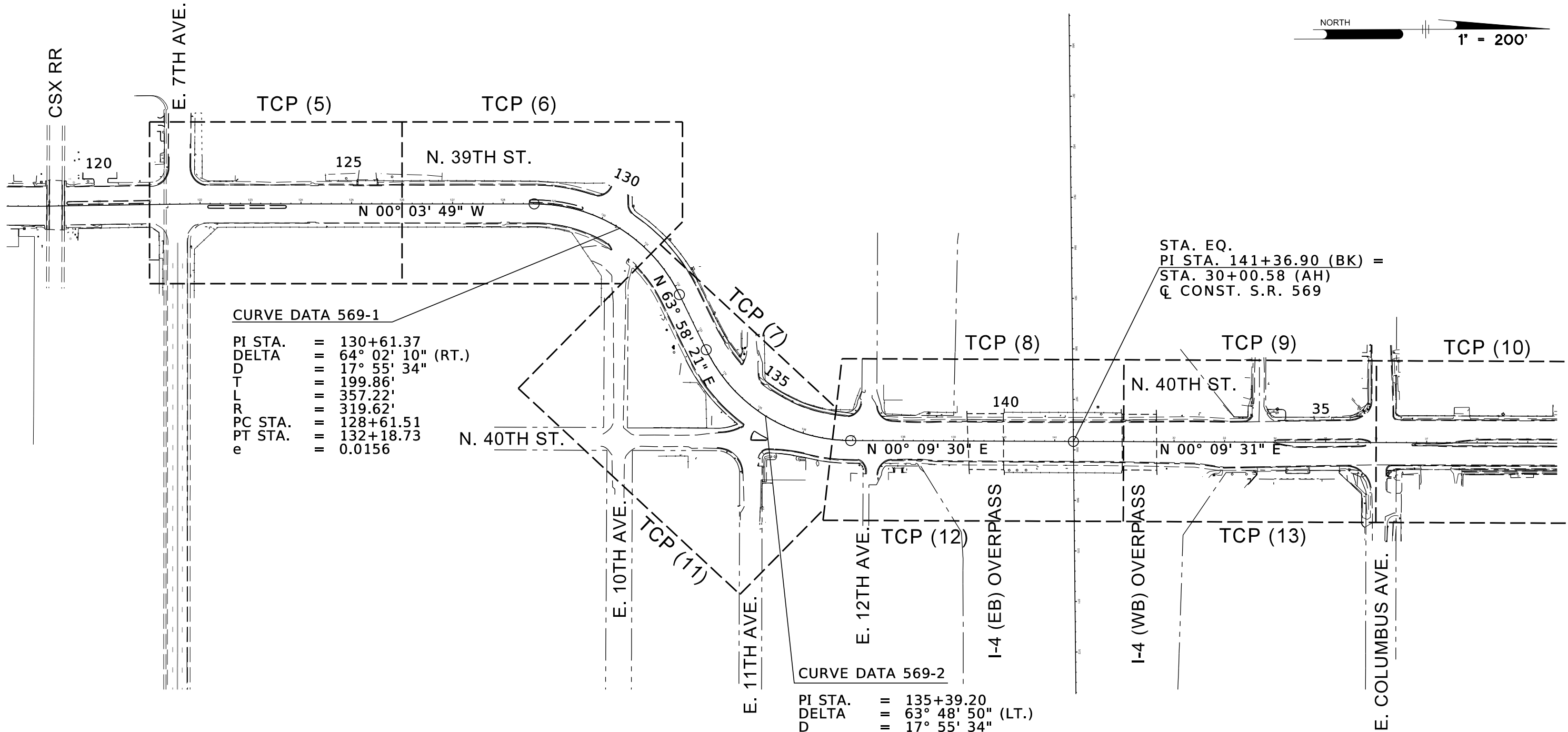
CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
TRAFFIC CONTROL PLAN -TYPICAL
SECTION (3)

SHEET
114



SW



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No.	DATE	REVISIONS



PENNONI ASSOCIATES INC.
2555 Nursery Road, Suite 101
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Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

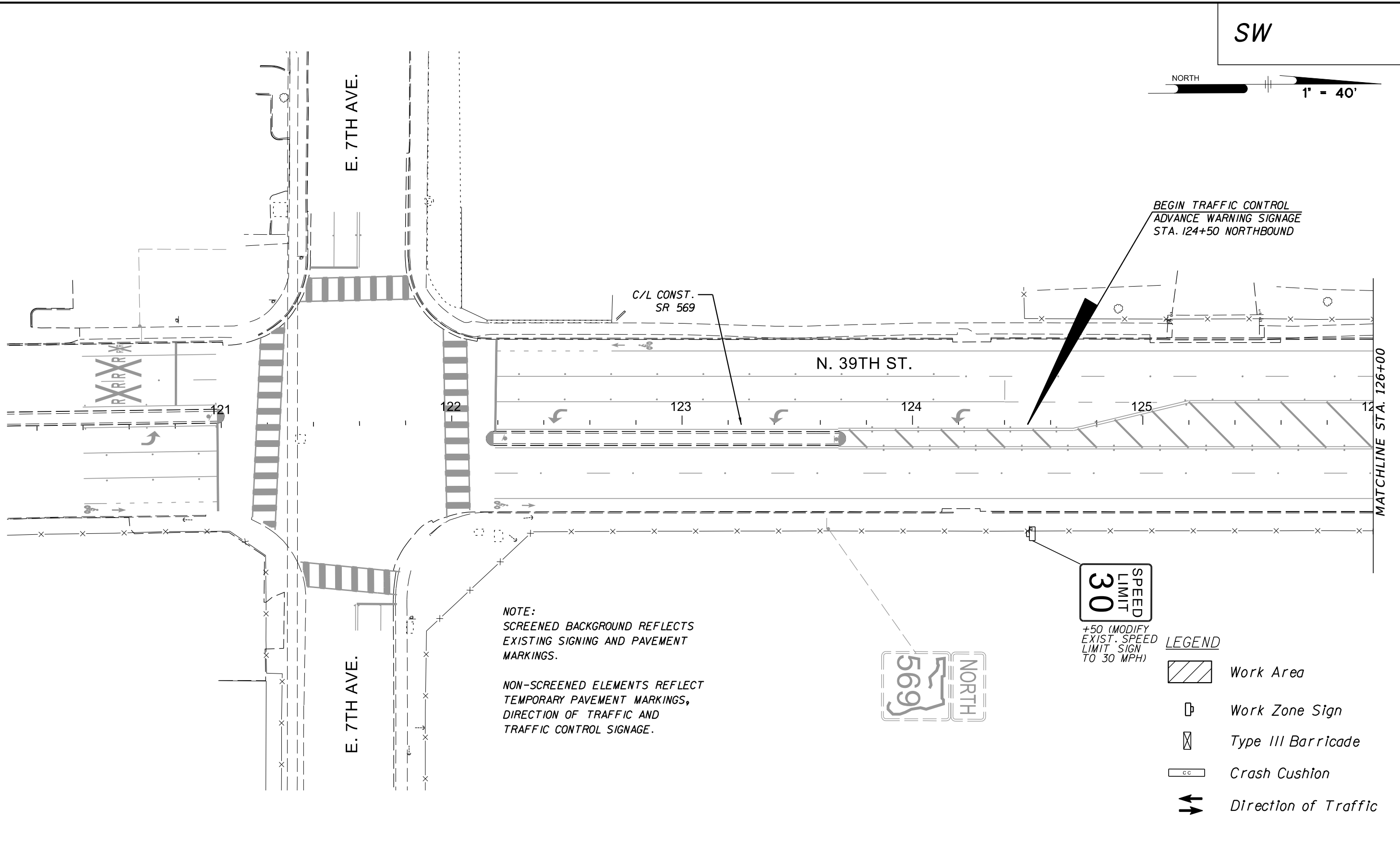
DES: RJL
DRN: RJL
CHK: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
TRAFFIC CONTROL PLAN (4)
SHEET LAYOUT

SHEET
116

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No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: RJL
DRN: RJL
CHK: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
TRAFFIC CONTROL PLAN (5)
FROM E. 7TH AVE. TO STA. 126+00

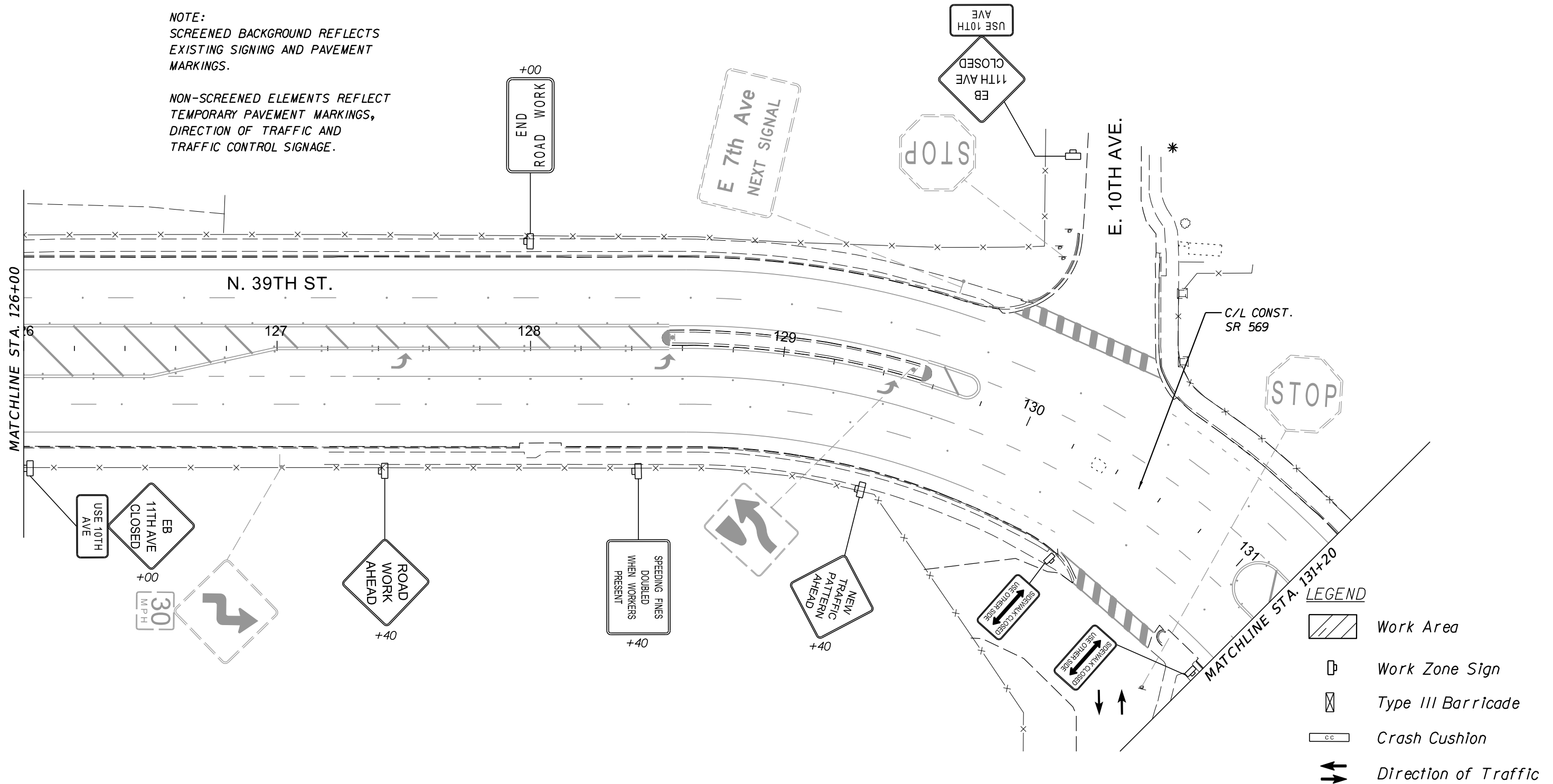
SHEET
117

SW



NOTE:
SCREENED BACKGROUND REFLECTS
EXISTING SIGNING AND PAVEMENT
MARKINGS.

NON-SCREENED ELEMENTS REFLECT
TEMPORARY PAVEMENT MARKINGS,
DIRECTION OF TRAFFIC AND
TRAFFIC CONTROL SIGNAGE.



- LEGEND**
- Work Area
 - Work Zone Sign
 - Type III Barricade
 - Crash Cushion
 - Direction of Traffic

No.	DATE	REVISIONS

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Certificate of Authorization 7819

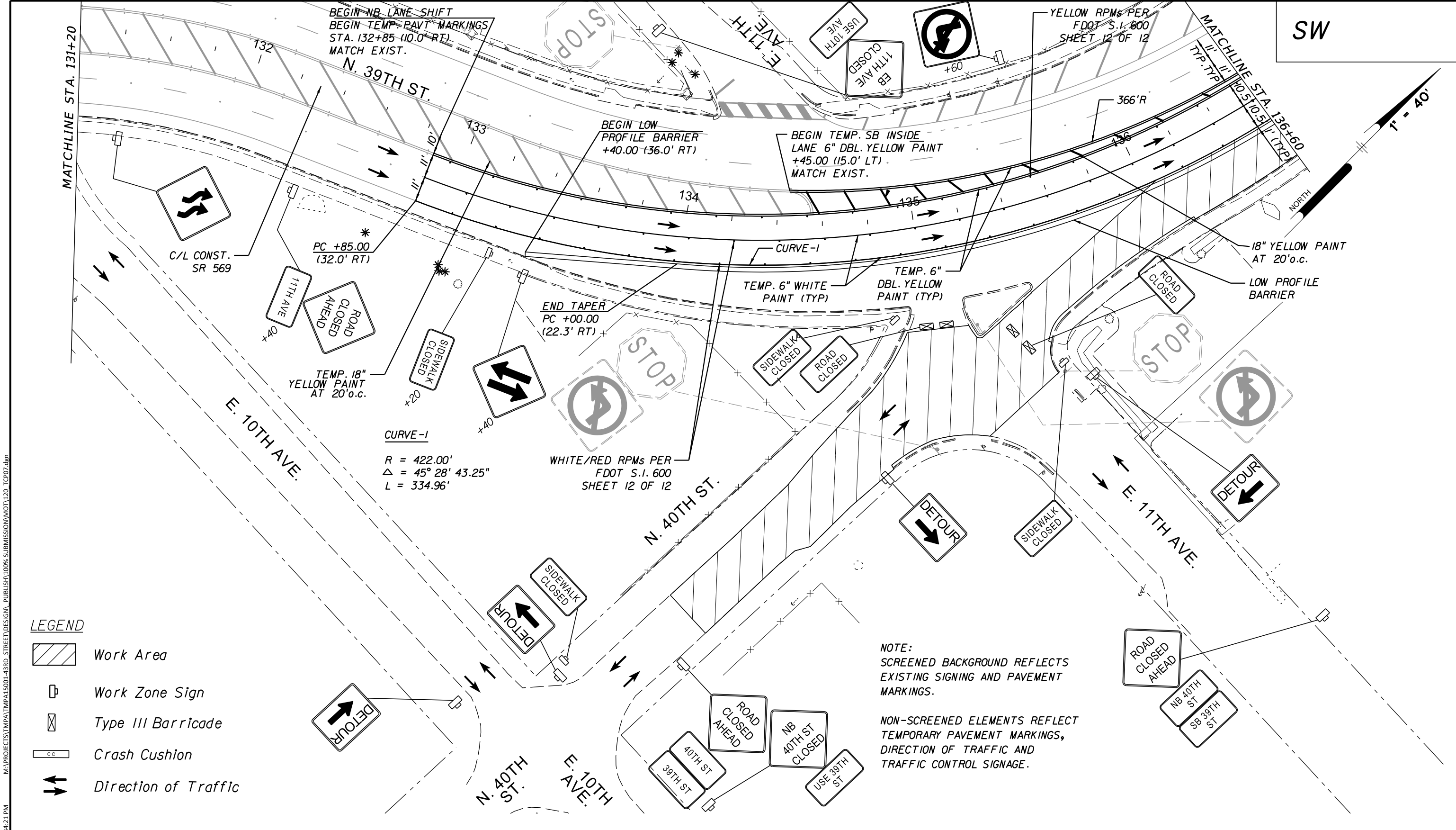
E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: RJL
DRN: RJL
CHK: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
TRAFFIC CONTROL PLAN (6)
FROM STA. 126+00 TO STA. 131+20

SHEET
118



LEGEND

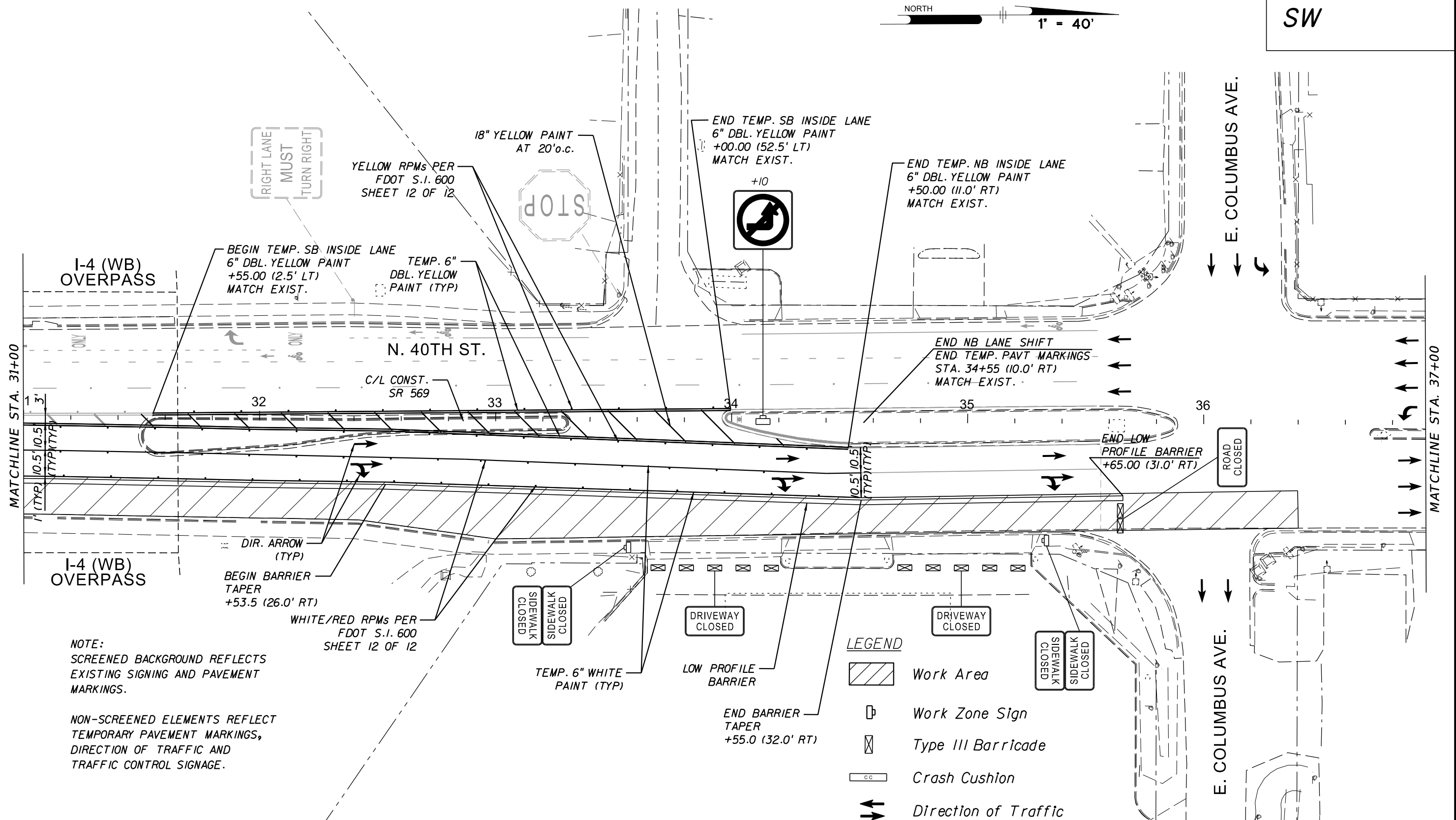
- Work Area
- Work Zone Sign
- Type III Barricade
- Crash Cushion
- Direction of Traffic

NOTE:
SCREENED BACKGROUND REFLECTS
EXISTING SIGNING AND PAVEMENT
MARKINGS.

NON-SCREENED ELEMENTS REFLECT
TEMPORARY PAVEMENT MARKINGS,
DIRECTION OF TRAFFIC AND
TRAFFIC CONTROL SIGNAGE.

REVISIONS			PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: RJL DRN: RJL CHK: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS TRAFFIC CONTROL PLAN (7) FROM STA. 131+20 TO STA. 136+60	SHEET 119
No.	DATE							

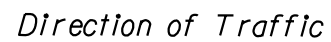
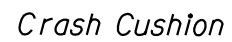
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No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE _____ P.E. NO. 38766	DES: RJL DRN: RJL CHK: EPN DATE: 11/16/18	CITY of TAMPA <i>Department of Transportation and Stormwater Services Stormwater Engineering Division</i>	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS TRAFFIC CONTROL PLAN (9) FROM STA. 31+00 TO STA. 37+00	SHEET 121



Work Area



NOTE:
SCREENED BACKGROUND REFLECTS
EXISTING SIGNING AND PAVEMENT
MARKINGS.

NON-SCREENED ELEMENTS REFLECT
TEMPORARY PAVEMENT MARKINGS,
DIRECTION OF TRAFFIC AND
TRAFFIC CONTROL SIGNAGE.

Pennoni

PENNONI ASSOCIATES INC.
2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

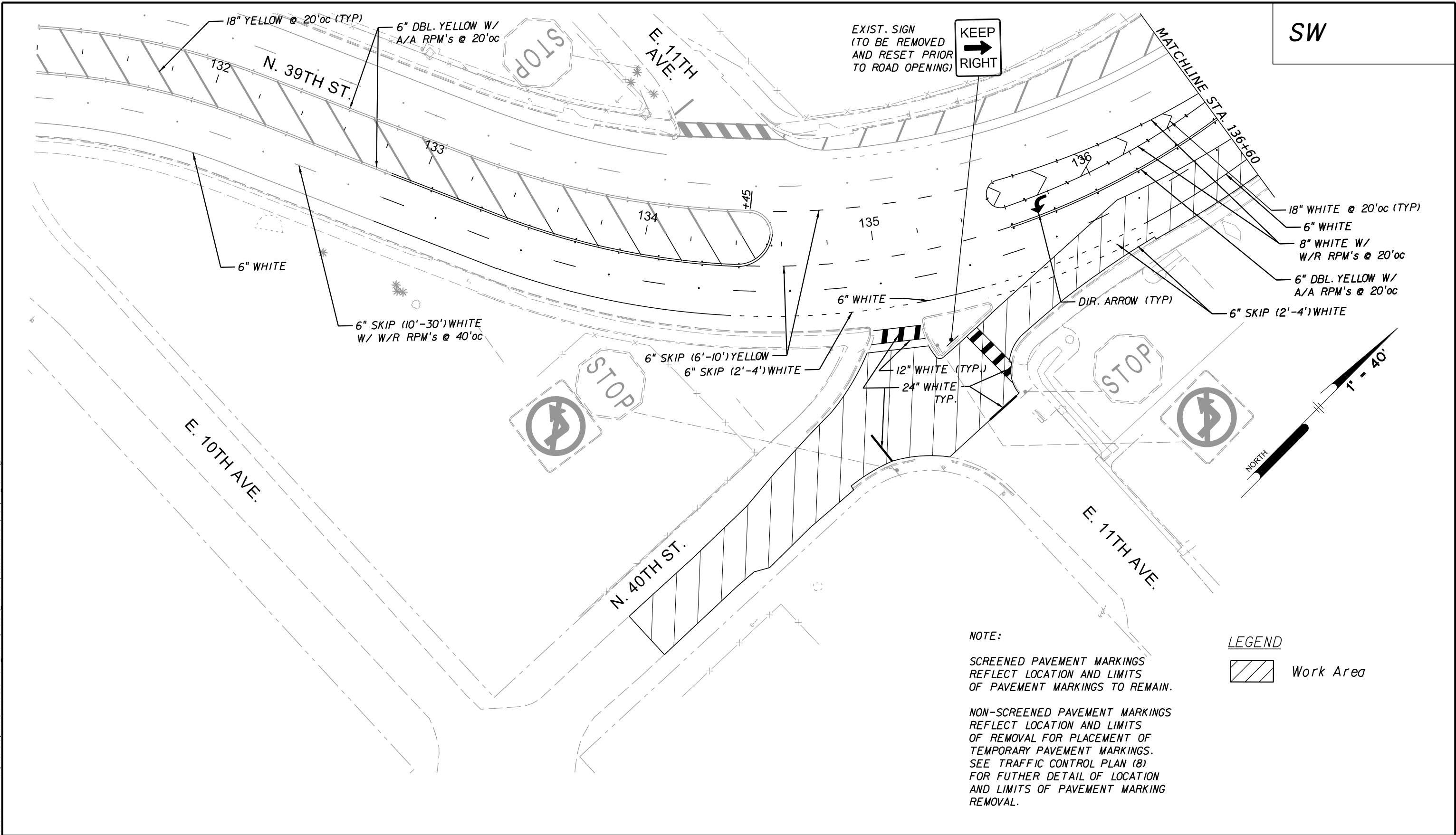
DES: RJL
DRN: RJL
CHK: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
TRAFFIC CONTROL PLAN (10)
FROM STA. 37+00 TO E. 19TH AVE.

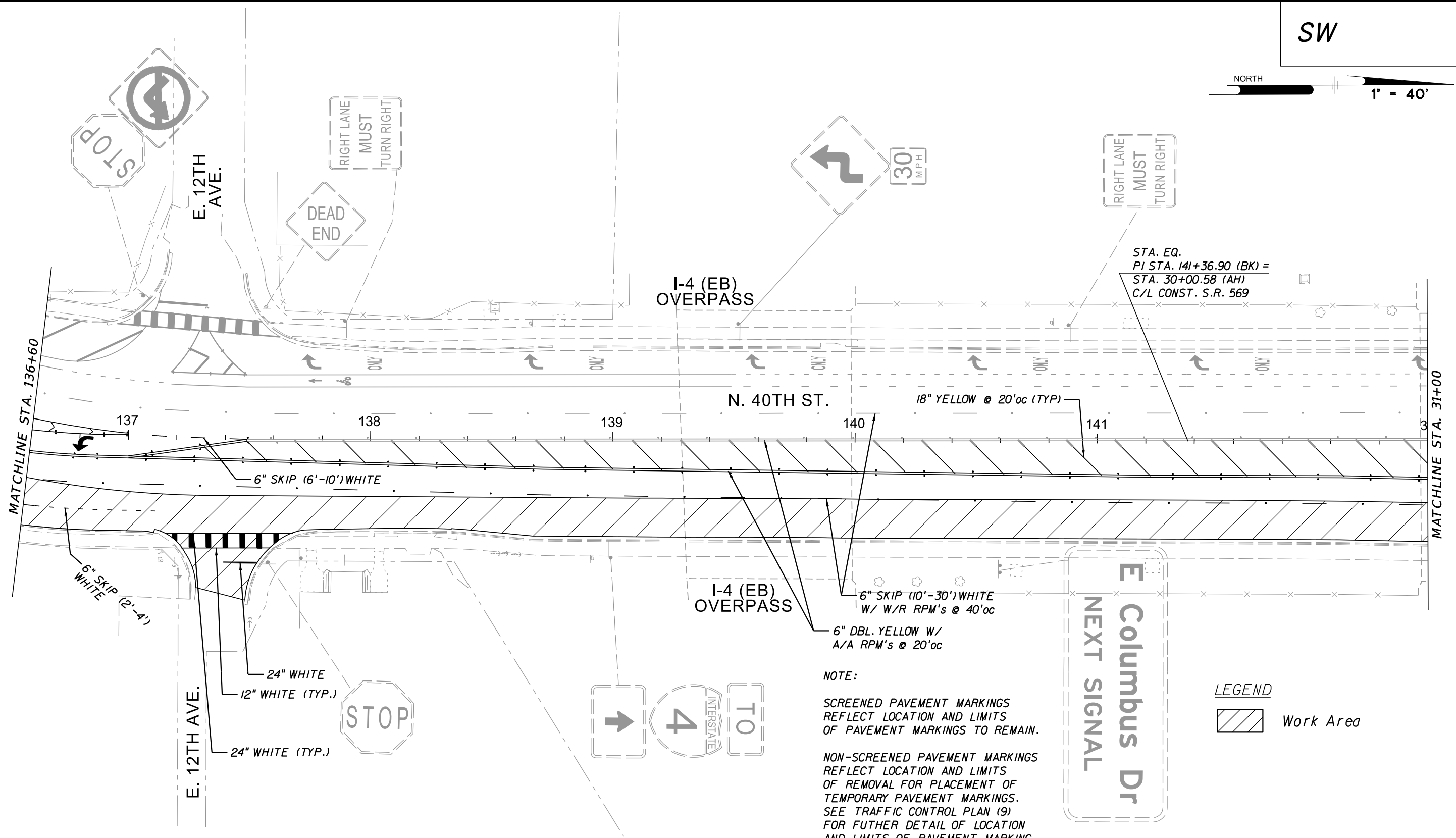
22

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No.	DATE	REVISIONS	PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE		DES: RJL DRN: RJL CHK: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS TRAFFIC CONTROL PLAN (II) EXIST. PAVEMENT MARKING REMOVAL (I)	SHEET 123
				P.E. NO. 38766					

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SW

NORTH

1" = 40'

I-4 (EB)
OVERPASS

N. 40TH ST.

18" YELLOW @ 20'oc (TYP)

I-4 (EB)
OVERPASS

6" SKIP (10'-30') WHITE
W/ W/R RPM's @ 40'oc

6" DBL. YELLOW W/
A/A RPM's @ 20'oc

NOTE:

SCREENED PAVEMENT MARKINGS
REFLECT LOCATION AND LIMITS
OF PAVEMENT MARKINGS TO REMAIN.

NON-SCREENED PAVEMENT MARKINGS
REFLECT LOCATION AND LIMITS
OF REMOVAL FOR PLACEMENT OF
TEMPORARY PAVEMENT MARKINGS.
SEE TRAFFIC CONTROL PLAN (9)
FOR FURTHER DETAIL OF LOCATION
AND LIMITS OF PAVEMENT MARKING
REMOVAL.

LEGEND

Work Area

No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

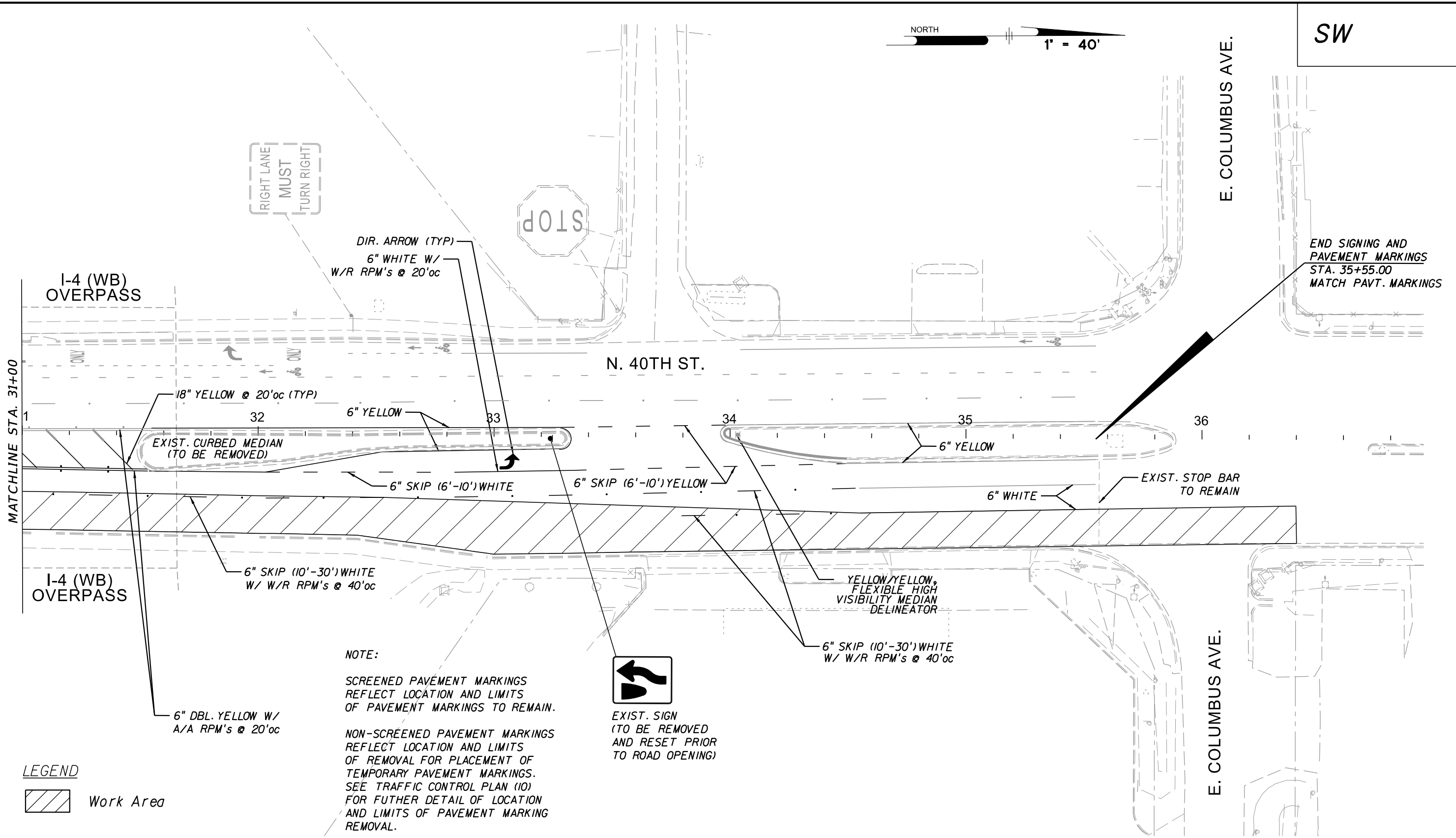
DES: RJL
DRN: RJL
CHK: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
TRAFFIC CONTROL PLAN (12)
EXIST. PAVEMENT MARKING REMOVAL (2)

SHEET
124

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No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: RJL
DRN: RJL
CHK: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
TRAFFIC CONTROL PLAN (13)
EXIST. PAVEMENT MARKING REMOVAL (3)

SHEET
125

SW

EXISTING SANITARY SEWER DATA

EXISTING SANITARY SEWER STRUCTURE TABLE			
ID	RIM ELEVATION	INV IN	INV OUT
sa-2	31.39	24.55 (E) 25.00 (N)	24.52 (W)
sa-4	32.68	15.46 (E)	15.46 (W)
sa-5	33.26	16.05 (E) 26.39 (E) 25.67 (W)	16.05 (W)
sa-6	33.00	16.37 (E) 26.20 (N) 26.12 (W) 19.67 (NW) 26.68 (E)	16.37 (W)
sa-7	32.78	26.18 (W) 26.69 (E)	26.16 (S)
sa-8	33.38	27.33 (W)	27.33 (E)
sa-9	33.01		28.01 (E)
sa-10	33.13		27.30 (W)
sa-11	32.00	17.05 (E) 25.22 (W) 18.09 (S)	17.05 (W)
sa-12	33.27		26.66 (E)
sa-14	26.94	24.01 (SE) 23.80 (W) 17.72 (N)	17.72 (W)
sa-15	31.87		

EXISTING SANITARY SEWER STRUCTURE TABLE			
ID	RIM ELEVATION	INV IN	INV OUT
sa-19	33.23	21.05 (N)	21.05 (S)
sa-20	33.42	21.64 (N) 22.48 (E)	21.64 (S)
sa-21	34.42		23.00 (W)
sa-22	33.13	21.83 (N) 22.22 (E)	21.83 (S)
sa-23	33.01	22.02 (N) 22.31 (W) 22.48 (E)	22.02 (S)
sa-24	33.98		23.00 (W)
sa-25	32.52	22.48 (N)	22.48 (S)
sa-26	31.93	23.06 (N) 23.38 (W)	23.06 (S)
sa-27	32.66	23.32 (N) 23.75 (W)	23.32 (S)
sa-29	32.88	23.68 (N) 23.98 (W)	23.68 (S)
sa-31	32.13		24.13 (S)

No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS EXISTING SANITARY SEWER DATA	SHEET WWI

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 PLOTTED: 11/19/2018 4:55:42 PM. BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB. PROJECT STATUS: ---

PROPOSED SANITARY SEWER DATA

PROPOSED SANITARY SEWER STRUCTURE TABLE				
ID	RIM EL.	DESCRIPTION	STATION	OFFSET
SA-40	33.05	SAN MH (4' DIA)	48+77.81	2.40
SA-41	33.16	SAN MH (4' DIA)	46+07.97	5.81
SA-42	33.09	SAN MH (4' DIA)	45+71.39	6.41
SA-43	33.50	SAN MH (4' DIA)	45+65.31	15.94
SA-44	33.26	SAN DROP MH (4' DIA)	44+62.86	15.77
SA-45	33.13	SAN MH (4' DIA)	43+04.36	6.67
SA-46	33.11	SAN MH (4' DIA)	42+74.69	16.21
SA-47	32.72	SAN MH (4' DIA)	42+24.63	16.05
SA-48	32.14	SAN MH (4' DIA)	40+25.31	16.08
SA-49	31.65	SAN DROP MH (4' DIA)	38+41.35	16.23
SA-50	31.70	DOGHOUSE SAN MH (5' DIA)	38+48.18	0.65
SA-51	30.46	SAN MH (4' DIA)	36+77.90	4.53
SA-52	31.34	SAN MH (4' DIA)	27+71.95	15.65

PROPOSED SANITARY SEWER PIPE TABLE							
STRUC. START	STRUC. END	PIPE SIZE AND MATERIAL	LENGTH (FT)	START INV.	END INV.	FALL IN FEET	SLOPE
	SA-52	6" PVC	8'	25.02	25.00	0.02	0.20%
	SA-52	8" PVC	7'	24.57	24.55	0.02	0.26%
SA-40	sa-5	8" PVC	168'	26.51	25.67	0.84	0.50%
SA-41	sa-5	8" PVC	102'	26.80	26.39	0.41	0.40%
SA-42	sa-6	8" PVC	117'	26.70	26.12	0.58	0.50%
SA-43	SA-44	8" PVC	102'	26.75	26.34	0.41	0.40%
SA-44	sa-6	8" PVC	18'	19.80	19.67	0.13	0.73%
SA-45	sa-6	8" PVC	151'	27.30	26.68	0.62	0.41%
SA-46	SA-44	8" PVC	188'	27.17	26.47	0.70	0.37%
SA-47	SA-48	8" PVC	199'	26.20	25.50	0.70	0.35%
SA-48	SA-49	8" PVC	184'	25.45	24.82	0.63	0.34%
SA-49	SA-50	8" PVC	18'	19.86	19.79	0.07	0.41%
SA-51	SA-50	8" PVC	170'	24.00	23.50	0.50	0.30%
SA-52		8" PVC	28'	24.55	24.35	0.20	0.72%

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PLOTTED: 11/19/2018 4:55:49 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB PROJECT STATUS: ---

No.	DATE	REVISIONS



PENNONI ASSOCIATES INC.
2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E.

DATE

P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS

PROPOSED SANITARY SEWER DATA

SHEET

WW2

SW

MATCH LINE STA. 29+25

MATCH LINE STA. 26+75



NOTES:

1. SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN
2. 14" AND 60" STL CASINGS SHALL EXTEND ONE FOOT BEYOND OUTER CONFLICT STRUCTURE WALLS
3. 42" PCCP FM (SS) TO REMAIN OPERATIONAL AND BE FULLY SUPPORTED THROUGHOUT CONSTRUCTION
4. CONTRACTOR SHALL PROVIDE AND INSTALL TEMPORARY SHEETING AND SHORING TO MAINTAIN VEHICULAR ACCESS TO PROPERTIES SOUTH OF E. 7TH AVE/ E BROADWAY

SA-52
27+71.95 OFF 15.65 RT
CONST SAN MH (4' DIA)
RIM 31.34
INV. 8" PVC (E) = 24.55
INV. 6" PVC (N) = 25.00
INV. 8" PVC (W) = 24.55

ST-59
STA. 27+35.50, 8.38' RT
CONST MH TYPE J7 (7' DIA)
FDOT INDEX NO. 200, 201
IE: 48" RCP (N) = 17.05
IE: 12" RCP (E) = 26.89
IE: 48" RCP (S) = 16.97
RIM: 30.60

ST-61
STA. 27+66.48, 5.79' RT
CONST MH TYPE J7 (6'X20')
(CONFLICT, MOD)
FDOT INDEX NO. 200, 201
IE: 48" RCP (N) = 20.10
IE: 42" PCCP (SS-CONFLICT) (E) = 18.38
IE: 48" RCP (S) = 17.09
SUMP: 15.59
RIM: 30.95

ST-65
STA. 28+01.92, 2.70' RT
CONST MH TYPE J7T (6' DIA)
FDOT INDEX NO. 200, 201
IE: 48" RCP (N) = 21.79
IE: 18" RCP (E) = 26.54
IE: 48" RCP (S) = 20.12
RIM: 31.06

ST-66
STA. 29+12.30, 6.89' RT
CONST SUNTREE NSBB
MODEL NO NSSB-8-14
RIM: 32.43



PENNONI ASSOCIATES INC.
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Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

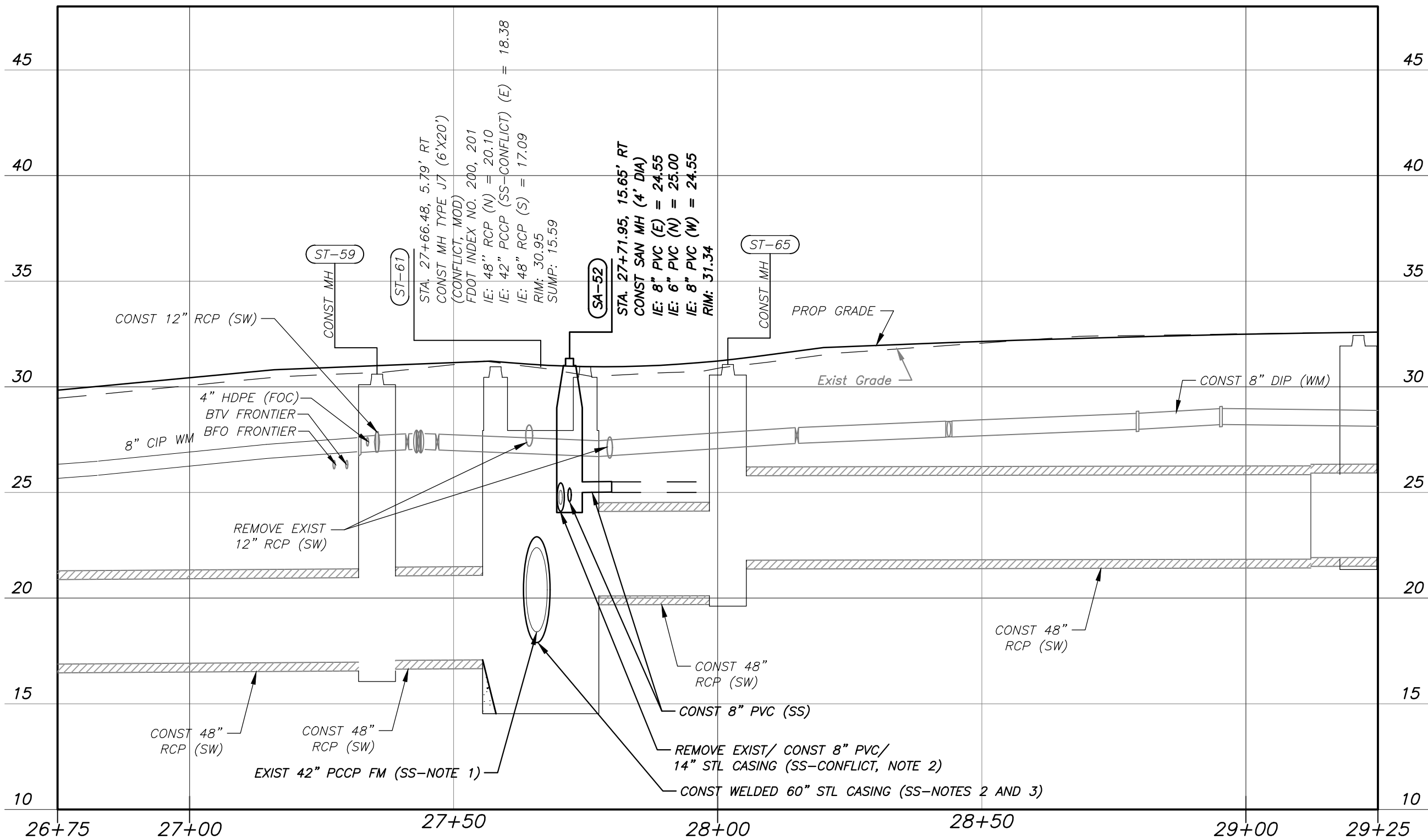
DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
SANITARY SEWER PLAN
STA 26+75 TO STA 29+25

SHEET
WW3

SW



- NOTES:
- 42" PCCP TO REMAIN OPERATIONAL AND BE FULLY SUPPORTED THROUGH OUT CONSTRUCTION.
 - 14" AND 60" STL CASINGS SHALL EXTEND ONE FOOT BEYOND OUTER CONFLICT STRUCTURE WALLS
 - GROUT ANNULAR SPACE BETWEEN CASING AND PCCP WITH NON-SHRINK FLOWABLE FILL

VERT SCALE: 1" = 5'
HORIZ SCALE: 1" = 20'

No.	DATE	REVISIONS

**PENNONI ASSOCIATES INC.**
2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL STORMWATER
IMPROVEMENTS
SANITARY SEWER PROFILE
STA 26+75 TO STA 29+25

SHEET
WW4

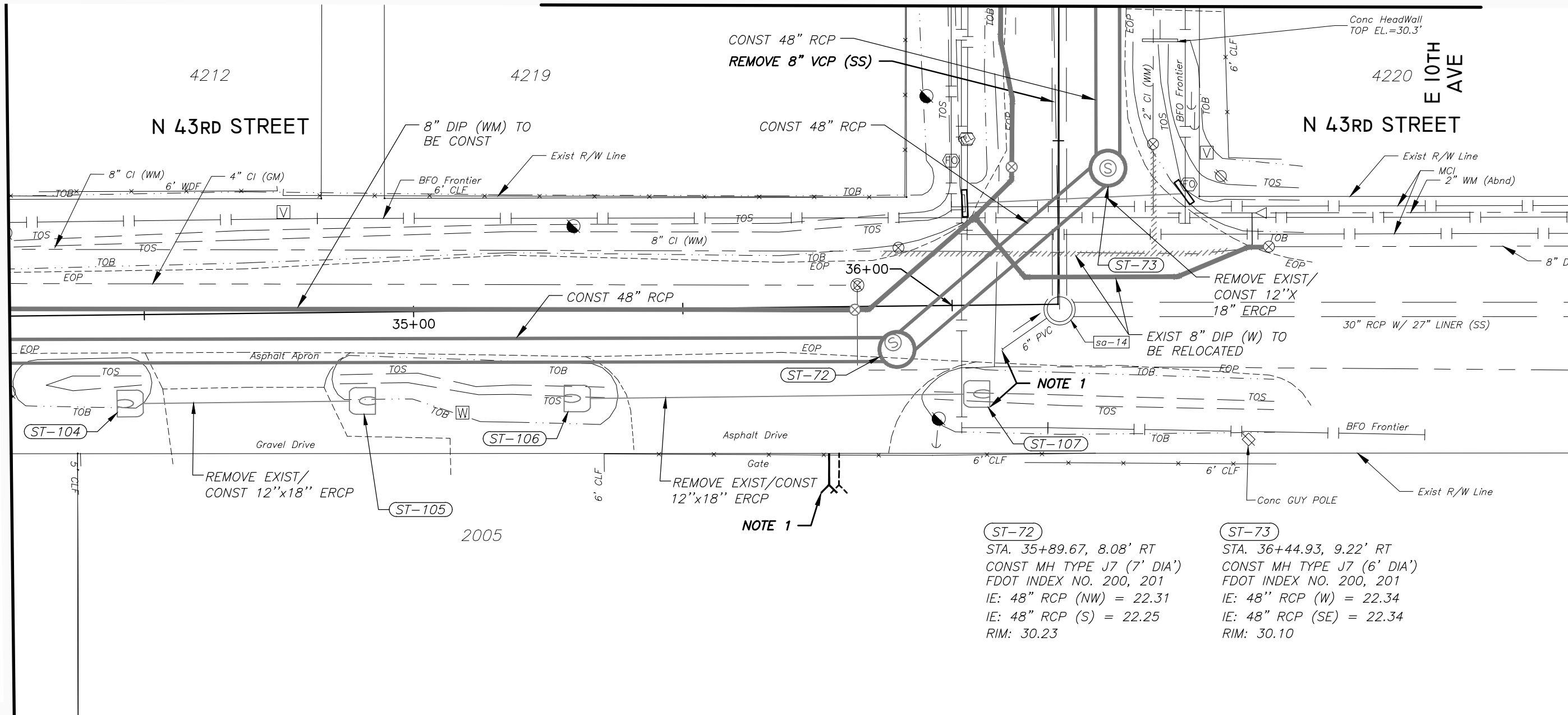
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NORTH

SW

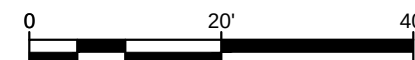
MATCH LINE STA. 36+75

MATCH LINE STA. 34+25



NOTE:

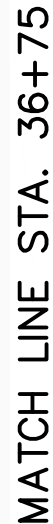
1. REMOVE/INSTALL 6" SS LATERAL AS NECESSARY TO AVOID CONFLICT WITH MES
2. SEE SEPARATE PLANS FOR STOMRWATER AND WATER DESIGN



No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS SANITARY SEWER PLAN STA 34+25 TO STA 36+75	SHEET WW5

SW

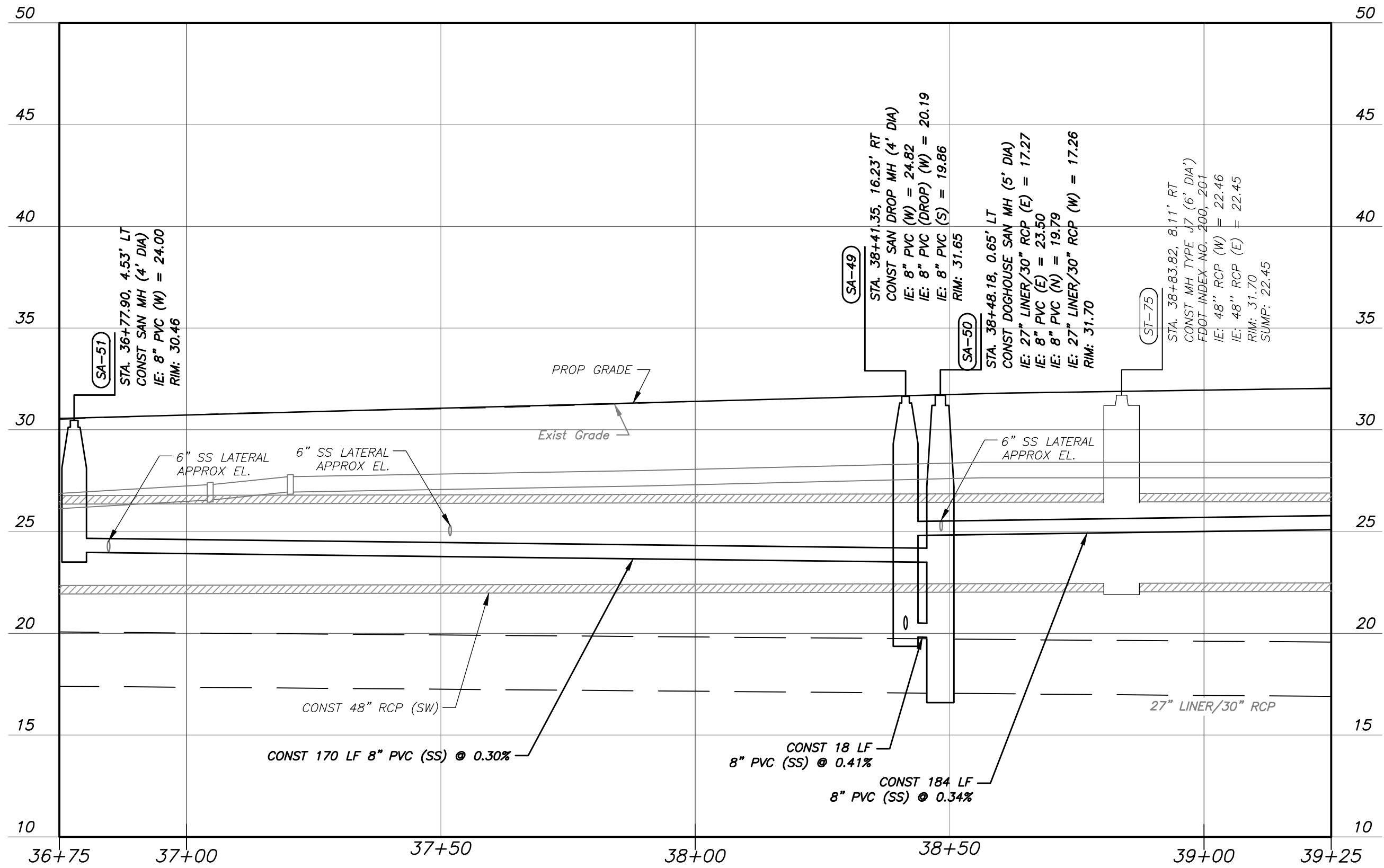
MATCH LINE STA. 39+25



A horizontal graphic scale bar with tick marks at 0, 20', and 40'. The bar is divided into alternating black and white segments, with the 20' mark occurring at the end of the third segment.

