

SURVEY AND LOCATE DATA:

- ☐ ☒ 1. ALL ELEVATIONS ARE BASED ON U.S.C.&G.S. DATUM AND SHOWN IN FEET.
- ☐ ☒ 2. ELEVATIONS ARE BASED ON NAVD 88.
- ☐ ☒ 3. LOCATION OF EXISTING UTILITIES OBTAINED BY SOFT DIG LOCATES WHERE SHOWN ON PLANS, OR INCLUDED WITH BID SPECS.
- ☐ ☒ 4. EXISTING WATER AND SEWER LINES ARE SHOWN AS PER FIELD LOCATES AND SUBDIVISION AS-BUILT PLANS.
- ☐ ☒ 5. UNDERGROUND UTILITIES WERE LOCATED UTILIZING GROUND PENETRATING RADAR (GPR) AND A DIGITAL LOCATOR. CONTRACTOR SHALL BE AWARE THAT IN SOME CASES UTILITIES HAVE BEEN LOCATED, AND SURVEY HAS BEEN COMPLETED ONLY ON ONE SIDE OF THE ROAD.
- ☐ ☒ 6. ALL PIPE LENGTHS SHOWN ON PLAN AND PROFILES ARE FROM CENTER TO CENTER OF MANHOLES, CATCH BASINS, INLETS ETC. OR ALONG THE CENTER LINE OF FORCE MAINS AND WATER MAINS.
- ☐ ☒ 7. INVERT ELEVATIONS SHOWN ON DRAWINGS REFER TO THE CENTERLINE OF MANHOLES, UNLESS OTHERWISE INDICATED.
- ☐ ☒ 8. THE LOCATION OF ALL EXISTING SEWER AND WATER SERVICE LINES MAY NOT BE INDICATED ON THESE PLANS. THE LOCATION OF NEW SERVICES SHALL BE VERIFIED IN THE FIELD.
- ☐ ☒ 9. BENCHMARK DATA: PER SURVEY

PERMIT REQUIREMENTS (NOT ALL INCLUSIVE):

- | | | | | |
|-------------------------------------|-------------------------------------|-----|---|--------------------------|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 1. | CONTRACTOR TO OBTAIN ALL REQUIRED RIGHT-OF-WAY PERMITS. | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 2. | CONTRACTOR SHALL NOT OPEN CUT STREETS IN THE PROJECT AREA UNLESS SPECIFICALLY SHOWN ON PLANS | |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. | THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A CONSUMPTIVE USE PERMIT (C.U.P.) THROUGH THE ST. JOHNS WATER MANAGEMENT DISTRICT SHOULD DEWATERING ACTIVITIES BE REQUIRED. | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 4. | THE DEPARTMENT OF TRANSPORTATION, RAILROAD COMPANIES AND C.O.J. ARE TO BE NOTIFIED IN ADVANCE OF CONSTRUCTION PER THEIR RESPECTIVE PERMIT CONDITIONS. | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 5. | ALL WORK SHALL BE IN ACCORDANCE WITH BID DOCUMENTS, JEA WATER AND SEWER STANDARDS, DETAILS AND MATERIALS MANUAL, REV. 2019, AND CITY OF JACKSONVILLE STANDARD SPECIFICATIONS AND DETAILS AND ALL APPLICABLE STATE AND LOCAL REGULATIONS. | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 6. | IF SOLVENT CONTAMINATION IS FOUND IN THE PIPE TRENCH, WORK SHALL BE STOPPED AND THE PROPER AUTHORITIES NOTIFIED. WITH APPROVAL OF THE PERMITTING AGENCY, DUCTILE IRON PIPE, FITTINGS AND SOLVENT RESISTANT GASKET MATERIAL SHALL BE USED IN THE CONTAMINATED AREA. THE DUCTILE IRON PIPE SHALL EXTEND AT LEAST 100 FEET BEYOND ANY SOLVENT NOTED. | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 7. | THE CONTRACTOR SHALL NOTIFY APPLICABLE UTILITY CONTACT PERSONNEL NOT LESS THAN ONE WEEK PRIOR TO CONSTRUCTION OF FACILITIES IN THEIR RESPECTIVE AREAS. | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 8. | TREE PROTECTION SHALL BE IN ACCORDANCE WITH JACKSONVILLE ORDINANCE CODE 656 AND/OR AS DETAILED ON SPECIFIC PLAN SHEETS. NO TRIMMING OF OVERHANGING TREE LIMBS WILL BE ALLOWED. USE SMALLER EQUIPMENT IF NECESSARY. | RIGHT OF WAY |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 9. | THE CONTRACTOR SHALL LOCATE THE DRAINAGE INLET STRUCTURES IN THE PROJECT AREA AND ERECT SEDIMENTATION CONTROL DEVICES AS NECESSARY PER THE CITY OF JACKSONVILLE STORMWATER POLLUTION PREVENTION PLAN. | CENTER LINE |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 10. | CONTRACTOR TO COORDINATE WORK WITH OTHER UTILITIES DURING CONSTRUCTION. | LIMITS OF CONSTRUCTION |
| | | | | FENCE (HEIGHT INDICATED) |

EXISTING UTILITY PROTECTION:

1. IN ORDER TO REDUCE THE DISRUPTION AND COST OF UTILITY DAMAGES OCCURRING IN THE DUVAL COUNTY RIGHT-OF-WAY AND EASEMENTS, THE CONTRACTOR SHALL PREVENT DAMAGES TO EXISTING UTILITIES CAUSED BY HIS WORK THROUGH FIELD VERIFICATION OF THE LOCATION OF THE EXISTING UTILITIES. IN THE CASE OF OPEN EXCAVATION, VERIFICATION MAY BE PERFORMED DURING THE CONTRACTORS WORK. IN THE CASE OF DIRECTIONAL DRILLING, VERIFICATION SHALL TAKE PLACE PRIOR TO MOBILIZATION OF THE DRILLING EQUIPMENT.
2. THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES AS NEEDED TO AVOID CONTACT. EXISTING UTILITIES SHALL BE EXPOSED USING DETECTION EQUIPMENT OR OTHER ACCEPTABLE MEANS. SUCH METHODS MAY INCLUDE BUT SHALL NOT BE LIMITED TO "SOFT DIG" EQUIPMENT AND GROUND PENETRATING RADAR (GPR). THE EXCAVATOR SHALL BE HELD LIABLE FOR DAMAGES CAUSED TO THE CITY'S/JEA'S INFRASTRUCTURE AND THE EXISTING FACILITIES OF OTHER UTILITY COMPANIES.
3. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND AVOID ALL UTILITIES, OTHER STRUCTURES AND OBSTRUCTIONS BOTH ABOVE AND BELOW GROUND SURFACE. ALL DAMAGE RESULTING FROM THE CONTRACTOR'S FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

ABBREVIATIONS:

AC	ASBESTOS CEMENT	INT.	INTERSECTION
A.G.	ALLEY GRATE	INV.	INVERT
B	BASE LINE	I.P.	IRON PIPE
B.M.	BENCH MARK	J.W.W.	JACKSONVILLE WATER
BC	BOTTOM OF CURVE		WORKS
C.B.	CATCH BASIN	LT.	LEFT
C.I.	CAST IRON	MB	MAIL BOX
C	CENTER LINE	M.H.	MANHOLE
C.E.P.	CITY ELECTRIC POLE	N.T.S.	NOT TO SCALE
CONC.	CONCRETE	O.E.	OVERHEAD ELECTRIC
CONST.	CONSTRUCTION	O.T.	OVERHEAD TELEPHONE
C.M.P.	CORRUGATED METAL PIPE	P.R.M.	PERMANENT REFERENCE
C.M.P.A.	CORRUGATED METAL PIPE ARCH		MENT
CUL.V.	CULVERT	P.V.C.	POLYVINYL CHLORIDE
C&G	CURB & GUTTER	R	RADIUS
C	CUT	R	RATE
D.B.I.	DITCH BOTTOM INVERT	R.C.P.	
D.W. OR DR	DRIVEWAY	RT	RIGHT
D.I.	DUCTILE IRON	R/W	RIGHT OF WAY
E.O.P.	EDGE OF PAVEMENT	R.D.	ROOF DRAIN
ELEV.	ELEVATION	S/W	SIDE WALK
ERCP	ELLIPTICAL REINFORCED	S.B.T.	SOUTHERN BELL TELEPHONE
	CONC. PIPE	STA	STATION
EXP. JT.	EXPANSION JOINT	TC	TOP OF CURVE
F	FILL	TFM	TOP OF FORCE MAIN
F.H.	FIRE HYDRANT	TWM	TOP OF WATER MAIN
FL	FLOW LINE	U.G.E.	UNDERGROUND ELECTRIC
FM	FORCE MAIN	U.G.T.	UNDERGROUND TELEPHONE
GALV./GLV	GALVANIZED	U.S.C. & G.S.	UNITED STATES COASTAL &
G	GAS LINE		GEODETIC SURVEY
G.V.	GAS VALVE	V.C.	VERTICAL
HDPE	HIGH DENSITY	WM	WATER METER
	POLYETHYLENE PIPE	W.V.	WATER VALVE
H.W.	HEAD WALL	WLP	WOOD LIGHT POLE
H.C.	HIGH CURB	WPP	WOOD POWER POLE
		WTP	WOOD TELEPHONE POLE

RESTORATION NOTES:

1. THE CONTRACTOR SHALL EMPLOY A LAND SURVEYOR, REGISTERED IN THE STATE OF FLORIDA, TO REFERENCE AND RESTORE PROPERTY CORNERS AND LANDMARKS WHICH MAY BE DISTURBED BY CONSTRUCTION. KNOWN CORNER LOCATIONS ARE AVAILABLE FROM THE CITY OF JACKSONVILLE ENGINEERING DIVISION.
2. THE CONTRACTOR SHALL RESTORE/REPLACE ALL CULVERTS, HEADWALLS AND STORM DRAIN INLETS REMOVED OR DISTURBED BY THE CONSTRUCTION OPERATION.
3. TRAFFIC SIGNS AND PAVEMENT MARKINGS SHALL BE RESTORED TO THEIR PRE-CONSTRUCTION CONDITION IN ACCORDANCE WITH CITY OF JACKSONVILLE/FDOT STANDARD SPECIFICATIONS.
4. SIDEWALKS, DRIVEWAYS AND CURBING DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED IN ACCORDANCE WITH JACKSONVILLE STANDARD SPECIFICATIONS. SIDEWALKS REMOVED AND REPLACED IN CURB AND GUTTER AREAS AT INTERSECTIONS SHALL HAVE HANDICAP RAMPS INSTALLED. DRIVEWAYS AND SIDEWALKS SHALL BE SAWCUT ALONG THE RIGHT-OF-WAY LINE OR NEAREST JOINT AND REMOVED AND REPLACED TO THE EDGE OF STREET.
5. GRASS SOD SHALL BE FURNISHED AND PLACED IN THE AREAS DISTURBED OR DAMAGED BY THE CONSTRUCTION OPERATION.
6. ALL PAVEMENT REPAIR SHALL BE IN ACCORDANCE WITH THE CITY OF JACKSONVILLE/FDOT STANDARD DETAILS AND SPECIFICATIONS LATEST EDITION.
7. UNLESS OTHERWISE NOTED, REMOVE AND REPLACE EXISTING PAVEMENT AS PER C.O.J. CASE X (10) PAVEMENT REPLACEMENT DETAIL.
8. CONTRACTOR MUST MAINTAIN AND PRESERVE NEWLY GRADED AREAS AND REPAIR AREAS WHERE SETTLING AND EROSION HAVE OCCURRED.


























UTILITY CONTACTS:

A.	AT&T ~	904-699-4976
B.	CITY OF JACKSONVILLE ~ PUBLIC WORKS DEPT. ~	904-630-2489
C.	CITY OF JACKSONVILLE ~ TRAFFIC OPERATIONS	904-630-2489
D.	FLORIDA DEPT. OF TRANSPORTATION	904-360-5200
E.	JEA - GENERAL INFORMATION	904-665-6000
F.	JEA - PROJECT OUTREACH	904-665-7500
G.	JEA - POWER OUTAGES	904-665-6000
H.	JEA - SEWER PROBLEMS	904-665-4802
I.	JEA - WATER PROBLEMS	904-665-4801
J.	COMCAST ~ EMERGENCY HOTLINE	904-380-6341
K.	TECO/PEOPLES GAS	904-443-7316
L.	SUNSHINE ONE CALL	811

GENERAL LEGEND

	EXISTING	PROPOSED
RIGHT OF WAY LINE	_____	_____
CENTER LINE	_____	_____
LIMITS OF CONSTRUCTION	_____	_____ L.O.C. _____
FENCE (HEIGHT & MAT'L INDICATED)	_____ X 6' CHAIN LINK _____	_____ X 6' CHAIN LINK _____
DITCH OR SWALE	~~~~~	~~~~~
DRAIN PIPE	_____ D _____	_____ D _____
CATCH BASIN		
STORM DRAIN GRATE		
STORM SEWER (SIZE & MAT'L. INDICATED)	_____ 24" RCP _____	_____ 24" RCP _____
STORM SEWER (SIZE & MAT'L. INDICATED)	_____	=====
CULVERT W/ENDWALLS (SIZE & MAT'L. INDICATED)	_____ 18" CMP _____	_____ 18" CMP _____
WATER MAIN SIZE, TYPE INDICATED	_____ W 6" W PVC _____	_____ 8" W _____
GRAVITY SEWER SIZE, TYPE INDICATED	_____ S 8" PVC S _____	_____ S 8" PVC _____
SEWER FORCE MAIN SIZE, TYPE INDICATED	_____ FM 10" PVC _____	_____ 12" FM _____
LINE VALVE	_____ _____	_____ _____
CHECK VALVE	_____ _____	_____ _____
FIRE HYDRANT	_____ _____	_____ _____
VALVE (TYPE INDICATED)	_____ _____	_____ _____
END CAP	_____ _____	_____ _____
PLUG (AT END OF LINE)	_____ _____	_____ _____
VALVE (TYPE INDICATED)	_____ _____	_____ _____
REDUCER	_____ _____	_____ _____
FIRE HYDRANT	_____ _____	_____ OR _____
HOUSE CONNECTION (SEWER)	_____ _____	1275 _____
SPOT ELEVATION	+ (100.00) OR + 100.00	MH1
MANHOLE - TYPE (IF INDICATED) E - ELECTRIC S - SANITARY D - STORM T - TELEPHONE	C.O. SPR	MH1
CLEAN OUT	_____ _____	_____ _____
SPRINKLER HEAD	_____ _____	_____ _____
TEMPORARY SAMPLING TAP POINT (BACTERIOLOGICAL SAMPLING POINT)	_____ _____	_____ _____
SILT HAY BARRIER	_____ _____	_____ _____
SIDEWALK	_____ _____	_____ _____

UTILITY SYMBOLS

CONCRETE POLE OR S.B.T. POLE (WOOD)	 OR  (WITH LIGHT)
WOOD POWER POLE	 WPP
ELECTRIC POLE OR S.B.T. POLE (CONC.)	 OR  (WITH LIGHT)
CONCRETE POWER POLE	 CPP
GUY WIRE	
TRAFFIC SIGNAL POLE	
IRON PIPE	 I.P.
UNDERGROUND TELECOMMUNICATION LINE	--UGT--
UNDERGROUND GAS LINE	--UGG--
UNDERGROUND FIBER OPTIC LINE	--UFO--
OVERHEAD UTILITIES	--OH--
UNDERGROUND WATER LINE	--UGW--
UNDERGROUND SANITARY SEWER LINE (GRAVITY)	--S--
UNDERGROUND SANITARY SEWER LINE (FORCE MAIN)	--FM--
WATER METER	 WM
WATER METER WITH TOUCHREAD	 WM(TR)
TELEPHONE BOX	 T
CATV BOX	 CATV
CONCRETE MONUMENT	 CM
GAS VALVE	
SOIL BORING (NUMBER INDICATED)	 B-1
SOFT DIG (TEST HOLE) (NUMBER INDICATED)	 TH1
BENCHMARK	
TREE, SIZE & TYPE INDICATED	 12" O
MAIL BOX	 MB
SIGN - TYPE INDICATED	
BUSH, SHRUB OR HEDGE	
FULL DEPTH ASPHALT PAVEMENT REPLACEMENT	
ASPHALT PAVEMENT OVERLAY	
INDICATES DRIVEWAY/SIDEWALK TO BE AND REPLACED	

INSTALLATION NOTES:

1. CONTRACTOR TO REHABILITATE ALL MANHOLES ON PIPE BURST SEWERS VIA COATING/LINING PER JEA SPECIFICATION 446-2, UNLESS OTHERWISE NOTED ON THE PLANS.

2. CONTRACTOR TO RENEW, REHABILITATE, REPLACE OR REINSTALL AS APPLICABLE ALL SERVICE LATERALS TO R.O.W. LINE.

3. CONTRACTOR TO INSTALL SEWER SERVICE PIPING A MINIMUM OF 60 INCHES BELOW GRADE. WHERE NEW SANITARY SEWER MAIN IS LESS THAN 5 FEET DEEP, THE SEWER SERVICE PIPE SHALL BE INSTALLED AS DEEP AS POSSIBLE.

4. WHEN THE DISTANCE BETWEEN A POWER POLE AND THE TRENCH IS LESS THAN THE TRENCH DEPTH, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH JEA ELECTRICAL PERSONNEL TO SECURE POWER POLES. THE CONTACTS FOR JEA ARE AS FOLLOWS:

RICHARD HEALD, EMAIL: healds@jea.com

A MINIMUM OF TWO (2) WORKING DAYS NOTICE IS REQUIRED FOR AN OUTSIDE MEETING WITH JEA ELECTRICAL TO DISCUSS THE REQUIRED WORK. ADDITIONAL TIME WILL BE REQUIRED BY JEA ELECTRICAL FOR ANY REQUIRED WORK TO BE ACCOMPLISHED.

5. ALL NEW STORM DRAIN PIPE JOINTS SHALL BE WRAPPED WITH FILTER FABRIC.

6. THE DESIGN FOR THE PROJECT IS BASED UPON THE "OPEN-CUT" METHOD OF CONSTRUCTION. IF USING ALTERNATIVE MEANS OR METHODS, THE CONTRACTOR SHALL FOLLOW ALL APPLICABLE STANDARDS FOR THAT MEANS OR METHOD.

7. THE CONTRACTOR SHALL MINIMIZE SERVICE INTERRUPTIONS AT SERVICE CONNECTIONS. THE MEANS AND METHODS SHALL BE LEFT TO THE DISCRETION OF THE CONTRACTOR, SUBJECT TO THE REQUIREMENTS OF THE CONTRACT SPECIFICATIONS. NO EXISTING ACTIVE SERVICE SHALL BE LEFT INTERRUPTED AT THE END OF THE WORK DAY.

8. CONTRACTOR SHALL PROVIDE ADDITIONAL CORPORATION STOPS FOR FILLING AND DRAINING PURPOSES DURING CONSTRUCTION AS NEEDED. CORPORATION STOPS ARE TO BE PLUGGED AND LEFT IN PLACE. INDICATE CORPORATION STOP LOCATIONS ON RECORD DRAWINGS (AS-BUILTS).

9. WATER AND SEWER SERVICES SHALL BE TRANSFERRED TO THE NEW MAIN UPON COMPLETION AND F.D.E.P./J.E.A. CERTIFICATION, AND PRIOR TO THE EXISTING MAINS BEING ABANDONED.

10. IF EXISTING VALVES ARE IN UNPAVED AREAS AND ARE TO BE TAKEN OUT OF SERVICE, THEY SHALL BE CLOSED AND THE VALVE BOX AND COVER SHALL BE REMOVED. IF THE VALVES ARE UNDER PAVED AREAS, THEY SHALL BE CLOSED, THE VALVE BOX GROUT FILLED AND THE COVER REMOVED.

11. CONTRACTOR SHALL REPLACE EXISTING WATER METER BOXES WHEN DEEMED NECESSARY BY THE JEA INSPECTOR.

12. CONTRACTOR TO PROVIDE ADDITIONAL DEPTH OF BURY VIA PIPE JOINT DEFLECTION TO ACCOMMODATE VALVE SELECTION PER JEA STANDARDS.

13. WATER METERS MAY REQUIRE RELOCATION FOR CONSTRUCTION, CONTRACTOR SHALL CONTACT JEA METER DEPARTMENT AND RELOCATE WATER METERS AS NECESSARY.

14. PRIOR TO COMMENCING ANY EXCAVATION OR GRADING, THE CONTRACTOR SHALL OBTAIN ALL GEOTECHNICAL AND TOPOGRAPHIC SURVEY DATA AND LOCATIONS OF ABOVE GROUND AND UNDERGROUND UTILITIES. SHOULD THE CONTRACTOR DISCOVER ANY INACCURACIES, ERRORS OR OMISSIONS IN THE SURVEY DATA, HE SHALL IMMEDIATELY NOTIFY THE DESIGN ENGINEER IN ORDER THAT PROPER ADJUSTMENTS CAN BE ANTICIPATED AND ORDERED.

15. SHEET PILING WILL BE REQUIRED ON ALL EXCAVATIONS DEEPER THAN 16 FEET.

16. ALL WATER, RECLAIMED WATER, AND WASTEWATER CONSTRUCTION SHALL BE PROVIDED BY A CONTRACTOR QUALIFIED, AS REQUIRED UNDER THE CURRENT FLORIDA STATUTE, OR BY AN UNDERGROUND UTILITY CONTRACTOR, LICENSED UNDER THE PROVISIONS OF CHAPTER 489 FS.

17. THE CONTRACTOR SHALL CONTACT THE JEA, AND SCHEDULE A PRE-CONSTRUCTION MEETING, TO BE HELD PRIOR TO INITIATING THE JEA WATER AND WASTEWATER UTILITY WORK, INCLUDING ALL UTILITY MAIN TAPS BY THE CONTRACTOR.

18. JEA WATER AND WASTEWATER TAP FEES, JEA WATER AND SEWER CAPACITY FEES, AND JEA METER FEES SHALL BE PAID PRIOR TO THE WATER METER INSTALLATION. WATER METERS WILL NOT BE INSTALLED PRIOR TO THE ISSUANCE OF REQUIRED ACCEPTANCE (TRANSFER OF OWNERSHIP) DOCUMENTS, WHICH MAY INCLUDE THE ISSUANCE OF A REGULATORY CLEARANCE LETTER (COC) FOR THE WATER AND WASTEWATER IMPROVEMENTS. COMPLETION, AND APPROVAL OF FINAL INSPECTION AND APPROVED AS-BUILT DRAWINGS.

19. FINAL CONNECTION TO THE JEA SYSTEM MAY BE CONTINGENT UPON THE CONSTRUCTION, DEDICATION, AND FINAL ACCEPTANCE (TRANSFER OF OWNERSHIP/MAINTENANCE) OF THE JEA OFF-SITE UTILITIES.

20. THE MINIMUM HORIZONTAL AND VERTICAL SEPARATION REQUIREMENTS FOR THE WATER, RECLAIMED WATER, AND WASTEWATER IMPROVEMENTS SHALL CONFORM TO THE LATEST JEA AND FDEP RULES. THE MINIMUM HORIZONTAL SEPARATION REQUIREMENTS BETWEEN THE PROPOSED WATER AND WASTEWATER UTILITIES AND PONDS OR STRUCTURES SHALL CONFORM TO THE LATEST JEA WATER AND WASTEWATER STANDARDS MANUAL.

21. WATER AND WASTEWATER PIPES LESS THAN 24-INCHES IN DIAMETER SHALL BE CONSTRUCTED WITH A MINIMUM 30-INCHES COVER IN UNPAVED OR SIDEWALK AREAS AND A MINIMUM OF 36-INCHES COVER IN PAVED AREAS. THE MAXIMUM COVER FOR UTILITIES, BOTH OPEN CUT AND UTILIZING HORIZONTAL DIRECTIONAL DRILL METHODS, SHALL COMPLY WITH THE LATEST JEA WATER AND WASTEWATER STANDARDS MANUAL.

22. WATER AND WASTEWATER PRESSURE MAINS AND SERVICES SHALL PASS A JEA PRESSURE AND LEAKAGE TEST AT 150-PSI MINIMUM, OF TWO TIMES OPERATING PRESSURE, FOR TWO HOURS. IN ADDITION, WATER MAINS SHALL BE DISINFECTED AND PASS A BACTERIOLOGICAL ANALYSIS. ALL TESTS SHALL CONFORM TO JEA AND FDEP RULES, REGULATIONS, AND AWWA C6051. THE JEA INSPECTOR SHALL BE NOTIFIED 72-HOURS (MIN) PRIOR TO PERFORMING THESE TESTS. NO FINAL CONNECTION(S) TO EXISTING POTABLE WATER MAINS SHALL BE MADE UNTIL THE NEW MAIN IS PRESSURE TESTED, DISINFECTED, AND CLEARED FOR SERVICE.

23. RESIDENTIAL SERVICES USING RECLAIMED WATER FOR IRRIGATION MUST HAVE A JEA APPROVED BACKFLOW PREVENTER INSTALLED ON EACH POTABLE WATER SERVICE PRIOR TO THE INSTALLATION OF A JEA RECLAIMED WATER METER. THE INSTALLATION OF A BACKFLOW PREVENTER SHALL BE IN ACCORDANCE WITH THE JEA RULES AND REGULATIONS FOR WATER, SEWER AND RECLAIMED WATER SERVICES, APPENDIX B, CROSS CONNECTION CONTROL POLICY.

24. FOR DEVELOPMENTS UTILIZING RECLAIMED WATER, A JEA APPROVED RECLAIMED WATER SIGNAGE PLAN SHALL BE IMPLEMENTED PRIOR TO THE INSTALLATION OF THE RECLAIMED WATER METERS.

25. ALL BACKFLOW PREVENTERS SHALL BE IN ACCORDANCE WITH JEA CROSS CONNECTION PROGRAM. BACKFLOW PREVENTERS MUST BE TESTED AFTER INSTALLATION BY A CERTIFIED TESTER AND ANNUALLY THEREAFTER. JEA CONTACT: PERMITTING (904) 665-7988.

26. BACKFLOW PREVENTERS ON FIRE LINES OR COMBINATION FIRE/POTABLE MAINS SHALL HAVE FREEZE PROTECTION.

BID DOCUMENTS - NOT FOR CONSTRUCTION		PROJ. NO. 17-025-02 DATE: MAY 5, 2020 SCALE: AS NOTED	
NO. SHEETS 69 SHEET NO. 2 DRAWING NO. G-1		BEVERLY HILLS SEPTIC TANK PHASE OUT OFFSITE FORCE MAIN GENERAL NOTES & LEGEND	
		DESIGNER: D.W.H. DRAWN BY: J.E.S. CHECKED BY: S.A.W. DATE:	
DESIGN ENGINEER: SCOTT A. WILD FLORIDA REGISTRATION NO. 47030		NO. 6 BY _____ DATE _____ REVISIONS	

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59	TTCP-1	TTCP DETOUR PLAN - ORIOLE ST. AND GRANT AVE.
60	TTCP-2	TTCP DETOUR PLAN - IDA ST.
61	TTCP-3	TTCP DETOUR PLAN - ORIOLE ST. AND GRANT AVE.
62	TTCP-4	TTCP DETOUR PLAN - LAKE PARK DR.
63	TTCP-5	TTCP DETOUR PLAN - PALMDALE ST.
64	TTCP-6	TTCP DETOUR PLAN - ROWE AVE.
65	TTCP-7	TTCP DETOUR PLAN - CALVIN ST.
66	TTCP-8	TTCP DETOUR PLAN - ORIOLE ST. AT GANDY ST.
67	TTCP-9	TTCP DETOUR PLAN - ORIOLE ST. INTERSECTIONS
68	TTCP-10	TTCP FDOT INDEX 102-603
69	TTCP-11	TTCP FDOT INDEX 102-660

NO. SHEETS 69	PROJ. NO. 17-026-02		BEVERLY HILLS SEPTIC TANK PHASE OUT	
SHEET NO. 3	DATE: MAY 5, 2020		OFFSITE FORCE MAIN	
DRAWING NO. G-2	SCALE: AS NOTED		INDEX SHEET	
DESIGNER: D.W.H.		<div style="display: flex; justify-content: space-between;"> <div> DESIGN ENGINEER SCOTT A. WILD FLORIDA REGISTRATION NO. 47030 </div> <div> NO. BY DATE 6 5 4 3 2 1 </div> <div> REVISIONS </div> </div>		
DRAWN BY: J.E.S.				
DATE:				
CHECKED BY: S.A.W.				
DATE:				

SURVEY LEGEND

LEGEND:

BC	BACK OF CURVE
BFP	BACK FLOW PREVENTER
BGV	COMMUNICATIONS UNDERGROUND VAULT
BOL	BOLLARD
C&G	CONCRETE CURB AND GUTTER
CB	CHORD BEARING
CBS	CATCH BASIN
CH	CHORD DISTANCE
CI	CURB INLET
CLF	CHAIN LINK FENCE
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CPP	CORRUGATED PLASTIC PIPE
CUP	CONCRETE UTILITY POLE
DLP	DELINEATOR POST
DMH	DRAINAGE MANHOLE
ECMP	ELLIPTICAL CORRUGATED METAL PIPE
ELV	ELEVATION
EP	EDGE OF PAVEMENT
ERCP	ELLIPTICAL REINFORCED CONCRETE PIPE
EW	CONCRETE ENDWALL
EWB	ELECTRIC WIRE PULL BOX
FH	FIRE HYDRANT
FNC	FENCE
GLV	GALVANIZED

LEGEND (CONTINUED):

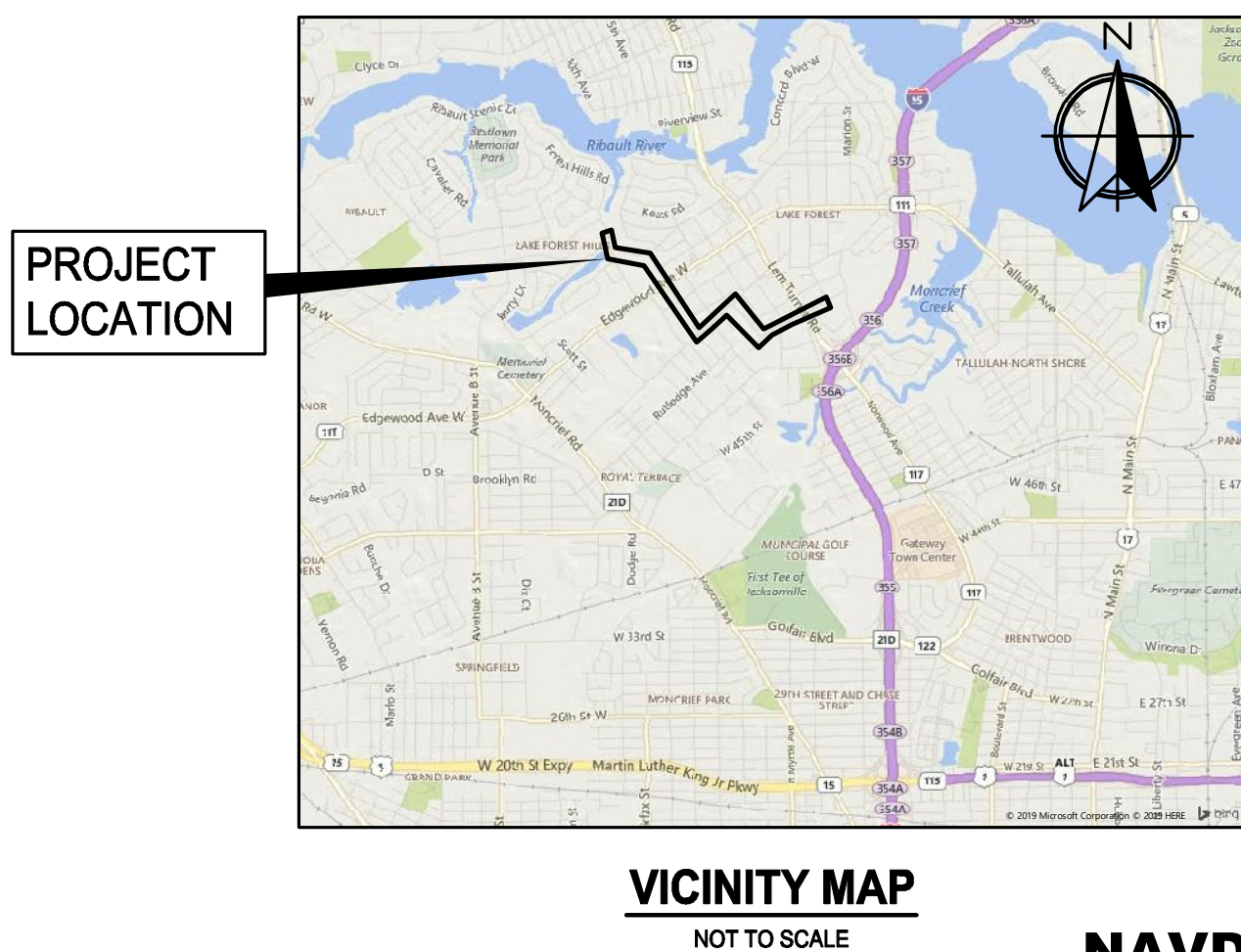
GYA	GUY ANCHOR
INV	INVERT
IP	IRON PIPE
IRC	IRON ROD AND CAP
L	ARC LENGTH
LT	LEFT
(M)	MEASURED
M.B.	MAP BOOK
MES	CONCRETE MITERED END SECTION
MH	MANHOLE
MUP	METAL UTILITY POLE
N&D	NAIL AND DISK
O.R.B.	OFFICIAL RECORDS BOOK
O.R.V.	OFFICIAL RECORDS VOLUME
P.B.	PLAT BOOK
PG.	PAGE
PVC	POLYVINYL CHLORIDE PIPE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RP	REFLECTOR POST
RT	RIGHT
R/W	RIGHT OF WAY
SMH	SANITARY MANHOLE
SPWY	CONCRETE SPILLWAY
STA.	STATION

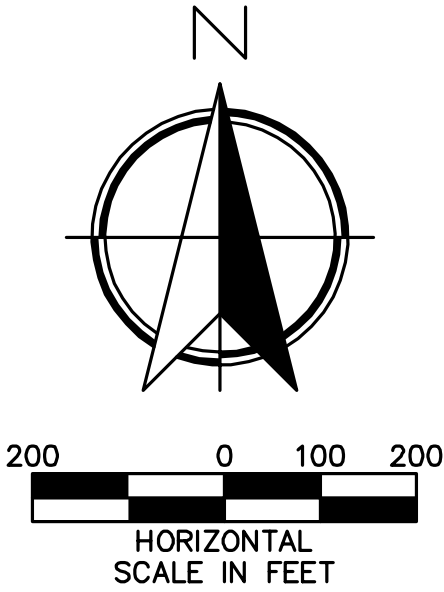
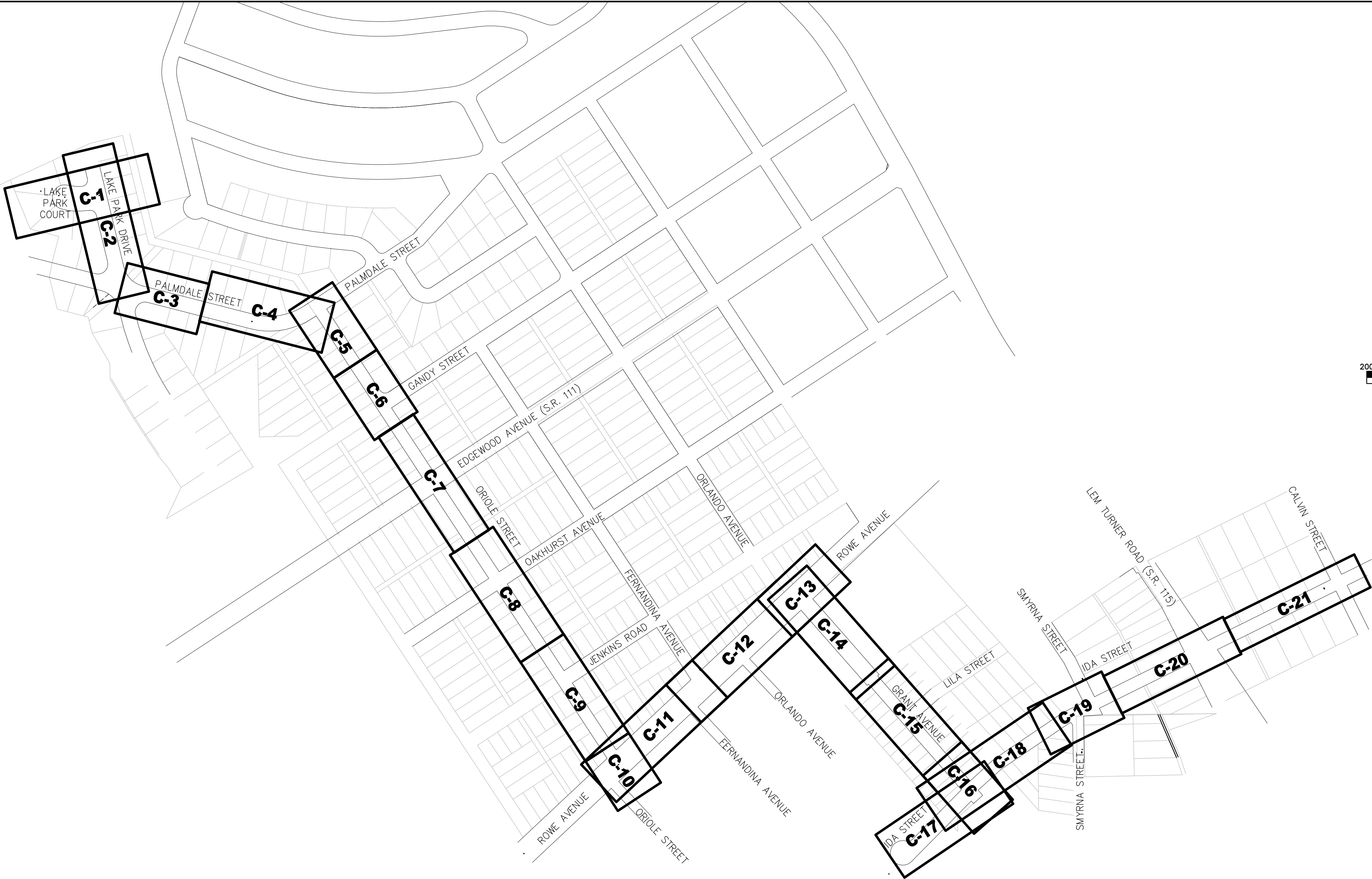
LEGEND (CONTINUED):

TER	TELECOMMUNICATIONS RISER
TH	TEST HOLE
TMH	TELECOMMUNICATIONS MANHOLE
TOB	TOP OF BANK
TPD	TELEPHONE PEDESTAL
TSC	TELECOMMUNICATIONS SERVICE CABINET
UNK	UNKNOWN
WLP	WOOD LIGHT POLE
WM	WATER METER
WPF	WOOD PRIVACY FENCE
WUP	WOOD UTILITY POLE
WV	WATER VALVE
—UGT—	UNDERGROUND TELECOMMUNICATION LINE
—UGG—	UNDERGROUND GAS LINE
—UFO—	UNDERGROUND FIBER OPTIC LINE
—OH—	OVERHEAD UTILITIES
—UGW—	UNDERGROUND WATER LINE
—S—	UNDERGROUND SANITARY SEWER LINE (GRAVITY)
—FM—	UNDERGROUND SANITARY SEWER LINE (FORCE MAIN)
Δ	CENTRAL ANGLE
⊕	BENCHMARK
⊗	TEST HOLE LOCATION
⑧	BLOCK NUMBER
⊙	SIGN

TREE LEGEND:

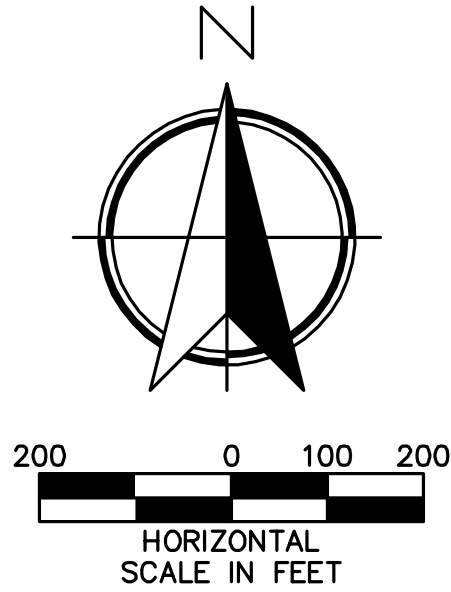
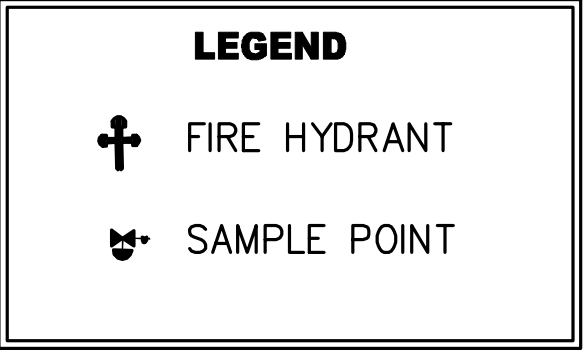
CAM	CAMPHOR
CED	CEDAR
HOL	HOLLY
MAG	MAGNOLIA
ORMTL	ORNAMENTAL CLUSTER
CPM	CRAPE MYRTLE CLUSTER

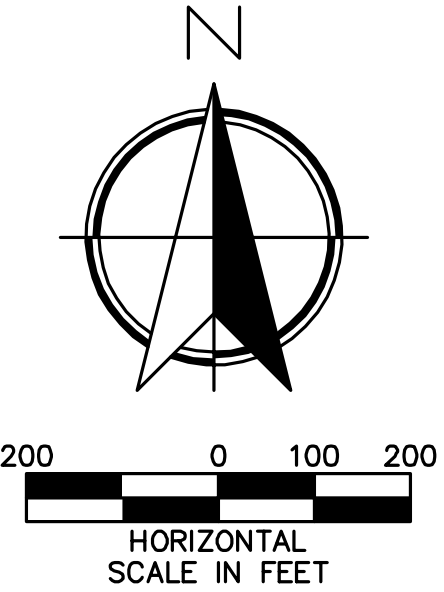
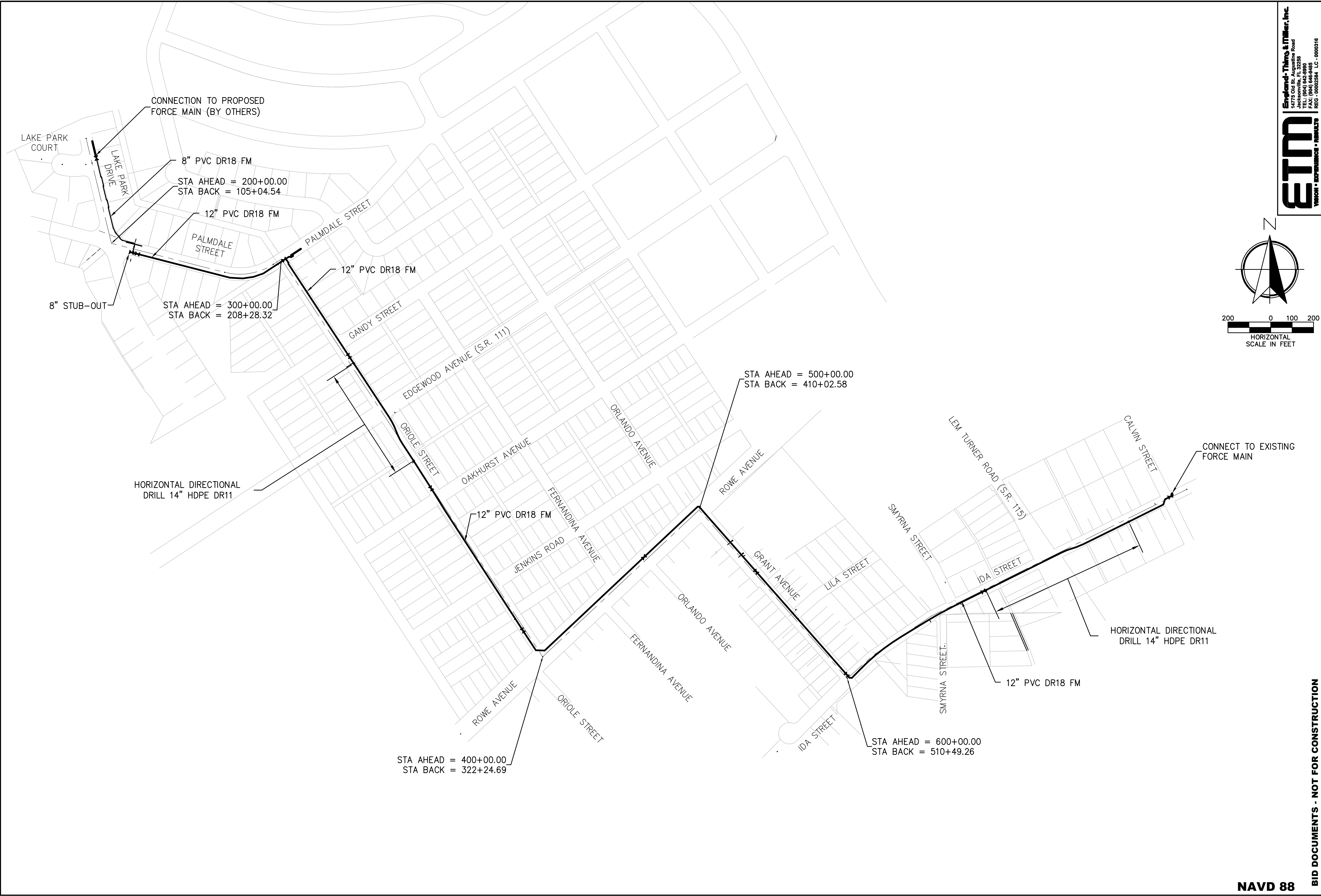




NAVD 88

BID DOCUMENTS - NOT FOR CONSTRUCTION				BEVERLY HILLS SEPTIC TANK PHASE OUT OFFSITE FORCE MAIN KEY PLAN		JEA Building Community sm		ETM Engineering, Planning & Management, Inc. 14775 Old St. Augustine Road Jacksonville, FL 32218 TEL: (904) 642-8890 FAX: (904) 642-4460 REG. # 0000259 LC - 0000316				
NO. SHEETS	PROJ. NO.	17-026-02	DESIGN ENGINEER		SCOTT A. WILD	DESIGNER:	D.W.H.	NO.	BY	DATE	REVISIONS	
89	DATE:	MAY 5, 2020	DRAWN BY:			DATE:	J.E.S.	6				
SHEET NO.	SCALE:	AS NOTED	CHECKED BY:			DATE:	S.A.W.	4				
4			DATE:					3				
DRAWING NO.								2				
G-3								1				





ETM
Engineering & Technology
14775 Old St. Augustine Road
Jacksonville, FL 32218
TEL: (904) 642-8980
FAX: (904) 642-4949
REG. 0005294 LC - 0000316

NO.	BY	DATE	REVISIONS
6			
4			
3			
2			
1			

JEA
Building Communitysm

DESIGNER:		D.W.H.	DESIGN ENGINEER
DRAWN BY:		J.E.S.	SCOTT A. WILD
DATE:			FLORIDA REGISTRATION NO.
CHECKED BY:		S.A.W.	47030
DATE:			

BID DOCUMENTS - NOT FOR CONSTRUCTION

BEVERLY HILLS SEPTIC TANK PHASE OUT
OFFSITE FORCE MAIN
OVERALL FORCE MAIN SHEET

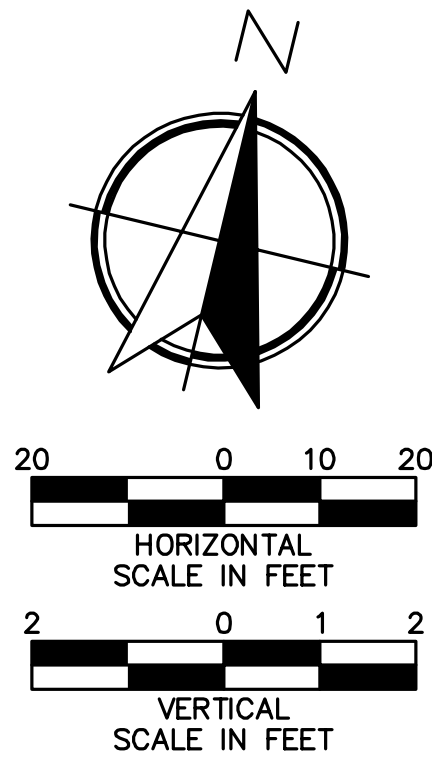
NO. SHEETS	PROJ. NO.	17-026-02
69	DATE:	MAY 5, 2020
SHEET NO. 6	SCALE:	AS NOTED
DRAWING NO. G-5		

UTILITY CROSSING SYNOPSIS BEVERLY HILLS OFFSITE FORCE MAIN G:\17-026\17-026-02\LandDev\DesignData\17-026-02 PIPE CROSSING DATA TABLE.xlsx 4/22/2020							W - POTABLE WATER RW - REUSE WATER FM - FORCE MAIN SD - STORM DRAIN SS - SANITARY SEWER FG - FINISH GRADE				
Plan DWG Number	Crossing No.	Road	Station	Top Pipe /Bottom Pipe	FG Elev at Crossing	Top EL Top pipe	Top Pipe Size-Type	Bott EL Top pipe	Top EL Bottom Pipe	Bott pipe Size-Type	Clearance Btwn Pipes
C-2	1	LAKE PARK DR.	100+85	W/SS	6.95	3.95	8" PVC	3.19	1.97	8" PVC	1.22
C-2	2	LAKE PARK DR.	104+80.28	SD/W	5.27	3.69	36" X 58" ECMP	0.19	-0.81	8" PVC	1.00
C-3	3	LAKE PARK DR.	104+75.19	SD/FM	4.72	3.53	36" X 58" ECMP	0.03	-0.97	8" PVC	1.00
C-3	4	PALMDALE ST.	201+07	W/FM	5.88	2.74	8" PVC	1.99	0.99	8" PVC	1.00
C-3	5	PALMDALE ST.	201+07	FM/SS	6.11	2.28	8" PVC	1.52	-1.02	8" PVC	2.54
C-5	6	PALMDALE ST.	207+77.72	FM/SS	9.63	6.05	12" PVC	4.95	3.95	8" PVC	1.00
C-5	7	PALMDALE ST.	208+15.87	SD/FM	10.03	8.94	34" X 53" ERCP	5.27	3.47	12" PVC	1.80
C-5	8	ORIOLE ST.	300+23.23	SD/FM	10.46	6.67	15" RCP	6.29	3.47	12" PVC	2.82
C-5	9	ORIOLE ST.	300+25.98	SS/FM	10.07	4.68	8" PVC	4.59	3.59	12" PVC	1.00
C-6	10	ORIOLE ST.	303+41.52	FM/FM	19.13	15.29	4" PVC	14.89	12.60	12" PVC	2.29
C-6	11	ORIOLE ST.	304+58.19	SD/FM	21.26	16.53	24" X 38" RCP	13.91	12.91	12" PVC	1.00
C-6	12	ORIOLE ST.	305+74.87	SD/FM	23.94	21.56	18" RCP	19.20	18.20	12" PVC	1.00
C-7	13	ORIOLE ST.	308+16.36	SS/FM	31.56	21.68	24" RCP	18.66	12.20	14" HDPE	6.46
C-7	14	ORIOLE ST.	308+83.07	W/FM	31.99	28.99	8" PVC	28.23	12.20	14" HDPE	16.00
C-7	15	ORIOLE ST.	309+23.65	FM/FM	32.29	28.91	4" PVC	28.51	12.46	14" HDPE	16.05
C-8	16	ORIOLE ST.	313+09.34	SD/FM	29.73	28.25	15" RCP	26.62	24.21	12" PVC	2.41
C-8	17	ORIOLE ST.	313+19.08	FM/FM	29.92	26.08	4" PVC	25.68	24.21	12" PVC	1.47
C-8	18	ORIOLE ST.	313+52.93	SD/W	29.84	28.53	19" X 30" ERCP	26.41	24.21	12" PVC	2.20
C-9	19	ORIOLE ST.	318+25	SD/W	30.05	28.98	15" RCP	27.35	26.35	8" PVC	1.00
C-10	20	ORIOLE ST.	321+75.50	W/FM	30.11	27.11	8" PVC	26.35	25.11	12" PVC	1.24
C-10	21	ORIOLE ST.	321+79.35	W/FM	30.10	27.10	2" GSP	26.89	25.11	12" PVC	1.78
C-12	22	ROWE AVE.	404+74.87	W/FM	31.07	28.07	8" PVC	27.31	25.71	12" PVC	1.60
C-12	23	ROWE AVE.	404+80	W/FM	31.10	29.06	2" GSP	28.85	25.71	12" PVC	3.14
C-14	24	GRANT AVE.	500+17.66	W/FM	26.20	23.99	2" GSP	23.78	20.83	12" PVC	2.95
C-14	25	GRANT AVE.	500+25.30	SD/FM	26.12	25.78	15" CMP	24.15	20.83	12" PVC	3.32
C-14	26	GRANT AVE.	500+33.69	W/FM	26.08	23.08	8" PVC	22.32	20.83	12" PVC	1.49
C-15	27	GRANT AVE.	506+48.59	SD/W	23.30	22.41	12" RCP	21.07	20.00	8" PVC	1.07
C-15	28	GRANT AVE.	506+48.60	W/FM	23.68	20.00	8" PVC	19.24	18.07	12" PVC	1.17
C-15	29	GRANT AVE.	506+51	W/FM	23.66	21.96	2" GSP	21.75	18.07	12" PVC	3.68
C-16	30	GRANT AVE.	510+31.39	SD/W	22.44	21.07	15" CMP	19.82	18.45	8" PVC	1.37
C-16	31	GRANT AVE.	510+30.78	SD/FM	22.16	20.77	15" CMP	19.52	16.42	12" PVC	3.10
C-16	32	GRANT AVE.	600+10	W/FM	22.36	18.31	8" PVC	17.55	16.42	12" PVC	1.13
C-18	33	IDA ST.	601+74.31	SD/W	20.83	19.26	15" CMP	18.01	16.28	8" PVC	1.73
C-18	34	IDA ST.	601+79.27	SD/FM	20.45	19.21	15" CMP	17.96	16.45	12" PVC	1.51
C-19	35	IDA ST.	605+48.26	W/FM	21.94	18.94	8" PVC	18.18	16.79	12" PVC	1.39
C-19	36	IDA ST.	606+24.09	SD/W	22.24	18.75	15" RCP	17.12	15.96	8" PVC	1.16
C-19	37	IDA ST.	606+25.19	SD/W	21.11	19.04	15" RCP	17.41	15.55	8" PVC	1.86
C-19	38	IDA ST.	608+44.30	SD/FM	21.24	19.01	15" RCP	17.38	15.72	12" PVC	1.66
C-20	39	IDA ST.	608+44.30	SD/FM	17.33	14.88	15" RCP	13.25	12.14	8" PVC	1.11
C-20	40	IDA ST.	610+81.53	W/FM	17.33	14.78	15" RCP	13.15	9.46	14" HDPE	3.69
C-20	41	IDA ST.	611+87.60	W/FM	18.58	15.60	16" CI	14.27	-1.42	14" HDPE	15.69
C-20	42	IDA ST.	612+27.64	FM/FM	18.98	15.98	8" PVC	15.22	-1.28	14" HDPE	16.50
C-20	43	IDA ST.	617+02.90	SS/FM	19.44	16.92	15" RCP	15.29	-0.52	14" HDPE	15.81
C-21	44	IDA ST.	617+03	W/FM	26.93	23.02	6" PVC	22.45	21.40	12" PVC	1.05
C-21	45	IDA ST.	617+05	FM/SS	26.89	21.40	12" PVC	20.30	13.46	8" PVC	6.84
C-21	46	IDA ST.	617+24	FM/SS	27.25	23.93	12" PVC	22.83	13.25	8" PVC	9.58
C-19	47	IDA ST.	606+13	SD/W	21.26	19.01	15" RCP	17.38	15.55	8" PVC	1.83
									</		



NOTE: QUANTITIES FOR REMOVAL &
REPLACEMENT OF EXISTING PAVING &
DRAINAGE ITEMS ARE SHOWN ON
SHEETS 30 THRU 33 - DEMOLITION
PLANS

**PI. STA. 101+18.18 LAKE PARK DRIVE
= STA. 11+41.08 LAKE PARK COURT**



ETM
VISION • EXPERIENCE • RESULTS

DESIGNER:	D.W.H.	DESIGN ENGINEER
DRAWN BY:	J.E.S.	
DATE:		
CHECKED BY:	S.A.W.	
DATE:		SCOTT A. WILD
		FLORIDA REGISTRATION NO.
		47030

G:\17-026\17-026-02\LandDev\Design\Plots\17-026-02 PLAN AND PROFILE SHEETS.dwg PLOTTED: Apr. 29, 20 - 4:19 PM, BY: John Savage

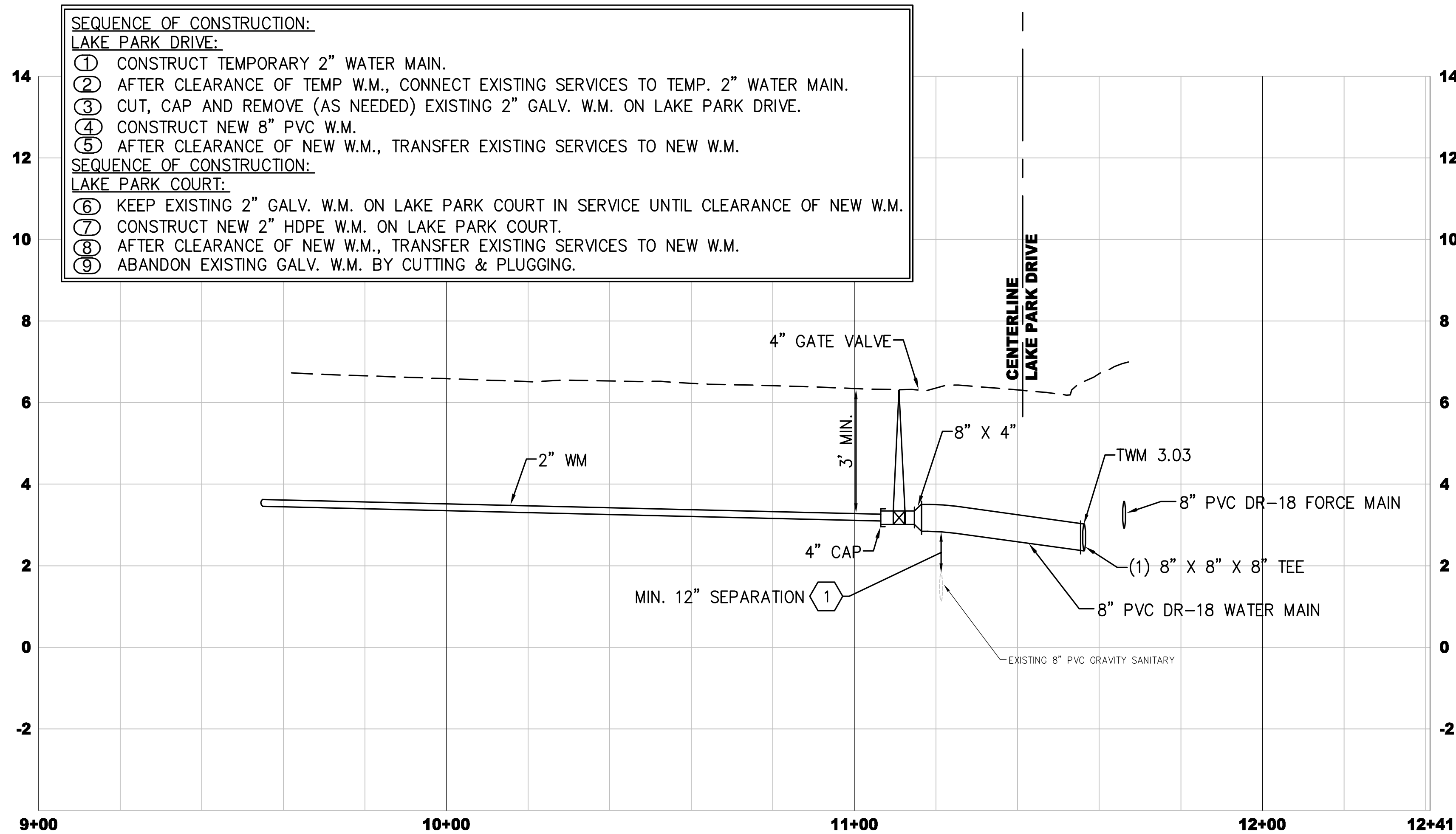


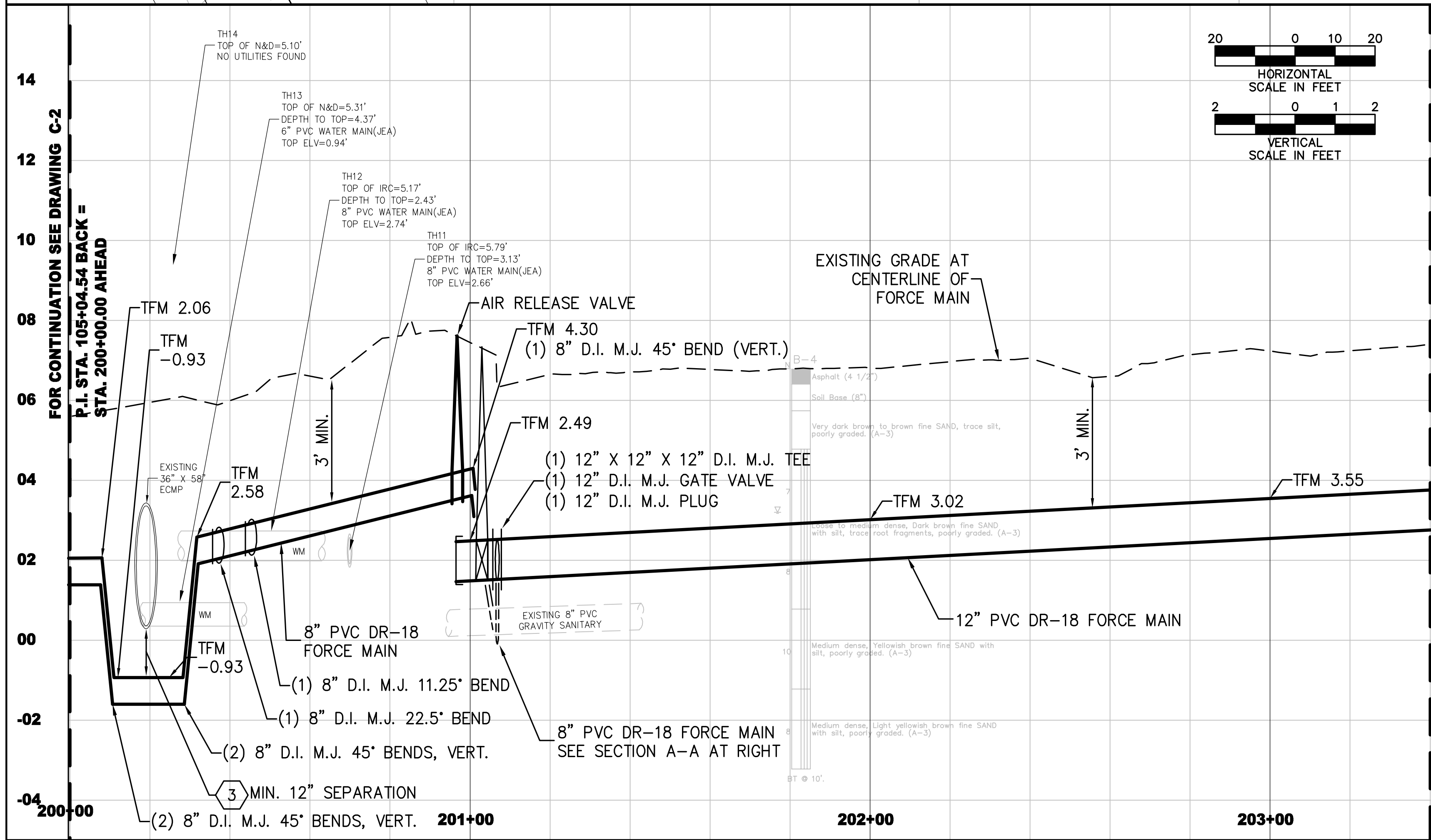
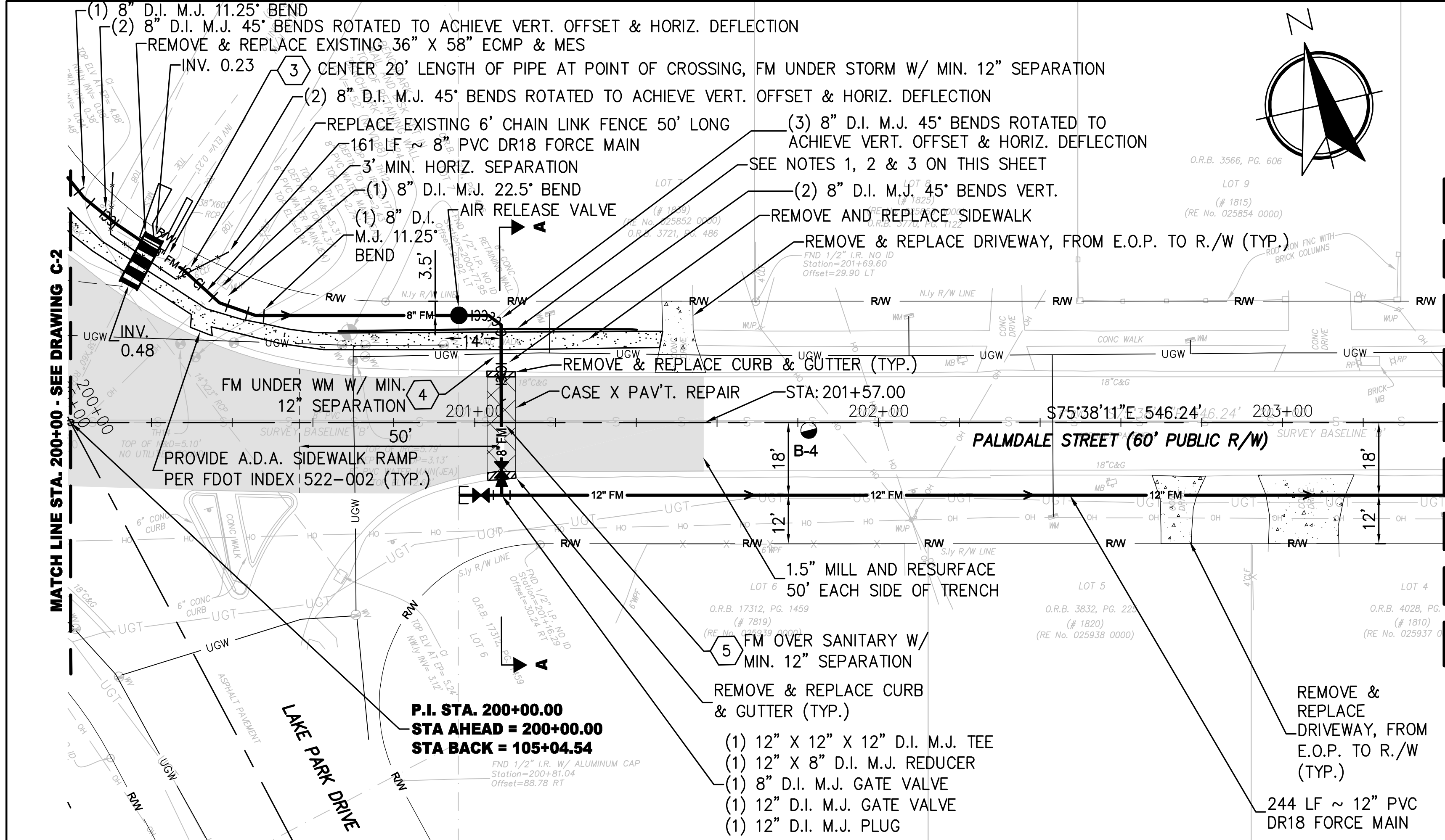
INSTRUCTION
BEVERLY HILLS SEPTIC TANK PHASE OUT
OFFSITE FORCE MAIN
LAKE PARK COURT - PLAN AND PROFILE

NO. SHEETS 69	PROJ. NO. 17-026-02
SHEET NO.	DATE: MAY 5, 2020
DRAWING NO. C-1	SCALE: AS NOTED

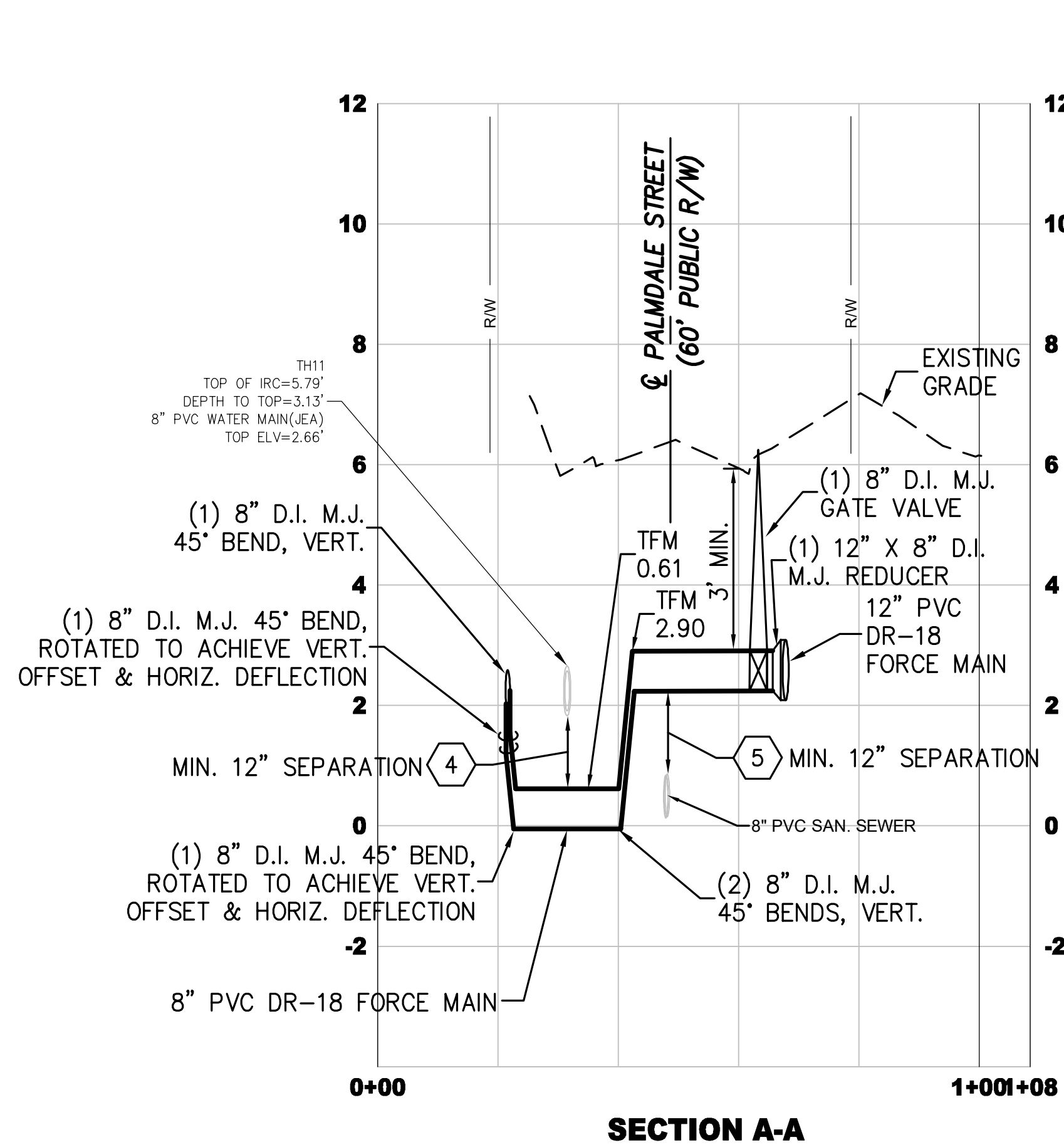
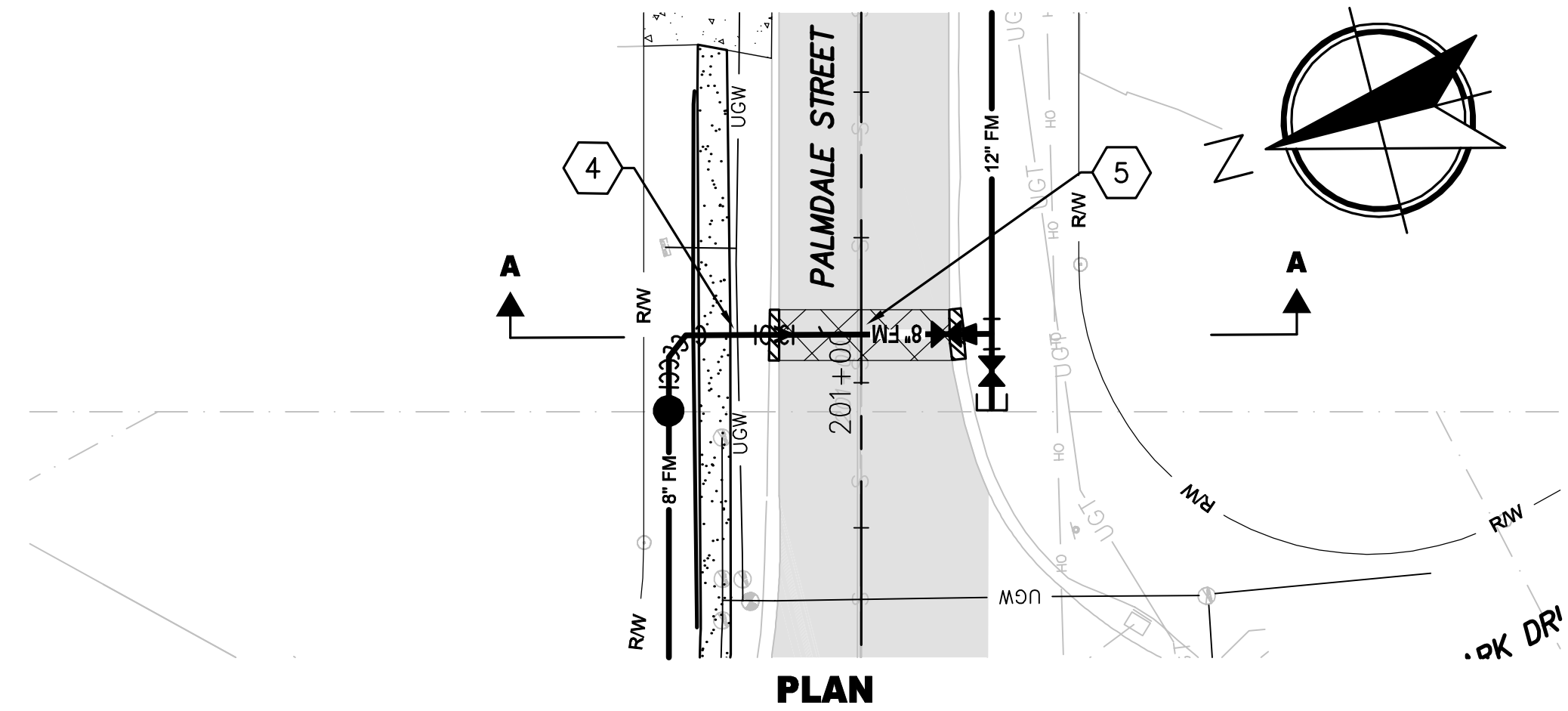
BID DOCUMENTS - NOT FOR CONSTRUCTION

