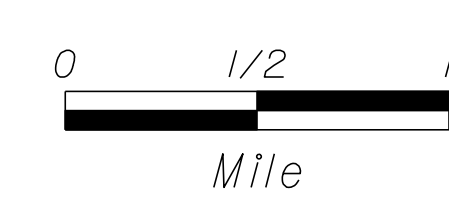
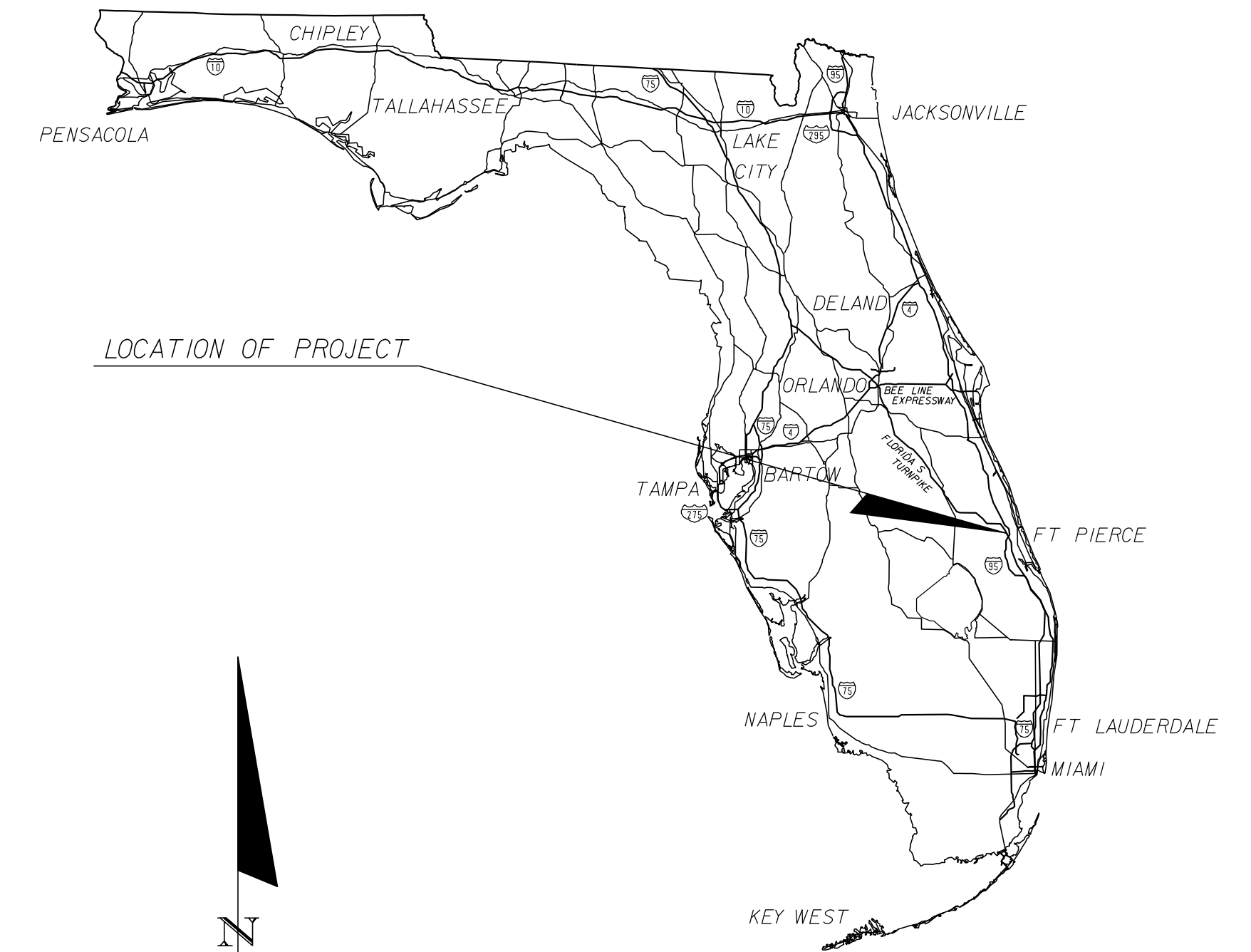
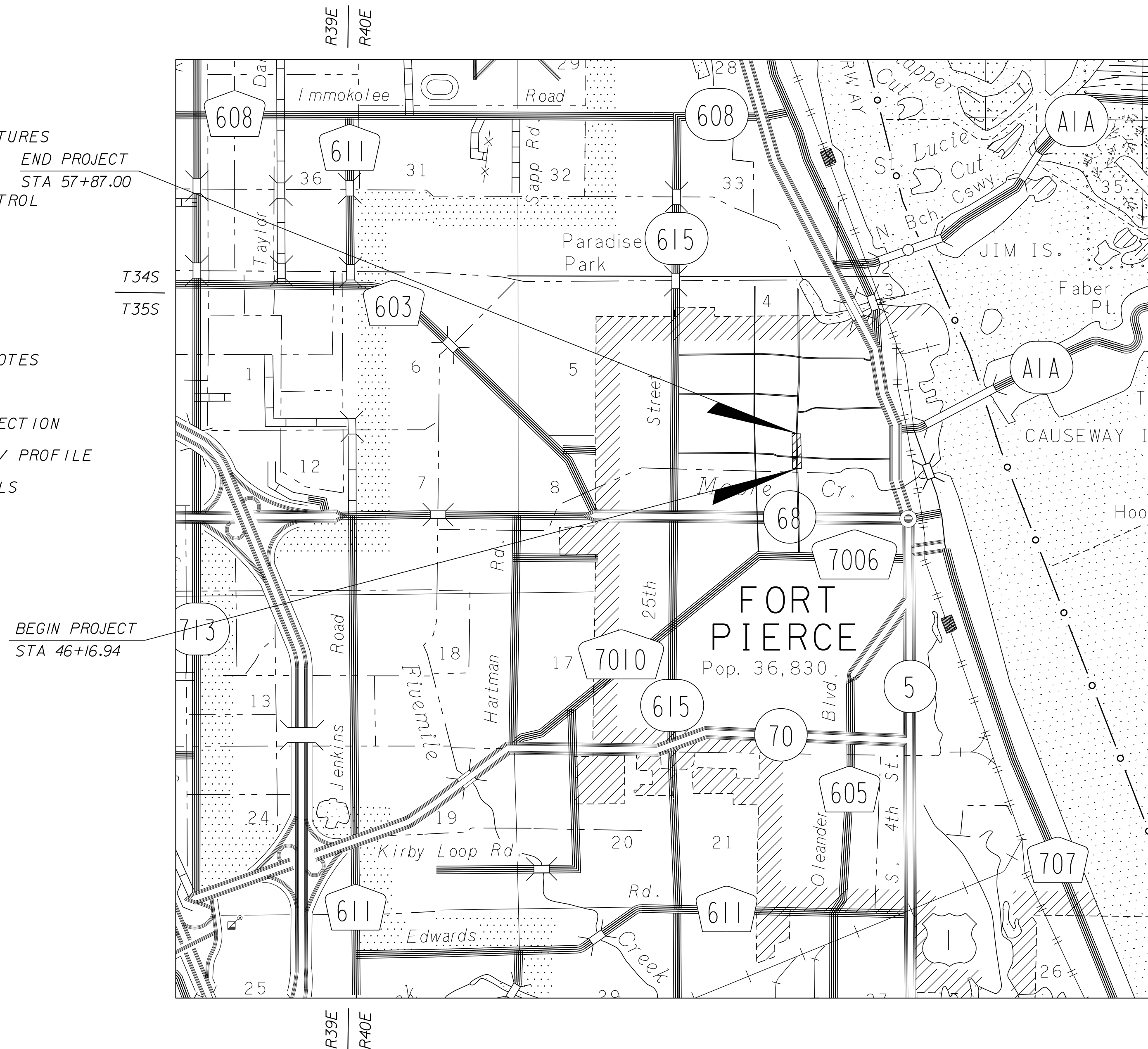


CONTRACT PLANS

NORTH 13TH STREET IMPROVEMENTS PHASE IIB - 400' SOUTH OF AVENUE D TO AVENUE E

INDEX OF ROADWAY PLANS

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ROADWAY SHOP DRAWINGS
TO BE SUBMITTED TO:
KIMLEY-HORN AND ASSOCIATES, INC.
BRIAN GOOD, P.E.
601 21st STREET, SUITE 300
VERO BEACH, FLORIDA 32960

PLANS PREPARED BY:
Kimley»Horn
445 24TH STREET, SUITE 200
VERO BEACH, FL 32960
TEL (772) 794-4000
PROJECT NUMBER: 47922001
CERTIFICATE OF AUTHORIZATION: 00000696

ROADWAY PLANS
ENGINEER OF RECORD: BRIAN GOOD, P.E.

P.E. NO.: 56939

NOTE: THE SCALE OF THESE PLANS MAY
HAVE CHANGED DUE TO REPRODUCTION.

PREPARED FOR:
CITY OF FORT PIERCE/
FORT PIERCE REDEVELOPMENT AGENCY

SHEET
NO.
1

GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO APPLICABLE STANDARDS AND SPECIFICATIONS OF THE CITY OF FORT PIERCE, FLORIDA STANDARD CONTRACT DOCUMENTS AND SPECIFICATIONS FOR PUBLIC WORK PROJECTS, LATEST ISSUE.

2. CONSTRUCTION DETAILS SHALL BE IN ACCORDANCE WITH STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND TRAFFIC DESIGN STANDARDS, LATEST ISSUE.

3. THE INFORMATION PROVIDED IN THESE DRAWINGS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF CONDITIONS WHICH WILL BE ENCOUNTERED DURING THE COURSE OF WORK. THE CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATIONS THEY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSION REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH BIDS WILL BE BASED.

4. LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING UTILITIES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF THE PREPARATION OF THESE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS, AND OTHER FEATURES AFFECTING HIS/HER WORK PRIOR TO CONSTRUCTION, AND NOTIFY THE CITY OF FORT PIERCE, ENGINEERING DEPARTMENT IMMEDIATELY WHEN CONFLICT BETWEEN DRAWINGS AND ACTUAL CONDITIONS ARE DISCOVERED. THE CONTRACTOR SHALL WORK AS NEEDED TO AVOID CONFLICT WITH EXISTING UTILITIES (NO ADDITIONAL COST SHALL BE PAID FOR THIS WORK). EXISTING UTILITIES SHALL BE MAINTAINED IN SERVICE DURING CONSTRUCTION UNLESS OTHERWISE APPROVED BY THE UTILITY OWNER.

PRE-TRENCHING IN THE ALIGNMENT AND GRADE OF PROPOSED PIPES, STRUCTURES, CONDUITS AND/OR SUB-GRADE SHALL BE PERFORMED FOURTEEN DAYS IN ADVANCE OF ITS CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE UNDERGROUND UTILITY OWNERS AND THE CITY WITH A FOURTEEN DAY ADVANCE NOTICE OF ANY CONFLICT WITH PROPOSED CONSTRUCTION. PAYMENT FOR PRE-TRENCHING, SURVEY, AND BACKFILLING SHALL BE INCLUDED IN THE UNIT COST OF THE RELATED BID ITEM FOR WORK BEING DONE.

5. THE CONTRACTOR SHALL COORDINATE WITH UTILITIES TO ARRANGE RELOCATION AND TEMPORARY SUPPORT OF UTILITY FEATURES, ETC. AS NECESSARY TO COMPLETE THE WORK.

6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT ANY AND ALL EXISTING UTILITIES ON THIS PROJECT. THE CONTRACTOR WILL RECEIVE NO DIRECT PAYMENT TO SUPPORT AND/OR PROTECT ANY AND ALL UTILITIES. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE UNIT COST OF THE RELATED BID ITEM FOR WORK BEING DONE.

7. THE CONTRACTOR SHALL GIVE AT LEAST 48 HOURS NOTICE TO UTILITY COMPANIES TO PROVIDE FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES IN ADVANCE OF CONSTRUCTION. CONTACT UTILITIES NOTIFICATION CENTER AT 1-800-432-4770.

8. THE CONTRACTOR IS REQUIRED TO OBTAIN ALL APPLICABLE CONSTRUCTION PERMITS PRIOR TO START OF CONSTRUCTION.

9. THE CONTRACTOR SHALL NOTIFY THE CITY OF FORT PIERCE, ENGINEERING DEPARTMENT AND CITY'S FIELD REPRESENTATIVE, AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.

10. THE CONTRACTOR SHALL CONTACT THE CITY OF FORT PIERCE, ENGINEERING DEPARTMENT AND CITY'S FIELD REPRESENTATIVE IMMEDIATELY OF ANY CONFLICT ARISING DURING CONSTRUCTION OF ANY IMPROVEMENTS SHOWN ON THESE DRAWINGS.

11. B.M. DATA IS NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD-'29).

ANY NGVD - 1929 MONUMENT WITHIN THE LIMITS OF CONSTRUCTION IS TO BE PROTECTED. IF IN DANGER OF BEING DAMAGE, NOTIFY:
 GEODETIC INFORMATION CENTER
 ATTN: MARK MAINTENANCE SECTION N/CG-162
 6001 EXECUTIVE BLVD.
 ROCKVILLE MARYLAND 20852

12. EXISTING SECTION CORNERS AND 1/4 SECTION CORNERS, AND OTHER LAND MARKERS OR MONUMENTS LOCATED WITHIN PROPOSED CONSTRUCTION ARE TO BE REFERENCED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND RESET AFTER CONSTRUCTION USING REGISTERED LAND SURVEYOR LICENSED IN THE STATE OF FLORIDA.

13. STORM SEWER PIPE LENGTHS SHOWN ARE APPROXIMATE, AND MAY BE ADJUSTED AS REQUIRED UPON APPROVAL BY THE CITY OF FORT PIERCE, ENGINEERING DEPARTMENT.

14. INSTALLATION OF ALL STORM SEWERS, INLETS, MANHOLES AND APPURTENANCES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF FORT PIERCE, ENGINEERING DEPARTMENT AS INDICATED ON THE DRAWINGS. ALL REINFORCED CONCRETE PIPE SHALL BE CLASS III PIPE.

15. ALL CATCH BASINS AND PIPE INVERTS SHALL BE AS INDICATED ON THE DRAWINGS.

16. CONTRACTOR SHALL ADJUST ALL UTILITY LIDS AND COVERS TO FINISHED GRADE AS REQUIRED.

17. ALL COMPLETED DRAINAGE STRUCTURES SHALL BE PROTECTED FROM CONTAMINATION BY SILT AND CONSTRUCTION DEBRIS. THE CONTRACTOR SHALL PLACE PLYWOOD ON, OR FILTER FABRIC BETWEEN FRAME AND INLET GRATE UNTIL CONSTRUCTION OPERATIONS ARE COMPLETED. ALL DRAINAGE STRUCTURES (EXISTING AND PROPOSED) WITHIN PROJECT LIMITS SHALL BE CLEANED PRIOR TO FINAL ACCEPTANCE. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE UNIT COST OF THE RELATED BID ITEM FOR WORK BEING DONE.

18. ALL ROAD CROSSINGS ARE OPEN CUT UNLESS OTHERWISE NOTED ON THE DRAWINGS.

19. THE CONTRACTOR SHALL REPLACE ALL PAVING, STABILIZING EARTH, DRIVEWAYS, SIDEWALKS, ETC. WITH THE SAME TYPE OF MATERIAL THAT WAS REMOVED DURING CONSTRUCTION OR AS DIRECTED BY THE CITY OF FORT PIERCE FIELD ENGINEER.

20. THE CONTRACTOR SHALL NOT ENCROACH INTO PRIVATE PROPERTY WITH PERSONNEL, MATERIAL OR EQUIPMENT WITHOUT WRITTEN PERMISSION FROM THE PROPERTY OWNER.

21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE, REMOVAL OR MODIFICATION, ACCIDENTALLY OR PURPOSELY, CAUSED TO ANY IRRIGATION SYSTEMS, PRIVATE OR PUBLIC. THE CONTRACTOR SHALL REPLACE ANY DAMAGED, REMOVED, OR MODIFIED IRRIGATION PIPES, SPRINKLER HEADS OR OTHER PERTINENT APPURTENANCES AT NO ADDITIONAL COST.

22. REGARDING MAIL BOXES, WALLS, FENCES, SECURITY GATE TRACKING, OR OTHER PRIVATE PROPERTY OR IMPROVEMENTS THAT SHALL BE TEMPORARILY RELOCATED AND REPLACED, THE CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE OWNER. ANY AND ALL COSTS ASSOCIATED WITH COORDINATING, REMOVING, AND REPLACING ANY PROPERTY ITEMS SHALL BE INCLUDED IN THE UNIT COST OF THE RELATED BID ITEM FOR WORK BEING DONE.

23. CONTRACTOR SHALL PROVIDE MAINTENANCE OF TRAFFIC IN ACCORDANCE WITH FDOT INDEX 600 SERIES, MUTCD AND THESE PLANS. THE CONTRACTOR SHALL MAINTAIN AT ALL TIMES VEHICULAR AND PEDESTRIAN ACCESS TO ALL RESIDENCES AND/OR BUSINESS.

24. NO TREES ARE TO BE REMOVED OR RELOCATED WITHOUT PRIOR APPROVAL FROM THE CITY OF FORT PIERCE FIELD ENGINEER (CITY PERMIT REQUIRED FOR ANY TREE REMOVAL).

25. COMPLETE 'AS-BUILT' INFORMATION RELATIVE TO LOCATION, SIZE AND DEPTH OF NEW PIPES, MANHOLES, INLETS, ETC., SHALL BE ACCURATELY RECORDED BY THE CONTRACTOR AND SUBMITTED (SIGNED AND SEALED BY A FLORIDA CERTIFIED P.L.S.) TO THE CITY OF FORT PIERCE, ENGINEERING DEPARTMENT PRIOR TO FINAL ACCEPTANCE OF THE WORK. ALL RECORD INFORMATION ON EXISTING UTILITY CROSSINGS ENCOUNTERED DURING CONSTRUCTION, INCLUDING BUT NOT LIMITED TO PIPES, INLETS, MANHOLE, ETC., SHALL BE RECORDED BY A FLORIDA REGISTERED SURVEYOR AND SHOWN ON THE RECORD DRAWINGS. THE COST OF SIGNED AND SEALED AS-BUILTS SHALL BE INCLUDED IN OVERALL BID AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF AND MAKING THE REPAIRS OF EXISTING PAVEMENT, SIDEWALKS, PIPES, CONDUITS, CURBS, CABLES, ETC., WHETHER OR NOT SHOWN ON THE PLANS DAMAGED AS A RESULT OF THE CONTRACTORS OPERATIONS AND/OR THOSE OF HIS SUBCONTRACTORS, AND SHALL RESTORE THEM PROMPTLY AT NO ADDITIONAL EXPENSE TO THE OWNER OR THE CITY OF FORT PIERCE. CONTRACTOR SHALL REPORT ANY DAMAGE TO SIDEWALK, DRIVEWAY, ETC., PRIOR TO BEGINNING WORK IN ANY AREA.

27. ALL DRAINAGE PIPES SHALL BE APPROVED BY CITY OF FORT PIERCE ENGINEERING DEPARTMENT. THE CONTRACTOR SHALL CONSTRUCT A FILTER FABRIC JACKET AT ALL PROPOSED STORM SEWER JOINTS AS PER FDOT INDEX 280. COST OF FILTER FABRIC JACKET SHALL BE INCLUDED IN UNIT PIPE COSTS.

28. EXISTING DRAINAGE STRUCTURES IN CONFLICT WITH PROPOSED DRAINAGE STRUCTURES SHALL BE REMOVED UNLESS OTHERWISE NOTED. ALL OTHER EXISTING DRAINAGE STRUCTURES WITHIN CONSTRUCTION LIMITS SHALL BE REMOVED UNLESS OTHERWISE NOTED. REMOVAL OF EXISTING DRAINAGE STRUCTURE IS TO INCLUDE ASSOCIATED PIPING TO DOWNSTREAM STRUCTURE OR TO TIE IN WITHIN PROPOSED STORM SEWER PIPING.

29. NO EXISTING BASE MATERIAL REMOVED IN EXCAVATION SHALL BE REUSED AS PROPOSED BASE MATERIAL.

30. STAGING AND MATERIAL STORAGE SHALL NOT BE CONDUCTED ON ABUTTING PRIVATE PROPERTY WITHOUT WRITTEN APPROVAL FROM THE OWNER. STAGING AND STORAGE SHALL BE CONDUCTED WITHIN PUBLIC R/W AND/OR CONSTRUCTION EASEMENTS (ACCESS LICENSE AGREEMENTS).

31. THE CONTRACTOR SHALL REFER TO THE LANDSCAPE PLAN TO DETERMINE IMPACTS TO EXISTING TREES AND VEGETATION. ALL TREES AND VEGETATION DESIGNATED TO REMAIN SHALL BE PROTECTED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER OR THE CITY.

32. PROPOSED DRAINAGE STRUCTURES HAVE BEEN SIZED BASED UPON THE AVAILABLE UTILITY INFORMATION. THE CONTRACTOR SHALL VERIFY THAT PROPOSED DIMENSIONS WILL ACCOMMODATE THE EXISTING AND PROPOSED STORM SEWER CONFIGURATION PRIOR TO SUBMITTING SHOP DRAWINGS. DRAINAGE CONNECTIONS TO EXISTING STRUCTURES SHALL BE CORE DRILLED AT THE SPECIFIED INVERT.

33. EXISTING UTILITY CONTACT INFORMATION:

UTILITY COMPANY	CONTACT	PHONE NUMBER	ADDRESS
BELL SOUTH	MICHAEL KOENIG	561-439-9118	2021 S MILITARY TRAIL, WEST PALM BEACH, FL 33415
COMCAST CABLE	ANTHONY SPRINGSTEEL	954-534-7484	2501 SW 145 AVE. MIRAMAR, FL 33027
FLORIDA GAS TRANSMISSION - FORT PIERCE	JOSEPH SANCHEZ	407-838-7171	601 S LAKE DESTINY ROAD SUITE 450 MAITLAND, FL 32794
FLORIDA POWER AND LIGHT	TRACY STERN	305-229-7987	10705 QUAIL ROOST DRIVE MIAMI, FL 33157
FORT PIERCE UTILITY AUTHORITY	WILLIAM THIESS	772-466-1600	P.O. BOX 3191 FORT PIERCE, FL 34947

33. EROSION CONTROL MEASURES SHALL BE TAKEN BY CONTRACTOR DURING CONSTRUCTION AS PER FOOT STANDARDS:

- A. SILT FENCE SHALL BE INSTALLED ALONG THE ENTIRE PERIMETER OF THE PROJECT ADJACENT TO ANY SOIL DISTURBING ACTIVITIES.
- B. ALL DRAINAGE STRUCTURES ARE TO BE PROTECTED DURING CONSTRUCTION PER STANDARDS.
- C. ALL FENCING, GRADING, SIGNING AND SODDING SHALL BE MAINTAINED DURING THE CONTRACT LIFE. ALL DAMAGED WORK SHALL BE RESTORED AT NO COST TO THE CITY.

34. DETECTABLE WARNING SURFACES SHALL CONSIST OF A.D.A. TRUNCATED DOME CONCRETE PAVING UNITS (4"x8"x2-3/8"). WARNING SURFACES SHALL EXTEND TWO FEET FROM BACK OF CURB AND SPAN RAMP RUN WIDTH. WARNING SURFACE COLOR SHALL BE "BRICK RED".

35. ROADWAY AND LANDSCAPE IMPROVEMENTS HAVE BEEN PREPARED UNDER DIRECTION THAT ALL ABOVE GROUND ELECTRICAL DISTRIBUTION SERVICES WILL BE RELOCATED UNDERGROUND.

36. ALL EXISTING MAILBOXES WITHIN LIMITS OF CONSTRUCTION SHALL BE RELOCATED IN ACCORDANCE WITH CITY AND POSTAL CODES.

37. VERTICAL LOCATES ASSOCIATED WITH EXISTING UTILITIES HAVE NOT BEEN CONDUCTED AS OF 100% PLAN DEVELOPMENT. CONSULTANT IS AWAITING DIRECTION AS TO SCOPE OF POTENTIAL UTILITY REPLACEMENT.

38. NON-STRUCTURAL CONCRETE UTILIZED IN CURB AND GUTTER, SIDEWALK AND URBAN FLARED TURNOUT CONSTRUCTION SHALL CONSIST OF 3000 PSI FIBER REINFORCED MIX.

39. SELECT CLEARING AND GRUBBING AREAS ARE DESIGNATED AREAS THAT THE CONTRACTOR SHALL DETERMINE IF CLEARING AND GRUBBING IS NEEDED BUT NOT LIMITED TO GRADING. IF NEEDED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING, RESETTING, OR REPLACING LIKE VEGETATION TO EQUAL OR BETTER CONDITION, ALL EXISTING SIDEWALK FALLING IN THIS AREA SHALL BE REMOVED AS SHOWN IN THE PLANS.

40. THE EXISTING ROADWAY RIGHT-OF-WAY IS DEPICTED ACCORDING TO THE NORTH 13TH STREET FROM 400' SOUTH OF AVENUE D TO AVENUE 3 MAINTENANCE MAP.

REVISIONS						 BRIAN A. GOOD, P.E. P.E. LICENSE NUMBER 56939 601 21ST STREET, SUITE 300 WEST PALM BEACH, FL 32960 (772) 562-7381 CERTIFICATE OF AUTHORIZATION: 00000696	CITY OF FORT PIERCE/ FORT PIERCE REDEVELOPMENT AGENCY NORTH 13TH STREET IMPROVEMENTS PHASE II - 400' SOUTH OF AVENUE D TO AVENUE I	GENERAL NOTES	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				2

SUMMARY OF PAY ITEMS			
PAY ITEM NO.	DESCRIPTION	UNIT	QUANTITY
ROADWAY			
101-1	MOBILIZATION (NON-UTILITIES)	LS	1
101-2A	MATERIAL TESTING (NON-UTILITIES)	LS	1
102-1	MAINTENANCE OF TRAFFIC	LS	1
104-2	PREVENTION, CONTROL & ABATEMENT OF EROSION AND WATER POLLUTION	LS	1
108-1	AS-BUILTS (NON-UTILITIES)	LS	1
110-1-1	CLEARING & GRUBBING	AC	1.4
110-1-2	SELECT CLEARING & GRUBBING	AC	0.5
110-7-4	MAILBOX (RELOCATE)	EA	10
120-1	REGULAR EXCAVATION	CY	1,758
120-6	EMBANKMENT	CY	37
160-4	STABILIZATION, TYPE "B"	SY	4,721
285-706	CEMENTED COQUINA LBR 100 (8")	SY	3,935
286-1	ASPHALT TURNOUT CONSTRUCTION	SY	76
334-1-13	SUPERPAVE ASPHALTIC CONCRETE (TRAFFIC C)	TN	541
425-1-201	INLETS (CURB TYPE 9) (<10')	EA	10
425-5-1	MANHOLE - ADJUST (UTILITIES)	EA	1
425-11	DRAINAGE STRUCTURE - MODIFY EXISTING	EA	2
430-175-115	CONCRETE PIPE CULVERT (15" RCP)	LF	267
430-175-118	CONCRETE PIPE CULVERT (18" RCP)	LF	231
430-175-124	CONCRETE PIPE CULVERT (24" RCP)	LF	323
430-175-215	CONCRETE PIPE CULVERT (12" X 18" ERCP)	LF	31
430-175-218	CONCRETE PIPE CULVERT (14" X 23" ERCP)	LF	45
430-963-01A	DRAINAGE TILE	EA	2
520-1-10	CONCRETE CURB & GUTTER (TYPE F)	LF	2,351
520-2-9	CONCRETE CURB (HEADER)	LF	444
522-1	CONCRETE SIDEWALK, 4" THICK	SY	1,255
522-2	CONCRETE SIDEWALK, 6" THICK	SY	453
526-1-1	ARCHITECTURAL PAVERS (ROADWAY)	SF	940
526-1-2A	ARCHITECTURAL PAVERS (SIDEWALK) (REMOVE & RESET)	SF	288
527-2	DETECTABLE WARNING DOMES	SF	106
550-10-210	FENCING, TYPE B, (4'), STANDARD GALVANIZED W/ TOP RAIL	LF	82
550-60-211A	FENCE GATE, TYPE B, (SINGLE SWING) (4' OPENING)	EA	2
550-60-222	FENCE GATE, TYPE B, (DOUBLE SWING) (12' OPENING)	EA	2
570-1-2	PERFORMANCE TURF (SOD) (BAHIA)	SY	1975
570-1-2B	PERFORMANCE TURF (SOD) (FLORATAM)	SY	200
635-2-40	PULL & SPLICE BOX (RESET)	EA	11
SIGNING AND MARKING			
700-20-11	SINGLE POST SIGN (FURNISH & INSTALL) (LESS THAN 12 SF)	AS	3
700-20-12	SINGLE POST SIGN (FURNISH & INSTALL) (12 SF TO 20 SF)	AS	8
700-20-12	SINGLE POST SIGN (FURNISH & INSTALL) (>20 SF BACK TO BACK)	AS	1
706-3	RETRO-REFLECTIVE PAVEMENT MARKER	EA	190
711-11-121	THERMOPLASTIC (STANDARD) (WHITE) (SOLID) (6")	LF	2449
711-11-123	THERMOPLASTIC (STANDARD) (WHITE) (SOLID) (12")	LF	150
711-11-124	THERMOPLASTIC (STANDARD) (WHITE) (SOLID) (18")	LF	96
711-11-125	THERMOPLASTIC (STANDARD) (WHITE) (SOLID) (24")	LF	74
711-11-170	THERMOPLASTIC (STANDARD) (WHITE) (ARROWS)	EA	4
711-11-221	THERMOPLASTIC (STANDARD) (YELLOW) (SOLID) (6")	LF	2,761
711-11-224	THERMOPLASTIC (STANDARD) (YELLOW) (SOLID) (18")	LF	161
UTILITIES			
1	DEMOLITION, WATER / WASTEWATER	LS	1
2	BACTERIOLOGICAL SAMPLING POINT	EA	3
3	12" PVC WATER MAIN	LF	1,030
4	12" DUCTILE IRON WATER MAIN	LF	20
5	8" PVC SEWER MAIN (0'-6")	LF	775
6	8" PVC SEWER MAIN (>6'-8")	LF	140
7	8" DUCTILE IRON SEWER MAIN (0'-6")	LF	40
8	8" DUCTILE IRON SEWER MAIN (>6'-8")	LF	40
9	FIRE HYDRANT (F&I)	EA	2
10	DUCTILE IRON UTILITY FITTINGS	TN	1.5
11	1" WATER SERVICE (SINGLE SHORT)	EA	7
12	1" WATER SERVICE (DOUBLE SHORT)	EA	1
13	1" WATER SERVICE (SINGLE LONG)	EA	3
14	2" WATER SERVICE (SINGLE SHORT)	EA	1
15	2" WATER SERVICE (SINGLE LONG)	EA	2
16	2" WATER SERVICE (4 CONNECTIONS)	EA	1
17	8" RESILIENT SEAT GATE VALVE ASSEMBLY (F&I)	EA	2
18	12" RESILIENT SEAT GATE VALVE ASSEMBLY (F&I)	EA	1
19	8" WATER MAIN TIE-IN (F&I)	EA	2
20	12" WATER MAIN TIE-IN NORTH END (F&I)	EA	1
21	12" WATER MAIN TIE-IN SOUTH END (F&I)	EA	1
22	PRECAST 4' CONCRETE SANITARY MANHOLE (0'-6")	EA	2
23	PRECAST 4' CONCRETE SANITARY MANHOLE (6'-8")	EA	1
24	6" PVC SEWER SERVICE (0'-6")	EA	16
25	6" PVC SEWER SERVICE (>6'-8")	EA	5
26	6" DIP SEWER SERVICE (0'-6")	EA	2
27	SANITARY SEWER / STORM CONFLICT STRUCTURE AND SANITARY PIPING	EA	1
28	12" MECHANICAL JOINT BELL RESTRAINT	EA	14
29	8" MEGA LUG RESTRAINT	EA	14
30	12" MEGA LUG RESTRAINT	EA	42
31	12" PVC WATER MAIN DEFLECTION	EA	3
32	TWO SEWER CONNECTIONS TO NEW MANHOLE A-80 IN AVENUE D INTERSECTION	EA	1
33	PLUG MH A-717 SOUTH INVERT	EA	1
101-1	MOBILIZATION (UTILITIES)	LS	1
101-2B	MATERIAL TESTING (UTILITIES)	LS	1
108-1	AS-BUILTS (UTILITIES)	LS	1
630-2-11	CONDUIT (F&I) (4") (SCH 40)	LF	101

PAY ITEM FOOTNOTES

- 101-2A, 101-2B THE CONTRACTOR SHALL RETAIN THE SERVICES OF A TESTING LABORATORY TO PROVIDE TESTING SERVICES AS REQUIRED BY THE PROJECT SPECIFICATIONS. ALL INSPECTIONS, TEST OR APPROVALS REQUIRED BY LAWS OR REGULATIONS SHALL BE PERFORMED. THE TESTING LABORATORY SHALL MAIL COPIES OF ALL TEST REPORTS INDEPENDENTLY TO THE CITY, ENGINEER AND CONTRACTOR. ALL TESTING COSTS ASSOCIATED WITH INSTALLATION OF THE PROPOSED UTILITY IMPROVEMENTS SHALL BE INCORPORATED WITH PAY ITEM 101-2B, ALL OTHER TESTING COSTS SHALL BE INCORPORATED INTO PAY ITEM 101-2A.
- 102-1 COST OF MAINTENANCE OF TRAFFIC SHALL INCLUDE BUT NOT BE LIMITED TO CONSTRUCTION SIGNS, BUSINESS SIGNS, TEMPORARY BARRICADES, VARIABLE MESSAGE SIGNS, TEMPORARY REFLECTIVE PAVEMENT MARKERS, TEMPORARY PAVEMENT MARKINGS, INCIDENTAL TEMPORARY PAVEMENT, DUST CONTROL, ANY TEMPORARY DRAINAGE ELEMENTS BEYOND WHAT IS SPECIFIED IN THE CONTRACT DOCUMENTS, AND ALL ITEMS NECESSARY TO MEET THE MAINTENANCE OF TRAFFIC REQUIREMENTS OF THE FLORIDA DEPARTMENT OF TRANSPORTATION AS PRESCRIBED IN SECTION 600 OF THE FDOT STANDARD INDEXES.
- 110-1-2 IN ADDITION TO 110-1-1 COST TO INCLUDE REMOVAL, RESETTING, OR REPLACING LIKE PLANT MATERIAL, STORAGE OF PLANT MATERIAL IF REQUIRED, AND TIME REQUIRED TO DETERMINE THE AFFECTED AREAS AND ACTION NEEDED. COST TO INCLUDE, BUT NOT LIMITED TO, REMOVAL AND DISPOSAL OF SOD AND/OR CONCRETE PAVEMENT NECESSARY TO HARMONIZE CORRIDOR GRADING OR REPLACE DRIVEWAY CONNECTION. CONTRACTOR SHALL CORRDINATE WITH CITY PRIOR TO UNDERTAKING THESE ACTIVITIES.
- 104-2 COST TO INCLUDE ALL NECESSARY EROSION CONTROL MEASURES AND MATERIALS.
- 285-706 THE COST OF THE PRIME COAT SHALL BE INCLUDED IN THE PRICE OF THE BASE.
- 286-1 COST TO INCLUDE, BUT NOT LIMITED TO, BASE MATERIAL, EXCAVATION AND ASPHALTIC CONCRETE
- 334-1-13 THE COST OF THE TACK COAT SHALL BE INCLUDED IN THE PRICE OF THE ASPHALT.
- 430-963-01A COST TO INCLUDE, BUT NOT LIMITED TO, PVC PIPE, GUTTER COUPLING, CAST IRON CURB OPENING, SIDEWALK REINFORCEMENT AND ALL INCIDENTAL ITEMS REQUIRED TO CONSTRUCT.
- 436-1 ALL COST, LABOR AND MATERIALS ASSOCIATED WITH CONCRETE ENCASEMENT SHALL BE INCLUDED IN UNIT COST FOR TRENCH DRAIN, LF.
- 520-2-9 COST OF HEADER CURB TO INCLUDE STEEL REINFORCEMENT.
- 522-1 COST OF PEDESTRIAN RAMPS TO BE INCLUDED. ALL SIDEWALK JOINTS ARE TO BE SAWCUT AS PER FDOT SPECIFICATION. TOOLED JOINTS ARE NOT PERMITTED.
- 526-1-1 COST TO INCLUDE, BUT NOT LIMITED TO, CONCRETE SUB SLAB, BEDDING SAND, POLYMERIC JOINT SAND, PAVERS AND SEALANT.
- 526-1-2A COST TO INCLUDE, BUT NOT LIMITED TO, ALL MATERIAL AND LABOR REQUIRED TO REMOVE AND RESET EXISTING BRICK PAVERS TO HARMONIZE WITH PROPOSED GRADES.
- 527-2 WARNING DOMES SHALL BE BRICK RED IN COLOR.
- 570-1-2 COST OF PERFORMANCE TURF TO INCLUDE SOD, FERTILIZER, MOWING, WATERING, TOOLS, EQUIPMENT, LABOR AND ALL INCIDENTAL ITEMS NECESSARY. TURF TO MATCH EXISTING ADJACENT R/W TURF.
- 1 - 33 PAY ITEM FOOTNOTES REGARDING ALL PROPOSED UTILITY IMPROVEMENTS ARE REFERENCED UNDER SECTION 01550 MEASUREMENT AND PAYMENT OF THE BID DOCUMENTS