M:\PROJECTS\TPA\TPA15001-43RD_STREET\DESIGN_PUBLISH\BID SET\T711 SANITARY PLAN.DWG
 PLOTTED: 11/19/2018 4:57:16 PM, BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI.NCS,STB, PROJECT STATUS:

SW



VERT SCALE: 1" = 5'
HORIZ SCALE: 1" = 20'

No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
 2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL STORMWATER
IMPROVEMENTS
SANITARY SEWER PROFILE
STA 36+75 TO STA 39+25

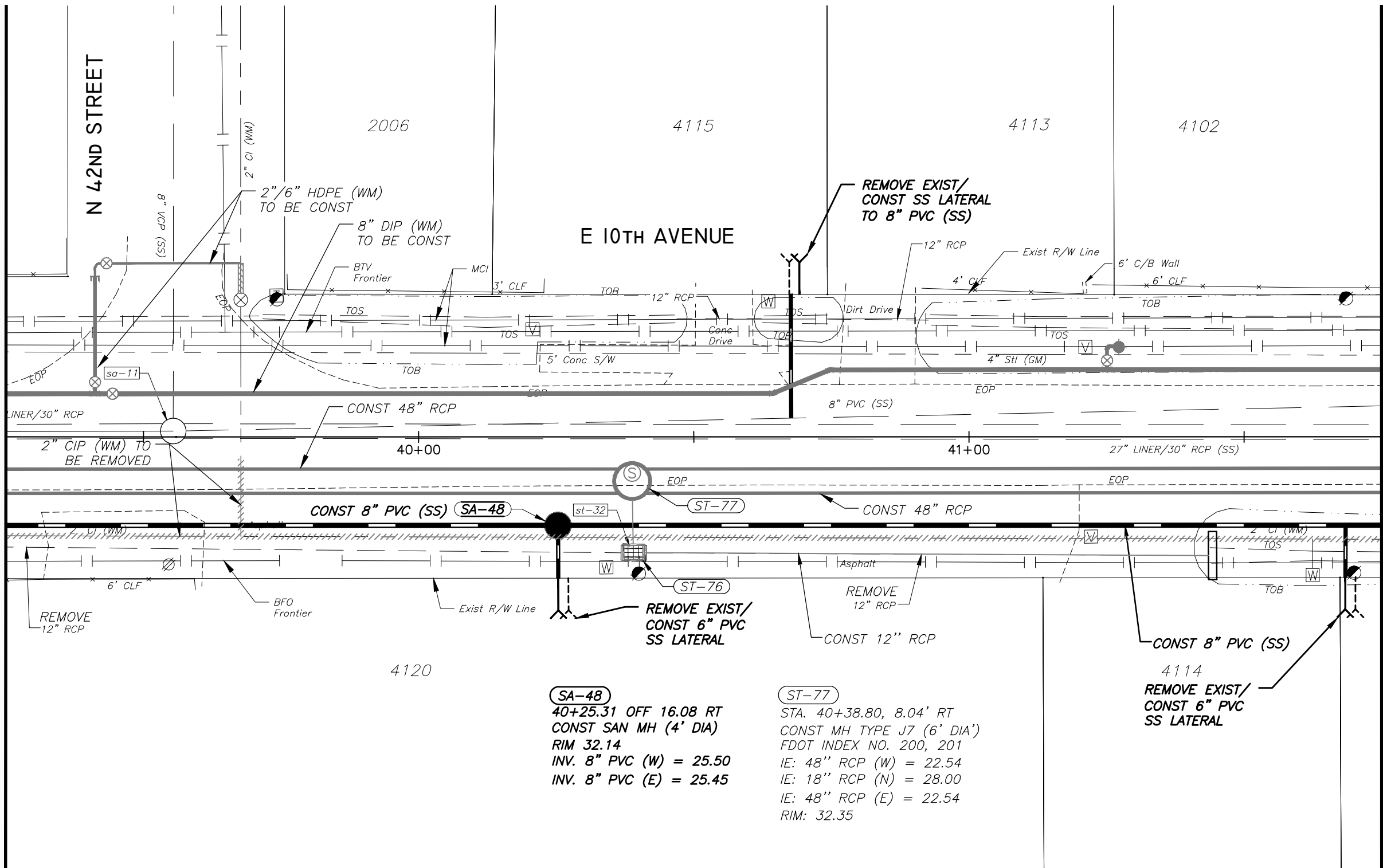
SHEET
WW7

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PLOTTED: 11/19/2018 4:57:30 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---

SW

MATCH LINE STA. 41+75

MATCH LINE STA. 39+25



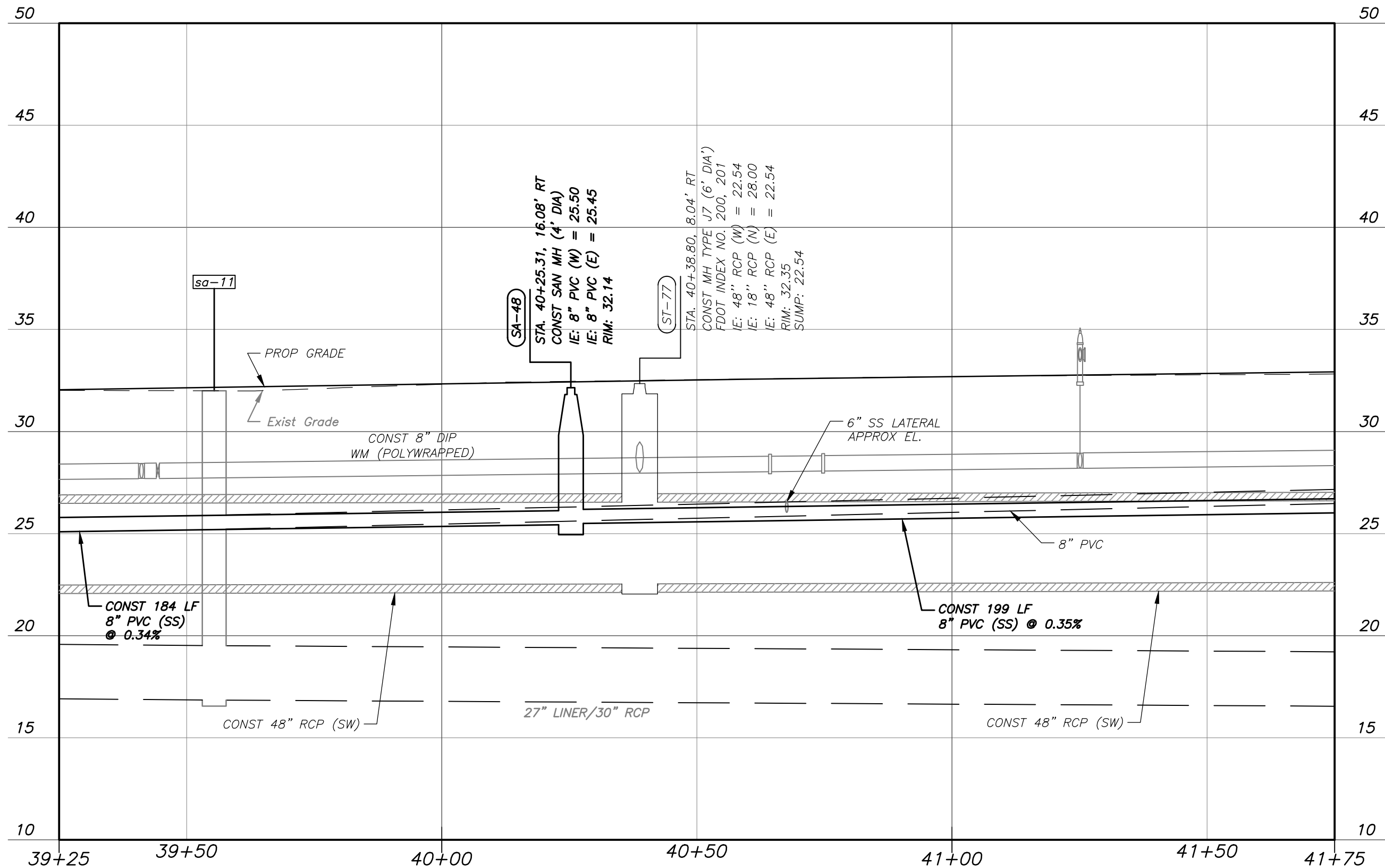
NOTE:
SEE SEPARATE PLANS FOR STOMRWATER AND WATER DESIGN



No.	DATE	REVISIONS	PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS SANITARY SEWER PLAN STA 39+25 TO STA 41+75	SHEET WW8

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PLOT: 11/19/2018 4:58:01 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB PROJECT STATUS: ---

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PLOTTED: 11/19/2018 4:58:15 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI.NCS,STB, PROJECT STATUS: ---



No.	DATE	REVISIONS

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DES: MCH
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Stormwater Engineering Division

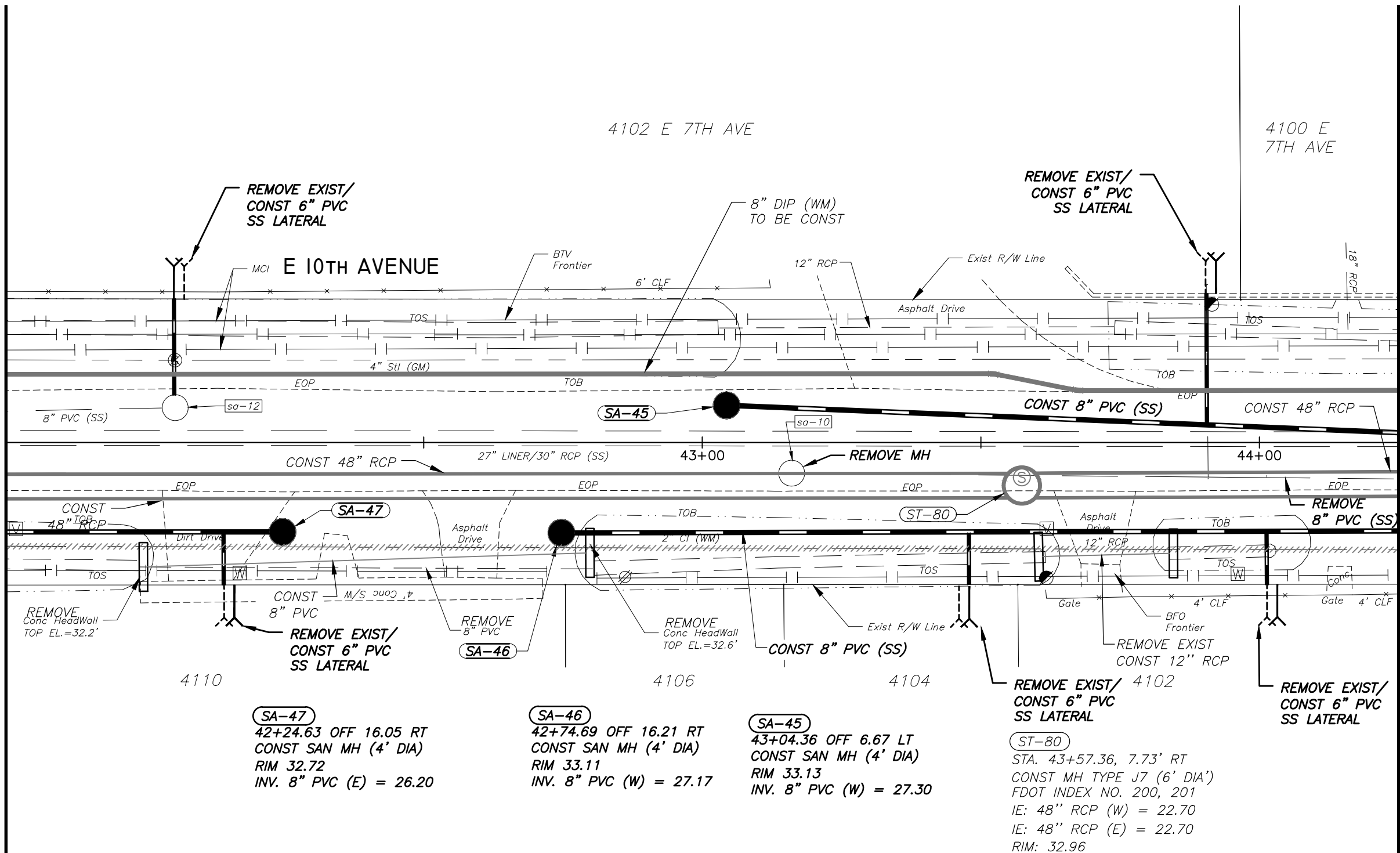
43RD STREET OUTFALL REGIONAL STORMWATER
IMPROVEMENTS
SANITARY SEWER PROFILE
STA 39+25 TO STA 41+75

SHEET
WW9

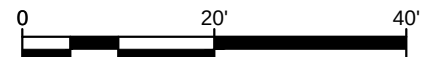
SW

MATCH LINE STA. 44+25

MATCH LINE STA. 41+75



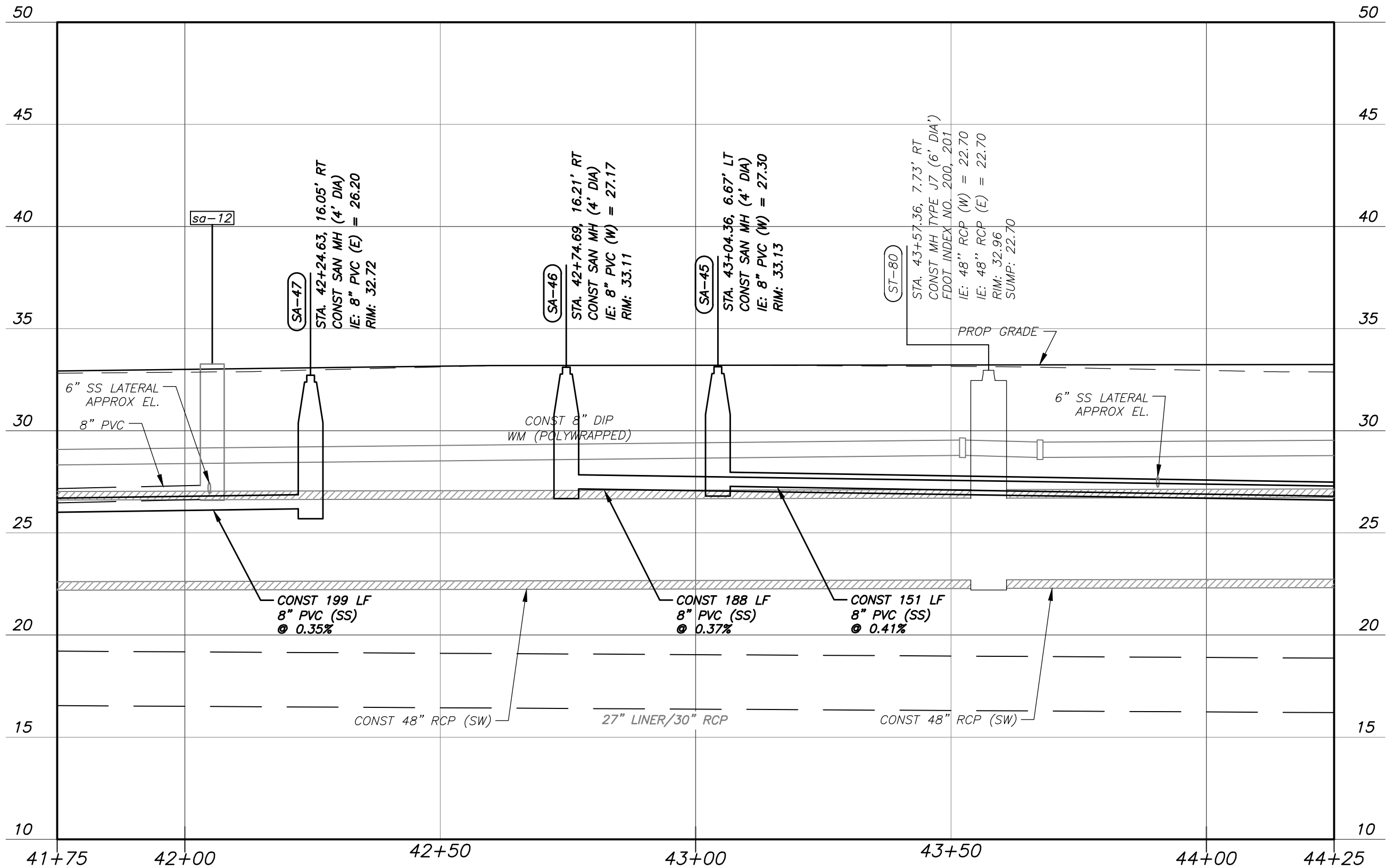
NOTE:
SEE SEPARATE PLANS FOR STOMRWATER AND WATER DESIGN



No.	DATE	REVISIONS	PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS SANITARY SEWER PLAN STA 41+75 TO STA 44+25	SHEET WW10

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PLOT: 11/19/2018 4:58:46 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB PROJECT STATUS: ---

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PLOT DATE: 11/19/2018 4:59:00 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI NCS.STB PROJECT STATUS: ---



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DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

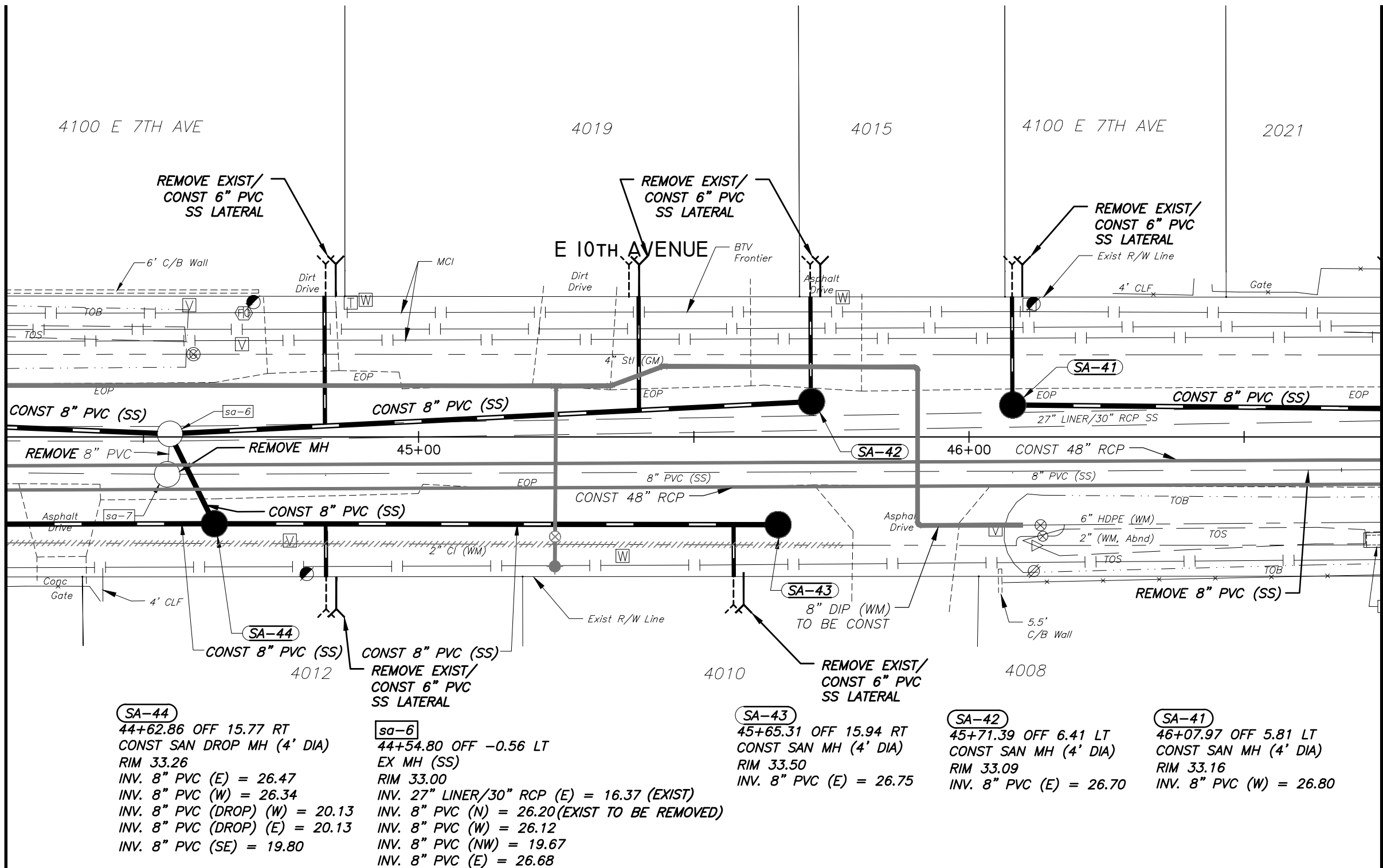
43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
SANITARY SEWER PROFILE
STA 41+75 TO STA 44+25

SHEET
WW11

SW

MATCH LINE STA. 46+75

MATCH LINE STA. 44+25



SA-44
44+62.86 OFF 15.77 RT
CONST SAN DROP MH (4' DIA)
RIM 33.26
INV. 8" PVC (E) = 26.47
INV. 8" PVC (W) = 26.34
INV. 8" PVC (DROP) (W) = 20.13
INV. 8" PVC (DROP) (E) = 20.13
INV. 8" PVC (SE) = 19.80

sa-6
44+54.80 OFF -0.56 LT
EX MH (SS)
RIM 33.00
INV. 27" LINER/30" RCP (E) = 16.37 (EXIST)
INV. 8" PVC (N) = 26.20 (EXIST TO BE REMOVED)
INV. 8" PVC (W) = 26.12
INV. 8" PVC (NW) = 19.67
INV. 8" PVC (E) = 26.68

SA-43
45+65.31 OFF 15.94 RT
CONST SAN MH (4' DIA)
RIM 33.50
INV. 8" PVC (E) = 26.75

SA-42
45+71.39 OFF 6.41 LT
CONST SAN MH (4' DIA)
RIM 33.09
INV. 8" PVC (E) = 26.70

SA-41
46+07.97 OFF 5.81 LT
CONST SAN MH (4' DIA)
RIM 33.16
INV. 8" PVC (W) = 26.80

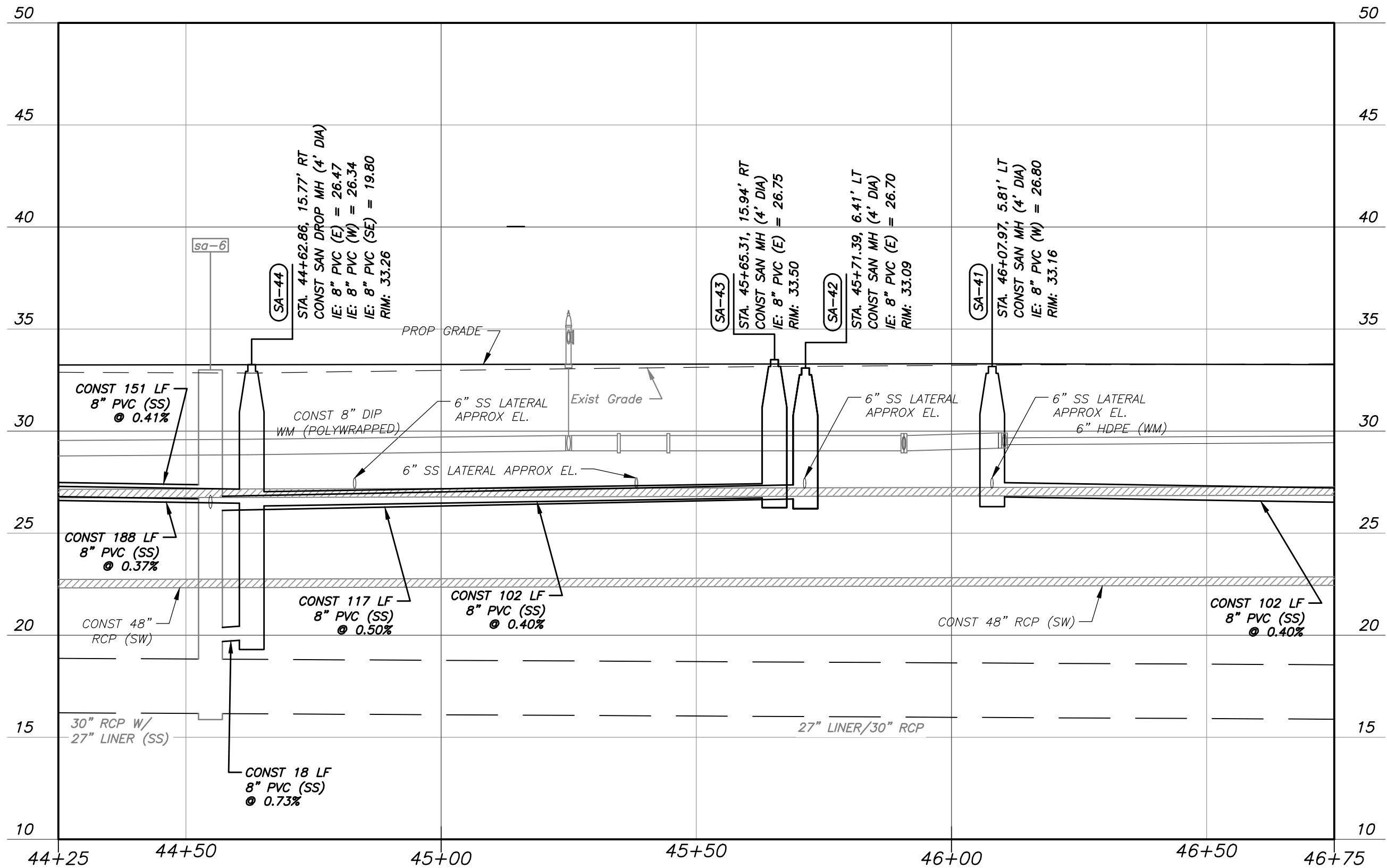
NOTE:
SEE SEPARATE PLANS FOR STOMRWATER AND WATER DESIGN



No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS SANITARY SEWER PLAN STA 44+25 TO STA 46+75	SHEET WW12

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PLOT: 11/19/2018 4:59:31 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB PROJECT STATUS: ---

SW



VERT SCALE: 1" = 5'
HORIZ SCALE: 1" = 20'

No.	DATE	REVISIONS



PENNONI ASSOCIATES INC.
2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

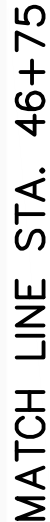
43RD STREET OUTFALL REGIONAL STORMWATER
IMPROVEMENTS
SANITARY SEWER PROFILE
STA 44+25 TO STA 46+75

SHEET
WW/3

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PLOT: 11/19/2018 4:59:45 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB PROJECT STATUS: ---

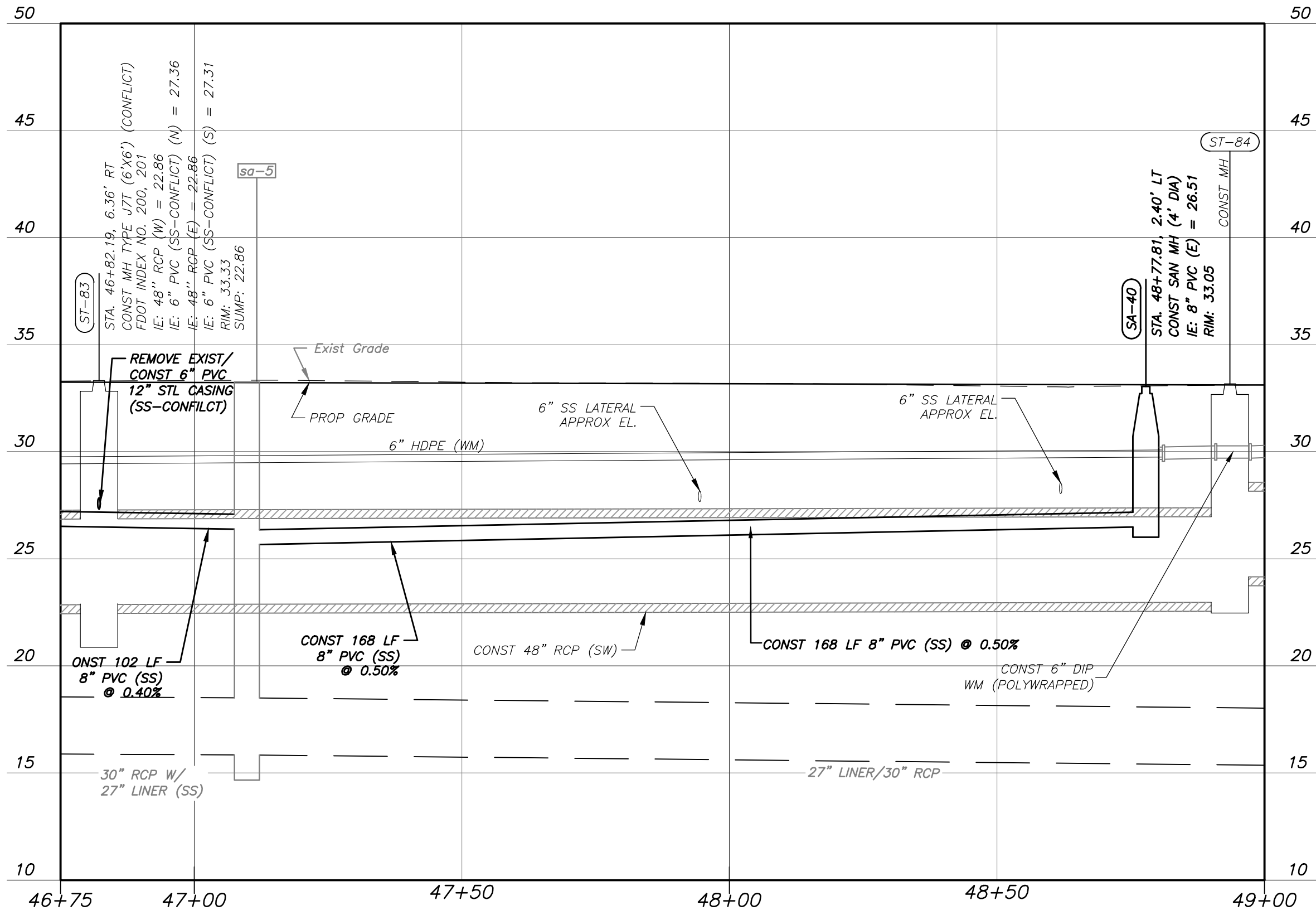
SW

MATCH LINE STA. 49+00



M:\PROJECTS\ITMPA\ITMPA15001-43RD_STREET\DESIGN_PUBLISH\BID SET\1711 SANITARY PLAN.DWG
PLOTTED: 11/19/2018 5:00:17 PM, BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI.NCS.STB, PROJECT STATUS: ---

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PLOT DATE: 11/19/2018 5:00:31 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI.NCS,STB, PROJECT STATUS: ---



SW

VERT SCALE: 1" = 5'
HORIZ SCALE: 1" = 20'

No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
Pennoni 2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

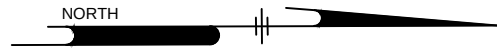
DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
SANITARY SEWER PROFILE
STA 46+75 TO STA 49+00

SHEET
WW/5

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PLOTTED: 11/19/2018 5:01:01 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB PROJECT STATUS: ---

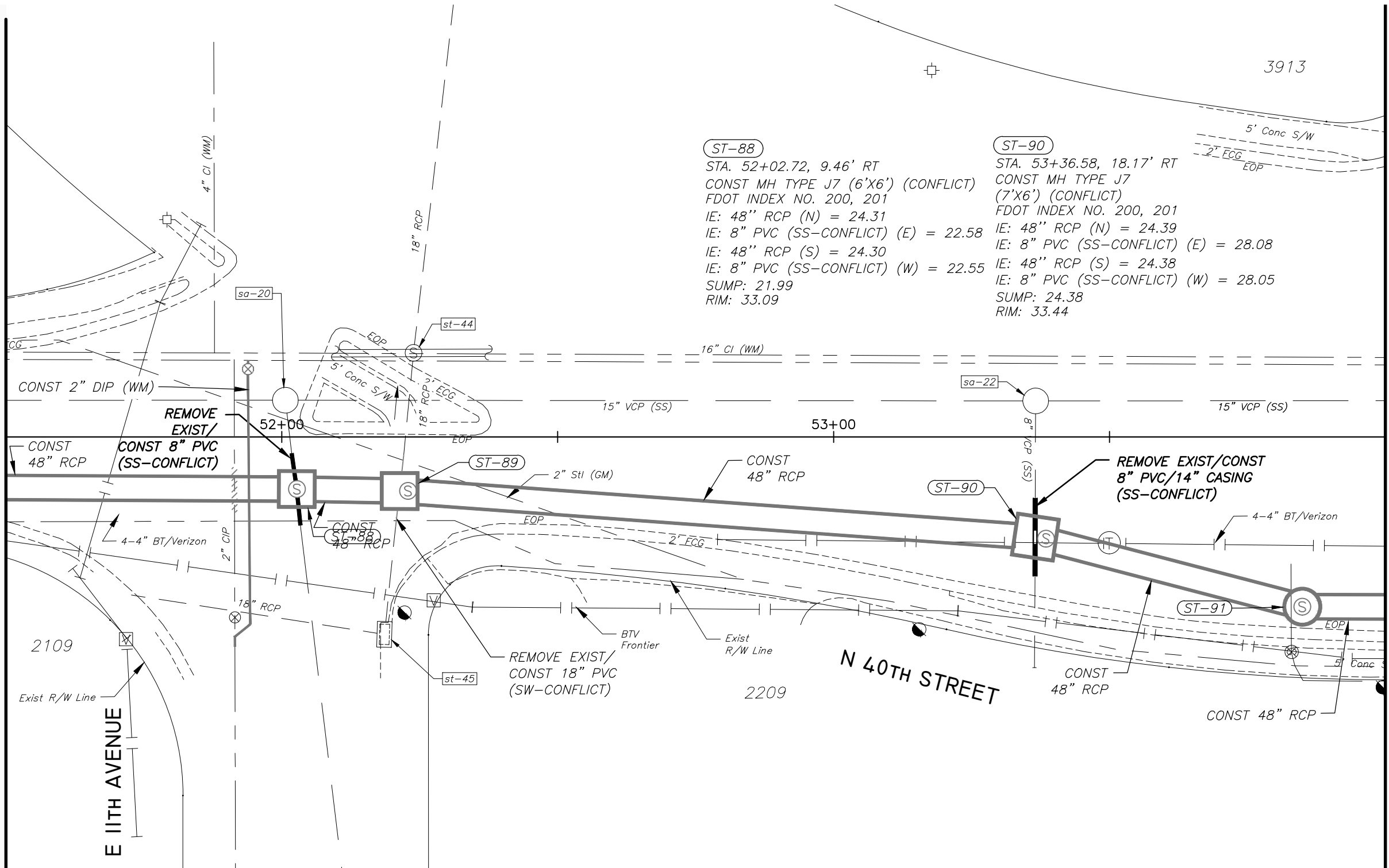


SW

MATCH LINE STA. 51+50

E IITH AVENUE

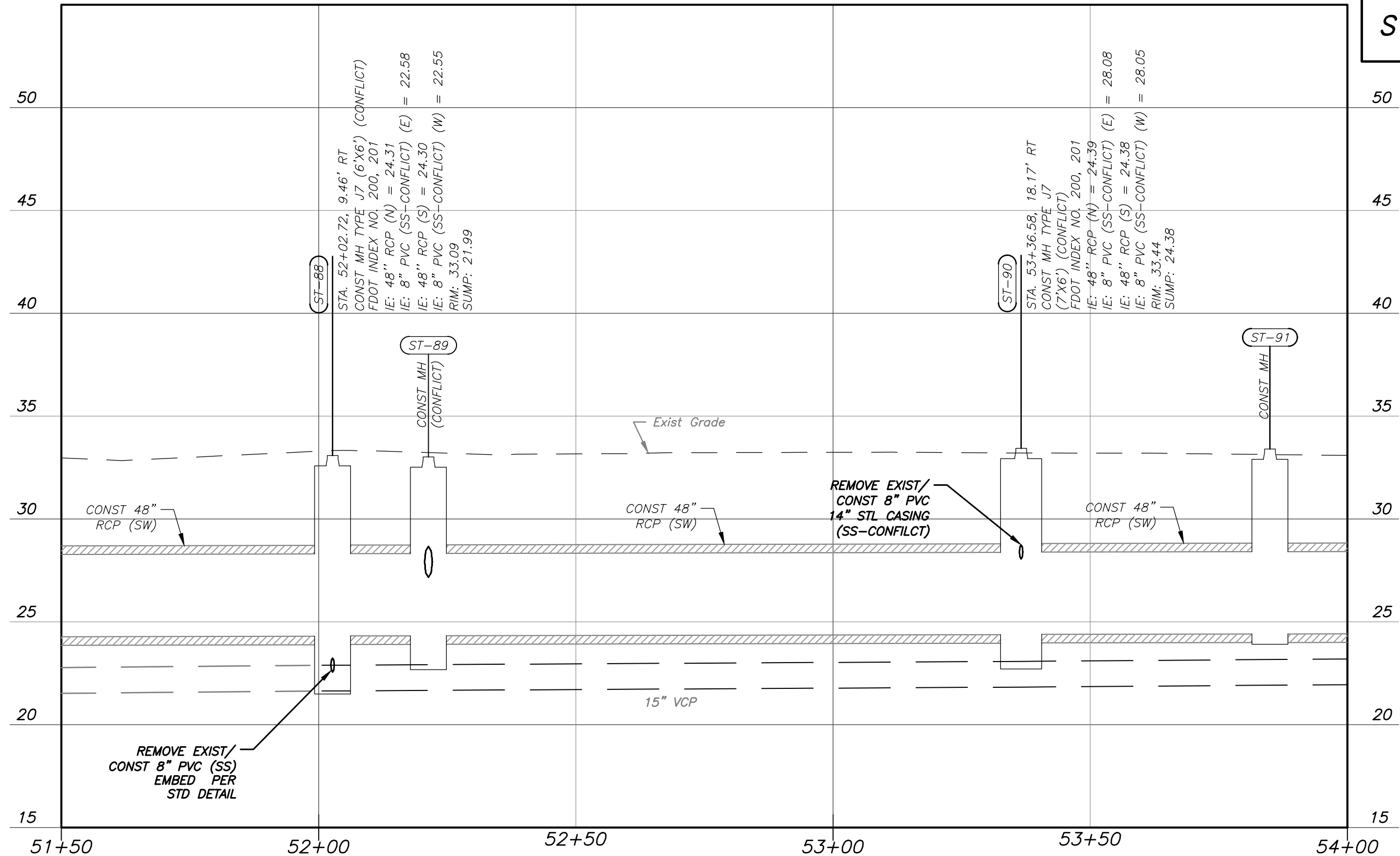
MATCH LINE STA. 54+00



NOTES:
1. SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN



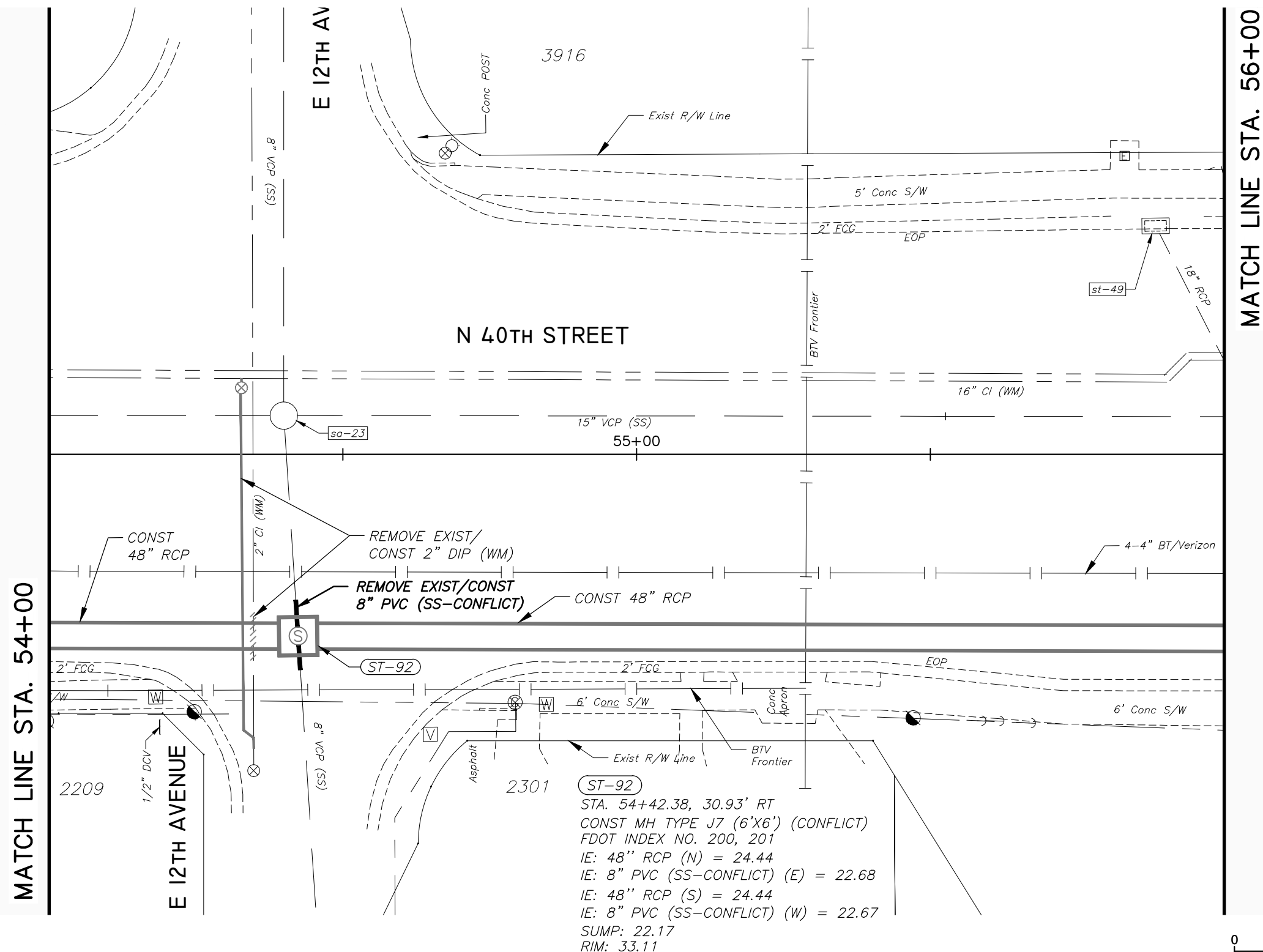
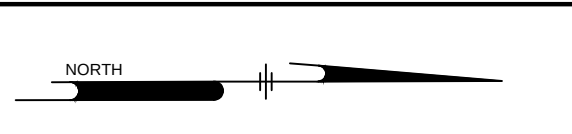
REVISIONS			PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS SANITARY SEWER PLAN STA 51+50 TO STA 54+00	SHEET WW16
No.	DATE							



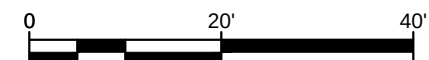
VERT SCALE: 1" = 5'
HORIZ SCALE: 1" = 20'

No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS SANITARY SEWER PROFILE STA 51+50 TO STA 54+00	SHEET WW17

SW

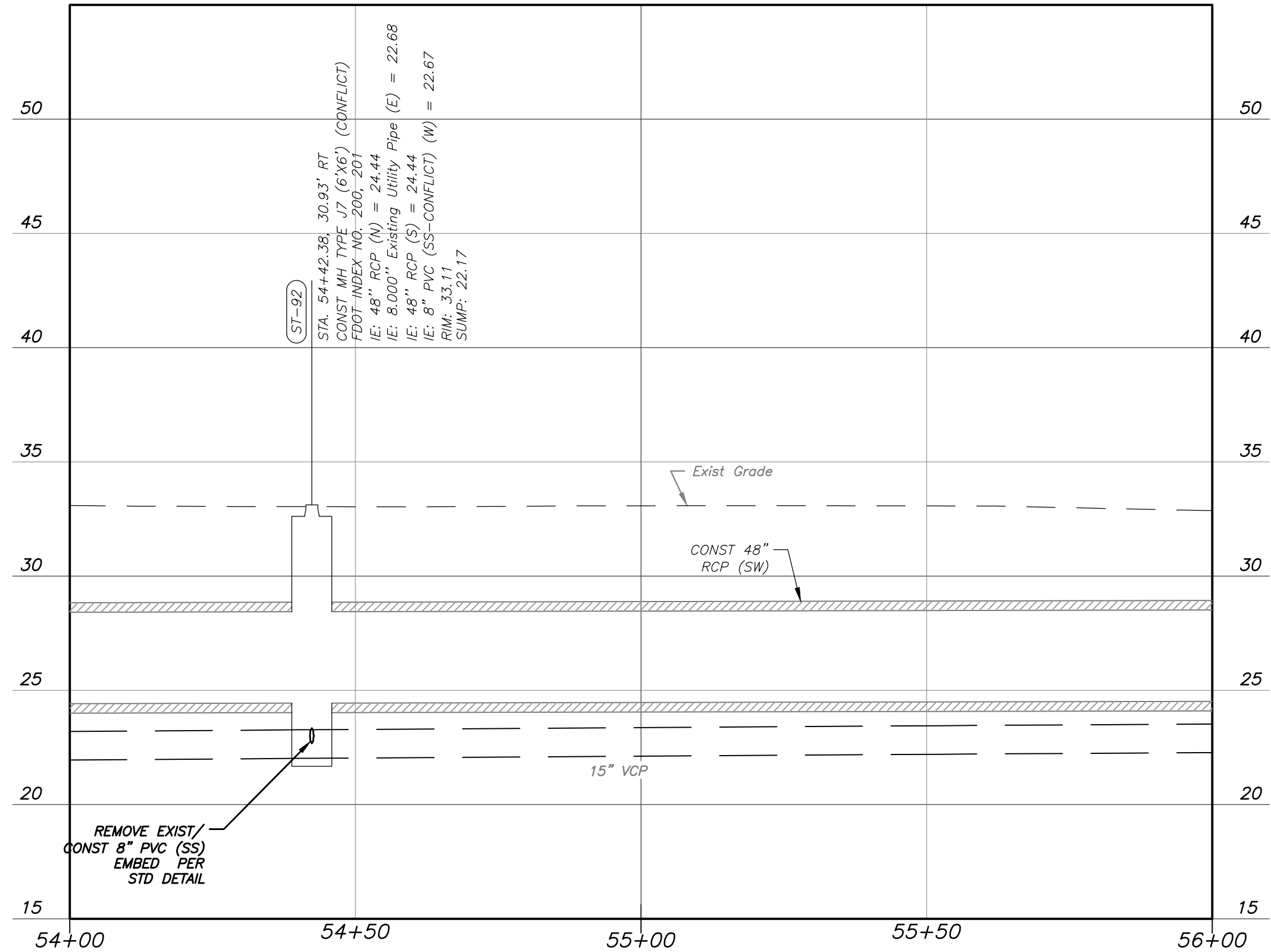


NOTE:
SEE SEPARATE PLANS FOR WATER AND STORMWATER DESIGN



No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS SANITARY SEWER PLAN STA 54+00 TO STA 56+00	SHEET WW18

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PLOTTED: 11/19/2018 5:02:01 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---



SW

VERT SCALE: 1" = 5'
HORIZ SCALE: 1" = 20'

No.	DATE	REVISIONS



PENNONI ASSOCIATES INC.
2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E.
P.E. NO. 38766

DATE

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL STORMWATER
IMPROVEMENTS
SANITARY SEWER PROFILE
STA 54+00 TO STA 56+00

SHEET
WW/9

M:\PROJECTS\TAMPA\15001-43RD_STREET\DESIGN_PUBLISH\DWG SET\11 SANITARY PLAN.DWG
PLOTTED: 11/19/2018 5:02:31 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---

MATCH LINE STA. 61+00

MATCH LINE STA. 63+50

SW

NOTES:
1. SEE SEPARATE SHEETS FOR WATER AND STORMWATER DESIGN.

