

NASSAU CARWASH SITE

NASSAU COUNTY, FLORIDA

PREPARED FOR

FOWLER PROPERTIES, INC.

9838 OLD BAYMEADOWS ROAD
JACKSONVILLE, FL 32256



England-Thims & Miller, Inc.
14775 Old St. Augustine Road
Jacksonville, FL 32258
TEL: (904) 642-8990
FAX: (904) 646-9485
CA - 00002584 LC - 0000316

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NOTE:
IF YOU DIG IN FLORIDA, YOU ARE REQUIRED TO
CALL SUNSHINE STATE ONE-CALL OF FLORIDA,
INC. 1-800-432-4770 FOR LOCATES. IT'S THE
LAW.



LOCATION MAP
N.T.S.

JEA AVAILABILITY #: 2020-3020

FOR AGENCY REVIEW ONLY
NOT FOR CONSTRUCTION

PLANS PREPARED UNDER THE
DIRECTION OF:

ANDREW J. BOOTH
P.E. NUMBER: 92302

ETM NO. 20-207	DRAWN BY: AJB
DESIGNED BY: AJB	CHECKED BY:
DATE: FEBRUARY 2021	

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COVER SHEET

NASSAU CARWASH SITE
FOR
FOWLER PROPERTIES, INC.

DRAWING NUMBER
1

VERTICAL DATUM USED FOR
THIS PROJECT: NAVD 1988

THE FLORIDA PROFESSIONAL ENGINEER NAMED HEREIN SHALL BE RESPONSIBLE FOR THE DRAWINGS LISTED IN THIS BOX IN ACCORDANCE WITH RULE 61G15-23-003, F.A.C. THESE SHEETS HAVE BEEN SIGNED AND SEALED USING A DIGITAL SIGNATURE BY: ANDREW J. BOOTH P.E. NUMBER:82302

ENGLAND—THIMS & MILLER, INC.
14775 OLD ST. AUGUSTINE ROAD
JACKSONVILLE, FLORIDA 32258
PHONE (904) 642-8990
CERTIFICATE OF AUTHORIZATION NUMBER: 00002584

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED
SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED
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SIGNATURE PAGE

**NASSAU CARWASH SITE
FOR
FOWLER PROPERTIES, INC.**

DRAWING NUMBER

SIG-1

T: \\2020\\20-207\\LandDev\\Design\\Plots\\Cover-20-207.dwg

PLOTTED: May 26, 2021 - 11:53 AM, BY: AJ Booth

Development Review General Notes:			
1. Engineering Plans approval does not constitute permission to violate any adopted Federal, State, or Local law, code, or ordinance.	2. All work within the public streets and right-of-ways shall conform to Nassau County Land Development Codes (LDC), FDOT Standard Indices, Florida Greenbook, Nassau County Roadway and Drainage Standards, and Nassau County Standard Details as necessary. For any discrepancy between standards, the most stringent shall prevail.	3. Per Nassau County Roadway and Drainage Standards, Ordinance 99-17 Section 6.2.4, site shall be constructed per approved construction drawings. Any substantial deviation shall be concurrently reviewed by Engineer of Record and Nassau County Development Review Committee prior to field changes.	4. A pre-construction meeting with Nassau County Engineering Services Construction Inspector is required. Attendees shall be Nassau County, Engineer of Record, Contractor, Testing firm, Paving firm, and utility companies per Nassau County Ordinance 99-17 Section 7.2.3. Nassau County may cancel pre-construction meeting if attendee list is inadequate. Nassau County Engineering Services can be reached at 904-530-6225.
5. The contractor shall schedule and coordinate all work with the appropriate Nassau County Construction Inspector assigned to the project per Nassau County Ordinance 99-17 Section 7.2.	6. All work shall be performed in a safe manner. All safety rules and guidelines of O.S.H.A. shall be followed. The contractor shall be wholly responsible for any injuries to his employees and any damage to private property or persons during the course of this project.	7. Per Nassau County Roadway and Drainage Standards, Ordinance 99-17 Section 11.8.1, any disturbed areas within Nassau County Right-of-Way shall be sodded.	8. Per Nassau County Roadway and Drainage Standards, Ordinance 99-17 Section 7.4.1, at the time of final inspection, grassing shall be a minimum of seventy percent coverage and fully established and/or sodding to be one hundred percent coverage and stabilized.
10. Parking at mail kiosks is required per Nassau County Roadway and Drainage Standards, Ordinance 99-17 Section 8.4. Mail kiosk locations are subject to USPS Postmaster approval.	11. The developer's contractor is the single responsible party for the proper implementation of an Erosion Protection Sediment Control (EPSC) within each lot or construction site. This includes the responsibility for the actions/inactions of employees, subcontractors, and/or suppliers.	12. Sidewalks to be provided and built in accordance Florida Building Code. All proposed sidewalks shall meet ADA requirements.	13. The Contractor shall comply with current Florida accessibility standards for all work on this project.
ROADWAY AND DRAINAGE STANDARDS NASSAU COUNTY ENGINEERING SERVICES DEPARTMENT	REVISION DATES	DEVELOPMENT REVIEW GENERAL NOTES	NOTE SHEET: 1
			DWG:
			ISSUED: 12/09/2020

Stormwater Drainage Notes:			
1. All stormwater drainage facilities within Public Right-of-Way and paved areas, including Nassau County Right-of-Way, turn lanes, residential roadways, drive aisles for multi-family developments, and major drive aisles for commercial developments shall be laser profiled per FDOT Section 430.	2. A builder cannot modify the County's storm water management system including the pipes, inlets, area drains, ditches and related elements typically within the street or within a drainage easement without the prior written approval of the County Engineer or designee.	3. Drainage easements and ditches should remain free of stockpiled soil, sediment, mud, construction materials/waste, et cetera at all times. Positive stormwater flow must be maintained throughout construction.	4. The contractor shall temporarily or permanently stabilize bare soil areas and soil stockpiles when the area is inactive for fourteen days or more or has reached finished grade.
ROADWAY AND DRAINAGE STANDARDS NASSAU COUNTY ENGINEERING SERVICES DEPARTMENT	REVISION DATES	STORMWATER DRAINAGE & PAVING NOTES	NOTE SHEET: 2
			DWG:
			ISSUED: 12/09/2020

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				DWG:
				ISSUED: 12/09/2020

PAVING AND DRAINAGE LEGEND

EXISTING	PROPOSED	EXISTING	PROPOSED

WATER AND SEWER LEGEND

EXISTING	PROPOSED	EXISTING	PROPOSED

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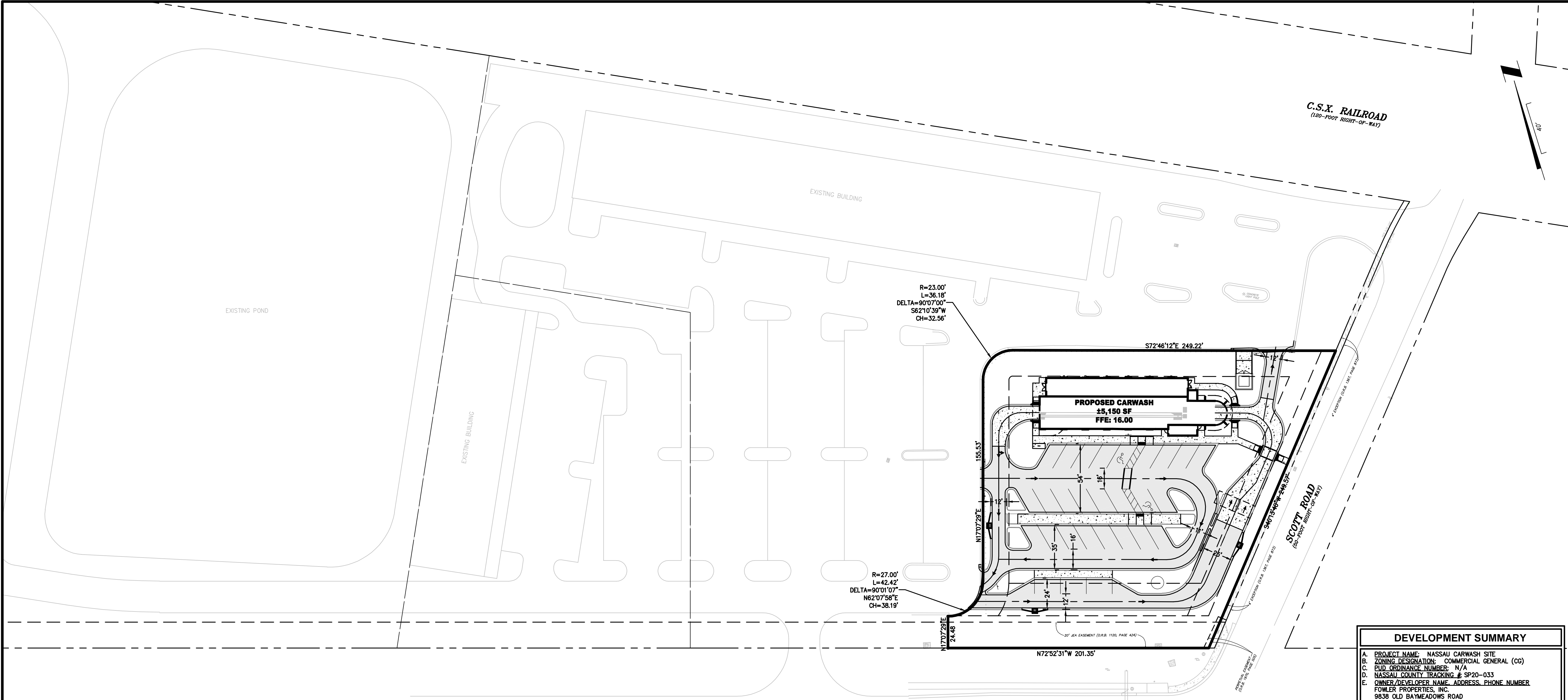
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GENERAL NOTES AND LEGEND
NASSAU CARWASH SITE
FOR
FOWLER PROPERTIES, INC.

DRAWING NUMBER
2

ANDREW J. BOOTH
P.E. NUMBER: 92302
PLOTTED: May 26, 2021 – 11:53 AM. BY: AJ Booth

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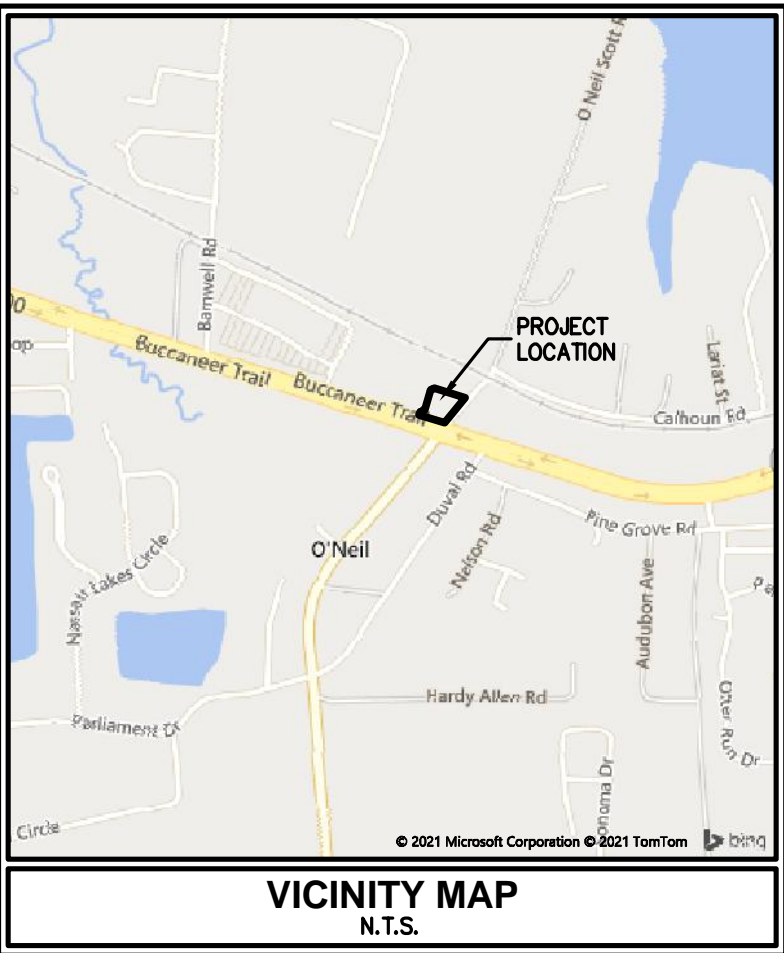


STATE ROAD NO. 200 (A-1-A)
(RIGHT-OF-WAY VARIES) (P.D.O.T. SECTION 74060-2503)

LEGAL DESCRIPTION

COPY AND PASTE LEGAL DESCRIPTION HERE

A PART OF SECTIONS 27, TOWNSHIP 2 NORTH, RANGE 28 EAST, NASSAU COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCE AT THE NORTHEAST CORNER OF SAID SECTION 27; THENCE SOUTH 50°30'22" WEST, A DISTANCE OF 121.40 FEET TO A POINT AT THE INTERSECTION OF THE SOUTHERLY RIGHT-OF-WAY LINE OF THE CSX RAILROAD (A 120-FOOT RIGHT-OF-WAY AS NOW ESTABLISHED) WITH THE WESTERLY RIGHT-OF-WAY LINE OF SCOTT ROAD (A 60-FOOT RIGHT-OF-WAY AS NOW ESTABLISHED); THENCE SOUTH 48°25'04" WEST ALONG SAID WESTERLY RIGHT-OF-WAY LINE A DISTANCE OF 1.65 FEET TO THE POINT OF CURVATURE OF A CURVE CONCAVE TO THE SOUTHEAST AND HAVING A RADIUS OF 307.48 FEET; THENCE ALONG THE ARC OF SAID CURVE A DISTANCE OF 43.48 FEET; SAID ARC BEING SUBTENDED BY A CHORD BEARING AND DISTANCE OF SOUTH 44°21' 27" WEST; 43.44 FEET TO THE POINT OF TANGENCY OF SAID CURVE; THENCE SOUTH 40°18'23" WEST; ALONG SAID WESTERLY RIGHT-OF-WAY LINE A DISTANCE OF 81.71 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE SOUTH 40°18'23" WEST, ALONG SAID WESTERLY RIGHT OF WAY LINE, A DISTANCE OF 249.56 FEET TO THE NORTHERLY RIGHT-OF-WAY OF STATE ROAD NO. 200 (A-1-A, A VARIABLE RIGHT-OF-WAY AS ESTABLISHED BY FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY MAP SECTION NO. 74060-2503); THENCE NORTH 72°47'48" WEST, ALONG SAID NORTHERLY RIGHT-OF-WAY A DISTANCE OF 205.70 FEET; THENCE NORTH 17°12'12" EAST, DEPARTING SAID RIGHT-OF-WAY LINE, A DISTANCE OF 24.48 FEET TO THE POINT OF CURVATURE OF A CURVE CONCAVE TO THE NORTHWEST AND HAVING A RADIUS OF 27.00 FEET; THENCE ALONG THE ARC OF SAID CURVE A DISTANCE OF 42.42 FEET, SAID ARC BEING SUBTENDED BY A CHORD BEARING AND DISTANCE OF NORTH 62°12'41" EAST, 38.19 FEET TO THE POINT OF TANGENCY OF SAID CURVE; THENCE NORTH 17°12'12" EAST, A DISTANCE 155.53 FEET TO THE POINT OF CURVATURE OF A CURVE CONCAVE TO THE SOUTHEAST AND HAVING A RADIUS OF 23.00 FEET; THENCE ALONG THE ARC OF SAID CURVE A DISTANCE OF 36.17 FEET, SAID ARC BEING SUBTENDED BY A CHORD BEARING AND DISTANCE OF NORTH 62°15'22" EAST; 32.56 FEET TO THE POINT OF TANGENCY OF SAID CURVE; THENCE SOUTH 72°41'29" EAST, A DISTANCE OF 253.57 FEET TO THE POINT OF BEGINNING, LESS AND EXCEPT THAT PART CONVEYED TO NASSAU COUNTY IN QUIT CLAIM DEED RECORDED IN O.R. BOOK 1367, PAGE 873.



OWNER/DEVELOPER:	FOWLER PROPERTIES, INC. 9838 OLD BAYMEADOWS ROAD JACKSONVILLE, FL 32256
SURVEYOR:	MANZIE & DRAKE LAND SURVEYING 117 S 9th St FERNANDINA BEACH, FL 32034 904-491-5700
ARCHITECT:	od ARCHITECTURE 1235 CORAL WAY, SUITE 101 MIAMI FL, 33145 305-595-3095
LANDSCAPE ARCHITECT:	ENGLAND, THIMS & MILLER, INC. 14775 OLD ST. AUGUSTINE ROAD JACKSONVILLE, FL 32258 (904)642-8990
ENGINEER:	ENGLAND, THIMS & MILLER, INC. 14775 OLD ST. AUGUSTINE ROAD JACKSONVILLE, FL 32258 (904)642-8990

DEVELOPMENT SUMMARY	
A. PROJECT NAME: NASSAU CARWASH SITE	
B. ZONING DESIGNATION: COMMERCIAL GENERAL (CG)	
C. P.L.D. ORDINANCE NUMBER: N/A	
D. NASSAU COUNTY TRACKING # SP20-033	
E. OWNER/DEVELOPER NAME, ADDRESS, PHONE NUMBER FOWLER PROPERTIES, INC. 9838 OLD BAYMEADOWS ROAD JACKSONVILLE, FL 32256	
F. ENGINEER NAME, ADDRESS, PHONE NUMBER ANDREW J. BOOTH, P.E. ENGLAND-THIMS & MILLER, INC. 14775 OLD ST. AUGUSTINE ROAD JACKSONVILLE, FLORIDA 32258 PHONE: (904) 642-8990	
G. DATA SUMMARY	
1. TOTAL PROJECT AREA: ±1.19 AC.	
2. SQUARE FOOTAGE OF BUILDING: ±5,150 SF	
3. TOTAL PARKING AREA: 0.32 AC.	
3.1. PARKING: GENERAL COMMERCIAL - (1) SPACE PER 300SF GROSS FLOOR AREA (PER NASSAU COUNTY LOC SECTION 31.12 E)	
3.2. 18 SPACES REQUIRED	
3.3. 25 SPACES PROVIDED, INCL. 2 HANDICAP SPACES	
4. TOTAL IMPERVIOUS AREA: ±0.62 AC.	
5. TOTAL LANDSCAPE AND BUFFER AREA = 10% MIN. REQUIRED (PROPOSED: 0.53 AC., ±45%)	
6. POND AREA (T.O.B.) = N/A (SITE MASTER PLANNED FOR DRAINAGE)	
7. TOTAL NET DEVELOPABLE AREA: 1.19 AC.	
8. WETLAND IMPACTS = N/A	
8.1. WETLAND BUFFER WIDTH = N/A	
8.2. SUBMERGED AREAS (MLW OR DWE) = N/A	
9. REAL ESTATE NUMBER: 27-2N-28-0000-0001-0060	
10. I.S.R. = 67% MAX. (PROVIDED: 0.66 AC., ±55%)	
11. FLOOR TO AREA RATIO (F.A.R.) = 40% MAX.; (PROPOSED: 10%, 5,150 SF)	
12. LOT COVERAGE BY BUILDINGS = 50% MAX.; (PROPOSED: 10%)	
13. BUILDING HEIGHT: 35' (MAY INCREASE TO 40' W/ ADDITIONAL SETBACKS)	
14. BUILDING SETBACKS	
14.1. FRONT = 25'	
14.2. SIDE = 20'	
14.3. REAR = 20'	
14.4. SR-200/A1A OVERLAY = 25'	
*SETBACKS ON THE SR-200/A1A CORRIDOR SHALL BE THE REQUIREMENTS OF THE UNDERLYING ZONING PLUS AN ADDITIONAL TWENTY FIVE (25) FEET.	
H. SITE DESCRIPTION	
1. VEGETATION: SITE IS GRASSED WITH SOME EXISTING TREES	
2. DRAINAGE: SITE CURRENTLY DRAINS TO EXISTING MASTER DRAINAGE SYSTEM.	
3. WETLANDS: NONE PRESENT	
4. FEMA FLOOD ZONE: X	
I. UTILITY SERVICES	
1. SEWAGE TREATMENT	JE
2. WATER SUPPLY	JE
3. ELECTRICITY	JE

PLANS PREPARED UNDER THE DIRECTION OF:

REVISIONS:

ETM NO. 20-207

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DESIGNED BY: AJB

CHECKED BY:

DATE: FEBRUARY 2021

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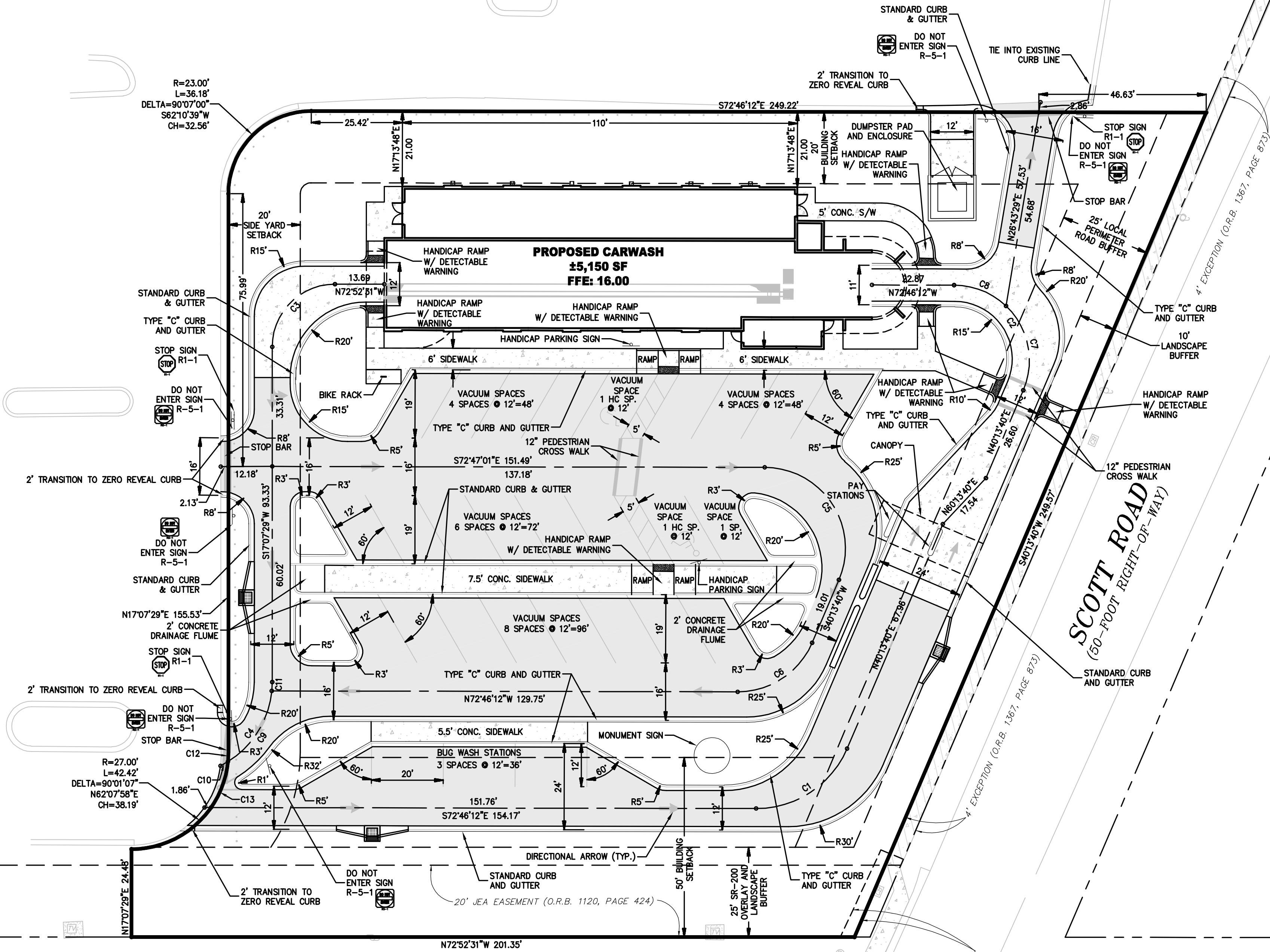
MASTER SITE PLAN

NASSAU CARWASH SITE FOR FOWLER PROPERTIES, INC.

DRAWING NUMBER

3

ANDREW J. BOOTH
P.E. NUMBER: 92302
PLOTTED: May 26, 2021 - 11:53 AM. BY: AJ Booth



LEGEND

[Symbol]	ASPHALT PAVEMENT
[Symbol]	HEAVY DUTY ASPHALT PAVEMENT
[Symbol]	CONCRETE PAVEMENT
[Symbol]	JURISDICTIONAL WETLANDS

GENERAL NOTES:

- SEE DRAWING NO. 2 FOR GENERAL NOTES AND LEGEND.
- ALL DIMENSIONS ARE TO BE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL PROVIDE CURB RAMP AT ALL PLACES WHERE SIDEWALK TERMINATES INTO PAVEMENT. CURB RAMP SHALL COMPLY WITH LATEST ADA CODE PER FDOT INDEX NO. 522-002.
- ALL STRIPING, PAVEMENT MARKINGS AND RPM'S SHALL BE IN ACCORDANCE WITH FDOT INDEX 711-001.
- STOP BARS SHALL BE LOCATED 4' MINIMUM FROM CROSSWALKS AND/OR CURB RAMP.
- CONTRACTOR SHALL NOT SCALE PLAN, BUT SHALL REFER TO COUNTY APPROVED SITE PLAN FOR ALL LINE DIMENSIONS. ELECTRONIC FILES PROVIDED FOR INFORMATIONAL PURPOSES ONLY.
- BUILDING FOOTPRINT SHOWN REPRESENTS THE EXTERIOR ENVELOPE OF THE BUILDING AS RECEIVED FROM THE ARCHITECT. CONTRACTOR TO NOTIFY CIVIL ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	BEARING	CHORD	DELTA
C1	27.50'	32.16'	18.20'	N73°43'44"E	30.36'	67°00'08"
C2	21.00'	41.42'	31.73'	N16°16'16"W	35.02'	112°59'52"
C3	17.50'	27.49'	17.50'	S62°07'29"W	24.75'	90°00'00"
C4	26.00'	28.83'	16.10'	N48°53'35"E	27.38'	63°32'11"
C5	22.50'	44.38'	34.00'	N16°16'16"W	37.52'	113°01'32"
C6	22.50'	26.31'	14.89'	N73°43'44"E	24.84'	67°00'08"
C7	21.00'	25.48'	14.57'	N52°7'59"E	23.95'	69°31'23"
C8	21.00'	15.93'	8.37'	N51°01'57"W	15.55'	43°28'29"
C9	26.00'	23.97'	12.91'	N48°56'24"E	23.13'	52°48'54"
C10	25.99'	2.41'	1.21'	N78°00'17"E	2.41'	51°8'53"
C11	25.99'	2.45'	1.25'	N19°49'40"E	2.45'	52°4'35"
C12	27.00'	2.60'	1.30'	N19°53'15"E	2.60'	53°1'40"
C13	27.00'	13.80'	7.06'	N37°17'50"E	13.65'	29°17'31"

STATE ROAD NO. 200 (A-1-A)
(RIGHT-OF-WAY VARIES) (F.D.O.T. SECTION 74060-2503)

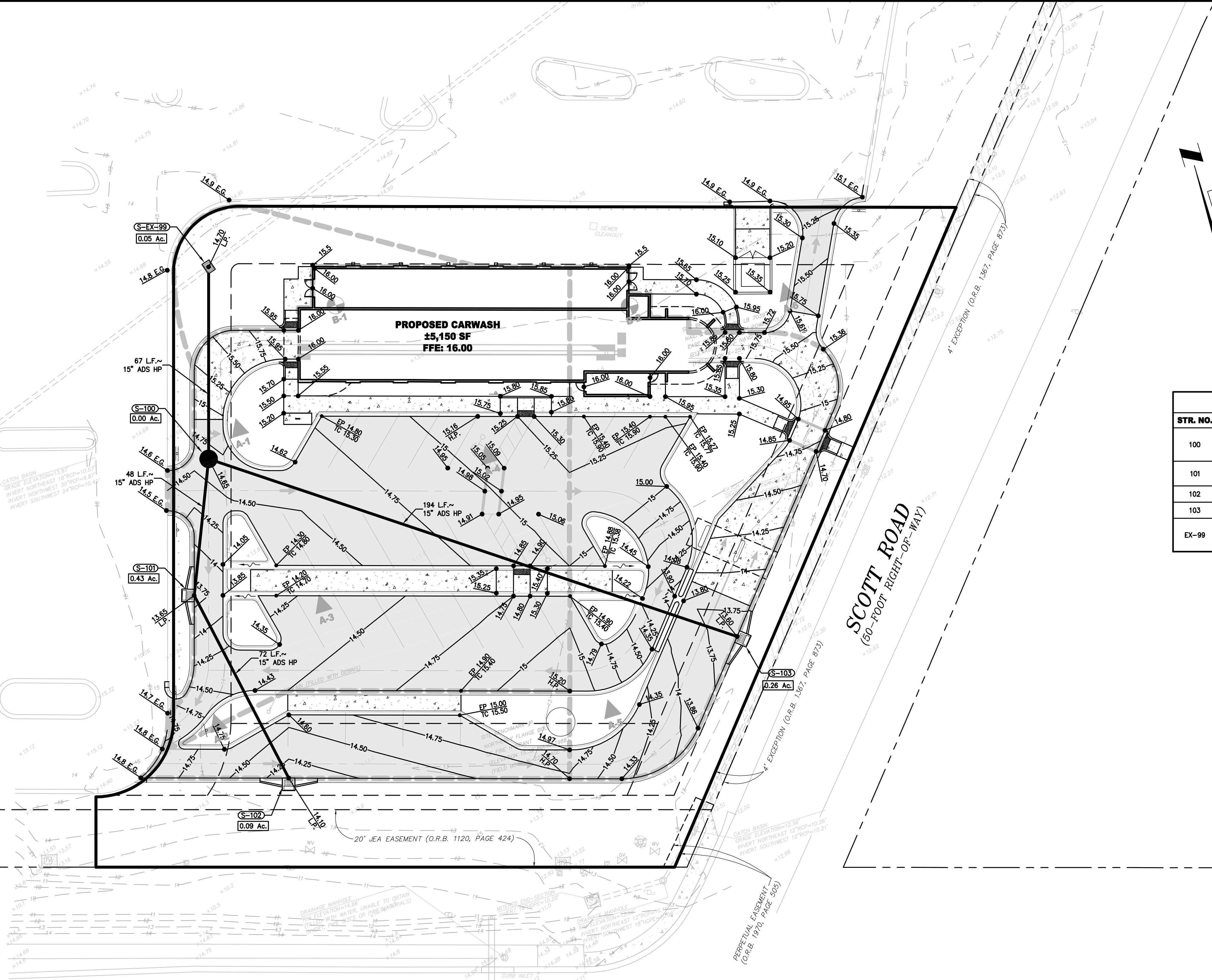
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REG. #284 LC 0000316

REVISIONS:
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DRAWN BY: A/B
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SITE GEOMETRY PLAN
NASSAU CARWASH SITE
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DRAWING NUMBER
4

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ANDREW J. BOOTH



- GENERAL NOTES:**
- SEE DRAWING NO. 2 FOR GENERAL NOTES & LEGEND.
 - 2-6" 20' UNDERDRAIN STUBOUTS AT EACH PAVEMENT DRAINAGE INLET.
 - ALL PIPE LENGTHS SHOWN HEREON ARE APPROXIMATE AND ARE TAKEN FROM THE APPROXIMATE CENTER OF GRATE / RING AND COVER TO THE BACK OF THE MITERED END SECTIONS.
 - SIDEWALK CONSTRUCTION TO MEET ADA REQUIREMENTS.
A. RAMPS MAXIMUM SLOPE: 1:12 (8.33%)
B. SIDEWALK/CROSSWALK MAXIMUM CROSS SLOPE 1:48 (2%)
C. SIDEWALK/CROSSWALK MAXIMUM RUNNING SLOPE 1:20 (5%)
 - CONTRACTOR RESPONSIBLE FOR NOTIFYING CITY FOR ALL/ANY REQUIRED INSPECTIONS FOR WORK WITHIN A PUBLIC RIGHT OF WAY.
 - CONTRACTOR SHALL NOT SCALE PLAN, BUT SHALL REFER TO PLAT FOR ALL HORIZONTAL LINE DIMENSIONS.
 - ALL DRAINAGE MANHOLE TOPS ARE APPROXIMATE. REFER TO DRAWINGS 7A & 7B FOR PAVING AND DRAINAGE DETAILS.
 - UNSUITABLE MATERIAL SHALL BE REMOVED AND REPLACED AS PER RECOMMENDATIONS IN THE GEOTECH REPORT
 - SEED AND MULCH ALL DISTURBED AREAS.

LEGEND

	DRAINAGE DIVIDE LINE
	DRAINAGE SUB-DIVIDE LINE
	ASPHALT PAVEMENT
	HEAVY DUTY ASPHALT PAVEMENT
	CONCRETE PAVEMENT
	JURISDICTIONAL WETLANDS

DRAINAGE STRUCTURE TABLE

STR. NO.	STRUCTURE TYPE	TOP/GRATE EL.	INVERT EL.
100	MANHOLE TYPE J-1	14.65	15" ADS HP - 11.00 (SE) 15" ADS HP - 11.00 (SW) 15" ADS HP - 11.00 (N)
101	CURB INLET - SINGLE	13.65	15" ADS HP - 11.15 (S) 15" ADS HP - 11.15 (NE)
102	CURB INLET - SINGLE	14.10	15" ADS HP - 11.35 (N)
103	CURB INLET - SINGLE	13.60	15" ADS HP - 11.50 (NW)
EX-99	CONSTRUCT TYPE "C" INLET ON TOP OF EX. 18" RCP	14.70	15" ADS HP - 10.85 (S) 18" RCP (EX.) - 10.83 (E) 18" RCP (EX.) - 10.83 (W)

IMPERVIOUS AREA CALCULATIONS

PARCEL IS 1.19 AC± PERMITTED TO 85% IMPERVIOUS PER S.R.WMD PERMIT NO. 80422-1
MAX. ALLOWABLE IMPERVIOUS AREA (85%) = ±1.01 AC
PROPOSED IMPERVIOUS AREA (52.1%) = ±0.62 AC

STATE ROAD NO. 200 (A-1-A)
(RIGHT-OF-WAY VARIES) (F.D.O.T. SECTION 74060-2503)

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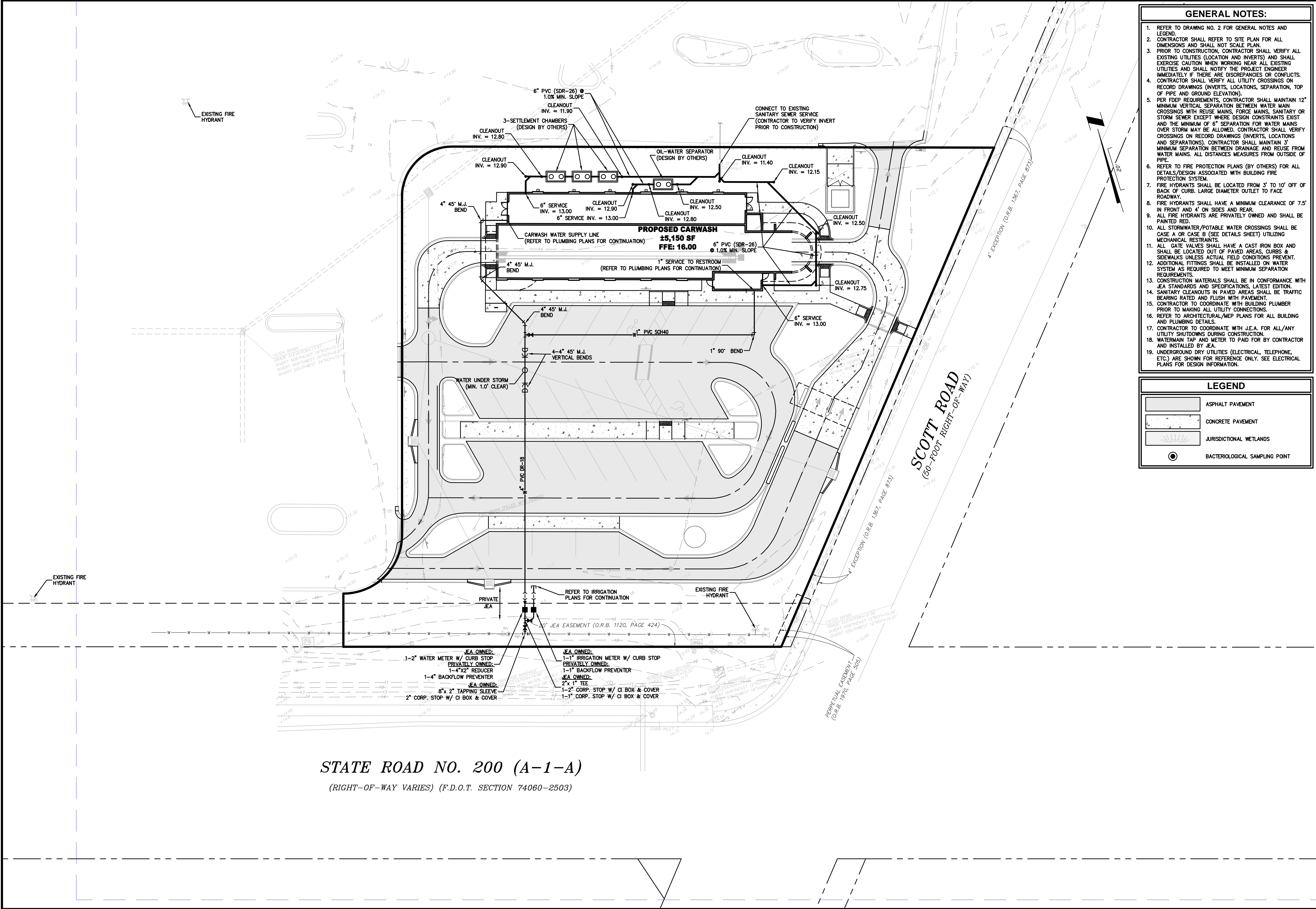
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PAVING AND DRAINAGE PLAN
NASSAU CARWASH SITE
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5

PLOTTED: May 26, 2021 - 11:54 AM. BY: AJ Booth
P.E. NUMBER: 92302

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GENERAL NOTES:

- REFER TO DRAWING NO. 2 FOR GENERAL NOTES AND LEGEND.
- CONTRACTOR SHALL REFER TO SITE PLAN FOR ALL DIMENSIONS AND SHALL NOT SCALE PLAN.
- PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES (LOCATION AND INVERTS) AND SHALL EXERCISE CAUTION WHEN WORKING NEAR ALL EXISTING UTILITIES AND SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY IF THERE ARE DISCREPANCIES OR CONFLICTS.
- CONTRACTOR SHALL VERIFY ALL UTILITY CROSSINGS ON RECORD DRAWINGS (INVERTS, LOCATIONS, SEPARATION, TOP OF PIPE AND GROUND ELEVATION).
- PER FDEP REQUIREMENTS, CONTRACTOR SHALL MAINTAIN 12" MINIMUM VERTICAL SEPARATION BETWEEN WATER MAIN CROSSINGS WITH REUSE MAINS, FORCE MAINS, SANITARY OR STORM SEWER EXCEPT WHERE DESIGN CONSTRAINTS EXIST AND THE MINIMUM OF 6" SEPARATION FOR WATER MAINS OVER STORM MAY BE ALLOWED. CONTRACTOR SHALL VERIFY CROSSINGS ON RECORD DRAWINGS (INVERTS, LOCATIONS AND SEPARATIONS). CONTRACTOR SHALL MAINTAIN 3" MINIMUM SEPARATION BETWEEN DRAINAGE AND REUSE FROM WATER MAINS. ALL DISTANCES MEASURES FROM OUTSIDE OF PIPE.
- REFER TO FIRE PROTECTION PLANS (BY OTHERS) FOR ALL DETAILS/DESIGN ASSOCIATED WITH BUILDING FIRE PROTECTION SYSTEM.
- FIRE HYDRANTS SHALL BE LOCATED FROM 3' TO 10' OFF OF BACK OF CURB. LARGE DIAMETER OUTLET TO FACE ROADWAY.
- FIRE HYDRANTS SHALL HAVE A MINIMUM CLEARANCE OF 7.5' IN FRONT AND 4' ON SIDES AND REAR.
- ALL FIRE HYDRANTS ARE PRIVATELY OWNED AND SHALL BE PAINTED RED.
- ALL STORMWATER/POTABLE WATER CROSSINGS SHALL BE CASE A OR CASE B (SEE DETAILS SHEET) UTILIZING MECHANICAL RESTRAINTS.
- ALL GATE VALVES SHALL HAVE A CAST IRON BOX AND SHALL BE LOCATED OUT OF PAVED AREAS, CURBS & SIDEWALKS UNLESS ACTUAL FIELD CONDITIONS PREVENT.
- ADDITIONAL FITTINGS SHALL BE INSTALLED ON WATER SYSTEM AS REQUIRED TO MEET MINIMUM SEPARATION REQUIREMENTS.
- CONSTRUCTION MATERIALS SHALL BE IN CONFORMANCE WITH JEA STANDARDS AND SPECIFICATIONS, LATEST EDITION.
- SANITARY CLEANOUTS IN PAVED AREAS SHALL BE TRAFFIC BEARING RATED AND FLUSH WITH PAVEMENT.
- CONTRACTOR TO COORDINATE WITH BUILDING PLUMBER PRIOR TO MAKING ALL UTILITY CONNECTIONS.
- REFER TO ARCHITECTURAL/MEP PLANS FOR ALL BUILDING AND PLUMBING DETAILS.
- CONTRACTOR TO COORDINATE WITH J.E.A. FOR ALL/ANY UTILITY SHUTDOWNS DURING CONSTRUCTION.
- WATERMAIN TAP AND METER TO PAID FOR BY CONTRACTOR AND INSTALLED BY J.E.A.
- UNDERGROUND DRY UTILITIES (ELECTRICAL, TELEPHONE, ETC.) ARE SHOWN FOR REFERENCE ONLY. SEE ELECTRICAL PLANS FOR DESIGN INFORMATION.

LEGEND

ASPHALT PAVEMENT

CONCRETE PAVEMENT

JURISDICTIONAL WETLANDS

BACTERIOLOGICAL SAMPLING POINT

PLANS PREPARED UNDER THE DIRECTION OF:

REVISIONS:

ETM NO. 20-207

DRAWN BY: AJB

DESIGNED BY: AJB

CHECKED BY:

DATE: FEBRUARY 2021

England-Thins & Miller, Inc.
17501 St. Augustine Road
Jacksonville, FL 32228
TEL: (904) 642-8890
FAX: (904) 646-9485
REG - 2584 LC - 0000316

ETM
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UTILITY PLAN

NASSAU CARWASH SITE FOR FOWLER PROPERTIES, INC.

DRAWING NUMBER

6



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.



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.
4. EXTEND JOINTS FILLER FULL WIDTH AND DEPTH OF JOINT, AND 1/2" BELOW FINISHED SURFACE. PLACE SEALANT OVER JOINT FILLER PER MANUFACTURERS RECOMMENDATIONS.
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%.