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION



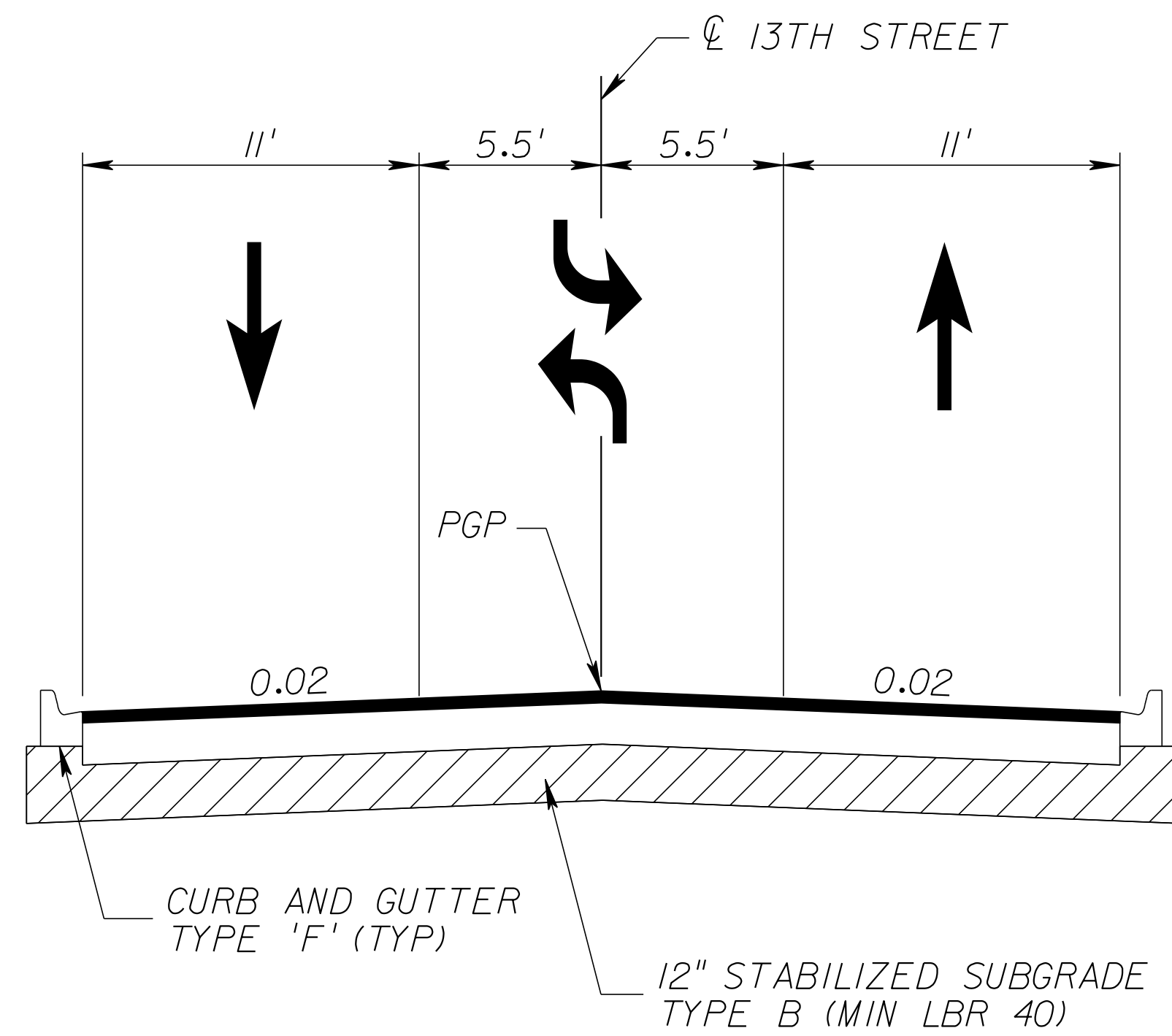
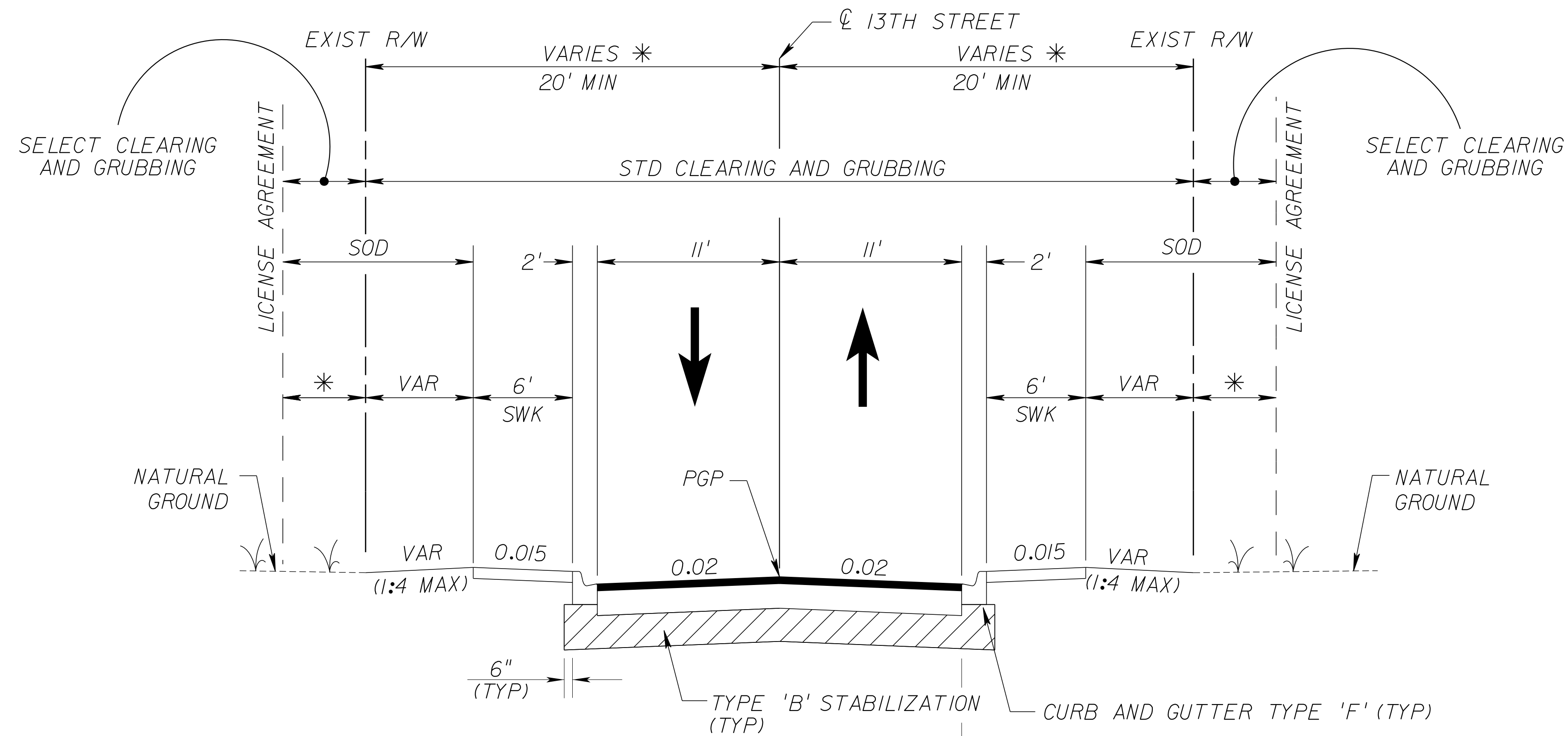
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CITY OF FORT PIERCE/
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NORTH 13TH STREET IMPROVEMENTS
PHASE II - 400' SOUTH OF AVENUE D TO AVENUE I

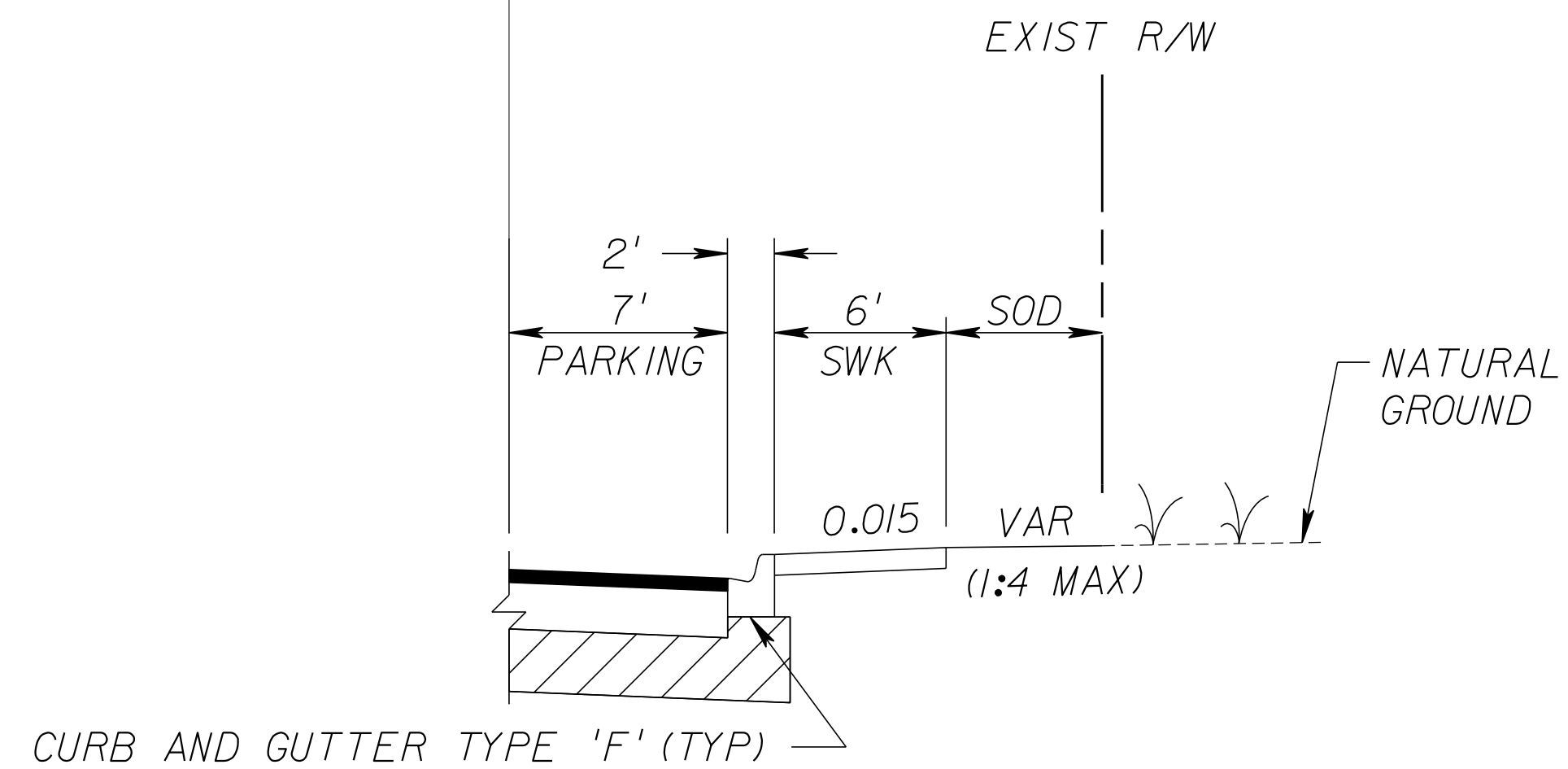
SUMMARY OF PAY ITEMS

SHEET NO.

3



☉ STA 47+50.00 TO STA 49+62.14
 ☉ STA 50+11.05 TO STA 52+30.00



☉ STA 53+70.00 TO STA 54+94.00

NORTH 13TH STREET

☉ STA 46+16.94 TO STA 57+87.00

* SEE PLANS FOR ADDITIONAL INFORMATION REGARDING WIDTHS AND LOCATIONS.

PAVEMENT DESIGN

- TYPE SP 9.5 STRUCTURAL COURSE (TRC) (1")
- TYPE SP 12.5 STRUCTURAL COURSE (TRC) (1.5")
- CEMENTED COQUINA LBR 100 (8")
- STABILIZED SUBGRADE TYPE 'B' (12")

POSTED SPEED = 25 MPH
 DESIGN SPEED = 30 MPH

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 NORTH 13TH STREET IMPROVEMENTS
 PHASE II - 400' SOUTH OF AVENUE D TO AVENUE I

TYPICAL SECTION

SHEET NO.

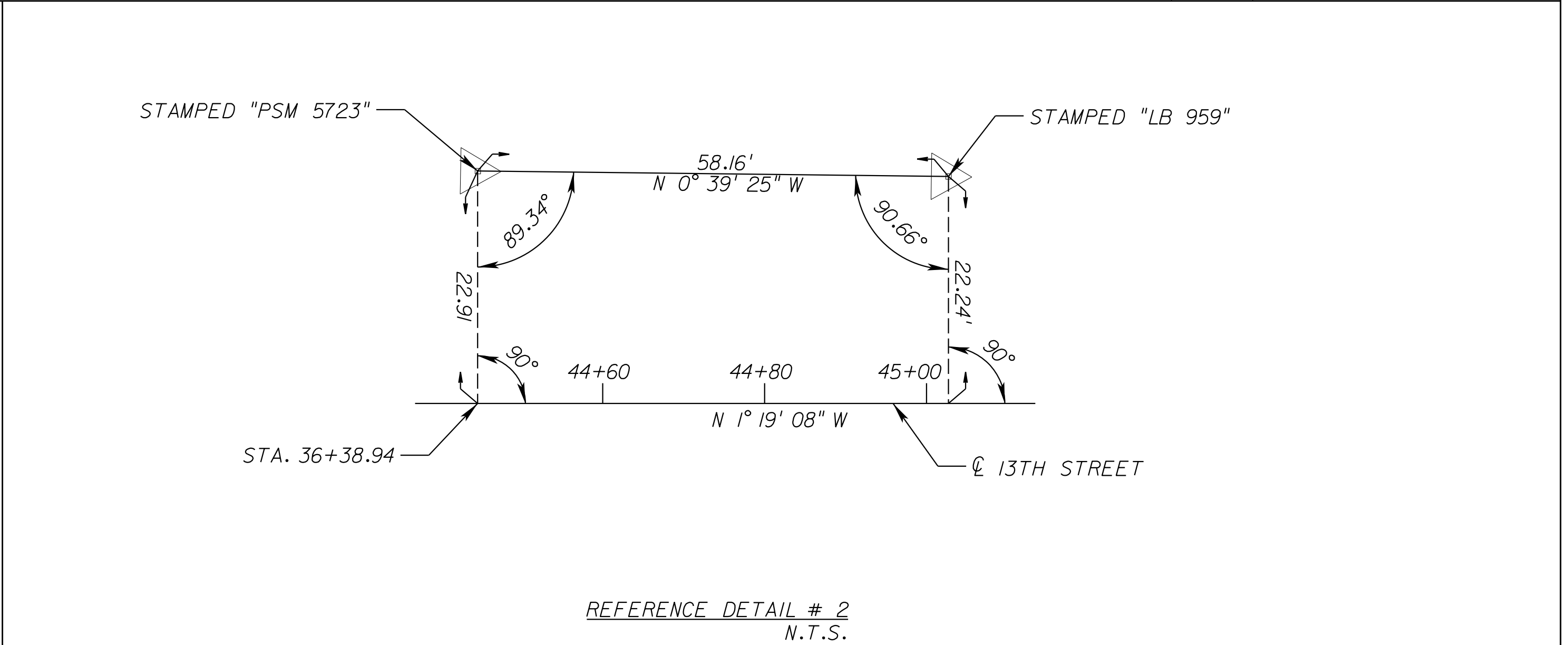
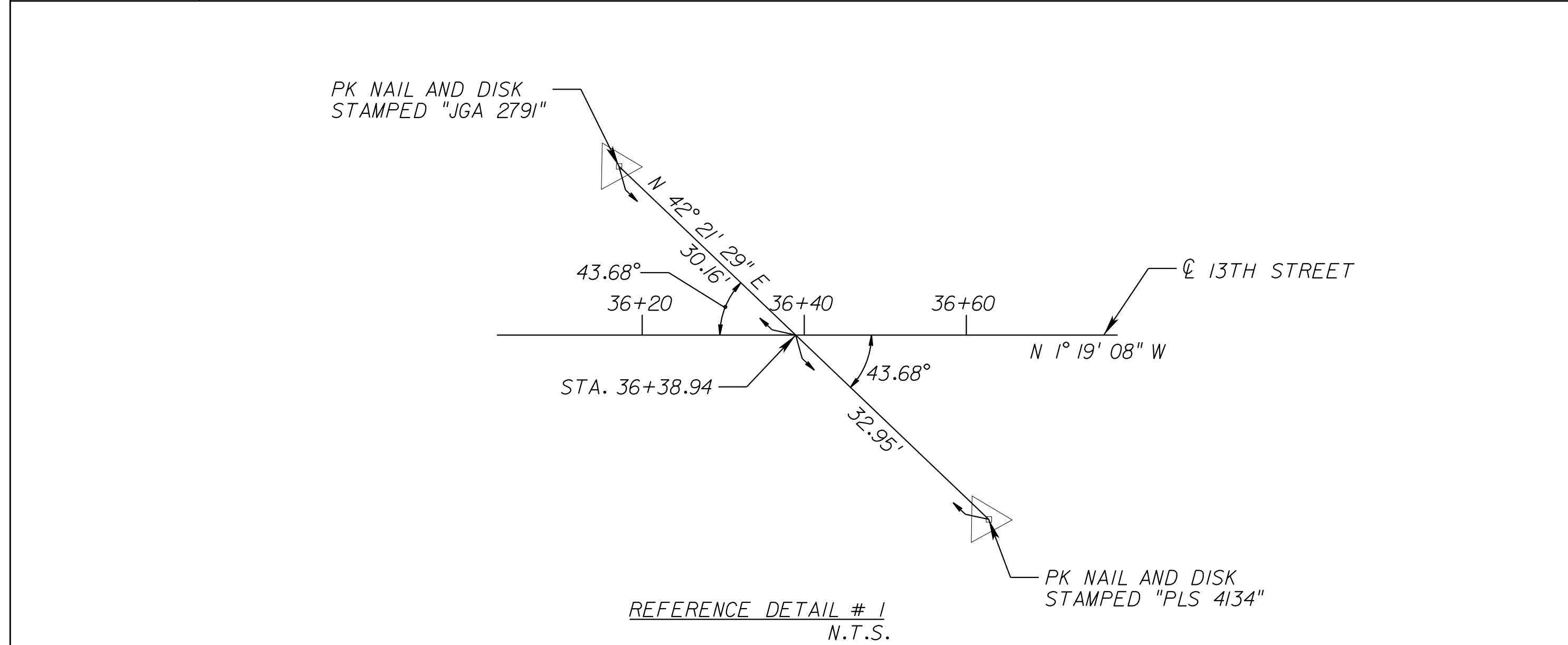
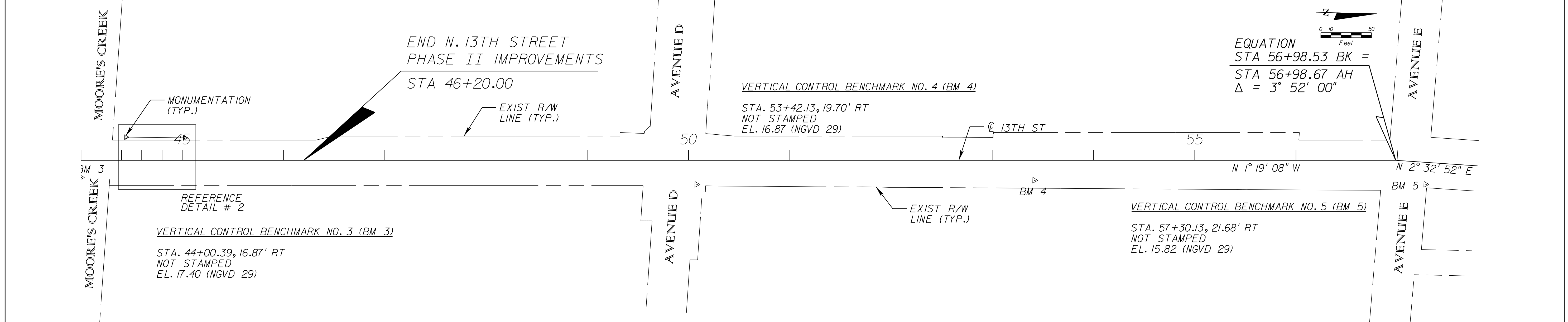
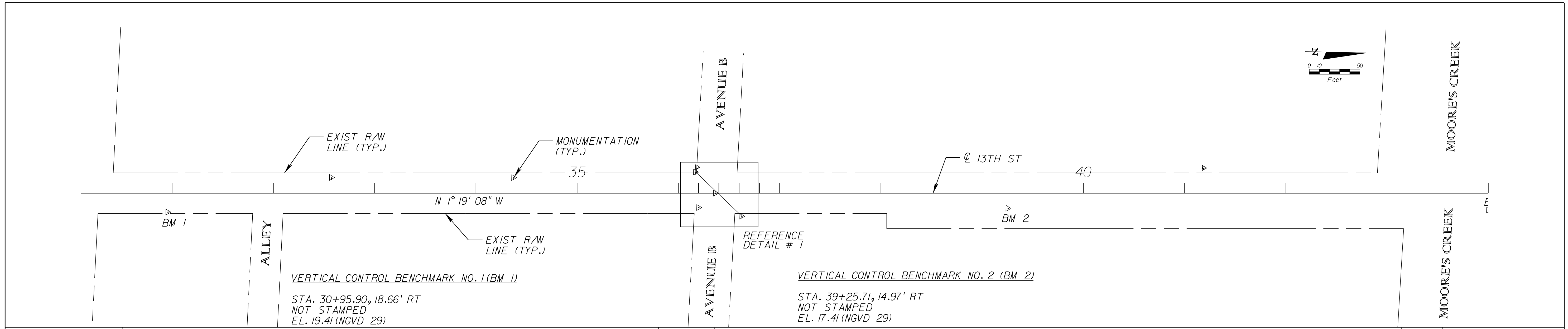
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mike.forman

3/16/2016

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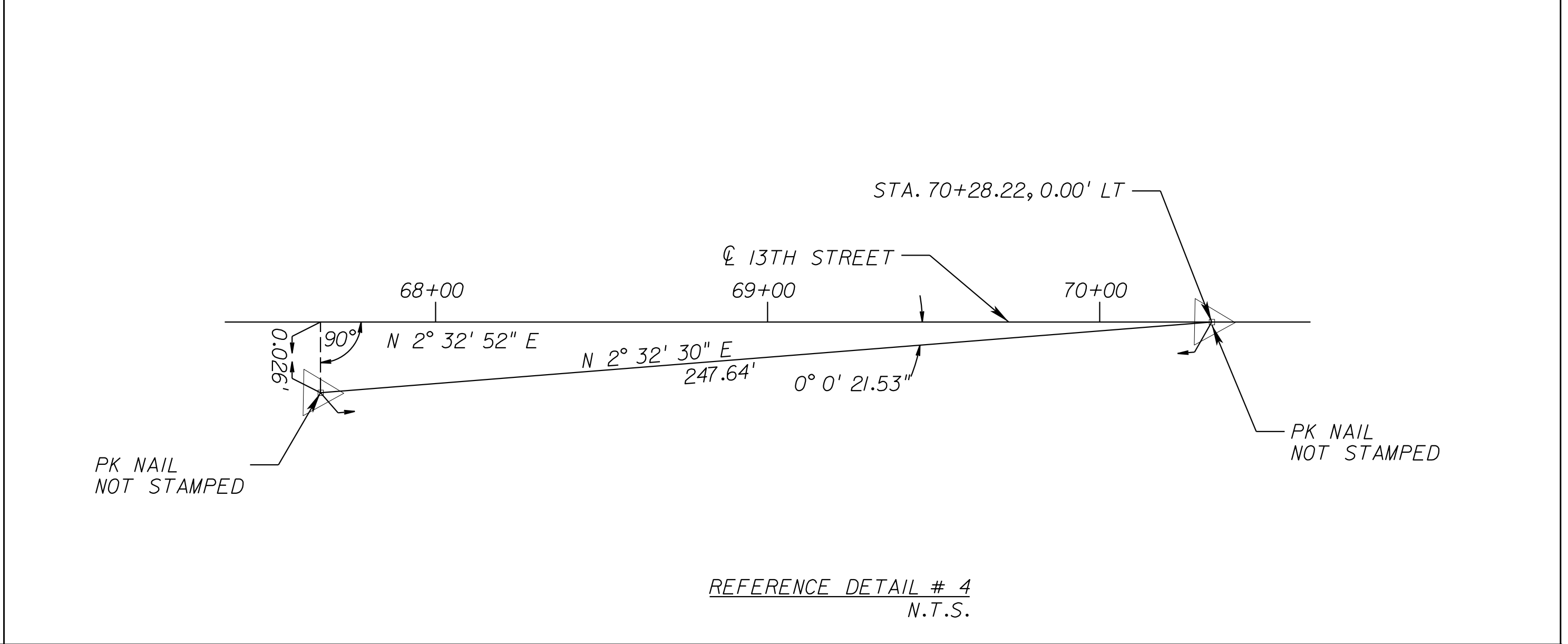
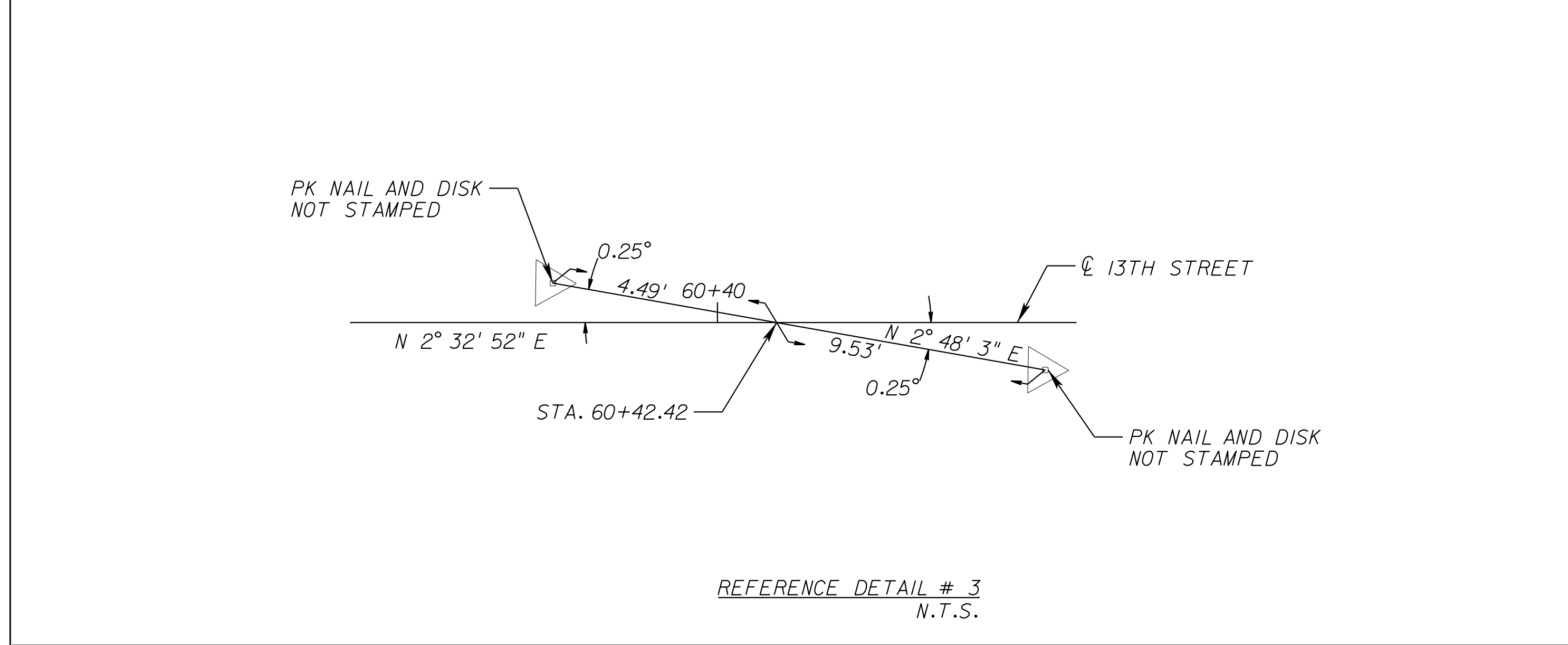
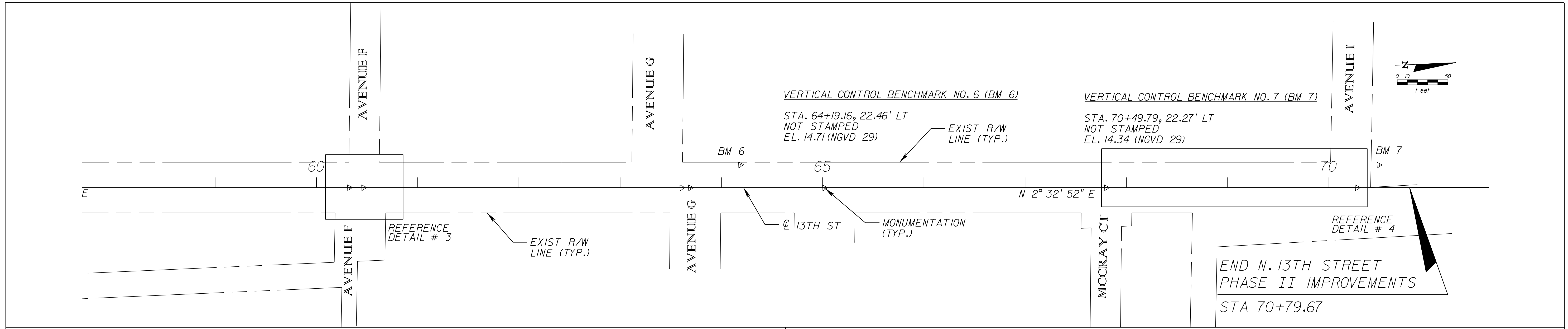
CITY OF FORT PIERCE/
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NORTH 13TH STREET IMPROVEMENTS
PHASE II - 400' SOUTH OF AVENUE D TO AVENUE I

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HORIZONTAL & VERTICAL CONTROL

SHEET NO. 6



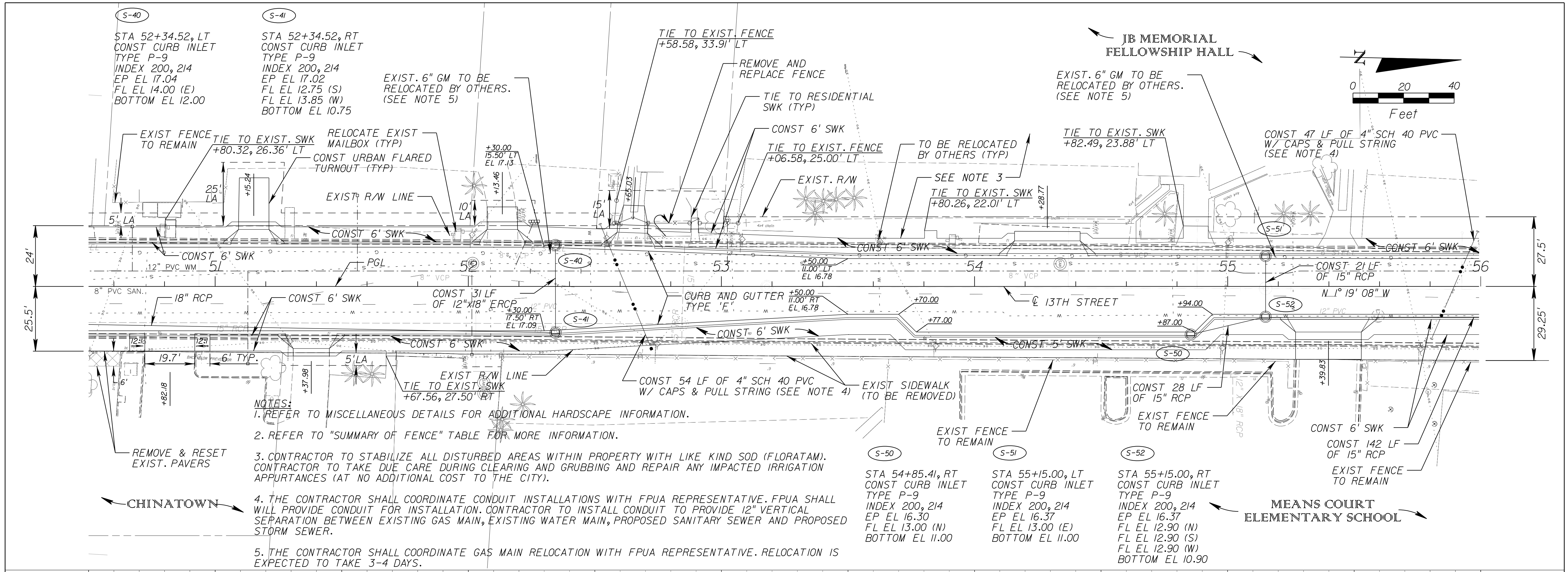
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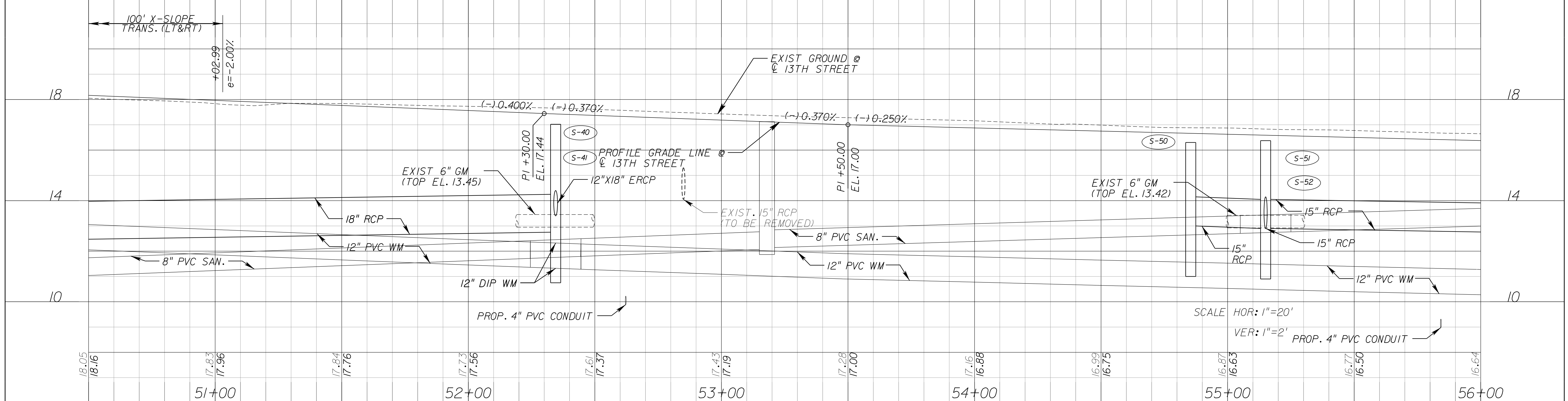
CITY OF FORT PIERCE/
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 NORTH 13TH STREET IMPROVEMENTS
 PHASE II - 400' SOUTH OF AVENUE D TO AVENUE I

HORIZONTAL & VERTICAL CONTROL

SHEET NO.
 7



- NOTES:**
- REFER TO MISCELLANEOUS DETAILS FOR ADDITIONAL HARDSCAPE INFORMATION.
 - REFER TO "SUMMARY OF FENCE" TABLE FOR MORE INFORMATION.
 - CONTRACTOR TO STABILIZE ALL DISTURBED AREAS WITHIN PROPERTY WITH LIKE KIND SOD (FLORATAM). CONTRACTOR TO TAKE DUE CARE DURING CLEARING AND GRUBBING AND REPAIR ANY IMPACTED IRRIGATION APPURTANCES (AT NO ADDITIONAL COST TO THE CITY).
 - THE CONTRACTOR SHALL COORDINATE CONDUIT INSTALLATIONS WITH FPUA REPRESENTATIVE. FPUA SHALL WILL PROVIDE CONDUIT FOR INSTALLATION. CONTRACTOR TO INSTALL CONDUIT TO PROVIDE 12" VERTICAL SEPARATION BETWEEN EXISTING GAS MAIN, EXISTING WATER MAIN, PROPOSED SANITARY SEWER AND PROPOSED STORM SEWER.
 - THE CONTRACTOR SHALL COORDINATE GAS MAIN RELOCATION WITH FPUA REPRESENTATIVE. RELOCATION IS EXPECTED TO TAKE 3-4 DAYS.

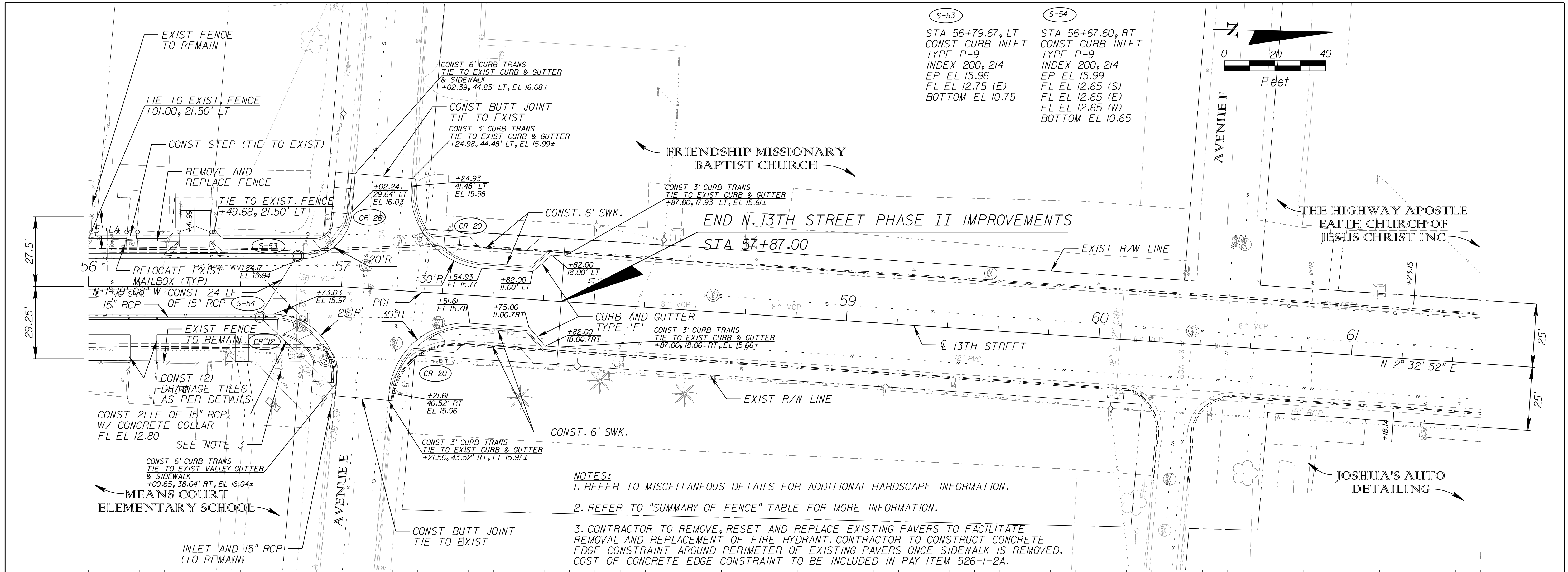


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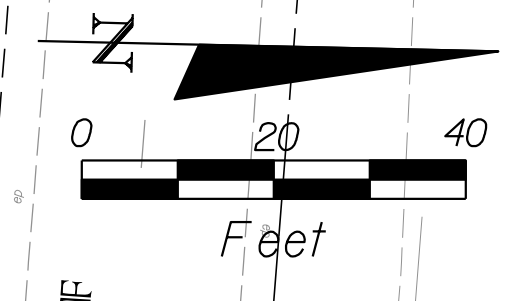
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**CITY OF FORT PIERCE/
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**NORTH 13TH STREET IMPROVEMENTS
 PHASE II - 400' SOUTH OF AVENUE D TO AVENUE I**

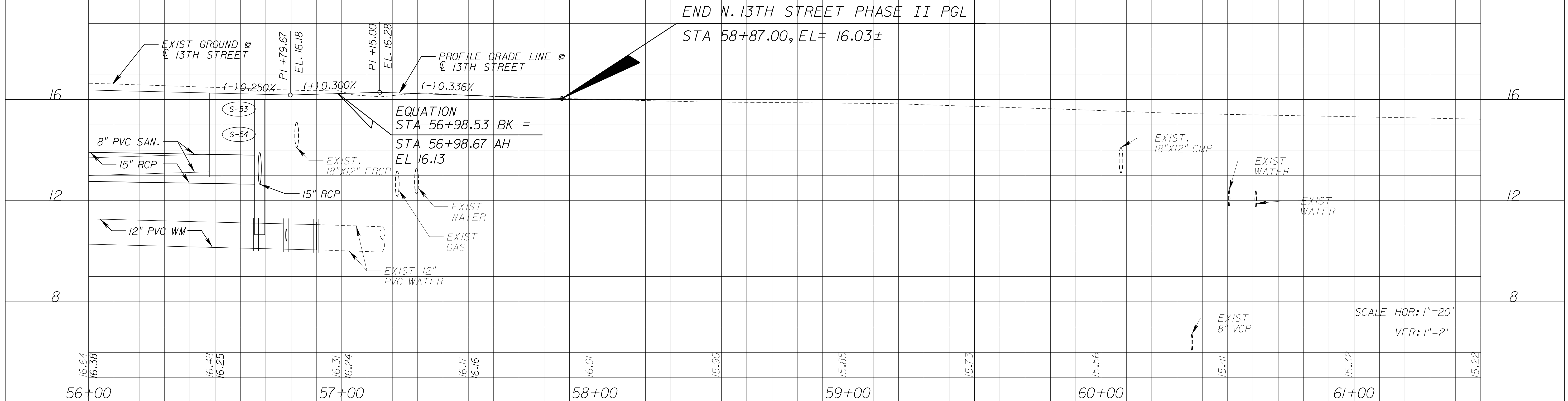
PLAN AND PROFILE
 SHEET NO. 9



S-53	S-54
STA 56+79.67, LT CONST CURB INLET TYPE P-9 INDEX 200, 214 EP EL 15.96 FL EL 12.75 (E) BOTTOM EL 10.75	STA 56+67.60, RT CONST CURB INLET TYPE P-9 INDEX 200, 214 EP EL 15.99 FL EL 12.65 (S) FL EL 12.65 (E) FL EL 12.65 (W) BOTTOM EL 10.65



- NOTES:**
- REFER TO MISCELLANEOUS DETAILS FOR ADDITIONAL HARDSCAPE INFORMATION.
 - REFER TO "SUMMARY OF FENCE" TABLE FOR MORE INFORMATION.
 - CONTRACTOR TO REMOVE, RESET AND REPLACE EXISTING PAVERS TO FACILITATE REMOVAL AND REPLACEMENT OF FIRE HYDRANT. CONTRACTOR TO CONSTRUCT CONCRETE EDGE CONSTRAINT AROUND PERIMETER OF EXISTING PAVERS ONCE SIDEWALK IS REMOVED. COST OF CONCRETE EDGE CONSTRAINT TO BE INCLUDED IN PAY ITEM 526-1-2A.