REMOVE EXIST
CONST 6" PVC
10" STL CASING
(SS-CONFLICT)

CONST 48" RCP

ST-98

CONST 48" RCP

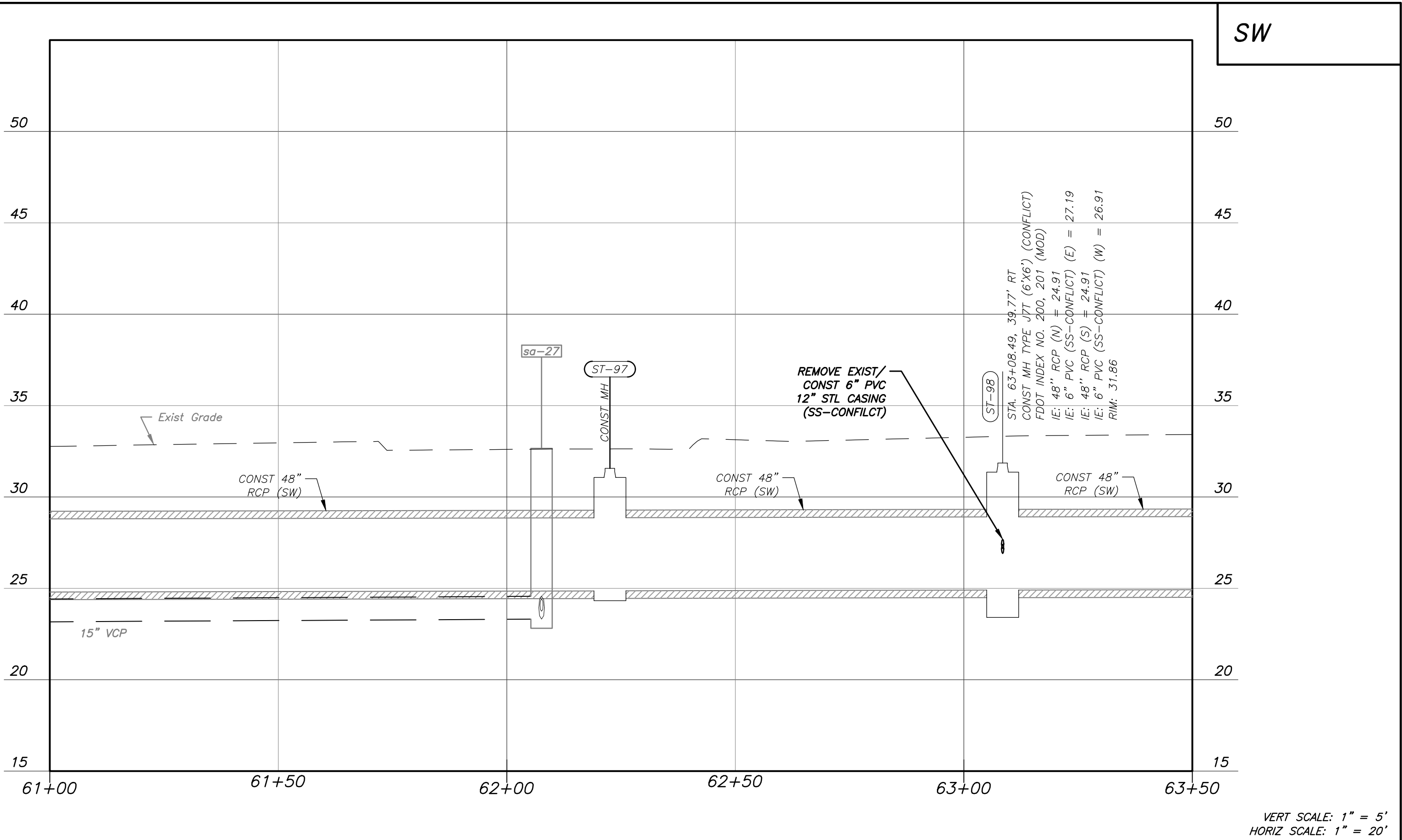
ST-98

STA. 63+08.49, 39.77' RT
CONST MH TYPE J7T (6'X6') (CONFLICT)
FDOT INDEX NO. 200, 201 (MOD)
IE: 48" RCP (N) = 24.91
IE: 6" PVC (SS-CONFLICT) (E) = 27.19
IE: 48" RCP (S) = 24.91
IE: 6" PVC (SS-CONFLICT) (W) = 26.91
SUMP: 24.91
RIM: 31.86



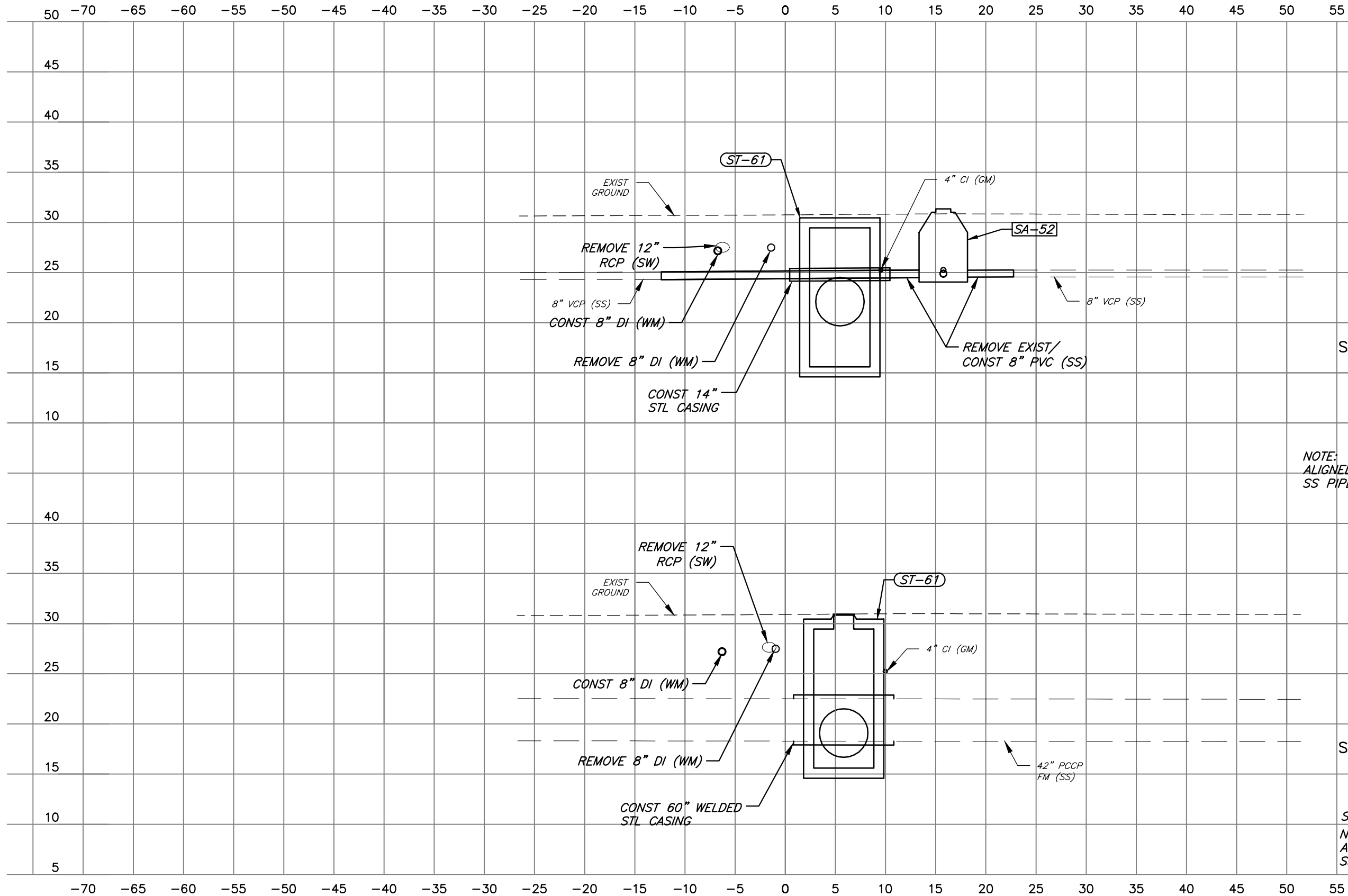
No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. P.E. NO. 38766 DATE	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS SANITARY SEWER PLAN STA 61+00 TO STA 63+50	SHEET WW20

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PLOTTED: 11/19/2018 5:02:46 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI.NCS,STB, PROJECT STATUS: ---



No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS SANITARY SEWER PROFILE STA 61+00 TO STA 63+50	SHEET WW21

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PLOT DATE: 11/19/2018 5:03:08 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI.NCS.STB PROJECT STATUS: ---



SW

STA 27+70

STA 27+66

NOTE: CROSS SECTIONS
ALIGNED TO CONFLICTING
SS PIPES.

SCALE: 1" = 10'
NOTE: CROSS SECTIONS
ALIGNED TO CONFLICTING
SS PIPES.

No.	DATE	REVISIONS

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E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

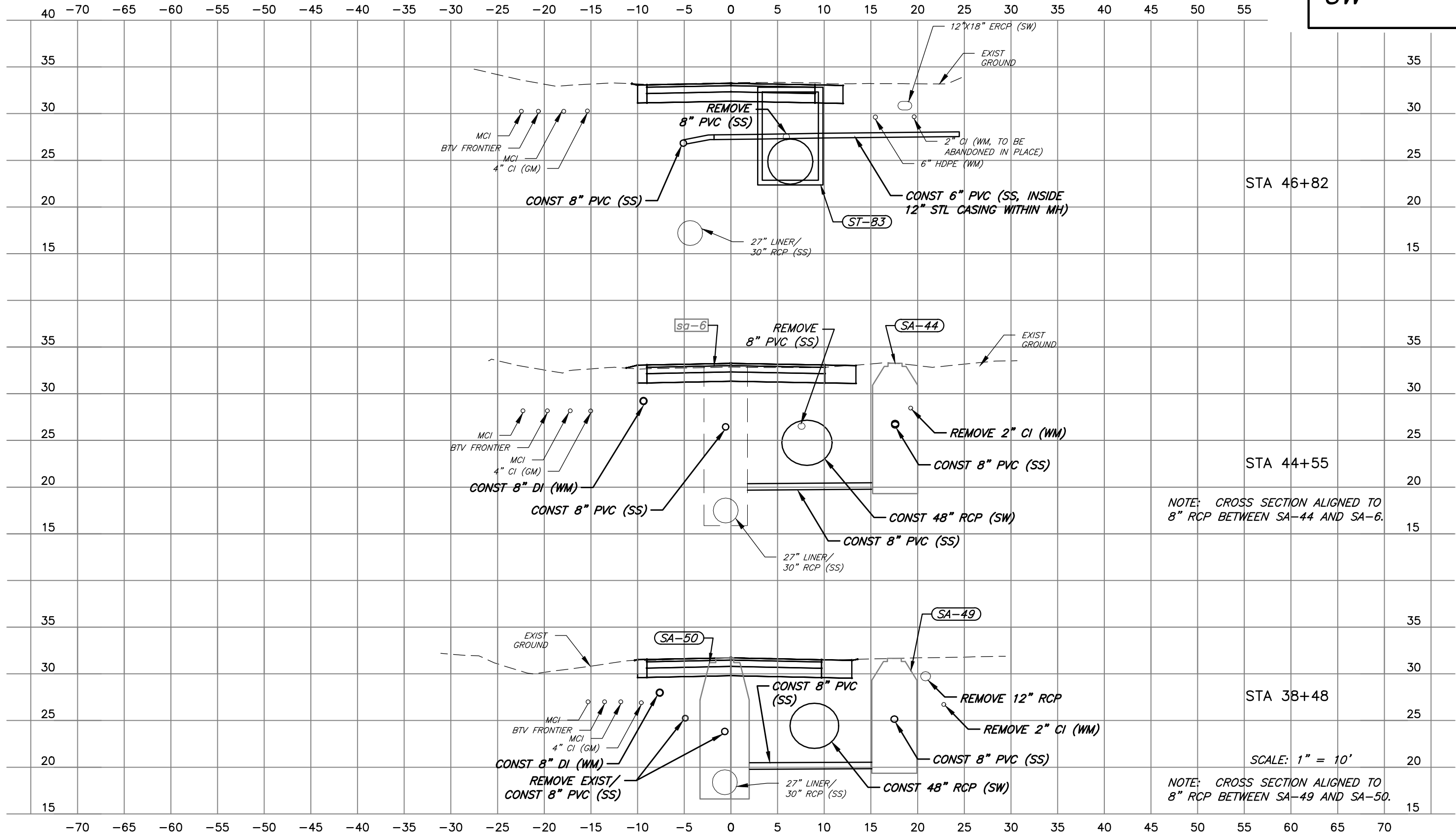
DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
SANITARY SEWER CROSS SECTIONS
E. 7TH AVE - E. BROADWAY

SHEET
WW22

SW



No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
Pennoni 2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 10/10/18

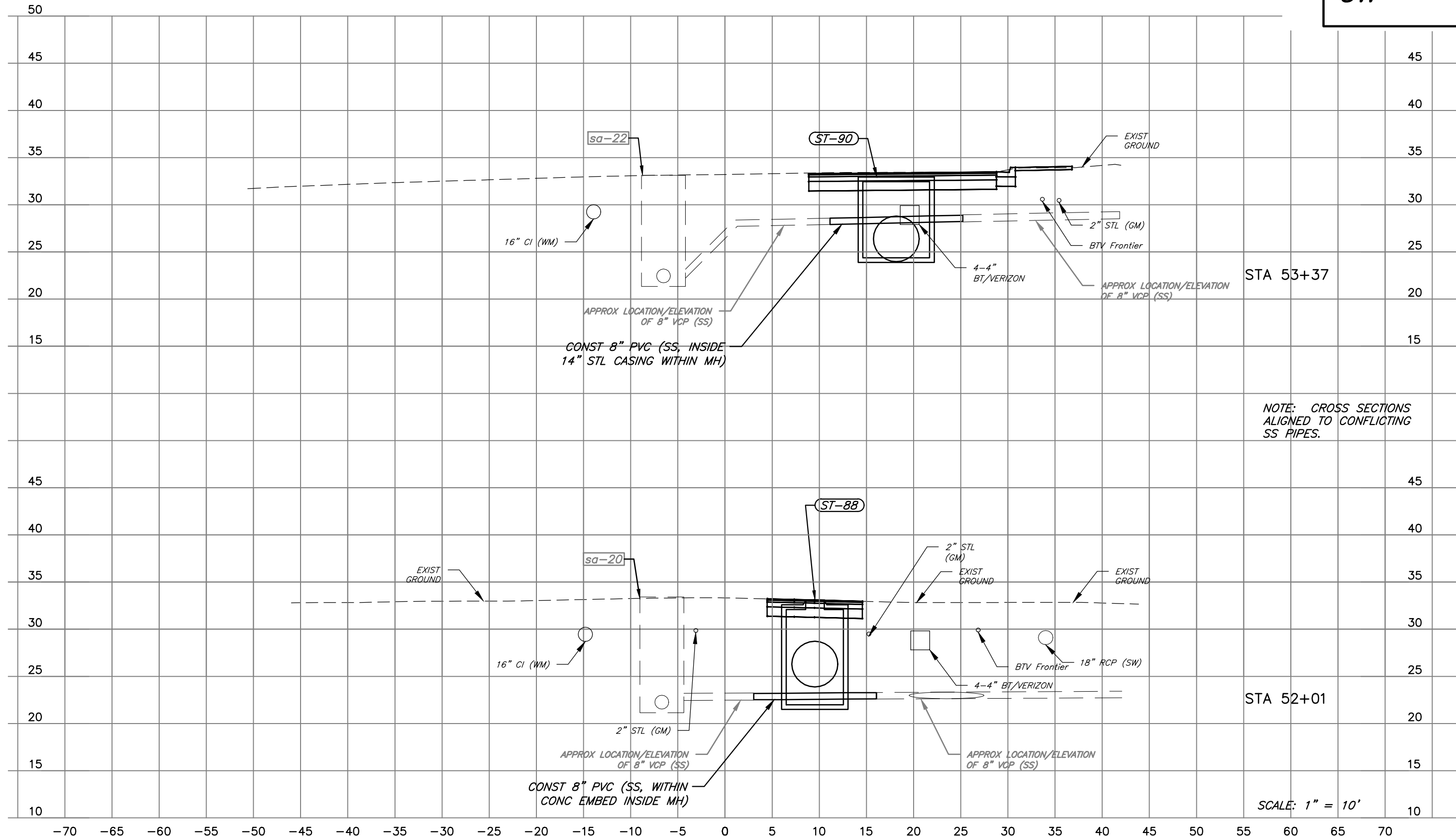
CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
SANITARY SEWER CROSS SECTIONS
EAST 10TH AVE

SHEET
WW23

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PLOT: 11/19/2018 5:03:15 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI NCS.STB PROJECT STATUS: ---

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PENNONI ASSOCIATES INC.
2555 Nursery Road, Suite 101
Clearwater, FL 33764
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E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
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CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
SANITARY SEWER CROSS SECTIONS
NORTH 40TH ST (I)

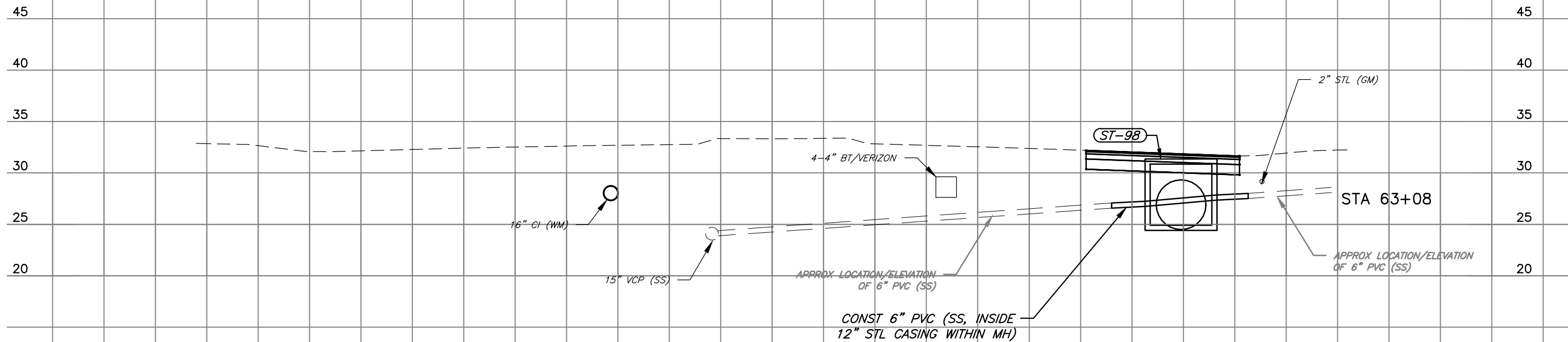
SHEET
WW24

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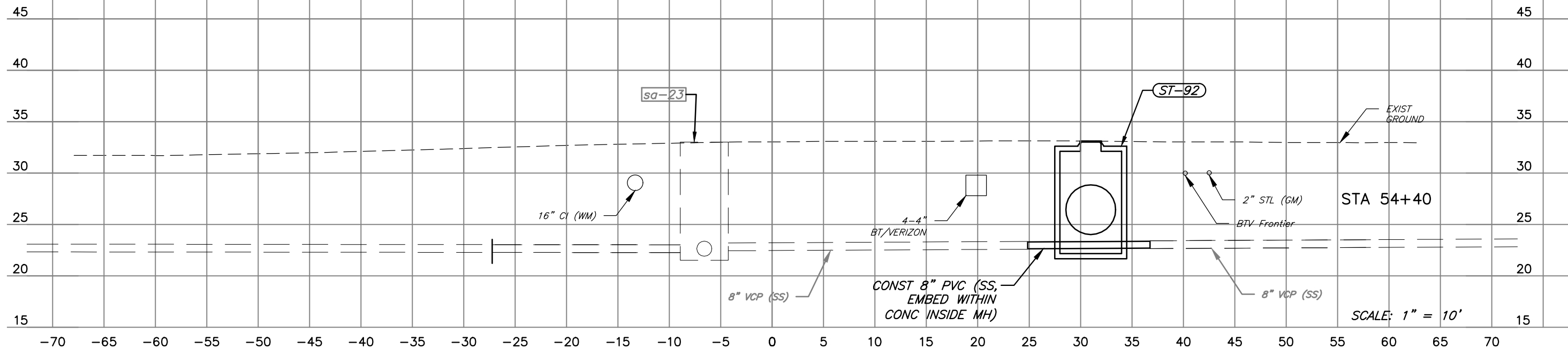
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50 -70 -65 -60 -55 -50 -45 -40 -35 -30 -25 -20 -15 -10 -5 0 5 10 15 20 25 30 35 40 45 50 55

SW



NOTE: CROSS SECTIONS
ALIGNED TO CONFLICTING
SS PIPES.



SCALE: 1" = 10'

No.	DATE	REVISIONS

**PENNONI ASSOCIATES INC.**
2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
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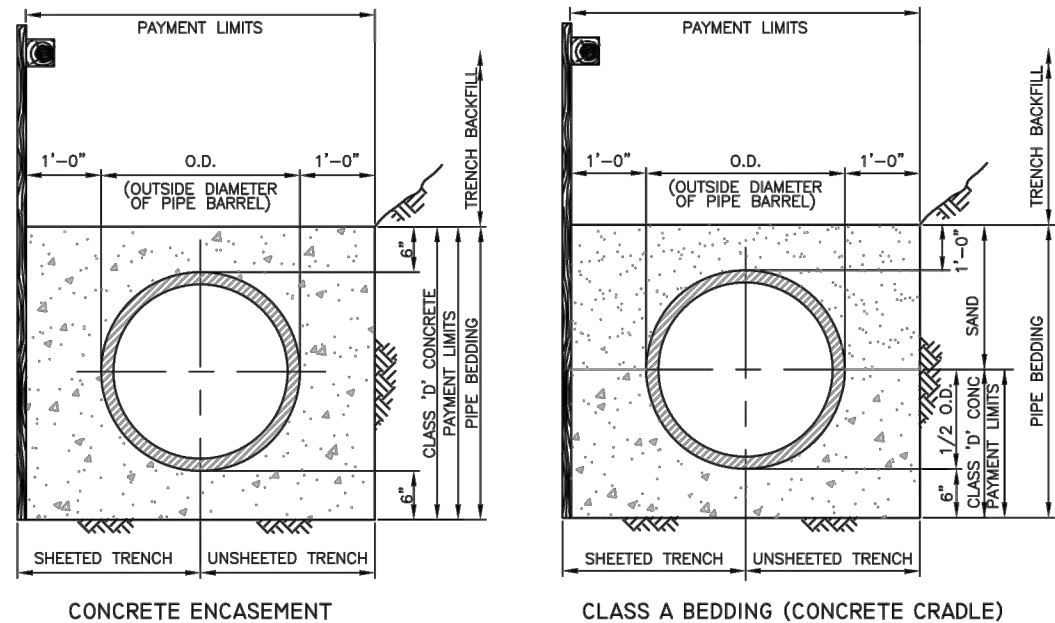
DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

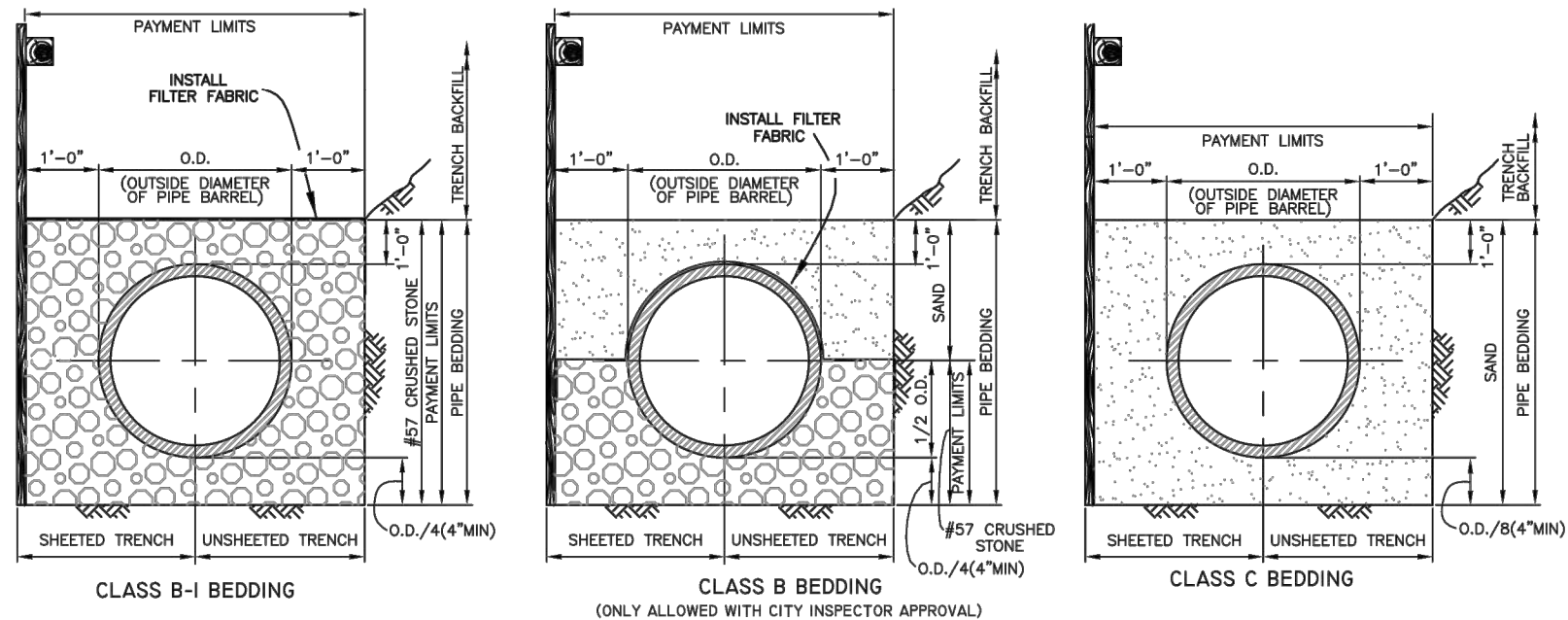
43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
SANITARY SEWER CROSS SECTIONS
NORTH 40TH ST (2)

SHEET
WW25

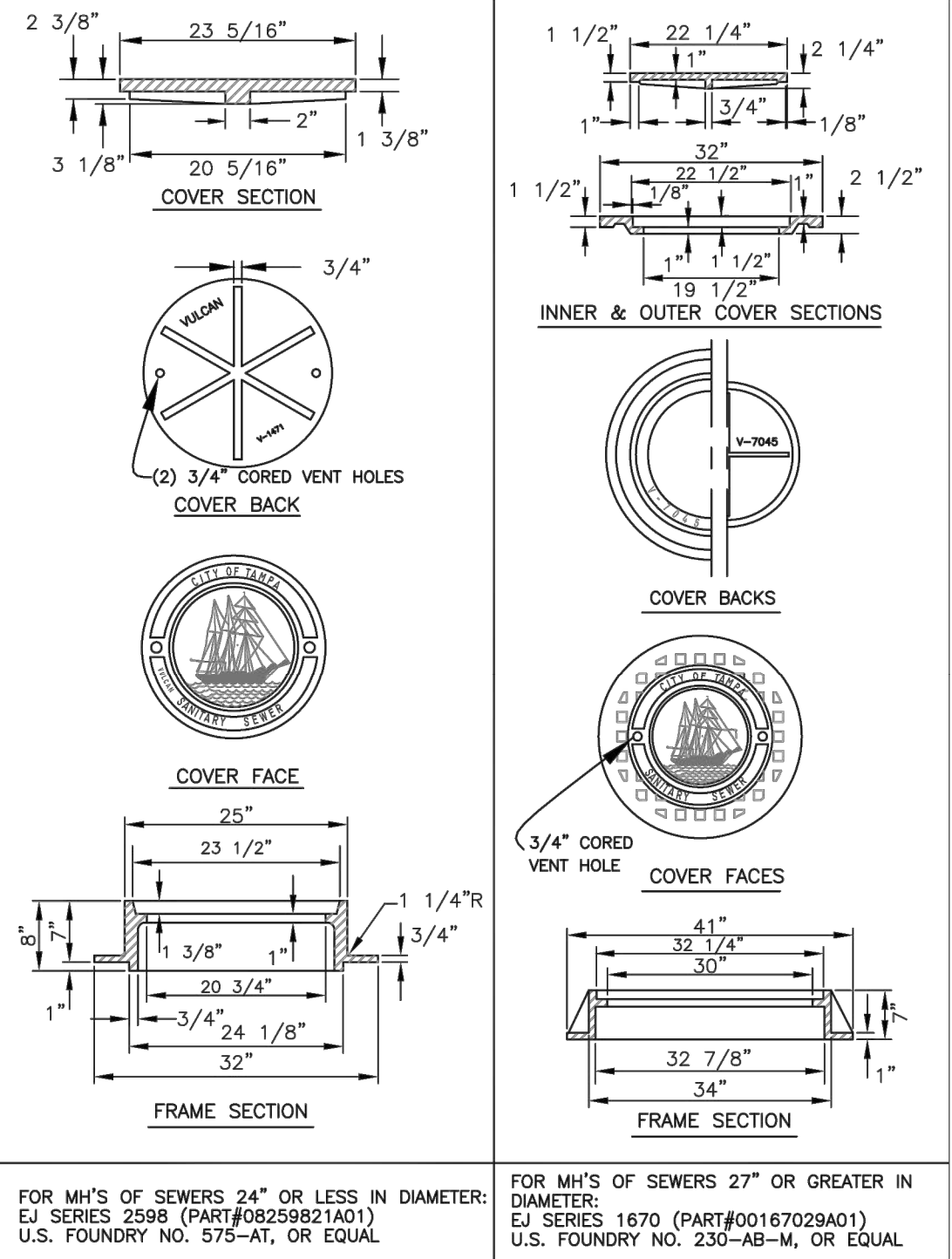
SW



- NOTES:
1. ALL TYPES OF PIPE BEDDING SHALL EXTEND TO UNDISTURBED EARTH AT SIDES AND BOTTOM OF THE TRENCH.
 2. SAND AND CRUSHED STONE PIPE BEDDING SHALL BE PLACED AND COMPACTED IN ACCORDANCE WITH SPECIFICATIONS.



PIPE BEDDING DETAILS
N.T.S.

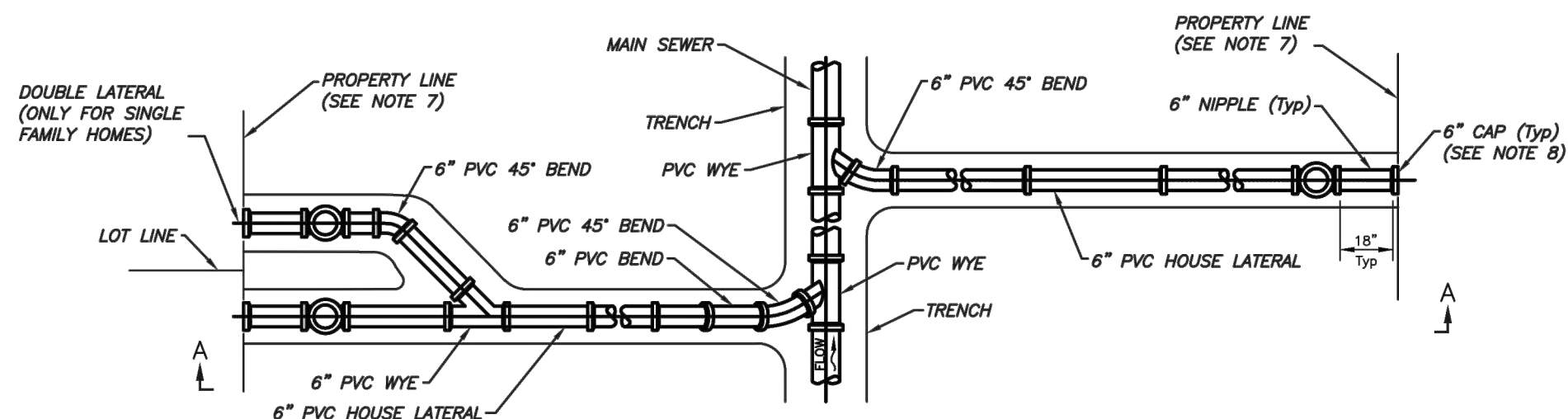


HEAVY DUTY CAST IRON MANHOLE
FRAME & COVER DETAILS
N.T.S.

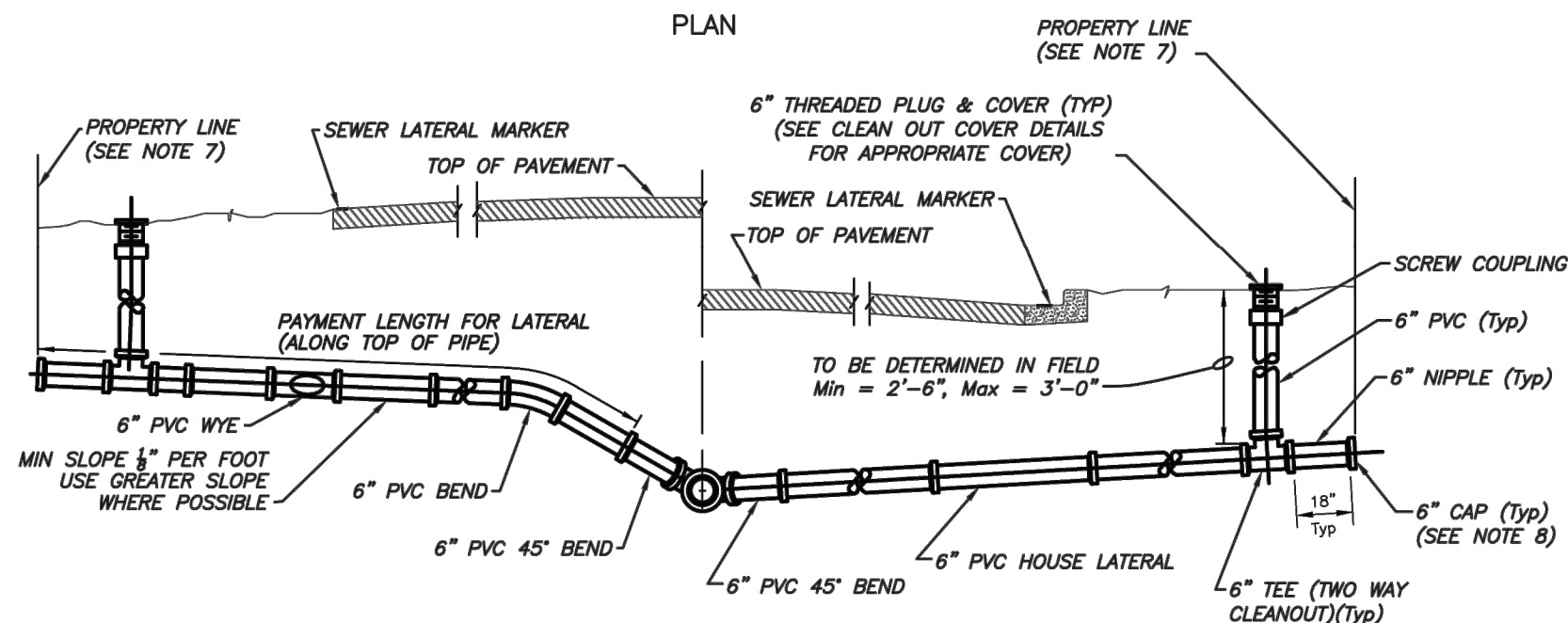
No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. P.E. NO. 38766 DATE	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS MISCELLANEOUS GRAVITY DETAILS	SHEET WW26

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PLOT DATE: 11/19/2018 5:03:44 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI NCS.STB PROJECT STATUS: ---

SW



PLAN



SECTION A-A

TYPE A HOUSE LATERAL DETAIL
Not to Scale

- NOTES:**

1. *The locations of house laterals by symbols on plans are approximate only and the actual location and slopes will be determined in the field by the contractor with the approval of the engineer.*
2. *The minimum diameter of all house laterals shall be 6 inches.*
3. *The vertical alignment of the service lateral shall be designed so that no more than two (2) vertical bends are required between the connection to the gravity main and the property line.*
4. *House laterals which pass under drainage ditches with less than 18" of cover or which have less than 30" of cover under pavement shall be Pressure Class 350 with 40 mils (MDFT) of Protecto 401 interior coating per specifications.*
5. *A minimum vertical clearance of 12-inches shall be provided when crossing above a water main. However, a vertical clearance less than 12-inches but greater than 6-inches will be allowed if the lateral is installed using one the following criteria:*

- The lateral is constructed of ductile iron pipe with a minimum pressure class of 350 with 40 mils (MDFT) of Protecto 401 interior coating.
- The lateral is encased in at least 4-inches of concrete.
- The lateral is installed in a casing pipe with an impact strength equal to the impact strength of pressure class 350 ductile iron.

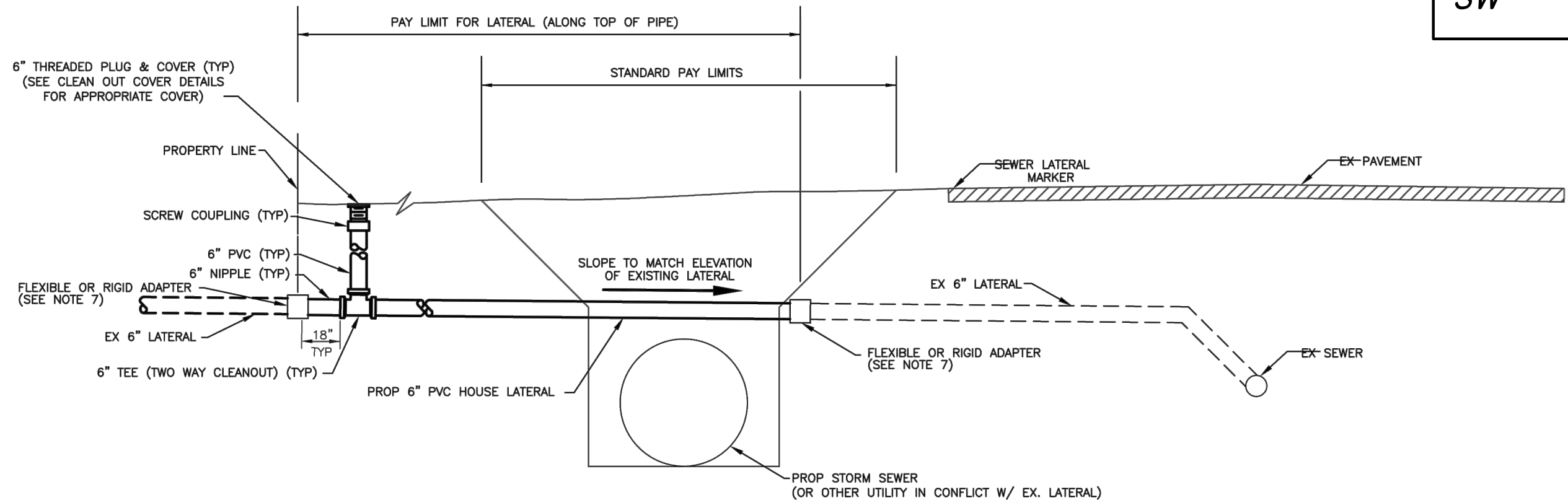
A minimum of 6-inches of vertical clearance shall be provided when crossing below water mains with a diameter 6-inches or less. A minimum of 12-inches of clearance shall be provided when crossing below a water main with a diameter greater than 6-inches up to a diameter of 18-inches. A minimum of 18-inches of vertical clearance will be required when crossing under a water main with diameters greater than 18-inches.

At all water main crossings, joints of the lateral pipe at the crossing shall be arranged so that no joint is within 6-ft of a joint along the water main. If the joint spacing can not be achieved, then the gravity sewer at the crossing shall be constructed of C-900 PVC.

A minimum vertical clearance of 6-inches shall be provided when crossing above all utilities other than a water main. A minimum of 6-inches of vertical clearance shall be provided when crossing below a utility with a diameter 6-inches or less. A minimum of 12-inches of clearance shall be provided when crossing below a utility with a diameter greater than 6-inches up to a diameter of 18-inches. A minimum of 18-inches of vertical clearance will be required when crossing under utilities with diameters greater than 18-inches.

6. *Transitions from SDR 35 PVC to either C900 or ductile iron pipes shall be made with PVC rigid adaptors. Transitions from SDR 35 PVC to either existing clay or concrete pipes shall be made with a Fernco 1000 series flexible coupling with stainless steel shear ring or approved equal.*
7. *In sub-divisions where the Developer has provided a recorded utility easement (typically 10') beyond the property line, the clean out shall be installed within the easement away from the sidewalk.*
8. *At the direction of the City's inspector, the contractor shall temporarily stake the cap of all laterals at the property line with a 2"x4" treated wood stake.*
9. *Double laterals are only allowed for single family homes on single lots.*

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NOTES

1. CONTRACTOR SHALL REMOVE AND REPLACE THE EXISTING LATERALS WITHIN THE PAY LIMITS AND FROM THE PAY LIMITS TO THE PROPERTY LINE. THE NEW 6" PVC LATERAL SHALL BE CONNECTED TO THE EXISTING LATERAL PIPE USING FLEXIBLE ADAPTERS. A NEW CLEAN-OUT AND CLEAN-OUT COVER SHALL BE INSTALLED ON THE R/W SIDE OF THE PROPERTY LINE AND WILL BE PAID FOR UNDER SEPARATE PAY ITEM.
2. SEWER SERVICE MUST BE MAINTAINED DURING CONSTRUCTION.
3. THE LOCATIONS OF HOUSE LATERALS BY SYMBOLS ON PLANS ARE APPROXIMATE ONLY AND THE ACTUAL LOCATION AND SLOPES WILL BE DETERMINED IN THE FIELD BY THE CONTRACTOR WITH THE APPROVAL OF THE ENGINEER.
4. THE MINIMUM DIAMETER OF ALL HOUSE LATERALS SHALL BE 6".
5. HOUSE LATERALS WHICH PASS UNDER DRAINAGE DITCHES WITH LESS THAN 18" OF COVER OR WHICH HAVE LESS THAN 30" OF COVER UNDER PAVEMENT SHALL BE PRESSURE CLASS 350 WITH 40 MILS (MDFT) OF PROTECTO 401 INTERIOR COATING.
6. A MINIMUM VERTICAL CLEARANCE OF 12-INCHES SHALL BE PROVIDED WHEN CROSSING ABOVE A WATER MAIN. HOWEVER, A VERTICAL CLEARANCE LESS THAN 12-INCHES BUT GREATER THAN 6-INCHES WILL BE ALLOWED IF THE LATERAL IS INSTALLED USING ONE THE FOLLOWING CRITERIA:
 - THE LATERAL IS CONSTRUCTED OF DUCTILE IRON PIPE WITH A MINIMUM PRESSURE CLASS OF 350 WITH 40 MILS (MDFT) OF PROTECTO 401 INTERIOR COATING.
 - THE LATERAL IS ENCASED IN AT LEAST 4-INCHES OF CONCRETE.

- THE LATERAL IS INSTALLED IN A CASING PIPE WITH AN IMPACT STRENGTH EQUAL TO THE IMPACT STRENGTH OF PRESSURE CLASS 350 DUCTILE IRON.

A MINIMUM OF 6-INCHES OF VERTICAL CLEARANCE SHALL BE PROVIDED WHEN CROSSING BELOW WATER MAINS WITH A DIAMETER 6-INCHES OR LESS. A MINIMUM OF 12-INCHES OF CLEARANCE SHALL BE PROVIDED WHEN CROSSING BELOW A WATER MAIN WITH A DIAMETER GREATER THAN 6-INCHES UP TO A DIAMETER OF 18-INCHES. A MINIMUM OF 18-INCHES OF VERTICAL CLEARANCE WILL BE REQUIRED WHEN CROSSING UNDER A WATER MAIN WITH DIAMETERS GREATER THAN 18-INCHES.

AT ALL WATER MAIN CROSSINGS, JOINTS OF THE LATERAL PIPE AT THE CROSSING SHALL BE ARRANGED SO THAT NO JOINT IS WITHIN 6-FT OF A JOINT ALONG THE WATER MAIN. IF THE JOINT SPACING CAN NOT BE ACHIEVED, THEN THE GRAVITY SEWER AT THE CROSSING SHALL BE CONSTRUCTED OF C-900 PVC.

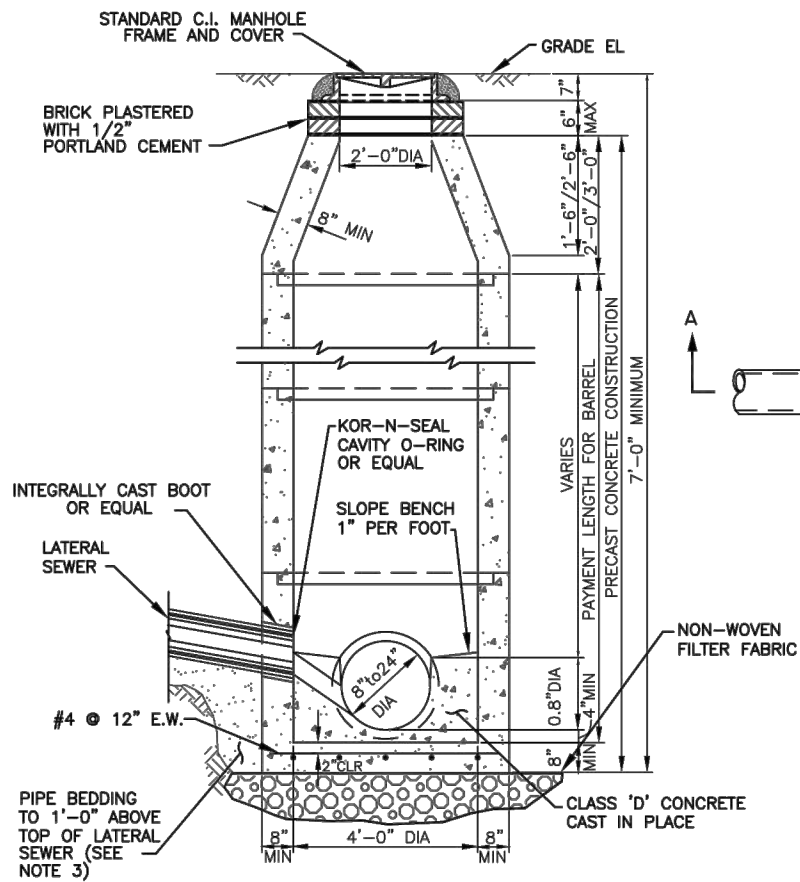
A MINIMUM VERTICAL CLEARANCE OF 6-INCHES SHALL BE PROVIDED WHEN CROSSING ABOVE ALL UTILITIES OTHER THAN A WATER MAIN. A MINIMUM OF 6-INCHES OF VERTICAL CLEARANCE SHALL BE PROVIDED WHEN CROSSING BELOW A UTILITY WITH A DIAMETER 6-INCHES OR LESS. A MINIMUM OF 12-INCHES OF CLEARANCE SHALL BE PROVIDED WHEN CROSSING BELOW A UTILITY WITH A DIAMETER GREATER THAN 6-INCHES UP TO A DIAMETER OF 18-INCHES. A MINIMUM OF 18-INCHES OF VERTICAL CLEARANCE WILL BE REQUIRED WHEN CROSSING UNDER UTILITIES WITH DIAMETERS GREATER THAN 18-INCHES.

7. TRANSITIONS FROM SDR 35 PVC TO EITHER C900 OR DUCTILE IRON PIPES SHALL BE MADE WITH PVC RIGID ADAPTORS. TRANSITIONS FROM SDR 35 PVC TO EITHER EXISTING CLAY OR CONCRETE PIPES SHALL BE MADE WITH FERNCO 1000 SERIES FLEXIBLE COUPLING WITH STAINLESS STEEL SHEAR RING OR APPROVED EQUAL.