NAVD 88





- NOTES:
1. REMOVE & REPLACE 74 LF EXISTING 6" CONCRETE RETAINING WALL. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR PROPOSED WALL DESIGN SIGNED AND SEALED BY A STRUCTURAL ENGINEER LICENSED IN FLORIDA FOR REVIEW & APPROVAL PRIOR TO CONSTRUCTION.
 2. PRIOR TO DEMOLITION, CONTRACTOR SHALL SET A NEW BENCHMARK IN ORDER TO PRESERVE EXISTING BENCHMARK (NAIL AND DISK SET IN TOP OF RETAINING WALL 'BENCHMARK' LB 3624 ELV=7.52') (NAVD88)
 3. SEE SECTION 3.32 OF THE TECHNICAL SPECIFICATIONS "REMOVE & REPLACE EXISTING RETAINING WALL"
 4. QUANTITIES FOR REMOVAL & REPLACEMENT OF EXISTING PAVING & DRAINAGE ITEMS ARE SHOWN ON SHEETS 30 THRU 33 - DEMOLITION PLANS



ETM
Engineering, Planning & Construction, Inc.
14775 Old St. Augustine Road
Jacksonville, FL 32218
TEL: (904) 644-9880
FAX: (904) 644-9881
REG. ENGINEER - FLORIDA
REG. NO. 0000316

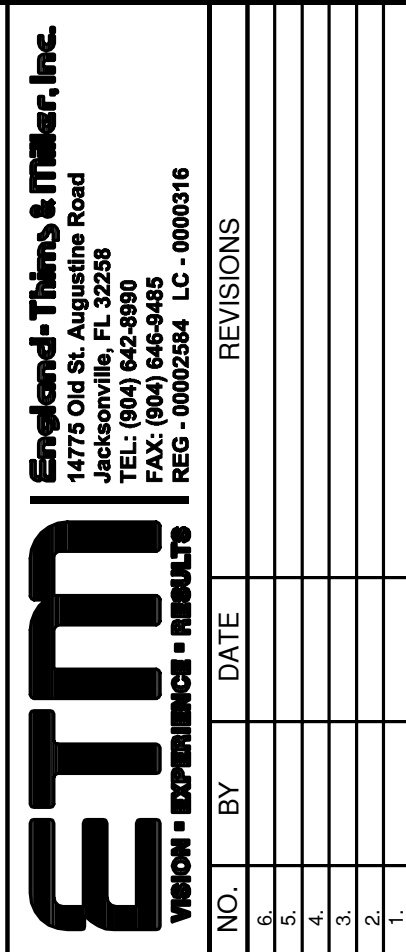
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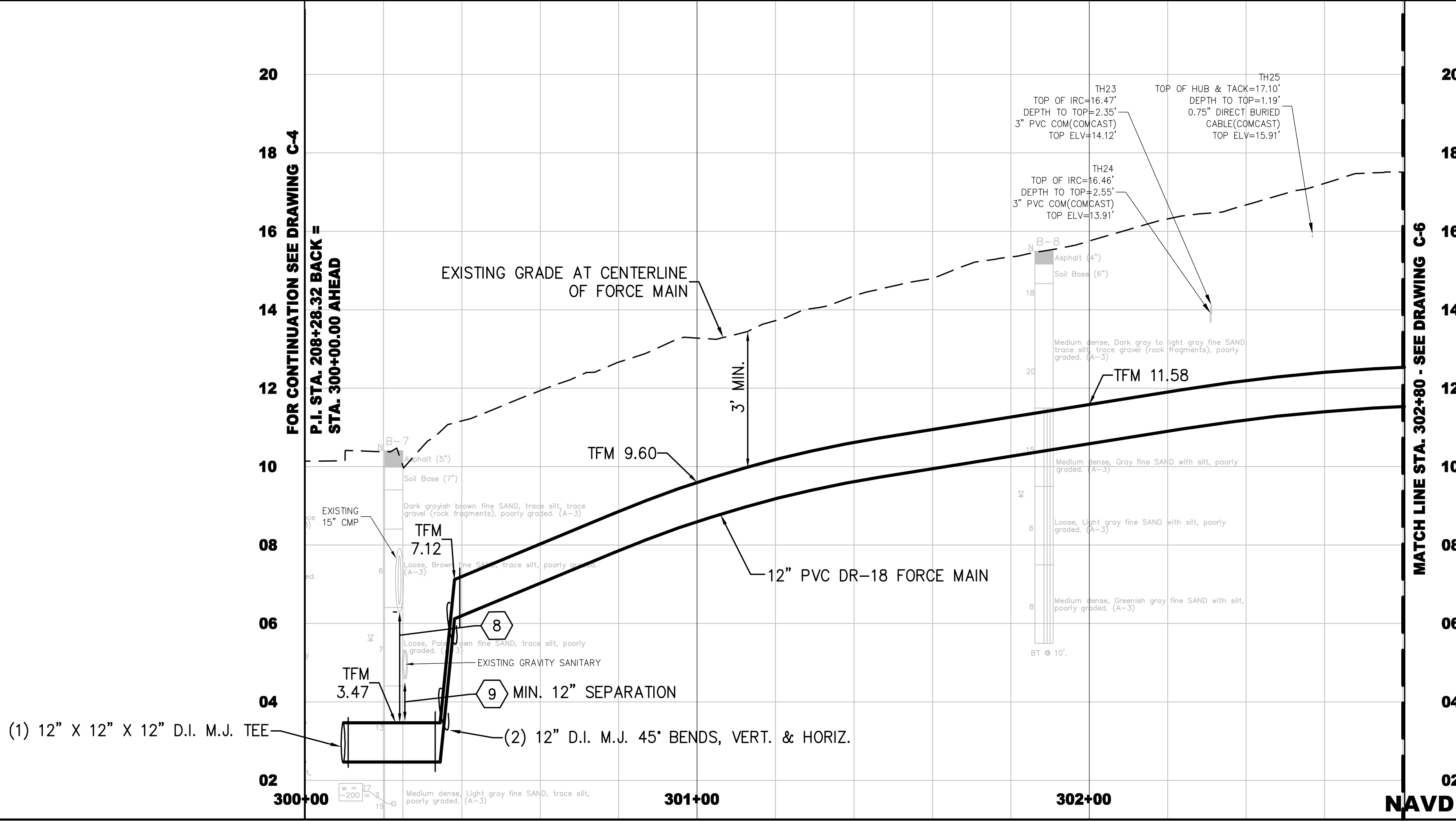
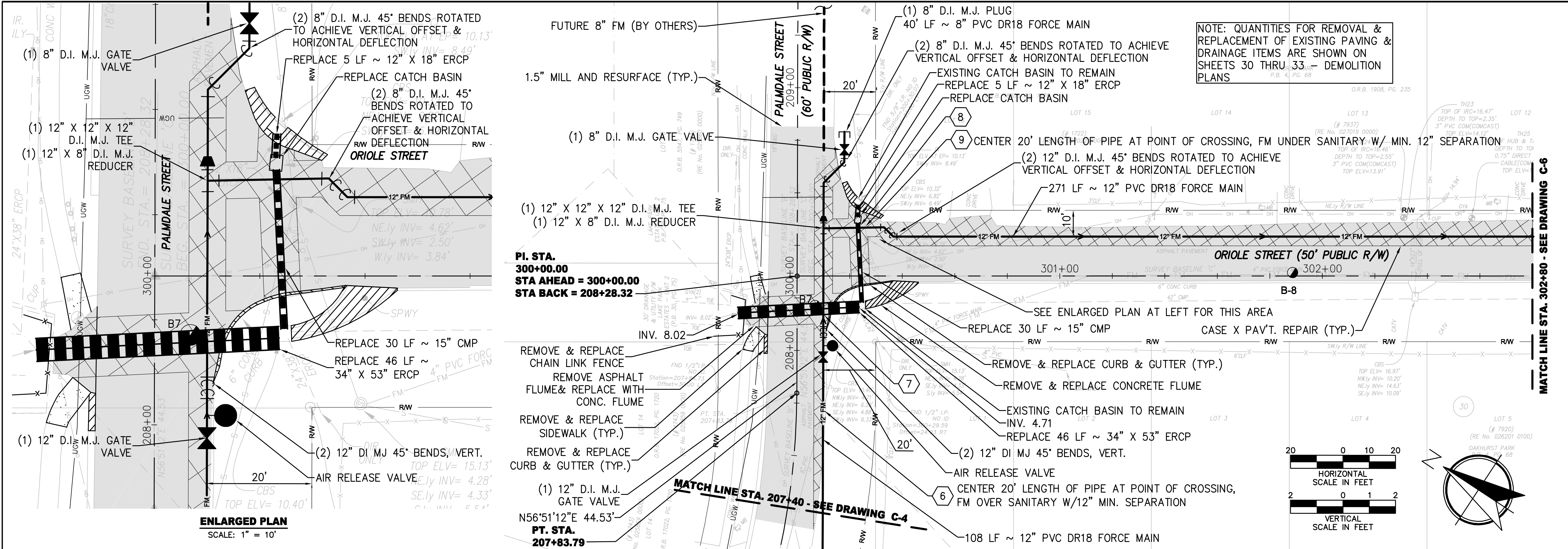
DESIGNER:	D.W.H.	DESIGN ENGINEER:	SCOTT A. WILD
DRAWN BY:	J.E.S.	DATE:	
CHECKED BY:	S.A.W.	FLORIDA REGISTRATION NO.:	47030
DATE:			

**BEVERLY HILLS SEPTIC TANK PHASE OUT
OFFSITE FORCE MAIN
PALMDALE STREET - PLAN AND PROFILE**

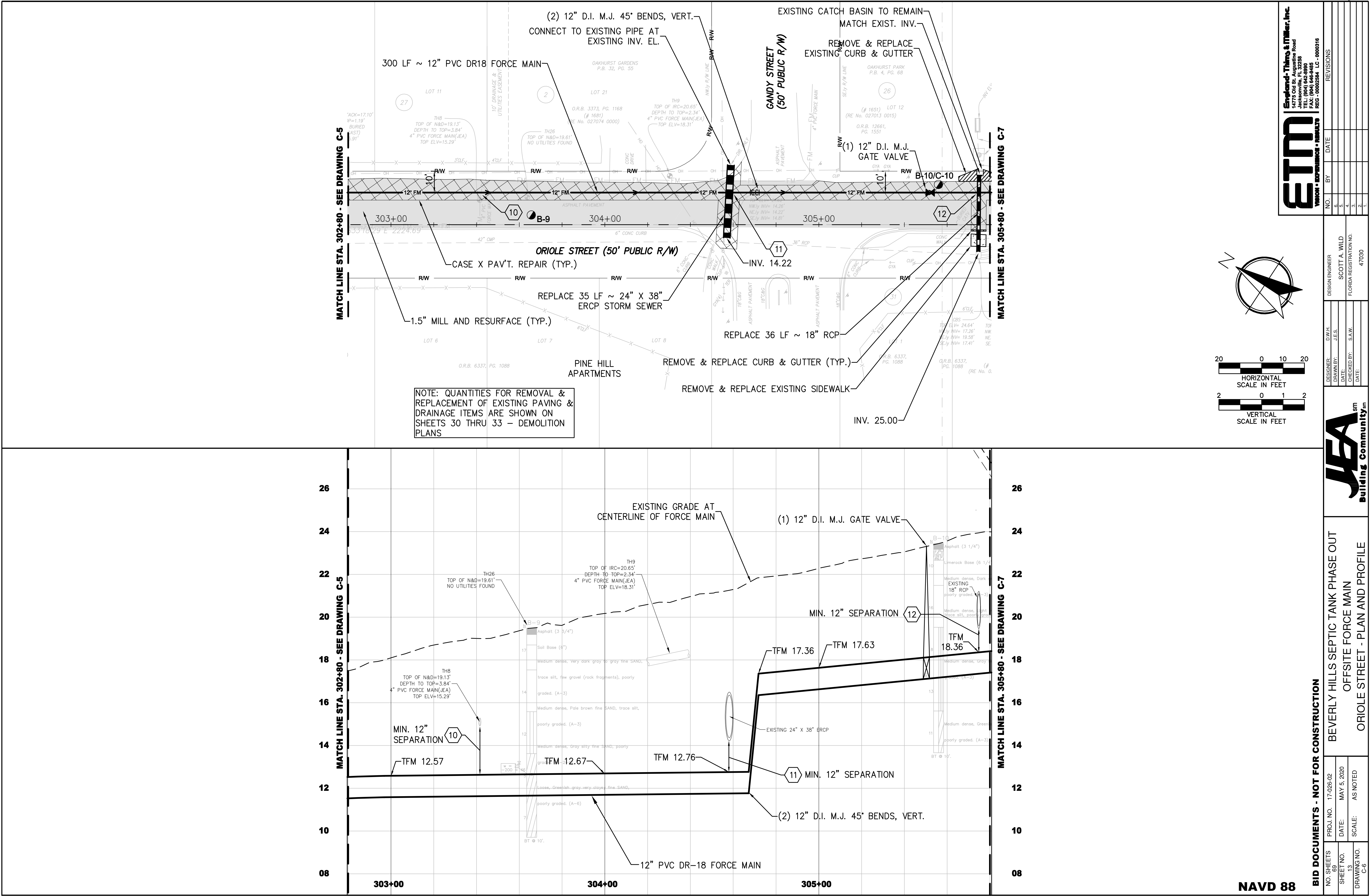
PROJ. NO. 17-026-02
DATE: MAY 5, 2020
SCALE: AS NOTED

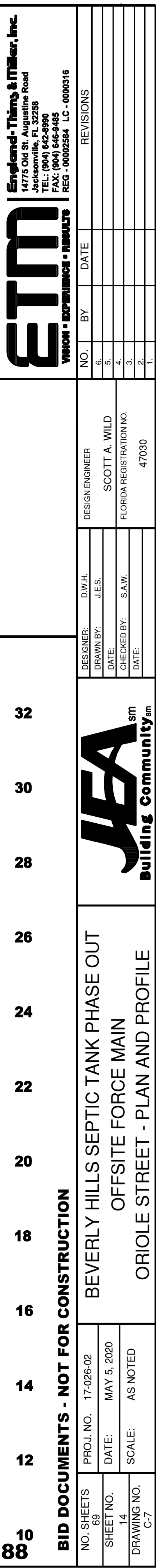
NO. SHEETS 69
SHEET NO. 10
DRAWING NO. C-3

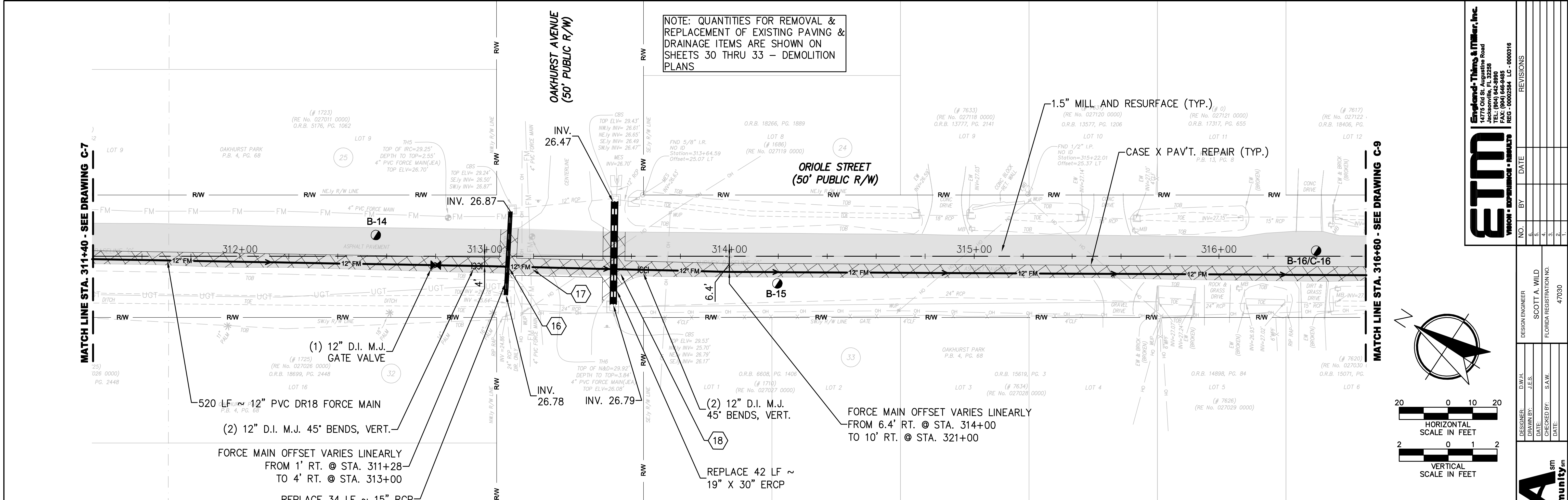


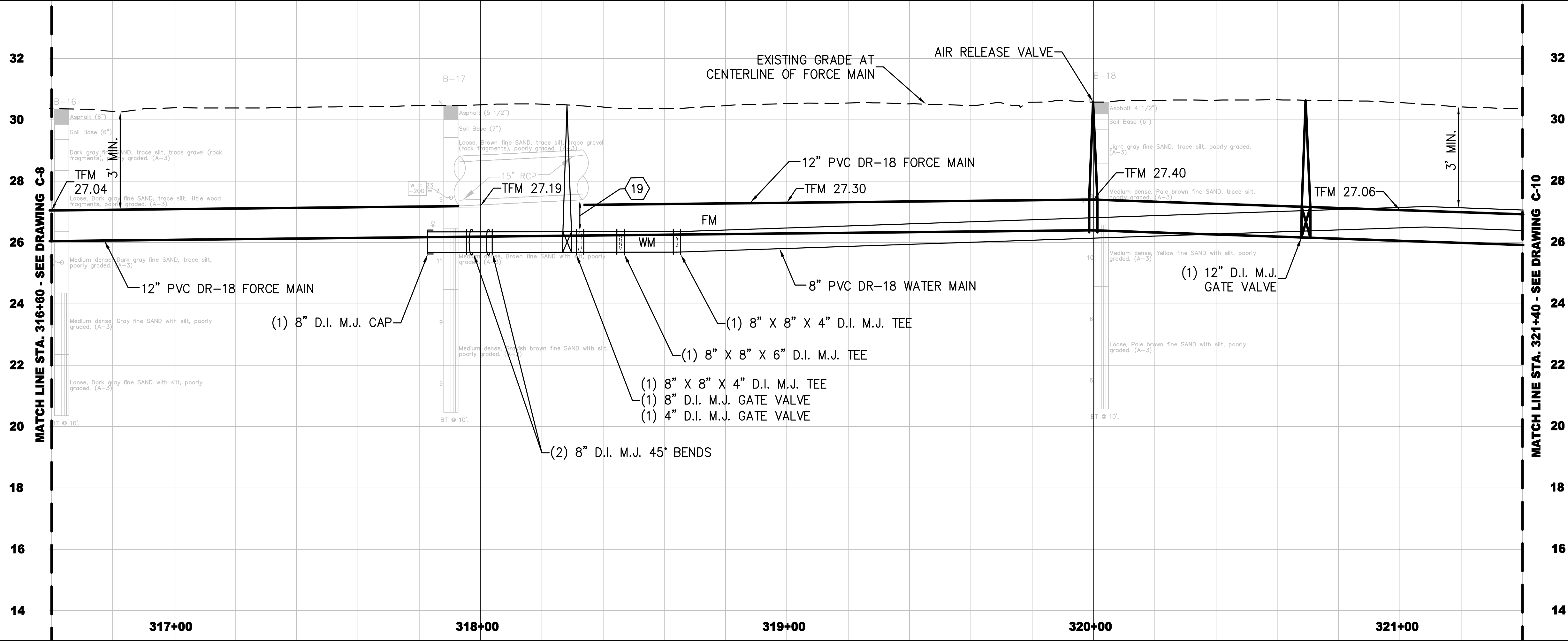
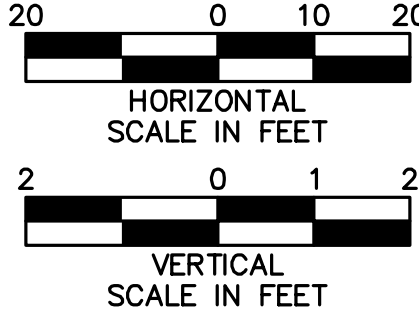
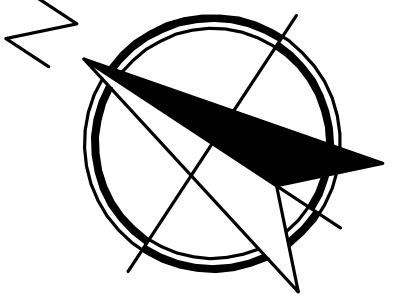
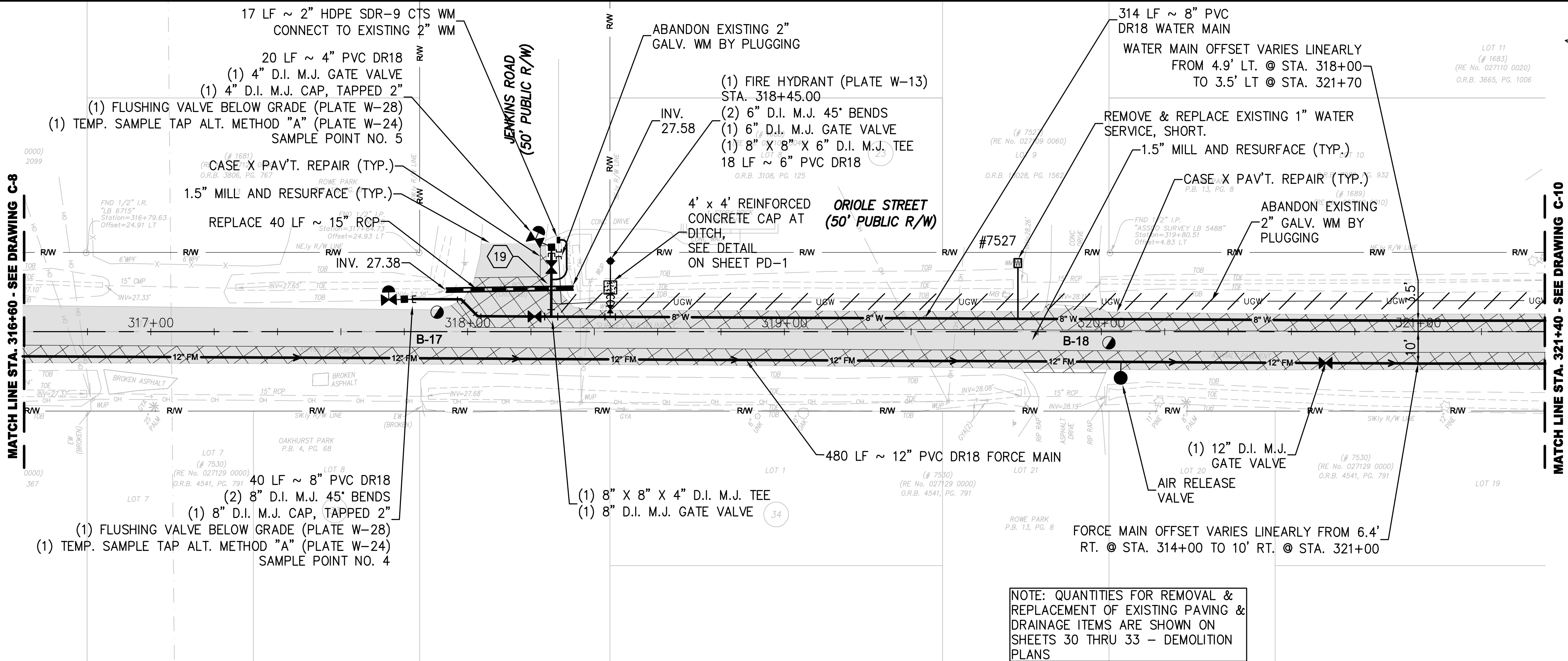


ETM Engineering, Planning & Construction, Inc. 14775 Old St. Augustine Road Jacksonville, FL 32218 TEL: (904) 644-9890 FAX: (904) 644-4444 REG. 0000259 LC - 0000316		REVISIONS	
		NO.	DATE
DESIGNER: D.W.H. DRAWN BY: J.E.S. DATE: MAY 5, 2020 CHECKED BY: S.A.W. DATE: AS NOTED	DESIGN ENGINEER	SCOTT A. WILD	
	FLORIDA REGISTRATION NO.	47030	
	BID DOCUMENTS - NOT FOR CONSTRUCTION		
	BEVERLY HILLS SEPTIC TANK PHASE OUT OFFSITE FORCE MAIN ORIOLE STREET - PLAN AND PROFILE		
NO. SHEETS 69	PROJ. NO. 17-026-02		
SHEET NO. 12	DATE: MAY 5, 2020		
DRAWING NO. C-5	SCALE: AS NOTED		









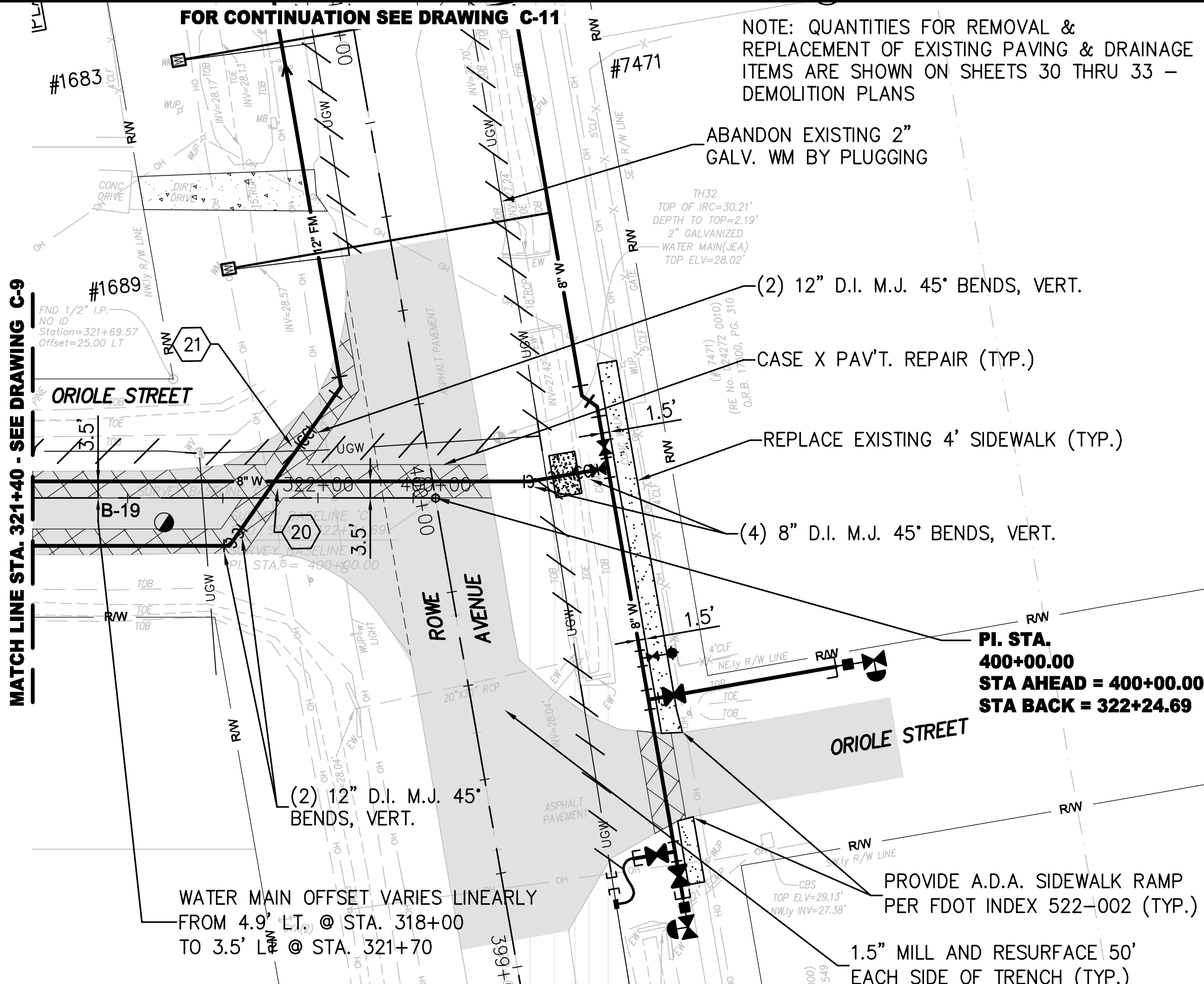
ETM
Engineering, Planning & Construction, Inc.
14775 Old St. Augustine Road
Jacksonville, FL 32258
TEL: (904) 644-9890
FAX: (904) 644-9891
REG. 0000294 LC 0000316

REVISIONS		DESIGN ENGINEER		DRAWING NO.	
NO.	BY	DATE	SCOTT A. WILD	47030	
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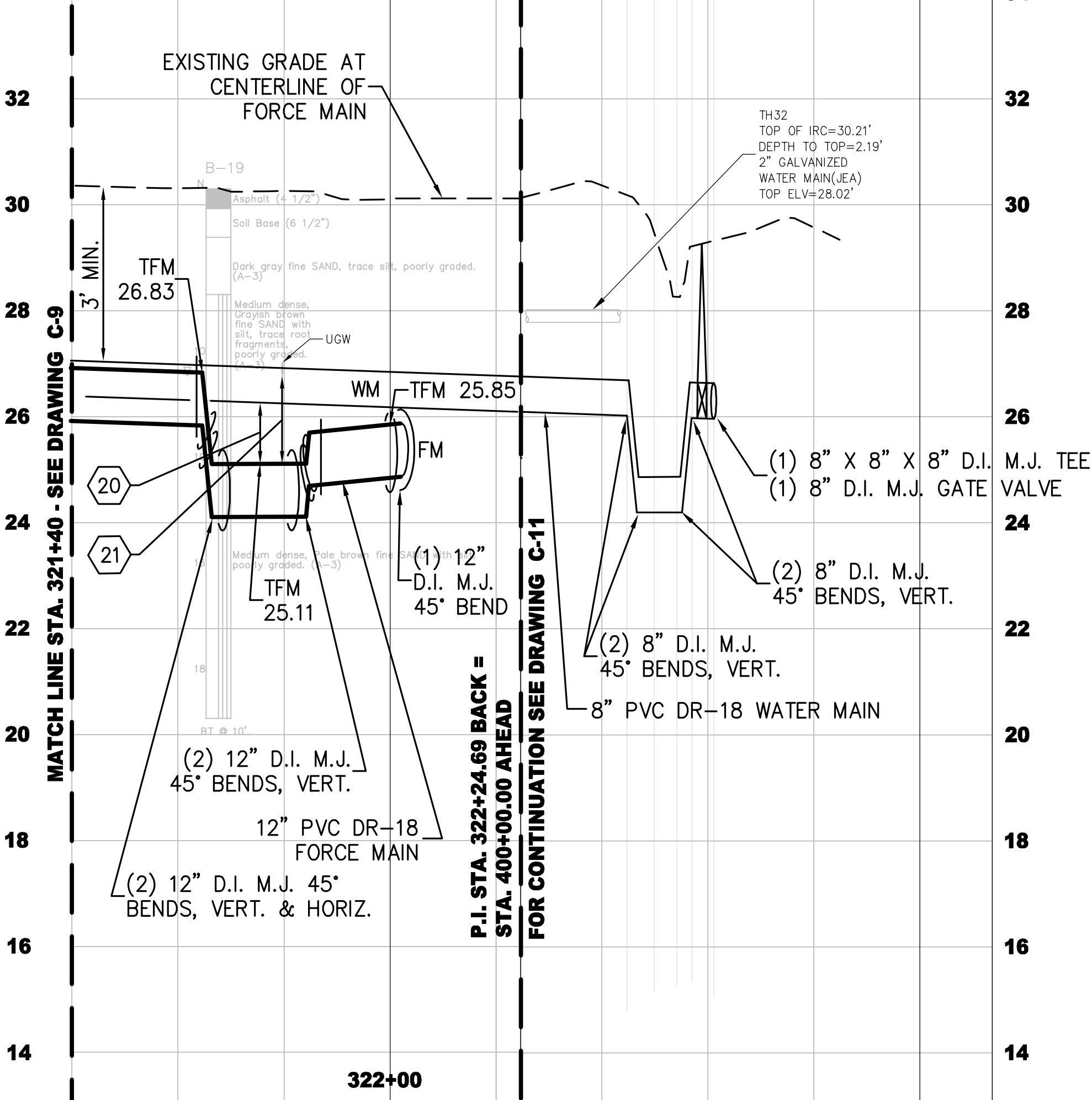
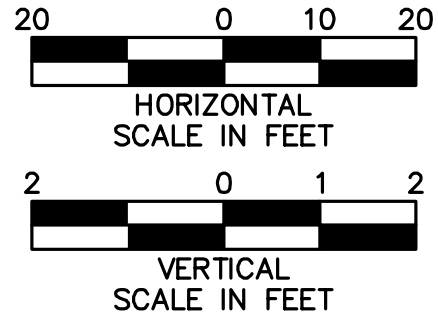
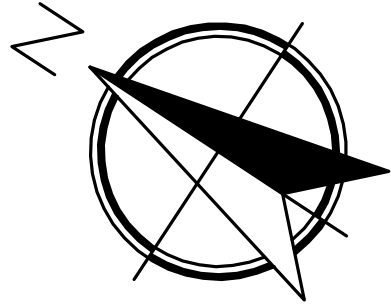
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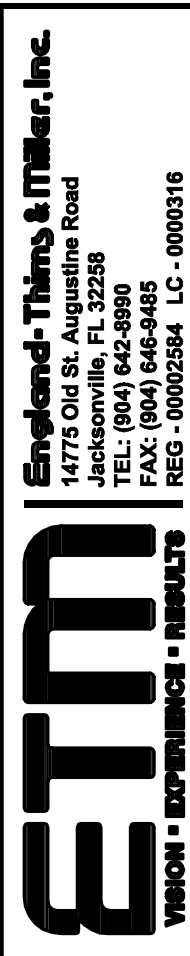
BEVERLY HILLS SEPTIC TANK PHASE OUT
OFFSITE FORCE MAIN
ORIOLE STREET - PLAN AND PROFILE


NO. SHEETS	PROJ. NO.	17-026-02
69	DATE:	MAY 5, 2020
SHEET NO.	SCALE:	AS NOTED
16		
DRAWING NO.		
C-9		

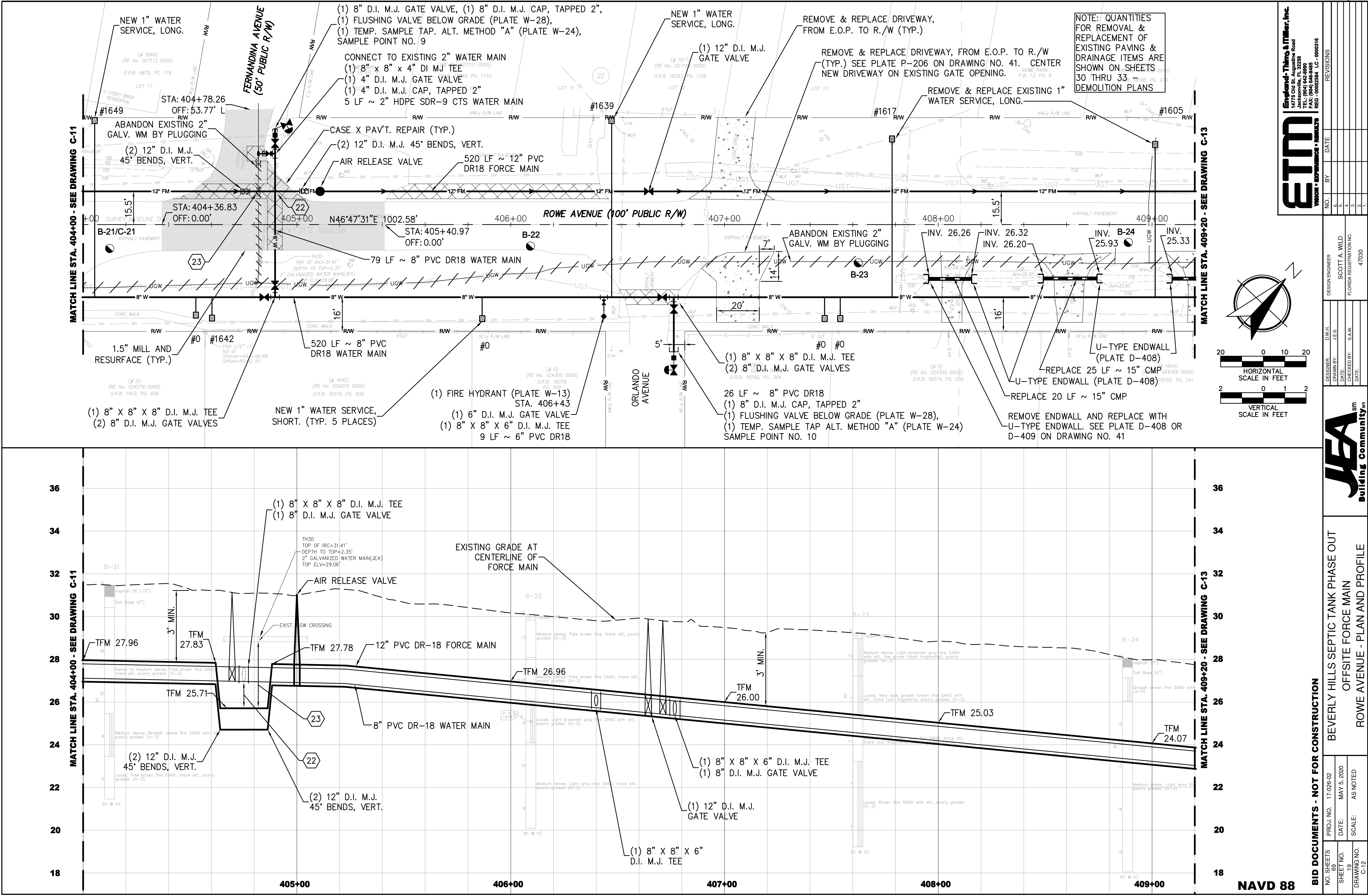


NOTE: THE ONLY PURPOSE OF THIS SHEET IS TO SHOW THE PROFILE INFORMATION ON ORIOLE STREET CROSSING ROWE AVENUE THAT DOES NOT APPEAR ON SHEET C-11. THEREFORE THE IMPROVEMENTS SHOWN ON THIS SHEET ARE LABELED AND QUANTIFIED ON SHEET C-11, AND INCLUDED IN THE QUANTITY TABULATIONS FOR THAT SHEET.





NO. SHEETS 69	PROJ. NO.	17-025-02		DESIGNER: D.W.H. DRAWN BY: J.E.S. DATE: _____ CHECKED BY: S.A.W. DATE: _____ DATE: _____	DESIGN ENGINEER SCOTT A. WILD FLORIDA REGISTRATION NO. 47030	NO.	BY	DATE	REVISIONS
	SHEET NO.	DATE: MAY 5, 2020							
	18	SCALE: AS NOTED							
	DRAWING NO. C-11								
BEVERLY HILLS SEPTIC TANK PHASE OUT OFFSITE FORCE MAIN ROWE AVENUE - PLAN AND PROFILE									



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NO. SHEETS	PROJ. NO.	DATE:	SCALE:
69	17-026-02	MAY 5, 2020	AS NOTED
SHEET NO.	DRAWING NO.		
19	C-12		

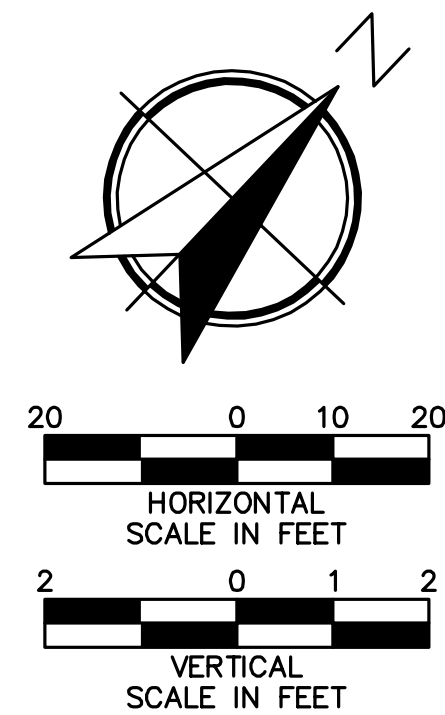
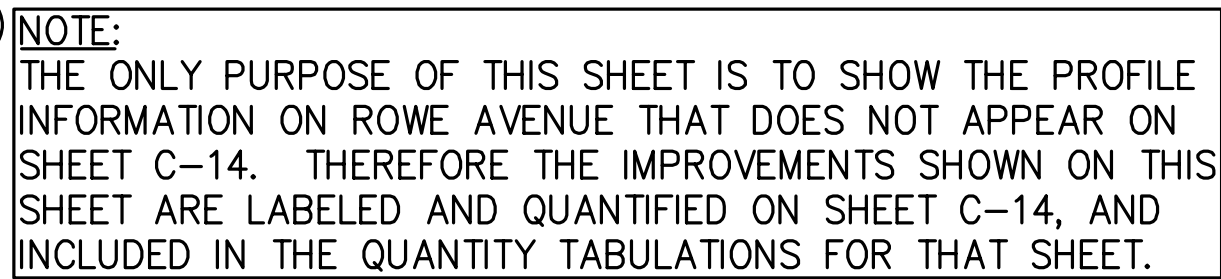
BEVERLY HILLS SEPTIC TANK PHASE OUT
OFFSITE FORCE MAIN
ROWE AVENUE - PLAN AND PROFILE



DESIGNER:	D.W.H.	DESIGN ENGINEER:	SCOTT A. WILD
DRAWN BY:	J.E.S.	DATE:	
CHECKED BY:	S.A.W.	FLORIDA REGISTRATION NO.:	47030
DATE:			

NO.	BY	DATE	REVISIONS
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REG. 0000294 LC 0000316



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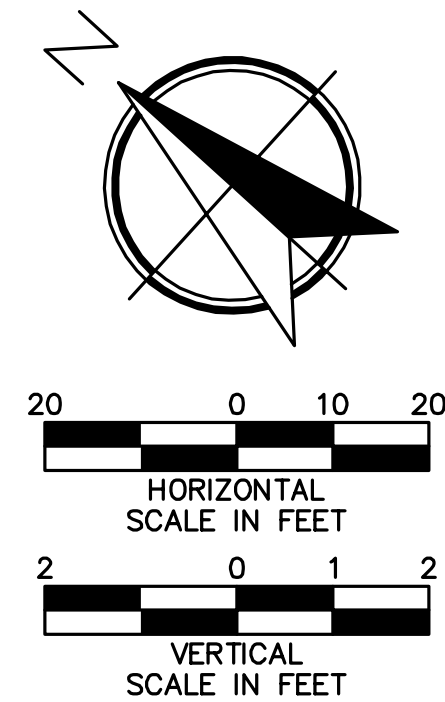
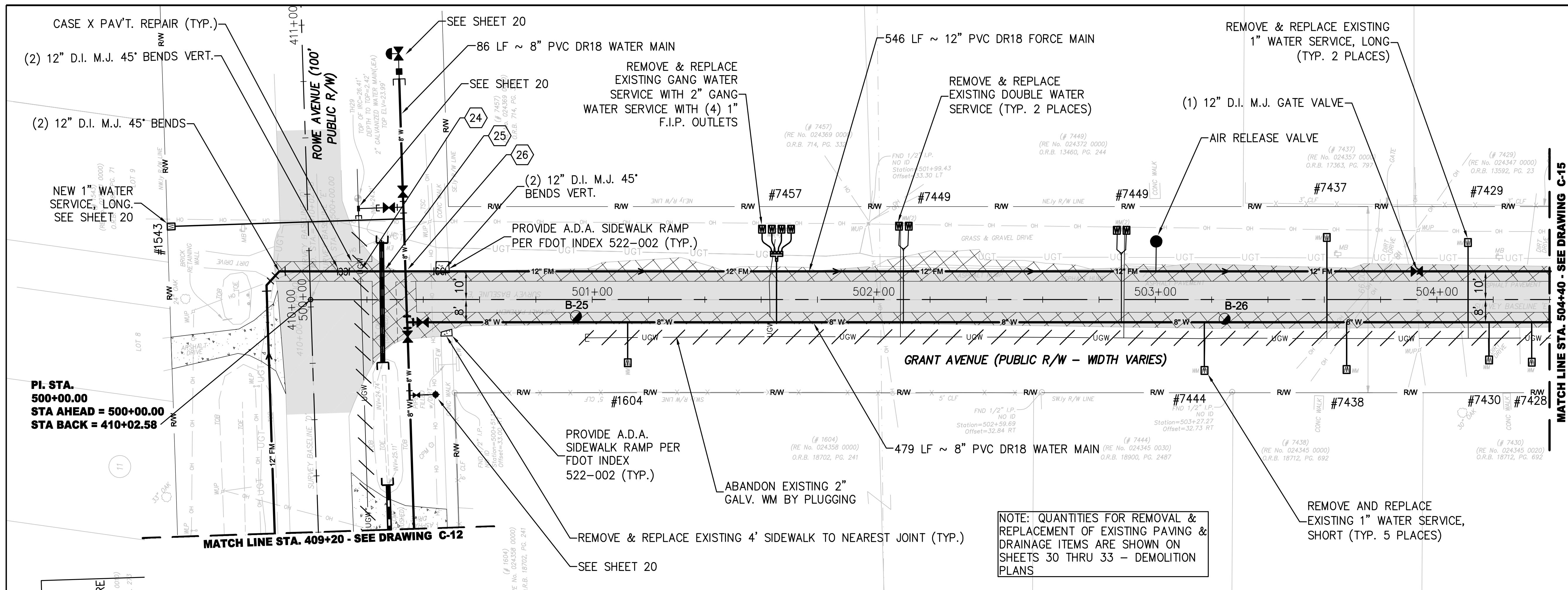
JEAsm
Building Communitysm

DESIGN ENGINEER	SCOTT A. WILD
	FLORIDA REGISTRATION NO.
	47030

DESIGNER:	D.W.H.
DRAWN BY:	J.E.S.
DATE:	
CHECKED BY:	S.A.W.
DATE:	

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 REG. #00002354 LC - 0000316

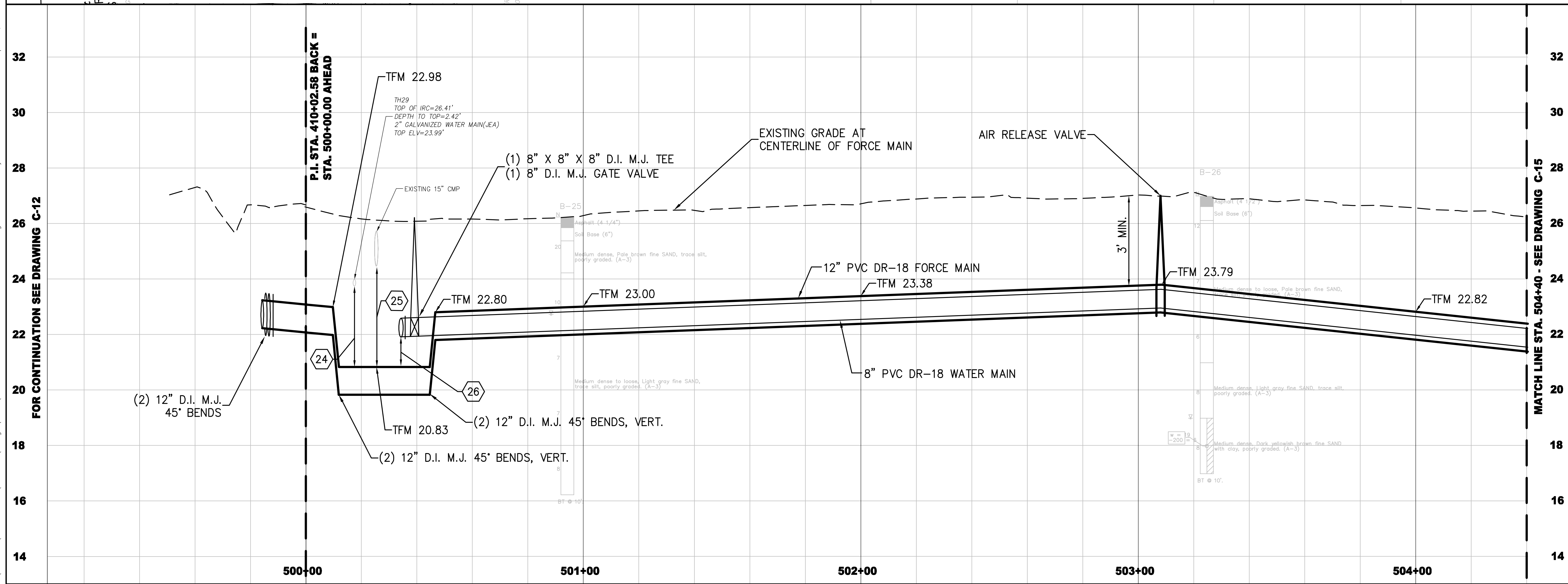


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NO. SHEETS 69	PROJ. NO.	17-028-02		DESIGNER: D.W.H. DRAWN BY: J.E.S. DATE: _____ CHECKED BY: S.A.W. DATE: _____	DESIGN ENGINEER SCOTT A. WILD FLORIDA REGISTRATION NO. 47030	NO.	BY	DATE	REVISIONS	
	SHEET NO.	DATE:								MAY 5, 2020
	21	SCALE:								AS NOTED
	DRAWING NO. C-14									
BEVERLY HILLS SEPTIC TANK PHASE OUT OFFSITE FORCE MAIN GRANT AVENUE - PLAN AND PROFILE										

**NAVD 88**

BID DOCUMENTS - NOT FOR CONSTRUCTION

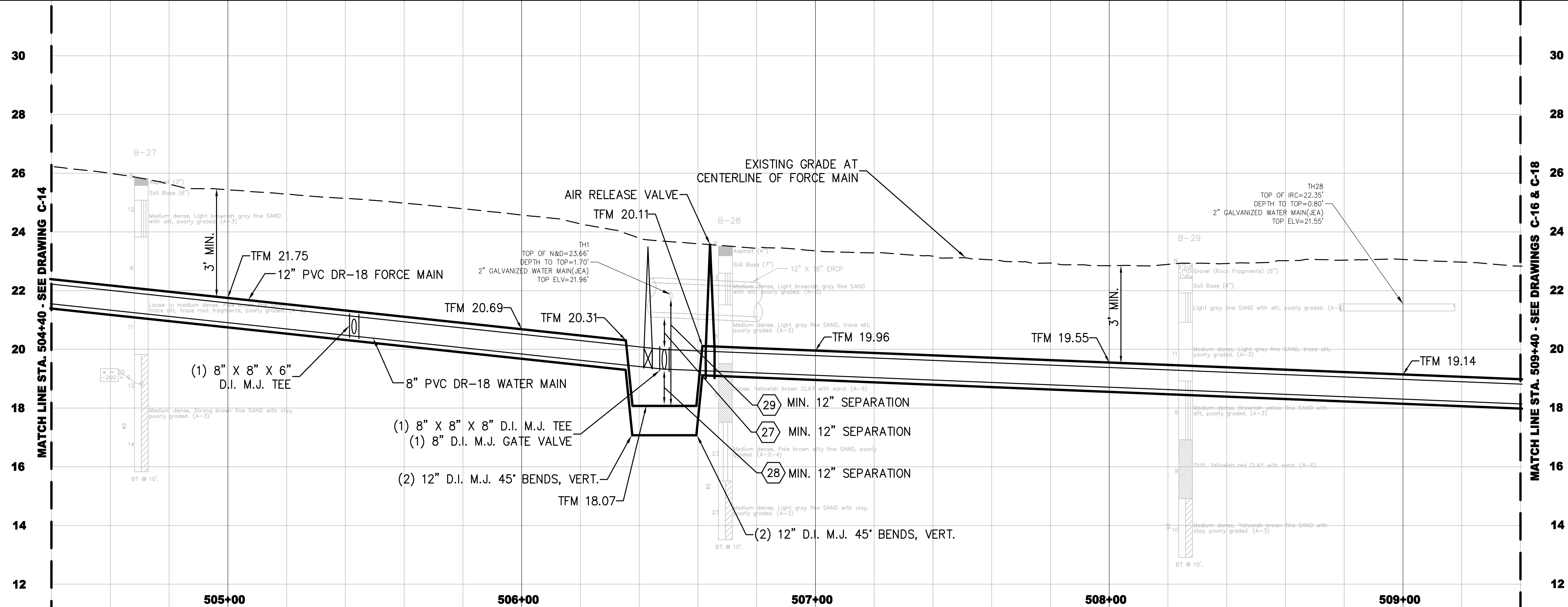
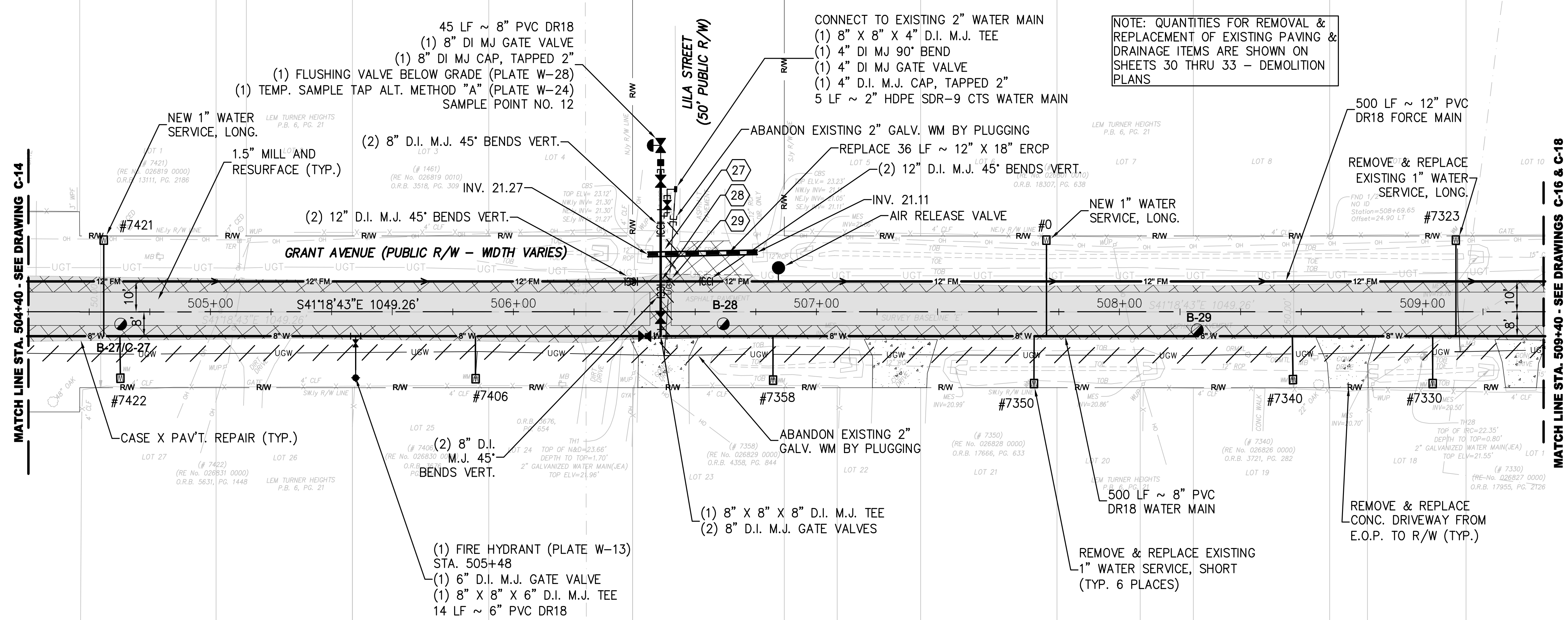
BEVERLY HILLS SEPTIC TANK PHASE OUT
OFFSITE FORCE MAIN
GRANT AVENUE / F - PLAN AND PROFILE

IEAsm
Building Community

DESIGNER:	D.W.H.	DESIGN ENGINEER SCOTT A. WILD FLORIDA REGISTRATION NO. 47030
DRAWN BY:	J.E.S.	
DATE:		
CHECKED BY:	S.A.W.	
DATE:		

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**NAVD 88**

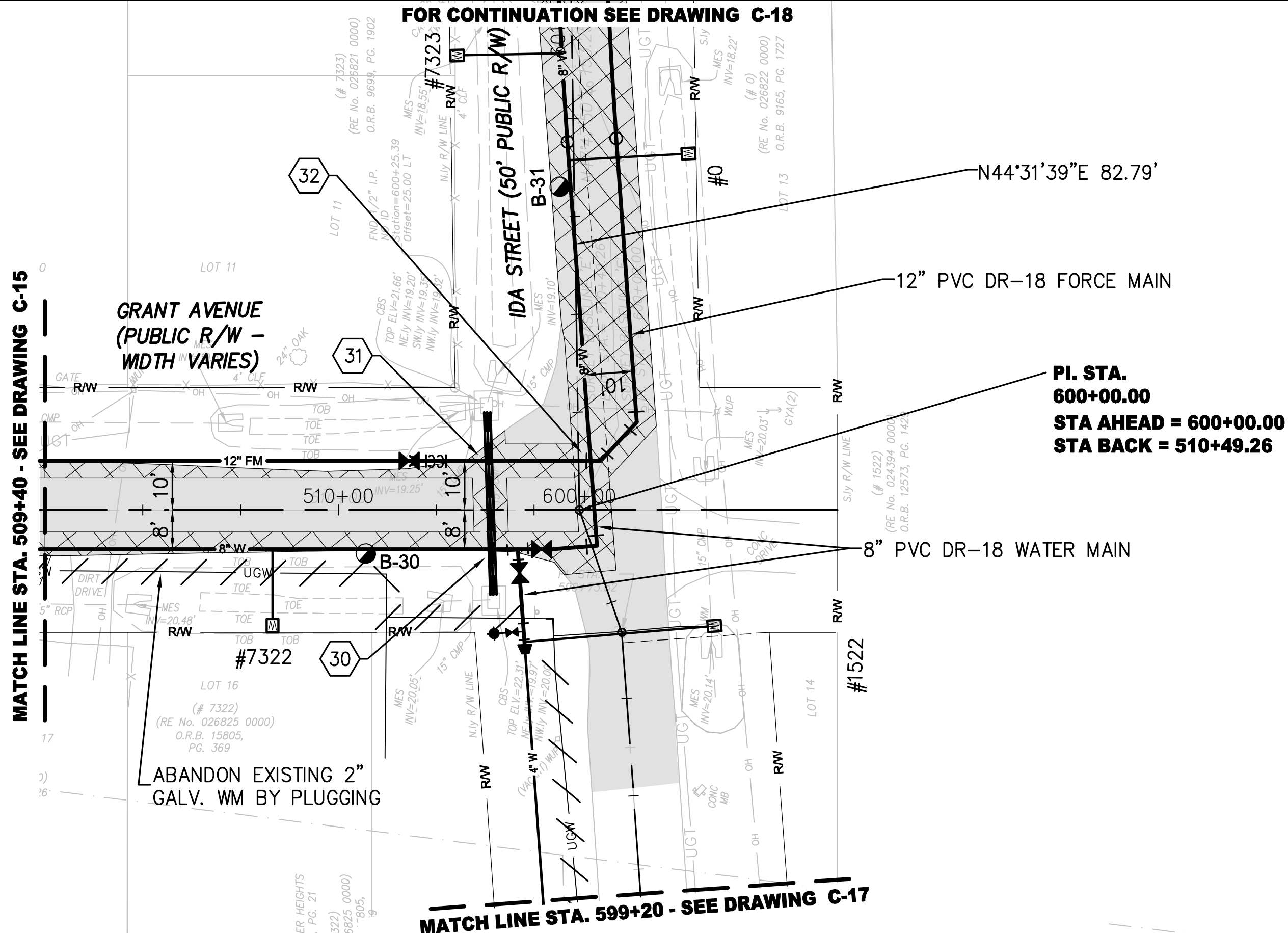
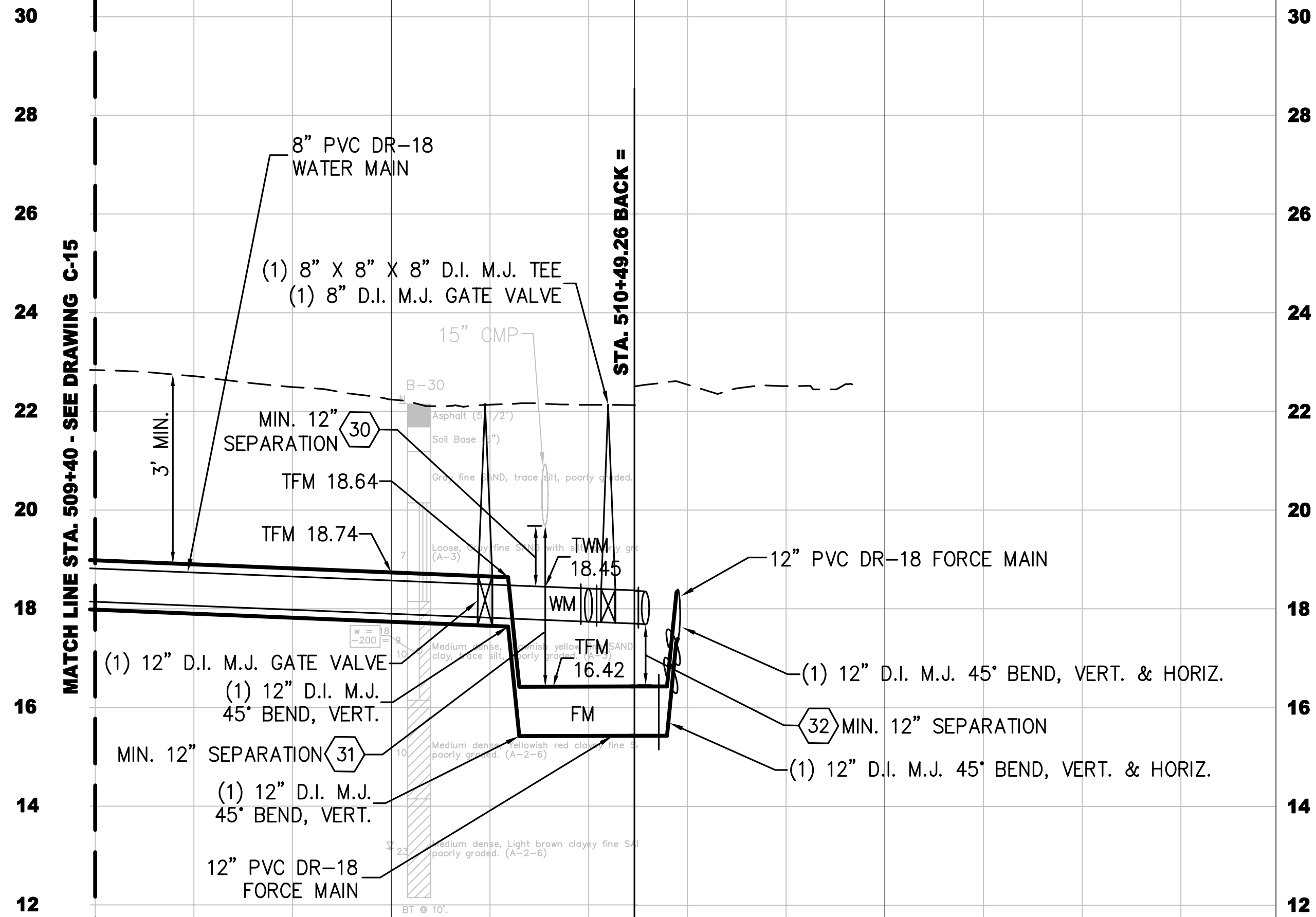
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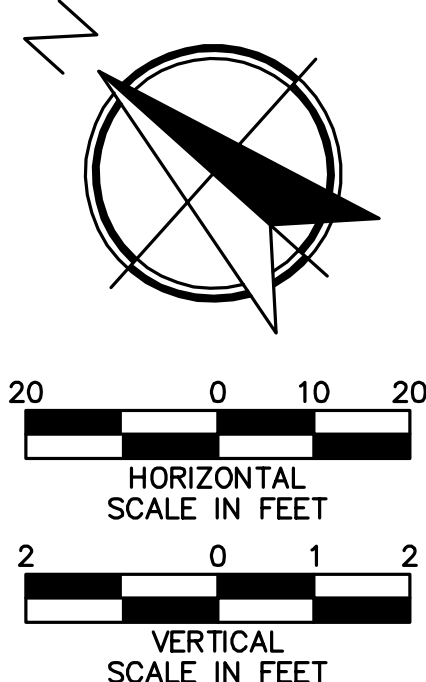
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NO. SHEETS 69	PROJ. NO. 17-026-02	BEVERLY HILLS SEPTIC TANK PHASE OUT			DESIGNER: DW.H.	NO.	BY	DATE	REVISIONS
SHEET NO. 22	DATE: MAY 5, 2020	OFFSITE FORCE MAIN			DRAWN BY: J.E.S.	5			6
DRAWING NO. C-15	SCALE: AS NOTED	GRANT AVENUE - PLAN AND PROFILE			DATE	3			4
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**NAVD 88**

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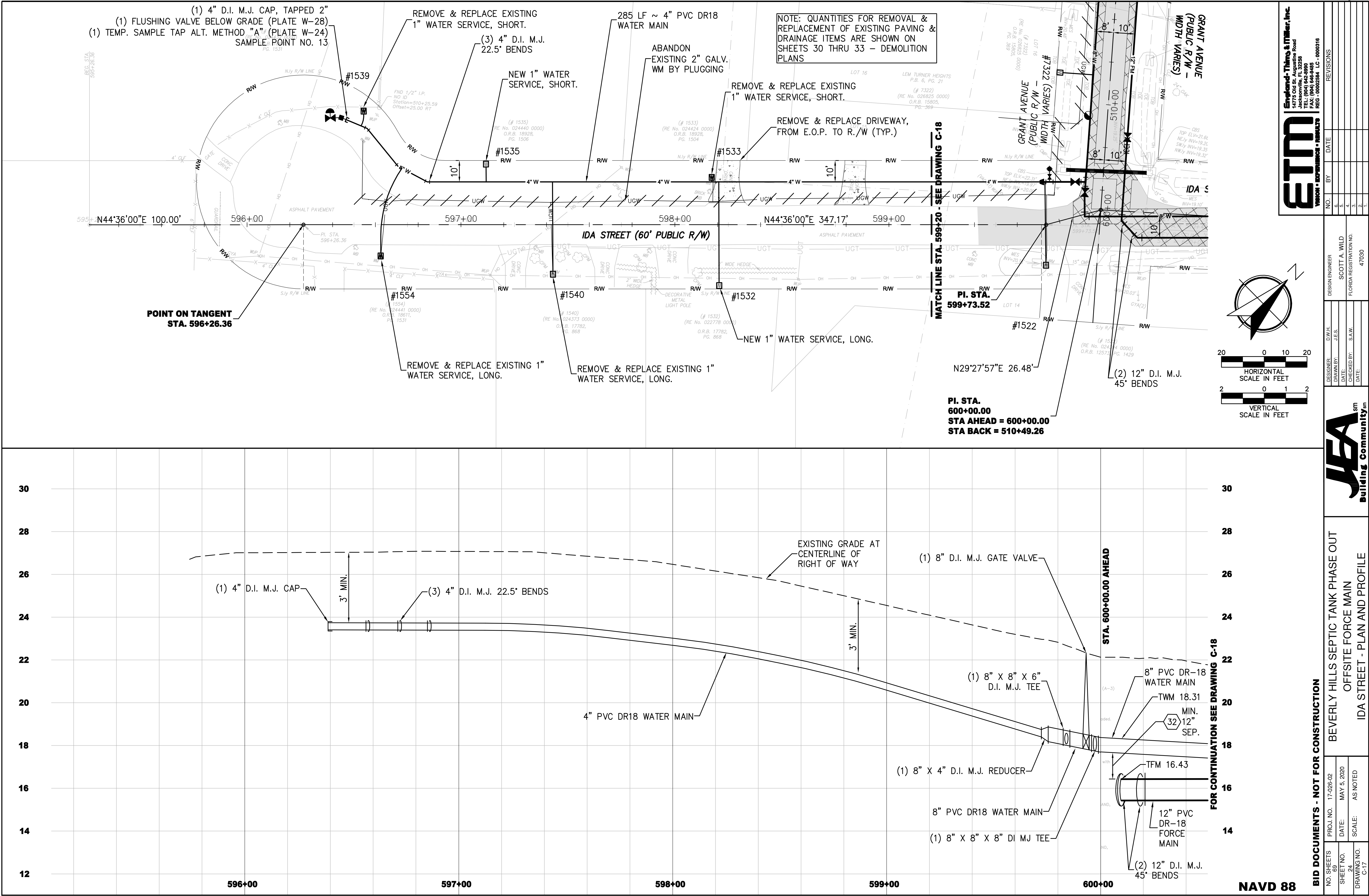
BEVERLY HILLS SEPTIC TANK PHASE OUT
OFFSITE FORCE MAIN
GRANT AVENUE - PLAN AND PROFILE



DESIGNER:	D.W.H.	DESIGN ENGINEER
DRAWN BY:	J.E.S.	
DATE:		SCOTT A. WILD
CHECKED BY:	S.A.W.	
DATE:		FLORIDA REGISTRATION NO.
		47030

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FAX: (904) 642-9999
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DESIGNER: D.W.H.
DRAWN BY: J.E.S.
DATE: MAY 5, 2020
CHECKED BY: S.A.W.
DATE: AS NOTED

DESIGN ENGINEER: SCOTT A. WILD
FLORIDA REGISTRATION NO.: 47030

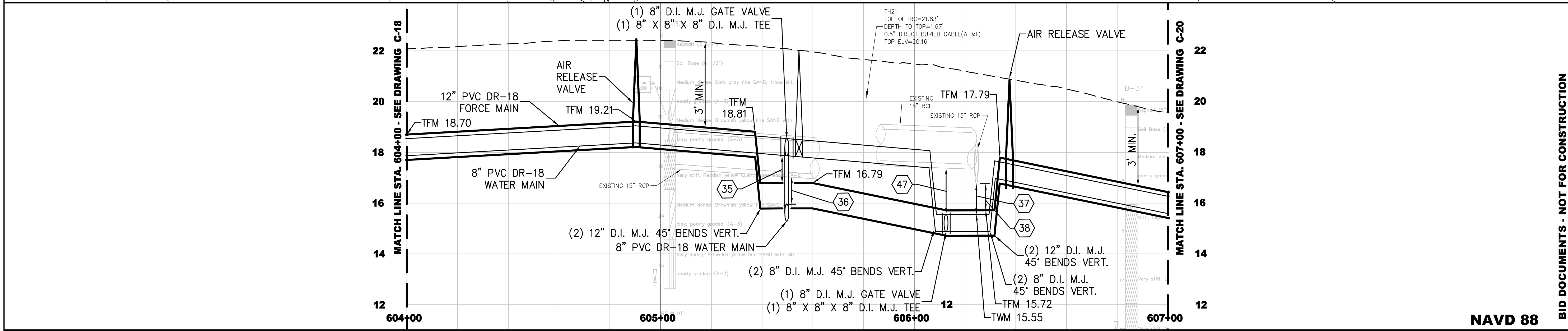
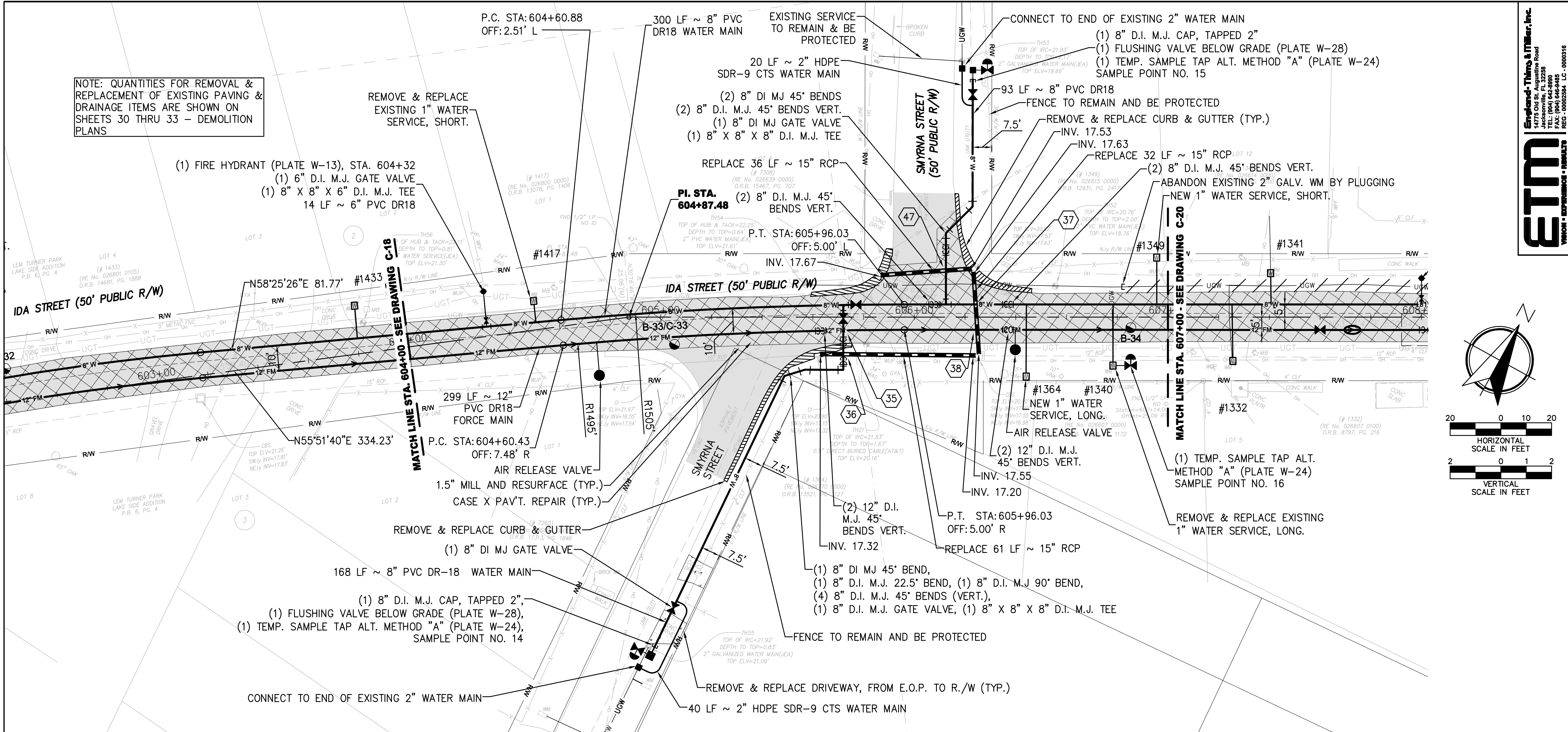
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SHEET NO.: 24
DRAWING NO.: C-17