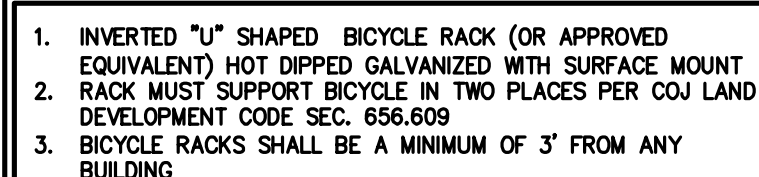
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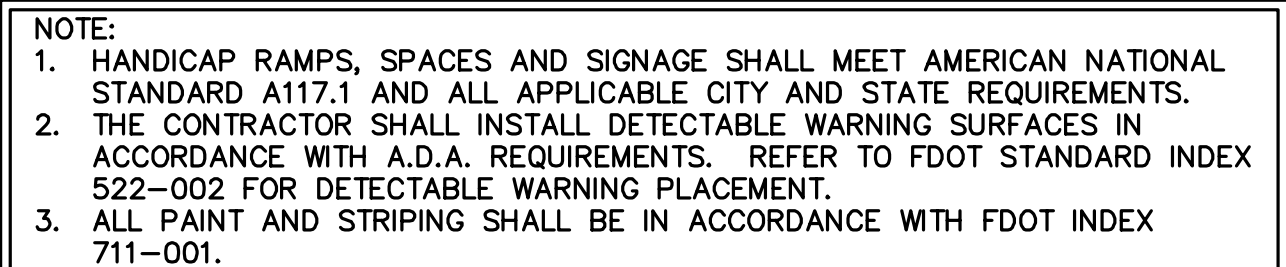
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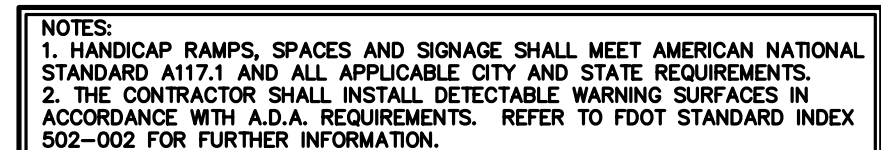
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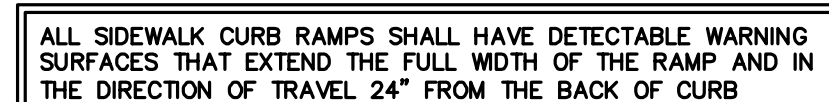
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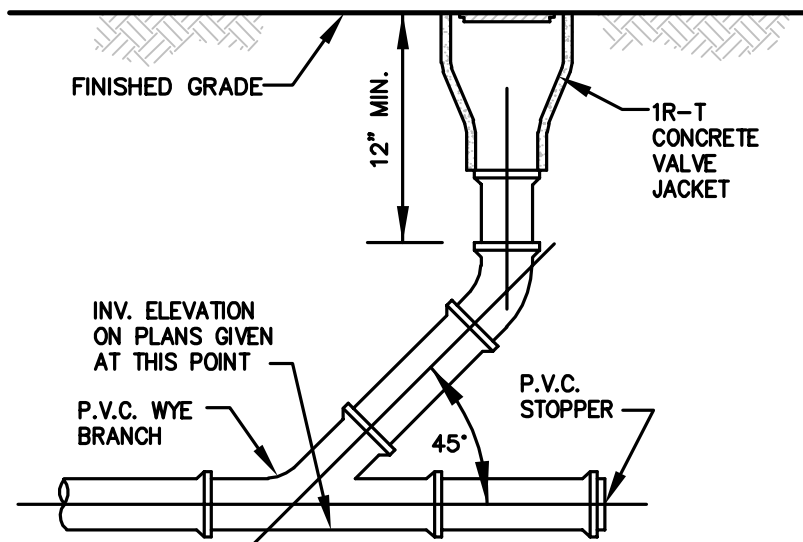
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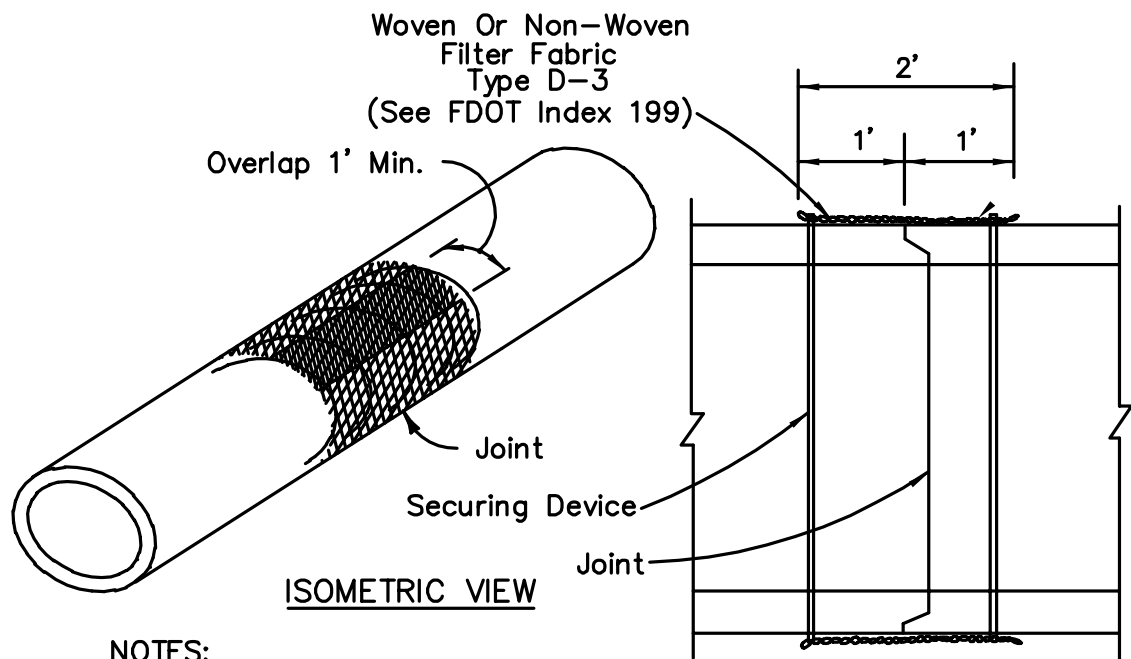
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7A

F:\2020\20-207\LandDev\Design\Plots\FdPlots-20-207.dwg PLOTTED: May 26, 2021 - 11:54 AM, BY: AJ Booth

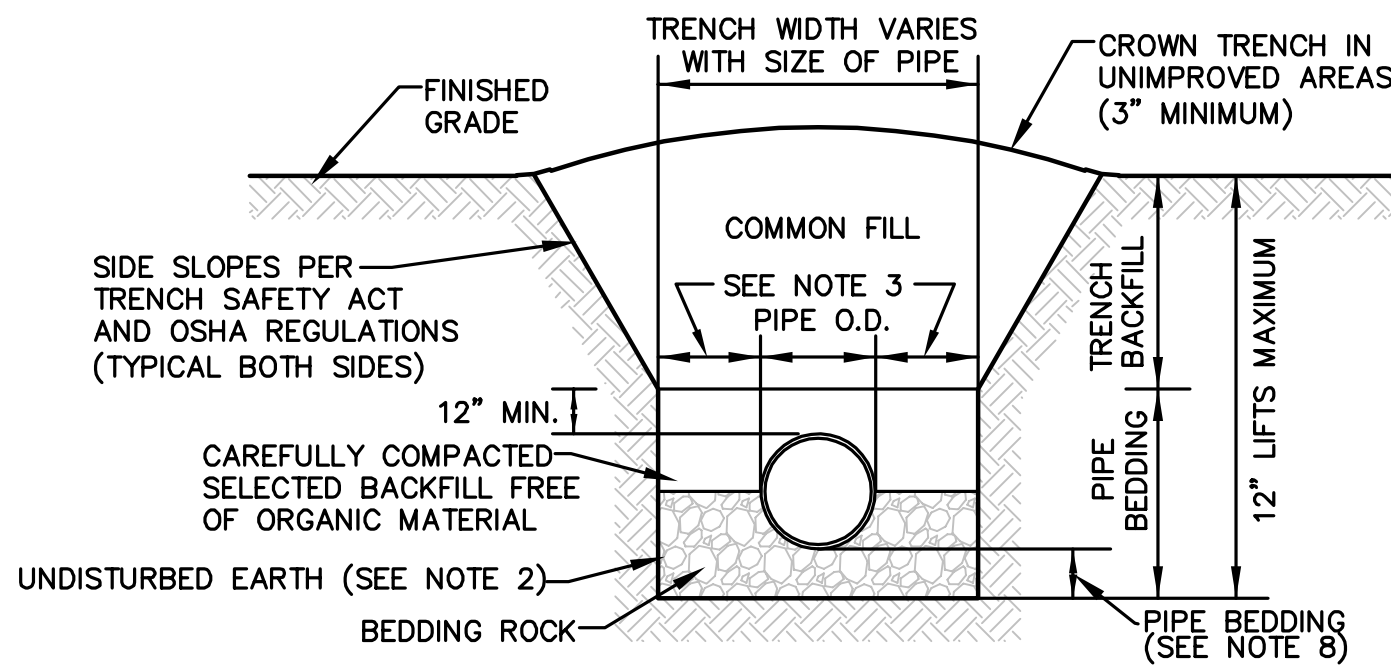


CLEAN OUT
N.T.S.



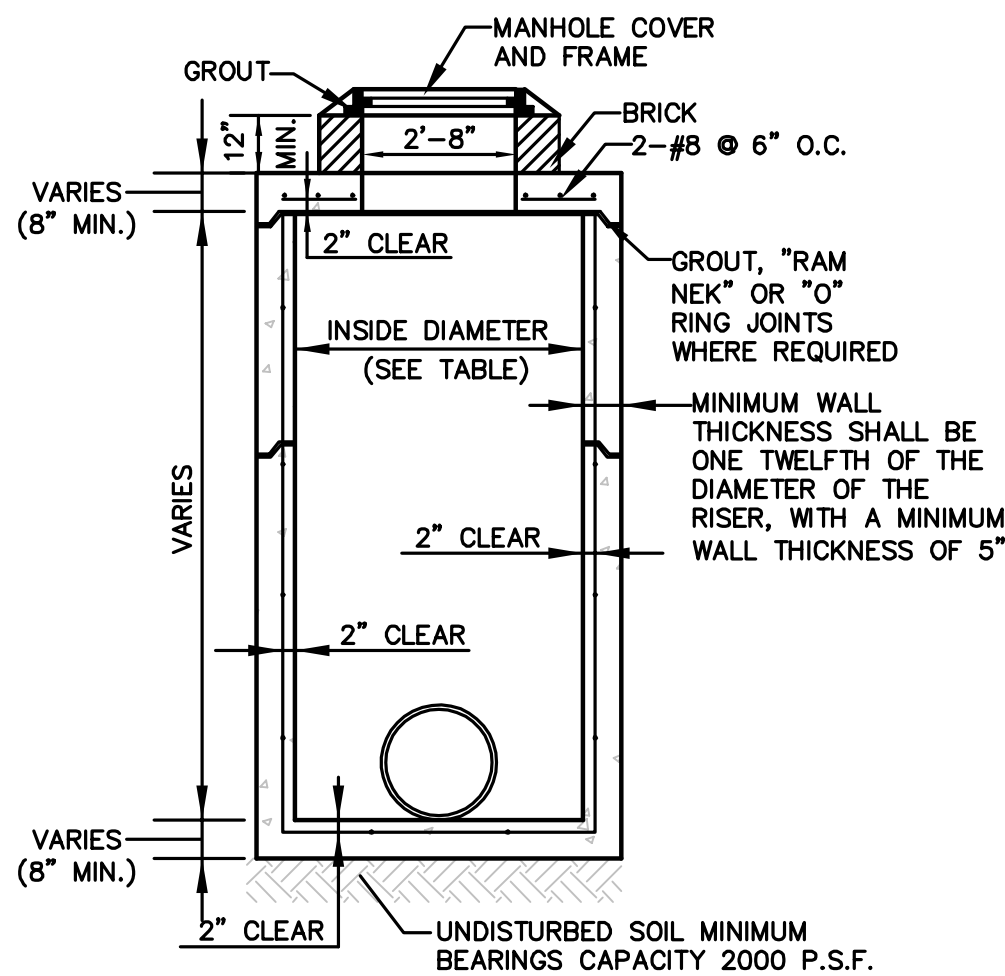
- NOTES:**
1. ALL DRAINAGE PIPE TO BE WRAPPED AT JOINTS.
 2. COST OF FILTER FABRIC JACKET TO BE INCLUDED IN COST OF PIPE CULVERTS.

FILTER FABRIC JACKET
N.T.S.



- 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 THE COUNTY.
 3. 15" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" 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 COUNTY 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.

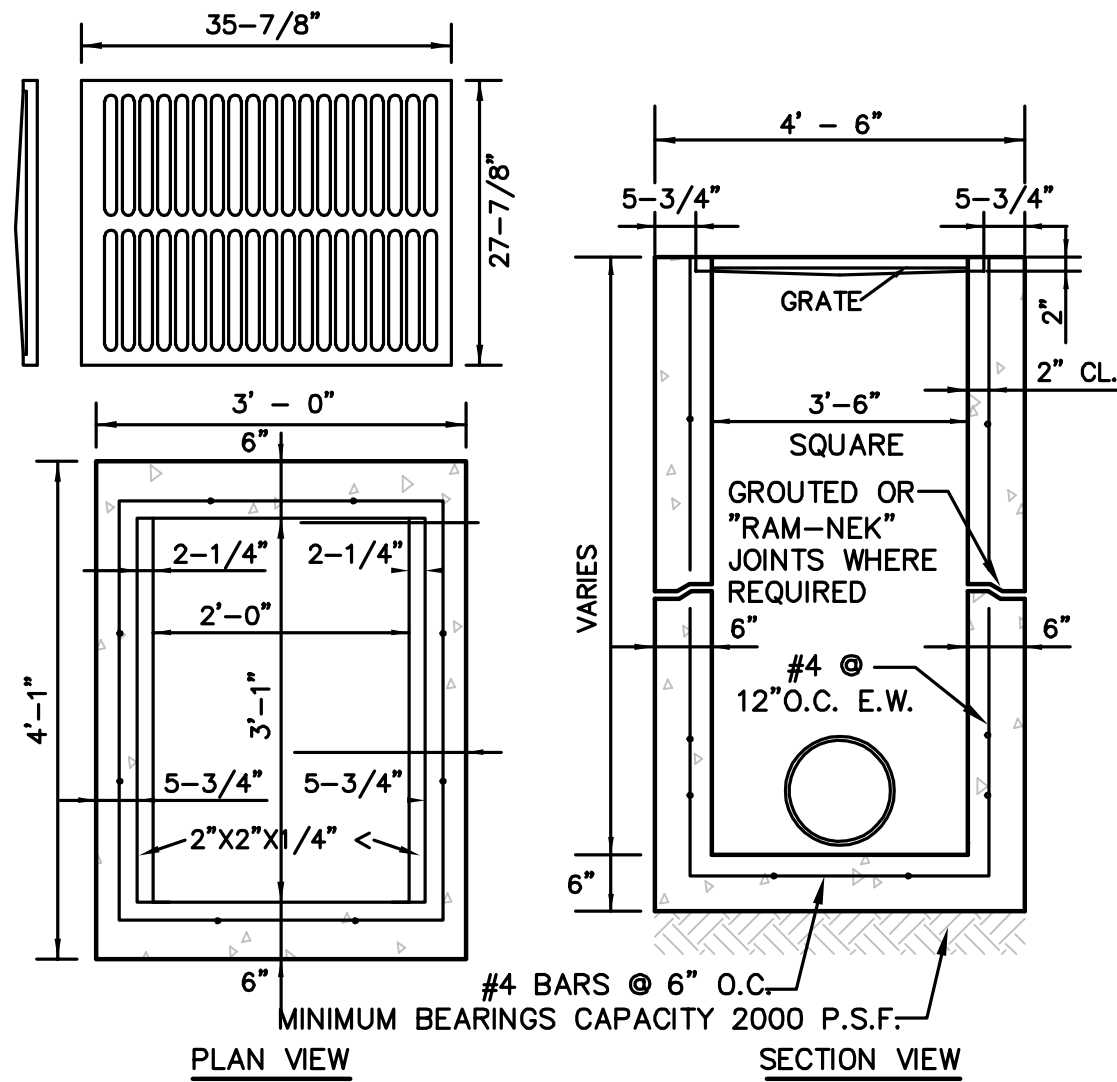
TYPE A BEDDING AND TRENCH DETAIL
N.T.S.



INSIDE DIAMETER TABLE							
J-1	J-1A	J-1B	J-1C	J-1D	J-1E	J-1F	
4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	

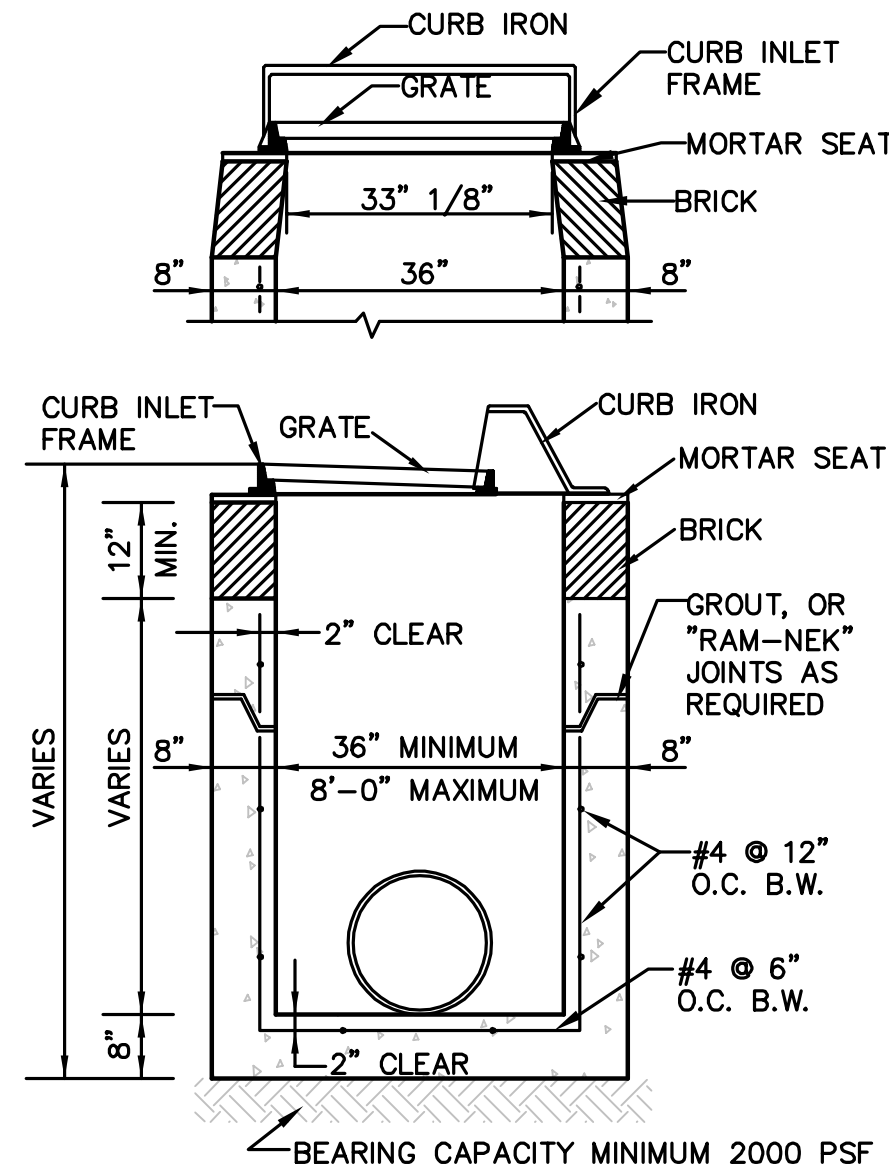
- NOTES:**
1. CONCRETE DESIGN STRENGTH 4,000 PSI.
 2. PRECAST IN ACCORDANCE WITH LATEST EDITIONS OF ASTM C 478.
 3. PIPES SHALL BE FLUSH WITH INSIDE WALL.
 4. IN PAVED AREAS FRAME AND GRATE MUST MATCH FINAL ASPHALT AND CROSS-SLOPE.
 5. RING AND COVER SHALL BE TRAFFIC BEARING

STORM SEWER J-1 MANHOLE
N.T.S.



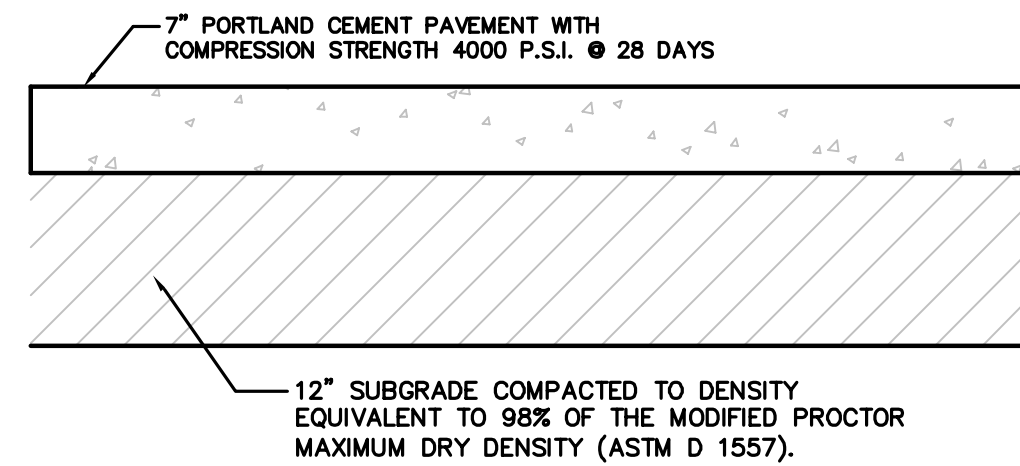
- NOTES:**
1. CONCRETE DESIGN STRENGTH 4,000 PSI.
 2. ALL GRATES TO BE TRAFFIC BEARING GRATE.
 3. CONTRACTOR SHALL PLACE A 10' WIDE SOD COLLAR AROUND ALL INLETS (NOT IN PAVEMENT)

STORM SEWER TYPE "C" INLET
N.T.S.

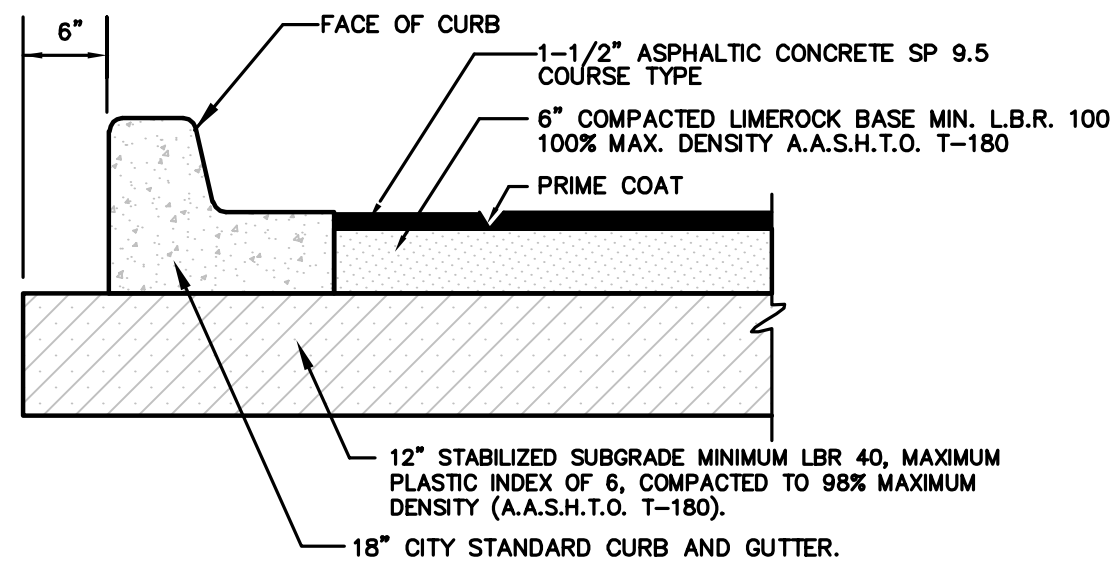


- NOTES:**
1. PROVISION SHALL BE MADE AT THE TIME OF DRAINAGE STRUCTURE PRE- CASTING TO PROVIDE OPENINGS FOR UNDERDRAIN STUBOUTS ON EACH SIDE OF INLET.
 2. CONCRETE DESIGN STRENGTH 4,000 PSI.
 3. PIPE SHALL NOT BE IN CONSTRUCTION JOINT.

TYPE "A" SINGLE CURB INLET
N.T.S.



TYPICAL CONCRETE PAVEMENT SECTION
N.T.S.



- NOTES:**
1. ALL DISTURBED AREAS TO BE SEEDED AND MULCHED
 2. SOIL ANALYSIS MAY INDICATE THE NEED FOR THICKER BASE COURSES THAN THOSE HEREIN. THE PAVEMENT THICKNESS SHOWN HEREIN ARE NOT INTENDED TO BE ABSOLUTE, BUT ARE PRELIMINARY CRITERIA AND MAY BE MODIFIED TO ACCOMMODATE THE BEARING CAPACITY OF VARIOUS SUBGRADES.
 3. ALL ASPHALTIC CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 331 AND/OR 333, FDOT STANDARD SPECIFICATIONS, LATEST EDITION.
 5. CONTRACTOR TO VERIFY PAVEMENT SECTION WITH GEOTECHNICAL REPORT.

TYPICAL PAVEMENT SECTION
N.T.S.

PLANS PREPARED UNDER THE
DIRECTION OF:

REVISIONS:

ETM NO. 20-207

DRAWN BY: A/B

DESIGNED BY: A/B

CHECKED BY:

DATE: FEBRUARY 2021

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1000 S. W. 10th St.
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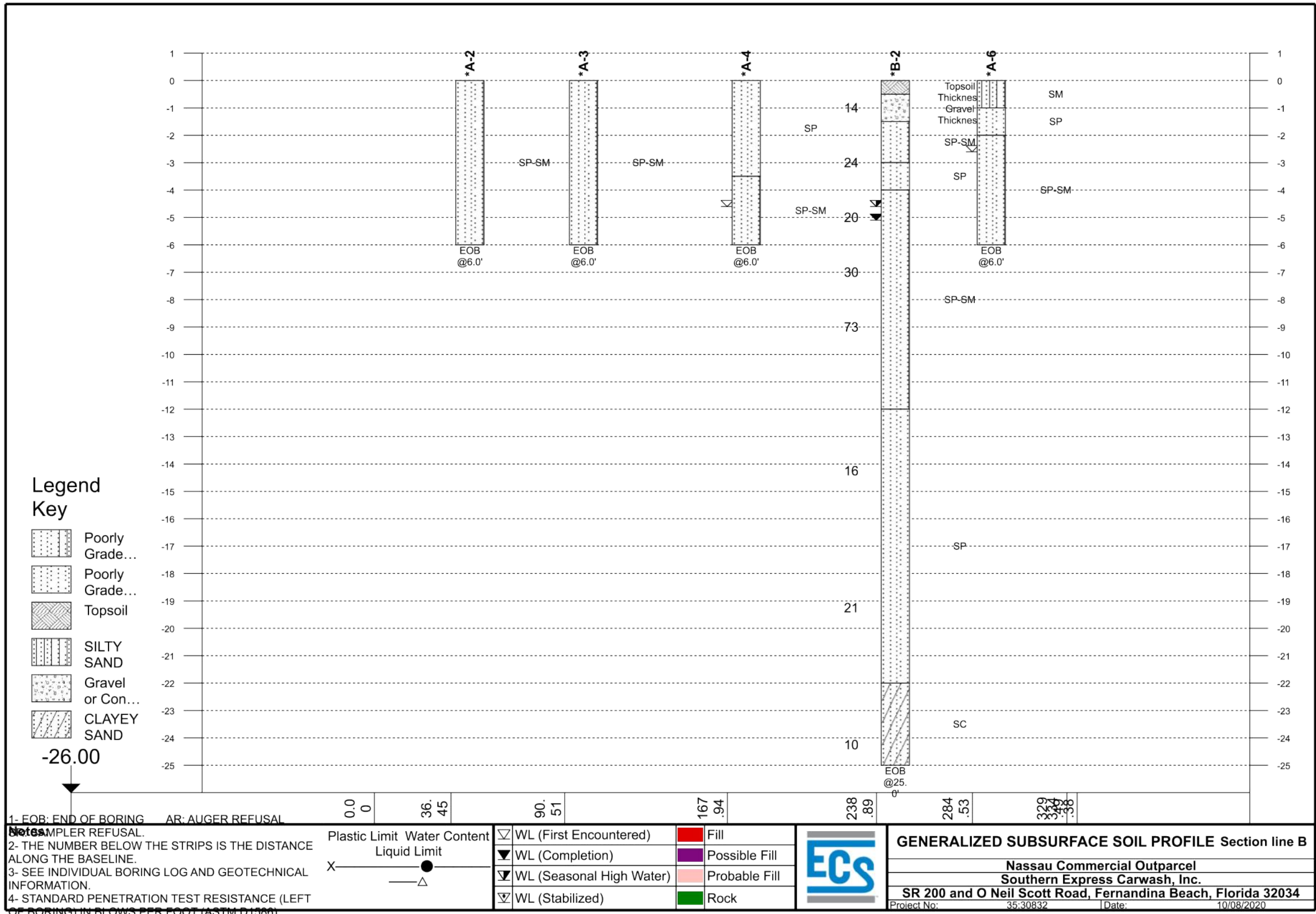
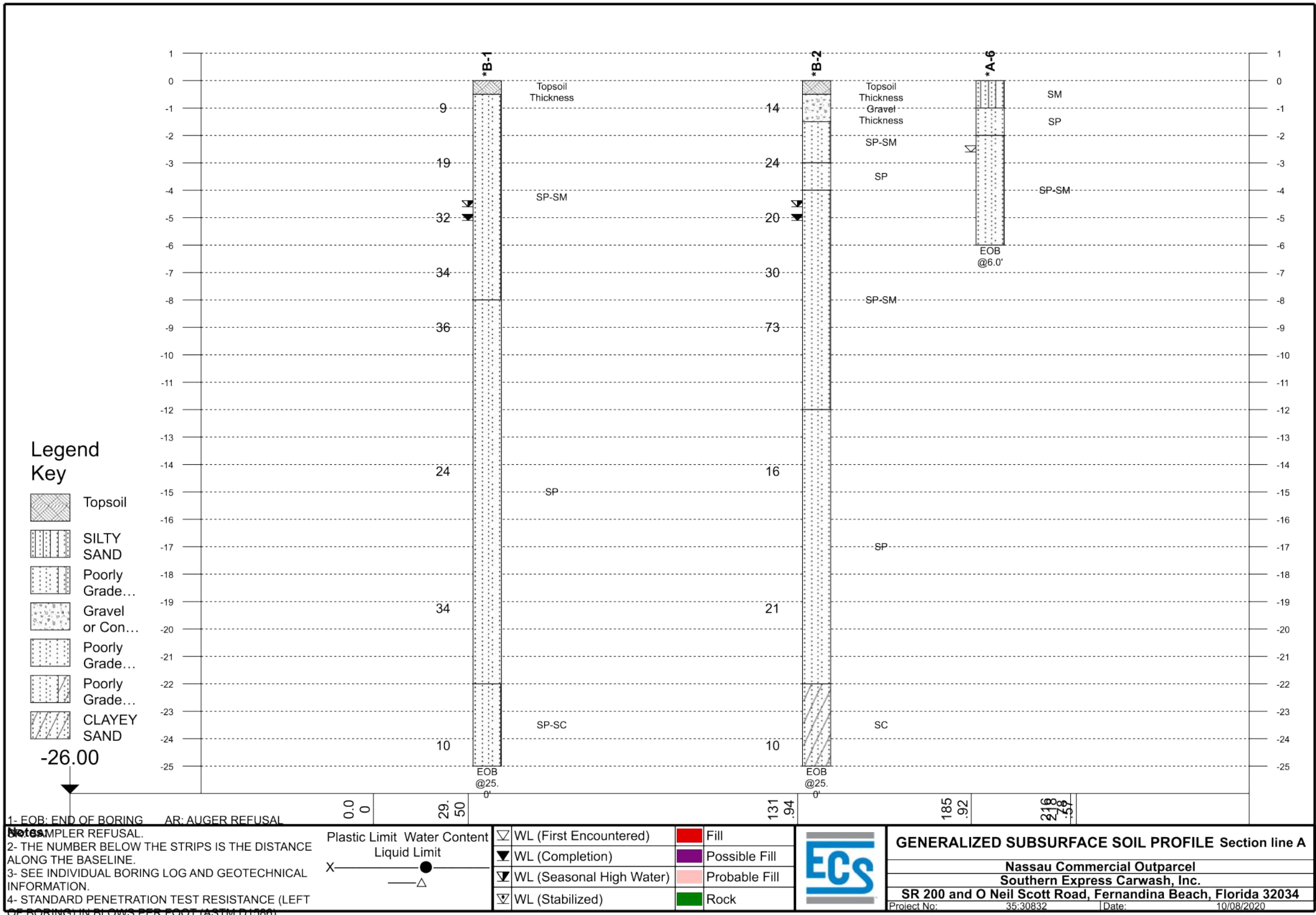
ETM
VISION • EXPERIENCE • RESULTS

PAVING AND DRAINAGE DETAILS

**NASSAU CARWASH SITE
FOR
FOWLER PROPERTIES, INC.**

DRAWING NUMBER

7B



PAVING AND DRAINAGE DETAILS

NASSAU CARWASH SITE
FOR
FOWLER PROPERTIES, INC.

DRAWING NUMBER
7C

England-Thins & Miller, Inc.
1775 Old St. Augustine Road
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REG - 2584 LC - 0000316

ETM
VISION • EXPERIENCE • RESULTS

REVISIONS:

ETM NO. 20-207

DRAWN BY: AJB

DESIGNED BY: AJB

CHECKED BY:

DATE: FEBRUARY 2021

PLANS PREPARED UNDER THE
DIRECTION OF:

ANDREW J. BOOTH
P.E. NUMBER: 32302

NOT APPLICABLE
☐ ☒ APPLICABLE

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 1988.
- ☐ ☒
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: _____

PERMIT REQUIREMENTS (NOT ALL INCLUSIVE):

- ☐ ☒
1. CONTRACTOR TO OBTAIN ALL REQUIRED RIGHT-OF-WAY PERMITS.
- ☐ ☒
2. CONTRACTOR SHALL NOT OPEN CUT STREETS IN THE PROJECT AREA UNLESS SPECIFICALLY SHOWN ON PLANS
- ☐ ☒
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.
- ☐ ☒
4. THE DEPARTMENT OF TRANSPORTATION, RAILROAD COMPANIES AND C.O.J. ARE TO BE NOTIFIED IN ADVANCE OF CONSTRUCTION PER THEIR RESPECTIVE PERMIT CONDITIONS.
- ☐ ☒
5. ALL WORK SHALL BE IN ACCORDANCE WITH BID DOCUMENTS, JEA WATER AND SEWER STANDARDS, DETAILS AND MATERIALS MANUAL, REV. 2018, AND CITY OF JACKSONVILLE STANDARD SPECIFICATIONS AND DETAILS AND ALL APPLICABLE STATE AND LOCAL REGULATIONS.
- ☐ ☒
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.
- ☐ ☒
7. THE CONTRACTOR SHALL NOTIFY APPLICABLE UTILITY CONTACT PERSONNEL NOT LESS THAN ONE WEEK PRIOR TO CONSTRUCTION OF FACILITIES IN THEIR RESPECTIVE AREAS.
- ☐ ☒
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.
- ☐ ☒
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.
- ☐ ☒
10. CONTRACTOR TO COORDINATE WORK WITH OTHER UTILITIES DURING CONSTRUCTION.

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.

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 ~ GENERAL NUMBER-----904-519-2529
B. AT&T ~ ADAM DUGAN ~ NORTH DISTRICT-----904-781-0741
C. AT&T ~ BILL LAKE ~ SOUTH DISTRICT-----904-303-8754
D. CITY OF JACKSONVILLE ~ PUBLIC WORKS DEPT.-----904-255-8786
E. CITY OF JACKSONVILLE ~ TRAFFIC OPERATIONS-----904-387-7533
F. FLORIDA DEPT. OF TRANSPORTATION-----904-360-5200
G. JEA ~ WATER COLLECTION & DISTRIBUTION ~ BOB ALLSBROOK-----904-665-7299
H. JEA ~ SEWER COLLECTION & DISTRIBUTION ~ BOB ALLSBROOK-----904-665-7299
I. JEA ~ GENERAL INFORMATION-----904-665-6000
J. JEA ~ PROJECT OUTREACH-----904-665-7500
K. JEA ~ POWER OUTAGES-----904-665-6000
L. JEA ~ SEWER PROBLEMS-----904-665-4802
M. JEA ~ WATER PROBLEMS-----904-665-4801
N. JEA ~ WATER & SEWER LOCATES-----904-665-8410
O. NASSAU COUNTY ~ PUBLIC WORKS ~ CHARLES HOUSTON-----904-491-7334
P. ST. JOHNS COUNTY ~ RIGHT-OF-WAY PERMITTING ~ RICK MAULDIN-----904-209-0134
Q. ST. JOHNS COUNTY ~ TRAFFIC SIGNALS ~ HANK MEIN-----904-209-0173
R. COMCAST ~ EMERGENCY HOTLINE-----904-380-6274
S. TECO/PEOPLES GAS ~ BEN MOBLEY-----904-545-8958
T. SUNSHINE ONE CALL-----811

NOT APPLICABLE
☐ ☒ APPLICABLE

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:
NORTHSIDE-EAST OF US-1 MIKE CORBITT @ 665-7991 (mobile 662-0635)
NORTHSIDE-WEST OF US-1 ANDY YEAGER @ 665-7998 (mobile 662-0622)
NORTHSIDE-BACKUP ALAN AINSLEY @ 665-7303 (mobile 662-6557)
SOUTHSIDE-SOUTH OF BEACH BLVD. TOM KERNS @ 665-6847 (mobile 860-1687)
SOUTHSIDE-NORTH OF BEACH BLVD. DERYL BASFORD @ 665-6855 (mobile 662-0616)
SOUTHSIDE-BACKUP EDDIE GALES @ 665-6855 (mobile 662-0616)
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.

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

ETM
VISION • EXPERIENCE • RESULTS
England, Thims & Miller, Inc.
14775 Old St. Augustine Road
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E-MAIL: info@etm-inc.com
CA 0002654 LC 0000316



JEA STANDARD
GENERAL NOTES
NASSAU CARWASH SITE

NO. SHEETS	20-207
5	
SHEET NO.	JANUARY 2017
5	
DRAWING NO.	AS NOTED
8	

NO.	BY	DATE	REVISIONS
6			
4			
3			
2			
1			

DESIGN ENGINEER
ANDREW J. BOOTH
FLORIDA REGISTRATION NO.
82302

PROPOSED UTILITY

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

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.

JANUARY 2020

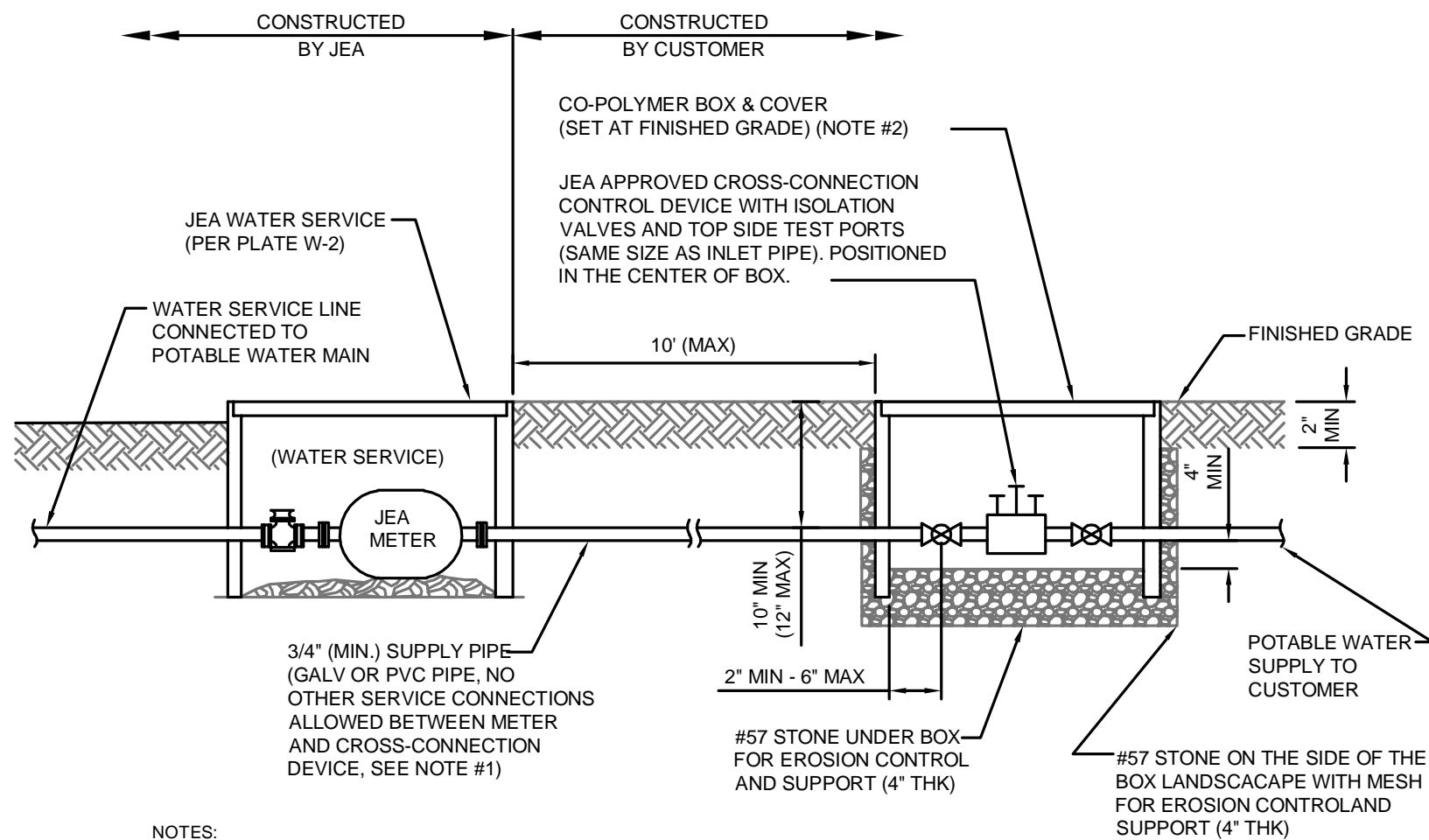
PLATE W-10

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 PROCESS 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 VACUUM-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 AT 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. AT LEAST TWELVE (12) FEET, AND PREFERABLY TWENTY (20) FEET, FROM EACH UTILITY CROSSING, 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 SIX (6) FEET, AND PREFERABLY TWENTY (20) FEET, FROM ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER, STORM SEWER, 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.

JANUARY 2020

PLATE W-11

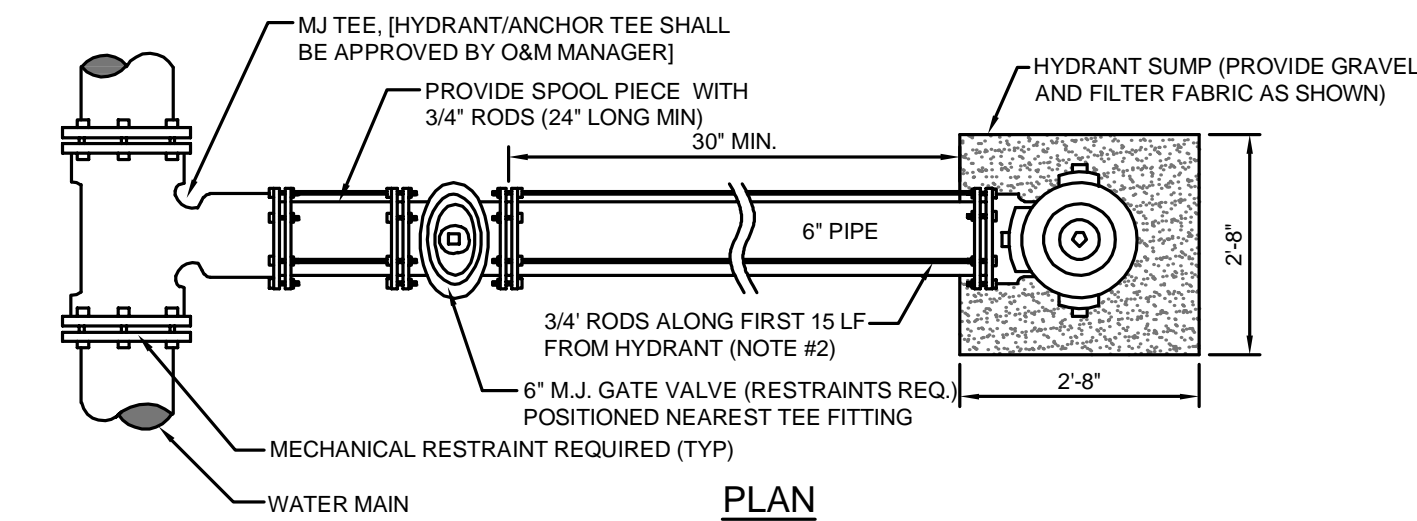


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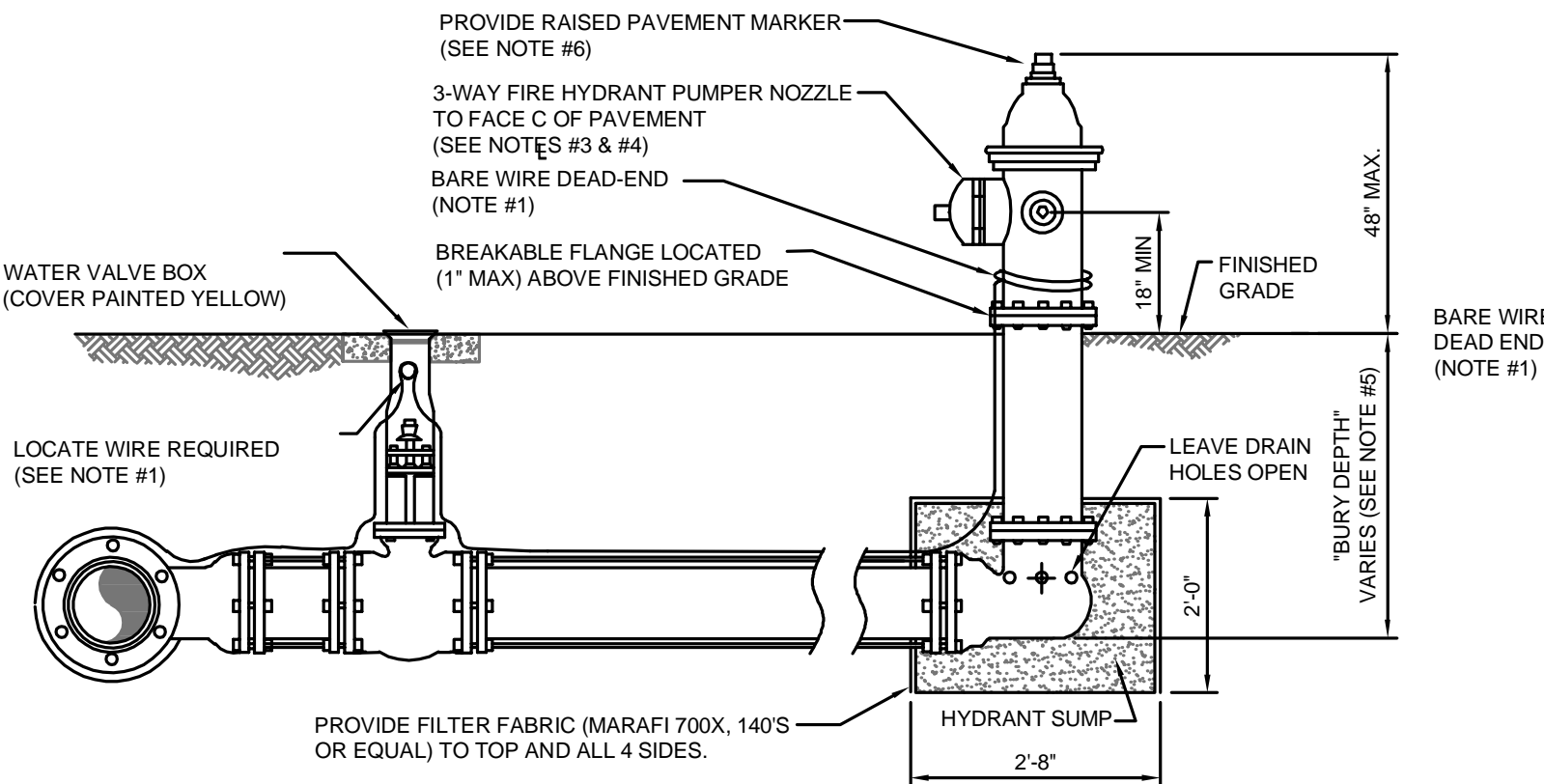
1. THE POTABLE WATER CUSTOMER IS REQUIRED TO INSTALL AND MAINTAIN A JEA APPROVED CROSS-CONNECTION DEVICE ON THEIR POTABLE WATER SERVICE LINE. OPERATION AND MAINTENANCE OF THIS CROSS-CONNECTION DEVICE SHALL COMPLY WITH JEA CROSS-CONNECTION CONTROL PROGRAM AND ASSOCIATED OPERATIONS POLICIES. ALL REDUCED PRESSURE ASSEMBLIES SHALL BE MOUNTED ABOVE GRADE.
2. ONLY DOUBLE CHECK VALVE ASSEMBLIES MAY BE INSTALLED BELOW GROUND. THESE DEVICES MAY BE INSTALLED IN A TYPICAL 1" (CO-POLYMER) METER BOX WITH SOLID LID (GENERIC LID WITH NO "JEA" LOGO, SEE ALSO W-3). THE SIZE OF BOX SHALL BE 12"x20", AT A MINIMUM. IT SHALL BE NOTED THAT IF THE HIGH GROUND WATER LEVEL FALLS INSIDE THE BOX, THEN THE CROSS CONNECTION CONTROL DEVICE MUST BE INSTALLED ABOVE GROUND. ONLY DOUBLE CHECK VALVE ASSEMBLIES WITH TWO BALL VALVES AND TWO CHECK VALVES AND UNION CONNECTION BETWEEN BALL VALVES AND THE DEVICE) INCLUDE: WATTS U007M20T, WILKINS 950XLTU OR JEA APPROVED EQUIV.
3. BACKFLOW PREVENTION DEVICES REQUIRED WHEN:
 IRRIGATION SYSTEMS - REQUIRED ON IRRIGATION SYSTEMS AT THE CONNECTION TO POTABLE SYSTEM
 INDUSTRIAL SYSTEMS - REQUIRED ON WATER SERVICE IF RECLAIMED SERVICE WATER AVAILABLE TO SITE
 COMMERCIAL SITES - REQUIRED ON WATER SERVICE IF RECLAIMED SERVICE WATER AVAILABLE TO SITE
 RESIDENTIAL SITES - REQUIRED ON BOTH WATER AND RECLAIMED SERVICE ON, WATER SERVICE EVEN IF NO RECLAIMED
4. JEA IRRIGATION SERVICE CONNECTION REQUIRE ABOVE GRADE REDUCED PRESSURE BACKFLOW PREVENTERS. (SEE PLATE W-15A)