HOUSE LATERAL REPLACEMENT DETAIL
Not to Scale

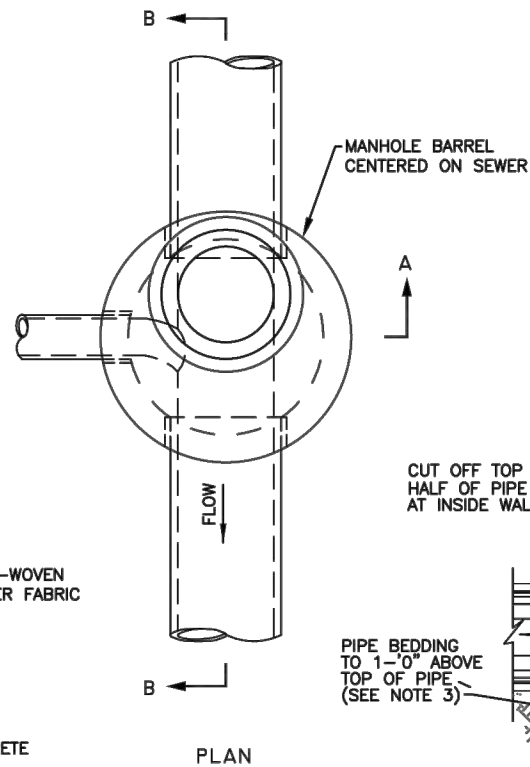
No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS LATERAL CONNECTIONS (UTILITY CONFLICT REPLACEMENT)	SHEET WW28

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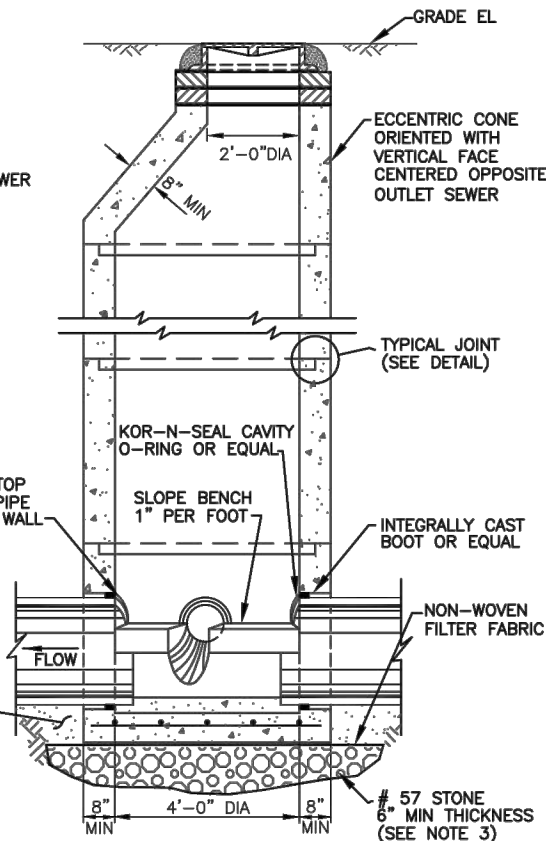


SECTION A-A

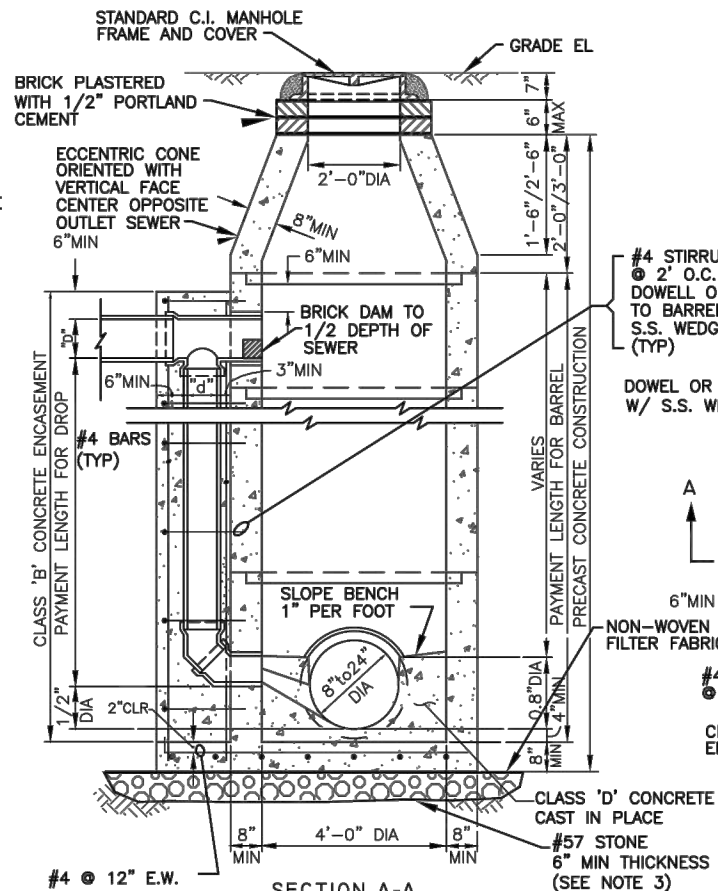
STANDARD MANHOLE - DEEP TYPE
FOR SEWERS 24" OR LESS IN DIAMETER
N.T.S



PLAN

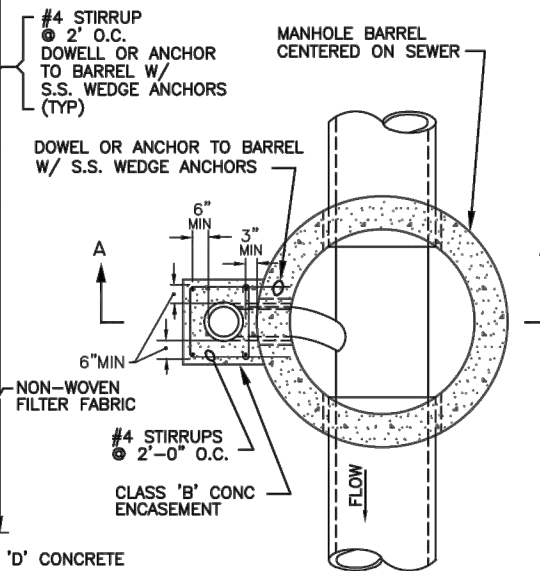


SECTION B-B

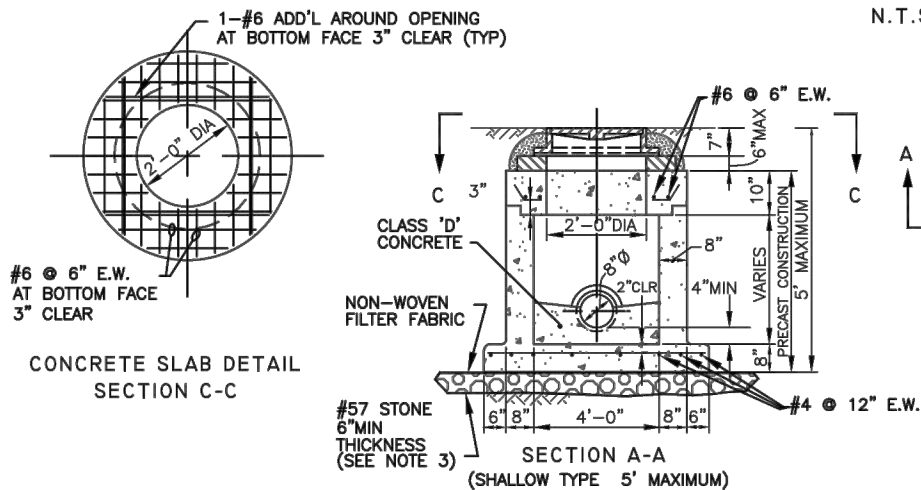


SECTION A-A

STANDARD DROP MANHOLE
FOR SEWERS 24" OR LESS IN DIAMETER
N.T.S

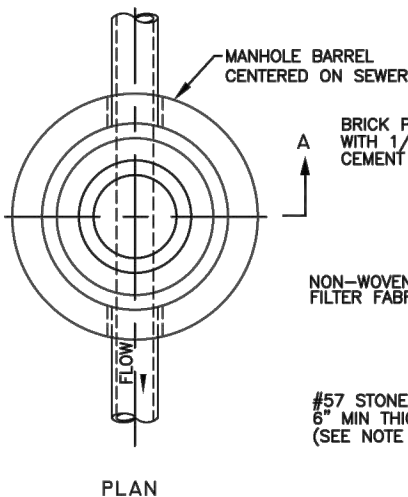


SECTIONAL PLAN

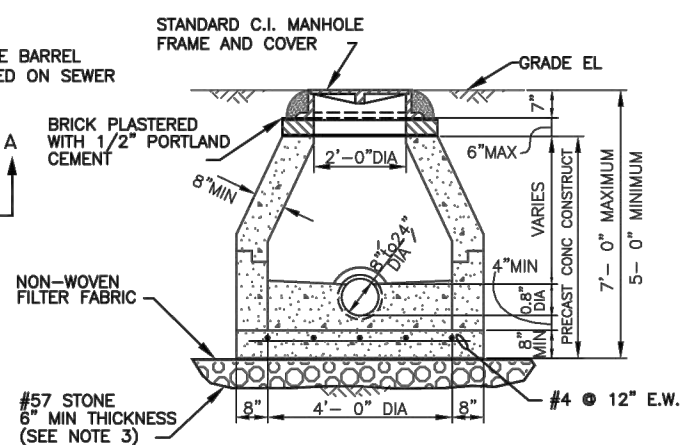


CONCRETE SLAB DETAIL
SECTION C-C

SECTION A-A
(SHALLOW TYPE 5' MAXIMUM)
STANDARD MANHOLE - SHALLOW TYPE
FOR SEWERS 24" OR LESS IN DIAMETER
N.T.S



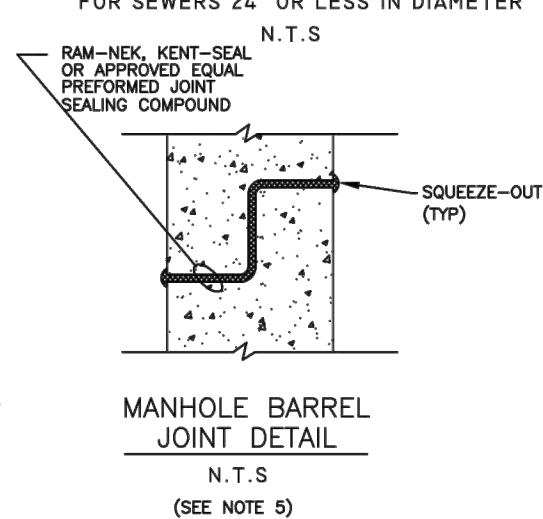
PLAN



SECTION A-A
5'-0" TO 7'-0" DEEP
(SEE NOTE 4)

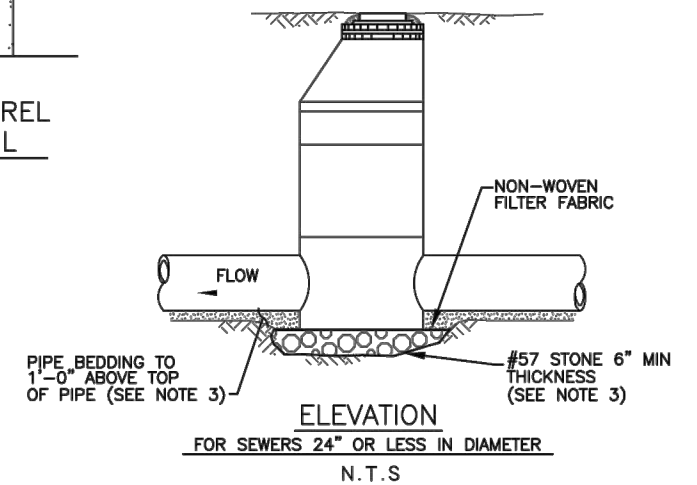
NOTES

1. REINFORCING STEEL FOR ALL MANHOLES SHALL CONFORM TO ASTM-C478 AND PLACED AS DESCRIBED IN THE SPECIFICATIONS.
2. ALL PIPE STUBS FROM MANHOLES FOR FUTURE CONNECTIONS OR OTHER CONTRACT DIVISIONS SHALL BE PROVIDED WITH WATER TIGHT PLUGS PLACED FROM WITHIN THE MANHOLE.
3. SEE SPECIFICATIONS FOR MATERIALS REQUIREMENTS AND PLACEMENTS AND COMPACTION OF PIPE AND STRUCTURE BEDDING.
4. STANDARD SHALLOW-TYPE MANHOLES WITH DEPTHS BETWEEN A MAXIMUM OF 7'-0" AND A MINIMUM OF 5'-0" MUST HAVE A CONCRETE CONE FOR THE TOP SECTION.
5. ALL MANHOLE JOINTS MUST BE SEALED WITH AN ACCEPTABLE JOINT SEALING COMPOUND REGARDLESS OF WHETHER AN O-RING GASKET IN A PREFORMED GROOVE IS USED.
6. FILTER FABRIC SHALL BE NON-WOVEN FABRIC PER D.O.T. SPECIFICATION SECTIONS 514 AND 985 AND SHALL BE WRAPPED ENTIRELY AROUND THE #57 STONE.



MANHOLE BARREL
JOINT DETAIL
N.T.S
(SEE NOTE 5)

SCHEDULE FOR DROP MANHOLE	
INLET PIPE DIAMETER "D"	DROP PIPE DIAMETER "d"
8"	8"
10"	8"
12"	10"
15"	12"
18"	15"
21"	18"
24"	18"



ELEVATION
FOR SEWERS 24" OR LESS IN DIAMETER
N.T.S

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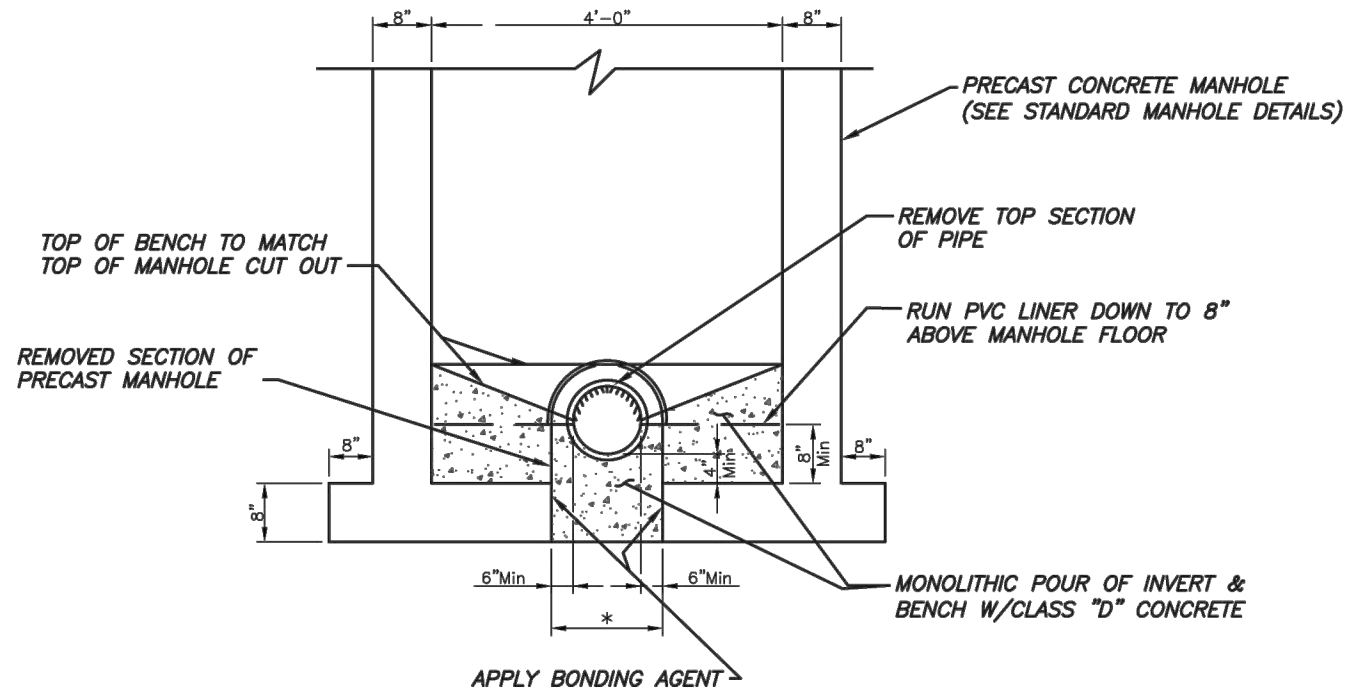
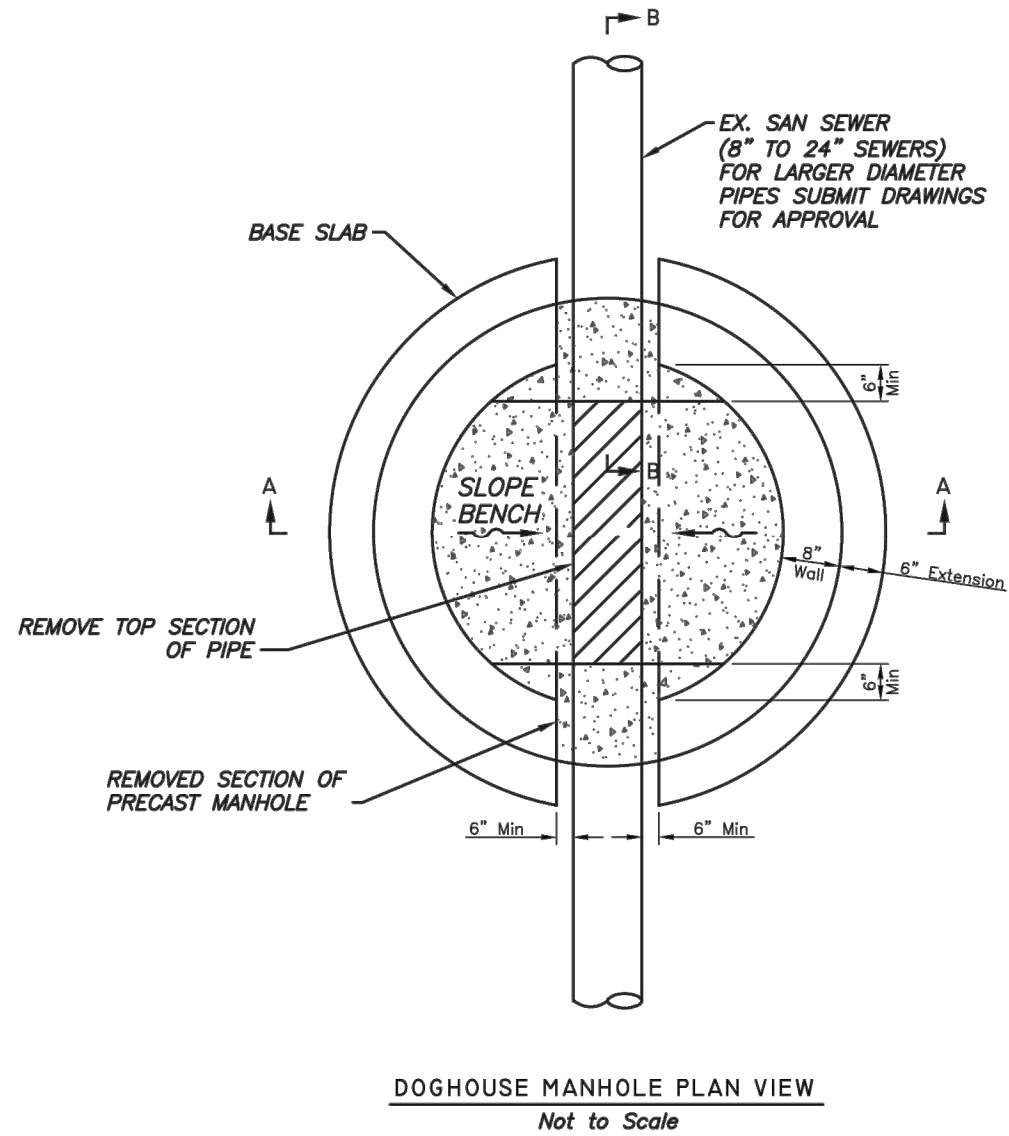
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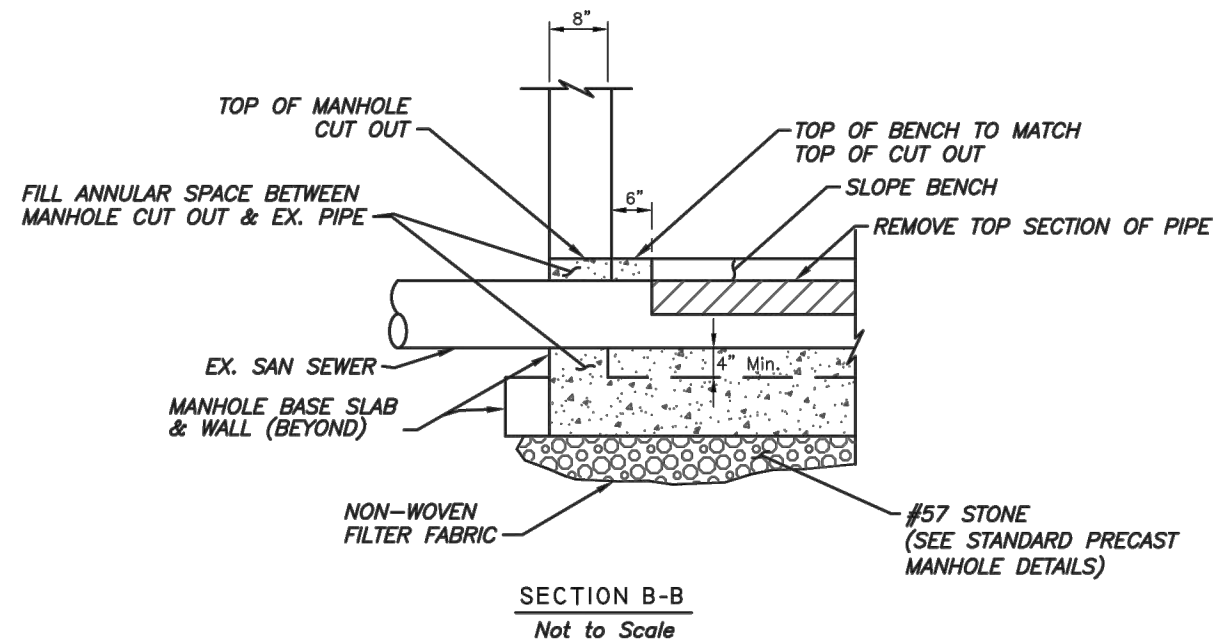
CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
STANDARD MANHOLE 8" TO 24"

SHEET
WW29



* TYPICAL WIDTH OF OPENING IS 24" FOR AN EX. 8" PIPE



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CITY of TAMPA
 Department of Transportation and
 Stormwater Services
 Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
 STORMWATER IMPROVEMENTS
 DOGHOUSE MANHOLE

SHEET
WW30

WATER CONSTRUCTION NOTES:

SW

1. CONTRACTOR SHALL CONTACT CITY OF TAMPA WATER DEPARTMENT CONSTRUCTION ENGINEER A MIN. OF 10 WORKING DAYS PRIOR TO START OF CONSTRUCTION TO SCHEDULE A PRE-CONSTRUCTION MEETING FOR REVIEW OF INSTALLATION METHODS AND COORDINATION REQUIRED WITH THE CITY OF TAMPA WATER DEPARTMENT.
2. ALL WORKMANSHIP AND MATERIALS USED IN THE CONSTRUCTION OF WATER PUBLIC FACILITIES FOR THIS PROJECT SHALL CONFORM TO WATER DEPARTMENT SPECIFICATIONS AS PROVIDED IN CONTRACT 18-C-00009 BID DOCUMENTS, ANY ASPECT OF SAID CONSTRUCTION REQUIRED BUT NOT ADDRESSED IN THE BID DOCUMENTS SHALL BE IN ACCORDANCE WITH CURRENT WATER DEPARTMENT SPECIFICATIONS.
3. THE LOCATIONS AND SIZE OF THE UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. HOWEVER, THERE IS NO GUARANTEE THAT ALL EXISTING UTILITIES HAVE BEEN FOUND OR SHOWN. THE CONTRACTOR IS FOREWARNED TO ASCERTAIN AND DETERMINE PRECISE LOCATIONS PRIOR TO EXCAVATION AND ALSO TO FAMILIARIZE HIM/HER SELF WITH ALL VOLTAGES CARRIED IN OVERHEAD OR UNDERGROUND UTILITY SERVICES. NO CLAIM FOR EXTRA COST SHALL BE MADE AS A RESULT OF THE AFOREMENTIONED APPROXIMATIONS.
4. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES AT LEAST 48 HOURS BEFORE BEGINNING CONSTRUCTION. CALL "SUNSHINE ONE CALL" AT 1-800-432-4770.
5. ALL PIPE LENGTHS ARE PLUS OR MINUS AND MAY BE ADJUSTED IN THE FIELD AS REQUIRED. PIPE MEASUREMENTS ARE TO CENTER OF STRUCTURES OR FITTINGS.
6. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION SAFETY. SPECIAL PRECAUTIONS MAY BE REQUIRED IN THE VICINITY OF POWER LINES AND OTHER UTILITIES.
7. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. THIS EXCLUSION DOES NOT ALLEVIATE THE CONTRACTOR FROM PROVIDING A CONTINUOUS SAFE WORKSPACE.
8. ALL WORK PERFORMED SHALL COMPLY WITH THE REGULATIONS, PERMIT REQUIREMENTS, AND ORDINANCES OF THE VARIOUS GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE WORK.
9. WATER MAIN CONSTRUCTION SHALL INCLUDE EXCAVATION AS REQUIRED, FACILITIES INSTALLATION, AND BACKFILLING ONLY - ROADWAY AND SURFACE RESTORATION SHALL BE PER THE PROJECT ROADWAY PLANS AND PAID THROUGH THE CONTRACT ROADWAY PAY ITEMS.
10. THE CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED BY CONSTRUCTION TO THEIR ORIGINAL OR BETTER CONDITION.
11. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH IN THE FIELD RIGHT-OF-WAY LINES, BASE LINES, BENCH MARKS (ELEV.), CENTER LINES, AND STATIONING AS REQUIRED TO PERFORM HIS WORK.
12. THE CONTRACTOR SHALL PROVIDE SUPPORT FOR UTILITY POLES WHERE CONSTRUCTION MAY CAUSE THE POLE TO LOSE ITS SELF-SUPPORTING ABILITY.
13. THE INTENT OF THIS PROJECT'S WATER PLANS AND TECHNICAL PROVISIONS IS FOR ALL WATER MAINS TO BE INSTALLED AS A CONTINUOUS PROJECT. CONNECTIONS TO EXISTING WATER MAINS SHALL BE DONE IN A TIMELY MANNER. AT NO TIME SHALL THE FLOW OF WATER RUNNING THE LENGTH OF THE PROJECT BE STOPPED EXCEPT TO TIE-IN WATER MAINS THAT HAVE BEEN TESTED AND CLEARED FOR POTABLE WATER USE.
14. CONNECTIONS TO EXISTING SYSTEMS: THE CITY WATER DEPARTMENT REQUIRES THAT ITS CUSTOMERS BE KEPT IN SERVICE AT ALL TIMES. THE CONTRACTOR MUST PROVIDE TEMPORARY SERVICE TO CUSTOMERS WHOSE SERVICE WILL BE AFFECTED BY A SHUTDOWN.
15. WHEN A SHUTDOWN IS AUTHORIZED BY THE CITY WATER DEPARTMENT AND CUSTOMERS WILL HAVE THEIR WATER SHUT OFF, THE CONTRACTOR MUST HAVE PRE-ASSEMBLED ALL NEW PIPING EXCEPT AT THE POINT OF TIE-IN, INCLUDING SERVICE LINES BEING TRANSFERRED TO THE NEW MAIN. THE ENTIRE PRE-ASSEMBLY SHALL BE SUCCESSFULLY PRESSURE TESTED AND BACTERIOLOGICAL TESTED PRIOR TO THE SHUTDOWN FOR CONNECTION(S). THE CONTRACTOR SHALL HAVE SUFFICIENT CREWS ON SITE TO ACCOMPLISH THE SHUTDOWN IN LESS THAN FOUR HOURS.
16. CONTRACTOR SHALL INSTALL LINESOPS IF AND AS REQUIRED TO KEEP CUSTOMERS IN SERVICE DURING SHUTDOWNS, WITH THE CONCURRENCE OF THE CITY WATER DEPARTMENT. SEVERAL REQUIRED LINESOPS HAVE BEEN SHOWN IN THE PLANS, BASED ON KNOWN EXISTING CONDITIONS - HOWEVER, OTHERS MAY BE REQUIRED BASED ON THE CONTRACTOR'S AGREED SEQUENCING OF CONSTRUCTION.
17. THE CONTRACTOR'S SCHEDULE PROPOSED FOR WATER MAIN RELOCATION CONSTRUCTION AND REMOVALS SHALL BE SUBMITTED TO, AND MUST BE APPROVED BY, THE CITY WATER DEPARTMENT. NOTE THAT THE SCHEDULE PROPOSED IN THE PROJECT ROADWAY PLANS IS INTENDED FOR ROADWAY & DRAINAGE CONSTRUCTION ONLY - WATER MAINS CANNOT BE CONSTRUCTED IN A BLOCK-BY-BLOCK MANNER. IT IS RECOMMENDED THAT WATER MAIN RELOCATIONS BE ACCOMPLISHED PRIOR TO THE DRAINAGE AND ROADWAY CONSTRUCTION.

18. ALL ELEVATIONS ARE BASED ON NAVD 1988 DATUM UNLESS OTHERWISE NOTED. STATIONING OF THE WATER MAIN AND FITTINGS AS SHOWN HEREON REFERS TO CENTERLINE OF ROADWAY UNLESS OTHERWISE INDICATED.
19. ALL WATER MAINS SHALL HAVE A MINIMUM COVER OF 36 INCHES UNLESS OTHERWISE NOTED.
20. ALL WATER MAINS SHALL BE CONSTRUCTED IN A MANNER SUCH AS TO MAINTAIN A MINIMUM OF THREE (3) FEET HORIZONTAL SEPARATION FROM OTHER UTILITIES, EXCEPT STORM, SANITARY AND GAS.
21. ALL WATER PIPE MATERIAL AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE CITY OF TAMPA SPECIFICATIONS. ALL DUCTILE IRON PIPE (DIP) SHALL BE MANUFACTURED IN ACCORDANCE WITH AWWA STANDARD C-151/A21.51. PIPE SHALL BE LINED WITH A STANDARD THICKNESS CEMENT-MORTAR LINING AND SEAL COATED IN ACCORDANCE WITH THE LATEST EDITION OF AWWA C104/A21.4 AND NSF 61. PIPE SHALL BE PRESSURE CLASS 350.
22. ALL DUCTILE IRON PIPE SHALL BE PUSH-ON JOINT AND SHALL CONFORM TO AWWA STANDARD C-111/A21.11.
23. ALL FITTINGS SHALL BE DUCTILE IRON AND MECHANICAL JOINT. FITTINGS SHALL BE CONNECTED TO PIPES WITH WEDGE ACTION RESTRAINT SUCH AS EBBA MEGA-LUG OR APPROVED EQUAL.
24. RESTRAINT OF DIP PIPE AND MECHANICAL JOINT PIPE FITTINGS SHALL BE WITH MECHANICAL RESTRAINTS IN ACCORDANCE WITH THE APPROPRIATE CITY OF TAMPA RESTRAINT TABLE AND AS INDICATED ON THE PLANS. CONCRETE BLOCKS SHALL NOT BE USED FOR THRUST RESTRAINT. MECHANICAL RESTRAINT OF PUSH-ON DIP, OTHER THAN FOR FITTINGS, SHALL BE WITH APPROVED PUSH-ON JOINT GASKET-TYPE (GRIPPER) RESTRAINTS SUCH AS AMERICAN "FAST-GRIP GASKET" OR US PIPE "FIELD-LOK GASKET"
25. BENDS SHALL BE INSTALLED ON DIP WATER MAIN, AS NECESSARY, TO MAINTAIN PROPER ALIGNMENT. DIP JOINT DEFLECTION SHALL BE IN ACCORDANCE WITH AWWA C-600, LATEST EDITION, EXCEPT DEFLECTION ALLOWED SHALL BE 80% OR LESS THAN THE DEFLECTION VALUES GIVEN IN THE AWWA DEFLECTION TABLES.
26. FIRE HYDRANT AND GATE VALVE ASSEMBLIES SHALL CONSIST OF ALL PIPE, VALVES, TEES, FITTINGS AND ANY AND ALL OTHER APPURTENANCES COMPRISING A COMPLETE, WORKING UNIT AS REQUIRED BY THE CITY OF TAMPA SPECIFICATIONS. FIRE HYDRANTS SHALL BE 5-1/4" DNS, WITH BOTTOM FLANGE ELEVATION LOCATED 3"-6" ABOVE FINISHED GRADE. (SEE COT STANDARD DETAILS 4.01 AND 4.02).
27. ALL FIRE HYDRANTS SHALL BE CONSTRUCTED IN A MANNER THAT MAINTAINS AT LEAST SIX (6) FEET OF CLEARANCE BETWEEN ROADWAY BACK OF CURB (OR EDGE OF PAVEMENT) AND THE HYDRANT.
28. DIP WATER MAIN AND APPURTENANCES SHALL BE INSTALLED IN A LOOSE POLYETHYLENE ENCASEMENT NOT LESS THAN 8 MILS THICK IN ACCORDANCE WITH AMERICAN NATIONAL STANDARDS INSTITUTE SPECIFICATION A21.5 AND CITY OF TAMPA STANDARD DETAIL 2.05.

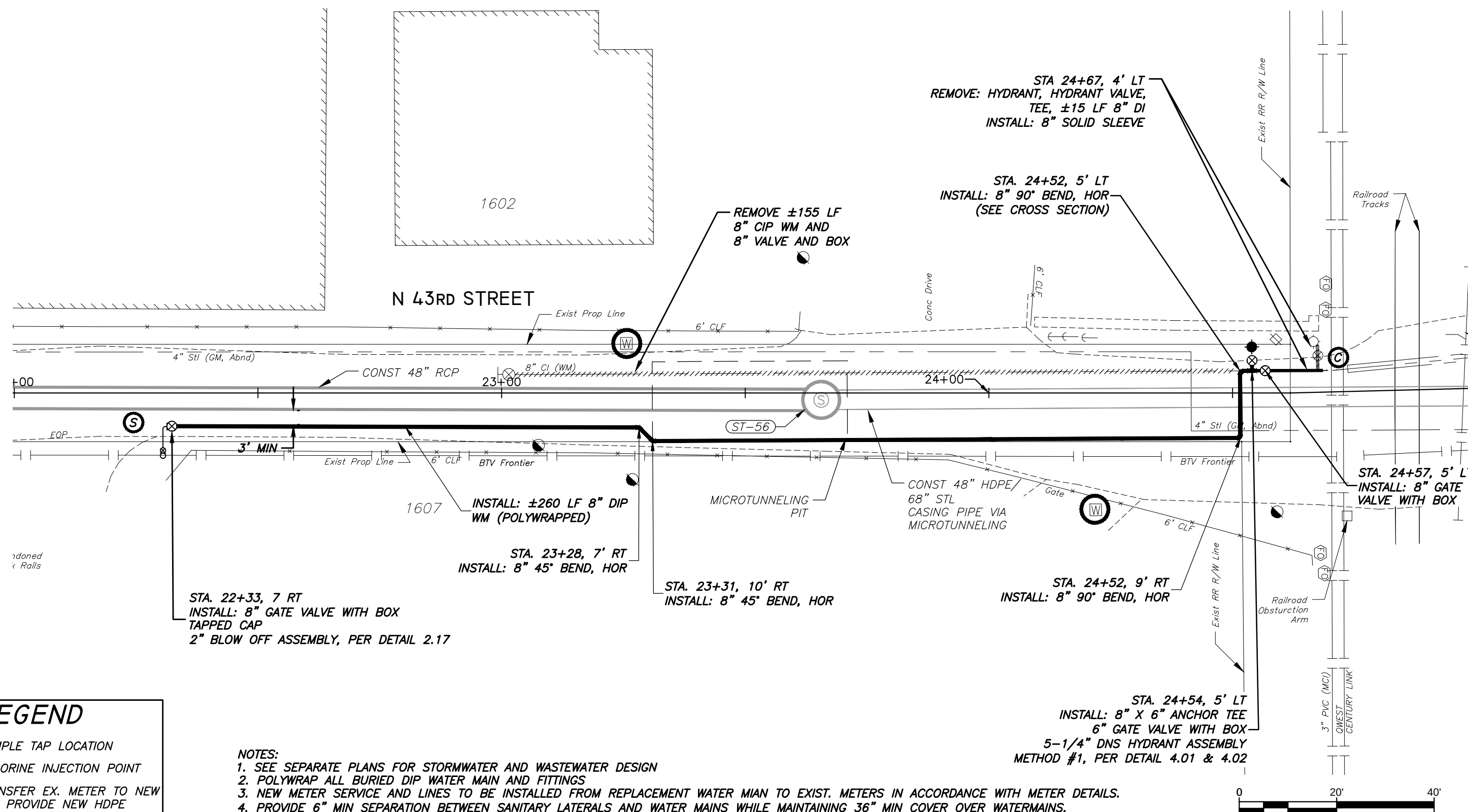
WATER SYSTEM TESTING AND INSPECTION REQUIREMENT NOTES

1. ALL COMPONENTS OF THE WATER SYSTEM, INCLUDING FITTINGS, HYDRANTS, CONNECTIONS, AND VALVES SHALL REMAIN UNCOVERED UNTIL PROPERLY PRESSURE TESTED AND ACCEPTED BY THE OWNER'S ENGINEER. PRESSURE TESTS TO BE IN ACCORDANCE WITH WATER DEPARTMENT SPECIFICATIONS. CONTRACTOR TO NOTIFY OWNER'S ENGINEER AND CITY INSPECTORS 3 WORKING DAYS IN ADVANCE OF PERFORMING TESTS.
2. CONTRACTOR SHALL PRESSURE TEST WATER MAINS AT 150 PSI FOR A PERIOD OF 2 HOURS IN ACCORDANCE WITH AWWA C600-87 STANDARDS. CONTRACTOR SHALL NOTIFY ENGINEER AND THE CITY OF TAMPA AT LEAST 72 HOURS PRIOR TO START OF ANY TEST. THE CONTRACTOR SHALL MAKE ALL NECESSARY APPLICATIONS AND ARRANGEMENTS.
3. CONTRACTOR TO PERFORM CHLORINATION AND COORDINATE BACTERIOLOGICAL SAMPLING WITH THE CITY OF TAMPA CONSTRUCTION INSPECTION SECTION IN ACCORDANCE WITH TAMPA WATER DEPARTMENT TECHNICAL MANUAL AND AWWA SPECIFICATION C651. CONTRACTOR TO OBTAIN SAMPLE CLEARANCE ON DOMESTIC WATER SYSTEM.
4. ALL TEST POINTS AND CHLORINATION POINTS PIPING SHALL BE COMPLETELY REMOVED PRIOR TO FINAL ACCEPTANCE. THE CORPORATION STOP SHALL BE REMOVED AND THE MAIN PLUGGED AFTER OPERATION (SEE CITY OF TAMPA STANDARD DETAIL 2.17).

No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS WATER CONSTRUCTION AND TESTING NOTES	SHEET W-1

M:\PROJECTS\TAMPA\TAMPA15001-43RD_STREET\DESIGN_PUBLISH\BID SET\T800 WATER NOTES.DWG
PLOTTED: 11/19/2018 5:04:12 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB PROJECT STATUS: ---

SW



LEGEND

	SAMPLE TAP LOCATION
	CHLORINE INJECTION POINT
	TRANSFER EX. METER TO NEW WM, PROVIDE NEW HDPE METER BOX AND COVER

- # LEGEND
- | | |
|---|--|
|  | SAMPLE TAP LOCATION |
|  | CHLORINE INJECTION POINT |
|  | TRANSFER EX. METER TO NEW
WM, PROVIDE NEW HDPE
METER BOX AND COVER |

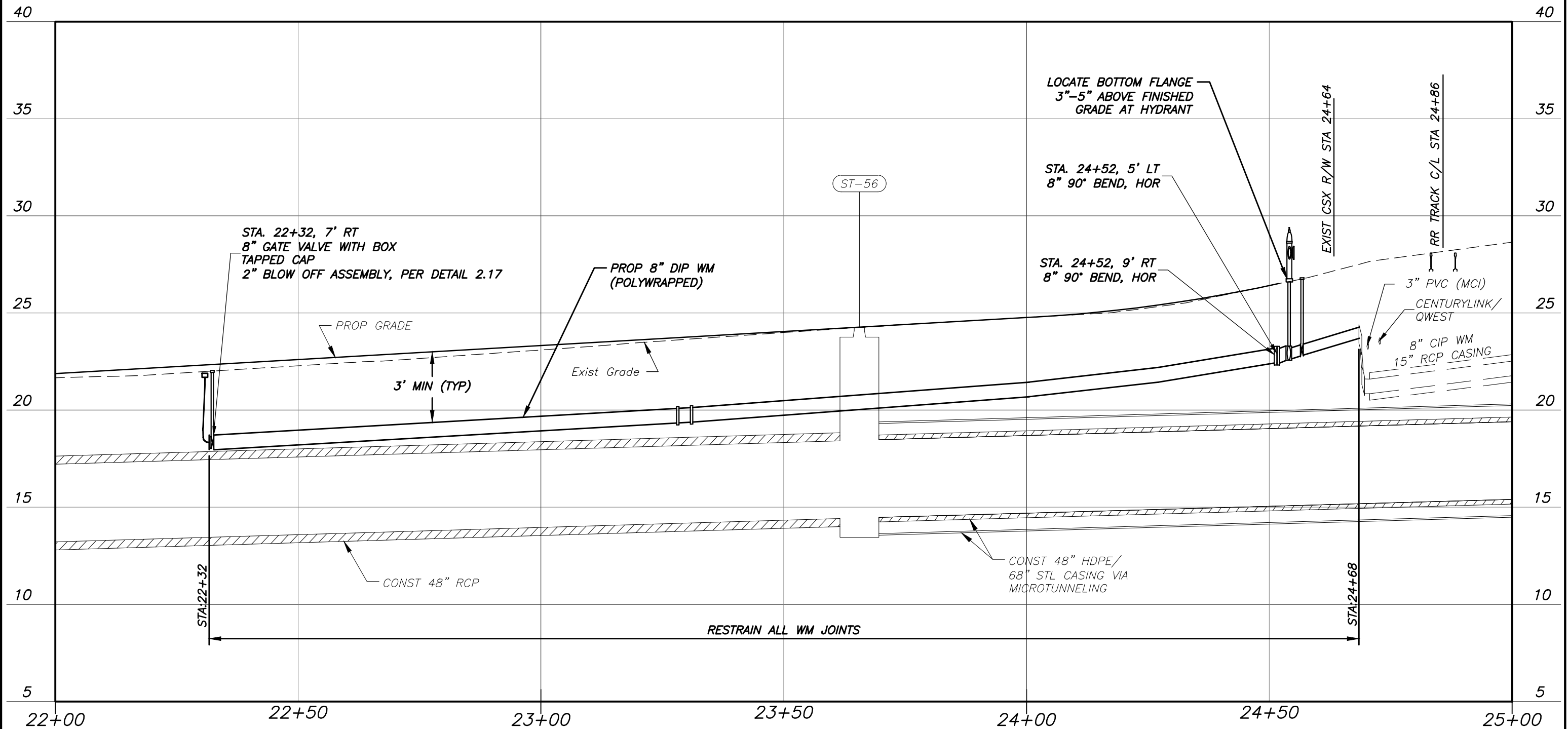
NOTES:

1. SEE SEPARATE PLANS FOR STORMWATER AND WASTEWATER DESIGN
2. POLYWRAP ALL BURIED DIP WATER MAIN AND FITTINGS
3. NEW METER SERVICE AND LINES TO BE INSTALLED FROM REPLACEMENT WATER MAIN TO EXIST. METERS IN ACCORDANCE WITH METER DETAILS.
4. PROVIDE 6" MIN SEPARATION BETWEEN SANITARY LATERALS AND WATER MAINS WHILE MAINTAINING 36" MIN COVER OVER WATERMAINS.

- NOTES:
1. SEE SEPARATE PLANS FOR STORMWATER AND WASTEWATER DESIGN
 2. POLYWRAP ALL BURIED DIP WATER MAIN AND FITTINGS
 3. NEW METER SERVICE AND LINES TO BE INSTALLED FROM REPLACEMENT WATER MAIN TO EXIST. METERS IN ACCORDANCE WITH METER DETAILS.
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SW



VERT SCALE: 1" = 5'
HORIZ SCALE: 1" = 20'

No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
 2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

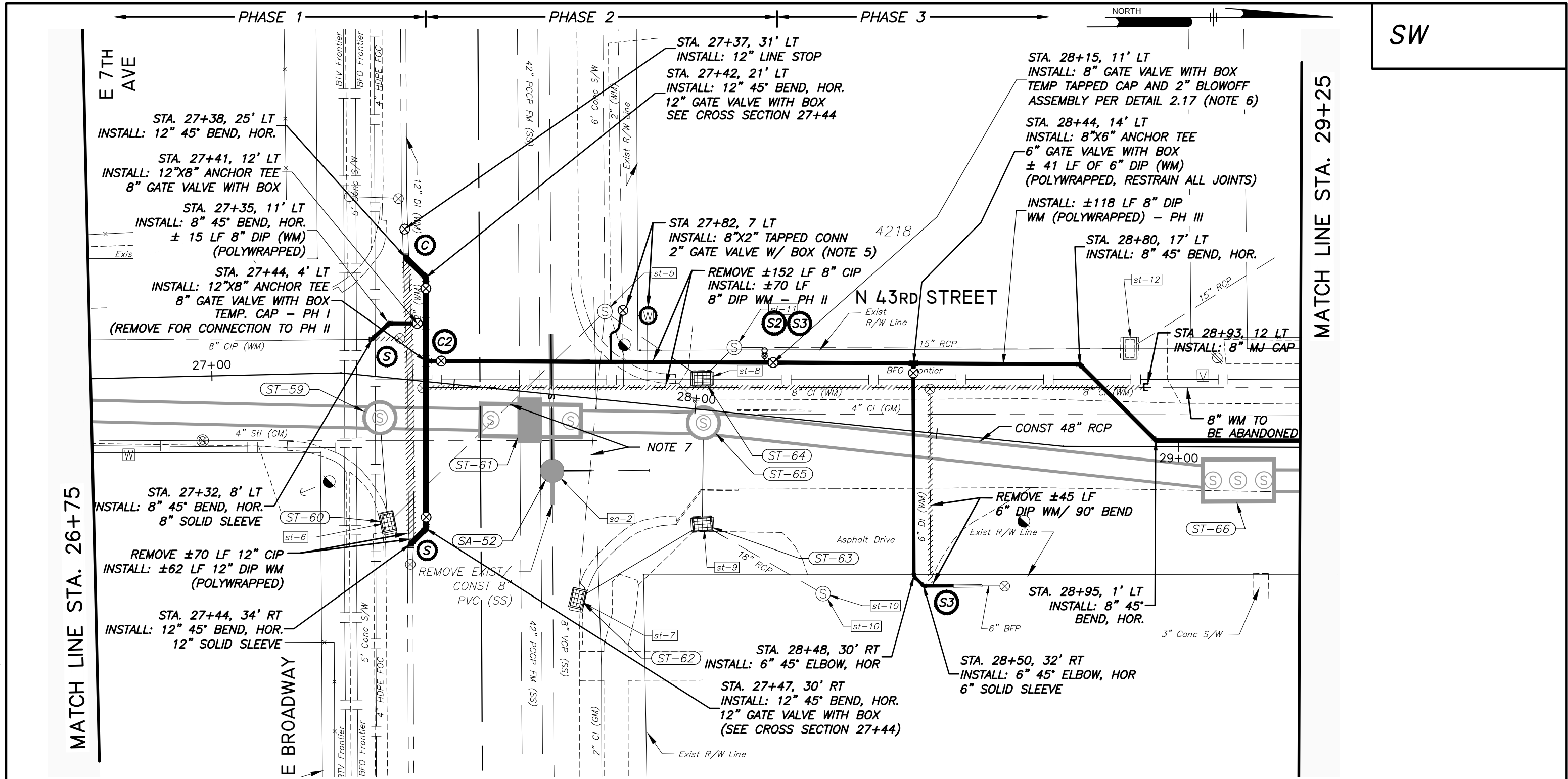
CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
WATER PROFILE STA 22+00
TO STA 25+00

SHEET
W-4

M:\PROJECTS\TAMPA\15001-43RD_STREET\DESIGN_PUBLISH\BID SET\1805 WATER PROFILES.DWG
PLOTTED: 11/19/2018 5:05:00 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---

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PLOT DATE: 11/19/2018 5:05:29 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI NCS.STB PROJECT STATUS: ---



SW

MATCH LINE STA. 29+25

LEGEND

- SAMPLE TAP LOCATION
- CHLORINE INJECTION POINT
- TRANSFER EX. METER TO NEW WM, PROVIDE NEW HDPE METER BOX AND COVER

NOTES:

- SEE SEPARATE PLANS FOR STORMWATER AND WASTEWATER DESIGN
- POLYWRAP ALL BURIED DIP WATER MAIN AND FITTINGS
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- PROVIDE 6" MIN SEPARATION BETWEEN SANITARY LATERALS AND WATER MAINS WHILE MAINTAINING 36" MIN COVER OVER WATERMAINS.
- PROVIDE TEMPORARY SERVICE TO ANY EX. METERS REQUIRED DUE TO WM CONSTRUCTION PHASING
- TEMPORARY CAP AND BLOW OFF ONLY - TO BE REMOVED FOR CONNECTION AFTER SS IN 7TH STREET IS INSTALLED
- EXIST 15" RCP (SW) TO BE REMOVED BY OTHERS



No.	DATE	REVISIONS

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E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

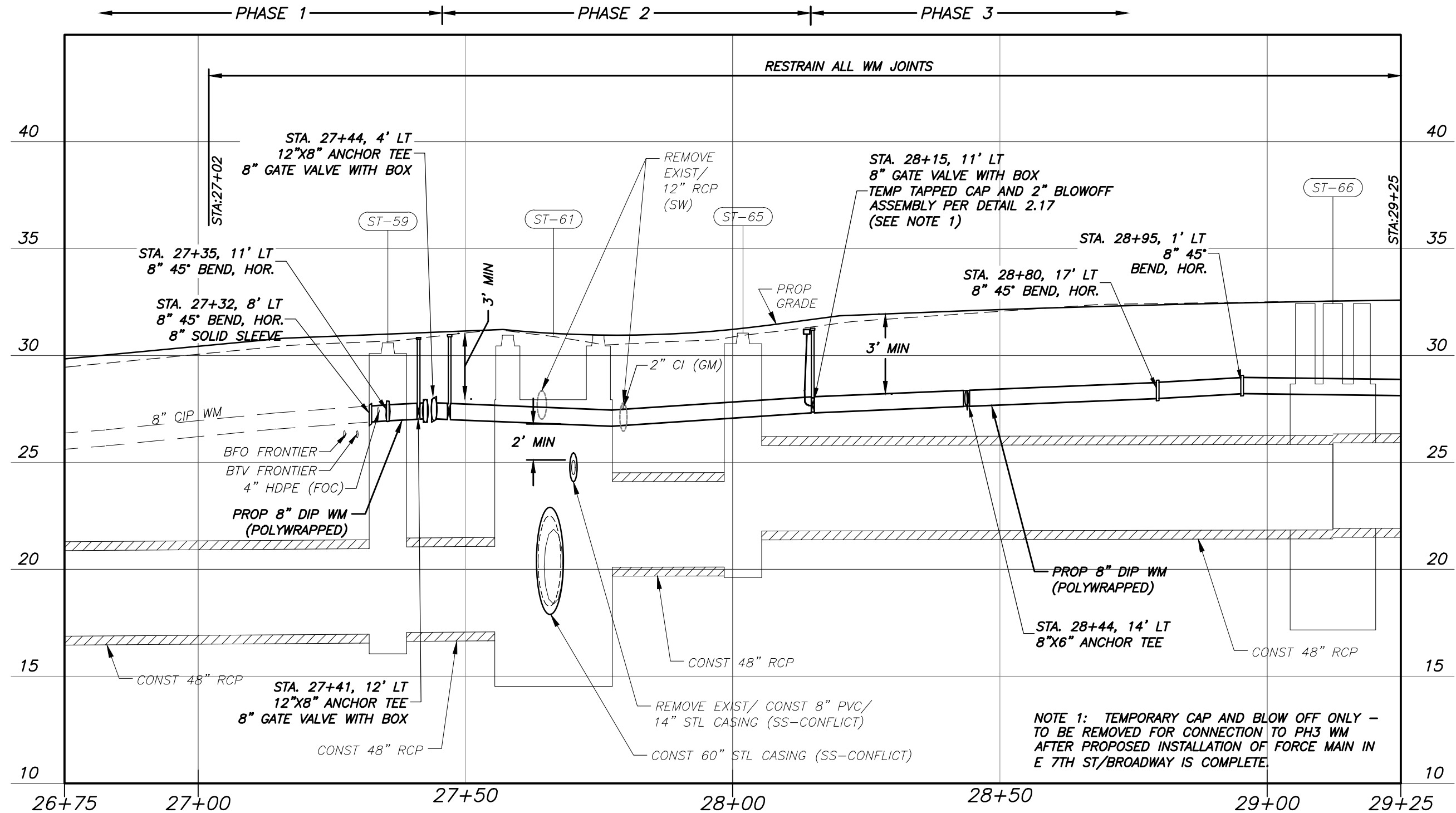
DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
WATER CONSTRUCTION PLAN
STA 26+75 TO STA 29+25

SHEET
W-5

SW



VERT SCALE: 1" = 5'
HORIZ SCALE: 1" = 20'

No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
Pennoni 2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
WATER PROFILE STA 26+25
TO STA 29+25

SHEET
W-6

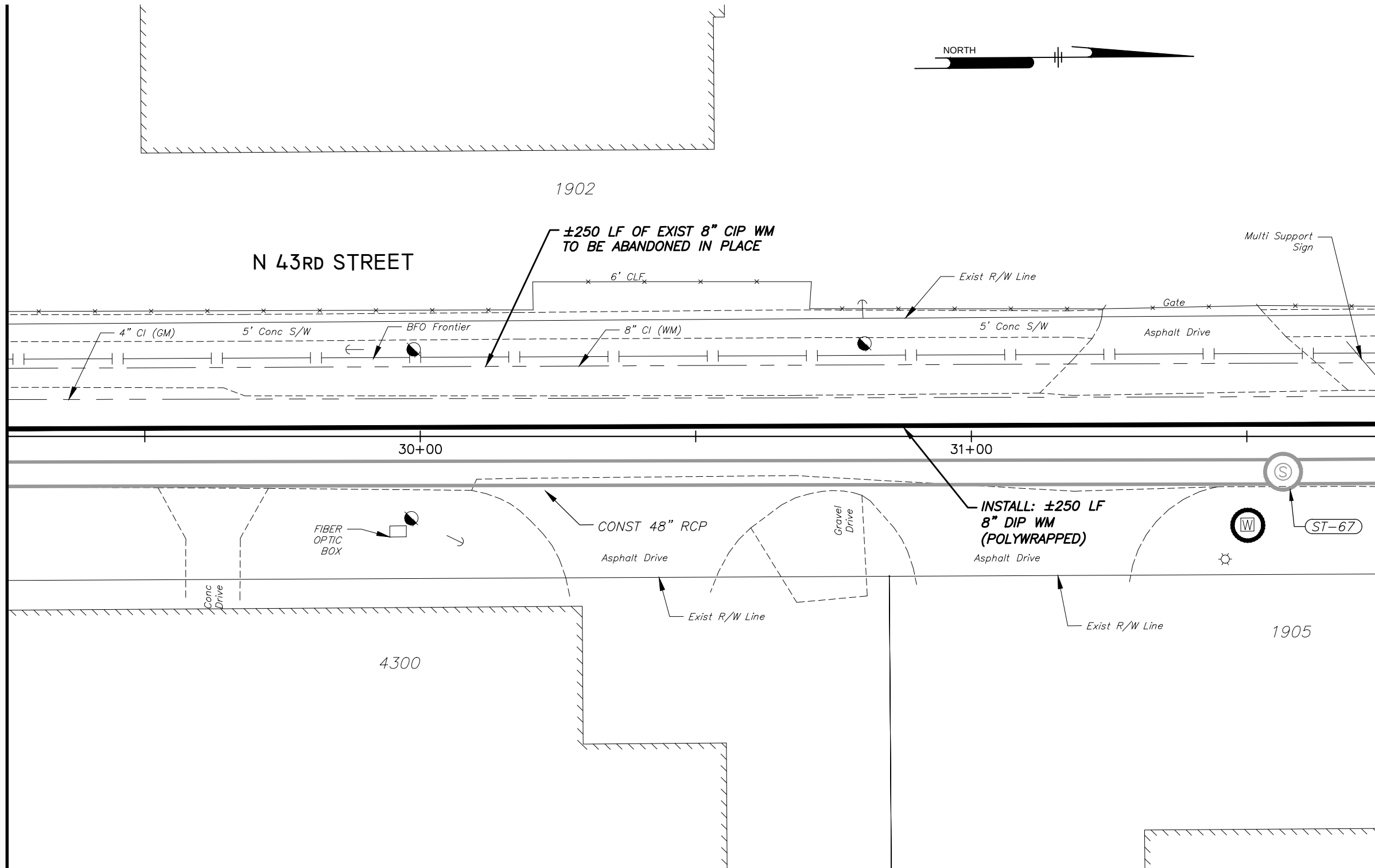
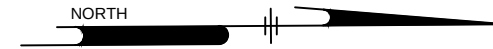
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PLOTTED: 11/19/2018 5:05:45 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB PROJECT STATUS: ---