PROJ. NO.: 17-026-02
DATE: MAY 5, 2020
SCALE: AS NOTED

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BEVERLY HILLS SEPTIC TANK PHASE OUT
OFFSITE FORCE MAIN
IDA STREET - PLAN AND PROFILE

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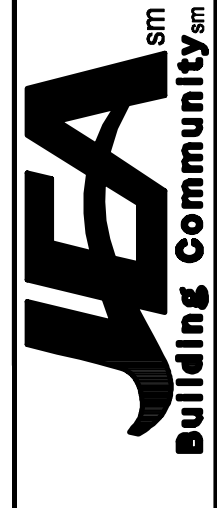
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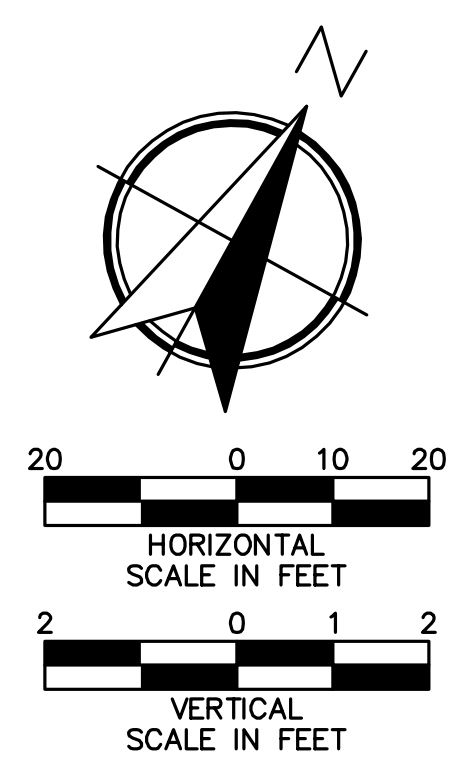
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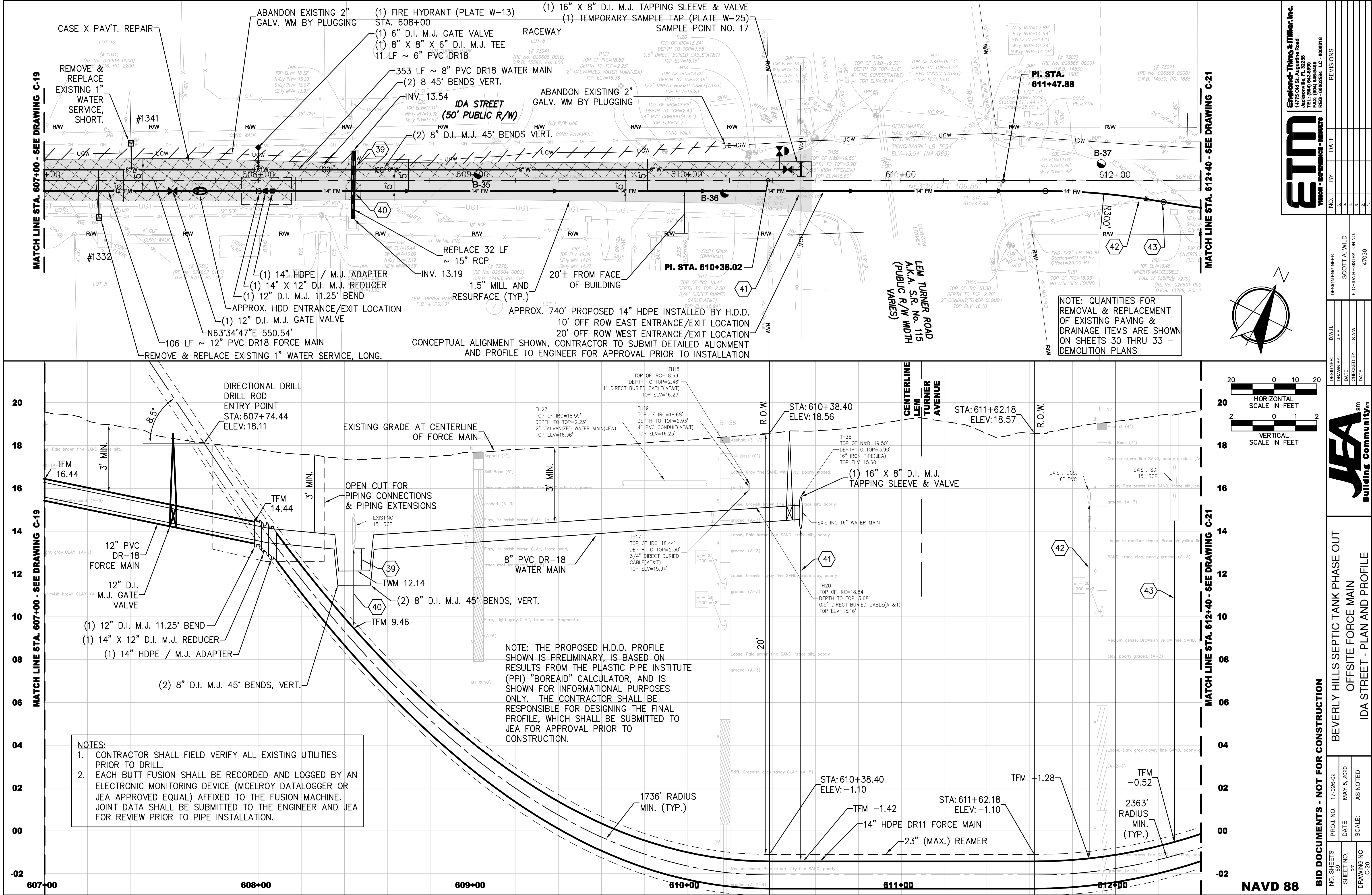
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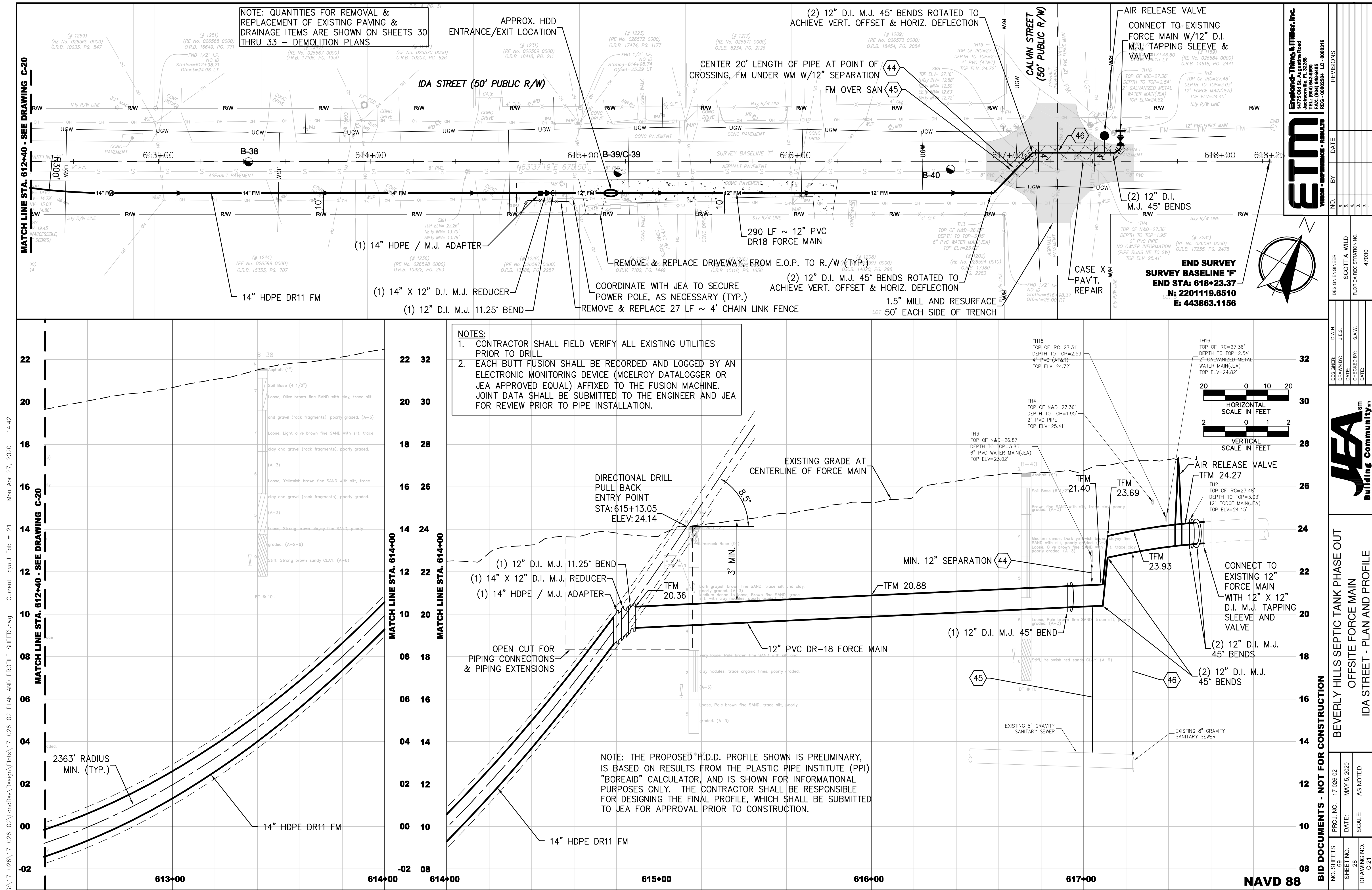
	DESIGNER: D.W.H.		DESIGN ENGINEER
	DRAWN BY: J.E.S.		
	DATE:		SCOTT A. WILD
	CHECKED BY: S.A.W.		
	DATE:		FLORIDA REGISTRATION NO.
			47030



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BEVERLY HILLS SEPTIC TANK PHASE OUT OFFSITE FORCE MAIN IDA STREET - PLAN AND PROFILE			
PROJ. NO.	17-026-02	DATE	MAY 5, 2020
SHEET NO.	26	SCALE	AS NOTED
DRAWING NO.	C-19		









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DESIGN ENGINEER
SCOTT A. WILD
FLORIDA REGISTRATION NO.
47030

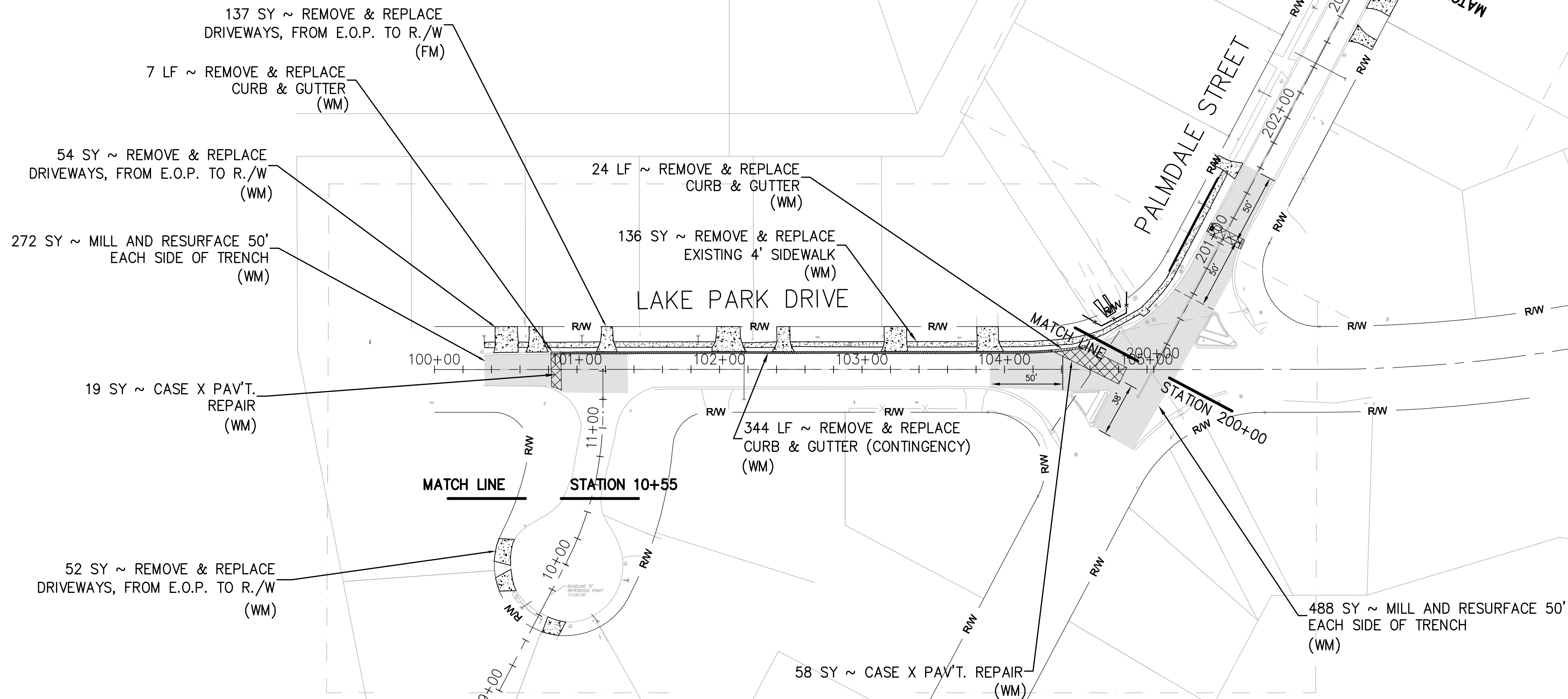
DESIGNER
D.W.H.
J.E.S.
DRAWN BY
DATE
CHECKED BY
S.A.W.
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Building Communitysm

BID DOCUMENTS - NOT FOR CONSTRUCTION
BEVERLY HILLS SEPTIC TANK PHASE OUT
OFFSITE FORCE MAIN
IDA STREET EXISTING PAVEMENT TOPO

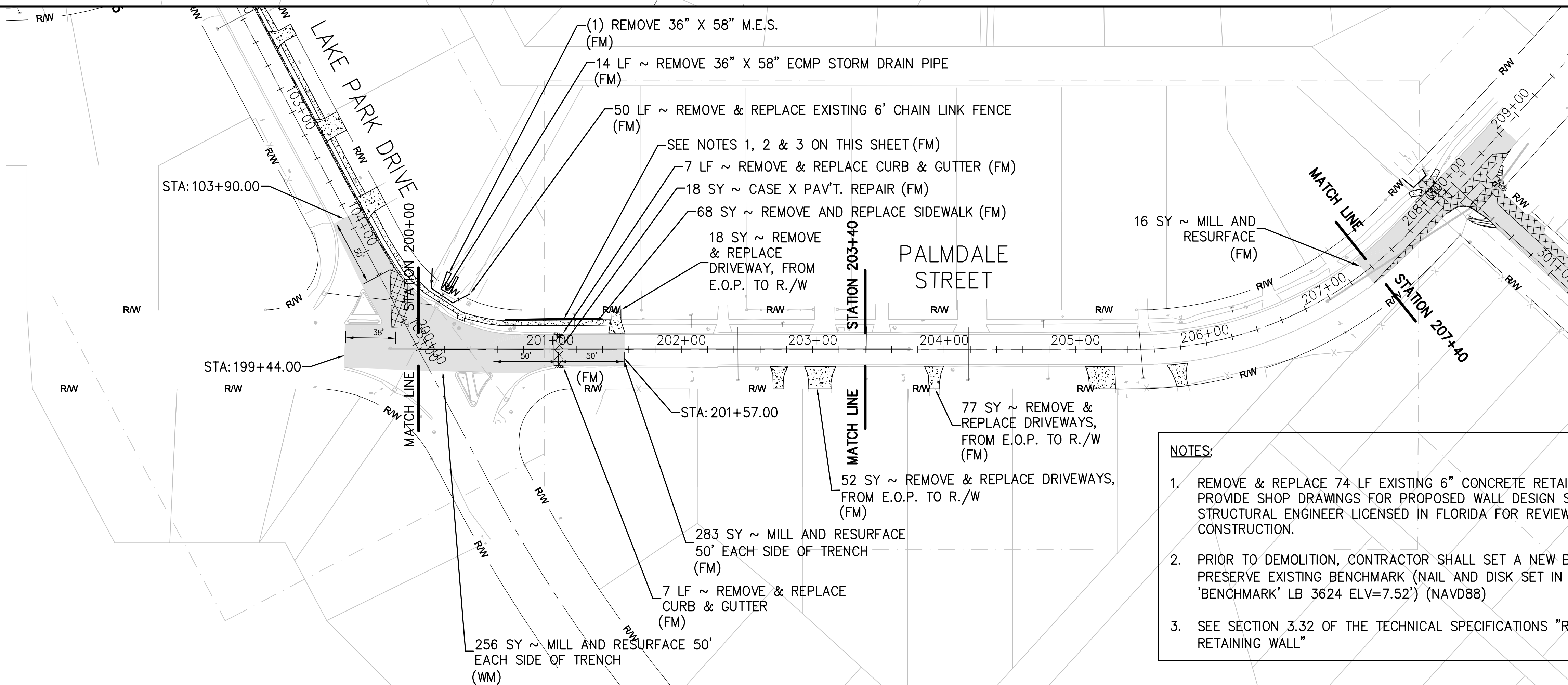
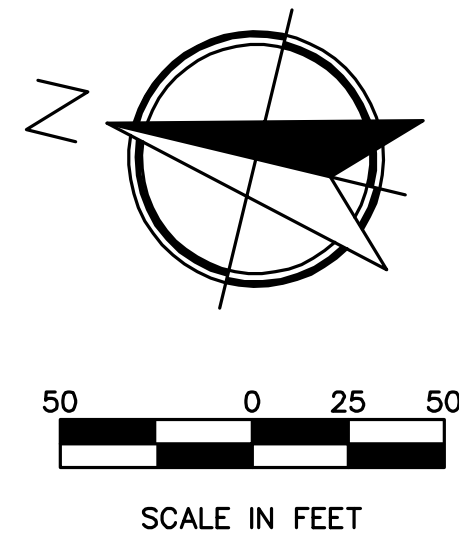
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SHEET NO. 29	DATE MAY 5, 2020
DRAWING NO. C-22	SCALE AS NOTED

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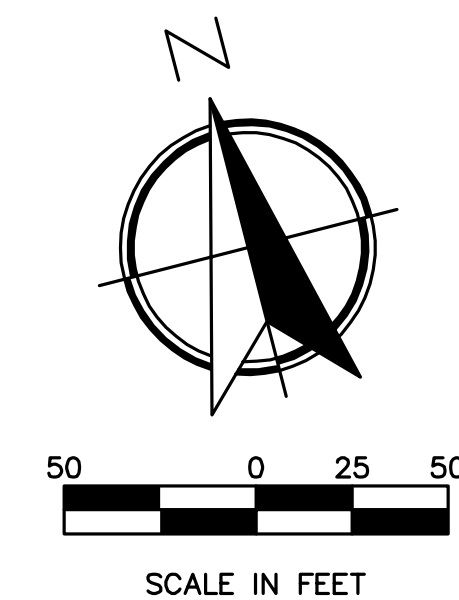


LEGEND	
	REMOVE EXISTING ASPHALT PAVEMENT
	REMOVE EXISTING CONCRETE DRIVEWAY
	REMOVE EXISTING SIDEWALK
	MILL EXISTING ASPHALT PAVEMENT
	REMOVE EXISTING CURB & GUTTER

- NOTES:
- QUANTITIES LABELED ON THIS PLAN ARE MEASURED FROM MATCHLINE TO MATCHLINE WHICH CORRESPOND TO THE PLAN AND PROFILE SHEET MATCHLINES. (SEE SHEETS C-1 THROUGH C-21)
 - (WM) DENOTES PAY ITEM FOR WATER MAIN CONSTRUCTION. (FM) DENOTES PAY ITEM FOR FORCE MAIN CONSTRUCTION.



- NOTES:
- REMOVE & REPLACE 74 LF EXISTING 6" CONCRETE RETAINING WALL. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR PROPOSED WALL DESIGN SIGNED AND SEALED BY A STRUCTURAL ENGINEER LICENSED IN FLORIDA FOR REVIEW & APPROVAL PRIOR TO CONSTRUCTION.
 - PRIOR TO DEMOLITION, CONTRACTOR SHALL SET A NEW BENCHMARK IN ORDER TO PRESERVE EXISTING BENCHMARK (NAIL AND DISK SET IN TOP OF RETAINING WALL 'BENCHMARK' LB 3624 ELV=7.52') (NAVD88)
 - SEE SECTION 3.32 OF THE TECHNICAL SPECIFICATIONS "REMOVE & REPLACE EXISTING RETAINING WALL"



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FAX: (904) 642-4444
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REVISIONS		NO.	BY	DATE
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DESIGN ENGINEER	SCOTT A. WILD
FLORIDA REGISTRATION NO.	47030
DATE:	
CHECKED BY:	
DATE:	
DRAWN BY:	
DATE:	

JE Building Community

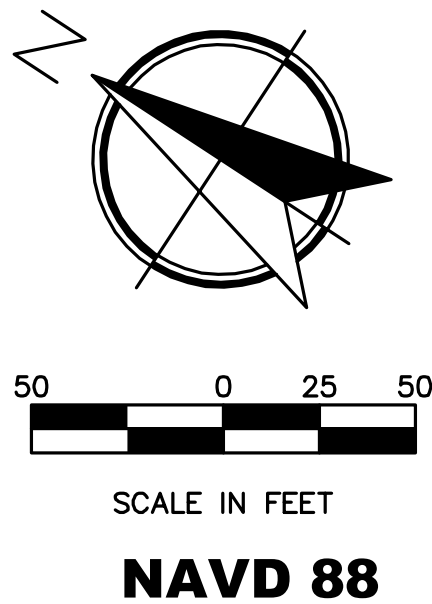
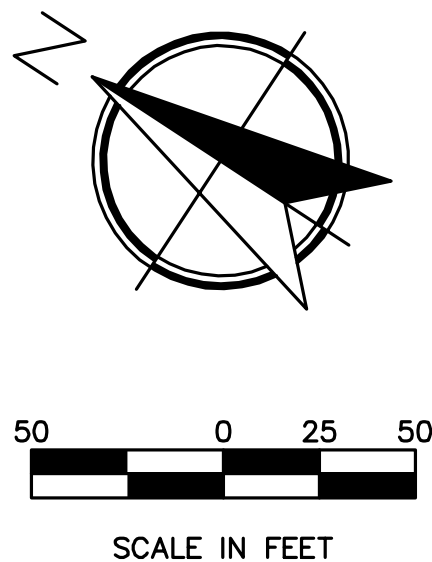
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BEVERLY HILLS SEPTIC TANK PHASE OUT

OFFSITE FORCE MAIN

DEMOLITION PLAN

NO. SHEETS	PROJ. NO.	17-026-02
69	DATE:	MAY 5, 2020
SHEET NO.	SCALE:	AS NOTED
30	DRAWING NO.	D-1



BEVERLY HILLS SEPTIC TANK PHASE OUT
OFFSITE FORCE MAIN
DEMOLITION PLAN

DESIGNER:	D.W.H.	DESIGN ENGINEER
DRAWN BY:	J.E.S.	
DATE:		
CHECKED BY:	S.A.W.	SCOTT A. WILD
DATE:		
		FLORIDA REGISTRATION NO.
		47030

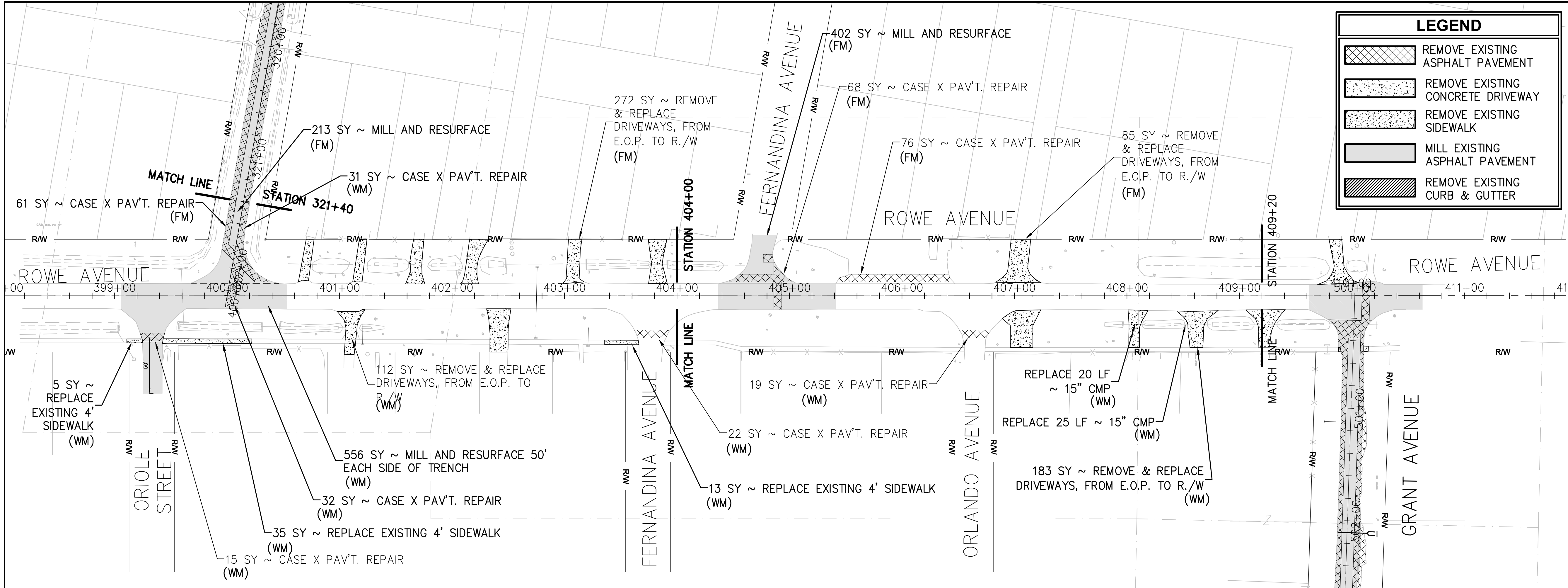
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LEGEND

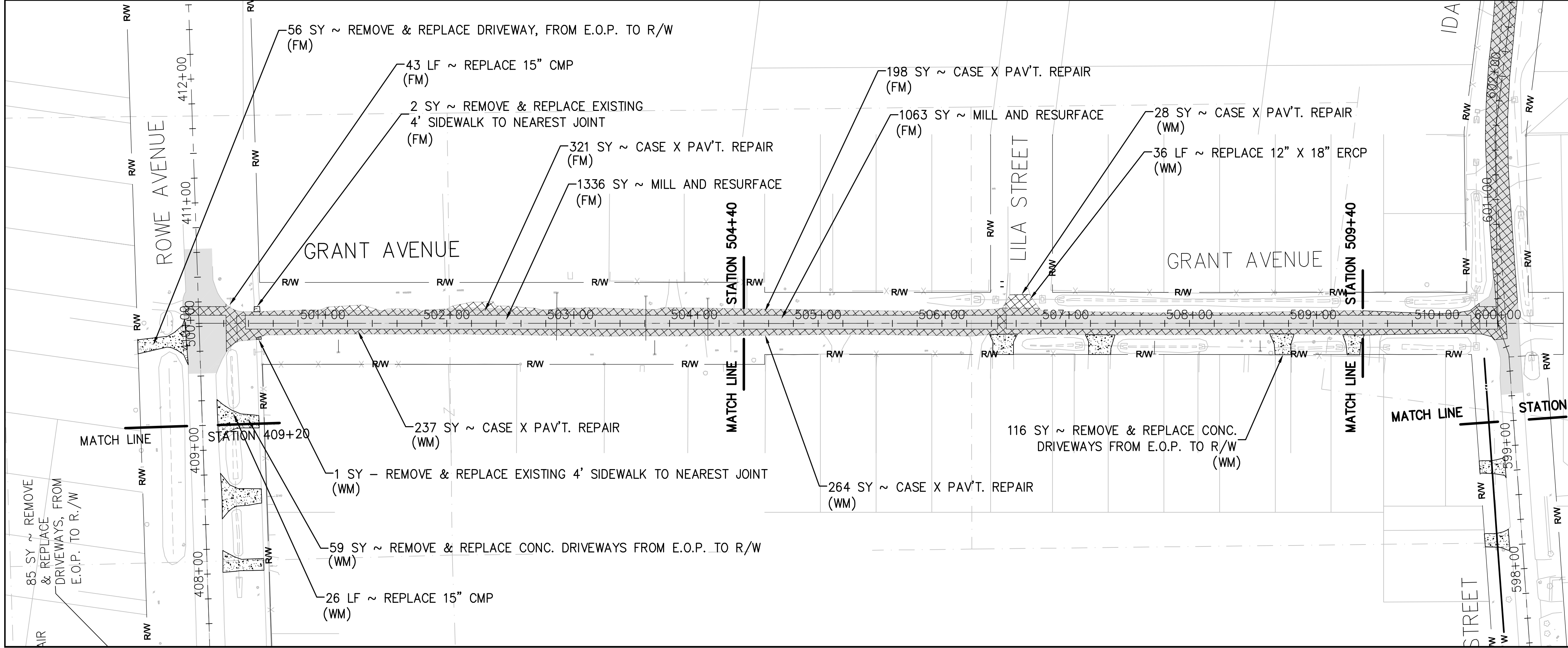
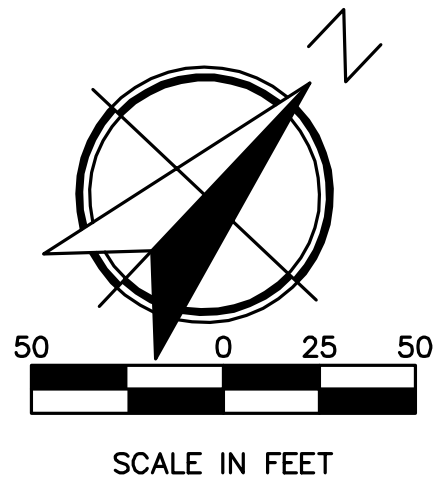
REMOVE EXISTING ASPHALT PAVEMENT

REMOVE EXISTING CONCRETE DRIVEWAY

REMOVE EXISTING SIDEWALK

MILL EXISTING ASPHALT PAVEMENT

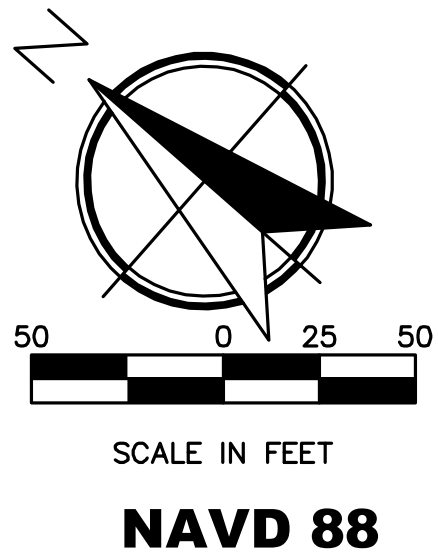
REMOVE EXISTING CURB & GUTTER



NOTES:

1. QUANTITIES LABELED ON THIS PLAN ARE MEASURED FROM MATCHLINE TO MATCHLINE WHICH CORRESPOND TO THE PLAN AND PROFILE SHEET MATCHLINES. (SEE SHEETS C-1 THROUGH C-21)

2. (WM) DENOTES PAY ITEM FOR WATER MAIN CONSTRUCTION. (FM) DENOTES PAY ITEM FOR FORCE MAIN CONSTRUCTION.



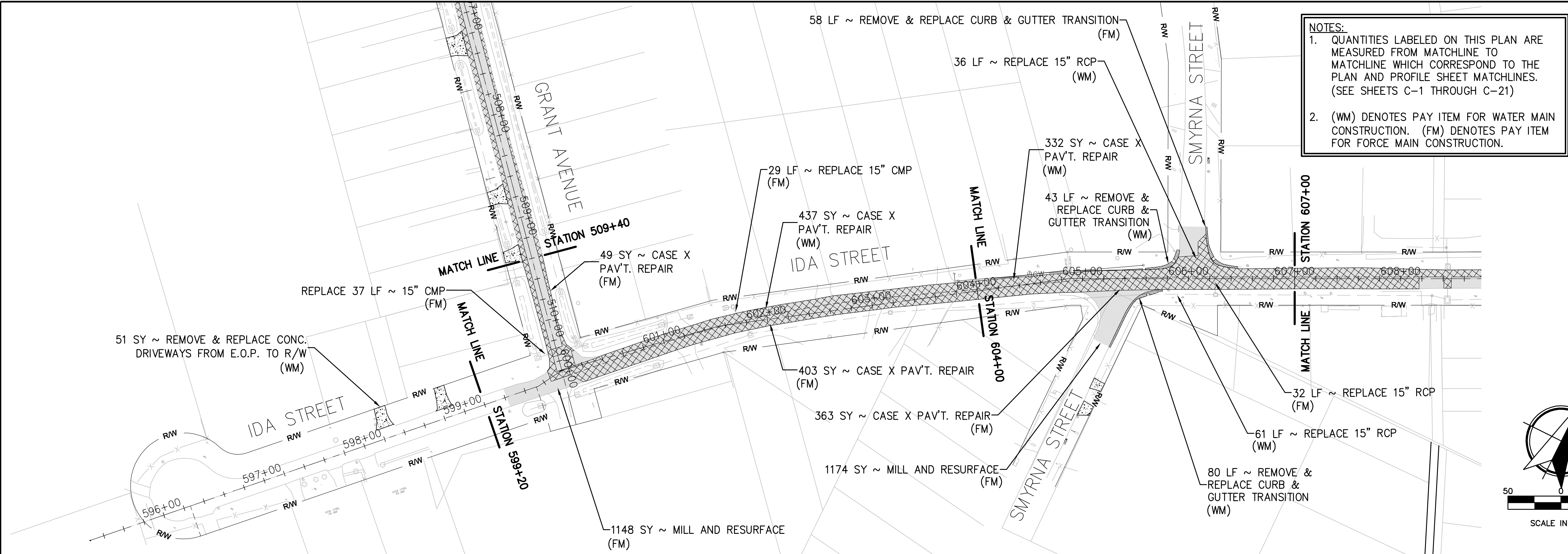
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NO. SHEETS 69		PROJ. NO. 17-026-02		BEVERLY HILLS SEPTIC TANK PHASE OUT OFFSITE FORCE MAIN DEMOLITION PLAN				DESIGNER: D.W.H. DRAWN BY: J.E.S. DATE: CHECKED BY: S.A.W. DATE: 47030		DESIGN ENGINEER SCOTT A. WILD FLORIDA REGISTRATION NO. 47030		NO. BY DATE		REVISIONS	
SHEET NO. 32		DATE: MAY 5, 2020													
DRAWING NO. D-3		SCALE: AS NOTED													

JEA

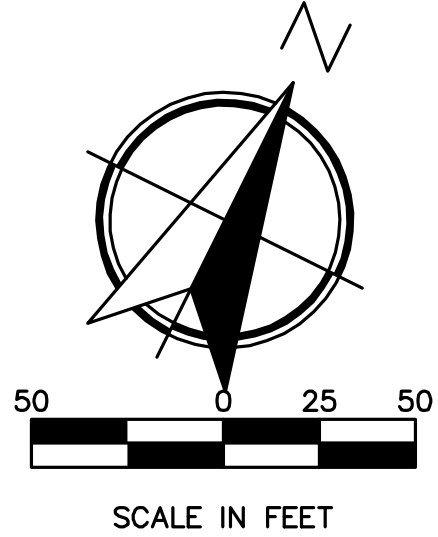
Building Communitysm



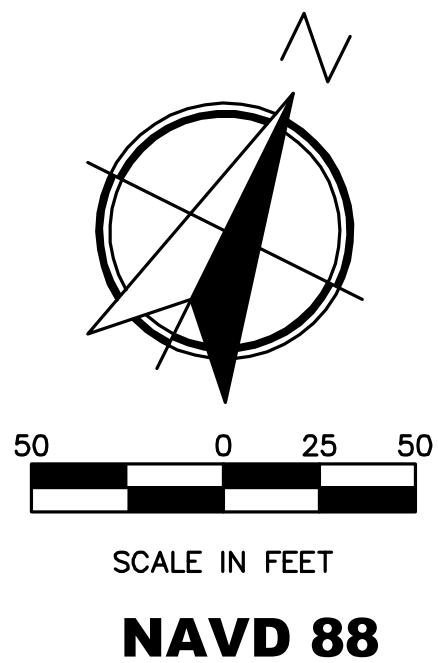
NOTES:

1. QUANTITIES LABELED ON THIS PLAN ARE MEASURED FROM MATCHLINE TO MATCHLINE WHICH CORRESPOND TO THE PLAN AND PROFILE SHEET MATCHLINES. (SEE SHEETS C-1 THROUGH C-21)

2. (WM) DENOTES PAY ITEM FOR WATER MAIN CONSTRUCTION. (FM) DENOTES PAY ITEM FOR FORCE MAIN CONSTRUCTION.



LEGEND	
	REMOVE EXISTING ASPHALT PAVEMENT
	REMOVE EXISTING CONCRETE DRIVEWAY
	REMOVE EXISTING SIDEWALK
	MILL EXISTING ASPHALT PAVEMENT
	REMOVE EXISTING CURB & GUTTER



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NO. SHEETS 69		PROJ. NO. 17-026-02	BEVERLY HILLS SEPTIC TANK PHASE OUT OFFSITE FORCE MAIN DEMOLITION PLAN						DESIGNER: D.W.H.		DESIGN ENGINEER		NO.	BY	DATE	REVISIONS
SHEET NO. 33		DATE: MAY 5, 2020							DRAWN BY: J.E.S.		SCOTT A. WILD					
DRAWING NO. D-4		SCALE: AS NOTED							CHECKED BY: S.A.W.		FLORIDA REGISTRATION NO.		4.	5.		
			DATE:				3.	2.								
					47030		1.									

HORIZONTAL & VERTICAL SEPARATION REQUIREMENTS

CONFLICTING UTILITY	POTABLE WATER			WASTEWATER GRAVITY AND FORCE MAIN			RECLAIMED WATER			VACUUM SEWERS		
	HORIZ.	VERT.	JOINT SPACING*	HORIZ.	VERT.	JOINT SPACING*	HORIZ.	VERT.	JOINT SPACING*	HORIZ.	VERT.	JOINT SPACING*
POTABLE WATER	3' NOTE 1	12"	3' NOTE 2	6' to 10'	12" NOTE 5	6' NOTE 2	3'	12"	6' NOTE 2	3' to 10'	12"	3' NOTE 2
RECLAIMED WATER	3'	12"	6' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3'	12"	6' NOTE 2	3' NOTE 1	12"	3' NOTE 2
WASTEWATER (GRAVITY AND FORCE MAIN)	6' to 10'	12"	6' NOTE 2	3' NOTE 1	12"	6"	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2
VACUUM SEWERS	3' to 10'	12"	3' NOTE 2	3' NOTE 1	12"	6"	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2
RIGHT OF WAYS	3' NOTE 1	N/A	N/A	3' NOTE 1	N/A	N/A	3' NOTE 1	N/A	N/A	3' NOTE 1	N/A	N/A
PERMANENT STRUCTURES (SIGNS, POLES, ETC.)	3' NOTE 1	N/A	N/A	3' NOTE 1	N/A	N/A	3' NOTE 1	N/A	N/A	3' NOTE 1	N/A	N/A
STORM SEWERS	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2
GAS	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2
TREES	3'-6' NOTE 6	N/A	N/A	3'-6' NOTE 6	N/A	N/A	3'-6' NOTE 6	N/A	N/A	3'-6' NOTE 6	N/A	N/A
ALL OTHER UTILITIES	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2

NOTES:

1. THIS SEPARATION REQUIREMENT IS TO PROVIDE ACCESSIBILITY FOR CONSTRUCTION AND MAINTENANCE. THREE FEET OF HORIZONTAL SEPARATION IS THE MINIMUM FOR PIPES WITH THREE FEET OF COVER. FOR PIPES INSTALLED AT GREATER DEPTH, PROVIDE AN ADDITIONAL FOOT OF SEPARATION FOR EACH ADDITIONAL FOOT OF DEPTH.
2. THE MINIMUM JOINT SPACING REQUIRED FROM CROSSING FROM OTHER UTILITIES WHILE STILL MAINTAINING MINIMUM VERTICAL SEPARATION.
3. DISTANCES GIVEN ARE FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE.
4. NO WATER PIPE SHALL PASS THROUGH OR COME INTO CONTACT WITH ANY PART OF SANITARY OR STORM WATER MANHOLE OR STRUCTURES.
5. WATER MAIN SHOULD CROSS ABOVE OTHER PIPES WHENEVER POSSIBLE. WHEN WATER MAIN MUST BE BELOW OTHER UTILITY PIPING, THE MINIMUM SEPARATION SHALL BE 12 INCHES.
6. REFER TO POTABLE WATER PIPING- SECTION 350, III.4.11.

SEPARATION REQUIREMENTS FOR WATER, WASTEWATER AND RECLAIMED WATER MAINS

JANUARY 2019

PLATE W-10

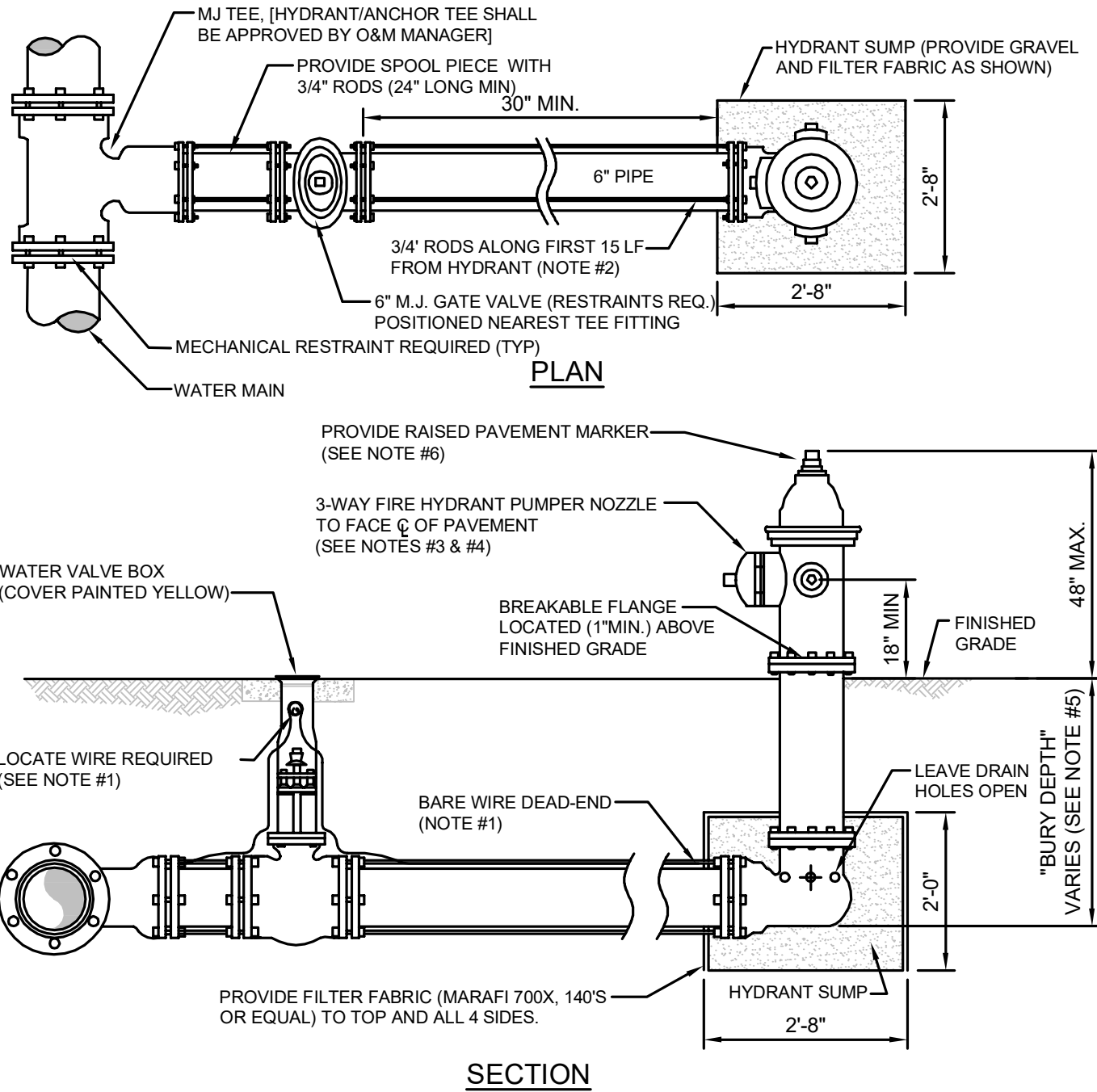
WATER MAIN AND NON-WATER MAIN SEPARATION REQUIREMENTS - NOTES

1. IT IS REQUIRED THAT "WATER MAINS" BE INSTALLED, CLEANED, DISINFECTED AND HAVE A SATISFACTORY BACTERIOLOGICAL SURVEY PERFORMED IN ACCORDANCE WITH THE LATEST APPLICABLE AWWA STANDARDS, CHAPTER 62-555, F.A.C. AND LATEST JEA WATER AND SEWER STANDARDS. FOR THE PURPOSE OF THIS SECTION, THE PHRASE "WATER MAINS" SHALL MEAN MAINS, INCLUDING TREATMENT PLANT, PRESSURE PIPING, CONVEYING EITHER RAW, PARTIALLY TREATED, OR FINISHED DRINKING WATER; FIRE HYDRANT LEADS, AND SERVICE LINES THAT HAVE AN INSIDE DIAMETER OF THREE (3) INCHES OR GREATER. IN ADDITION, THE PHRASE "RECLAIMED WATER" REFERS TO THE WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
2. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE (3) FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER.
3. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX (6) FEET, AND PREFERABLY TEN (10) FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS MAY BE REDUCED TO THREE (3) FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX (6) INCHES ABOVE THE TOP OF THE SEWER (SPECIAL CASE).
4. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX (6) INCHES, AND PREFERABLY TWELVE (12) INCHES, ABOVE OR AT LEAST TWELVE (12) INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
5. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS A LEAST TWELVE (12) INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
6. AT THE UTILITY CROSSINGS DESCRIBED IN NOTES 4 AND 5 ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE (3) FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER, AND AT LEAST SIX (6) FEET FROM ALL JOINTS IN GRAVITY OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINE CONVEYING RECLAIMED WATER.
7. NEW OR RELOCATED FIRE HYDRANTS SHALL BE LOCATED SO THAT THE HYDRANTS ARE AT LEAST THREE (3) FEET FROM ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER, AT LEAST THREE (3) FEET, AND PREFERABLY TEN (10) FEET, FROM ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER, AT LEAST SIX (6) FEET, AND PREFERABLY TEN (10) FEET, FROM ANY EXISTING OR PROPOSED GRAVITY OR PRESSURE-TYPE SANITARY SEWER OR WASTEWATER FORCE MAIN.
8. WHERE AN UNDERGROUND WATER MAIN IS BEING LAID LESS THAN THE REQUIRED MINIMUM HORIZONTAL DISTANCE FROM ANOTHER PIPELINE AND WHERE AN UNDERGROUND WATER MAIN IS CROSSING ANOTHER PIPELINE AND JOINTS IN THE WATER MAIN ARE BEING LOCATED LESS THAN THE REQUIRED MINIMUM DISTANCE FROM JOINTS IN THE OTHER PIPELINE, THE CONTRACTOR SHALL CONSULT THE DESIGN ENGINEER TO OBTAIN APPROVAL OF ANY ALTERNATIVE CONSTRUCTION METHODS, PRIOR TO CONSTRUCTION.

NOTES ON UTILITY SEPARATION REQUIREMENTS

JANUARY 2019

PLATE W-11



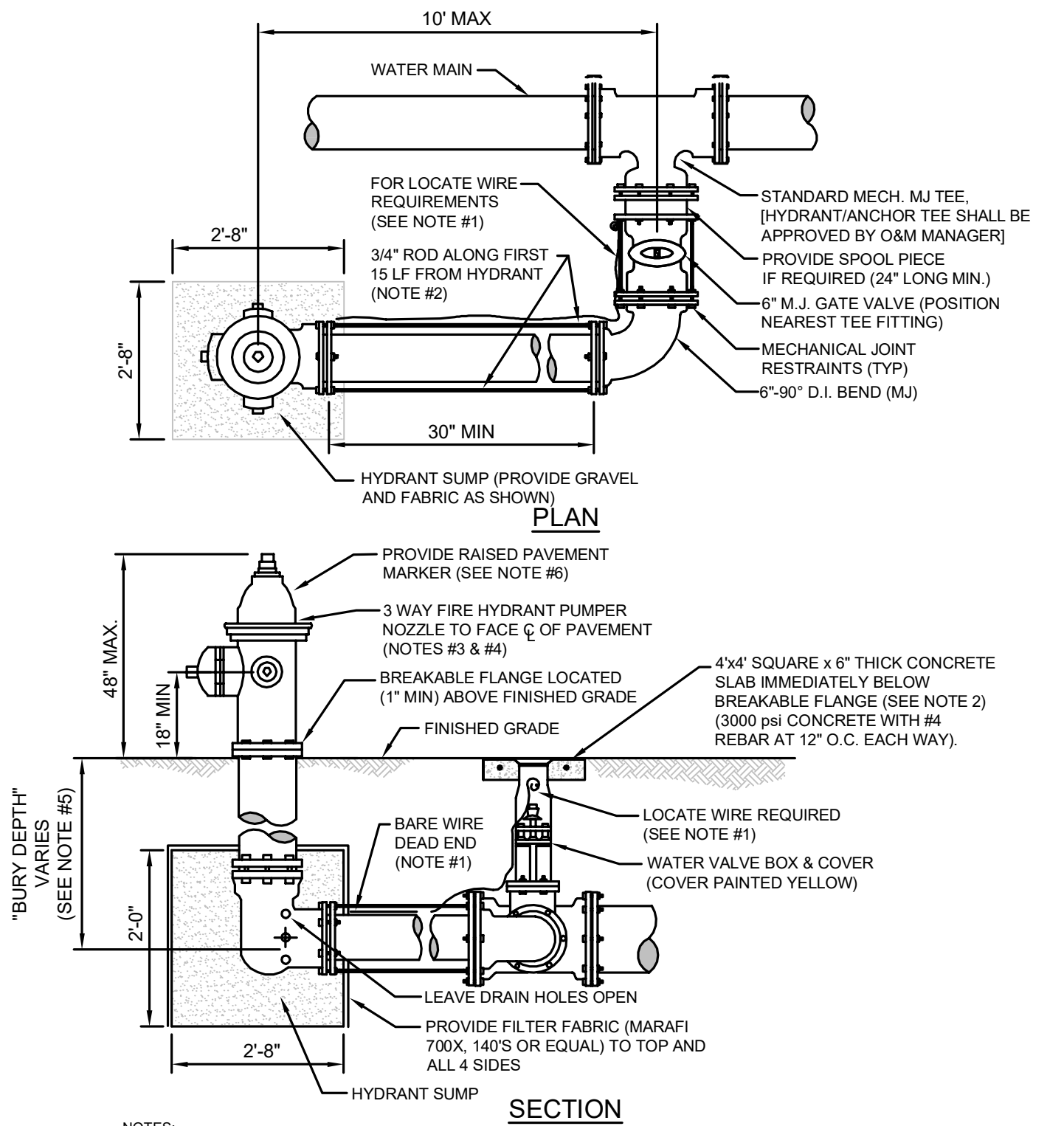
NOTES:

1. LOCATE WIRE SHALL BE ROUTED FROM THE VALVE TO THE HYDRANT AS SHOWN ABOVE. THE END OF THE WIRE SHALL BE SECURED TO THE PIPE MAIN. SEE SECTION 350, LOCATE WIRE INSTALLATION PARAGRAPH.
2. FIRE HYDRANTS SHALL BE INSTALLED BETWEEN BACK OF CURB AND FACE OF SIDEWALK AND NOT WITHIN SWALE/DITCH AREAS. THE DISTANCE RANGE FROM EDGE OF ADJACENT PAVEMENT, BACK OF CURB AND FACE OF SIDEWALK SHALL BE IN COMPLIANCE WITH LOCAL COUNTY FIRE DEPARTMENT RULES AND AS APPROVED BY JEA AND APPLICABLE PERMITTING AGENCIES. DISTANCE SHALL BE MEASURED TO THE CLOSEST PART OF THE FIRE HYDRANT (I.E. THE PUMPER NOZZLE). THE MAXIMUM DISTANCE (BACK OF CURB) SHALL BE IN COMPLIANCE WITH LOCAL COUNTY FIRE DEPARTMENT RULES AND AS APPROVED BY JEA. FOR OTHER LOCATION LIMITATIONS SEE PLATES W-10 AND W-11. IF PIPING BETWEEN TEE AND HYDRANT IS LONGER THAN 80 LF, AN ADDITIONAL 6" GATE VALVE IS REQUIRED AT THE HYDRANT LOCATION (PROVIDE 30" SEPARATION). ALL PIPING, VALVES AND FITTINGS ALONG THE HYDRANT BRANCH MAIN WHICH IS WITHIN 15 LF OF THE HYDRANT SHALL BE RESTRAINED UTILIZING ONLY TWO 3/4" DIA (THREADED ENDS) STEEL RODS AND EYE BOLTS (NO JOINT RESTRAINT DEVICES REQUIRED). A SPLIT SERRATED RING WITH RESTRAINT EARS (EBAA 15 PF06 or EQUAL) MAYBE USED IN THIS ASSEMBLY. ALL OTHER JOINTS ALONG THE HYDRANT BRANCH MAIN OUTSIDE OF THE FIRST 15 LF SHALL INCLUDE JOINT RESTRAINTS.
3. OPERATION OF THE FIRE HYDRANT SHALL BE EITHER FULL OPEN POSITION OR TOTALLY CLOSED POSITION. THE HYDRANT SHALL NOT BE UTILIZED TO THROTTLE OUTLET FLOW.
4. PRIOR TO PROJECT FINAL INSPECTION, THE HYDRANT AND ALL ABOVE GROUND PIPING SHALL BE RE-OILED, GREASED AND REPAINTED (RUS: KIL ENAMEL-INTERNATIONAL YELLOW OR EQUAL). PRIVATELY OWNED AND MAINTAINED FIRE HYDRANTS SHALL BE PAINTED RED.
5. FIRE HYDRANTS SHALL BE ORDERED WITH PROPER "BURY DEPTH" TO MEET ACTUAL FIELD CONDITIONS. THIS IS ESPECIALLY IMPORTANT FOR BRANCH LINES WHICH TEE-OFF A 12" OR LARGER WATER MAIN, UNLESS APPROVED OTHERWISE BY JEA. THE INSTALLATION OF (45°) BENDS IS NOT ACCEPTABLE WHEN UTILIZED TO CORRECT AN IMPROPERLY FURNISHED HYDRANT. THE USE OF HYDRANT EXTENSIONS SHOULD BE MINIMIZED.
6. BLUE REFLECTIVE MARKERS SHALL BE INSTALLED IN SUCH A MANNER THAT THE REFLECTIVE FACE OF THE MARKER IS PERPENDICULAR TO A LINE PARALLEL TO THE ROADWAY CENTERLINE. THE BLUE REFLECTIVE MARKERS SHALL BE PLACED IN THE CENTER OF THE TRAVEL LANE, DIRECTLY ACROSS FROM AND ADJACENT TO EACH FIRE HYDRANT.

FIRE HYDRANT INSTALLATION USING MECHANICAL JOINT TEE

JANUARY 2019

PLATE W-13



NOTES:

1. LOCATE WIRE SHALL BE ROUTED FROM THE VALVE TO THE HYDRANT AS SHOWN ABOVE. THE END OF THE WIRE SHALL BE SECURED TO THE PIPE MAIN. SEE SECTION 350, LOCATE WIRE INSTALLATION PARAGRAPH.
2. FIRE HYDRANTS SHALL BE INSTALLED BETWEEN BACK OF CURB AND FACE OF SIDEWALK. ALL HYDRANTS SHALL BE LOCATED NO LESS THAN THREE (3) FEET FROM THE EDGE OF PAVEMENT OR BACK OF CURB OF THE ADJACENT ROADWAY AND NO LESS THAN THREE (3) FEET FROM ANY PHYSICAL FEATURE WHICH MAY OBSTRUCT ACCESS OR VIEW OF ANY HYDRANT UNLESS OTHERWISE APPROVED BY THE JEA. THE MAXIMUM DISTANCE (BACK OF CURB) SHALL BE IN COMPLIANCE WITH LOCAL COUNTY FIRE DEPARTMENT RULES AND AS APPROVED BY JEA. FOR OTHER LOCATION LIMITATIONS SEE PLATES W-10 AND W-11. IF PIPING BETWEEN TEE AND HYDRANT IS LONGER THAN 80 LF, AN ADDITIONAL 6" GATE VALVE IS REQUIRED AT THE HYDRANT LOCATION (PROVIDE 30" SEPARATION). ALL PIPING, VALVES AND FITTINGS ALONG THE HYDRANT BRANCH MAIN WHICH IS WITHIN 15 LF OF THE HYDRANT SHALL BE RESTRAINED UTILIZING ONLY TWO 3/4" DIA (THREADED ENDS) STEEL RODS AND EYE BOLTS (NO JOINT RESTRAINT DEVICES REQUIRED). A SPLIT SERRATED RING WITH RESTRAINT EARS (EBAA 15 PF06 or EQUAL) MAYBE USED IN THIS ASSEMBLY. ALL OTHER JOINTS ALONG THE HYDRANT BRANCH MAIN OUTSIDE OF THE FIRST 15 LF SHALL INCLUDE JOINT RESTRAINTS.
3. OPERATION OF THE FIRE HYDRANT SHALL BE EITHER FULL OPEN POSITION OR TOTALLY CLOSED POSITION. THE HYDRANT SHALL NOT BE UTILIZED TO THROTTLE OUTLET FLOW.
4. PRIOR TO PROJECT FINAL INSPECTION, THE HYDRANT AND ALL ABOVE GROUND PIPING SHALL BE RE-OILED, GREASED AND REPAINTED (RUS: KIL ENAMEL-INTERNATIONAL YELLOW OR EQUAL). PRIVATELY OWNED AND MAINTAINED FIRE HYDRANTS SHALL BE PAINTED RED.
5. FIRE HYDRANTS SHALL BE ORDERED WITH PROPER "BURY DEPTH" TO MEET ACTUAL FIELD CONDITIONS. THIS IS ESPECIALLY IMPORTANT FOR BRANCH LINES WHICH TEE-OFF A 12" OR LARGER WATER MAIN, UNLESS APPROVED OTHERWISE BY JEA. THE INSTALLATION OF (45°) BENDS IS NOT ACCEPTABLE WHEN UTILIZED TO CORRECT AN IMPROPERLY FURNISHED HYDRANT. THE USE OF HYDRANT EXTENSIONS SHOULD BE MINIMIZED.
6. BLUE REFLECTIVE MARKERS SHALL BE INSTALLED IN SUCH A MANNER THAT THE REFLECTIVE FACE OF THE MARKER IS PERPENDICULAR TO A LINE PARALLEL TO THE ROADWAY CENTERLINE. THE BLUE REFLECTIVE MARKERS SHALL BE PLACED IN THE CENTER OF THE TRAVEL LANE, DIRECTLY ACROSS FROM AND ADJACENT TO EACH FIRE HYDRANT.

FIRE HYDRANT INSTALLATION LIMITED SPACE

JANUARY 2019

PLATE W-14

Engelhard, Thoms & Miller, Inc.
14775 Old St. Augustine Road
Jacksonville, FL 32218
TEL: (904) 642-9890
FAX: (904) 642-4444
REG - 0005254 LC - 0000316

ETM
WATER • SEWER • GAS • RAILROAD

THESE DETAILS AS SHOWN ON THIS DRAWING ARE BY THE JEA. WE TAKE NO EXCEPTION TO THE DESIGN

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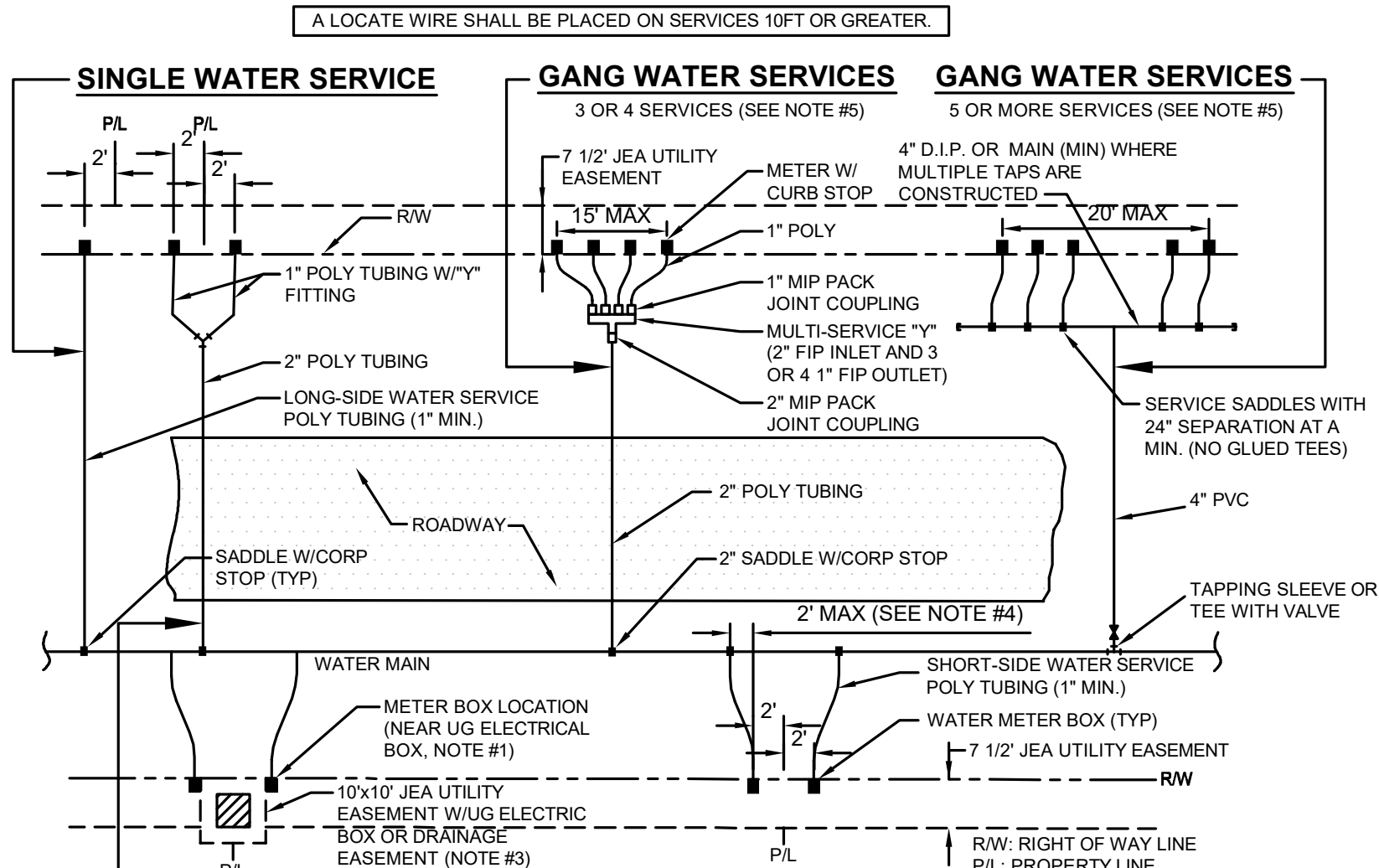
DESIGN ENGINEER	SCOTT A. WILD
FLORIDA REGISTRATION NO.	47030

JEA
Building Community

BEVERLY HILLS SEPTIC TANK PHASE OUT
OFFSITE FORCE MAIN
WATER DETAILS

BID DOCUMENTS - NOT FOR CONSTRUCTION

NO. SHEETS	PROJ. NO.	17-026-02
69	DATE:	MAY 5, 2020
SHEET NO.	SCALE:	AS NOTED
34	DRAWING NO.	W-STD-1

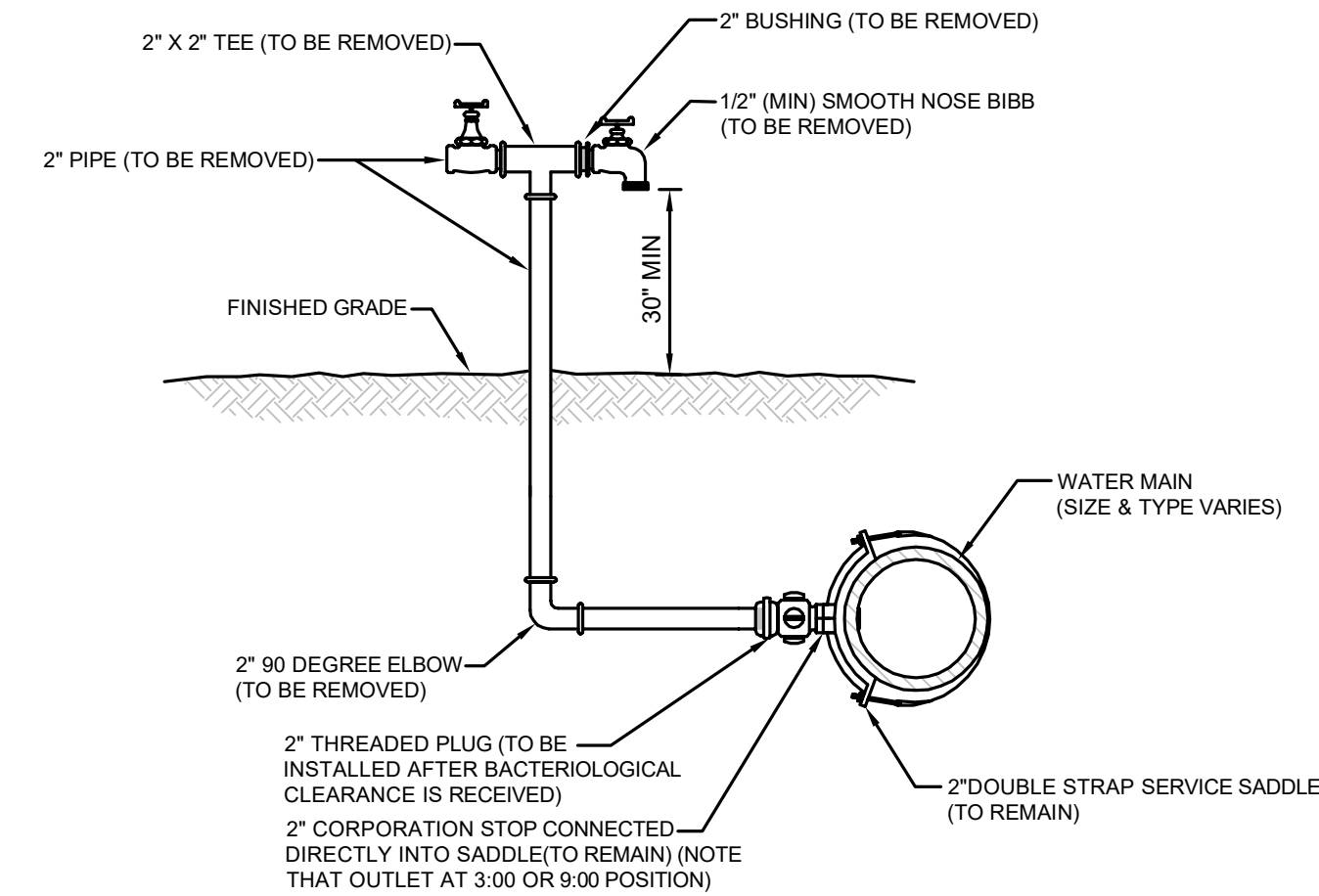


- NOTES:**
(SEE NOTE #6)
- THE SKETCHES ABOVE INDICATE TYPICAL WATER SERVICE AND METER BOX LOCATIONS. ACTUAL LOCATIONS OF BOXES MAY VARY SLIGHTLY ACCORDING TO FIELD CONDITIONS ENCOUNTERED. TYPICALLY, THE METER BOX SHALL LOCATED AT THE RW LINE BUT INSIDE THE 7 1/2" ELECTRIC EASEMENT.
 - UNLESS SPECIFIED OTHERWISE BY THE APPLICABLE COUNTY (NASSAU, CLAY OR ST. JOHN'S COUNTY), THE METER BOX SHALL BE LOCATED IN THE JEA 7 1/2" UTILITY EASEMENT, AND TWO FEET INSIDE OF THE PROLONGATION OF ONE OF THE SIDE PROPERTY LINES. IF A CONFLICT EXISTS WITH OTHER UTILITIES, THE METER BOX MAY BE ADJUSTED TO FOUR FEET (MAX.) INSIDE PROPERTY LINES (IN LIEU OF TWO FEET), UNLESS APPROVED OTHERWISE BY JEA. THE WATER METER BOX SHALL BE LOCATED IN NON-TRAFFIC AREAS (NOT IN SIDEWALKS OR DRIVEWAYS); IF THE METER BOX IS APPROVED BY JEA TO BE LOCATED IN A DRIVEWAY OR SIDEWALK, THEN THE CONSTRUCTION SHALL MEET STANDARD DETAIL NUMBERS W-384, AT A MINIMUM (SEE W-3 AND W-4 FOR THE REQUIREMENTS OF SPECIAL ORDER POLYMER BOX AND TOP). SET TOP OF BOX AT FINISHED GRADE. IF AN UNAPPROVED METER BOX IS IDENTIFIED BY JEA, THEN THE CONTRACTOR OR CUSTOMER SHALL BE RESPONSIBLE FOR THE COST OF RELOCATING ANY METER BOX WHICH IS LOCATED IN THE SIDEWALK OR DRIVEWAY OR THE COST TO PROVIDE THE CORRECT METER BOX. JEA SHALL APPROVE ALL DEVIATIONS TO THE ABOVE PRIOR TO CONSTRUCTION.
 - IF DRAINAGE OR OTHER EASEMENT LOCATED BETWEEN LOTS, METER BOXES SHALL BE LOCATED AT THE EASEMENT LINE BUT OUTSIDE THE EASEMENT AREA.
 - FOR SINGLE SERVICES, THE HORIZONTAL DISTANCE (PERPENDICULAR TO THE MAIN) BETWEEN THE SERVICES SADDLE AND THE METER BOX SHALL BE 2 FEET MAXIMUM FOR DOUBLE 1" SERVICES. THE 2" POLY MAIN SHALL BE LOCATED CENTERED BETWEEN THE TWO METER BOXES. LOCATE WIRE IS REQUIRED ON ALL SERVICES 10' OR GREATER IN LENGTH. IF LOCATE WIRE IS REQUIRED, THE WIRE SHALL RUN FROM THE METER BOX (W/ PIG TAIL) TO THE MAIN (DEAD END SHALL BE TAPED WITH NO CONNECTION TO MAIN WIRE WITH THE LAST 24 INCHES STRIPED OF INSULATION/BARE WIRE AS GROUND). ALL EXCEPTIONS TO THIS REQUIREMENT MUST BE APPROVED BY JEA. THIS WILL ASSIST IN LOCATING EXISTING SERVICE LINES IN THE FUTURE.
 - GANG WATER SERVICES: FOR 3 OR 4 SERVICES IN ONE AREA, A DUCTILE IRON PIPE (D.I.P.) WATER MAIN EXTENSION W/LOCATE WIRE MAY BE UTILIZED ON EITHER SHORT-SIDE OR LONG-SIDE SERVICES WHERE SHOWN ON THE DRAWINGS. LOCATE WIRE SHALL EXTEND FROM ONE METER BOX TO CORP STOP AT WATER MAIN. FOR 5 OR MORE SERVICES IN ONE AREA, A WATER MAIN EXTENSION W/LOCATE WIRE MAY BE UTILIZED ON EITHER SHORT-SIDE OR LONG-SIDE SERVICES WHERE SHOWN ON THE DRAWINGS (TAPS STAGGERED AND AT 2 FEET ON CENTER-MIN). FOR WATER SUPPLY HEADERS WHERE 5 OR MORE TAPS ARE CONSTRUCTED, THE HEADER PIPE SHALL BE 4" AT A MINIMUM. EXAMPLE: CONSTRUCT 4" MAIN PVC CROSSING THE STREET FOR 5 RESIDENTIAL CUSTOMERS, UTILIZING 4" DIP, 4" PIPE, 4"x1" SADDLES AND 1" CORP STOPS (NO GLUED TEE FITTINGS). THE 4" OR LARGER D.I.P. WATER MAIN MUST BE SIZED AND DESIGNED BY THE P.E. ENGINEER.
 - DOUBLE 1" WATER SERVICES IS ALLOWED FOR SHORT-SIDE OR LONG-SIDE SERVICES AND WHERE SHOWN ON THE DRAWINGS.
 - A 1" IRRIGATION SERVICE MAYBE TAPPED INTO THE (1" MIN) DOMESTIC WATER SERVICE LINE (WHICH SERVES THE SAME CUSTOMER) UTILIZING A 1" BRONZE "Y" FITTING. (IN AREAS WHERE NO RECLAIMED WATER IS AVAILABLE).
 - No 2" AND SMALLER WATER SERVICE TAPS PERMITTED ON WATER MAINS WHICH ARE 20" AND LARGER SIZE.
 - RECLAIMED WATER METER BOXES OR SERVICES SHALL BE CONSTRUCTED SIMILAR TO THE ABOVE AND SHALL BE LOCATED, AT A MIN. OF 10' FROM THE POTABLE WATER SERVICE, AND/OR BOX AND NOT ALLOWED IN CONCRETE OR ASPHALT UNLESS APPROVED OTHERWISE BY JEA.
 - SERVICE SIZE SHALL BE SAME AS THE METER SIZE.