JANUARY 2020

PLATE W-15



PLAN



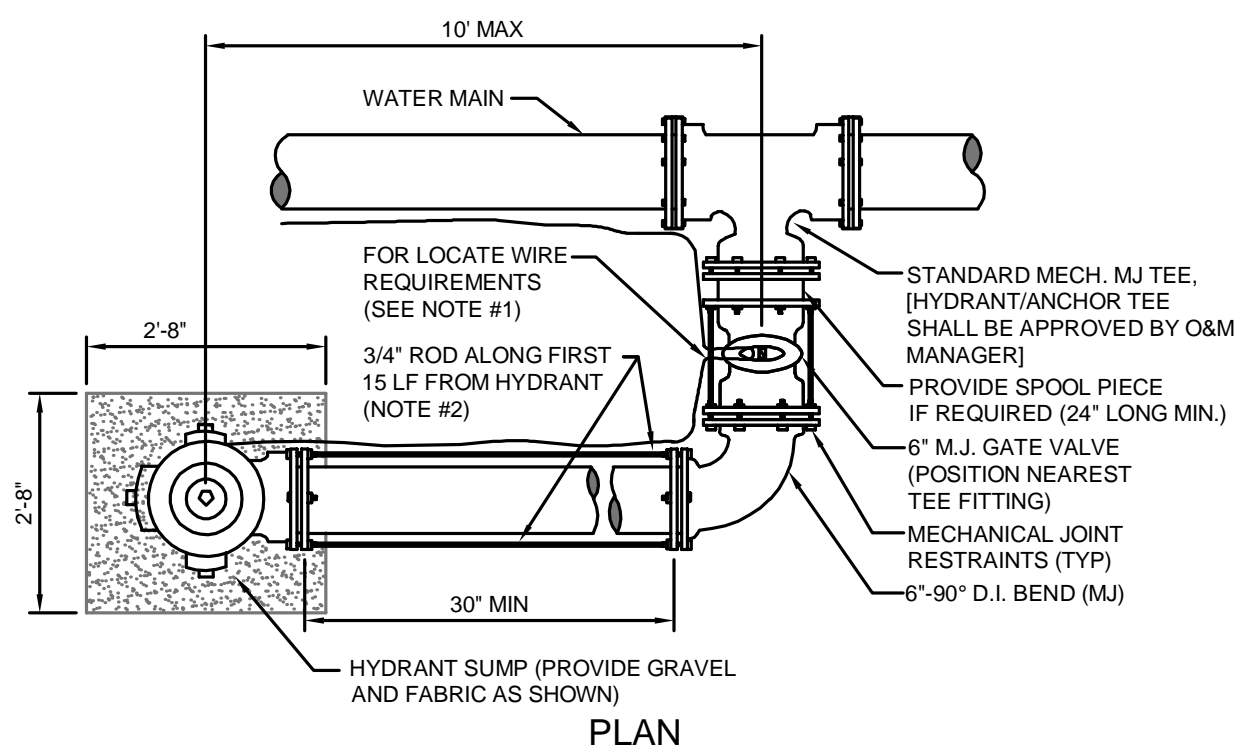
SECTION

NOTES:

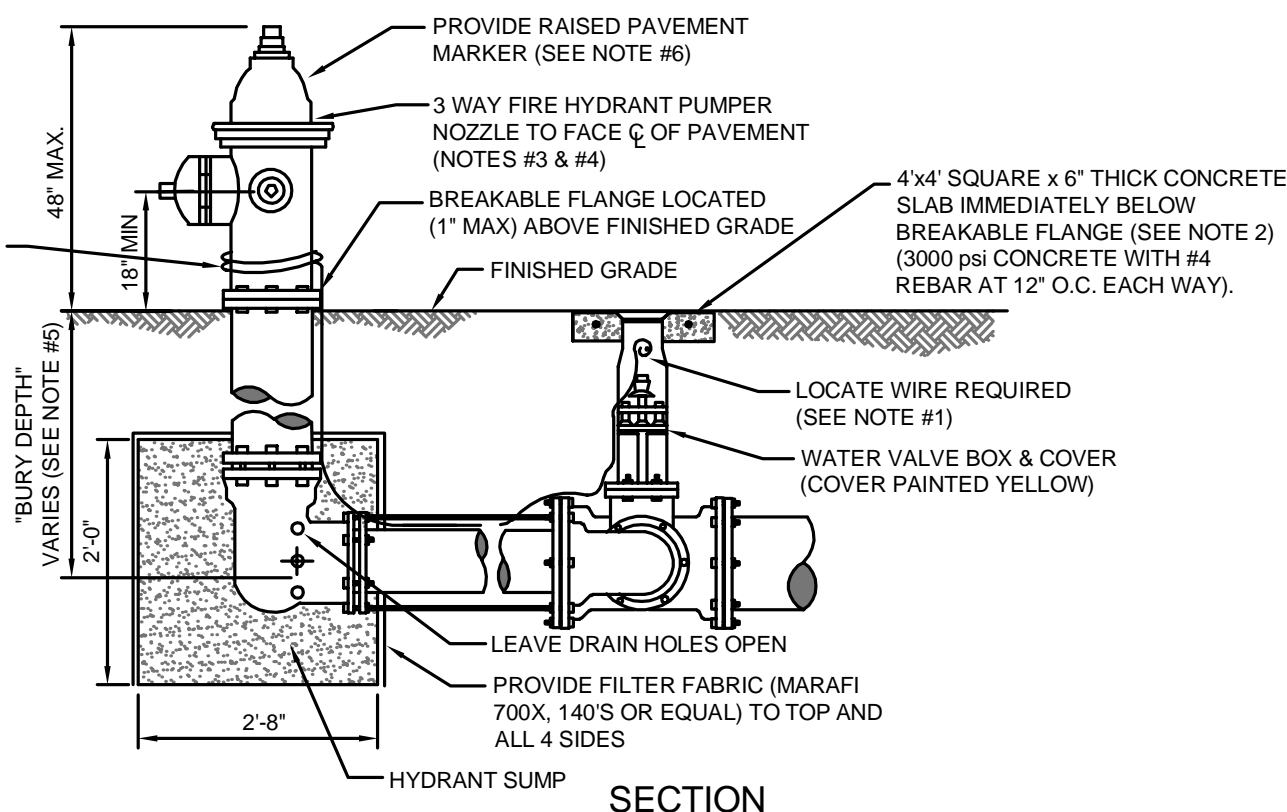
1. LOCATE WIRE SHALL BE ROUTED FROM THE VALVE TO THE HYDRANT AS SHOWN ABOVE LEAVING ENOUGH SLACK TO REACH 4' ABOVE FINAL GRADE. THE END OF THE WIRE SHALL BE SECURED TO THE PIPE MAN. SEE SECTION 350. LOCATE WIRE INSTALLATION PARAGRAPH.
2. FIRE HYDRANTS SHALL BE INSTALLED BETWEEN BACK OF CURB AND FACE OF SIDEWALK AND NOT WITHIN SWEETITCH AREAS. THE DISTANCE RANGE FROM EDGE OF ADJACENT PAVEMENT, BACK OF CURB AND FACE OF SIDEWALK SHALL BE IN COMPLIANCE WITH LOCAL COUNTY ORDINANCES. THE DISTANCE FROM THE FACE OF THE SIDEWALK TO THE FACE OF THE CURB SHALL BE IN COMPLIANCE WITH LOCAL AGENCIES. DISTANCE SHALL BE MEASURED TO THE CLOSEST PART OF THE FIRE HYDRANT (IE. THE PUMPER NOZZLE). THE MAXIMUM DISTANCE (BACK OF CURB) SHALL BE IN COMPLIANCE WITH LOCAL COUNTY FIRE DEPARTMENT RULES AND AS APPLICABLE BY JEA. FIRE HYDRANT SHALL BE INSTALLED WITHIN 10' OF THE SIDEWALK. THE DISTANCE BETWEEN THE FACE OF THE CURB AND THE FACE OF THE SIDEWALK SHALL BE 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 10" X 24" DIA (THREADED ENDS) STEEL RODS AND EYE BOLTS UN JOINT RESTRAINT DEVICES (EYE BOLTS) TO BE SPLIT SEPARATED RINGS WITH RESTRAINT EARS (EARS 15" W/10" OR W-11). IF PIPING BETWEEN THE HYDRANT AND 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 OUTFLOW 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 EQUIV). 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 PARALLEL TO A 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.

JANUARY 2020

PLATE W-13



PLAN



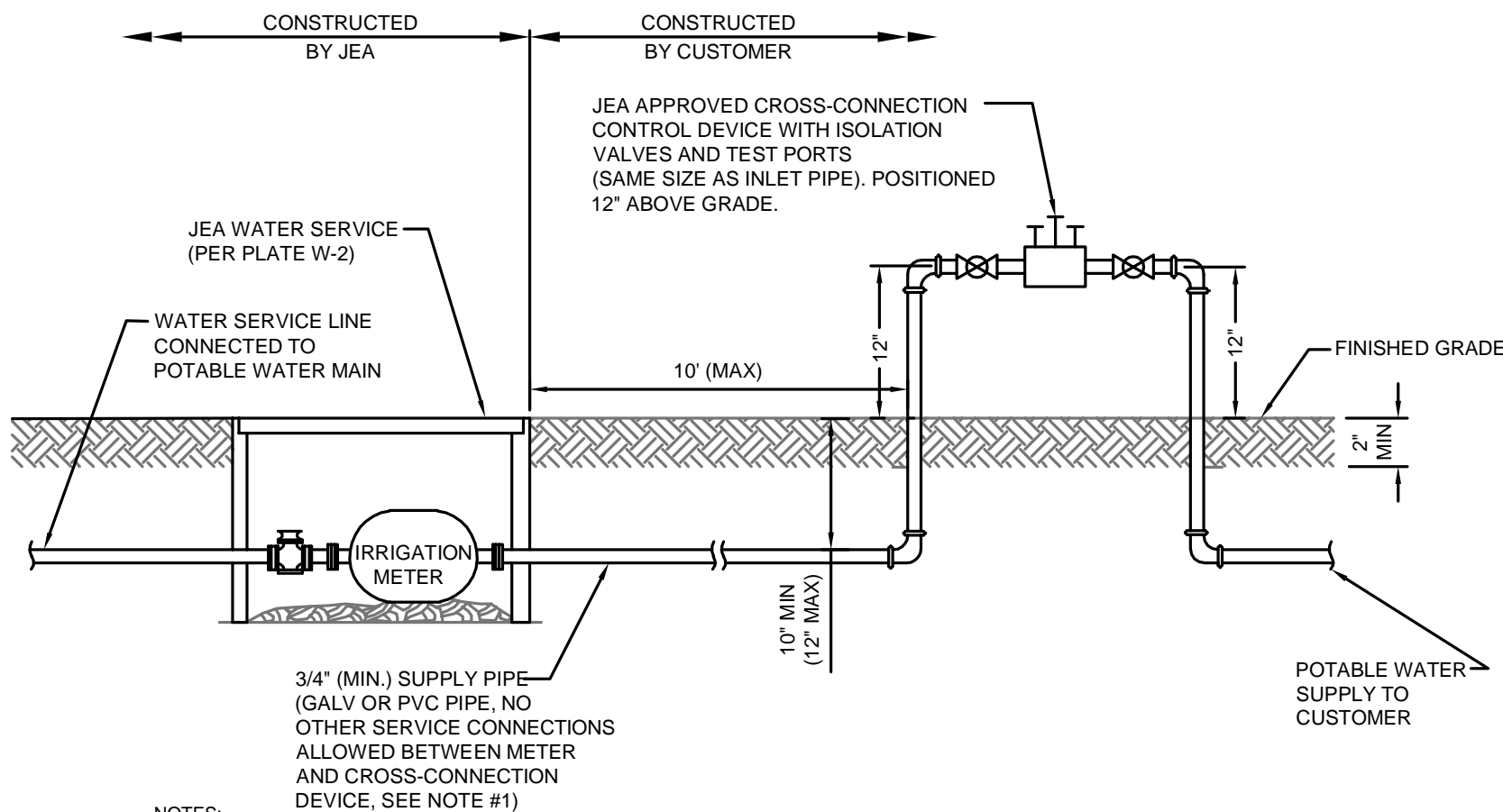
SECTION

NOTES:

1. LOCATE FIRE SHALL BE ROUTED FROM THE VALVE TO THE HYDRANT AS SHOWN ABOVE LEAVING ENOUGH SLACK TO REACH ABOVE FINAL GRADE. THE END OF THE WIRE SHALL BE SECURED TO THE PIPE MAN. SEE SECTION 300, 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 TWO (2) 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 THE HYDRANT IS LOCATED IN THE STREET, THE HYDRANT SHALL BE LOCATED AT THE INTERSECTION OF THE HYDRANT LOCATION (PROVIDE 30" SEPARATION), ALL PIPING, VALVES AND FITTINGS ALONG THE HYDRANT BRANCH WHICH IS WITH 15 LF OF THE HYDRANT SHALL BE RESTRAINED UTILIZING ONLY TWO 3/4" DIA (THEADED ENDS) STEEL RODS AND EYE BOLTS (NO JOINT RESTRAINT DEVICES REQUIRED). A SPLIT SERATED RING WITH RESTRAINT EARS (EARS 15 P/06 OR EQUAL) MAYBE USED IN THIS ASSEMBLY. ALL OTHER JOINTS ALONG THE HYDRANT BRANCH MAN OUTSIDE OF THE FIRST 15 LF SHALL INCORPORATE 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 EXTERNS SHOULD BE MINIMIZED.
6. BLUE REFLECTIVE MARKERS SHALL BE INSTALLED IN SUCH A MANNER THAT THE REFLECTIVE FACE OF THE MARKER IS PARALLEL TO THE ROADWAY CENTERLINE. THE BLUE REFLECTIVE MARKERS SHALL BE PLACED IN THE TRAVEL LANE OF THE REFLECTOR OF THE TRAVEL LANE, DIRECTLY ACROSS FROM AND ADJACENT TO EACH FIRE HYDRANT.

JANUARY 2020

PLATE W-14



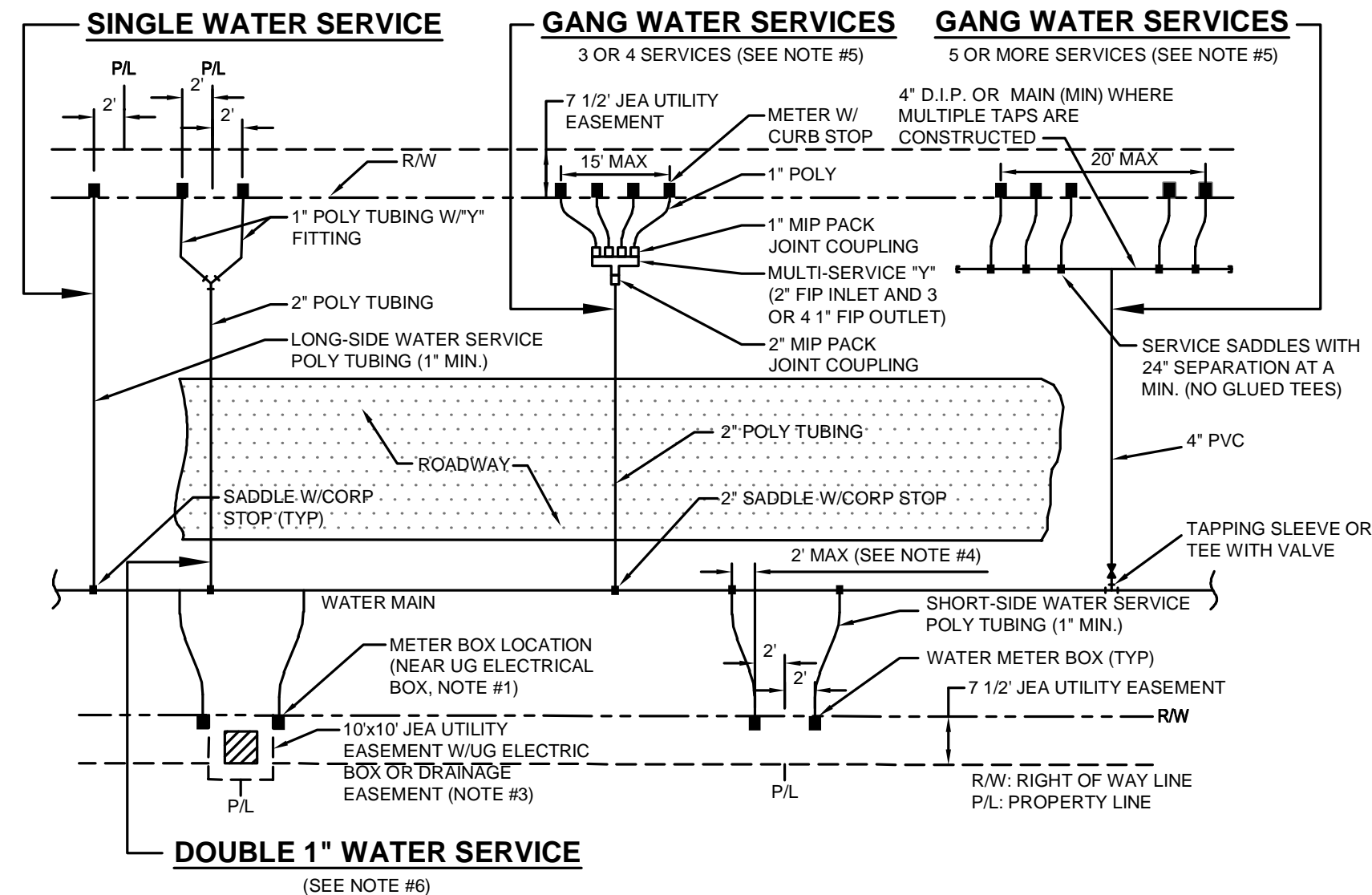
NOTES:

1. WATER SERVICE CONNECTIONS REQUIRE ABOVE GRADE REDUCED PRESSURE BACKFLOW PREVENTERS. (SEE PLATE W-15)
2. BACKFLOW PREVENTION DEVICES REQUIRED WHEN:
IRRIGATION SYSTEMS - REQUIRED ON IRRIGATION SYSTEMS AT THE CONNECTION TO POTABLE SYSTEM
RESIDENTIAL SYSTEMS - REQUIRED ON WATER SERVICE IF RECLAIMED SERVICE WATER AVAILABLE TO SITE
COMMERCIAL SITES - REQUIRED ON ALL WATER SERVICES
INDUSTRIAL SITES - REQUIRED ON BOTH WATER AND RECLAIMED SERVICE CONNECTIONS.
3. RESIDENTIAL IRRIGATION SERVICES MAY UTILIZE AN ALTERNATE BACKFLOW PREVENTER LOCATION IF THE FOLLOWING CONDITIONS EXIST:
3.a. CUSTOMER HAS SUBMITTED A COMPLETED "CUSTOMER AFFIDAVIT" FORM AND
3.b. THERE ARE NO ADDITIONAL CONNECTIONS BETWEEN THE METER AND THE BACKFLOW PREVENTER, AND
3.c. THE ALTERNATE BACKFLOW LOCATION IS EASILY ACCESSIBLE TO JEA AND BACKFLOW TESTERS.

CROSS CONNECTION CONTROL DEVICE

JANUARY 2020 JEA IRRIGATION SERVICE CONNECTIONS PLATE W-15A

A LOCATE WIRE SHALL BE PLACED ON SERVICES 10FT OR GREATER.



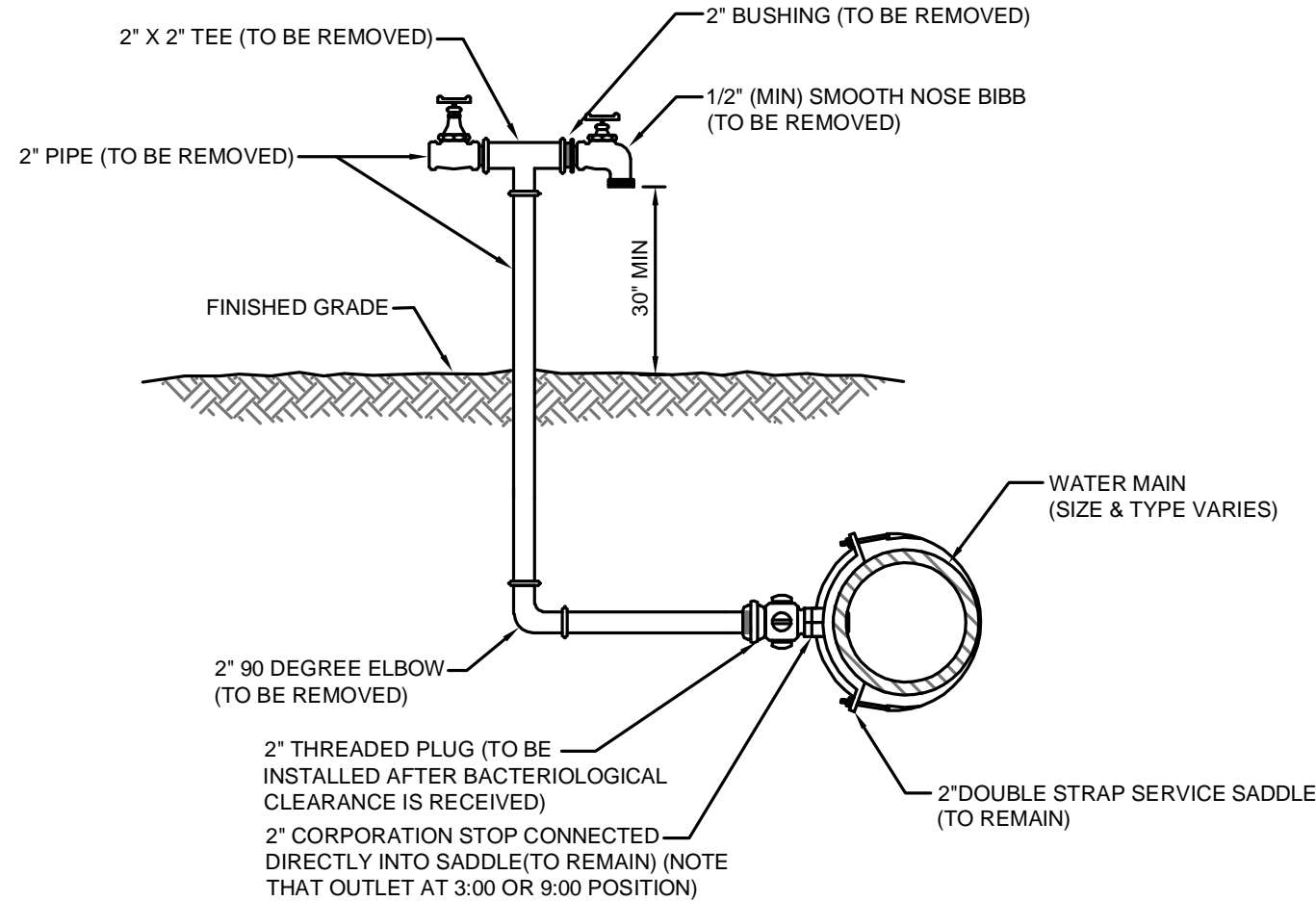
NOTES:

1. 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 R/W LINE BUT INSIDE THE 7 1/2' ELECTRIC EASEMENT.
2. UNLESS SPECIFIED OTHERWISE BY THE APPLICABLE COUNTY (NASSAU, CLAY OR ST. JOHNS COUNTY), THE METER BOX SHALL BE LOCATED IN THE JEA 7 1/2' UTILITY EASEMENT, AND 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.
3. IF DRAINAGE OR OTHER EASEMENT LOCATED BETWEEN LOTS, METER BOXES SHALL BE LOCATED AT THE EASEMENT LINE BUT OUTSIDE THE EASEMENT AREA.
4. 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 TAPPED 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.
5. 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 A 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.
6. DOUBLE 1" WATER SERVICES IS ALLOWED FOR SHORT SIDE OR LONG SIDE SERVICES AND WHERE SHOWN ON THE DRAWINGS.
7. 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).
8. No 2" AND SMALLER WATER SERVICE TAPS PERMITTED ON WATER MAINS WHICH ARE 20" AND LARGER SIZE.
9. 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.
10. SERVICE SIZE SHALL BE SAME AS THE METER SIZE.

WATER OR RECLAIM SERVICE INSTALLATIONS
2" AND SMALLER METER

JANUARY 2020

PLATE W-1



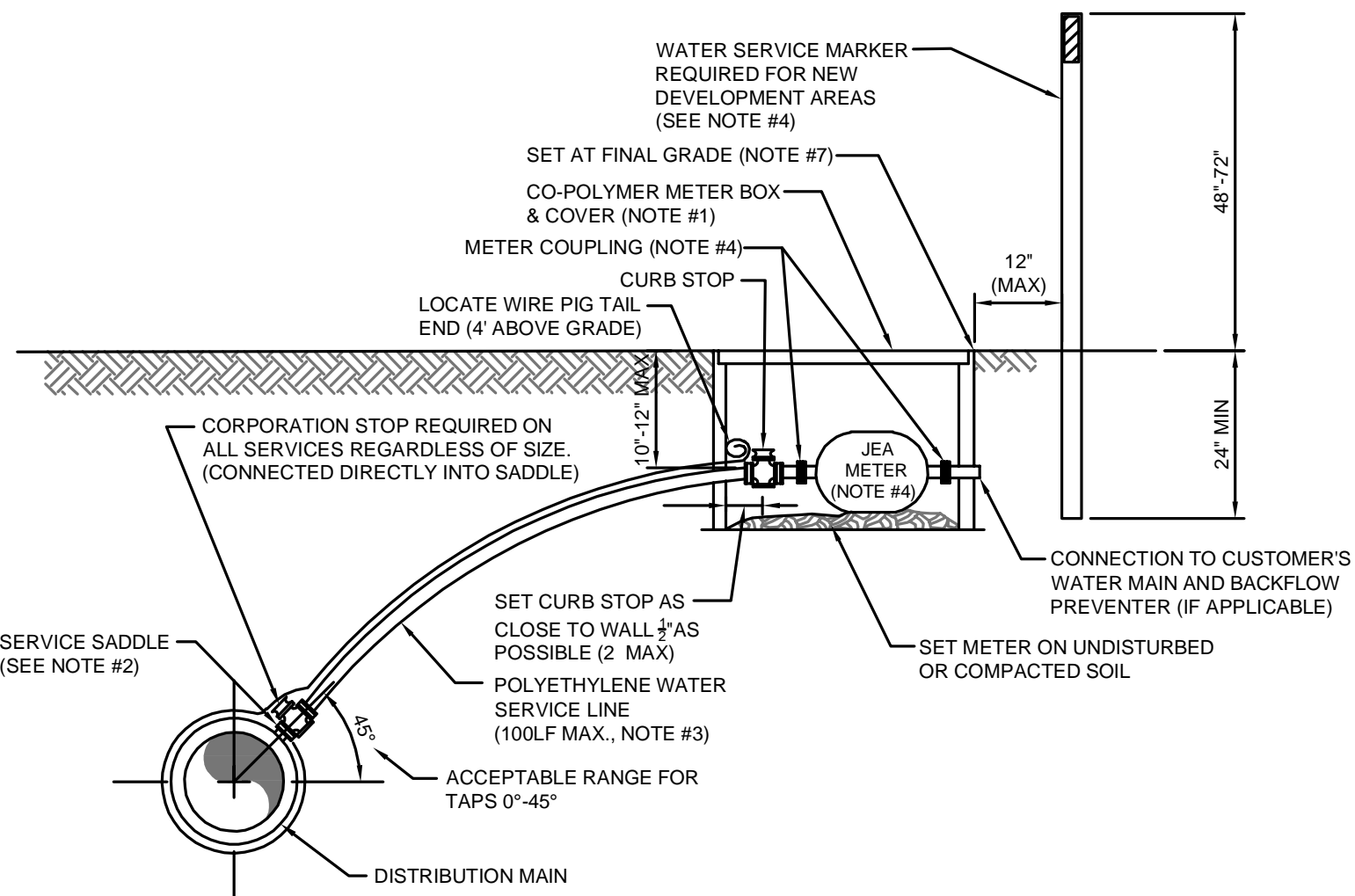
NOTES:

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

2" TEMPORARY SAMPLE TAP FOR STUB OUT

JANUARY 2020

PLATE W-26



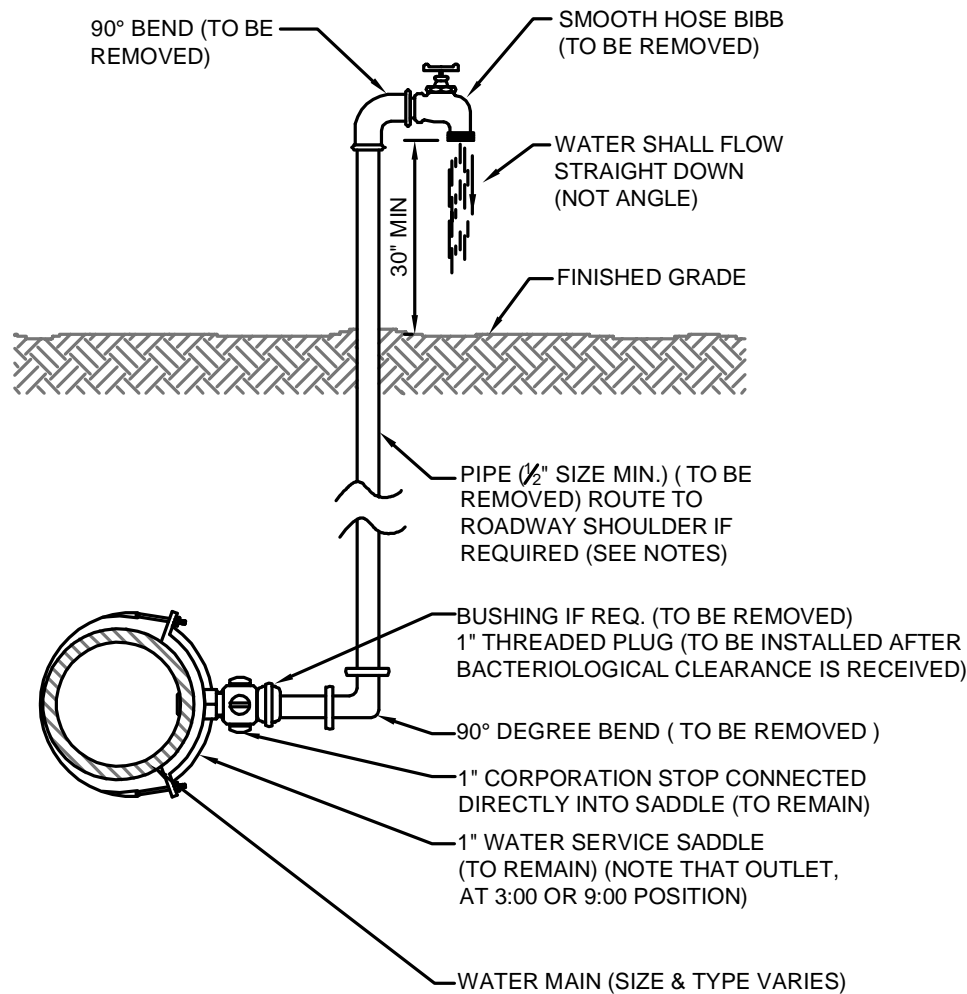
NOTES:

1. SEE PLATE W-1 FOR METER LOCATION REQUIREMENTS.
2. SINGLE BAND SADDLES SHALL BE 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. DOUBLE BAND 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.
3. NO OPEN CUT UNDER ROADWAY PAVING ALLOWED UNLESS THE ROADWAY IS BEING RECONSTRUCTED OR IF DIRECTED OTHERWISE BY JEA. 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.
4. 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).
5. NO 2" AND SMALLER WATER SERVICE TAPS PERMITTED ON WATER MAINS WHICH ARE 20" AND LARGER SIZE.
6. 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.
7. 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).
8. LOCATE WIRING REQUIRED ON ALL SERVICES 10' OR GREATER IN LENGTH. SEE PLATE W-44.

WATER SERVICE DETAIL- 2" AND SMALLER METER

JANUARY 2020

PLATE W-2



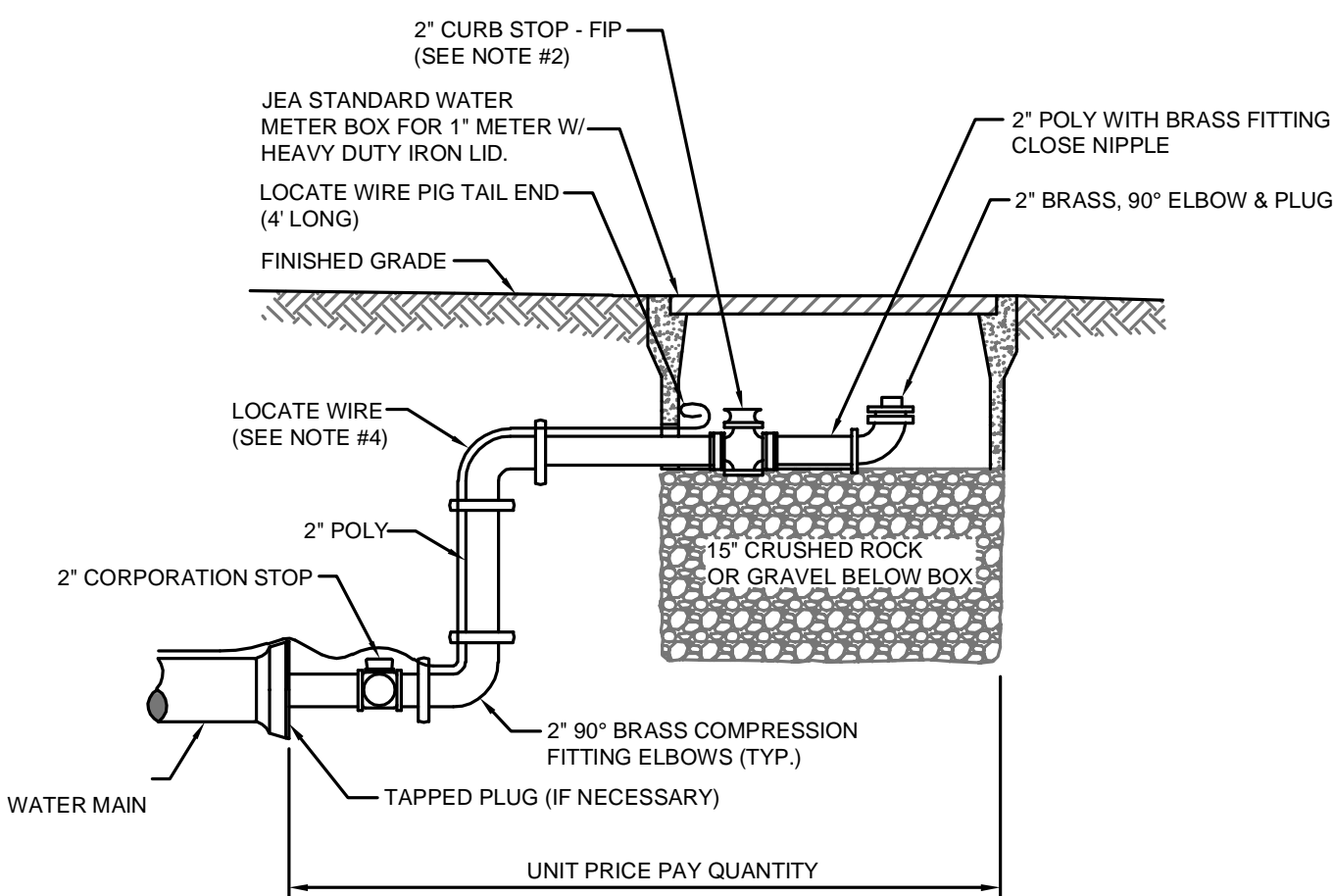
NOTES:

1. LOCATION OF SAMPLE POINT BIBB SHALL NOT BE WITHIN THE ROADWAY BUT ROUTED TO THE ROADWAY SHOULDERS (NON-TRAFFIC AREAS).
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY PIPING & FITTINGS (AS NOTED), AFTER BACTERIOLOGICAL CLEARANCE IS RECEIVED.
3. PIPE AND FITTINGS SHALL BE PVC (SCH. 40) OR GALV. MATERIAL.
4. 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.
5. THE CONTRACTOR SHALL COMPLY WITH ALL JEA RULES AND POLICES AS OUTLINED BY JEA'S ENVIRONMENTAL RESPONSE COORDINATOR (ERC) AND OTHER ASSOCIATED JEA STANDARDS.

TEMPORARY SAMPLE TAP

JANUARY 2020

PLATE W-25



NOTES:

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

FLUSHING VALVE BELOW GRADE

JANUARY 2020

PLATE W-28

England, Thoms & Miller, Inc.
14775 Old St. Augustine Road
Jacksonville, FL 32218
TEL: (904) 642-9890
FAX: (904) 642-9895
CA 0002894 LC 0000316

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NO EXCEPTION TO THE DESIGN

NO.	BY	DATE	REVISIONS
1			
2			
3			
4			
5			
6			

DESIGN ENGINEER
ANDREW J. BOOTH
FLORIDA REGISTRATION NO.
82302

DESIGNER	DRAWN BY	CHECKED BY	DATE

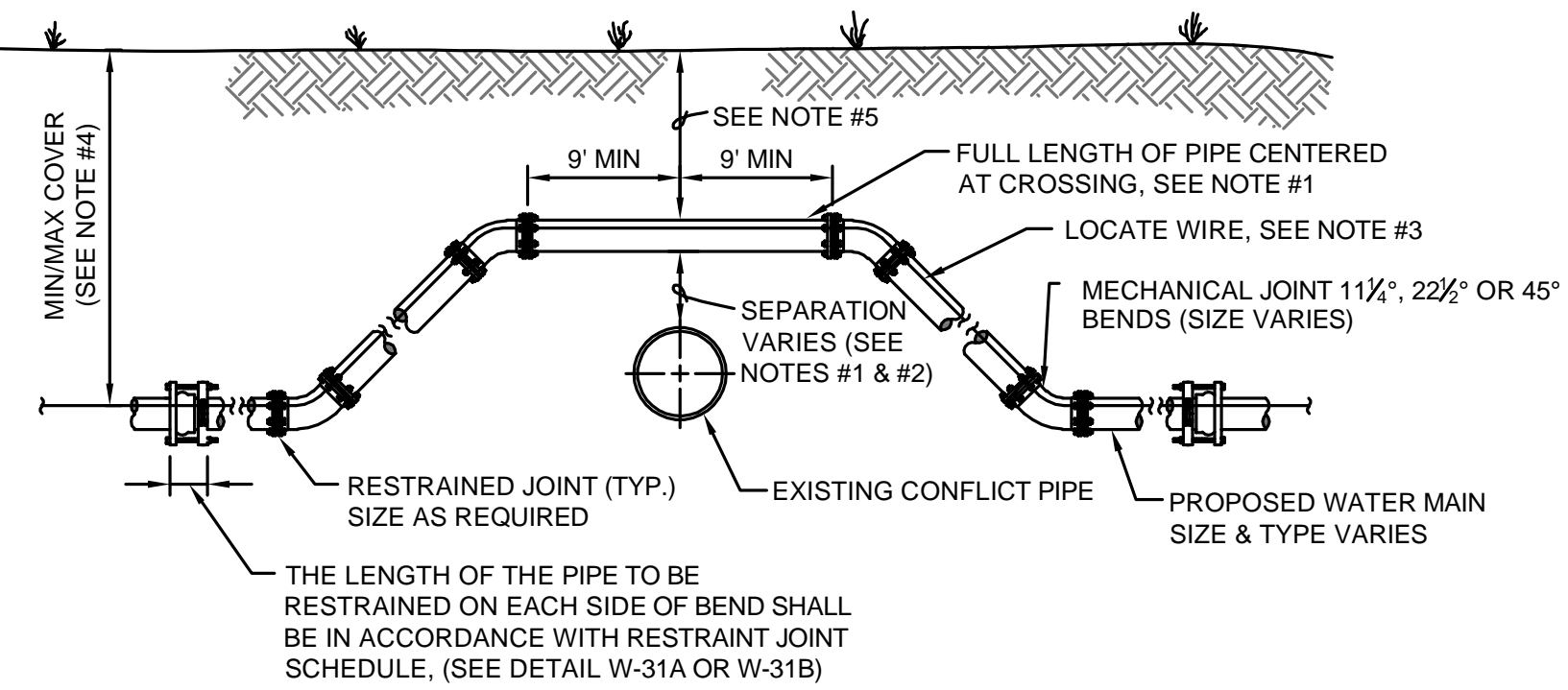


JEA STANDARD
WATER AND RECLAIM DETAILS
NASSAU CARWASH SITE

NO. SHEETS	1
SHEET NO.	5
DRAWING NO.	9B

PROJ. NO.	20-207
DATE:	JANUARY 2020
SCALE:	AS NOTED

T: Y2020_20-207_LandDev\Design\Photos\JEA_Wat_Re_Dets_01-2020_20-207.dwg PLOTTED: May, 26, 21 - 11:55 AM, BY: AJ Booth



CASE "A" CROSSING

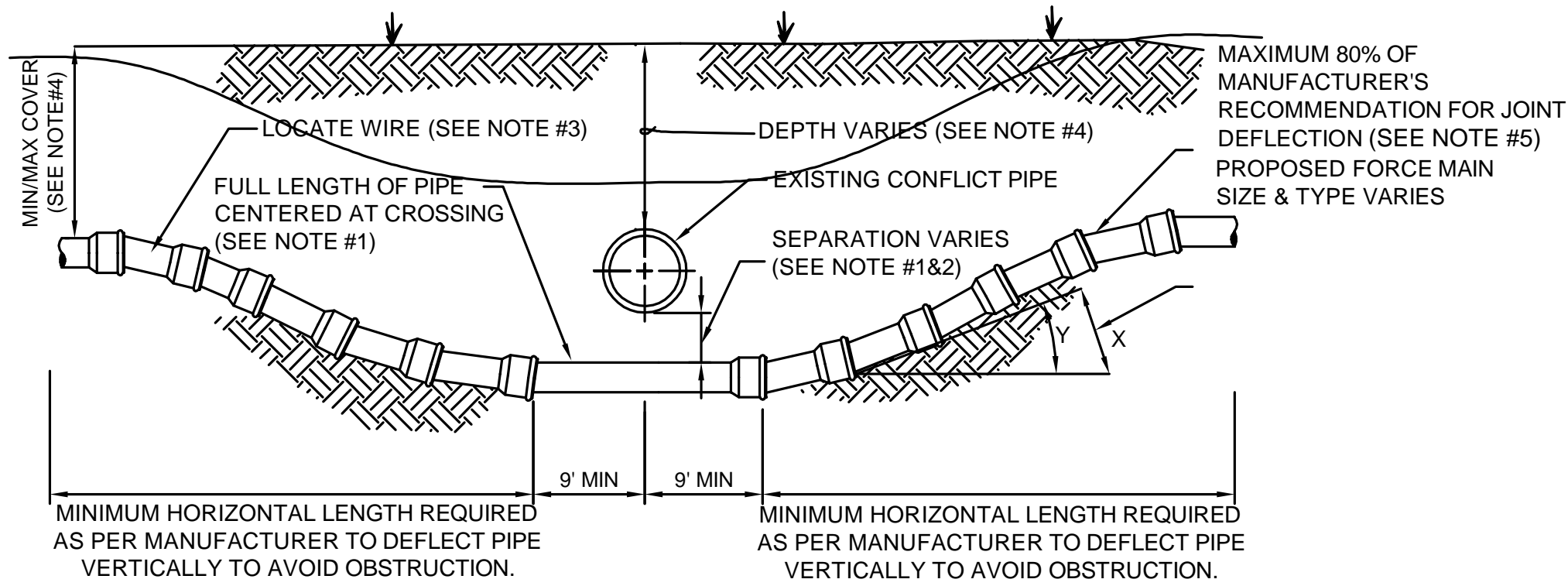
NOTES:

1. 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.
2. FOR MINIMUM VERTICAL SEPARATION REQUIREMENTS SEE DETAIL (W-10 AND W-11).
3. LOCATING WIRE REQUIRED: SEE DETAIL W-44.
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 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. 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 2020

PLATE W-32



NOTES:

1. 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.
2. FOR OTHER LOCATION LIMITATIONS SEE DETAIL (W-10 & W-11).
3. LOCATING WIRE REQUIRED: SEE DETAIL W-44.
4. 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.
5. JEA 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