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PLOTTED: 11/19/2018 5:06:18 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---

MATCH LINE STA. 29+25

MATCH LINE STA. 31+75

SW



LEGEND

- SAMPLE TAP LOCATION
- CHLORINE INJECTION POINT
- TRANSFER EX. METER TO NEW WM, PROVIDE NEW HDPE METER BOX AND COVER

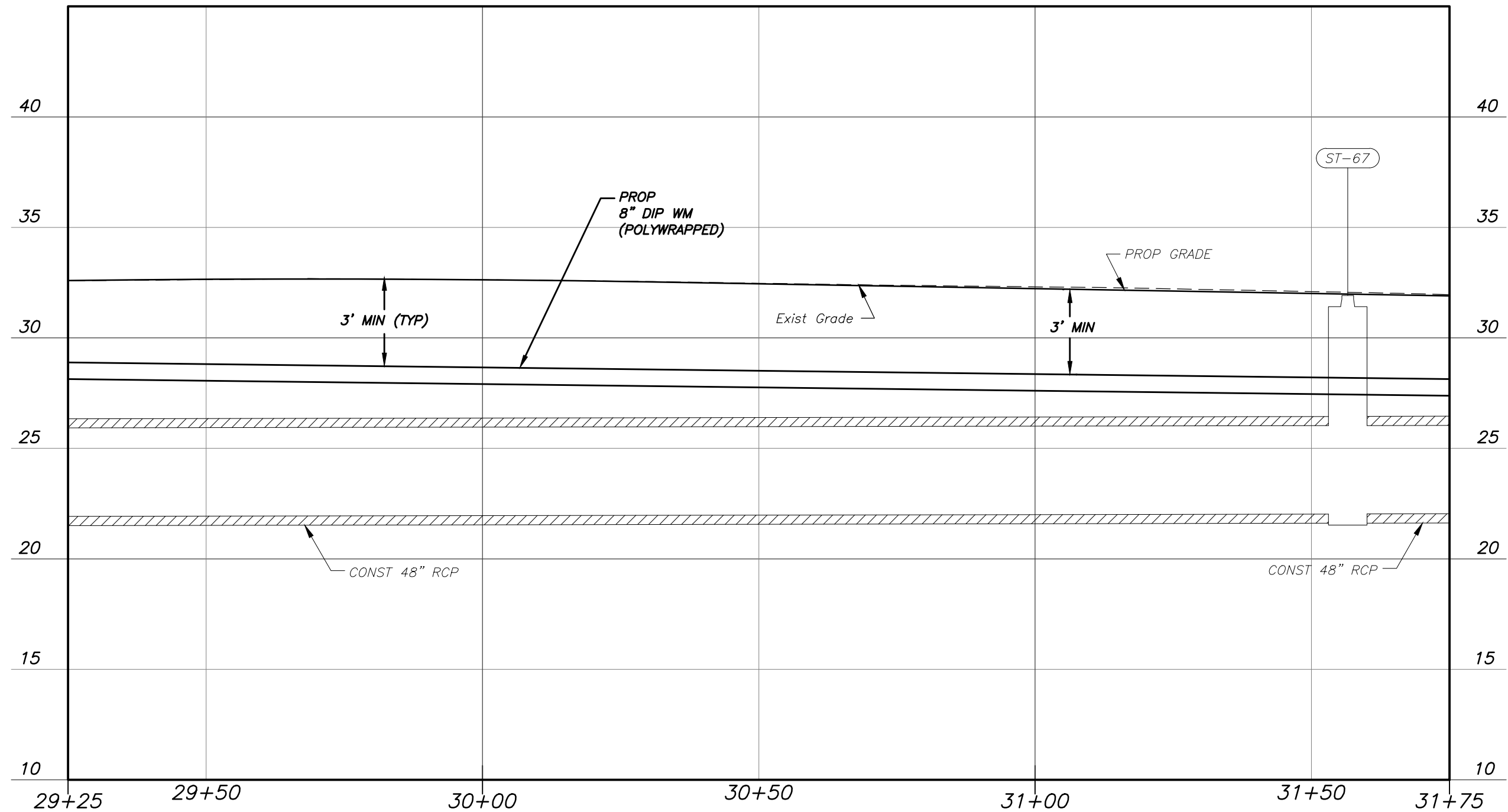
NOTES:

- SEE SEPARATE PLANS FOR STORMWATER AND WASTEWATER DESIGN
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No.	DATE	REVISIONS	PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819		DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS WATER CONSTRUCTION PLAN STA 29+25 TO STA 31+75	SHEET W-7
			E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766					

SW



VERT SCALE: 1" = 5'
HORIZ SCALE: 1" = 20'

No.	DATE	REVISIONS



PENNONI ASSOCIATES INC.
2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E.
P.E. NO. 38766

DATE

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

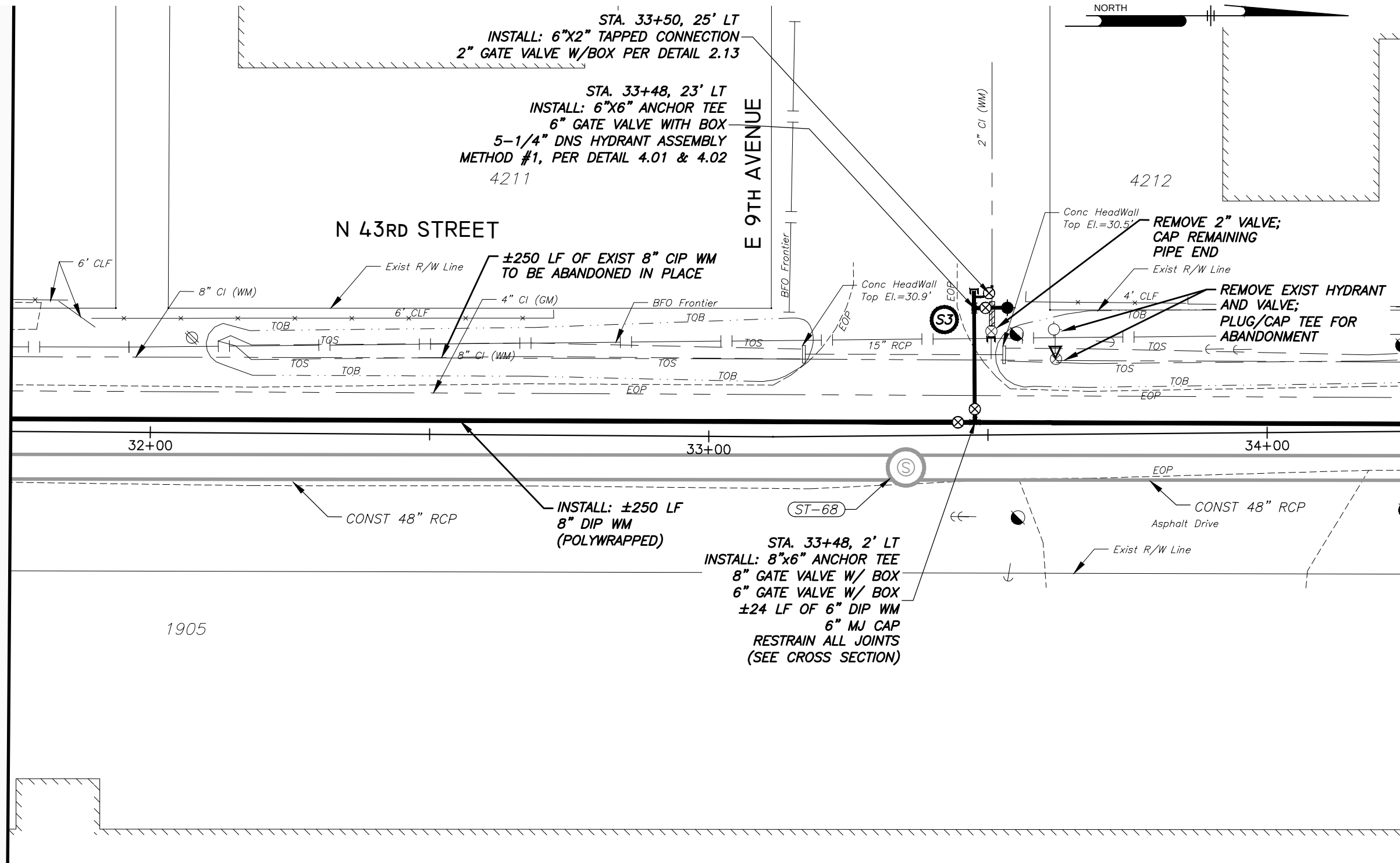
CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
WATER PROFILE STA 29+25 TO STA
31+75

SHEET
W-8

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PLOT DATE: 11/19/2018 5:07:01 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI.NCS,STB, PROJECT STATUS: ---

MATCH LINE STA. 31+75



MATCH LINE STA. 34+25

SW

LEGEND

- SAMPLE TAP LOCATION
- CHLORINE INJECTION POINT
- TRANSFER EX. METER TO NEW WM, PROVIDE NEW HDPE METER BOX AND COVER

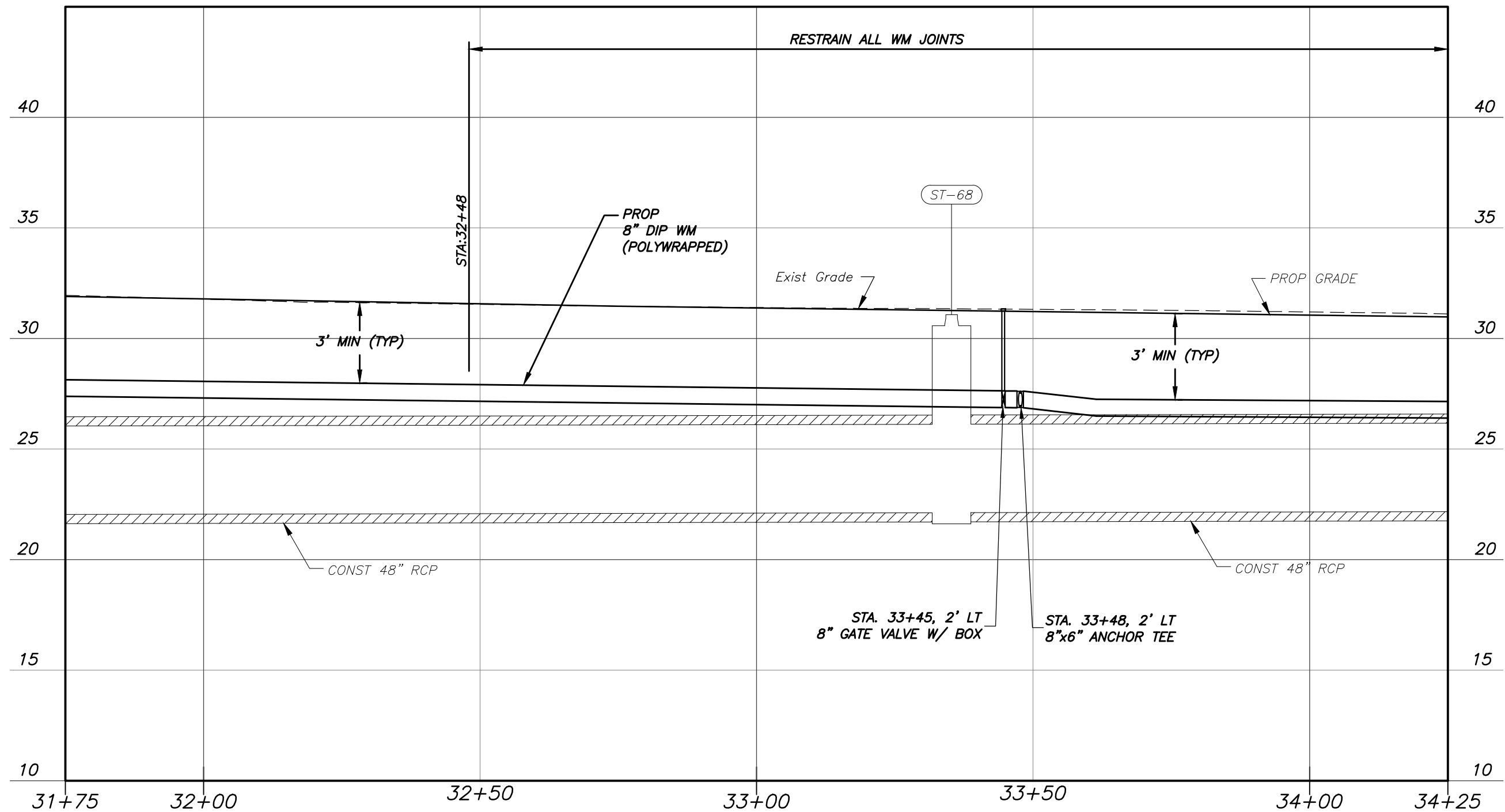
NOTES:

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			E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766					

SW



VERT SCALE: 1" = 5'
HORIZ SCALE: 1" = 20'

No.	DATE	REVISIONS	PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. P.E. NO. 38766 DATE	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS WATER PROFILE STA 31+75 TO STA 34+25	SHEET W-10

M:\PROJECTS\TAMPA\TAMPA15001-43RD STREET\DESIGN\ PUBLISH\BID SET\T805 WATER PROFILES.DWG
PLOT DATE: 11/19/2018 5:07:16 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI NCS.STB PROJECT STATUS: ---



±165 LF OF EXIST 8" CIP WM
TO BE ABANDONED IN PLACE
WITH ENDS CAPPED

N 43RD STREET

STA. 36+43, 9' LT
INSTALL: 8" DIP 45° BEND, HOR.:
8" GATE VALVE WITH BOX

STA 35+90, 7' LT, REMOVE: 8" VALVE
= STA 35+87, 7' LT, INSTALL: 8" MJ CAP

8" CI (WM)

CLOSE VALVE, REMOVE
VALVE BOX, ± 20 LF
2" CI AND ± 60 8" CI

N 43RD STREET

E 10TH
AVE

MATCH LINE STA. 34+25

INSTALL: 227± LF 8" DIP
WM (POLYWRAPPED)

2005

STA. 35+84, 1' RT
INSTALL: 8" DIP 45° BEND, HOR.-
8" GATE VALVE WITH BOX

STA. 36+25, 22' RT
INSTALL: 8" 22.5° BEND, HOR, ROLLED

STA. 36+30, 35' RT
CUT 8" CIP WM AT VALVE,
REMOVE STUB FROM VALVE,
BEGIN NEW DI WM SOUTH

INSTALL: 2 LF OF 8" DIP
8" 22.5° BEND, HOR, ROLLED
8" SOLID SLEEVE

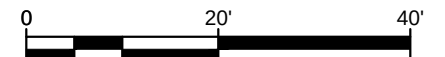
STA. 36+14, 5' LT
INSTALL: (2) 8" DIP 90° BEND, VERT.
(1 ABOVE, 1 BELOW— SEE PROFILE VIEW)

LEGEND

-  SAMPLE TAP LOCATION
 CHLORINE INJECTION POINT
 TRANSFER EX. METER TO NEW WM, PROVIDE NEW HDPE METER BOX AND COVER

NOTES:

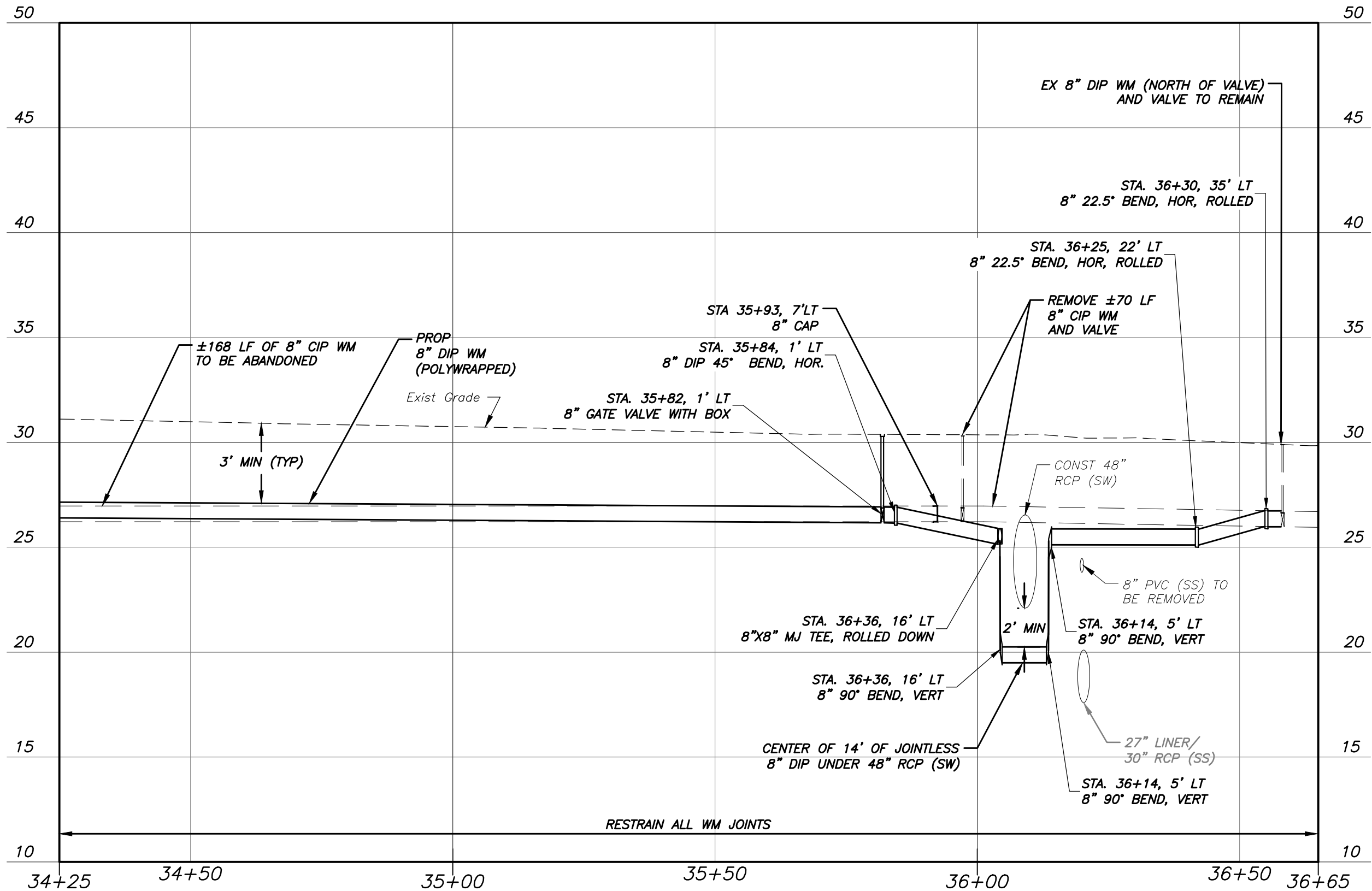
1. SEE SEPARATE PLANS FOR STORMWATER AND WASTEWATER DESIGN
2. POLYWRAP ALL BURIED DIP WATER MAIN AND FITTINGS
3. NEW METER SERVICE AND LINES TO BE INSTALLED FROM REPLACEMENT WATER MAIN TO EXIST. METERS IN ACCORDANCE WITH METER DETAILS.
4. PROVIDE 6" MIN SEPARATION BETWEEN SANITARY LATERALS AND WATER MAINS WHILE MAINTAINING 36" MIN COVER OVER WATERMAINS.



No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE _____ P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS WATER CONSTRUCTION PLAN STA 34+25 TO STA 36+75	SHEET W-11

M:\PROJECTS\T\PAINT\PA15001-43RD_STREET\DESIGN\ PublishID SET1T804 WATER PLAN.DWG
 PLOTTED: 11/19/2018 5:07:46 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB PROJECT STATUS: ---

SW



VERT SCALE: 1" = 5'
HORIZ SCALE: 1" = 20'

No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

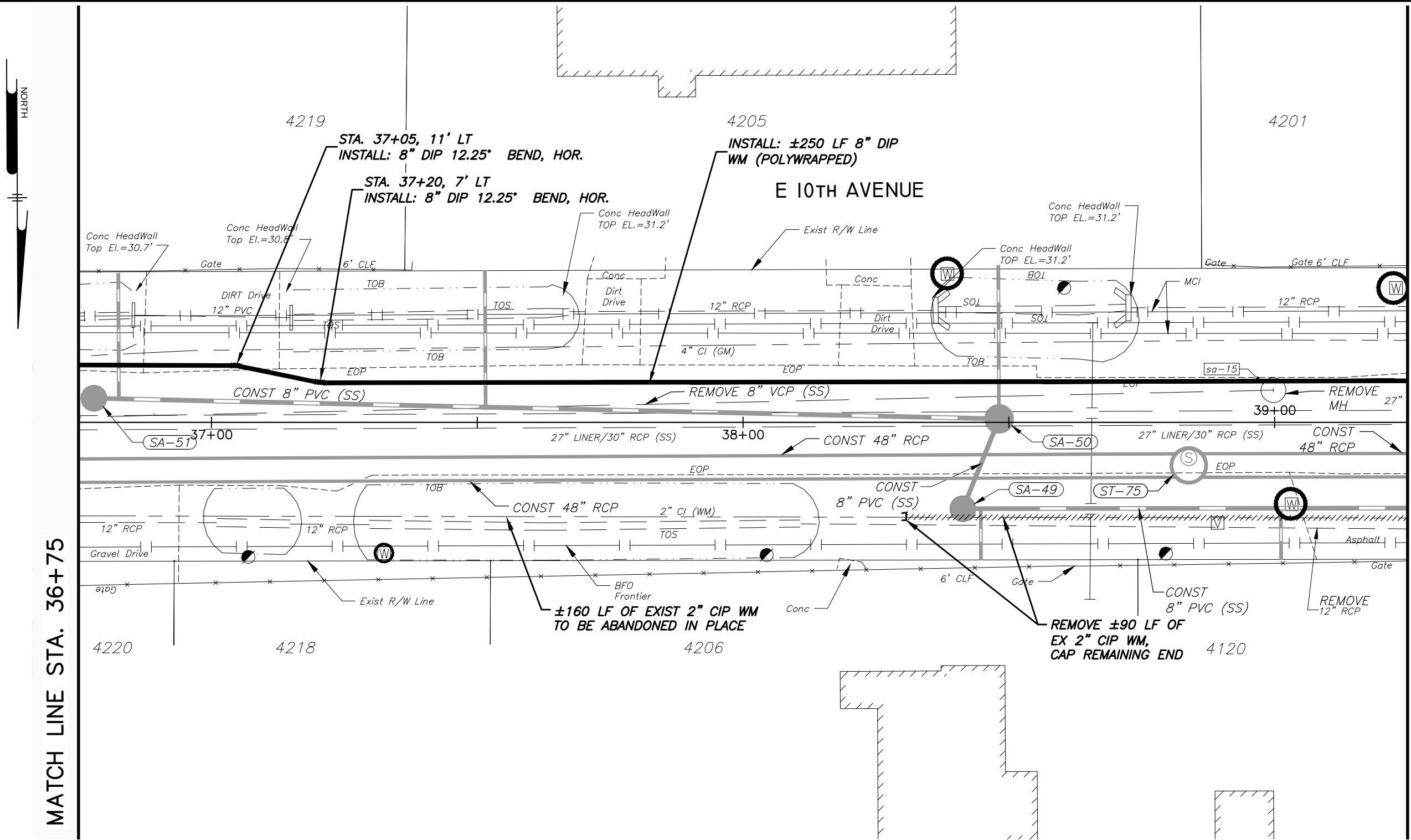
CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
WATER PROFILE STA 34+25 TO STA
36+75

SHEET
W-12

M:\PROJECTS\TAMPA\43RD_STREET\DESIGN_PUBLISH\BID SET\T805 WATER PROFILES.DWG
PLOT: 11/19/2018 5:08:01 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI NCS.STB PROJECT STATUS: ---

SW



LEGEND

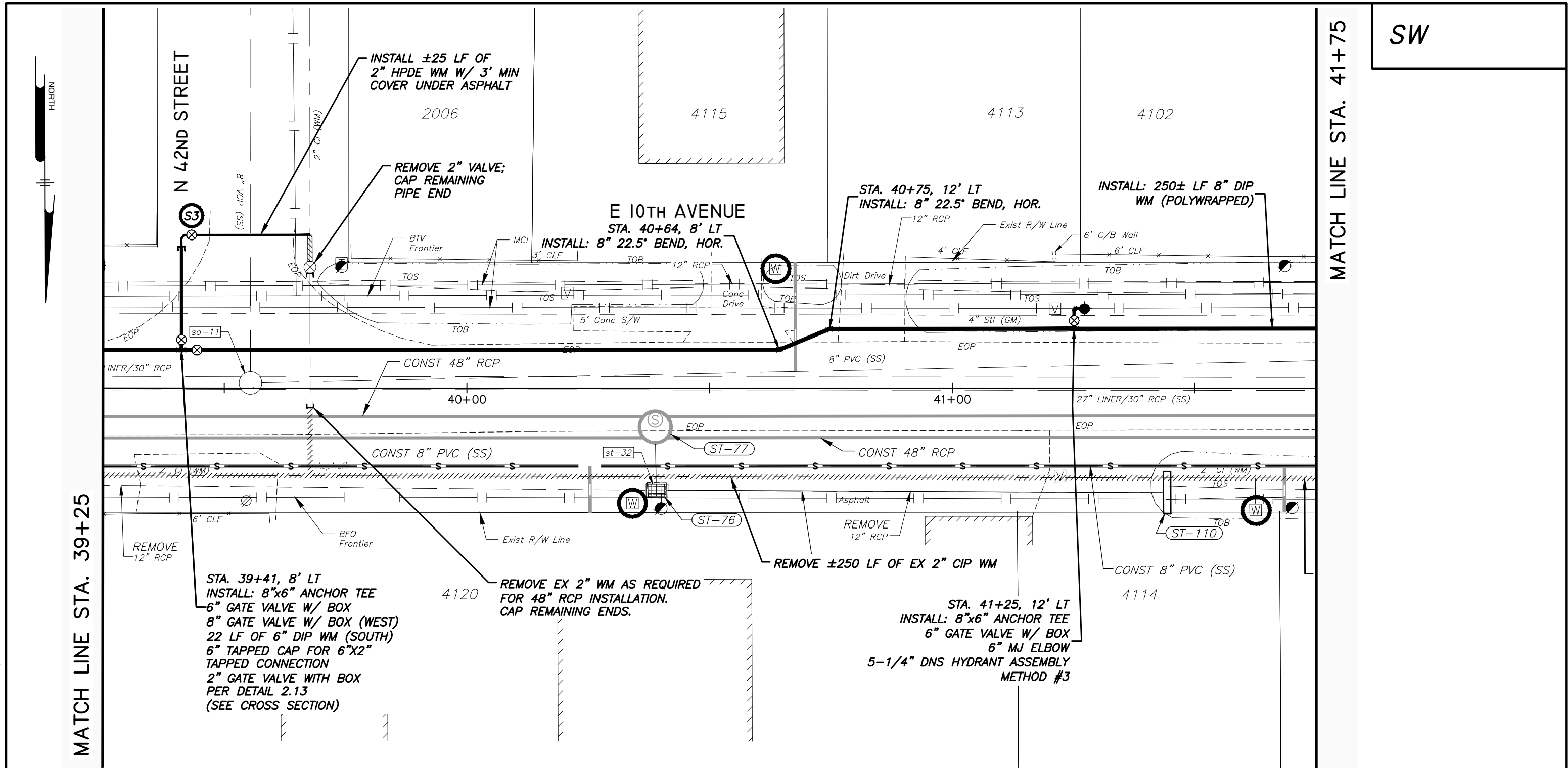
	SAMPLE TAP LOCATION
	CHLORINE INJECTION POINT
	TRANSFER EX. METER TO NEW WM, PROVIDE NEW HDPE METER BOX AND COVER

1. SEE SEPARATE PLANS FOR STORMWATER AND WASTEWATER DESIGN
2. POLYWRAP ALL BURIED DIP WATER MAIN AND FITTINGS
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M:\PROJECTS\TWPATMPA15001-43RD_STREET\DESIGN_PUBLISH\BID SET\T804 WATER PLAN.DWG
PLOTTED: 11/19/2018 5:09:16 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB PROJECT STATUS: ---



SW

LEGEND

- SAMPLE TAP LOCATION
- CHLORINE INJECTION POINT
- TRANSFER EX. METER TO NEW WM, PROVIDE NEW HDPE METER BOX AND COVER

NOTES:

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E. PETER NIKOLOV, P.E. DATE
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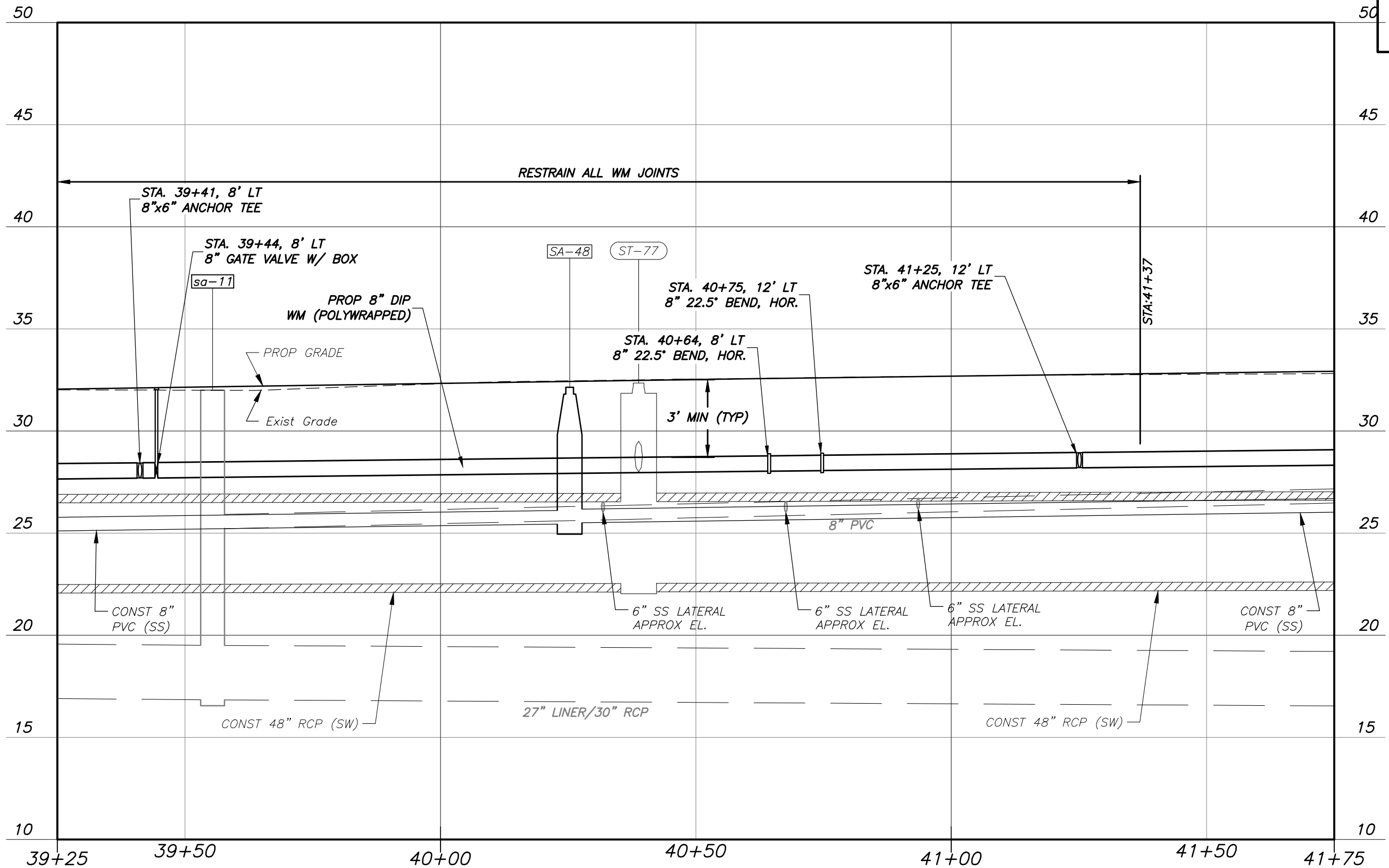
DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
WATER CONSTRUCTION PLAN STA 39+25
TO STA 41+75

SHEET
W-15

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PLOTTED: 11/19/2018 5:09:31 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB PROJECT STATUS: ---



SW

VERT SCALE: 1" = 5'
HORIZ SCALE: 1" = 20'

No.	DATE	REVISIONS

Pennoni **PENNONI ASSOCIATES INC.**
2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
WATER PROFILE STA STA 39+25 TO
STA 41+75

SHEET
W-16

M:\PROJECTS\TWPATMPA15001-43RD_STREET\DESIGN_PUBLISH\BID SET\T804 WATER PLAN.DWG
PLOTTED: 11/19/2018 5:00:02 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB PROJECT STATUS: ---

NORTH

MATCH LINE STA. 41+75

MATCH LINE STA. 44+25

SW

4102 E 7TH AVE

4100 E
7TH AVE

INSTALL: ±250 LF 8" DIP
WM (POLYWRAPPED)

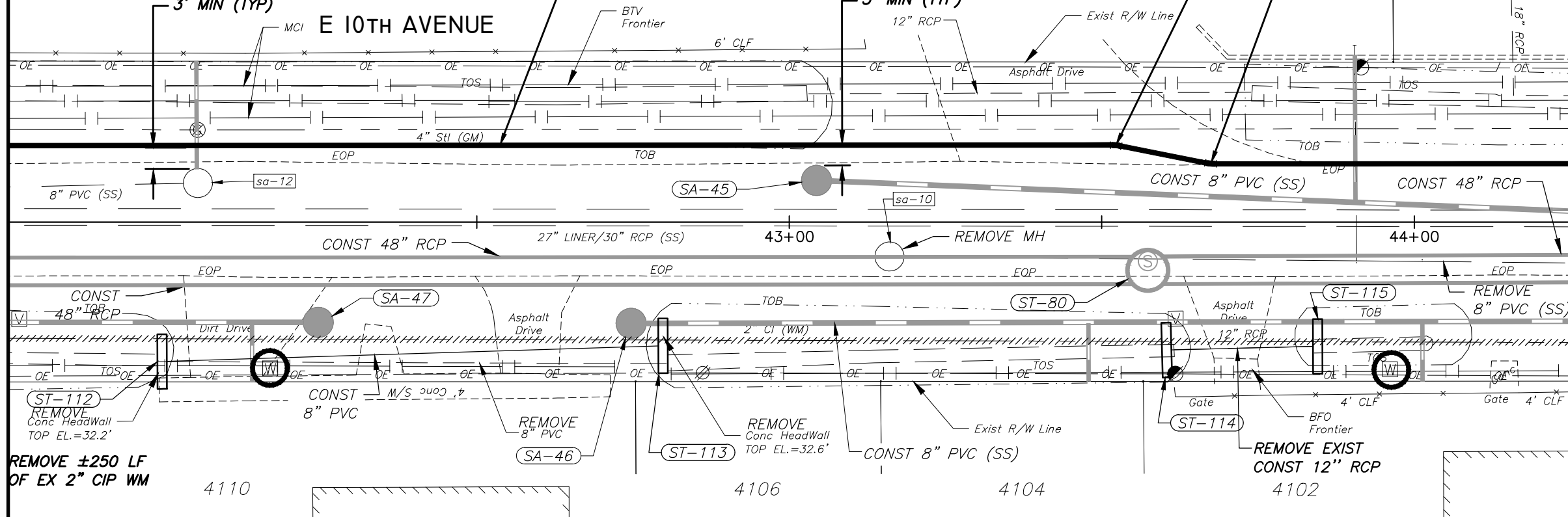
STA. 43+52, 12' LT
INSTALL: 8" 11.25° BEND, HOR.

STA. 43+67, 9' LT
INSTALL: 8" 11.25° BEND, HOR.

3' MIN (TYP)

3' MIN (TYP)

E 10TH AVENUE



LEGEND

- SAMPLE TAP LOCATION
- CHLORINE INJECTION POINT
- TRANSFER EX. METER TO NEW WM, PROVIDE NEW HDPE METER BOX AND COVER

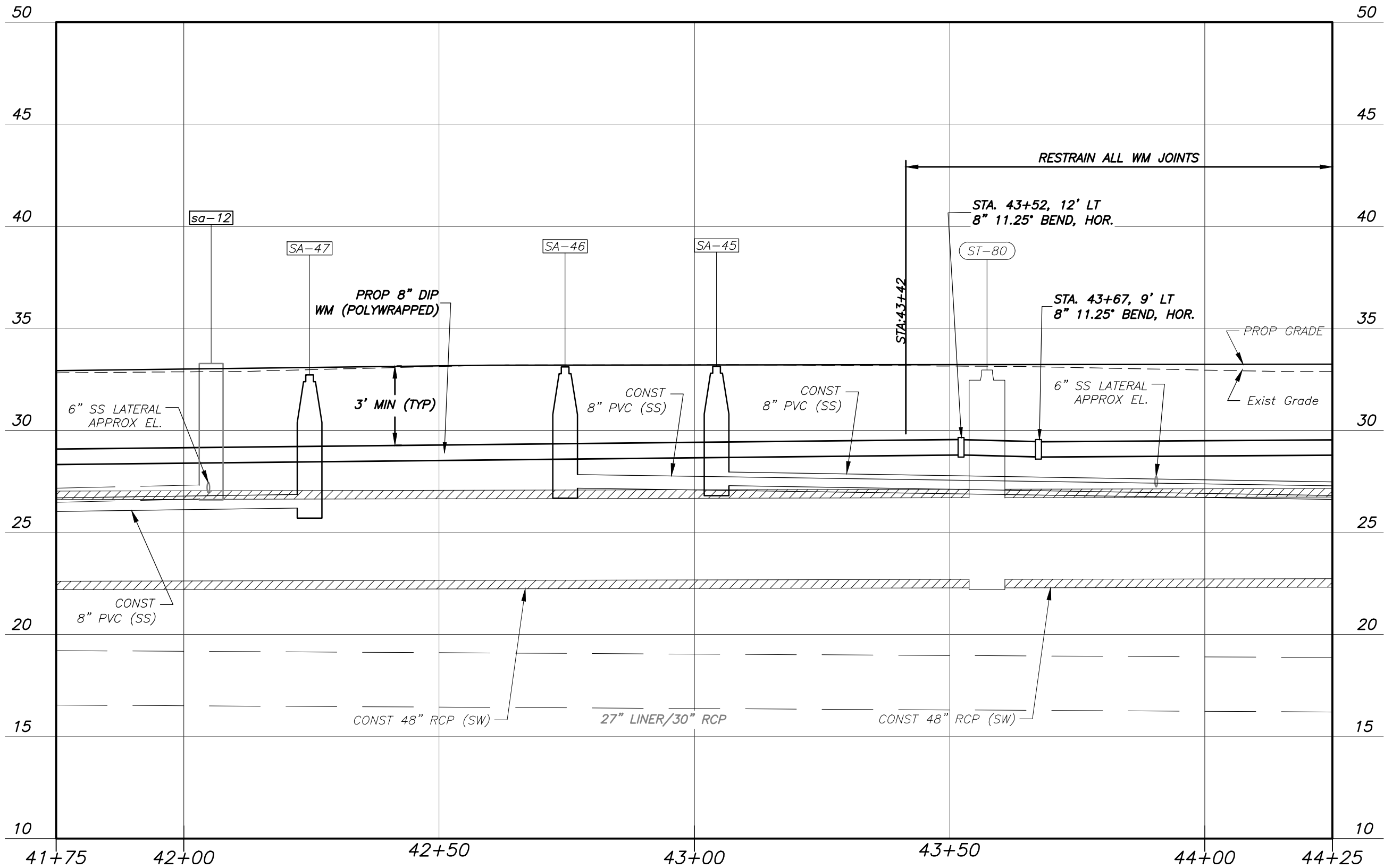
NOTES:

- SEE SEPARATE PLANS FOR STORMWATER AND WASTEWATER DESIGN
- POLYWRAP ALL BURIED DIP WATER MAIN AND FITTINGS
- NEW METER SERVICE AND LINES TO BE INSTALLED FROM REPLACEMENT WATER MAIN TO EXIST. METERS IN ACCORDANCE WITH METER DETAILS.
- PROVIDE 6" MIN SEPARATION BETWEEN SANITARY LATERALS AND WATER MAINS WHILE MAINTAINING 36" MIN COVER OVER WATERMAINS.



No.	DATE	REVISIONS	PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS WATER CONSTRUCTION PLAN STA 41+75 TO STA 44+25	SHEET W-17

SW



VERT SCALE: 1" = 5'
HORIZ SCALE: 1" = 20'

No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
Pennoni 2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
WATER PROFILE STA STA 41+75 TO
STA 44+25

SHEET
W-18

M:\PROJECTS\TAMPA\15001-43RD STREET\DESIGN\ PUBLISH\BID SET\1805 WATER PROFILES.DWG
PLOT DATE: 11/19/2018 5:10:15 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI NCS.STB PROJECT STATUS: ---

M:\PROJECTS\TAMPA\15001-43RD STREET\DESIGN\ PUBLISH\BID SET\1804 WATER PLAN.DWG
PLOT DATE: 11/19/2018 5:10:48 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI NCS.STB PROJECT STATUS: ---

NORTH

MATCH LINE STA. 44+25

MATCH LINE STA. 46+75

SW

4100 E 7TH AVE

4019

4015

4100 E 7TH AVE

2021

STA. 45+44, 13' LT
INSTALL: 8" DIP 22.5° BEND, HOR.

STA. 45+35, 9' LT
INSTALL: 8" DIP 22.5° BEND, HOR.

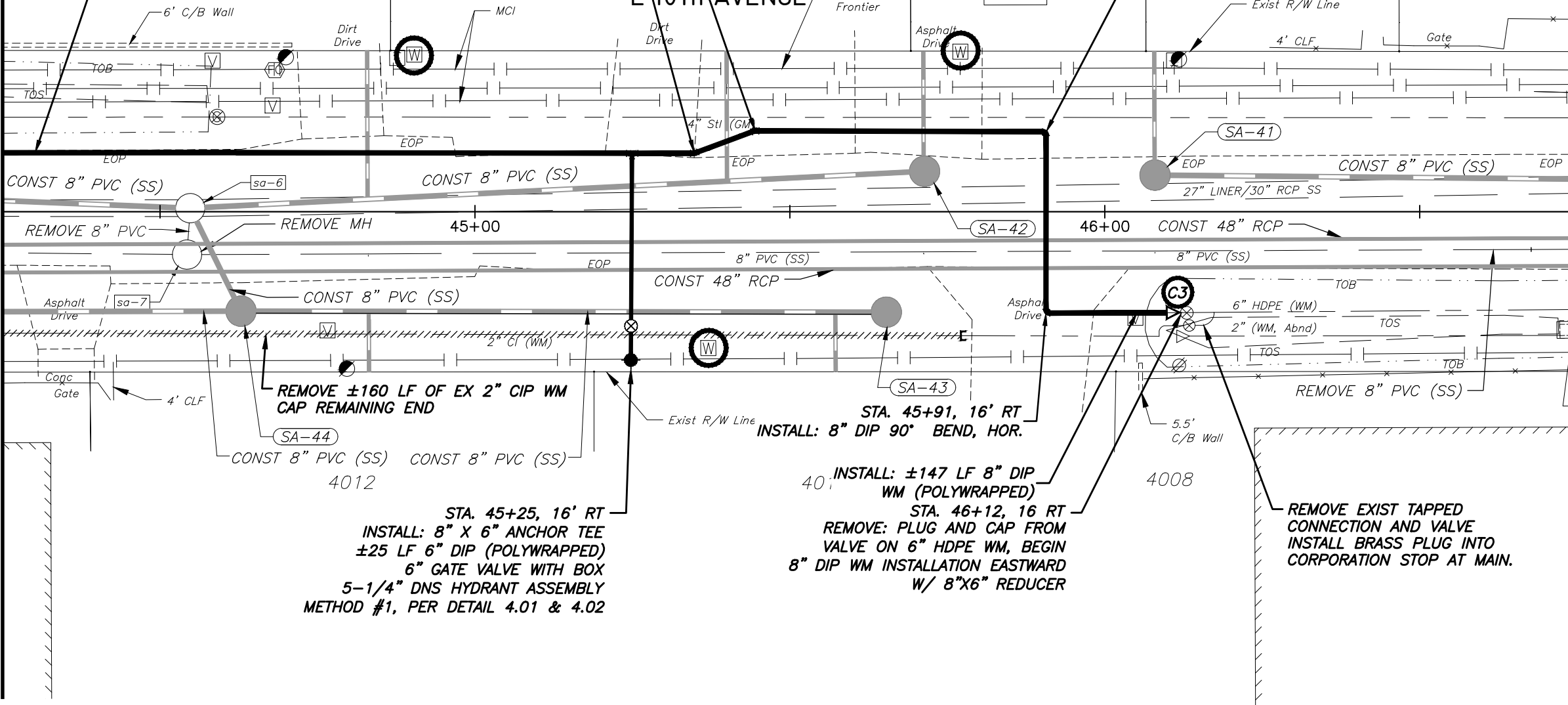
STA. 45+91, 13' LT
INSTALL: 8" DIP 90° BEND, HOR.

INSTALL: ±200 LF 8" DIP
WM (POLYWRAPPED)

E 10TH AVENUE

BTV
Frontier

Exist R/W Line



LEGEND

-  SAMPLE TAP LOCATION
-  CHLORINE INJECTION POINT
-  TRANSFER EX. METER TO NEW WM, PROVIDE NEW HDPE METER BOX AND COVER

NOTES:

1. SEE SEPARATE PLANS FOR STORMWATER AND WASTEWATER DESIGN
2. POLYWRAP ALL BURIED DIP WATER MAIN AND FITTINGS
3. NEW METER SERVICE AND LINES TO BE INSTALLED FROM REPLACEMENT WATER MAIN TO EXIST. METERS IN ACCORDANCE WITH METER DETAILS.
4. PROVIDE 6" MIN SEPARATION BETWEEN SANITARY LATERALS AND WATER MAINS WHILE MAINTAINING 36" MIN COVER OVER WATERMAINS.