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

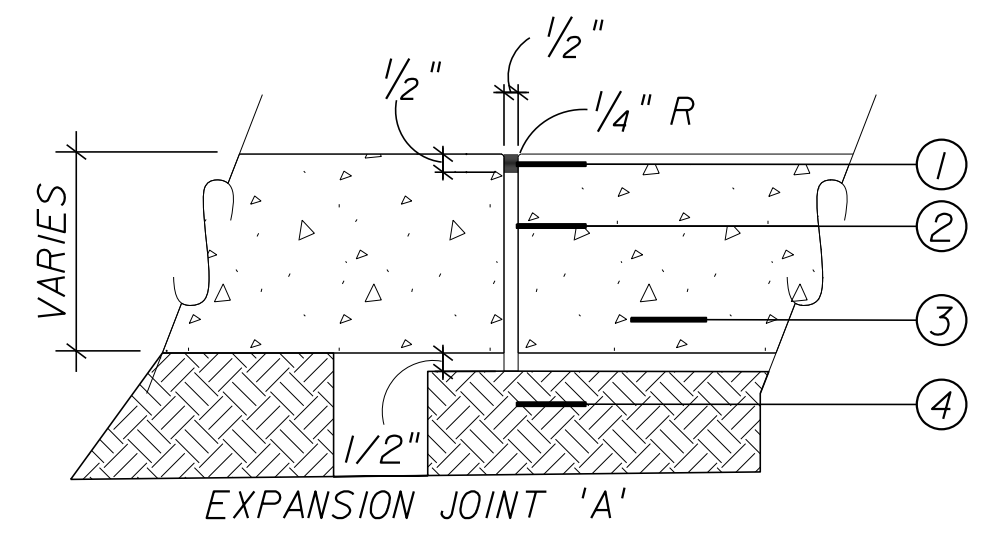
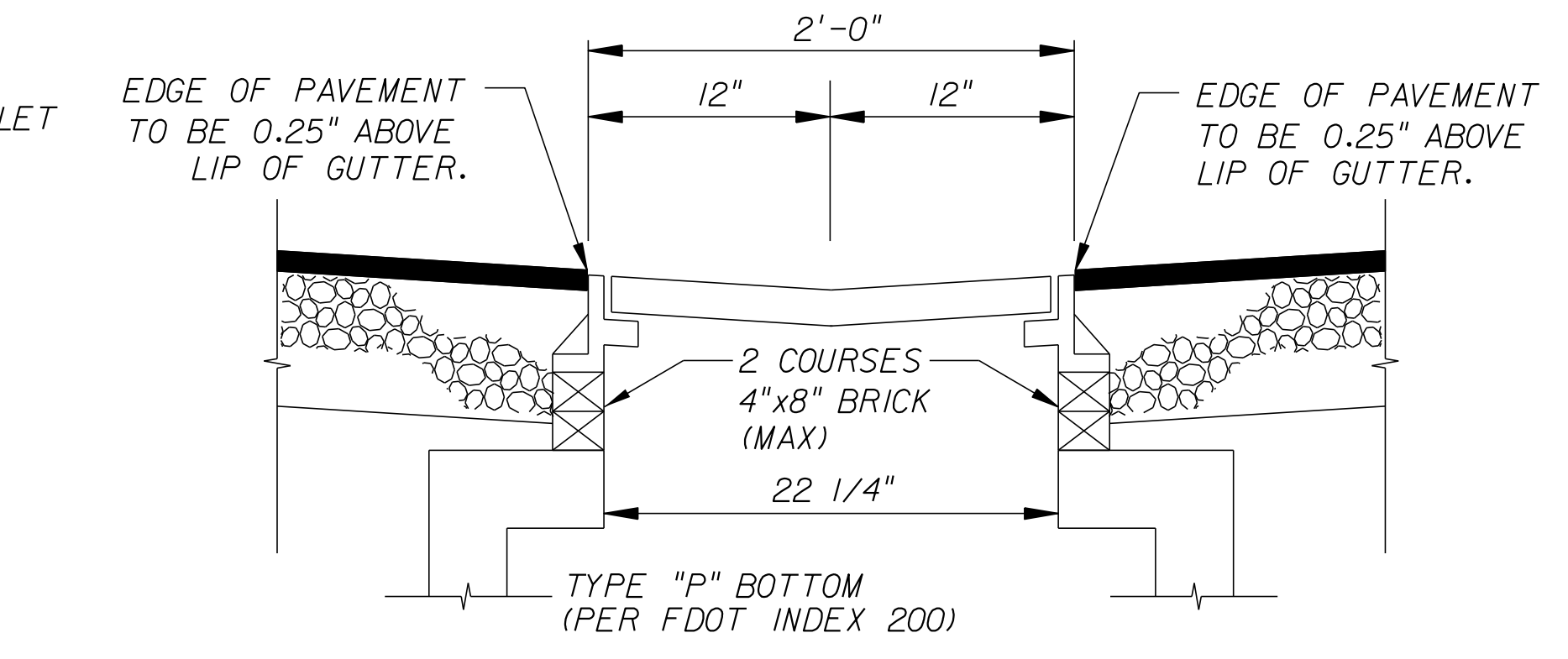
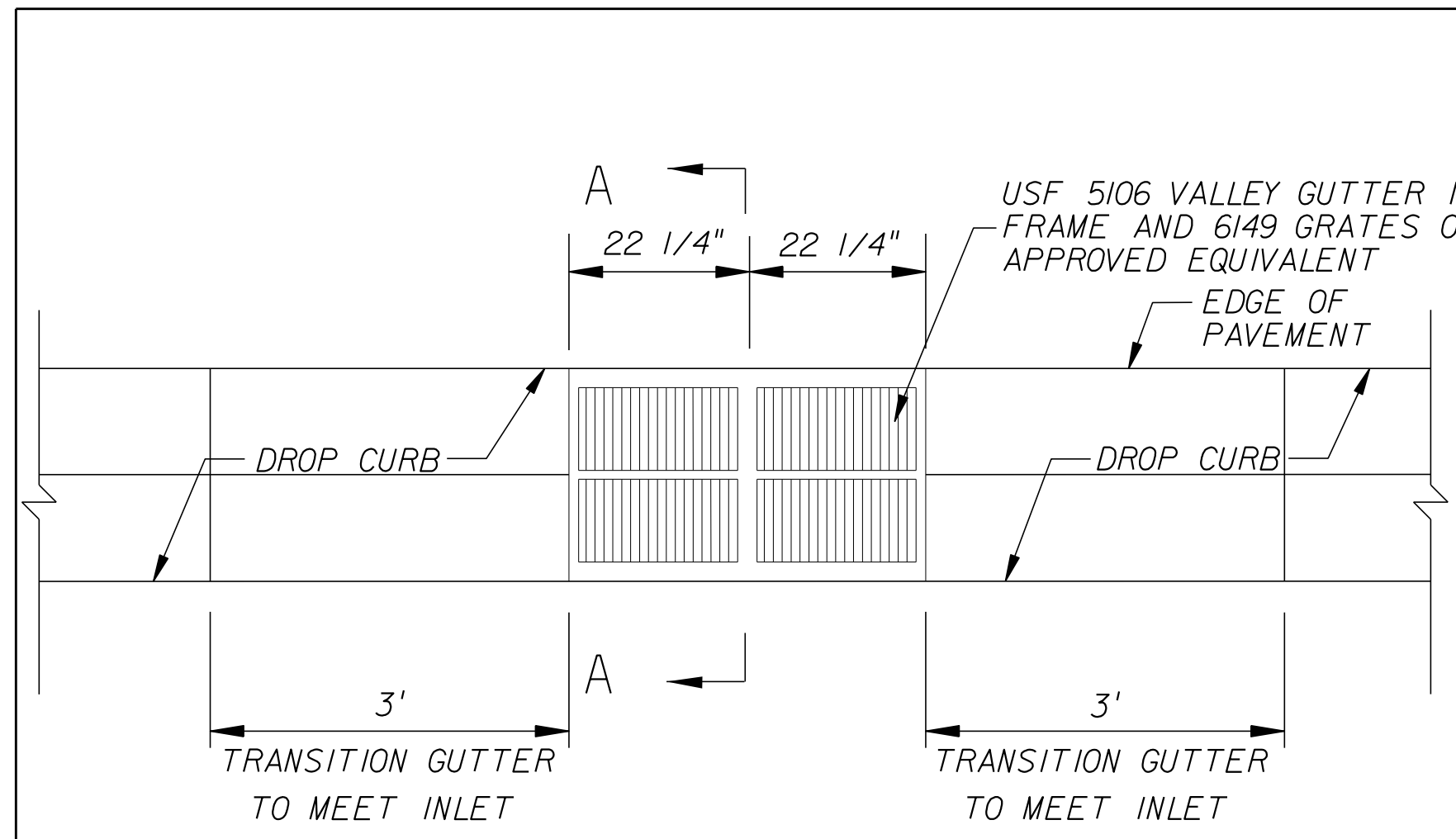
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 PHASE II - 400' SOUTH OF AVENUE D TO AVENUE I

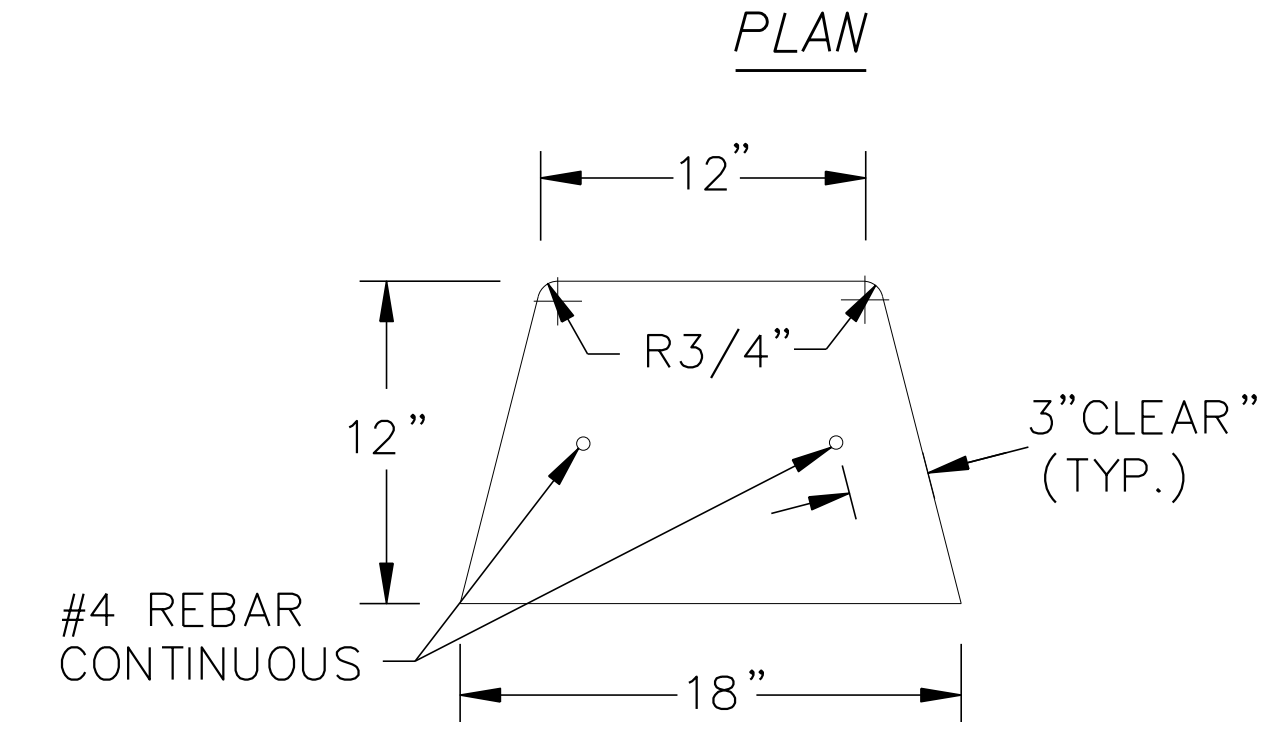
SCALE HOR: 1"=20'
 VER: 1"=2'

PLAN AND PROFILE

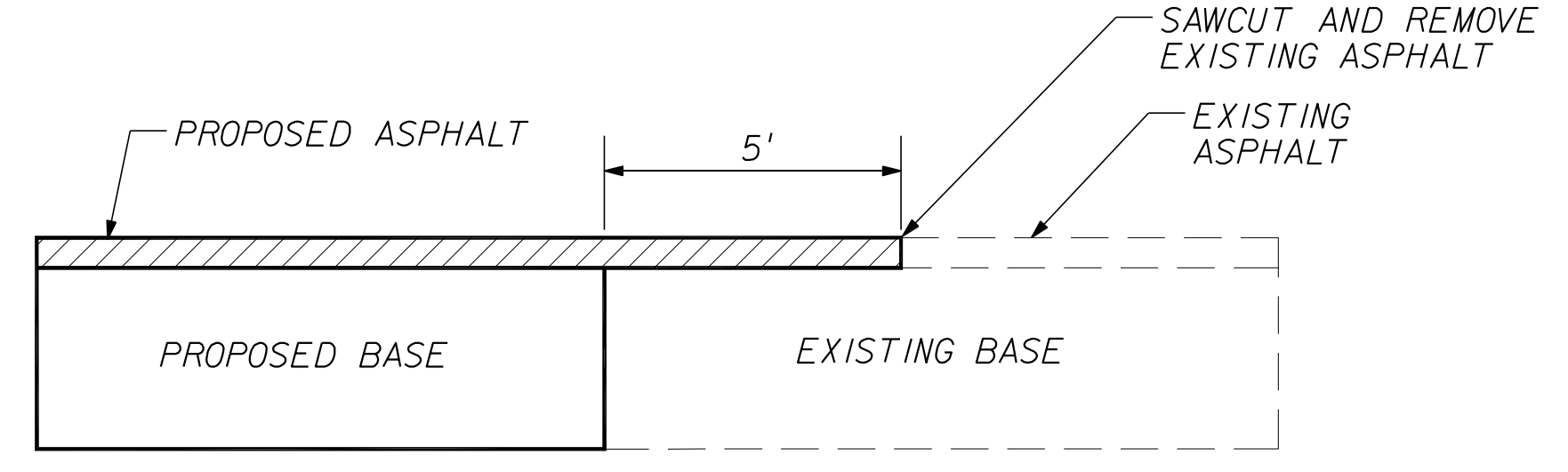
SHEET NO. 10



- MATERIAL NOTES:**
1. COLORED CAULKING/SEALANT MATERIAL. COLORED CAULKING TO MATCH SIDEWALK COLOR. PROVIDE SAMPLE FOR APPROVAL BY LANDSCAPE ARCHITECT.
 2. 1/2" PREFORMED EXPANSION JOINT FILLER (NEOPRENE OR BITUMINOUS CORK/FIBERBOARD).
 3. CONCRETE SLAB - DEPTH VARIES, 3000 PSI (TYP.).
 4. COMPACTED SUBGRADE TO 95% OF AASHTO T-99 DENSITY.

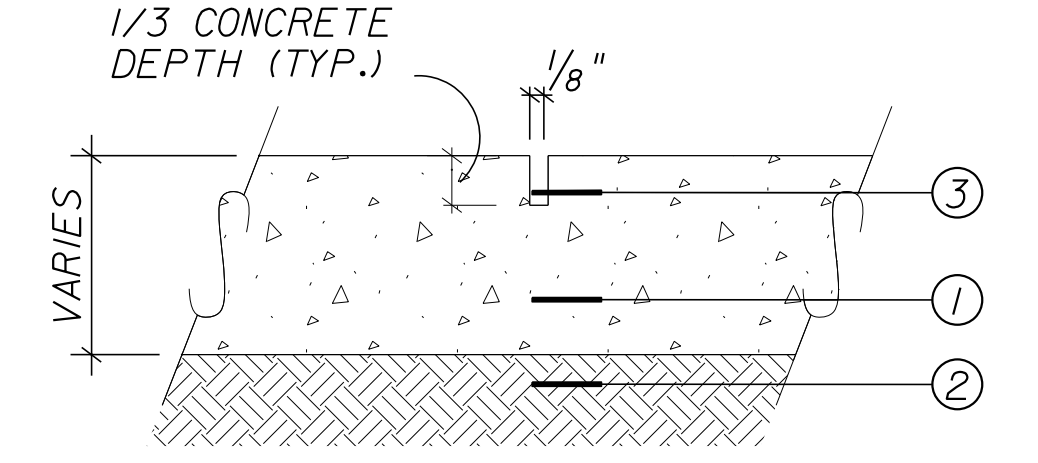


TYPE 'HEADER' CURB
N.T.S.



BUTT JOINT DETAIL
N.T.S.

NOTE:
COST OF CONSTRUCTING JOINT SHALL BE INCLUDED IN UNIT PRICE OF ASPHALTIC CONCRETE.

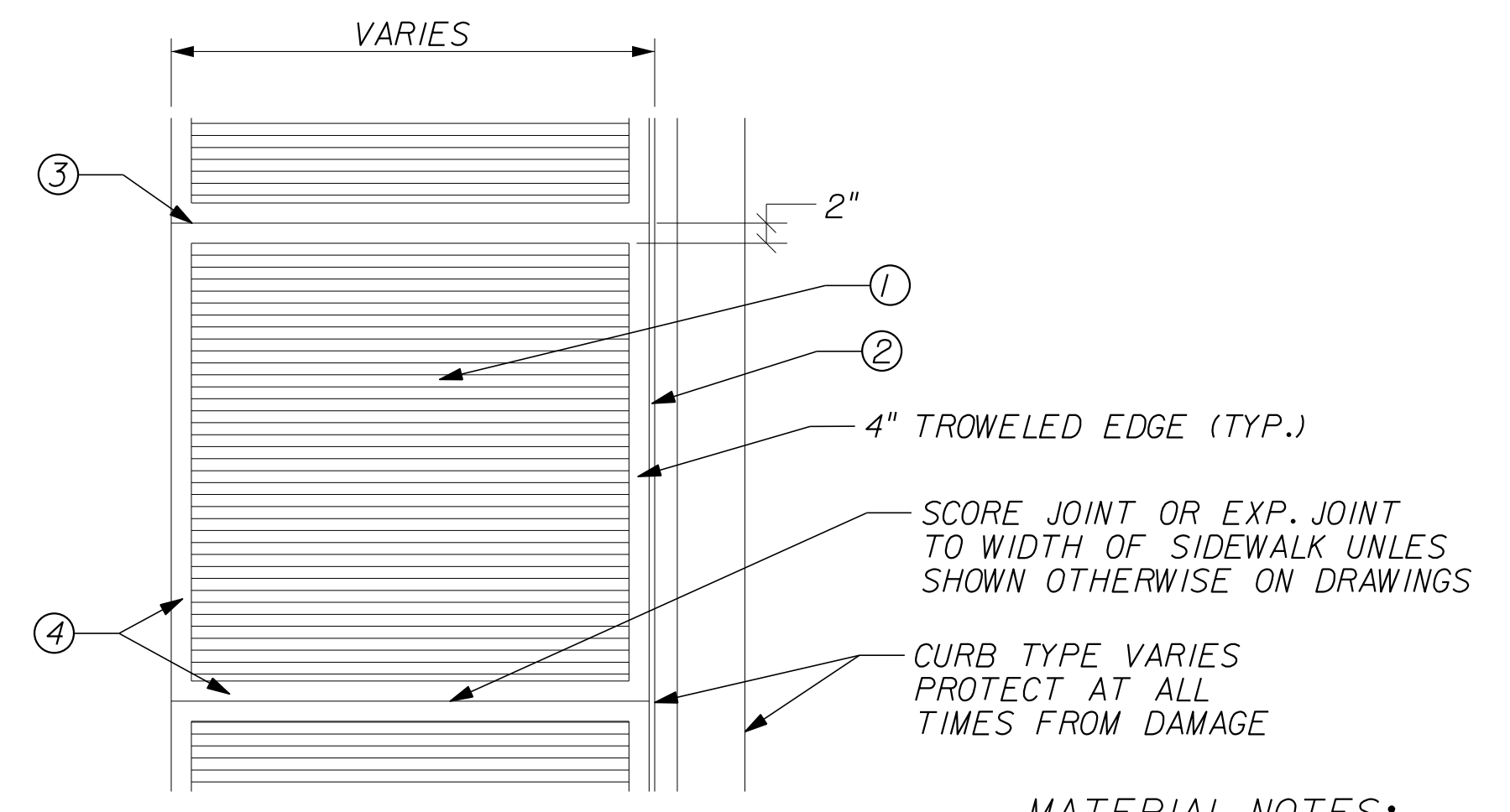


WEAKENED PLANE JOINT 'C'
(CONTROL JOINT)

TYPICAL JOINTS
N.T.S.

- MATERIAL NOTES:**
1. CONCRETE SLAB - DEPTH VARIES, 3000 PSI (TYP.).
 2. COMPACTED SUBGRADE TO 95% OF AASHTO T-99 DENSITY.
 3. 1/8" SAWCUT CONTROL JOINT.

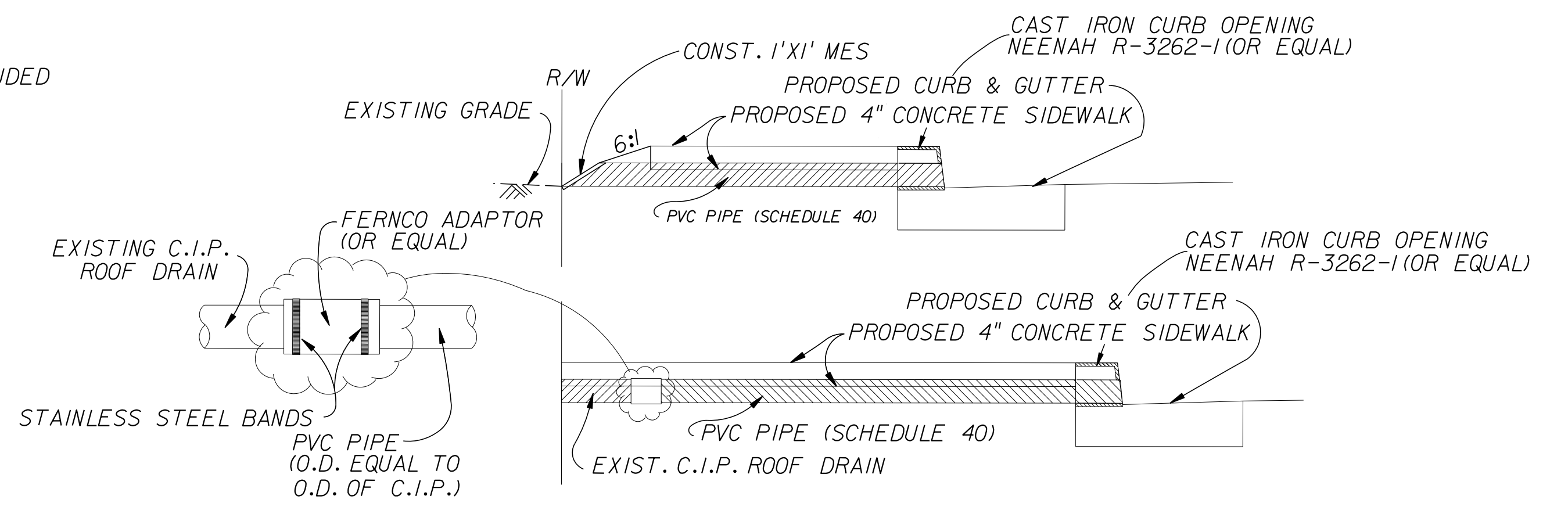
- NOTES:**
- A. ON ALL CURB RETURNS A 1/2" EXPANSION JOINT SHALL BE CONSTRUCTED BETWEEN THE BACK OF CURB AND THE SIDEWALK FOR THE ENTIRE LENGTH OF THE RETURN.
 - B. 1/2" EXPANSION JOINT EVERY 40'-50' O.C., OR AT COLD JOINTS. (LOCATE 1/2" EXPANSION JOINTS TO BLEND WITH SCORING PATTERN)
 - C. LOCATION OF SAWCUT JOINTS AND EXPANSION JOINTS SHALL BE INSTALLED ACCORDING TO THESE PLANS AND INDEX 310.



BROOM FINISH CONCRETE PAVING
N.T.S.

- NOTES:**
1. THIS DETAIL IS FOR SURFACE TREATMENT ONLY. REFER TO ROADWAY DRAWINGS FOR SPECIFICATIONS OF MATERIALS, ETC.
 2. COST OF SIDEWALK FINISH SHALL BE INCLUDED IN UNIT PRICE OF CONCRETE SIDEWALK.

- MATERIAL NOTES:**
1. 4" THICK CONCRETE SIDEWALK, 3000 PSI MIN. 4" SMOOTH TROWELLED EDGE AND MEDIUM BROOM FINISH CENTER FIELD PERPENDICULAR TO DIRECTION OF TRAVEL
 2. EXPANSION JOINT "TYPE A" (SEE DETAIL)
 3. SAWCUT CONTROL JOINT "TYPE C" OR EXPANSION JOINT "TYPE A" EVERY 40'-50' O.C. (SEE DETAIL)
 4. 4" TROWELLED EDGE AT SIDES AND 2" TROWELLED EDGES WHERE SIDEWALK CONTROL JOINTS OCCUR



DRAINAGE TILE DETAIL
N.T.S.

- NOTES:**
1. IF DRAINS PROTRUDE INTO THE BOTTOM OF THE PROPOSED SIDEWALK, IT WILL BE NECESSARY TO REINFORCE THE SIDEWALK WITH 4X4 MESH-4' WIDE CENTERED ON THE DRAIN.
 2. PAY ITEM INCLUDES ALL COST ASSOCIATED WITH FURNISHING AND INSTALLING FERNCO ADAPTER, PVC PIPE, SIDEWALK CURB OPENING OR GUTTER GRATE AND BOX.
 3. LOCATIONS SHOWN IN THE PLANS ARE APPROXIMATE AND ARE TO BE ADJUSTED AS REQUIRED TO MEET FIELD CONDITIONS.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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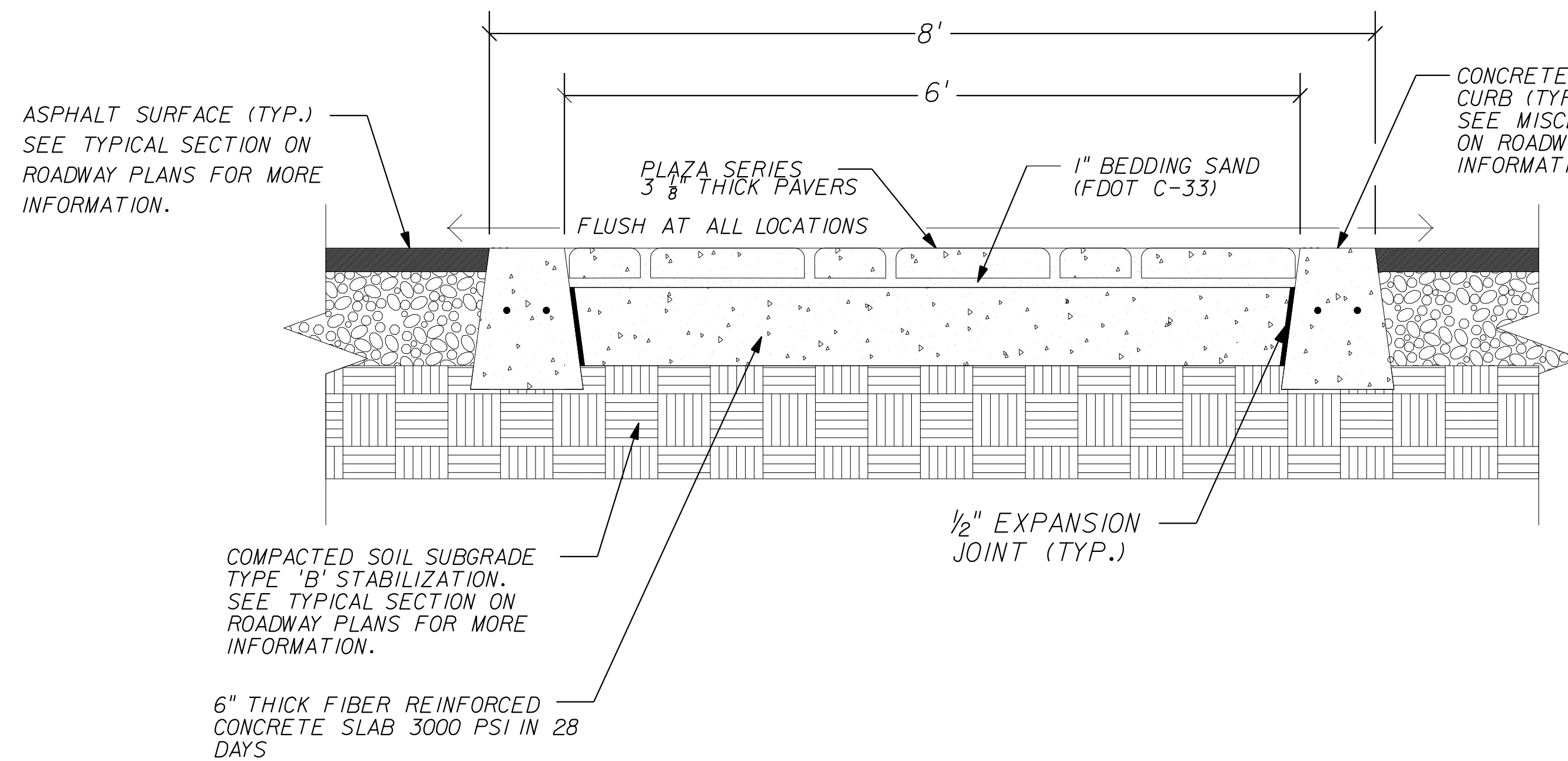
**CITY OF FORT PIERCE/
FORT PIERCE REDEVELOPMENT AGENCY**
**NORTH 13TH STREET IMPROVEMENTS
PHASE II - 400' SOUTH OF AVENUE D TO AVENUE I**

MISCELLANEOUS DETAILS
SHEET NO. 13

SUMMARY OF FENCE												
N. 13TH STREET		SIDE	TYPE						GATE		COMMENT	FIELD BOOK REFERENCE
STATION			TYPE 'B'						12' WIDE	4' WIDE		
FROM	TO		4' HEIGHT		5' HEIGHT		6' HEIGHT					
		PLAN	FINAL	PLAN	FINAL	PLAN	FINAL					
52+58	53+06	LT	45.0						1.0	1.0	WITH TOP RAIL	1
56+01	56+50	LT	37.0						1.0	1.0		
TOTAL:			82.0						2.0	2.0		

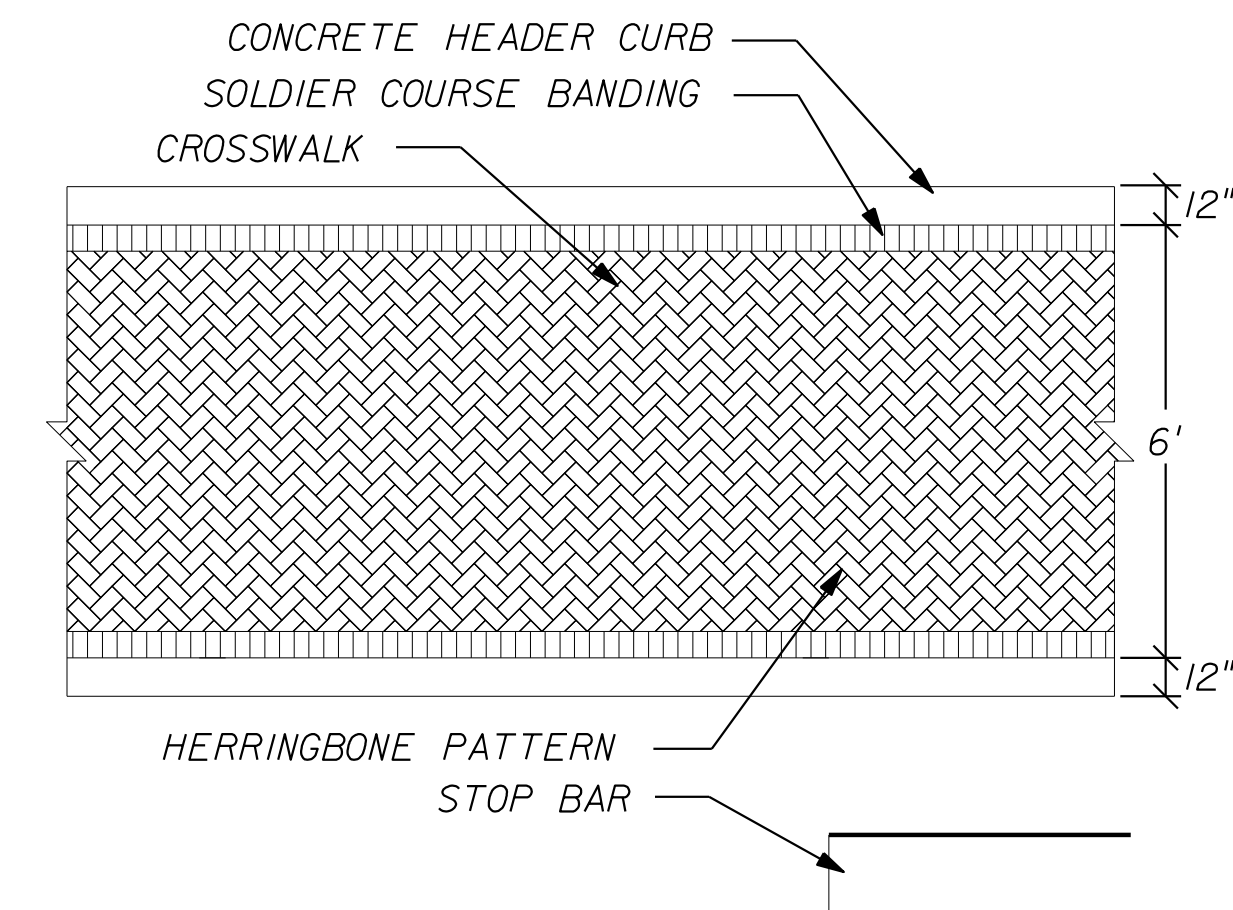
NOTES:

1. STATIONING REFERS TO C OF 13TH STREET.
2. CONTRACTOR SHALL REPLACE FENCE WITH THE SAME TYPE OF MATERIAL THAT WAS REMOVED DURING CONSTRUCTION OR AS DIRECTED BY THE CITY OF FORT PIERCE.
3. CONTRACTOR SHALL REMOVE FENCE TO THE NEAREST LINE POST OR AS DIRECTED BY THE CITY OF FORT PIERCE.
4. CONTRACTOR TO FIELD VERIFY ALL FENCE LENGTHS.
5. CONTRACTOR TO MATCH MATERIAL, STYLE AND HEIGHT OF EXISTING FENCE.



CROSSWALK PAVING DETAIL - SECTION
SECTION

N.T.S.