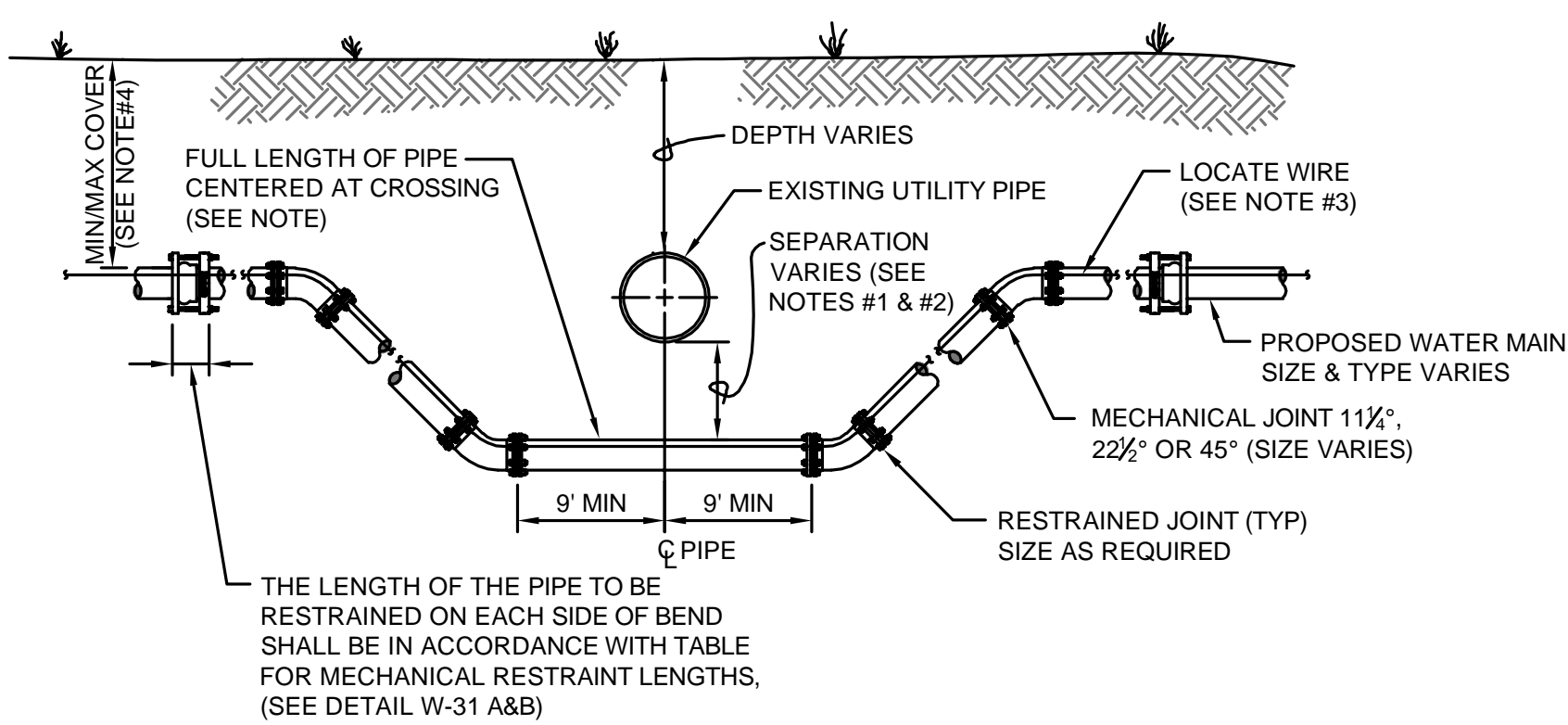
PVC PIPE			
PIPE SIZE (IN.)	(X) MAX. OFFSET (IN.)	(Y) ANGLE AT ONE BELL	RESULTING RADIUS OF CURVE WITH 20FT. LENGTHS
2	30	7°	158 FT
4	10	2.4°	480 FT
6	10	2.4°	480 FT
8	10	2.4°	480 FT
10	10	2.4°	480 FT
12	8.5	2°	564 FT
14 - 24	5	1.2°	960 FT
30 - 48	3.25	0.8°	1477 FT

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 2020

PLATE W-40



CASE "B" CROSSING

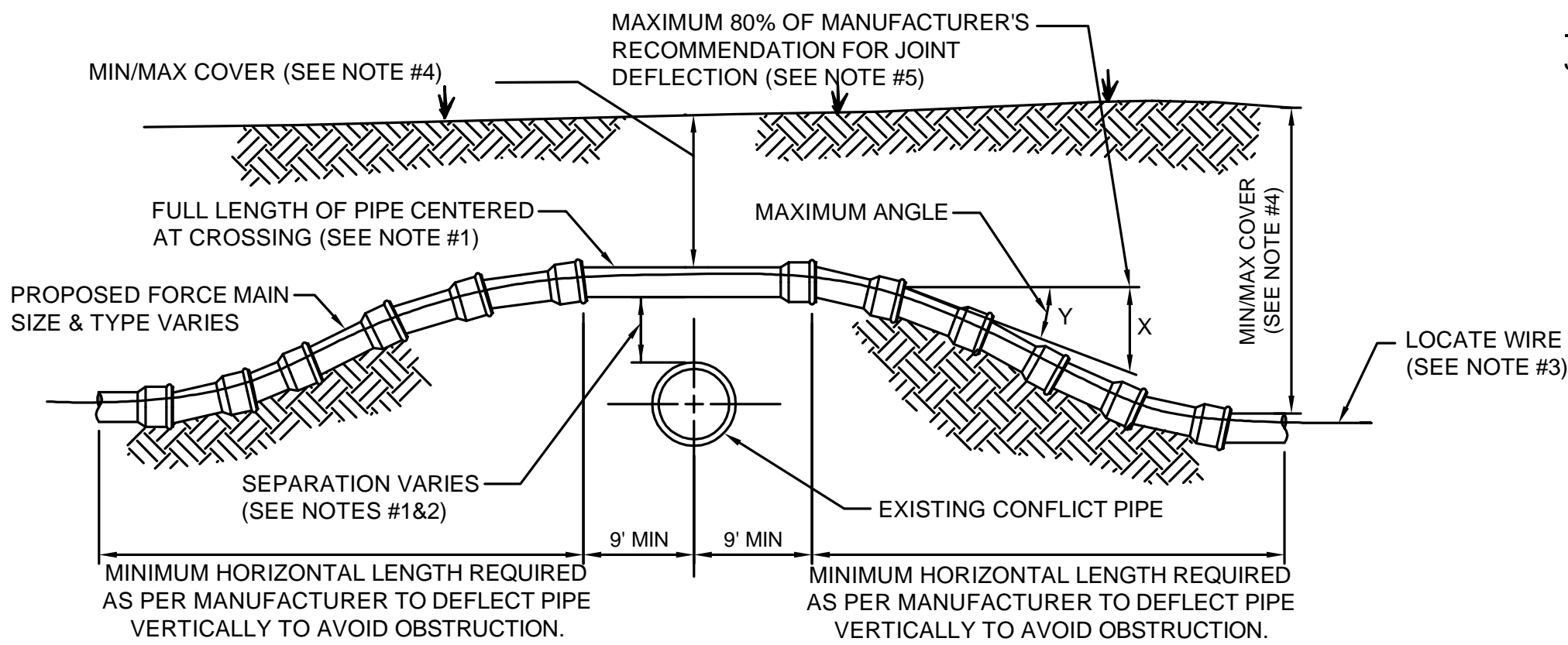
NOTES:

1. 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.
2. FOR MINIMUM VERTICAL SEPARATION REQUIREMENTS SEE DETAILS (W-10 AND W-11)
3. LOCATING WIRE REQUIRED: SEE DETAIL W-44.
4. 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 2020

PLATE W-34



NOTES:

1. 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.
2. FOR OTHER LOCATION LIMITATIONS SEE DETAIL (S-10 & W-11).
3. LOCATING WIRE REQUIRED: SEE DETAIL W-44.
4. 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.
5. JEA 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

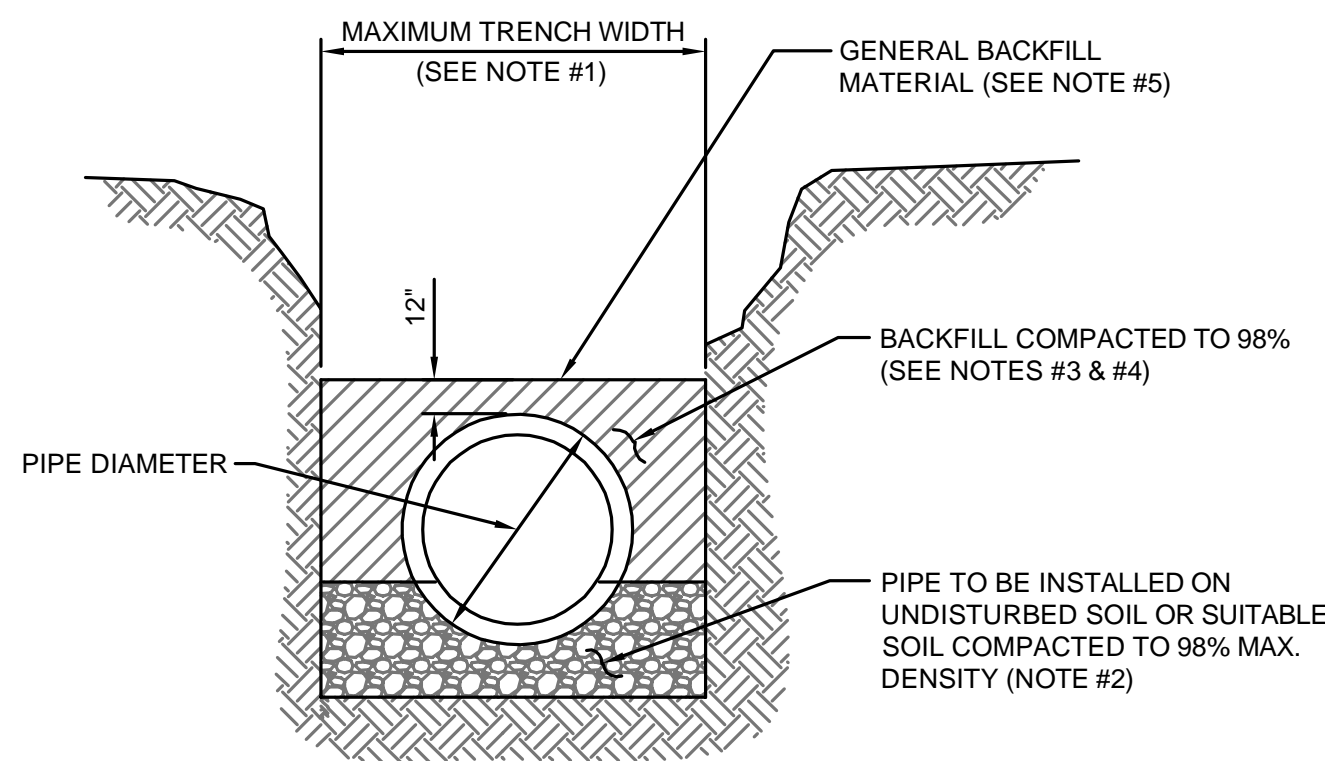
PVC PIPE			
PIPE SIZE (IN.)	(X) MAX. OFFSET (IN.)	(Y) ANGLE AT ONE BELL	RESULTING RADIUS OF CURVE WITH 20FT. LENGTHS
2	30	7°	158 FT
4	10	2.4°	480 FT
6	10	2.4°	480 FT
8	10	2.4°	480 FT
10	10	2.4°	480 FT
12	8.5	2°	564 FT
14 - 24	5	1.2°	960 FT
30 - 48	3.25	0.8°	1477 FT

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 2020

PLATE W-41



TYPICAL TRENCH

NOTES:

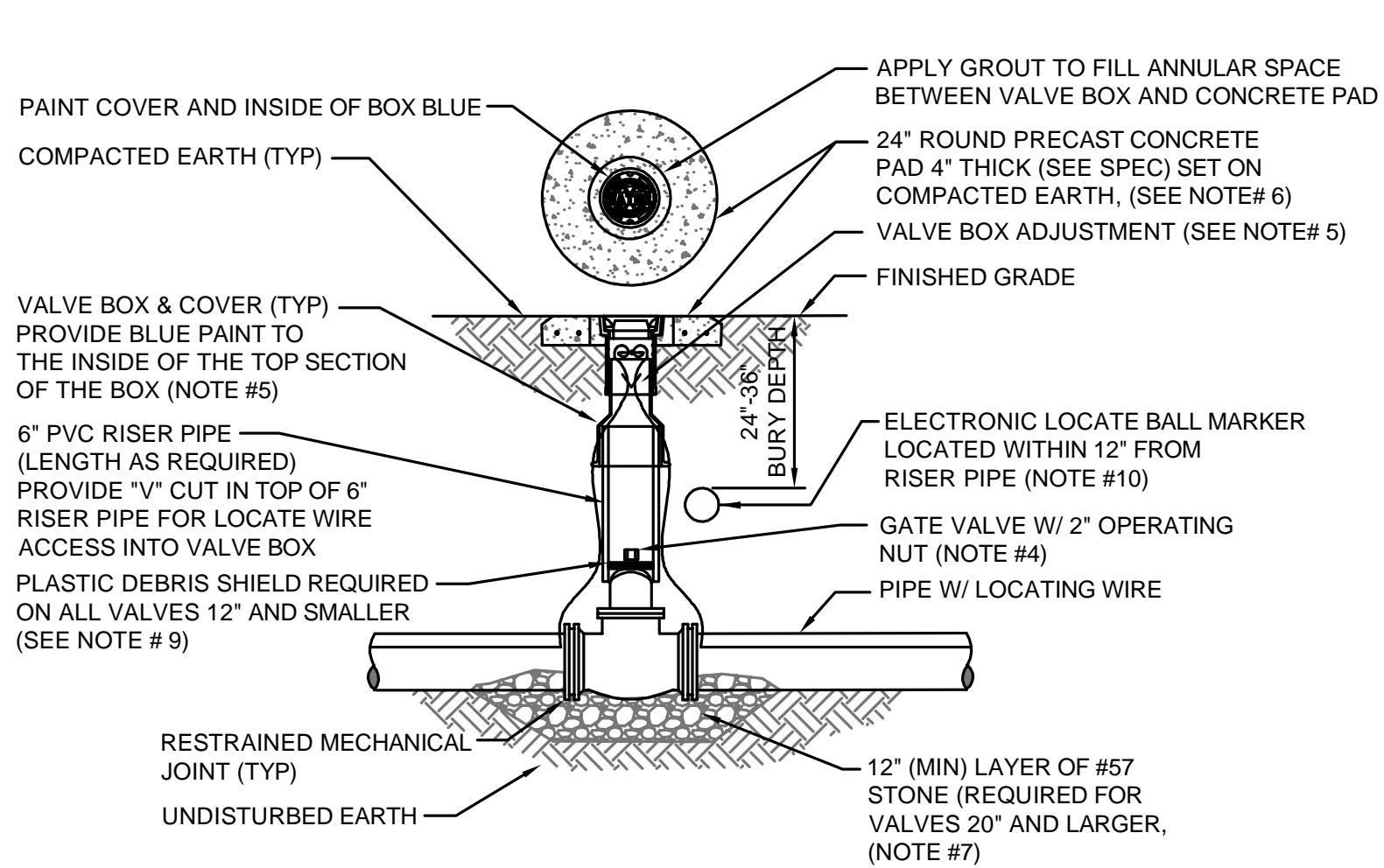
1. TRENCH SIDES SHALL BE APPROXIMATELY VERTICAL BETWEEN AN ELEVATION OF 1 FOOT ABOVE THE TOP OF THE PIPE AND THE CENTER LINE OF THE PIPE; OTHERWISE, TRENCH SIDES SHALL BE AS VERTICAL AS POSSIBLE OR AS REQUIRED BY OSHA STANDARDS. REFER TO THE MEASUREMENT AND PAYMENT SECTION (SECTION #801, PARAGRAPH #41) TO DETERMINE MAXIMUM PAYLINE WIDTHS.
2. 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.
3. 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.
4. 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 ITS MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST, ASTM D1557.
5. 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 2020

IN CITY RIGHT OF WAY

PLATE W-42



NOTES:

1. 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 DETAILW-44).
3. A "V" CUT SHALL BE CARVED IN THE CURB CLOSEST/ADJACENT/(ASPHALT IF NO CURB) TO ALL BELOW GRADE VALVES. THE "V" CUT IS TO BE PAINTED BLUE WATER/PURPLE RECLAIMED.
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. 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 24" LONG PIG-TAIL AT THE TOP SHALL BE CONNECTED TOGETHER WITH A WIRE NUT.
6. 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.
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 CENTER 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 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 2020

PLATE W-18

England, Thoms & Miller, Inc.
14775 Old St. Augustine Road
Jacksonville, FL 32218
TEL: (904) 644-9890
FAX: (904) 644-9895
CA 0002694 LC 0000316

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

NO.		BY	DATE	REVISIONS	
1	6				
2	6				
3	6				
4	6				
5	6				

DESIGNER:	ANDREW J. BOOTH
DRAWN BY:	
CHECKED BY:	
DATE:	
DATE:	
FLORIDA REGISTRATION NO.:	82302

JEA STANDARD
WATER AND RECLAIM DETAILS
NASSAU CARWASH SITE

PROJ. NO.:	20-207
DATE:	JANUARY 2020
SCALE:	AS NOTED
SHEET NO.:	5
DRAWING NO.:	9C

T: V2020\20-207\LondonDev\Design\Photos\JEA_Wat_Re_01-2020_20-207.dwg PLOTTED: May, 26, 21 - 11:55 AM. BY: AJ Booth

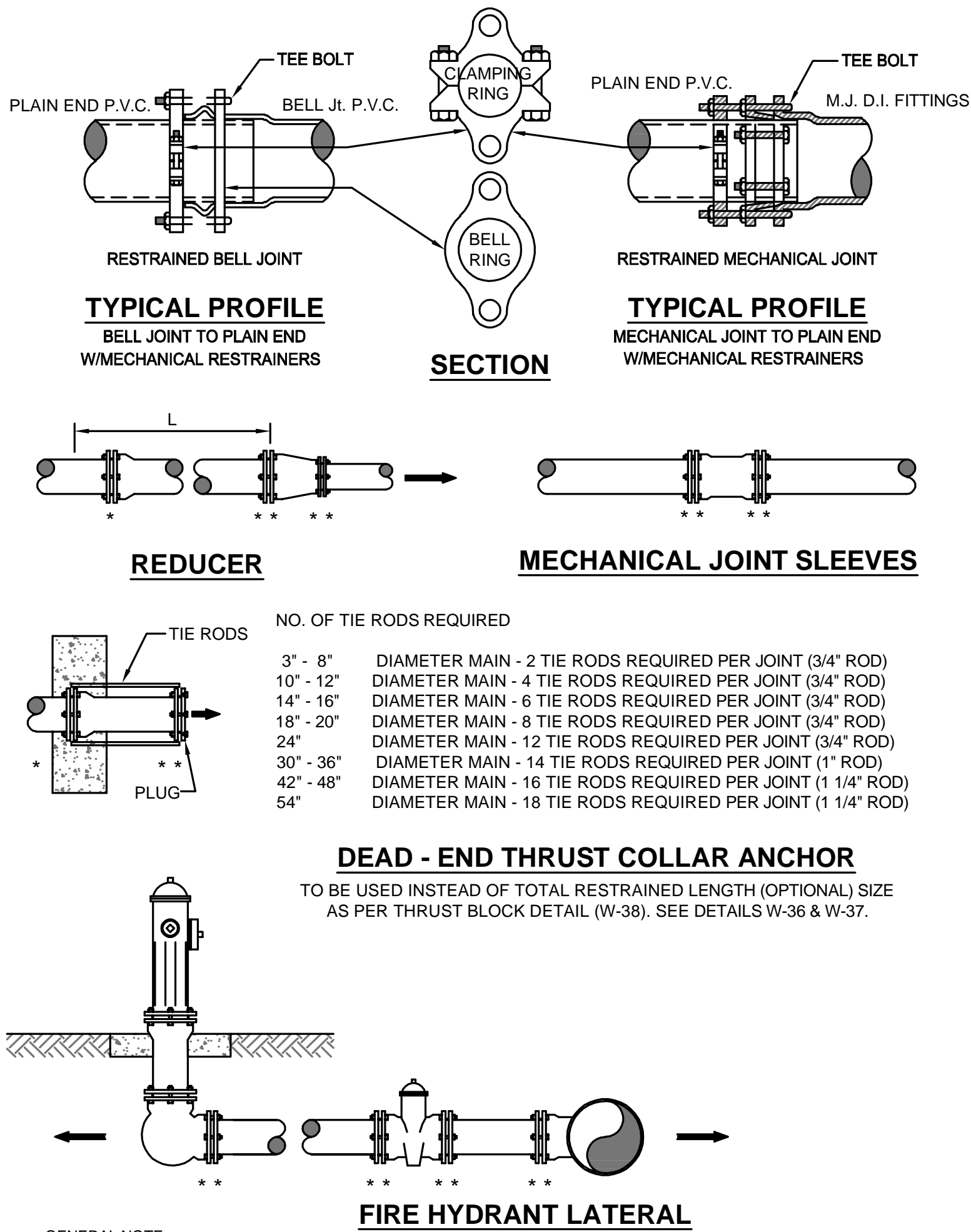
PVC PIPE RESTRAINT NOTES:

- 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.

PVC PIPE RESTRAINT JOINT SCHEDULE

JANUARY 2020

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 2020

PLATE W-31C

LENGTH (L) TO BE RESTRAINED

NOMINAL PIPE SIZE (IN.)	HORIZONTAL BENDS				VERTICAL OFFSETS 45° BENDS (SEE NOTE 4)		VALVES OR DEAD ENDS
	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.)
8x4	34
8x6	36
8x4	62
10x8	35
10x6	63
12x10	36
12x8	64
16x12	66
16x10	92
20x18	35
20x16	66
20x12	117
24x20	56
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	6	10
4	4 < LESS	F.O.
8	8	29
8	6 < LESS	F.O.
10	10	45
10	8	13
10	6 < LESS	F.O.
12	12	62
12	10	32
12	8 < LESS	F.O.
16	16	94
16	12	39
16	10	5
16	10 < LESS	F.O.
20	20	125
20	16	76
20	12	14
20	10 < LESS	F.O.
24	24	124
24	20	84
24	16	36
24	12 < LESS	F.O.
30	30	159
30	24	104
30	20	60
30	16	5
30	16 < LESS	F.O.
36	36	192
36	30	142
36	24	83
36	20	33
36	16 < LESS	F.O.
42	42	223
42	36	178
42	30	124
42	24	59
42	20	5
42	16 < LESS	F.O.
48	48	253
48	42	209
48	36	162
48	30	104
48	24	34
48	20 < LESS	F.O.

F.O. = FITTING ONLY

DUCTILE IRON 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: DUCTILE IRON PIPE (WITHOUT POLY WRAP), 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. FOR D.I.P. W/POLY WRAP, USE RESTRAINT JOINT SCHEDULE FOR PVC PIPE.
- 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 D.I.P. TRANSITIONS: THE D.I.P. PIPE SIDE SHALL BE RESTRAINED 35 FT (MIN).

DUCTILE IRON PIPE RESTRAINT JOINT SCHEDULE

JANUARY 2020

PLATE W -31B

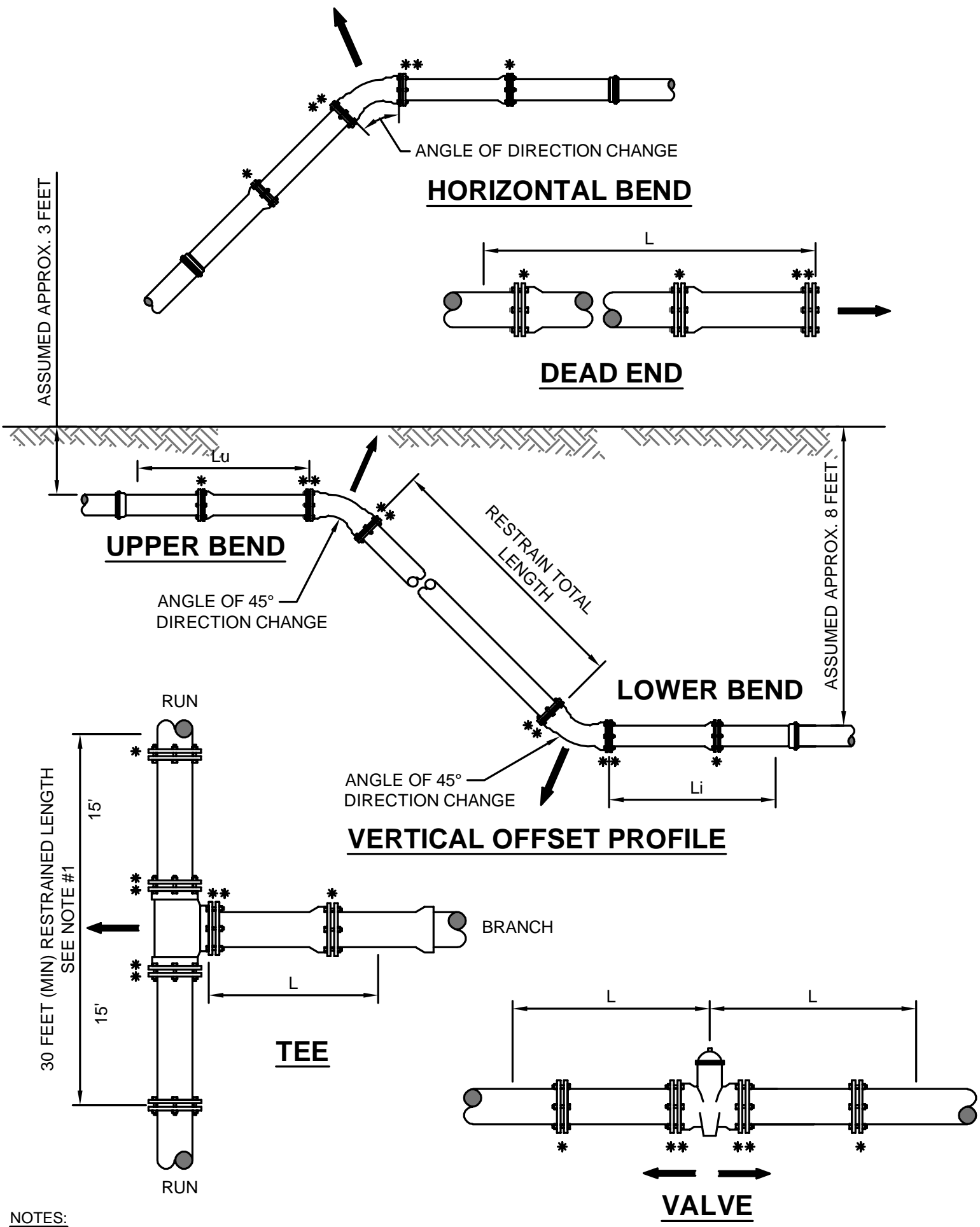
LENGTH (L) TO BE RESTRAINED

NOMINAL PIPE SIZE (IN.)	HORIZONTAL BENDS				VERTICAL OFFSETS 45° BENDS (SEE NOTE 4)		VALVES OR DEAD ENDS
	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	17	7	4	2	11	3	30
6	24	15	5	3	15	4	42
8	31	13	6	3	20	5	55
10	36	15	8	4	23	6	65
12	42	18	9	5	27	7	77
14	48	20	10	5	31	7	87
16	53	22	11	6	35	8	97
18	58	24	12	6	39	9	107
20	63	27	13	6	42	10	118
24	63	27	13	7	49	12	118
30	75	31	15	8	59	14	141
36	86	36	17	9	68	17	163
42	95	40	19	10	76	19	183
48	117	43	21	11	84	21	203

REDUCERS	
SIZE (IN.)	L (FT.)
6x4	22
6x6	23
8x4	39
10x8	22
10x6	40
12x10	23
12x8	41
16x12	42
16x10	58
20x18	22
20x16	42
20x12	74
24x20	36
24x18	51
24x16	64
30x24	50
30x20	77
36x30	50
36x24	89
42x36	48
42x30	89
48x42	48
48x36	88

TEE SEE NOTE 5		
RUN SIZE (IN.)	BRANCH SIZE (IN.)	L (FT.)
4	4	F.O.
4	4 < LESS	F.O.
8	8	19
8	6 < LESS	F.O.
10	10	29
10	8	9
10	6 < LESS	F.O.
12	12	40
12	10	21
12	8 < LESS	F.O.
16	16	60
16	12	25
16	10 < LESS	F.O.
20	20	79
20	16	48
20	12	9
20	10 < LESS	F.O.
24	24	79
24	20	54
24	16	23
24	12 < LESS	F.O.
30	30	101
30	24	66
30	20	38
30	16	4
30	12 < LESS	F.O.
42	42	141
42	36	113
42	30	79
42	24	38
42	20	3
42	16	1
42	12 < LESS	F.O.
48	48	180
48	42	133
48	36	103
48	30	66
48	24	22
48	20 < LESS	F.O.

F.O. = FITTING ONLY



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 BASIC.
- PAY ITEM " * * * " DENOTES A RESTRAINT WHICH IS INCLUDED IN THE UNIT PRICE BID FOR FITTING OR VALVE.

MECHANICAL RESTRAINT DETAILS - II

JANUARY 2020

PLATE W-31D

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

England, Thoms & Miller, Inc.
 14775 Old St. Augustine Road
 Jacksonville, FL 32218
 TEL: (904) 642-9890
 FAX: (904) 642-9895
 E-MAIL: info@etm-inc.com
 CA 0002894 LC 0000316

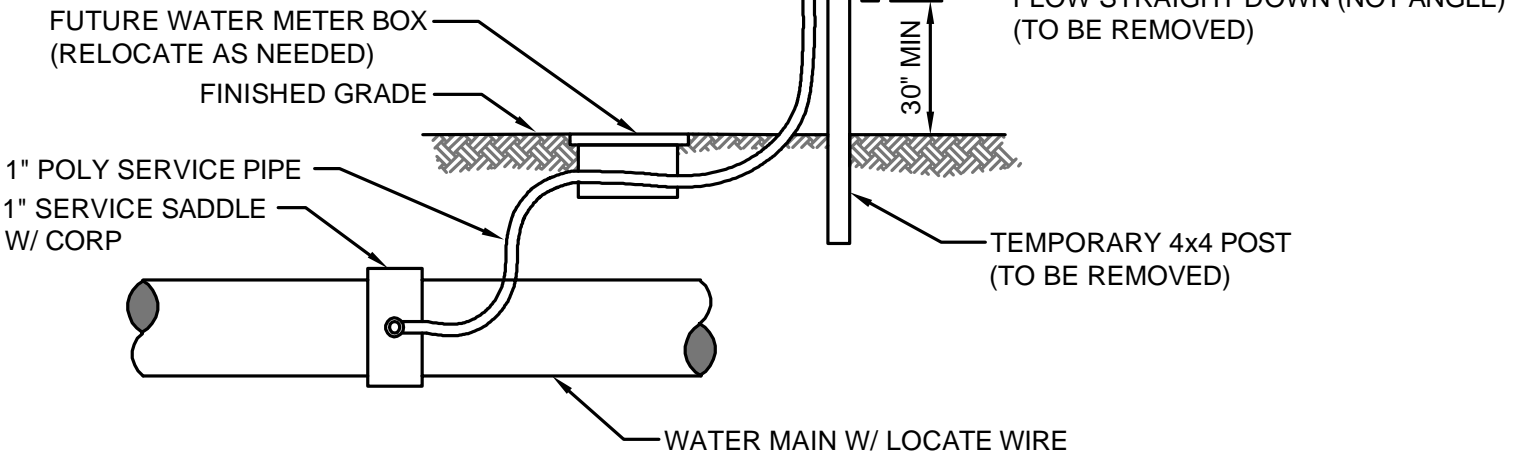
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NO. SHEETS	PROJ. NO.	DATE:	SCALE:	DESIGN ENGINEER				REVISIONS			
				NO.	BY	DATE					
1	20-207	JANUARY 2020	AS NOTED	6							
5				4							
90				3							
				2							
				1							

J.E.A.
 Building Community™

JEA STANDARD
WATER AND RECLAIM DETAILS
NASSAU CARWASH SITE

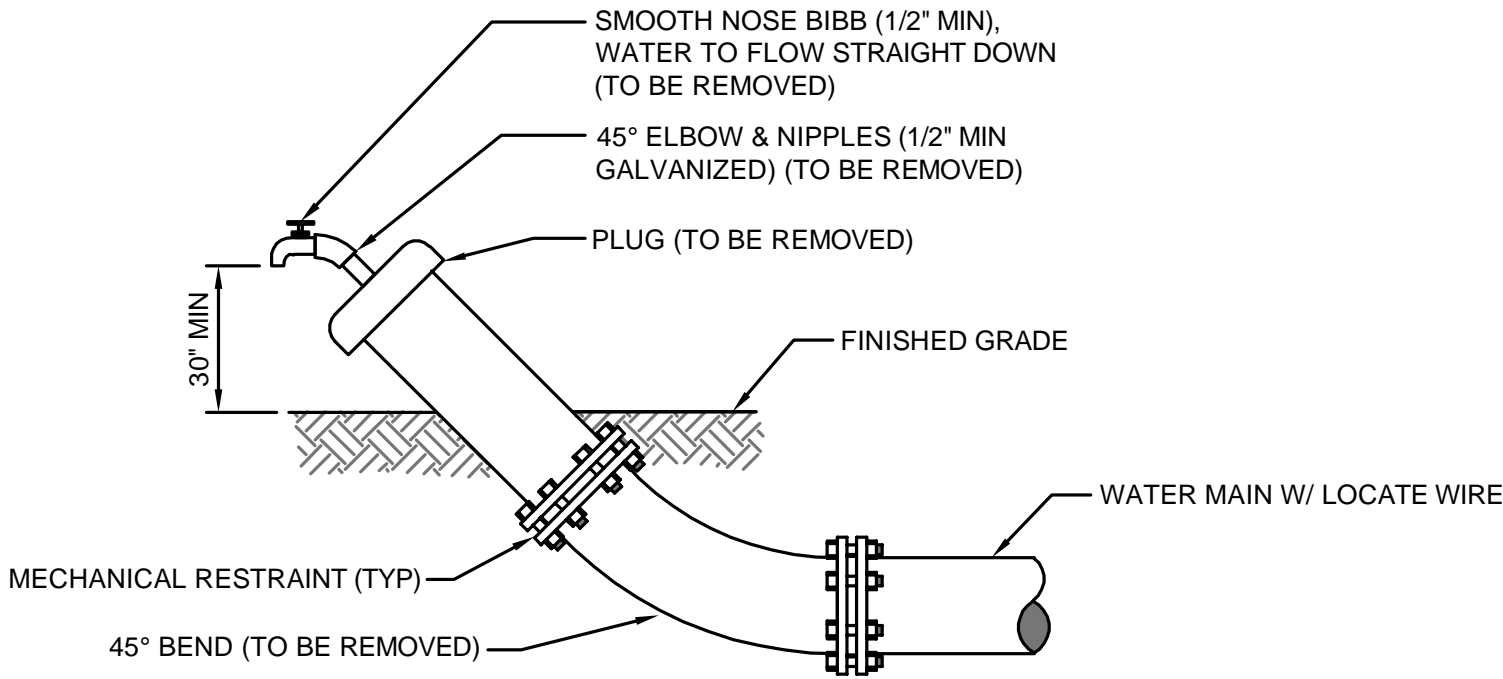
T: \\2020\\20-207\\LondDev\\Design\\Pics\\JEA\\Wat_Re\\20-207.dwg PLOTTED: May, 26, 21 - 11:55 AM, BY: AJ Booth



TEMPORARY SAMPLE TAP UTILIZING A NEW 1" WATER SERVICE

NOTES:

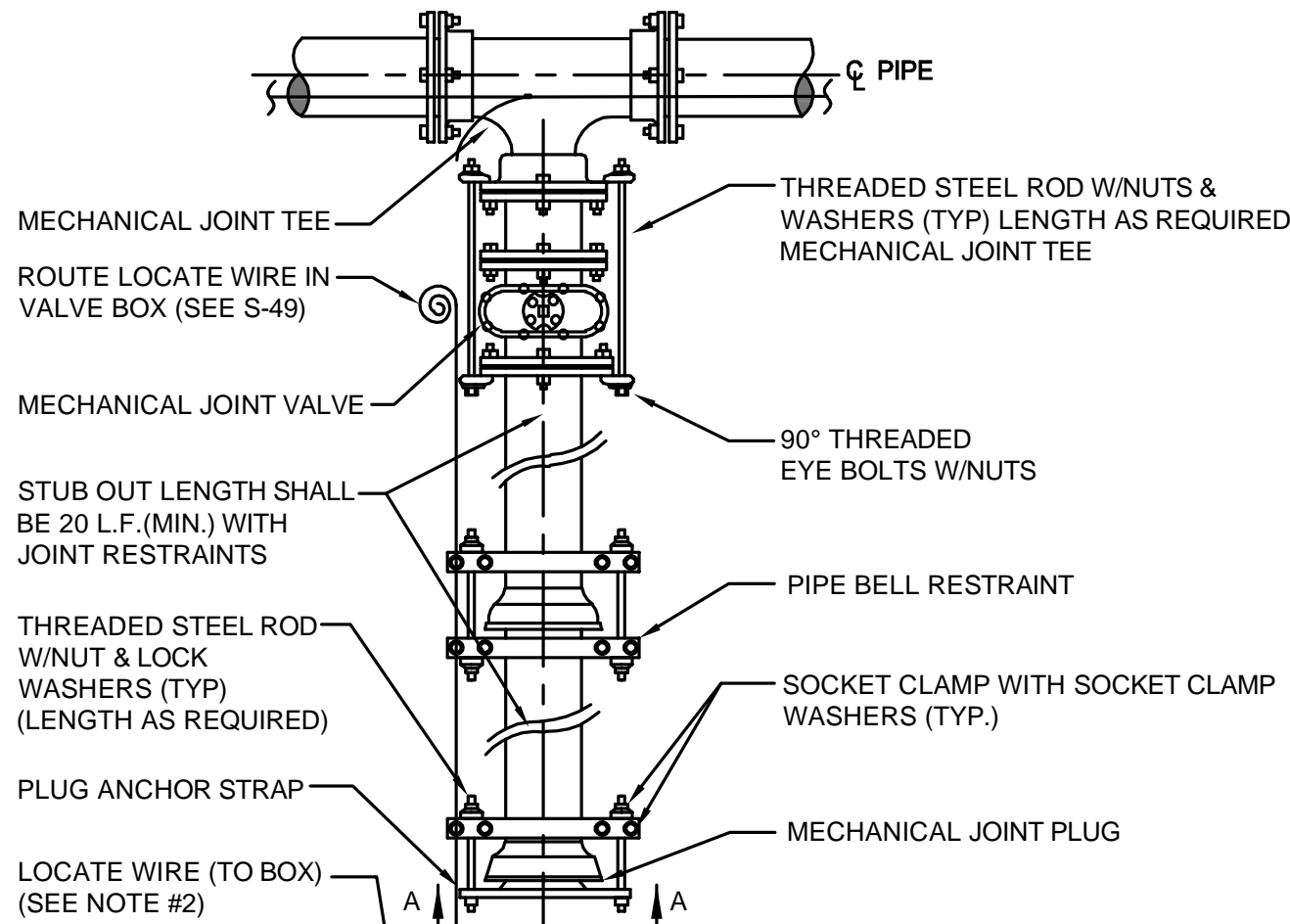
- LOCATION OF SAMPLE POINT BIBB SHALL NOT BE WITHIN THE ROADWAY BUT ROUTED TO THE ROAD SHOULDERS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY PIPING & FITTINGS (AS NOTED) AFTER BACTERIOLOGICAL CLEARANCE IS RECEIVED.
- THE CONTRACTOR SHALL UTILIZE THE ABOVE ALTERNATIVE METHODS 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.



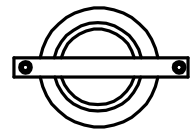
TEMPORARY SAMPLE TAP UTILIZING PLUG AT FLUSHING LOCATION

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.



PLAN



SECTION "A-A"

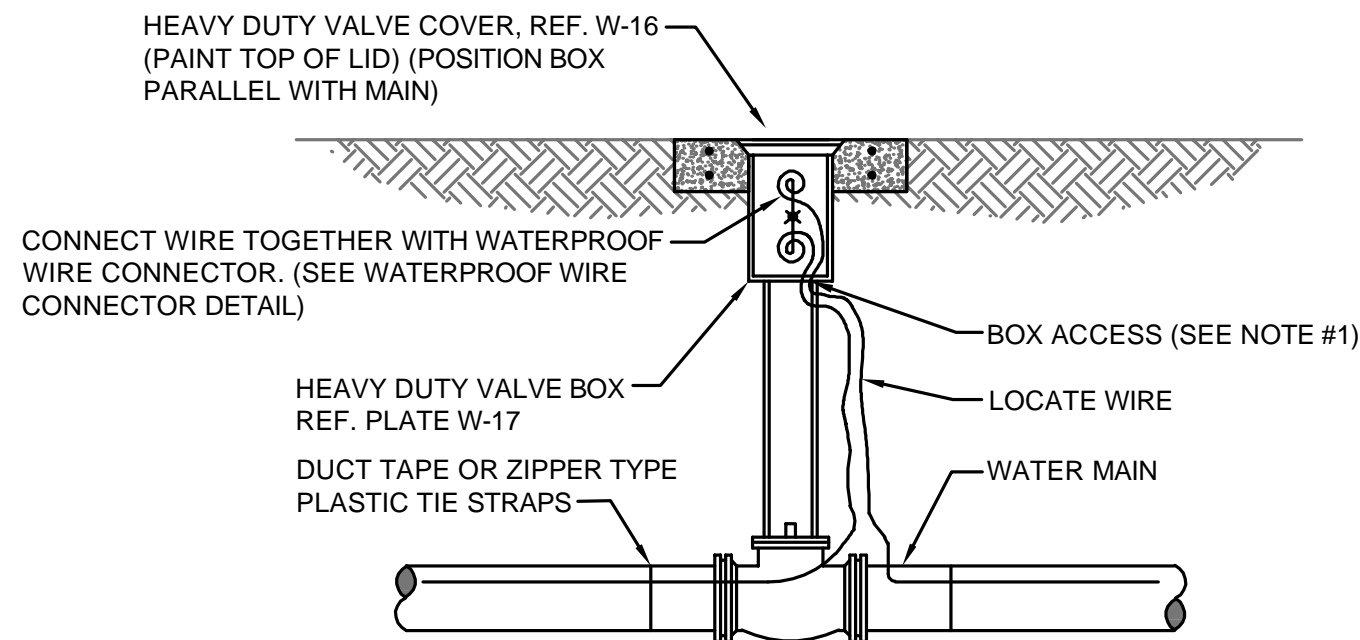
NOTES:

- IN LIEU OF BELL/ROD RESTRAINTS, MECHANICAL JOINT RESTRAINTS MAY BE USED.
- LOCATING WIRE REQUIRED, UTILIZING A LOCATE WIRE BOX INSTALLED AT PLUG LOCATION.
- NUMBER OF TIE 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)
24" 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)
- THE LOCATION OF THE DEAD END PLUG SHALL NOT BE UNDER PAVEMENT, IF POSSIBLE. THE STUB OUT SHALL EXTEND BEYOND THE INTERSECTION AREAS OR ROAD CROSSING BY 10 FEET (MIN.) WHERE POSSIBLE.