No.	DATE	REVISIONS

	PENNONI ASSOCIATES INC.	
	2555 Nursery Road, Suite 101	
	Clearwater, FL 33764	
	Certificate of Authorization 7819	

E. PETER NIKOLOV, P.E.		DATE
P.E. NO. 38766		

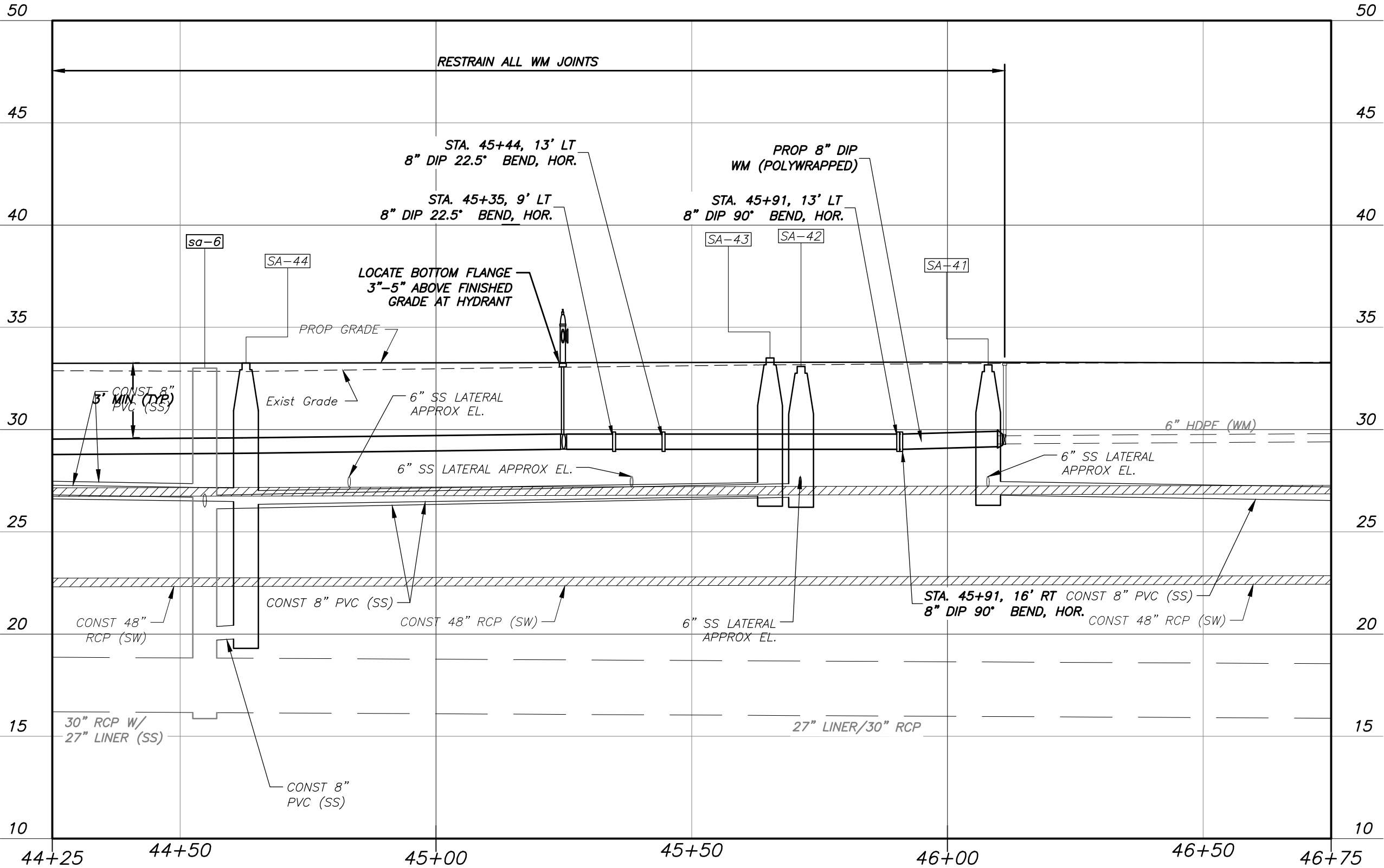
DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS
WATER CONSTRUCTION PLAN STA 44+25 TO STA 46+75

SHEET
W-19

SW



VERT SCALE: 1" = 5'
HORIZ SCALE: 1" = 20'

No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
 2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
WATER PROFILE STA 44+25 TO STA
46+75

SHEET
W-20

M:\PROJECTS\TAMPA\15001-43RD STREET\DESIGN\ PUBLISH\BID SET\1805 WATER PROFILES.DWG
PLOT: 11/19/2018 5:11:00 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI NCS.STB, PROJECT STATUS: ---

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PLOT DATE: 11/19/2018 5:11:31 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI NCS.STB PROJECT STATUS: ---



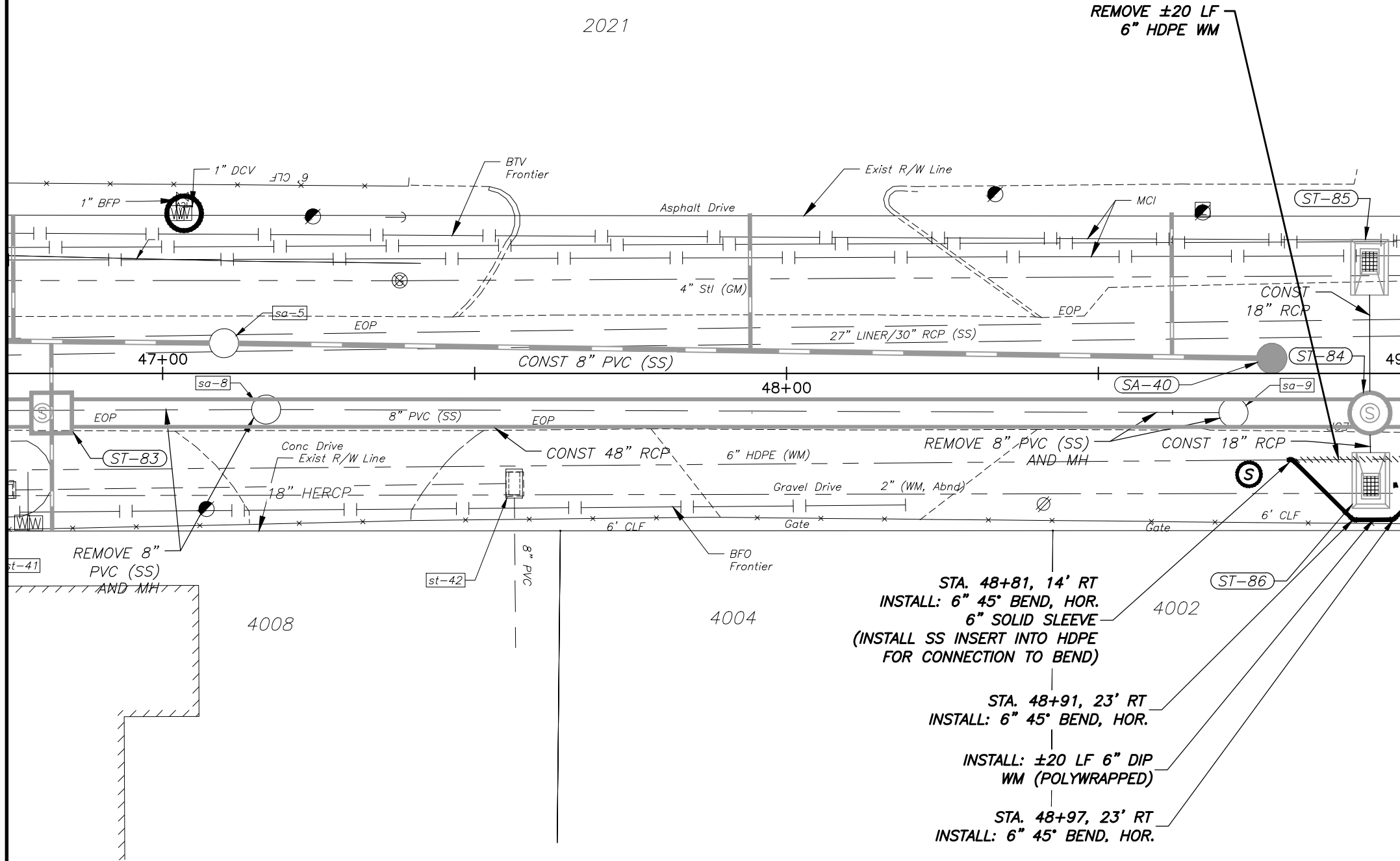
E 10TH AVENUE

2021

SW

MATCH LINE STA. 46+75

MATCH LINE STA. 49+00



STA. 48+81, 14' RT
INSTALL: 6" 45° BEND, HOR.
6" SOLID SLEEVE
(INSTALL SS INSERT INTO HDPE
FOR CONNECTION TO BEND)

STA. 48+91, 23' RT
INSTALL: 6" 45° BEND, HOR.

INSTALL: ±20 LF 6" DIP
WM (POLYWRAPPED)

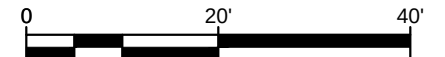
STA. 48+97, 23' RT
INSTALL: 6" 45° BEND, HOR.

LEGEND

- SAMPLE TAP LOCATION
- CHLORINE INJECTION POINT
- TRANSFER EX. METER TO NEW WM, PROVIDE NEW HDPE METER BOX AND COVER

NOTES:

1. SEE SEPARATE PLANS FOR STORMWATER AND WASTEWATER DESIGN
2. POLYWRAP ALL BURIED DIP WATER MAIN AND FITTINGS
3. NEW METER SERVICE AND LINES TO BE INSTALLED FROM REPLACEMENT WATER MAIN TO EXIST. METERS IN ACCORDANCE WITH METER DETAILS.
4. PROVIDE 6" MIN SEPARATION BETWEEN SANITARY LATERALS AND WATER MAINS WHILE MAINTAINING 36" MIN COVER OVER WATERMAINS.



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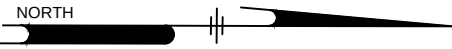
DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

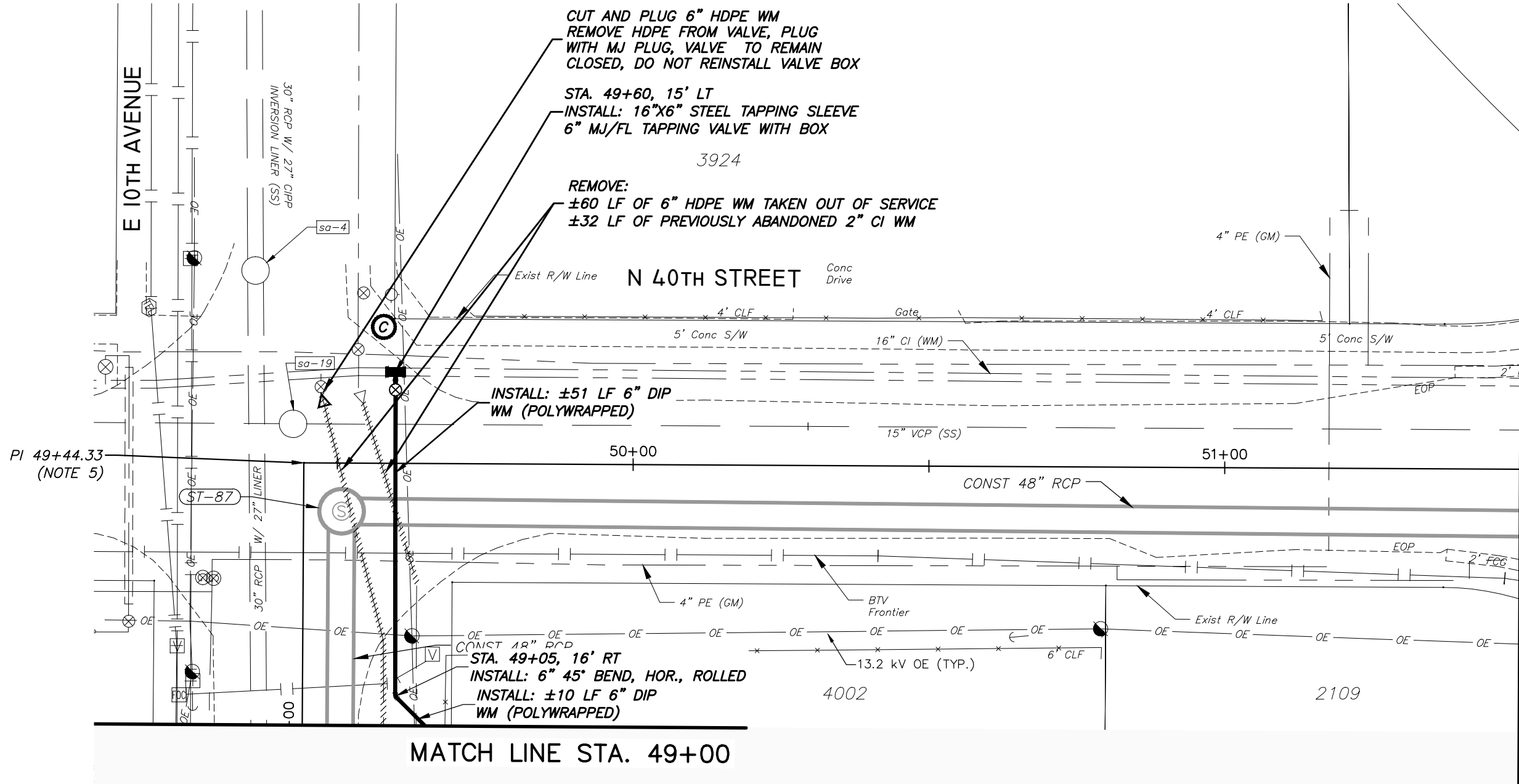
43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
WATER CONSTRUCTION PLAN STA
46+75 TO STA 49+00

SHEET
W-21

M:\PROJECTS\TAMP\TAMP\15001-43RD_STREET\DESIGN_PUBLISH\BID SET\T804 WATER PLAN.DWG
PLOTTED: 11/19/2018 5:11:41 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB PROJECT STATUS: ---



SW



LEGEND

- SAMPLE TAP LOCATION
- CHLORINE INJECTION POINT
- TRANSFER EX. METER TO NEW WM, PROVIDE NEW HDPE METER BOX AND COVER

NOTES:

1. SEE SEPARATE PLANS FOR STORMWATER AND WASTEWATER DESIGN
2. POLYWRAP ALL BURIED DIP WATER MAIN AND FITTINGS
3. NEW METER SERVICE AND LINES TO BE INSTALLED FROM REPLACEMENT WATER MAIN TO EXIST. METERS IN ACCORDANCE WITH METER DETAILS.
4. PROVIDE 6" MIN SEPARATION BETWEEN SANITARY LATERALS AND WATER MAINS WHILE MAINTAINING 36" MIN COVER OVER WATERMAINS.
5. REFER TO LAYOUT PLAN ALIGNMENTS B AND C FOR ALIGNMENT BEARINGS



No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
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Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
WATER CONSTRUCTION PLAN STA 49+00
TO STA 51+50

SHEET
W-22

M:\PROJECTS\TAMPA\15001-43RD STREET\DESIGN\ PUBLISH\BID SET\15001-43RD STREET\PLAN.DWG
PLOT: 11/19/2018 5:22:27 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB PROJECT STATUS: ---

MATCH LINE STA. 51+50

E ITH AVENUE

MATCH LINE STA. 54+00

SW

CAP EXIST 2" CI WM
AT 16" WM

STA 51+94, 13' LT
INSTALL: 16"x2" SADDLE TAP
2" GATE VALVE WITH BOX
±51' OF 2" HDPE WM
CONNECT TO EX 2" CI WM
WITH TRANSITION COUPLING
(SEE CROSS SECTION)

NORTH

3913

5' Conc S/W

2" FCG

EOP

4" CI (WM)

sa-20

st-44

16" CI (WM)

15" VCP (SS)

53+00

sa-22

15" VCP (SS)

REMOVE
EXIST/

CONST
48" RCP

CONST 8" PVC
(SS-CONFLICT)

52+00

ST-89

2" SH (GM)

CONST
48" RCP

ST-90

REMOVE EXIST/CONST
8" PVC/14" CASING
(SS-CONFLICT)

4-4" BT/Verizon

4-4" BT/Verizon

2" CIP

CONST
48" RCP

ST-88

13.2 kV OE (TYP.)

BTV
Frontier

Exist
R/W Line

N 40TH STREET

2209

REMOVE EXIST/
CONST 18" PVC
(SW-CONFLICT)

st-45

REMOVE VALVE AND
VALVE BOX

CONST
48" RCP

CONST 48" RCP

ST-91

5' Conc S/W

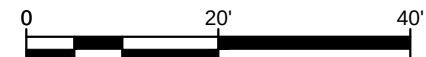
EOP

LEGEND

-  SAMPLE TAP LOCATION
-  CHLORINE INJECTION POINT
-  TRANSFER EX. METER TO NEW WM, PROVIDE NEW HDPE METER BOX AND COVER

NOTES:

- SEE SEPARATE PLANS FOR STORMWATER AND WASTEWATER DESIGN
- POLYWRAP ALL BURIED DIP WATER MAIN AND FITTINGS
- NEW METER SERVICE AND LINES TO BE INSTALLED FROM REPLACEMENT WATER MAIN TO EXIST. METERS IN ACCORDANCE WITH METER DETAILS.
- PROVIDE 6" MIN SEPARATION BETWEEN SANITARY LATERALS AND WATER MAINS WHILE MAINTAINING 36" MIN COVER OVER WATERMAINS.



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PENNONI ASSOCIATES INC.
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Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
WATER CONSTRUCTION PLAN STA
51+50 TO STA 54+00

SHEET
W-24

M:\PROJECTS\TAMPA\15001-43RD_STREET\DESIGN\ PUBLISH\BID SET\15001-43RD_STREET\STATUS:---
PLOT: 11/19/2018 5:24:46 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI NCS.STB, PROJECT STATUS:---

MATCH LINE STA. 61+00

MATCH LINE STA. 63+50

SW

LEGEND

-  SAMPLE TAP LOCATION
-  CHLORINE INJECTION POINT
-  TRANSFER EX. METER TO NEW WM, PROVIDE NEW HDPE METER BOX AND COVER

NOTES:

- LOCATION OF CONFLICTING PIPES AS SHOWN IS APPROXIMATE. LOCATE AND DETERMINE INVERTS OF PIPES AT INTERSECTION WITH PROPOSED 48" RCP PRIOR TO ORDERING STRUCTURE.
- SEE SEPARATE SHEETS FOR WATER AND WASTEWATER DESIGN.

No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
 2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

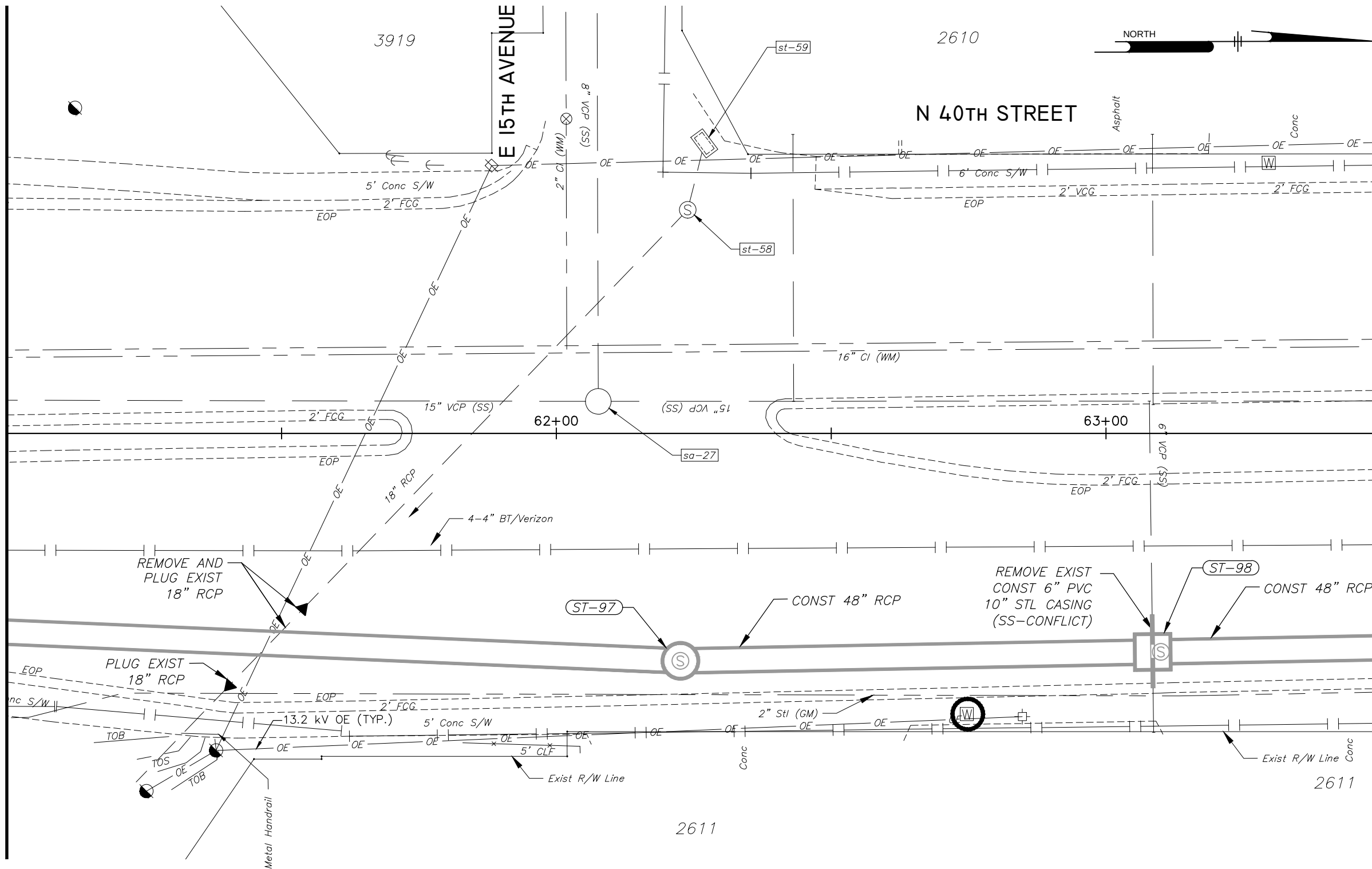
E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

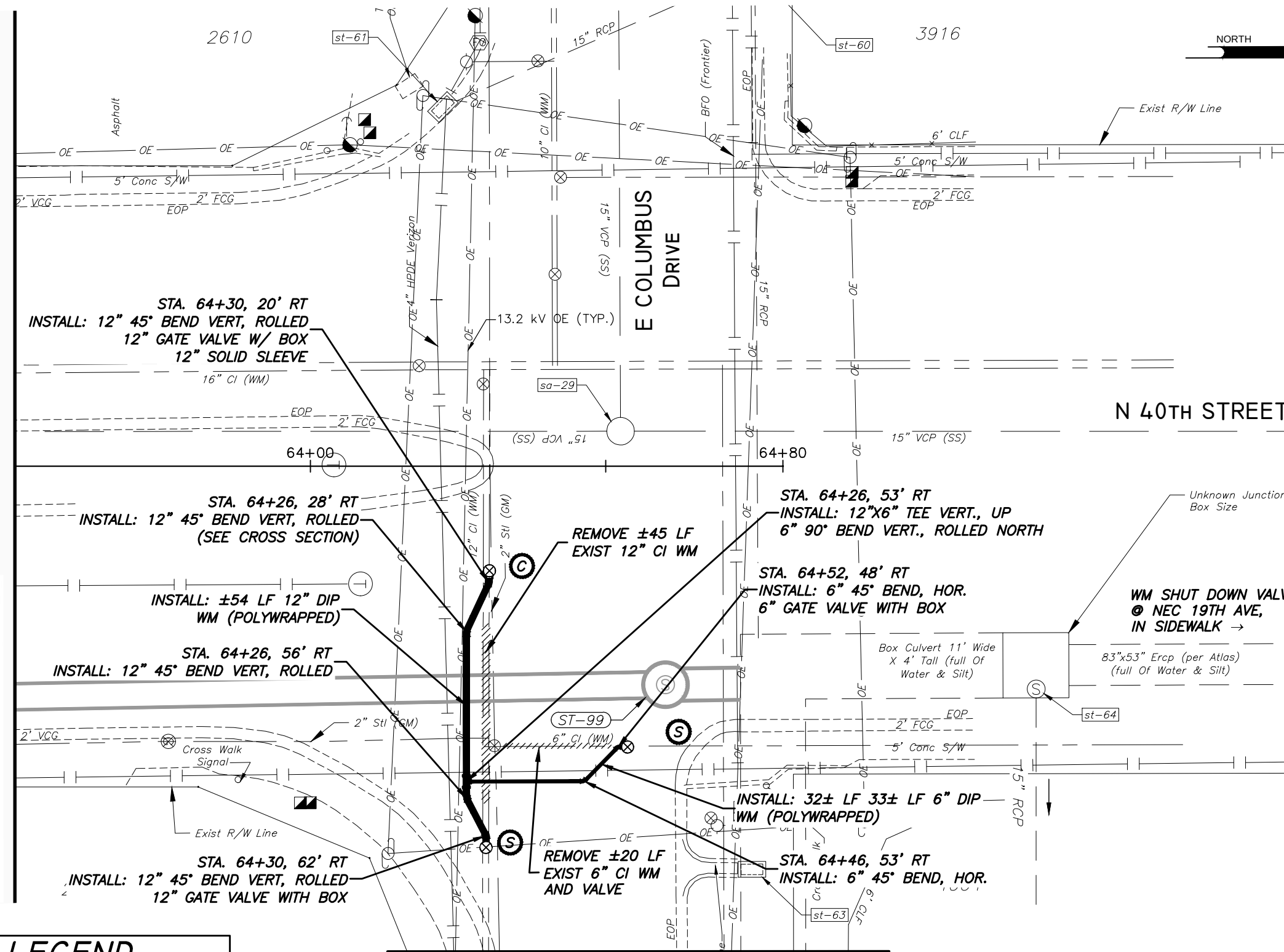
43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
WATER CONSTRUCTION PLAN STA 61+00
TO STA 63+50

SHEET
W-26

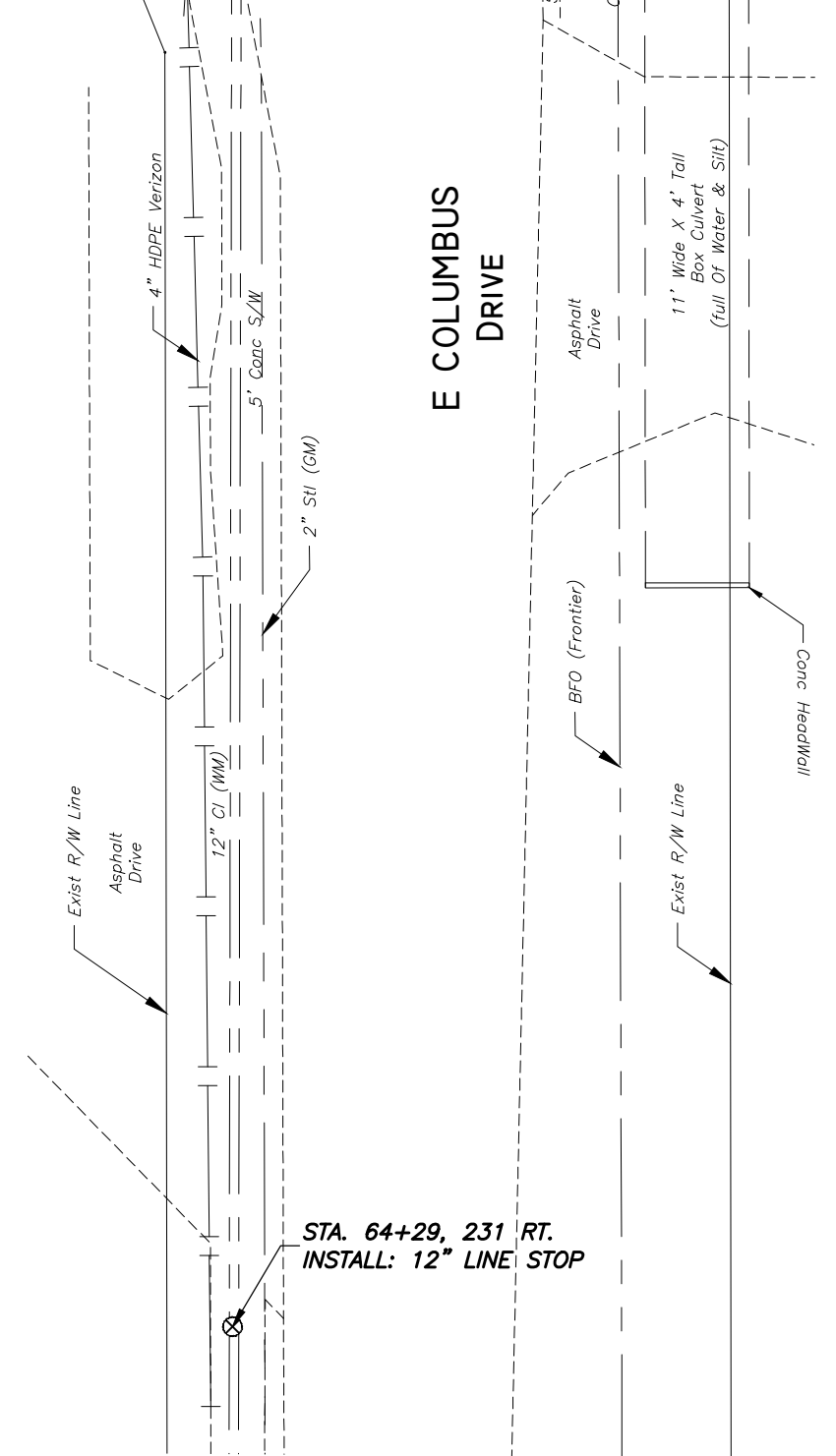


M:\PROJECTS\TWPATMPA15001-43RD_STREET\DESIGN_PUBLISH\BID SET\T804 WATER PLAN.DWG
PLOTTED: 11/19/2018 5:13:02 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---

MATCH LINE STA. 63+50



MATCH LINE THIS SHEET



LEGEND

-  SAMPLE TAP LOCATION
-  CHLORINE INJECTION POINT
-  TRANSFER EX. METER TO NEW WM, PROVIDE NEW HDPE METER BOX AND COVER

NOTES:

1. SEE SEPARATE PLANS FOR STORMWATER AND WASTEWATER DESIGN
2. POLYWRAP ALL BURIED DIP WATER MAIN AND FITTINGS
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E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

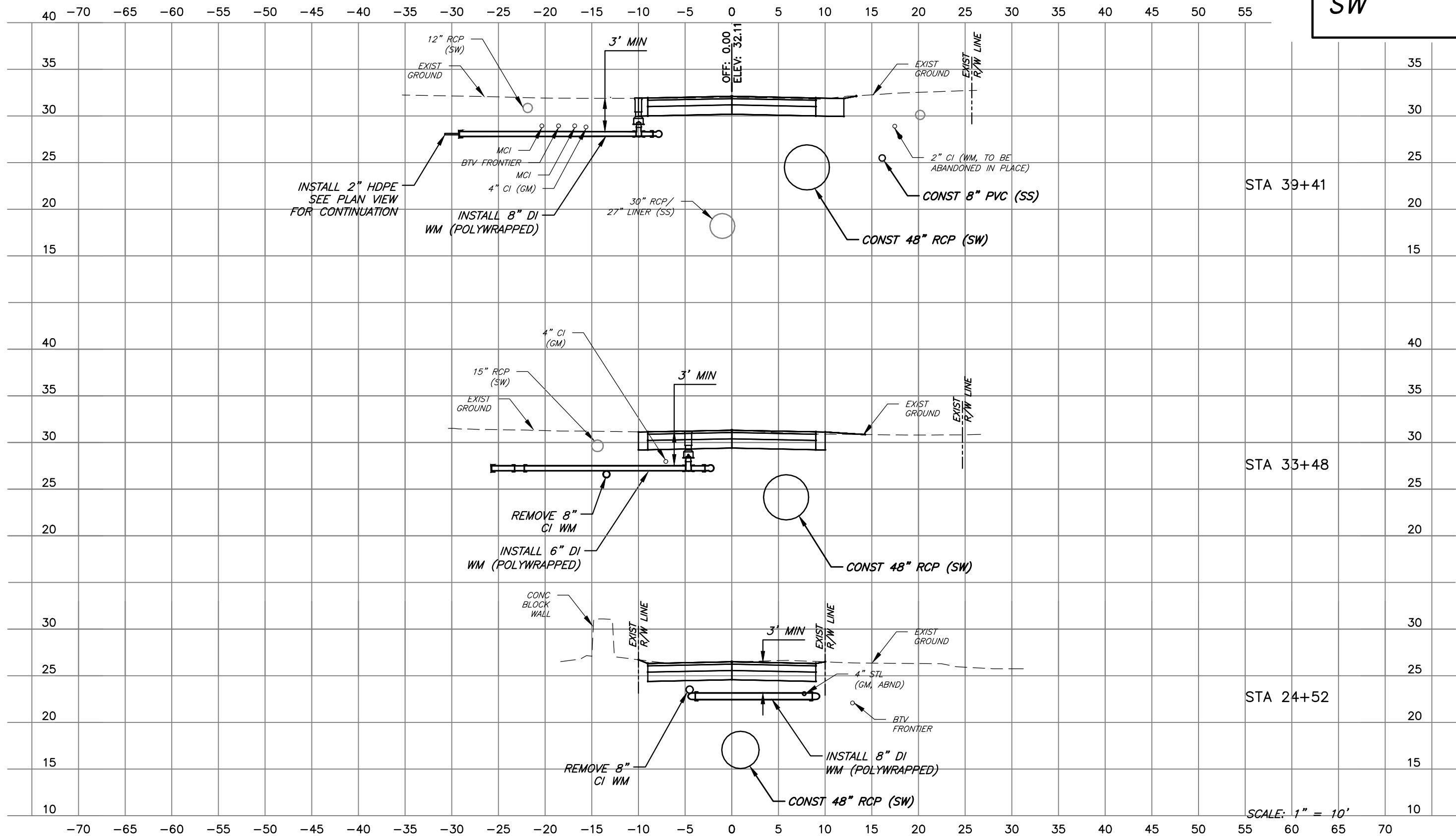
CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
WATER CONSTRUCTION PLAN STA
63+50 TO STA 64+80

SHEET
W-27



M:\PROJECTS\TAMPA\15001-43RD_STREET\DESIGN\15001-43RD_STREET\DWG\WATER_CROSS_SECTIONS_NORTH.dwg
PLOT: 11/19/2018 5:13:35 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI.NCS,STB, PROJECT STATUS: ---



No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
Pennonni 2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

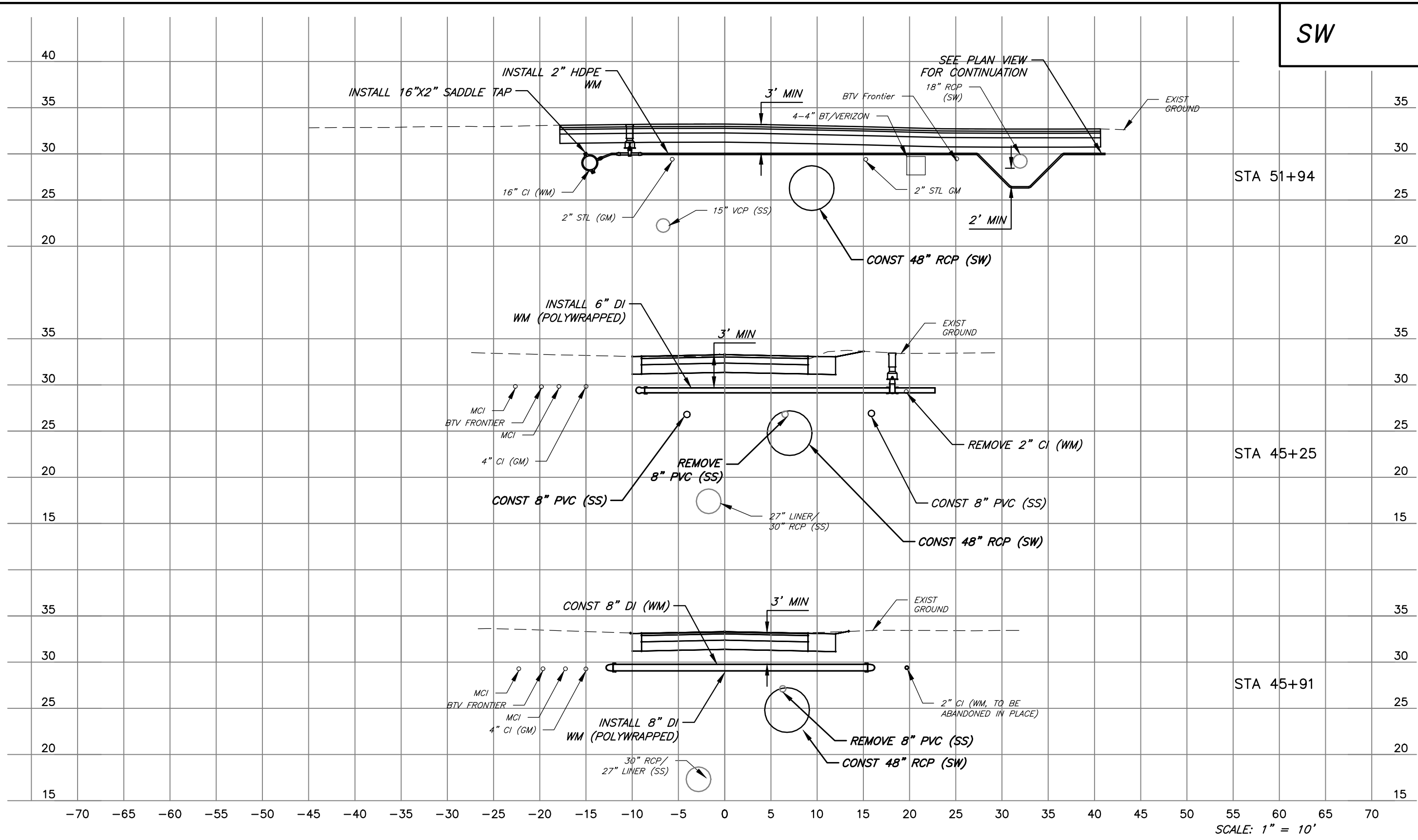
DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
WATER CROSS SECTIONS NORTH
43RD ST

SHEET
W-29

M:\PROJECTS\TAMPA\15001-43RD_STREET\DESIGN_PUBLISH\BID SET\1807 WATER CROSS SECTIONS.DWG
PLOTTED: 11/19/2018 5:13:45 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---



SW

No.	DATE	REVISIONS

Pennoni **PENNONI ASSOCIATES INC.**
2555 Nursery Road, Suite 101
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Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

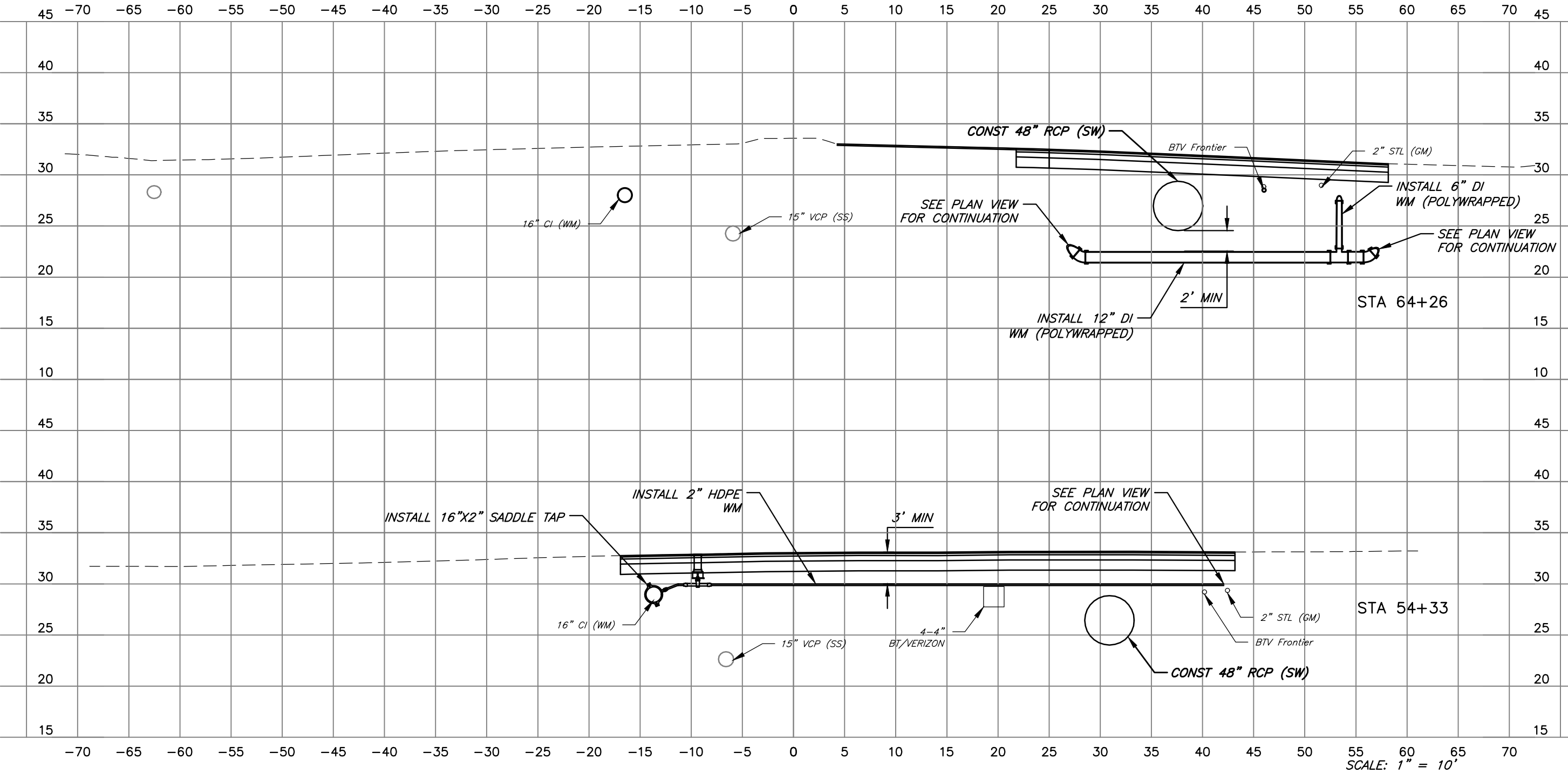
DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
WATER CROSS SECTIONS EAST
10TH AVE NORTH 40TH ST

SHEET
W-30

SW



SCALE: 1" = 10'

M:\PROJECTS\TAMPA\TAMPA15001-43RD_STREET\DESIGN_PUBLISH\SETT1807_WATER_CROSS_SECTIONS.DWG
PLOT DATE: 11/19/2018 5:13:55 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI.NCS,STB, PROJECT STATUS: ---

No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
Pennoni 2555 Nursery Road, Suite 101
Clearwater, FL 33764
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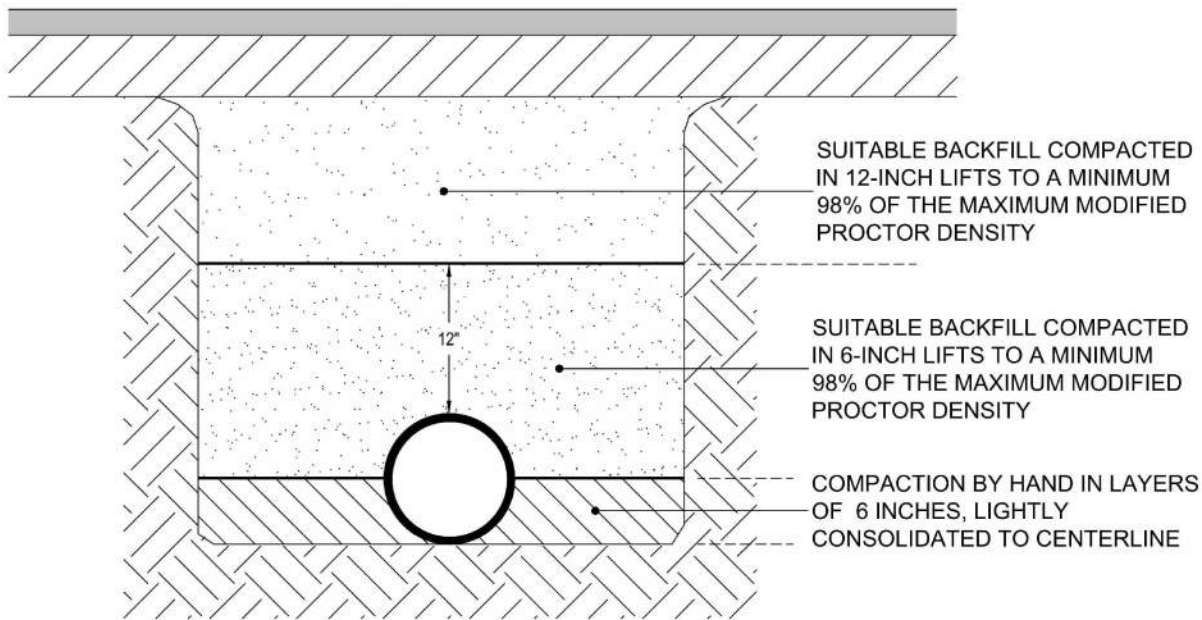
E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

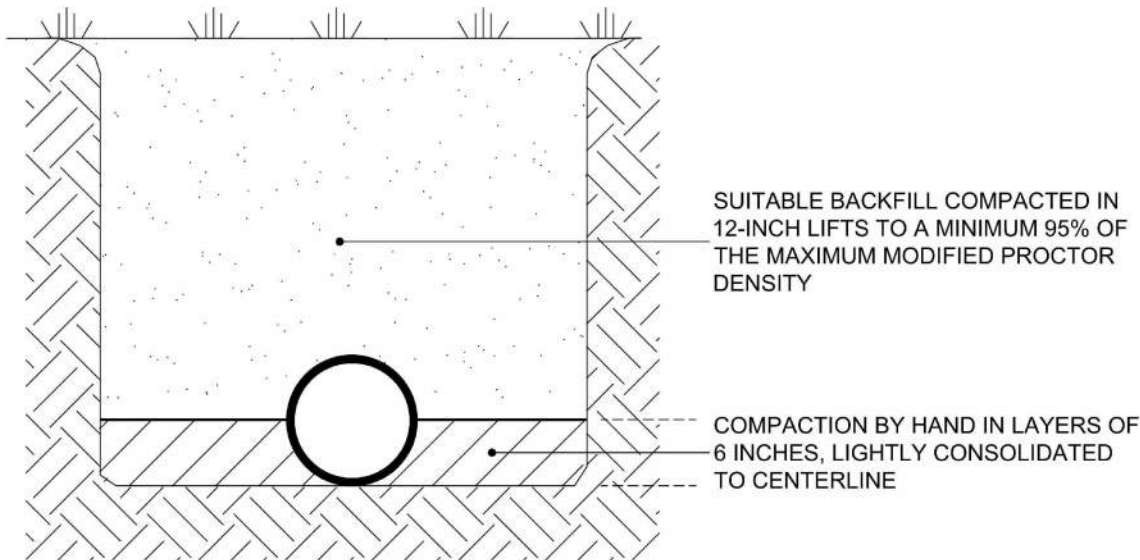
43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
WATER CROSS SECTIONS
NORTH 40TH ST

SHEET
W-31



NOTES:

1. TYPE 2 TRENCH IS DEFINED AS A FLAT-BOTTOM TRENCH. LIGHTLY CONSOLIDATE BACKFILL TO CENTERLINE OF PIPE.
2. THIS STANDARD SHALL BE UTILIZED IN THE ABSENCE OF SPECIFIC STANDARDS. THE STANDARD OF THE AGENCY CONTROLLING THE RIGHT-OF-WAY SHALL GOVERN UNLESS OTHERWISE DIRECTED BY CITY ENGINEER.
3. SUITABLE BACKFILL SHALL BE DEFINED AS MATERIAL FREE FROM CINDERS, ASHES, REFUSE, CLAY, ORGANIC MATTER, BOULDERS, ROCKS OR STONES, OR OTHER MATERIAL THAT IN THE OPINION OF THE CITY ENGINEER IS UNSUITABLE.
4. NON-PERVIOUS AREAS SHALL MEAN ANY CONCRETE OR ASPHALT CURB, SIDEWALK, TRAIL, DRIVEWAY, OR ROADWAY.



NOTES:

1. TYPE 2 TRENCH IS DEFINED AS A FLAT-BOTTOM TRENCH. LIGHTLY CONSOLIDATE BACKFILL TO CENTERLINE OF PIPE.
2. THIS STANDARD SHALL BE UTILIZED IN THE ABSENCE OF SPECIFIC STANDARDS. THE STANDARD OF THE AGENCY CONTROLLING THE RIGHT-OF-WAY SHALL GOVERN UNLESS OTHERWISE DIRECTED BY CITY ENGINEER.
3. SUITABLE BACKFILL SHALL BE DEFINED AS MATERIAL FREE FROM CINDERS, ASHES, REFUSE, CLAY, ORGANIC MATTER, BOULDERS, ROCKS OR STONES, OR OTHER MATERIAL THAT IN THE OPINION OF THE CITY ENGINEER IS UNSUITABLE.
4. NON-PAVED AREA IS A PERVIOUS AREA. IF ANY PART OF THE TRENCH IS WITHIN A CONCRETE OR ASPHALT CURB, SIDEWALK, DRIVEWAY, OR ROADWAY, THEN STANDARD DETAIL 2.01 APPLIES.

	LAST REVISION	TRENCHING, BEDDING AND BACKFILL DETAIL FOR NON-PERVIOUS (PAVED) AREAS	2.01A
	JAN 2018		

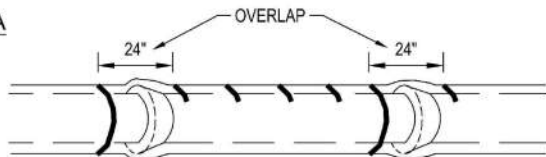
	LAST REVISION	TRENCHING, BEDDING, AND BACKFILL DETAIL FOR PERVIOUS (NON-PAVED) AREAS	2.02
	JUL 2018		

No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS WATER DETAILS (I)	SHEET W-32

M:\PROJECTS\TAMPA\15001-43RD_STREET\DESIGN_PUBLISH\BID SET\1801 WATER DETAILS.DWG
PLOT: 11/19/2018 5:14:04 PM, BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---

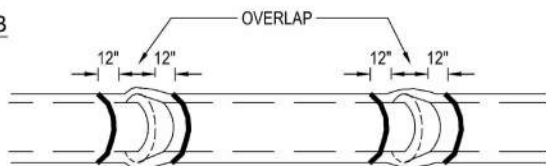
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PLOTTED: 11/19/2018 5:14:10 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---

METHOD A



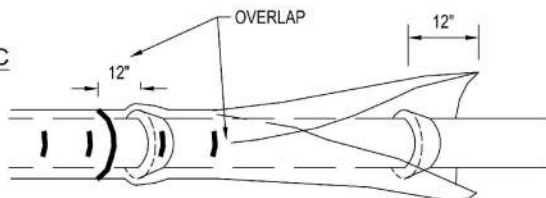
POLYETHYLENE TUBE IS CUT INTO LENGTHS APPROXIMATELY TWO FEET LONGER THAN THE PIPE SECTION AND PLACED AROUND IT. AFTER THE PIPE JOINT IS ASSEMBLED, THE POLYETHYLENE TUBE IS MADE TO OVERLAP THE JOINT AND THE OVERLAP SECURED IN PLACE. SINCE THE TUBE IS CONSIDERABLY LARGER THAN THE BARREL OF PIPE, IT IS MADE TO FIT SNUGLY BY FOLDING OVER AT THE TOP AND SECURING WITH TAPE EVERY 24" ALONG THE PIPE SECTION.

METHOD B



POLYETHYLENE TUBE IS CUT ONE FOOT SHORTER THAN THE LENGTH OF THE PIPE SECTION. AFTER PLACEMENT OF THE PIPE, IT IS FOLDED AND SECURED SNUGLY OVERALL. A THREE FOOT LENGTH OF POLYETHYLENE TUBE PLACED OVER THE END OF THE PRECEEDING SECTION IS THEN PULLED IN PLACE OVER THE JOINT AFTER ASSEMBLY AND SECURED.

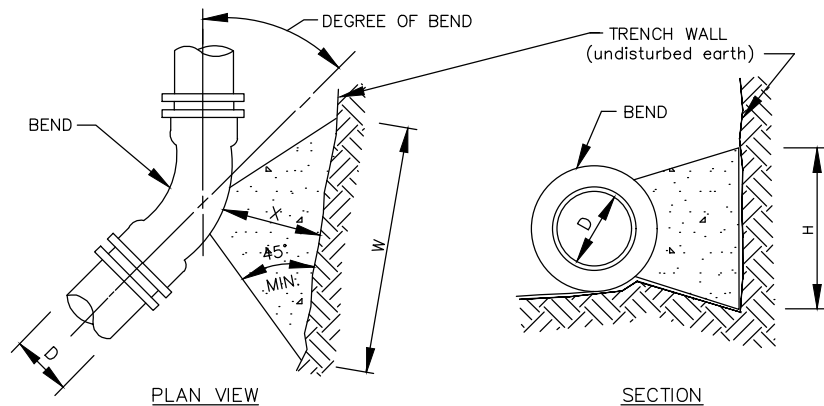
METHOD C



POLYETHYLENE SHEET IS CUT TO A LENGTH TWO FEET LONGER THAN THE PIPE SECTION. THE SHEET IS WRAPPED AROUND THE PIPE SO THAT IT OVERLAPS CIRCUMFERENTIALLY OVER THE TOP QUADRANT OF THE PIPE, THEN SECURED. AFTER JOINT ASSEMBLY, THE SURPLUS LENGTH OF POLYETHYLENE FILM IS SECURED AROUND THE JOINT, PROVIDING AN OVERLAP OF EACH JOINT. TAPE AT EACH JOINT AND AT 3' INTERVALS IN BETWEEN.