WATER OR RECLAIM SERVICE INSTALLATIONS 2" AND SMALLER METER

January 2019

PLATE W-1

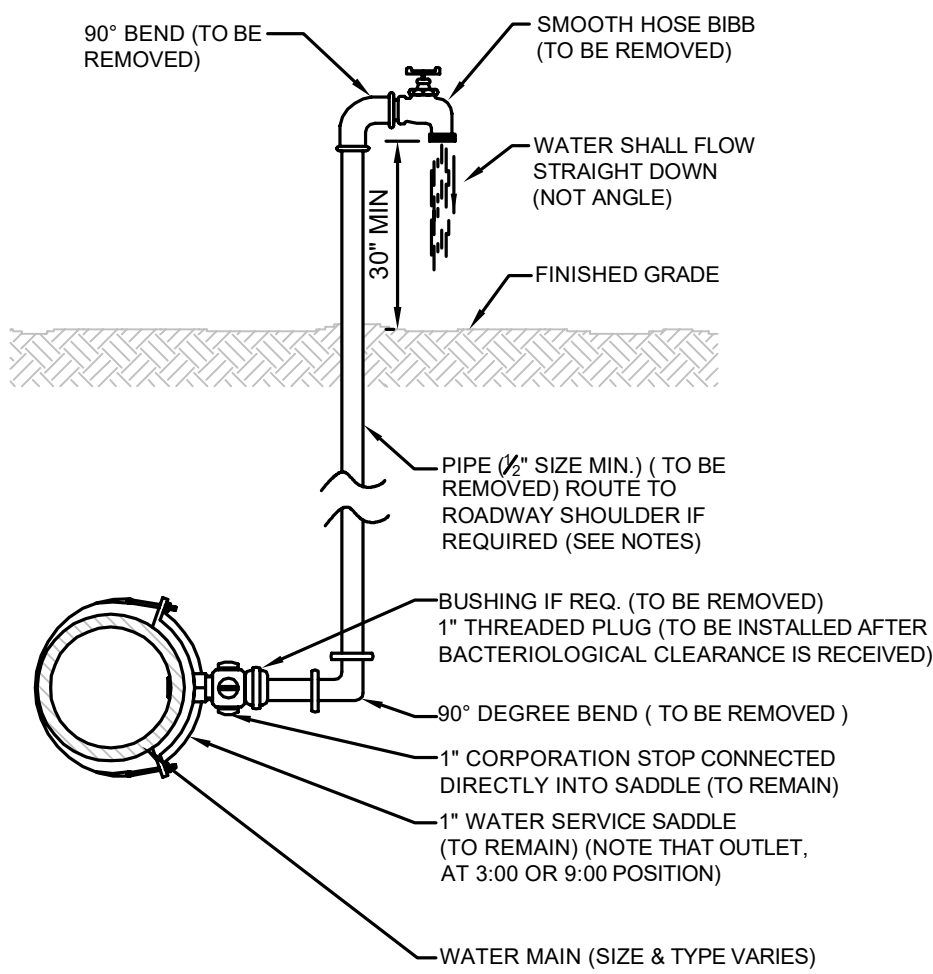


- NOTES:**
- LOCATION OF SAMPLE POINT BIBB SHALL NOT BE WITHIN THE ROADWAY BUT ROUTED TO THE ROADWAY SHOULDERS (NON-TRAFFIC AREAS).
 - ALL PIPE & FITTING SHALL BE GALVANIZED MATERIAL OR PVC (S-40).
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY PIPING & FITTING (AS NOTED) AFTER BACTERIOLOGICAL CLEARANCE IS RECEIVED.
 - THE CONTRACTOR SHALL COMPLY WITH ALL JEA RULES AND POLICIES AS OUTLINED BY THE JEA'S ENVIRONMENTAL RESPONSE COORDINATOR (ERC) AND OTHER ASSOCIATED JEA STANDARDS.

2" TEMPORARY SAMPLE TAP FOR STUB OUT

JANUARY 2019

PLATE W-26

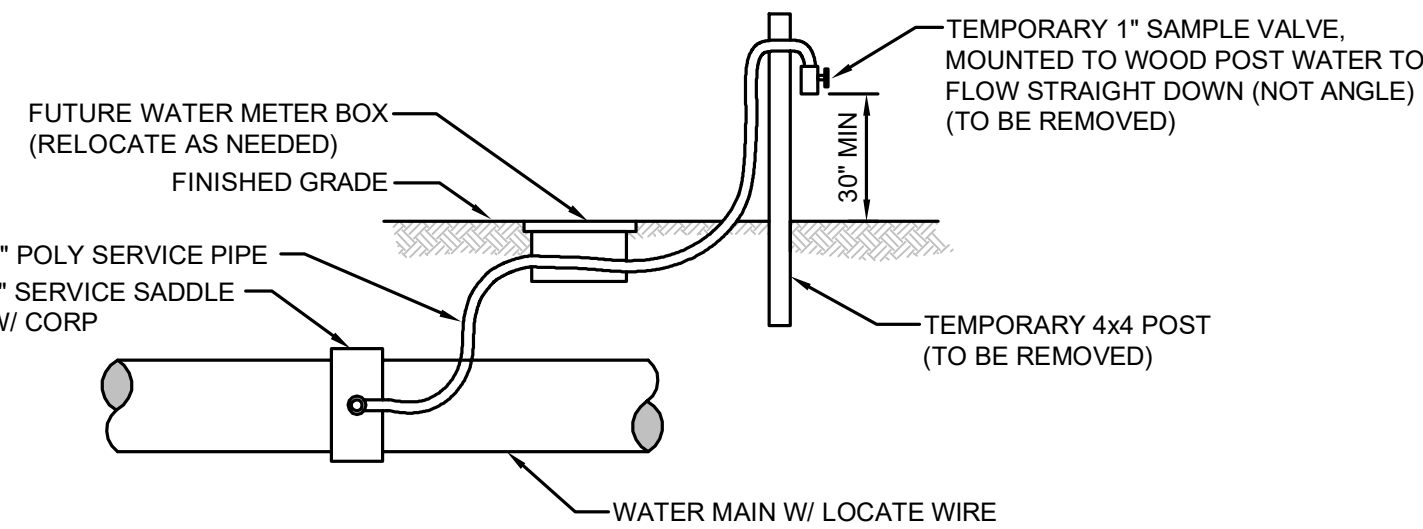


- NOTES:**
- LOCATION OF SAMPLE POINT BIBB SHALL NOT BE WITHIN THE ROADWAY BUT ROUTED TO THE ROADWAY SHOULDERS (NON-TRAFFIC AREAS).
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY PIPING & FITTINGS (AS NOTED), AFTER BACTERIOLOGICAL CLEARANCE IS RECEIVED.
 - PIPE AND FITTINGS SHALL BE PVC (SCH. 40) OR GALV. MATERIAL.
 - THE USE OF THE ABOVE CONSTRUCTION FOR A TEMPORARY SAMPLE POINT SHALL BE LIMITED TO AREAS WHERE A SAMPLE TAP BY ALTERNATIVE METHODS (SEE W-24) IS NOT FEASIBLE OR IF DIRECTED OTHERWISE BY JEA.
 - THE CONTRACTOR SHALL COMPLY WITH ALL JEA RULES AND POLICIES AS AS OUTLINED BY JEA'S ENVIRONMENTAL RESPONSE COORDINATOR (ERC) AND OTHER ASSOCIATED JEA STANDARDS.

TEMPORARY SAMPLE TAP

JANUARY 2019

PLATE W-25



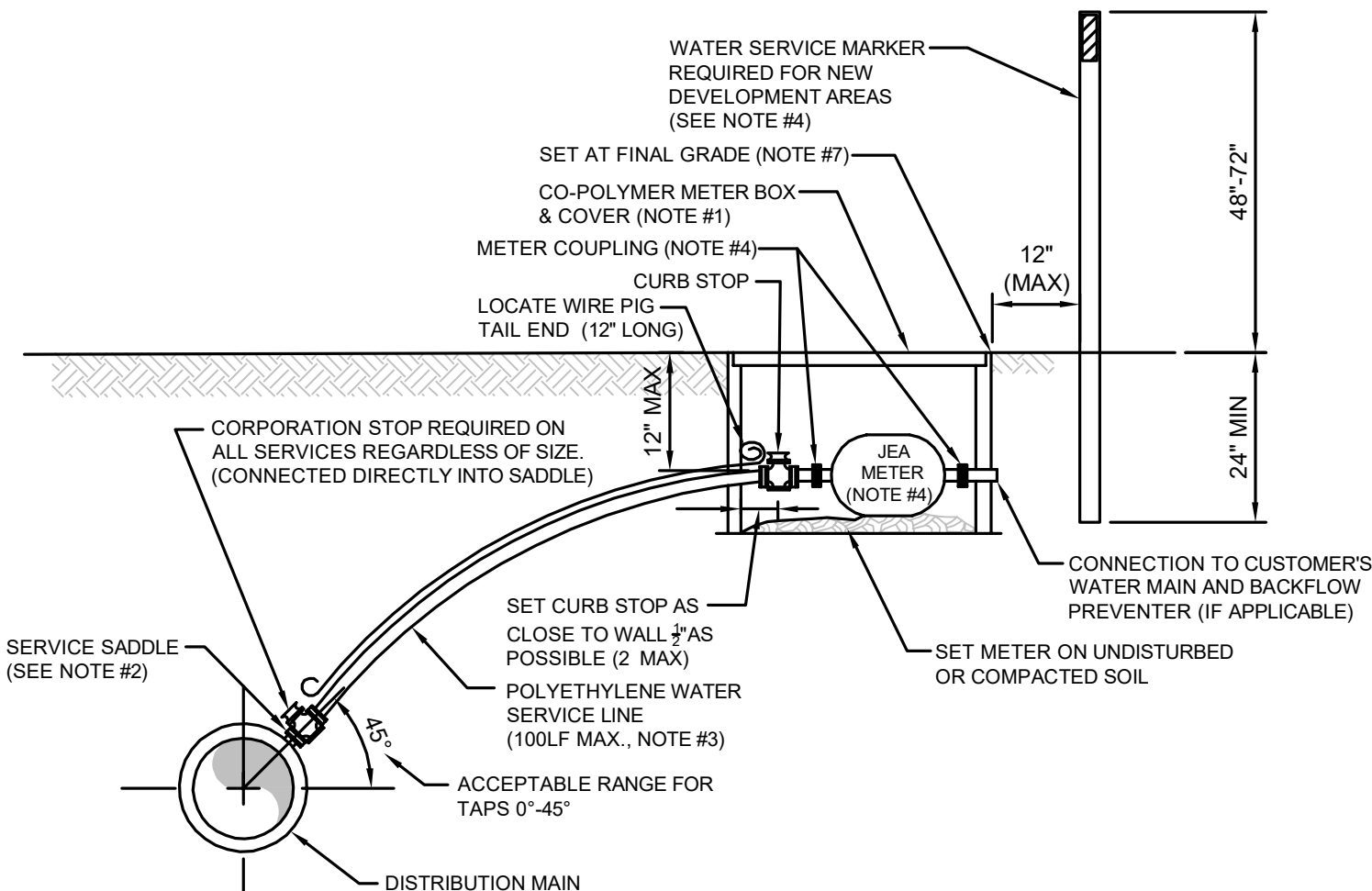
TEMPORARY SAMPLE TAP UTILIZING A NEW 1" WATER SERVICE

- NOTES:**
- LOCATION OF SAMPLE POINT BIBB SHALL NOT BE WITHIN THE ROADWAY BUT ROUTED TO THE ROAD SHOULDERS.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY PIPING & FITTINGS (AS NOTED) AFTER BACTERIOLOGICAL CLEARANCE IS RECEIVED.
 - THE CONTRACTOR SHALL UTILIZE THE ABOVE ALTERNATIVE METHODS FOR CONSTRUCTION OF TEMPORARY SAMPLE POINTS IN ALL AREAS, WHERE POSSIBLE.
 - THE CONTRACTOR SHALL COMPLY WITH ALL JEA RULES AND POLICIES AS OUTLINED BY THE JEA'S ENVIRONMENTAL RESPONSE COORDINATOR (ERC) AND OTHER ASSOCIATED JEA STANDARDS.

TEMPORARY SAMPLE TAP ALTERNATIVE METHOD A

JANUARY 2019

PLATE W-24

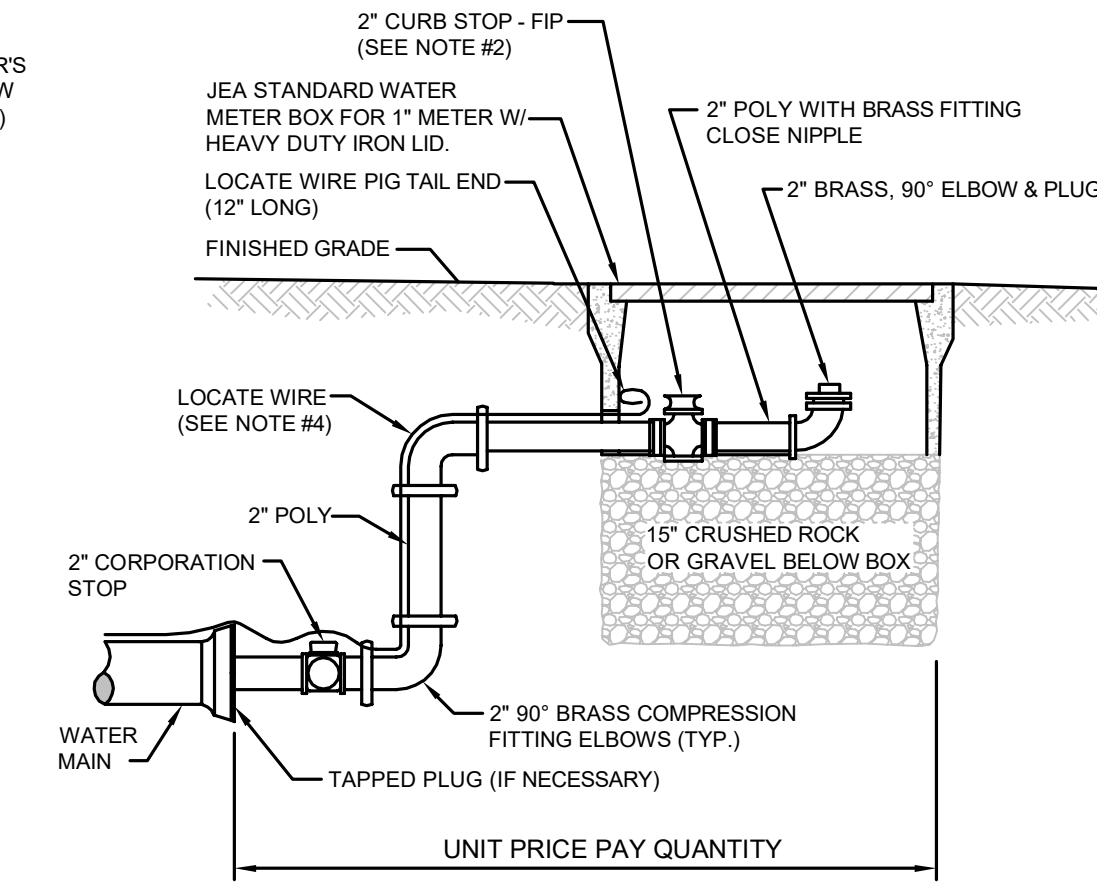


- NOTES:**
- SEE PLATE W-1 FOR METER LOCATION REQUIREMENTS.
 - SINGLE BAND SADDLES MAYBE UTILIZED ON NEW 1" WATER SERVICES WHICH ARE INSTALLED ON A DRY 10" SIZE OR SMALLER WATER MAIN (NEW WATER MAIN CONSTRUCTION). FOR WET TAPS OR WATER MAINS 12" SIZE AND LARGER, A DOUBLE BAND SADDLE IS REQUIRED. BRASS SADDLES MAY BE UTILIZED ON NEW 1 INCH AND SMALLER WATER SERVICES WHICH ARE INSTALLED ON A DRY 10 INCH OR SMALLER PVC WATER MAIN.
 - NO OPEN CUT UNDER ROADWAY PAVING ALLOWED UNLESS THE ROADWAY IS BEING RECONSTRUCTED OR IF DIRECTED OTHERWISE BY J.E.A. CONSTRUCT POLY LINE WITH 24" (MIN.) COVER UNDER ROADWAYS. THE POLY WATER SERVICE LINE SHALL BE SAME SIZE AS THE METER (1" MINIMUM) AND BE INSTALLED PERPENDICULAR TO THE MAIN AND NOT EXCEED 100LF UNLESS APPROVED OTHERWISE BY JEA.
 - INSTALL PVC PLUG IN ALL CURB STOPS IF WATER SERVICE IS "NOT IN USE" (I.E.: IF NO METER IS INSTALLED). WATER SERVICES SERVING VACANT LOTS (SERVICE NOT IN USE), SHALL INCLUDE A "W" CUT INTO THE CURB (CLOSEST TO THE METER BOX), AND PAINTED BLUE (PAINTED PURPLE FOR RECLAIMED WATER). IN ADDITION, FOR NEW DEVELOPMENT AREAS WHERE THE WATER SERVICE IS "NOT IN USE", A LANDSCAPE TIMBER OR 3/4 MIN. P.T. POST (TOP PAINTED BLUE OR PURPLE FOR RECLAIMED WATER). THE REMOVAL OR TRANSFER OF A WATER SERVICE SHALL INCLUDE BRASS METER COUPLINGS (HEX ON BARREL TYPE).
 - NO 2" AND SMALLER WATER SERVICE TAPS PERMITTED ON WATER MAINS WHICH ARE 20" AND LARGER SIZE.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF THE METER OR ELECTRONIC DEVICES IF DAMAGED BY THE CONTRACTOR DURING THE CONSTRUCTION PERIOD.
 - METER BOX AND TOP SHALL BE CLEAR OF ALL DEBRIS TO ALLOW FULL ACCESS TO BOX (I.E. NO DIRT, TRASH OR OTHER DEBRIS PLACED ON TOP OF BOX).
 - LOCATE WIRING REQUIRED ON ALL SERVICES 10' OR GREATER IN LENGTH. SEE PLATE W-44.

WATER SERVICE DETAIL- 2" AND SMALLER METER

JANUARY 2019

PLATE W-2

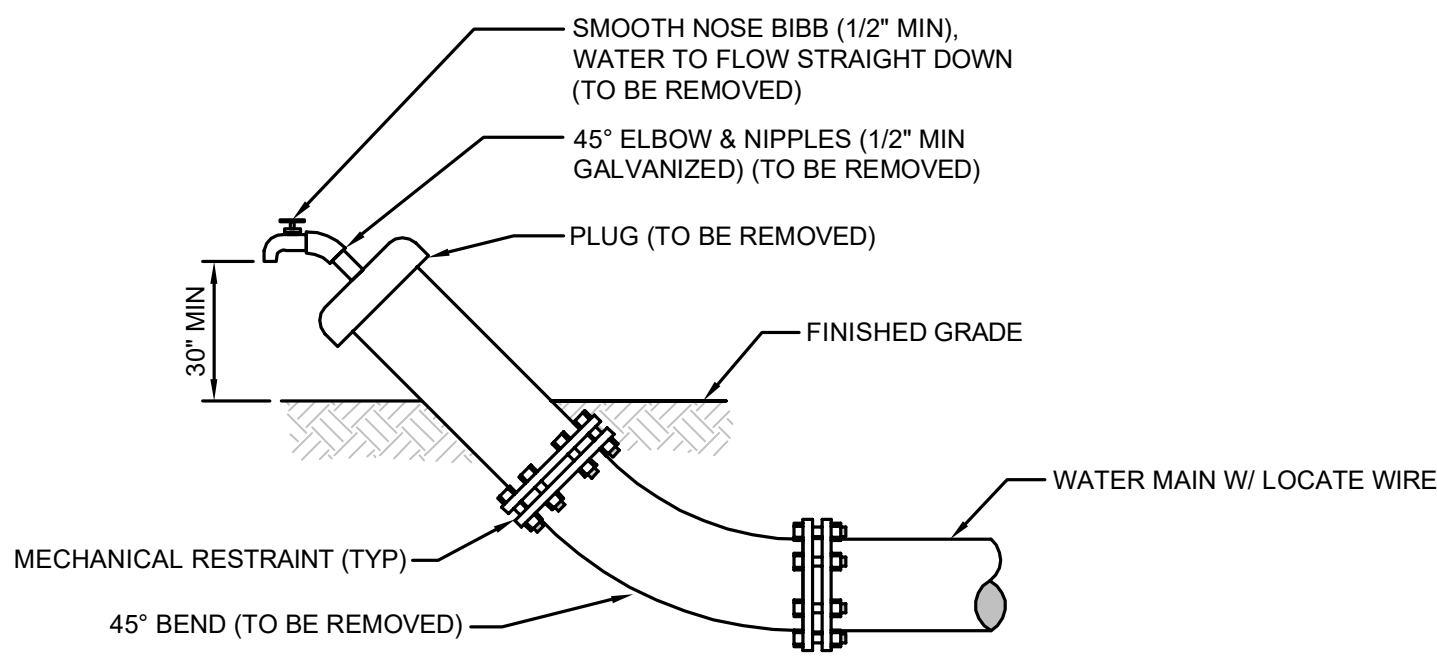


- NOTES:**
- PIPE SHALL BE POLYETHYLENE. FITTINGS SHALL BE BRASS.
 - THE 2" CURB STOP SHALL BE ALL BRONZE. FITTINGS SHALL BE BRASS.
 - ANY RECLAIMED WATER VALVE SHALL HAVE RECLAIMED EMBLEM.
 - LOCATE WIRE FOR 10' OR GREATER IN LENGTH.
 - CANNOT BE PLACED UNDER CONCRETE OR PAVEMENT.
 - PLACE 2 FEET PAST LAST WATER MAIN SERVICE CONNECTION.

FLUSHING VALVE BELOW GRADE

JANUARY 2019

PLATE W-28



TEMPORARY SAMPLE TAP UTILIZING PLUG AT FLUSHING LOCATION

- NOTES:**
- LOCATION OF SAMPLE POINT BIBB SHALL NOT BE WITHIN THE ROADWAY BUT ROUTED TO THE ROAD SHOULDERS.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY PIPING & FITTINGS (AS NOTED) AFTER BACTERIOLOGICAL CLEARANCE IS RECEIVED.
 - THE CONTRACTOR SHALL UTILIZE THE ABOVE ALTERNATIVE METHODS FOR CONSTRUCTION OF TEMPORARY SAMPLE POINTS IN ALL AREAS, WHERE POSSIBLE.
 - THE CONTRACTOR SHALL COMPLY WITH ALL JEA RULES AND POLICIES AS OUTLINED BY THE JEA'S ENVIRONMENTAL RESPONSE COORDINATOR (ERC) AND OTHER ASSOCIATED JEA STANDARDS.

TEMPORARY SAMPLE TAP ALTERNATIVE METHOD B

JANUARY 2019

PLATE W-24A
NAVD 88

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14776 Old St. Augustine Road
Jacksonville, FL 32218
TEL: (904) 642-8980
FAX: (904) 642-4444
REG. 00002594 LC - 0000316

ETM
WATER • SEWER • RAIN • SLOPE

THESE DETAILS AS SHOWN ON THIS DRAWING ARE BY THE JEA. WE TAKE NO EXCEPTION TO THE DESIGN

NO.	BY	DATE	REVISIONS
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3.			
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DESIGNER	D.W.H.	J.E.S.
SCOTT A. WILD		

FLORIDA REGISTRATION NO.	47030

JEA
Building Community

BID DOCUMENTS - NOT FOR CONSTRUCTION

PROJ. NO: 17-026-02

DATE: MAY 5, 2020

SCALE: AS NOTED

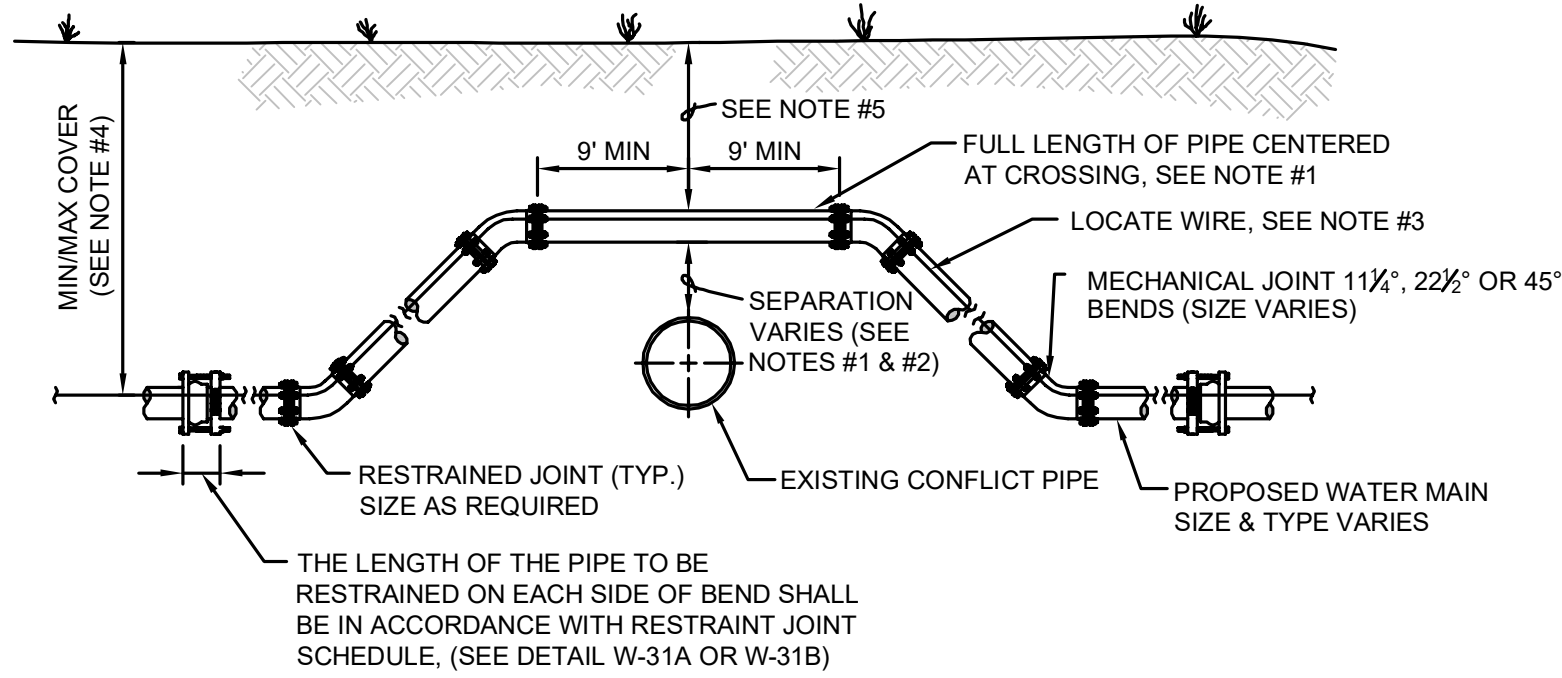
BEVERLY HILLS SEPTIC TANK PHASE OUT
OFFSITE FORCE MAIN
WATER DETAILS

NO. SHEETS 69

SHEET NO. 35

DRAWING NO. W-STD-2

G:\17-026\17-026-02\LandDev\Design\Plots\17-026-02 JEA WATER AND RECLAIMED DETAILS.dwg
Current Layout Tab = W-STD-3 WATER DETAILS
Mon Apr 27, 2020 - 14:45



CASE "A" CROSSING

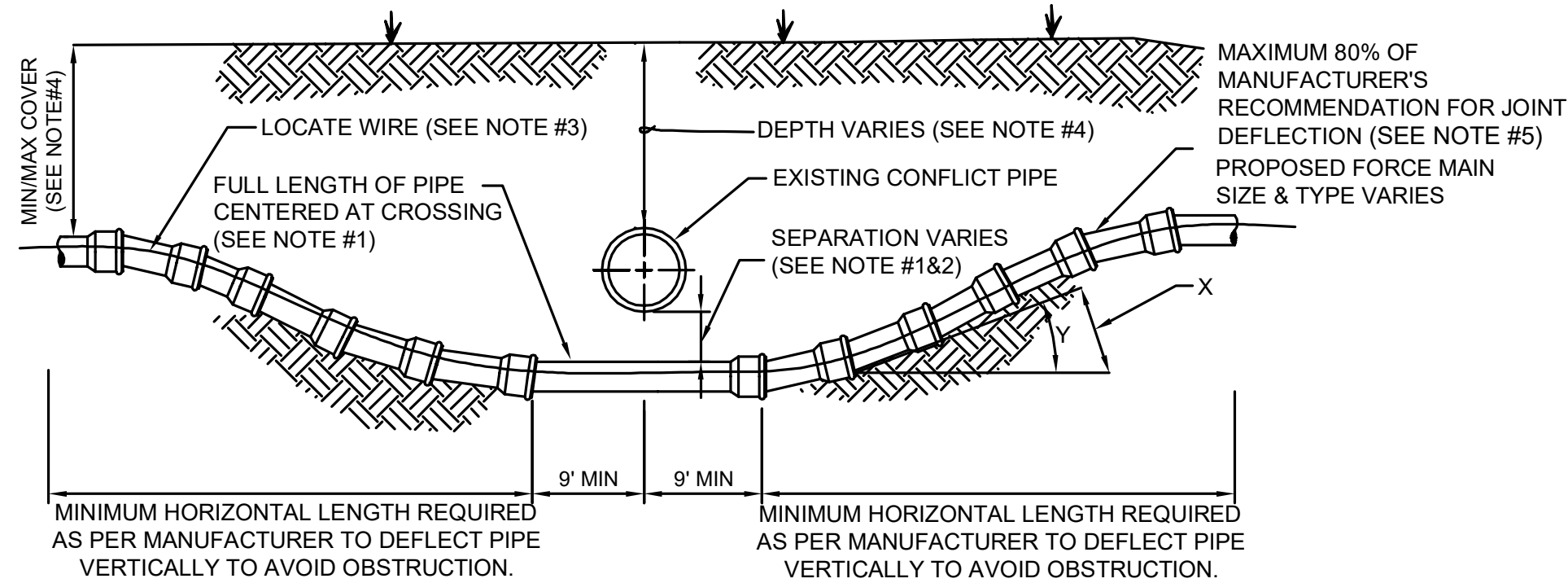
NOTES:

- THE SOILS BETWEEN THE NEW MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST, ASTM D 1557.
- FOR MINIMUM VERTICAL SEPARATION REQUIREMENTS SEE DETAIL (W-10 AND W-11).
- LOCATING WIRE REQUIRED: SEE DETAIL W-44.
- THE COVER FOR PIPING LESS THAN 24" SIZE SHALL BE 30" (MIN) IN UNPAVED AREAS, 36" (MIN) IN PAVED AREAS AND A MAXIMUM COVER OF 60", UNLESS APPROVED BY JEA. THE COVER FOR PIPING 24" SIZE AND LARGER SHALL BE 36" (MIN) IN PAVED AND UNPAVED AREAS AND A MAXIMUM COVER OF 84", UNLESS APPROVED BY JEA.
- IF UTILITY CONFLICT IS LOCATED IN A NON-TRAFFIC AREA (NO TRAFFIC LOADS) AND THE NEW PIPE IS D.I.P., THEN THE MINIMUM COVER MAY BE REDUCED TO 24 INCHES (ONLY IN THE AREA OF THE CONFLICT).

ADJUSTMENT OVER EXISTING UTILITIES MECHANICAL RESTRAINTS

JANUARY 2019

PLATE W-32



CASE "B" CROSSING

NOTES:

- IF EXISTING CONFLICT PIPE IS A WATER MAIN, 12-INCHES OF SEPARATION IS REQUIRED. A FULL LENGTH OF PIPE SHALL BE CENTERED OVER EXISTING UTILITY MAIN TO PROVIDE MAXIMUM JOINT SPACING FOR ALL CROSSING.
- FOR OTHER LOCATION LIMITATIONS SEE DETAIL (W-10 & W-11).
- LOCATING WIRE REQUIRED: SEE DETAIL W-44.
- THE COVER OVER ALL PIPING LESS THAN 24" SIZE SHALL BE A MINIMUM OF 30" IN UNPAVED AREAS AND 36" IN PAVED AREAS WITH A MAXIMUM COVER OF 60" UNLESS APPROVED OTHERWISE BY JEA. COVER FOR PIPING 24" SIZE AND LARGER SHALL BE MINIMUM OF 36" (PAVED AND UNPAVED) AND MAXIMUM OF 84" UNLESS APPROVED OTHERWISE BY JEA. THE SOILS BETWEEN THE NEW MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST ASTM D 1557.
- JE A ONLY ALLOWS 80% OF THE PIPE MANUFACTURER'S RECOMMENDATION FOR JOINT DEFLECTION. BENDING THE PIPE BARREL IS NOT ALLOWED. UNLESS OTHERWISE APPROVED BY JEA, THE MAXIMUM ARE LISTED IN TABLE BELOW. ONLY MANUAL FORCE CAN BE UTILIZED TO OBTAIN THESE JOINT DEFLECTION. ALL OFFSETS ARE BASED ON MINIMUM 20LF PIPE LENGTH.

MAXIMUM ALLOWED OFFSET FOR PIPE BY JOINT DEFLECTION

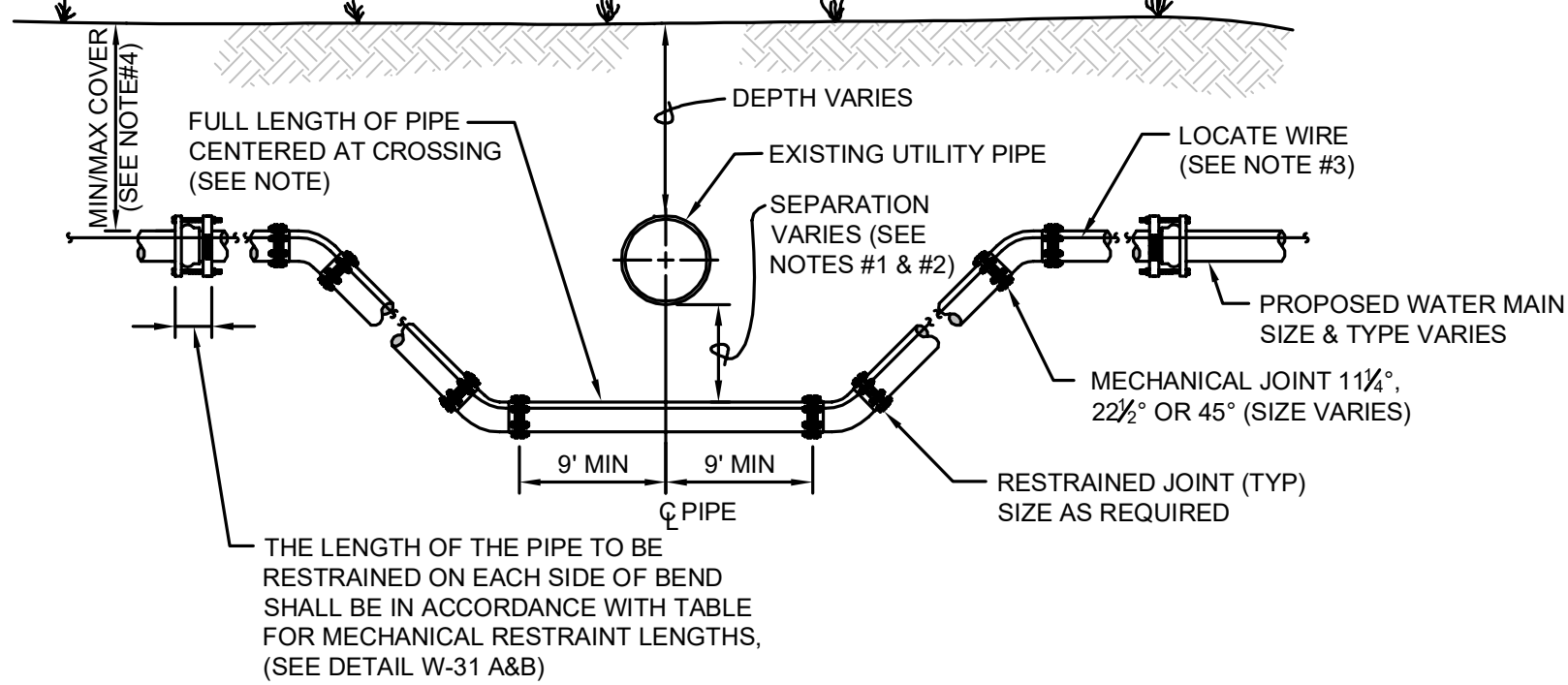
PVC PIPE			
PIPE SIZE (IN.)	(X) MAX. OFFSET (IN.)	(Y) ANGLE AT ONE BELL	RESULTING RADIUS OF CURVE WITH 20FT. LENGTHS
2	30	7°	158 FT
4	10	2.4°	480 FT
6	10	2.4°	480 FT
8	10	2.4°	480 FT
10	10	2.4°	480 FT
12	8.5	2°	564 FT
14 - 24	5	1.2°	960 FT
30 - 48	3.25	0.8°	1477 FT

DUCTILE IRON PIPE (Mechanical Joint)			
PIPE SIZE (IN.)	(X) MAX. OFFSET (IN.)	(Y) ANGLE AT ONE BELL	RESULTING RADIUS OF CURVE WITH 20FT. LENGTHS
-	-	-	-
4	27	6.5°	177 FT
6	24	5.7°	200 FT
8 - 12	17.5	4.2°	273 FT
14 - 16	12	2.9°	400 FT
18 - 20	10	2.4°	477 FT
24 - 30	8	1.9°	600 FT
36	7	1.7°	687 FT
42 - 48	6.7	1.6°	716 FT

ADJUSTMENT UNDER EXISTING UTILITIES PIPE JOINT DEFLECTION

JANUARY 2019

PLATE W-40



CASE "B" CROSSING

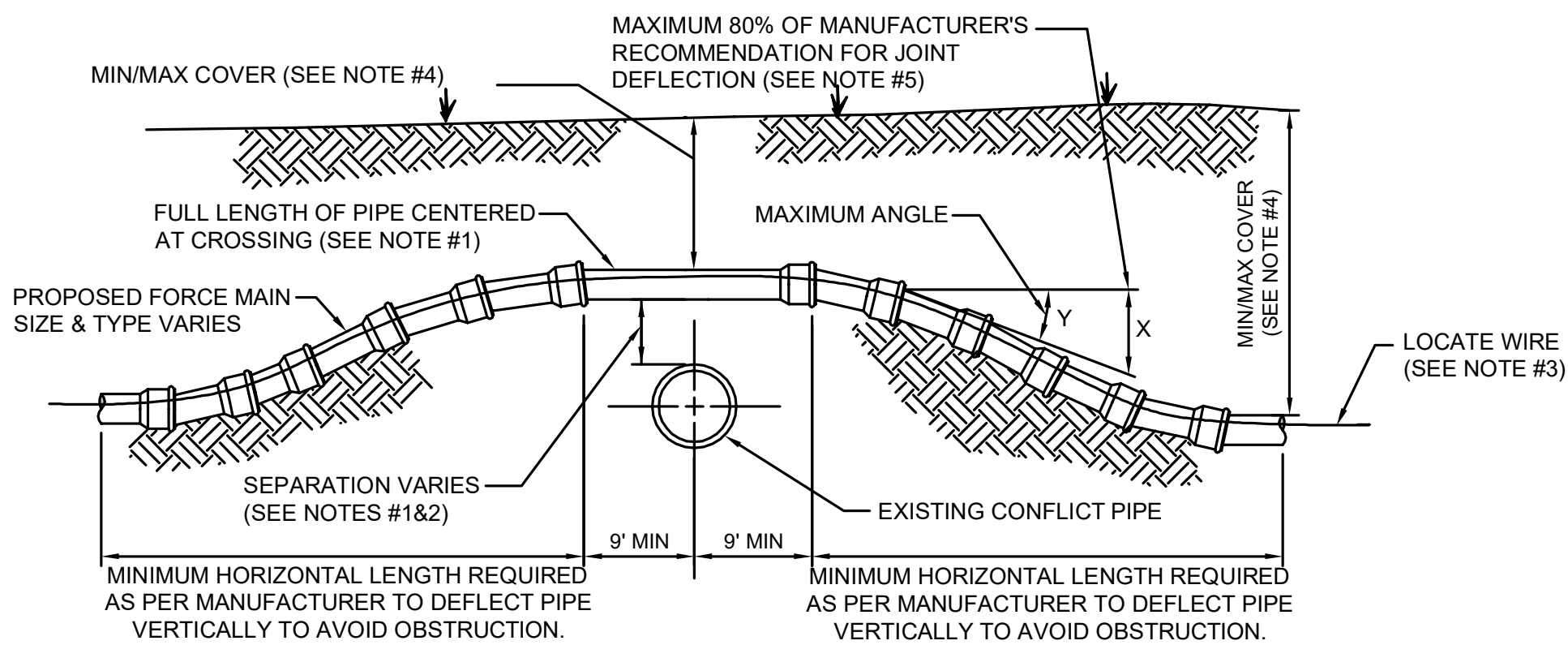
NOTES:

- THE SOILS BETWEEN THE NEW MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST, ASTM D 1557
- FOR MINIMUM VERTICAL SEPARATION REQUIREMENTS SEE DETAILS (W-10 AND W-11)
- LOCATING WIRE REQUIRED: SEE DETAIL W-44.
- THE COVER FOR PIPING LESS THAN 24" SIZE SHALL BE 30" (MIN) IN UNPAVED AREA, 36" (MIN) IN PAVED AREAS AND A MAXIMUM COVER OF 60", UNLESS APPROVED BY JEA. THE COVER FOR PIPING 24" SIZE AND LARGER SHALL BE 36" (MIN) IN PAVED AND UNPAVED AREAS AND A MAXIMUM COVER OF 84", UNLESS APPROVED BY JEA.

ADJUSTMENT UNDER EXISTING UTILITIES MECHANICAL RESTRAINTS

JANUARY 2019

PLATE W-34



CASE "A" CROSSING

NOTES:

- IF EXISTING CONFLICT PIPE IS A WATER MAIN, 12-INCHES OF SEPARATION IS REQUIRED. A FULL LENGTH OF PIPE SHALL BE CENTERED OVER EXISTING UTILITY MAIN TO PROVIDE MAXIMUM JOINT SPACING FOR ALL CROSSING.
- FOR OTHER LOCATION LIMITATIONS SEE DETAIL (S-10 & W-11).
- LOCATING WIRE REQUIRED: SEE DETAIL W-44.
- THE COVER OVER ALL PIPING LESS THAN 24" SIZE SHALL BE A MINIMUM OF 30" IN UNPAVED AREAS AND 36" IN PAVED AREAS WITH A MAXIMUM COVER OF 60" UNLESS APPROVED OTHERWISE BY JEA. COVER FOR PIPING 24" SIZE AND LARGER SHALL BE MINIMUM OF 36" (PAVED AND UNPAVED) AND MAXIMUM OF 84" UNLESS APPROVED OTHERWISE BY JEA. THE SOILS BETWEEN THE NEW MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST ASTM D 1557.
- JE A ONLY ALLOWS 80% OF THE PIPE MANUFACTURER'S RECOMMENDATION FOR JOINT DEFLECTION. BENDING THE PIPE BARREL IS NOT ALLOWED. UNLESS OTHERWISE APPROVED BY JEA, THE MAXIMUM ARE LISTED IN TABLE BELOW. ONLY MANUAL FORCE CAN BE UTILIZED TO OBTAIN THESE JOINT DEFLECTION. ALL OFFSETS ARE BASED ON MINIMUM 20LF PIPE LENGTH.

MAXIMUM ALLOWED OFFSET FOR PIPE BY JOINT DEFLECTION

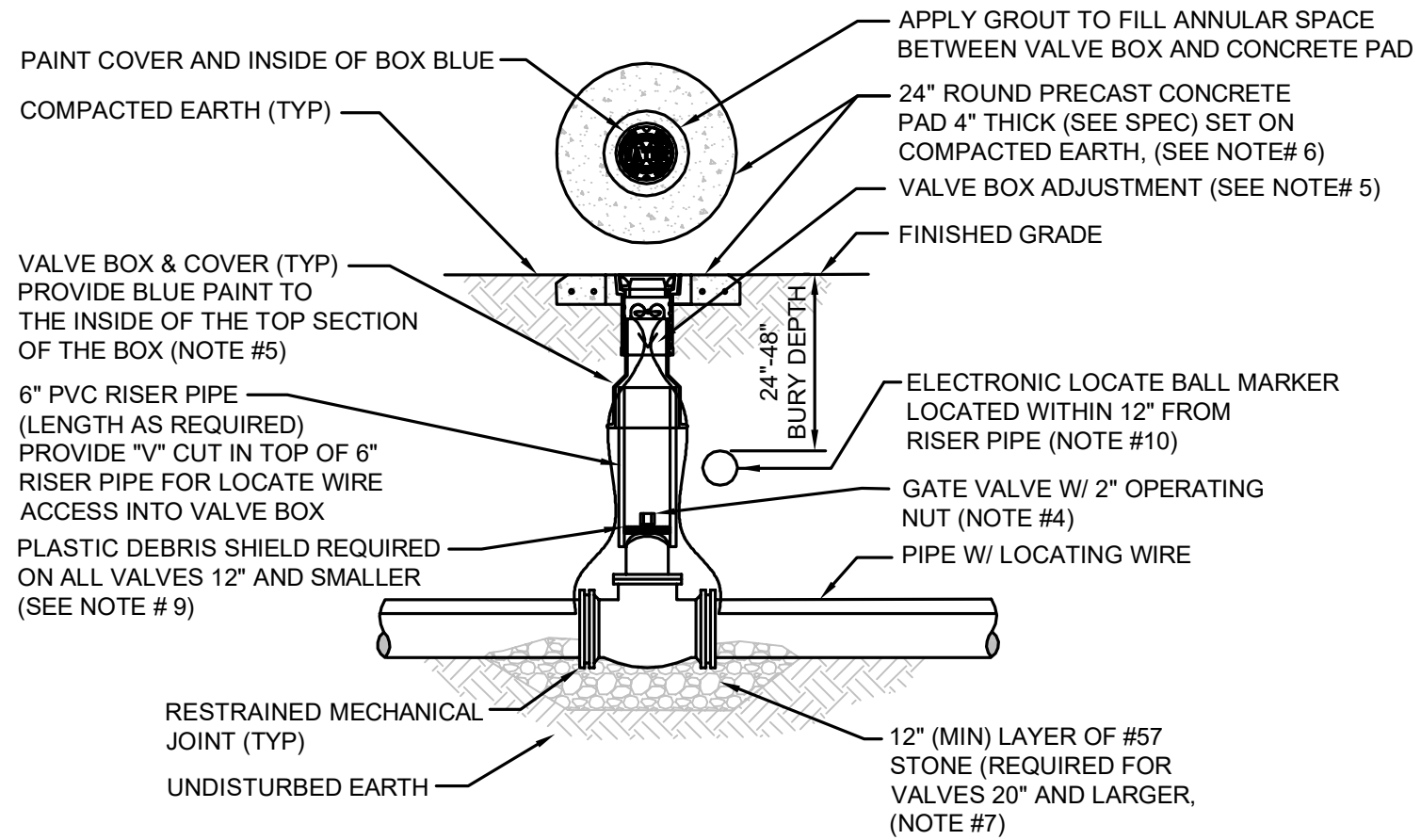
PVC PIPE			
PIPE SIZE (IN.)	(X) MAX. OFFSET (IN.)	(Y) ANGLE AT ONE BELL	RESULTING RADIUS OF CURVE WITH 20FT. LENGTHS
2	30	7°	158 FT
4	10	2.4°	480 FT
6	10	2.4°	480 FT
8	10	2.4°	480 FT
10	10	2.4°	480 FT
12	8.5	2°	564 FT
14 - 24	5	1.2°	960 FT
30 - 48	3.25	0.8°	1477 FT

DUCTILE IRON PIPE (Mechanical Joint)			
PIPE SIZE (IN.)	(X) MAX. OFFSET (IN.)	(Y) ANGLE AT ONE BELL	RESULTING RADIUS OF CURVE WITH 20FT. LENGTHS
-	-	-	-
4	27	6.5°	177 FT
6	24	5.7°	200 FT
8 - 12	17.5	4.2°	273 FT
14 - 16	12	2.9°	400 FT
18 - 20	10	2.4°	477 FT
24 - 30	8	1.9°	600 FT
36	7	1.7°	687 FT
42 - 48	6.7	1.6°	716 FT

ADJUSTMENT OVER EXISTING UTILITIES PIPE JOINT DEFLECTION

JANUARY 2019

PLATE W-41



NOTES:

- FOR UNPAVED LOCATIONS, A PRECAST CONCRETE VALVE PAD SHALL BE PROVIDED AND INSTALLED FLUSH WITH GRADE. CONCRETE PAD IS NOT REQUIRED FOR VALVE LOCATED IN THE ROADWAY, UNLESS SHOWN OR NOTED OTHERWISE.
- LOCATING WIRE IS REQUIRED ON ALL PRESSURE PIPING (SEE DETAILW-44).
- A "V" CUT SHALL BE CARVED IN THE CURB CLOSEST/ADJACENT TO ALL BELOW GRADE VALVES. THE "V" CUT IS TO BE PAINTED GREEN.
- IN PAVED AREAS, INSTALL VALVE AT A DEPTH TO ALLOW A 12" MIN. DISTANCE BETWEEN THE VALVE COVER PLATE AND THE TOP OF THE VALVE OPERATING NUT. OUTSIDE OF PAVED AREAS (GRASS), INSTALL VALVE AT A DEPTH TO ALLOW A 6" MINIMUM DISTANCE BETWEEN THE VALVE COVER AND THE TOP OF THE VALVE OPERATING NUT. OPERATING NUT/STEM EXTENSION SHALL BE PROVIDED (WHERE APPLICABLE) SO THAT THE OPERATING NUT WILL BE NO MORE THAN 30 INCHES BELOW FINISHED GRADE.
- FOR NEW CONSTRUCTION, THE VALVE BOX SHALL BE ADJUSTED TO MIDRANGE TO ALLOW FOR FUTURE BOX ADJUSTMENTS. ROUTE LOCATE WIRES THRU A "V" CUT IN THE TOP OF THE 6" PVC RISER PIPE FOR LOCATE WIRE ACCESS INTO VALVE BOX. THE LOCATE WIRES WITH A 12" LONG PIG-TAIL AT THE TOP SHALL BE CONNECTED TOGETHER WITH A WIRE NUT.
- BRASS IDENTIFICATION TAG INDICATING "WATER", VALVE SIZE, DIRECTION AND TURNS TO OPEN & VALVE TYPE. PROVIDE A 1/2" HOLE IN BRASS TAG AND ATTACH TAG (TWIST WIRE AROUND TAG) TO THE END OF THE LOCATE WIRE. TAGS ARE NOT REQUIRED ON VALVES INSTALLED ON FIRE HYDRANT BRANCH LINES.
- IN LIEU OF PRECAST CONCRETE PAD, A 6" THICK X 24" (ROUND OR SQUARE) POURED CONCRETE PAD W/2 - #4 REBAR AROUND PERIMETER, MAY BE USED.
- GRAVEL SHALL BE PROVIDED UNDER ALL VALVES 20" AND LARGER. THE MINIMUM VERTICAL LIMIT OF GRAVEL IS 12" UNDER THE VALVE UP TO 1/2 THE OVERALL HEIGHT OF THE VALVE.
- FOR VALVES 12 INCH AND SMALLER, PROVIDE A WHITE OR BLACK PLASTIC DEBRIS SHIELD WHICH INSTALLS BELOW THE OPERATING NUT. THIS SHIELD SHALL CENTER THE RISER PIPE BOX OVER THE OPERATING NUT AND MINIMIZE INFILTRATION. SHIELD SHALL BE BY AFC, BOXLOK OR APPROVED EQUAL.
- ALL VALVES SHALL BE INSTALLED WITH AN ELECTRIC LOCATE MARKER. MARKER SHALL BE 4" DIA. COLOR CODED BALL MARKER (3M-1403XR FOR WATER AND 1408XR FOR RECLAIMED WATER).

WATER VALVE INSTALLATION DETAIL

JANUARY 2019

PLATE W-18

NAVD 88

ENGINEER: Thomas & Miller, Inc.
14775 Old St. Augustine Road
Jacksonville, FL 32218
TEL: (904) 642-8880
FAX: (904) 642-4444
REG. # 00002594 - FLORIDA
REG. # 00002594 - FLORIDA

ETM
EARTH TANK MARKER

THESE DETAILS AS SHOWN ON THIS DRAWING ARE BY THE JEA. WE TAKE NO EXCEPTION TO THE DESIGN

DESIGNER: D.W.H.
DRAWN BY: J.E.S.
DATE: S.A.W.
CHECKED BY: S.A.W.
DATE:

DESIGN ENGINEER: SCOTT A. WILD
FLORIDA REGISTRATION NO.: 47030

NO. SHEETS: 69
SHEET NO.: 36
DRAWING NO.: W-STD-3

PROJ. NO.: 17-026-02
DATE: MAY 5, 2020
SCALE: AS NOTED

BID DOCUMENTS - NOT FOR CONSTRUCTION

BEVERLY HILLS SEPTIC TANK PHASE OUT
OFFSITE FORCE MAIN
WATER DETAILS

PVC PIPE RESTRAINT NOTES:

- THIS SCHEDULE SHALL BE UTILIZED ON ALL WATER, SEWER FORCE MAIN OR RECLAIMED WATER SYSTEMS. ALL FITTINGS SHALL BE RESTRAINED TO LENGTHS INDICATED ON THE ABOVE SCHEDULE, AT A MINIMUM.
- ASSUMPTIONS: PVC PIPE, SAFETY FACTOR=1.5, TEST PRESSURE=150PSI, SOIL=GM OR SM, TRENCH TYPE 3, DEPTH OF COVER=30 INCHES FOR 20" AND SMALLER PIPE SIZE OR 36 INCHES FOR 24" AND LARGER PIPE SIZE.
- BENDS AND VALVES: SHALL BE RESTRAINED ON EACH SIDE OF FITTING.
- VERTICAL OFFSETS: ARE APPROX. 3 FEET COVER ON TOP AND APPROX. 8 FEET COVER ON BOTTOM. PER THE DETAILS, LU IS THE RESTRAINED LENGTH FOR THE UPPER (TOP) LEVEL. LI IS THE RESTRAINED LENGTH FOR THE LOWER (DEEPER) LEVEL. ASSUME 45 DEGREE BENDS.
- TEES: TOTAL LENGTH BETWEEN FIRST JOINTS OR RESTRAINED LENGTH ON EITHER SIDE OF TEE (RUN) SHALL BE A TOTAL DISTANCE OF 30 FEET (MIN). SEE SCHEDULE ABOVE FOR RESTRAINT LENGTH ON TEE "BRANCH" LINE.
- HDPE TO PVC TRANSITIONS: THE PVC PIPE SIDE SHALL BE RESTRAINED 35 FT (MIN).
- THE INSTALLATION OF BELL HARNESS RESTRAINTS AT PVC JOINTS (DR-18 & 25 PIPE) SHALL BE COMPLETED PER THE MANUFACTURERS RECOMMENDATION, WHICH INCLUDES NOT OVER TIGHTENING THE PARALLEL RODS/NUTS. THESE NUTS SHOULD ONLY BE SNUG TIGHT. THE HOME MARKS ON THE PIPE SHOULD ALWAYS BE VISIBLE AFTER THE RESTRAINT IS INSTALLED. OVERHOMING THE JOINT MAY CAUSE A FAILURE AT THE BELL RESULTING IN A SERVICE OUTAGE.

LENGTH (L) TO BE RESTRAINED

NOMINAL PIPE SIZE (IN.)	HORIZONTAL BENDS				VERTICAL OFFSETS 45° BENDS (SEE NOTE 4)		VALVES OR DEAD ENDS L (FT.)
	90° BENDS L (FT.)	45° BENDS L (FT.)	22.5° BENDS L (FT.)	11.25° BENDS L (FT.)	UPPER L (FT.)	LOWER L (FT.)	
4	21	9	5	3	17	3	47
6	30	13	6	3	23	4	66
8	38	16	8	4	30	6	86
10	45	19	9	5	36	7	103
12	53	22	11	6	43	8	121
14	61	26	13	6	50	9	140
16	66	28	14	7	55	10	154
18	73	30	15	8	60	11	170
20	79	33	16	8	66	12	186
24	79	33	16	8	77	15	185
30	93	39	19	10	97	17	222
36	106	39	21	11	107	20	257
42	117	49	24	12	120	24	289
48	144	53	26	13	133	26	321

(SEE PLATE Nos. 38C & 38D FOR ADDITIONAL DETAILS)

REDUCERS	
SIZE (IN.)	L (FT.)
6x4	34
8x6	36
8x4	62
10x8	35
10x6	63
12x10	36
12x8	64
16x12	66
16x10	92
20x18	35
20x16	66
20x12	117
24x20	58
24x18	80
24x16	101
30x24	78
30x20	121
36x30	78
36x24	141
42x36	75
42x30	140
48x42	75
48x36	139

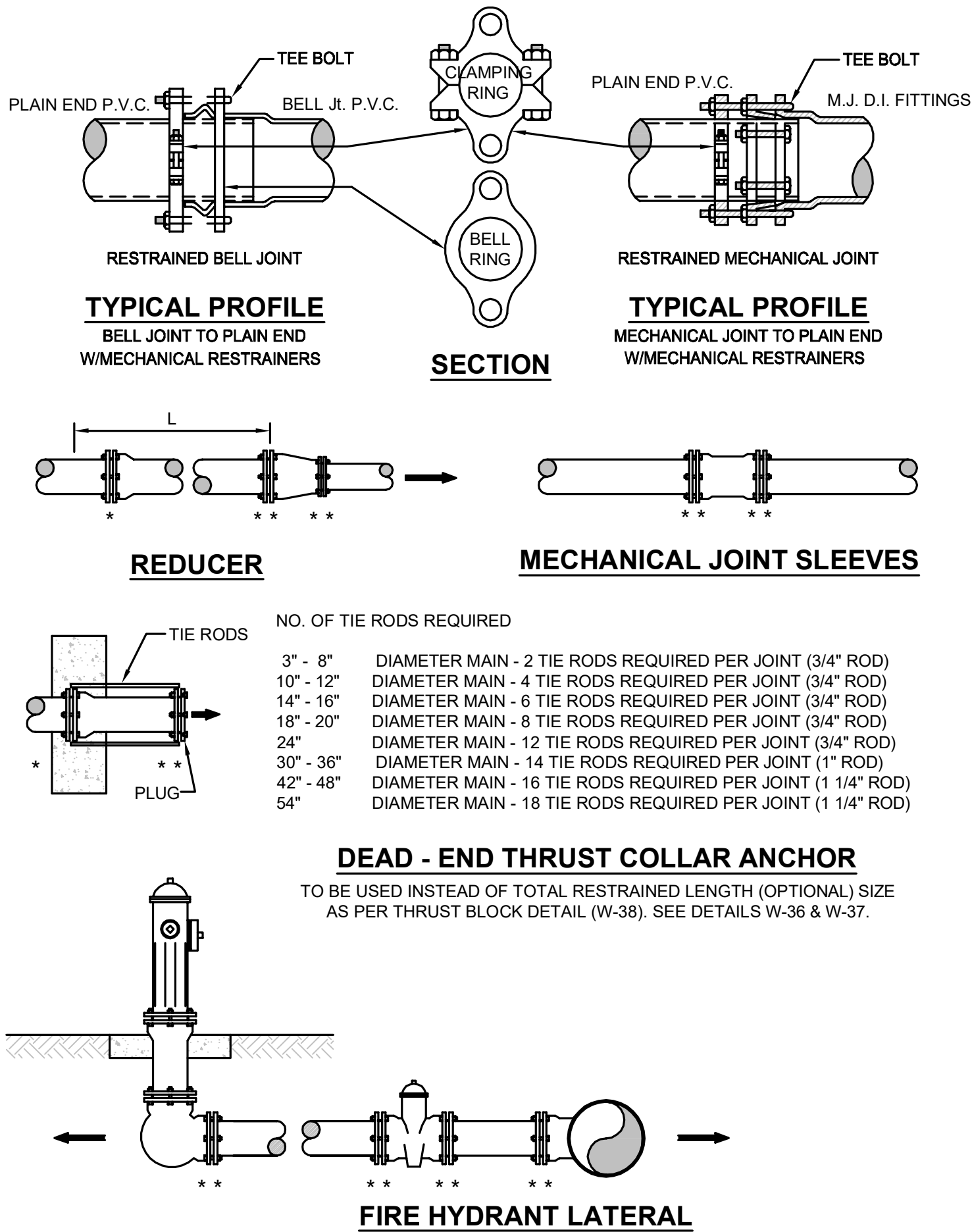
TEES SEE NOTE 5		
RUN SIZE (IN.)	BRANCH SIZE (IN.)	L (FT.)
4	4	F.O.
4	4 < LESS	10 F.O.
8	6 < LESS	29 F.O.
10	10	45 F.O.
12	12	62 F.O.
16	10	32 F.O.
16	8 < LESS	10 F.O.
16	16	94 F.O.
20	12	39 F.O.
20	10	5 F.O.
20	20	125 F.O.
24	16	76 F.O.
24	12	14 F.O.
24	10 < LESS	10 F.O.
24	24	124 F.O.
30	20	84 F.O.
30	16	36 F.O.
30	12 < LESS	16 F.O.
30	30	159 F.O.
36	24	104 F.O.
36	20	60 F.O.
36	16	5 F.O.
36	36	192 F.O.
42	30	142 F.O.
42	24	83 F.O.
42	20	33 F.O.
42	16 < LESS	5 F.O.
42	42	223 F.O.
48	36	178 F.O.
48	30	124 F.O.
48	24	59 F.O.
48	20	5 F.O.
48	16 < LESS	5 F.O.
48	48	253 F.O.
48	42	209 F.O.
48	36	162 F.O.
48	30	104 F.O.
48	24	34 F.O.
48	20 < LESS	5 F.O.

F.O. = FITTING ONLY

PVC PIPE RESTRAINT JOINT SCHEDULE

JANUARY 2019

PLATE W-31A



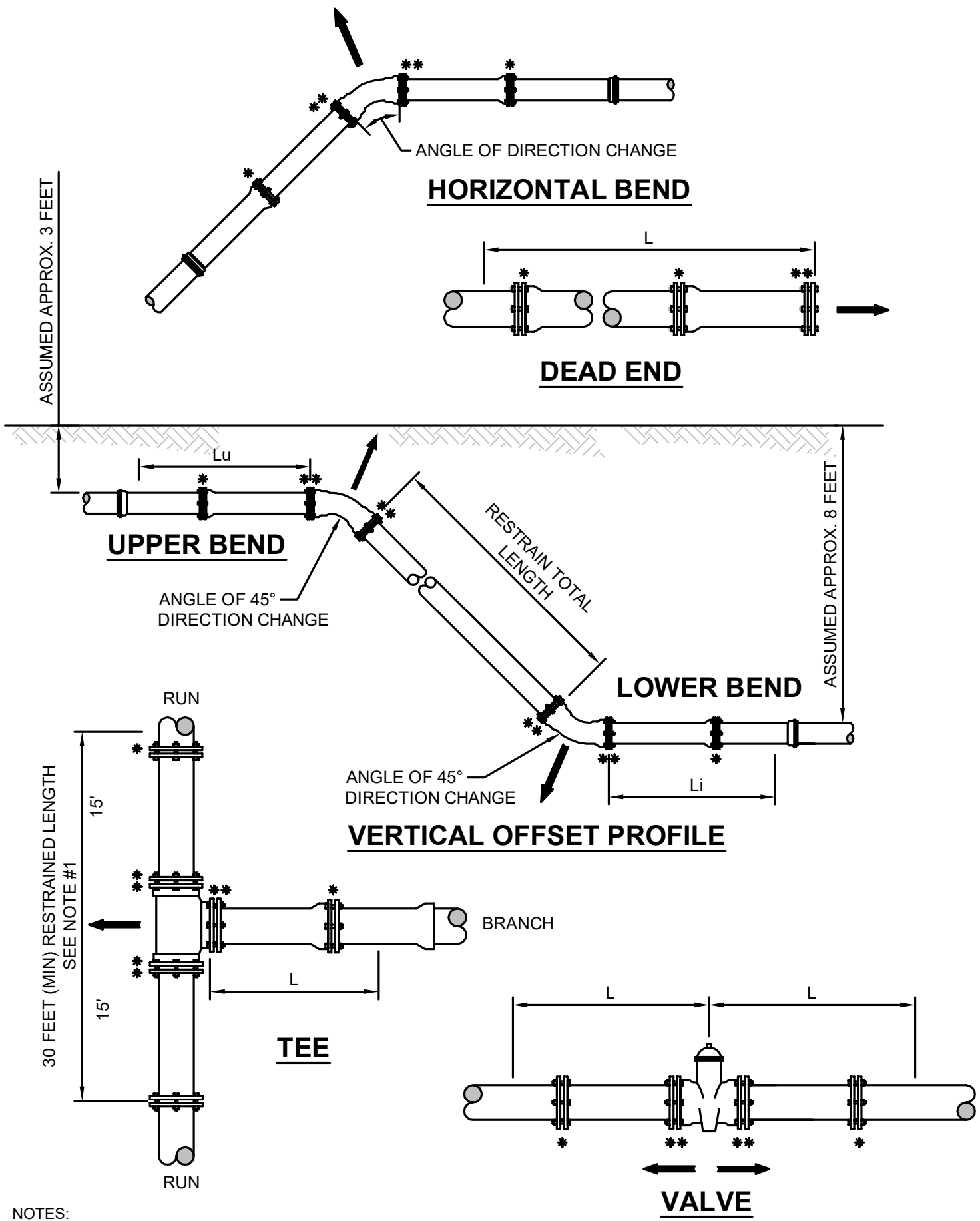
GENERAL NOTE:

- PAY ITEM " " " " DENOTES A RESTRAINT WHICH IS PAID FOR ON A PER EACH BASIS.
- PAY ITEM " " " " DENOTES A RESTRAINT WHICH IS INCLUDED IN THE UNIT PRICE BID FOR FITTING OR VALVE.
- ➔ INDICATES DIRECTION OF THRUST FORCE.

MECHANICAL RESTRAINT DETAILS - I

JANUARY 2019

PLATE W-31C



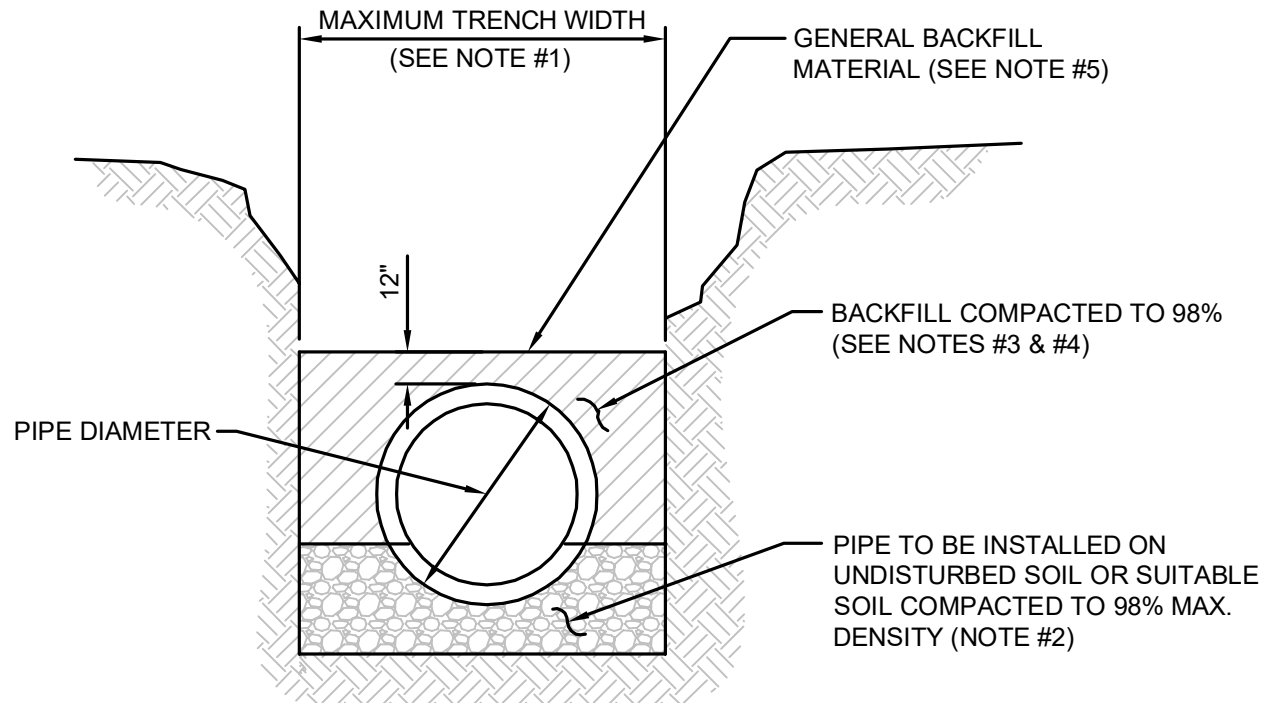
NOTES:

- TOTAL LENGTH BETWEEN FIRST JOINTS OR RESTRAINED LENGTH ON EITHER SIDE OF TEE (RUN) SHALL BE A TOTAL DISTANCE OF 30 FEET (MIN.).
- PAY ITEM " " " " DENOTES A RESTRAINT WHICH IS PAID FOR ON A PER EACH BASIS.
- PAY ITEM " " " " DENOTES A RESTRAINT WHICH IS INCLUDED IN THE UNIT PRICE BID FOR FITTING OR VALVE.

MECHANICAL RESTRAINT DETAILS - II

JANUARY 2019

PLATE W-31D



TYPICAL TRENCH

NOTES:

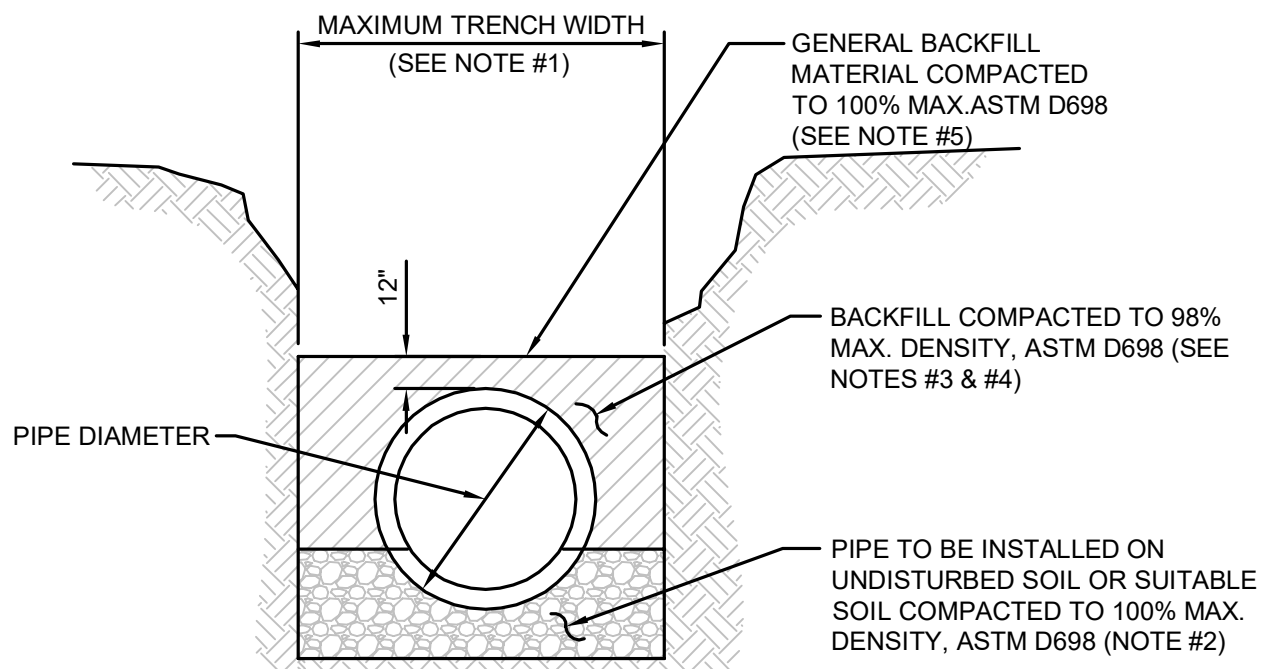
- TRENCH SIDES SHALL BE APPROXIMATELY VERTICAL BETWEEN AN ELEVATION OF 1 FOOT ABOVE THE TOP OF THE PIPE AND THE CENTER LINE OF THE PIPE; OTHERWISE, TRENCH SIDES SHALL BE AS VERTICAL AS POSSIBLE OR AS REQUIRED BY OSHA STANDARDS. REFER TO THE MEASUREMENT AND PAYMENT SECTION (SECTION #801, PARAGRAPH #4)) TO DETERMINE MAXIMUM PAYLINE WIDTHS.
- BELL HOLE SHALL BE DUG TO PERMIT THE ENTIRE STRAIGHT BARREL OF THE PIPE TO REST ON THE UNDISTURBED TRENCH BOTTOM. BOULDERS OR LOOSE ROCKS LARGER THAN 3/4 INCH IN SIZE WILL NOT BE PERMITTED IN BACKFILL UP TO 1 FOOT ABOVE THE TOP OF THE PIPE.
- BACK FILL MATERIAL UP TO A LEVEL OF 1 FOOT OVER THE PIPE SHALL CONSIST OF AASHTO CLASS A-3 SOIL (SUITABLE SOIL) AND SHALL EXCLUDE CLAY MATERIALS AND LOOSE ROCKS LARGER THAN 3/4 INCH SIZE.
- BACKFILL MATERIAL UP TO A LEVEL 1 FOOT OVER THE TOP OF PIPE OR BOTTOM OF STRUCTURES SHALL BE PLACED IN 6 INCH COMPACTED THICKNESS LAYERS AND SHALL BE COMPACTED TO 98% OF IT'S MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST, ASTM D1557.
- SEE " EXCAVATION AND EARTHWORK", SECTION 408 FOR ADDITIONAL REQUIREMENTS INCLUDING REMOVAL AND REPLACEMENT OF UNSUITABLE SOILS, DEWATERING, COMPACTION REQUIREMENTS AND DENSITY TESTING OF COMPACTED SOILS.