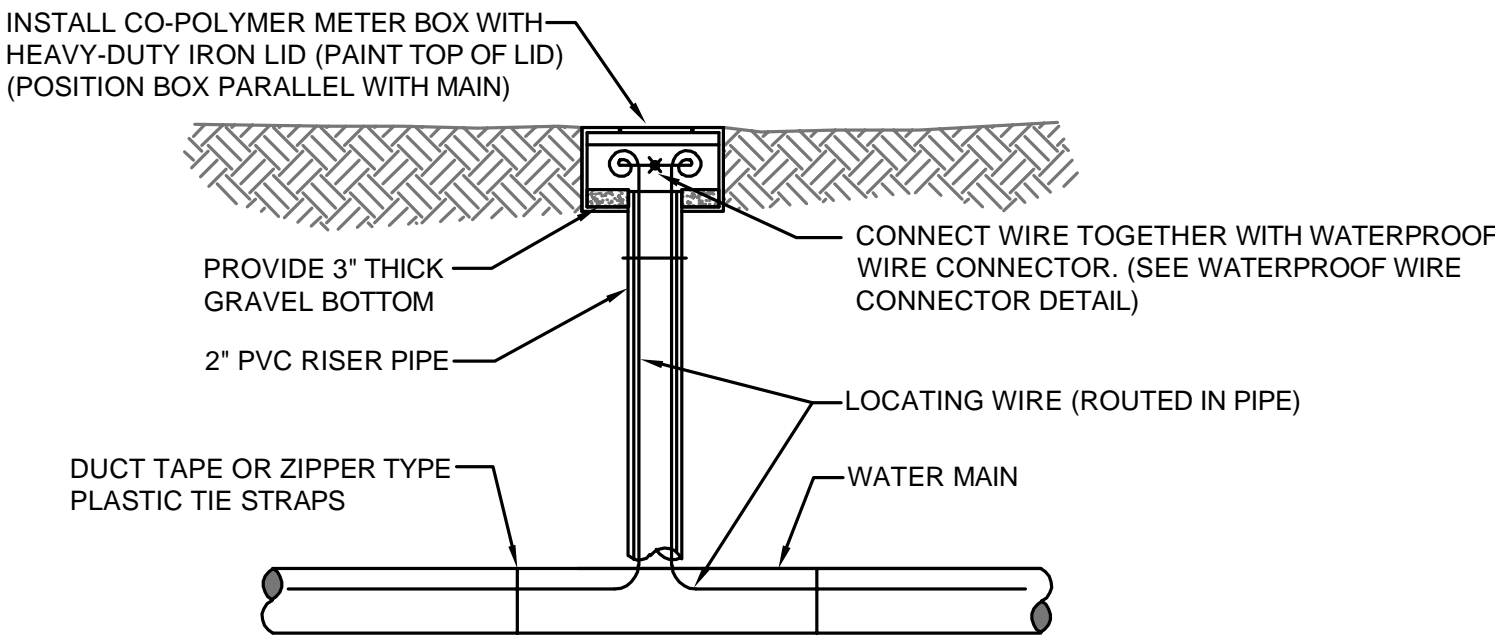
PLUGGED DEAD END USING MECHANICAL RESTRAINTS

JANUARY 2020

PLATE W-37



LOCATE WIRE BOX UTILIZING VALVE BOX



LOCATE WIRE BOX UTILIZING METER BOX

LOCATE WIRE BOX

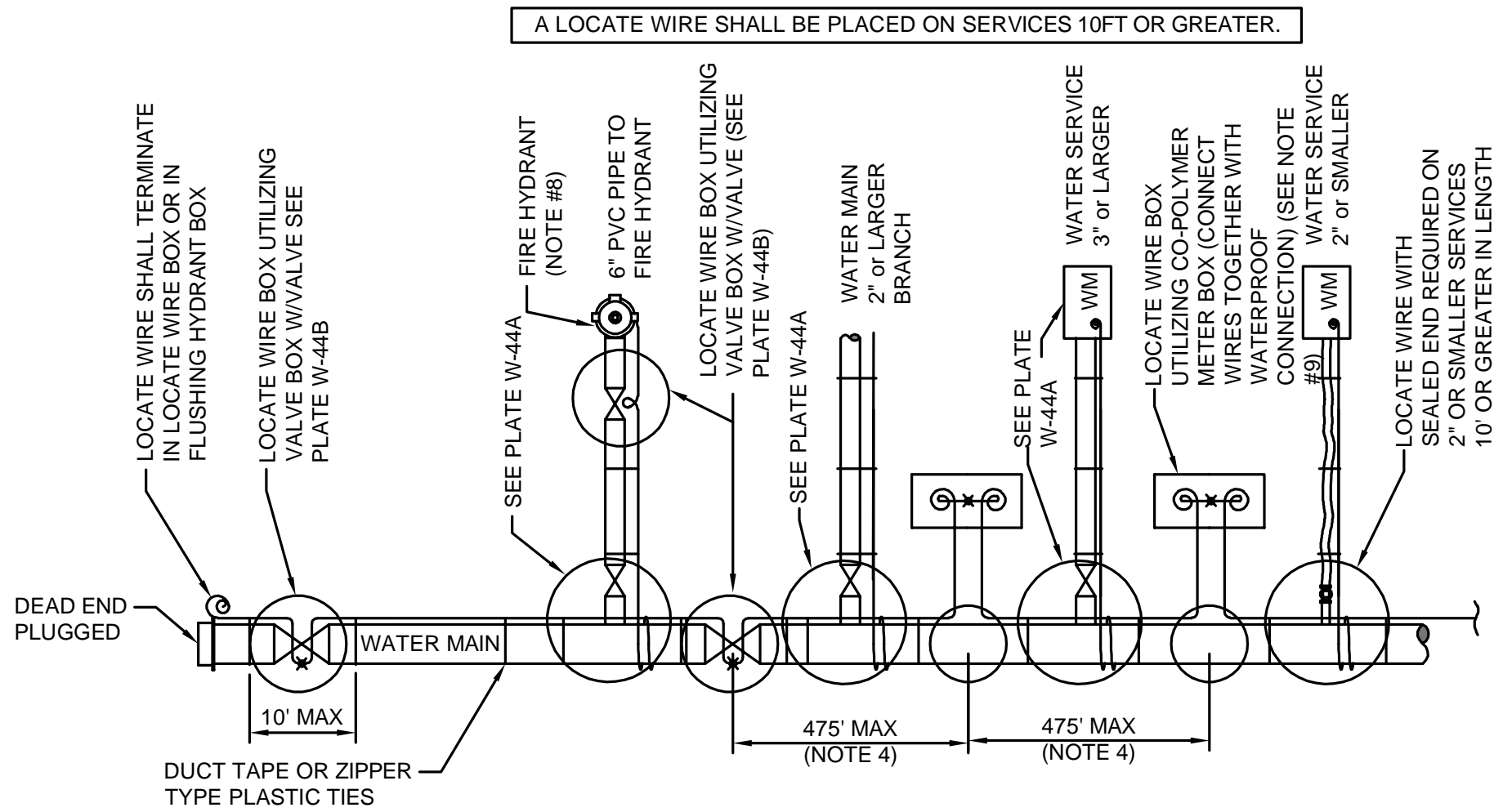
JANUARY 2020

PLATE W-44B

TEMPORARY SAMPLE TAP ALTERNATIVE METHOD A

JANUARY 2020

PLATE W-24



LOCATE WIRE SYSTEM

NOTES:

- 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).
- SECURE LOCATING WIRE TO PVC & D.I.P. WATER 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.
- 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.
- 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 W-44B. WIRE CONNECTIONS BELOW GROUND (OUTSIDE OF A BOX) SHALL BE AVOIDED.
- REFER TO SECTION 350 FOR LOCATE WIRE SPECIFICATIONS.
- *X* INDICATES THAT THE WIRES ARE CONNECTED TOGETHER WITH A WATERPROOF CONNECTION. (SEE DETAIL W-44B)
- *C* INDICATES A WIRE PIG-TAIL (4' LONG)
- FOR FIRE HYDRANT LOCATE WIRE REQUIREMENTS AND EXCLUSIONS, SEE PLATES W-12,13 AND 14.
- AN "LW" CUT SHALL BE CARVED IN THE CONCRETE CURB AND PAINTED AT ALL LOCATE WIRE BOXES.
- 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 WATER MAINS

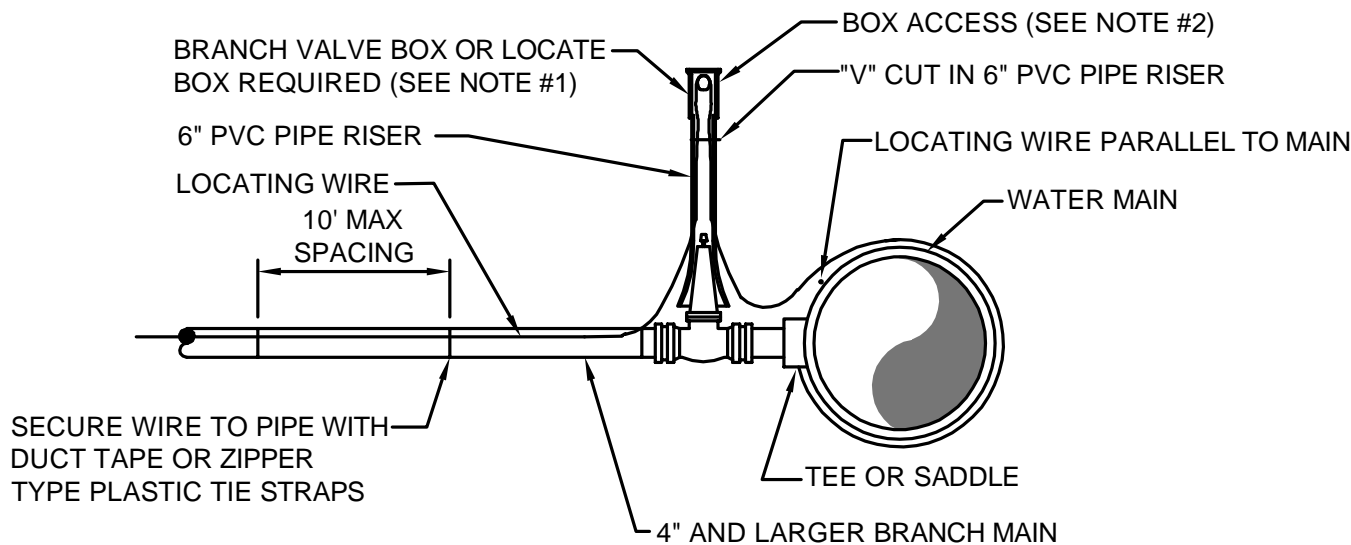
JANUARY 2020

PLATE W-44

TEMPORARY SAMPLE TAP ALTERNATIVE METHOD B

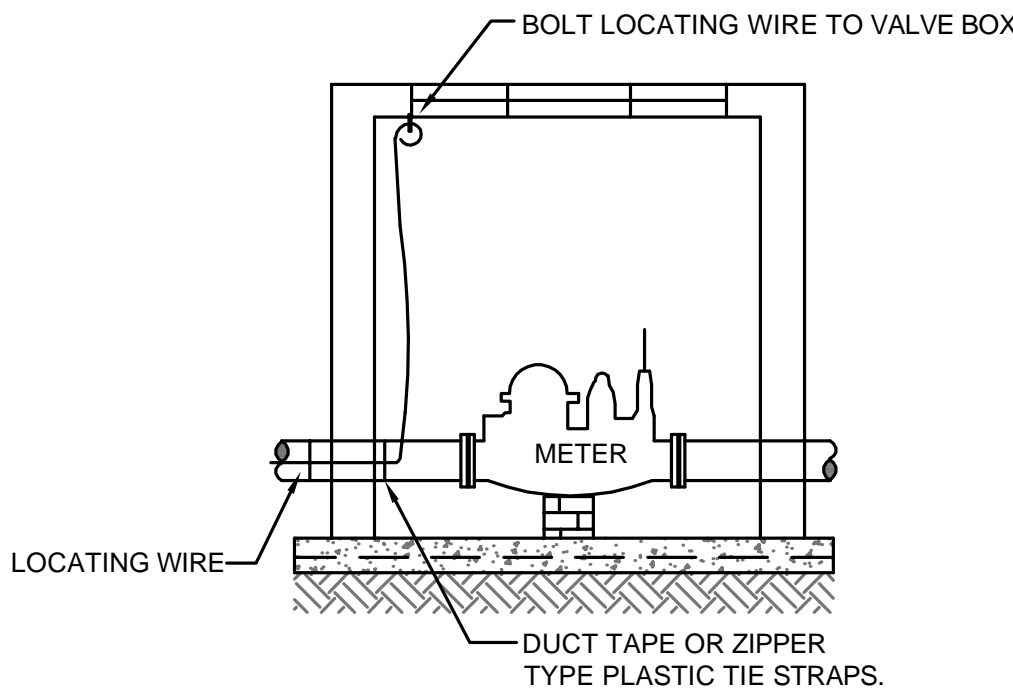
JANUARY 2020

PLATE W-24A



BRANCH FORCE MAIN

(2" AND LARGER WATER MAIN OR 3" AND LARGER WATER SERVICE PIPE)



CONNECTION AT LARGE METER BOX

(3" OR LARGER SERVICE)

NOTES:

- NOTE THAT THE BRANCH WIRE IS NOT CONNECTED TO THE MAIN WIRE.
- LOCATE WIRE SHALL ENTER THE VALVE BOX THROUGH A "V" CUT IN THE 6" PVC RISER PIPE SECTION (SEE W-18).
- LOCATE WIRE SHALL HAVE ENOUGH SLACK TO REACH 4' ABOVE FINAL GRADE AND LOCATE POINTS.

LOCATE WIRE FOR BRANCH MAIN

JANUARY 2020

PLATE W-44A

England, Thoms & Miller, Inc.
14775 Old St. Augustine Road
Jacksonville, FL 32218
TEL: (904) 442-9890
FAX: (904) 442-9895
CA 0002894 LC 0000316

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DESIGN ENGINEER
ANDREW J. BOOTH
FLORIDA REGISTRATION NO.
82302

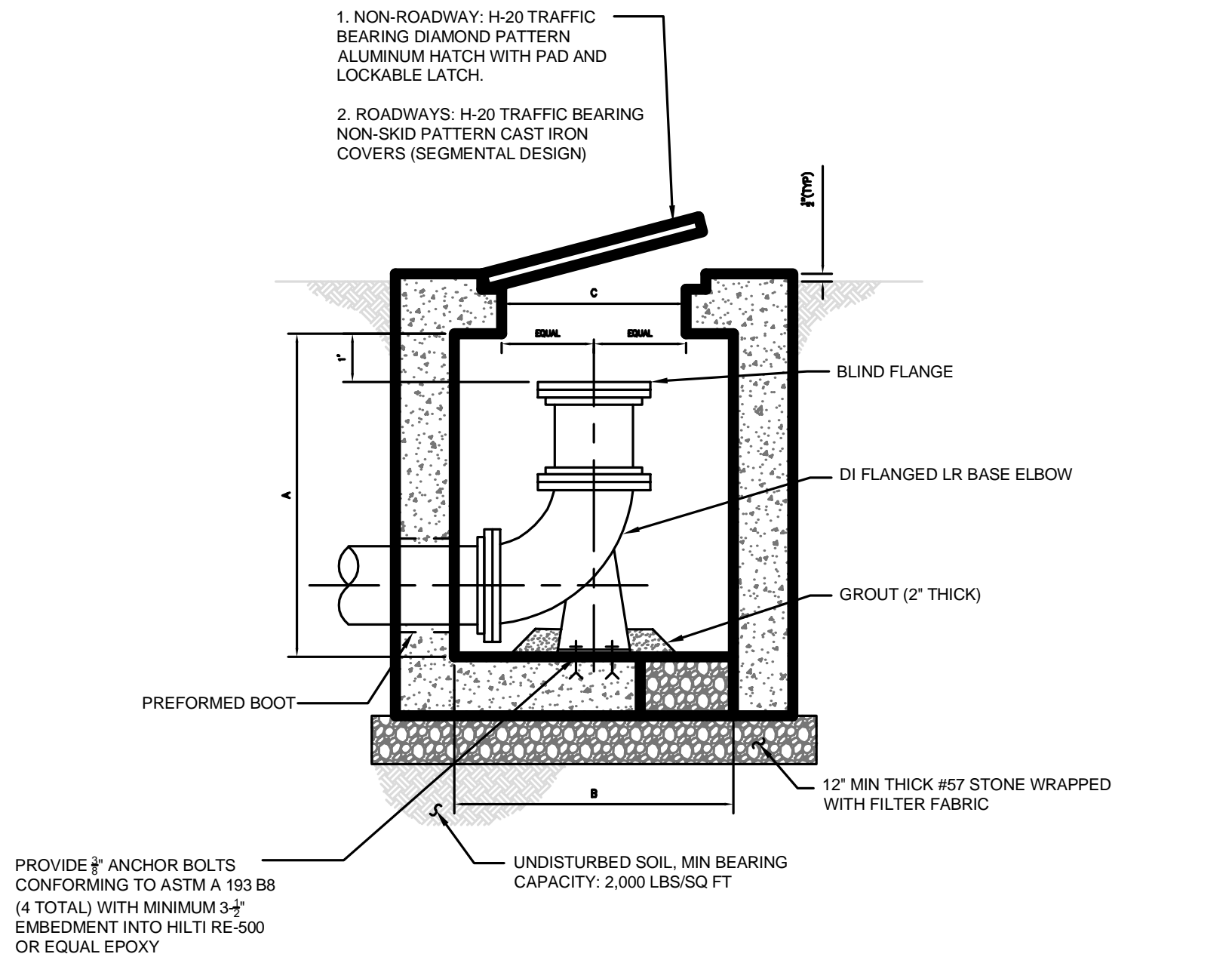
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DRAWN BY:
DATE:
CHECKED BY:
DATE:



JEA STANDARD
WATER AND RECLAIM DETAILS
NASSAU CARWASH SITE

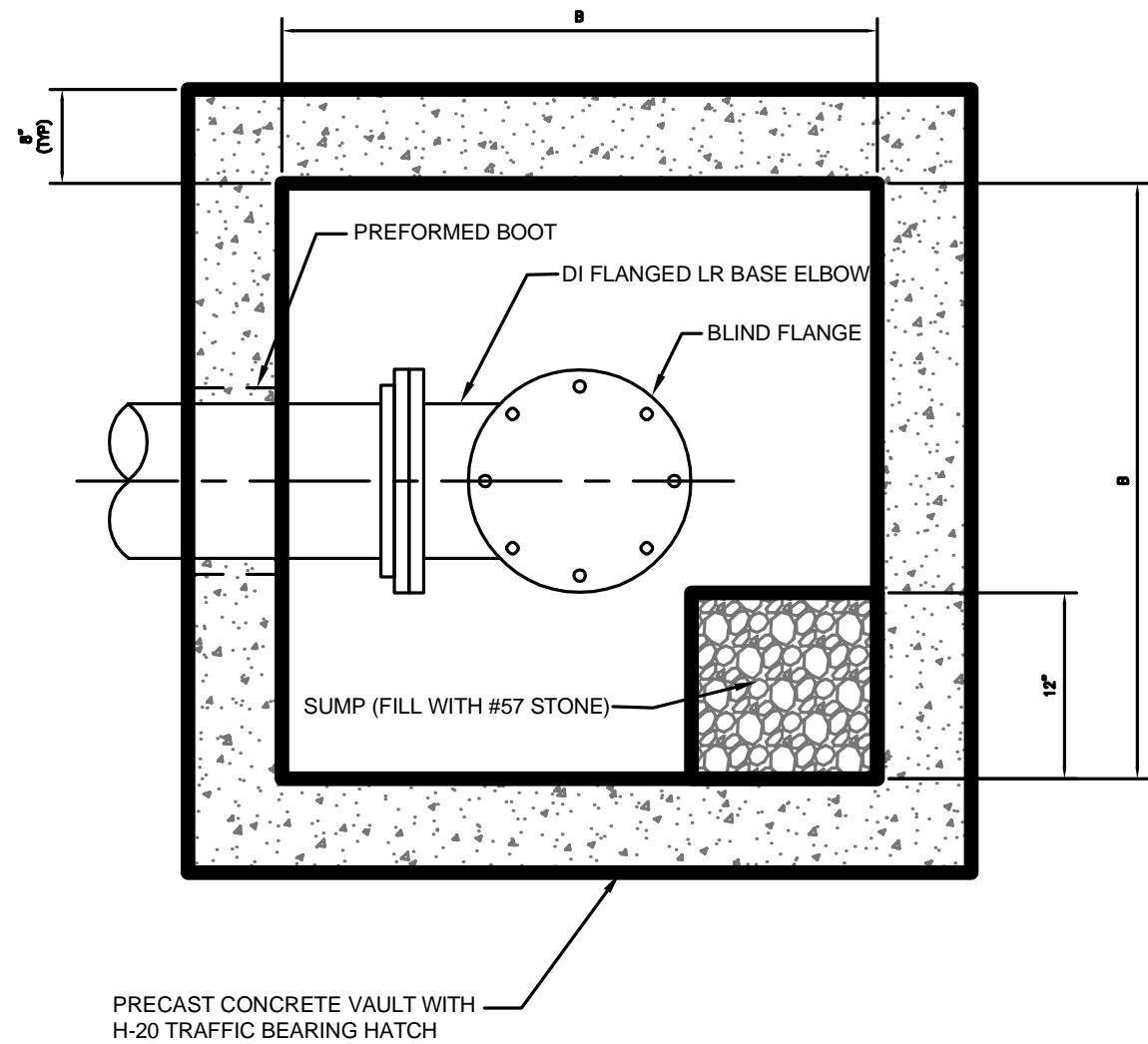
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SHEET NO.	SCALE:	AS NOTED
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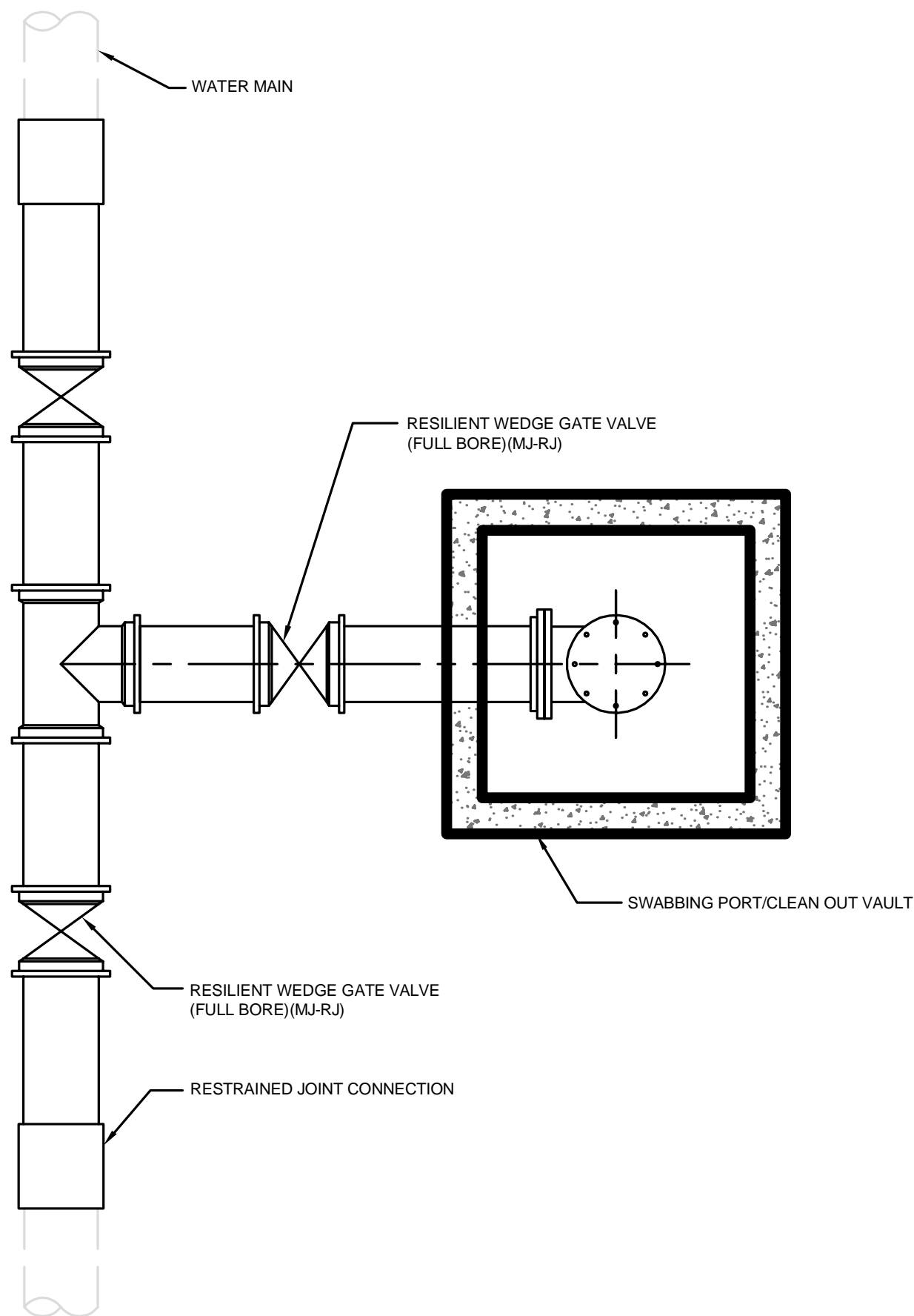
SWABBING PORT AND CLEAN OUT VAULT DETAIL - SECTION

JANUARY 2020 PLATE W-45



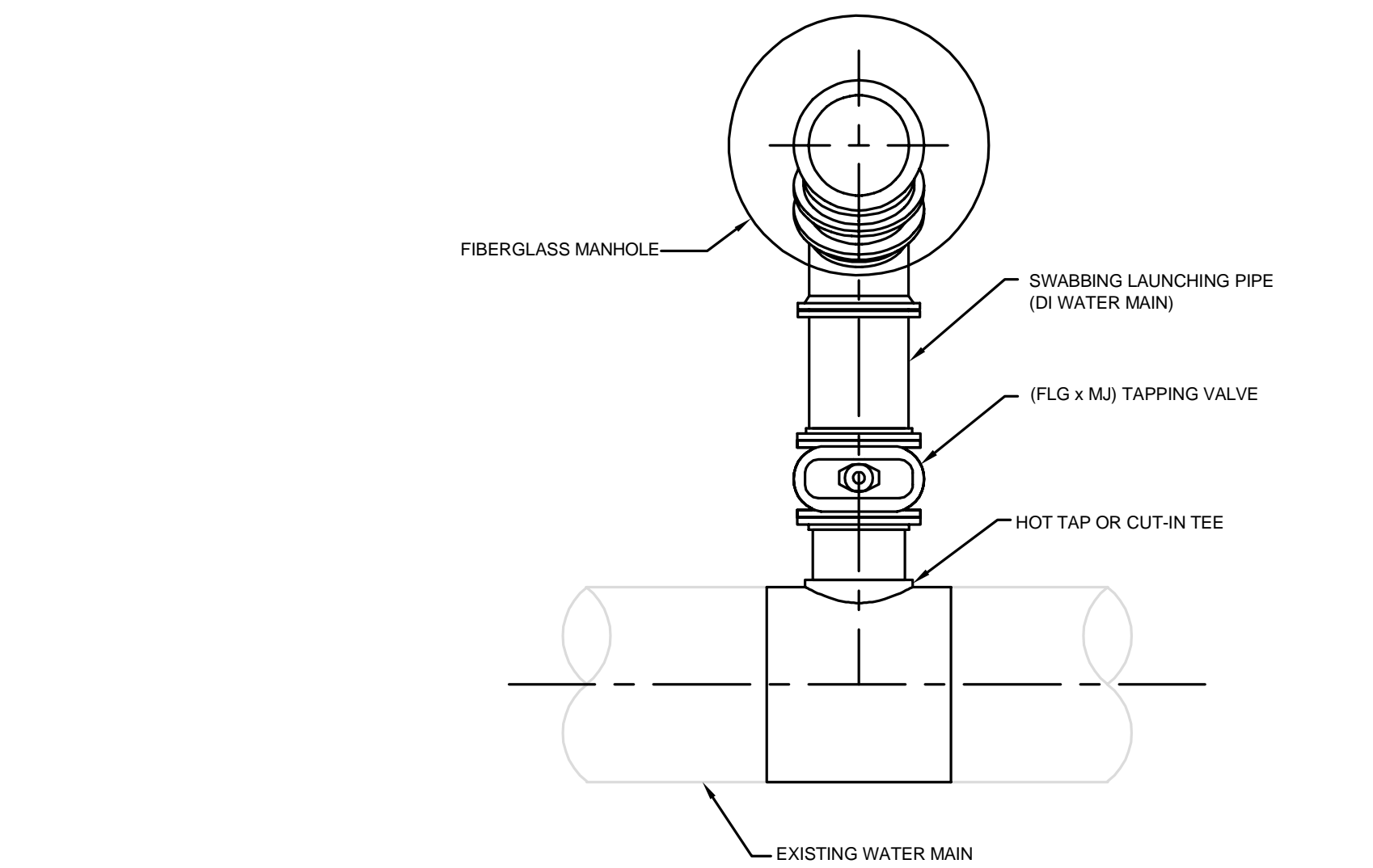
SWABBING PORT AND CLEAN OUT VAULT DETAIL - PLAN

JANUARY 2020 PLATE W-45A



SWABBING LAUNCHING STATION DETAIL FOR NEW WATER MAIN UP TO 24"

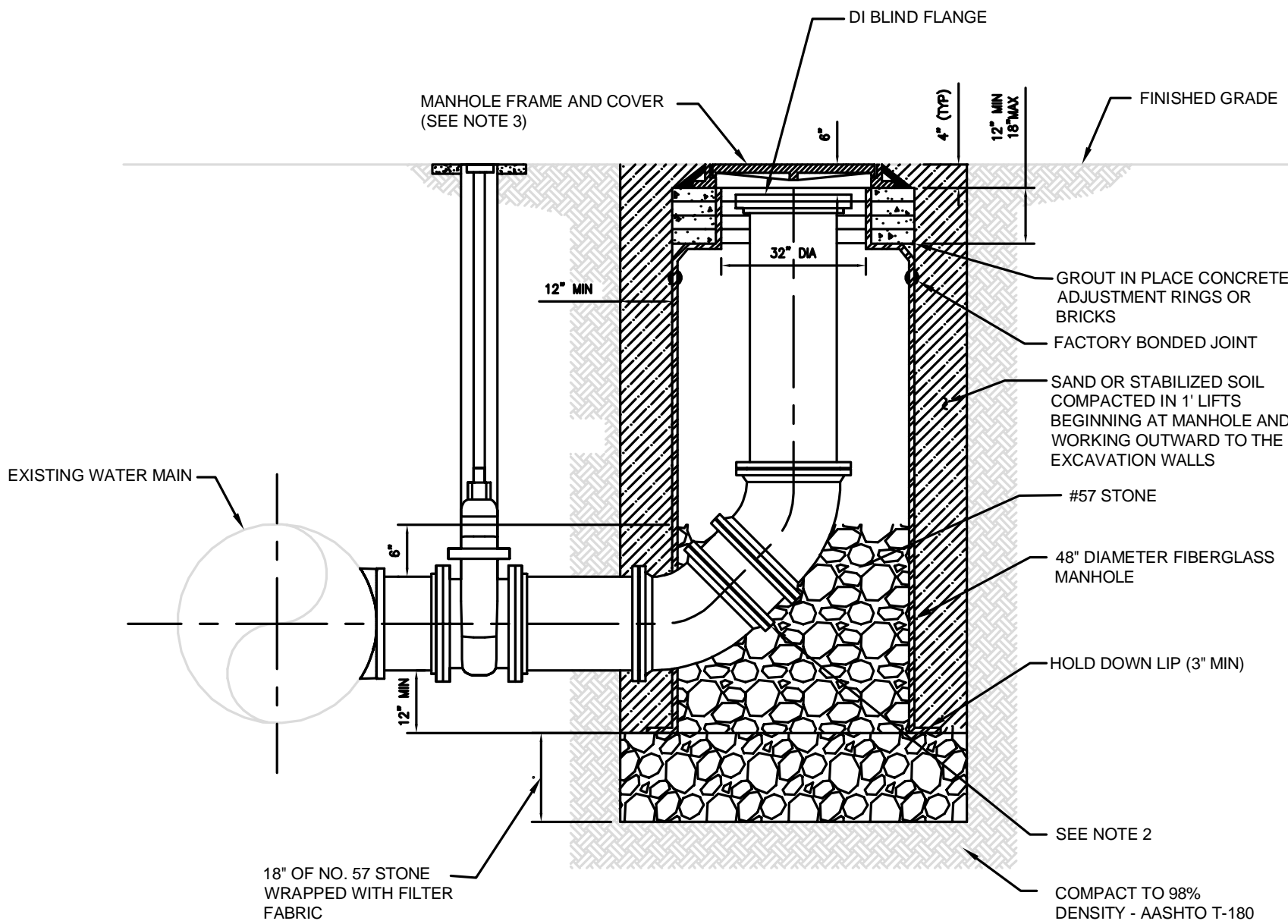
JANUARY 2020 PLATE W-45B



- NOTES:
- FOR HOT TAP CONNECTIONS ON EXISTING WATER MAINS 10" DIAMETER AND GREATER, DIAMETER OF TAPPING VALVE AND PIG LAUNCHING PIPE SHALL BE ONE NOMINAL SIZE LESS THAN EXISTING WATER MAIN.

SWABBING PIG LAUNCHING STATION DETAIL FOR WATER MAINS UP TO 24" - PLAN

JANUARY 2020 PLATE W-45C



- NOTES:
- PROVIDE ALL MATERIALS IN ACCORDANCE TO JEA WATER AND WASTEWATER STANDARD SPECIFICATIONS.
 - USE TWO VERTICAL 45 DEGREE MJ BENDS OR LONG RADIUS 90 DEGREE MJ BEND.
 - PROVIDE STANDARD JEA FRAME AND COVER.
 - RESTRAIN ALL JOINTS.

RETROFIT SWABBING LAUNCHING STATION DETAIL FOR WATER MAINS UP TO 24" - SECTION

JANUARY 2020 PLATE W-45D

England, Thoms & Miller, Inc.
14175 Old St. Augustine Road
Jacksonville, FL 32218
TEL: (904) 642-9890
FAX: (904) 642-9891
CA 00002894 LC 0000316

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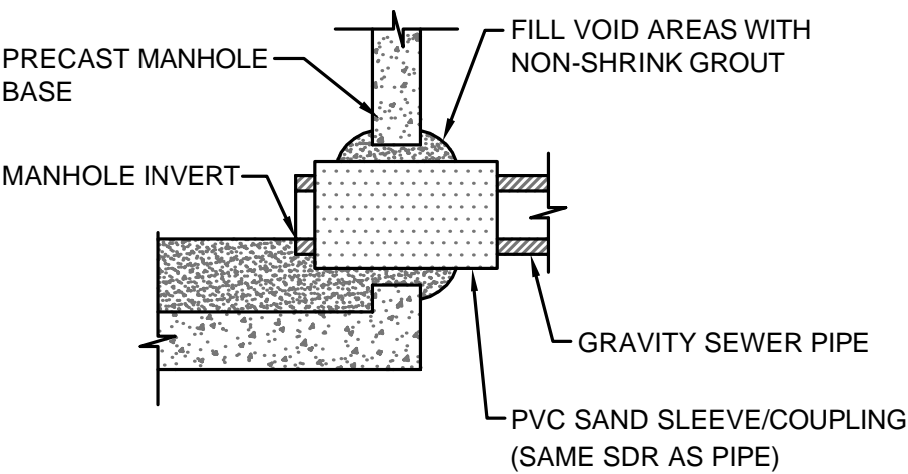
DESIGNER:	DESIGN ENGINEER
ANDREW J. BOOTH	ANDREW J. BOOTH
FLORIDA REGISTRATION NO. 82302	

PROJ. NO.	DATE	SCALE
20-207	JANUARY 2020	AS NOTED

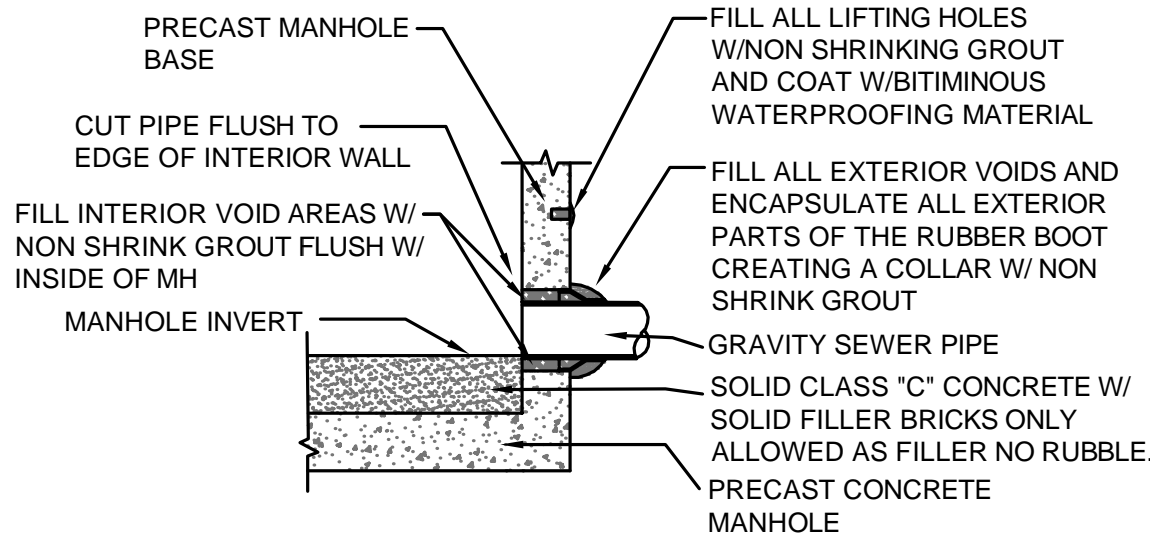
NO. SHEETS	SHEET NO.	DRAWING NO.
6	6	9F

JEA STANDARD
WATER AND RECLAIM DETAILS
NASSAU CARWASH SITE

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PVC SAND SLEEVE
(FOR EXISTING AND NEW M/H CONSTRUCTION)

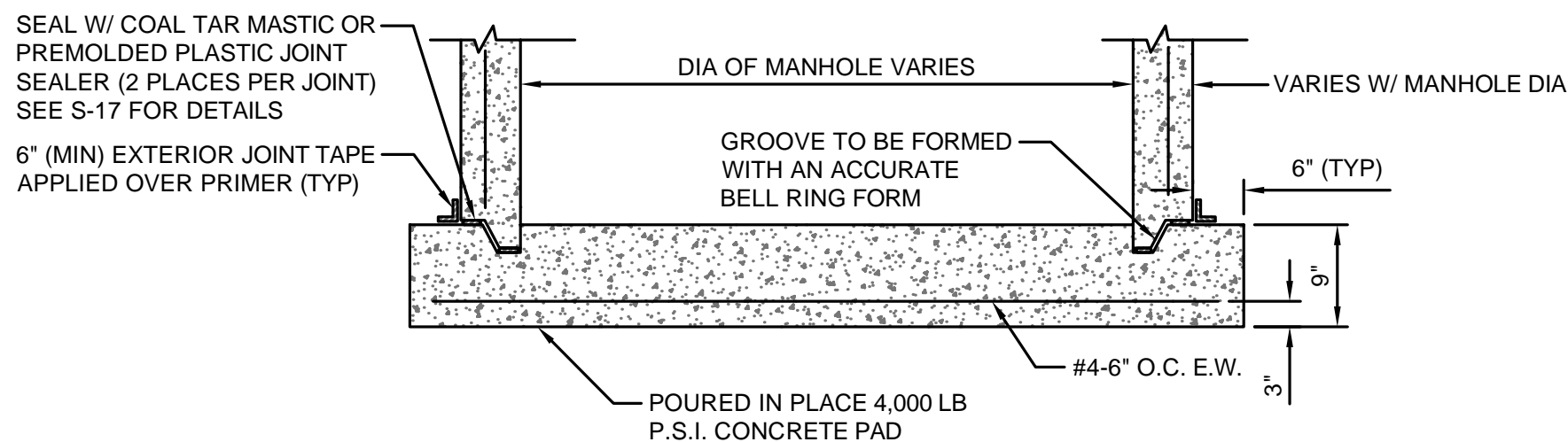


NOTES:

RUBBER BOOT, DOUBLE BANDED, 316 S/S CLAMPS, MEETING THE ASTM C923 STANDARD. Kor-N-Seal® I EX SERIES CONNECTOR WITH DOUBLE STAINLESS STEEL BANDS OR EQUAL

RUBBER BOOT

(FOR NEW M/H CONSTRUCTION ONLY, MAXIMUM DEPTH 15FT)



NOTES:

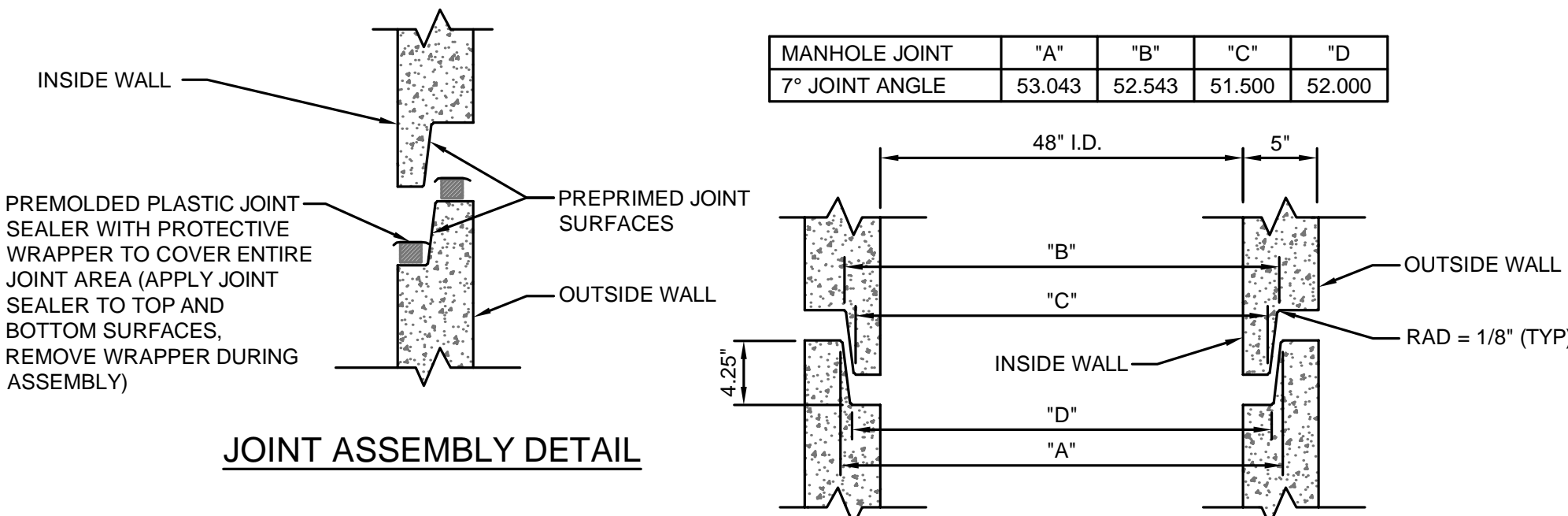
THE USE OF THE POURED IN PLACE MANHOLE BOTTOM SHALL BE MINIMIZED AND SHALL BE SPECIFICALLY APPROVED BY JEA PRIOR TO CONSTRUCTION.

MANHOLE BOTTOM

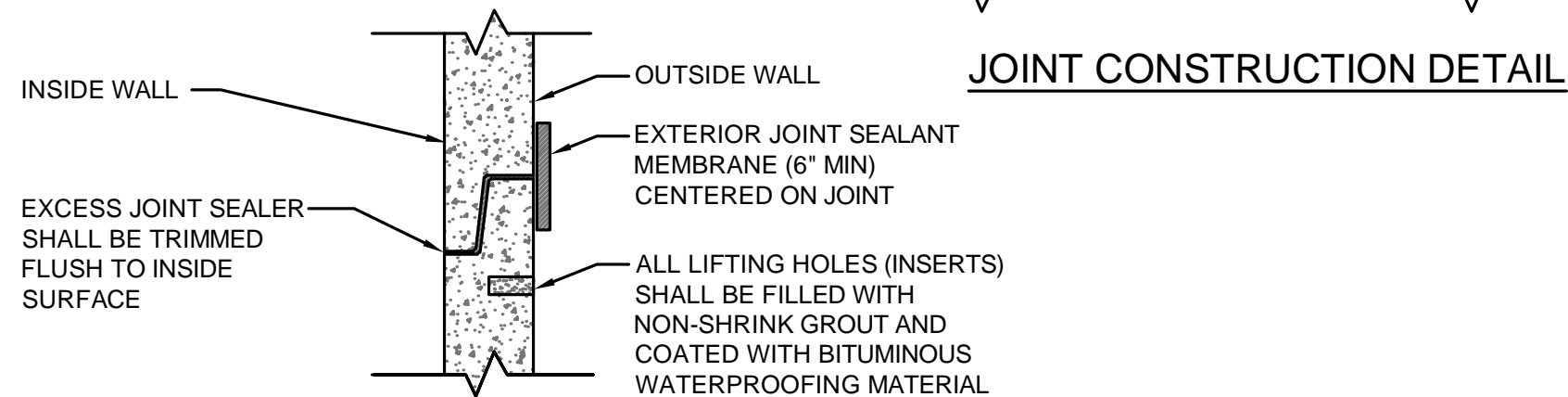
MANHOLE PIPE CONNECTION DETAIL

JANUARY 2020

PLATE S-15



JOINT ASSEMBLY DETAIL

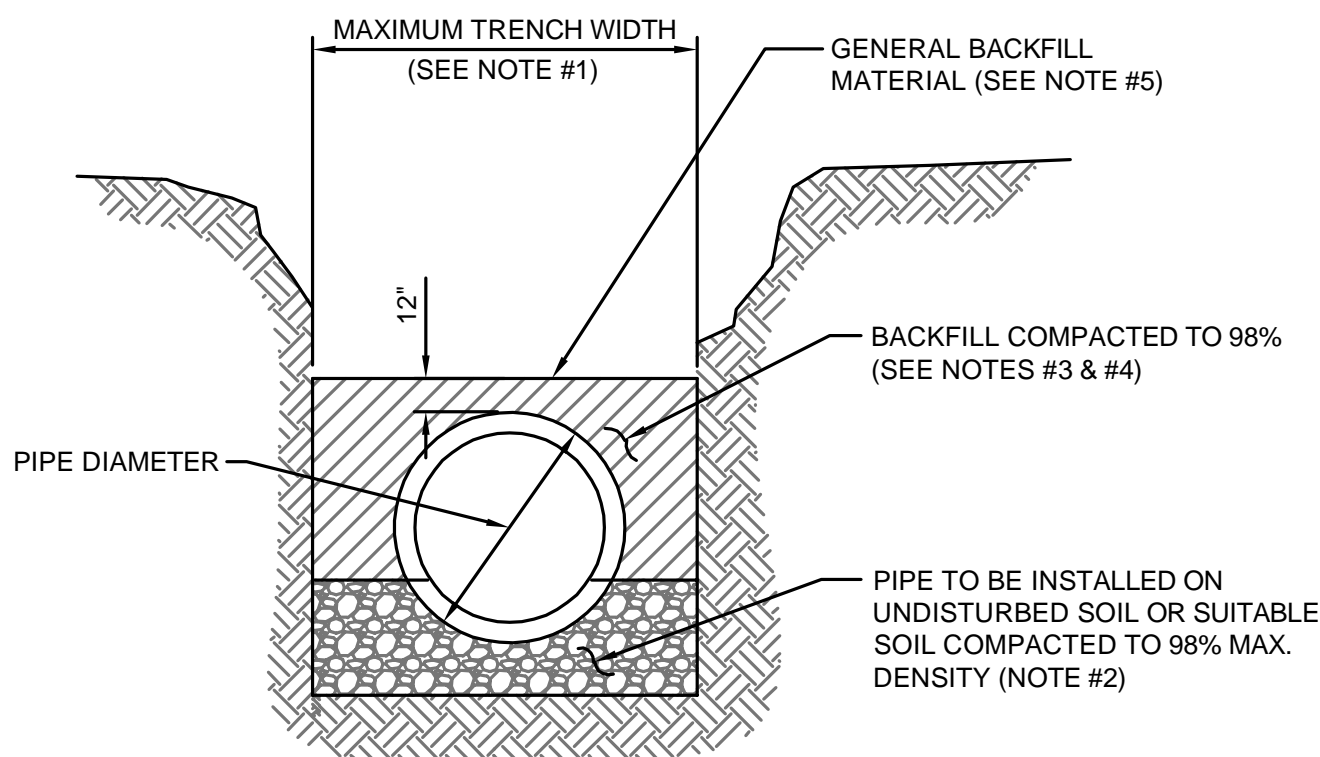


COMPLETED JOINT DETAIL

PRECAST SEWER MANHOLE JOINT DETAIL

JANUARY 2020

PLATE S-17



TYPICAL TRENCH

NOTES:

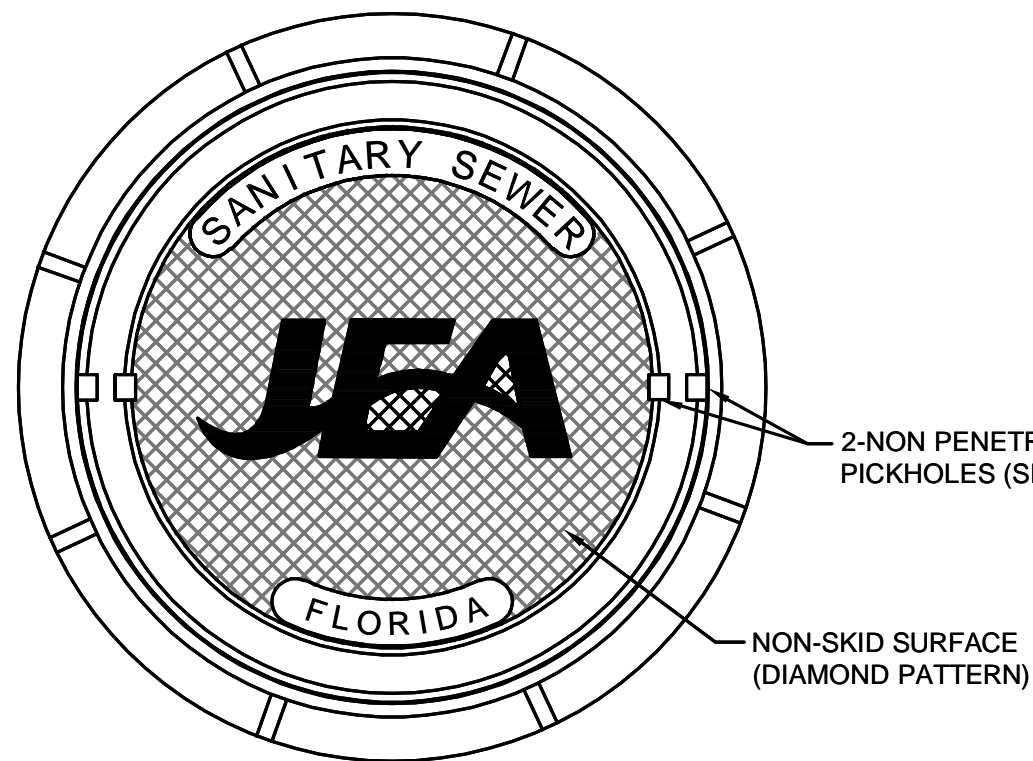
- TRENCH SIDES SHALL BE APPROXIMATELY VERTICAL BETWEEN AN ELEVATION OF 1 FOOT ABOVE THE TOP OF THE PIPE AND THE CENTER LINE OF THE PIPE; OTHERWISE, TRENCH SIDES SHALL BE AS VERTICAL AS POSSIBLE OR AS REQUIRED BY OSHA STANDARDS. REFER TO THE MEASUREMENT AND PAYMENT SECTION (SECTION #801, PARAGRAPH #4J) 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 ITS 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