NOTES:

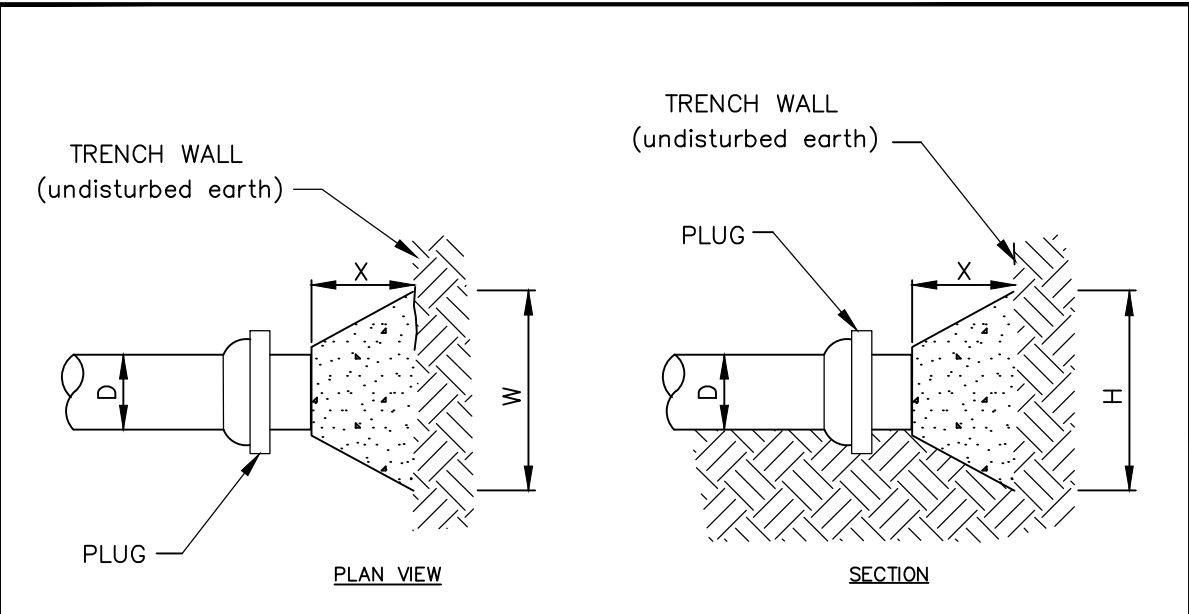
1. USE BLUE POLYETHYLENE FILM AND TAPE ONLY.
2. POLYETHYLENE FILM SHALL BE A MINIMUM OF 8 MIL. THICKNESS.
3. SPIRAL WRAP NOT REQUIRED WITH POLYWRAP.



DIMENSIONS OF THRUST BLOCKS
FOR GOOD SOIL

11-1/4° BEND	SIZE (D)	4"	6"	8"	12"	16"	20"	24"
	THRUST (lbs.)	674	1393	2396	5097	8857	13,649	19,472
	BEARING AREA (ft. ²)	0.51	1.05	1.80	3.83	6.65	10.25	14.63
	CONCRETE (yds. ³)	0.005	0.015	0.033	0.104	0.239	0.459	0.783
	H (ft.)	0.6	0.8	1.1	1.6	2.1	2.6	3.1
	W (ft.)	0.9	1.3	1.6	2.4	3.2	3.9	4.7
	X (ft.)	0.4 Min.	0.6 Min.	0.8 Min.	1.2 Min.	1.6 Min.	2.0 Min.	2.3 Min.
22-1/2° BEND	THRUST (lbs.)	1342	2772	4769	10,145	17,628	27,166	38,757
	BEARING AREA (ft. ²)	1.01	2.08	3.58	7.61	13.22	20.37	29.07
	CONCRETE (yds. ³)	0.012	0.035	0.080	0.252	0.580	1.113	1.792
	H (ft.)	0.8	1.2	1.5	2.3	3.0	3.7	4.4
	W (ft.)	1.2	1.8	2.3	3.4	4.5	5.5	6.6
	X (ft.)	.06 Min.	0.9 Min.	1.2 Min.	1.7 Min.	2.2 Min.	2.8 Min.	3.0 Min.
45° BEND	THRUST (lbs.)	2632	5437	9355	19,901	34,579	53,288	76,024
	BEARING AREA (ft. ²)	1.97	4.08	7.02	14.93	25.94	39.98	57.04
	CONCRETE (yds. ³)	0.029	0.087	0.198	0.620	1.387	2.301	3.517
	H (ft.)	1.2	1.7	2.2	3.2	4.2	5.2	6.2
	W (ft.)	1.7	2.5	3.2	4.7	6.2	7.7	9.3
	X (ft.)	0.9 Min.	1.2 Min.	1.6 Min.	2.4 Min.	3.0 Min.	3.0 Min.	3.0 Min.
90° BEND	THRUST (lbs.)	4863	10,047	17,286	36,772	63,894	98,463	140,474
	BEARING AREA (ft. ²)	3.65	7.53	12.96	27.58	47.91	73.84	105.34
	CONCRETE (yds. ³)	0.068	0.203	0.459	1.360	2.561	4.250	6.496
	H (ft.)	1.6	2.2	3.0	4.3	5.7	7.0	8.4
	W (ft.)	2.3	3.4	4.4	6.4	8.5	10.5	12.6
X (ft.)	1.2 Min.	1.7 Min.	2.2 Min.	3.0 Min.	3.0 Min.	3.0 Min.	3.0 Min.	

SW



DIMENSIONS OF THRUST BLOCKS FOR GOOD SOIL

	SIZE (D)	4"	6"	8"	12"	16"	20"	24"
PLUG	THRUST (lbs.)	3439	7104	12,223	26,002	45,180	69,624	99,330
	BEARING AREA (ft. ²)	2.58	5.33	9.17	19.50	33.89	52.22	74.50
	CONCRETE (yds. ³)	0.042	0.126	0.285	0.891	1.811	3.005	4.594
	H (ft.)	1.3	1.9	2.5	3.6	4.8	5.9	7.0
	W (ft.)	2.0	2.8	3.7	5.4	7.1	8.9	10.6
	X (ft.)	1.0 Min.	1.4 Min.	1.9 Min.	2.7 Min.	3.0 Min.	3.0 Min.	3.0 Min.

NOTES:

1. Concrete shall be kept at sufficient distance from joint for removal of all joint accessories including bolts.
2. All bearing surfaces to be carried to undisturbed soil.
3. This table shows the minimum size thrust blocks for soil bearing pressure of 2000 psf and an internal pressure of 190 psi.
Cover to T.O.P. is 3 feet for 12" and smaller mains; 4 feet for 16" and larger mains.
- *4. Poor and wet soil (silty soils, clay, muck and peat) will require larger thrust blocks.
5. Fittings shall be completely polywrapped prior to pouring thrust blocks.

***WARNING**



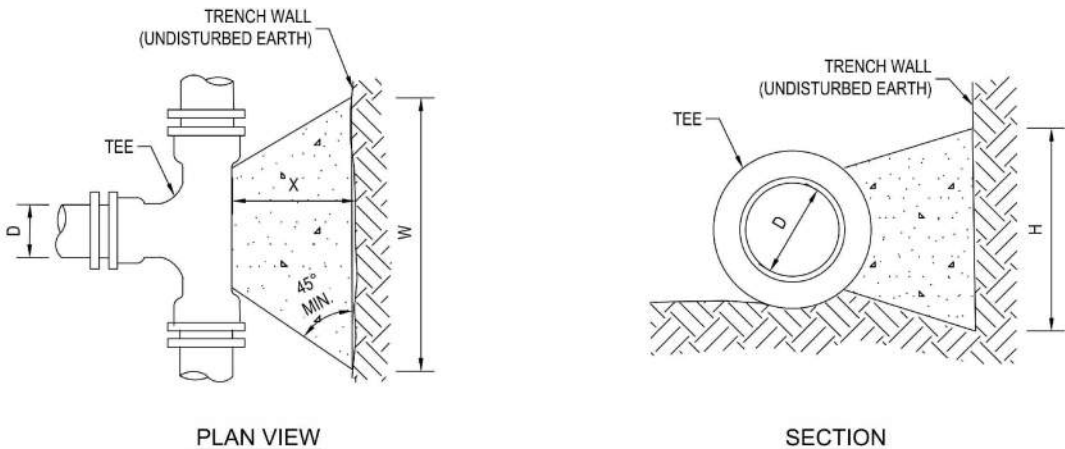
TAMPA
WATER
DEPARTMENT

APPROVED

REVISÉD

THRUST BLOCKS FOR PLUGS

2.08



DIMENSIONS OF THRUST BLOCKS FOR GOOD SOIL

TEES	SIZE (D)	4"	6"	8"	12"	16"	20"	24"
	THRUST (LBS.)	3,439	7,104	12,223	26,002	45,180	69,624	99,330
	BEARING AREA (FT. ²)	2.58	5.33	9.17	19.50	33.89	52.22	74.50
	CONCRETE (YDS. ³)	0.042	0.126	0.285	0.891	1.811	3.005	4.594
	H (FT.)	1.3	1.9	2.5	3.6	4.8	5.9	7.0
	W (FT.)	2.0	2.8	3.7	5.4	7.1	8.9	10.6
	X (FT.)	1.0 MIN.	1.4 MIN.	1.9 MIN.	2.7 MIN.	3.0 MIN.	3.0 MIN.	3.0 MIN.

NOTES:

1. SIZE (D), SHALL BE THE BRANCH SIZE OF TEES.
2. CONCRETE SHALL BE KEPT AT SUFFICIENT DISTANCE FROM JOINT FOR REMOVAL OF ALL JOINT ACCESSORIES INCLUDING BOLTS.
3. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED SOIL.
4. THIS TABLE SHOWS THE MINIMUM SIZE THRUST BLOCKS FOR SOIL BEARING PRESSURE OF 2000 PSF AND AN INTERNAL PRESSURE OF 190 PSI.
5. TEES SHALL BE COMPLETELY POLYWRAPPED PRIOR TO POURING THRUST BLOCKS.

WARNING - COVER TO T.O.P. IS 3 FEET FOR 12" AND SMALLER MAINS; 4 FEET FOR 16" AND LARGER MAINS. POOR AND WET SOIL (SILTY SOILS, CLAY, MUCK AND PEAT) WILL REQUIRE LARGER THRUST BLOCKS.



LAST REVISION

JUL 2018

THRUST BLOCKS FOR TEES

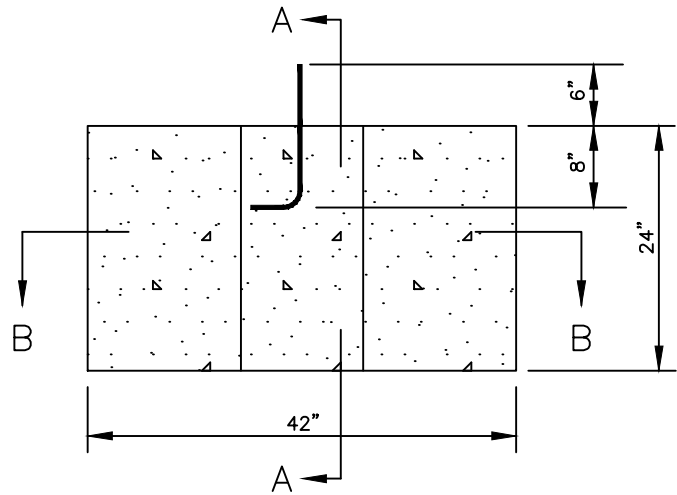
2.09

No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE _____ P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS WATER DETAILS (3)	SHEET W-34

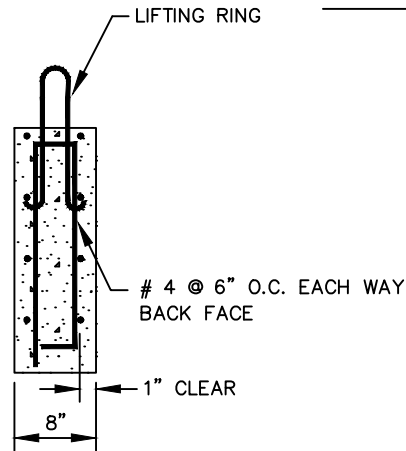
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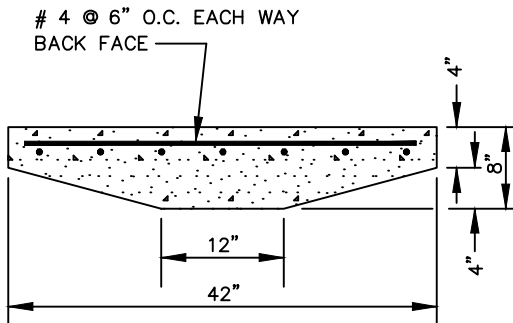
SW



ELEVATION



SECTION A-A

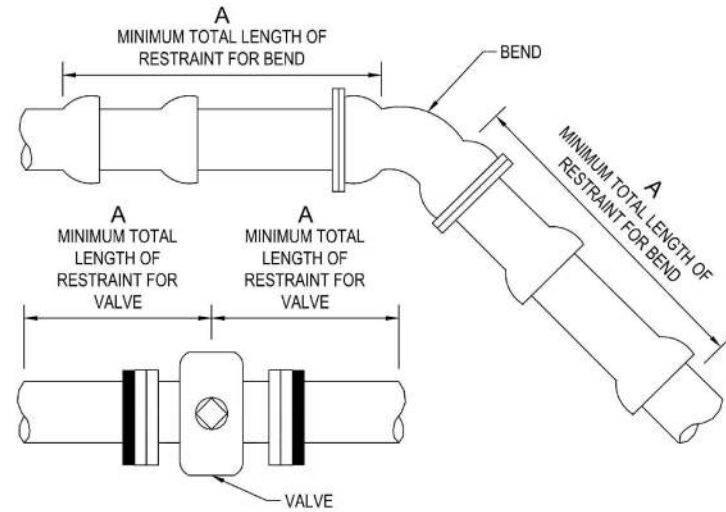
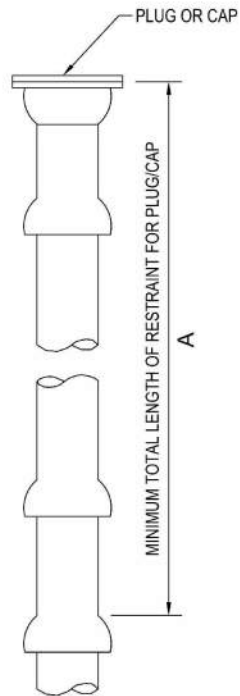


SECTION B - B

Notes:

1. Reinforcing to be standard deformed bar. $f'_c=3000$ psi
2. Precast thrust blocking to be used only on fire hydrants and 8" or smaller fittings, if allowed by the Engineer.
3. A 12"x18" spacer block shall be placed between the precast thrust block and fitting if so directed by the Engineer.

 TAMPA WATER DEPARTMENT	APPROVED	REVISED	PRECAST CONCRETE THRUST BLOCK	2.10
	_____	_____		



RESTRAIN "A" (LF)									
FITTING / PIPE	4"	6"	8"	12"	16"	20"	24"	30"	36"
11-1/4°	4	5	8	10	11	13	15	19	21
22-1/2°	8	11	15	20	21	26	31	38	44
45°/OFFSET	16	23	30	43	45	55	65	78	91
90°	39	55	73	103	109	133	156	189	220
PLUG/CAP/VALVE*	69	98	128	179	179	218	255	306	356
A = MINIMUM FOOTAGE OF PIPE TO BE RESTRAINED									
* = FOR IN-LINE VALVE, RESTRAINT LENGTH "A" REQUIRED BOTH WAYS FROM VALVE									

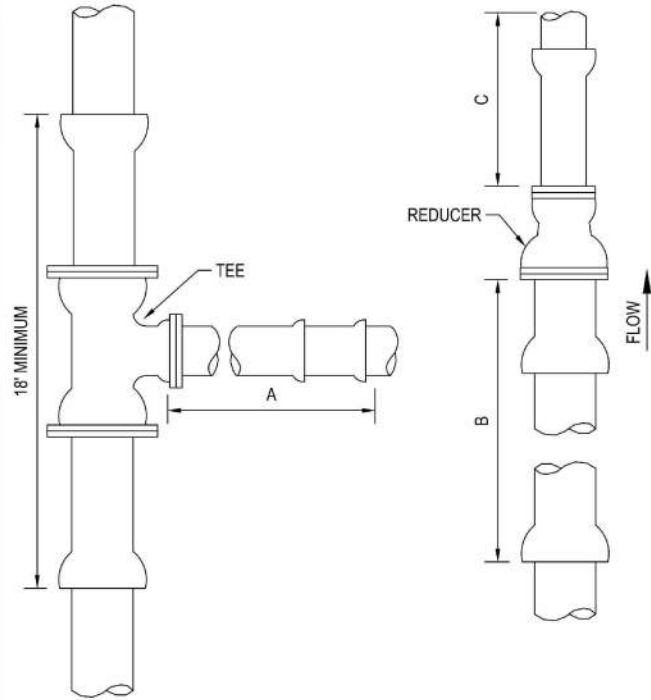
NOTES:

1. THIS TABLE IS BASED ON:
 - a. MAXIMUM TEST PRESSURE OF 190 PSI
 - b. LAYING CONDITION TYPE 2 (SEE DETAILS 2.01 AND 2.02)
 - c. POOR SOIL CONDITIONS
 - d. USING D.I.P.
 - e. 3 FEET OF COVER FOR 12" AND SMALLER MAINS; 4 FEET OF COVER FOR 16" AND LARGER MAINS
 - f. HORIZONTAL BENDS ONLY - ENGINEER TO SUBMIT CALCULATIONS FOR VERTICAL RESTRAINTS
2. "RESTRAINED" PIPE SHALL BE MANUFACTURED RESTRAINED JOINT PIPE, PUSH-ON JOINT PIPE RESTRAINED W/GASKET-TYPE "GRIPPER RESTRAINTS", OR MECHANICAL JOINT PIPE RESTRAINED BY MEGALUG (OR APPROVED EQUIVALENT).
3. ANY ADDITIONAL FITTINGS WITHIN THE RESTRAINED SECTION SHALL BE RESTRAINED ACCORDINGLY.

	LAST REVISION	RESTRAINED JOINT STANDARD FOR BENDS, PLUGS, CAPS, AND VALVES	2.11
	JUL 2018		

No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS WATER DETAILS (4)	SHEET W-35

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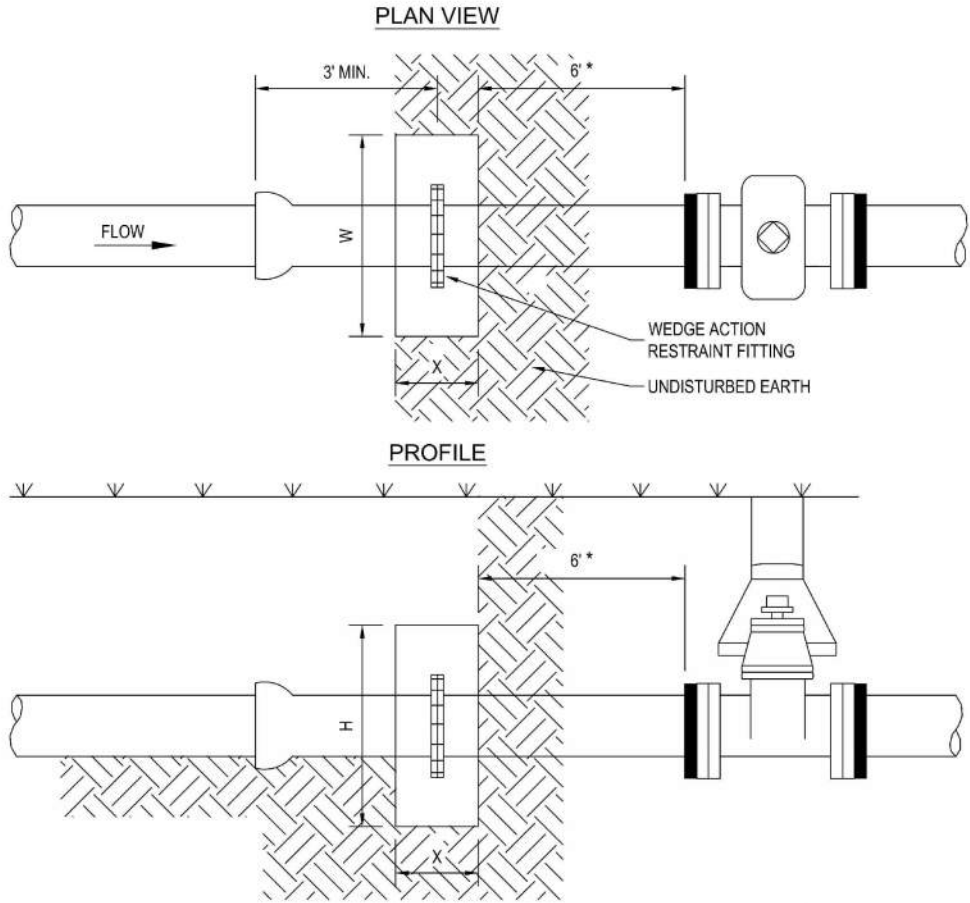


FITTING SIZE	RESTRAIN (LF)		UNRESTRAINED STRAIGHT RUN (LF)
	TEE "A"	REDUCER "B"	REDUCER "C"
4x4	31	*	*
6x4	14	50	74
6x6	60	*	*
8x4	A.T.	91	178
8x6	48	54	70
8x8	90	*	*
12x4	A.T.	155	455
12x6	24	130	260
12x8	71	95	144
12x12	143	*	*
16x6	A.T.	151	401
16x8	34	130	265
16x12	96	76	103
16x16	148	*	*
20x6	A.T.	195	659
20x8	18	180	461
20x12	85	136	233
20x16	139	76	96
20x20	186	*	*
24x6	A.T.	236	971
24x8	A.T.	224	700
24x12	74	188	391
24x16	130	139	215
24x20	180	76	93
24x24	224	*	*
30x6	A.T.	293	1534
30x8	A.T.	283	1130
30x12	56	255	678
30x16	118	216	426
30x20	169	168	260
30x24	215	108	138
30x30	275	*	*
36x6	A.T.	345	2230
36x8	A.T.	336	1660
36x12	38	314	1030
36x16	104	283	689
36x20	159	244	466
36x24	206	195	306
36x30	269	108	133
36x36	326	*	*

A.T. = RESTRAINT REQUIRED AT TEE ONLY. * = NOT APPLICABLE

- NOTES:
- THIS TABLE IS BASED ON:
 - MAXIMUM TEST PRESSURE OF 190 PSI
 - LAYING CONDITION TYPE 2 (SEE DETAILS 2.01 AND 2.02)
 - POOR SOIL CONDITIONS
 - USING D.I.P.
 - 3 FEET OF COVER FOR 12" AND SMALLER MAINS; 4 FEET OF COVER FOR 16" AND LARGER MAINS
 - HORIZONTAL BENDS ONLY - ENGINEER TO SUBMIT CALCULATIONS FOR VERTICAL RESTRAINTS
 - RESTRAINT FOR REDUCERS: IF "C" STRAIGHT RUN OF PIPE DOWNSTREAM OF REDUCER NOT AVAILABLE, THE RESTRAIN "B" UPSTREAM OF REDUCER.
 - "RESTRAINED" PIPE SHALL BE MANUFACTURED RESTRAINED JOINT PIPE, PUSH-ON JOINT PIPE RESTRAINED W/GASKET-TYPE "GRIPPER RESTRAINTS", OR MECHANICAL JOINT PIPE RESTRAINED BY MEGALUG (OR APPROVED EQUIVALENT).
 - ANY ADDITIONAL FITTINGS WITHIN THE RESTRAINED SECTION SHALL BE RESTRAINED ACCORDINGLY.

	LAST REVISION	RESTRAINED JOINT STANDARD FOR TEES AND REDUCERS	2.12A
	JUL 2018		



SIZE (D)	4"	6"	8"	12"	16"	20"	24"
THRUST (LBS.)	3,439	7,104	12,223	26,002	45,180	69,624	99,330
BEARING AREA (FT. ²)	2.58	5.33	9.17	19.50	33.89	52.22	74.50
CONCRETE (YDS. ³)	0.15	0.31	0.71	1.51	3.29	5.07	7.23
H (FT.)	1.6	2.4	3.1	4.5	6.0	7.4	8.8
W (FT.)	1.6	2.4	3.1	4.5	6.0	7.4	8.8
X (FT.)	1.5 MIN.	1.5 MIN.	2.0 MIN.	2.0 MIN.	2.5 MIN.	2.5 MIN.	2.5 MIN.

- NOTES:
- CONCRETE SHALL BE KEPT AT SUFFICIENT DISTANCE FROM JOINT FOR REMOVAL OF ALL JOINT ACCESSORIES INCLUDING BOLTS.
 - ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED SOIL.
 - THIS TABLE SHOWS THE MINIMUM SIZE THRUST BLOCKS FOR SOIL BEARING PRESSURE OF 2000 PSF AND AN INTERNAL PRESSURE OF 190 PSI. COVER TO T.O.P. IS 3 FEET FOR 12" AND SMALLER MAINS; 4 FEET FOR 16" AND LARGER MAINS.
 - POOR AND WET SOIL (SILTY SOILS, CLAY, MUCK AND PEAT) WILL REQUIRE LARGER THRUST BLOCKS, AS DIRECTED BY CITY ENGINEER.
 - FITTINGS SHALL BE COMPLETELY POLYWRAPPED PRIOR TO POURING THRUST BLOCKS.
- * CLOSEST DISTANCE TO VALVE FOR DEADMAN TO REMAIN EFFECTIVE.

	LAST REVISION	DEADMAN THRUST BLOCK	2.12B
	JUL 2018		

No.	DATE	REVISIONS



PENNONI ASSOCIATES INC.
2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

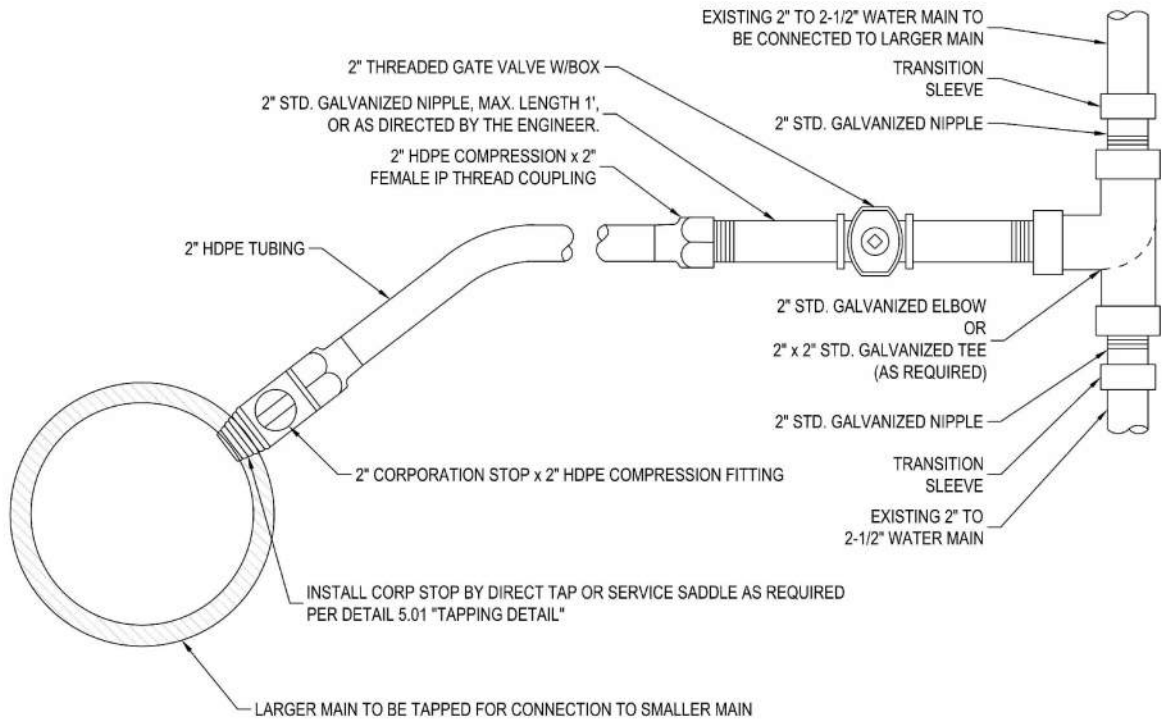
43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
WATER DETAILS (5)

SHEET
W-36

SW

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PLOT: 11/19/2018 5:14:30 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB PROJECT STATUS: ---

SW



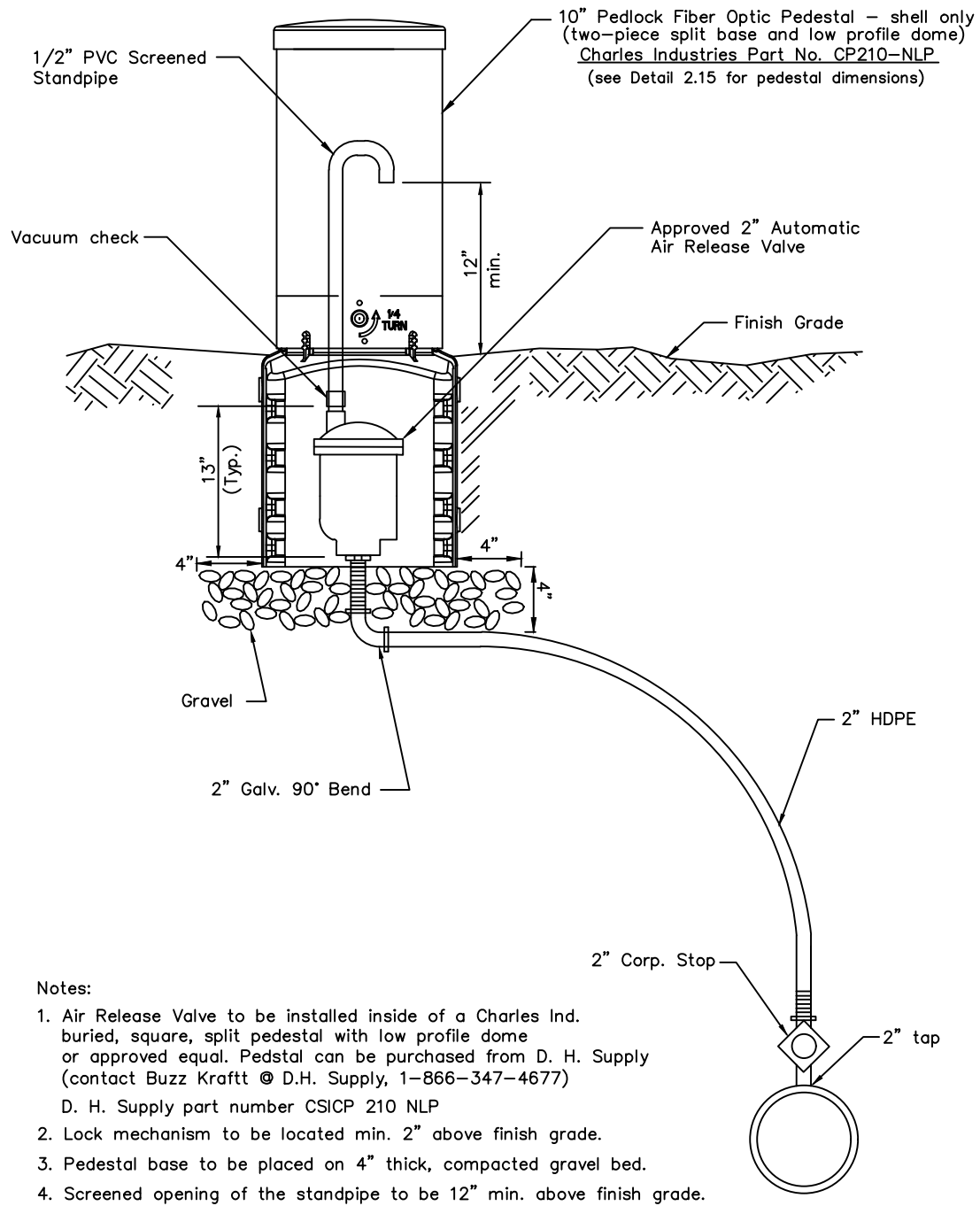
NOTE:
SEE DETAIL 5.01 TO DETERMINE WHEN SADDLES ARE REQUIRED FOR CORP INSTALLATION. VALVE SHALL BE SET IN ACCORDANCE WITH DETAIL 3.01.



LAST REVISION
JUL 2018

TAPPED CONNECTION FROM DI, CI,
OR PVC PIPE TO <4" WATER MAINS

2.13A



Notes:

1. Air Release Valve to be installed inside of a Charles Ind. buried, square, split pedestal with low profile dome or approved equal. Pedstal can be purchased from D. H. Supply (contact Buzz Kraftt @ D.H. Supply, 1-866-347-4677)
D. H. Supply part number CSICP 210 NLP
2. Lock mechanism to be located min. 2" above finish grade.
3. Pedestal base to be placed on 4" thick, compacted gravel bed.
4. Screened opening of the standpipe to be 12" min. above finish grade.

TAMPA
WATER
DEPARTMENT

APPROVED
Sept. 2011

REVISED

AUTOMATIC
AIR RELEASE VALVE

2.14

No.	DATE	REVISIONS



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P.E. NO. 38766

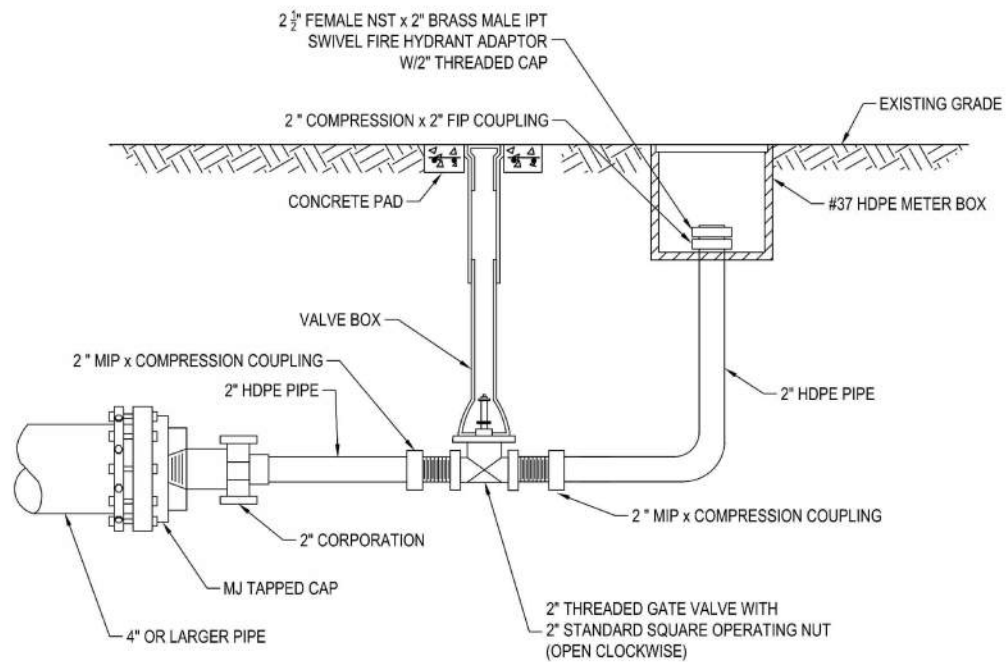
DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

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Department of Transportation and
Stormwater Services
Stormwater Engineering Division

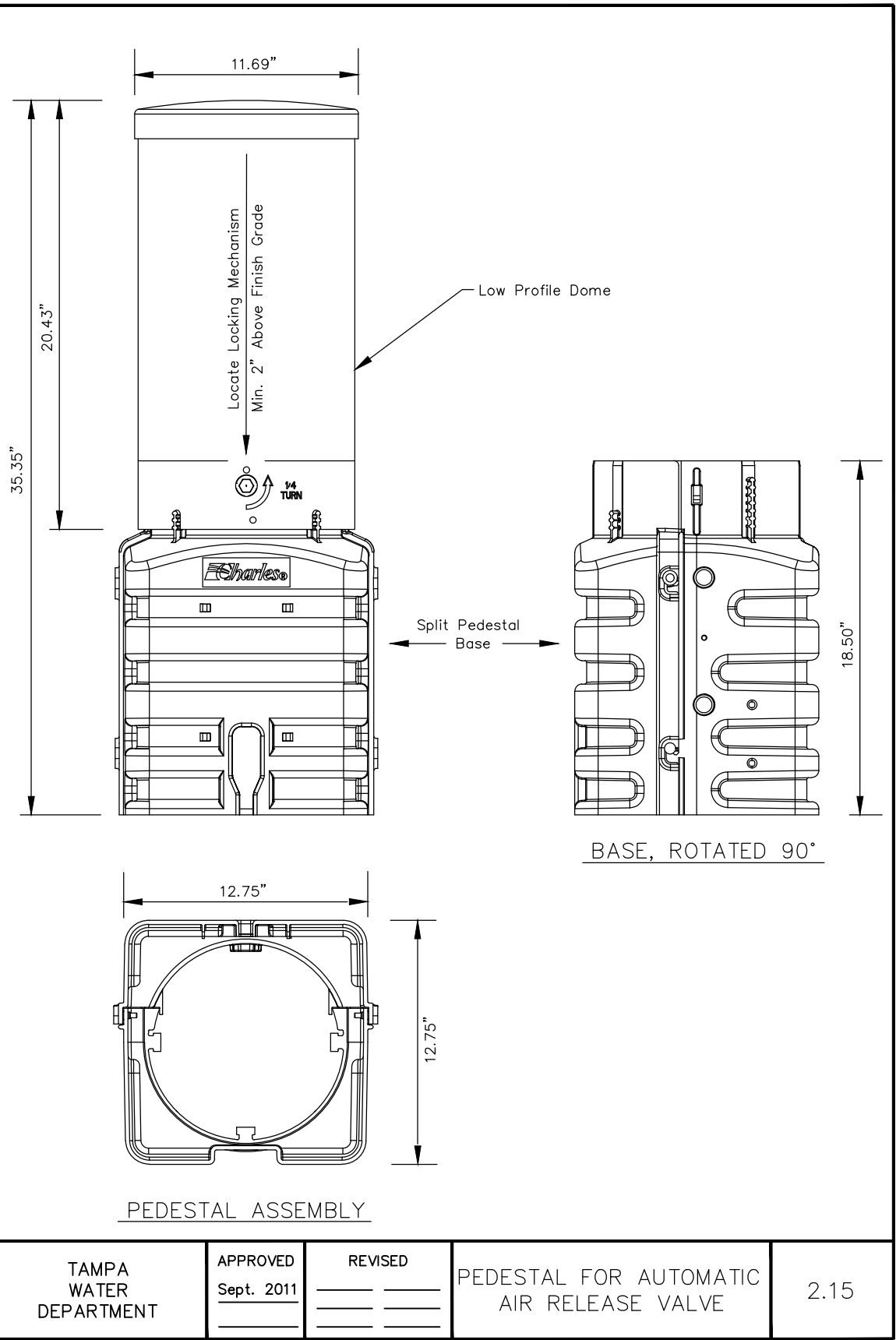
43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
WATER DETAILS (6)

SHEET
W-37

SW



BLOW-OFF FOR ≥ 4" MAINS
NO GALVANIZED PIPES OR FITTINGS ALLOWED.
SCHEDULE 80 PVC ALLOWED.



LAST REVISION
JUL 2018

BLOW-OFF VALVE ASSEMBLY
FOR ≥ 4" MAINS
W/DI, CI OR PVC PIPE

2.17A

TAMPA
WATER
DEPARTMENT

APPROVED
Sept. 2011

REVISED

PEDESTAL FOR AUTOMATIC
AIR RELEASE VALVE

2.15

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PLOT DATE: 11/19/2018 5:14:36 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI NCS.STB PROJECT STATUS: ---

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2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

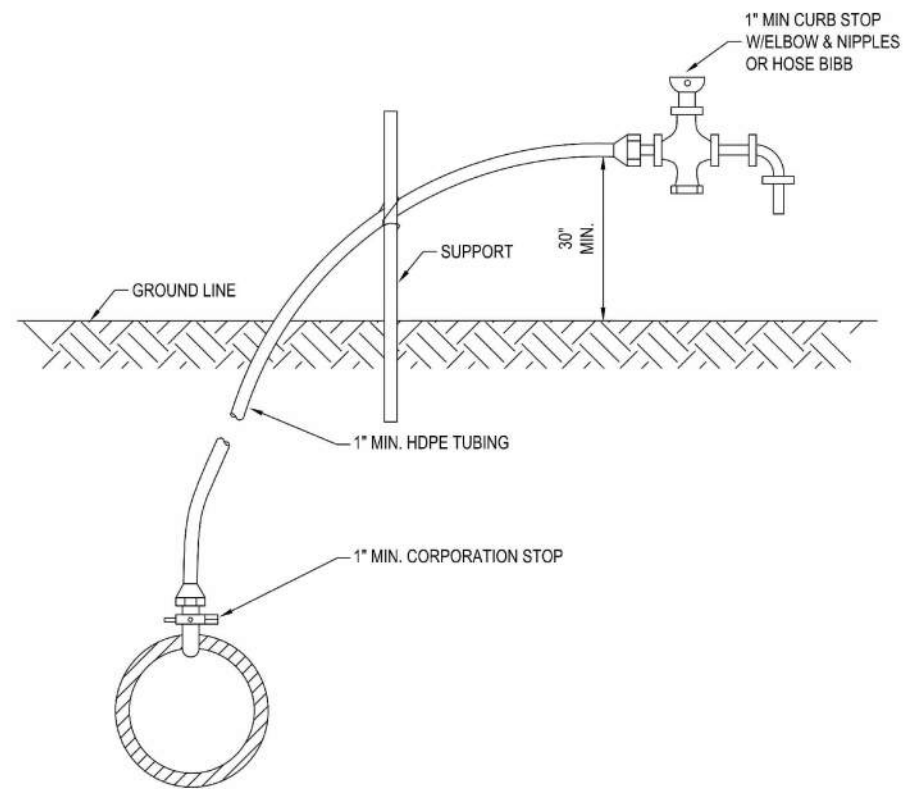
DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS

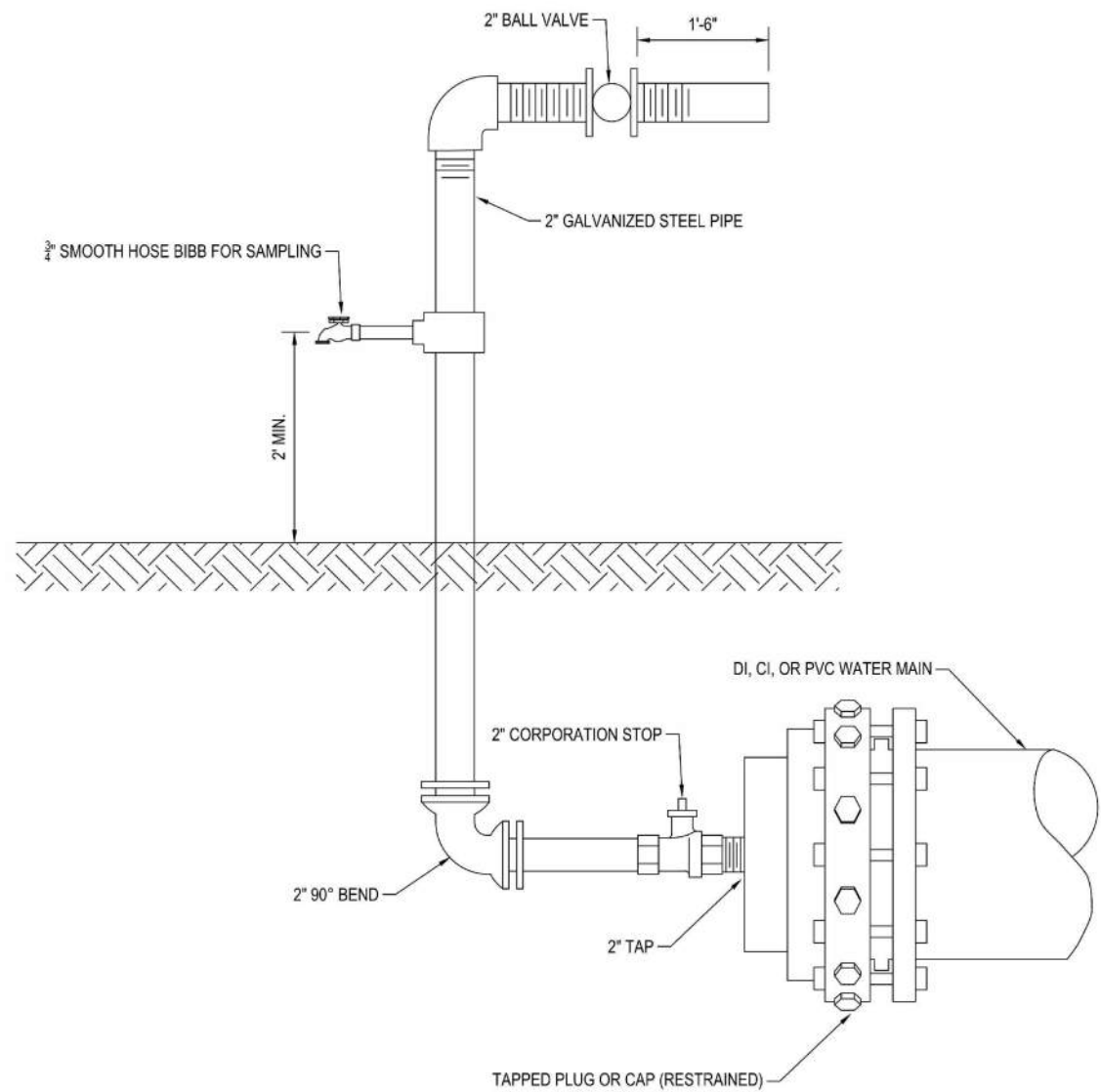
WATER DETAILS (7)

SHEET
W-38



- NOTES:
- 1. WATER OUTLET SHALL BE HELD UP OFF THE GROUND SO AS NOT TO INTERFERE WITH THE SAMPLING PROCESS.
 - 2. CORPORATION STOP TO BE REMOVED AND BRASS PLUG INSTALLED IN TAPPED MAIN AFTER OPERATION.

	LAST REVISION	TEMPORARY SAMPLE TAP INSTALLATION W/DI, CI, OR PVC PIPE	2.18A
	JUL 2018		

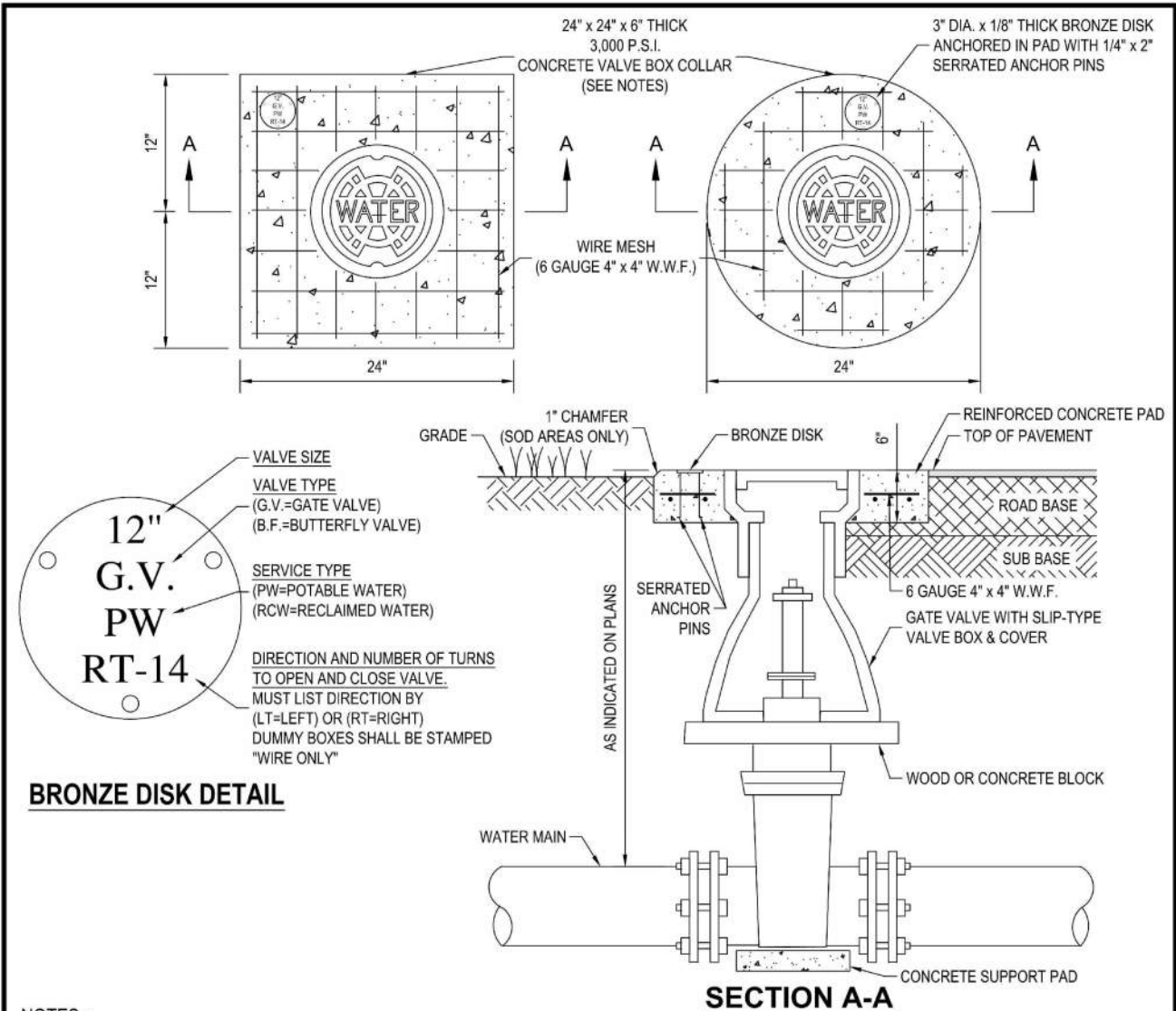


- NOTES:
- 1. FOR DEAD-END MAINS, SAMPLE TAP TO BE INSTALLED ON A 2" TAPPED CAP/PLUG.
 - 2. FLUSHING/SAMPLING ARRANGEMENT TO BE REMOVED AFTER DISINFECTION OF MAIN LINE.
 - 3. AFTER OPERATION COMPLETE, INSTALL BRASS PLUG AT CORPORATION STOP.