OPEN CUT TRENCH FOR PRESSURE PIPE

JANUARY 2019

IN CITY RIGHT OF WAY

PLATE W-42



TYPICAL TRENCH

NOTES:

- TRENCH SIDES SHALL BE APPROXIMATELY VERTICAL BETWEEN AN ELEVATION OF 1 FOOT ABOVE THE TOP OF THE PIPE AND THE CENTER LINE OF THE PIPE; OTHERWISE, TRENCH SIDES SHALL BE AS VERTICAL AS POSSIBLE OR AS REQUIRED BY OSHA STANDARDS. REFER TO THE MEASUREMENT AND PAYMENT SECTION (SECTION #801, PARAGRAPH #4)) TO DETERMINE MAXIMUM PAYLINE WIDTHS.
- BELL HOLE SHALL BE DUG TO PERMIT THE ENTIRE STRAIGHT BARREL OF THE PIPE TO REST ON THE UNDISTURBED TRENCH BOTTOM. BOULDERS OR LOOSE ROCKS LARGER THAN 3/4 INCH IN SIZE WILL NOT BE PERMITTED IN BACKFILL UP TO 1 FOOT ABOVE THE TOP OF THE PIPE.
- BACK FILL MATERIAL UP TO A LEVEL OF 1 FOOT OVER THE PIPE SHALL CONSIST OF AASHTO CLASS A-3 SOIL (SUITABLE SOIL) AND SHALL EXCLUDE CLAY MATERIALS AND LOOSE ROCKS LARGER THAN 3/4 INCH SIZE.
- BACKFILL MATERIAL UP TO A LEVEL 1 FOOT OVER THE TOP OF PIPE OR BOTTOM OF STRUCTURES SHALL BE PLACED IN 6 INCH COMPACTED THICKNESS LAYERS AND SHALL BE COMPACTED TO 100% OF IT'S MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST, ASTM D698.
- SEE " EXCAVATION AND EARTHWORK", SECTION 408 FOR ADDITIONAL REQUIREMENTS AND EXCEPTIONS INCLUDING REMOVAL AND REPLACEMENT OF UNSUITABLE SOILS, DEWATERING, COMPACTION REQUIREMENTS AND DENSITY TESTING OF COMPACTED SOILS.

OPEN CUT TRENCH FOR PRESSURE PIPE

JANUARY 2019

IN STATE ROAD RIGHT -OF-WAY

PLATE W-42A

Engelhardt, Thoms & Miller, Inc.
14175 Old St. Augustine Road
Jacksonville, FL 32218
TEL: (904) 642-8880
FAX: (904) 642-4444
REG. 0005254 LC - 0000316

THESE DETAILS AS SHOWN ON THIS DRAWING ARE BY THE J.E.A. WE TAKE NO EXCEPTION TO THE DESIGN

DESIGNER: D.W.H. J.E.S. SCOTT A. WILD
DRAWN BY: J.E.S. DATE: MAY 5, 2020
CHECKED BY: S.A.W. DATE: AS NOTED
DATE: 47030

ETM
EARTHWORK TRENCHING & MECHANICAL

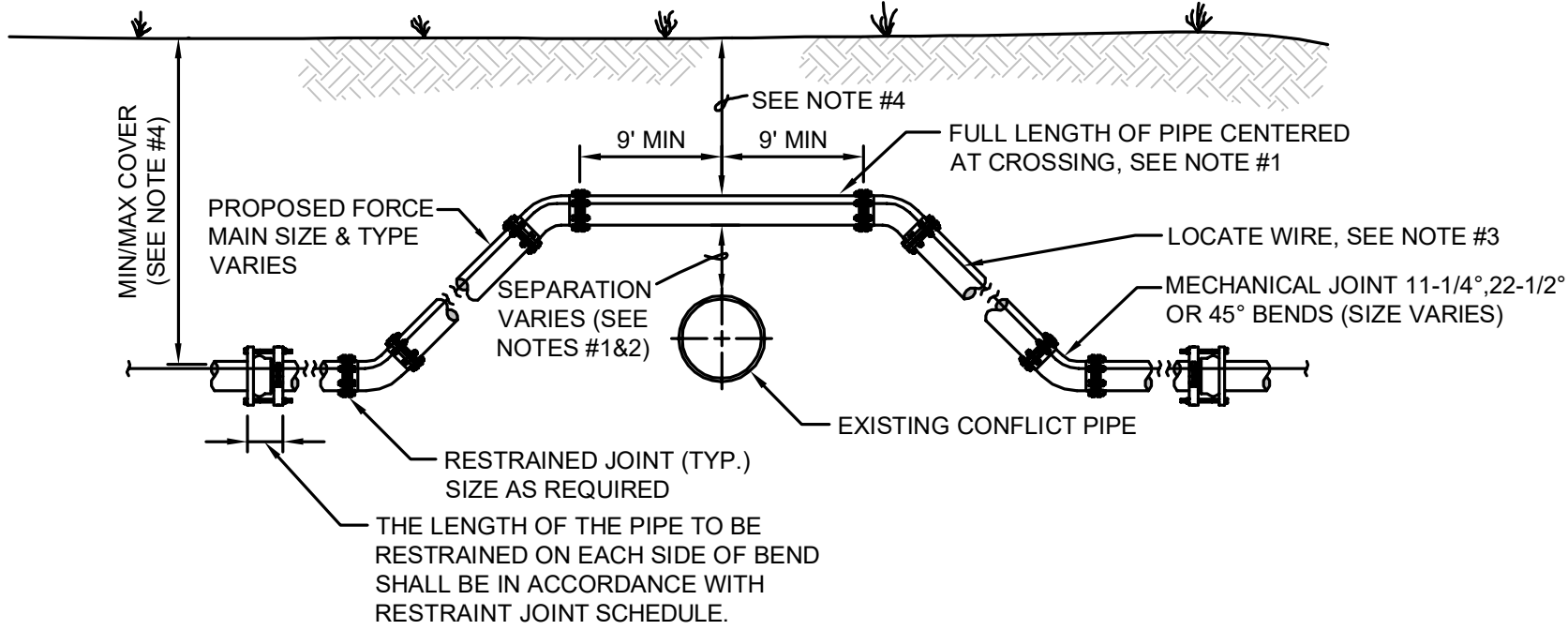
JEA
Building Community

BID DOCUMENTS - NOT FOR CONSTRUCTION

BEVERLY HILLS SEPTIC TANK PHASE OUT
OFFSITE FORCE MAIN
WATER DETAILS

PROJ. NO. 17-026-02
DATE: MAY 5, 2020
SCALE: AS NOTED

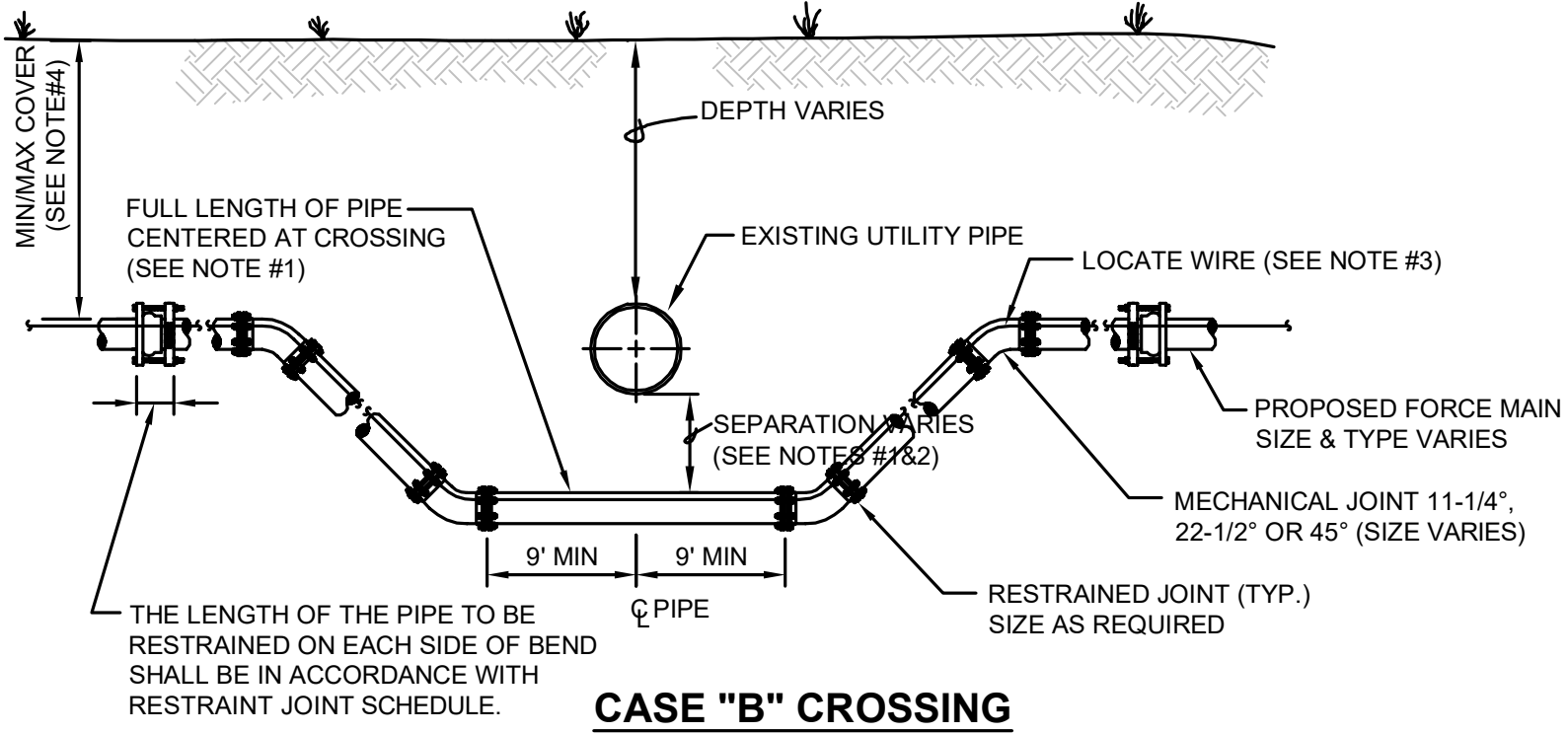
NO. SHEETS 69
SHEET NO. 37
DRAWING NO. W-STD-4



CASE "A" CROSSING

NOTES:

1. IF EXISTING CONFLICT PIPE IS A WATER OR RECLAIMED WATER MAIN, 12-INCHES OF SEPARATION IS REQUIRED. A FULL LENGTH OF PIPE SHALL BE CENTERED OVER EXISTING UTILITY MAIN TO PROVIDE MAXIMUM JOINT SPACING FOR ALL CROSSINGS.
2. FOR OTHER LOCATION LIMITATIONS SEE DETAIL (S-26 & S-27).
3. LOCATING WIRE REQUIRED: SEE DETAIL S-49.
4. THE COVER FOR PIPING LESS THAN 24" SIZE SHALL BE 30" (MIN) IN UNPAVED AREAS, 36" (MIN) IN PAVED AREAS AND A MAXIMUM COVER OF 60", UNLESS PRE-APPROVED BY JEA. THE COVER FOR PIPING 24" SIZE AND LARGER SHALL BE 36" (MIN) IN PAVED AND UNPAVED AREAS AND A MAXIMUM COVER OF 84", UNLESS APPROVED BY JEA.
5. THE SOILS BETWEEN THE MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST ASTM D 1557.



CASE "B" CROSSING

NOTES:

1. IF EXISTING CONFLICT PIPE IS A WATER OR RECLAIMED WATER MAIN, 12-INCHES OF SEPARATION IS REQUIRED A FULL LENGTH OF PIPE SHALL BE CENTERED OVER EXISTING UTILITY MAIN TO PROVIDE MAXIMUM JOINT SPACING FOR ALL CROSSINGS.
2. FOR OTHER LOCATION LIMITATIONS SEE DETAIL (S-26 & S-27).
3. LOCATING WIRE REQUIRED: SEE DETAIL S-49.
4. THE COVER FOR PIPING LESS THAN 24" SIZE SHALL BE 30" (MIN) IN UNPAVED AREAS, 36" (MIN) IN PAVED AREAS AND A MAXIMUM COVER OF 60", UNLESS PRE-APPROVED BY JEA. THE COVER FOR PIPING 24" SIZE AND LARGER SHALL BE 36" (MIN) IN PAVED AND UNPAVED AREAS AND A MAXIMUM COVER OF 84", UNLESS APPROVED BY JEA.
5. THE SOILS BETWEEN THE MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST ASTM D 1557.

ADJUSTMENT UNDER EXISTING UTILITIES
MECHANICAL RESTRAINTS

JANUARY 2019

PLATE S-41

ADJUSTMENT OVER EXISTING UTILITIES
MECHANICAL RESTRAINTS

JANUARY 2019

PLATE S-39

BEVERLY HILLS SEPTIC TANK PHASE OUT
OFFSITE FORCE MAIN
SANITARY DETAILS

NO. SHEETS
69

SHEET NO.
38

DRAWING NO.
S-STD-1

PROJ. NO.
17-026-02

DATE:
MAY 5, 2020

SCALE:
AS NOTED

DESIGNER:
D.W.H.
J.E.S.

DRAWN BY:
J.E.S.

CHECKED BY:
S.A.W.

DATE:

DESIGN ENGINEER
SCOTT A. WILD
FLORIDA REGISTRATION NO.
47030

THESE DETAILS AS SHOWN ON THIS
DRAWING ARE BY THE JEA. WE TAKE
NO EXCEPTION TO THE DESIGN

NO. BY DATE REVISIONS

4.

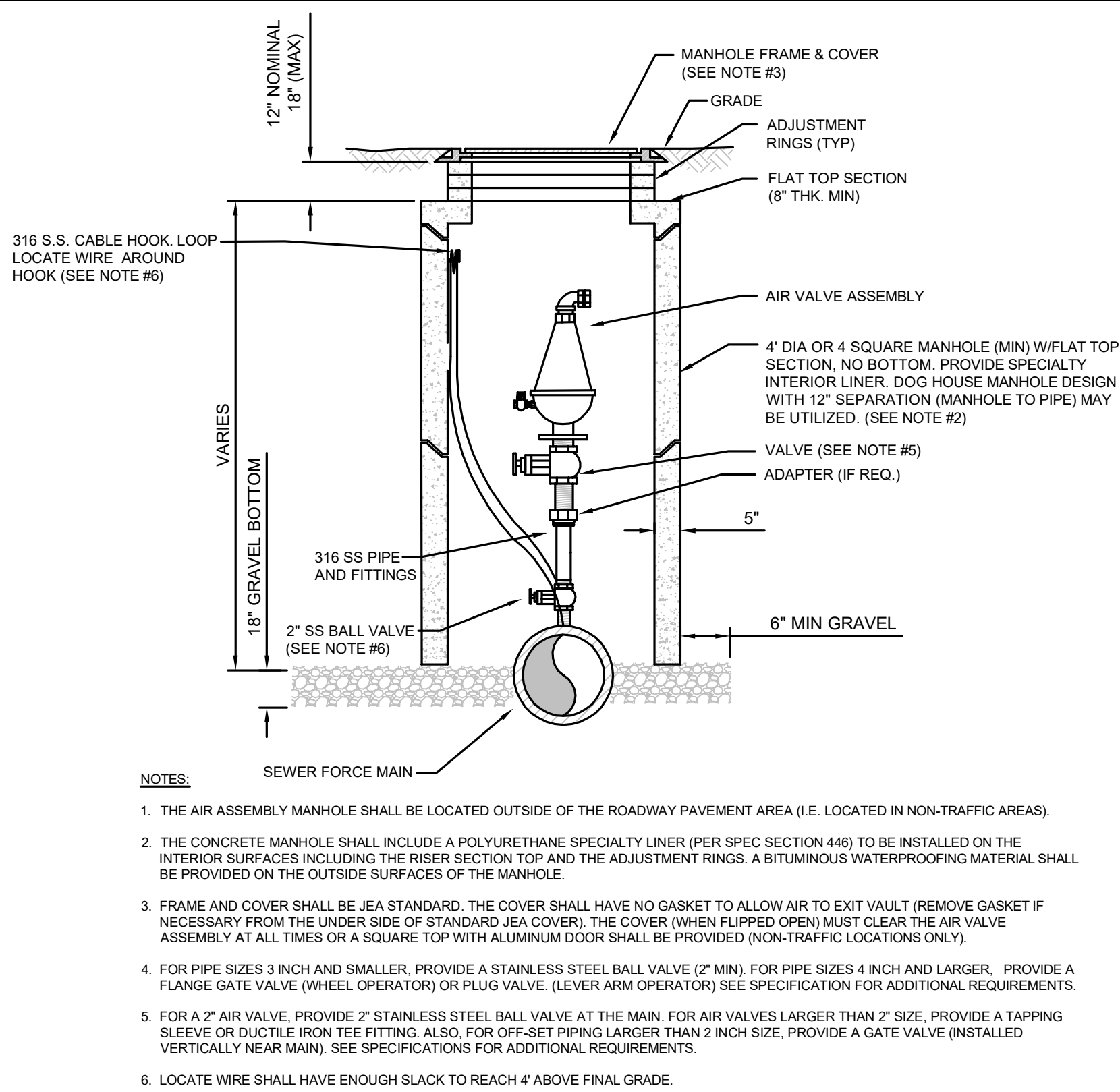
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2.

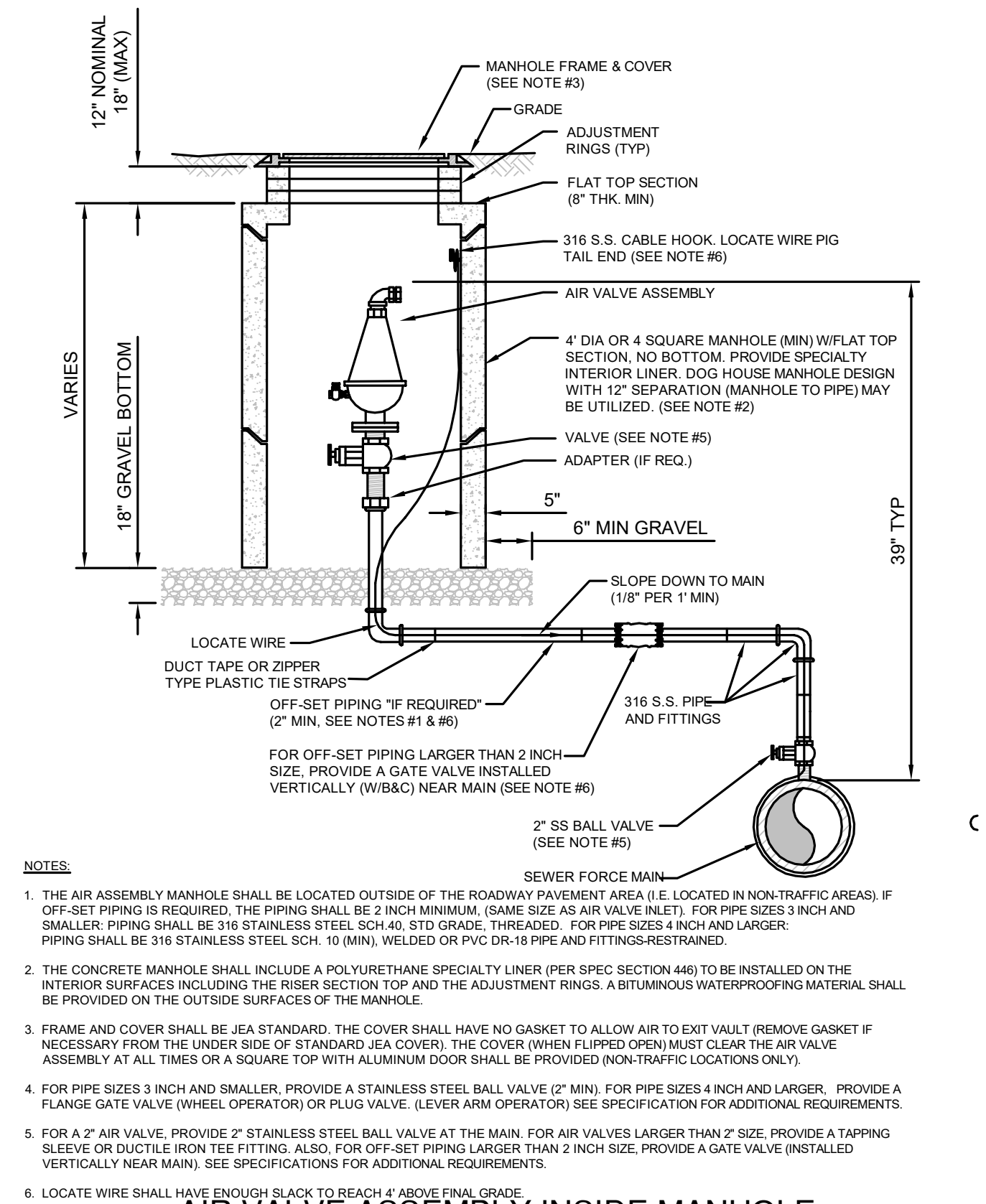
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ETM
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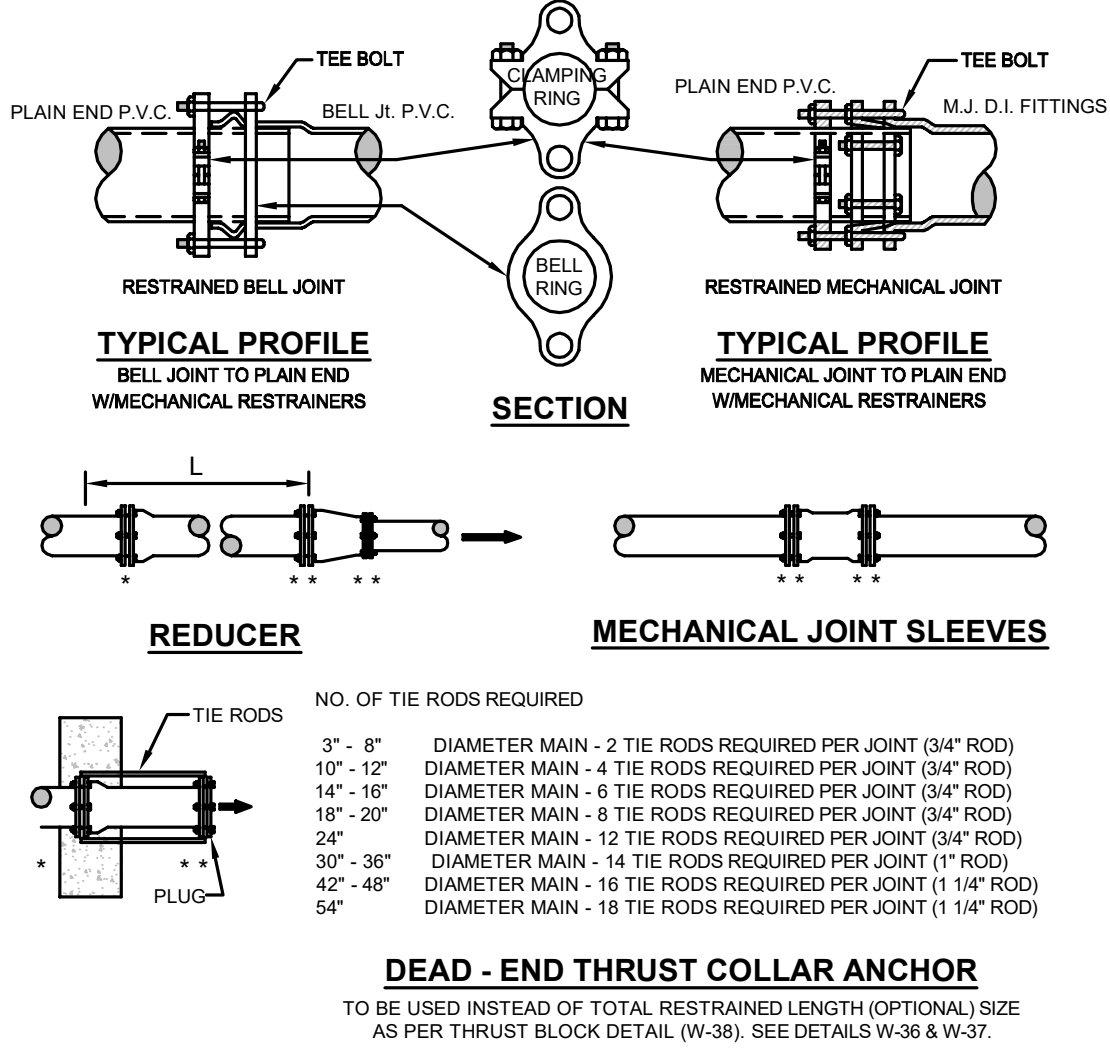
Engelhard, Thoms & Miller, Inc.
14775 Old St. Augustine Road
Jacksonville, FL 32218
TEL: (904) 642-9890
FAX: (904) 642-9891
REG. # 0005294 LC - 0000316



AIR VALVE ASSEMBLY INSIDE MANHOLE IN ROW
JANUARY 2019 PLATE S-29B

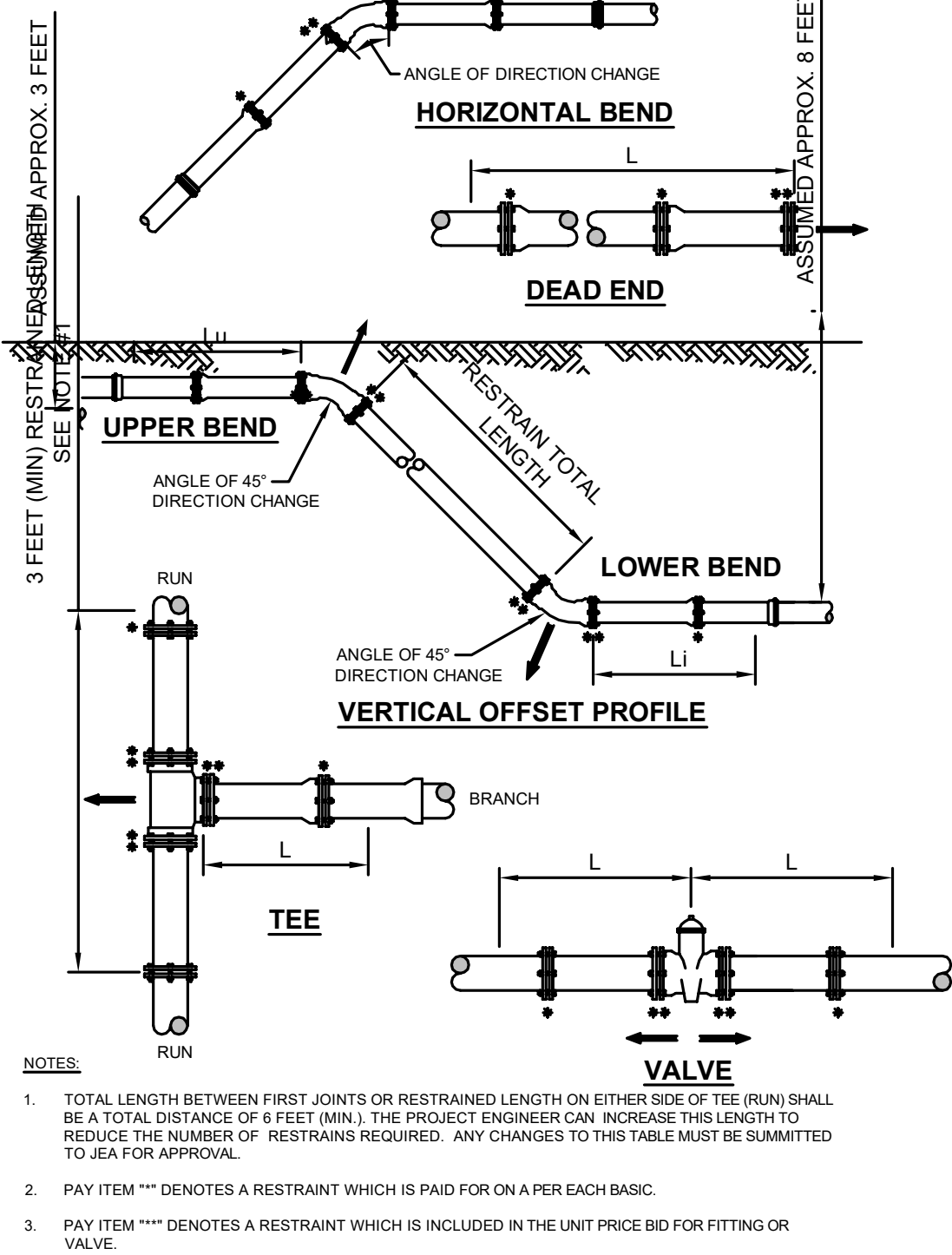


AIR VALVE ASSEMBLY INSIDE MANHOLE
JANUARY 2019 PLATE S-29



GENERAL NOTE:
1. PAY ITEM *** DENOTES A RESTRAINT WHICH IS PAID FOR ON A PER EACH BASIS.
2. PAY ITEM *** DENOTES A RESTRAINT WHICH IS INCLUDED IN THE UNIT PRICE BID FOR FITTING OR VALVE.
3. → INDICATES DIRECTION OF THRUST FORCE.

MECHANICAL RESTRAINT DETAILS - I
JANUARY 2019 PLATE S-38C



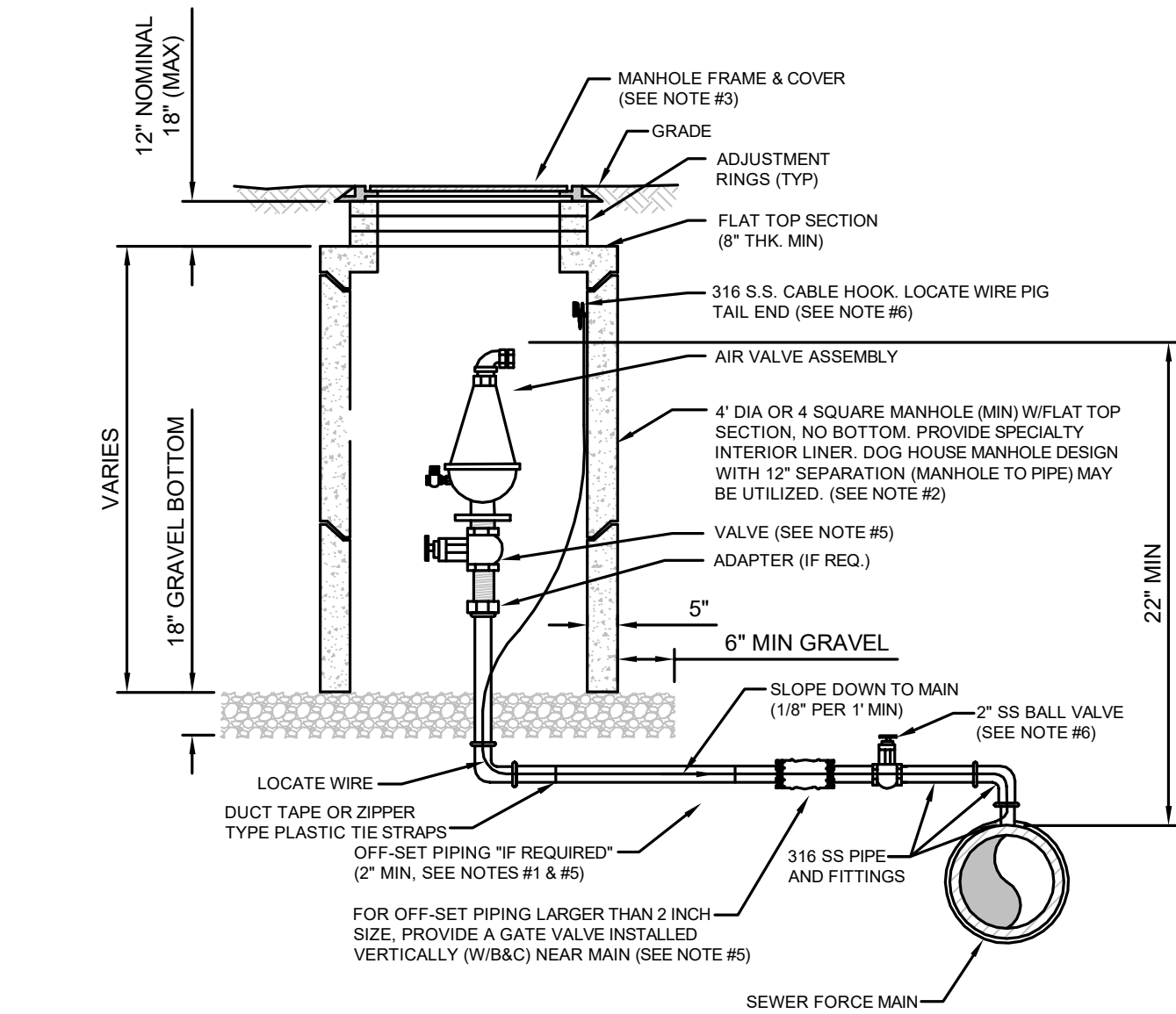
MECHANICAL RESTRAINT DETAILS - II
JANUARY 2019 PLATE S-38D

LENGTH (L) TO BE RESTRAINED										(SEE PLATE Nos. 38C & 38D FOR ADDITIONAL DETAILS)									
NOMINAL PIPE SIZE (IN.)	HORIZONTAL BENDS				VERTICAL OFFSETS 45° BENDS (SEE NOTE 4)		VALVES OR DEAD ENDS			REDUCERS		TEES SEE NOTE 5							
	90° BENDS L (FT.)	45° BENDS L (FT.)	22.5° BENDS L (FT.)	11.25° BENDS L (FT.)	UPPER L (FT.)	LOWER L (FT.)				SIZE (IN.)	L (FT.)	RUN SIZE (IN.)	BRANCH SIZE (IN.)	L (FT.)					
4	21	9	5	3	17	3	47			6x4	34	4	4	F.O.					
6	30	13	6	3	23	4	66			8x6	36	4	6	F.O.					
8	38	16	8	4	30	6	86			8x4	62	8	4 < LESS	10					
10	45	19	9	5	36	7	103			10x8	35	8	6 < LESS	29					
12	53	22	11	6	43	8	121			10x6	63	10	8	45					
14	61	26	13	6	50	9	140			12x10	36	10	6 < LESS	13					
16	66	28	14	7	55	10	154			12x8	64	12	12	62					
18	73	30	15	8	60	11	170			16x12	66	12	8 < LESS	32					
20	79	33	16	8	66	12	186			16x10	92	16	16	94					
24	79	33	16	8	77	15	185			20x16	66	20	12	5					
30	93	39	19	10	97	17	222			20x12	117	24	10 < LESS	F.O.					
36	106	39	21	11	107	20	257			24x20	56	20	20	125					
42	117	49	24	12	120	24	289			24x18	80	24	16	76					
48	144	53	26	13	133	26	321			24x16	101	30	12 < LESS	14					
										30x24	78	24	24	124					
										30x20	121	24	20	84					
										36x30	78	16	16	36					
										36x24	141	30	30	159					
										42x36	75	24	24	104					
										42x30	140	16	16	5					
										48x42	75	16 < LESS	16 < LESS	F.O.					
										48x36	139	36	36	192					
												30	30	142					
												24	24	83					
												20	20	33					
												16 < LESS	16 < LESS	F.O.					
												42	42	223					
												30	36	178					
												24	30	124					
												20	24	59					
												16 < LESS	16 < LESS	F.O.					
												48	48	253					
												30	42	209					
												20	36	162					
												30	30	104					
												24	24	34					
												16 < LESS	16 < LESS	F.O.					

- PVC PIPE RESTRAINT NOTES:
- THIS SCHEDULE SHALL BE UTILIZED ON ALL WATER, SEWER FORCE MAIN OR RECLAIMED WATER SYSTEMS. ALL FITTINGS SHALL BE RESTRAINED TO LENGTHS INDICATED ON THE ABOVE SCHEDULE, AT A MINIMUM.
 - ASSUMPTIONS: PVC PIPE, SAFETY FACTOR=1.5, TEST PRESSURE=150PSI, SOIL=GM OR SM, TRENCH TYPE 3, DEPTH OF COVER=30 INCHES FOR 20" AND SMALLER PIPE SIZE OR 36 INCHES FOR 24" AND LARGER PIPE SIZE.
 - BENDS AND VALVES: SHALL BE RESTRAINED ON EACH SIDE OF FITTING.
 - VERTICAL OFFSETS: ARE APPROX. 3 FEET COVER ON TOP AND APPROX. 8 FEET COVER ON BOTTOM. PER THE DETAILS, L_u IS THE RESTRAINED LENGTH FOR THE UPPER (TOP) LEVEL, L_i IS THE RESTRAINED LENGTH FOR THE LOWER (DEEPER) LEVEL. ASSUME 45 DEGREE BENDS.
 - TEES: TOTAL LENGTH BETWEEN FIRST JOINTS OR RESTRAINED LENGTH ON EITHER SIDE OF TEE (RUN) SHALL BE A TOTAL DISTANCE OF 30 FEET (MIN). SEE SCHEDULE ABOVE FOR RESTRAINT LENGTH ON TEE "BRANCH" LINE.
 - HDPE TO PVC TRANSITIONS: THE PVC PIPE SIDE SHALL BE RESTRAINED 35 FT (MIN).
 - THE INSTALLATION OF BELL HARNESS RESTRAINTS AT PVC JOINTS (DR-18 & 25 PIPE) SHALL BE COMPLETED PER THE MANUFACTURERS RECOMMENDATION, WHICH INCLUDES NOT OVER TIGHTENING THE PARALLEL RODS/NUTS. THESE NUTS SHOULD ONLY BE SNUG TIGHT. THE HOME MARKS ON THE PIPE SHOULD ALWAYS BE VISIBLE AFTER THE RESTRAINT IS INSTALLED. OVERHOMING THE JOINT MAY CAUSE A FAILURE AT THE BELL RESULTING IN A SERVICE OUTAGE.

PVC PIPE RESTRAINT JOINT SCHEDULE

JANUARY 2019 PLATE S-38A



- NOTES:
- THE AIR ASSEMBLY MANHOLE SHALL BE LOCATED OUTSIDE OF THE ROADWAY PAVEMENT AREA (I.E. LOCATED IN NON-TRAFFIC AREAS). IF OFF-SET PIPING IS REQUIRED, THE PIPING SHALL BE 2 INCH MINIMUM. (SAME SIZE AS AIR VALVE INLET). FOR PIPE SIZES 3 INCH AND SMALLER, PIPING SHALL BE 316 STAINLESS STEEL SCH.40, STD GRADE, THREADED, FOR PIPE SIZES 4 INCH AND LARGER, PIPING SHALL BE 316 STAINLESS STEEL SCH. 10 (MIN), WELDED OR PVC DR-18 PIPE AND FITTINGS-RESTRAINED.
 - THE CONCRETE MANHOLE SHALL INCLUDE A POLYURETHANE SPECIALTY LINER (PER SPEC SECTION 446) TO BE INSTALLED ON THE INTERIOR SURFACES INCLUDING THE RISER SECTION TOP AND THE ADJUSTMENT RINGS. A BITUMINOUS WATERPROOFING MATERIAL SHALL BE PROVIDED ON THE OUTSIDE SURFACES OF THE MANHOLE.
 - FRAME AND COVER SHALL BE JEA STANDARD. THE COVER SHALL HAVE NO GASKET TO ALLOW AIR TO EXIT VAULT (REMOVE GASKET IF NECESSARY FROM THE UNDER SIDE OF STANDARD JEA COVER). THE COVER (WHEN FLIPPED OPEN) MUST CLEAR THE AIR VALVE ASSEMBLY AT ALL TIMES OR A SQUARE TOP WITH ALUMINUM DOOR SHALL BE PROVIDED (NON-TRAFFIC LOCATIONS ONLY).
 - FOR PIPE SIZES 3 INCH AND SMALLER, PROVIDE A STAINLESS STEEL BALL VALVE (2" MIN). FOR PIPE SIZES 4 INCH AND LARGER, PROVIDE A FLANGE GATE VALVE (WHEEL OPERATOR) OR PLUG VALVE. (LEVER ARM OPERATOR) SEE SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
 - FOR A 2" AIR VALVE, PROVIDE 2" STAINLESS STEEL BALL VALVE AT THE MAIN. FOR AIR VALVES LARGER THAN 2" SIZE, PROVIDE A TAPPING SLEEVE OR DUCTILE IRON TEE FITTING. ALSO, FOR OFF-SET PIPING LARGER THAN 2 INCH SIZE, PROVIDE A GATE VALVE (INSTALLED VERTICALLY NEAR MAIN). SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
 - LOCATE WIRE SHALL HAVE ENOUGH SLACK TO REACH 4' ABOVE FINAL GRADE.

OPTIONAL LOW PROFILE AIR VALVE ASSEMBLY INSIDE MANHOLE

JANUARY 2019 PLATE S-29A

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Engineering, Planning & Construction
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THESE DETAILS AS SHOWN ON THIS
DRAWING ARE BY THE JEA. WE TAKE
NO EXCEPTION TO THE DESIGN

DESIGNER: D.W.H.
DRAWN BY: J.E.S.
DATE: MAY 5, 2020
CHECKED BY: S.A.W.
DATE: AS NOTED

DESIGN ENGINEER: SCOTT A. WILD
FLORIDA REGISTRATION NO.: 47030

NO. SHEETS: 69
SHEET NO.: 39
DRAWING NO.: S-STD-2

PROJ. NO.: 17-026-02
DATE: MAY 5, 2020
SCALE: AS NOTED

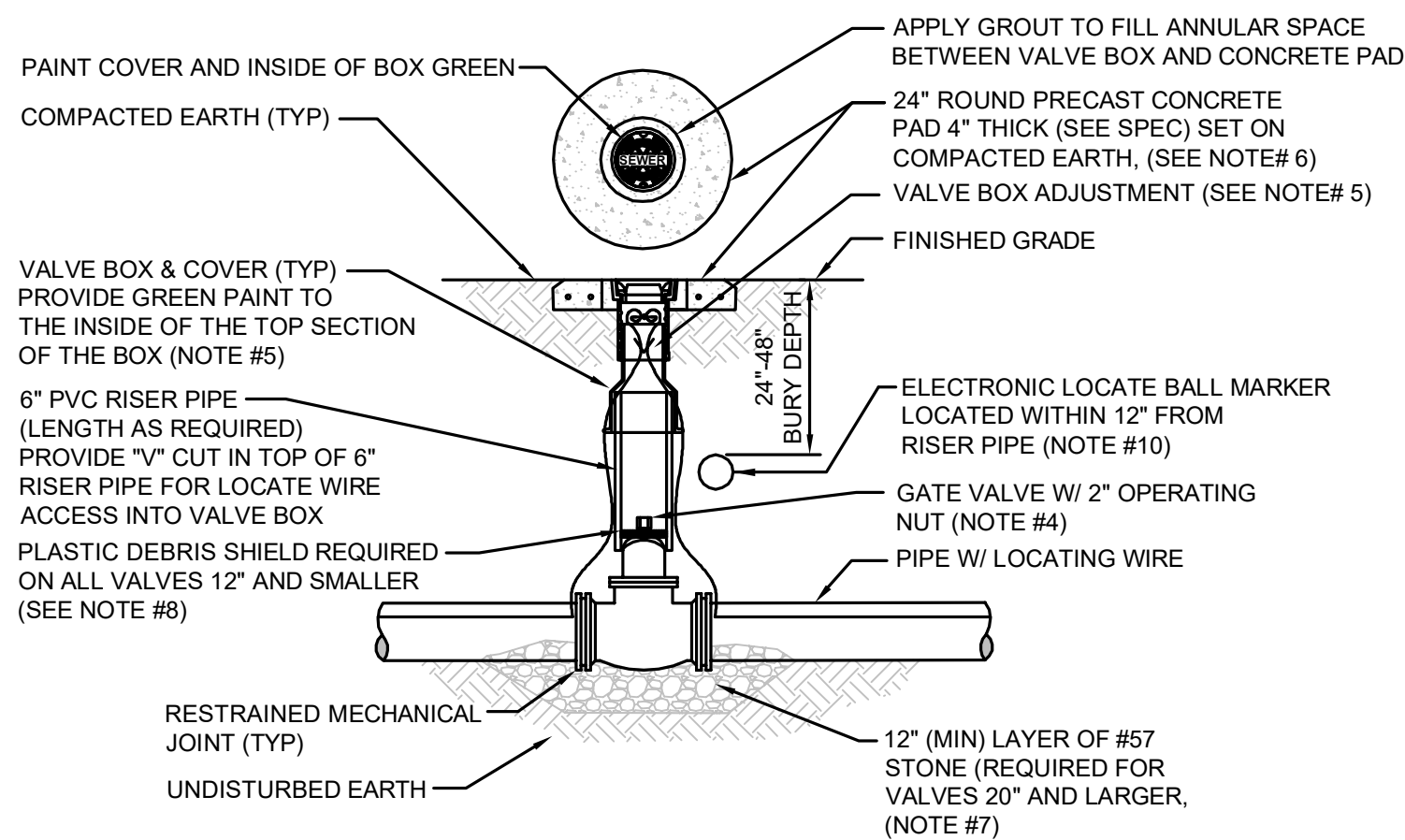
BID DOCUMENTS - NOT FOR CONSTRUCTION

BEVERLY HILLS SEPTIC TANK PHASE OUT
OFFSITE FORCE MAIN
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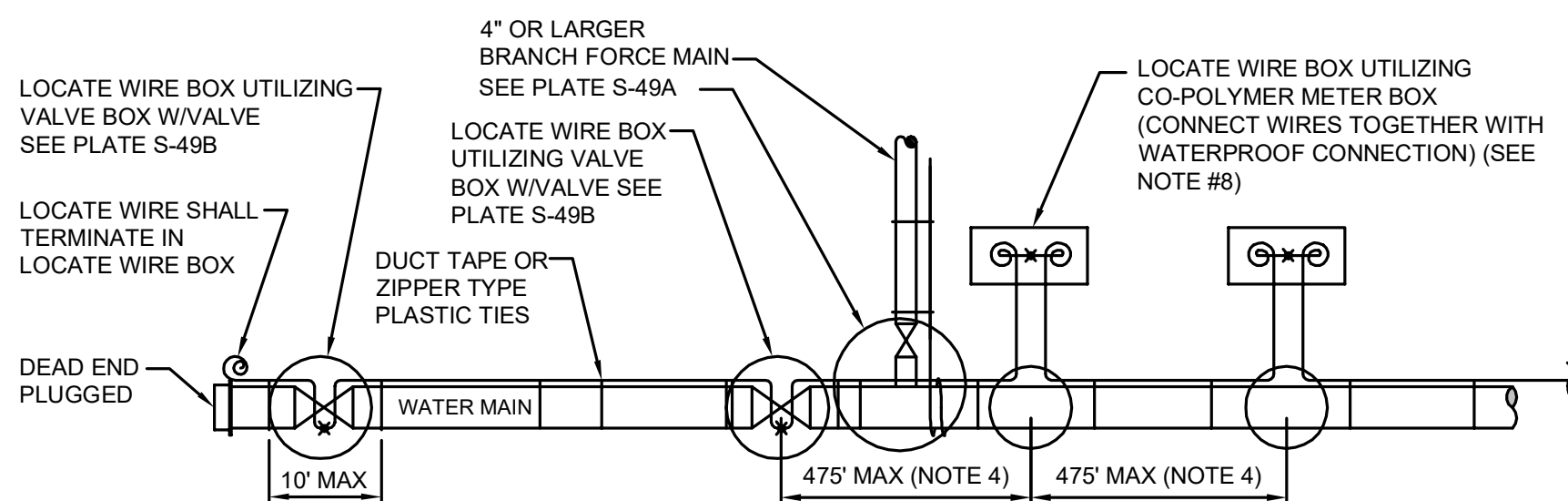
REVISIONS

NO. BY DATE





NOTES:

3. FOR UNPAVED LOCATIONS, A PRECAST CONCRETE VALVE PAD SHALL BE PROVIDED AND INSTALLED FLUSH WITH GRADE. CONCRETE PAD IS NOT REQUIRED FOR VALVE LOCATED IN THE ROADWAY, UNLESS SHOWN OR NOTED OTHERWISE.
2. LOCATING WIRE IS REQUIRED ON ALL PRESSURE PIPING (SEE DETAIL S-49).
3. A "V" CUT SHALL BE CARVED IN THE CURB CLOSEST (ASPHALT IF NO CURB) ADJACENT TO ALL BELOW GRADE VALVES. THE "V" CUT IS TO BE PAINTED GREEN.
4. IN PAVED AREAS, INSTALL VALVE AT A DEPTH TO ALLOW A 12" MIN. DISTANCE BETWEEN THE VALVE COVER PLATE AND THE TOP OF THE VALVE OPERATING NUT. OUTSIDE OF PAVED AREAS (GRASS), INSTALL VALVE AT A DEPTH TO ALLOW A 6" MINIMUM DISTANCE BETWEEN THE VALVE COVER AND THE TOP OF THE VALVE OPERATING NUT. OPERATING NUT/STEM EXTENSION SHALL BE PROVIDED (WHERE APPLICABLE) SO THAT THE OPERATING NUT WILL BE NO MORE THAN 30 INCHES BELOW FINISHED GRADE.
5. FOR NEW CONSTRUCTION, THE VALVE BOX SHALL BE ADJUSTED TO MIDRANGE TO ALLOW FOR FUTURE BOX ADJUSTMENTS. LOCATE VALVE WITH A 1/4" CUT IN THE TOP OF THE 6" PVC RISER PIPE FOR LOCATING WIRE ACCESS INTO VALVE BOX. THE LOCATE WIRES WITH A 24" LONG PIG-TAIL AT THE TOP SHALL BE CONNECTED TOGETHER WITH A WIRE NUT.
6. BRASS IDENTIFICATION TAG INDICATING "SEWER", VALVE SIZE, DIRECTION AND TURNS TO OPEN & VALVE TYPE. PROVIDE A 1/2" HOLE IN BRASS TAG AND ATTACH TAG (TWIST WIRE AROUND TAG) TO THE END OF THE LOCATE WIRE. TAGS ARE NOT REQUIRED ON VALVES INSTALLED ON FIRE HYDRANT BRANCH LINES.
7. IN LIEU OF PRECAST CONCRETE PAD, A 6" THICK X 24" (ROUND OR SQUARE) POURED CONCRETE PAD W/2" #4 REBAR AROUND PERIMETER, MAY BE USED.
8. GRAVEL SHALL BE PROVIDED UNDER ALL VALVES 20" AND LARGER. THE MINIMUM VERTICAL LIMIT OF GRAVEL IS 12" UNDER THE VALVE UP TO 1/2" THE OVERALL HEIGHT OF THE VALVE.
9. FOR VALVES 12 INCH AND SMALLER, PROVIDE A WHITE OR BLACK PLASTIC DEBRIS SHIELD WHICH INSTALLS BELOW THE OPERATING NUT. THIS SHIELD SHALL COVER THE RISER PIPE BOX OVER THE OPERATING NUT AND MINIMIZE INFILTRATION. SHIELD SHALL BE BY AFC, BOXLOK OR APPROVED EQUAL.
10. ALL VALVES SHALL BE INSTALLED WITH AN ELECTRIC LOCATOR MARKER. MARKER SHALL BE 4" DIA. COLOR CODED BALL MARKER (3M-1404XRF FOR SEWER).



LOCATE WIRE SYSTEM

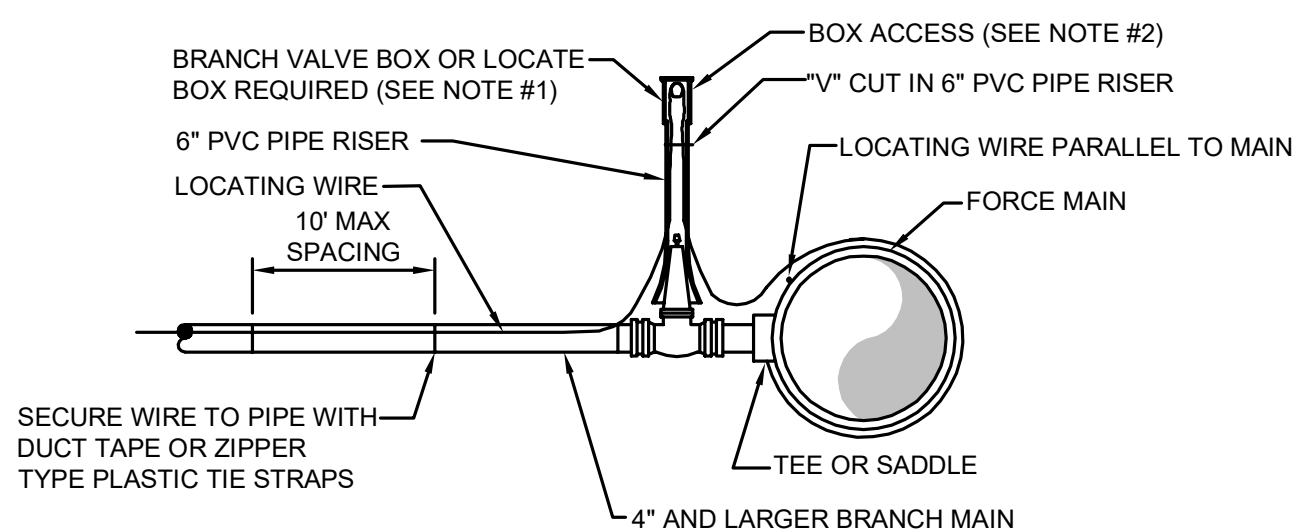
NOTES:

1. LOCATING WIRE TO BE INSTALLED IN EITHER THE ONE OR ELEVEN O'CLOCK POSITION ON ALL DUCTILE IRON OR PVC (PRESSURE MAINS). LOCATE WIRE SHALL ALSO BE INSTALLED ON ALL (HDPE) POLY MAIN PIPING (1:00 OR 11:00 POSITION, IF POSSIBLE).
2. SECURE LOCATING WIRE TO PVC FORCE MAIN BY USE OF DUCT TAPE OR ZIPPER TYPE PLASTIC TIE STRAPS SPACED AT A MAXIMUM DISTANCE OF TEN (10') AND AT EACH SIDE OF BELL JOINT OR FITTING.
3. THE ENTIRE LOCATING SYSTEM SHALL BE SUBJECTED TO TESTING TO DETERMINE ITS RELIABILITY. WHERE INSTALLED UNDER PAVEMENT AREAS, TESTING SHALL BE DONE PRIOR TO THE PLACEMENT OF PAVEMENT, UNLESS APPROVED OTHERWISE BY JEA.
4. LOCATING WIRE SHALL TERMINATE WITHIN AN ACTIVE VALVE BOX (WITH A VALVE) OR A METER BOX (IF NO VALVE) AT 475' INTERVALS. SEE DETAIL PLATE S-49B. WIRE CONNECTIONS BELOW GROUND (OUTSIDE OF A BOX) SHALL BE AVOIDED.
5. LOCATING WIRE SHALL BE 12 GAUGE COPPER WIRE WITH .03 INCHES (MINIMUM) HDPE INSULATION THICKNESS, 0.141 INCHES (MINIMUM) O.D. RATED BREAK LOAD 250LBS., UF RATED (DIRECT BURIAL), GREEN COLOR. FOR HDD INSTALLATIONS, THE LOCATE WIRE SHALL BE COPPER CODED STEEL AS SPECIFIED IN SPEC. SECTION 750.
6.  INDICATES THAT THE WIRES ARE CONNECTED TOGETHER WITH WATERPROOF CONNECTION. (SEE DETAIL W-49B)
7.  INDICATES A WIRE PIG-TAIL (24" LONG)
8. AN "LW" CUT SHALL BE CARVED IN THE CONCRETE CURB AND PAINTED AT ALL LOCATE WIRE BOXES.
9. FOUR LANES OF TRAFFIC (HAVING TWO LANES OF TRAFFIC IN EACH DIRECTION) OR GREATER THE LOCATE WIRE AND VALVE BOX SHALL BE OFF-SET TO THE RIGHT-OF-WAY.

LOCATE WIRE CONSTRUCTION FOR FORCE MAINS

JANUARY 2019


PLATE S-49



BRANCH FORCE MAIN

(4" AND LARGER SEWER MAIN)

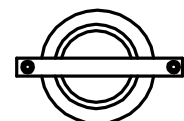
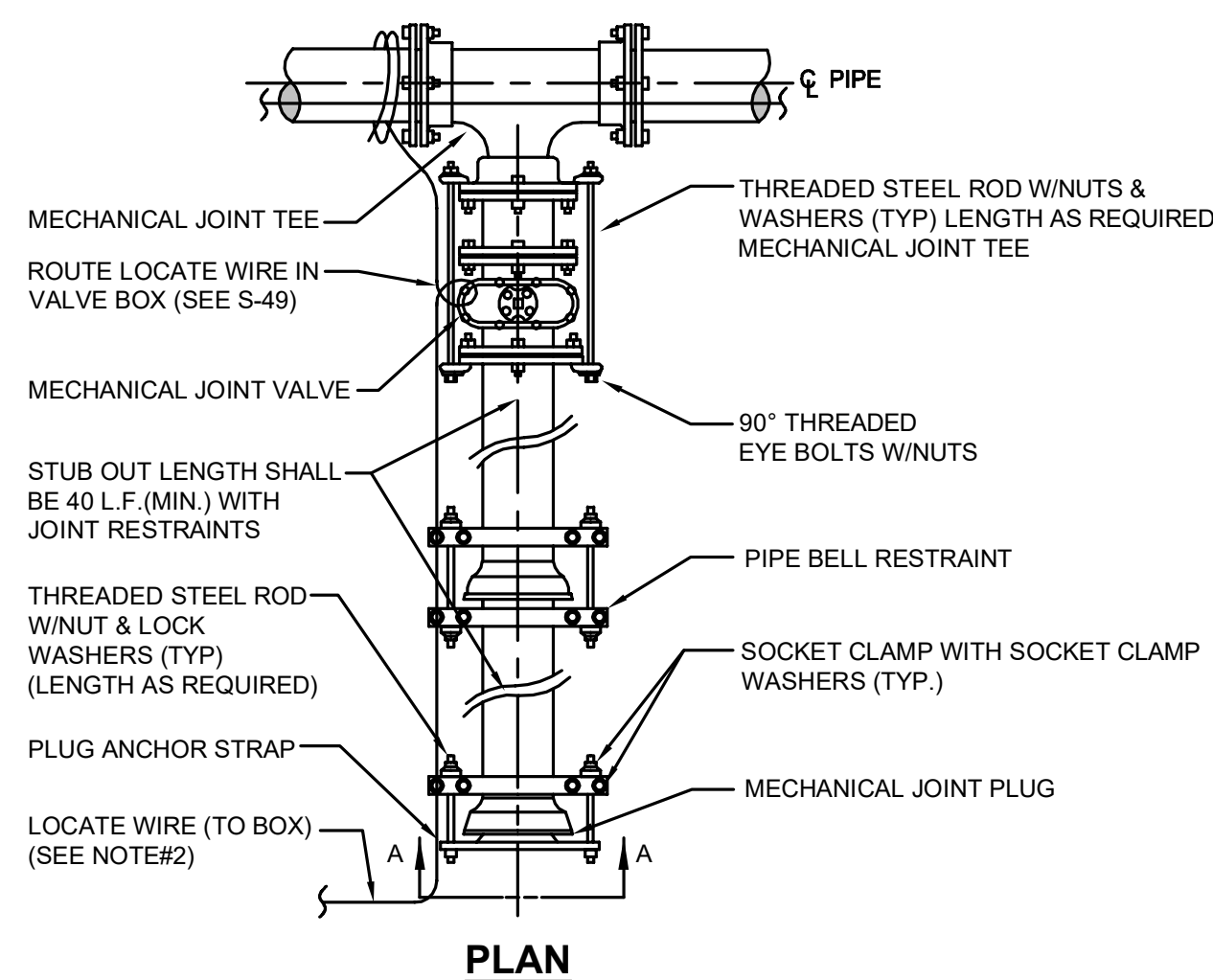
NOTE:

1. NOTE THAT THE BRANCH WIRE IS NOT CONNECTED TO THE MAIN WIRE.
2. LOCATE WIRE SHALL ENTER THE VALVE BOX THROUGH A "V" CUT IN THE 6" PVC RISER PIPE SECTION (SEE S-30).
3. LOCATE WIRE BOX SHALL BE INSTALLED OUTSIDE OF SIDEWALKS, DRIVEWAYS AND PAVEMENT.
4.  INDICATES A WIRE PIG-TAIL (4' LONG)

LOCATE WIRE FOR BRANCH MAIN

JANUARY 2019

PLATE S-49A



SECTION "A-A"

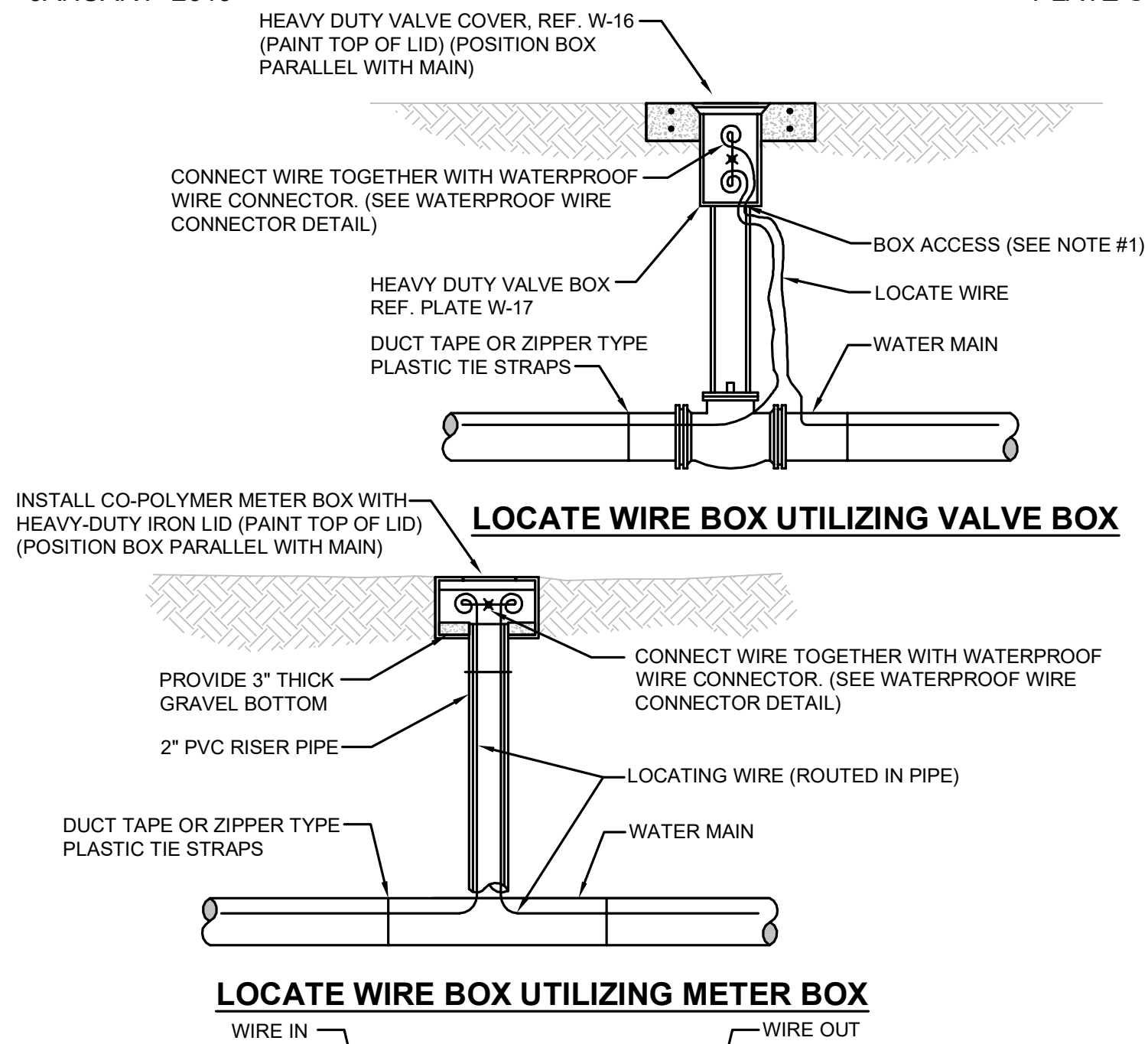
- NOTES:**
1. IN LIEU OF BELL/ROD RESTRAINTS, MECHANICAL JOINT RESTRAINTS MAY BE USED.
 2. LOCATING WIRE REQUIRED, UTILIZING A LOCATE WIRE BOX INSTALLED AT PLUG LOCATION.
 3. NUMBER OF THE RODS REQUIRED IS AS FOLLOWS:

3" - 8"	DIAMETER MAIN - 2 TIE RODS REQUIRED PER JOINT (3/4" ROD)
10" - 12"	DIAMETER MAIN - 4 TIE RODS REQUIRED PER JOINT (3/4" ROD)
14" - 16"	DIAMETER MAIN - 6 TIE RODS REQUIRED PER JOINT (3/4" ROD)
18" - 20"	DIAMETER MAIN - 8 TIE RODS REQUIRED PER JOINT (3/4" ROD)
22"	DIAMETER MAIN - 12 TIE RODS REQUIRED PER JOINT (3/4" ROD)
30" - 36"	DIAMETER MAIN - 14 TIE RODS REQUIRED PER JOINT (1" ROD)
42" - 48"	DIAMETER MAIN - 16 TIE RODS REQUIRED PER JOINT (1 1/4" ROD)
54"	DIAMETER MAIN - 18 TIE RODS REQUIRED PER JOINT (1 1/4" ROD)
 4. THE LOCATION OF THE DEAD END PLUG SHALL NOT BE UNDER PAVEMENT, IF POSSIBLE. THE STUD OUT SHALL EXTEND BEYOND THE INTERSECTION AREAS OR ROAD CROSSING BY 10 FEET (MIN.) WHERE POSSIBLE.

PLUGGED DEAD END USING MECHANICAL RESTRAINTS

JANUARY 2019

PLATE S-44



LOCATE WIRE BOX UTILIZING METER BOX

WIRE IN WIRE OUT

WATERPROOF WIRE CONNECTOR DETAIL

1. LOCATE WIRE SHALL ENTER THE VALVE BOX THROUGH A "V" CUT IN THE 6" PVC RISER PIPE (SEE W-18)
2. LOCATE WIRE SHALL HAVE ENOUGH SLACK TO REACH 4' ABOVE FINAL GRADE AND LOCATE POINTS.
3. LOCATE WIRE CONNECTION SHALL ONLY BE A 2 WAY CONNECTION.