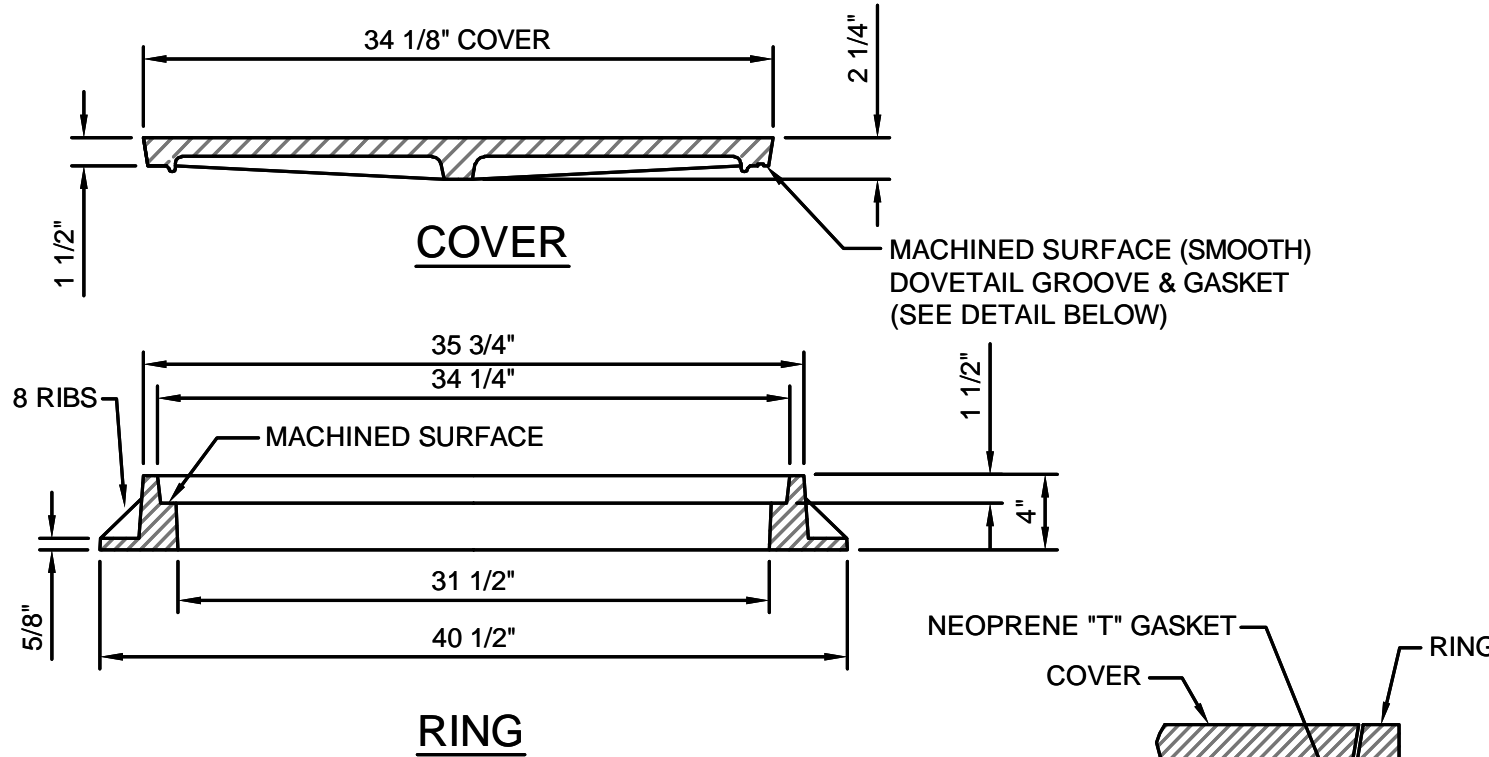
JANUARY 2020

IN CITY RIGHT -OF-WAY

PLATE W-42



PICKHOLE DETAIL



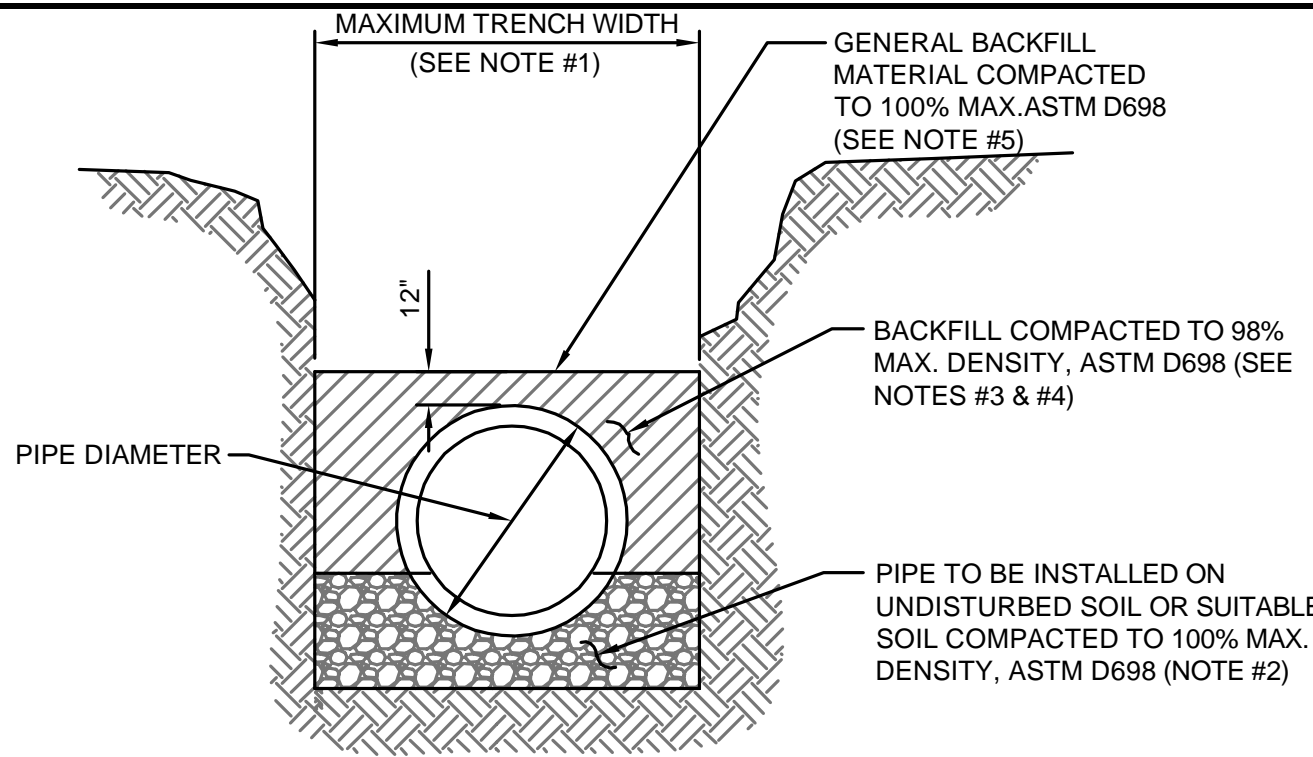
NOTES:

- MATERIAL: ASTM A-48 CLASS 35B GRAY IRON.
- RING WEIGHT 230 LBS APPROX.
- COVER WEIGHT 230 LBS. APPROX.
- ALL DIMENSIONS ARE SHOWN IN INCHES.
- FOR MANHOLES WHICH WILL BE MAINTAINED BY JEA (INCLUDING UTILITY DEDICATION PROJECTS), THE COVER SHALL INCLUDE THE "JEA" LOGO AND A NEOPRENE GASKET.
- FOR MANHOLES WHICH WILL BE MAINTAINED BY PARTIES OTHER THAN JEA (SUCH AS PRIVATE SEWER COLLECTION SYSTEMS, PRIVATE (FORCE MAIN) PUMP OUT BOX AND SYSTEMS NOT MAINTAINED BY JEA), THE COVER SHALL INCLUDE "SANITARY SEWER" GENERIC LETTERING (NO "JEA" LOGO OR NEOPRENE GASKET).

SANITARY SEWER MANHOLE FRAME AND COVER

JANUARY 2020

PLATE S-1



TYPICAL TRENCH

NOTES:

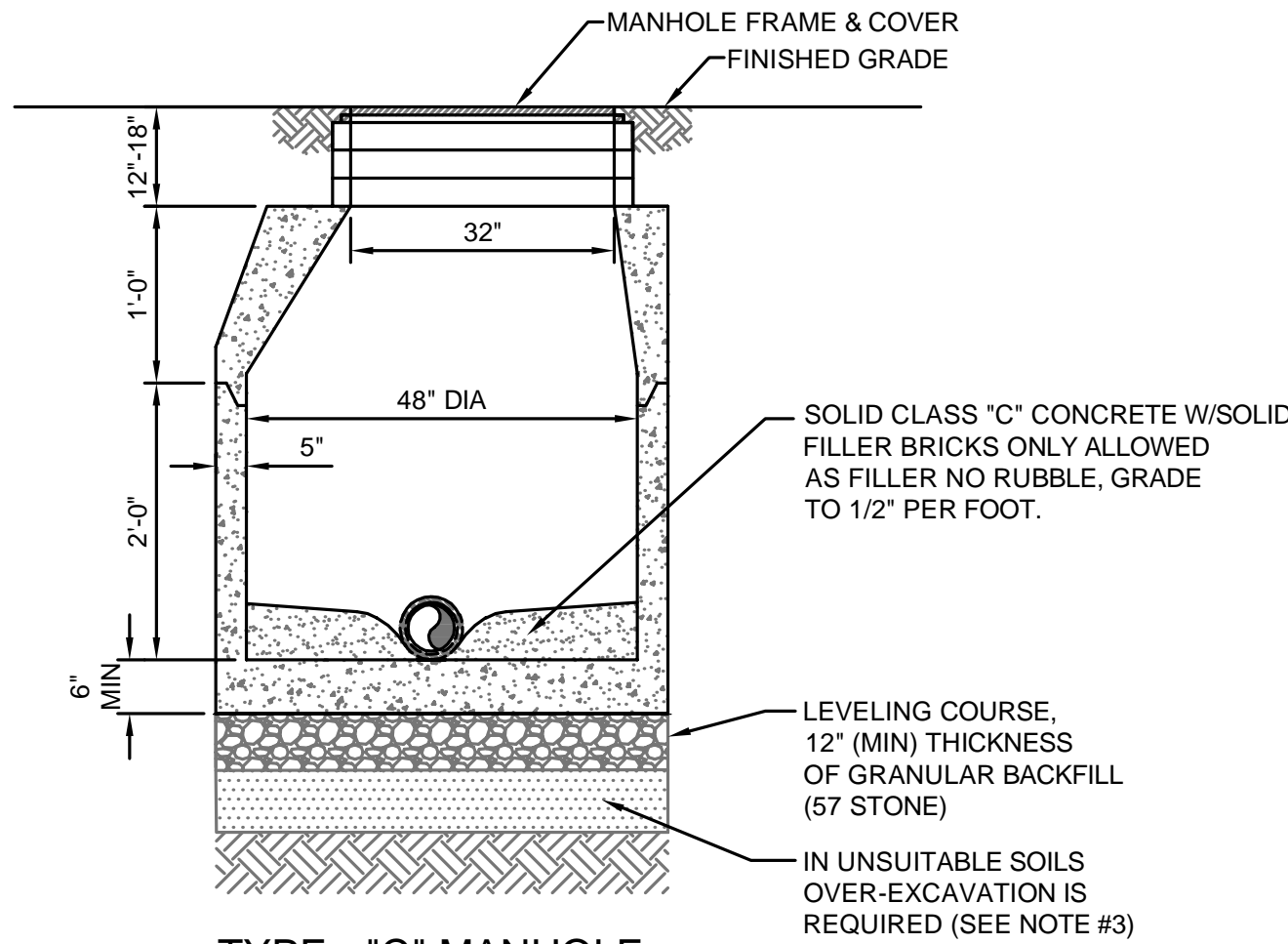
- TRENCH SIDES SHALL BE APPROXIMATELY VERTICAL BETWEEN AN ELEVATION OF 1 FOOT ABOVE THE TOP OF THE PIPE AND THE CENTER LINE OF THE PIPE; OTHERWISE, TRENCH SIDES SHALL BE AS VERTICAL AS POSSIBLE OR AS REQUIRED BY OSHA STANDARDS. REFER TO THE MEASUREMENT AND PAYMENT SECTION (SECTION #801, PARAGRAPH #4J) 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 ITS 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

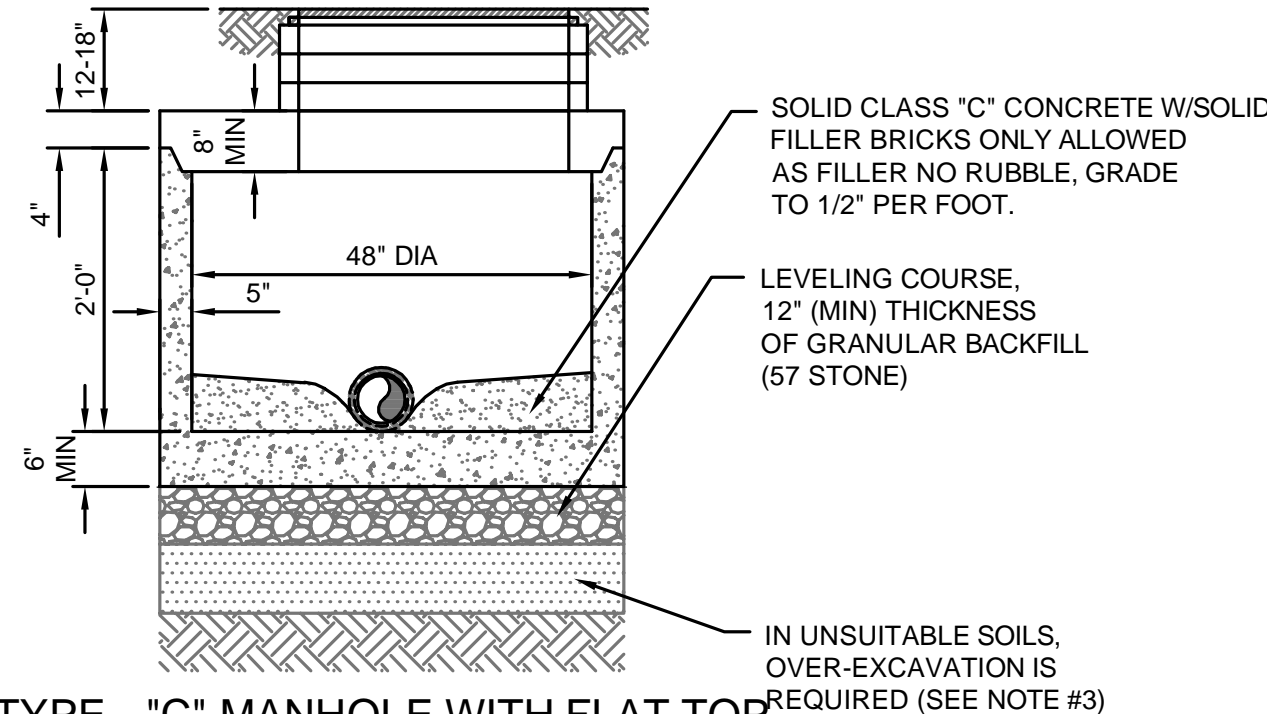
JANUARY 2020

IN STATE ROAD RIGHT -OF-WAY

PLATE W-42A



TYPE - "C" MANHOLE



**TYPE - "C" MANHOLE WITH FLAT TOP
SECTION VIEWS**

NOTES:

- PRECAST MANHOLE SECTIONS TO BE MANUFACTURED IN ACCORDANCE WITH THE LATEST EDITIONS OF A.S.T.M. C-478 WITH 4000 LB. CONC., TYPE II CEMENT. ALL LIFTING HOLES AND OUTSIDE INSERTS SHALL BE FILLED WITH NON-SHRINK GROUT AND COATED WITH BITUMINOUS WATERPROOFING MATERIAL.
- THE INTERIOR AND EXTERIOR OF MANHOLE AND INTERIOR OF ADJUSTMENT RINGS SHALL BE GIVEN TWO COAT OF BITUMINOUS WATERPROOFING MATERIAL.
- IN SILTS, CLAY OR HIGHLY ORGANIC SOILS (FINE-GRAINED SOILS INCLUDING SOIL GROUPS ML, CL, OL, MH, CH, OH AND PT) THE SOILS SHALL BE OVER-EXCAVATED AN ADDITIONAL 24" (AT A MIN.) AND BACKFILLED WITH AASHTO CLASS A-3 SOIL (COMPACTED TO 98%, ASTM D1557) OR OVER-EXCAVATE AN ADDITIONAL 12" (AT A MIN.) AND BACKFILL WITH GRANULAR BACKFILL (57 STONE).

**SANITARY SEWER TYPE "C" MANHOLE
8"-21" SEWERS**

JANUARY 2020

PLATE S-6

England, Thoms & Miller, Inc.
14175 Old St. Augustine Road
Jacksonville, FL 32218
TEL: (904) 644-9890
FAX: (904) 644-1545
CA 0002894 LC 0000316

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DRAWN BY:
DATE:
CHECKED BY:
DATE:

DESIGN ENGINEER:
ANDREW J. BOOTH
FLORIDA REGISTRATION NO.:
82302

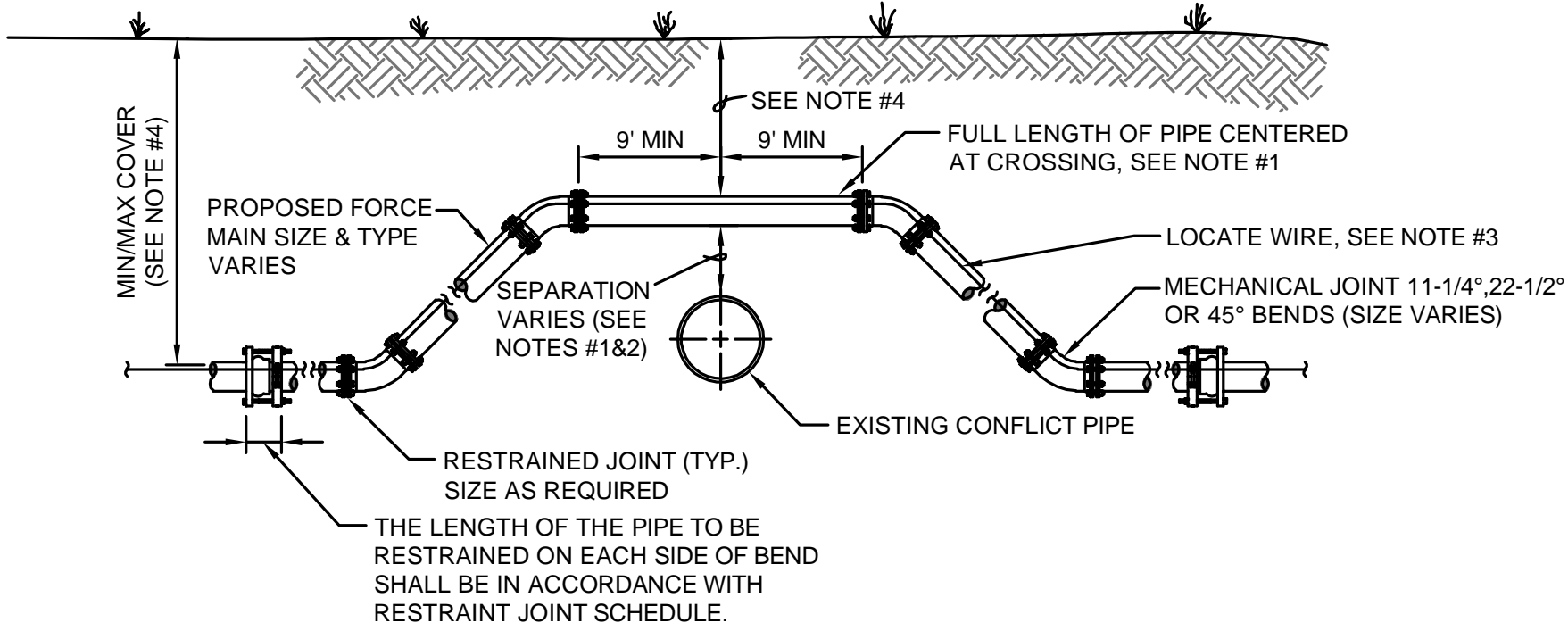
JEA STANDARD
SANITARY SEWER DETAILS
NASSAU CARWASH SITE

PROJ. NO.: 20-207
DATE: JANUARY 2020
SCALE: AS NOTED

NO. SHEETS: 2
SHEET NO.: 5
DRAWING NO.: 10B

REVISIONS:
NO. BY DATE
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CASE "A" CROSSING

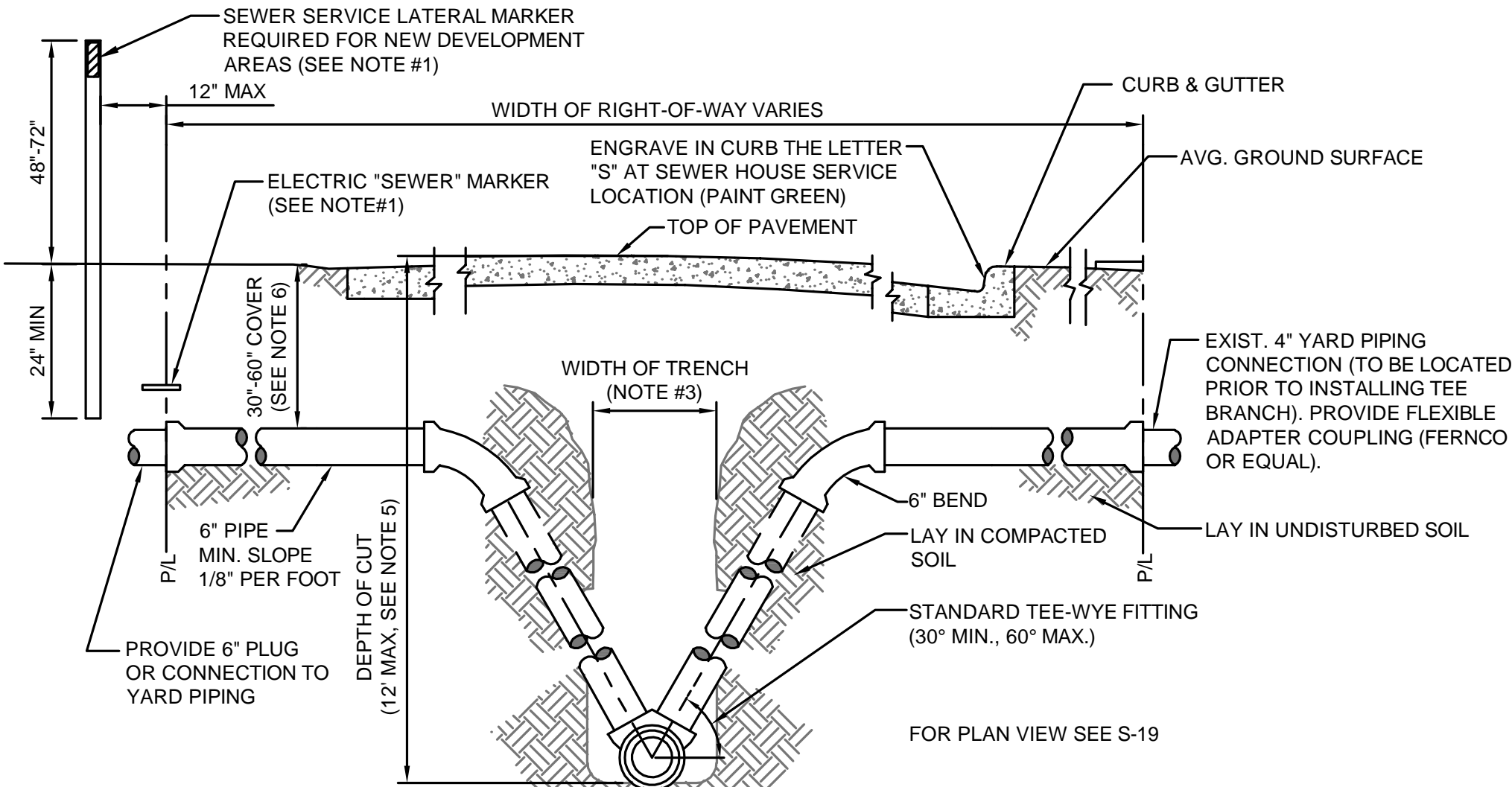
NOTES:

- 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.
- FOR OTHER LOCATION LIMITATIONS SEE DETAIL (S-26 & S-27).
- LOCATING WIRE REQUIRED: SEE DETAIL S-49.
- 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.
- 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 OVER EXISTING UTILITIES
MECHANICAL RESTRAINTS

JANUARY 2020

PLATE S-39



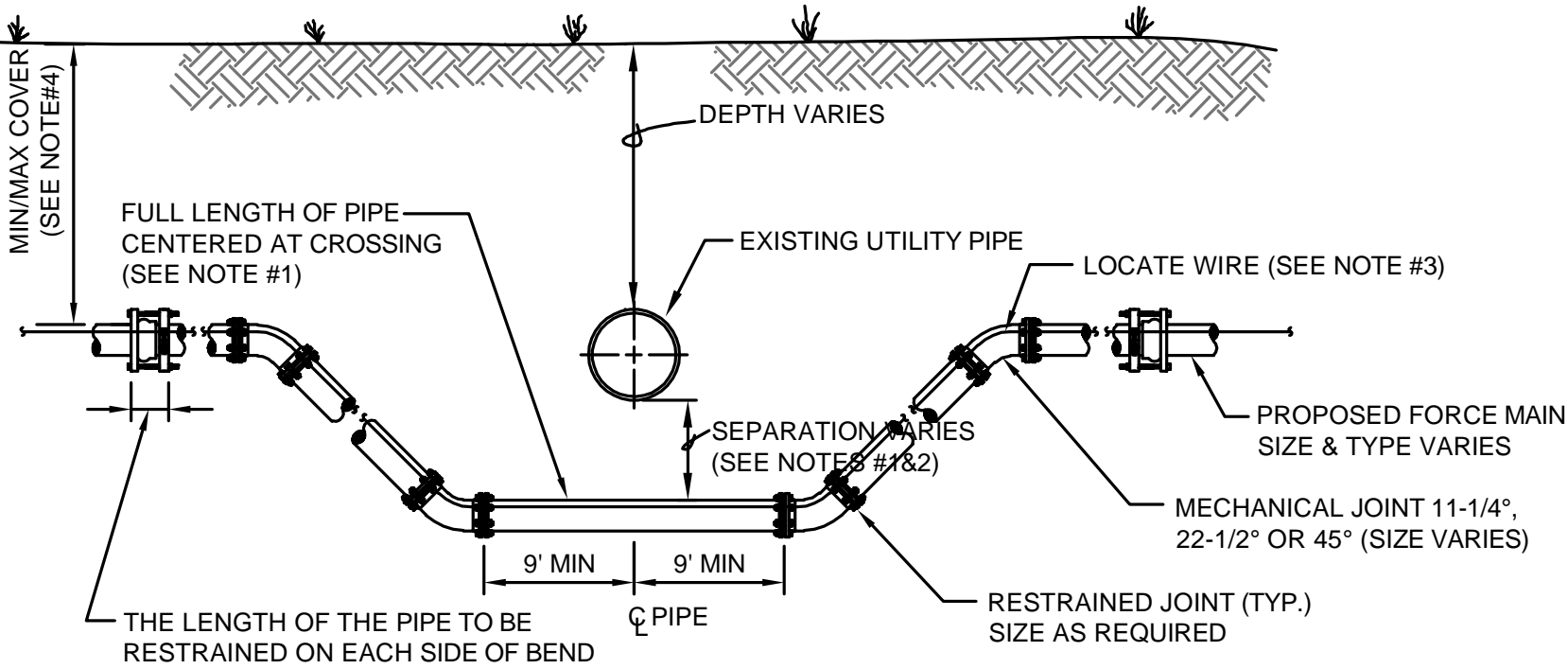
NOTES:

- TO MARK THE LOCATION OF THE 6" PLUG FOR NEW SERVICE: FOR PROJECTS WHERE NO CONCRETE CURB EXIST, AN ELECTRONIC "SEWER" MARKER IS REQUIRED FOR ALL LATERALS WHICH ARE "NOT" IN USE". FOR NEW DEVELOPMENT AREAS WHERE THE SEWER LATERAL IS "NOT" IN USE", A LANDSCAPE TIMBER OR 3x3 MIN. P.T. POST (TOP PAINTED GREEN) SHALL BE INSTALLED. WHERE REQUIRED BY JEA OR NO CONCRETE CURB EXIST, AN ELECTRONIC "SEWER" MARKER SHALL BE INSTALLED TO MARKER SHALL ALSO BE INSTALLED.
- THE MINIMUM SIZE OF ALL HOUSE LATERALS SHALL BE 6 INCHES. THE MAXIMUM LENGTH OF A HOUSE LATERAL SHALL BE 60 FEET (LENGTH BETWEEN SEWER MAIN OR MANHOLE TO CUSTOMERS PROPERTY LINE).
- SEE MEASUREMENT AND PAYMENT SECTION FOR MAXIMUM PAYMENT WIDTHS.
- ALL GRAVITY SEWER MAINS AND ASSOCIATED SEWER LATERAL PIPE AND FITTINGS (INCLUDING THE TEE-WYE FITTING) SHALL BE PVC SDR-26.
- UNLESS APPROVED OTHERWISE BY A JEA O&M MANAGER, NO GRAVITY SEWER MAIN WITH SEWER SERVICE LATERALS SHALL BE CONSTRUCTED WITH A "DEPTH OF CUT" GREATER THAN 12 FEET.
- SEWER SERVICE LATERALS ASSOCIATED WITH GRAVITY SEWER MAINS WHICH ARE DEEPER THAN 12 FEET, MUST BE ROUTED TO A GRAVITY SEWER HIGH-LINE, A MANHOLE OR OTHER JEA APPROVED METHOD.
- THE SEWER SERVICE LATERAL SHALL BE CONSTRUCTED AT A DEPTH TO ALLOW A GRAVITY CONNECTION BY THE CUSTOMER, WHERE POSSIBLE (CONTINGENT UPON MEETING THE CUSTOMER'S ON-SITE CONDITIONS AND LOCAL CONSTRUCTION STANDARDS). A LATERAL REQUIRING MORE THAN 60" OF COVER MUST BE APPROVED, PRIOR TO CONSTRUCTION, BY JEA.

HOUSE LATERAL - SECTION VIEW

JANUARY 2020

PLATE S-20



CASE "B" CROSSING

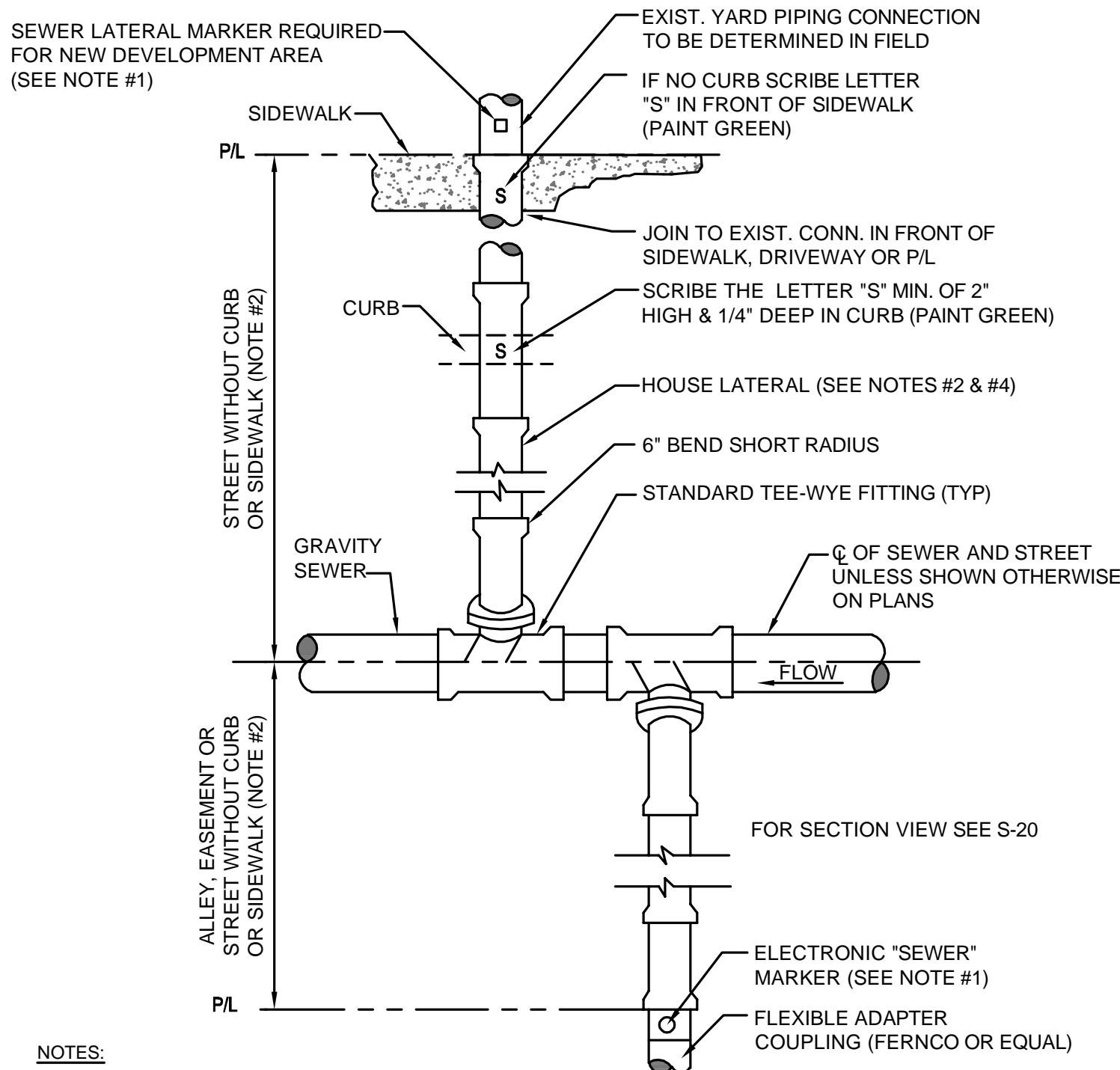
NOTES:

- 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.
- FOR OTHER LOCATION LIMITATIONS SEE DETAIL (S-26 & S-27).
- LOCATING WIRE REQUIRED: SEE DETAIL S-49.
- 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.
- 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 2020

PLATE S-41



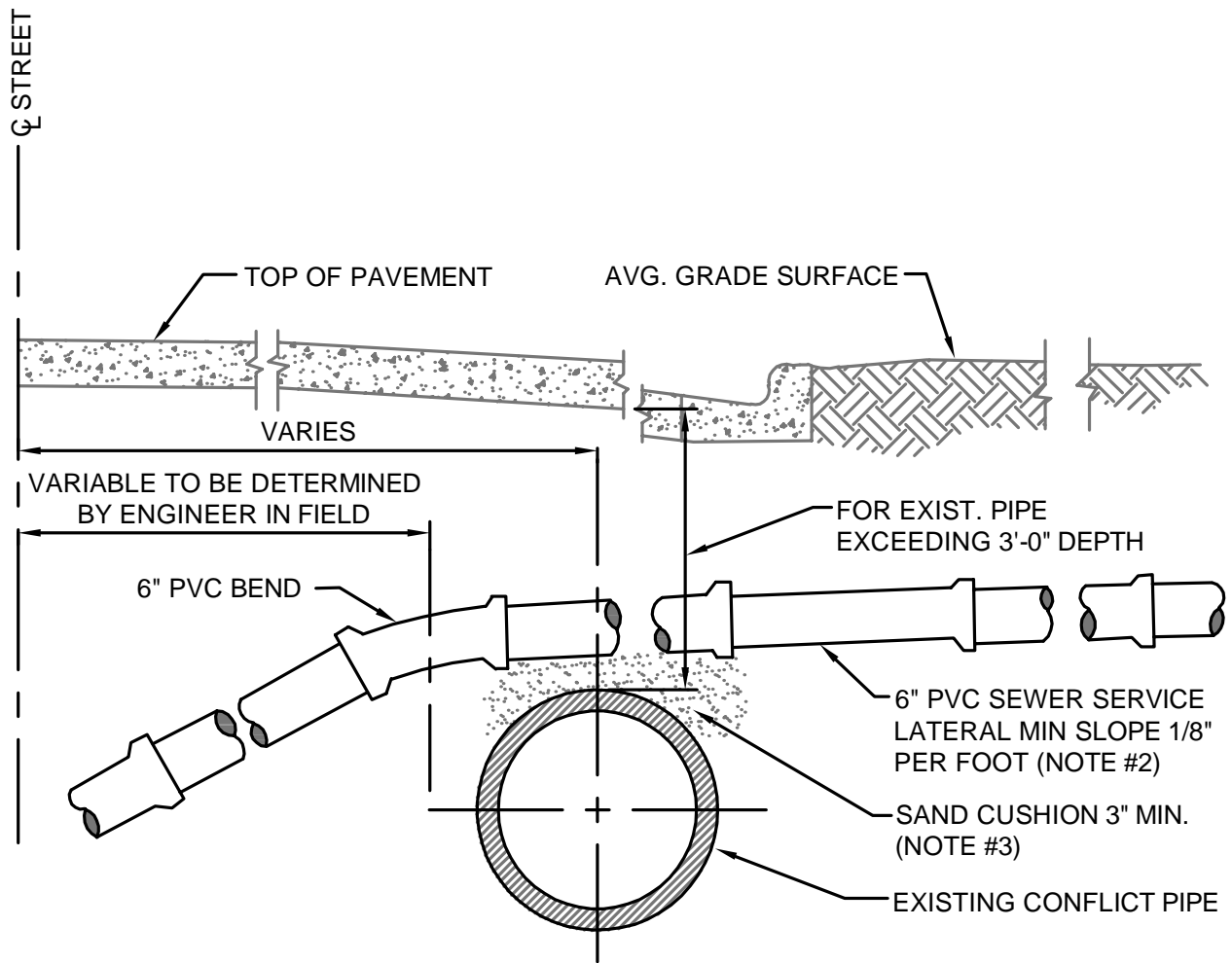
NOTES:

- TO MARK THE LOCATION OF THE 6" PLUG FOR NEW SERVICE: FOR PROJECTS WHERE NO CONCRETE CURB EXIST, AN ELECTRONIC "SEWER" MARKER IS REQUIRED FOR ALL LATERALS WHICH ARE "NOT" IN USE". FOR NEW DEVELOPMENT AREAS WHERE THE SEWER LATERAL IS "NOT" IN USE", A LANDSCAPE TIMBER OR 3x3 MIN. P.T. POST (TOP PAINTED GREEN) SHALL BE INSTALLED. WHERE REQUIRED BY JEA OR NO CONCRETE CURB EXIST, AN ELECTRONIC "SEWER" MARKER SHALL BE INSTALLED TO MARKER SHALL ALSO BE INSTALLED.
- THE MINIMUM SIZE OF ALL HOUSE LATERALS SHALL BE 6 INCHES. THE MAXIMUM LENGTH OF A HOUSE LATERAL SHALL BE 60 FEET (LENGTH BETWEEN SEWER MAIN OR MANHOLE TO CUSTOMERS PROPERTY LINE).
- NO SEWER SERVICE CONNECTIONS PERMITTED ON GRAVITY SEWER PIPE WHICH ARE 16" AND LARGER.
- ALL GRAVITY SEWER MAINS AND ASSOCIATED SEWER LATERAL PIPE AND FITTINGS (INCLUDING THE TEE-WYE FITTING) SHALL BE PVC SDR-26.

HOUSE LATERAL - PLAN VIEW

JANUARY 2020

PLATE S-19



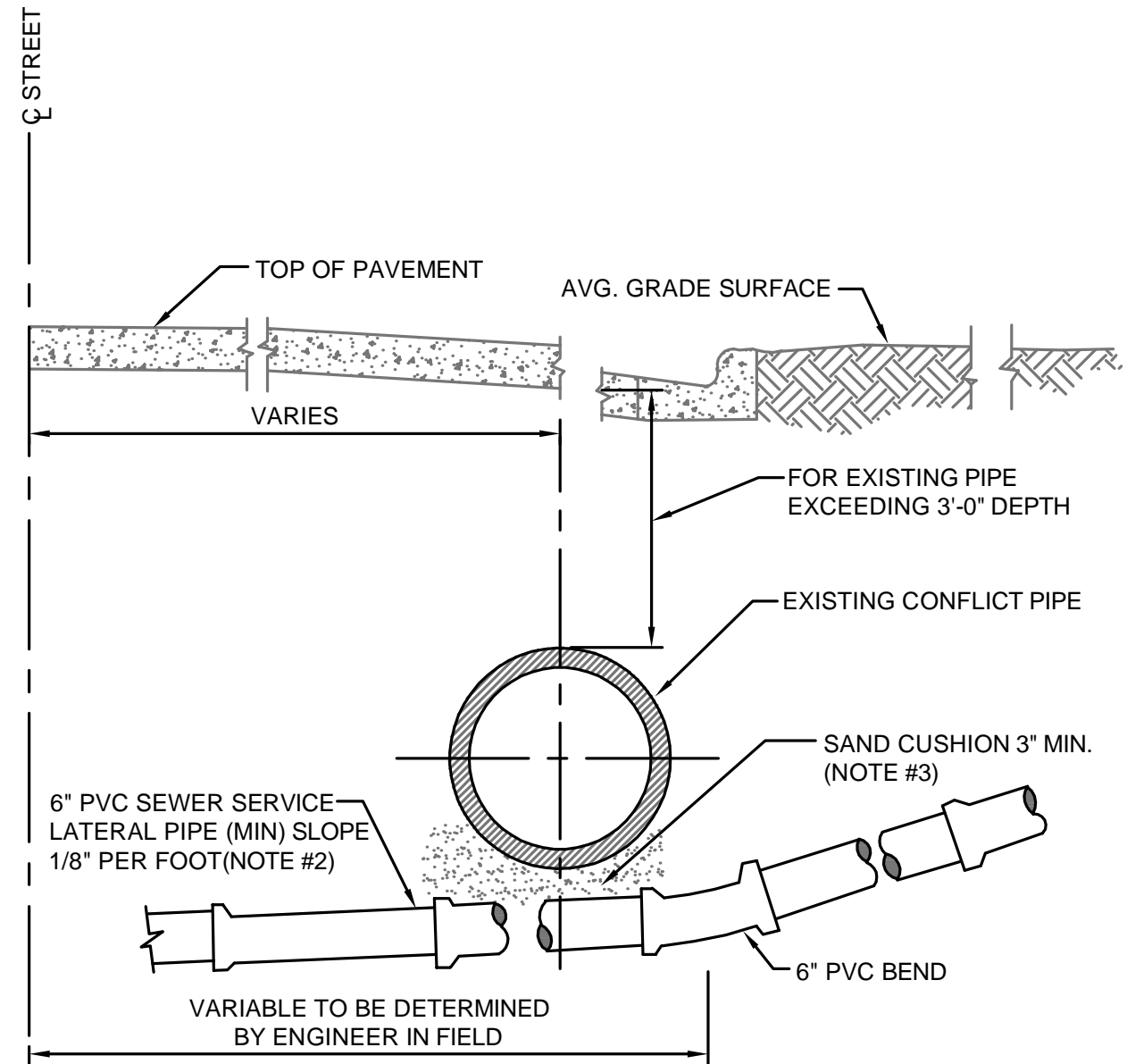
NOTES:

- ALTERNATE GRADIENT FOR 6 INCH LATERAL SEWERS AT CONFLICTS WITH EXISTING UTILITIES.
- FLATTER SLOPES MUST BE PRE-APPROVED BY JEA O&M MANAGER (ONLY) PRIOR TO CONSTRUCTION.
- 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.

HOUSE LATERAL OVER CONFLICT PIPE

JANUARY 2020

PLATE S-23



NOTES:

- ALTERNATE GRADIENT FOR 6 INCH LATERAL SEWERS AT CONFLICTS WITH EXISTING UTILITIES.
- FLATTER SLOPE MUST BE PRE-APPROVED BY JEA O&M MANAGER (ONLY) PRIOR TO CONSTRUCTION
- 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.