PAVER INFORMATION:
MANUFACTURED BY HANSON PAVER PRODUCTS
PAVER: PLAZA SERIES 4"X8"X3 1/8"
COLOR: RED/TAN/CHARCOAL
FIELD PATTERN: 45° HERRINGBONE
BANDING PATTERN: SOLDIER COURSE

CROSSWALK PAVING DETAIL - PLAN
PLAN

N.T.S.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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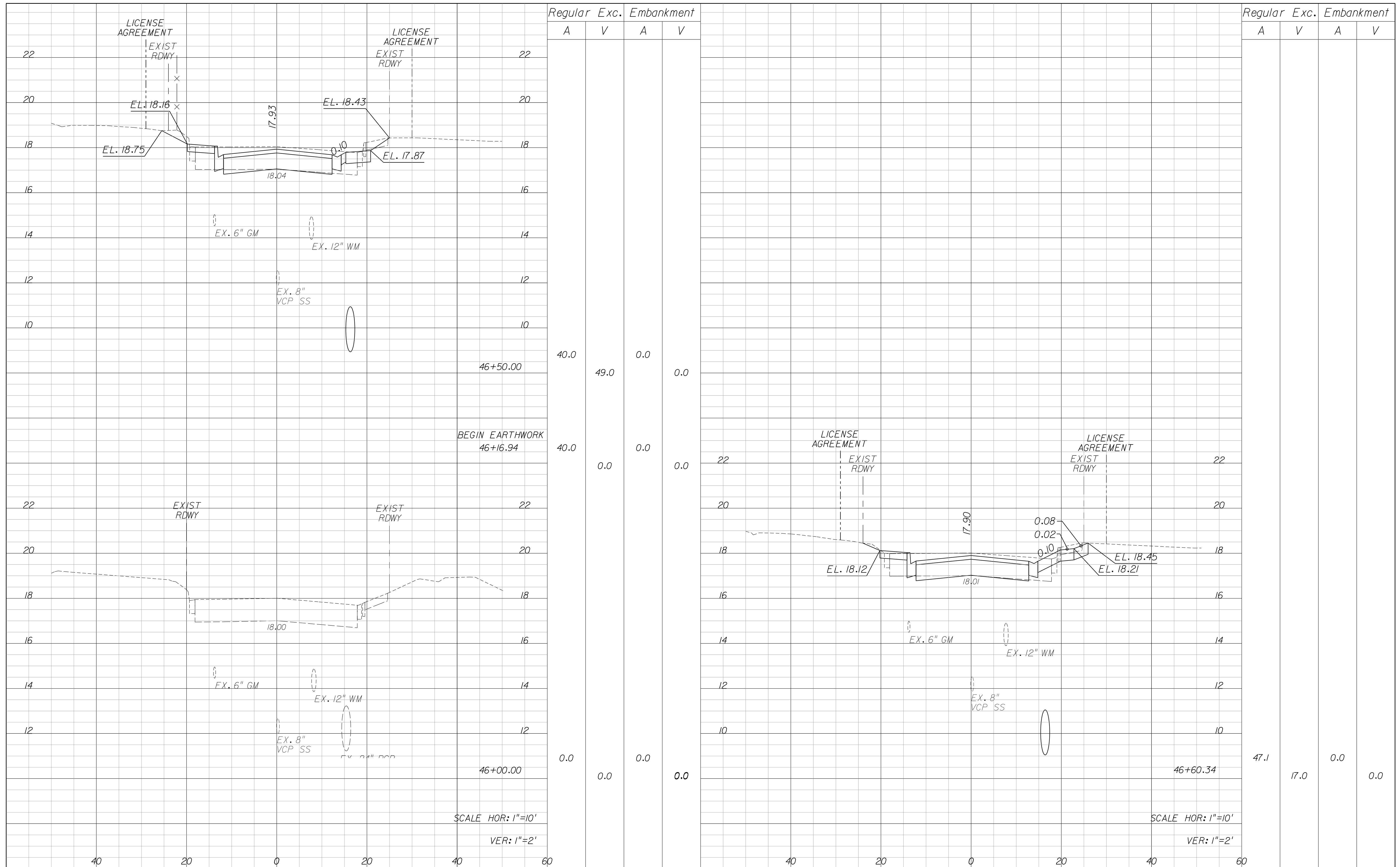
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NORTH 13TH STREET IMPROVEMENTS
PHASE II - 400' SOUTH OF AVENUE D TO AVENUE I

MISCELLANEOUS DETAILS

SHEET NO.

14



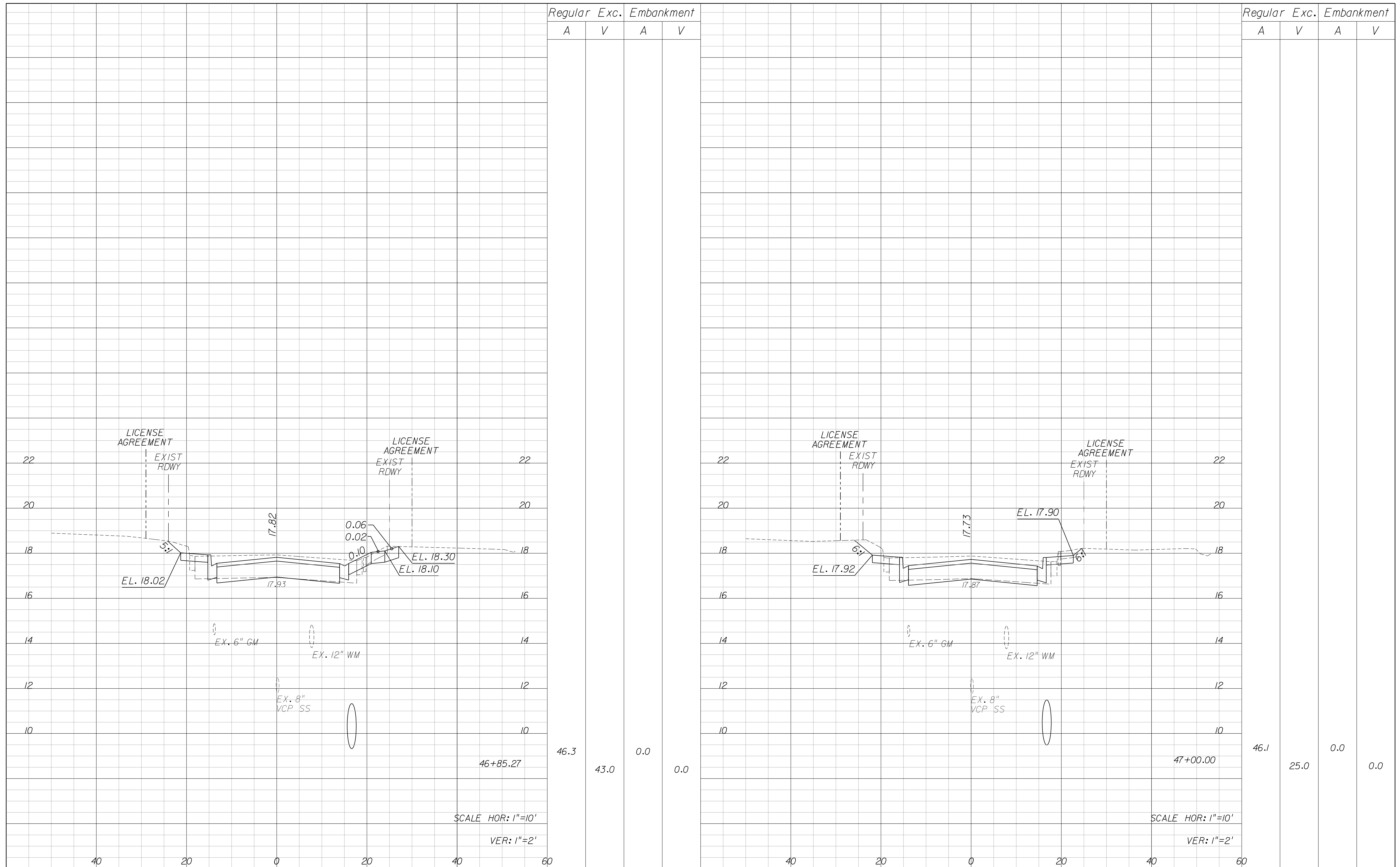
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 NORTH 13TH STREET IMPROVEMENTS
 PHASE II - ORANGE AVENUE TO 400' SOUTH OF AVENUE D

CROSS SECTIONS

SHEET NO.
 15



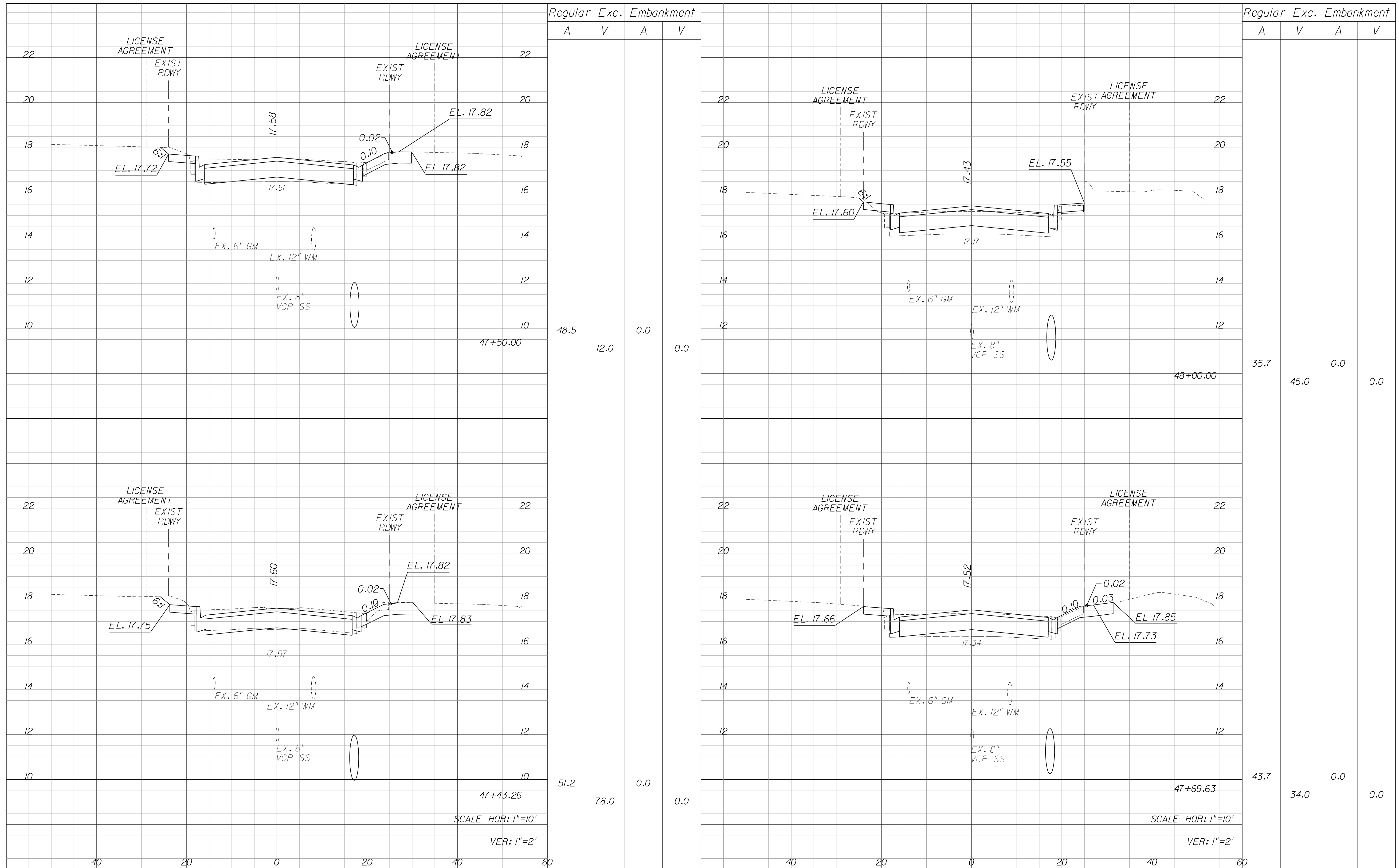
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 PHASE II - ORANGE AVENUE TO 400' SOUTH OF AVENUE D

CROSS SECTIONS

SHEET NO.
 16



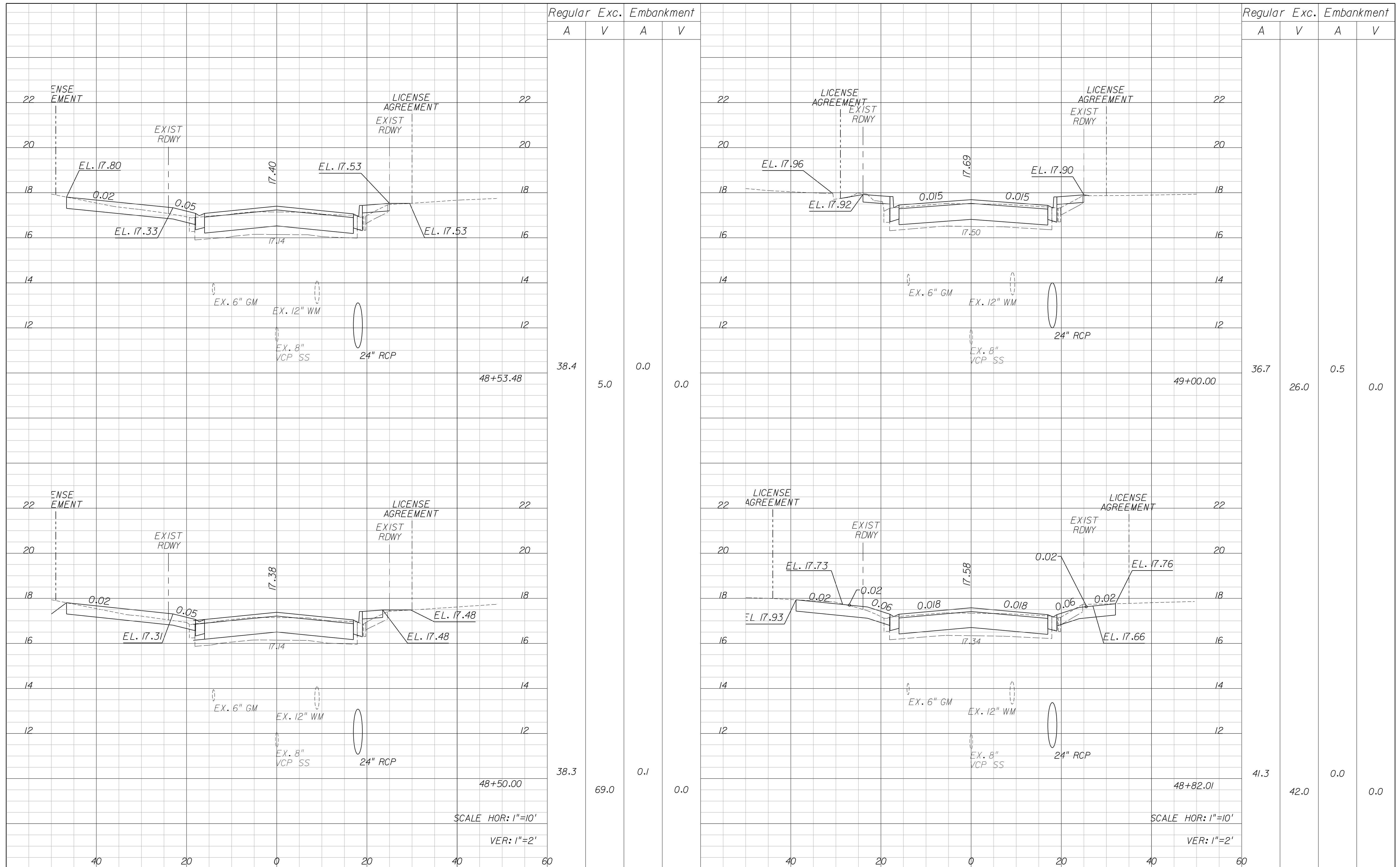
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 PHASE II - ORANGE AVENUE TO 400' SOUTH OF AVENUE D

CROSS SECTIONS

SHEET NO.
 17



Regular		Exc.		Embankment	
A	V	A	V	A	V
38.4	5.0	0.0	0.0		

Regular		Exc.		Embankment	
A	V	A	V	A	V
36.7	26.0	0.5	0.0		

SCALE HOR: 1"=10'
VER: 1"=2'

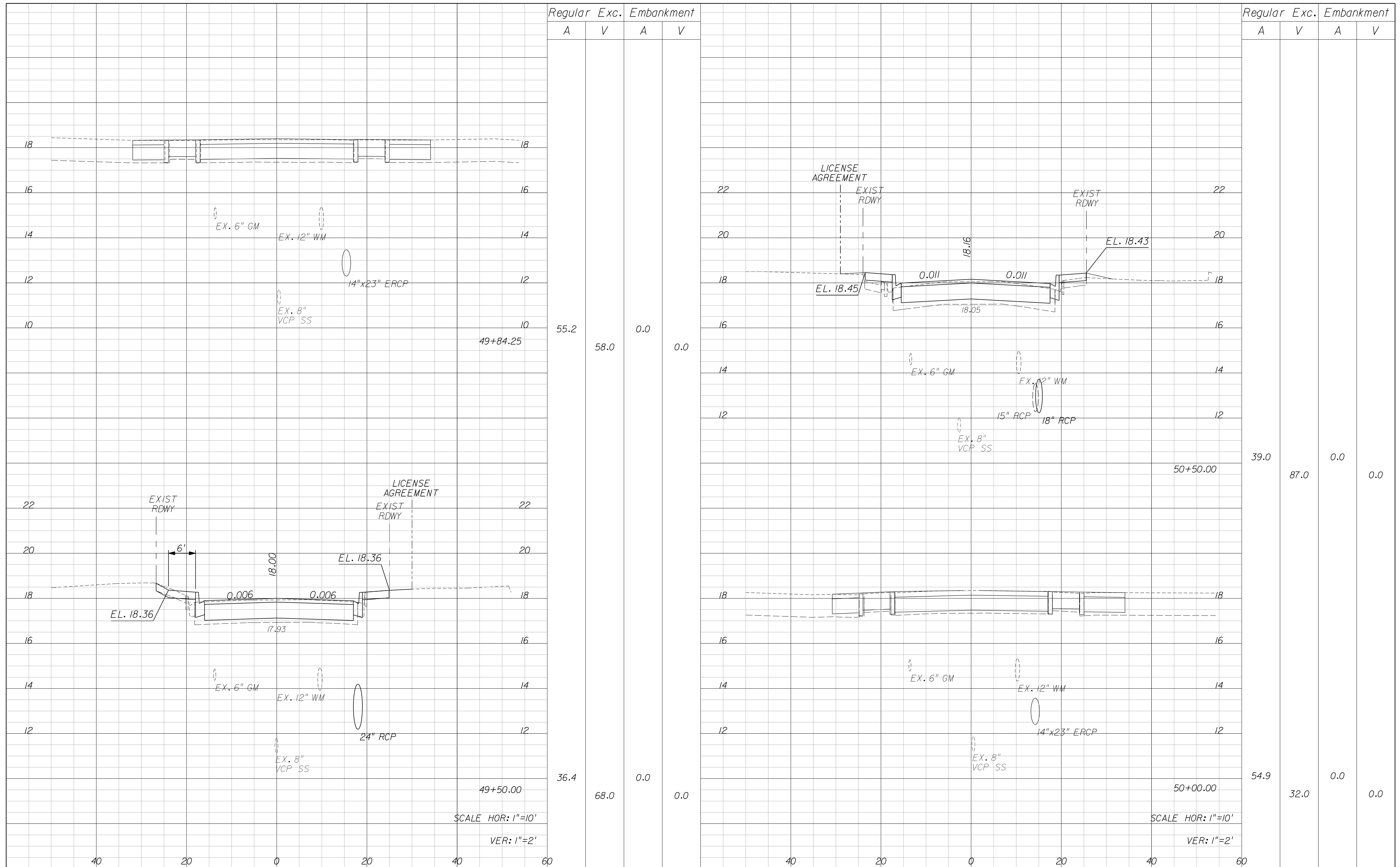
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**NORTH 13TH STREET IMPROVEMENTS
PHASE II - ORANGE AVENUE TO 400' SOUTH OF AVENUE D**

CROSS SECTIONS
SHEET NO. 18



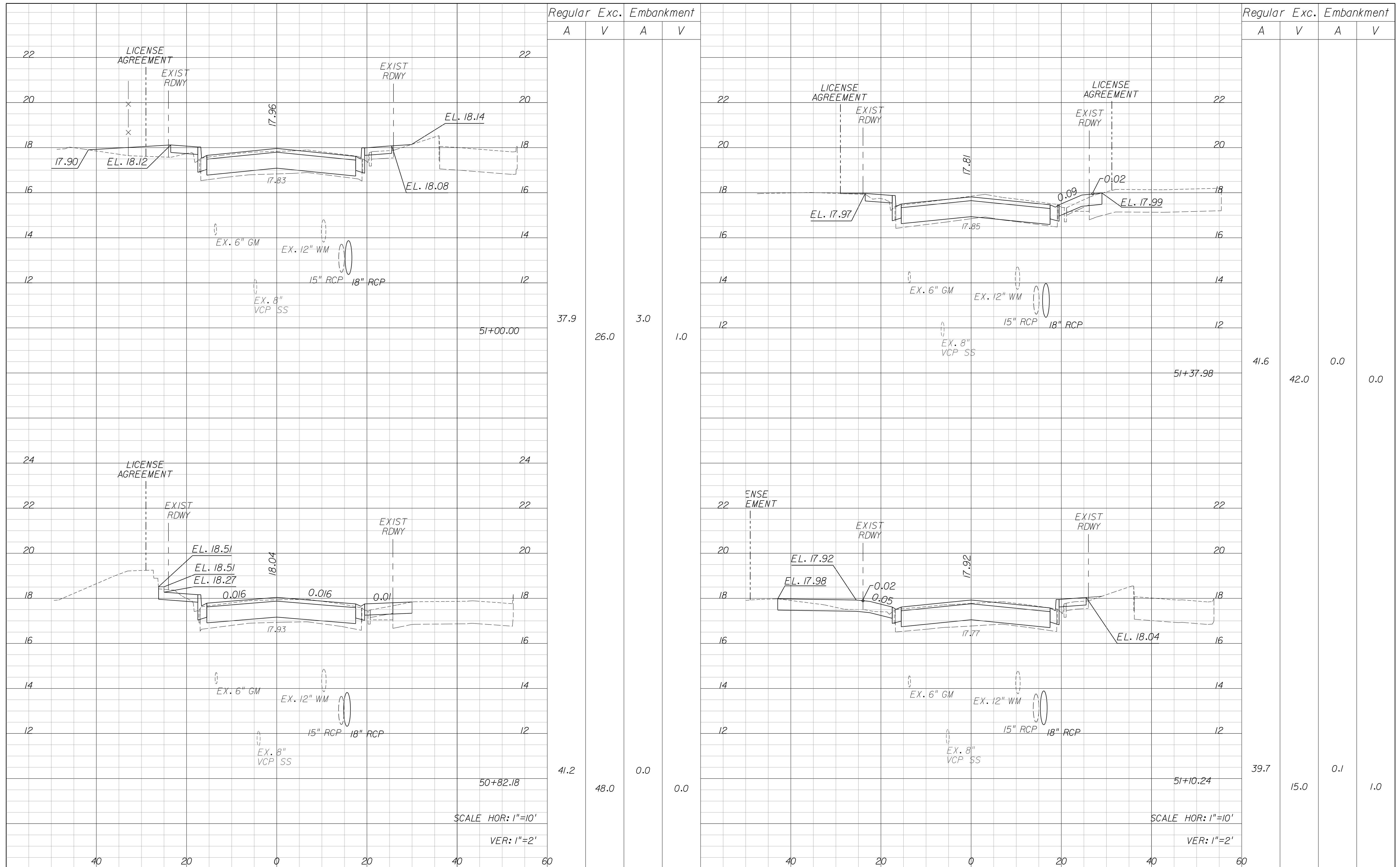
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 PHASE II - ORANGE AVENUE TO 400' SOUTH OF AVENUE D

CROSS SECTIONS

SHEET NO.
 19

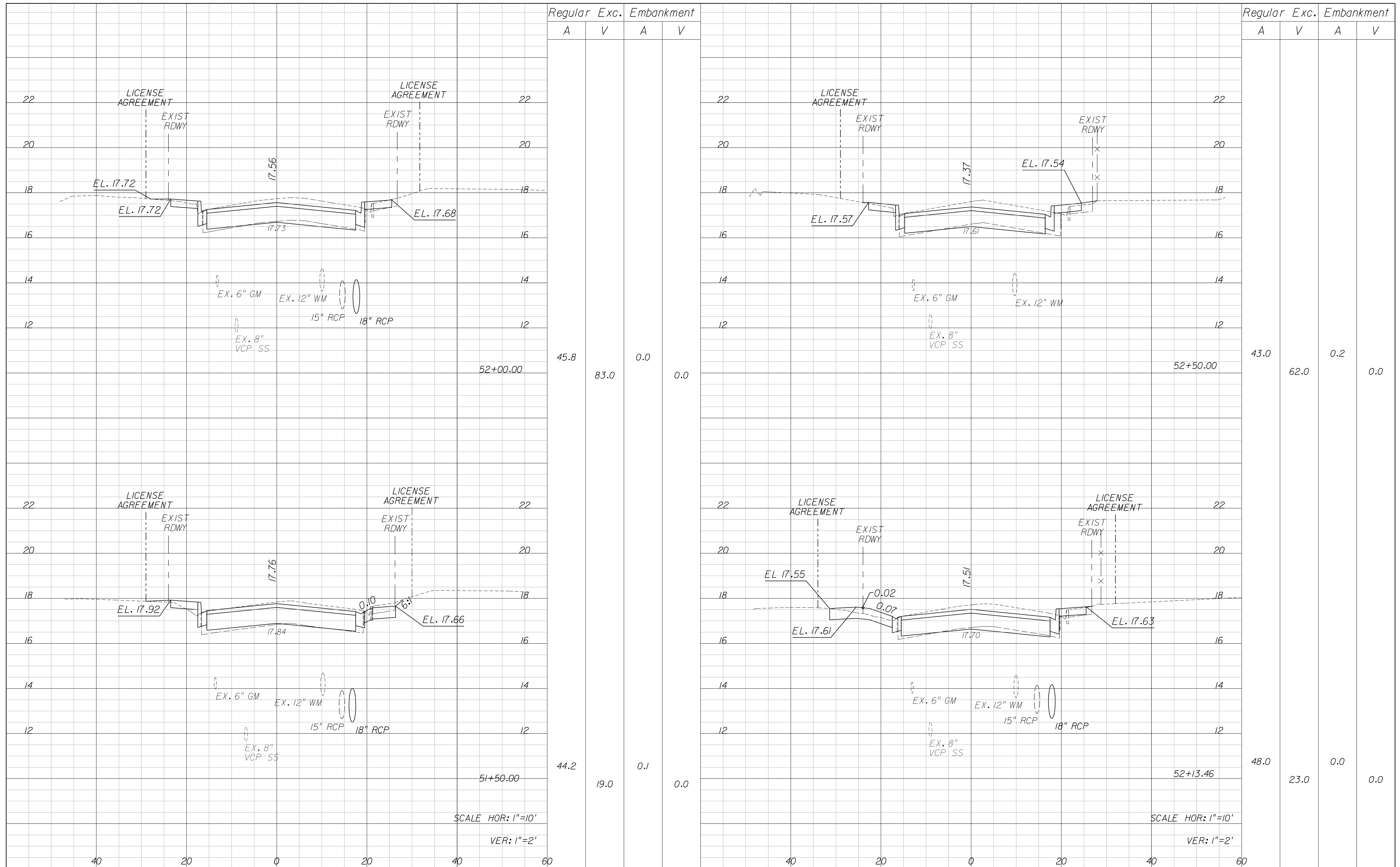


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CROSS SECTIONS
 SHEET NO.
 20

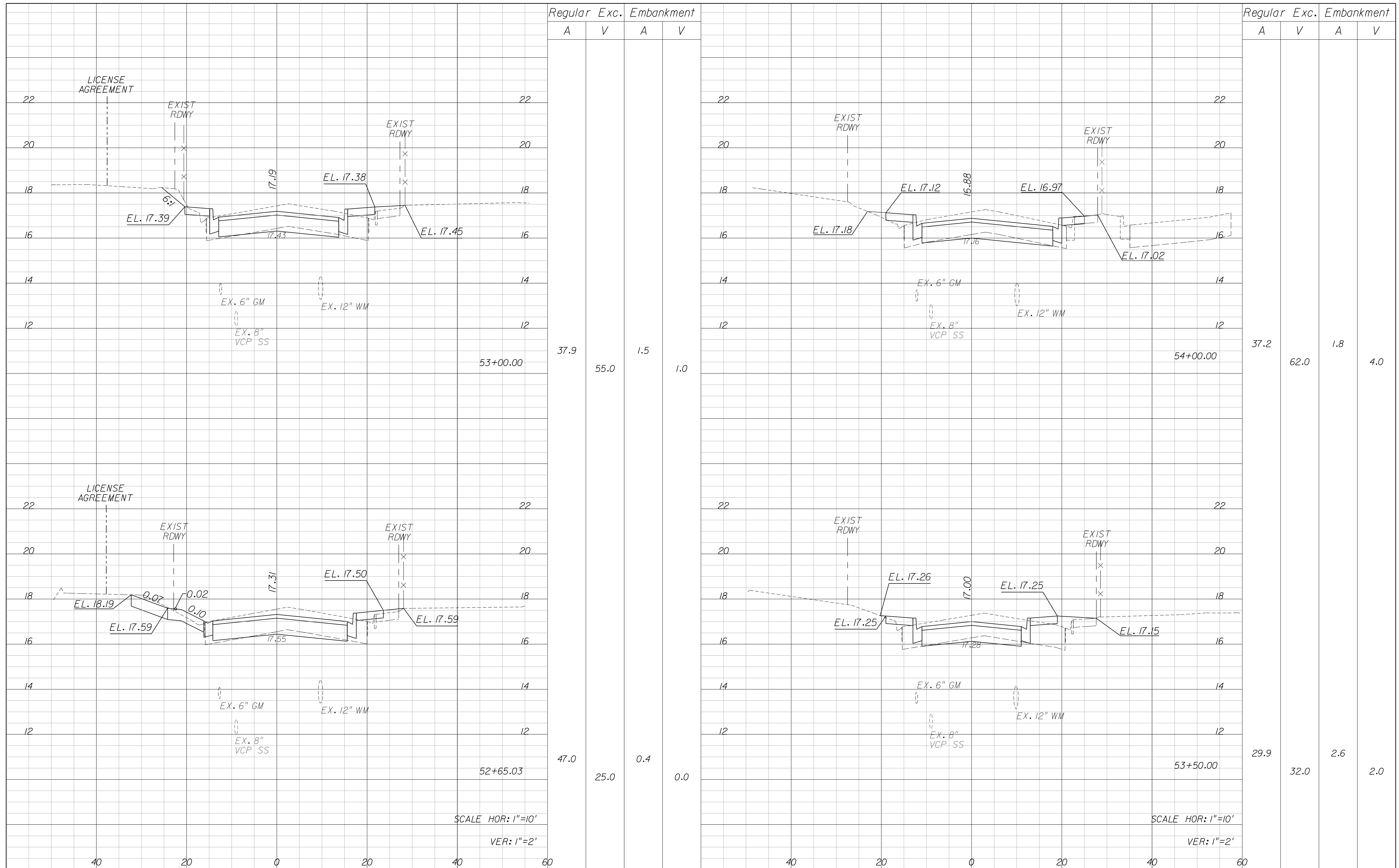


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CROSS SECTIONS
 SHEET NO.
 21



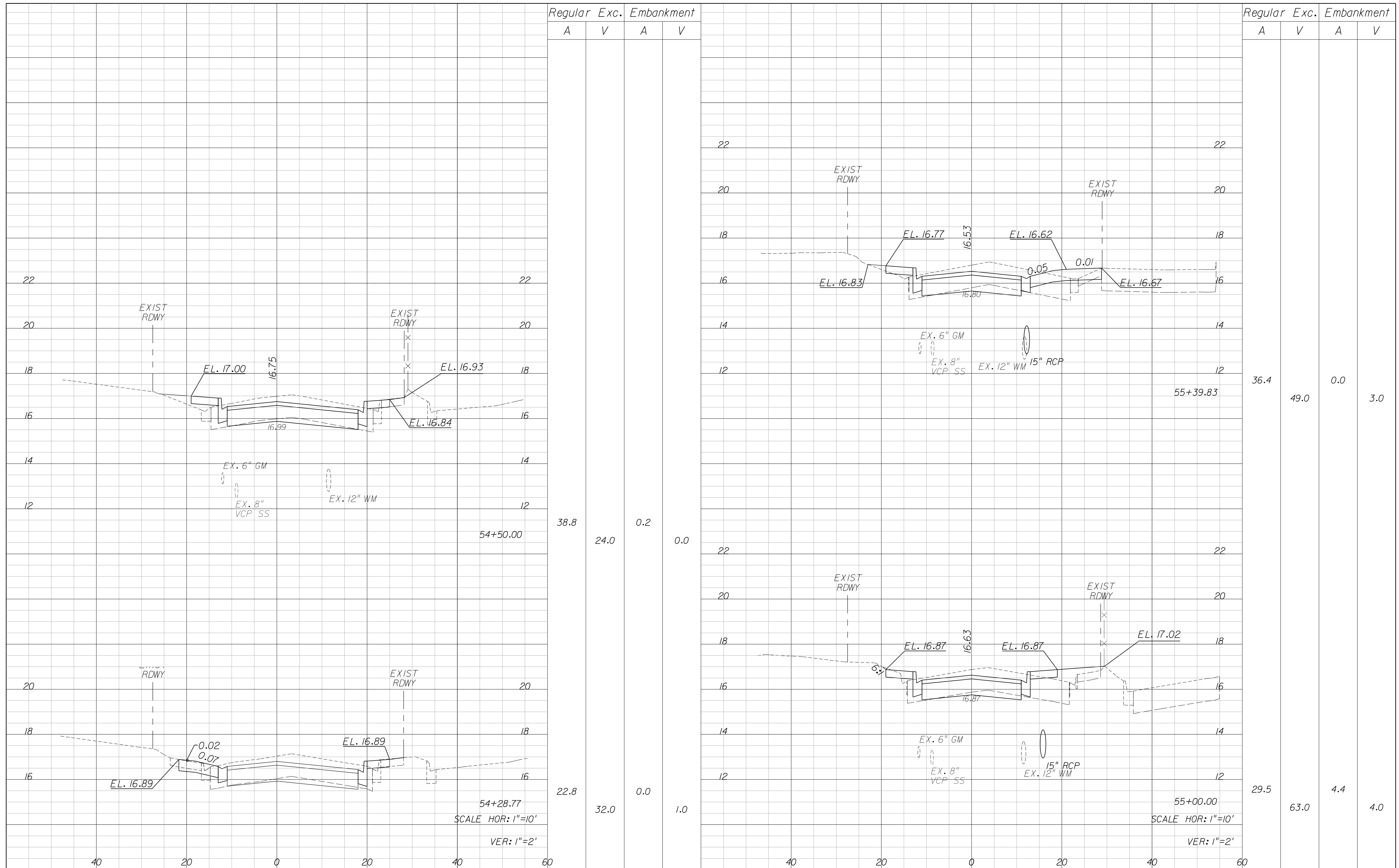
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CROSS SECTIONS

SHEET NO.
 22



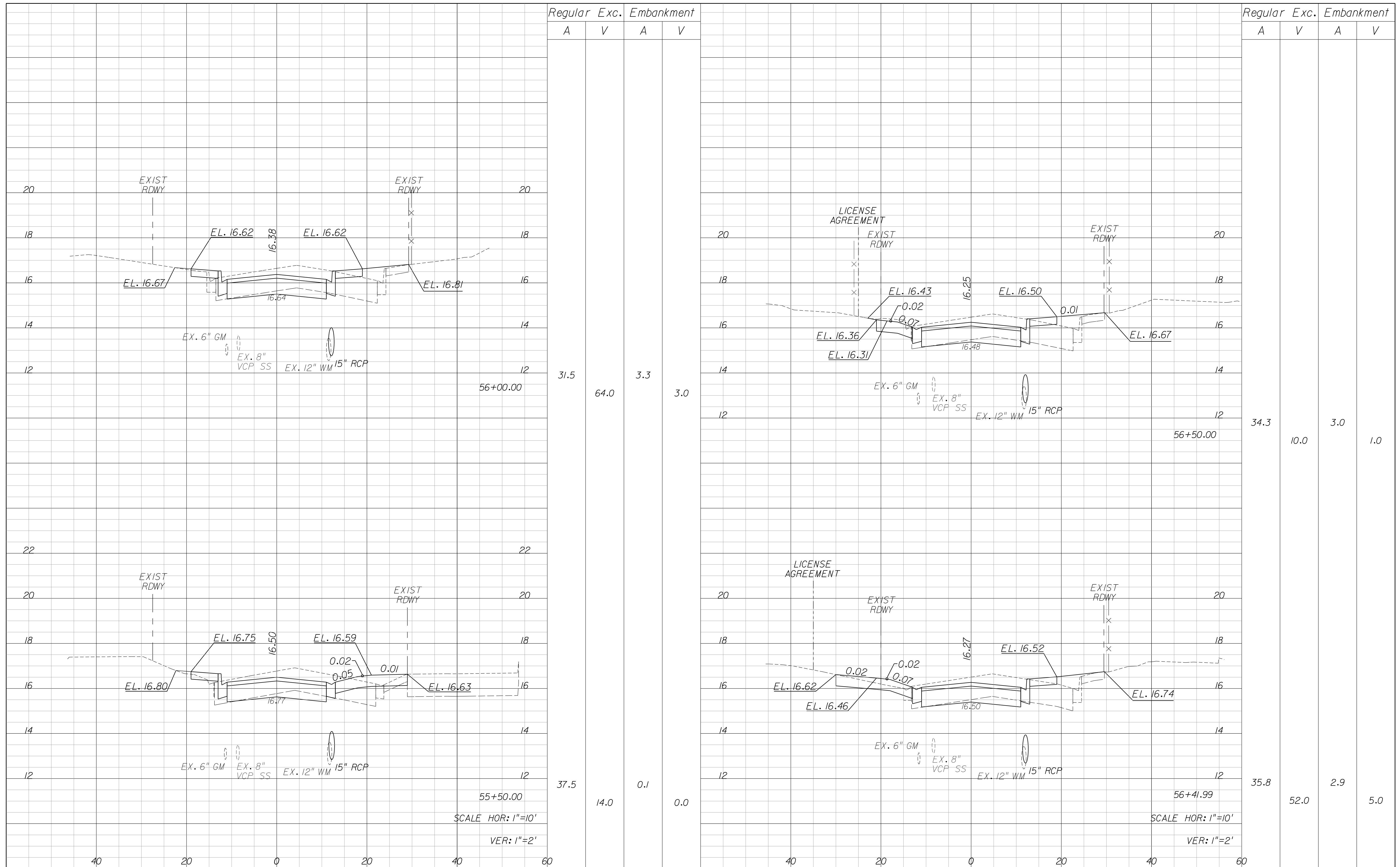
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
BRIAN A. GOOD, P.E.
 P.E. LICENSE NUMBER 56939
 601 21ST STREET, SUITE 300
 VERO BEACH, FL 32960
 (772) 562-7381
 CERTIFICATE OF AUTHORIZATION: 00000696

**CITY OF FORT PIERCE/
 FORT PIERCE REDEVELOPMENT AGENCY**
 NORTH 13TH STREET IMPROVEMENTS
 PHASE II - ORANGE AVENUE TO 400' SOUTH OF AVENUE D

CROSS SECTIONS

SHEET NO.
23



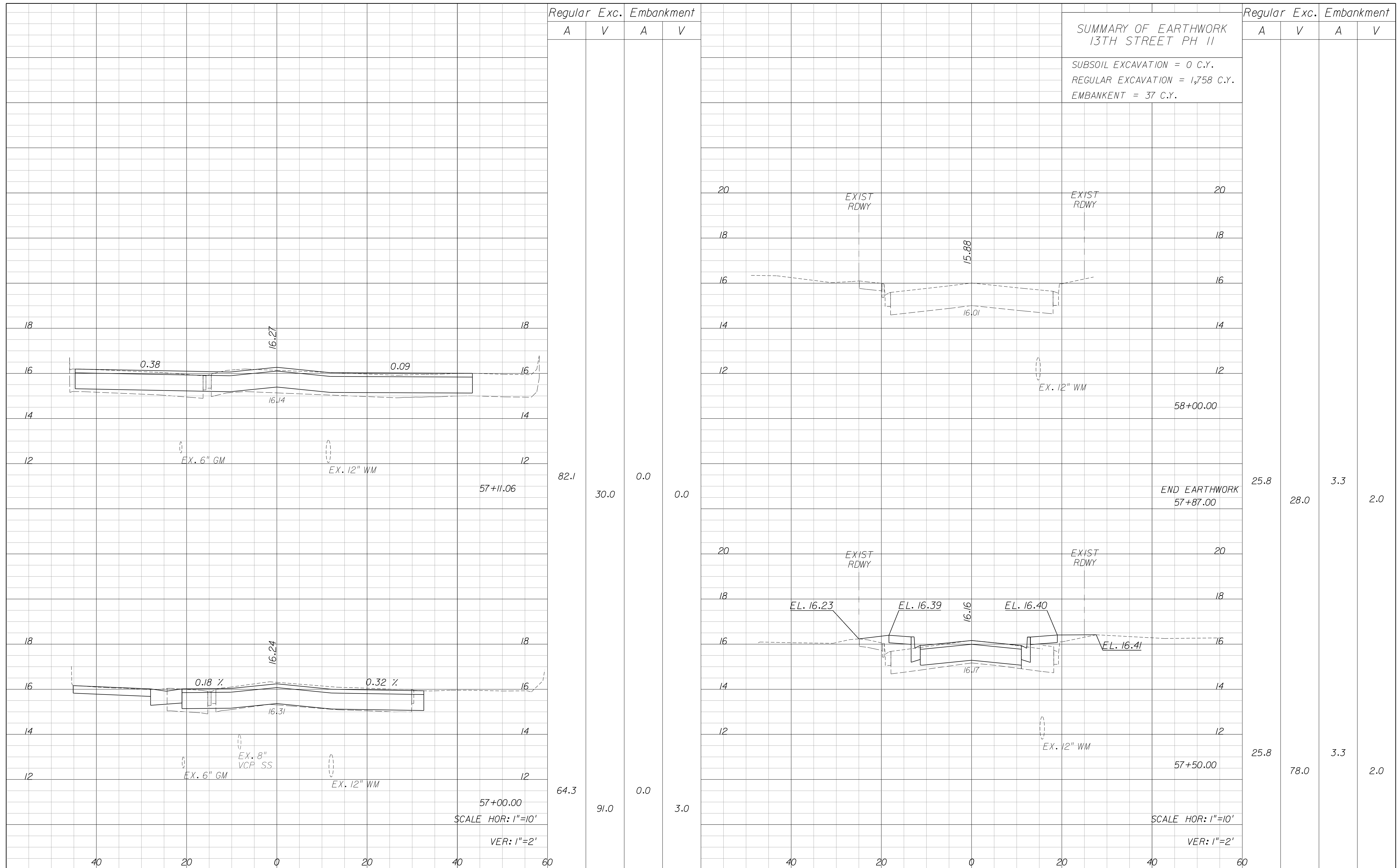
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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**CITY OF FORT PIERCE/
FORT PIERCE REDEVELOPMENT AGENCY**
**NORTH 13TH STREET IMPROVEMENTS
PHASE II - ORANGE AVENUE TO 400' SOUTH OF AVENUE D**

CROSS SECTIONS

SHEET NO.
24



SUMMARY OF EARTHWORK
13TH STREET PH II

SUBSOIL EXCAVATION = 0 C.Y.
REGULAR EXCAVATION = 1,758 C.Y.
EMBANKMENT = 37 C.Y.