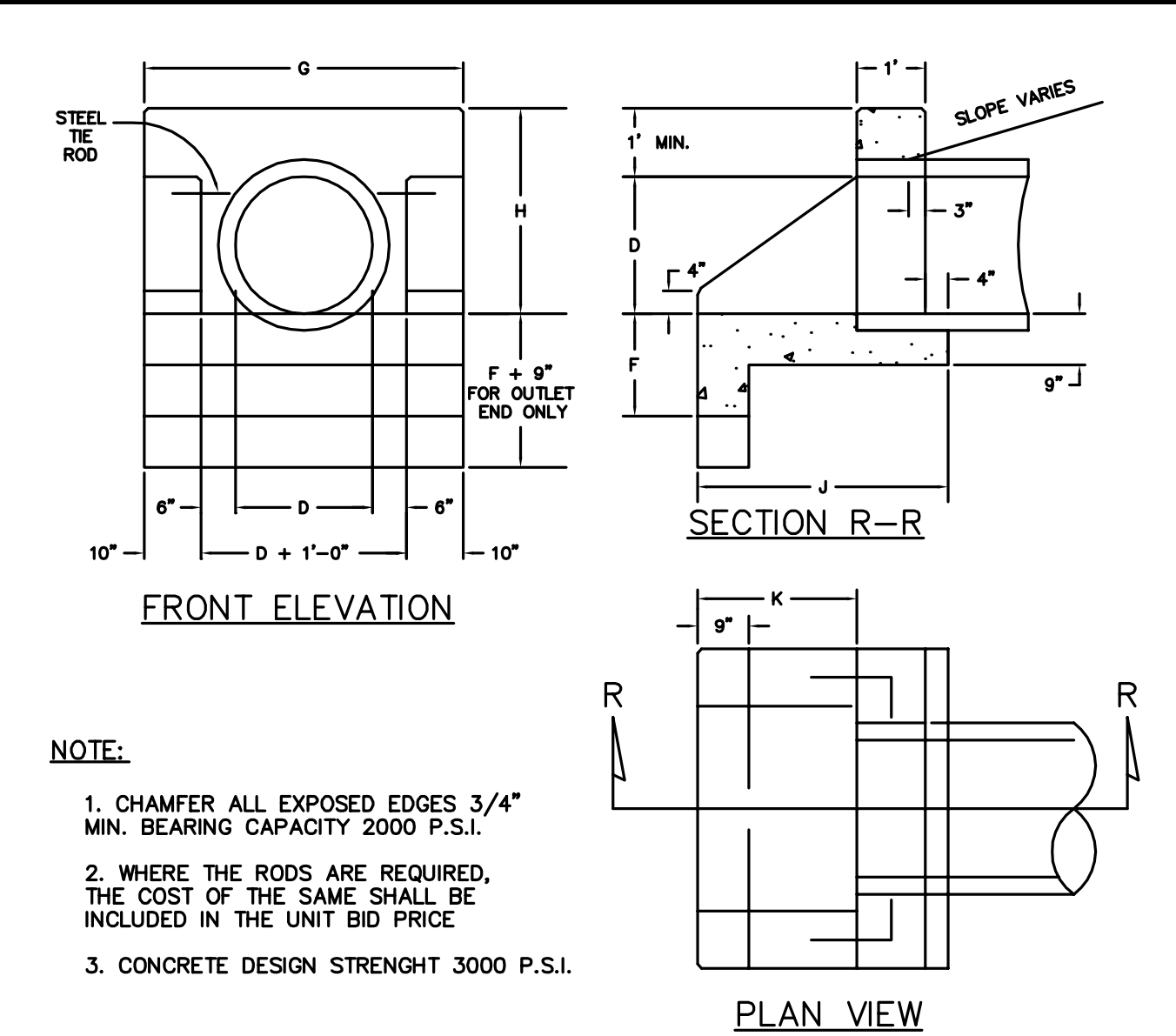
LOCATE WIRE BOX

JANUARY 2019

PLATE S-49E

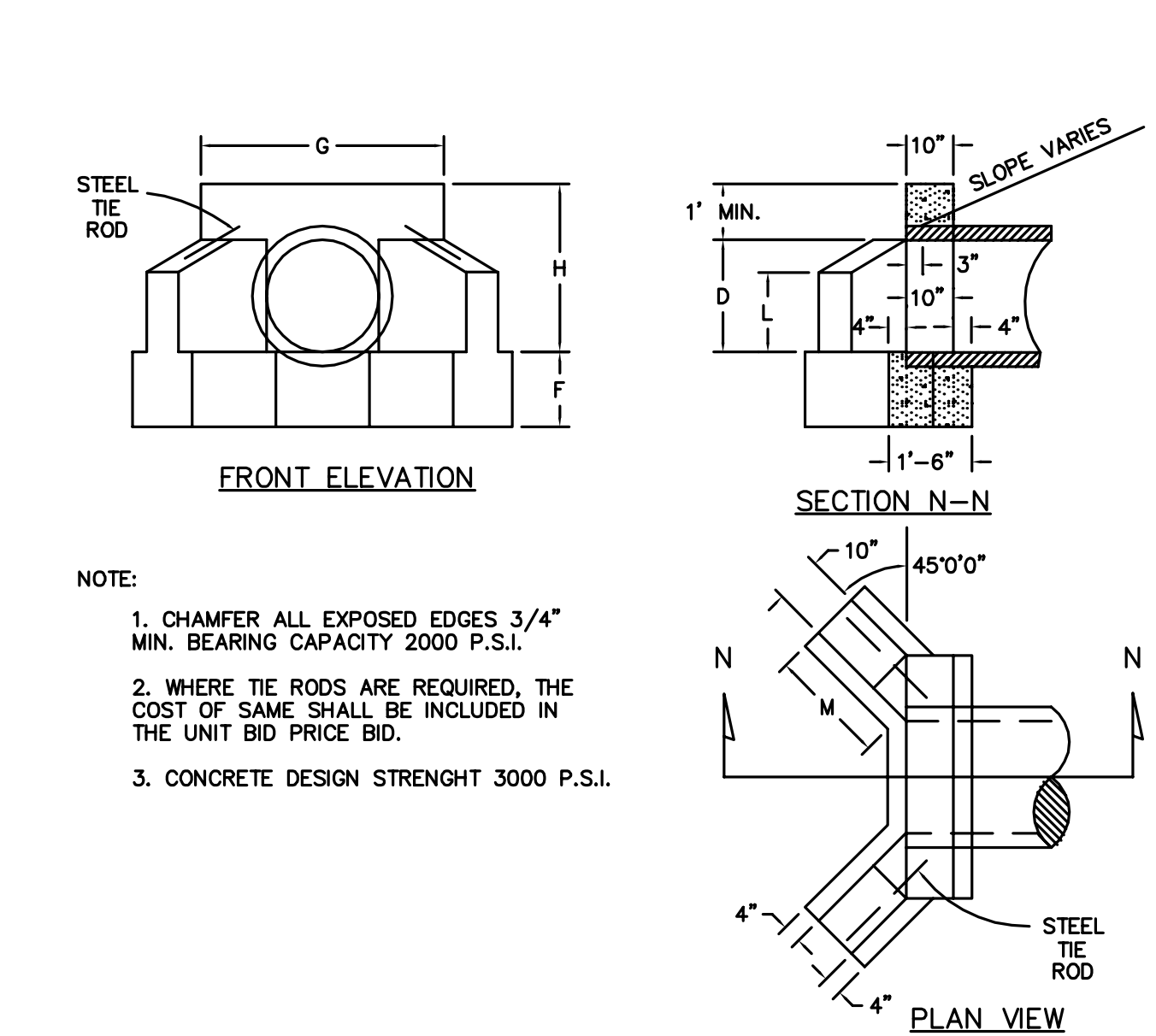
NAVD 88

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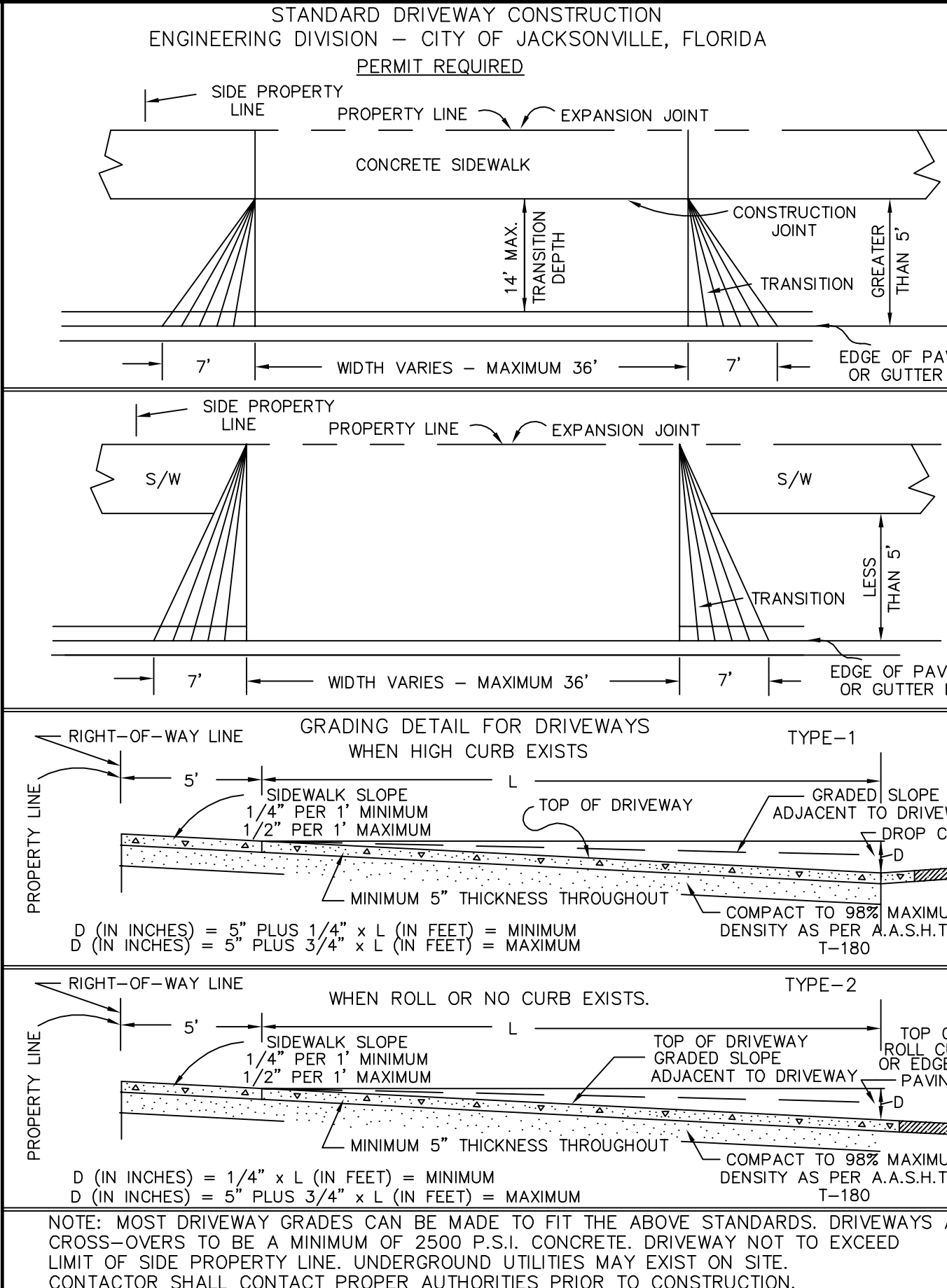
DIMENSIONS										QUANTITIES IN ONE ENDWALL				
OPENING	WALL			FOOTING			TOTAL CU. YDS. CONCRETE, 3000 P.S.I.					STEEL TIE RODS		
D	AREA SQ.FT.	G	H	K	F	J	CONC. PIPE INLET	C.M. PIPE OUTLET	C.I. PIPE INLET	C.I. PIPE OUTLET				
12"	0.8	3'-8"	2'-0"	1'-0"	1'-3"	2'-2"	0.50	0.51	0.59	0.51	0.59	NONE		
15"	1.2	3'-11"	2'-3"	1'-5"	1'-3"	2'-7"	0.61	0.69	0.64	0.72	0.63	0.72	NONE	
18"	1.8	4'-2"	2'-6"	1'-9"	1'-3"	2'-11"	0.72	0.81	0.76	0.84	0.76	0.84	NONE	
24"	3.1	4'-8"	3'-0"	2'-6"	1'-6"	3'-8"	1.03	1.13	1.08	1.18	1.08	1.18	2-3/4" x 2'-0"	
30"	4.9	5'-2"	3'-6"	3'-3"	1'-6"	4'-5"	1.35	1.46	1.43	1.53	1.42	1.53	2-3/4" x 2'-0"	
36"	7.1	5'-8"	4'-0"	4'-0"	1'-9"	5'-2"	1.75	1.87	1.86	1.98	1.84	1.96	2-3/4" x 2'-6"	
42"	9.6	6'-2"	4'-6"	4'-9"	2'-0"	5'-11"	2.21	2.34	2.34	2.47			2-3/4" x 2'-6"	
48"	12.6	6'-8"	5'-0"	5'-6"	2'-0"	6'-8"	2.66	2.80	2.83	2.97			2-3/4" x 3'-0"	

CONCRETE ENDWALL WITH U-TYPE WINGS FOR PIPE CULVERTS	CITY OF JACKSONVILLE STANDARD	N.T.S.	PLATE D-409
		DATE DRAWN	7-14-79
		REVISED DATE	5-12-94

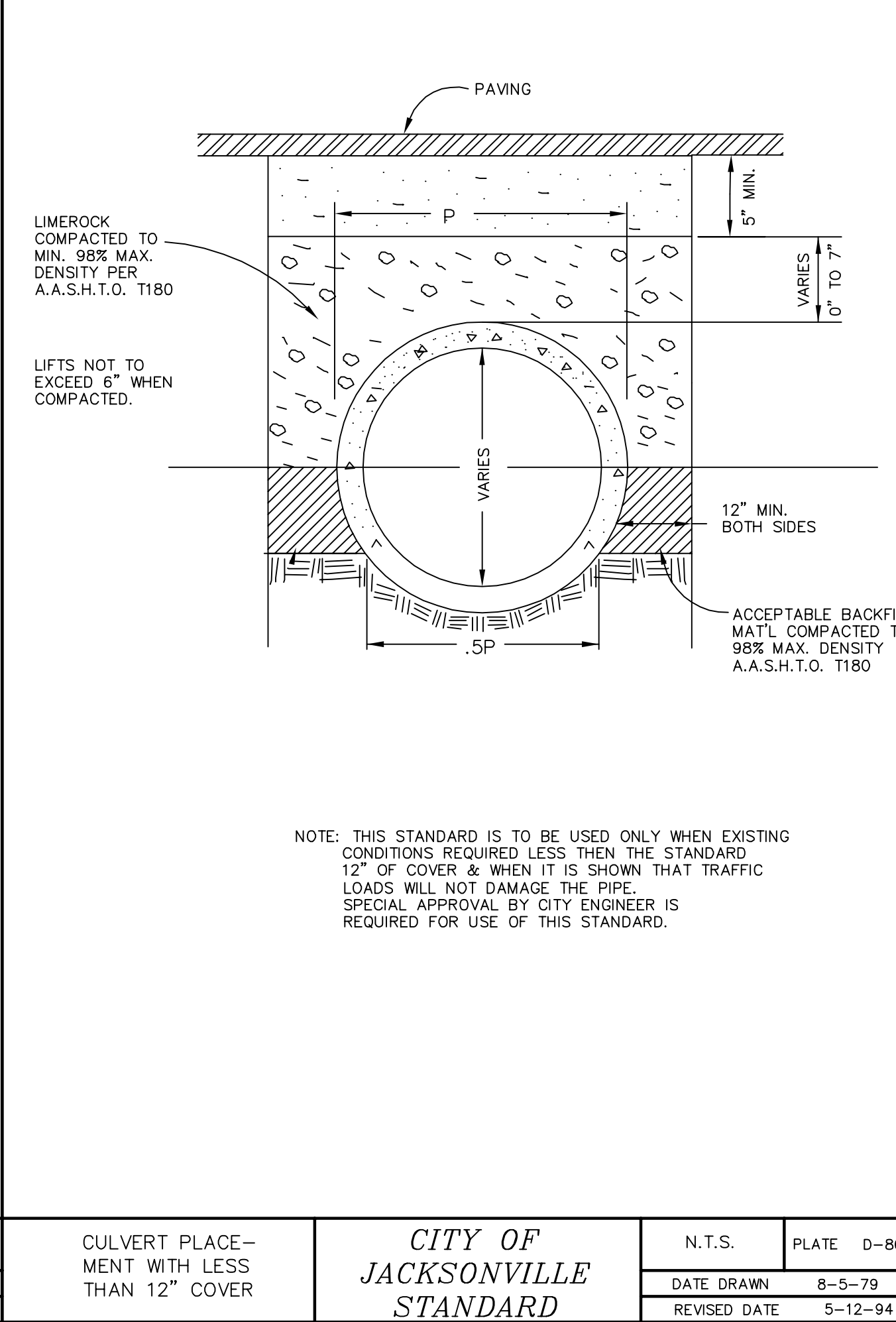


DIMENSIONS										QUANTITIES IN ONE ENDWALL				
OPENING	WALL			FOOTING			CONCRETE 3,000 P.S.I.					STEEL		
D	AREA SQ.FT.	H	G	L	M	F	CONC. PIPE	C.M. PIPE	C.I. PIPE					
15"	1.2	2'-3"	3'-7"	1'-0"	1'-3"	1'-3"	0.58	0.61	0.61			NONE		
18"	1.8	2'-6"	3'-10"	1'-2"	1'-7"	1'-3"	0.76	0.79	0.79			NONE		
24"	3.1	3'-0"	4'-4"	1'-5"	2'-1"	1'-4"	1.03	1.08	1.08			2-3/4" x 2'-0"		
30"	4.9	3'-6"	4'-10"	1'-9"	2'-5"	1'-6"	1.34	1.42	1.41			2-3/4" x 2'-0"		
36"	7.1	4'-0"	5'-4"	2'-0"	2'-11"	1'-8"	1.74	1.85	1.84			2-3/4" x 3'-0"		
42"	9.6	4'-6"	5'-10"	2'-3"	3'-5"	2'-0"	2.36	2.49				2-3/4" x 3'-0"		
48"	12.6	5'-0"	6'-4"	2'-6"	4'-0"	2'-0"	2.76	2.92				2-3/4" x 3'-0"		

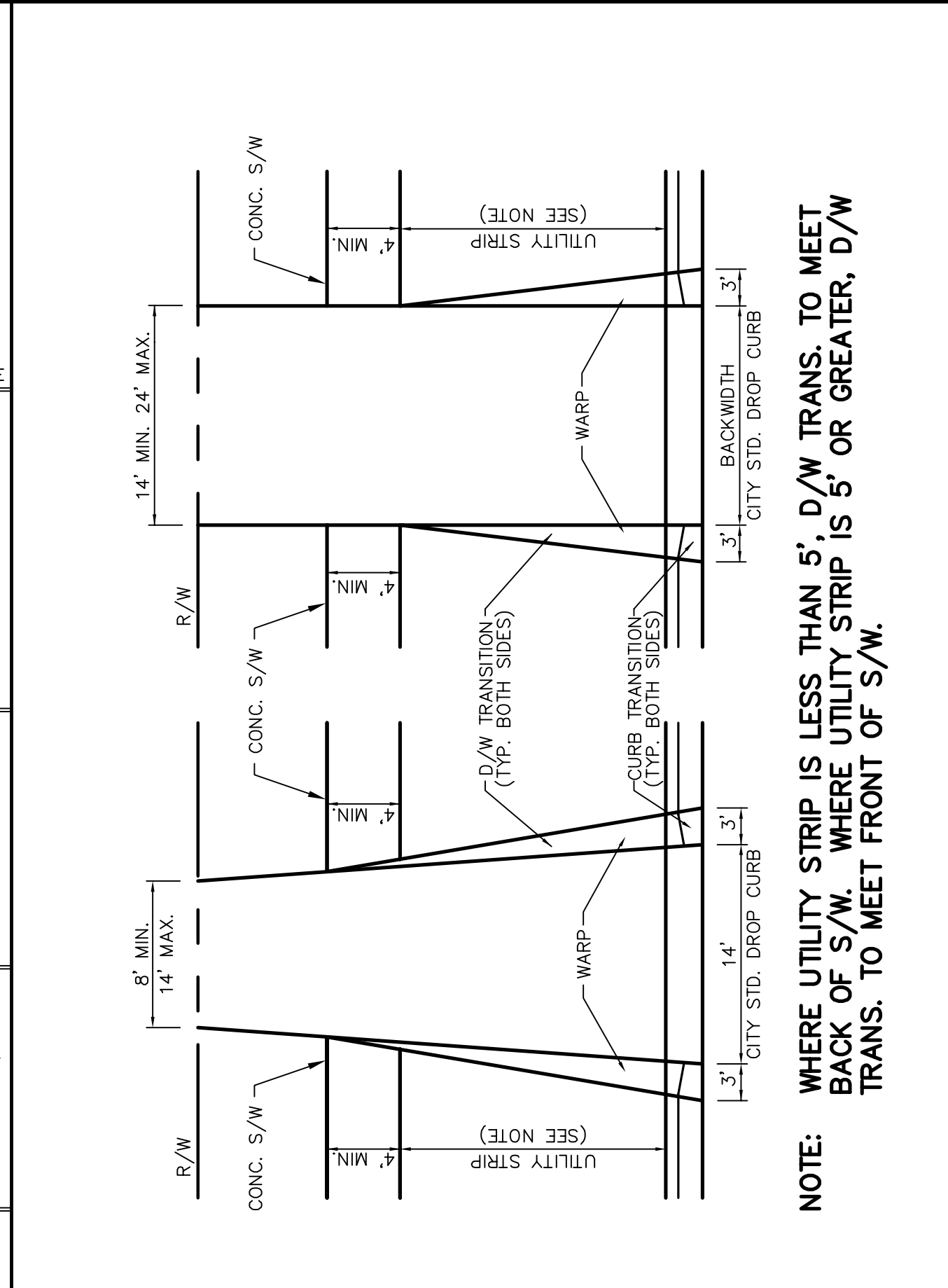
CONCRETE ENDWALL WITH 45° WINGS FOR PIPE CULVERTS	CITY OF JACKSONVILLE STANDARD	N.T.S.	PLATE D-408
		DATE DRAWN	7-12-79
		REVISED DATE	5-12-94



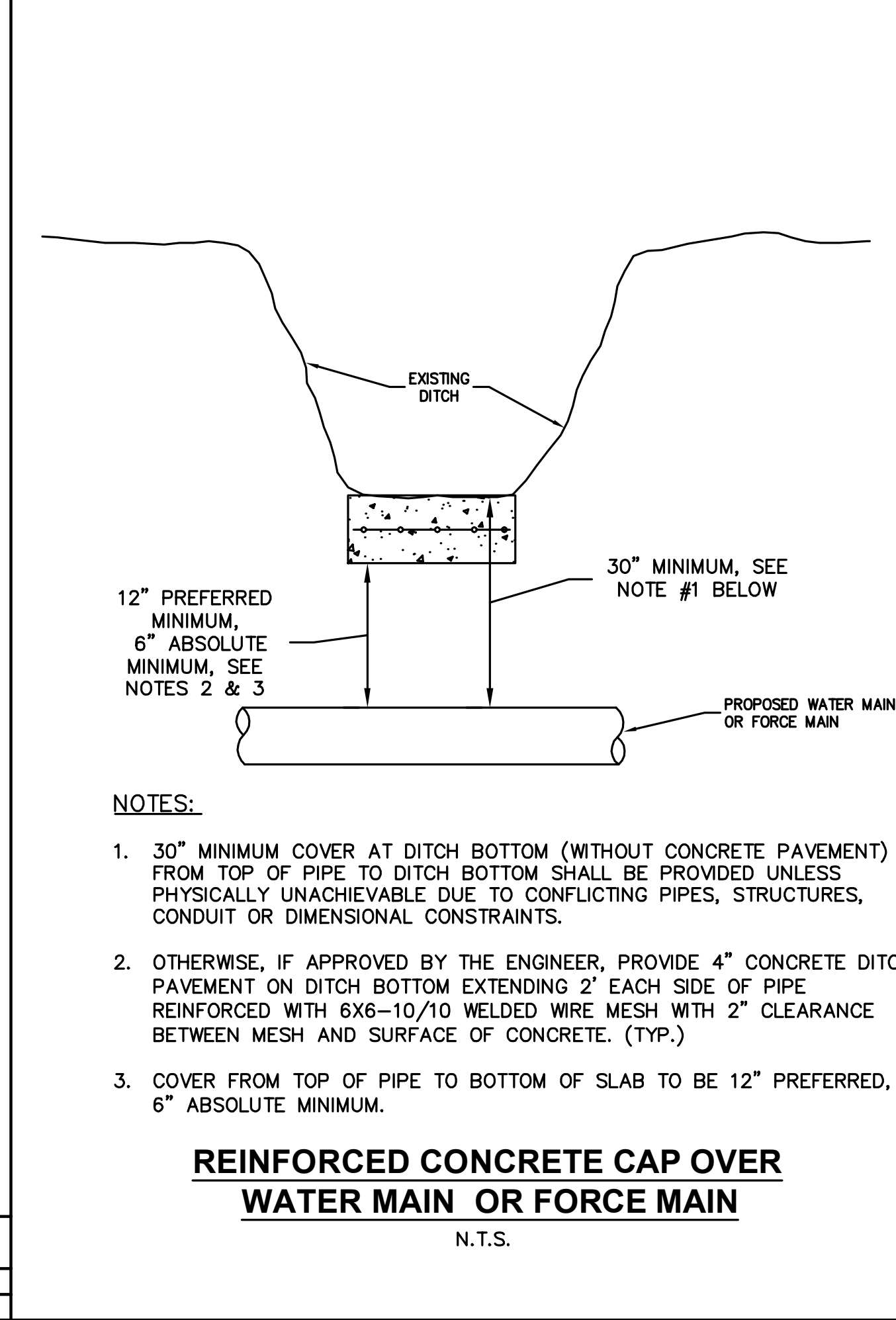
CLASS II COMMERCIAL CONCRETE DRIVEWAY DETAILS	CITY OF JACKSONVILLE STANDARD	N.T.S.	PLATE P-206
		DATE DRAWN	JULY 1978
		REVISED DATE	9-1-1990



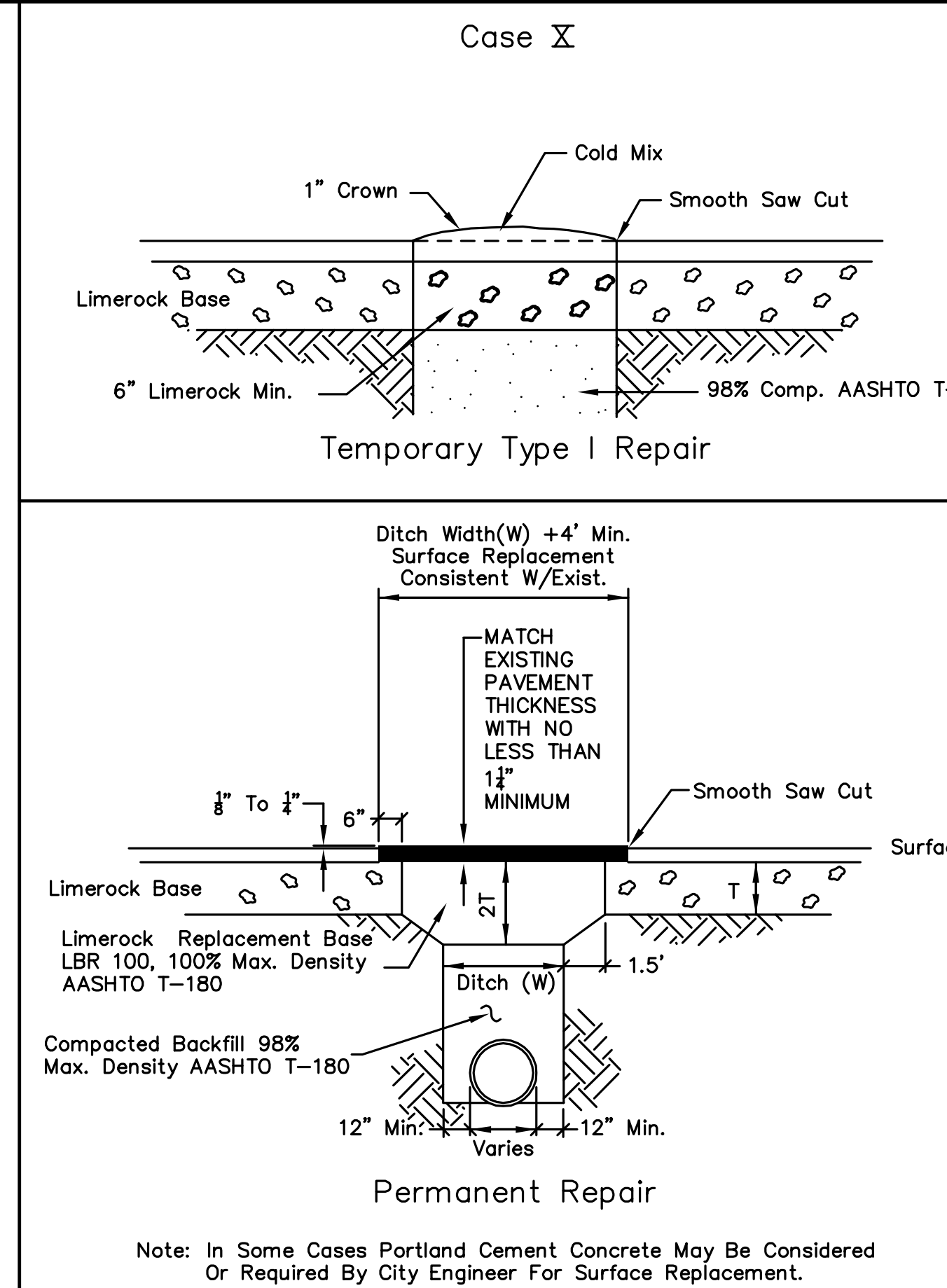
CULVERT PLACEMENT WITH LESS THAN 12" COVER	CITY OF JACKSONVILLE STANDARD	N.T.S.	PLATE D-804
		DATE DRAWN	8-5-79
		REVISED DATE	5-12-94



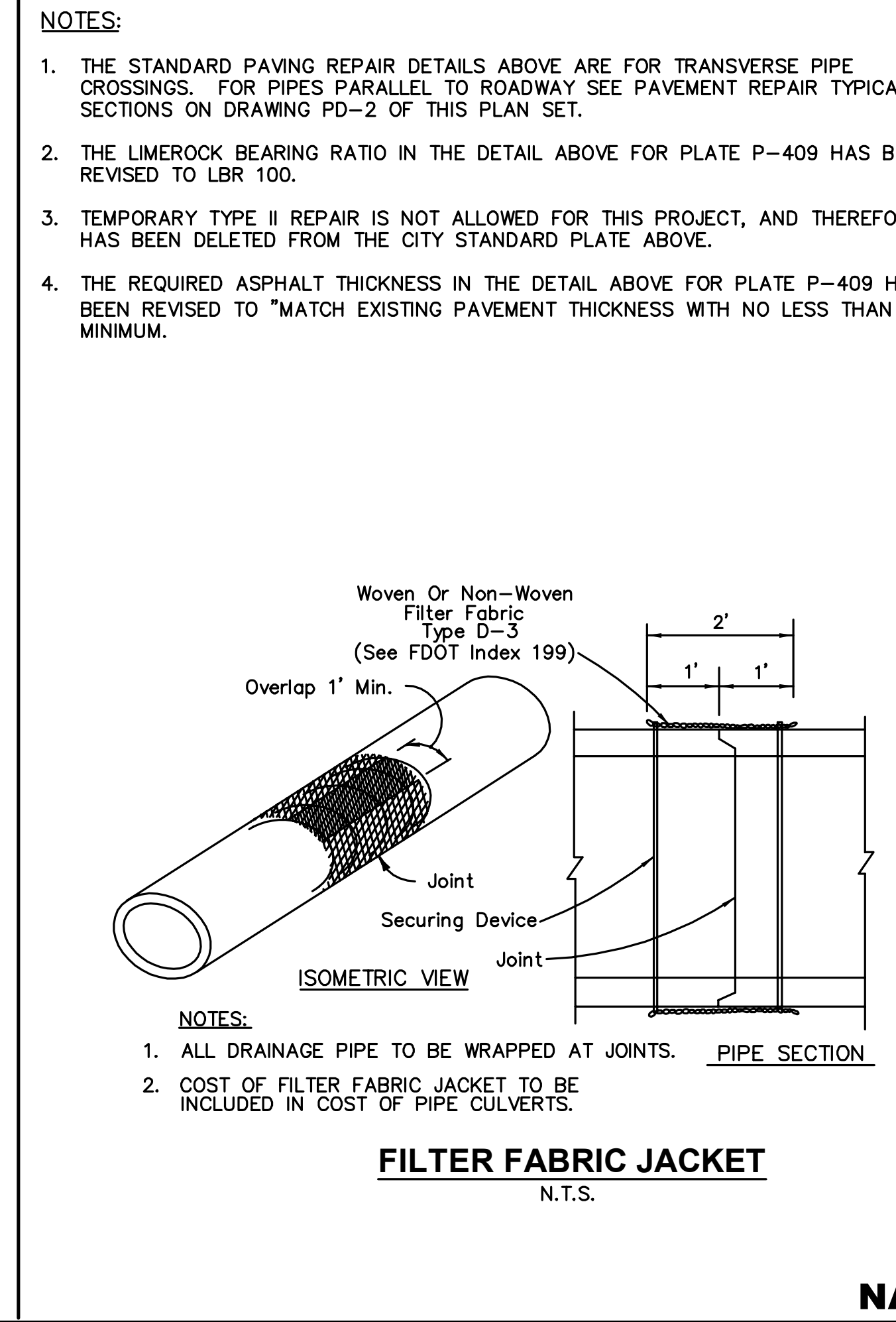
STANDARD CLASS I CONCRETE DRIVEWAY DETAIL	CITY OF JACKSONVILLE STANDARD	N.T.S.	PLATE P-205
		DATE DRAWN	10-10-97
		REVISED DATE	10-10-97



REINFORCED CONCRETE CAP OVER WATER MAIN OR FORCE MAIN	CITY OF JACKSONVILLE STANDARD	N.T.S.	PLATE P-205
		DATE DRAWN	10-10-97
		REVISED DATE	10-10-97



STANDARD PAVING REPAIR DETAILS	CITY OF JACKSONVILLE STANDARD	N.T.S.	PLATE P-409
		DATE DRAWN	7-6-73
		REVISED DATE	9-18-96



FILTER FABRIC JACKET	CITY OF JACKSONVILLE STANDARD	N.T.S.	PLATE P-409
		DATE DRAWN	7-6-73
		REVISED DATE	9-18-96

ETM

England, Thomas & Miller, Inc.
14775 Old St. Augustine Road
Jacksonville, FL 32218
TEL: (904) 642-9890
FAX: (904) 642-9891
REG. 0000259 LC 0000316

NO.	BY	DATE	REVISIONS
1			
2			
3			
4			
5			
6			

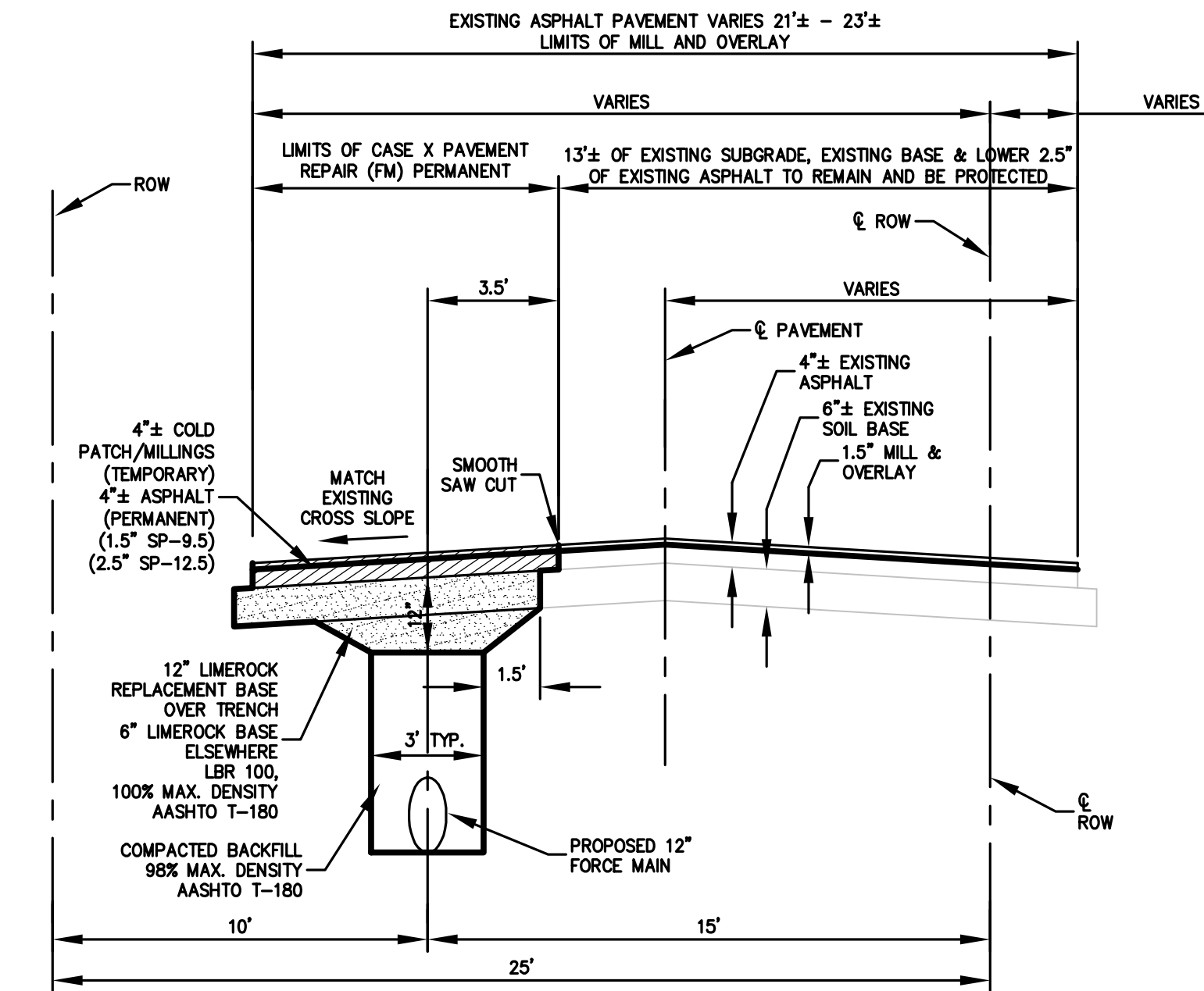
DESIGNER:	D.W.H.	DESIGN ENGINEER:	SCOTT A. WILD
DRAWN BY:	J.E.S.	DATE:	
CHECKED BY:	S.A.W.	FLORIDA REGISTRATION NO.:	47030
DATE:			

BID DOCUMENTS - NOT FOR CONSTRUCTION

BEVERLY HILLS SEPTIC TANK PHASE OUT
OFFSITE FORCE MAIN
PAVING AND DRAINAGE DETAILS

PROJ. NO.:	17-026-02
DATE:	MAY 5, 2020
SHEET NO.:	41
DRAWING NO.:	PD-1
SCALE:	AS NOTED

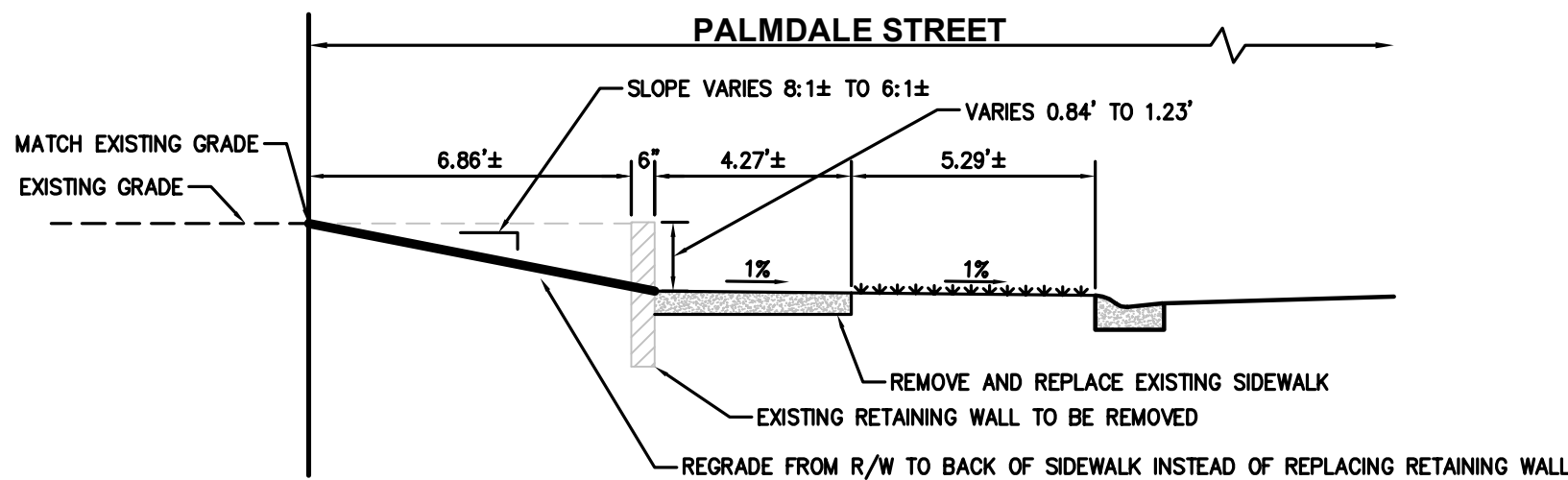
NAVD 88



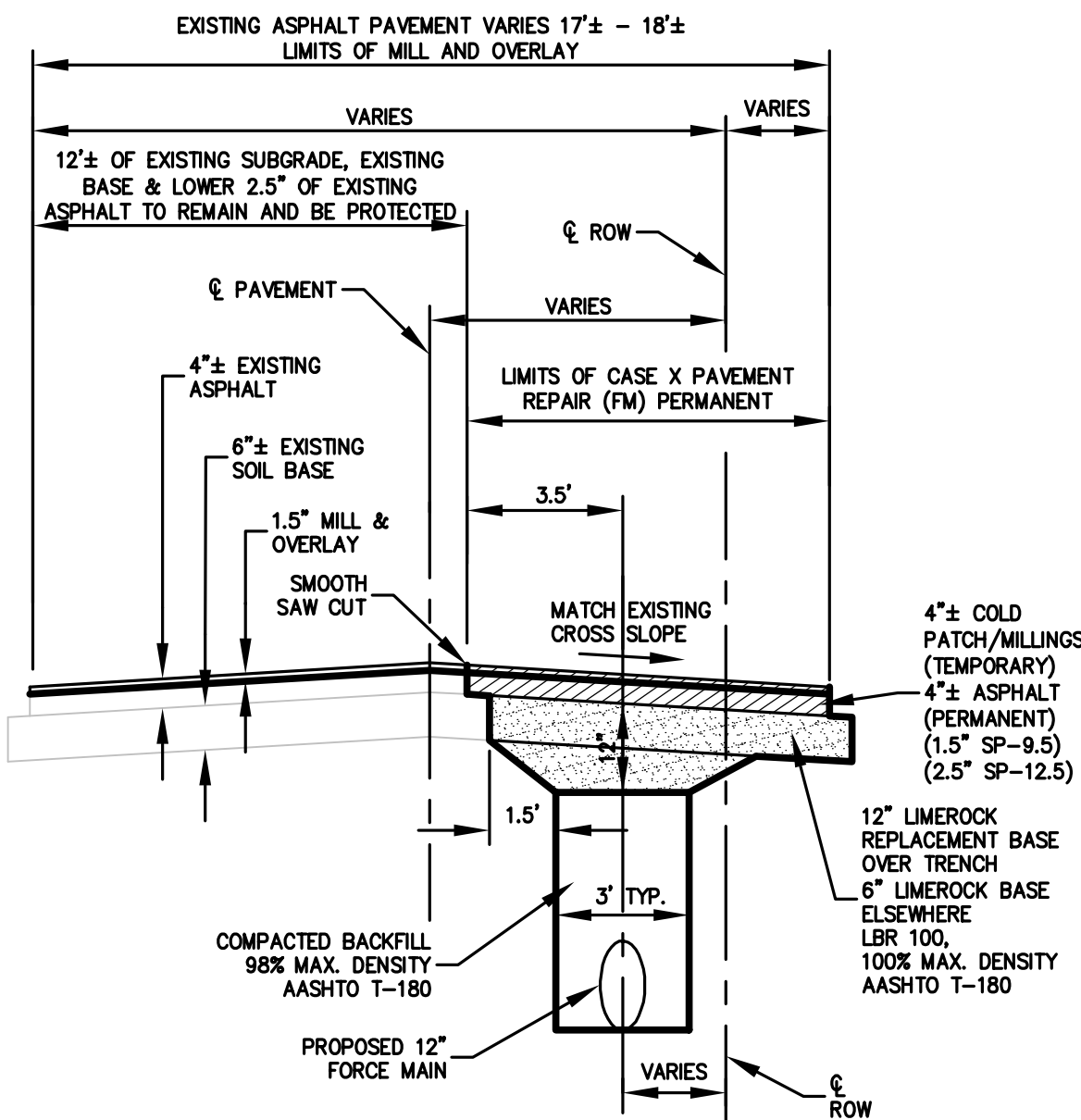
- NOTES:
- LIMEROCK REPLACEMENT BASE & COLD PATCH/MILLINGS SHALL BE INSTALLED ON THE SAME DAY AS PIPE INSTALLATION.
 - CONTRACTOR SHALL MAINTAIN COLD PATCH/MILLINGS TO PROVIDE A SMOOTH DRIVEABLE SURFACE AT ALL TIMES.
 - COLD PATCH/MILLINGS TO BE REMOVED & REPLACED WITH THE FIRST 2.5"± OF PERMANENT SP-12.5 ASPHALT AT ANY TIME. THE REMAINING TOP 1.5" OF PERMANENT SP-9.5 ASPHALT WITHIN REPAIR AREA SHALL BE PLACED CONCURRENT WITH 1.5" MILL & OVERLAY OPERATION.
 - PAYMENT FOR COLD PATCH/MILLINGS & FIRST 2.5" OF SP-12.5 ASPHALT SHALL BE INCLUDED IN COST OF "CASE X PAVEMENT REPAIR PERMANENT". PAYMENT FOR REMAINING 1.5" OF SP-9.5 SHALL BE INCLUDED IN COST OF "1.5" MILL & OVERLAY".
 - EXISTING PAVEMENT & SOIL BASE THICKNESS ARE FROM GEOTECHNICAL REPORT PREPARED BY MESKEL & ASSOCIATES ENGINEERING DATED NOVEMBER 1, 2019 AS SHOWN ON PLANS AND SUMMARIZED BELOW:

BORING NUMBER	PAVEMENT THICKNESS	SOIL BASE THICKNESS
B-7	5"	7"
B-8	4"	6"
B-9	3¾"	6"
B-10	3¾"	6¾"

ORIOLE STREET
PAVEMENT REPAIR TYPICAL SECTION
STA. 300+00± TO STA. 306+00±
N.T.S.



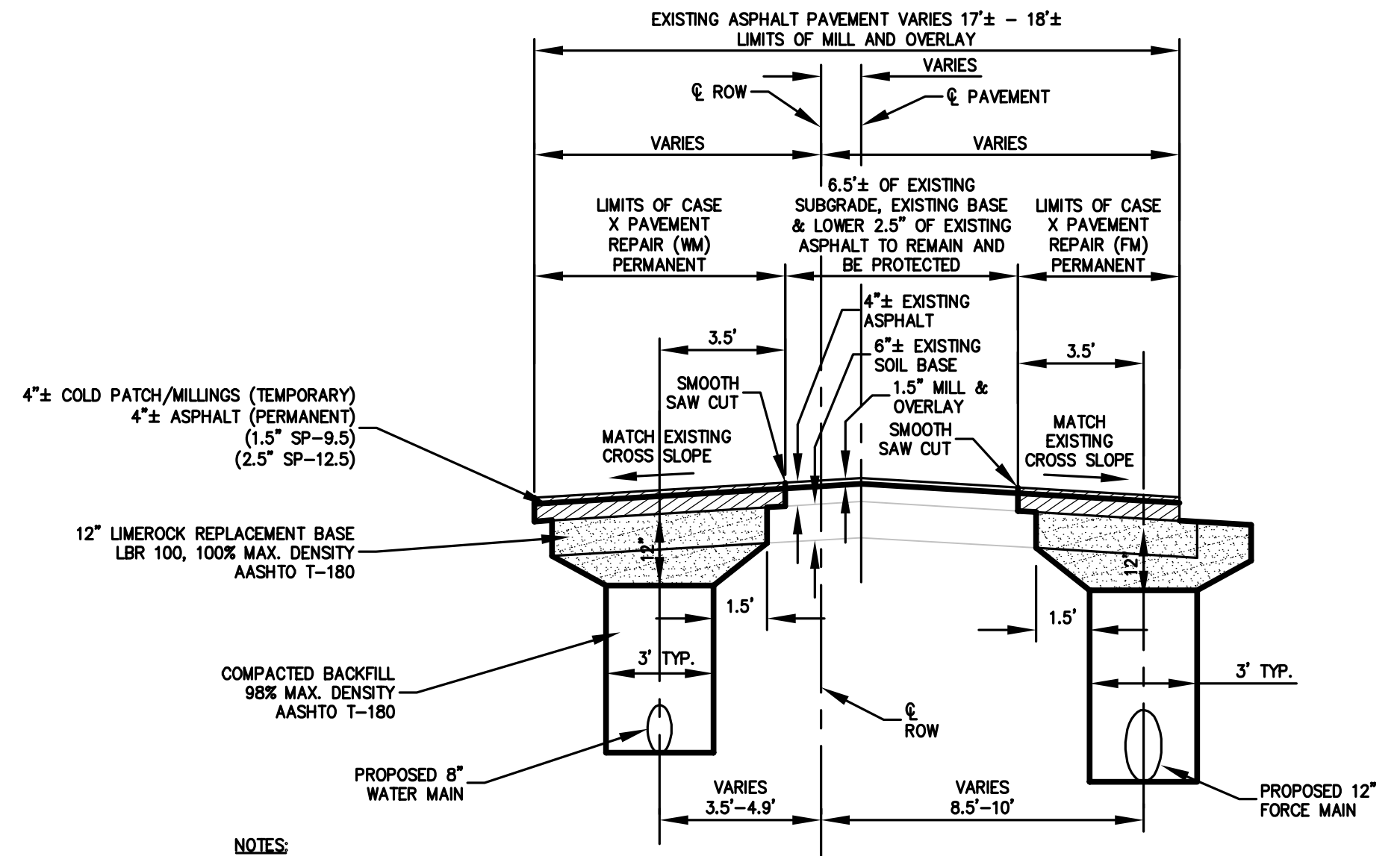
REGRADE EXISTING RIGHT-OF-WAY
INSTEAD OF REPLACING RETAINING WALL
(BID ALTERNATE)
N.T.S.



- NOTES:
- LIMEROCK REPLACEMENT BASE & COLD PATCH/MILLINGS SHALL BE INSTALLED ON THE SAME DAY AS PIPE INSTALLATION.
 - CONTRACTOR SHALL MAINTAIN COLD PATCH/MILLINGS TO PROVIDE A SMOOTH DRIVEABLE SURFACE AT ALL TIMES.
 - COLD PATCH/MILLINGS TO BE REMOVED & REPLACED WITH THE FIRST 2.5"± OF PERMANENT SP-12.5 ASPHALT AT ANY TIME. THE REMAINING TOP 1.5" OF PERMANENT SP-9.5 ASPHALT WITHIN REPAIR AREA SHALL BE PLACED CONCURRENT WITH 1.5" MILL & OVERLAY OPERATION.
 - PAYMENT FOR COLD PATCH/MILLINGS & FIRST 2.5" OF SP-12.5 ASPHALT SHALL BE INCLUDED IN COST OF "CASE X PAVEMENT REPAIR PERMANENT". PAYMENT FOR REMAINING 1.5" OF SP-9.5 SHALL BE INCLUDED IN COST OF "1.5" MILL & OVERLAY".
 - EXISTING PAVEMENT & SOIL BASE THICKNESS ARE FROM GEOTECHNICAL REPORT PREPARED BY MESKEL & ASSOCIATES ENGINEERING DATED NOVEMBER 1, 2019 AS SHOWN ON PLANS AND SUMMARIZED BELOW:

BORING NUMBER	PAVEMENT THICKNESS	SOIL BASE THICKNESS
B-13	5"	6"
B-14	4½"	6½"
B-15	4½"	6½"
B-16	6"	6"

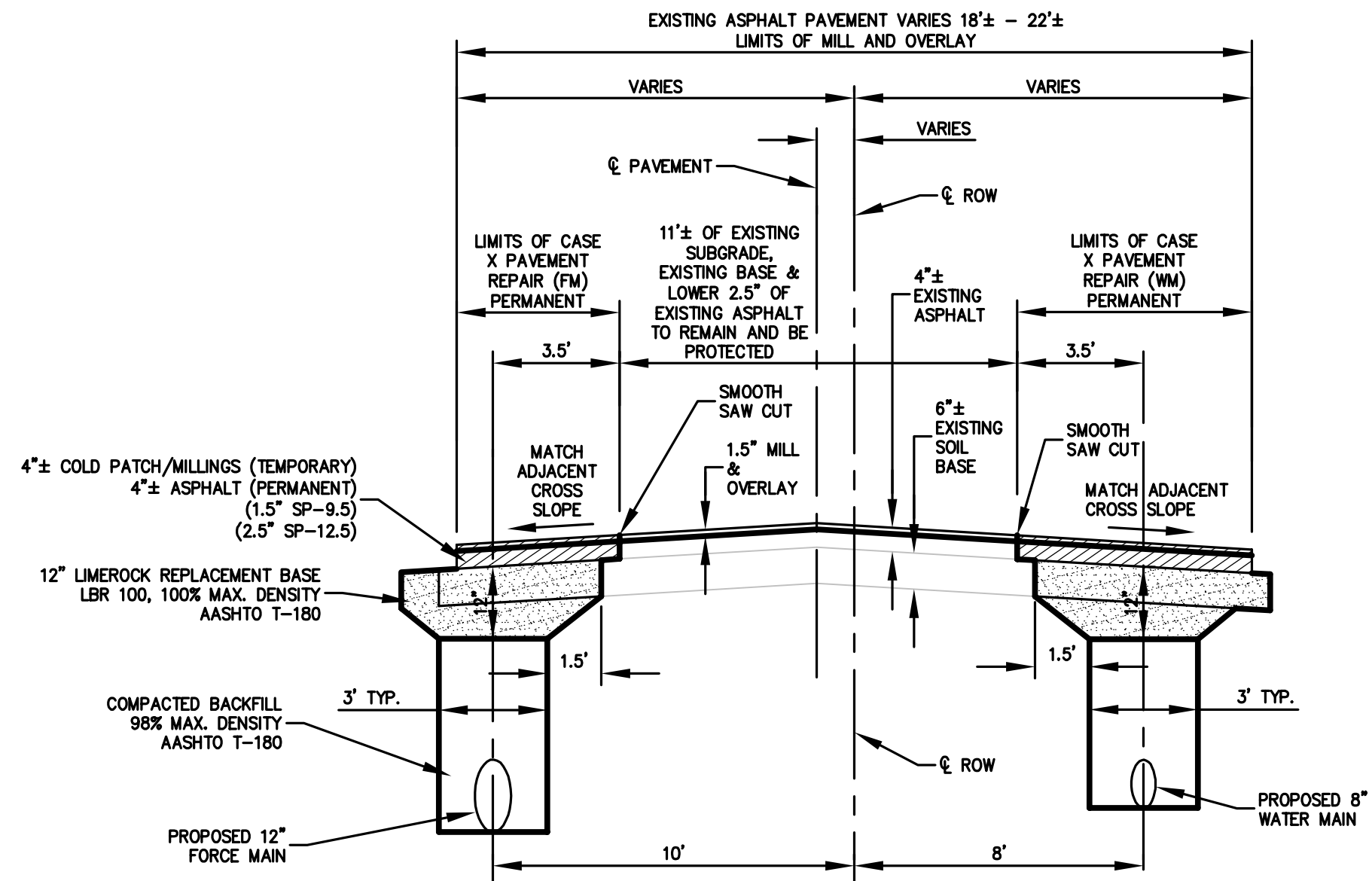
ORIOLE STREET
PAVEMENT REPAIR TYPICAL SECTION
STA. 311+00± TO STA. 318+00±
N.T.S.



- NOTES:
- LIMEROCK REPLACEMENT BASE & COLD PATCH/MILLINGS SHALL BE INSTALLED ON THE SAME DAY AS PIPE INSTALLATION.
 - CONTRACTOR SHALL MAINTAIN COLD PATCH/MILLINGS TO PROVIDE A SMOOTH DRIVEABLE SURFACE AT ALL TIMES.
 - COLD PATCH/MILLINGS TO BE REMOVED & REPLACED WITH THE FIRST 2.5"± OF PERMANENT SP-12.5 ASPHALT AT ANY TIME. THE REMAINING TOP 1.5" OF PERMANENT SP-9.5 ASPHALT WITHIN BOTH REPAIR AREAS SHALL BE PLACED CONCURRENT WITH 1.5" MILL & OVERLAY OPERATION.
 - PAYMENT FOR COLD PATCH/MILLINGS & FIRST 2.5" OF SP-12.5 ASPHALT SHALL BE INCLUDED IN COST OF "CASE X PAVEMENT REPAIR PERMANENT". PAYMENT FOR REMAINING 1.5" OF SP-9.5 SHALL BE INCLUDED IN COST OF "1.5" MILL & OVERLAY".
 - EXISTING PAVEMENT & SOIL BASE THICKNESS ARE FROM GEOTECHNICAL REPORT PREPARED BY MESKEL & ASSOCIATES ENGINEERING DATED NOVEMBER 1, 2019 AS SHOWN ON PLANS AND SUMMARIZED BELOW:

BORING NUMBER	PAVEMENT THICKNESS	SOIL BASE THICKNESS
B-17	5½"	7"
B-18	4½"	6"
B-19	4½"	6½"

ORIOLE STREET
PAVEMENT REPAIR TYPICAL SECTION
STA. 318+00± TO STA. 322+00±
N.T.S.



- NOTES:
- LIMEROCK REPLACEMENT BASE & COLD PATCH/MILLINGS SHALL BE INSTALLED ON THE SAME DAY AS PIPE INSTALLATION.
 - CONTRACTOR SHALL MAINTAIN COLD PATCH/MILLINGS TO PROVIDE A SMOOTH DRIVEABLE SURFACE AT ALL TIMES.
 - COLD PATCH/MILLINGS TO BE REMOVED & REPLACED WITH THE FIRST 2.5"± OF PERMANENT SP-12.5 ASPHALT AT ANY TIME. THE REMAINING TOP 1.5" OF PERMANENT SP-9.5 ASPHALT WITHIN BOTH REPAIR AREAS SHALL BE PLACED CONCURRENT WITH 1.5" MILL & OVERLAY OPERATION.
 - PAYMENT FOR COLD PATCH/MILLINGS & FIRST 2.5" OF SP-12.5 ASPHALT SHALL BE INCLUDED IN COST OF "CASE X PAVEMENT REPAIR PERMANENT". PAYMENT FOR REMAINING 1.5" OF SP-9.5 SHALL BE INCLUDED IN COST OF "1.5" MILL & OVERLAY".
 - EXISTING PAVEMENT & SOIL BASE THICKNESS ARE FROM GEOTECHNICAL REPORT PREPARED BY MESKEL & ASSOCIATES ENGINEERING DATED NOVEMBER 1, 2019 AS SHOWN ON PLANS AND SUMMARIZED BELOW:

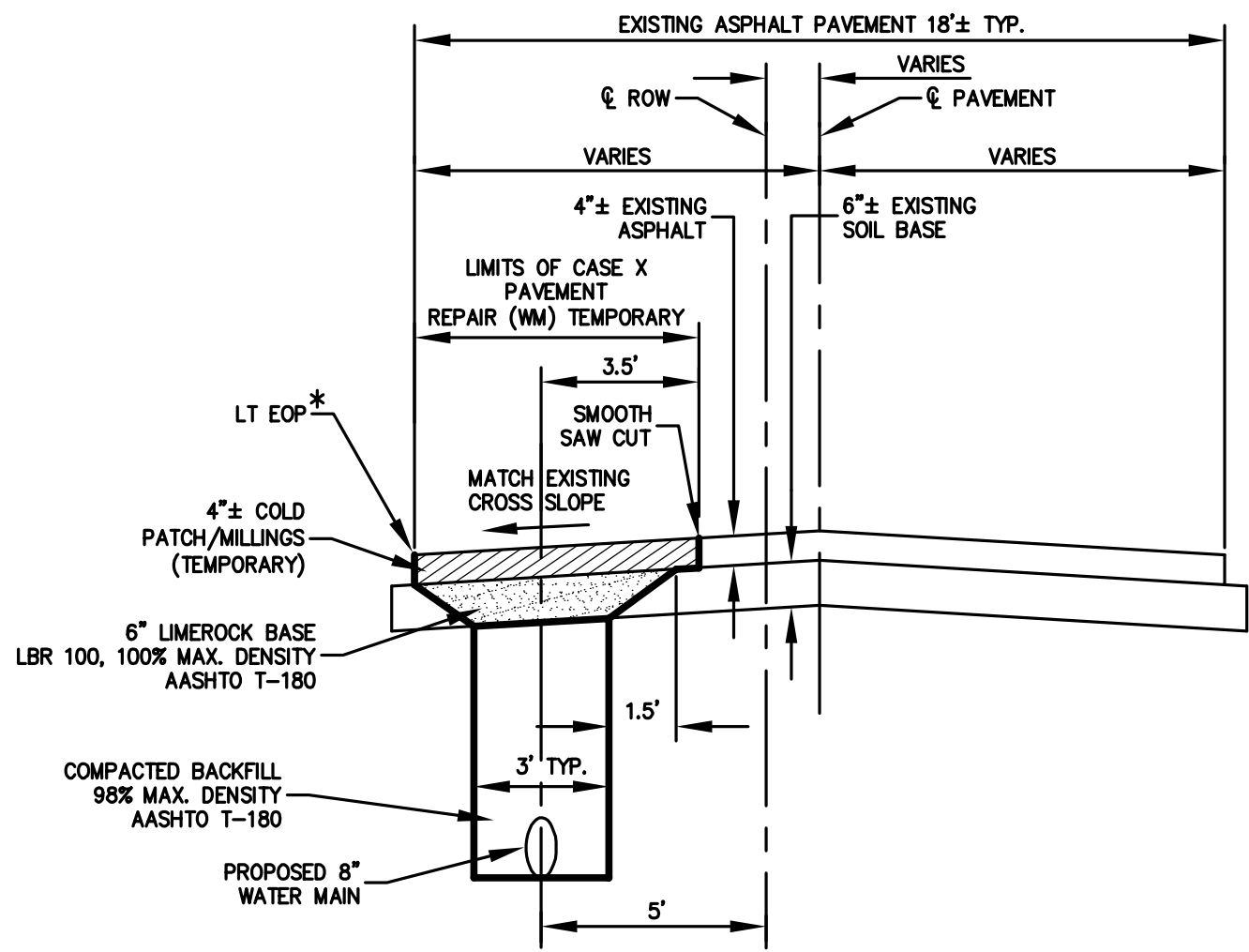
BORING NUMBER	PAVEMENT THICKNESS	SOIL BASE THICKNESS
B-25	4½"	6"
B-26	4½"	6"
B-27	3"	6"
B-28	4"	7"
B-29	6" GRAV	6"
B-30	5½"	6"

GRANT STREET
PAVEMENT REPAIR TYPICAL SECTION
N.T.S.

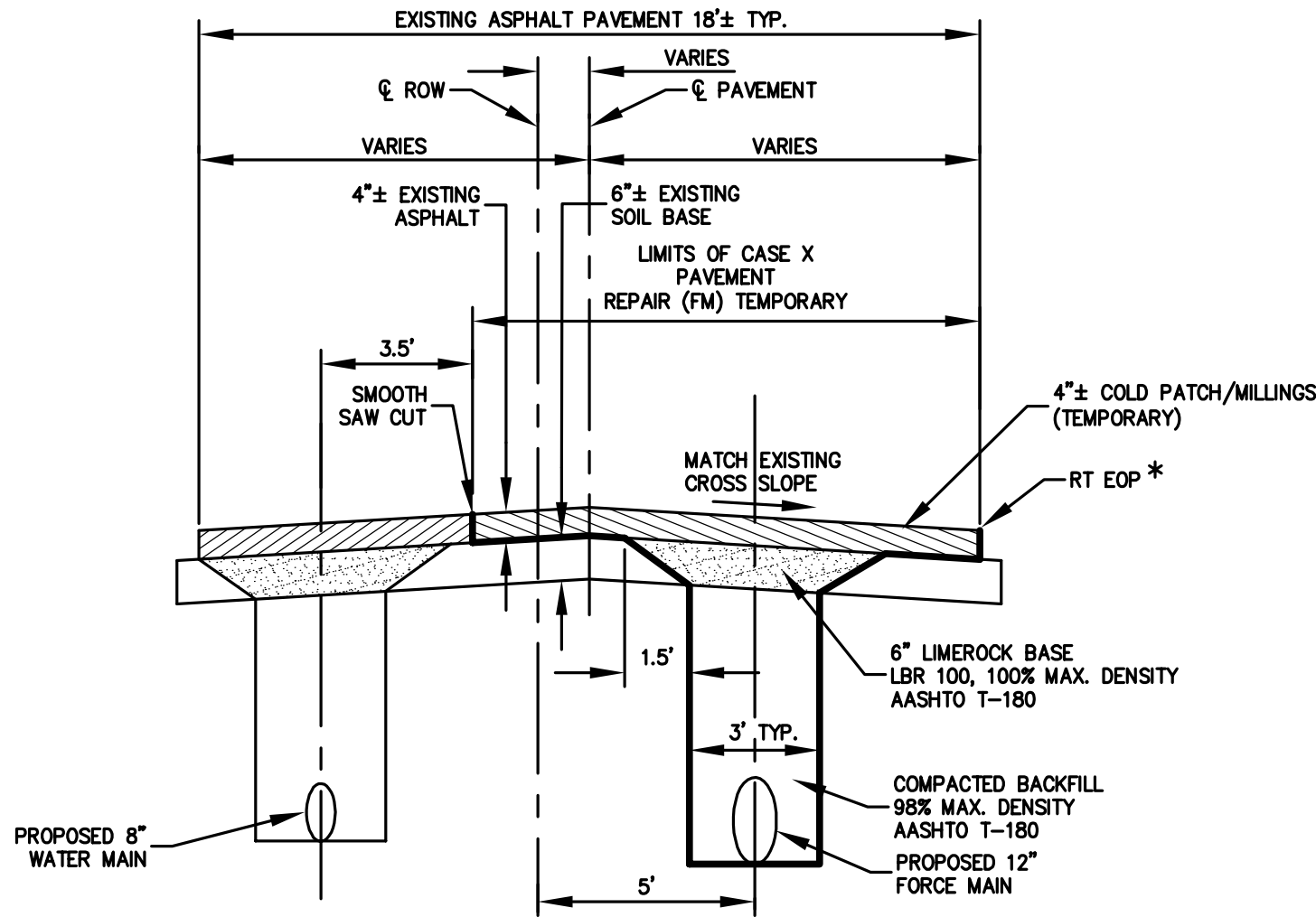
* PROPOSED REPLACEMENT PAVEMENT ELEVATIONS SHALL MATCH EXISTING PAVEMENT ELEVATIONS AS DEFINED BY THE SURVEY SPOT ELEVATIONS SHOWN ON SHEET 29 OF THE PLANS AND AS SUMMARIZED IN THE TABLE BELOW:

STA	OFF	ELEV	DESC
600+06.14	16.61	22.22	RT EOP
600+18.45	7.27	22.31	CL
600+21.74	-6.95	21.90	LT EOP
600+29.65	-4.34	22.06	LT EOP
600+38.23	-3.08	22.02	LT EOP
600+46.28	14.39	21.54	RT EOP
600+67.53	4.95	21.40	CL
600+68.06	13.18	20.99	RT EOP
600+68.45	-4.85	21.53	LT EOP
601+03.54	-6.89	21.15	LT EOP
601+09.81	10.86	20.43	RT EOP
601+17.90	2.74	20.79	CL
601+27.61	10.21	20.31	RT EOP
601+28.18	-7.46	20.97	LT EOP
601+68.31	-9.39	20.96	LT EOP
601+69.19	-0.19	20.74	CL
601+69.73	8.34	20.31	RT EOP
602+13.79	-12.24	20.86	LT EOP
602+15.24	-3.46	20.79	CL
602+16.49	5.61	20.49	RT EOP
602+47.24	-13.00	21.04	LT EOP
602+64.21	-13.87	21.16	LT EOP
602+65.12	-4.89	21.09	CL
602+66.47	4.23	20.74	RT EOP
603+11.63	-4.41	21.57	CL
603+11.75	4.62	21.33	RT EOP
603+13.16	-12.74	21.52	LT EOP
603+41.56	5.56	21.67	RT EOP
603+57.08	-2.95	21.85	CL
603+62.39	-11.43	21.72	LT EOP
603+76.41	7.05	21.90	RT EOP
603+80.39	-10.59	21.81	LT EOP

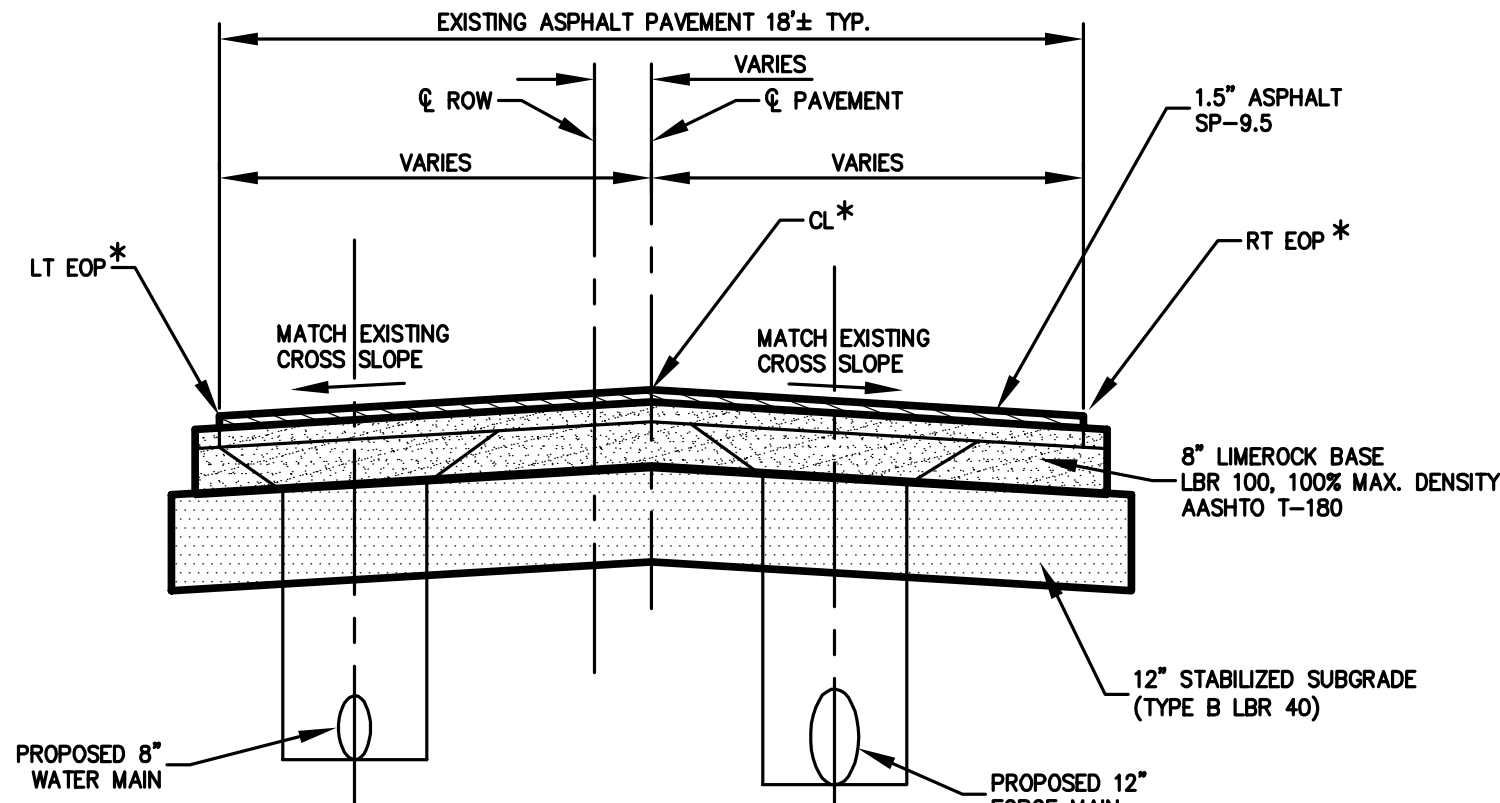
STA	OFF	ELEV	DESC
604+09.47	8.17	22.12	RT EOP
604+09.76	-9.21	22.03	LT EOP
604+10.16	-0.44	22.21	CL
604+56.56	10.16	22.37	RT EOP
604+57.39	2.19	22.43	CL
604+58.06	-6.94	22.37	LT EOP
604+76.37	11.94	22.48	RT EOP
605+05.53	15.73	22.11	RT EOP
605+07.59	-6.97	22.37	LT EOP
605+09.24	2.56	22.45	CL
605+50.42	18.39	21.99	RT EOP
605+58.21	-8.62	21.95	LT EOP
605+59.19	0.28	22.03	CL
605+75.17	10.25	21.84	RT EOP
605+76.09	-9.33	21.58	LT EOP
605+87.58	-14.73	21.31	LT EOP
606+06.59	10.29	21.66	RT EOP
606+07.08	-0.62	21.48	CL
606+21.97	-17.34	20.97	LT EOP
606+49.68	-9.29	20.62	LT EOP
606+59.14	-0.31	20.57	CL
606+59.14	10.05	20.37	RT EOP
607+07.85	9.64	19.36	RT EOP
607+09.14	-0.15	19.42	CL
607+09.91	-9.83	19.47	LT EOP
607+57.85	9.66	18.39	RT EOP
607+58.79	-10.22	18.25	LT EOP
607+59.14	0.01	18.44	CL
608+11.16	9.64	17.64	RT EOP
608+11.64	0.18	17.65	CL
608+12.05	-8.93	17.65	LT EOP



IDA STREET
TEMPORARY PAVEMENT REPAIR (ALTERNATE)
PHASE 1
N.T.S.



IDA STREET
TEMPORARY PAVEMENT REPAIR (ALTERNATE)
PHASE 2
N.T.S.

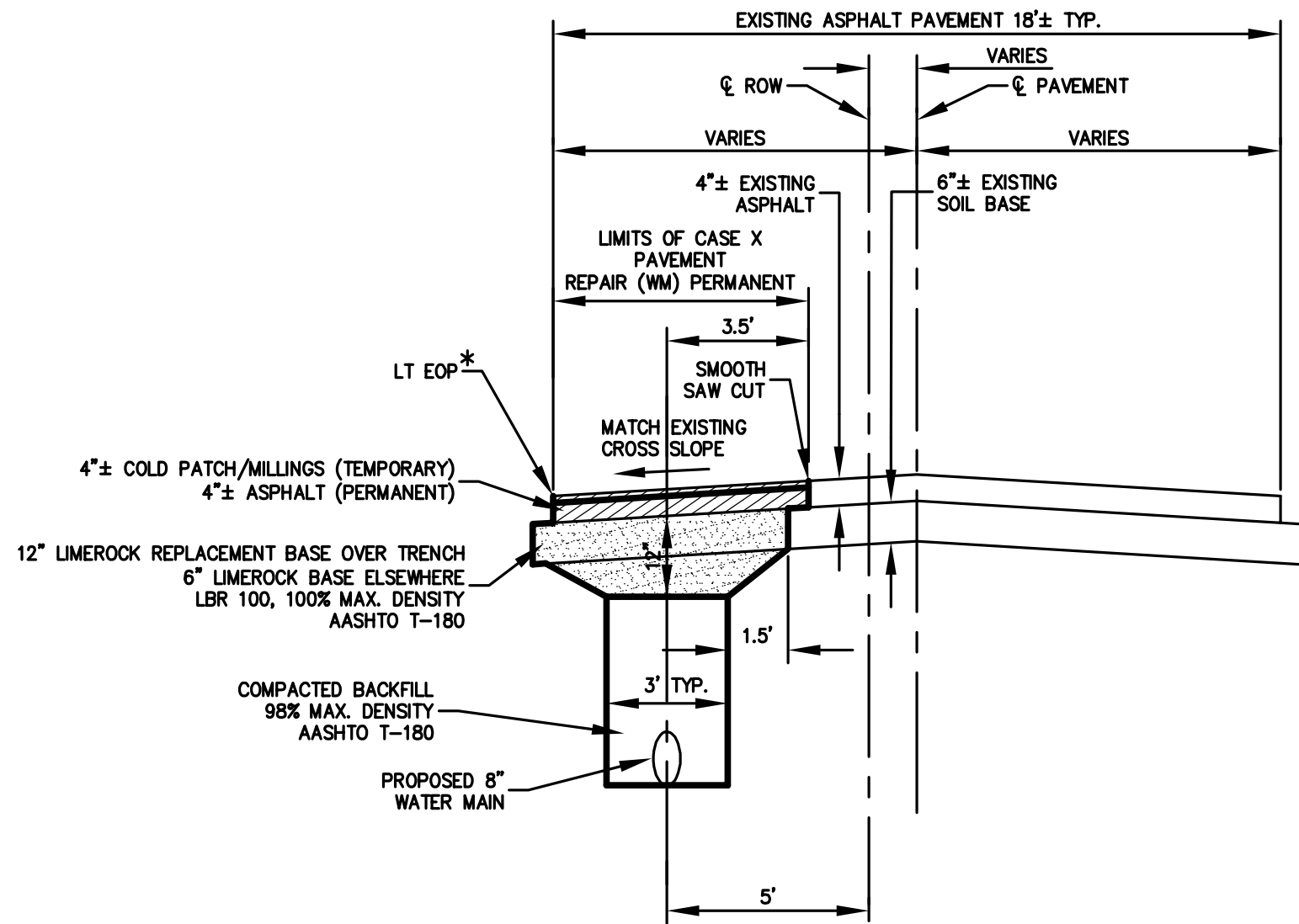


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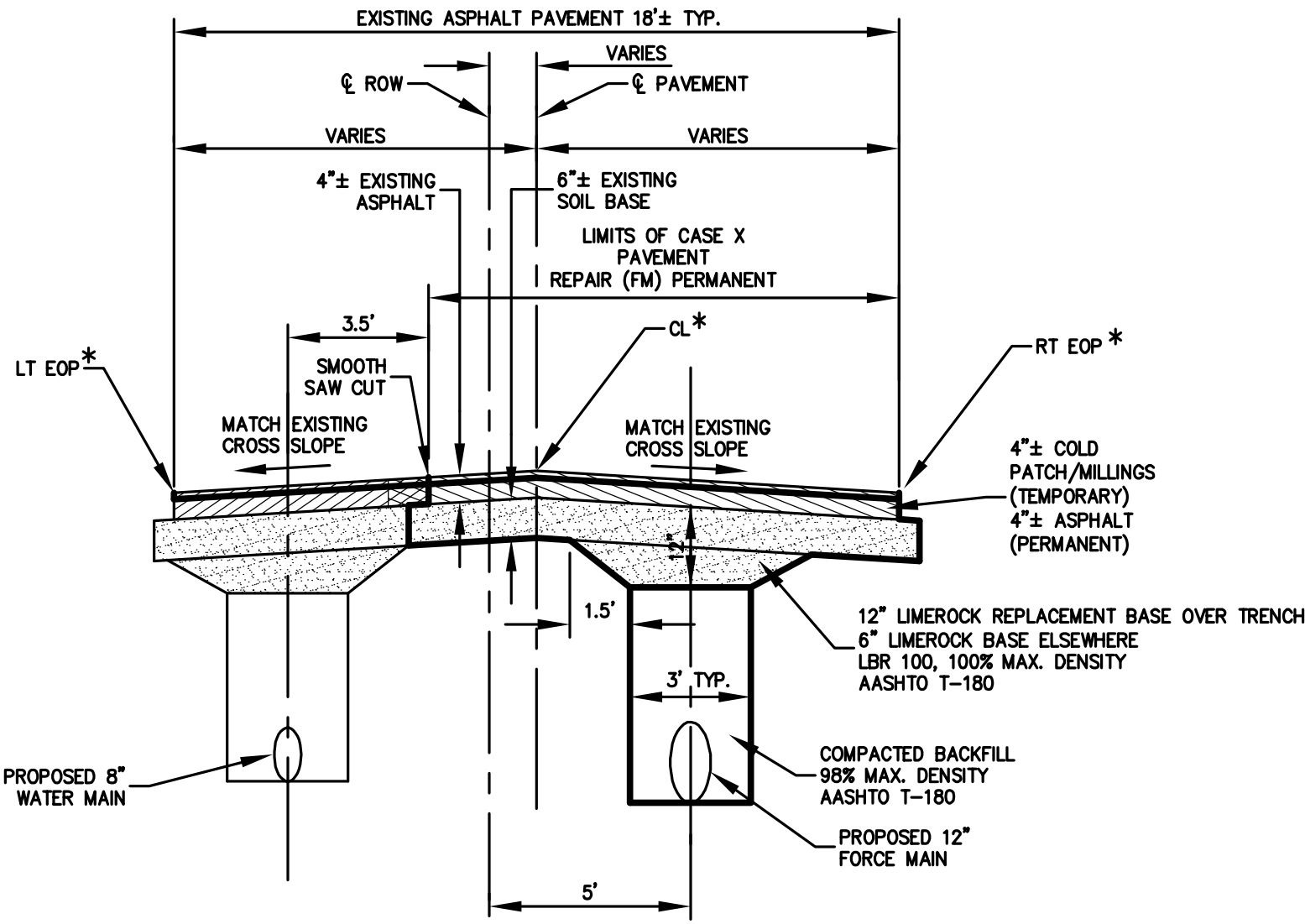
- AT THE CONTRACTOR'S OPTION, THE ALTERNATE 3-PHASE APPROACH SHOWN IN DETAILS ABOVE MAY BE CONSTRUCTED INSTEAD OF THE 2-PHASE BASIS OF BID APPROACH AT NO ADDITIONAL COST.
- THE DETAILS ABOVE ASSUME THAT WATER MAIN INSTALLATION WILL OCCUR PRIOR TO FORCE MAIN INSTALLATION. IF THE REVERSE IS TRUE, THEN THE SMOOTH SAW CUT SHALL BE MOVED TO 3.5' LEFT OF FORCE MAIN CENTERLINE, INSTEAD OF 3.5' RIGHT OF WATER MAIN CURRENTLY SHOWN.
- FOR PHASES 1 & 2 LIMEROCK REPLACEMENT BASE & COLD PATCH/MILLINGS SHALL BE INSTALLED ON THE SAME DAY AS PIPE INSTALLATION.
- CONTRACTOR SHALL MAINTAIN COLD PATCH/MILLINGS TO PROVIDE A SMOOTH DRIVEABLE SURFACE AT ALL TIMES.
- UPON COMPLETION OF PHASES 1 & 2 THE CONTRACTOR SHALL REPLACE THE ROADWAY WITH THE PHASE 3 SECTION.
- EXISTING PAVEMENT & SOIL BASE THICKNESS ARE FROM GEOTECHNICAL REPORT PREPARED BY MESKEL & ASSOCIATES ENGINEERING DATED NOVEMBER 1, 2019 AS SHOWN ON PLANS AND SUMMARIZED BELOW:

BORING NUMBER	PAVEMENT THICKNESS	SOIL BASE THICKNESS
B-31	3½"	7"
B-32	4½"	6"
B-33	3½"	6½"
B-34	5"	6"
B-35	4"	6"
B-36	3½"	6"

IDA STREET
PERMANENT PAVEMENT REPAIR (ALTERNATE)
PHASE 3
N.T.S.