HOUSE LATERAL UNDER CONFLICT PIPE

JANUARY 2020

PLATE S-24

England, Thoms & Miller, Inc.
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AZ-0002894 LC-0000316

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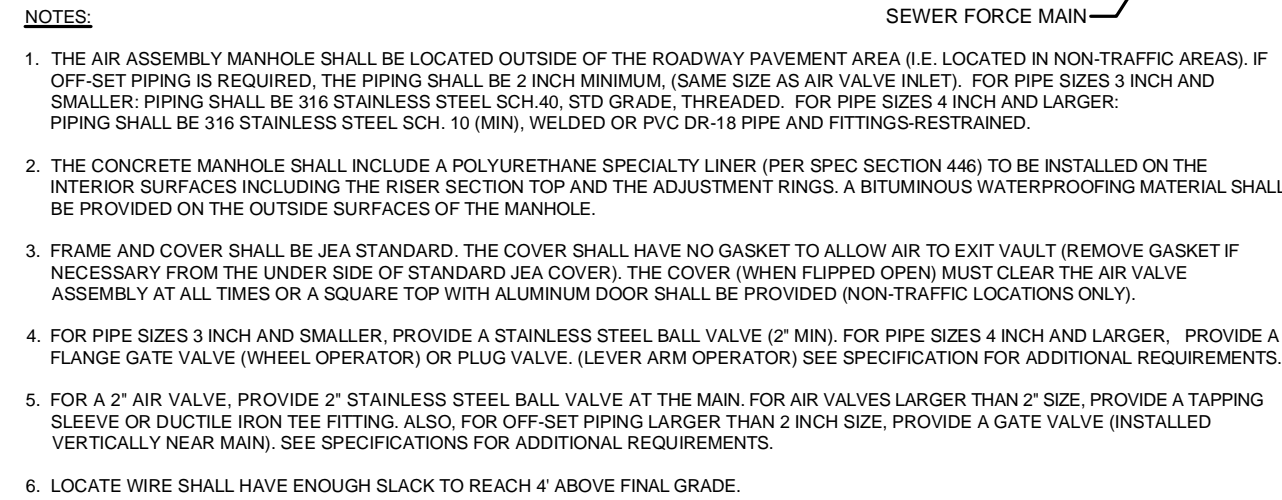
DESIGNER:	ANDREW J. BOOTH
DRAWN BY:	
CHECKED BY:	FLORIDA REGISTRATION NO.
DATE:	82302

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Building Communitysm

JEA STANDARD
SANITARY SEWER DETAILS
NASSAU CARWASH SITE

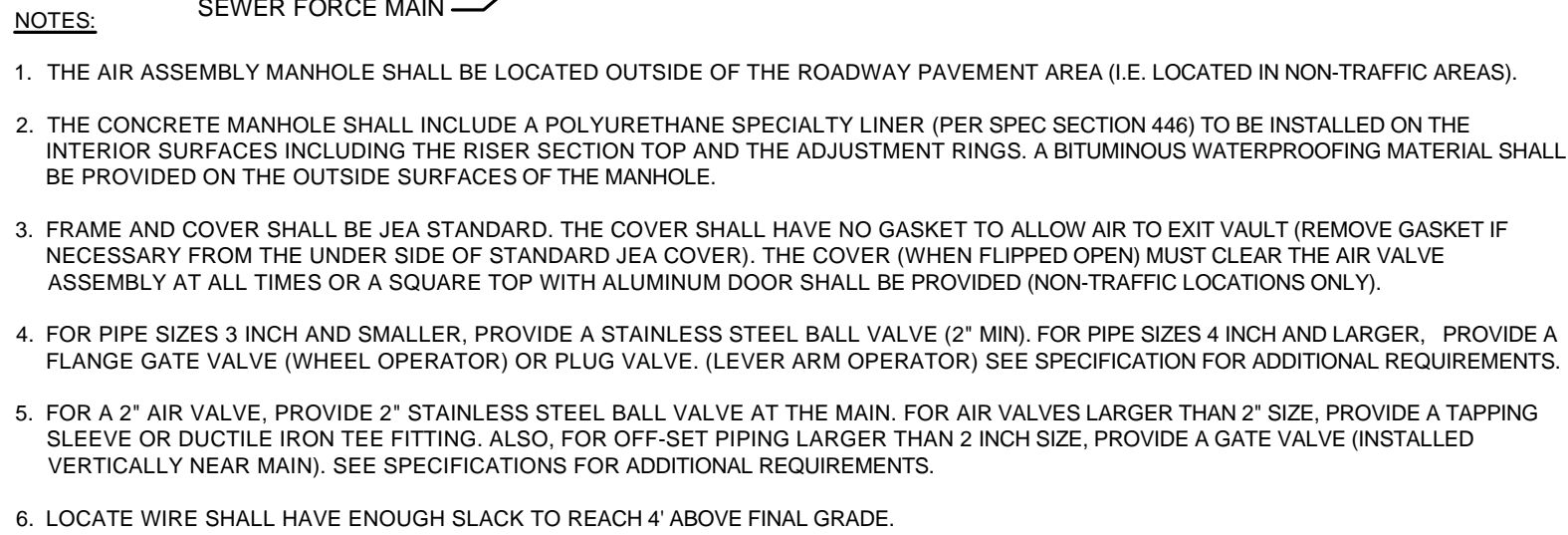
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DATE:	JANUARY 2020
SCALE:	AS NOTED

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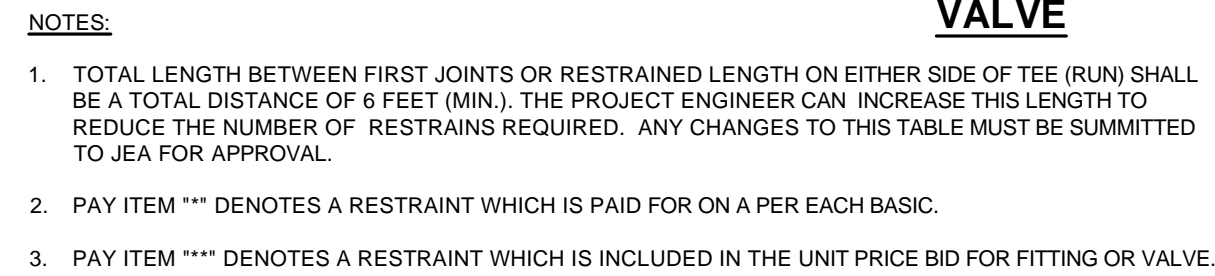
JANUARY 2020

PLATE S-29A



JANUARY 2020

PLATE S-29B



JANUARY 2020

PLATE S-46

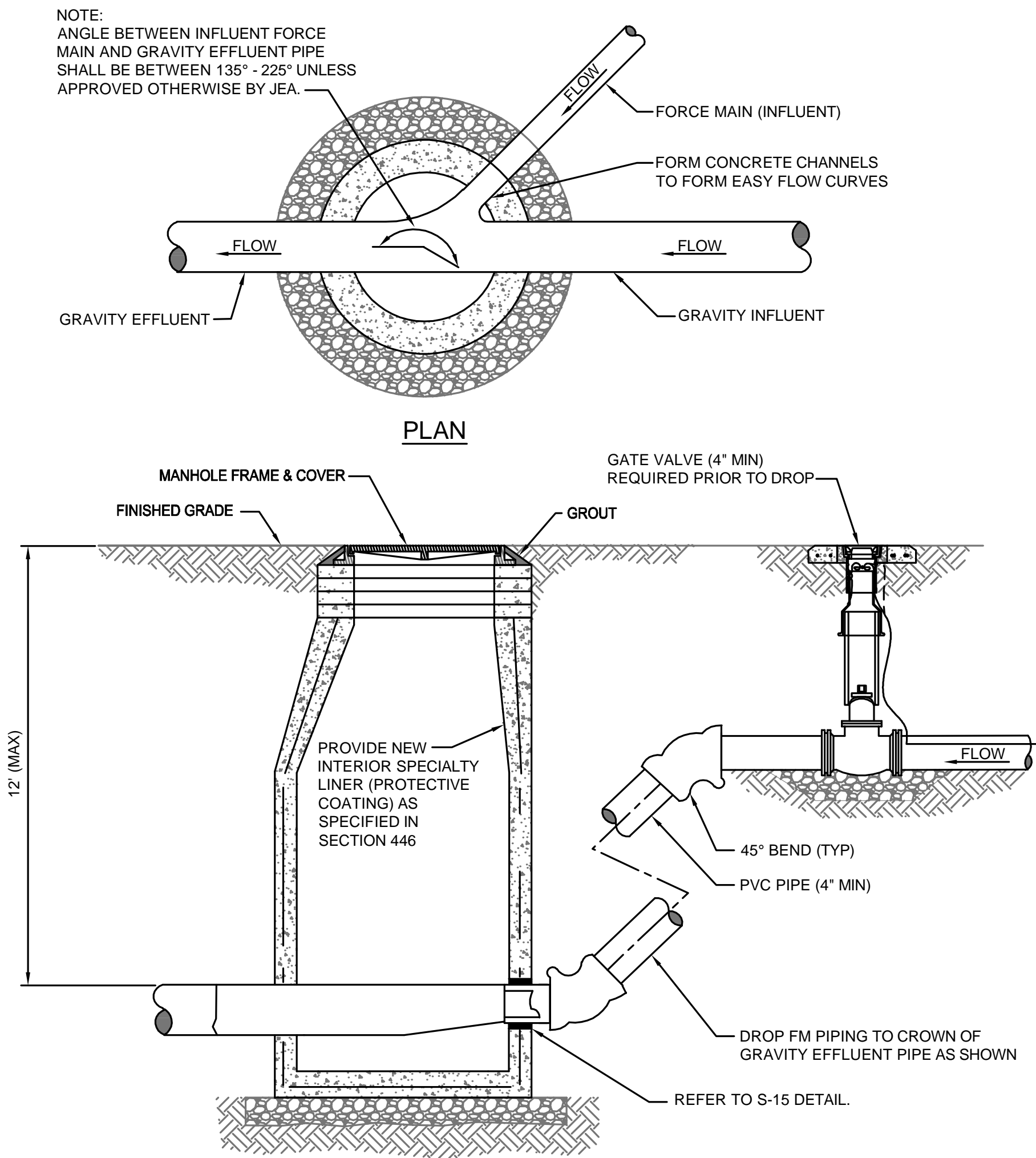
PVC PIPE RESTRAINT NOTES:

1. 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.
2. 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.
3. BENDS AND VALVES: SHALL BE RESTRAINED ON EACH SIDE OF FITTING.
4. 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_l IS THE RESTRAINED LENGTH FOR THE LOWER (DEEPER) LEVEL. ASSUME 45 DEGREE BENDS.
5. 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 RESTRRAINT LENGTH ON TEE "BRANCH" LINE.
6. HDPE TO PVC TRANSITIONS: THE PVC PIPE SIDE SHALL BE RESTRAINED 35 FT (MIN).
7. THE INSTALLATION OF BELL HARNES RESTRAINTS AT PVC JOINTS (OR-18 & 25 IN) 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. OVER TIGHTENING THE JOINT MAY CAUSE A FAILURE AT THE BELL RESULTING IN A SERVICE OUTAGE.

JANUARY 2020

PLATE S-38A

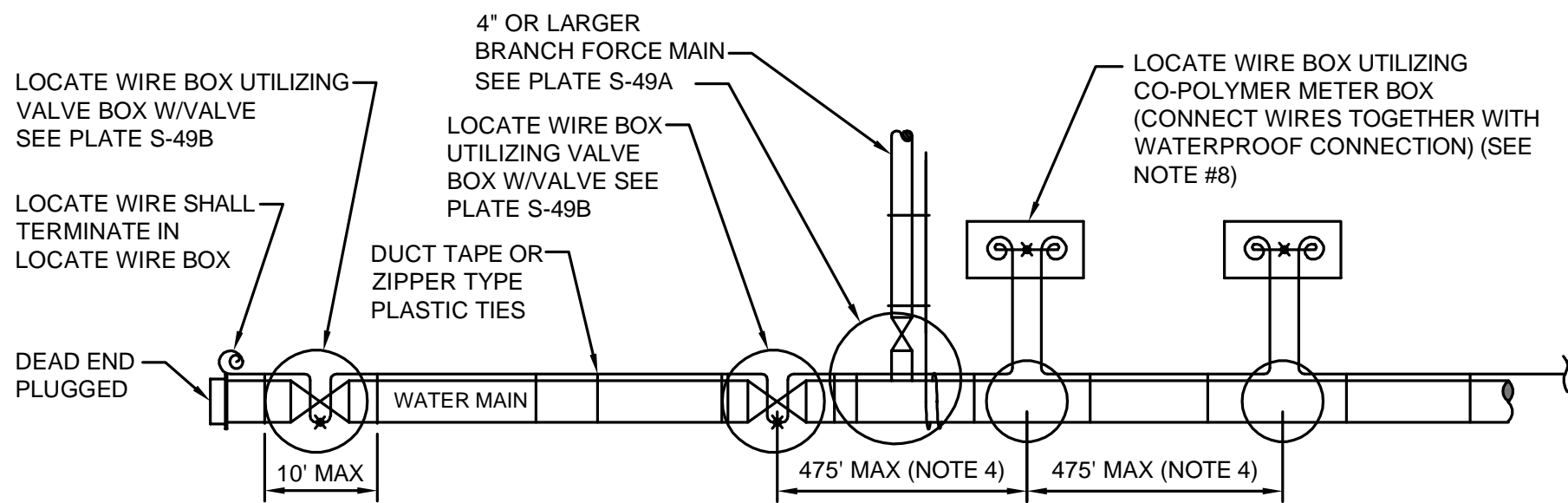
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	SCALE:	AS NOTED				



TYPICAL FORCE MAIN CONNECTION TO MANHOLE

JANUARY 2020

PLATE S-18



LOCATE WIRE SYSTEM

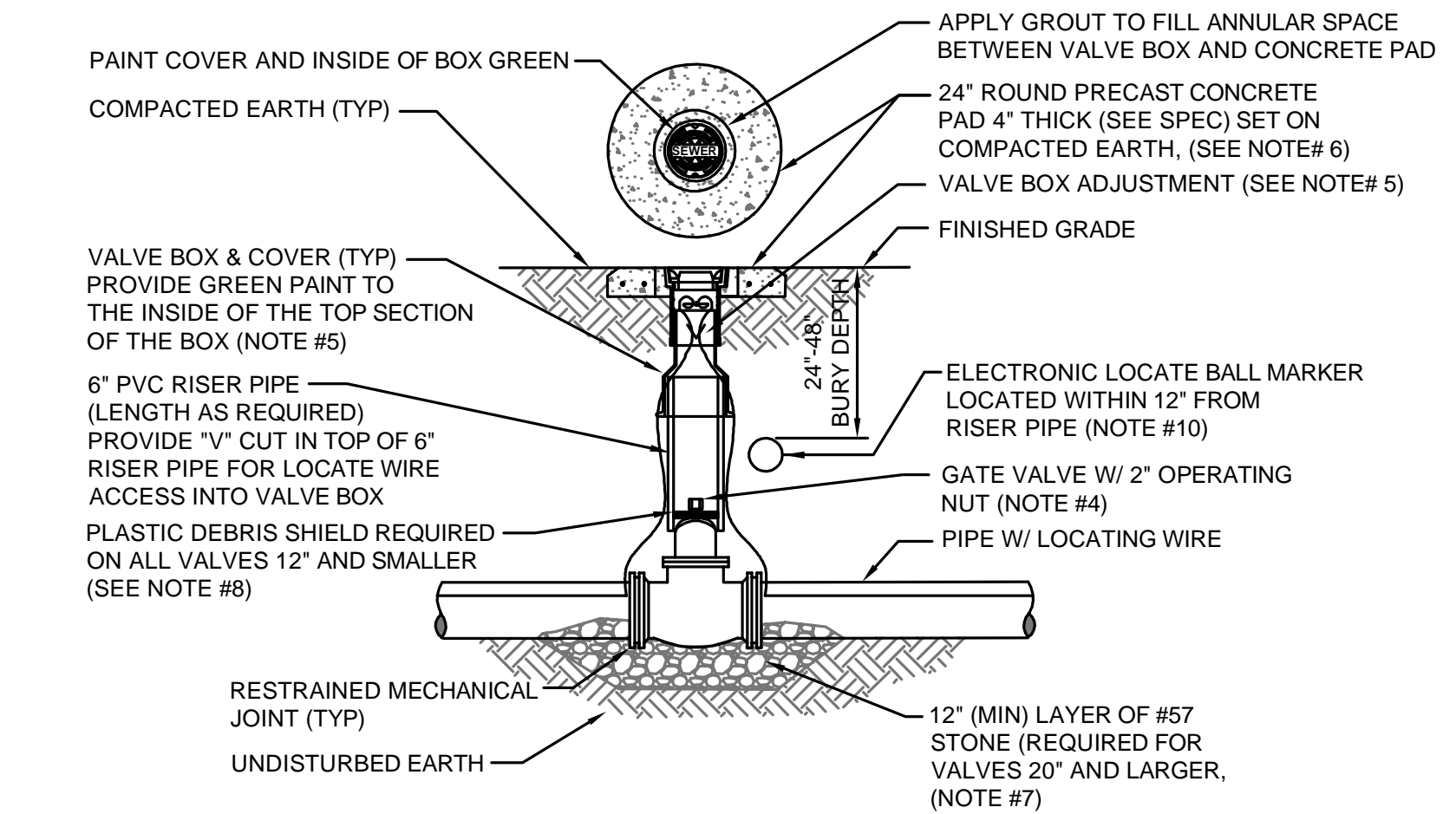
NOTES:

- 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).
- 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.
- THE ENTIRE LOCATING SYSTEM SHALL BE SUBJECT 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.
- 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.
- 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.
- X INDICATES THAT THE WIRES ARE CONNECTED TOGETHER WITH WATERPROOF CONNECTION. (SEE DETAIL W-49B)
- Ⓢ INDICATES A WIRE PIG-TAIL (24" LONG)
- AN "LW" CUT SHALL BE CARVED IN THE CONCRETE CURB AND PAINTED AT ALL LOCATE WIRE BOXES.
- 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 2020

PLATE S-49



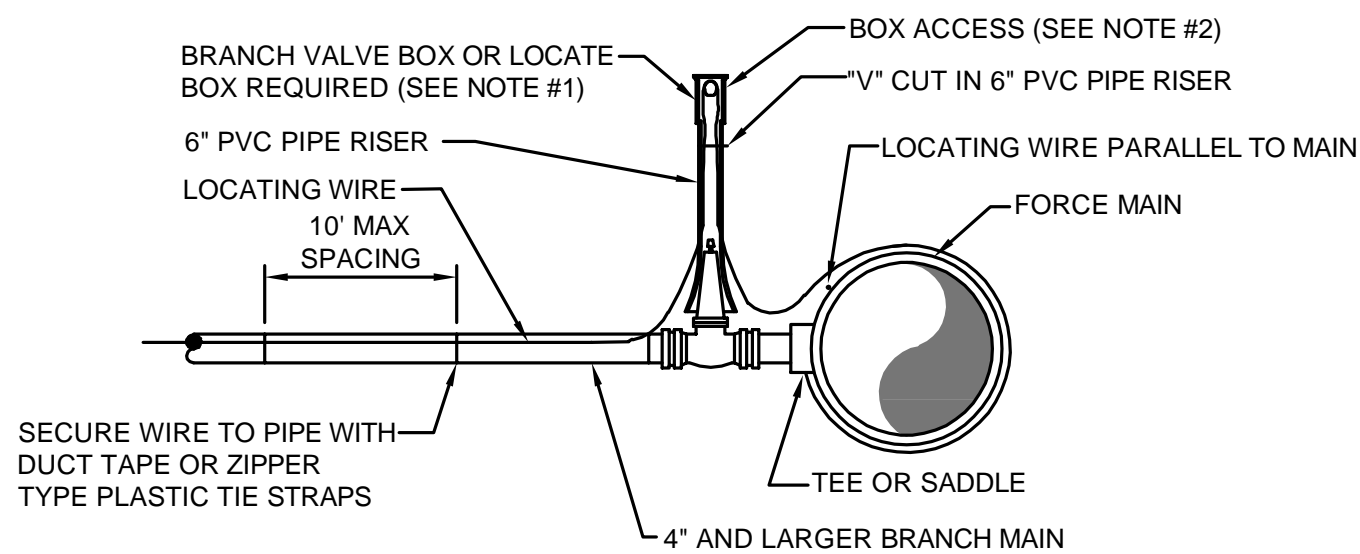
NOTES:

- 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 DETAIL S-49).
- 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.
- 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 24" LONG PIG-TAIL AT THE TOP SHALL BE CONNECTED TOGETHER WITH A WIRE NUT.
- 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.
- 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, BOX/LOK OR APPROVED EQUAL.
- ALL VALVES SHALL BE INSTALLED WITH AN ELECTRIC LOCATE MARKER. MARKER SHALL BE 4" DIA. COLOR CODED BALL MARKER (3M-1404XR FOR SEWER).

SEWER VALVE DETAIL

JANUARY 2020

PLATE S-30



BRANCH FORCE MAIN

(4" AND LARGER SEWER MAIN)

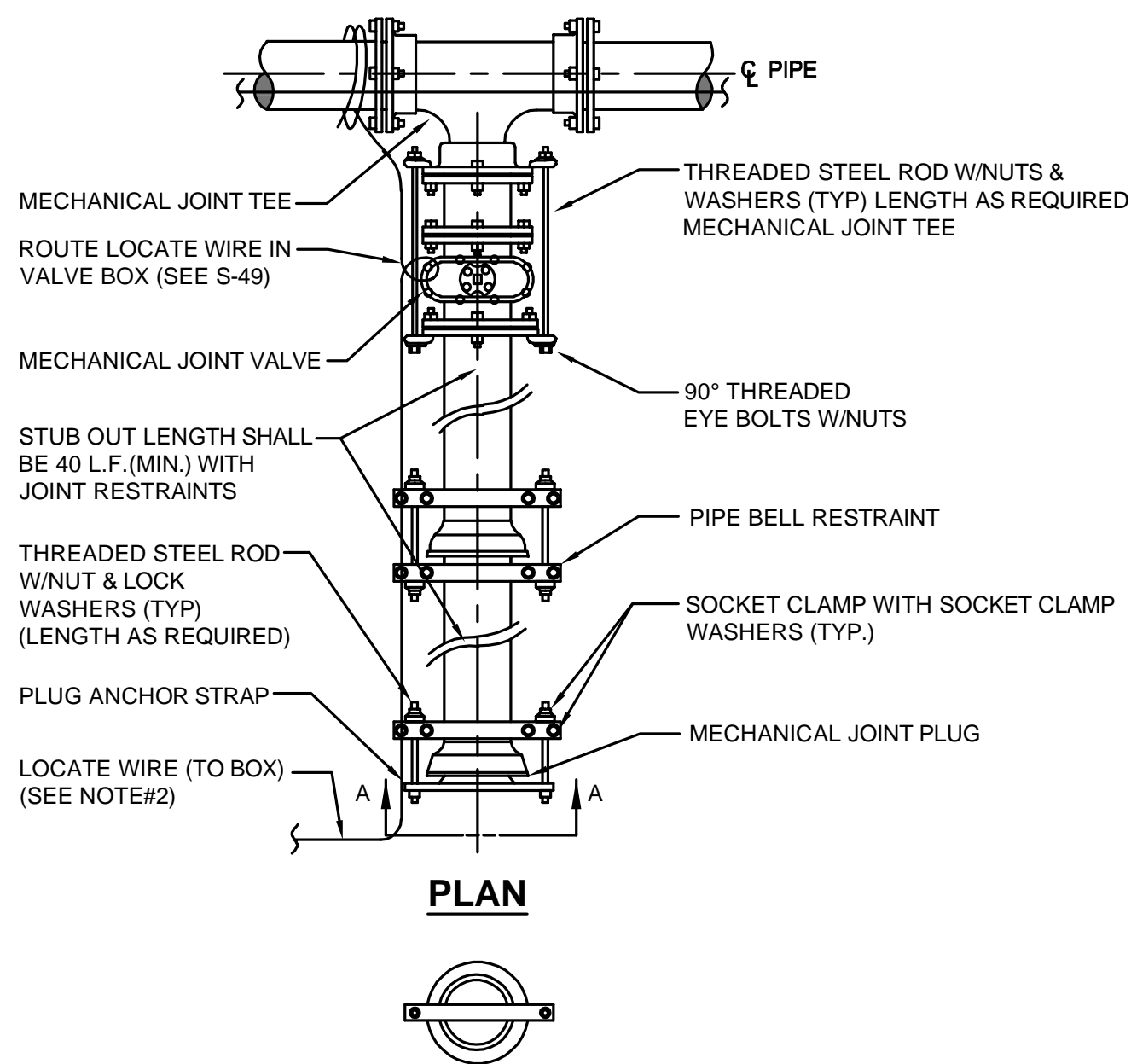
NOTE:

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

LOCATE WIRE FOR BRANCH MAIN

JANUARY 2020

PLATE S-49A



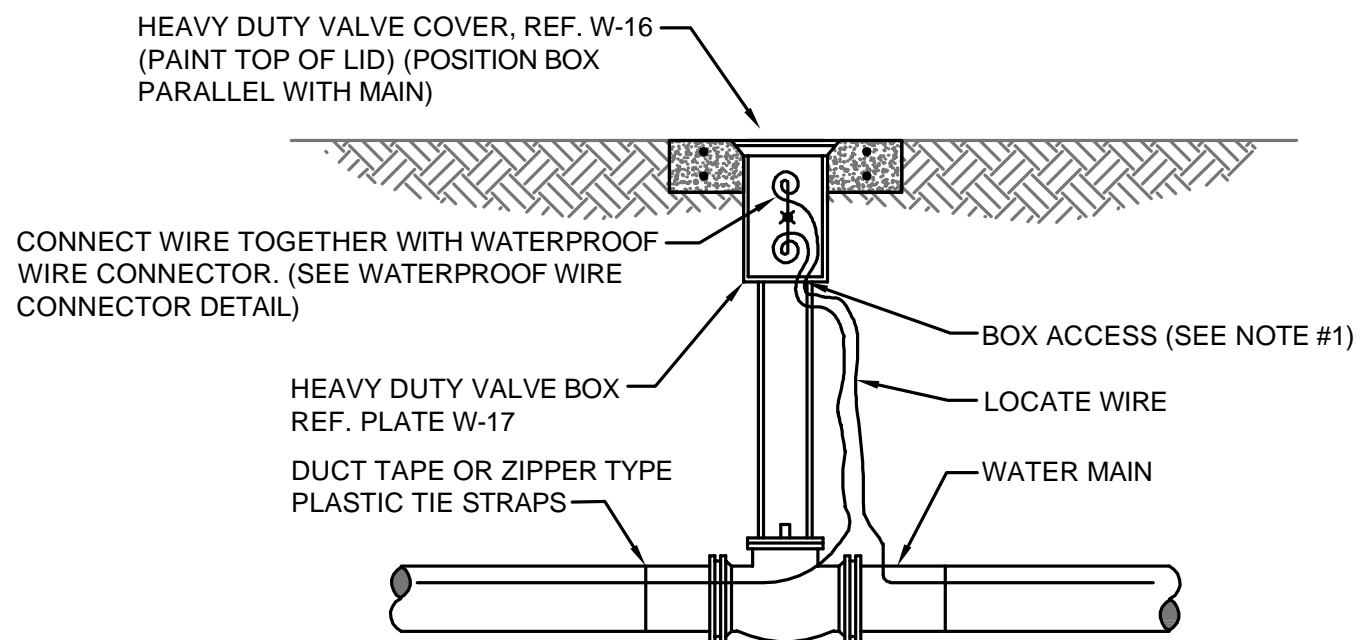
NOTES:

- IN LIEU OF BELL/ROD RESTRAINTS, MECHANICAL JOINT RESTRAINTS MAY BE USED.
- LOCATING WIRE REQUIRED, UTILIZING A LOCATE WIRE BOX INSTALLED AT PLUG LOCATION.
- NUMBER OF TIE 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)
24" 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)
- THE LOCATION OF THE DEAD END PLUG SHALL NOT BE UNDER PAVEMENT, IF POSSIBLE. THE STUB OUT SHALL EXTEND BEYOND THE INTERSECTION AREAS OR ROAD CROSSING BY 10 FEET (MIN.) WHERE POSSIBLE.

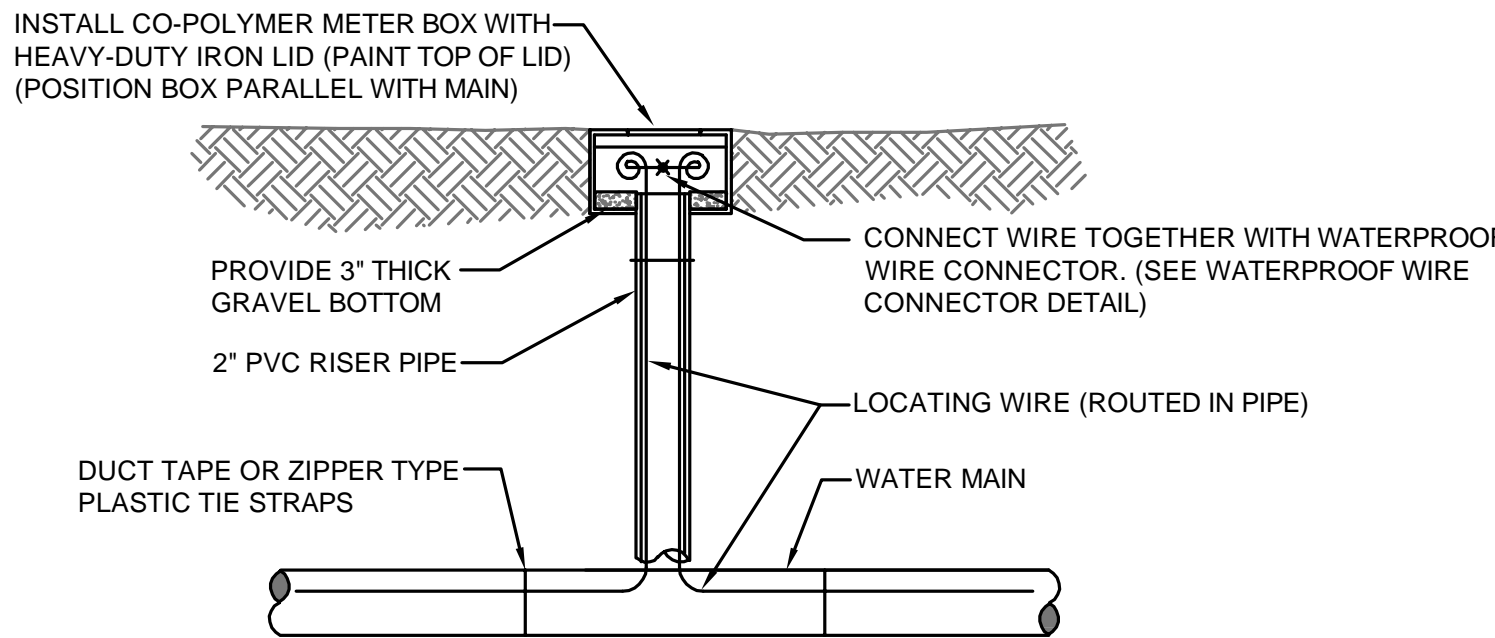
PLUGGED DEAD END USING MECHANICAL RESTRAINTS

JANUARY 2020

PLATE S-44



LOCATE WIRE BOX UTILIZING VALVE BOX



LOCATE WIRE BOX UTILIZING METER BOX

LOCATE WIRE BOX

JANUARY 2020

PLATE S-49B

England, Thoms & Miller, Inc.
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TEL: (904) 442-9890
FAX: (904) 442-9895
AZ-0002894 LC-0000316

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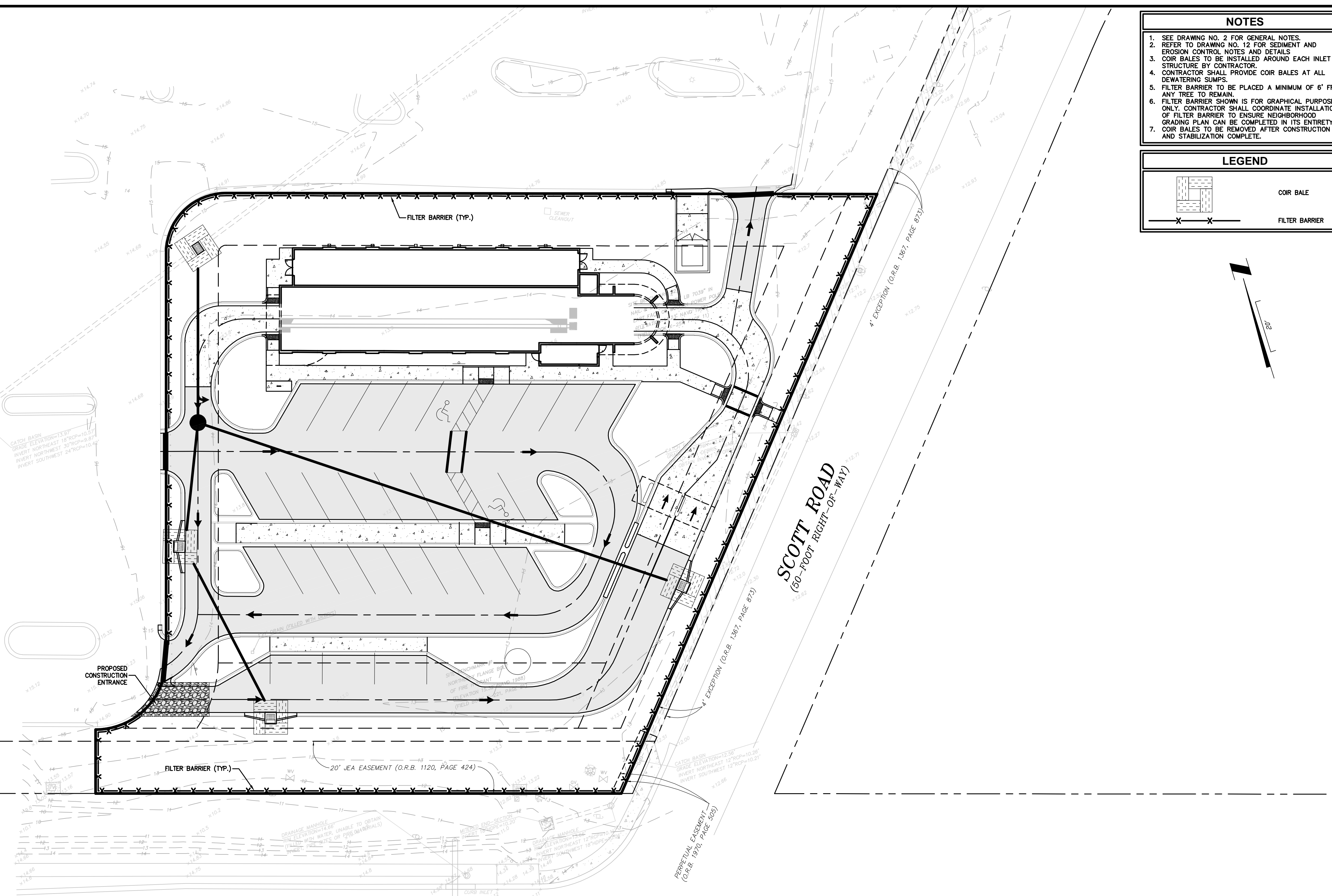
DESIGN ENGINEER:
ANDREW J. BOOTH
FLORIDA REGISTRATION NO.:
82302

JEA STANDARD
SANITARY SEWER DETAILS
NASSAU CARWASH SITE

PROJ. NO.: 20-207
DATE: JANUARY 2020
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NO. SHEETS: 5
SHEET NO.: 5
DRAWING NO.: 10E

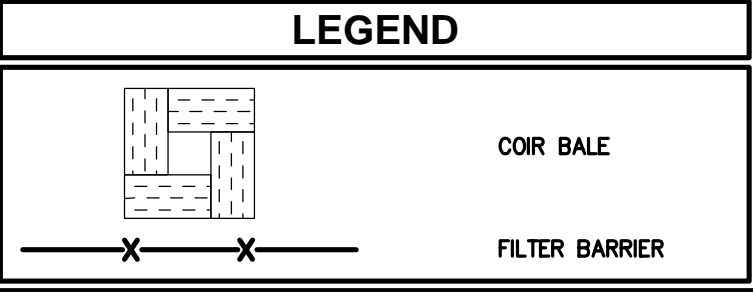
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STATE ROAD NO. 200 (A-1-A)

(RIGHT-OF-WAY VARIES) (F.D.O.T. SECTION 74060-2503)

- | NOTES | |
|-------|--|
| 1. | SEE DRAWING NO. 2 FOR GENERAL NOTES. |
| 2. | REFER TO DRAWING NO. 12 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 DETERMINING SUMPS. |
| 5. | FILTER BARRIER TO BE PLACED A MINIMUM OF 6' FROM ANY TREE TO REMAIN. |
| 6. | FILTER BARRIER SHOWN IS FOR GRAPHICAL PURPOSES ONLY. CONTRACTOR SHALL COORDINATE INSTALLATION OF FILTER BARRIER TO ENSURE NEIGHBORHOOD GRADING PLAN CAN BE MAINTAINED IN ITS ENTIRETY. COIR BALES TO BE REMOVED AFTER CONSTRUCTION AND STABILIZATION COMPLETE. |
| 7. | |



PLANS PREPARED UNDER THE
DIRECTION OF:

ANDREW J. BOOTH
P.E. NUMBER: 82302

PLOTTED: May 26, 2021 - 11:56 AM, BY: AJ Booth

REVISIONS:

ETM NO. 20-207

DRAWN BY: AJB

CHECKED BY:

DATE: FEBRUARY 2021

England-Thims & Miller, Inc.
14775 Old St. Augustine Road
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FAX: (904) 646-9485

REG - 2584 LC - 0000316



SEDIMENT AND EROSION CONTROL PLAN

**NASSAU CARWASH SITE
FOR
FOWLER PROPERTIES, INC.**

DRAWING NUMBER

11

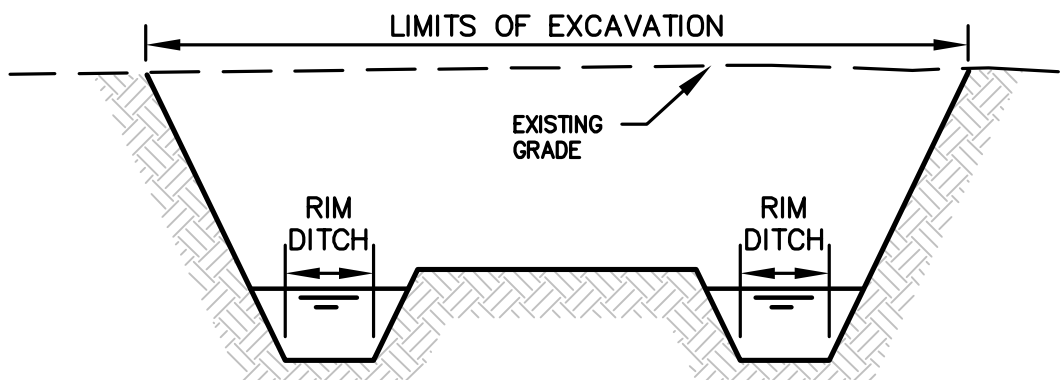
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SEDIMENT AND EROSION CONTROL NOTES

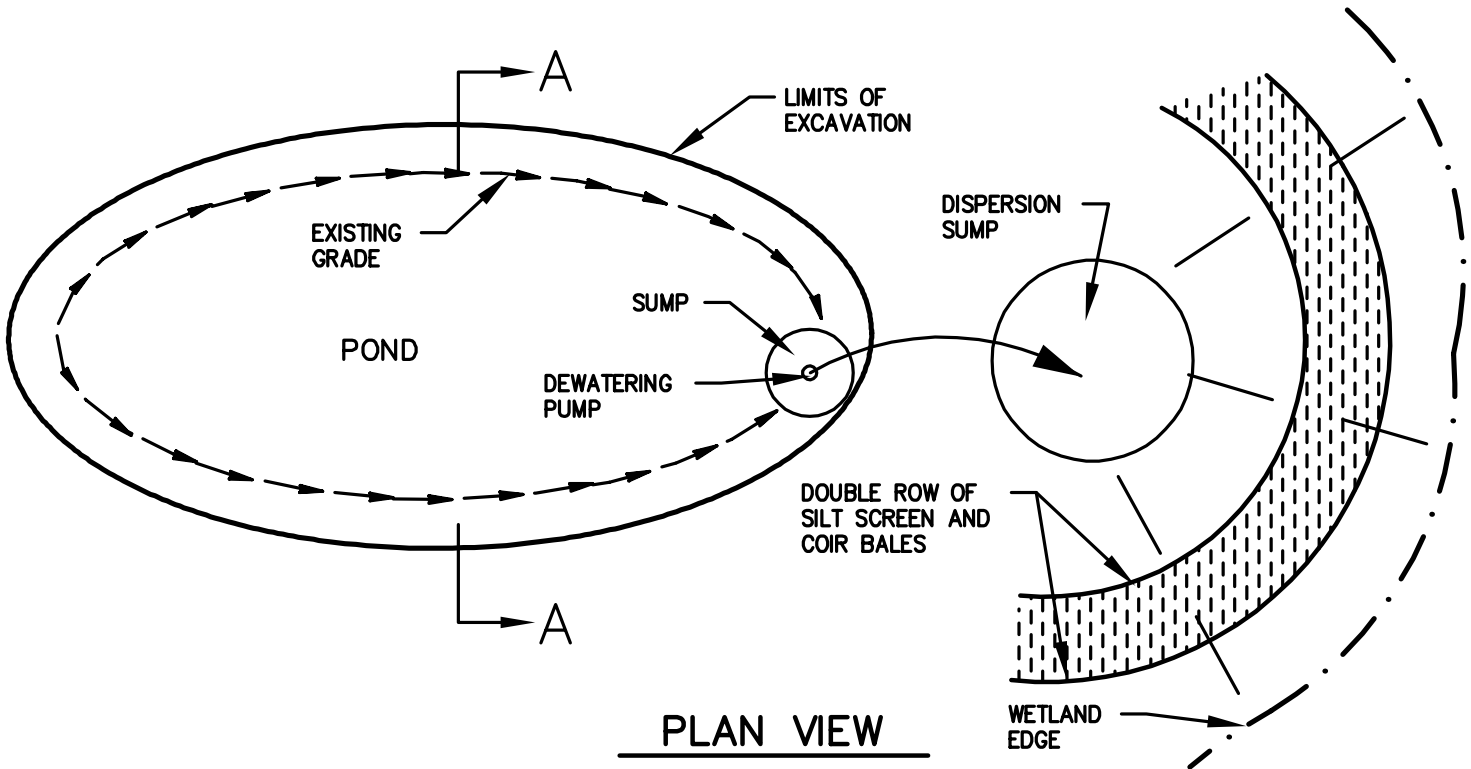
1. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SILT FROM SITE IF NOT REUSABLE ON-SITE AND ASSURING PLAN ALIGNMENT AND GRADE IN ALL DITCHES AND SWALES AT COMPLETION OF CONSTRUCTION.
2. THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF 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 UNDERCUTTING 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 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 SJRWMD 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, XXXXXXXXXX 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)



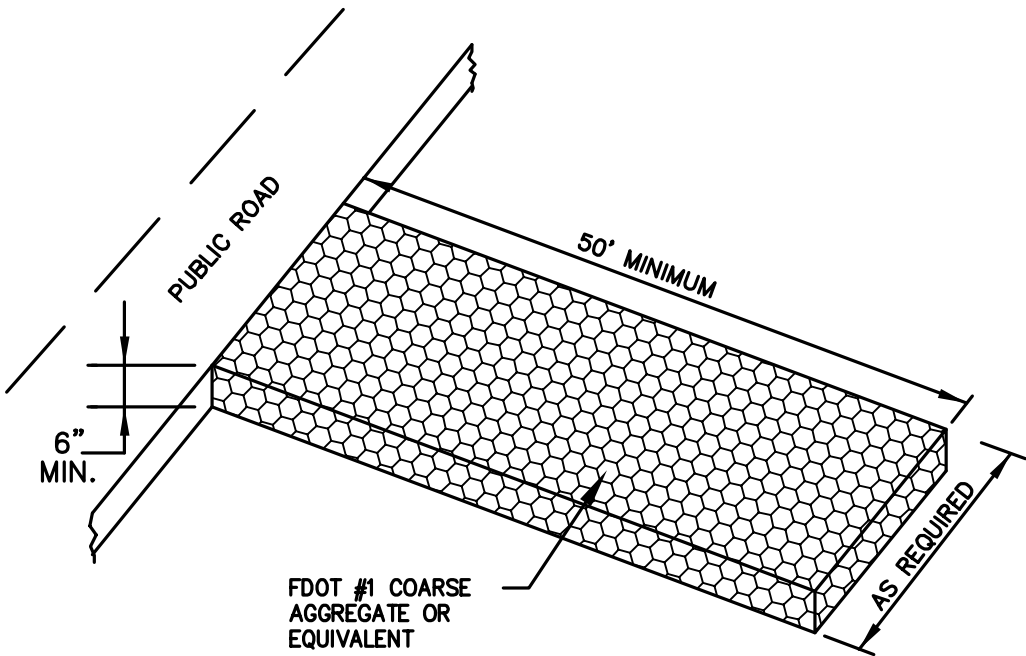
SECTION A-A



PLAN VIEW

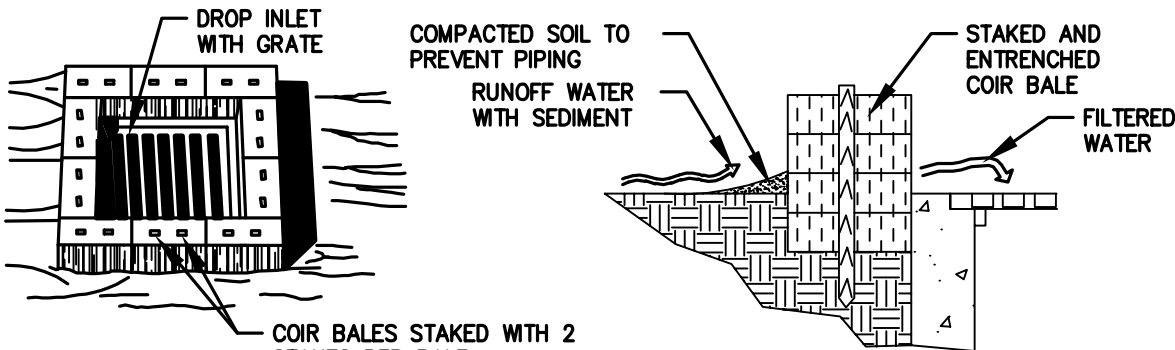
TEMPORARY DEWATERING DETAIL

N.T.S.



STABILIZED CONSTRUCTION ENTRANCE

N.T.S.

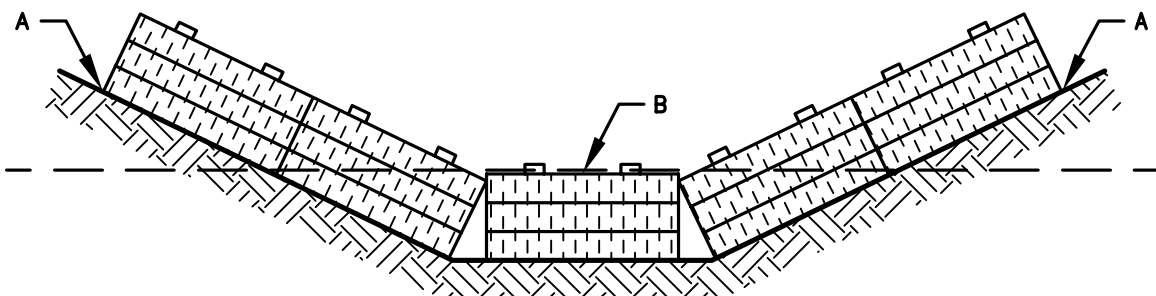


SPECIFIC APPLICATION

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.

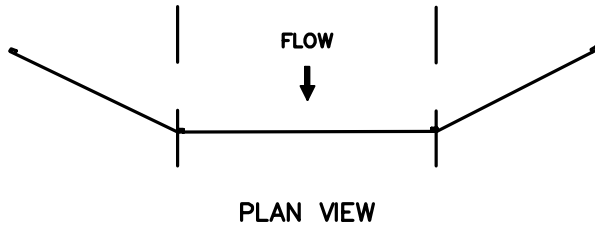
COIR BALE DROP INLET SEDIMENT FILTER

N.T.S.



PROPER PLACEMENT OF COIR BALE IN A DRAINAGE WAY

N.T.S.

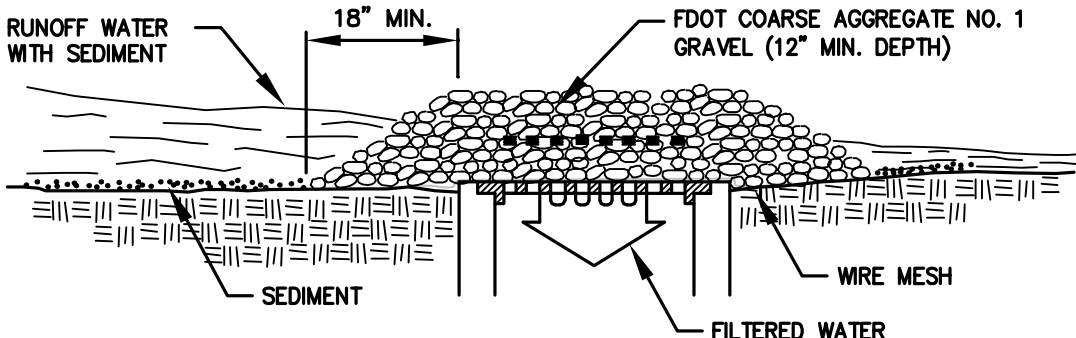


SECTION VIEW

POINTS A SHOULD BE HIGHER THAN POINT B

PROPER PLACEMENT OF A FILTER BARRIER IN DRAINAGE WAY

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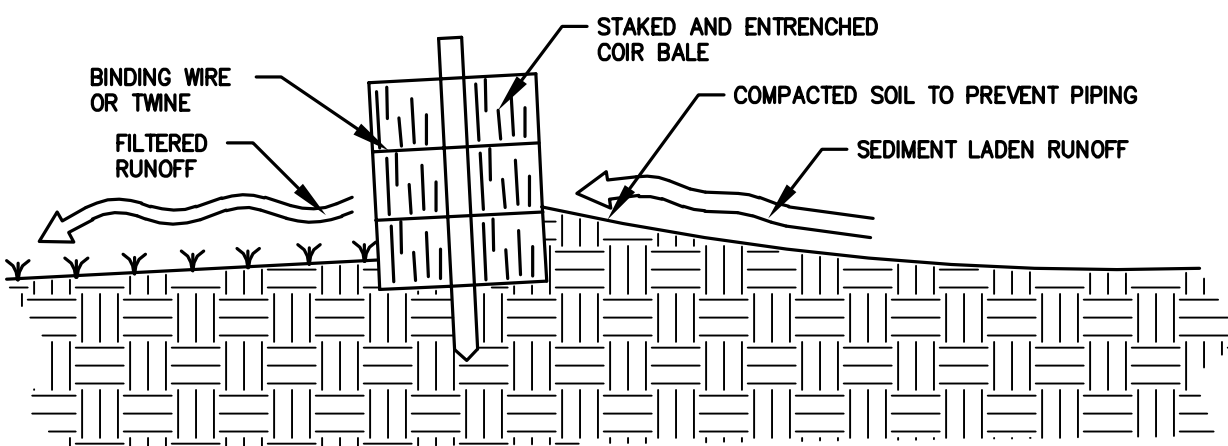


SPECIFIC APPLICATION

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.