Regular		Exc.		Embankment	
A	V	A	V	A	V
82.1	30.0	0.0	0.0	0.0	0.0
64.3	91.0	0.0	3.0	0.0	0.0

Regular		Exc.		Embankment	
A	V	A	V	A	V
25.8	28.0	3.3	2.0	3.3	2.0
25.8	78.0	3.3	2.0	3.3	2.0

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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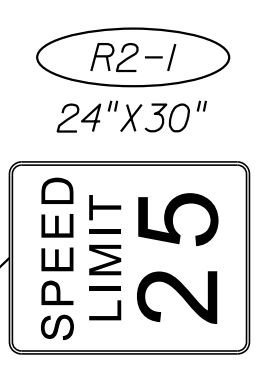
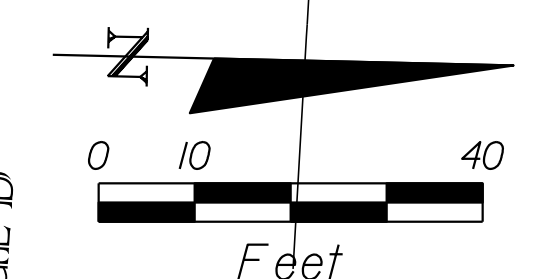
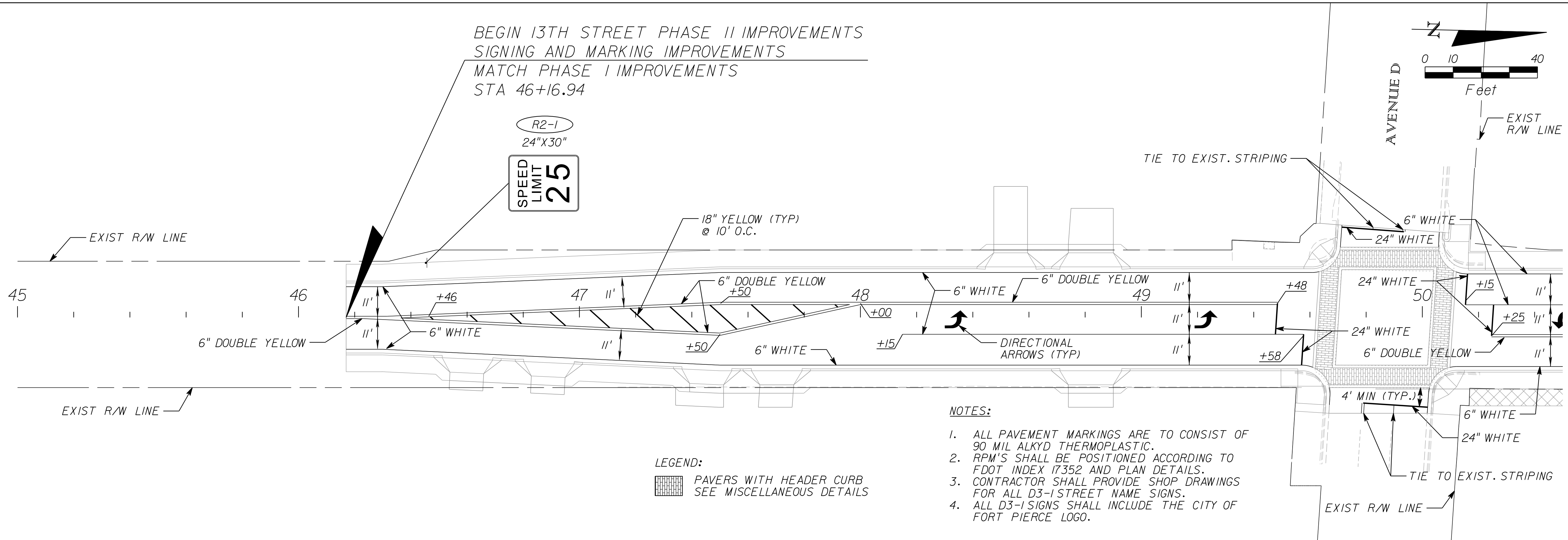
CITY OF FORT PIERCE/
FORT PIERCE REDEVELOPMENT AGENCY

NORTH 13TH STREET IMPROVEMENTS
PHASE II - ORANGE AVENUE TO 400' SOUTH OF AVENUE D

CROSS SECTIONS

SHEET NO.
25

BEGIN 13TH STREET PHASE II IMPROVEMENTS
SIGNING AND MARKING IMPROVEMENTS
MATCH PHASE I IMPROVEMENTS
STA 46+16.94



LEGEND:
 PAVERS WITH HEADER CURB
 SEE MISCELLANEOUS DETAILS

- NOTES:**
1. ALL PAVEMENT MARKINGS ARE TO CONSIST OF 90 MIL ALKYD THERMOPLASTIC.
 2. RPM'S SHALL BE POSITIONED ACCORDING TO FDOT INDEX 17352 AND PLAN DETAILS.
 3. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR ALL D3-1 STREET NAME SIGNS.
 4. ALL D3-1 SIGNS SHALL INCLUDE THE CITY OF FORT PIERCE LOGO.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
 BRIAN A. GOOD, P.E.
 P.E. LICENSE NUMBER 56939
 601 21ST STREET, SUITE 300
 VERO BEACH, FL 32960
 (772) 562-7381
 CERTIFICATE OF AUTHORIZATION: 00000696

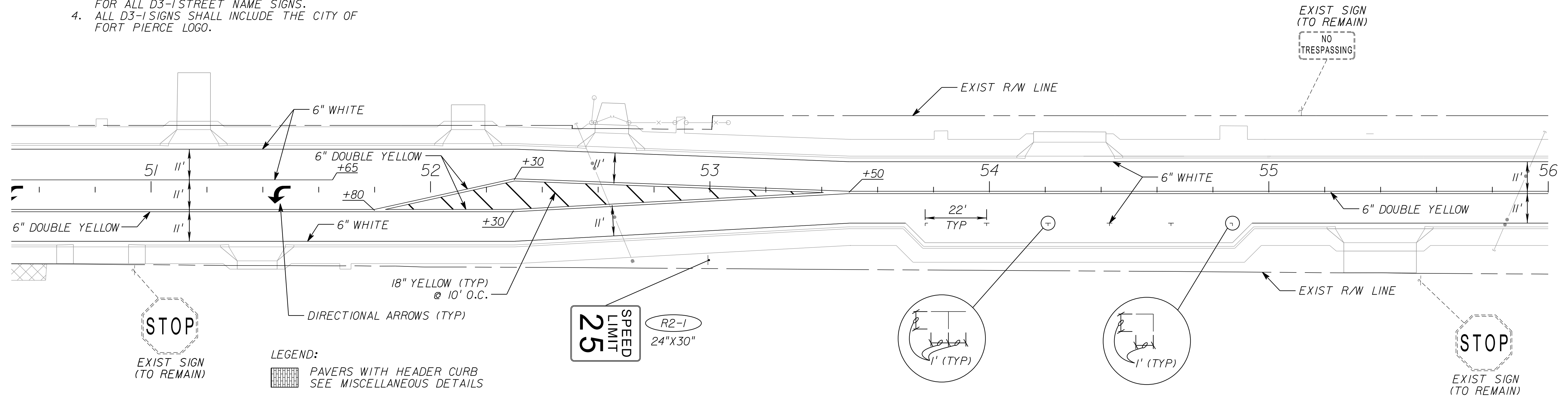
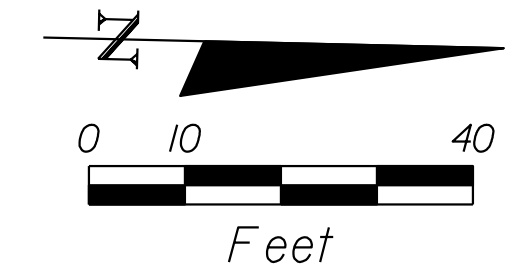
CITY OF FORT PIERCE/
 FORT PIERCE REDEVELOPMENT AGENCY
 NORTH 13TH STREET IMPROVEMENTS
 PHASE II - 400' SOUTH OF AVENUE D TO AVENUE I

SIGNING AND MARKING

SHEET NO.
 S-1

NOTES:

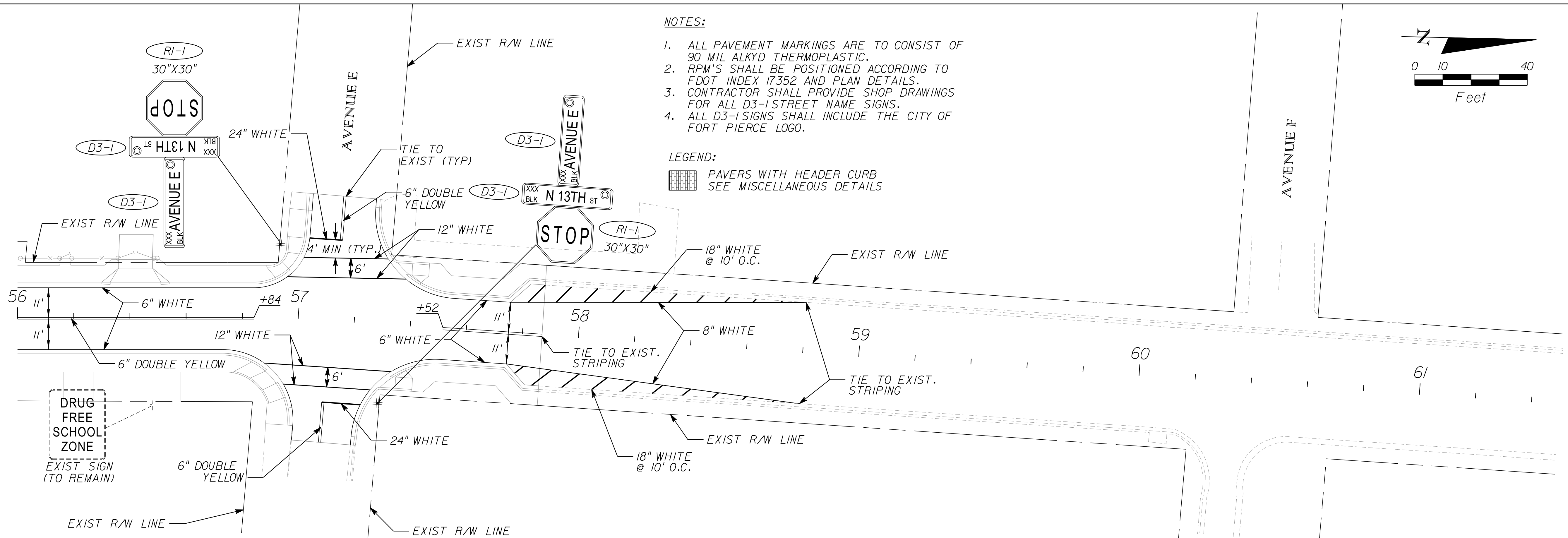
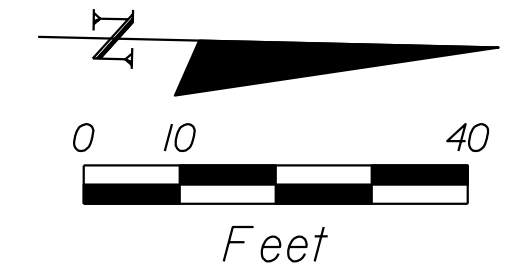
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4. ALL D3-1 SIGNS SHALL INCLUDE THE CITY OF FORT PIERCE LOGO.



LEGEND:
 PAVERS WITH HEADER CURB SEE MISCELLANEOUS DETAILS

NOTES:

1. ALL PAVEMENT MARKINGS ARE TO CONSIST OF 90 MIL ALKYD THERMOPLASTIC.
2. RPM'S SHALL BE POSITIONED ACCORDING TO FDOT INDEX 17352 AND PLAN DETAILS.
3. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR ALL D3-1 STREET NAME SIGNS.
4. ALL D3-1 SIGNS SHALL INCLUDE THE CITY OF FORT PIERCE LOGO.



LEGEND:
 PAVERS WITH HEADER CURB SEE MISCELLANEOUS DETAILS

REVISIONS							CITY OF FORT PIERCE/ FORT PIERCE REDEVELOPMENT AGENCY NORTH 13TH STREET IMPROVEMENTS PHASE II - 400' SOUTH OF AVENUE D TO AVENUE I	SIGNING AND MARKING	SHEET NO. S-2
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				
						BRIAN A. GOOD, P.E. P.E. LICENSE NUMBER 56939 601 21ST STREET, SUITE 300 VERO BEACH, FL 32960 (772) 562-7381 CERTIFICATE OF AUTHORIZATION: 00000696	mike.forman 3/16/2016 4:20:47 PM K:\WRB_Roadway\47922001\cadd\PHASE II\rdwy\plansp03.dgn		

GENERAL EROSION NOTES

A. THE STORMWATER POLLUTION PREVENTION PLAN IS COMPRISED OF THIS DRAWING, THE STANDARD DETAILS, THE PLAN NARRATIVE, ATTACHMENTS INCLUDED IN SPECIFICATIONS, PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.

B. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE OF FLORIDA NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.

C. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS.

D. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR THE CITY.

F. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.

G. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.

H. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.

I. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.

J. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

K. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.

L. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.

M. STABILIZATION PRACTICES SHOULD BE INITIATED AS SOON AS PRACTICAL, BUT IN NO CASE MORE THAN 7 DAYS WHERE CONSTRUCTION HAS TEMPORARILY CEASED.

N. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SODDED. THESE AREAS SHALL BE SODDED NO LATER THAN 7 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.

O. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.

P. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

Q. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.

R. ON-SITE & OFFSITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.

S. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

T. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, ETC.) TO PREVENT EROSION.

U. THE CONTRACTOR IS RESPONSIBLE FOR APPLYING FOR AND OBTAINING THE NPDES PERMIT PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

MAINTENANCE

ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A 0.5" RAINFALL EVENT, AND CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.

2. ALL SODDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESODDED AS NEEDED.

3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.

4. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.

5. THE TEMPORARY STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE).

6. OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS OR TRAPS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 50%.

7. ALL MAINTENANCE OPERATIONS SHALL BE DONE IN A TIMELY MANNER BUT IN NO CASE LATER THAN SEVEN CALENDAR DAYS FOLLOWING THE INSPECTION.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn

BRIAN A. GOOD, P.E.
P.E. LICENSE NUMBER 56939
601 21ST STREET, SUITE 300
VERO BEACH, FL 32960
(772) 562-7381
CERTIFICATE OF AUTHORIZATION: 00000696

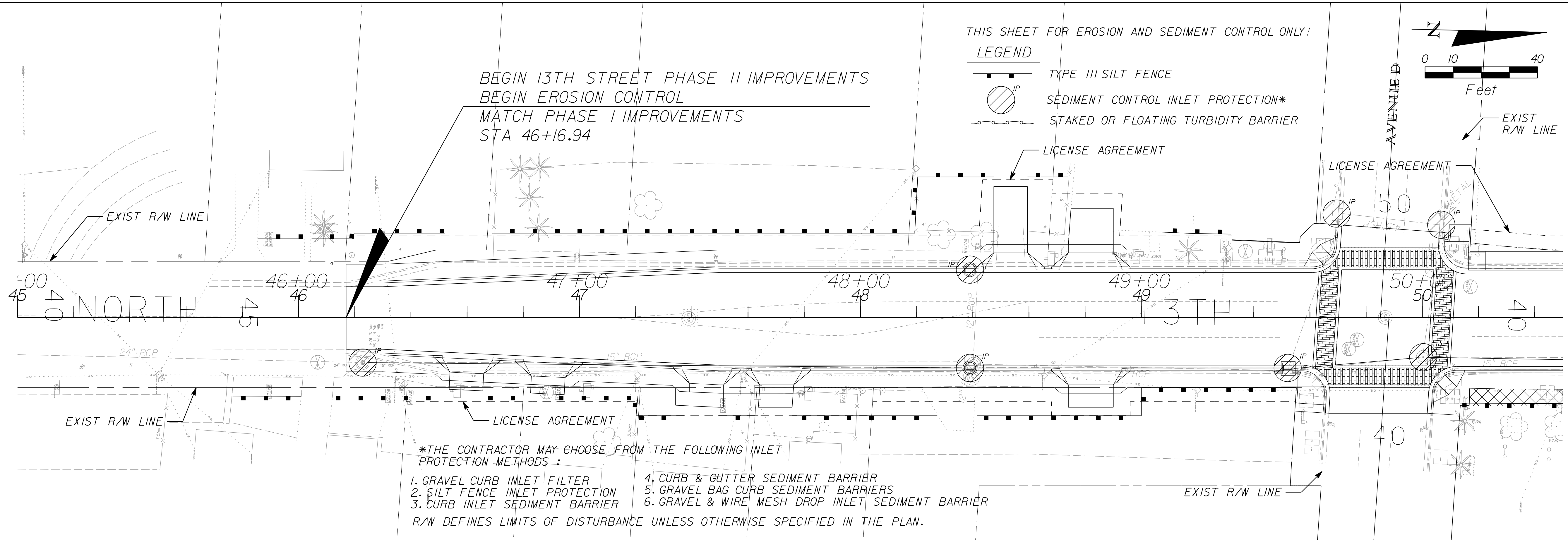
**CITY OF FORT PIERCE/
FORT PIERCE REDEVELOPMENT AGENCY**

**NORTH 13TH STREET IMPROVEMENTS
PHASE II - 400' SOUTH OF A VENUE D TO A VENUE I**

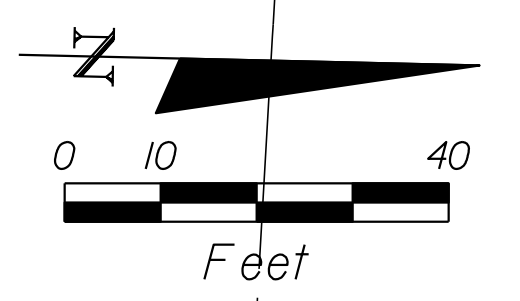
**EROSION CONTROL
GENERAL NOTES**

SHEET
NO.

E-1



THIS SHEET FOR EROSION AND SEDIMENT CONTROL ONLY!
LEGEND
 [Symbol] TYPE III SILT FENCE
 [Symbol] SEDIMENT CONTROL INLET PROTECTION*
 [Symbol] STAKED OR FLOATING TURBIDITY BARRIER



BEGIN 13TH STREET PHASE II IMPROVEMENTS
 BEGIN EROSION CONTROL
 MATCH PHASE I IMPROVEMENTS
 STA 46+16.94

- *THE CONTRACTOR MAY CHOOSE FROM THE FOLLOWING INLET PROTECTION METHODS:
- | | |
|--------------------------------|---|
| 1. GRAVEL CURB INLET FILTER | 4. CURB & GUTTER SEDIMENT BARRIER |
| 2. SILT FENCE INLET PROTECTION | 5. GRAVEL BAG CURB SEDIMENT BARRIERS |
| 3. CURB INLET SEDIMENT BARRIER | 6. GRAVEL & WIRE MESH DROP INLET SEDIMENT BARRIER |
- R/W DEFINES LIMITS OF DISTURBANCE UNLESS OTHERWISE SPECIFIED IN THE PLAN.

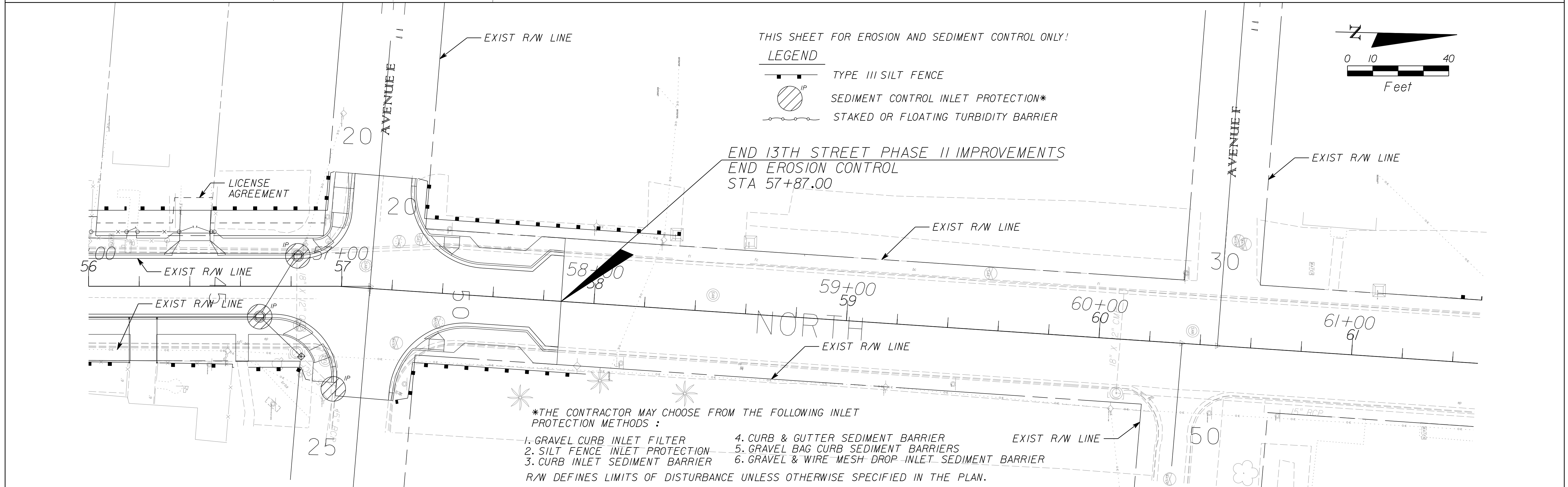
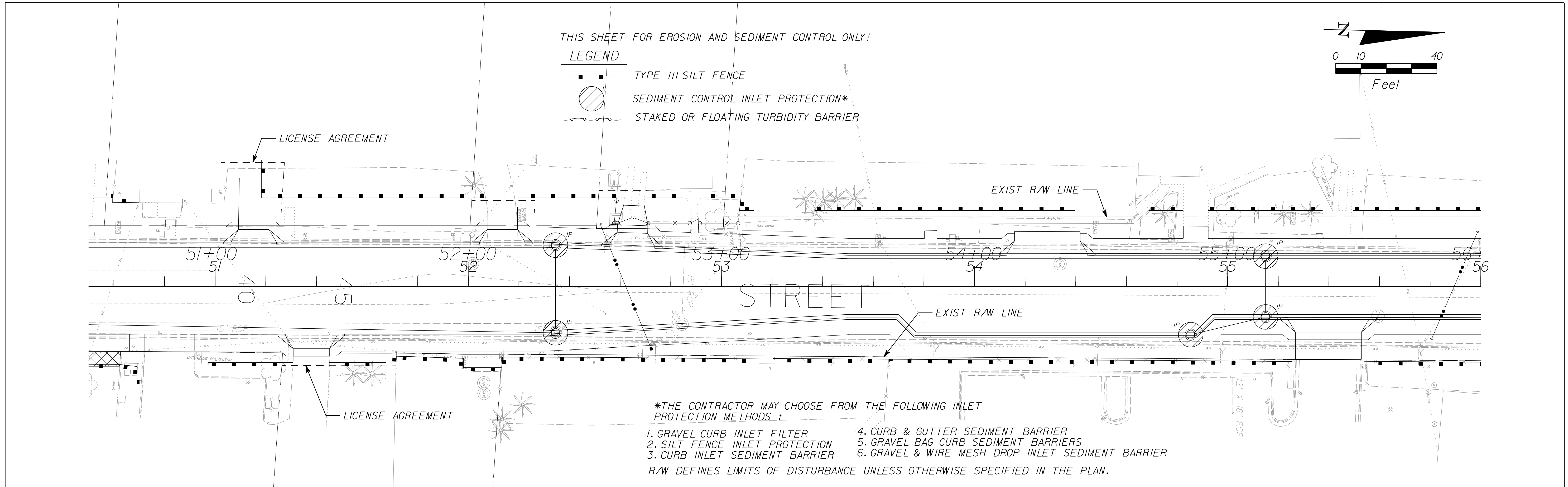
REVISIONS					
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CITY OF FORT PIERCE/
 FORT PIERCE REDEVELOPMENT AGENCY
 NORTH 13TH STREET IMPROVEMENTS
 PHASE II - 400' SOUTH OF AVENUE D TO AVENUE I

EROSION CONTROL

SHEET NO.
 E-2



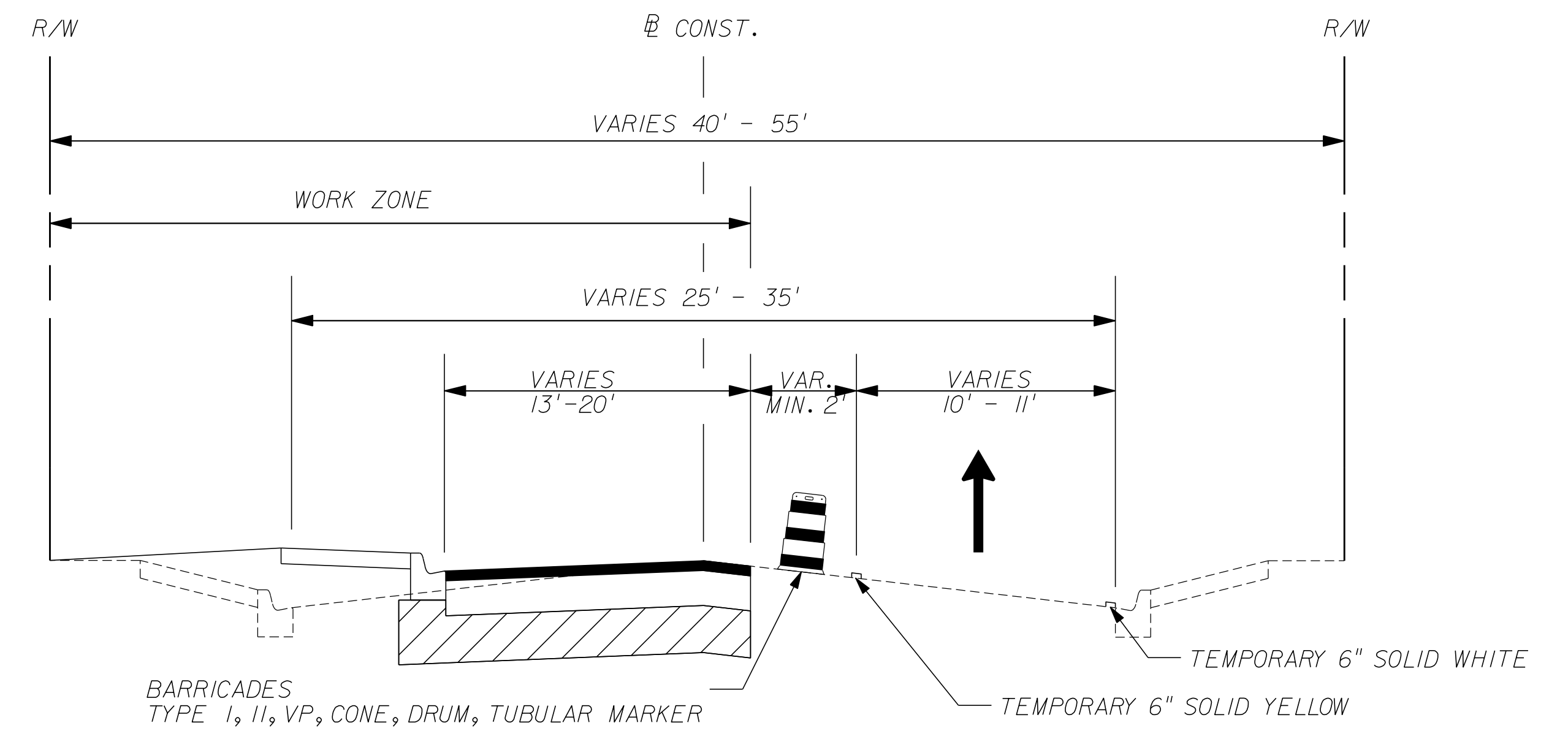
REVISIONS						Kimley»Horn	CITY OF FORT PIERCE/ FORT PIERCE REDEVELOPMENT AGENCY	EROSION CONTROL	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				
						BRIAN A. GOOD, P.E. P.E. LICENSE NUMBER 56939 601 21ST STREET, SUITE 300 VERO BEACH, FL 32960 (772) 562-7381 CERTIFICATE OF AUTHORIZATION: 00000696	NORTH 13TH STREET IMPROVEMENTS PHASE II - 400' SOUTH OF AVENUE D TO AVENUE I	E-3	

MAINTENANCE OF TRAFFIC GENERAL NOTES:

1. THE FOLLOWING MAINTENANCE OF TRAFFIC DETAILS HAVE BEEN PROVIDED TO GIVE THE CONTRACTOR GENERAL DIRECTION. THE CONTRACTOR SHALL DEVELOP DETAILED TRAFFIC CONTROL PLANS THAT MUST BE APPROVED BY THE CITY PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. AT NO TIME SHALL THE CONTRACTOR CLOSE THE ROAD TO THROUGH TRAFFIC WITHOUT PRIOR CONSENT FROM THE CITY.
3. THE CONTRACTOR SHALL CONTACT IN WRITING ALL AFFECTED PROPERTY OWNERS 2 WEEKS PRIOR TO CONTRACTOR IMPLEMENTING ONE WAY TRAFFIC PATTERN.
4. CONTRACTOR SHALL MAINTAIN VARIABLE MESSAGE SIGN (VMS) ALERTING COMMUTERS TO ONE WAY TRAFFIC PATTERN. VMS SHALL BE ACTIVE NO LESS THAN 1WEEK PRIOR TO TRAFFIC PATTERN MODIFICATION.
5. CONTRACTOR MUST MAINTAIN ACCESS TO ALL BUSINESS AND RESIDENCES AT ALL TIME.
6. MOT MUST BE IN COMPLIANCE WITH FDOT INDEX 600 SERIES.
7. PEDESTRIAN WALK WAY MUST FOLLOW FDOT INDEX 660 PEDESTRIAN CONTROL FOR CLOSURE OF SIDEWALKS.
8. AT THE END OF EVERYDAY, THE FDOT INDEX 600 SHOULDER TREATMENT MUST BE FOLLOWED.
9. CONTRACTOR SHALL GIVE CONSIDERATION TO PHASE CONSTRUCTION BASED ON PROPOSED FT. PIERCE UTILITY AUTHORITY UTILITY IMPROVEMENTS.

PHASE I DESCRIPTION

- MOT MUST BE IN COMPLIANCE WITH FDOT INDEX 600 SERIES.
- ERECT ALL ADVANCE CONSTRUCTION IDENTIFICATION SIGNS AND SET UP DETOUR.
- TRAFFIC TO REMAIN OPEN ON EXISTING ROADWAY IN A ONE WAY DIRECTION. PLACE TEMPORARY STRIPING AND PAVEMENT PER PHASE I CONSTRUCTION DETAIL (THIS SHEET).
- ALL EXISTING STRIPING THAT CONFLICTS WITH PROPOSED TEMPORARY STRIPING SHALL BE OBLITERATED.
- CONSTRUCT CROSS DRAINS AND SIDE DRAINS. MAINTAIN PROPER DRAINAGE DURING CONSTRUCTION BY USING TEMPORARY PIPING, PUMPING OR OTHER METHODS APPROVED BY CEI.
- PEDESTRIAN WALK WAY MUST FOLLOW FDOT INDEX 660 PEDESTRIAN CONTROL FOR CLOSURE OF SIDEWALKS.
- CONSTRUCT WIDENING, CURB AND GUTTER, DRIVEWAYS AND TURNOUTS. DO NOT PLACE LAST LIFT OF ASPHALT.
- AT THE END OF EVERYDAY, THE FDOT INDEX 600 SHOULDER TREATMENT MUST BE FOLLOWED.



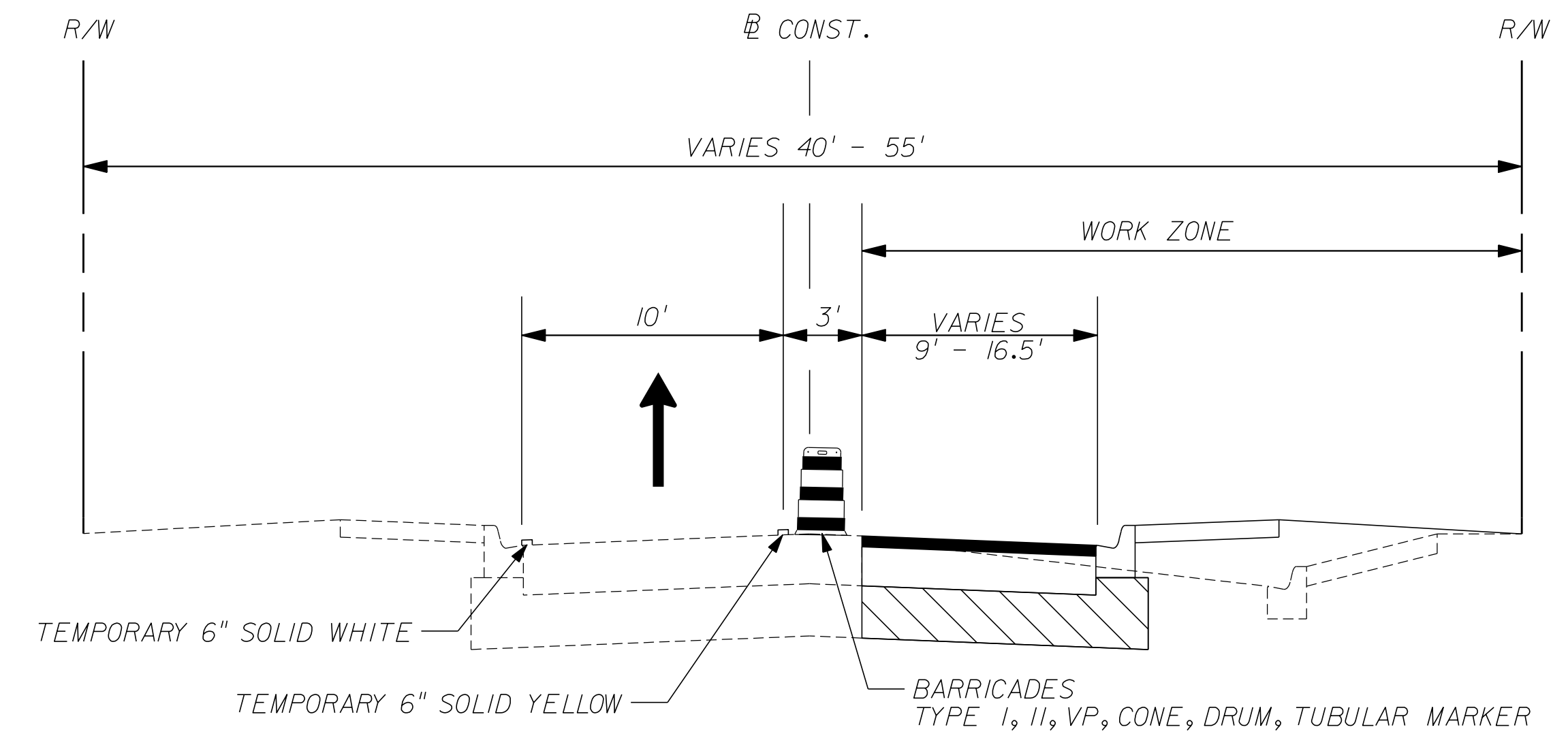
PHASE I CONSTRUCTION DETAIL

N.T.S.