IDA STREET
PAVEMENT REPAIR TYPICAL SECTION (BASIS OF BID)
PHASE 1
N.T.S.



NOTES:

- THE 2-PHASE PAVEMENT REPAIR APPROACH SHOWN IN THE DETAILS ABOVE SHALL BE THE BASIS OF BID. AT THE CONTRACTOR'S OPTION, THE "ALTERNATE" 3-PHASE APPROACH AS SHOWN ON DETAILS AT LEFT MAY BE CONSTRUCTED AT NO ADDITIONAL COST.
- THE DETAILS ABOVE ASSUME THAT WATER MAIN INSTALLATION WILL OCCUR PRIOR TO FORCE MAIN INSTALLATION. IF THE REVERSE IS TRUE, THEN THE SMOOTH SAW CUT SHALL BE MOVED TO 3.5' LEFT OF FORCE MAIN CENTERLINE, INSTEAD OF 3.5' RIGHT OF WATER MAIN CURRENTLY SHOWN.
- LIMEROCK REPLACEMENT BASE & COLD PATCH/MILLINGS SHALL BE INSTALLED ON THE SAME DAY AS PIPE INSTALLATION.
- CONTRACTOR SHALL MAINTAIN COLD PATCH/MILLINGS TO PROVIDE A SMOOTH DRIVEABLE SURFACE AT ALL TIMES.
- COLD PATCH/MILLINGS TO BE REMOVED & REPLACED WITH THE FIRST 2.5"± OF PERMANENT SP-12.5 ASPHALT AT ANY TIME. THE REMAINING TOP 1.5" OF PERMANENT SP-9.5 ASPHALT SHALL BE PLACED CONTINUOUSLY ACROSS THE ENTIRE PAVEMENT WIDTH.
- PAYMENT FOR COLD PATCH/MILLINGS & FIRST 2.5" OF SP-12.5 ASPHALT SHALL BE INCLUDED IN COST OF "CASE X PAVEMENT REPAIR PERMANENT". PAYMENT FOR REMAINING 1.5" OF SP-9.5 SHALL BE INCLUDED IN COST OF "1.5" MILL & OVERLAY".
- EXISTING PAVEMENT & SOIL BASE THICKNESS ARE FROM GEOTECHNICAL REPORT PREPARED BY MESKEL & ASSOCIATES ENGINEERING DATED NOVEMBER 1, 2019 AS SHOWN ON PLANS AND SUMMARIZED BELOW:

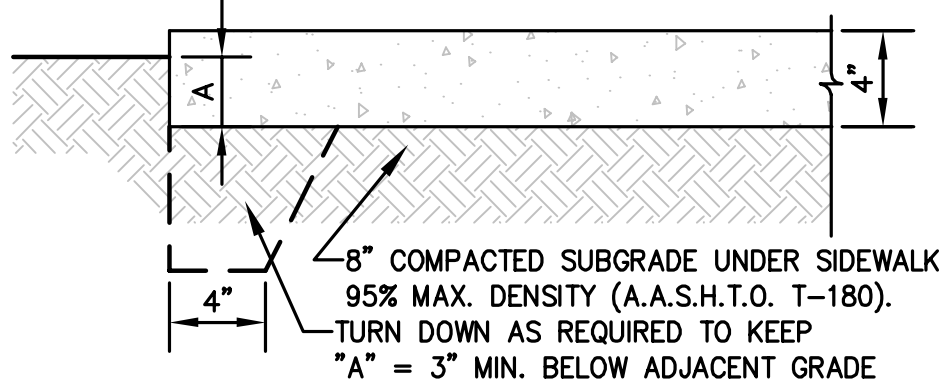
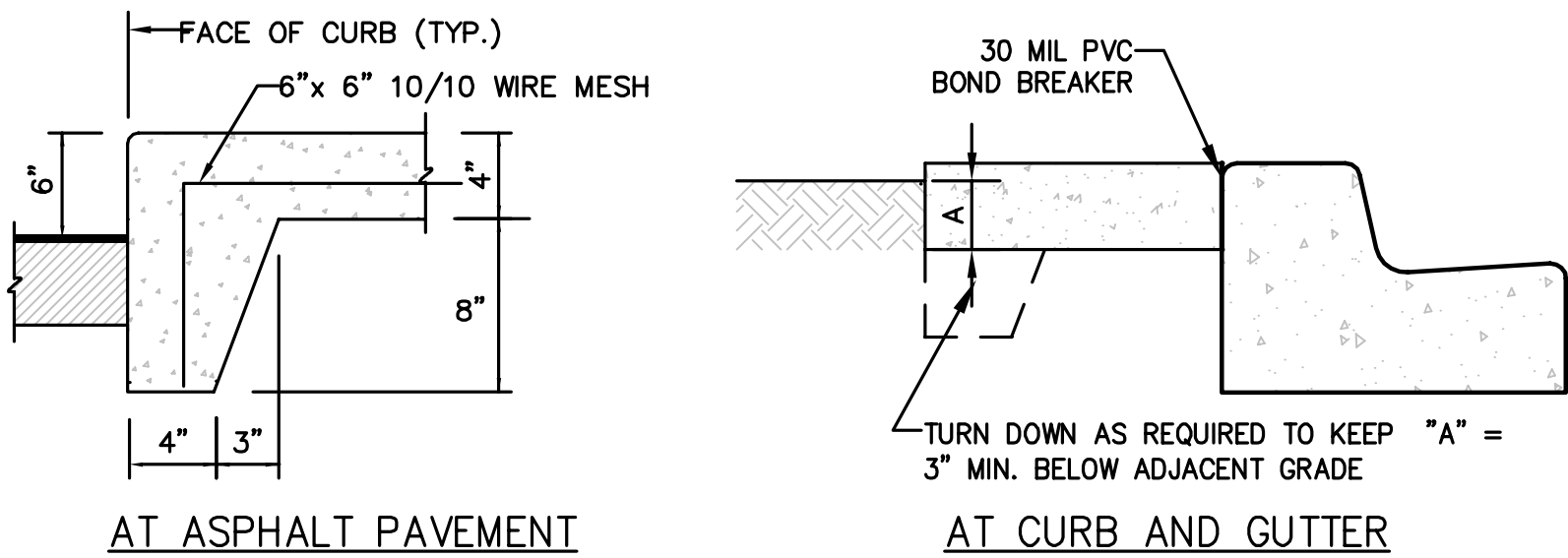
BORING NUMBER	PAVEMENT THICKNESS	SOIL BASE THICKNESS
B-31	3½"	7"
B-32	4½"	6"
B-33	3½"	6½"
B-34	5"	6"
B-35	4"	6"
B-36	3½"	6"

IDA STREET
PAVEMENT REPAIR TYPICAL SECTION (BASIS OF BID)
PHASE 2
N.T.S.

NAVD 88

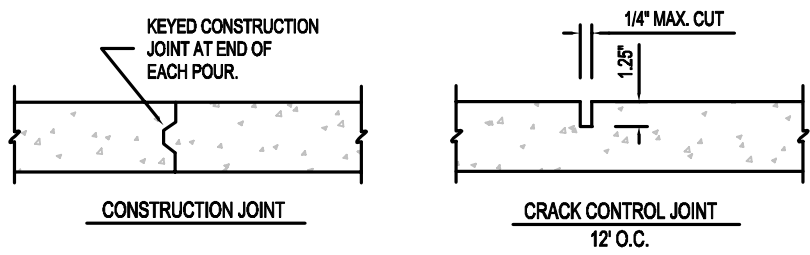
ETM
Engineering, Planning & Construction, Inc.
14775 Old St. Augustine Road
Jacksonville, FL 32218
TEL: (904) 644-8880
FAX: (904) 644-4444
REG. 00002594 LC 0000316

BID DOCUMENTS - NOT FOR CONSTRUCTION											
NO. SHEETS		PROJ. NO. 17-0256-02		BEVERLY HILLS SEPTIC TANK PHASE OUT							
69											
SHEET NO.		DATE: MAY 5, 2020		OFFSITE FORCE MAIN							
43											
DRAWING NO.		SCALE: AS NOTED		PAVING AND DRAINAGE DETAILS							
PD-3											
				DESIGNER:		D.W.H.		DESIGN ENGINEER			
				DRAWN BY:		J.E.S.		SCOTT A. WILD			
				DATE:		S.A.W.		FLORIDA REGISTRATION NO.			
				CHECKED BY:				47030			
				DATE:							
VISION • EXPERIENCE • RESULTS				NO.		BY		DATE		REVISIONS	
				6.							
				5.							
				4.							
				3.							
				2.							
				1.							



- NOTES:**
1. CONSTRUCT STRAIGHT JOINTS WITH FACE PERPENDICULAR TO SURFACE OF CONCRETE. TRAVERSE JOINTS SHALL BE AT RIGHT ANGLES TO CENTERLINE UNLESS OTHERWISE INDICATED ON PLANS.
 2. PROVIDE EXPANSION JOINTS AT 100' INTERVAL MAXIMUM SPACING ON CENTER.
 3. PROVIDE EXPANSION JOINTS FILLER FOR JOINTS ABUTTING CURBS, CATCH BASINS, MANHOLES, INLETS STRUCTURES, WALKS AND OTHER FIXED OBJECTS UNLESS OTHERWISE INDICATED ON PLANS. PLACE SEALANT OVER JOINT FILLER PER MANUFACTURERS RECOMMENDATIONS.
 4. EXTEND JOINTS FILLER FULL WIDTH AND DEPTH OF JOINT, AND 1/2" BELOW FINISHED SURFACE.
 5. USE PREMOLDED ASPHALT-IMPREGNATED FIBERBOARD, 1/2" THICK CONFORMING TO ASTM D1751. CONTRACTION JOINT SHALL BE SAW CUT (1/4" WIDE BY 1" DEEP).
 6. FINISHED SURFACE FOR CONCRETE SIDEWALK SHALL BE GRAY CONCRETE WITH LIGHT BROOM FINISH PERPENDICULAR TO LINE OF TRAFFIC (UNLESS OTHERWISE INDICATED ON PLANS).
 7. PROVIDE CRACK CONTROL JOINTS @ (SAME AS WIDTH) O.C.
 8. PROVIDE 16" STRIP SOD ADJACENT TO ALL EDGES OF SIDEWALK, CURB AND PAVEMENT AREAS.
 9. CONCRETE COMPRESSION STRENGTH 3000 P.S.I. @ 28 DAYS UNLESS OTHERWISE APPROVED BY ENGINEER OF RECORD.
 10. SIDEWALK TO BE CONSTRUCTED WITH SLOPES COMPLYING TO WITH LATEST ADA CODE AND FDOT INDEX 522-001. SIDEWALK MAX. VERTICAL SLOPE OF 5.0% AND MAX CROSS SLOPE OF 2.0%.

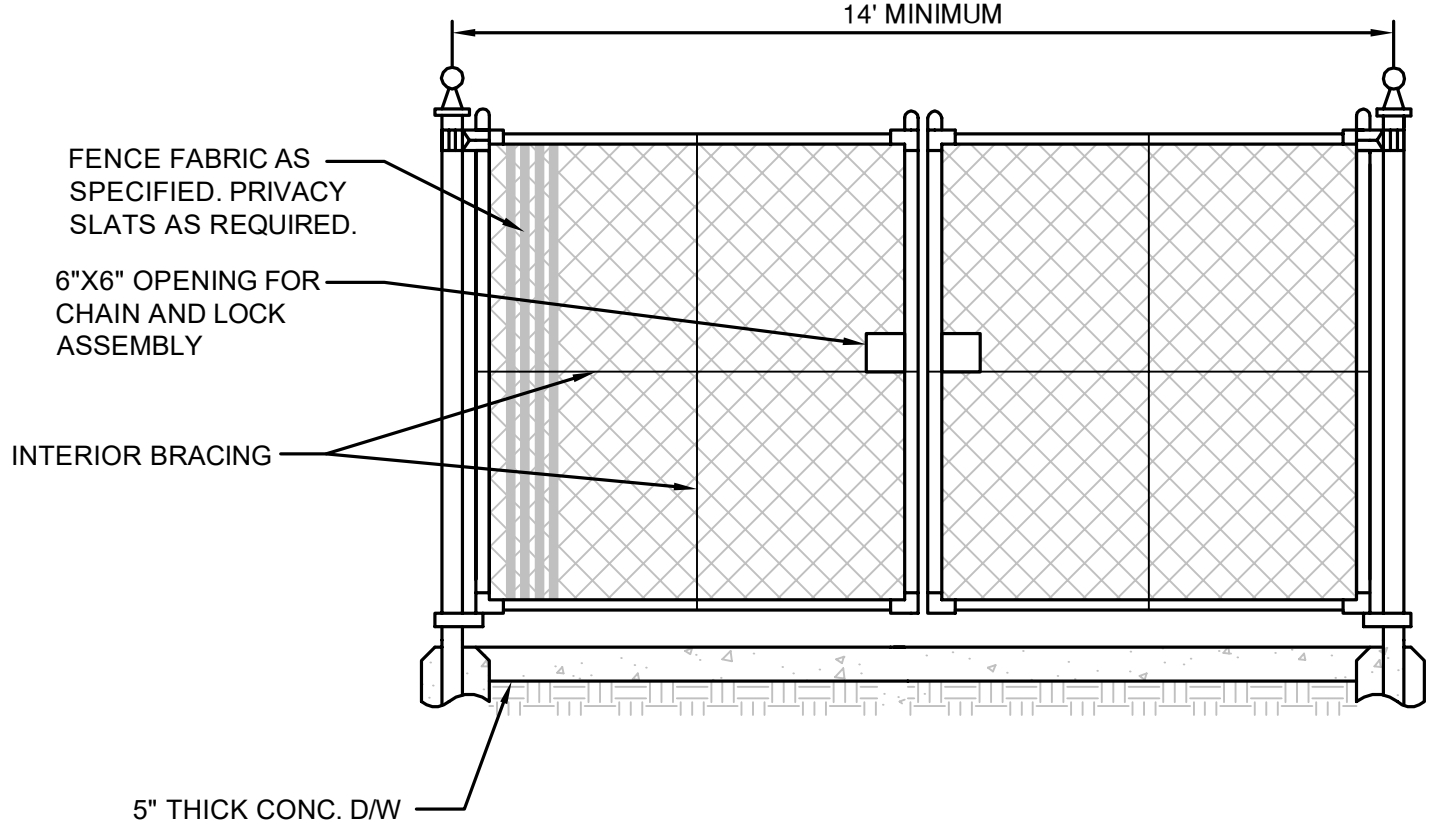
CONCRETE WALK
N.T.S.



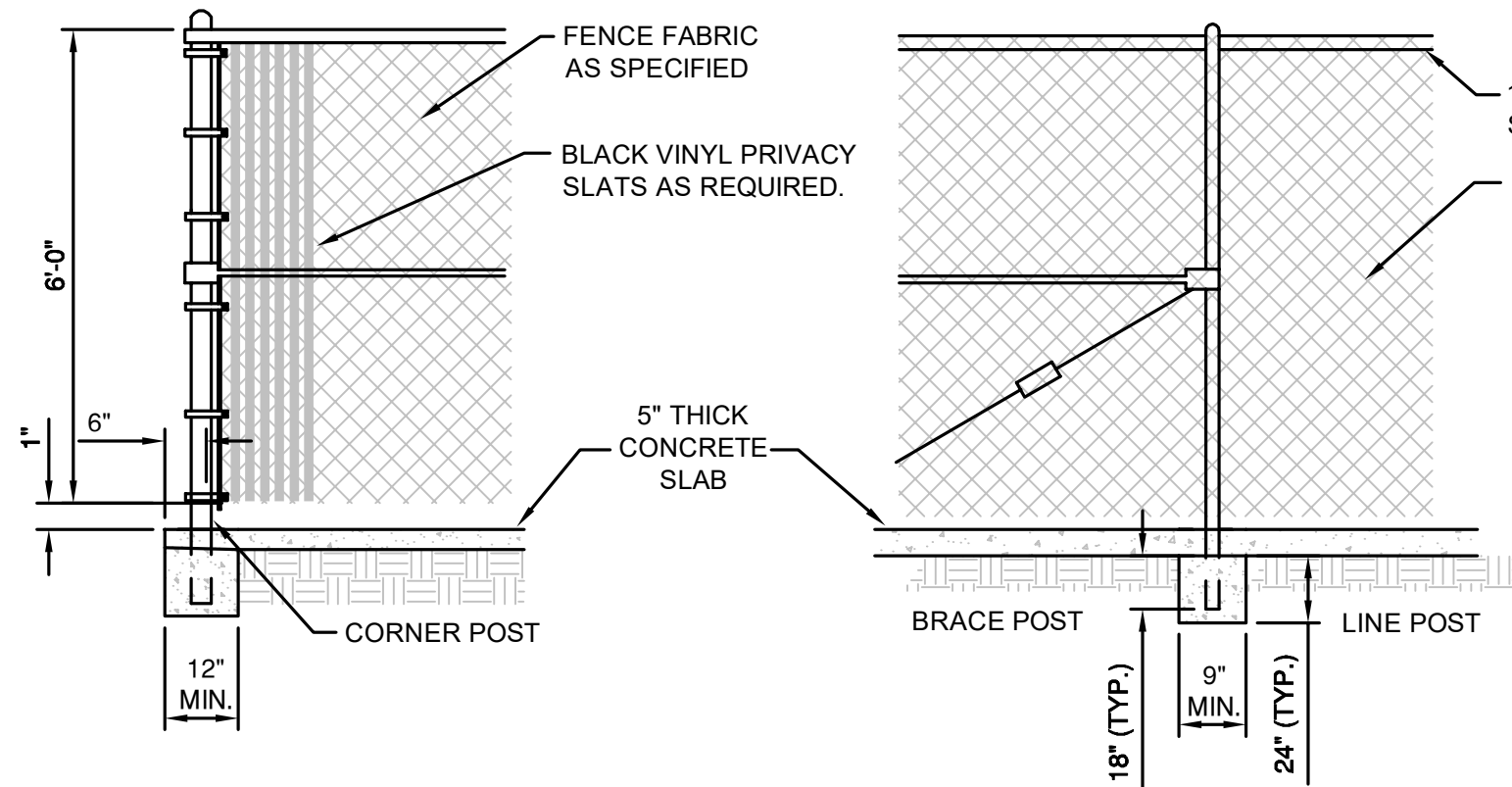
CONCRETE JOINT DETAIL
N.T.S.

FENCE NOTES

1. FENCE TO BE INSTALLED AS INDICATED ON SITE PLAN.
2. GATE POST TO BE 4" O.D. PVC COATED GALVANIZED STEEL PIPE. CORNER POST TO BE 3" O.D. PVC COATED GALVANIZED STEEL PIPE. LINE POST TO BE 2 1/2" O.D. PVC COATED GALVANIZED STEEL PIPE.
3. ALL FENCE SHALL BE GROUNDED IN ACCORDANCE WITH JEA GROUNDING STANDARDS.
4. BONDING WIRE BETWEEN GATE POST IS NOT REQUIRED WHERE EXISTING ROAD PAVING OR RAILROAD TRACKS WOULD MAKE INSTALLATION IMPRACTICAL.
5. ALL FENCING SHALL BE IN ACCORDANCE WITH JEA SPECIFICATION NO. 492.
6. EMBEDDED CONCRETE PORTION OF FENCE POST SHALL HAVE MASTIC SEAL OR EQUAL COATING TO A MINIMUM OF 6" ABOVE FINISH GRADE.
7. AN INTERIOR DOUBLE 14' WIDE SLIDING/ROLLING GATE IS AN ACCEPTABLE OPTION.
8. FENCE FABRIC SHALL BE KNUCKLED ON TOP AND TWIST ON BOTTOM.
9. ALL FENCING, RAILS, POSTS, BRACKETS, BOLTS ETC. WILL BE PVC COATED
10. CONTACT SECURITYSERVICE@JEA.COM FOR THE LATEST SECURITY FENCE UPDATES.



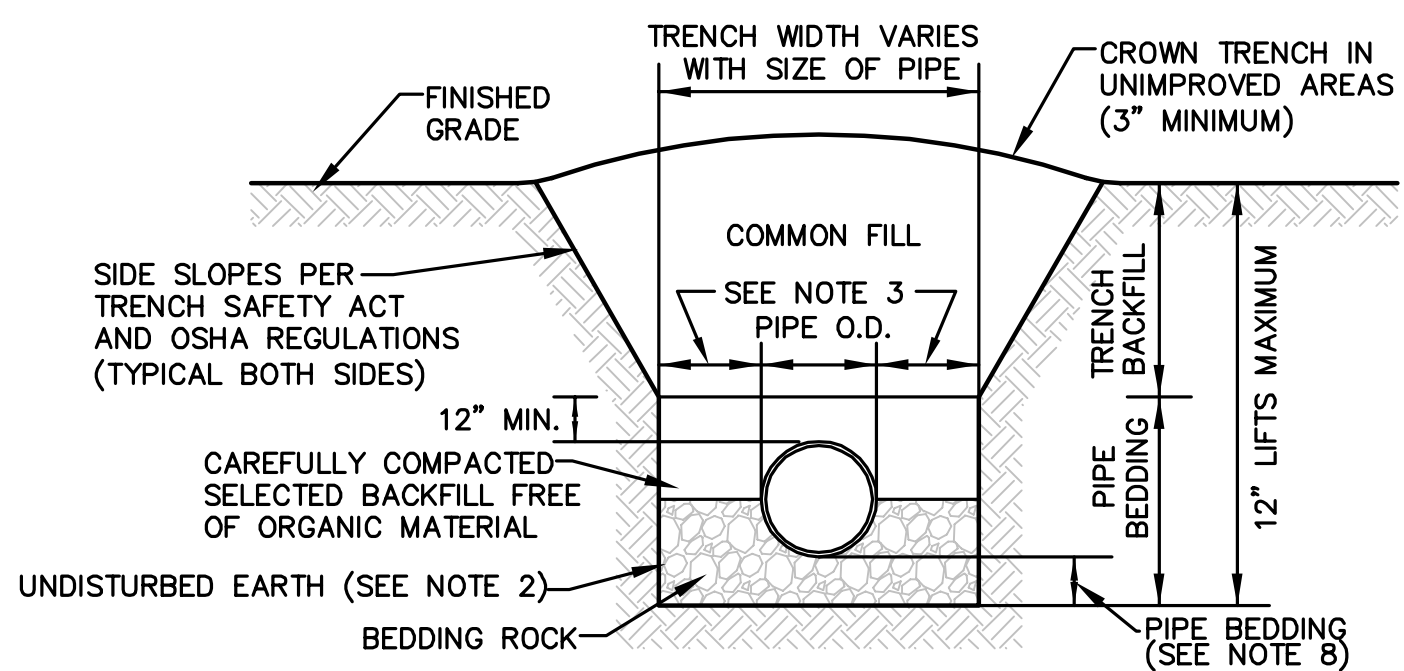
DOUBLE GATE DETAIL



CORNER POST DETAIL

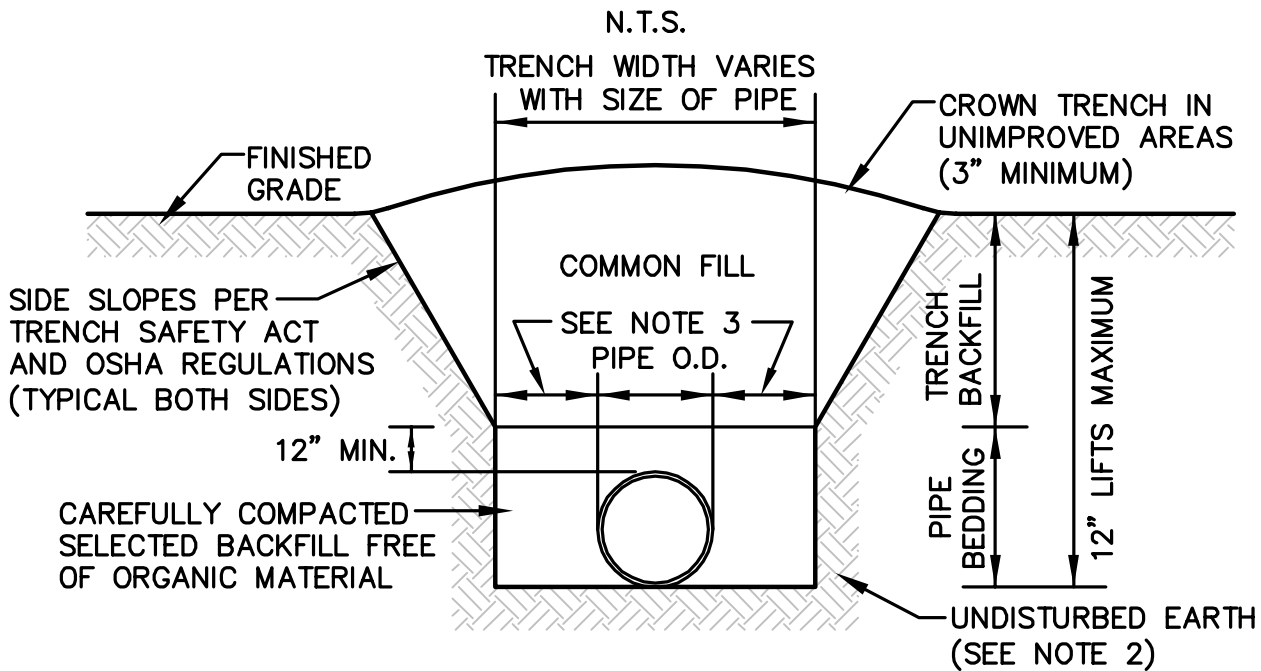
LINE POST DETAIL

FENCE DETAILS
NOT TO SCALE



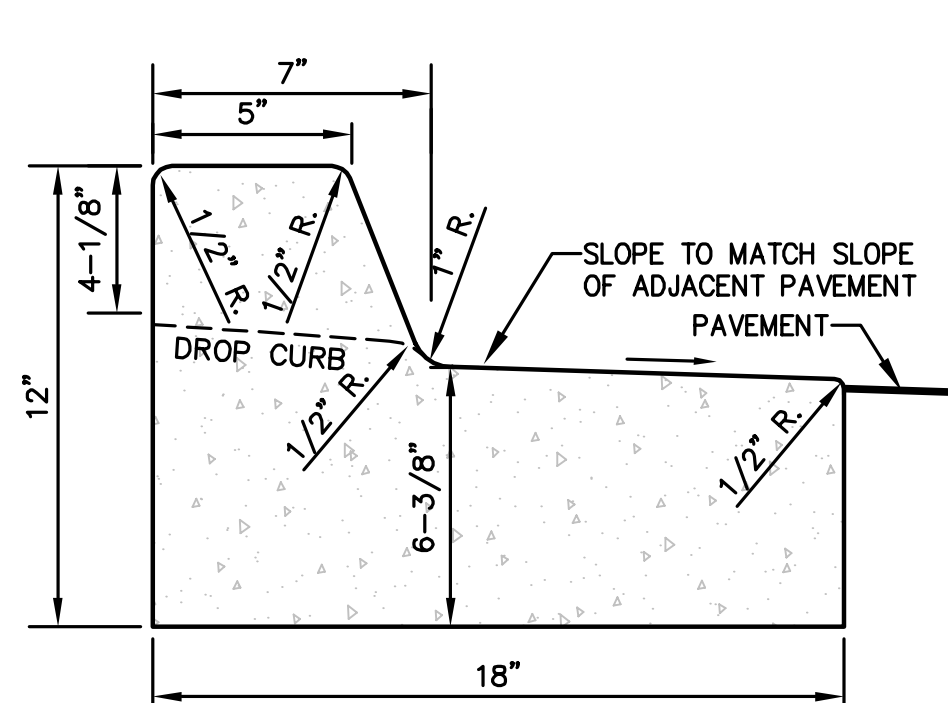
- NOTES:**
1. TRENCH AND PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 95% MAX. DENSITY (AASHTO T-180).
 2. USE TYPE A BEDDING TO BE DETERMINED IN THE FIELD AS DIRECTED BY JEA.
 3. 12" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 1/2 PIPE DIAMETER MAX. FOR PIPE DIAMETER 24" AND LARGER.
 4. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
 5. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
 6. REFER TO MANUAL FOR SHEETING AND BRACING IN EXCAVATIONS.
 7. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES SURFACE RESTORATION WITHIN CITY RIGHT-OF-WAY SHALL COMPLY WITH REQUIREMENTS OF RIGHT-OF-WAY UTILIZATION REGULATIONS AND ROAD CONSTRUCTION SPECIFICATIONS.
 8. DEPTH FOR REMOVAL OF UNSUITABLE MATERIAL SHALL GOVERN DEPTH OF BEDDING ROCK BELOW THE PIPE. THE COUNTY SHALL DETERMINE IN THE FIELD REQUIRED REMOVAL OF UNSUITABLE MATERIAL TO REACH SUITABLE FOUNDATION.

TYPE A BEDDING AND TRENCH DETAIL

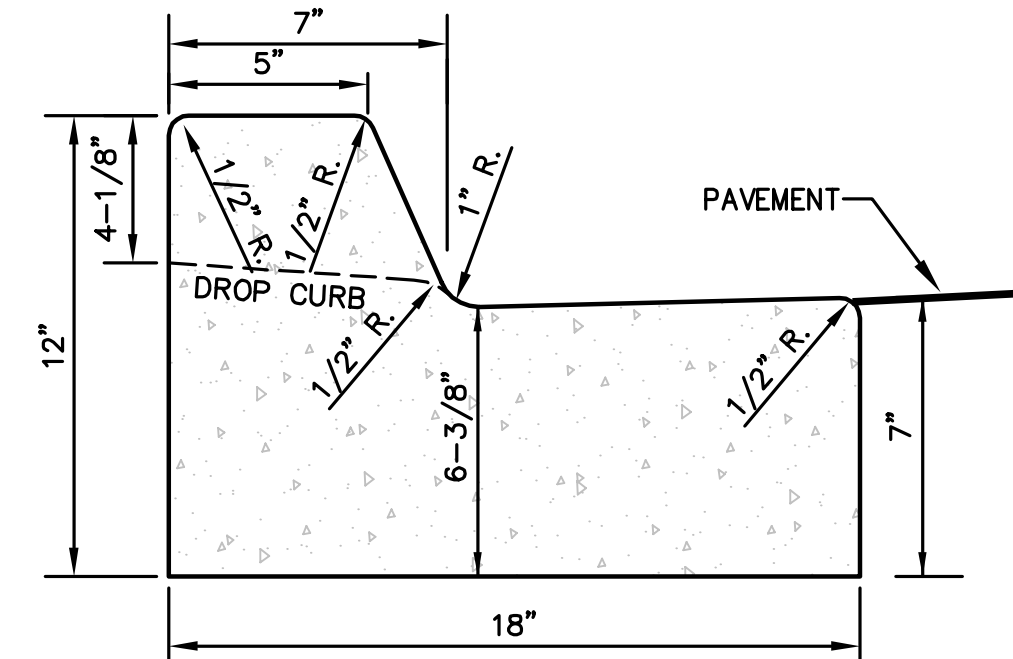


- NOTES:**
1. TRENCH AND PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 95% MAX. DENSITY (AASHTO T-180).
 2. USE TYPE B BEDDING TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE JEA.
 3. 12" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 1/2 PIPE DIAMETER MAX. FOR PIPE DIAMETER 24" AND LARGER.
 4. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
 5. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
 6. REFER TO MANUAL FOR SHEETING AND BRACING IN EXCAVATIONS.
 7. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES SURFACE RESTORATION WITHIN CITY RIGHT-OF-WAY SHALL COMPLY WITH REQUIREMENTS OF RIGHT-OF-WAY UTILIZATION REGULATIONS AND ROAD CONSTRUCTION SPECIFICATIONS

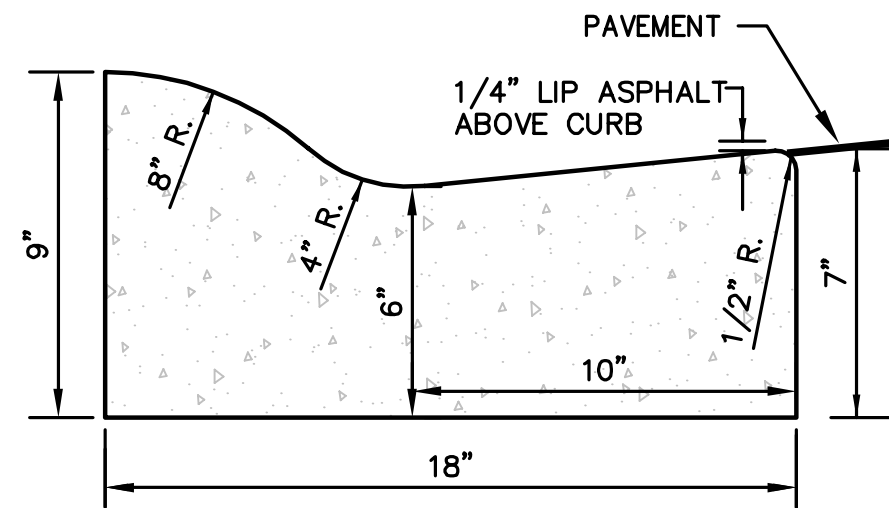
TYPE B BEDDING AND TRENCH DETAIL
N.T.S.



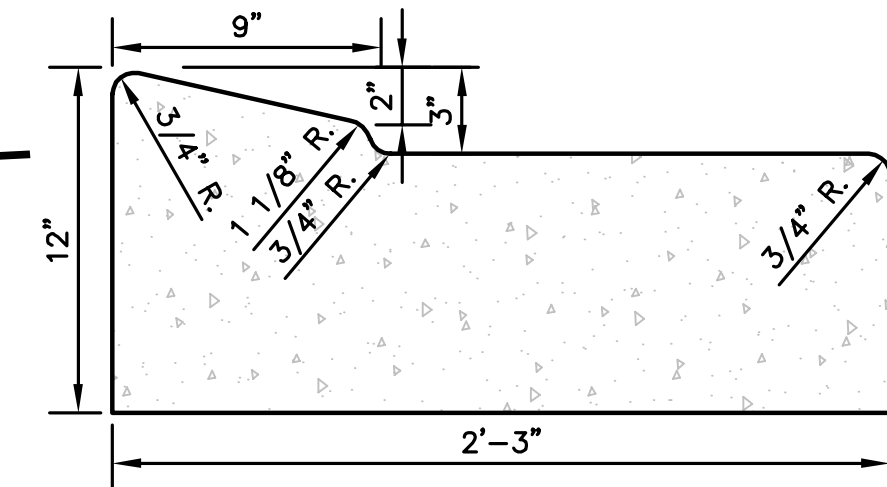
**TYPE "C" CURB AND GUTTER
TO BE USED AT ALL MEDIANS**
N.T.S.



STANDARD CURB AND GUTTER
N.T.S.

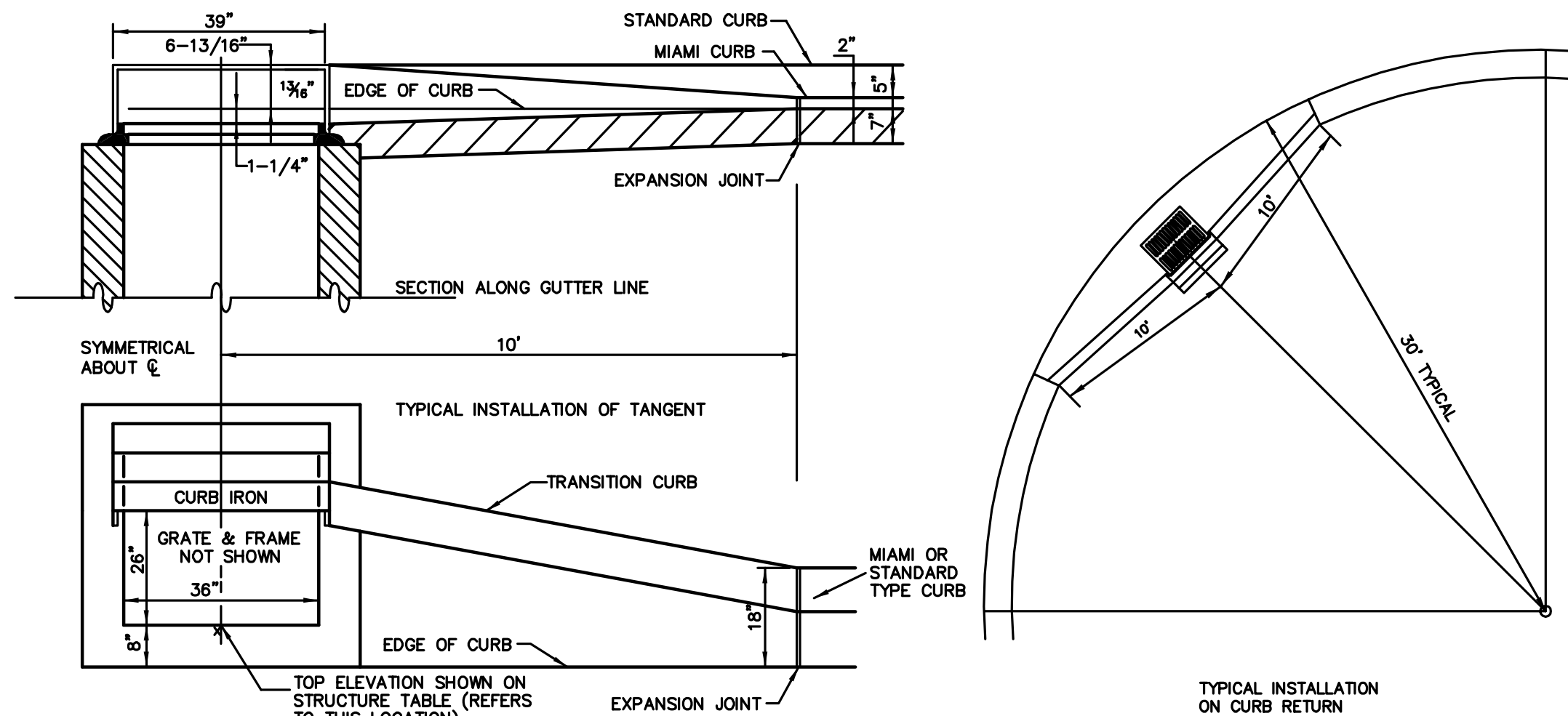


MIAMI TYPE CURB AND GUTTER
N.T.S.



**FDOT R/A CURB AND GUTTER
AT CENTER ISLAND ROUNDABOUTS**
N.T.S.

- CURB AND CURB & GUTTER NOTES:**
1. MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE LATEST FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
 2. CONCRETE SHALL BE CLASS 1 CONCRETE WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,000 PSI UNLESS OTHERWISE APPROVED BY THE ENGINEER OF RECORD.
 3. WHEN USED ON THE HIGH SIDE OF ROADWAY SECTIONS, THE CROSS SLOPE OF THE GUTTER SHALL MATCH THE CROSS SLOPE OF THE ADJACENT PAVEMENT. WHERE THIS CONDITION IS ENCOUNTERED, THE FRONT FACE VERTICAL DIMENSION SHALL REMAIN AS SHOWN FOR NORMAL SECTIONS SHOWN HEREON.



RECESSED STORM SEWER CURB INLET
N.T.S.

ETM
Engineering, Thermo & Miller, Inc.
14775 Old St. Augustine Road
Jacksonville, FL 32218
TEL: (904) 644-9890
FAX: (904) 644-9891
REG. 00002594 LC 0000316

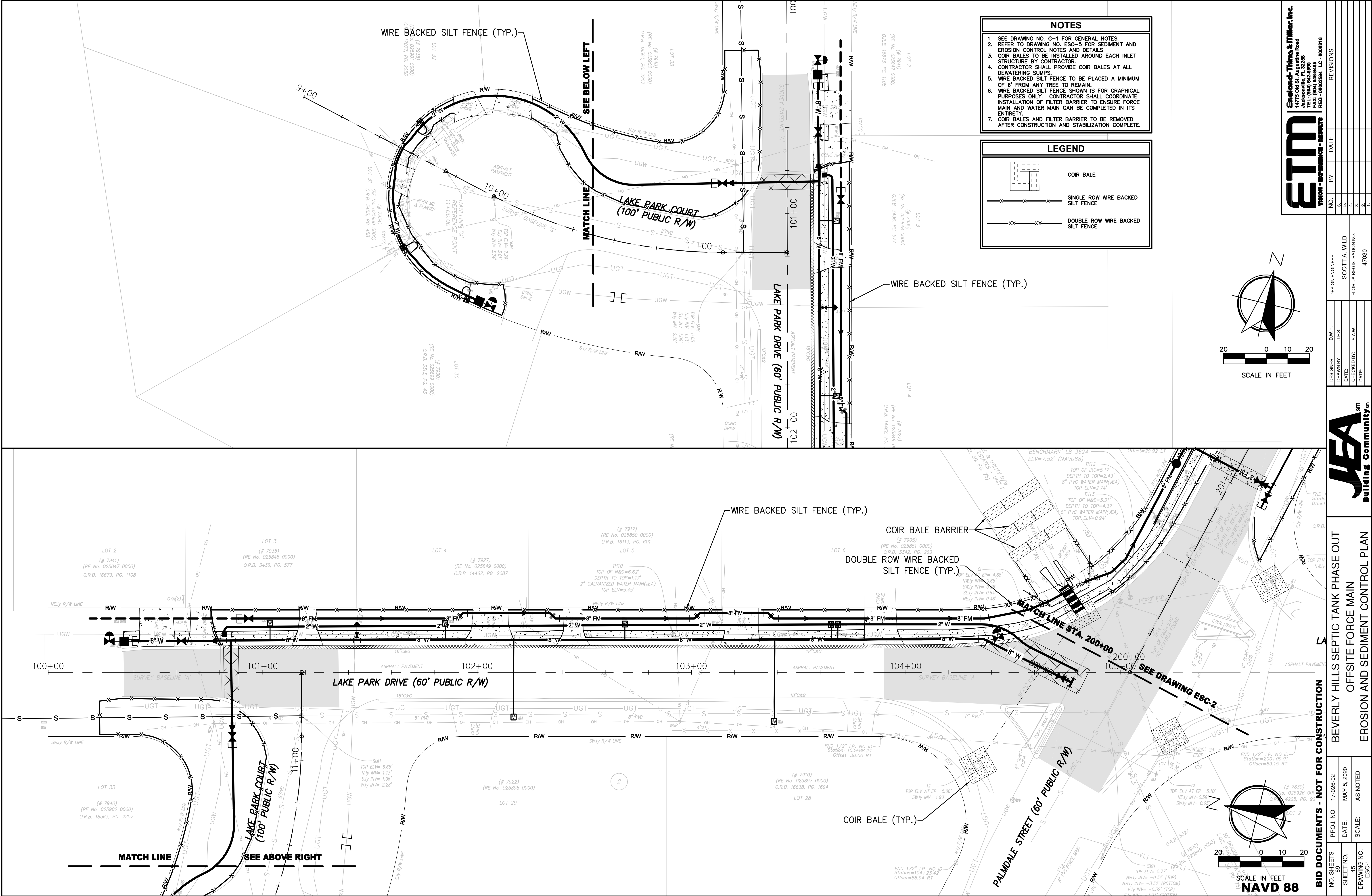
NO.	BY	DATE	REVISIONS
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DESIGNER:	D.W.H.	DESIGN ENGINEER
DRAWN BY:	J.E.S.	
DATE:		SCOTT A. WILD
CHECKED BY:	S.A.W.	FLORIDA REGISTRATION NO.
DATE:		47030

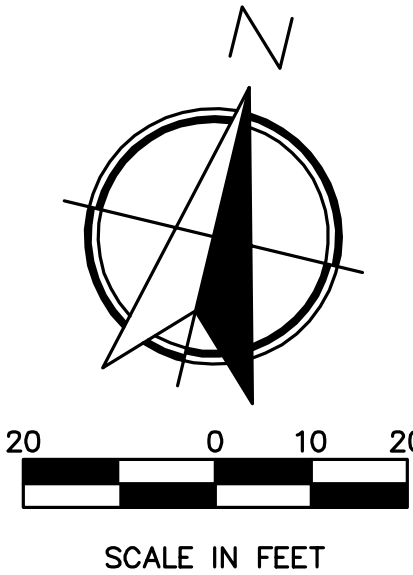
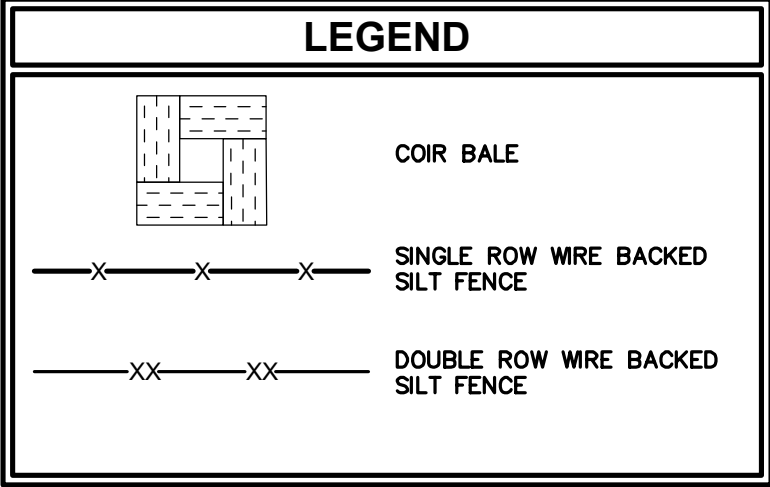
JEA
Building Communitysm

BID DOCUMENTS - NOT FOR CONSTRUCTION
BEVERLY HILLS SEPTIC TANK PHASE OUT
OFFSITE FORCE MAIN
PAVING AND DRAINAGE DETAILS

NO. SHEETS	PROJ. NO.	DATE	SCALE
69	17-026-02	MAY 5, 2020	AS NOTED
SHEET NO.	DRAWING NO.		
44	PD-4		



- NOTES**
1. SEE DRAWING NO. G-1 FOR GENERAL NOTES.
 2. REFER TO DRAWING NO. ESC-5 FOR SEDIMENT AND EROSION CONTROL NOTES AND DETAILS.
 3. COIR BALES TO BE INSTALLED AROUND EACH INLET STRUCTURE BY CONTRACTOR.
 4. CONTRACTOR SHALL PROVIDE COIR BALES AT ALL DEWATERING SUMPS.
 5. WIRE BACKED SILT FENCE TO BE PLACED A MINIMUM OF 6' FROM ANY TREE TO REMAIN.
 6. WIRE BACKED SILT FENCE SHOWN IS FOR GRAPHICAL PURPOSES ONLY. CONTRACTOR SHALL COORDINATE INSTALLATION OF FILTER BARRIER TO ENSURE FORCE MAIN AND WATER MAIN CAN BE COMPLETED IN ITS ENTIRETY.
 7. COIR BALES AND FILTER BARRIER TO BE REMOVED AFTER CONSTRUCTION AND STABILIZATION COMPLETE.



ETM Engineering, Planning & Construction, Inc.
14775 Old St. Augustine Road
Jacksonville, FL 32218
TEL: (904) 644-9999
FAX: (904) 644-4444
REG. 0005254 LC 0000316

REVISIONS		DATE	BY	NO.
1.				1.
2.				2.
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4.				4.
5.				5.

DESIGNER:	D.W.H.	DESIGN ENGINEER:	SCOTT A. WILD
DRAWN BY:	J.E.S.	FLORIDA REGISTRATION NO.:	47030
CHECKED BY:	S.A.W.		
DATE:			

JECA Building Communitysm

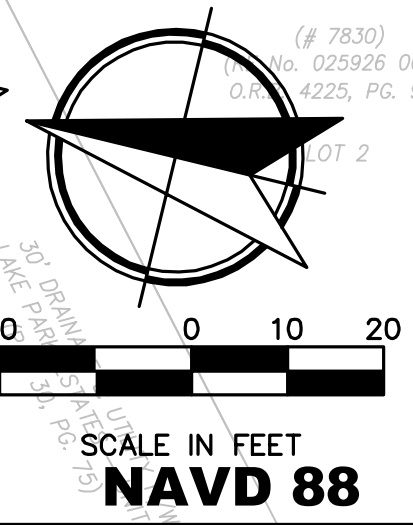
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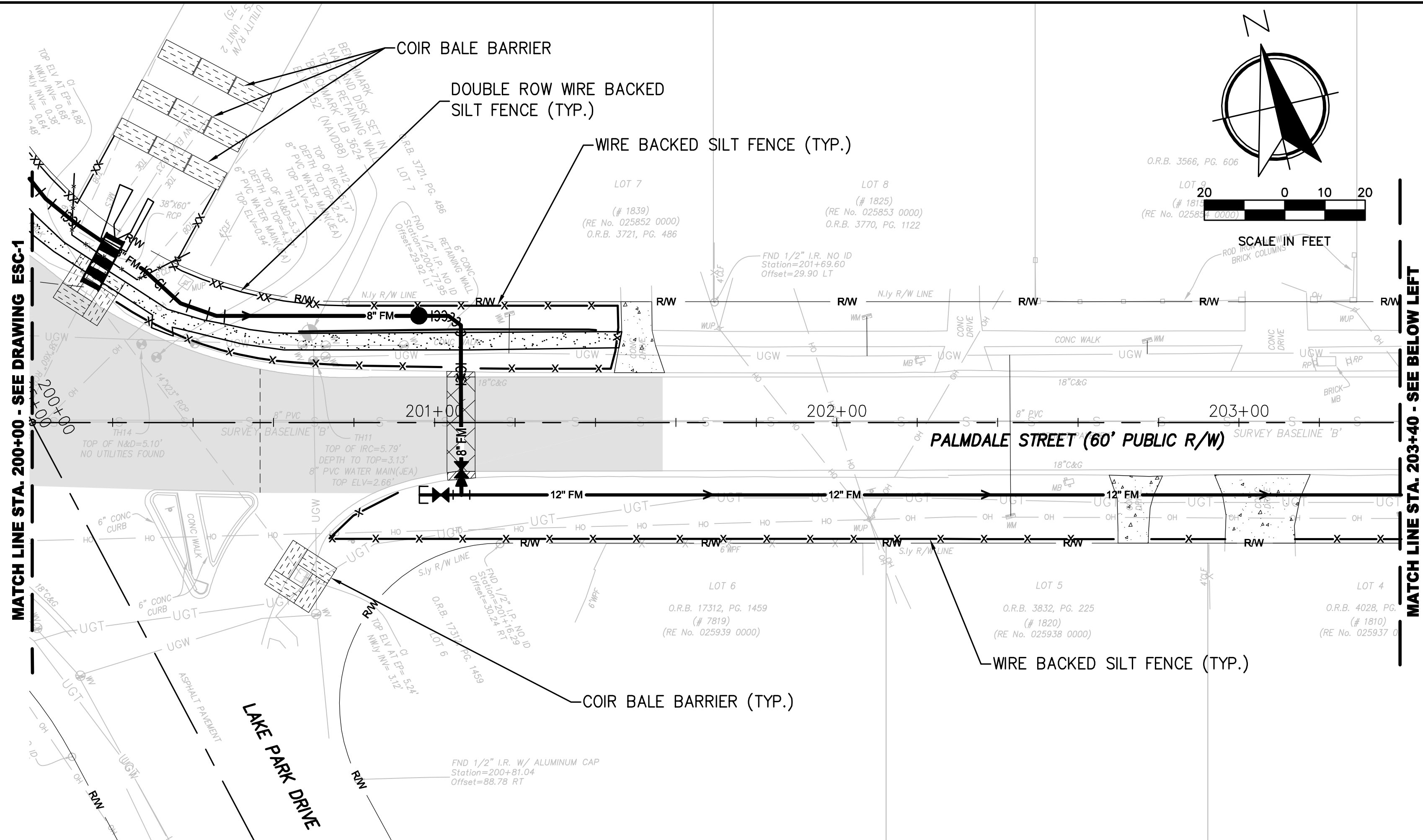
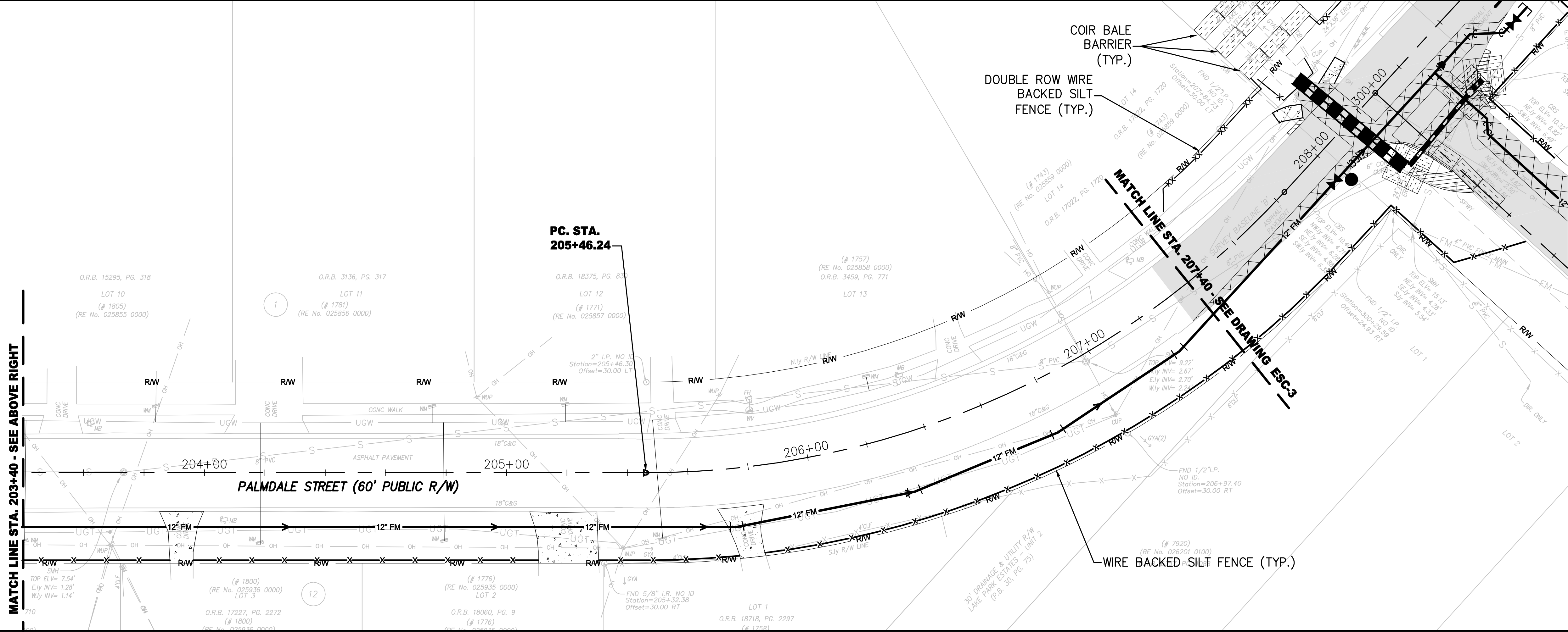
BEVERLY HILLS SEPTIC TANK PHASE OUT

OFFSITE FORCE MAIN

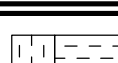

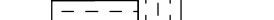
EROSION AND SEDIMENT CONTROL PLAN

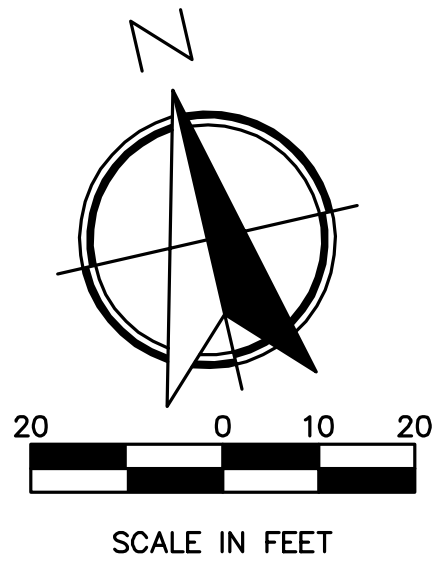
NO. SHEETS	PROJ. NO.	DATE:	SCALE:
69	17-026-02	MAY 5, 2020	AS NOTED
SHEET NO.			
45			
DRAWING NO.			
ESC-1			





- | NOTES | |
|-------|---|
| 1. | SEE DRAWING NO. G-1 FOR GENERAL NOTES. |
| 2. | REFER TO DRAWING NO. ESC-5 FOR SEDIMENT AND EROSION CONTROL NOTES AND DETAILS |
| 3. | COIR BALES TO BE INSTALLED AROUND EACH INLET STRUCTURE BY CONTRACTOR. |
| 4. | CONTRACTOR SHALL PROVIDE COIR BALES AT ALL DEWATERING PUMPS. |
| 5. | WIRE BACKED SILT FENCE TO BE PLACED A MINIMUM OF 6' FROM ANY TREE TO REMAIN. |
| 6. | WIRE BACKED SILT FENCE SHOWN IS FOR GRAPHICAL PURPOSES ONLY. CONTRACTOR SHALL COORDINATE INSTALLATION OF FILTER BARRIER TO ENSURE FORCE MAIN AND WATER MAIN CAN BE COMPLETED IN ITS ENTIRETY. |
| 7. | COIR BALES AND FILTER BARRIER TO BE REMOVED AFTER CONSTRUCTION AND STABILIZATION COMPLETE. |

- | LEGEND | |
|---|--------------------------------------|
|  | COIR BALE |
|  | SINGLE ROW WIRE BACKED
SILT FENCE |
|  | DOUBLE ROW WIRE BACKED
SILT FENCE |



BID DOCUMENTS - NOT FOR CONSTRUCTION		BEVERLY HILL		OF	EROSION ANALYSIS
NO. SHEETS 69		PROJ. NO. 17-026-02			
SHEET NO. 46		DATE: MAY 5, 2020			
DRAWING NO. ESC-2		SCALE: AS NOTED			

BEVERLY HILLS SEPTIC TANK PHASE OUT
OFFSITE FORCE MAIN
EROSION AND SEDIMENT CONTROL PLAN



DESIGNER:	D.W.H.	DESIGN ENGINEER
DRAWN BY:	J.E.S.	
DATE:		
CHECKED BY:	S.A.W.	FLORIDA REGISTRATION NO.
DATE:		
		47030

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- NOTES
1. SEE DRAWING NO. G-1 FOR GENERAL NOTES.

2. REFER TO DRAWING NO. ESC-5 FOR SEDIMENT AND EROSION CONTROL NOTES AND DETAILS.

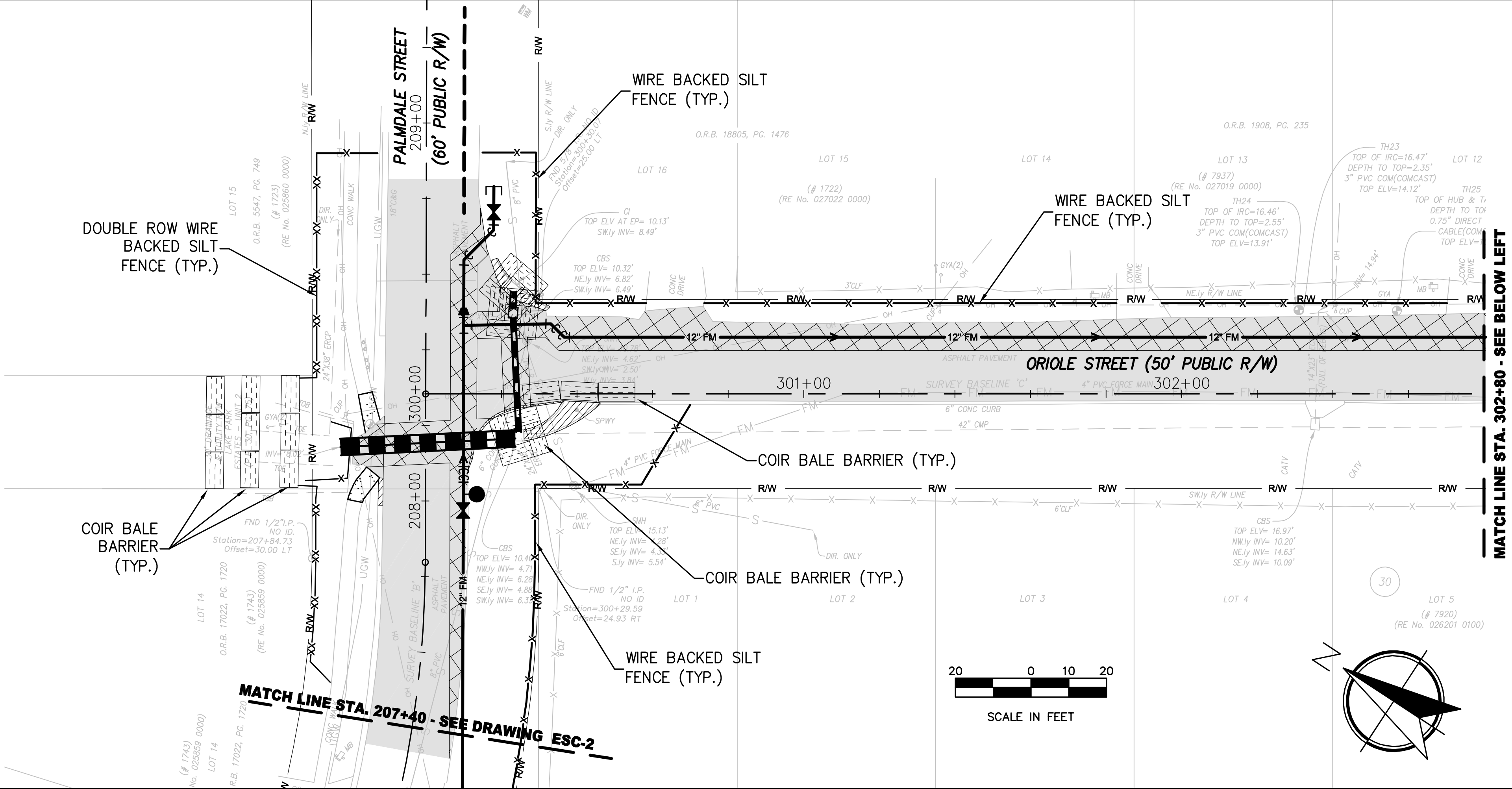
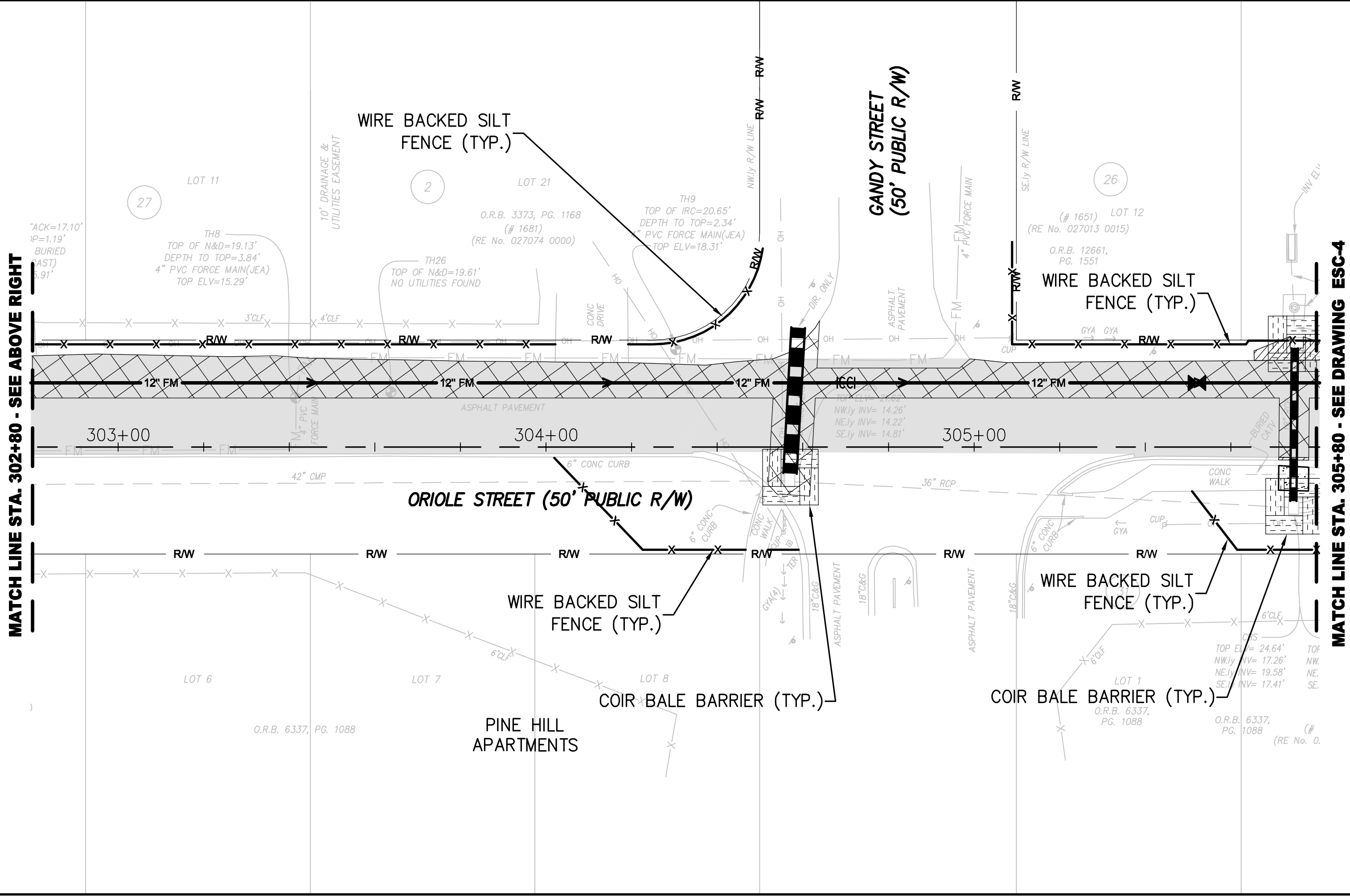
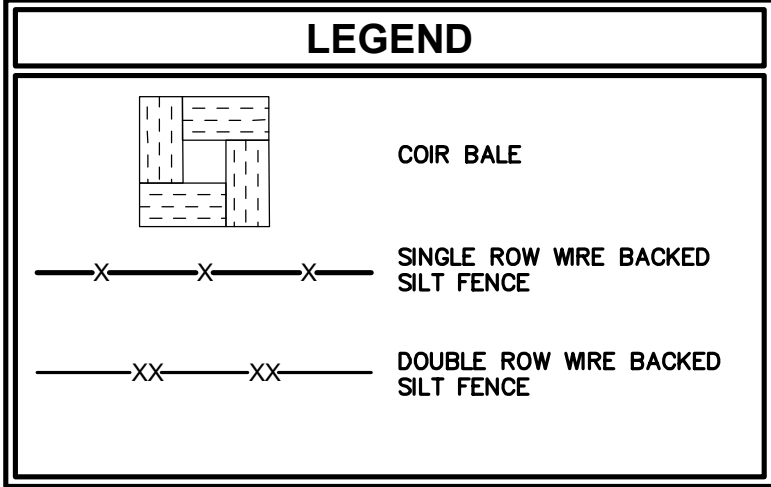
3. COIR BALES TO BE INSTALLED AROUND EACH INLET STRUCTURE BY CONTRACTOR.

4. CONTRACTOR SHALL PROVIDE COIR BALES AT ALL DEWATERING SUMPS.

5. WIRE BACKED SILT FENCE TO BE PLACED A MINIMUM OF 8' FROM ANY TREE TO REMAIN.

6. WIRE BACKED SILT FENCE SHOWN IS FOR GRAPHICAL PURPOSES ONLY. CONTRACTOR SHALL COORDINATE INSTALLATION OF FILTER BARRIER TO ENSURE FORCE MAIN AND WATER MAIN CAN BE COMPLETED IN ITS ENTIRETY.

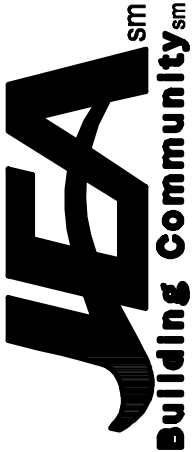
7. COIR BALES AND FILTER BARRIER TO BE REMOVED AFTER CONSTRUCTION AND STABILIZATION COMPLETE.



BID DOCUMENTS - NOT FOR CONSTRUCTION

NO. SHEETS	PROJ. NO.
69	17-026-02
SHEET NO.	DATE:
47	MAY 5, 2020
DRAWING NO.	SCALE:
ESC-3	AS NOTED

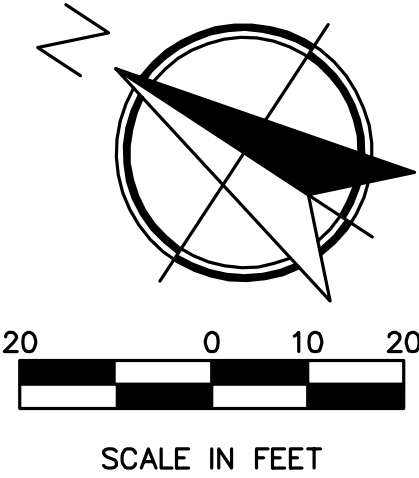
BEVERLY HILLS SEPTIC TANK PHASE OUT
OFFSITE FORCE MAIN
EROSION AND SEDIMENT CONTROL PLAN



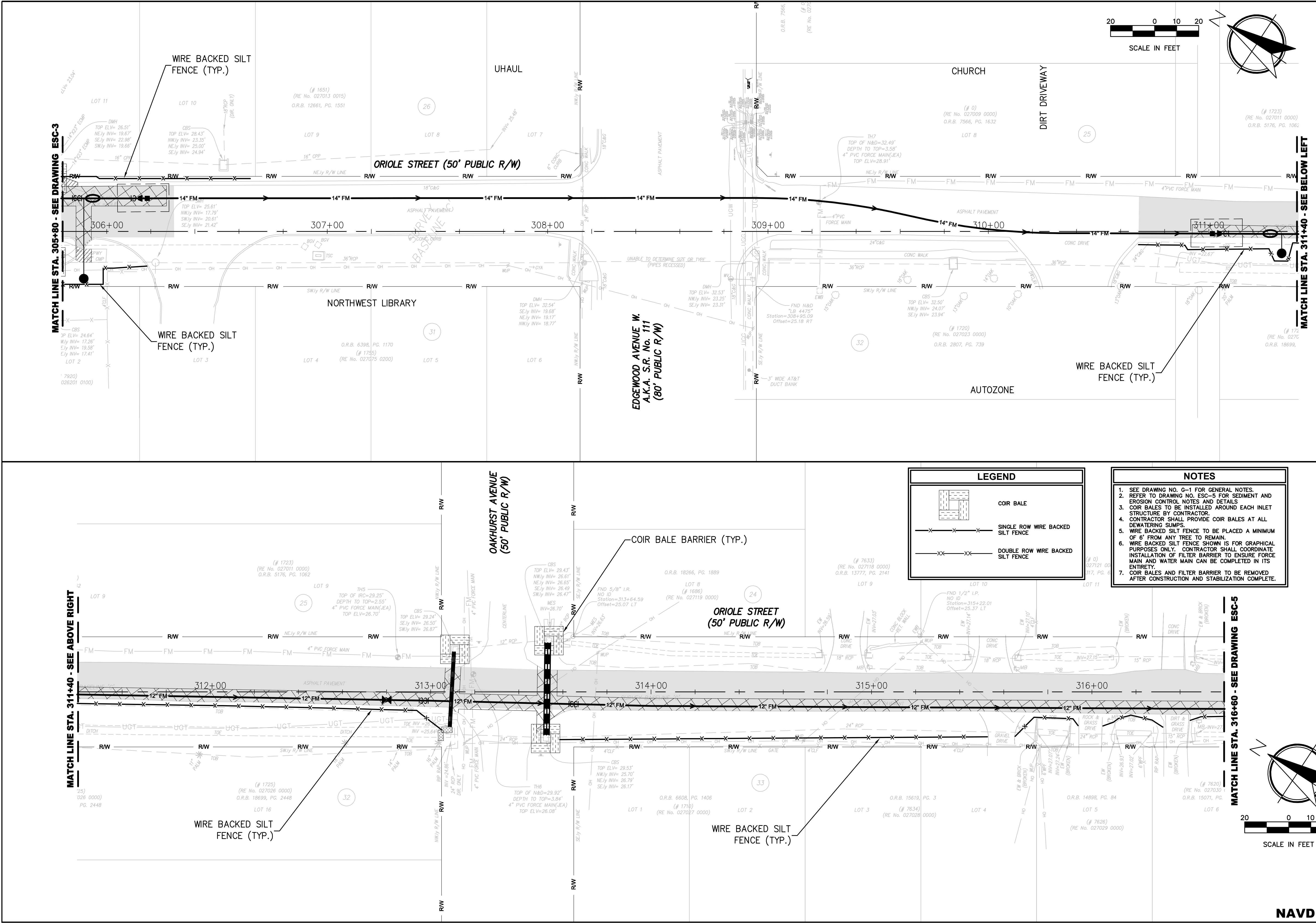
DESIGNER:	D.W.H.
DRAWN BY:	J.E.S.
DATE:	
CHECKED BY:	S.A.W.
DATE:	
DESIGN ENGINEER	SCOTT A. WILD
FLORIDA REGISTRATION NO.	47030

NO.	BY	DATE	REVISIONS
6			
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1			

England, Thoms & Miller, Inc.
14775 Old St. Augustine Road
Jacksonville, FL 32218
TEL: (904) 644-9990
FAX: (904) 644-4444
REG. 00002594 LC - 0000316



NAVD 88



LEGEND

COIR BALE

SINGLE ROW WIRE BACKED SILT FENCE

DOUBLE ROW WIRE BACKED SILT FENCE

NOTES

1. SEE DRAWING NO. G-1 FOR GENERAL NOTES.

2. REFER TO DRAWING NO. ESC-5 FOR SEDIMENT AND EROSION CONTROL NOTES AND DETAILS

3. COIR BALES TO BE INSTALLED AROUND EACH INLET STRUCTURE BY CONTRACTOR.

4. CONTRACTOR SHALL PROVIDE COIR BALES AT ALL DEWATERING SUMPS.

5. WIRE BACKED SILT FENCE TO BE PLACED A MINIMUM OF 6' FROM ANY TREE TO REMAIN.

6. WIRE BACKED SILT FENCE SHOWN IS FOR GRAPHICAL PURPOSES ONLY. CONTRACTOR SHALL COORDINATE INSTALLATION OF FILTER BARRIER TO ENSURE FORCE MAIN AND WATER MAIN CAN BE COMPLETED IN ITS ENTIRETY.