	LAST REVISION	TEMPORARY SAMPLE TAP INSTALLATION FOR END OF LINE W/DI, CI, OR PVC PIPE	2.19A
	JUL 2018		

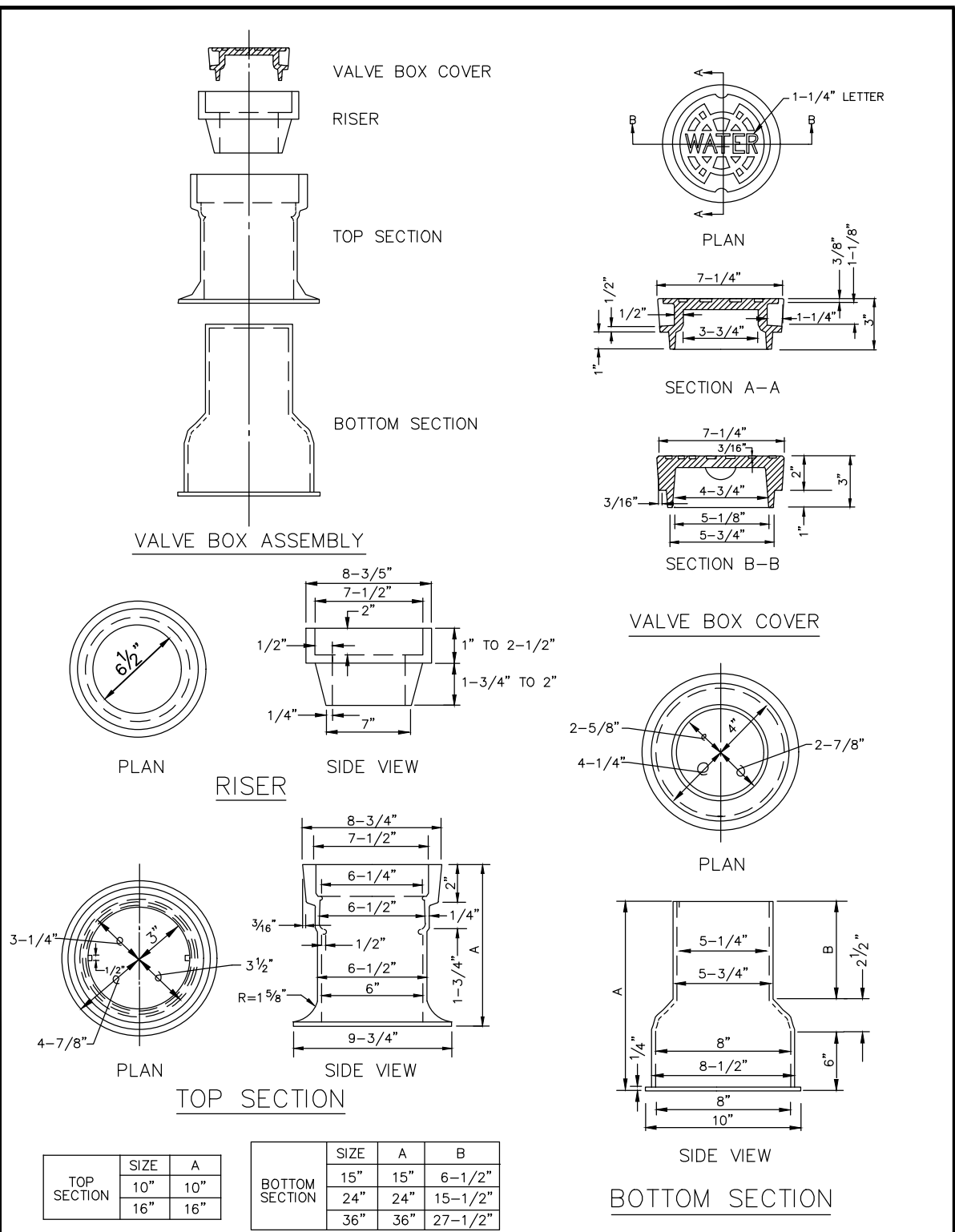
No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS WATER DETAILS (8)	SHEET W-39

M:\PROJECTS\TMPA\15001-43RD_STREET\DESIGN_PUBLISH\BID SET\1801 WATER DETAILS.DWG
PLOT DATE: 11/19/2018 5:14:41 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI NCS.STB PROJECT STATUS: ---



- NOTES :
1. CIRCULAR OR SQUARE CONCRETE PAD REQUIRED FOR ALL VALVE BOX INSTALLATIONS.
 2. CAST IRON VALVE BOXES SHALL BE FIRMLY SUPPORTED AND CENTERED AND PLUMB OVER THE OPERATING NUT OF THE VALVE. VALVE BOX COVER SHALL BE FLUSH WITH THE SURFACE OF THE FINISHED PAVEMENT, OR GRADE OR AT SUCH OTHER LEVEL AS MAY BE DIRECTED BY THE DEPARTMENT.
 3. "BLUE" WATER VALVE LOCATE MARKERS REQUIRED FOR ALL VALVE INSTALLATIONS.
 4. EMBED BRONZE VALVE INFO DISK INTO CONCRETE VALVE BOX COLLAR.
 5. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST T.W.D. APPROVED MATERIAL SPECIFICATIONS.
 6. IF VALVE IS LOCATED WITHIN A SIDEWALK CONCRETE COLLAR MAY BE ELIMINATED AND DISK SET FLUSH DIRECTLY IN SIDEWALK.
 7. BRONZE DISK REQUIRED FOR ALL VALVES AND DUMMY BOXES.

	LAST REVISION	VALVE INSTALLATION W/VALVE BOX & PAD FOR DI OR CI PIPE	3.01
	JUL 2018		



	APPROVED	REVISED	VALVE BOX	3.03

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PLOTTED: 11/19/2018 5:14:45 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---

No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

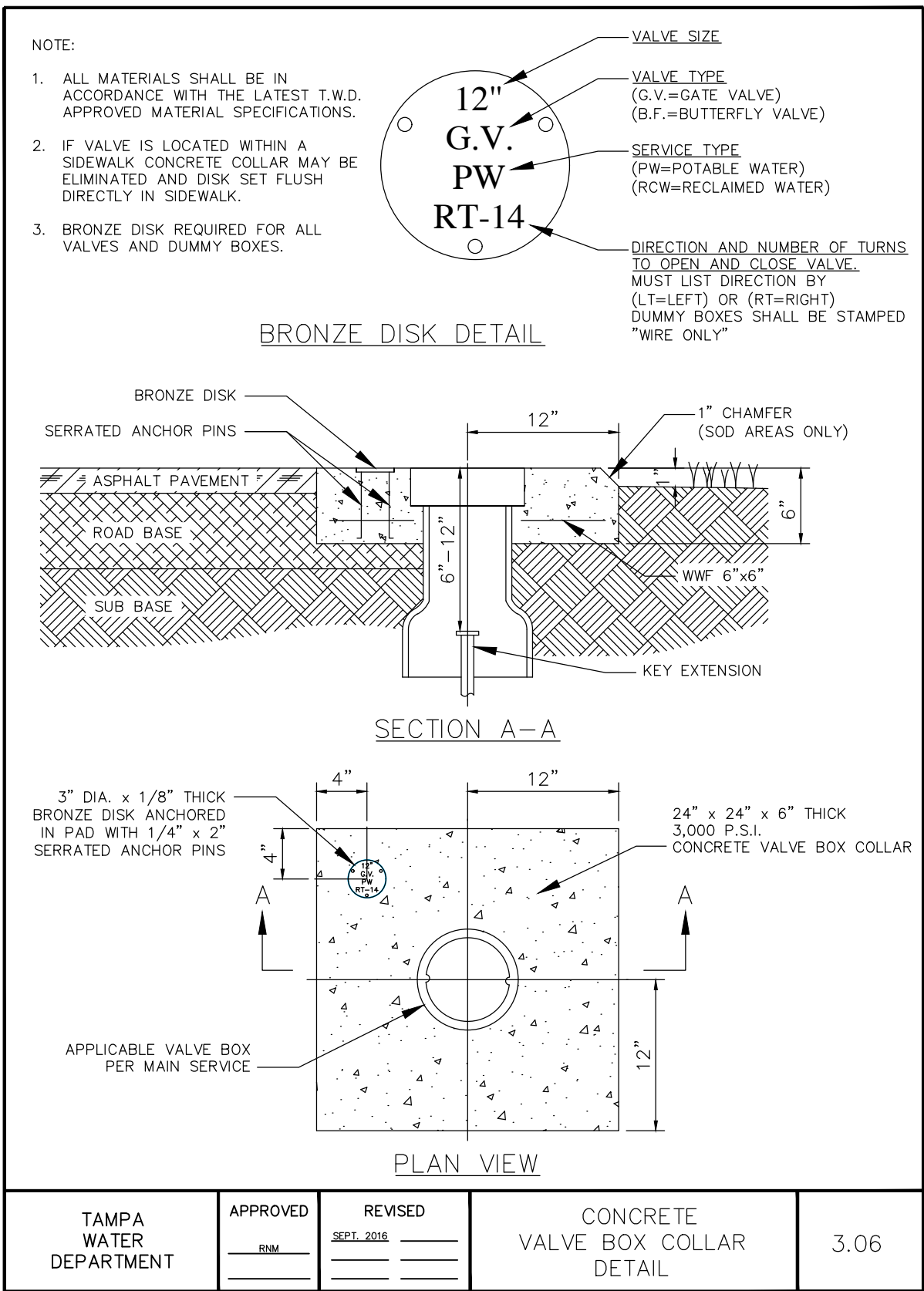
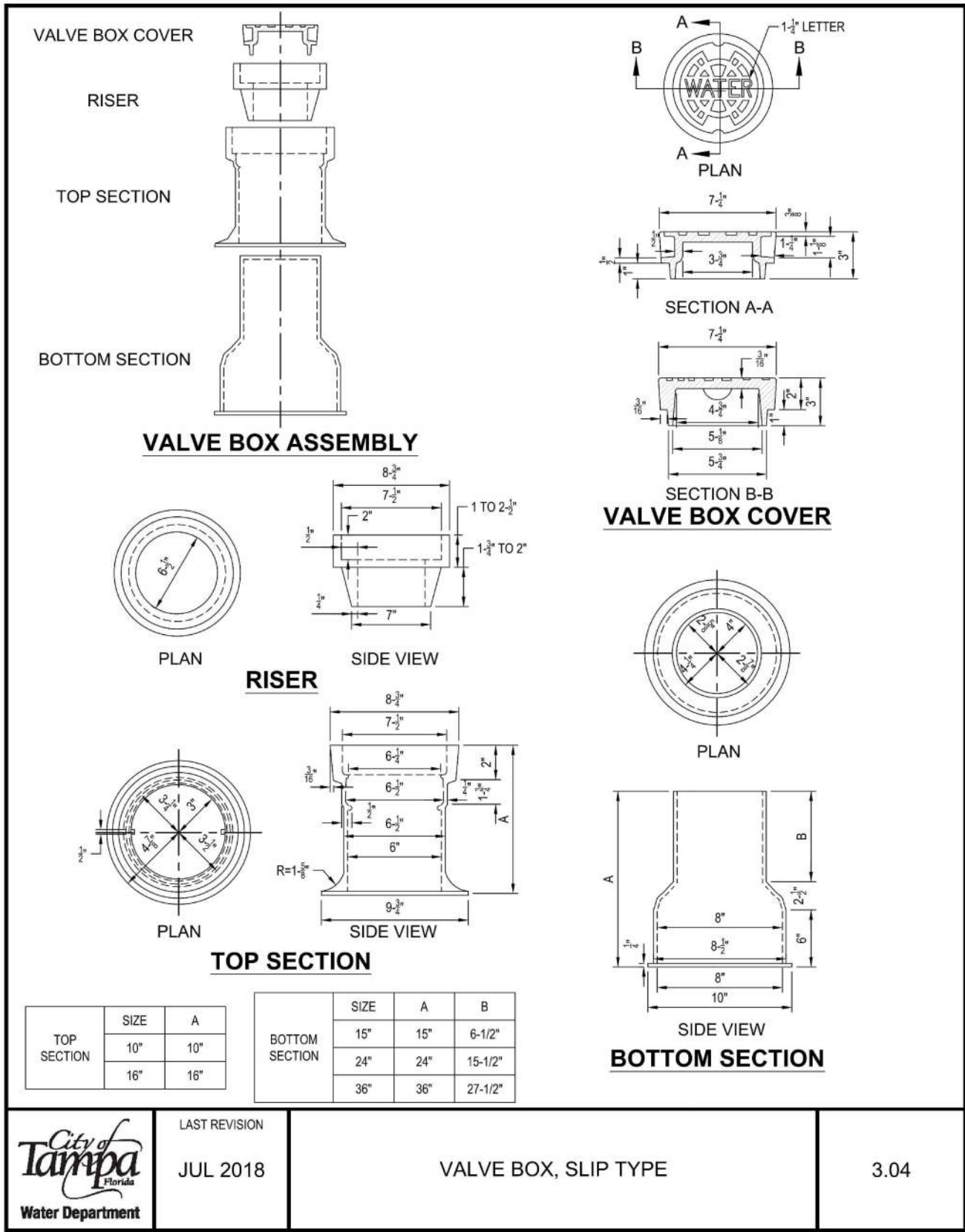
E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

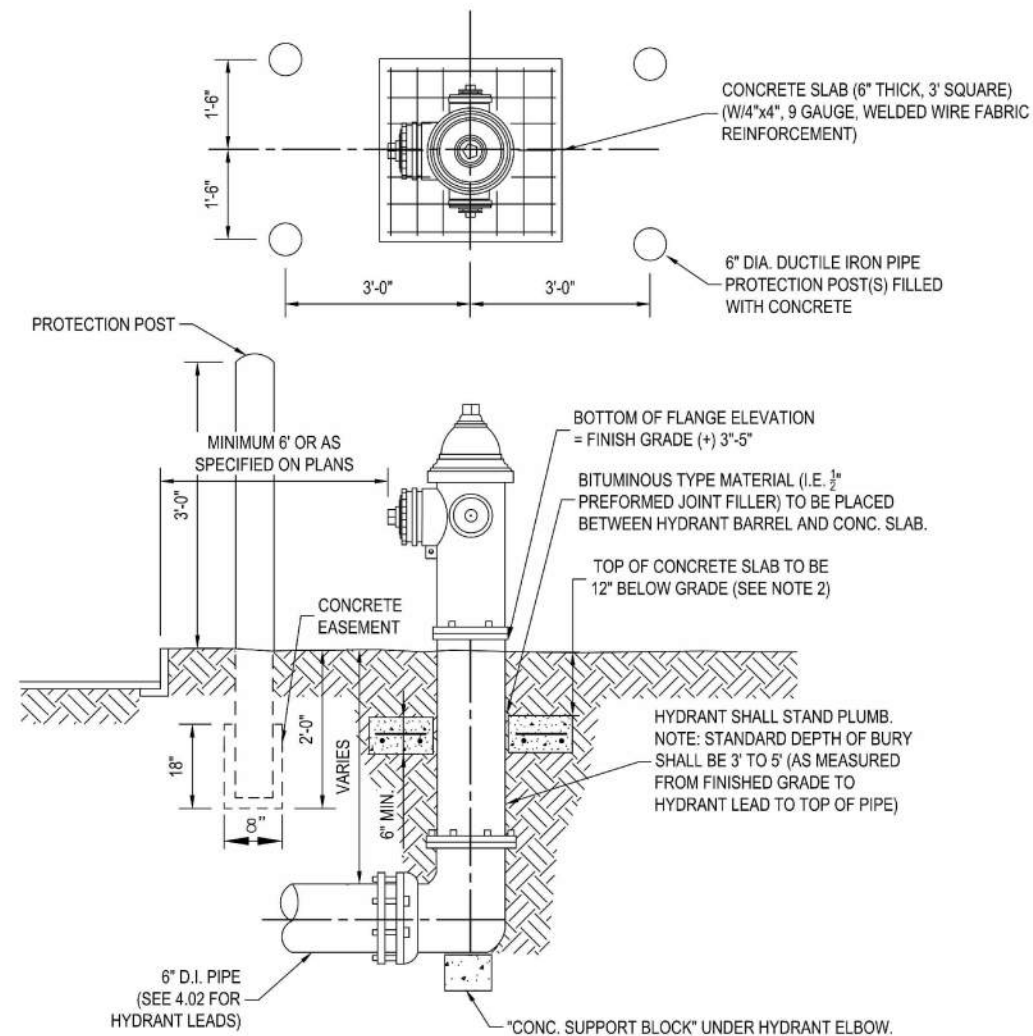
43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
WATER DETAILS (9)

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PLOT DATE: 11/19/2018 5:14:50 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI NCS.STB PROJECT STATUS: ---



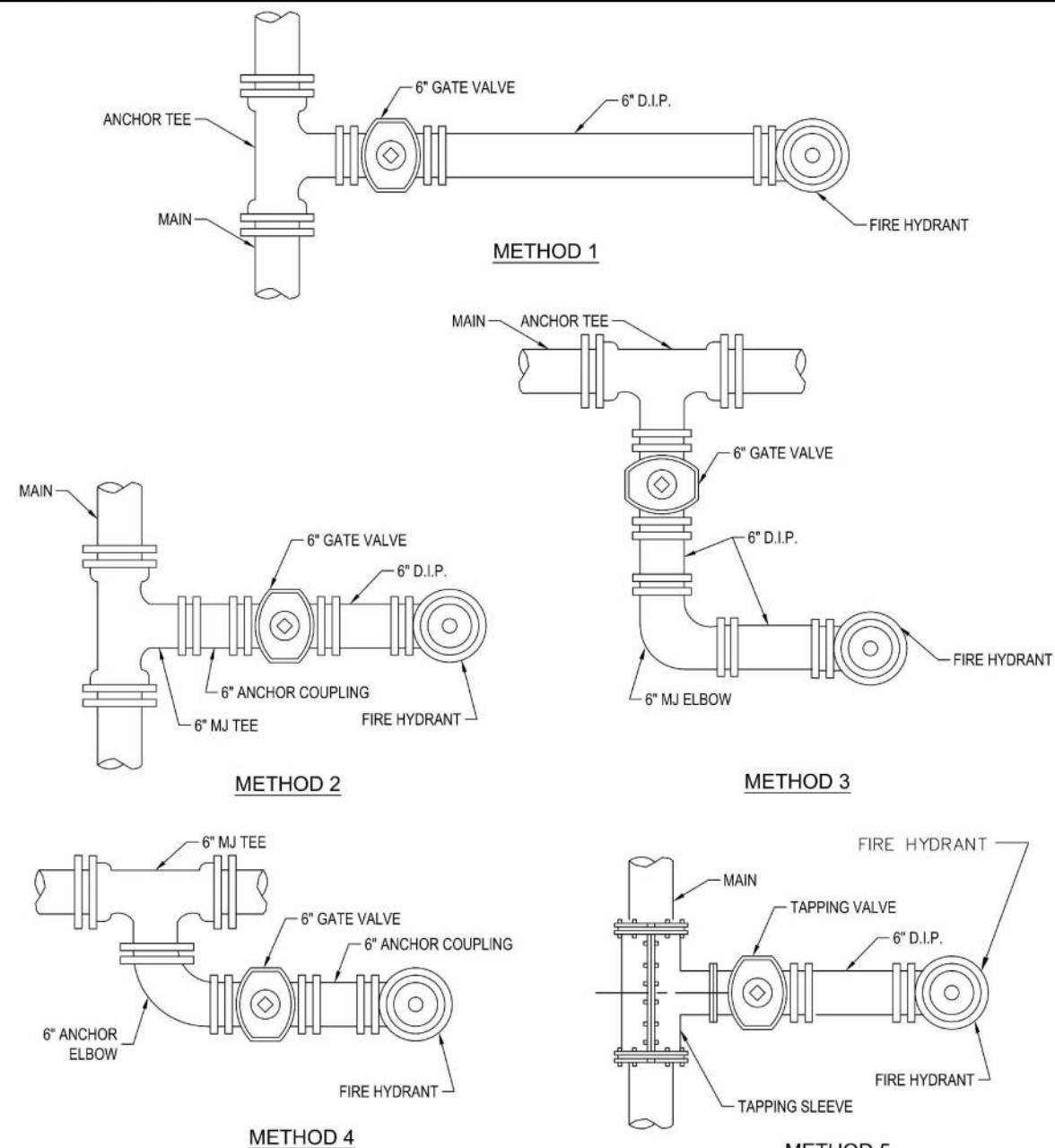
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No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS WATER DETAILS (10)	SHEET W-41



- NOTES:
1. FIRE HYDRANT BARREL ABOVE THE GROUND LINE SHALL BE PAINTED WITH A HIGH-GRADE ENAMEL PAINT, FEDERAL SAFETY YELLOW (OSHA APPROVED), AND THE HYDRANT BONNET SHALL BE PAINTED OSHA GREEN.
 2. CONCRETE SLAB MAY BE ELIMINATED IN AREAS WHERE HYDRANT IS SET IN SIDEWALK AND SIDEWALK HAS BEEN INSTALLED PRIOR TO FINAL ACCEPTANCE OF THE HYDRANT.
 3. THRUST RESTRAINT FOR HYDRANT:
a) HYDRANT SHALL BE FIRMLY SUPPORTED UNDER ELBOW IN ALL METHODS BY SUPPORT BLOCK
b) ALL BACKFILL SHALL BE THOROUGHLY COMPACTED UNDER SUPPORT BLOCK AND UNDER THRUST COLLAR
c) ALL HYDRANT LEADS SHALL BE RESTRAINED BY MEGALUGS OR EQUIVALENT MECHANICAL RESTRAINTS
 4. PROTECTION POSTS ARE REQUIRED WHEN HYDRANT IS LESS THAN 6 FEET FROM EDGE OF PAVEMENT, OR AS DIRECTED BY THE ENGINEER.
 5. FOR PVC MAINS, INSTALL CONCRETE SUPPORT BLOCK UNDER ALL HYDRANT TEES.

	LAST REVISION	FIRE HYDRANT INSTALLATION	4.01
	JUL 2018		

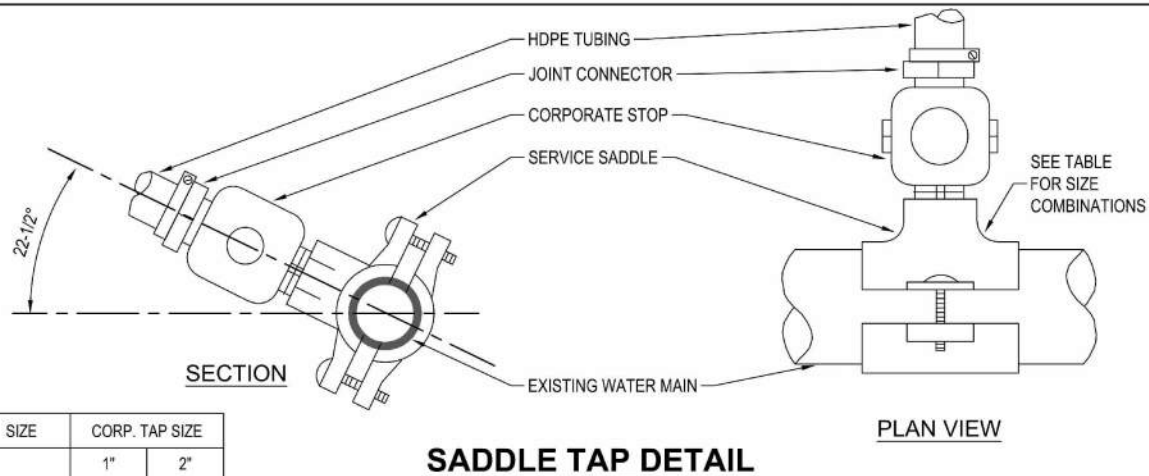
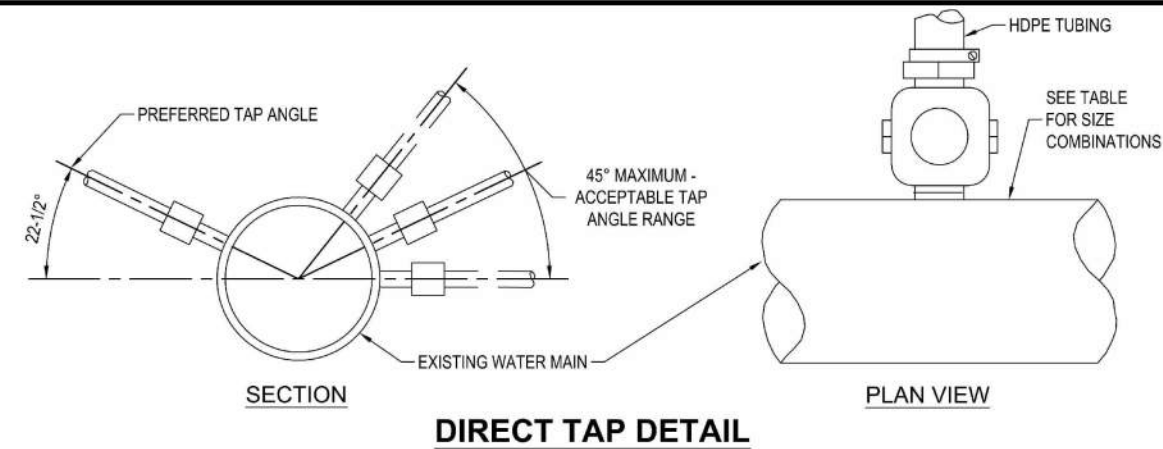


- NOTES:
1. VALVE SHALL BE SET IN ACCORDANCE WITH DETAIL 3.01. FOR HYDRANT SET, SEE DETAIL 4.01.
 2. ALL VALVES SHALL BE ANCHORED TO BRANCH OF TEE ON ALL HYDRANT INSTALLATIONS.
 3. ALL HYDRANT LEADS SHALL BE RESTRAINED BY MEGALUGS OR EQUIVALENT.
 4. FOR PVC MAINS, INSTALL CONCRETE SUPPORT BLOCK UNDER HYDRANT TEES.

	LAST REVISION	FIRE HYDRANT METHODS OF INSTALLATION	4.02
	JUL 2018		

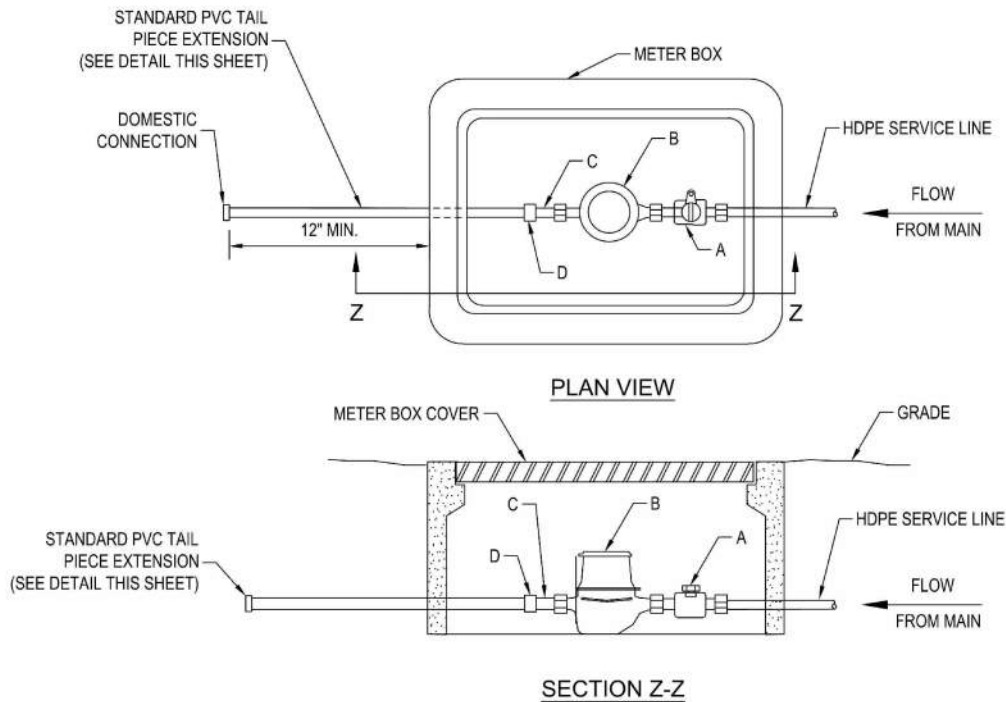
No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS WATER DETAILS (II)	SHEET W-42

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PLOT: 11/19/2018 5:14:56 PM, BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI.NCS,STB, PROJECT STATUS: ---

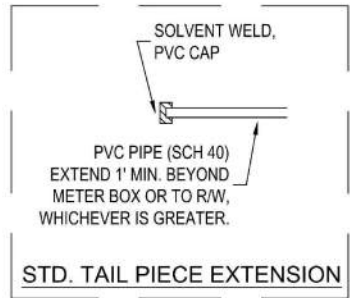


PIPE	SIZE	CORP. TAP SIZE	
DI/CI		1"	2"
	12"	DT	DT
	8"	DT	SS
	6"	DT	SS
PVC	4"	SS	SS
	2", 2-1/2"	SS	NA
	8", C-900	SS	SS
	6", C-900	SS	SS
OTHER*	2"-SDR21	SS	NA
	12"	SS	SS
	10"	SS	SS
	8"	SS	SS
	6"	SS	SS
	4"	SS	NA
	3"	SS	NA
	2", 2-1/2"	SS	NA

LEGEND
DT- DIRECT TAP CAN BE ALLOWED SS- SERVICE
SADDLE IS REQUIRED NA- NOT ALLOWED
*ASBESTOS CEMENT, STEEL, GALVANIZED IRON PIPE,
NON STD PVC, ETC.



METER INSTALLATION PARTS LIST	
ITEM	DESCRIPTION
A	HDPE CJ X METER, SWIVEL NUT (CURB STOP)
B	METER
C	BRASS METER COUPLING
D	*PVC FIP X WELD COUPLING



* ALL PVC PIPE AND FITTINGS SHALL BE SCH 80 EXCEPT FOR STANDARD
TAIL PIECE SECTION WHICH WILL BE SCH 40.
NOTE: PARTS LIST IS FOR STANDARD INSTALLATION; ACTUAL PARTS
REQUIRED MAY VARY AS DIRECTED BY THE ENGINEER.

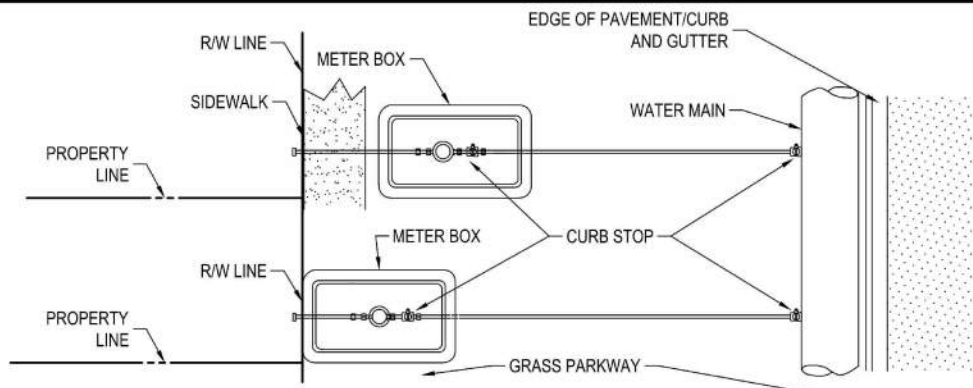
	LAST REVISION	TAPPING DETAIL FOR 3/4", 1", 1-1/2" & 2" W/DI, CI, OR PVC PIPE	5.01A
	JUL 2018		

	LAST REVISION	SINGLE METER SET DETAIL 3/4", 1", 1-1/2", 2"	5.02
	JUL 2018		

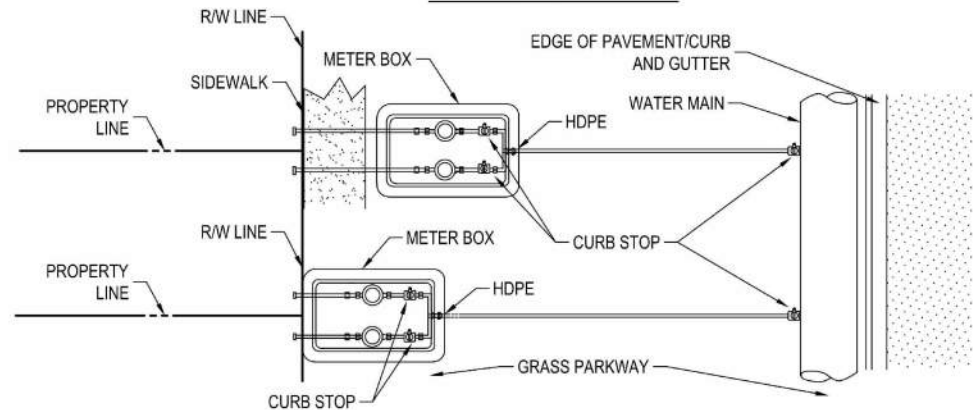
No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS WATER DETAILS (12)	SHEET W-43

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PLOTTED: 11/19/2018 5:15:01 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---

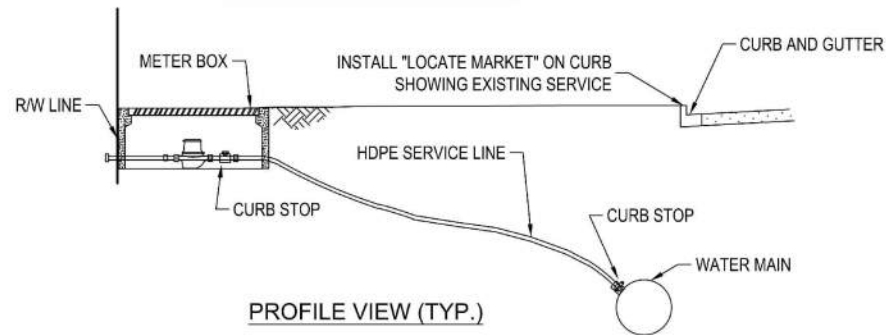
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PLOT DATE: 11/19/2018 5:15:06 PM BY: MICHAEL HENDERSON PLOT STYLE: PENNONI NCS.STB PROJECT STATUS: ---



PLAN - SINGLE METER



PLAN VIEW - DUAL METER



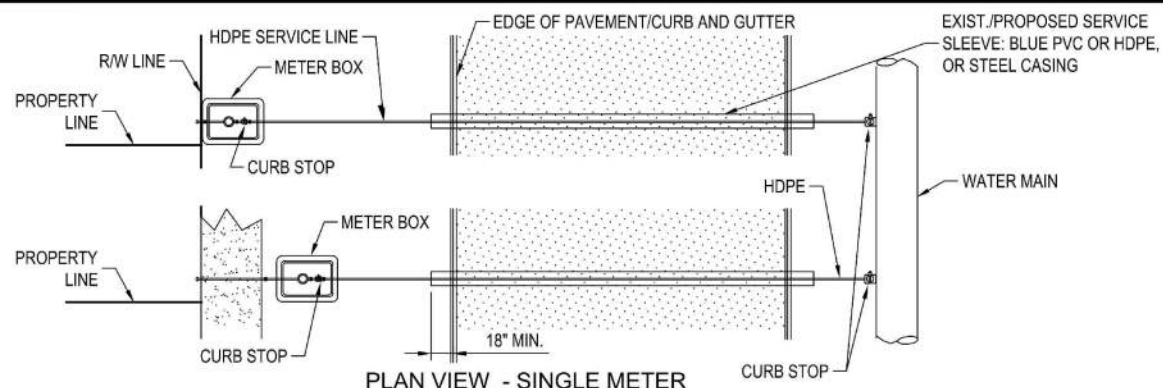
PROFILE VIEW (TYP.)

DO NOT INSTALL METER WITHIN SIDEWALK. WHEN SIDEWALK EXISTS, INSTALL METER ON STREET SIDE OF SIDEWALK OR WHERE DIRECTED BY CITY ENGINEER.

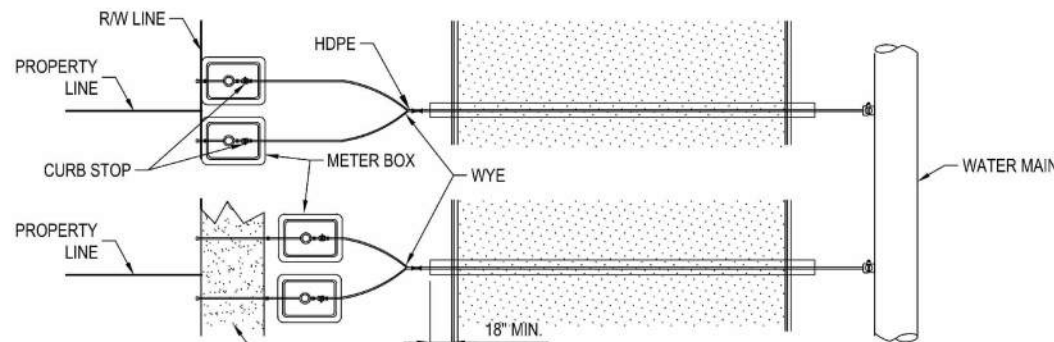
* LINE SIZE APPLICABLE FOR DDCVA			
SINGLE METER SIZE (INCHES)	SERVICE LINE SIZE (INCHES) (0'-15')	DUAL METER SIZE (INCHES)	SERVICE LINE SIZE (INCHES) (0'-15')
3/4	1	3/4	2
1	1	1	2
1 1/2	2	1 1/2	N/A
2*	2	2*	N/A

(FEET REFER TO DISTANCE FROM WATER MAIN TO METER)

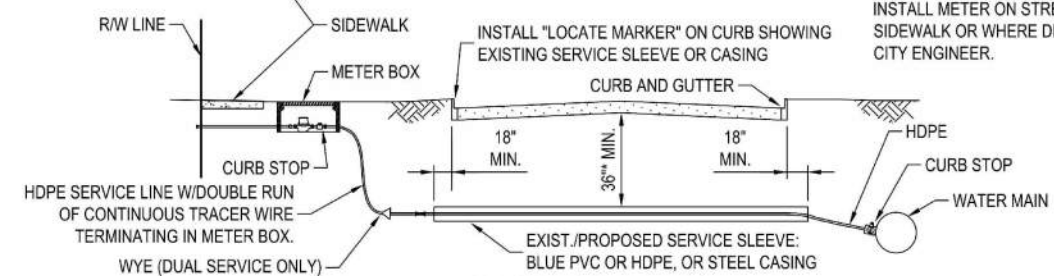
	LAST REVISION	SINGLE & DUAL METERED SERVICE - SHORT SIDE 3/4", 1", 1-1/2" & 2"	5.04A
	JUL 2018		



PLAN VIEW - SINGLE METER



PLAN VIEW - DUAL METER



PROFILE VIEW (TYP.)

CASING SPECIFICATION:

1. IF PUSHED-SCH 40 STEEL PIPE (MIN.)
2. IF LAYED IN OPEN TRENCH-SCH 40 STEEL PIPE OR SCH 80 PVC SOLVENT WELD PIPE.

SINGLE METER SIZE (INCHES)	SERVICE LINE SIZE (INCHES)		CASING SIZE (INCHES)
	(15'-80')	(80'-150')	
3/4	1	2	2 / 4
1	1	2	4
1 1/2	2	2	4
2**	4" D.I.P.	4" D.I.P.	12

(FEET REFER TO DISTANCE FROM WATER MAIN TO METER)

* OR GREATER, IF REQUIRED BY ROW CONTROLLING AGENCY

** LINE SIZES APPLICABLE FOR 2" DDCV

DUAL METER SIZE (INCHES)	SERVICE LINE SIZE (INCHES)		CASING SIZE (INCHES)
	(15'-80')	(80'-150')	
3/4	2	2	4
1	2	4" D.I.P.	4 / 12
1 1/2	N/A	N/A	N/A
2*	N/A	N/A	N/A

	LAST REVISION	SINGLE & DUAL METERED SERVICE - LONG SIDE 3/4", 1", 1-1/2" & 2"	5.05A
	JUL 2018		

SW

No.	DATE	REVISIONS

PENNONI ASSOCIATES INC.
2555 Nursery Road, Suite 101
Clearwater, FL 33764
Certificate of Authorization 7819

E. PETER NIKOLOV, P.E. DATE
P.E. NO. 38766

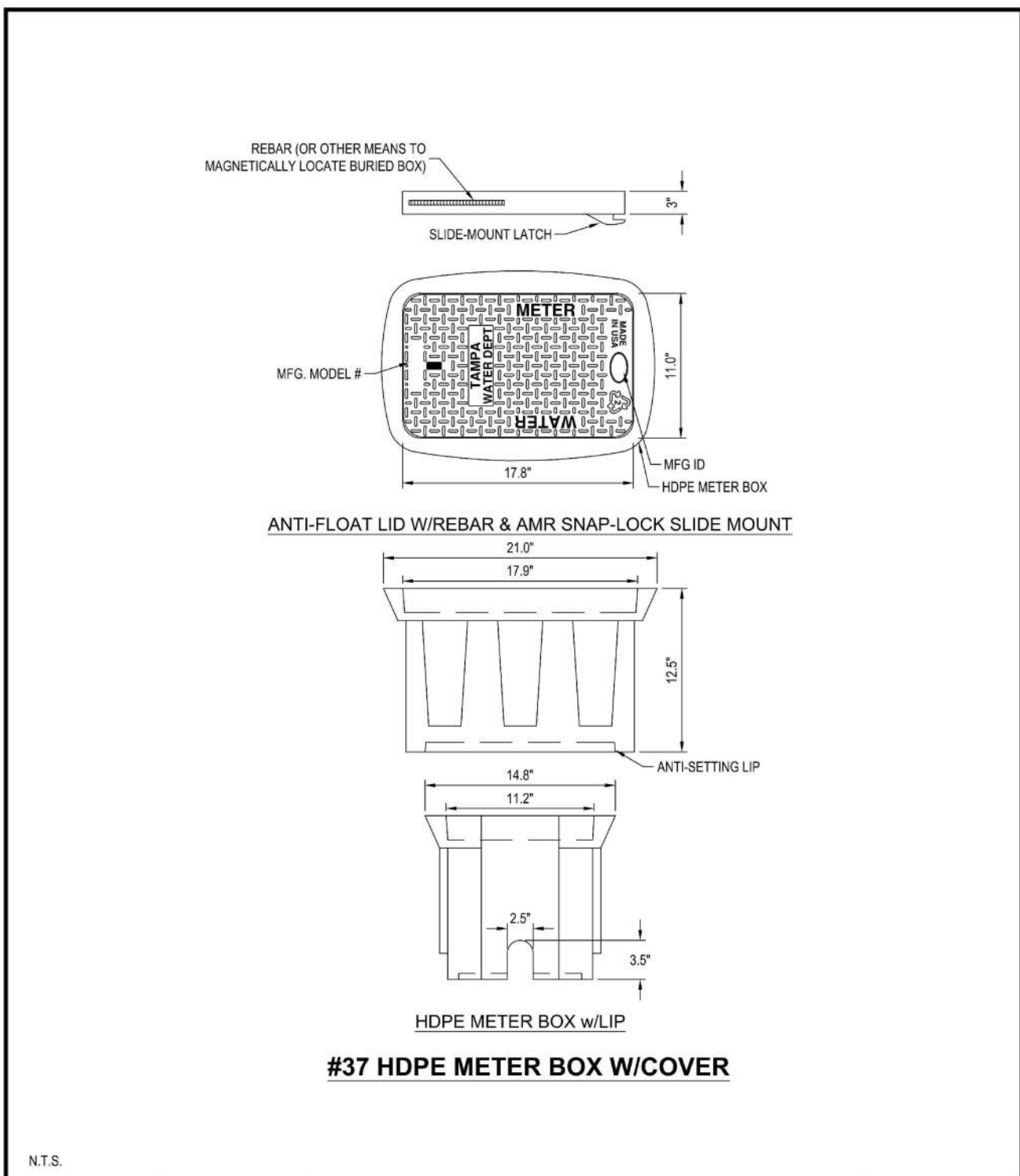
DES: MCH
DRN: MCH
CKD: EPN
DATE: 11/16/18

CITY of TAMPA
Department of Transportation and
Stormwater Services
Stormwater Engineering Division

43RD STREET OUTFALL REGIONAL
STORMWATER IMPROVEMENTS
WATER DETAILS (13)

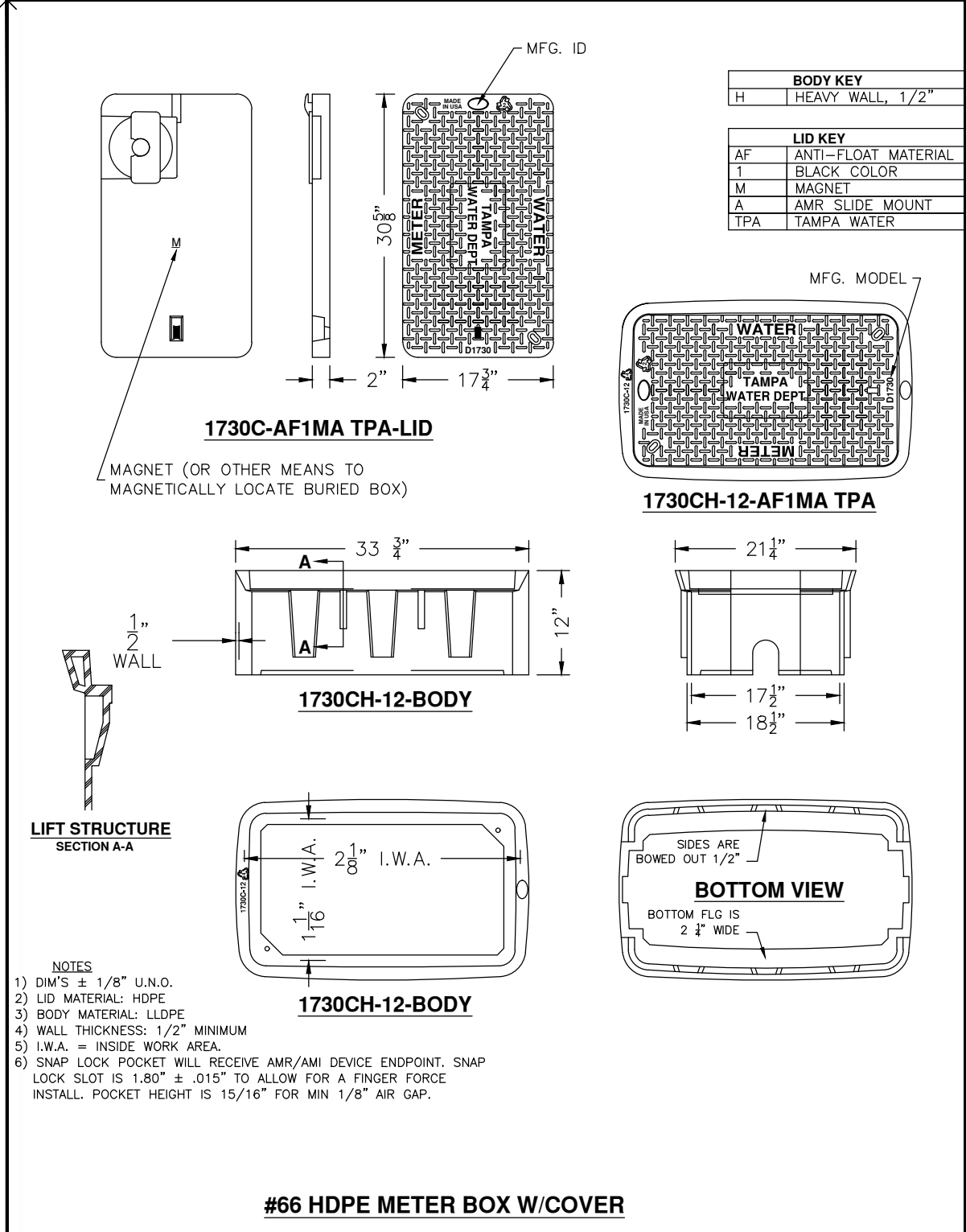
SHEET
W-44

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PLOTTED: 11/19/2018 5:15:10 PM BY: MICHAEL HENDERSON PLOTSTYLE: PENNONI NCS.STB, PROJECT STATUS: ---



#37 HDPE METER BOX W/COVER

N.T.S.			
	LAST REVISION	3/4" OR 1" SINGLE SERVICE HDPE METER BOX	5.10
	JUL 2018		

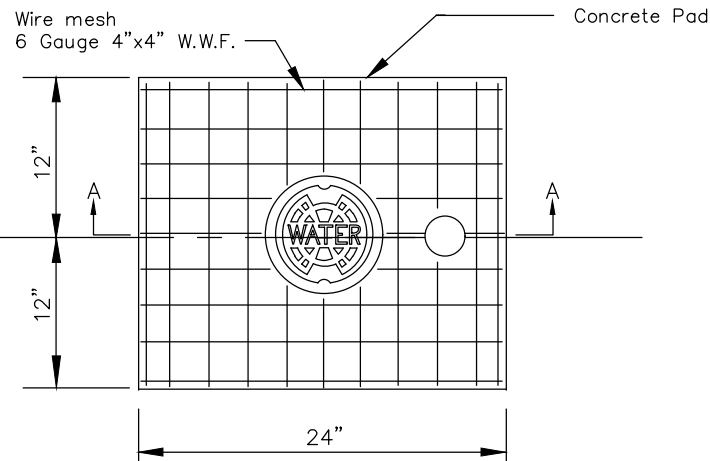


#66 HDPE METER BOX W/COVER				
TAMPA WATER DEPARTMENT	APPROVED Aug. 2017	REVISED	1-1/2" & 2" SINGLE SERVICE HDPE METER BOX	5.12A

SW

No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819		DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18		CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division		43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS WATER DETAILS (14)		SHEET W-45	
			E. PETER NIKOLOV, P.E. DATE		P.E. NO. 38766							

SW



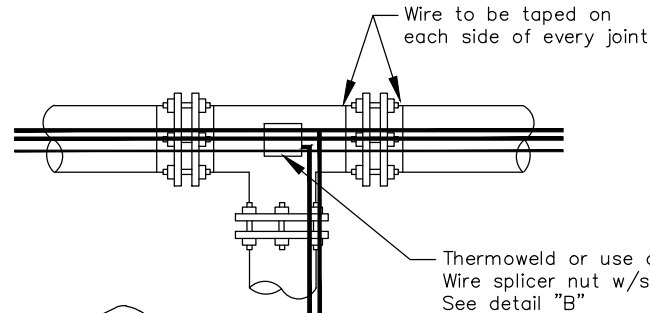
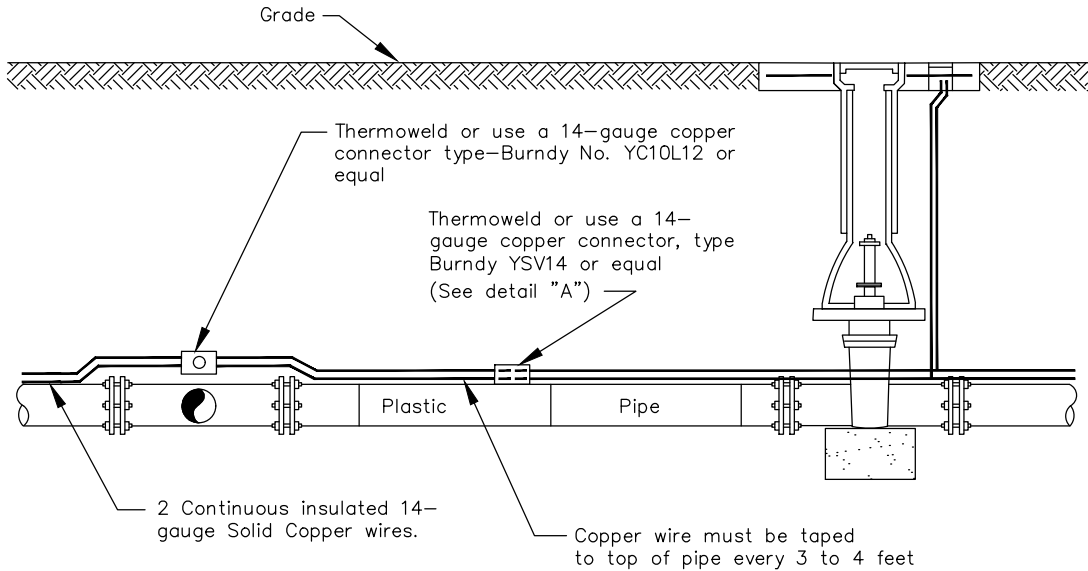
SECTION A-A

Notes :

1. Pad required for all applications.
2. Cast iron valve boxes shall be firmly supported and centered plumb over the operating nut of the valve by the contractor with valve box cover flush with the surface of the finished pavement or at such other level as may be directed.
3. Locate discs required for all valves.

NTS

 TAMPA WATER DEPARTMENT	APPROVED	REVISED	VALVE SETTING ON PLASTIC PIPE DETAIL	7.02
	_____	_____		
	_____	_____		



DETAIL "A"

DETAIL "B"

NOTE:

All connections shall be sealed with a bituminous coating for corrosion protection

NTS

 TAMPA WATER DEPARTMENT	APPROVED	REVISED	DOUBLE COPPER TRACER WIRE ON PVC PIPE	7.03
	_____	_____		
	_____	_____		

No.	DATE	REVISIONS	 PENNONI ASSOCIATES INC. 2555 Nursery Road, Suite 101 Clearwater, FL 33764 Certificate of Authorization 7819	E. PETER NIKOLOV, P.E. DATE P.E. NO. 38766	DES: MCH DRN: MCH CKD: EPN DATE: 11/16/18	CITY of TAMPA <i>Department of Transportation and Stormwater Services Stormwater Engineering Division</i>	43RD STREET OUTFALL REGIONAL STORMWATER IMPROVEMENTS WATER DETAILS (15)	SHEET W-46