REVISIONS						 <small>BRIAN A. GOOD, P.E. P.E. LICENSE NUMBER 56939 601 21ST STREET, SUITE 300 VERO BEACH, FL 32960 (772) 562-7381 CERTIFICATE OF AUTHORIZATION: 00000696</small>	CITY OF FORT PIERCE/ FORT PIERCE REDEVELOPMENT AGENCY NORTH 13TH STREET IMPROVEMENTS PHASE II - 400' SOUTH OF AVENUE D TO AVENUE I	TRAFFIC CONTROL TYPICAL SECTION	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				TC-1

PHASE II DESCRIPTION

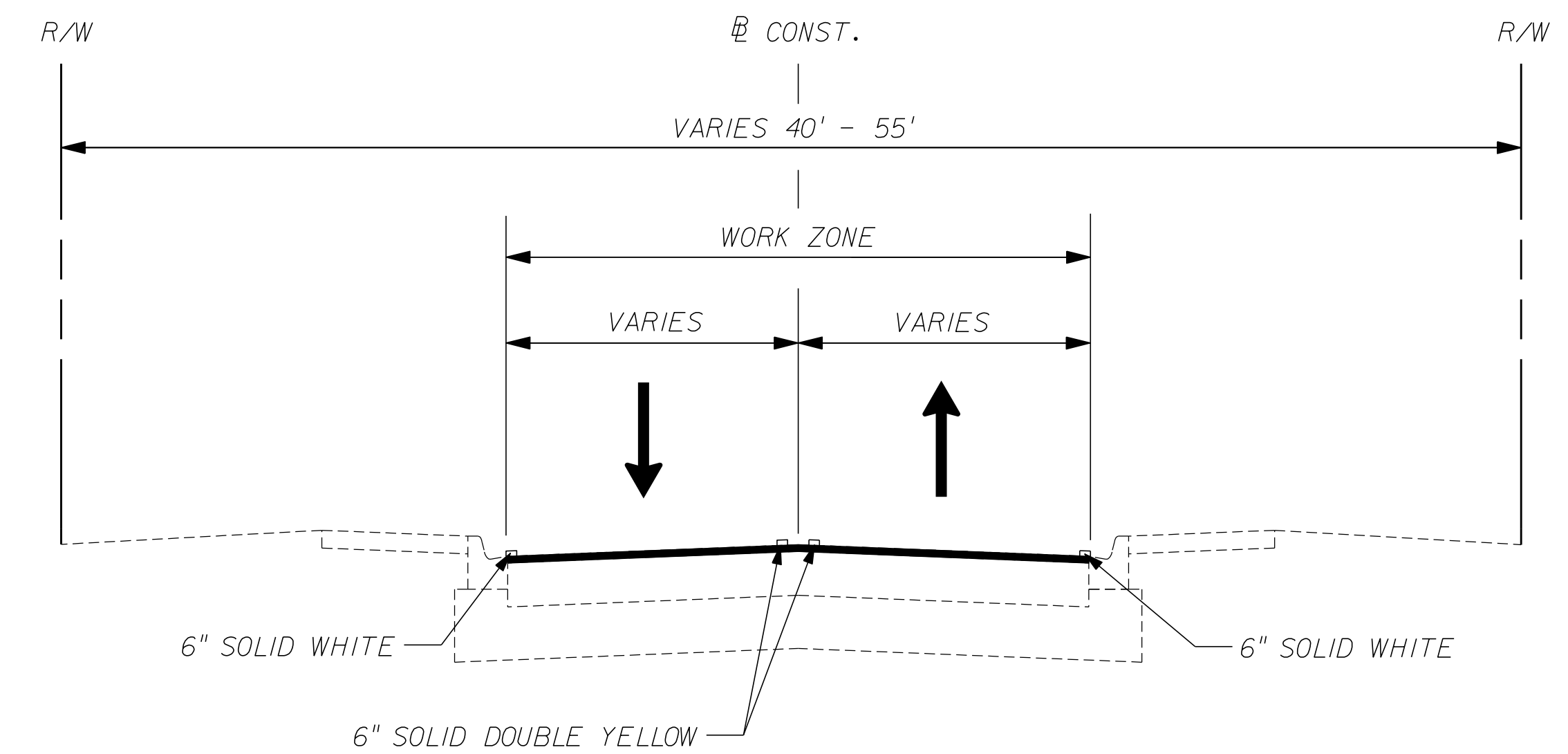
- MOT MUST BE IN COMPLIANCE WITH FDOT INDEX 600 SERIES.
- ERECT ALL ADVANCE CONSTRUCTION IDENTIFICATION SIGNS AND SET UP DETOUR AS REQUIRED OR MODIFIED FROM PHASE I.
- TRAFFIC TO REMAIN OPEN ON EXISTING ROADWAY IN A ONE WAY DIRECTION. PLACE TEMPORARY STRIPING AND PAVEMENT PER PHASE I CONSTRUCTION DETAIL (THIS SHEET).
- ALL EXISTING STRIPING THAT CONFLICTS WITH PROPOSED TEMPORARY STRIPING SHALL BE OBLITERATED.
- CONSTRUCT CROSS DRAINS AND SIDE DRAINS. MAINTAIN PROPER DRAINAGE DURING CONSTRUCTION BY USING TEMPORARY PIPING, PUMPING OR OTHER METHODS APPROVED BY CEI.
- PEDESTRIAN WALK WAY MUST FOLLOW FDOT INDEX 660 PEDESTRIAN CONTROL FOR CLOSURE OF SIDEWALKS.
- CONSTRUCT WIDENING, CURB AND GUTTER, DRIVEWAYS AND TURNOUTS. DO NOT PLACE LAST LIFT OF ASPHALT.
- AT THE END OF EVERYDAY, THE FDOT INDEX 600 SHOULDER TREATMENT MUST BE FOLLOWED.



PHASE II CONSTRUCTION DETAIL
N.T.S.

PHASE III DESCRIPTION

- PLACE FINAL LIFT OF ASPHALT PER TYPICAL SECTION
- PLACE TEMPORARY STRIPING PER FINAL STRIPING PLAN. ALL EXISTING STRIPING THAT CONFLICTS WITH PROPOSED TEMPORARY STRIPING SHALL BE OBLITERATED.
- AT THE END OF THE ASPHALT CURE PERIOD, PLACE PERMANENT PAVEMENT MARKINGS PER THE FINAL STRIPING PLAN.
- COMPLETE FINAL SIGNING AND PAVEMENT MARKINGS, AND OPEN TRAFFIC LANES.



PHASE III CONSTRUCTION DETAIL
N.T.S.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
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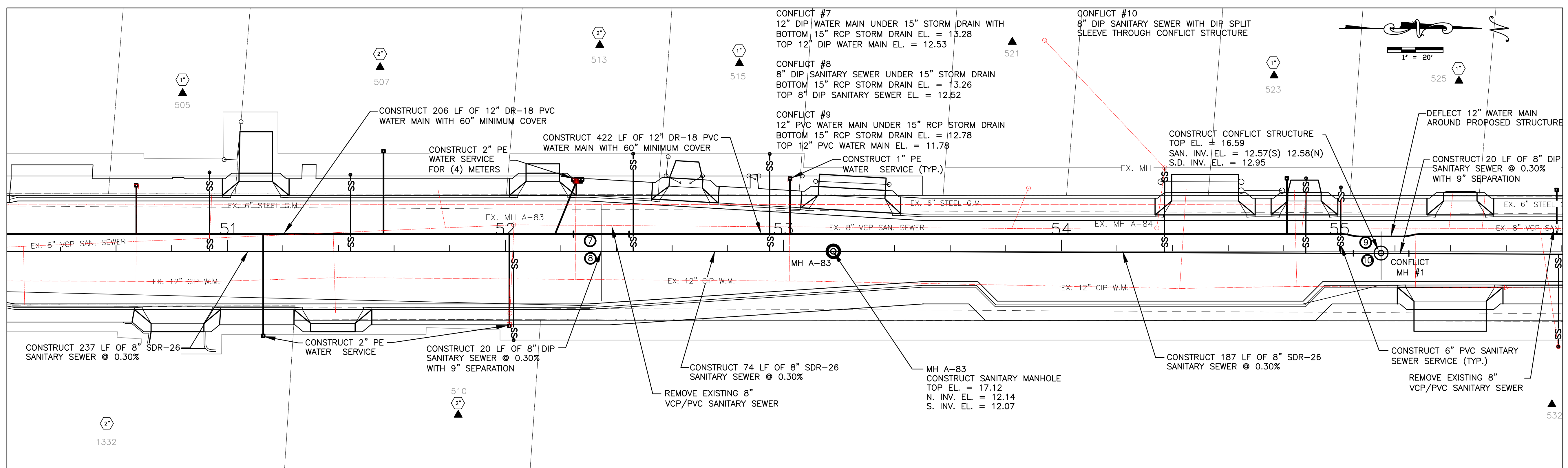
**CITY OF FORT PIERCE/
 FORT PIERCE REDEVELOPMENT AGENCY**
**NORTH 13TH STREET IMPROVEMENTS
 PHASE II - 400' SOUTH OF AVENUE D TO AVENUE I**

**TRAFFIC CONTROL
 TYPICAL SECTION**

SHEET NO.
 TC-2

MATCHLINE STA 50+20

MATCHLINE STA 55+80



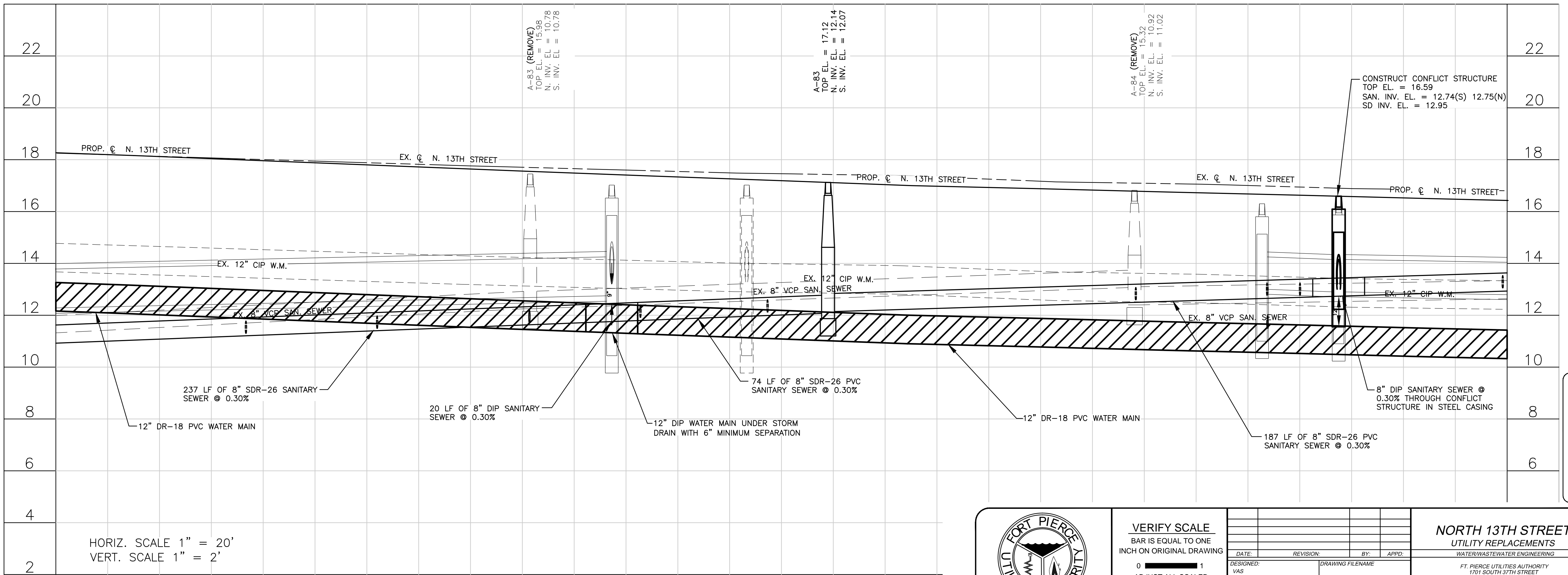
51+00

52+00

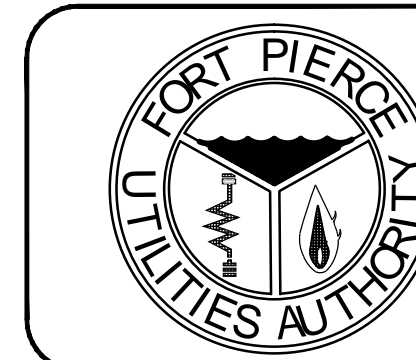
53+00

54+00

55+00



HORIZ. SCALE 1" = 20'
VERT. SCALE 1" = 2'



VERIFY SCALE
BAR IS EQUAL TO ONE
INCH ON ORIGINAL DRAWING

0 1
ADJUST ALL SCALED
DIMENSIONS ACCORDINGLY

DATE	REVISION	BY	APPD.
DESIGNED: VAS			
DRAWN BY: SLL			
APPROVED: VAS			
DRAWING FILENAME			
SCALE: 3/8"			
DATE: 12-31-2015			

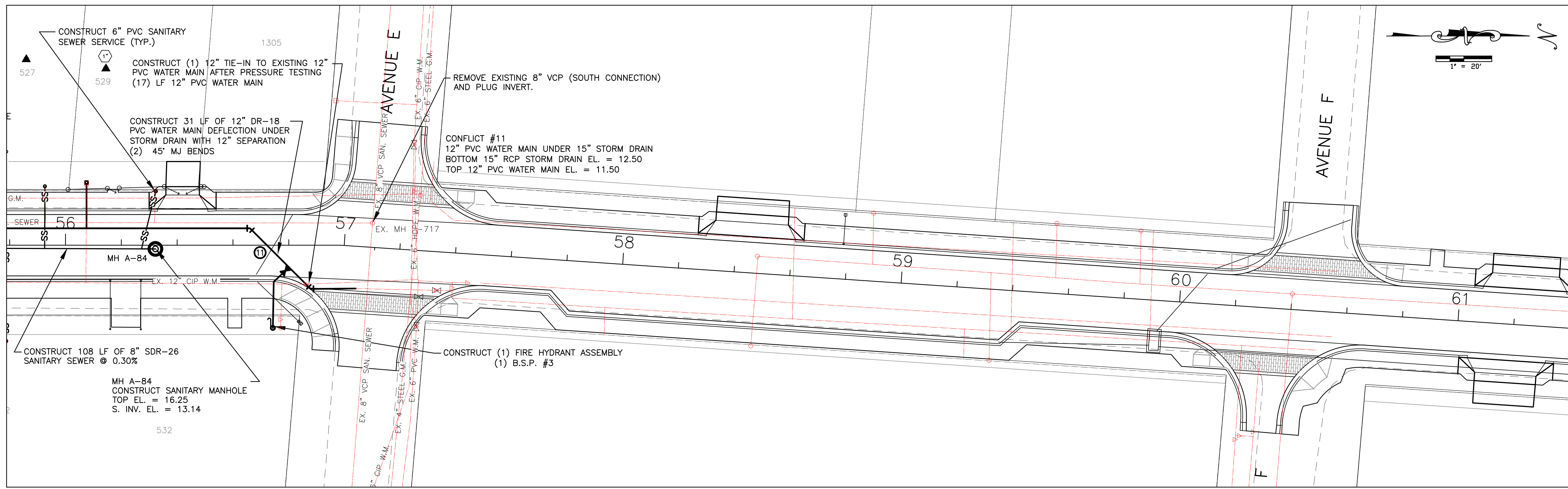
NORTH 13TH STREET
UTILITY REPLACEMENTS
WATER/WASTEWATER ENGINEERING

FT. PIERCE UTILITIES AUTHORITY
1701 SOUTH 37TH STREET
FT. PIERCE, FLORIDA 34947
(772) 468-1600 / FAX (772) 468-2414

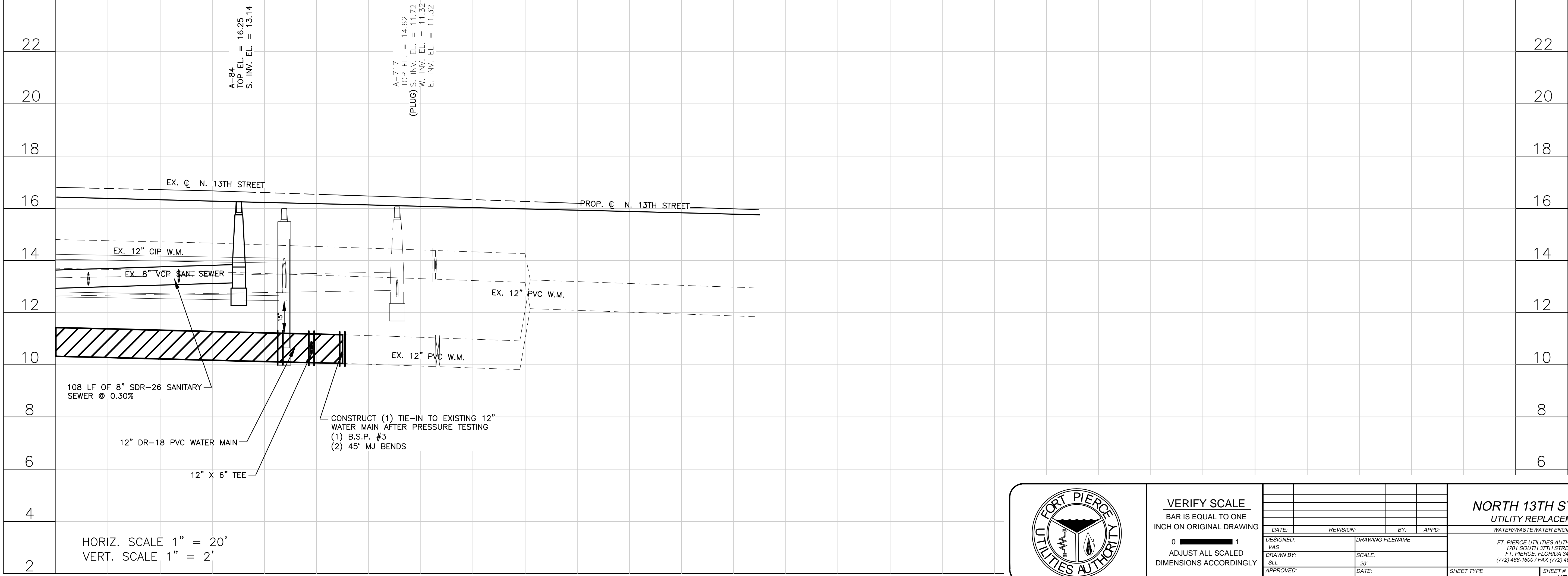
SHEET TYPE: PLAN / PROFILE
SHEET #: UT-2

Valerie A. Schmitt, P.E., REF 69355
1701 South 37th Street
Fort Pierce, FL 34947

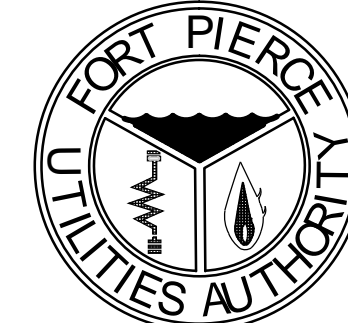
MATCHLINE STA 55+80



56+00 57+00 58+00 59+00 60+00 61+00



HORIZ. SCALE 1" = 20'
VERT. SCALE 1" = 2'



VERIFY SCALE
BAR IS EQUAL TO ONE
INCH ON ORIGINAL DRAWING

0 1
ADJUST ALL SCALED
DIMENSIONS ACCORDINGLY

DATE	REVISION	BY	APPD.

DESIGNED: VAS	DRAWING FILENAME
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APPROVED: VAS	DATE: 12-31-2015

**NORTH 13TH STREET
UTILITY REPLACEMENT**

WATER/WASTEWATER ENGINEERING

FT. PIERCE UTILITIES AUTHORITY
1701 SOUTH 37TH STREET
FT. PIERCE, FLORIDA 34947
(772) 468-1600 / FAX (772) 468-2414

SHEET TYPE: PLAN / PROFILE SHEET #: UT-3

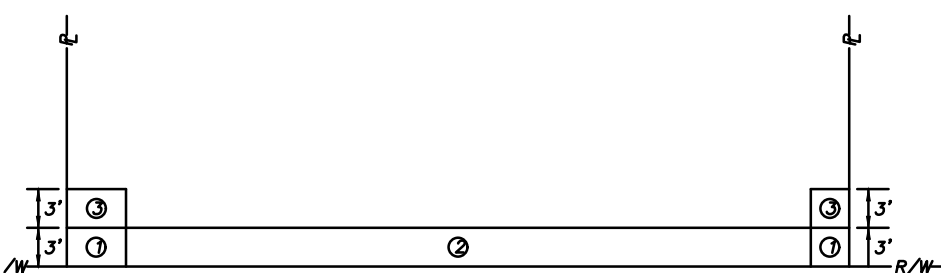
Valerie A. Schultz, P.E. REF: 69355
1701 South 37th Street
Fort Pierce, FL 34947

**FORT PIERCE UTILITIES AUTHORITY
WATER DISTRIBUTION NOTES**

- ALL CONSTRUCTION MATERIAL, INSTALLATION AND TESTING SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF THE FORT PIERCE UTILITIES AUTHORITY.
- WATER MAINS WHERE SPECIFIED AS POLYVINYL CHLORIDE (PVC) SHALL CONFORM TO ANMA C-900 OR C-905, PRESSURE CLASS 150, OR 110. WATER MAINS WHERE SPECIFIED AS POLYETHYLENE (PE) SHALL CONFORM TO ANMA C-901 OR C-906, STANDARD CODE DESIGNATION RES408, PIPE CLASS 200, DIMENSION RATIO (DR) 17 FOR DIRECT BURY, (DR) 11 FOR DIRECTIONAL BORING, AND (DR) 9 FOR 2 INCH AND SMALLER PIPELINES.
- WATER MAIN, WHERE SPECIFIED AS DUCTILE IRON PIPE, SHALL CONFORM TO ANS/AWWA C151/A21.51 AND SHALL BE PRESSURE CLASS 250 (MINIMUM).
- POLYVINYL CHLORIDE WATER MAIN SHALL BE BLUE IN COLOR OR WHITE IN COLOR WITH BLUE STRIPES. THE USE OF IDENTIFICATION TAPE ATTACHED TO THE TOP OF THE PIPE MAY BE USED IN LIEU OF MARKING ON THE PIPE, ALSO DIP PIPE SHALL REQUIRE THE USE OF IDENTIFICATION TAPE AND THIN WIRE.
- FITTINGS SHALL BE DUCTILE IRON CONFORMING TO ANS/AWWA C-110/A21.10, CLASS 250 MIN. CEMENT LINED AND FACTORY COATED.
- GATE VALVES SHALL BE MUELLER RESILIENT SEAT, KENNEDY KEN-SEAL, AMERICAN OR APPROVED EQUAL VALVES SHALL CONFORM TO ANMA C-509.
- WATER LINES SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH FPLUA DESIGN AND CONSTRUCTION STANDARDS. THE CONTRACTOR SHALL SUBMIT CERTIFIED DENSITY TESTS AS REQUIRED BY FPLUA ENGINEERING AND THE CITY, COUNTY, FDOT, IN CASES WHERE PAVED AREAS FALL WITHIN THE JURISDICTION OF LOCAL OR STATE AGENCIES. THE COMPACTOR REQUIREMENTS SHALL NOT BE LESS THAN THE MINIMUM REQUIRED BY THE APPROPRIATE RESPONSIBLE AGENCY.
- NO FIELD CHANGES OR DEVIATIONS FROM THE DESIGN SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE FPLUA ENGINEER AND CITY/COUNTY/FDOT ENGINEER.
- THE CONTRACTOR SHALL NOTIFY FPLUA ENGINEERING AND CITY/COUNTY/FDOT ENGINEERING 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
- A PRE-CONSTRUCTION CONFERENCE BETWEEN THE ENGINEER, THE CONTRACTOR, FPLUA AND CITY/COUNTY/FDOT ENGINEER SHALL BE MANDATORY PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- TRAFFIC CONTROL, BARRICADES, ETC., SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS AND APPROVED BY THE CITY ENGINEER.
- MINIMUM COVER SHALL BE 36 INCHES EXCEPT AS APPROVED BY THE UTILITIES ENGINEER AND CITY/COUNTY/FDOT ENGINEER. PIPES WITH COVER LESS THAN 30 INCHES SHALL BE CONSTRUCTED OF DUCTILE IRON OR IN PVC CASING.
- DISTURBED AREAS SHALL BE RESTORED IN CONFORMANCE WITH THE APPLICABLE GOVERNING AGENCY REQUIREMENTS.
- EXISTING UTILITIES AND DRAINAGE SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION AND PROTECTED BY THE CONTRACTOR.
- WATER MAINS SHALL BE TESTED AND DISINFECTED IN ACCORDANCE WITH THE APPLICABLE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ANMA C-651 FOR DISINFECTION.

GENERAL POLICY

WHERE COST JUSTIFIED AND OPERATIONALLY FEASIBLE, IT IS THE GENERAL POLICY OF THE F.P.L.U.A. TO PROVIDE WATER, ELECTRIC, SEWER AND GAS SERVICE FROM THE STREET SIDE OF A PIECE OF PROPERTY, DEPENDING ON FACTORS SUCH AS LOCATION OF EXISTING SUPPLY SOURCE FACILITIES, REAR OR SIDE LOT LINE SUPPLY MAY BE AUTHORIZED, BUT ONLY WITH PRIOR APPROVAL FROM THE F.P.L.U.A.



- NOTES:**
- THE PREFERRED POINT OF CONNECTION TO THE F.P.L.U.A. WATER METER, AREA (C) SHALL BE LOCATED IN THE CORNER OF THE PROPERTY SELECTED BY THE F.P.L.U.A. AS THE BEST LOCATION FOR THE WATER METER. EVERY EFFORT WILL BE MADE TO SELECT THE CORNER WHERE TWO WATER SERVICES AND METERS CAN BE CONNECTED.
 - IF PHYSICAL BARRIERS OR OTHER OBSTACLES PREVENT THE CONNECTION OF THE BUILDING SERVICE LINE TO THE F.P.L.U.A. WATER SERVICE, WITHIN AREA (D), THE F.P.L.U.A. ENGINEERING DEPARTMENT MAY AUTHORIZE THE CONNECTION ALONG THE PORTION OF THE R/W LINE MARKED AREA (E) OR ALONG THE PROPERTY LINES MARKED AREA (F).
 - HORIZONTAL SEPARATION OF WATER AND WASTEWATER SERVICES SHOULD BE A MINIMUM OF 6 FEET AND PREFERABLY 10 FEET.
 - ALL METERS SHALL BE INSTALLED IN AN UNRESTRICTED AREA FOLLOWING EASE OF ACCESS AND PROVIDING ADEQUATE PROTECTION.
 - THE F.P.L.U.A. SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND REPAIR OF THE WATER LATERAL WITHIN THE EASEMENT OR RIGHT-OF-WAY, UP TO THE POINT OF CONNECTION.

**WATER METER PLACEMENT
(N.T.S.)**

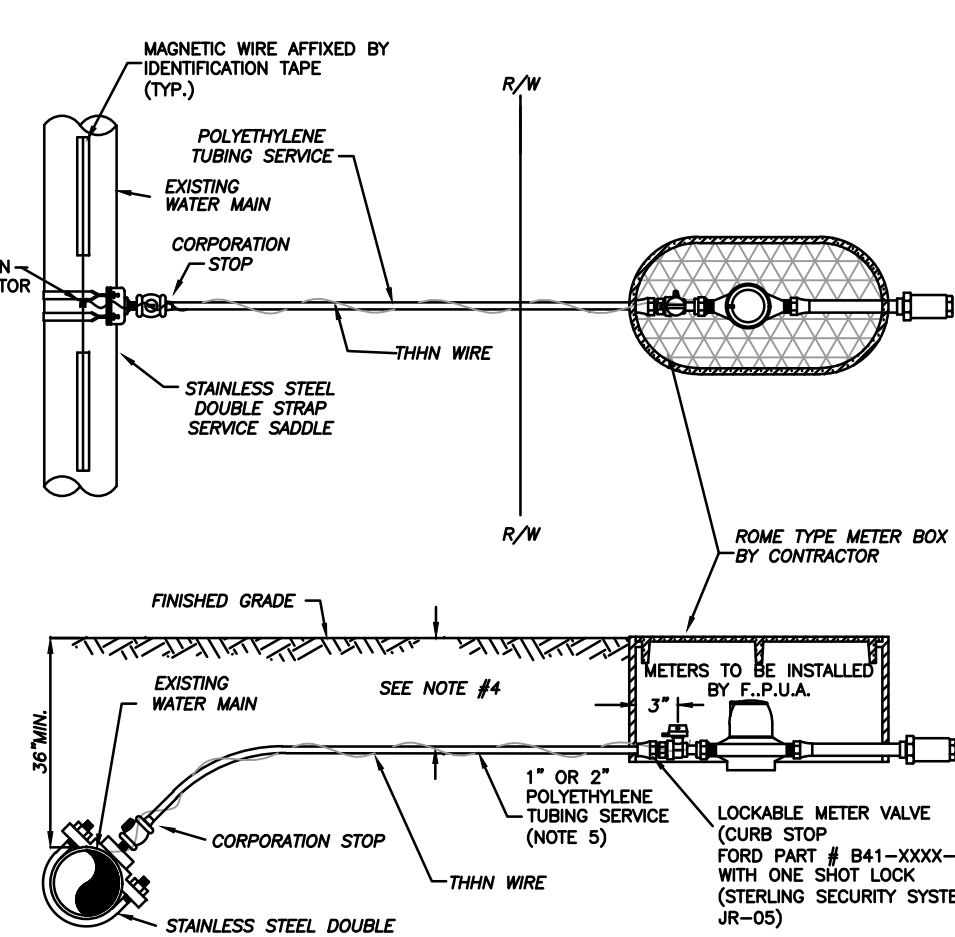
**FORT PIERCE UTILITIES AUTHORITY
WATER DISTRIBUTION NOTES
CONTINUED**

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EXISTING UTILITIES AND DRAINAGE.
- THE CONTRACTOR SHALL FURNISH RECORD DRAWING INFORMATION TO THE ENGINEER INCLUDING LOCATIONS OF VALVES, FITTINGS, SERVICE CONNECTIONS, BLOWOFFS, AIR RELEASE VALVES, AND ANY OTHER PERTINENT INFORMATION NECESSARY TO LOCATE ITEMS CONSTRUCTED UNDER THIS PROJECT, AS REQUIRED BY THE UTILITIES ENGINEER.
- THE CONTRACTOR SHALL TAP EXISTING LINES UNDER THE SUPERVISION OF THE FORT PIERCE UTILITIES AUTHORITY ONLY AFTER TESTING AND DISINFECTION HAS BEEN COMPLETED AND APPROVED ON THE TAPPING WELD AND SLEEVE.
- WATER MAIN SHALL BE MARKED BY THE USE OF CONTINUOUS 10 GAUGE THIN MULTI STRANDED WIRE (BLUE IN COLOR) AND IDENTIFICATION TAPE WITH "WATER" MARKED ON TAPE, PERMANENTLY ATTACHED TO THE TOP OF THE WATER MAIN IN ACCORDANCE WITH THE FORT PIERCE UTILITIES AUTHORITY SPECIFICATIONS.
- SERVICE TAPS SHALL BE PLACED APPROXIMATELY TEN FEET AWAY FROM GATE VALVES, AS SHOWN, FOR TESTING. FOLLOWING TESTING AND STERILIZATION OF WATER LINE, CONTRACTOR SHALL PLACE A BRASS PLUG IN CORPORATION STOPS AND CURB STOPS SHALL BE REMOVED FROM TESTING LOCATIONS.
- MECHANICAL RESTRAINTS TO BE USED ON ALL FITTINGS AND PLACED IN ACCORDANCE WITH MANUFACTURER'S OR ENGINEER'S RECOMMENDATIONS (WHICHEVER IS MORE STRINGENT) AND FPLUA REQUIREMENTS.
- ALL MAINS SHALL BE TESTED AT A MINIMUM OF 150 PSI. TESTING METHODS SHALL CONFORM TO ANMA C-900, - 2 HR MINIMUM TEST

$$L = \frac{SD(P)}{148,000} \cdot \frac{1}{2}$$

L = LEAKAGE IN GPH
S = LENGTH OF PIPE IN FEET
D = PIPE DIAMETER IN INCHES
P = TESTING PRESSURE IN PSI

- PRIOR TO ANY TESTING, ALL MAINS 6" IN DIA. AND LARGER SHALL HAVE A SWAB PASSED THRU THE ENTIRE LENGTH OF THE LINE. NOTE: SWAB SHOULD BE PLACED IN THE JOINT OF NEW LINE. END OF MAIN SHOULD BE TURNED UP AT 45° AND EXTENDED SO THAT SWABBING AND A FULL BORE FLUSH CAN BE ACCOMPLISHED. BLOW-OFF ASSY CAN THEN BE PLACED. WHERE LINES BRANCH, SWABS WILL BE PLACED IN BRANCH LINES AND SEQUENTIALLY SWABBED AND FLUSHED.
- A MINIMUM SIX FEET AND PREFERABLY TEN FEET HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN THE WATER MAIN AND ANY WASTEWATER LINES. 6 INCHES MINIMUM VERTICAL SEPARATION IF WATER MAIN IS OVER WASTEWATER AND 12 INCHES IF WATER MAIN IS UNDER SHALL BE MAINTAINED BETWEEN THE WATER MAIN AND ANY WASTEWATER LINES. THE DISTANCE SHALL BE MEASURED FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE OR STRUCTURE. WHERE THIS MINIMUM SEPARATION CANNOT BE MAINTAINED, THE CROSSING SHALL BE ARRANGED SO THAT THE WASTEWATER PIPE JOINTS AND THE WATER MAIN PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING, AND THE WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) AT THE CROSSING. SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN ANY TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT ALL CROSSINGS.
- WHERE A WATER MAIN IS TO BE INSTALLED BELOW A STORM DRAIN PIPE, A MINIMUM OF 6 INCHES OF VERTICAL CLEARANCE BETWEEN PIPES SHALL BE CONSTRUCTED OF DIP AT THE CROSSING, AND SHALL BE MECHANICALLY RESTRAINED WITHIN 20 FEET OF THE CROSSING.
- CONTRACTOR SHALL COMPLY WITH FLORIDA TRENCH SAFETY ACT REQUIREMENTS.

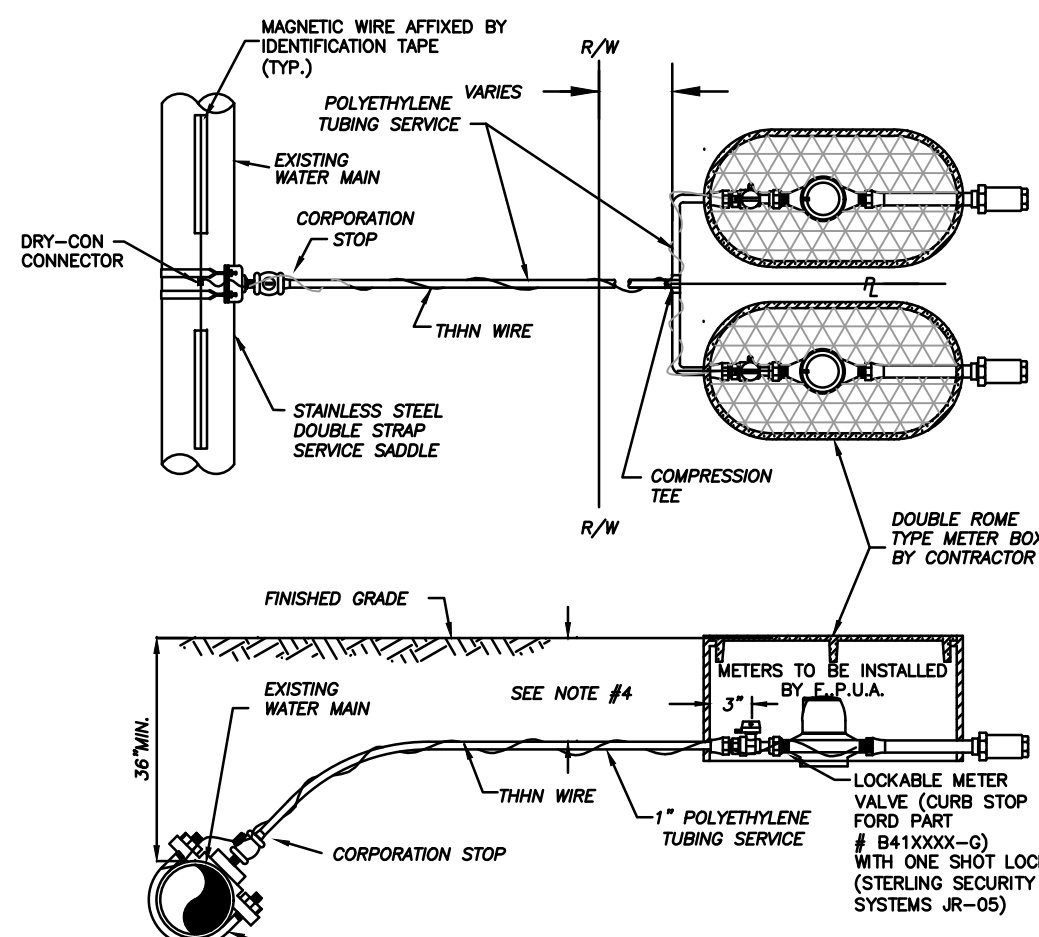


- NOTES:**
- BLUE 10 GAUGE THIN WIRE SHALL BE ATTACHED TO THE SERVICE LINE.
 - WHERE SERVICES UNDER PAVEMENT ARE REQUIRED, THE POLYETHYLENE TUBING SHALL BE INSTALLED WITHIN SCHEDULE 40 PVC CASING PIPE.
 - 1" & 3/4" METER SIZES SHALL REQUIRE A LOCKABLE METER VALVE (CURB STOP)
 - 1" & 3/4" METER SIZES SHALL REQUIRE A LOCKABLE METER VALVE (CURB STOP)
 - MINIMUM COVER IN UNPAVED AREAS SHALL BE 30", IN PAVED AREAS OR PLANNED ROADWAYS OR SWALES MIN. COVER SHALL BE 36".
 - FOR 2" COMMERCIAL SERVICE INSTALLATIONS, FPLUA WILL INSTALL ABOVE GROUND METER PER DETAIL W-8.