7. COIR BALES AND FILTER BARRIER TO BE REMOVED AFTER CONSTRUCTION AND STABILIZATION COMPLETE.

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ETM

Engineering, Thermo & Miller, Inc.
14775 Old St. Augustine Road
Jacksonville, FL 32218
TEL: (904) 642-9890
FAX: (904) 642-4444
REG. - PROFESSIONAL ENGINEER
REG. - PROFESSIONAL SURVEYOR

REVISIONS

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BID DOCUMENTS - NOT FOR CONSTRUCTION

PROJ. NO. 17-026-02

NO. SHEETS 69

BEVERLY HILLS SEPTIC TANK PHASE OUT

DATE: MAY 5, 2020

SHEET NO. 48

OFFSITE FORCE MAIN

SCALE: AS NOTED

DRAWING NO. ESC-4

DESIGNER: D.W.H.

DRAWN BY: J.E.S.

DATE: S.A.W.

DESIGN ENGINEER: SCOTT A. WILD

FLORIDA REGISTRATION NO. 47030

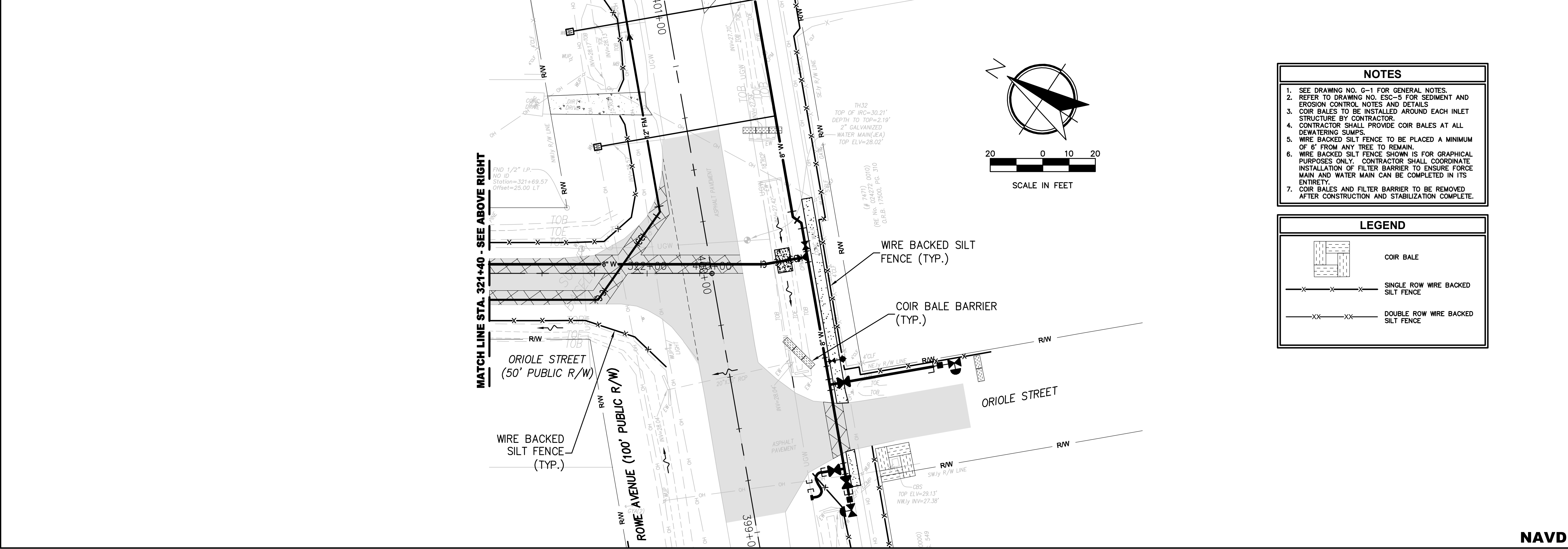
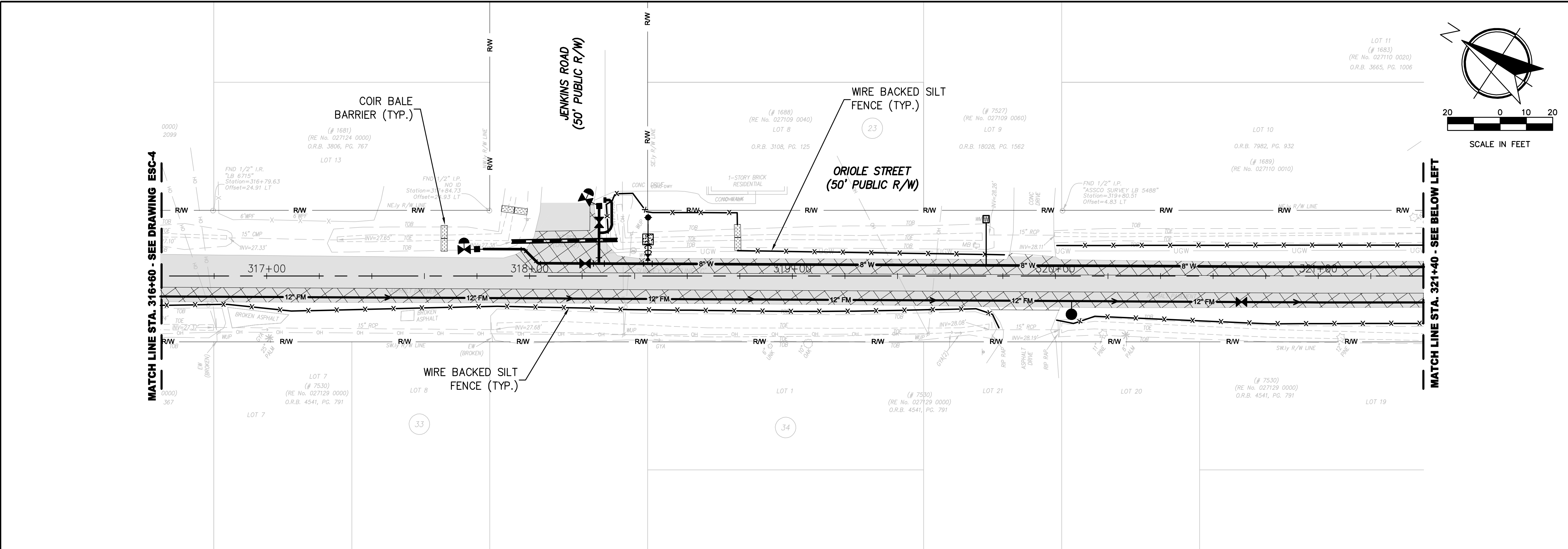
DATE:

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Building Community

EROSION AND SEDIMENT CONTROL PLAN

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NOTES

1. SEE DRAWING NO. G-1 FOR GENERAL NOTES.

2. REFER TO DRAWING NO. ESC-5 FOR SEDIMENT AND EROSION CONTROL NOTES AND DETAILS

3. COIR BALES TO BE INSTALLED AROUND EACH INLET STRUCTURE BY CONTRACTOR.

4. CONTRACTOR SHALL PROVIDE COIR BALES AT ALL DEWATERING SUMPS.

5. WIRE BACKED SILT FENCE TO BE PLACED A MINIMUM OF 6' FROM ANY TREE TO REMAIN.

6. WIRE BACKED SILT FENCE SHOWN IS FOR GRAPHICAL PURPOSES ONLY. CONTRACTOR SHALL COORDINATE INSTALLATION OF FILTER BARRIER TO ENSURE FORCE MAIN AND WATER MAIN CAN BE COMPLETED IN ITS ENTIRETY.

7. COIR BALES AND FILTER BARRIER TO BE REMOVED AFTER CONSTRUCTION AND STABILIZATION COMPLETE.

LEGEND

COIR BALE

SINGLE ROW WIRE BACKED SILT FENCE

DOUBLE ROW WIRE BACKED SILT FENCE

NAVD 88

ETM

England, Thoms & Miller, Inc.
14775 Old St. Augustine Road
Jacksonville, FL 32258
TEL: (904) 642-9890
FAX: (904) 642-9891
REG. 0000259 LC - 0000316

WISDOM • EXPERIENCE • RESULTS

DESIGNER: D.W.H.

DRAWN BY: J.E.S.

DATE: S.A.W.

CHECKED BY: S.A.W.

DATE: S.A.W.

DESIGN ENGINEER: SCOTT A. WILD

FLORIDA REGISTRATION NO. 47030

NO. BY DATE

REVISIONS

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PROJ. NO. 17-026-02

DATE: MAY 5, 2020

SCALE: AS NOTED

NO. SHEETS 69

SHEET NO. 49

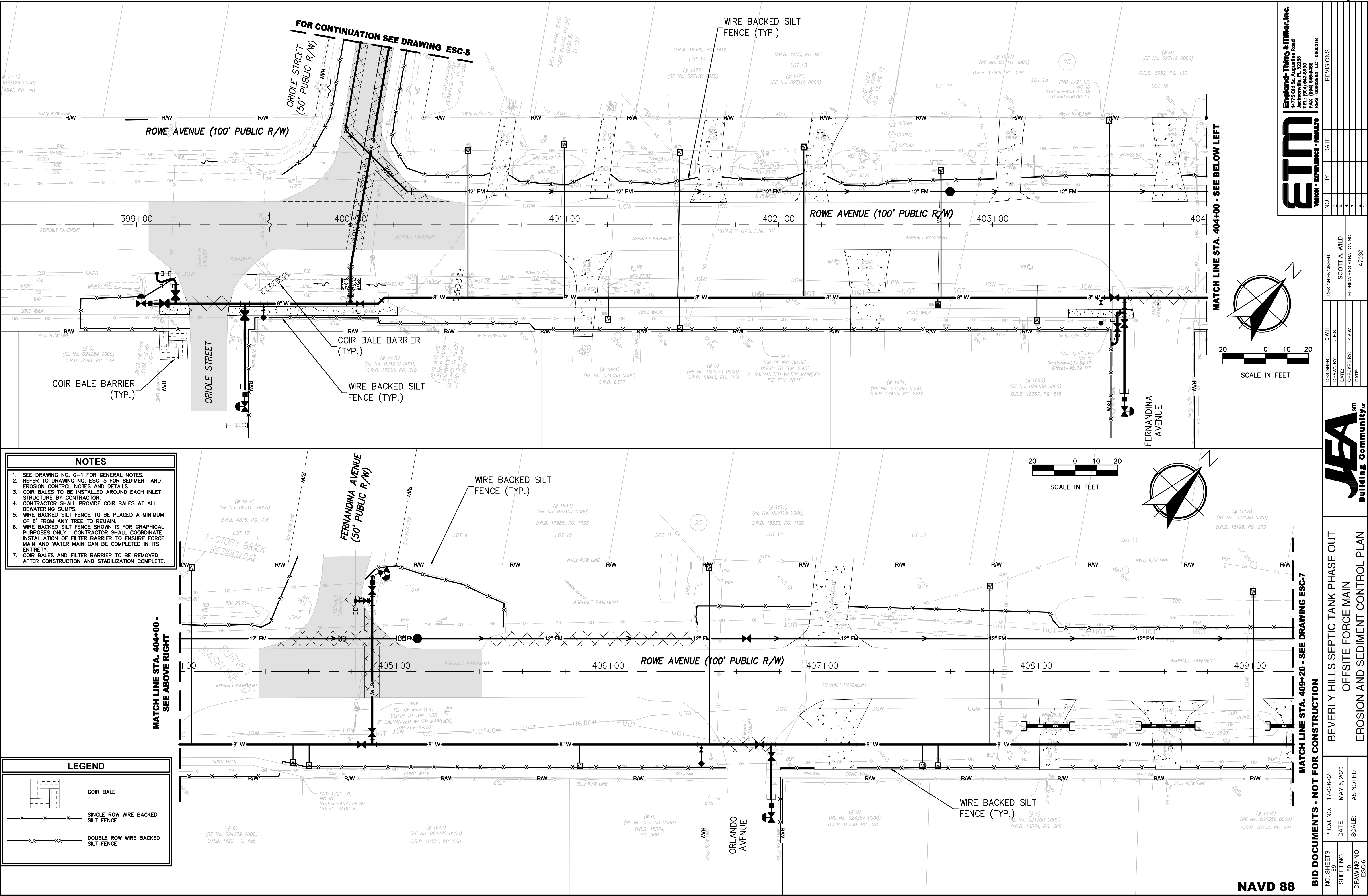
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BEVERLY HILLS SEPTIC TANK PHASE OUT

OFFSITE FORCE MAIN

EROSION AND SEDIMENT CONTROL PLAN

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ETM
Engineering, Thoms & Miller, Inc.
14775 Old St. Augustine Road
Jacksonville, FL 32218
TEL: (904) 642-9990
FAX: (904) 642-4444
REG. 00002594 LC - 00003016

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DESIGNER:
D.W.H.

DRAWN BY:
J.E.S.

DATE:
MAY 5, 2020

CHECKED BY:
S.A.W.

DATE:
AS NOTED

DESIGN ENGINEER:
SCOTT A. WILD

FLORIDA REGISTRATION NO.
47030

JE
Building Communitysm

BID DOCUMENTS - NOT FOR CONSTRUCTION

PROJ. NO.: 17-026-02

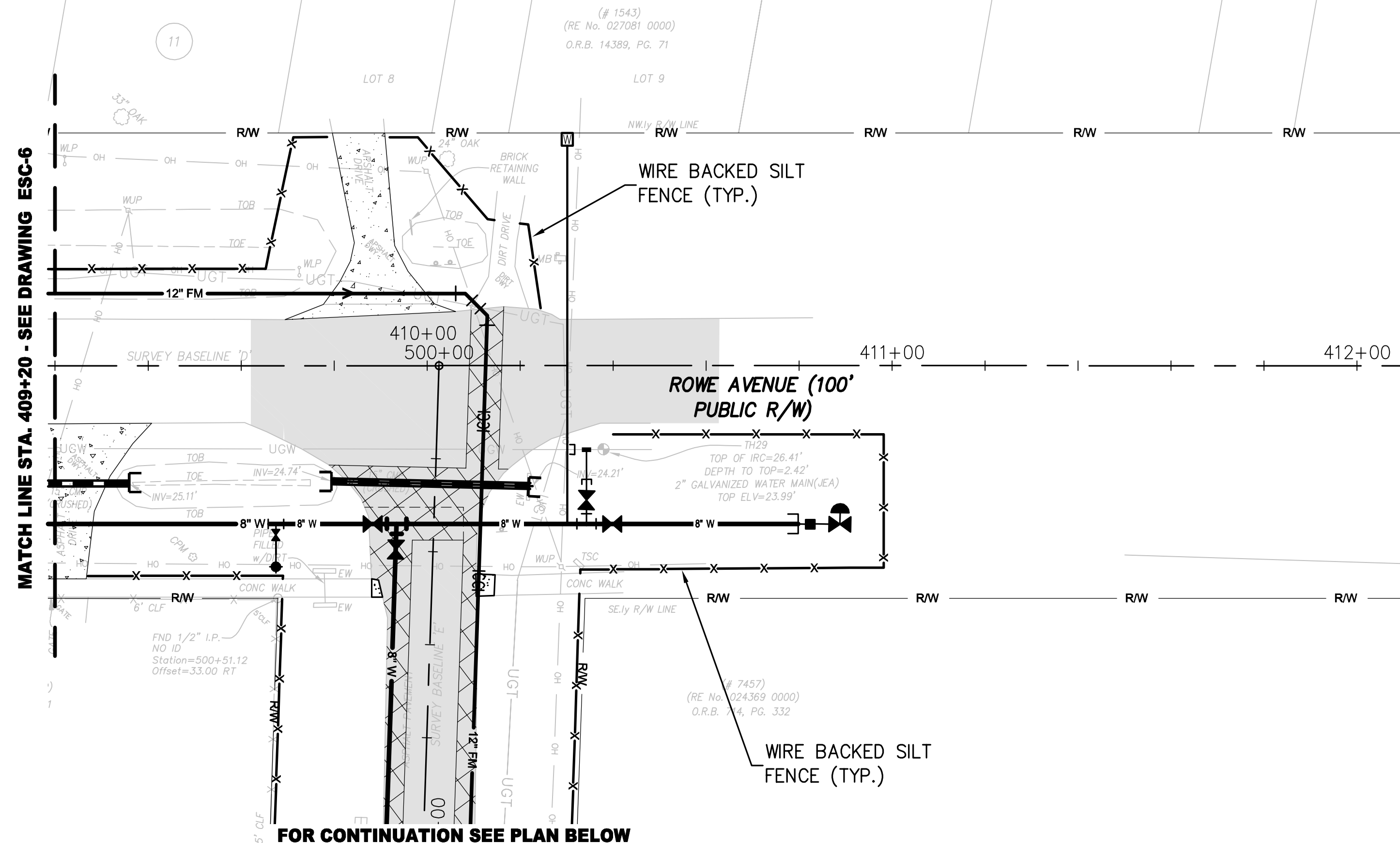
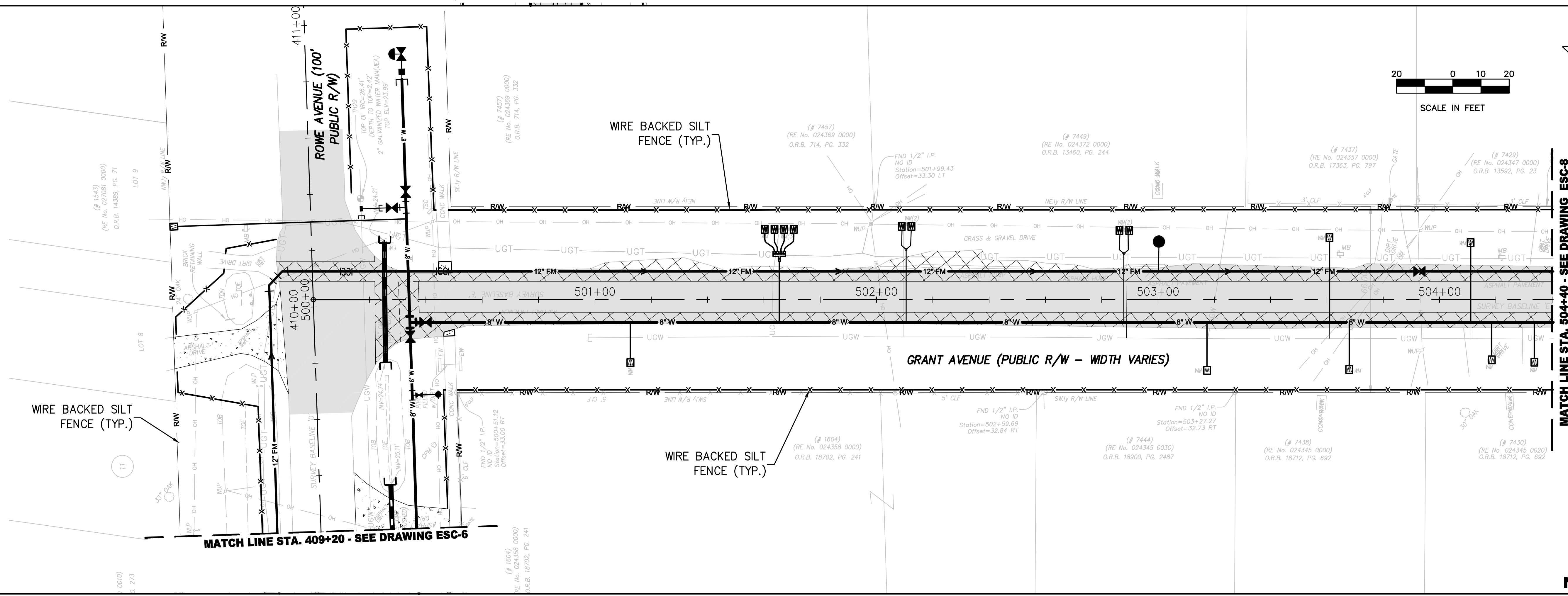
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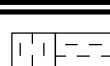


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BEVERLY HILLS SEPTIC TANK PHASE OUT
OFFSITE FORCE MAIN
EROSION AND SEDIMENT CONTROL PLAN

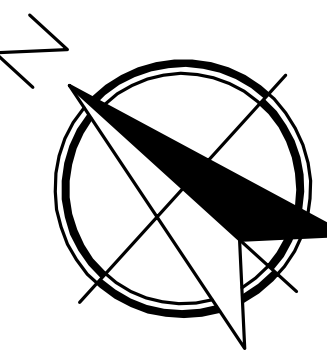
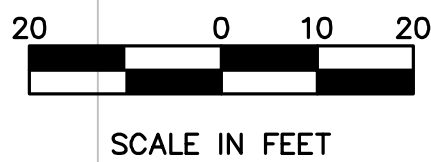
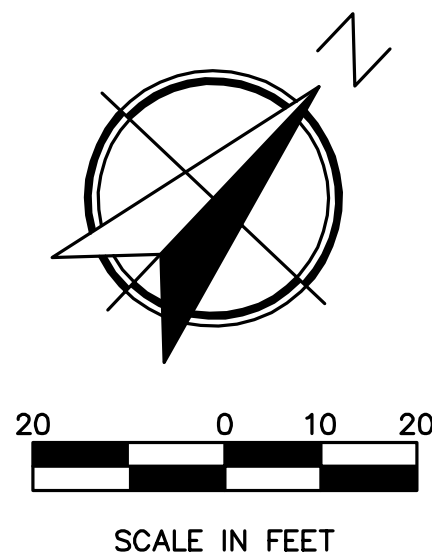
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- | NOTES | |
|-------|--|
| 1. | SEE DRAWING NO. G-1 FOR GENERAL NOTES. |
| 2. | REF. TO DRAWING NO. E-30 FOR SLOPE SEDIMENT AND EROSION CONTROL NOTES AND DETAILS. |
| 3. | COIR BALES TO BE INSTALLED AROUND EACH INLET STRUCTURE BY CONTRACTOR. |
| 4. | CONTRACTOR SHALL PROVIDE COIR BALES AT ALL DEWATERING SUMPS. |
| 5. | WIRE BACED SILT FENCE TO BE PLACED A MINIMUM OF 6' FROM ANY TREE TO REMAIN. |
| 6. | WIRE BACED SILT FENCE SHOWN IS FOR GRAPHICAL PURPOSES ONLY. CONTRACTOR SHALL COORDINATE INSTALLATION OF FILTER BARRIER TO ENSURE FORCE MAIN AND WATER MAIN CAN BE COMPLETED IN ITS ENTIRETY. |
| 7. | COIR BALES AND FILTER BARRIER TO BE REMOVED AFTER CONSTRUCTION AND STABILIZATION COMPLETE. |

- | LEGEND | |
|---|--------------------------------------|
|  | COIR BALE |
|  | SINGLE ROW WIRE BACKED
SILT FENCE |
|  | DOUBLE ROW WIRE BACKED
SILT FENCE |

NOTE:
QUANTITIES FOR IMPROVEMENTS
SHOWN ON THIS SHEET ARE
INCLUDED IN TABULATIONS FOR
SHEET C-14



BID DOCUMENTS - NOT FOR CONSTRUCTION

BEVERLY HILLS SEPTIC TANK PHASE OUT
OFFSITE FORCE MAIN
EROSION AND SEDIMENT CONTROL PLAN

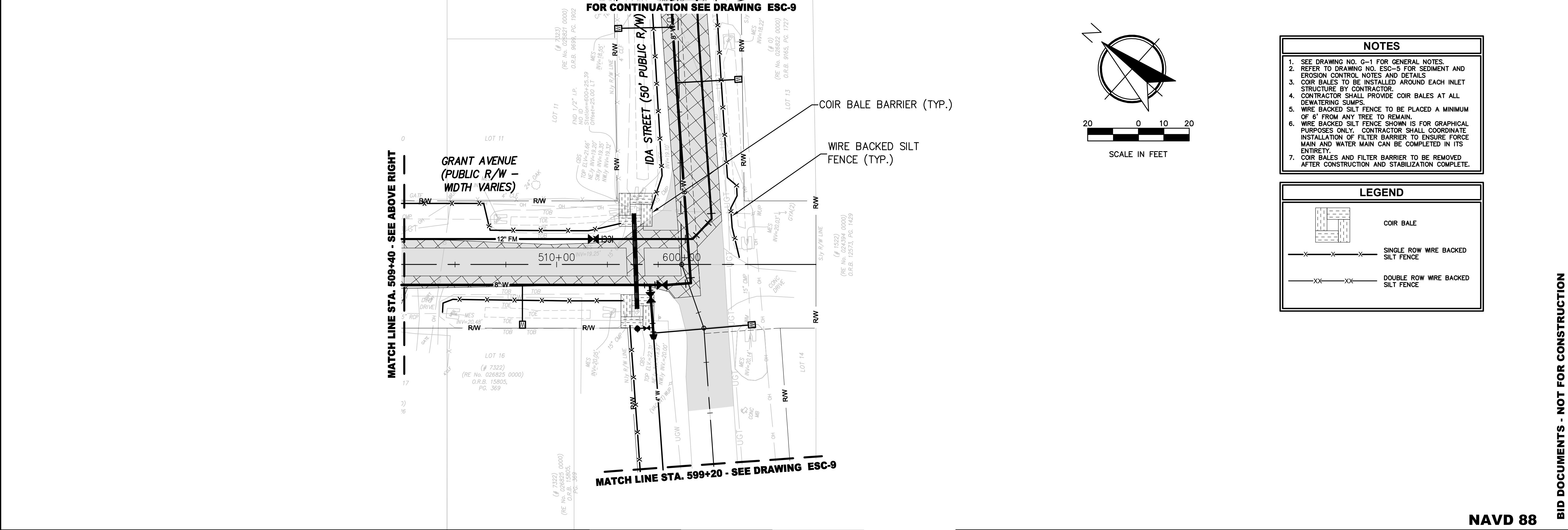
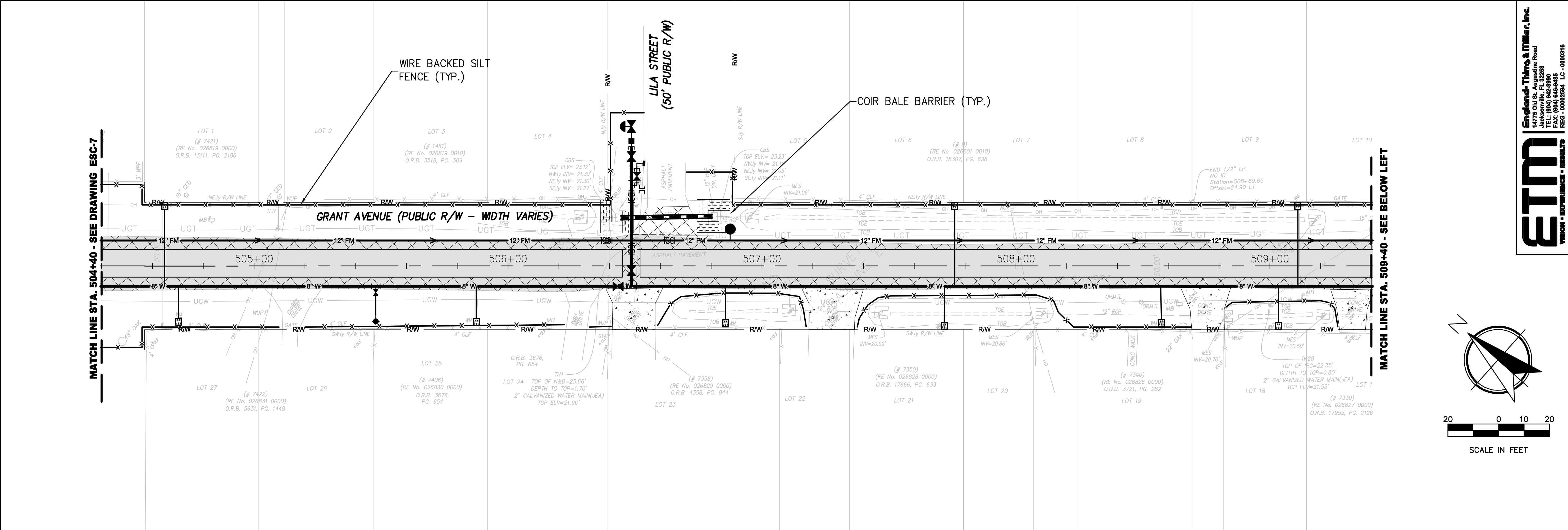
NO. SHEETS 69	PROJ. NO. 17-026-02
SHEET NO.	DATE: MAY 5, 2020
DRAWING NO. ESC-7	SCALE: AS NOTED

Engelhardt-Thoms & Miller, Inc.
14775 Old St. Augustine Road
Jacksonville, FL 32258
TEL: (904) 642-8990
FAX: (904) 646-8485
REG. 00002584 LC - 0000316

DESIGN ENGINEER	NO.	BY	DATE	REVISIONS
SCOTT A. WILD	6.			
	5.			
	4.			
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FLORIDA REGISTRATION NO. 47030	1.			

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ETM

Engineering, Planning & Management, Inc.

14775 Old St. Augustine Road

Jacksonville, FL 32218

TEL: (904) 644-8980

FAX: (904) 644-4444

REG - 00002594 LC - 0000316

REVISIONS

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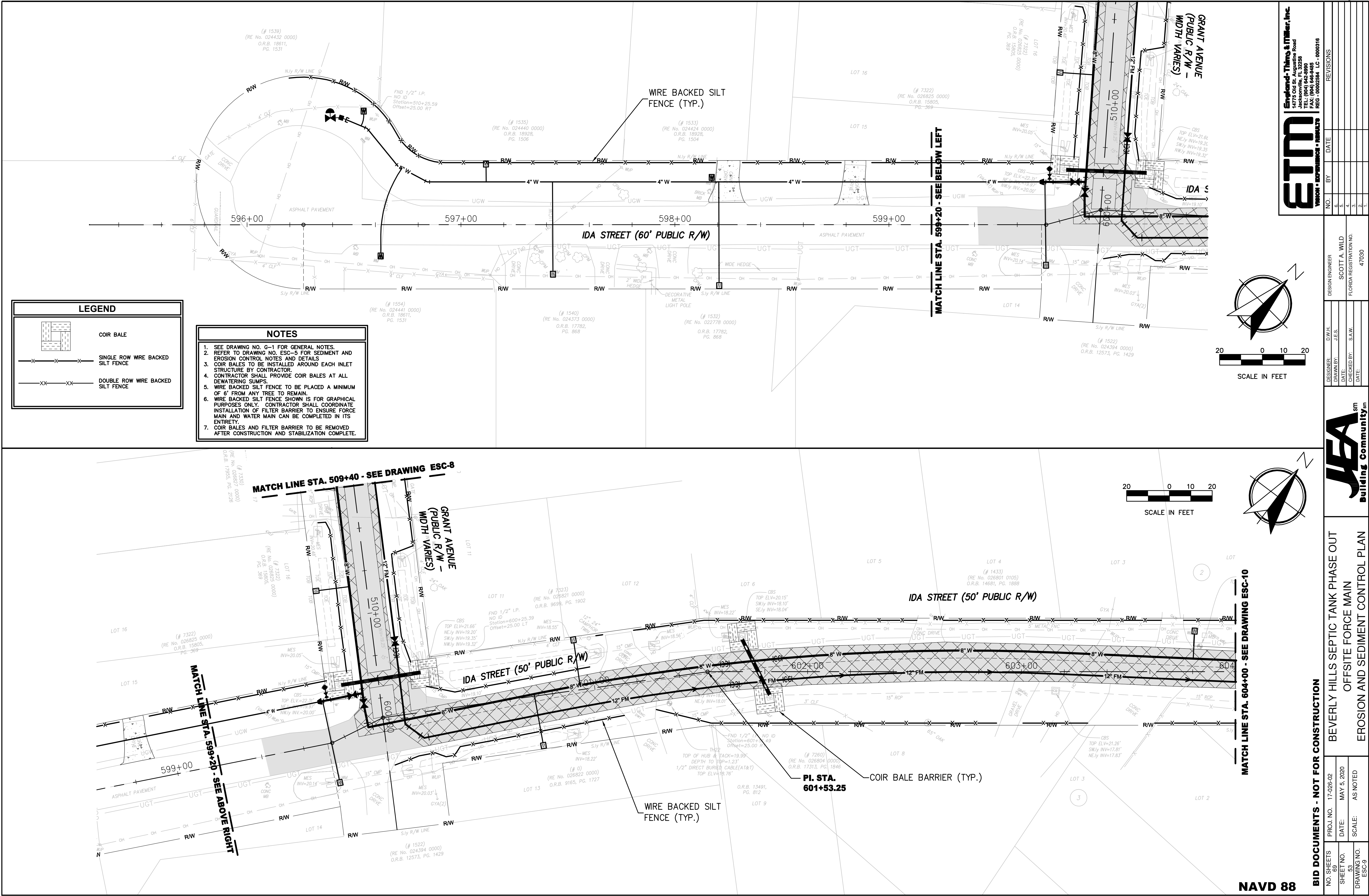
DESIGNER: D.W.H.		DESIGN ENGINEER: SCOTT A. WILD	
DRAWN BY: J.E.S.		FLORIDA REGISTRATION NO. 47030	
DATE: S.A.W.			
CHECKED BY: S.A.W.			
DATE:			
PROJ. NO. 17-026-02		NO. SHEETS 69	
DATE: MAY 5, 2020		SHEET NO. 52	
SCALE: AS NOTED		DRAWING NO. ESC-8	

BID DOCUMENTS - NOT FOR CONSTRUCTION

BEVERLY HILLS SEPTIC TANK PHASE OUT
OFFSITE FORCE MAIN
EROSION AND SEDIMENT CONTROL PLAN

G:\17-026\17-026-02\LandDev\Design\Plots\17-026-02 ESC.dwg PLOTTED: Apr. 27, 20 - 2:49 PM, BY: CAD Test

NAVD 88



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ETM

DESIGN • ENGINEERING • SURVEYING

REVISIONS	
NO.	DATE
1	
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DESIGNER:	D.W.H.	DESIGN ENGINEER:
DRAWN BY: <td>J.E.S.<td>SCOTT A. WILD</td></td>	J.E.S. <td>SCOTT A. WILD</td>	SCOTT A. WILD
CHECKED BY: <td>S.A.W.<td>FLORIDA REGISTRATION NO.</td></td>	S.A.W. <td>FLORIDA REGISTRATION NO.</td>	FLORIDA REGISTRATION NO.
DATE:		47030

BID DOCUMENTS - NOT FOR CONSTRUCTION

PROJ. NO. 17-026-02

NO. SHEETS 69

DATE: MAY 5, 2020

SHEET NO. 53

SCALE: AS NOTED

DRAWING NO. ESC-9

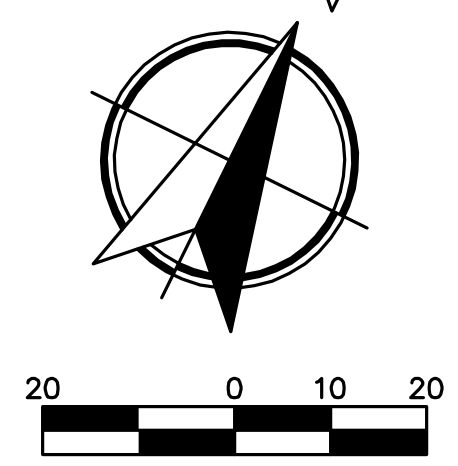
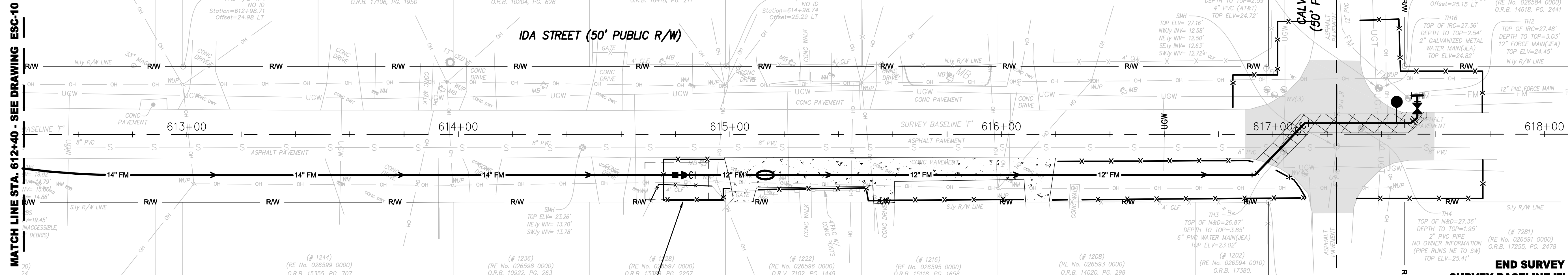
BEVERLY HILLS SEPTIC TANK PHASE OUT

OFFSITE FORCE MAIN

EROSION AND SEDIMENT CONTROL PLAN

NAV88

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1. SEE DRAWING NO. G-1 FOR GENERAL NOTES.
2. REFER TO DRAWING NO. ESC-5 FOR SEDIMENT AND EROSION CONTROL NOTES AND DETAILS.
3. COIR BALES TO BE INSTALLED AROUND EACH INLET STRUCTURE BY CONTRACTOR.
4. CONTRACTOR SHALL PROVIDE COIR BALES AT ALL DRAINAGE STRUCTURES.
5. WIRE BACKED SILT FENCE TO BE PLACED A MINIMUM OF 6' FROM ANY TREE TO REMAIN.
6. WIRE BACKED SILT FENCE SHOWN IS FOR GRAPHICAL PURPOSES ONLY. CONTRACTOR SHALL COORDINATE INSTALLATION OF FILTER BARRIER TO ENSURE FORCE MAIN AND WATER MAIN CAN BE COMPLETED IN ITS ENTIRETY.
7. COIR BALES AND FILTER BARRIER TO BE REMOVED AFTER CONSTRUCTION AND STABILIZATION COMPLETE.

- The diagram illustrates the components and application of the silt fence system. At the top left is a **COIR BALE**, depicted as a square divided into four quadrants with different hatching patterns. Below it are two types of **SILT FENCE**:

 - SINGLE ROW WIRE BACKED SILT FENCE**: Shown as a horizontal line with three 'X' marks representing the wire backing.
 - DOUBLE ROW WIRE BACKED SILT FENCE**: Shown as a horizontal line with two 'XX' marks representing the double wire backing.

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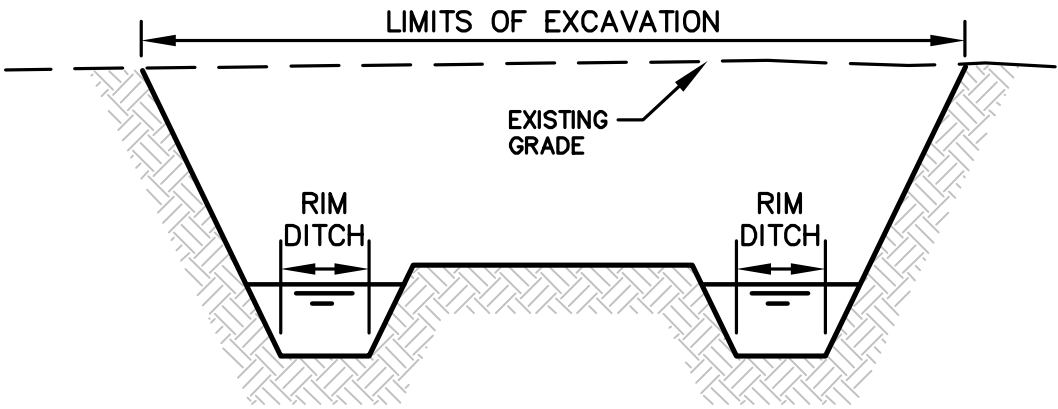
NO. SHEETS 69	PROJ. NO. 17-026-02		BEVERLY HILLS SEPTIC TANK PHASE OUT OFFSITE FORCE MAIN EROSION AND SEDIMENT CONTROL PLAN	DESIGNER: D.W.H. DRAWN BY: J.E.S. DATE: MAY 5, 2020 CHECKED BY: S.A.W. DATE: AS NOTED	DESIGN ENGINEER SCOTT A. WILD FLORIDA REGISTRATION NO. 47030	NO. BY DATE 6 5 4 3 2 1	REVISIONS
SHEET NO. 55							
DRAWING NO. ESC-11							

SEDIMENT AND EROSION CONTROL NOTES

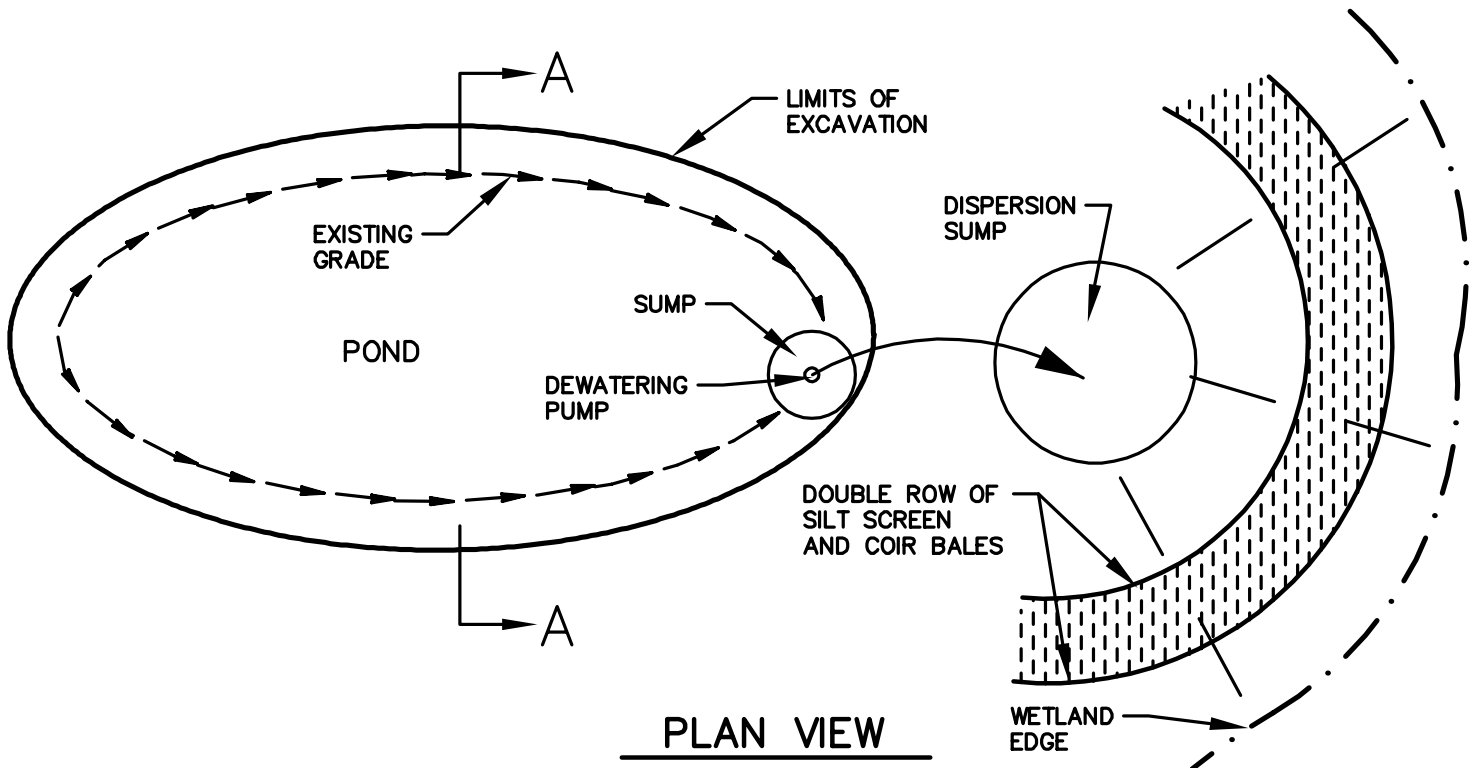
1. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SILT FROM SITE IF NOT REUSABLE ON-SITE AND ASSURING PLAN ALIGNMENT AND GRADE IN ALL DITCHES AND SWALES AT COMPLETION OF CONSTRUCTION.
2. THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED.
3. ADDITIONAL PROTECTION - ON-SITE PROTECTION IN ADDITION TO THE ABOVE MUST BE PROVIDED THAT WILL NOT PERMIT SILT TO LEAVE THE PROJECT CONFINES DUE TO UNSEEN CONDITIONS OR ACCIDENTS.
4. CONTRACTOR SHALL INSURE THAT ALL DRAINAGE STRUCTURES, PIPES, ETC. ARE CLEANED OUT AND WORKING PROPERLY AT TIME OF ACCEPTANCE.
5. WIRE MESH SHALL BE LAID OVER THE DROP INLET SO THAT THE WIRE EXTENDS A MINIMUM OF 1 FOOT BEYOND EACH SIDE OF THE INLET STRUCTURE. HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2-INCH OPENINGS SHALL BE USED. IF MORE THAN ONE STRIP OF MESH IS REQUIRED, THE STRIPS SHALL BE OVERLAPPED.
6. FDOT NO. 1 COARSE AGGREGATE SHALL BE PLACED OVER THE WIRE MESH AS INDICATED ON SEDIMENT FILTER DETAIL (SEE DETAIL THIS SHEET). THE DEPTH OF STONE SHALL BE AT LEAST 12 INCHES OVER THE ENTIRE INLET OPENING. THE STONE SHALL EXTEND BEYOND THE INLET OPENING AT LEAST 18 INCHES ON ALL SIDES.
7. IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONES MUST BE PULLED AWAY FROM THE INLET, CLEANED AND REPLACED.
8. BALES SHALL BE EITHER WIRE-BOUND OR STRING-TIED WITH THE BINDINGS ORIENTED AROUND THE SIDES RATHER THAN OVER AND UNDER THE BALES.
9. BALES SHALL BE PLACED LENGTHWISE IN A SINGLE ROW SURROUNDING THE INLET, WITH THE ENDS OF ADJACENT BALES PRESSED TOGETHER.
10. THE FILTER BARRIER SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 4 INCHES. AFTER THE BALES ARE STAKED, THE EXCAVATED SOIL SHALL BE BACKFILLED AND COMPACTED AGAINST THE FILTER BARRIER.
11. EACH BALE SHALL BE SECURELY ANCHORED AND HELD IN PLACE BY AT LEAST TWO STAKES OR REBARS DRIVEN THROUGH THE BALE.
12. LOOSE COIR SHOULD BE WEDGED BETWEEN BALES TO PREVENT WATER FROM ENTERING BETWEEN BALES.
13. COIR BALE BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
14. CLOSE ATTENTION SHALL BE GIVEN TO THE REPAIR OF DAMAGED BALES, END RUNS AND UNDERGUTTING BENEATH BALES.
15. NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF BALES SHALL BE ACCOMPLISHED PROMPTLY.
16. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. IT MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
17. ANY SEDIMENT DEPOSITS REMAINING IN PLACE, AFTER THE COIR BALE OR FILTER BARRIERS, AND OR SILT FENCES ARE NO LONGER REQUIRED, SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.
18. SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
19. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED IMMEDIATELY.
20. STRUCTURES SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS REQUIRED.
21. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
22. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING THE BEST EROSION AND SEDIMENT CONTROL PRACTICES AS OUTLINED IN THE PLANS, SPECIFICATIONS AND ST. JOHNS RIVER WATER MANAGEMENT DISTRICT RULES AND REGULATIONS.
23. FOR ADDITIONAL INFORMATION ON SEDIMENT AND EROSION CONTROL REFER TO "THE FLORIDA DEVELOPMENT MANUAL - A GUIDE TO SOUND LAND AND WATER MANAGEMENT" FROM THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION (F.D.E.P.) CHAPTER 6.
24. EROSION AND SEDIMENT CONTROL BARRIERS SHALL BE PLACED ADJACENT TO ALL WETLAND AREAS WHERE THERE IS POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION. SEE DETAILS (THIS SHEET) FOR TYPICAL CONSTRUCTION.
25. SOD SHALL BE PLACED IN AREAS WHICH MAY REQUIRE IMMEDIATE EROSION PROTECTION TO ENSURE WATER QUALITY STANDARDS ARE MAINTAINED.
26. ANY DISCHARGE FROM DEWATERING ACTIVITY SHALL BE FILTERED AND CONVEYED TO THE OUTFALL IN A MANNER WHICH PREVENTS EROSION AND TRANSPORTATION OF SUSPENDED SOLIDS TO THE RECEIVING OUTFALL.
27. DEWATERING PUMPS SHALL NOT EXCEED THE CAPACITY OF THAT WHICH REQUIRES A CONSUMPTIVE USE PERMIT FROM THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT.
28. ALL DISTURBED AREAS SHALL BE GRASSED, FERTILIZED AND MULCHED UNTIL A PERMANENT VEGETATIVE COVER IS ESTABLISHED. CONTRACTOR SHALL USE ADDITIONAL MEASURES TO STABILIZE DISTURBED AREAS THROUGH COMPACTION, SILT SCREENS, COIR BALES, AND GRASSING. ALL FILL SLOPES 3:1 OR STEEPER TO RECEIVE STAKED SOLID SOD.
29. ALL DEWATERING, EROSION, AND SEDIMENT CONTROL SHALL REMAIN IN PLACE UNTIL AFTER COMPLETION OF CONSTRUCTION, AND REMOVED ONLY WHEN AREAS HAVE BEEN STABILIZED.
30. THIS PLAN INDICATES THE MINIMUM EROSION AND SEDIMENT MEASURES REQUIRED FOR THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL APPLICABLE RULES, REGULATIONS AND WATER QUALITY GUIDELINES AND MAY NEED TO INSTALL ADDITIONAL CONTROLS.
31. THE CONTRACTOR SHALL BE REQUIRED TO RESPOND TO ALL WATER MANAGEMENT DISTRICT INQUIRIES, RELATIVE TO COMPLIANCE OF SURMMD FOR EROSION AND SEDIMENTATION CONTROL. THE COST OF THIS COMPLIANCE SHALL BE PART OF THE CONTRACT.
32. EROSION AND SEDIMENT CONTROL BARRIERS SHALL BE PLACED ADJACENT TO ALL WETLAND AREAS AND PRESERVATION EASEMENTS WHERE THERE IS POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION.
33. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING A PERMANENT STAND OF SOD AND/OR GRASS PER THE CONTRACT DOCUMENTS AND MEETING THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT, CITY OF JACKSONVILLE AND NPDES FINAL STABILIZATION REQUIREMENTS.
34. THESE PLANS INCLUDING THE POLLUTION PREVENTION PLAN INDICATE THE MINIMUM EROSION & SEDIMENT CONTROL MEASURES REQUIRED FOR THIS PROJECT. FOR ADDITIONAL INFORMATION ON SEDIMENT AND EROSION CONTROL REFER TO "THE FLORIDA DEVELOPMENT MANUAL - A GUIDE TO

SOUND LAND AND WATER MANAGEMENT" FROM THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (F.D.E.P.) CHAPTER 6. CONTRACTOR SHALL PROVIDE EROSION PROTECTION AND TURBIDITY CONTROL AS REQUIRED TO INSURE CONFORMANCE TO STATE AND FEDERAL WATER QUALITY STANDARDS AND MAY NEED TO INSTALL ADDITIONAL CONTROLS TO CONFORM TO AGENCIES REQUIREMENTS. IF A WATER QUALITY VIOLATION OCCURS, THE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR ALL DAMAGE AND ALL COSTS WHICH MAY RESULT INCLUDING LEGAL FEES, CONSULTANT FEES, CONSTRUCTION COSTS, AND FINES.

35. 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR WILL SUBMIT A "NOTICE OF INTENT" TO THE EPA IN ACCORDANCE WITH NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM RULES AND REGULATIONS. (FOR ANY CONSTRUCTION NOT COVERED BY THE OWNER'S "NOTICE OF INTENT" PERMIT)

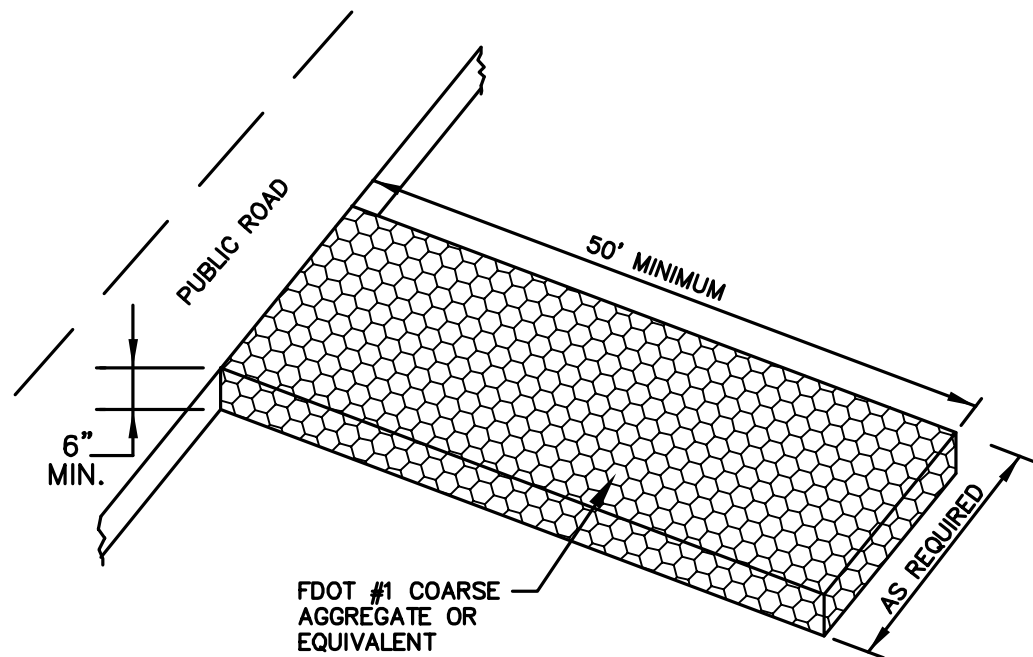


SECTION A-A



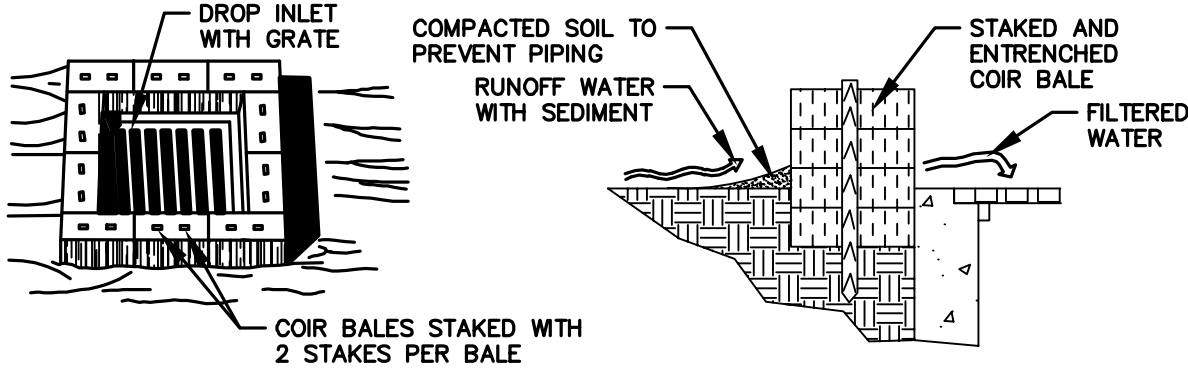
TEMPORARY DEWATERING DETAIL

N.T.S.



STABILIZED CONSTRUCTION ENTRANCE

N.T.S.

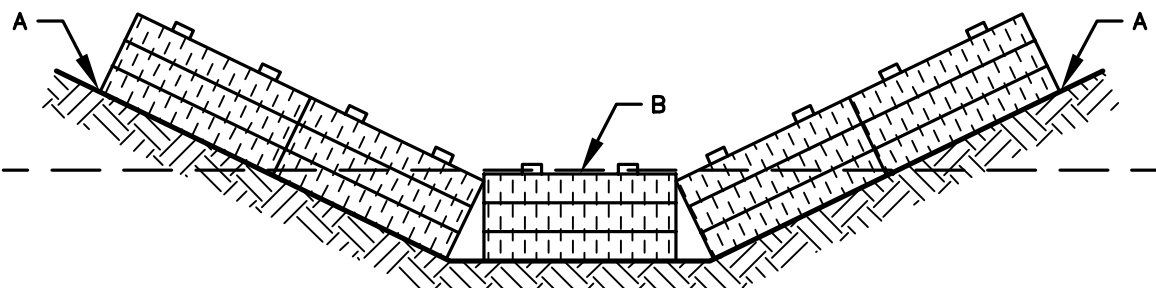


SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPES NO GREATER THAN 5 PERCENT) WHERE SHEET OR OVERLAND FLOWS (NOT EXCEEDING 0.5 cfs) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS.

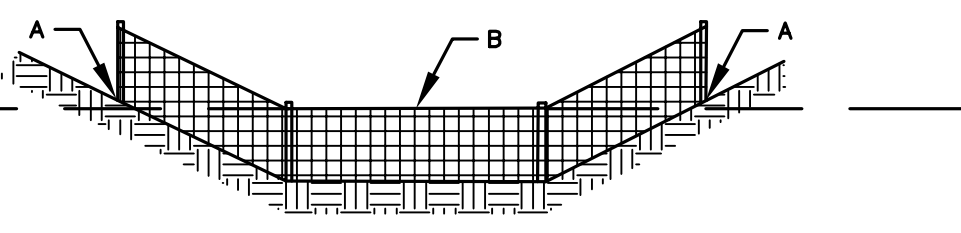
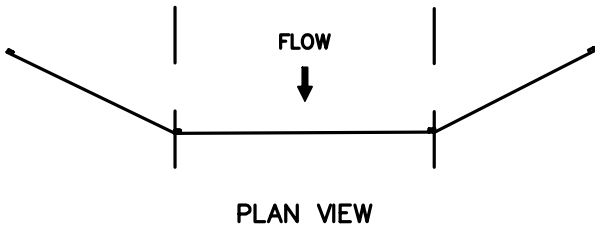
COIR BALE DROP INLET SEDIMENT FILTER

N.T.S.



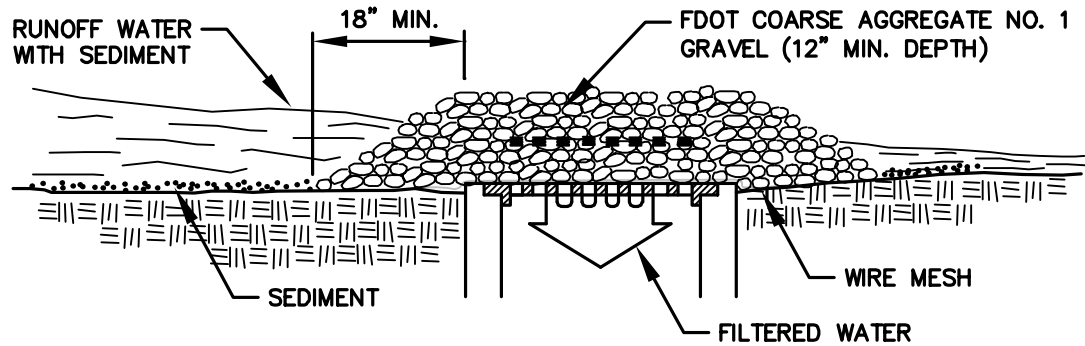
PROPER PLACEMENT OF COIR BALE
IN A DRAINAGE WAY

N.T.S.



PROPER PLACEMENT OF A
FILTER BARRIER IN DRAINAGE WAY

N.T.S.

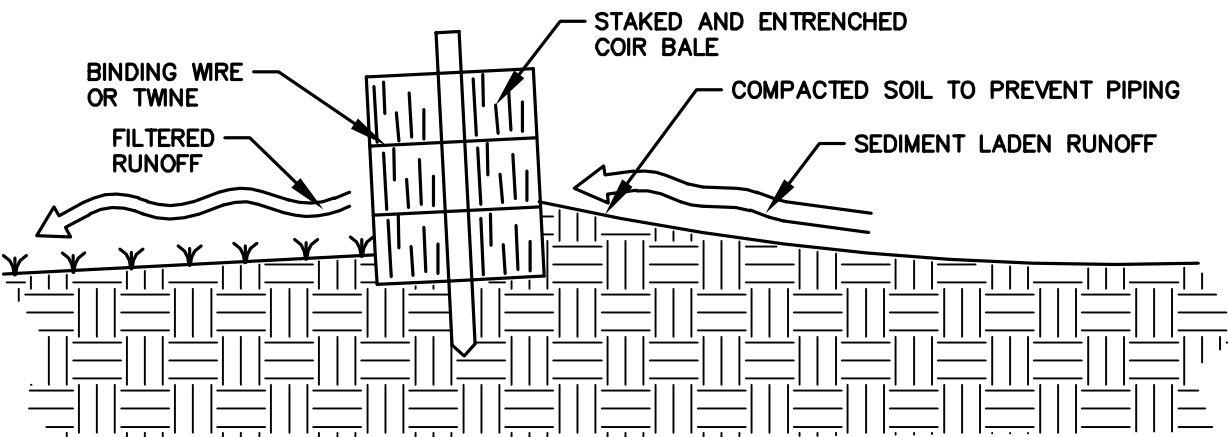


SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED, BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

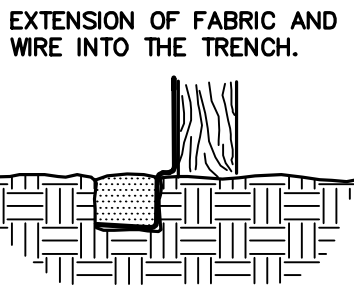
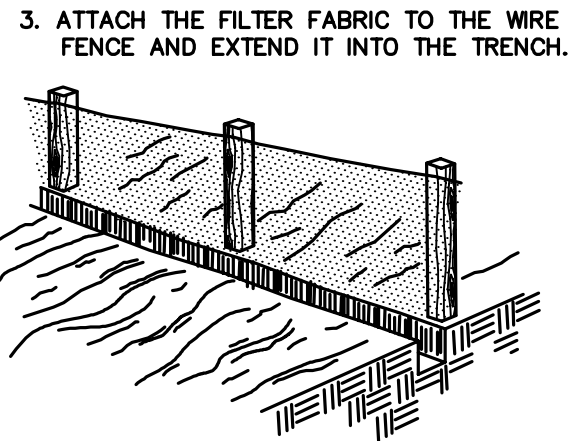
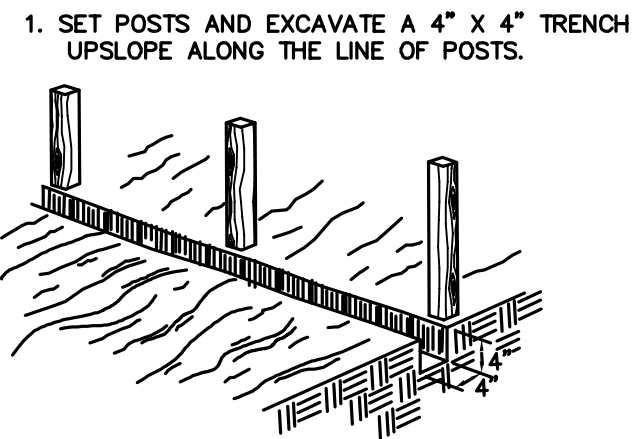
GRAVEL AND WIRE MESH DROP INLET
SEDIMENT FILTER

N.T.S.



CROSS-SECTION OF A PROPERLY
INSTALLED COIR BALE

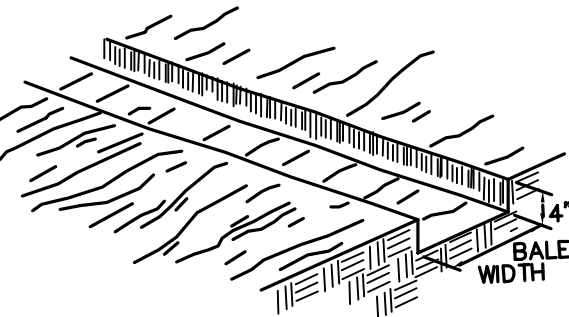
N.T.S.



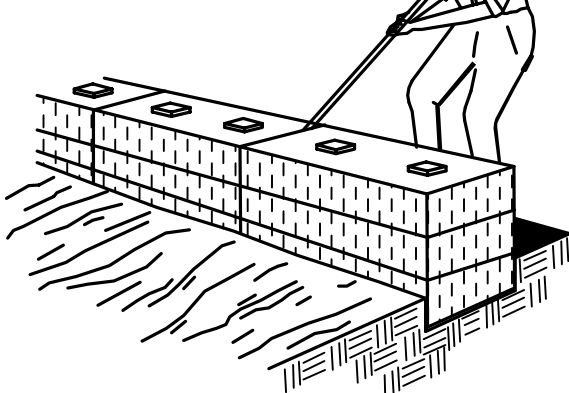
CONSTRUCTION OF SILT FENCE

N.T.S.

1. EXCAVATE THE TRENCH



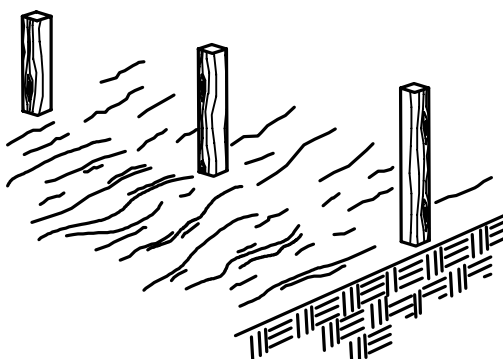
3. WEDGE LOOSE COIR BETWEEN BALES.



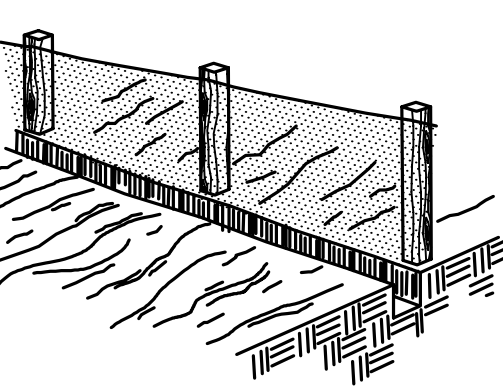
CONSTRUCTION OF A COIR BALE BARRIER

N.T.S.

1. SET THE STAKES.

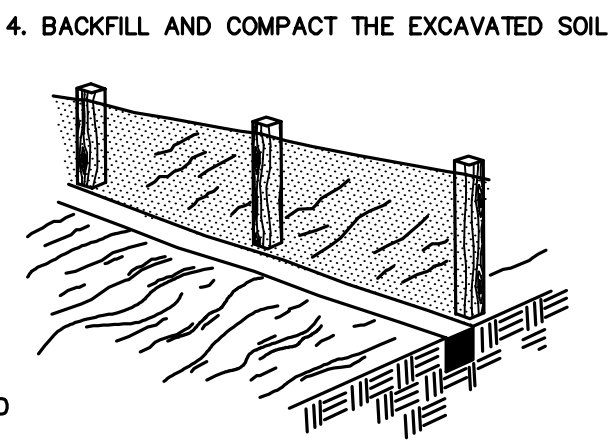
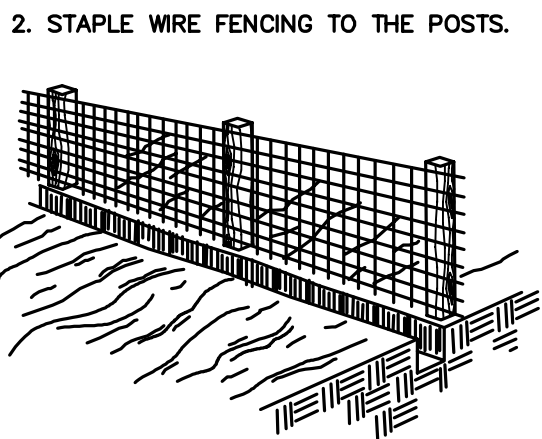


3. STAPLE FILTER MATERIAL TO STAKES AND EXTEND IT INTO THE TRENCH.

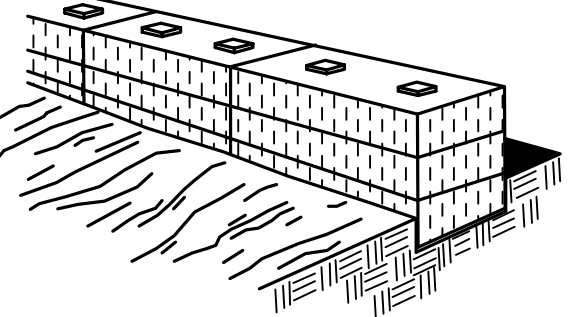


CONSTRUCTION OF A FILTER BARRIER

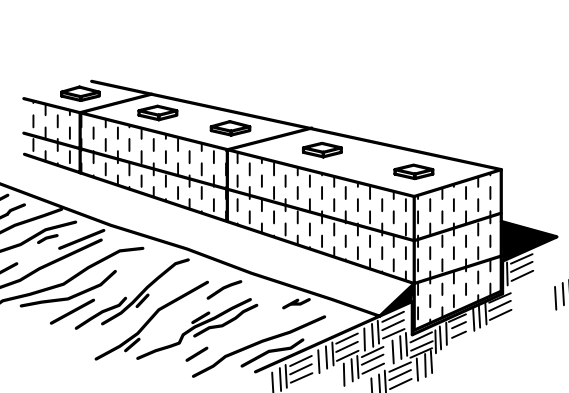
N.T.S.



2. PLACE AND STAKE COIR BALES.



4. BACKFILL AND COMPACT THE EXCAVATED SOIL.



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Erosion & Sediment Control
DESIGN • CONSTRUCTION • MAINTENANCE

Engelhard, Thoms & Miller, Inc.
14775 Old St. Augustine Road
Jacksonville, FL 32218
TEL: (904) 642-9880
FAX: (904) 642-9881
REG. 00002594 LC 0000316

NO. SHEETS 69		PROJ. NO. 17-026-02		<div>JEAsm Building Communitysm</div> <div>BEVERLY HILLS SEPTIC TANK PHASE OUT OFFSITE FORCE MAIN EROSION AND SEDIMENT CONTROL DETAILS</div>				DESIGNER: D.W.H.		DESIGN ENGINEER		NO.		BY		DATE		REVISIONS			
SHEET NO. 56		DATE: MAY 5, 2020						DRAWN BY: J.E.S.		DATE: SCOTT A. WILD		5.		6.							
DRAWING NO. ESC-12		SCALE: AS NOTED						CHECKED BY: S.A.W.		DATE: FLORIDA REGISTRATION NO.		3.		4.							
								DATE:		47030		2.									
												1.									

BEVERLY HILLS SEPTIC TANK PHASE OUT

STORM WATER POLLUTION PREVENTION PLAN
INSPECTION AND MAINTENANCE REPORT FORM

THIS IS THE CONTRACTORS CERTIFICATION REQUIRED BY THE EPA'S NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES). STORM WATER POLLUTION PREVENTION PLANS FOR CONSTRUCTION SITES OVER 1/4 ACRES WHICH CERTIFICATION MUST BE COMPLETED WEEKLY AND AFTER EVERY RAINFALL EVENT OVER 0.25 INCHES

INSPECTOR: _____

INSPECTOR'S QUALIFICATIONS: _____

DAYS SINCE LAST RAINFALL: _____ AMOUNT OF LAST RAINFALL _____ INCHES

STABILIZATION MEASURES

INSPECTION AREA (DESCRIPTION OF LOCATION)	DATE SINCE LAST DISTURBED	DATE OF NEXT DISTURBANCE	STABILIZED ? (YES/NO)	STABILIZED WITH	CONDITION

STABILIZATION REQUIRED:

TO BE PERFORMED BY: _____ ON OR BEFORE _____

PAGE 1 OF 4

BEVERLY HILLS SEPTIC TANK PHASE OUT

STORM WATER POLLUTION PREVENTION PLAN
INSPECTION AND MAINTENANCE REPORT FORM

DATE: _____

STRUCTURAL CONTROLS

EARTH DIKES/SWALES

DIKE OR SWALE	FROM	TO	IS DIKE/SWALE STABILIZED ?	IS THERE EVIDENCE OF WASHOUT OR OVERTOPPING

MAINTENANCE REQUIRED FOR EARTH DIKE/SWALE:

TO BE PERFORMED BY: _____ ON OR BEFORE _____

CATCH BASIN/CURB INLET/OUTFALL TURBIDITY CONTROLS

STRUCTURE/ OUTFALL	ARE TURBIDITY CONTROLS IN PLACE	ANY EVIDENCE OF CLOGGING/WASHOUT OR BYPASSING ?	ARE TURBIDITY CONTROLS IN NEED OF REPLACING	DOES SILT NEED TO BE REMOVED FROM AROUND CONTROL

MAINTENANCE REQUIRED FOR CATCH BASIN/CURB INLETS/OUTFALLS TURBIDITY CONTROLS:

TO BE PERFORMED BY: _____ ON OR BEFORE _____

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BEVERLY HILLS SEPTIC TANK PHASE OUT

STORM WATER POLLUTION PREVENTION PLAN
INSPECTION AND MAINTENANCE REPORT FORM

SEDIMENT BASIN

DEPTH OF SEDIMENT IN BASIN	DEPTH OF SEDIMENT SIDE BASIN	ANY EVIDENCE OF OVERTOPPING OF THE EMBANKMENT ?	CONDITION OF OUTFALL FROM SEDIMENT BASIN

MAINTENANCE REQUIRED FOR SEDIMENT BASIN:

TO BE PERFORMED BY: _____ ON OR BEFORE _____

OTHER CONTROLS

STABILIZED CONSTRUCTION ENTRANCE

DOES MUCH SEDIMENT GET TRACKED ON TO ROAD ?	IS THE GRAVEL CLEAN OR IS IT FILLED WITH SEDIMENT?	DOES ALL TRAFFIC USE THE STABILIZED ENTRANCE TO LEAVE THE SITE ?	IS THE CULVERT BENEATH THE ENTRANCE WORKING? (IF APPLICABLE)

MAINTENANCE REQUIRED FOR STABILIZED CONSTRUCTION ENTRANCE:

TO BE PERFORMED BY: _____ ON OR BEFORE _____

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BEVERLY HILLS SEPTIC TANK PHASE OUT

STORM WATER POLLUTION PREVENTION PLAN
INSPECTION AND MAINTENANCE REPORT FORM

CHANGES REQUIRED TO THE POLLUTION PREVENTION PLAN:

REASONS FOR CHANGES:

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY MAINTAINED AND OPERATED THE POLLUTION PREVENTION SYSTEM AND THAT THE INFORMATION SUBMITTED ON THIS FORM WAS OBTAINED FROM THE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION. THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE: _____

DATE: _____

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