**TYPICAL SINGLE WATER SERVICE CONNECTION
(N.T.S.)**

FORT PIERCE UTILITIES AUTHORITY WASTEWATER CONSTRUCTION NOTES

- ALL CONSTRUCTION MATERIAL, INSTALLATION AND TESTING SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF THE FORT PIERCE UTILITIES AUTHORITY.
- GRAVITY SEWER MAIN SHALL BE POLYVINYL CHLORIDE (PVC) 20-26, GREEN OR WHITE IN COLOR. GRAVITY SEWER MAIN SHALL HAVE LOCATOR TAPE WITH "SEWER" MARKED ON TAPE AND SHALL CONFORM TO ASTM D-3034.
- THE MANHOLE BASE SHALL BE SET ON A FIRM, DRY AND STABLE OR COMPACTED BASE FOUNDATION. IF NECESSARY, THE CONTRACTOR SHALL UTILIZE ROCK TO PROVIDE A FIRM AND SUITABLE MANHOLE BASE FOUNDATION.
- WASTEWATER LINES SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH FPLUA DESIGN AND CONSTRUCTION STANDARDS. THE CONTRACTOR SHALL SUBMIT CERTIFIED DENSITY TESTS AS REQUIRED BY FPLUA ENGINEERING AND THE CITY ENGINEERING DEPARTMENT. IN CASES WHERE PAVED AREAS FALL WITHIN THE JURISDICTION OF LOCAL OR STATE AGENCIES, THE COMPACTOR REQUIREMENTS SHALL NOT BE LESS THAN THE MINIMUM REQUIRED BY THE APPROPRIATE RESPONSIBLE AGENCY.
- A 1% MINIMUM SLOPE SHALL BE MAINTAINED ON ALL SANITARY SERVICE LATERALS.
- THE CONTRACTOR SHALL FURNISH RECORD DRAWING INFORMATION TO THE ENGINEER CONSISTING OF PIPE SIZES, LOCATION OF SERVICE TEE WELDS, DIAMETER OF SERVICES, LOCATION OF ANY FITTINGS, FINAL RIM AND INVERT ELEVATION OF ALL MANHOLES AND ANY OTHER PERTINENT INFORMATION NECESSARY TO LOCATE ITEMS CONSTRUCTED UNDER THIS PROJECT.
- MAINTAIN SIX FEET AND PREFERABLY 10 FEET HORIZONTAL DISTANCE BETWEEN WATER MAINS AND SEWER MAINS AS A MINIMUM.
- WASTEWATER FORCE MAINS, WASTEWATER COLLECTION LINES, AND STORM SEWERS SHOULD CROSS UNDER WATER MAINS WHENEVER POSSIBLE. A MINIMUM VERTICAL DISTANCE OF 12 INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE SHALL BE PROVIDED WHENEVER POSSIBLE. WHERE THIS MINIMUM SEPARATION CANNOT BE MAINTAINED, THE CROSSING SHALL BE ARRANGED SO THAT THE WASTEWATER PIPE JOINTS AND THE WATER PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING, AND THE WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) AT THE CROSSING. SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN ANY TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT ALL CROSSINGS.
- A PRE-CONSTRUCTION CONFERENCE BETWEEN THE ENGINEER, THE CONTRACTOR, AND FPLUA/CITY/COUNTY/FDOT SHALL BE MANDATORY PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- NO FIELD CHANGES OR DEVIATIONS FROM THE DESIGN SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE FPLUA/CITY/COUNTY/FDOT ENGINEER.
- TRAFFIC CONTROL, BARRICADES, ETC., SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS.
- CONTRACTOR SHALL NOTIFY FORT PIERCE UTILITIES AUTHORITY 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
- WASTEWATER FORCE MAIN SHALL BE POLYVINYL CHLORIDE CONFORMING TO ANMA C-900.
- WASTEWATER FORCE MAIN SHALL BE GREEN IN COLOR.
- FITTINGS SHALL BE DUCTILE IRON, CONFORMING TO ANS/AWWA C-110/A21.10 CLASS 250 MIN. AND INTERIOR EPOXY COATED.
- WASTEWATER FORCE MAIN SHALL BE MARKED BY THE USE OF CONTINUOUS 10 GAUGE THIN WIRE (GREEN IN COLOR) PERMANENTLY ATTACHED TO THE TOP OF THE FORCE MAIN WITH LOCATOR TAPE MARKED "SEWER" ON TAPE IN ACCORDANCE WITH FPLUA SPECIFICATIONS.
- MINIMUM COVER SHALL BE 36 INCHES. PIPES WITH COVER LESS THAN 30 INCHES SHALL REQUIRE PRIOR APPROVAL OF THE UTILITIES ENGINEER AND SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE.
- EACH SERVICE LATERAL WILL BE MARKED WITH A LOCATOR BALL AS MANUFACTURED BY 3M CORPORATION, OR APPROVED EQUAL AS REQUIRED BY FPLUA ENGINEER.
- ALL MANHOLES SHALL HAVE SEWER RAIN GUARDS INSTALLED AS REQUIRED BY FPLUA ENGINEER.
- CONTRACTOR SHALL COMPLY WITH THE FLORIDA TRENCH SAFETY ACT REQUIREMENTS.

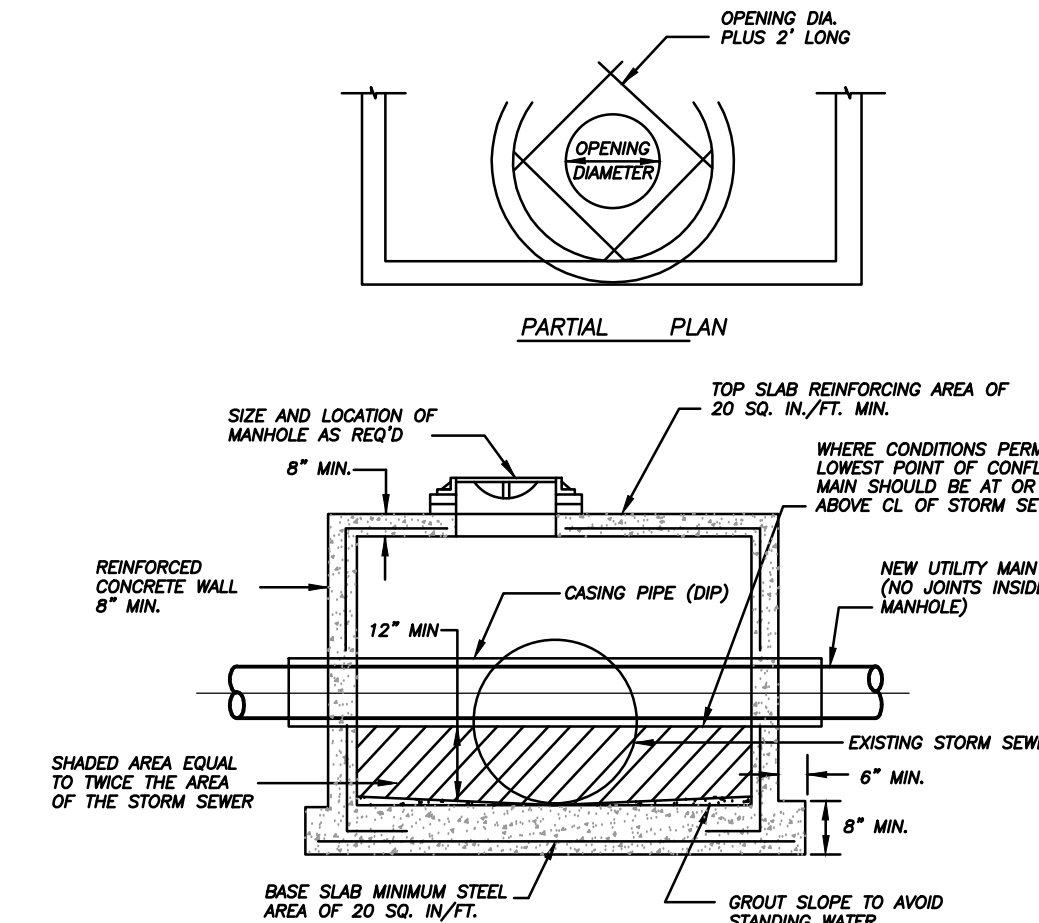


- NOTES:**
- BLUE 10 GAUGE THIN WIRE SHALL BE ATTACHED TO THE SERVICE LINE.
 - WHERE SERVICES UNDER PAVEMENT ARE REQUIRED, THE POLYETHYLENE TUBING SHALL BE INSTALLED WITHIN SCHEDULE 40 PVC CASING PIPE.
 - 1" & 3/4" METER SIZES SHALL REQUIRE A LOCKABLE METER VALVE (CURB STOP)
 - MINIMUM COVER IN UNPAVED AREAS SHALL BE 30", IN PAVED AREAS OR PLANNED ROADWAYS OR SWALES MIN. COVER SHALL BE 36".

**TYPICAL DOUBLE WATER SERVICE CONNECTION
(N.T.S.)**

**STANDARD SEPARATION STATEMENT FOR
WATER / SEWER CONFLICTS**

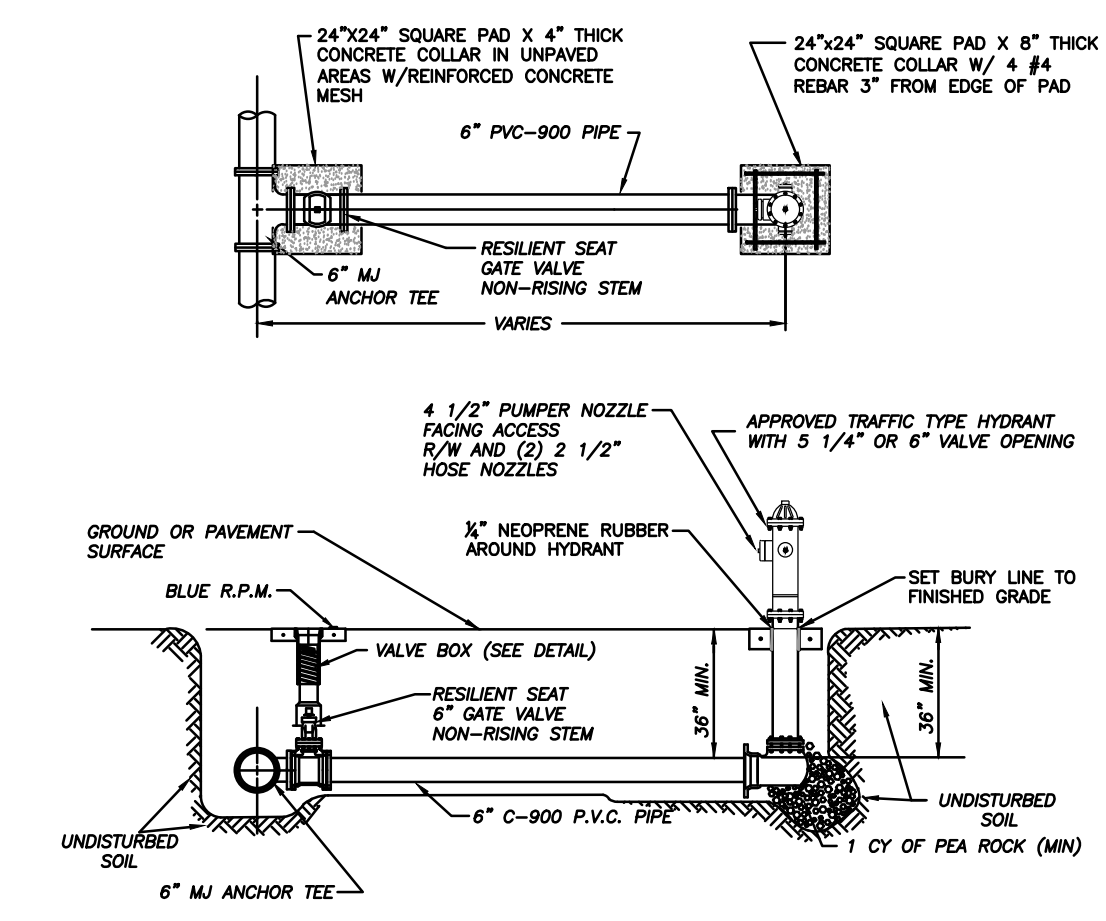
- SANITARY SEWER, FORCE MAINS, AND STORM SEWERS SHOULD CROSS UNDER WATER MAINS WHENEVER POSSIBLE. SANITARY SEWERS, FORCE MAINS AND STORM SEWERS CROSSING UNDER WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 6 INCHES, PREFERABLY 12 INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE WHEN ABOVE, AND AT LEAST 12 INCHES OF SEPARATION WHEN THE WATER MAIN IS BELOW.
- WHERE SANITARY SEWER, FORCE MAINS, STORM SEWERS MUST CROSS A WATER MAIN WITH LESS THAN 6 INCHES VERTICAL SEPARATION, BOTH THE SEWER AND WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) CENTERED ON THE CROSSING. (DIP IS NOT REQUIRED FOR STORM SEWERS.) SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED.
- ALL CROSSINGS SHALL BE ARRANGED SO THAT THE SEWER PIPE JOINTS AND WATER MAIN PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING (PIPES CENTERED ON THE CROSSING). AT SUCH CROSSINGS PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART II OF CHAPTER 62-110, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART II OF CHAPTER 62-110, F.A.C.
- WHERE A NEW PIPE CONFLICTS WITH AN EXISTING PIPE WITH LESS THAN 6 INCHES VERTICAL SEPARATION, THE NEW PIPE SHALL BE CONSTRUCTED OF DIP (EXCEPT STORM SEWERS) AND NEW PIPES SHALL BE ARRANGED TO MEET THE CROSSING REQUIREMENTS ABOVE.
- A MINIMUM 3-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN ANY TYPE OF STORM SEWER AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.
- A MINIMUM 4-FOOT, AND PREFERABLY 10-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN VACUUM-TYPE SANITARY SEWER AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.
- A MINIMUM 10-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN TASTE SENSITIVE WASTEWATER TREATMENT AND DISPOSAL SYSTEM AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.
- A MINIMUM 4-FOOT, AND PREFERABLY 10-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN GRAVITY OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO 3 FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.
- IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN A 10-FOOT HORIZONTAL SEPARATION, THE WATER MAIN MUST BE LAID IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER OR FORCE MAIN AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 6 INCHES ABOVE THE TOP OF THE SEWER.
- WHERE IT IS NOT POSSIBLE TO MAINTAIN A VERTICAL DISTANCE OF 6 INCHES IN PARALLEL INSTALLATIONS, THE WATER MAIN SHALL BE CONSTRUCTED OF DIP AND THE SEWER OR THE FORCE MAIN SHALL BE CONSTRUCTED OF DIP (EXCEPT STORM SEWER) WITH A MINIMUM VERTICAL DISTANCE OF 6 INCHES. THE WATER MAIN SHOULD ALWAYS BE ABOVE THE SEWER. JOINTS ON THE WATER MAIN SHALL BE LOCATED AS FAR APART AS POSSIBLE FROM JOINTS ON THE SEWER OR FORCE MAIN (STAGGERED JOINTS).
- ALL DIP SHALL BE PRESSURE CLASS 250 MIN. ADEQUATE PROTECTIVE MEASURES AGAINST CORROSION SHALL BE USED AS DETERMINED BY THE DESIGN ENGINEER.



NOTES:

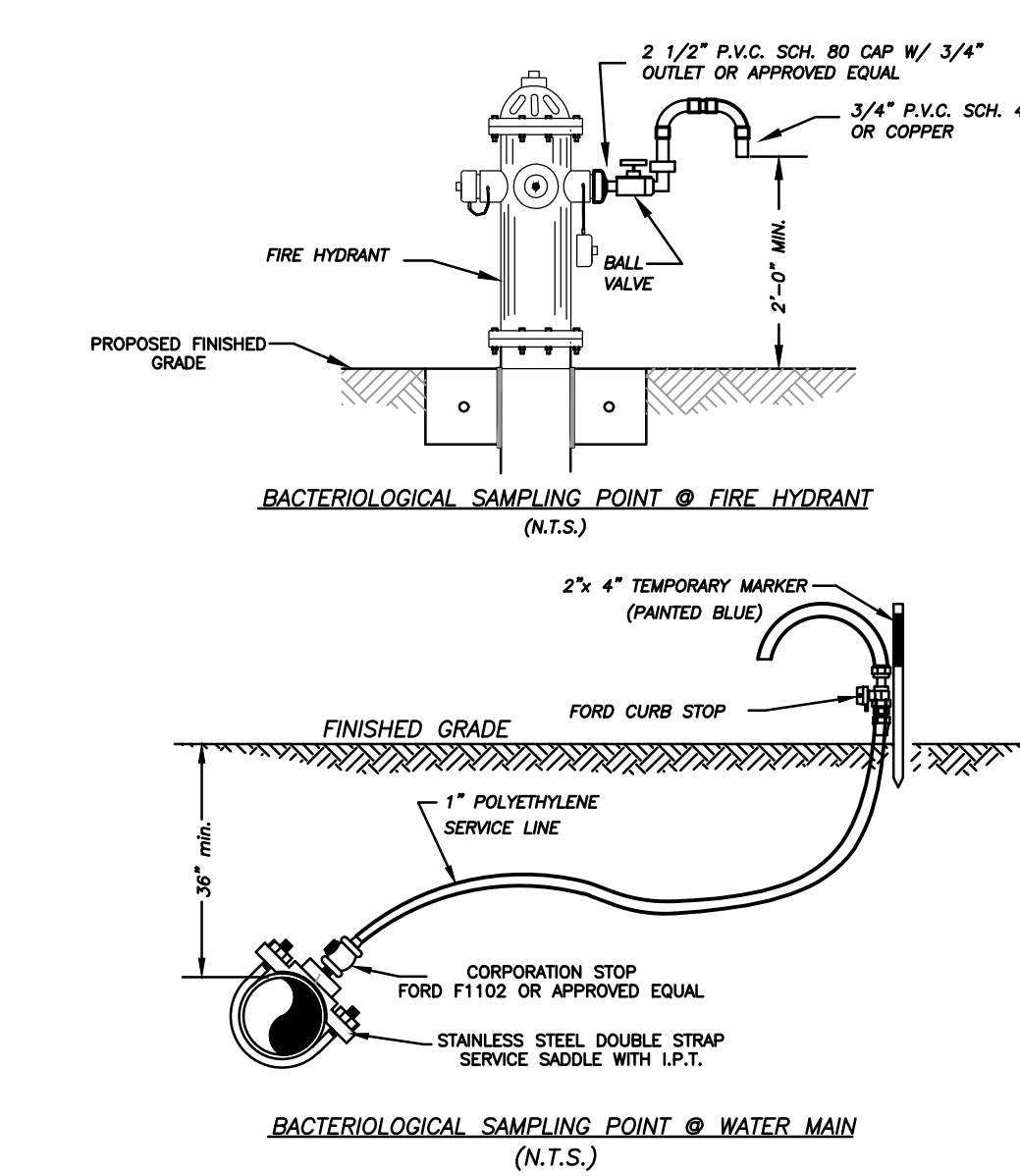
- CONFLICT MANHOLE WILL BE ALLOWED WHERE DESIGN PROBLEMS AND GRAVITY WASTEWATER SYSTEMS PROVE THEM TO BE THE ONLY VIABLE SOLUTION AS APPROVED BY FPLUA ENGINEERING.
- CONFLICT MANHOLES WILL NOT BE ALLOWED FOR WATER MAINS CROSSING GRAVITY WASTEWATER SYSTEMS.
- WHEN NECESSARY FOR EXISTING WATER MAINS, THE CARRIER PIPE SHALL BE SLEAVED IN D.I.P.

**CONFLICT MANHOLE
(N.T.S.)**



- NOTES:**
- HYDRANT SHALL BE INSTALLED PLUMB & TRUE.
 - HYDRANT SHALL BE PAINTED CARNIVAL RED.
 - HEEL TO REST IN UNDISTURBED SOIL.
 - THE ONLY HYDRANTS ACCEPTABLE ARE KENNEDY GUARDIAN, MUELLER CENTURION, & AMERICAN AWK, CLOW OR APPROVED EQUAL.
 - HYDRANT ASSEMBLY MUST BE RESTRAINED.
 - ALL FITTINGS SHALL BE MECHANICAL JOINT.
 - ENTIRE ASSEMBLY TO BE MECHANICALLY RESTRAINED.
 - BLUE LOCATOR SHALL BE PLACED IN CENTER OF TRAVEL LANE CLOSEST TO HYDRANT.
 - ALL HYDRANT VALVE BOX COVERS SHALL BE PAINTED CARNIVAL RED.
 - LOCATE WIRE SHALL TERMINATE AT HYDRANT ISOLATION VALVE.
 - HYDRANTS SHALL BE NO MORE THAN FIFTEEN FEET (15 FT.) FROM THE CURB OF ROADWAYS OR FROM THE EDGE OF PAVEMENT. CLEARANCES OF SEVEN AND ONE HALF FEET (7'-6") IN FRONT OF AND TO THE SIDES OF THE FIRE HYDRANTS, WITH FOUR FEET (4 FT.) CLEARANCE TO THE REAR OF HYDRANTS SHALL BE MAINTAINED.

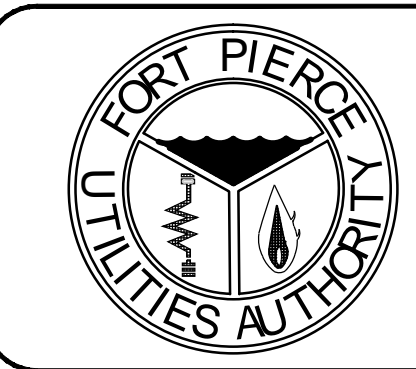
**TYPICAL FIRE HYDRANT ASSEMBLY
(N.T.S.)**



NOTE:

- AFTER TESTING REMOVE 1" P.E. LINE AND CAP WITH BRASS PLUG AT CORPORATION STOP.

**BACTERIOLOGICAL SAMPLING POINT @ WATER MAIN
(N.T.S.)**



VERIFY SCALE
BAR IS EQUAL TO ONE
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JUST ADJUST ALL SCALED
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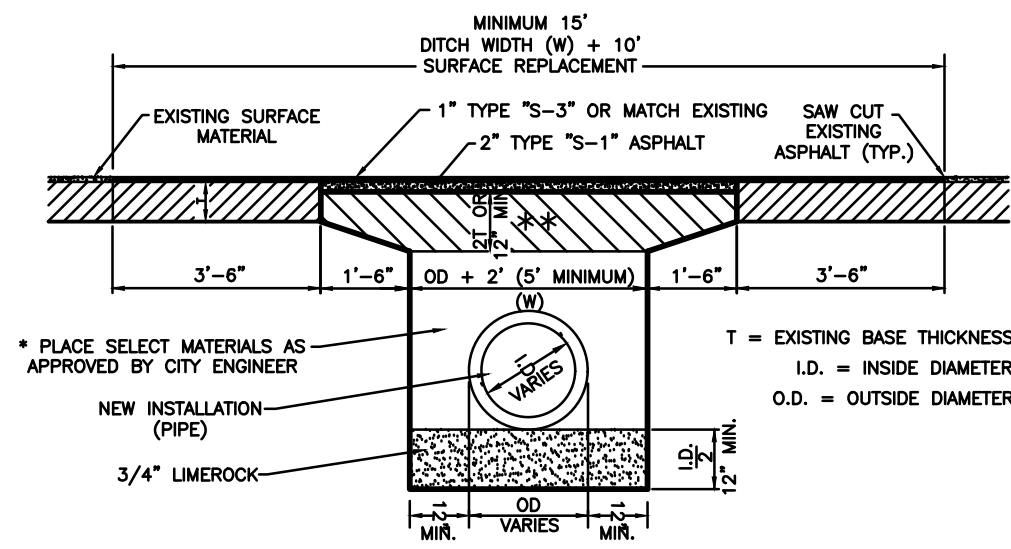
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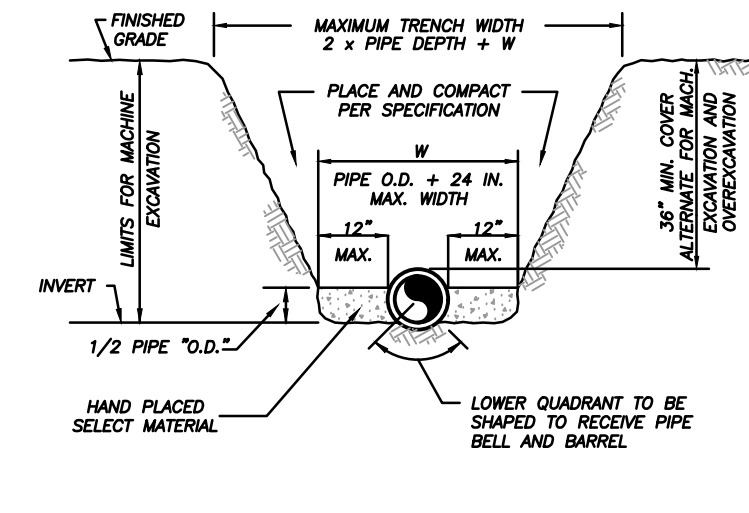
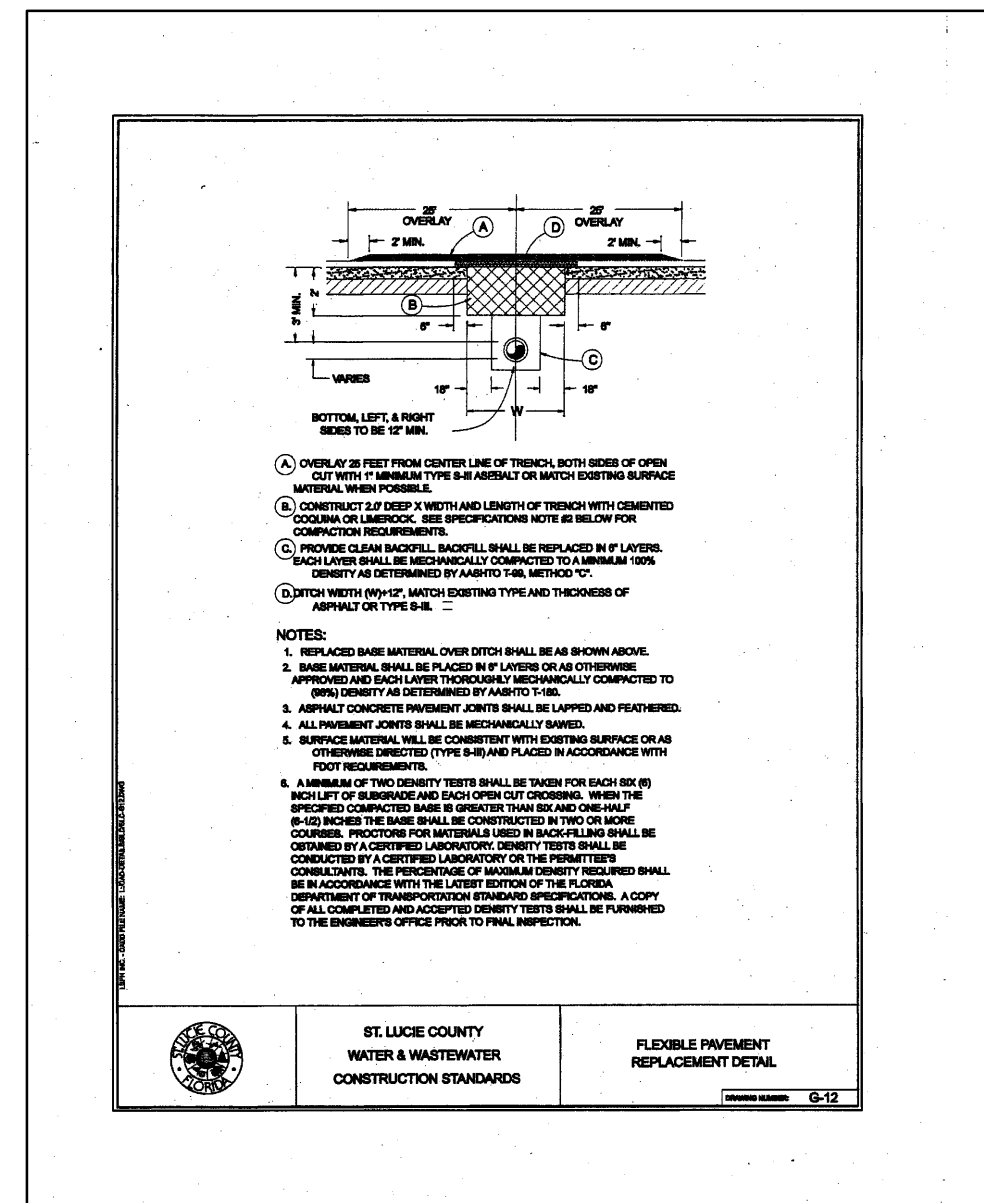
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SHEET #: UT-4

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1701 South 37th Street
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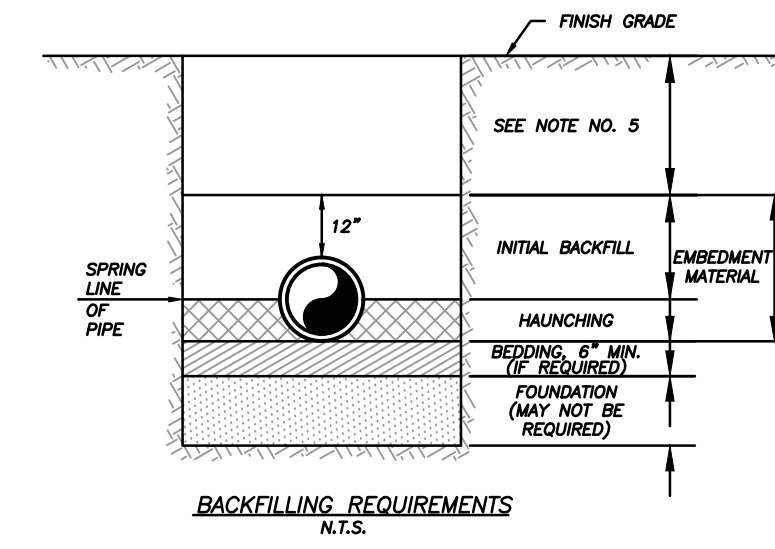
* INITIAL BACKFILL SHALL BE PLACED TO 12" ABOVE THE PIPE IN 6" LIFTS. BACKFILL SHALL BE MECHANICALLY TAMPOD TO A MINIMUM OF 95% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO METHOD T-99. UPPERMOST 12" BE COMPACTED TO 98% OF T-99.

** LIMEROCK OR CRUSHED COQUINA COMPACTED TO 98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO METHOD T-100.



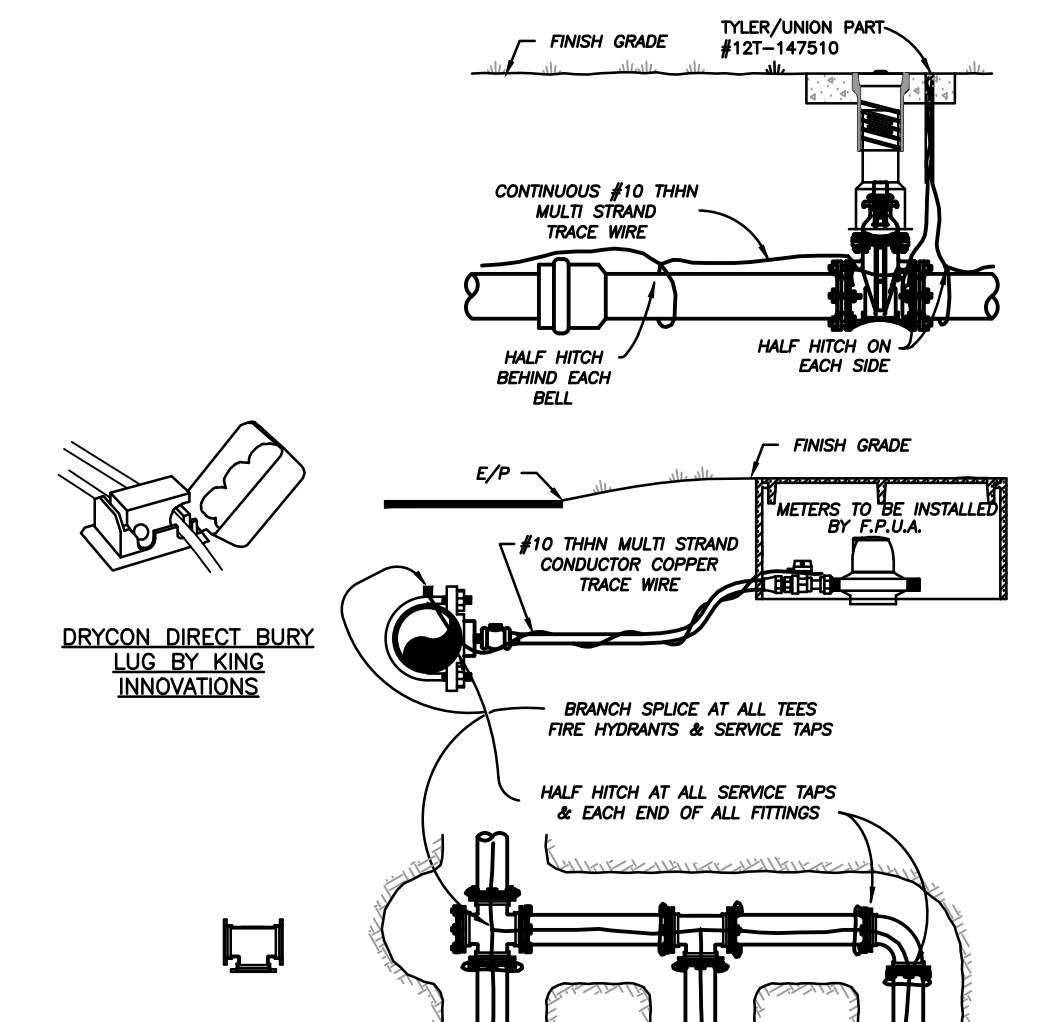
NOTES:
 1) THE CONTRACTOR SHALL COMPLY WITH REQUIREMENTS OF THE FLORIDA TRENCH SAFETY ACT.
 2) INITIAL BACKFILL SHALL BE HAND PLACED TO 12" ABOVE THE PIPE. BACKFILL SHALL BE MECHANICALLY TAMPOD TO A MINIMUM OF 100% OF MAX. DENSITY AS DETERMINED BY AASHTO METHOD T-99.

TYPICAL TRENCH DETAIL
N.T.S.



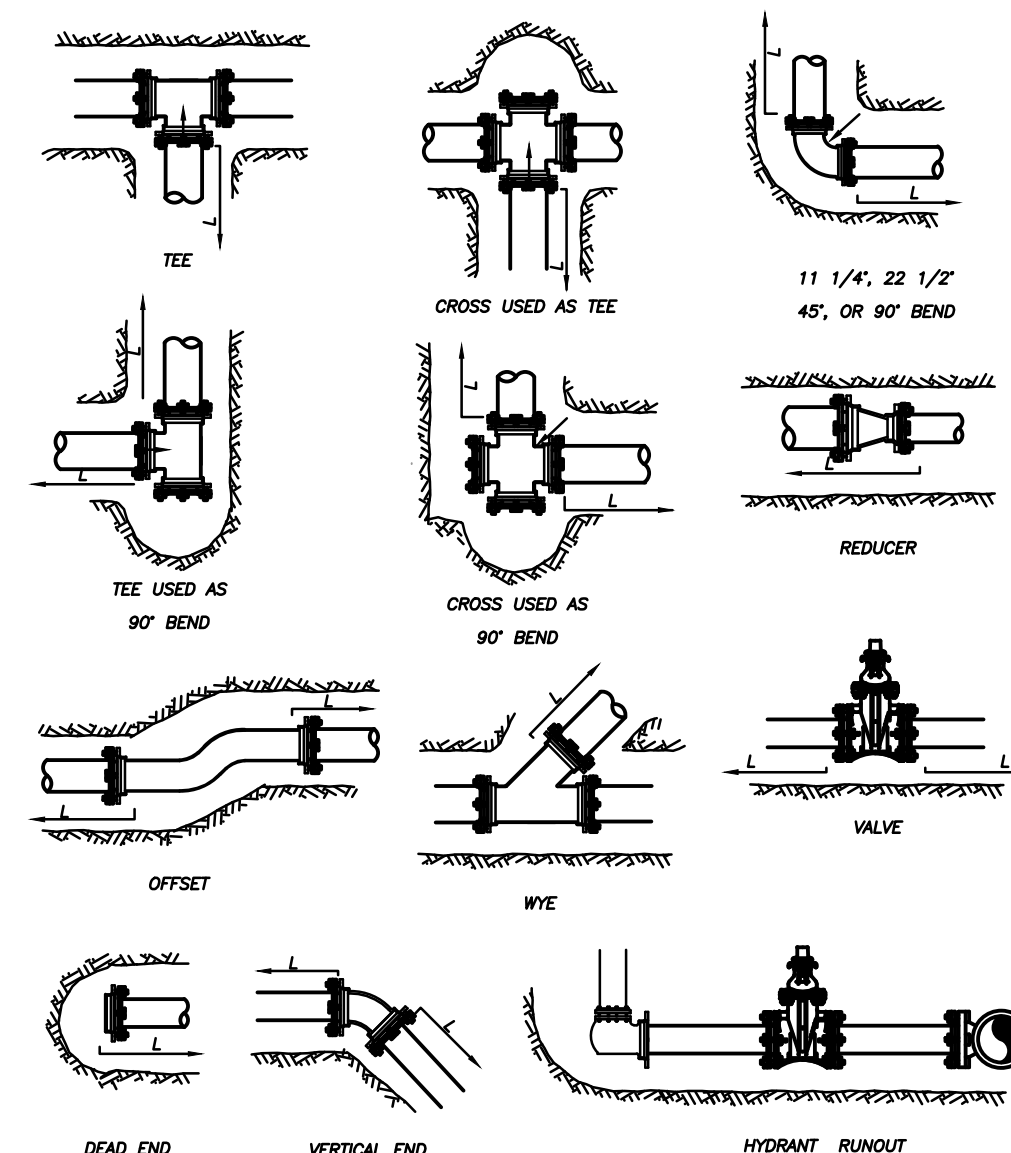
NOTES:
 1) IN CERTAIN SOIL CONDITIONS A FOUNDATION MAY BE REQUIRED.
 2) BEDDING IS REQUIRED PRIMARILY TO BRING THE TRENCH BOTTOM UP TO GRADE. BEDDING MATERIALS SHALL PROVIDE A UNIFORM AND ADEQUATE LONGITUDINAL SUPPORT UNDER THE PIPE.
 3) HAUNCHING MATERIAL SHALL BE HAND PLACED TO THE SPRINGLINE OF THE PIPE. MATERIAL SHALL BE CONSOLIDATED UNDER THE PIPE AND HAND TAMPOD TO PROVIDE ADEQUATE SIDE SUPPORT.
 4) INITIAL BACKFILL MATERIAL SHALL BE HAND PLACED TO 12" ABOVE THE TOP OF PIPE. THE SOIL SHALL BE COMPACTED TO 100% MAX. DENSITY (AASHTO T-99).
 5) BACKFILL SHALL BE COMPACTED TO 100% OF MAX. DENSITY AS PER AASHTO T-99. TO A POINT 30" BELOW PROPOSED GRADE OR EXISTING GRADE. THE FINAL 30" OF BACKFILL SHALL BE COMPACTED TO 98% OF MAX. DENSITY AS PER AASHTO T-100.
 6) DENSITY TEST SHALL BE PERFORMED AT AREAS DETERMINED BY THE UTILITIES ENGINEER OR PERMIT AGENCY HAVING JURISDICTION, AT THE CONTRACTOR'S EXPENSE.
 7) CONTRACTOR TO COMPLY WITH ALL FEDERAL, STATE AND LOCAL TRENCH SAFETY REGULATIONS.

BACKFILLING REQUIREMENTS
N.T.S.



NOTES:
 1) TRACE WIRE IS REQUIRED ON ALL PIPE AS NOTED BY UTILITIES ENGINEER AND SHOWN IN STANDARD DETAILS.
 2) INCLUDE ALL COST OF MATERIAL & LABOR IN PRICE OF PIPE.
 3) CONTRACTOR IS RESPONSIBLE FOR CONTINUITY OF ALL TRACE WIRE.

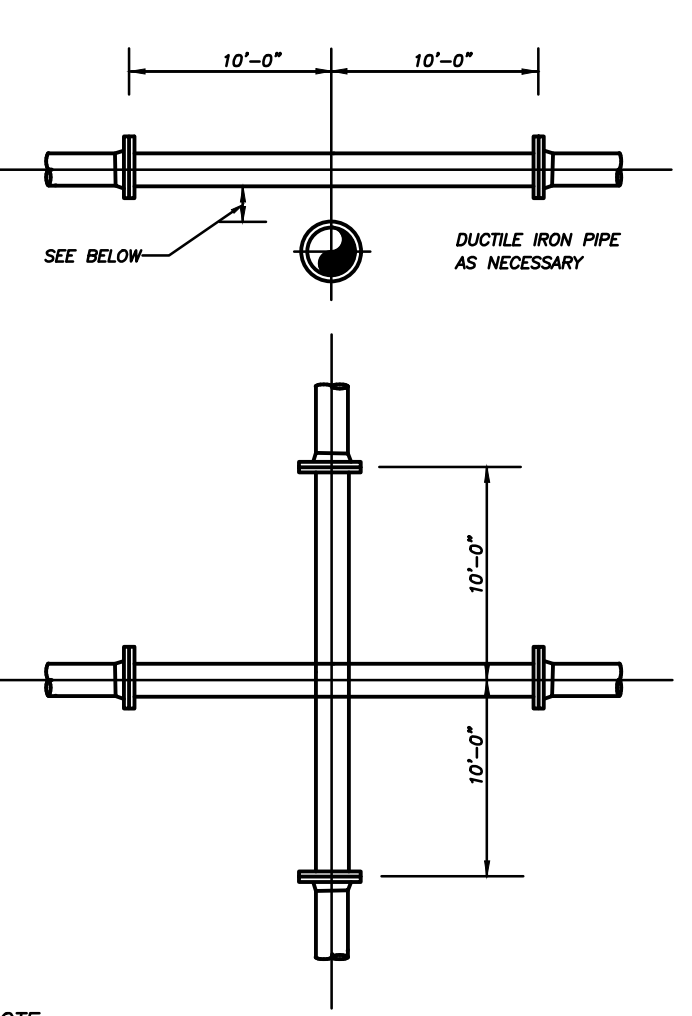
TRACE WIRE
N.T.S.



MECHANICAL JOINT ANCHORING REQUIREMENTS
N.T.S.

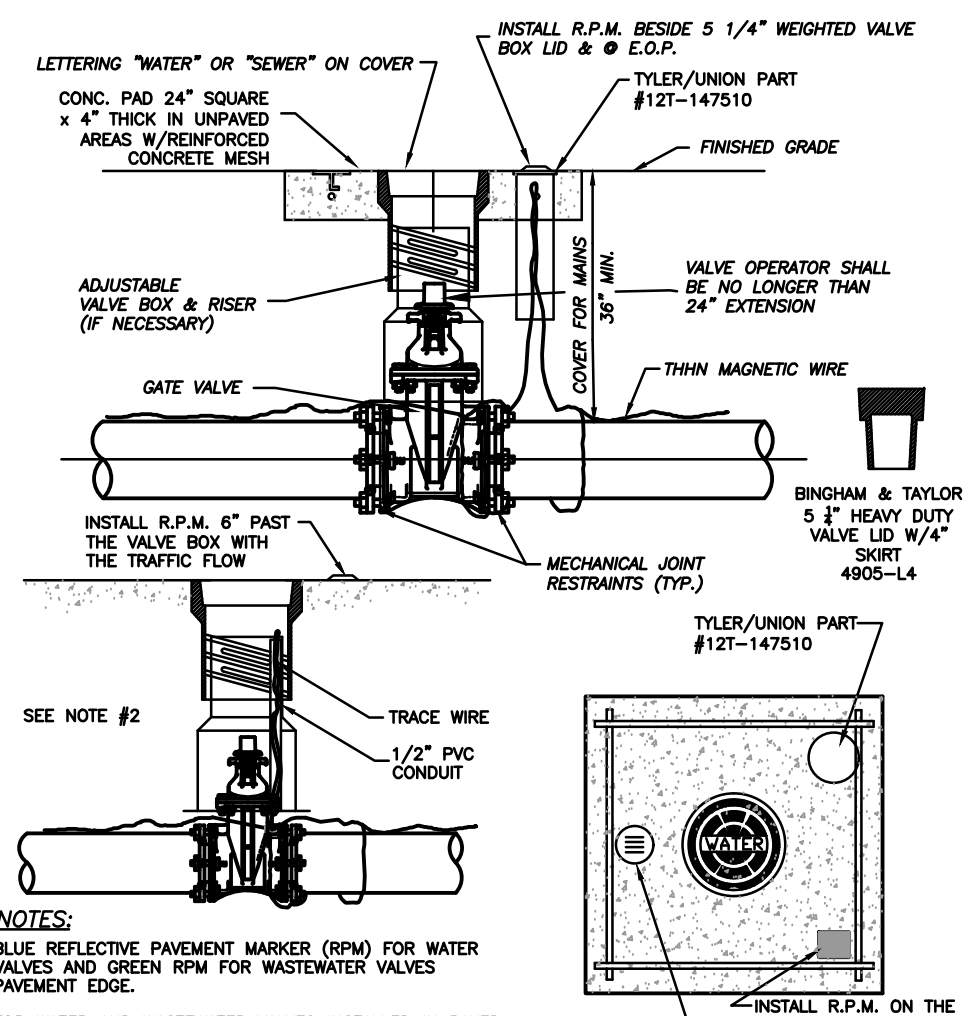
MECHANICAL JOINT RESTRAINT NOTES

NOTES:
 1) THE ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING THE REQUIRED LENGTH TO BE RESTRAINED BASED UPON THE PROJECT AREA SOIL TYPE, PROPOSED TRENCH CONDITIONS AND DEPTH, PRESSURE OF 150 PSI, AND A SAFETY FACTOR OF TWO (2). A DRAWING OF EVERY TYPICAL FITTING ASSEMBLY WITHIN THE PROJECT SHALL BE SUBMITTED WHICH REFLECTS THE RESTRAINT DETAIL PROPOSED FOR USE, INCLUDING LENGTH OF PIPE RESTRAINT.
 2) REQUIRED RESTRAINT LENGTH CALCULATIONS SHALL ALSO CONSIDER THE CONDITIONS OF OTHER BENDS OR FITTINGS THAT WILL BE LOCATED WITHIN THE CALCULATED RESTRAINT LENGTH (L) OF THE BEND OR FITTING IN QUESTION.
 3) EVERY JOINT OR FITTING MUST BE RESTRAINED ON BOTH SIDES OF THE BEND AND FOR TEES ALONG THE BEND ALSO.



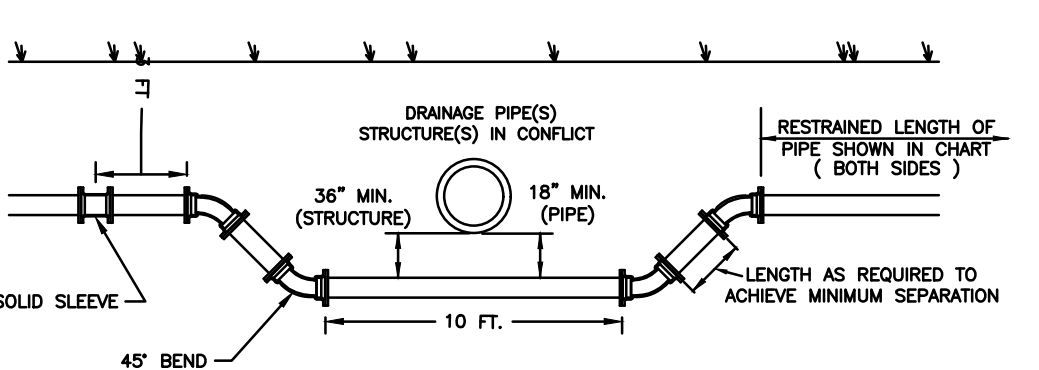
NOTE:
 PLEASE REFER TO FORT PIERCE UTILITIES STANDARD SEPARATION STATEMENT FOR WATER / SEWER CONFLICTS.

UTILITY CROSSING DETAIL
N.T.S.



NOTES:
 1. BLUE REFLECTIVE PAVEMENT MARKER (RPM) FOR WATER VALVES AND GREEN RPM FOR WASTEWATER VALVES.
 2. FOR WATER AND WASTEWATER VALVES INSTALLED IN PAVED AREAS, ELIMINATE CONCRETE PAD AND ENCASE THE MAGNETIC WIRE IN 1/2" PVC INSIDE THE VALVE BOX SEVEN INCHES BELOW GRADE.
 3. DIP MAY BE USED AS RISERS ONLY IF A VALVE BOX IS NOT MANUFACTURED FOR THAT DEPTH. NO PVC RISERS SHALL BE USED IN ANY CIRCUMSTANCES.

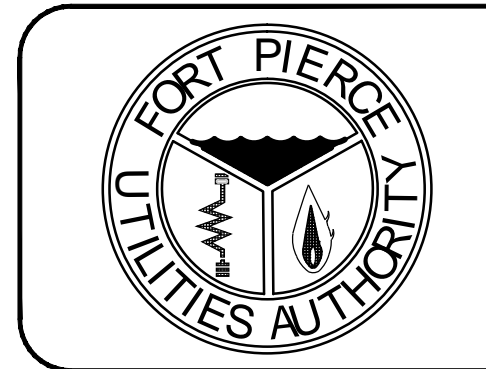
TYPICAL GATE VALVE & VALVE BOX DETAIL
N.T.S.



PIPE SIZE	90° BEND	45° BEND
2"	48 FT.	21 FT.
4"	70 FT.	29 FT.
6"	99 FT.	41 FT.
8"	129 FT.	54 FT.

1. PROVIDE RESTRAINED JOINTS AT CHANGES IN DIRECTION OF ALL PIPE.
 2. DISTANCES (FEET) SHALL APPLY TO LENGTHS OF PIPE ON EACH SIDE OF THE FITTING.
 3. CONSIDER DEAD ENDS EQUIVALENT TO 90° BENDS.
 4. TEES SHALL BE RESTRAINED ON BRANCH BASED ON SAME DISTANCE AS 90° BEND OF THE SIZE OF THE BRANCH.
 5. DETAIL APPLIES TO BOTH HORIZONTAL AND VERTICAL DEFLECTIONS.
 6. IF MULTIPLE PIPES/STRUCTURES ARE IN CONFLICT IN CLOSE PROXIMITY, EXTEND 10 FEET TYPICAL PORTION OF CONFLICT DEFLECTION AS NEEDED TO MAINTAIN DEFLECTION SPACING.

PIPE CONFLICT DETAIL



VERIFY SCALE
 BAR IS EQUAL TO ONE
 INCH ON ORIGINAL DRAWING

0 1
 ADJUST ALL SCALED
 DIMENSIONS ACCORDINGLY

DATE	REVISION	BY	APPD.
DESIGNED:	VAS	DRAWING FILENAME	
DRAWN BY:	S.L.L.	SCALE:	N.T.S.
APPROVED:	VAS	DATE:	12-31-2015

**NORTH 13TH STREET
 UTILITY REPLACEMENT**

WATER/WASTEWATER ENGINEERING

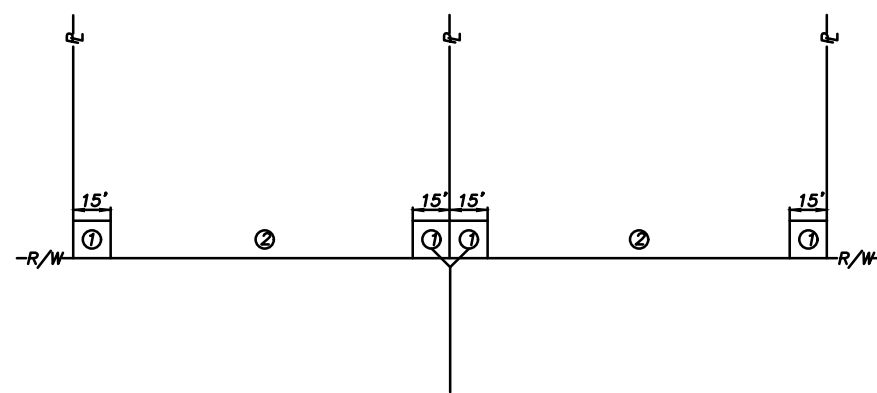
FT. PIERCE UTILITIES AUTHORITY
 1701 SOUTH 37TH STREET
 FT. PIERCE, FLORIDA 34947
 (772) 468-1600 / FAX (772) 468-2414

SHEET TYPE: Details
 SHEET #: UT-5

Valerie A. Schultz, P.E., REF 69355
 1701 South 37th Street
 Fort Pierce, FL 34947

GENERAL POLICY

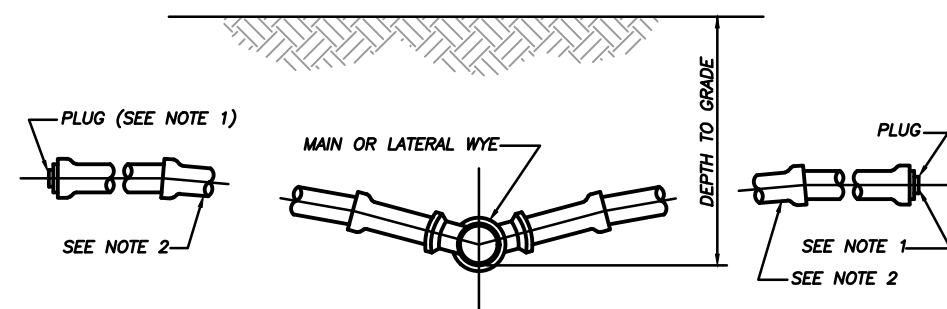
WHERE COST JUSTIFIED AND OPERATIONALLY FEASIBLE, IT IS THE GENERAL POLICY OF THE F.P.U.A. TO PROVIDE WATER, ELECTRIC, SEWER AND GAS SERVICE FROM THE STREET SIDE OF A PIECE OF PROPERTY. DEPENDENT ON FACTORS SUCH AS LOCATION OF EXISTING SUPPLY SOURCE FACILITIES, ROAD OR SIDE LOT LINE SUPPLY MAY BE AUTHORIZED, BUT ONLY WITH PRIOR APPROVAL FROM THE F.P.U.A.



NOTES:

1. THE PREFERRED POINT OF CONNECTION TO THE F.P.U.A. SEWER LATERAL AREA (Q) SHALL BE LOCATED IN THE CORNER OF THE PROPERTY SELECTED BY THE F.P.U.A. AS THE BEST LOCATION FOR THE LATERAL. EVERY EFFORT WILL BE MADE TO SELECT THE CORNER WHERE TWO LATERALS CAN BE CONNECTED IN A "Y" CONFIGURATION AS SHOWN.
2. IF PHYSICAL BARRIERS OR OTHER OBSTACLES PREVENT THE CONNECTION OF THE BUILDING SERVICE LINE TO THE F.P.U.A. SEWER LATERAL WITHIN AREA (Q), THE F.P.U.A. ENGINEERING DEPARTMENT MAY AUTHORIZE THE CONNECTION ALONG THE PORTION OF THE R/W LINE MARKED AREA (Q).
3. HORIZONTAL SEPARATION OF WATER AND WASTEWATER SERVICES SHOULD BE A MINIMUM OF SIX FEET AND PREFERABLY 10 FEET.
4. THE WASTEWATER LATERAL SHALL BE LOCATED WITHIN RIGHT-OF-WAY AND TERMINATE AT THE PROPERTY LINE.
5. THE F.P.U.A. SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND REPAIR OF THE WASTEWATER LATERAL, WITHIN THE EXISTENT OR RIGHT-OF-WAY, UP TO THE POINT OF CONNECTION.

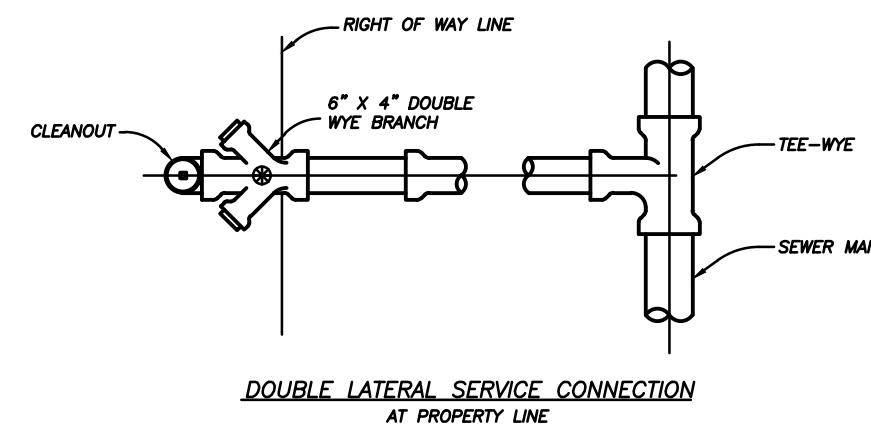
WASTEWATER SERVICE PLACEMENT (N.T.S.)



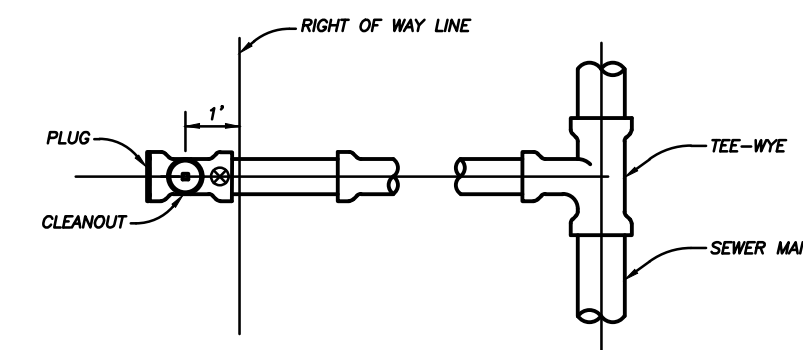
NOTES:

- 1) BALL TYPE WASTEWATER LOCATOR BY JM CORP. OR APPROVED EQUAL.
- 2) MINIMUM SLOPE OF 1/8" PER FOOT, USE GREATER SLOPE WHERE POSSIBLE.
- 3) SERVICE LATERAL SHALL TERMINATE WITH A CLEANOUT.
- 4) INSTALL CLEANOUT AT THE PROPERTY LINE. REFER TO DETAIL S-1 FOR SPECIFIC PROPERTY LAYOUT.

SERVICE CONNECTION (N.T.S.)



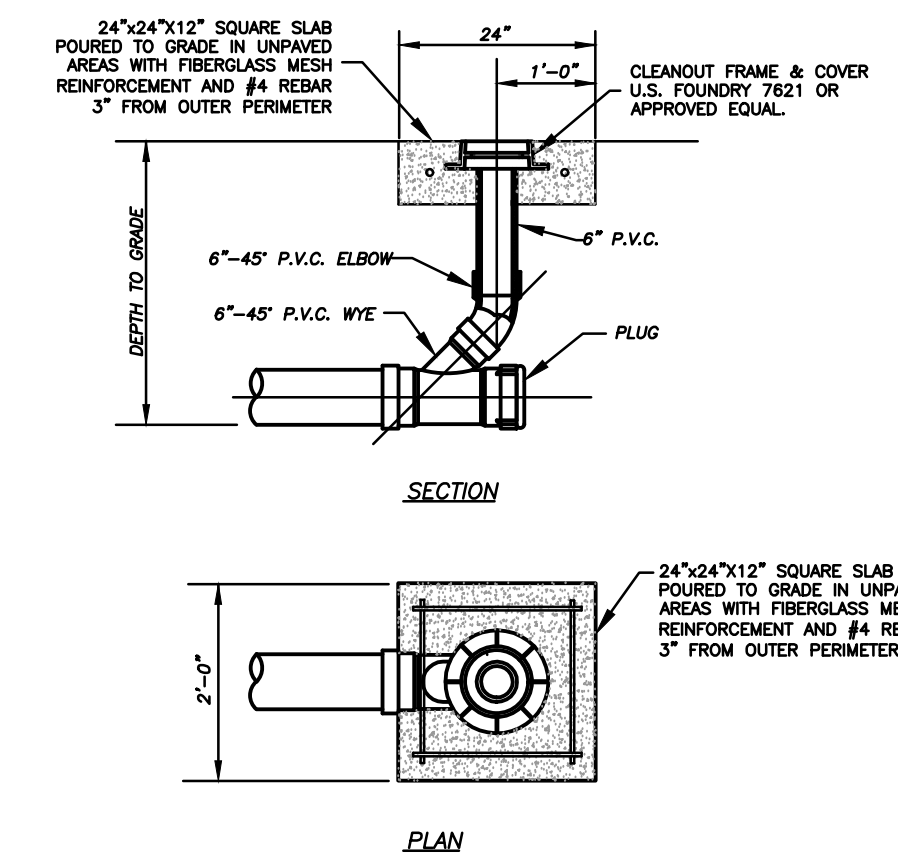
DOUBLE LATERAL SERVICE CONNECTION AT PROPERTY LINE



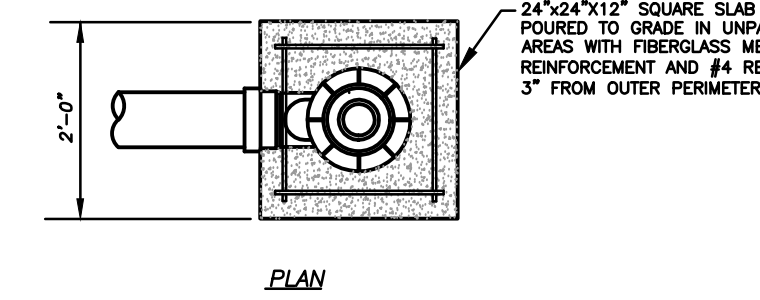
SINGLE SERVICE LATERAL CONNECTION

● = BALL TYPE WASTEWATER LOCATOR INSTALLED ABOVE THIS POINT BALL BY JM CORP. OR APPROVED EQUAL SERVICE LATERAL SHALL TERMINATE WITH A CLEANOUT

SERVICE CONNECTION (N.T.S.)

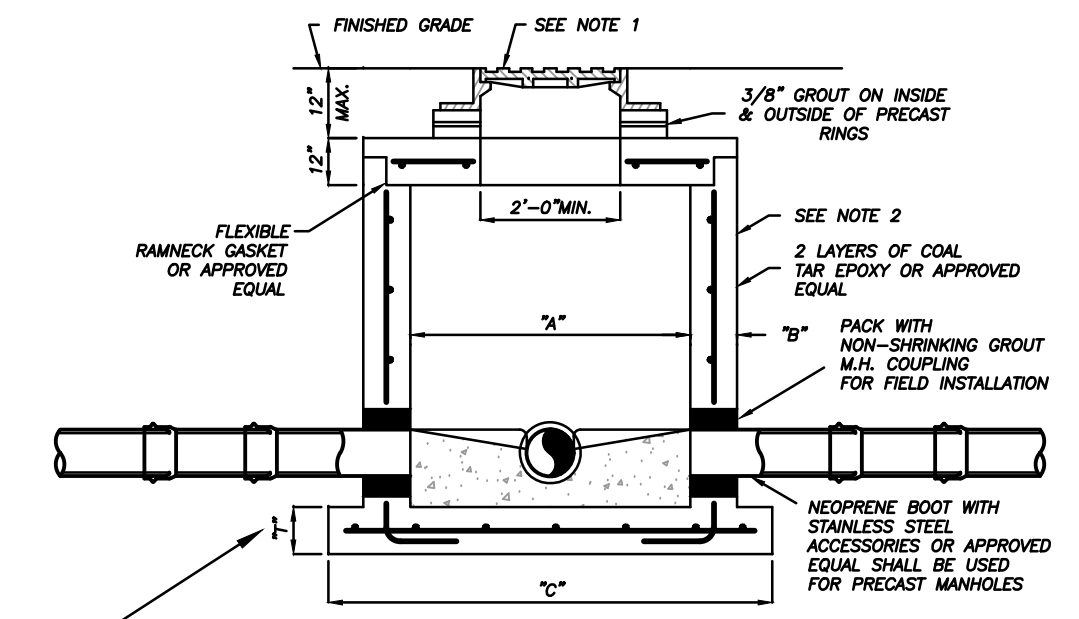


SECTION



PLAN

RESIDENTIAL CLEANOUT DETAIL (N.T.S.)



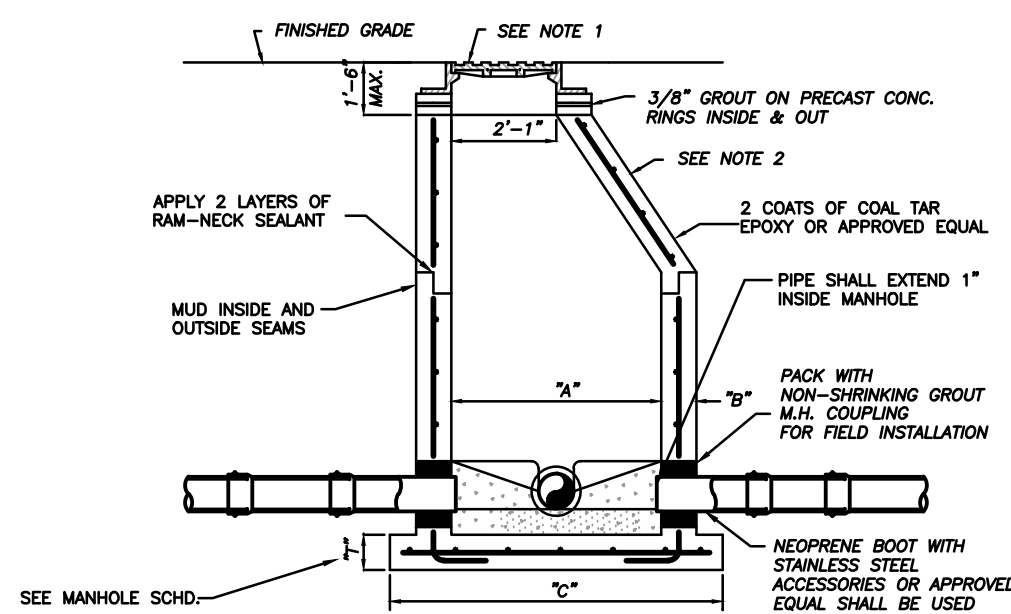
PIPE DIA.	"A"	"B"	"C"	BOT. SLAB T"
8"-24"	4'-0"	7"	7"	8"
30"-36"	5'-0"	7"	8"	10"
42"-48"	6'-0"	7"	10"	12"

TYPICAL MANHOLE DIMENSIONS

NOTES:

- 1) MANHOLE FRAME & COVER WITH THE WORDS "SANITARY SEWER" CAST IN THE COVER. U.S. FOUNDRY 170 OR APPROVED EQUAL.
- 2) ALL CONCRETE MANHOLES TO BE 4000 P.S.I. TO MEET OR EXCEED ASTM C478 ALL CEMENT TO BE TYPE I ACID RESISTANT. REINFORCING AREA OF 0.02 SQ. IN/FT FOR WALL SECTION MIN. TO MEET OR EXCEED ASTM A 185.
- 3) A MAXIMUM OF 2 LAYERS OF PRECAST CONCRETE RINGS, IF REQUIRED.
- 4) RAIN GUARDS SHALL BE INSTALLED IN MANHOLES THAT HAVE GRAVITY MAINS 12" OR LESS.

SHALLOW MANHOLE DEPTH OF LESS THAN 5'-0" (N.T.S.)



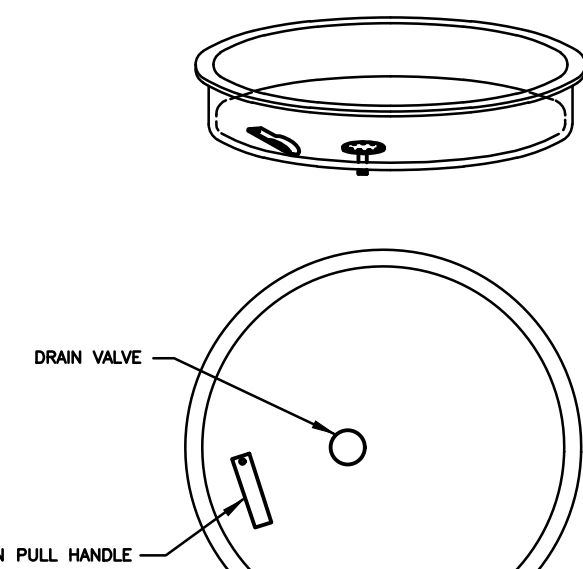
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TYPICAL MANHOLE DIMENSIONS

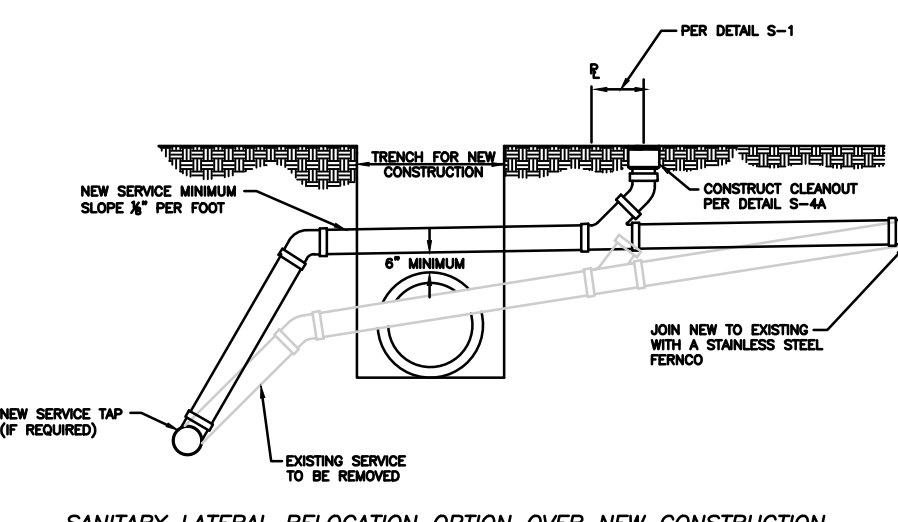
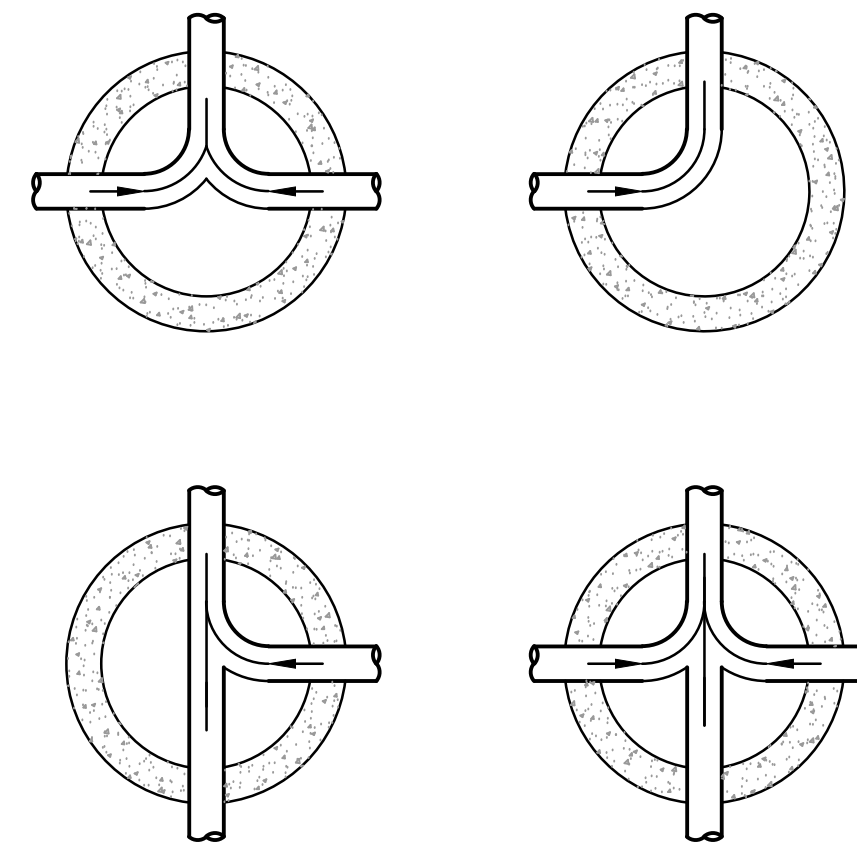
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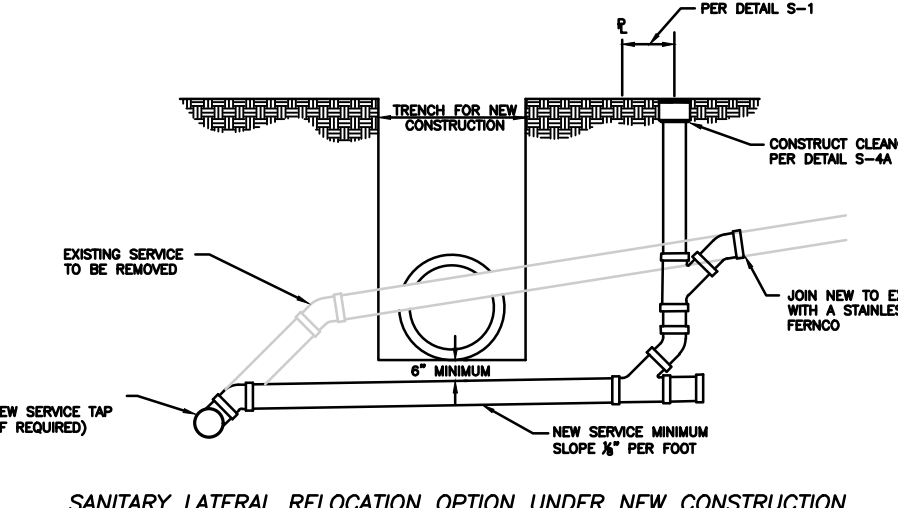
STANDARD MANHOLE DEPTH 5'-0" AND GREATER (N.T.S.)



RAINGUARD DETAIL (N.T.S.)

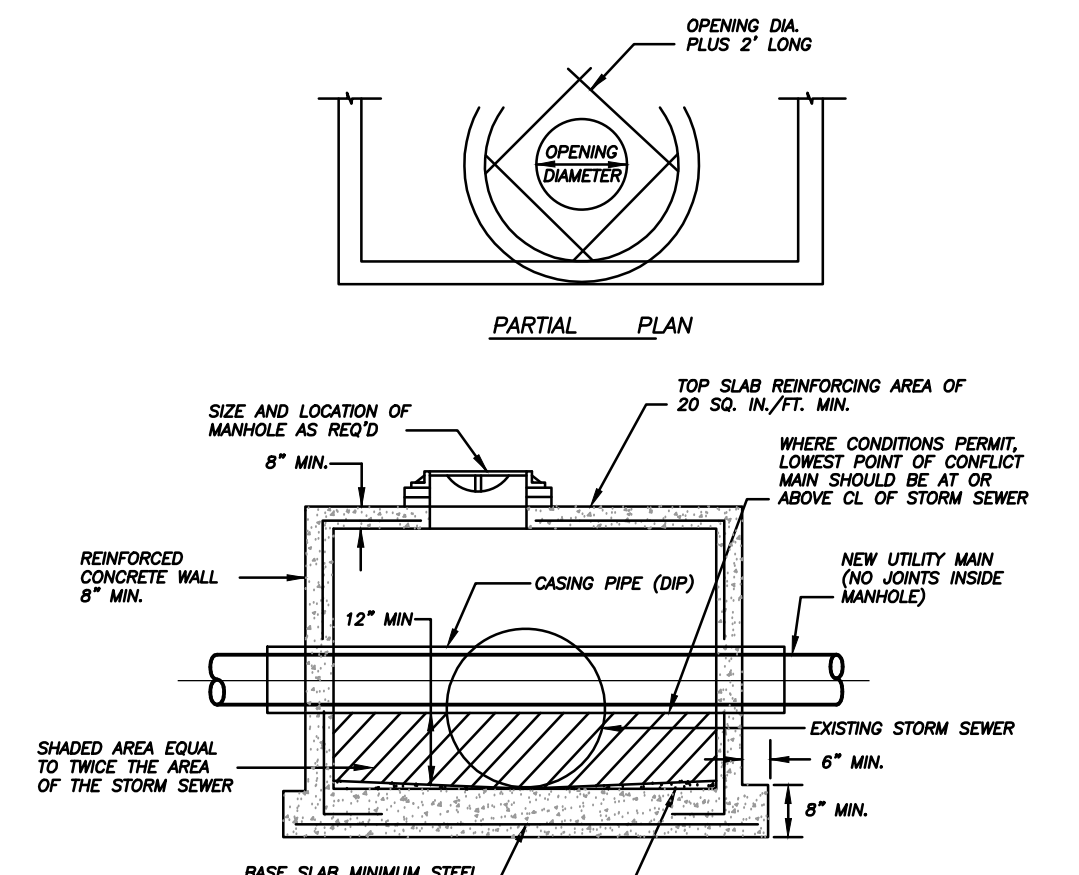


SANITARY LATERAL RELOCATION OPTION OVER NEW CONSTRUCTION



SANITARY LATERAL RELOCATION OPTION UNDER NEW CONSTRUCTION

- NOTES:**
1. ALL PIPING SHALL BE SDR-26 WITH SDR-26 FITTINGS.



NOTES:

- 1) CONFLICT MANHOLE WILL BE ALLOWED WHERE DESIGN PROBLEMS AND ECONOMICS PROVE THEM TO BE THE ONLY Viable SOLUTION AS APPROVED BY F.P.U.A. ENGINEERING.
- 2) CONFLICT MANHOLES WILL NOT BE ALLOWED FOR WATER MAINS CROSSING GRAVITY WASTEWATER SYSTEMS.
- 3) WHEN NECESSARY FOR EXISTING WATER MAINS, THE CARRIER PIPE SHALL BE SLEEVED IN D.I.P.

CONFLICT MANHOLE (N.T.S.)

FORT PIERCE UTILITIES AUTHORITY

VERIFY SCALE
BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING

0 1
ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

NORTH 13TH STREET
UTILITY REPLACEMENT

WATER/WASTEWATER ENGINEERING

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SHEET #
UT-6

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