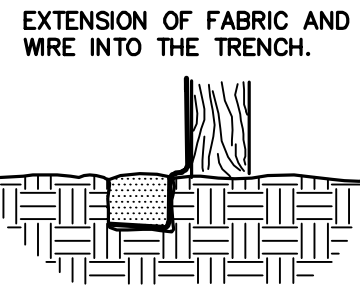
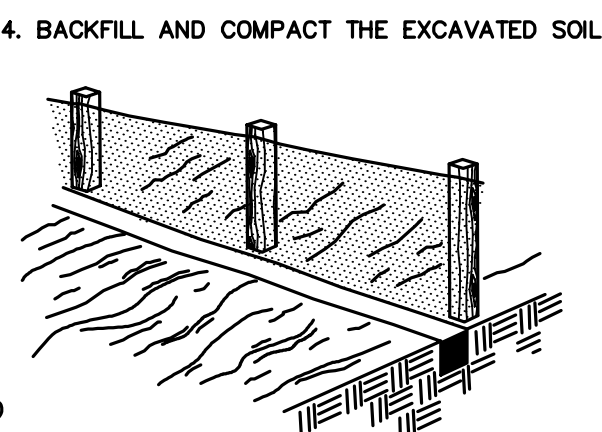
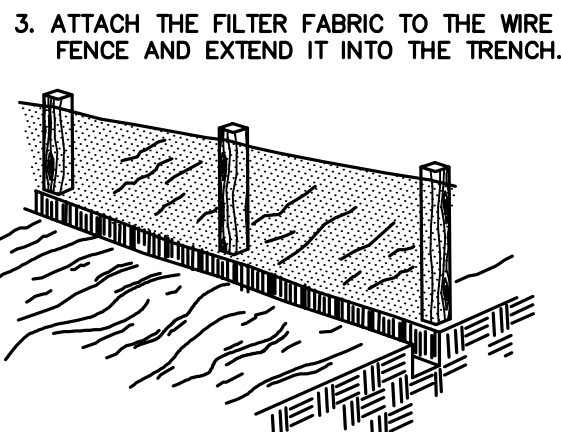
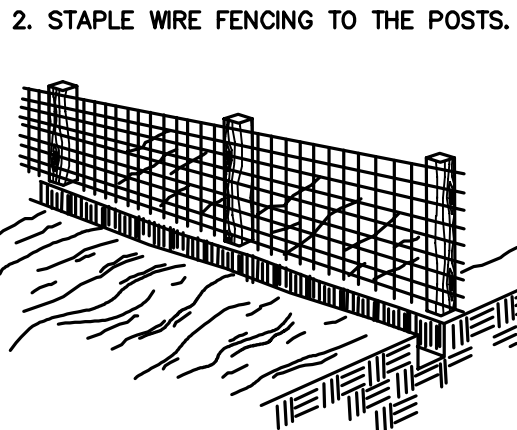
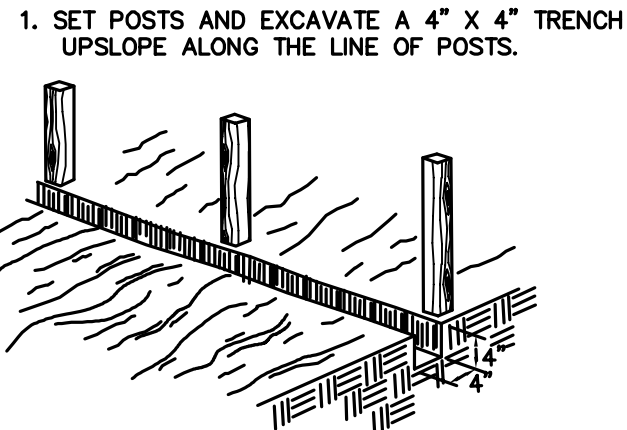
GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER

N.T.S.



CROSS-SECTION OF A PROPERLY INSTALLED COIR BALE

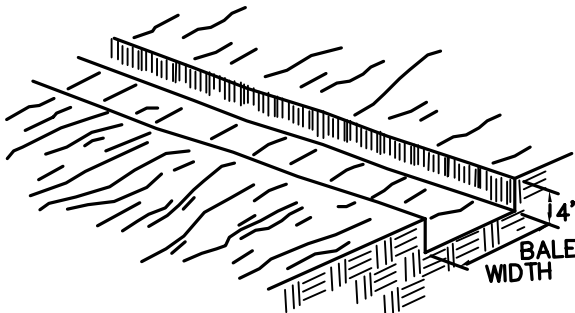
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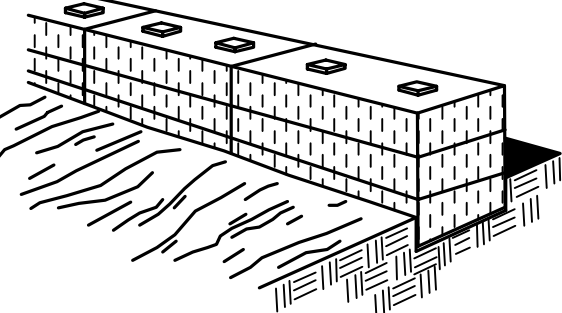
CONSTRUCTION OF SILT FENCE

N.T.S.

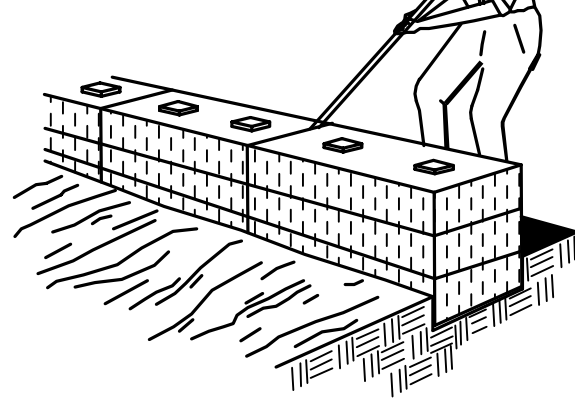
1. EXCAVATE THE TRENCH



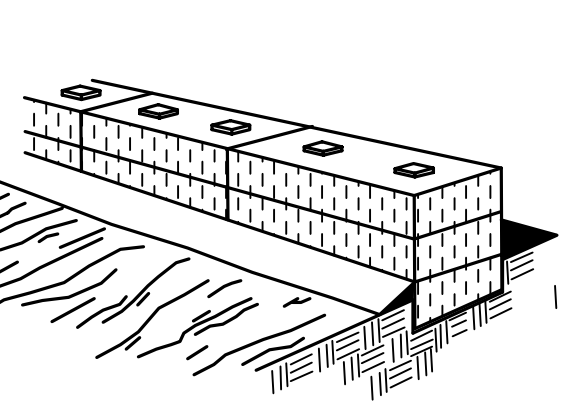
2. PLACE AND STAKE COIR BALES.



3. WEDGE LOOSE COIR BETWEEN BALES.



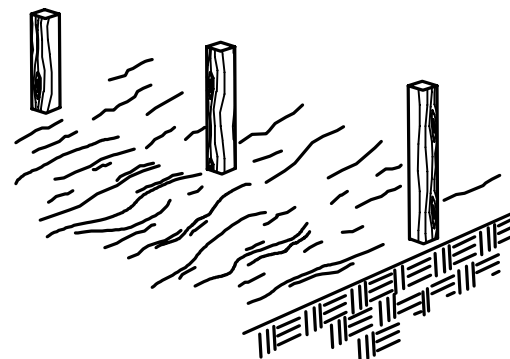
4. BACKFILL AND COMPACT THE EXCAVATED SOIL.



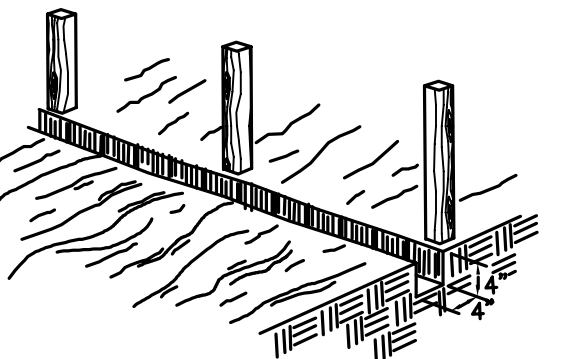
CONSTRUCTION OF A COIR BALE BARRIER

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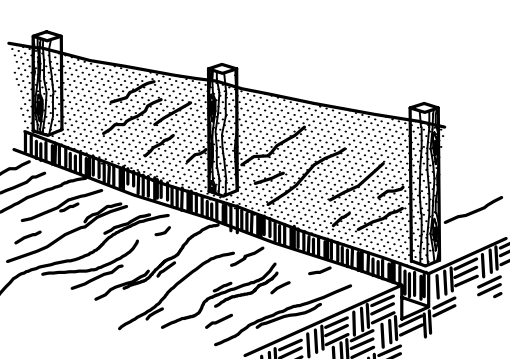
1. SET THE STAKES.



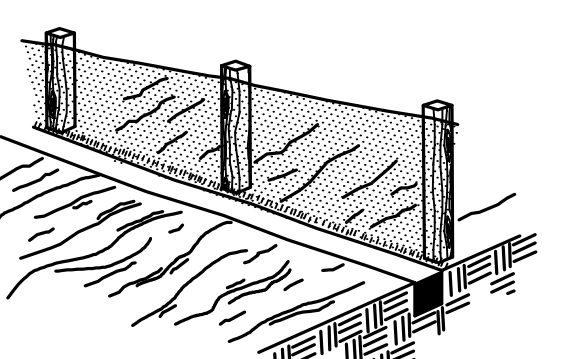
2. EXCAVATE A 4\"



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



4. BACKFILL AND COMPACT THE EXCAVATED SOIL.



CONSTRUCTION OF A FILTER BARRIER

N.T.S.

England-Thins & Miller, Inc.
10001 S. Highway 1
Jacksonville, FL 32228
TEL: (904) 642-8890
FAX: (904) 646-9485
REG-2584 LC-0000316

ETM
VISION • EXPERIENCE • RESULTS

SEDIMENT AND EROSION CONTROL DETAILS
NASSAU CARWASH SITE FOR FOWLER PROPERTIES, INC.

DRAWING NUMBER
12

PLANS PREPARED UNDER THE DIRECTION OF:

REVISIONS:

ETM NO. 20-207

DRAWN BY: AJB

DESIGNED BY: AJB

CHECKED BY:

DATE: FEBRUARY 2021

PLANS PREPARED UNDER THE DIRECTION OF:

ANDREW J. BOOTH
P.E. NUMBER: 92302

OWNER'S REQUIREMENTS		CONTRACTOR'S REQUIREMENTS	
SITE DESCRIPTION		GENERAL	
<p>PROJECT NAME AND LOCATION: NASSAU CARWASH NASSAU COUNTY, FLORIDA</p> <p>OWNER/DEVELOPER NAME AND ADDRESS: SOUTHERN EXPRESS CARWASH, INC.</p> <p>DESCRIPTION: THIS PROJECT WILL CONSIST OF: CONSTRUCTION OF A XXXXXXXX DEVELOPMENT. CONSTRUCTION WILL CONSIST OF INSTALLATION OF UNDERGROUND UTILITIES, CLEARING, GRADING, STORMWATER MANAGEMENT FACILITIES ROADWAYS, PARKING AREAS, XXXXXXXXXX AND ASSOCIATED CONSTRUCTION.</p> <p>SOIL DISTURBING ACTIVITIES WILL INCLUDE: CLEARING AND GRUBBING; INSTALLING A STABILIZED CONSTRUCTION ENTRANCE, PERIMETER, AND OTHER EROSION AND SEDIMENT CONTROLS; GRADING; EXCAVATION FOR THE SEDIMENTATION POND, STORM SEWER, UTILITIES, AND BUILDING FOUNDATION; CONSTRUCTION OF CURB AND GUTTER, ROAD, AND PARKING AREAS; AND PREPARATION FOR FINAL PLANTING AND SEEDING.</p> <p>GENERALIZED RUNOFF CURVE NUMBERS (REFER TO DRAINAGE CALCULATIONS FOR ACTUAL CURVE NUMBER FOR EACH BASIN)</p> <p>1. PRE-CONSTRUCTION = XX± 2. DURING CONSTRUCTION = XX± 3. POST-CONSTRUCTION = XX±</p> <p>SOILS: * SEE ATTACHED FOR SOILS DATA</p> <p>SITE MAPS: * SEE ATTACHED DWG. No. X – X FOR POST DEVELOPMENT GRADES, AREAS OF SOILS, DISTURBANCE, LOCATION OF SURFACE WATERS, WETLANDS, PROTECTED AREAS, MAJOR STRUCTURAL AND NONSTRUCTURAL CONTROLS AND STORM WATER DISCHARGE POINTS.</p> <p>* SEE ATTACHED DWG. No. X AND X FOR LOCATION OF TEMPORARY STABILIZATION PRACTICES, AND TURBIDITY BARRIERS</p> <p>SITE AREA: 1. TOTAL AREA OF SITE = XXXX AC± 2. TOTAL AREA TO BE DISTURBED = XXXX AC±</p> <p>NAME OF RECEIVING WATERS: HEADWATERS OF XXXXXX</p>		<p>THE CONTRACTOR SHALL AT A MINIMUM IMPLEMENT THE CONTRACTOR'S REQUIREMENTS OUTLINED BELOW AND THOSE MEASURES SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN. IN ADDITION THE CONTRACTOR SHALL UNDERTAKE ADDITIONAL MEASURES REQUIRED TO BE IN COMPLIANCE WITH APPLICABLE PERMIT CONDITIONS AND STATE WATER QUALITY STANDARDS. DEPENDING ON THE NATURE OF MATERIALS AND METHODS OF CONSTRUCTION THE CONTRACTOR MAY BE REQUIRED TO ADD FLOCCULANTS TO THE RETENTION SYSTEM PRIOR TO PLACING THE SYSTEM INTO OPERATION.</p> <p>SEQUENCE OF MAJOR ACTIVITIES:</p> <p>THE ORDER OF ACTIVITIES WILL BE AS FOLLOWS:</p> <p>1. INSTALL STABILIZED CONSTRUCTION ENTRANCE 2. INSTALL SILT FENCES AND COIR BALES AS REQUIRED 3. CLEAR AND GRUB FOR DIVERSION SWALES/DIKES AND SEDIMENT BASIN 4. CONSTRUCT SEDIMENTATION BASIN 5. CONTINUE CLEARING AND GRUBBING 6. STOCK PILE TOP SOIL IF REQUIRED 7. PERFORM PRELIMINARY GRADING ON SITE AS REQUIRED 8. STABILIZE DENUDED AREAS AND STOCKPILES AS SOON AS PRACTICABLE</p> <p>9. INSTALL UTILITIES, STORM SEWER, CURBS & GUTTER. 10. APPLY BASE TO PARKING AREAS 11. COMPLETE GRADING AND SEEDING/SOD AND PLANTING 12. COMPLETE FINAL PAVING 13. REMOVE ACCUMULATED SEDIMENT FROM BASINS 14. WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE IS STABILIZED, REMOVE ANY TEMPORARY DIVERSION SWALES/DIKES AND RESEED/SOD AS REQUIRED</p> <p>NOTE: VERTICAL CONSTRUCTION OF THE BUILDING WILL BE TAKING PLACE DURING ALL THE SEQUENCE STEPS LISTED ABOVE</p> <p>TIMING OF CONTROLS/MEASURES</p> <p>AS INDICATED IN THE SEQUENCE OF MAJOR ACTIVITIES, THE SILT FENCES AND COIR BALES, STABILIZED CONSTRUCTION ENTRANCE AND SEDIMENT BASIN WILL BE CONSTRUCTED PRIOR TO CLEARING OR GRADING OF ANY OTHER PORTIONS OF THE SITE. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN AREA, THAT AREA WILL BE STABILIZED PERMANENTLY IN ACCORDANCE WITH THE PLANS. AFTER THE ENTIRE SITE IS STABILIZED, THE ACCUMULATED SEDIMENT WILL BE REMOVED FROM THE SEDIMENT TRAPS AND THE EARTH DIKE/SWALES WILL BE REGRADED/REMOVED AND STABILIZED IN ACCORDANCE WITH THE XXX (DRAWING NO. XXX)</p>	
CONTROLS		CONTROLS	
<p>THIS PLAN UTILIZES BEST MANAGEMENT PRACTICES TO CONTROL EROSION AND TURBIDITY CAUSED BY STORM WATER RUN OFF. DWG. No. XX AND XX HAVE BEEN PREPARED TO INSTRUCT THE CONTRACTOR ON PLACEMENT OF THESE CONTROLS. IT IS THE CONTRACTORS RESPONSIBILITY TO INSTALL AND MAINTAIN THE CONTROLS AS PER PLAN AS WELL AS ENSURING THE PLAN IS PROVIDING THE PROPER PROTECTION AS REQUIRED BY FEDERAL, STATE AND LOCAL LAWS. REFER TO "CONTRACTORS REQUIREMENTS" FOR A VERBAL DESCRIPTION OF THE CONTROLS THAT MAY BE IMPLEMENTED.</p> <p>AREAS WHICH ARE NOT DEVELOPED BUT WILL BE REGRADED SHALL BE STABILIZED IMMEDIATELY AFTER GRADING IS COMPLETE.</p>		<p>IT IS THE CONTRACTORS RESPONSIBILITY TO IMPLEMENT THE EROSION AND TURBIDITY CONTROLS AS SHOWN ON THE SEDIMENT AND EROSION CONTROL PLAN. IT IS ALSO THE CONTRACTORS RESPONSIBILITY TO ENSURE THESE CONTROLS ARE PROPERLY INSTALLED , MAINTAINED AND FUNCTIONING PROPERLY TO PREVENT TURBID OR POLLUTED WATER FROM LEAVING THE PROJECT SITE. THE CONTRACTOR WILL ADJUST THE EROSION AND TURBIDITY CONTROLS SHOWN ON THE SEDIMENT AND EROSION CONTROL PLAN AND ADD ADDITIONAL CONTROL MEASURES, AS REQUIRED, TO ENSURE THE SITE MEETS ALL FEDERAL, STATE AND LOCAL EROSION AND TURBIDITY CONTROL REQUIREMENTS. THE FOLLOWING BEST MANAGEMENT PRACTICES WILL BE IMPLEMENTED BY THE CONTRACTOR AS REQUIRED BY THE EROSION AND SEDIMENT CONTROL PLAN AND AS REQUIRED TO MEET THE SEDIMENT AND TURBIDITY REQUIREMENTS IMPOSED ON THE PROJECT SITE BY THE REGULATORY AGENCIES.</p> <p>EROSION AND SEDIMENT CONTROLS STABILIZATION PRACTICES</p> <p>1. COIR BALE BARRIER: COIR BALE BARRIERS CAN BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WITH THE FOLLOWING LIMITATIONS: A. WHERE THE MAXIMUM SLOPE BEHIND THE BARRIER IS 33 PERCENT. B. IN MINOR SWALES OR DITCH LINES WHERE THE MAXIMUM CONTRIBUTING DRAINAGE AREA IS NO GREATER THAN 2 ACRES. C. WHERE EFFECTIVENESS IS REQUIRED FOR LESS THAN 3 MONTHS. D. EVERY EFFORT SHOULD BE MADE TO LIMIT THE USE OF COIR BALE BARRIERS CONSTRUCTED IN LIVE STREAMS OR IN SWALES WHERE THERE IS THE POSSIBILITY OF A WASHOUT. IF NECESSARY, MEASURES SHALL BE TAKEN TO PROPERLY ANCHOR BALES TO INSURE AGAINST WASHOUT.</p> <p>2. FILTER FABRIC BARRIER: FILTER FABRIC BARRIERS CAN BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WITH THE FOLLOWING LIMITATIONS: A. WHERE THE MAXIMUM SLOPE BEHIND THE BARRIER IS 33 PERCENT. B. IN MINOR SWALES OR DITCH LINES WHERE THE MAXIMUM CONTRIBUTING DRAINAGE AREA IS NO GREATER THAN 2 ACRES.</p> <p>3. BRUSH BARRIER WITH FILTER FABRIC: BRUSH BARRIER MAY BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WHERE ENOUGH RESIDUE MATERIAL IS AVAILABLE ON SITE.</p> <p>4. LEVEL SPREADER: A LEVEL SPREADER MAY BE USED WHERE SEDIMENT-FREE STORM RUNOFF IS INTERCEPTED AND DIVERTED AWAY FROM THE GRADED AREAS ONTO UNDISTURBED STABILIZED AREAS. THIS PRACTICE APPLIES ONLY IN THOSE SITUATIONS WHERE THE SPREADER CAN BE CONSTRUCTED ON UNDISTURBED SOIL AND THE AREA BELOW THE LEVEL LIP IS STABILIZED. THE WATER SHOULD NOT BE ALLOWED TO RECONCENTRATE AFTER RELEASE.</p> <p>5. STOCKPILING MATERIAL: NO EXCAVATED MATERIAL SHALL BE STOCKPILED IN SUCH A MANNER AS TO DIRECT RUNOFF DIRECTLY OFF THE PROJECT SITE INTO ANY ADJACENT WATER BODY OR STORM WATER COLLECTION FACILITY.</p> <p>6. EXPOSED AREA LIMITATION: THE SURFACE AREA OF OPEN, RAW ERODIBLE SOIL EXPOSED BY CLEARING AND GRUBBING OPERATIONS OR EXCAVATION AND FILLING OPERATIONS SHALL NOT EXCEED 10 ACRES. THIS REQUIREMENT MAY BE WAIVED FOR LARGE PROJECTS WITH AN EROSION CONTROL PLAN WHICH DEMONSTRATES THAT OPENING OF ADDITIONAL AREAS WILL NOT SIGNIFICANTLY AFFECT OFF-SITE DEPOSIT OF SEDIMENTS.</p>	
POLLUTION PREVENTION PLAN CERTIFICATION		OTHER CONTROLS	
<p>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 GATHERED AND EVALUATED THE INFORMATION SUBMITTED, BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE 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.</p> <p>SIGNED: _____</p> <p>TITLE: _____ CORPORATE OFFICER, GENERAL PARTNER, PROPRIETOR, EXECUTIVE OFFICER, OR RANKING ELECTED OFFICIAL</p> <p>DATE: _____</p>		<p>7. INLET PROTECTION: INLETS AND CATCH BASINS WHICH DISCHARGE DIRECTLY OFF-SITE SHALL BE PROTECTED FROM SEDIMENT –LADEN STORM RUNOFF UNTIL THE COMPLETION OF ALL CONSTRUCTION OPERATIONS THAT MAY CONTRIBUTE SEDIMENT TO THE INLET.</p> <p>8. TEMPORARY SEEDING: AREAS OPENED BY CONSTRUCTION OPERATIONS AND THAT ARE NOT ANTICIPATED TO BE RE-EXCAVATED OR DRESSED AND RECEIVE FINAL GRASSING TREATMENT WITHIN 7 DAYS SHALL BE SEEDED WITH A QUICK GROWING GRASS SPECIES WHICH WILL PROVIDE AN EARLY COVER DURING THE SEASON IN WHICH IT IS PLANTED AND WILL NOT LATER COMPETE WITH THE PERMANENT GRASSING.</p> <p>9. TEMPORARY SEEDING AND MULCHING: SLOPES STEEPER THAN 6:1 THAT FALL WITHIN THE CATEGORY ESTABLISHED IN PARAGRAPH 8 ABOVE SHALL ADDITIONALLY RECEIVE MULCHING OF APPROXIMATELY 2 INCHES LOOSE MEASURE OF MULCH MATERIAL CUT INTO THE SOIL OF THE SEEDED AREA ADEQUATE TO PREVENT MOVEMENT OF SEED AND MULCH.</p> <p>10. TEMPORARY GRASSING: THE SEEDED OR SEEDED AND MULCHED AREA(S) SHALL BE ROLLED AND WATERED OR HYDROMULCHED OR OTHER SUITABLE METHODS IF REQUIRED TO ASSURE OPTIMUM GROWING CONDITIONS FOR THE ESTABLISHMENT OF A GOOD GRASS COVER.</p> <p>11. TEMPORARY REGRASSING : IF, AFTER 14 DAYS FROM SEEDING, THE TEMPORARY GRASSED AREAS HAVE NOT ATTAINED A MINIMUM OF 75 PERCENT GOOD GRASS COVER, THE AREA WILL BE REWORKED AND ADDITIONAL SEED APPLIED SUFFICIENT TO ESTABLISH THE DESIRED VEGETATIVE COVER.</p> <p>12. MAINTENANCE: ALL FEATURES OF THE PROJECT DESIGNED AND CONSTRUCTED TO PREVENT EROSION AND SEDIMENT SHALL BE MAINTAINED DURING THE LIFE OF THE CONSTRUCTION SO AS TO FUNCTION AS THEY WERE ORIGINALLY DESIGNED AND CONSTRUCTED.</p> <p>13. PERMANENT EROSION CONTROL: THE EROSION CONTROL FACILITIES OF THE PROJECT SHOULD BE DESIGNED TO MINIMIZE THE IMPACT ON THE OFFSITE FACILITIES.</p> <p>14. PERMANENT SEEDING: ALL AREAS WHICH HAVE BEEN DISTURBED BY CONSTRUCTION WILL, AS A MINIMUM, BE SEEDED. THE SEEDING MIX MUST PROVIDE BOTH LONG-TERM VEGETATION AND RAPID GROWTH SEASONAL VEGETATION. SLOPES STEEPER THAN 4:1 SHALL BE SEEDED AND MULCHED OR SODDED.</p> <p>STRUCTURAL PRACTICES</p> <p>1. TEMPORARY DIVERSION DIKE: TEMPORARY DIVERSION DIKES MAY BE USED TO DIVERT RUNOFF THROUGH A SEDIMENT-TRAPPING FACILITY.</p> <p>2. TEMPORARY SEDIMENT TRAP: A SEDIMENT TRAP IS USUALLY INSTALLED IN AN DRAINAGEWAY AT A STORM DRAIN INLET OR AT OTHER POINTS OF DISCHARGE FROM A DISTURBED AREA WITH THE FOLLOWING LIMITATIONS: A. THE SEDIMENT TRAP MAY BE CONSTRUCTED EITHER INDEPENDENTLY OR IN CONJUNCTION WITH A TEMPORARY DIVERSION DIKE.</p> <p>3. OUTLET PROTECTION: APPLICABLE TO THE OUTLETS OF ALL PIPES AND PAVED CHANNEL SECTIONS WHERE THE VELOCITY OF FLOW AT DESIGN CAPACITY OF THE OUTLET WILL EXCEED THE PERMISSIBLE VELOCITY OF THE RECEIVING CHANNEL OR AREA.</p> <p>4. SEDIMENT BASIN: WILL BE CONSTRUCTED AT THE COMMON DRAINAGE LOCATIONS THAT SERVE AN AREA WITH 10 OR MORE DISTURBED ACRES AT ONE TIME, THE PROPOSED STORM WATER PONDS (OR TEMPORARY PONDS) WILL BE CONSTRUCTED FOR USE AS SEDIMENT BASINS. THESE SEDIMENT BASINS MUST PROVIDE A MINIMUM OF 3,600 CUBIC FEET OF STORAGE PER ACRE DRAINED UNTIL FINAL STABILIZATION OF THE SITE. THE 3,600 CUBIC FEET OF STORAGE AREA PER ACRE DRAINED DOES NOT APPLY TO FLOWS FROM OFFSITE AREAS AND FLOWS FROM ONSITE AREAS THAT ARE EITHER UNDISTURBED OR HAVE UNDERGONE FINAL STABILIZATION WHERE SUCH FLOWS ARE DIVERTED AROUND BOTH THE DISTURBED AREA AND THE SEDIMENT BASIN. ANY TEMPORARY SEDIMENT BASINS CONSTRUCTED MUST BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR STRUCTURAL FILL. ALL SEDIMENT COLLECTED IN PERMANENT OR TEMPORARY SEDIMENT TRAPS MUST BE REMOVED UPON FINAL STABILIZATION.</p> <p>WASTE DISPOSAL WASTE MATERIALS ALL WASTE MATERIALS EXCEPT LAND CLEARING DEBRIS SHALL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. THE DUMPSTER WILL MEET ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS. THE DUMPSTER WILL BE EMPTIED AS NEEDED AND THE TRASH WILL BE HAULED TO A STATE APPROVED LANDFILL. ALL PERSONNEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL. NOTICES STATING THESE PRACTICES WILL BE POSTED AT THE CONSTRUCTION SITE BY THE CONSTRUCTION SUPERINTENDENT, THE INDIVIDUAL WHO MANAGES THE DAY-TO-DAY SITE OPERATIONS, WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.</p> <p>HAZARDOUS WASTE ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES AND THE SITE SUPERINTENDENT, THE INDIVIDUAL WHO MANAGES DAY-TO-DAY SITE OPERATIONS, WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED.</p> <p>SANITARY WASTE ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS AS NEEDED TO PREVENT POSSIBLE SPILLAGE. THE WASTE WILL BE COLLECTED AND DISPOSED OF IN ACCORDANCE WITH STATE AND LOCAL WASTE DISPOSAL REGULATIONS FOR SANITARY SEWER OR SEPTIC SYSTEMS.</p> <p>OFFSITE VEHICLE TRACKING A STABILIZED CONSTRUCTION ENTRANCE WILL BE PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. THE PAVED STREET ADJACENT TO THE SITE ENTRANCE WILL BE SWEEP DAILY TO REMOVE ANY EXCESS MUD</p>	

OWNER'S REQUIREMENTS		CONTRACTOR'S REQUIREMENTS	
SITE DESCRIPTION		GENERAL	
<p>PROJECT NAME AND LOCATION: NASSAU CARWASH NASSAU COUNTY, FLORIDA</p> <p>OWNER/DEVELOPER NAME AND ADDRESS: SOUTHERN EXPRESS CARWASH, INC.</p> <p>DESCRIPTION: THIS PROJECT WILL CONSIST OF: CONSTRUCTION OF A XXXXXXXX DEVELOPMENT. CONSTRUCTION WILL CONSIST OF INSTALLATION OF UNDERGROUND UTILITIES, CLEARING, GRADING, STORMWATER MANAGEMENT FACILITIES ROADWAYS, PARKING AREAS, XXXXXXXXXX AND ASSOCIATED CONSTRUCTION.</p> <p>SOIL DISTURBING ACTIVITIES WILL INCLUDE: CLEARING AND GRUBBING; INSTALLING A STABILIZED CONSTRUCTION ENTRANCE, PERIMETER, AND OTHER EROSION AND SEDIMENT CONTROLS; GRADING; EXCAVATION FOR THE SEDIMENTATION POND, STORM SEWER, UTILITIES, AND BUILDING FOUNDATION; CONSTRUCTION OF CURB AND GUTTER, ROAD, AND PARKING AREAS; AND PREPARATION FOR FINAL PLANTING AND SEEDING.</p> <p>GENERALIZED RUNOFF CURVE NUMBERS (REFER TO DRAINAGE CALCULATIONS FOR ACTUAL CURVE NUMBER FOR EACH BASIN)</p> <p>1. PRE-CONSTRUCTION = XX± 2. DURING CONSTRUCTION = XX± 3. POST-CONSTRUCTION = XX±</p> <p>SOILS: * SEE ATTACHED FOR SOILS DATA</p> <p>SITE MAPS: * SEE ATTACHED DWG. No. X – X FOR POST DEVELOPMENT GRADES, AREAS OF SOILS, DISTURBANCE, LOCATION OF SURFACE WATERS, WETLANDS, PROTECTED AREAS, MAJOR STRUCTURAL AND NONSTRUCTURAL CONTROLS AND STORM WATER DISCHARGE POINTS.</p> <p>* SEE ATTACHED DWG. No. X AND X FOR LOCATION OF TEMPORARY STABILIZATION PRACTICES, AND TURBIDITY BARRIERS</p> <p>SITE AREA: 1. TOTAL AREA OF SITE = XXXX AC± 2. TOTAL AREA TO BE DISTURBED = XXXX AC±</p> <p>NAME OF RECEIVING WATERS: HEADWATERS OF XXXXXX</p>	<p>THE CONTRACTOR SHALL AT A MINIMUM IMPLEMENT THE CONTRACTOR'S REQUIREMENTS OUTLINED BELOW AND THOSE MEASURES SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN. IN ADDITION THE CONTRACTOR SHALL UNDERTAKE ADDITIONAL MEASURES REQUIRED TO BE IN COMPLIANCE WITH APPLICABLE PERMIT CONDITIONS AND STATE WATER QUALITY STANDARDS. DEPENDING ON THE NATURE OF MATERIALS AND METHODS OF CONSTRUCTION THE CONTRACTOR MAY BE REQUIRED TO ADD FLOCCULANTS TO THE RETENTION SYSTEM PRIOR TO PLACING THE SYSTEM INTO OPERATION.</p> <p>SEQUENCE OF MAJOR ACTIVITIES:</p> <p>THE ORDER OF ACTIVITIES WILL BE AS FOLLOWS:</p> <p>1. INSTALL STABILIZED CONSTRUCTION ENTRANCE 2. INSTALL SILT FENCES AND COIR BALES AS REQUIRED 3. CLEAR AND GRUB FOR DIVERSION SWALES/DIKES AND SEDIMENT BASIN 4. CONSTRUCT SEDIMENTATION BASIN 5. CONTINUE CLEARING AND GRUBBING 6. STOCK PILE TOP SOIL IF REQUIRED 7. PERFORM PRELIMINARY GRADING ON SITE AS REQUIRED 8. STABILIZE DENUDED AREAS AND STOCKPILES AS SOON AS PRACTICABLE</p> <p>9. INSTALL UTILITIES, STORM SEWER, CURBS & GUTTER. 10. APPLY BASE TO PARKING AREAS 11. COMPLETE GRADING AND SEEDING/SOD AND PLANTING 12. COMPLETE FINAL PAVING 13. REMOVE ACCUMULATED SEDIMENT FROM BASINS 14. WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE IS STABILIZED, REMOVE ANY TEMPORARY DIVERSION SWALES/DIKES AND RESEED/SOD AS REQUIRED</p> <p>NOTE: VERTICAL CONSTRUCTION OF THE BUILDING WILL BE TAKING PLACE DURING ALL THE SEQUENCE STEPS LISTED ABOVE</p> <p>TIMING OF CONTROLS/MEASURES</p> <p>AS INDICATED IN THE SEQUENCE OF MAJOR ACTIVITIES, THE SILT FENCES AND COIR BALES, STABILIZED CONSTRUCTION ENTRANCE AND SEDIMENT BASIN WILL BE CONSTRUCTED PRIOR TO CLEARING OR GRADING OF ANY OTHER PORTIONS OF THE SITE. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN AREA, THAT AREA WILL BE STABILIZED PERMANENTLY IN ACCORDANCE WITH THE PLANS. AFTER THE ENTIRE SITE IS STABILIZED, THE ACCUMULATED SEDIMENT WILL BE REMOVED FROM THE SEDIMENT TRAPS AND THE EARTH DIKE/SWALES WILL BE REGRADED/REMOVED AND STABILIZED IN ACCORDANCE WITH THE XXX (DRAWING NO. XXX)</p>	<p>7. INLET PROTECTION: INLETS AND CATCH BASINS WHICH DISCHARGE DIRECTLY OFF-SITE SHALL BE PROTECTED FROM SEDIMENT –LADEN STORM RUNOFF UNTIL THE COMPLETION OF ALL CONSTRUCTION OPERATIONS THAT MAY CONTRIBUTE SEDIMENT TO THE INLET.</p> <p>8. TEMPORARY SEEDING: AREAS OPENED BY CONSTRUCTION OPERATIONS AND THAT ARE NOT ANTICIPATED TO BE RE-EXCAVATED OR DRESSED AND RECEIVE FINAL GRASSING TREATMENT WITHIN 7 DAYS SHALL BE SEEDDED WITH A QUICK GROWING GRASS SPECIES WHICH WILL PROVIDE AN EARLY COVER DURING THE SEASON IN WHICH IT IS PLANTED AND WILL NOT LATER COMPETE WITH THE PERMANENT GRASSING.</p> <p>9. TEMPORARY SEEDING AND MULCHING: SLOPES STEEPER THAN 6:1 THAT FALL WITHIN THE CATEGORY ESTABLISHED IN PARAGRAPH 8 ABOVE SHALL ADDITIONALLY RECEIVE MULCHING OF APPROXIMATELY 2 INCHES LOOSE MEASURE OF MULCH MATERIAL CUT INTO THE SOIL OF THE SEEDDED AREA ADEQUATE TO PREVENT MOVEMENT OF SEED AND MULCH.</p> <p>10. TEMPORARY GRASSING: THE SEEDDED OR SEEDDED AND MULCHED AREA(S) SHALL BE ROLLED AND WATERED OR HYDROMULCHED OR OTHER SUITABLE METHODS IF REQUIRED TO ASSURE OPTIMUM GROWING CONDITIONS FOR THE ESTABLISHMENT OF A GOOD GRASS COVER.</p> <p>11. TEMPORARY REGRASSING : IF, AFTER 14 DAYS FROM SEEDING, THE TEMPORARY GRASSED AREAS HAVE NOT ATTAINED A MINIMUM OF 75 PERCENT GOOD GRASS COVER, THE AREA WILL BE REWORKED AND ADDITIONAL SEED APPLIED SUFFICIENT TO ESTABLISH THE DESIRED VEGETATIVE COVER.</p> <p>12. MAINTENANCE: ALL FEATURES OF THE PROJECT DESIGNED AND CONSTRUCTED TO PREVENT EROSION AND SEDIMENT SHALL BE MAINTAINED DURING THE LIFE OF THE CONSTRUCTION SO AS TO FUNCTION AS THEY WERE ORIGINALLY DESIGNED AND CONSTRUCTED.</p> <p>13. PERMANENT EROSION CONTROL: THE EROSION CONTROL FACILITIES OF THE PROJECT SHOULD BE DESIGNED TO MINIMIZE THE IMPACT ON THE OFFSITE FACILITIES.</p> <p>14. PERMANENT SEEDING: ALL AREAS WHICH HAVE BEEN DISTURBED BY CONSTRUCTION WILL, AS A MINIMUM, BE SEEDDED. THE SEEDING MIX MUST PROVIDE BOTH LONG-TERM VEGETATION AND RAPID GROWTH SEASONAL VEGETATION. SLOPES STEEPER THAN 4:1 SHALL BE SEEDDED AND MULCHED OR SODDED.</p> <p>STRUCTURAL PRACTICES</p> <p>1. TEMPORARY DIVERSION DIKE: TEMPORARY DIVERSION DIKES MAY BE USED TO DIVERT RUNOFF THROUGH A SEDIMENT-TRAPPING FACILITY.</p> <p>2. TEMPORARY SEDIMENT TRAP: A SEDIMENT TRAP IS USUALLY INSTALLED IN AN DRAINAGEWAY AT A STORM DRAIN INLET OR AT OTHER POINTS OF DISCHARGE FROM A DISTURBED AREA WITH THE FOLLOWING LIMITATIONS: A. THE SEDIMENT TRAP MAY BE CONSTRUCTED EITHER INDEPENDENTLY OR IN CONJUNCTION WITH A TEMPORARY DIVERSION DIKE.</p> <p>3. OUTLET PROTECTION: APPLICABLE TO THE OUTLETS OF ALL PIPES AND PAVED CHANNEL SECTIONS WHERE THE VELOCITY OF FLOW AT DESIGN CAPACITY OF THE OUTLET WILL EXCEED THE PERMISSIBLE VELOCITY OF THE RECEIVING CHANNEL OR AREA.</p> <p>4. SEDIMENT BASIN: WILL BE CONSTRUCTED AT THE COMMON DRAINAGE LOCATIONS THAT SERVE AN AREA WITH 10 OR MORE DISTURBED ACRES AT ONE TIME, THE PROPOSED STORM WATER PONDS (OR TEMPORARY PONDS) WILL BE CONSTRUCTED FOR USE AS SEDIMENT BASINS. THESE SEDIMENT BASINS MUST PROVIDE A MINIMUM OF 3,600 CUBIC FEET OF STORAGE PER ACRE DRAINED UNTIL FINAL STABILIZATION OF THE SITE. THE 3,600 CUBIC FEET OF STORAGE AREA PER ACRE DRAINED DOES NOT APPLY TO FLOWS FROM OFFSITE AREAS AND FLOWS FROM ONSITE AREAS THAT ARE EITHER UNDISTURBED OR HAVE UNDERGONE FINAL STABILIZATION WHERE SUCH FLOWS ARE DIVERTED AROUND BOTH THE DISTURBED AREA AND THE SEDIMENT BASIN. ANY TEMPORARY SEDIMENT BASINS CONSTRUCTED MUST BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR STRUCTURAL FILL. ALL SEDIMENT COLLECTED IN PERMANENT OR TEMPORARY SEDIMENT TRAPS MUST BE REMOVED UPON FINAL STABILIZATION.</p> <p>OTHER CONTROLS</p> <p>WASTE DISPOSAL WASTE MATERIALS ALL WASTE MATERIALS EXCEPT LAND CLEARING DEBRIS SHALL BE COLLECTED AND STORED IN A SECURELY LODGED METAL DUMPSTER. THE DUMPSTER WILL MEET ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS. THE DUMPSTER WILL BE EMPTIED AS NEEDED AND THE TRASH WILL BE HAULED TO A STATE APPROVED LANDFILL. ALL PERSONNEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL. NOTICES STATING THESE PRACTICES WILL BE POSTED AT THE CONSTRUCTION SITE BY THE CONSTRUCTION SUPERINTENDENT, THE INDIVIDUAL WHO MANAGES THE DAY-TO-DAY SITE OPERATIONS, WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.</p> <p>HAZARDOUS WASTE ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES AND THE SITE SUPERINTENDENT, THE INDIVIDUAL WHO MANAGES DAY-TO-DAY SITE OPERATIONS, WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED.</p> <p>SANITARY WASTE ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS AS NEEDED TO PREVENT POSSIBLE SPILLAGE. THE WASTE WILL BE COLLECTED AND DISPOSED OF IN ACCORDANCE WITH STATE AND LOCAL WASTE DISPOSAL REGULATIONS FOR SANITARY SEWER OR SEPTIC SYSTEMS.</p> <p>OFFSITE VEHICLE TRACKING A STABILIZED CONSTRUCTION ENTRANCE WILL BE PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. THE PAVED STREET ADJACENT TO THE SITE ENTRANCE WILL BE SWEEPED DAILY TO REMOVE ANY EXCESS MUD, DIRT OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE WILL BE COVERED WITH A TARP/AULIN.</p>	<p>INVENTORY FOR POLLUTION PREVENTION PLAN</p> <p>THE MATERIALS OR SUBSTANCES LISTED BELOW ARE EXPECTED TO BE PRESENT ONSITE DURING CONSTRUCTION:</p> <p>Concrete Asphalt Tar Detergents</p> <p>Fertilizers Petroleum Based Products Cleaning Solvents Paints</p> <p>Wood Masonry Blocks Roofing Materials Metal Studs</p> <p>SPILL PREVENTION</p> <p>MATERIAL MANAGEMENT PRACTICES</p> <p>THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER MATERIAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF.</p> <p>GOOD HOUSEKEEPING</p> <p>THE FOLLOWING GOOD HOUSEKEEPING PRACTICES WILL BE FOLLOWED ONSITE DURING THE CONSTRUCTION PROJECT.</p> <p>* AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB. * ALL MATERIALS STORED ONSITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE. * PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL. * SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER. * WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE CONTAINER. * MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED. * THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE MATERIALS ONSITE RECEIVE PROPER USE AND DISPOSAL.</p> <p>HAZARDOUS PRODUCTS</p> <p>THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS. * PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE. * ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED; THEY CONTAIN IMPORTANT PRODUCT INFORMATION. * IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S OR LOCAL AND STATE RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED.</p> <p>PRODUCT SPECIFIC PRACTICES</p> <p>THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ONSITE:</p> <p>PETROLEUM PRODUCTS</p> <p>ALL ONSITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ONSITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.</p> <p>FERTILIZERS</p> <p>FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORM WATER. STORAGE WILL BE IN A COVERED AREA. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.</p> <p>PAINTS</p> <p>ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURERS' INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.</p> <p>CONCRETE TRUCKS</p> <p>CONCRETE TRUCKS WILL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE SITE.</p> <p>SPILL CONTROL PRACTICES</p> <p>IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:</p> <p>MANUFACTURERS' RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED ON SITE AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.</p> <p>MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ONSITE. EQUIPMENT AND MATERIALS WILL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, LIQUID ABSORBENT (I.E. KITTY LITTER OR EQUAL), SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.</p> <p>ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.</p> <p>THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.</p> <p>SPILL OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE OF THE SPILL.</p> <p>THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCC</p>

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NASSAU CARWASH

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 ACT (SWPCA) AND THE NATIONAL SANITATION FOUNDATION (NSF).
CERTIFICATION MUST BE COMPLETED WEEKLY AND AFTER EVERY RAINFALL EVENT
OF 0.50 INCHES OR GREATER.

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 _____

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NASSAU CARWASH

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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NASSAU CARWASH

STORM WATER POLLUTION PREVENTION PLAN
INSPECTION AND MAINTENANCE REPORT FORM

STRUCTURAL CONTROLS

DATE: _____

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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NASSAU CARWASH

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
GATHERED AND EVALUATED THE INFORMATION SUBMITTED BASED ON AN INQUIRY OF THE PERSON OR PERSONS WHO
SUBMITTED THE INFORMATION. I AM AWARE THAT THE INFORMATION SUBMITTED MAY BE INCOMPLETE OR INACCURATE
AND I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND
IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE: _____

DATE: _____

PAGE 4 OF 4

DRAWING NUMBER
15

CONTRACTORS CERTIFICATIONS

NASSAU CARWASH
FOR
SOUTHERN EXPRESS CARWASH, INC.

England-Thins & Miller, Inc.
17501 St. Johns River Road
Jacksonville, FL 32228

TEL: (904) 642-8890
FAX: (904) 646-9485

REG - 2584 LC - 0000316

REVISIONS:

ETM NO. 20-207

DRAWN BY:

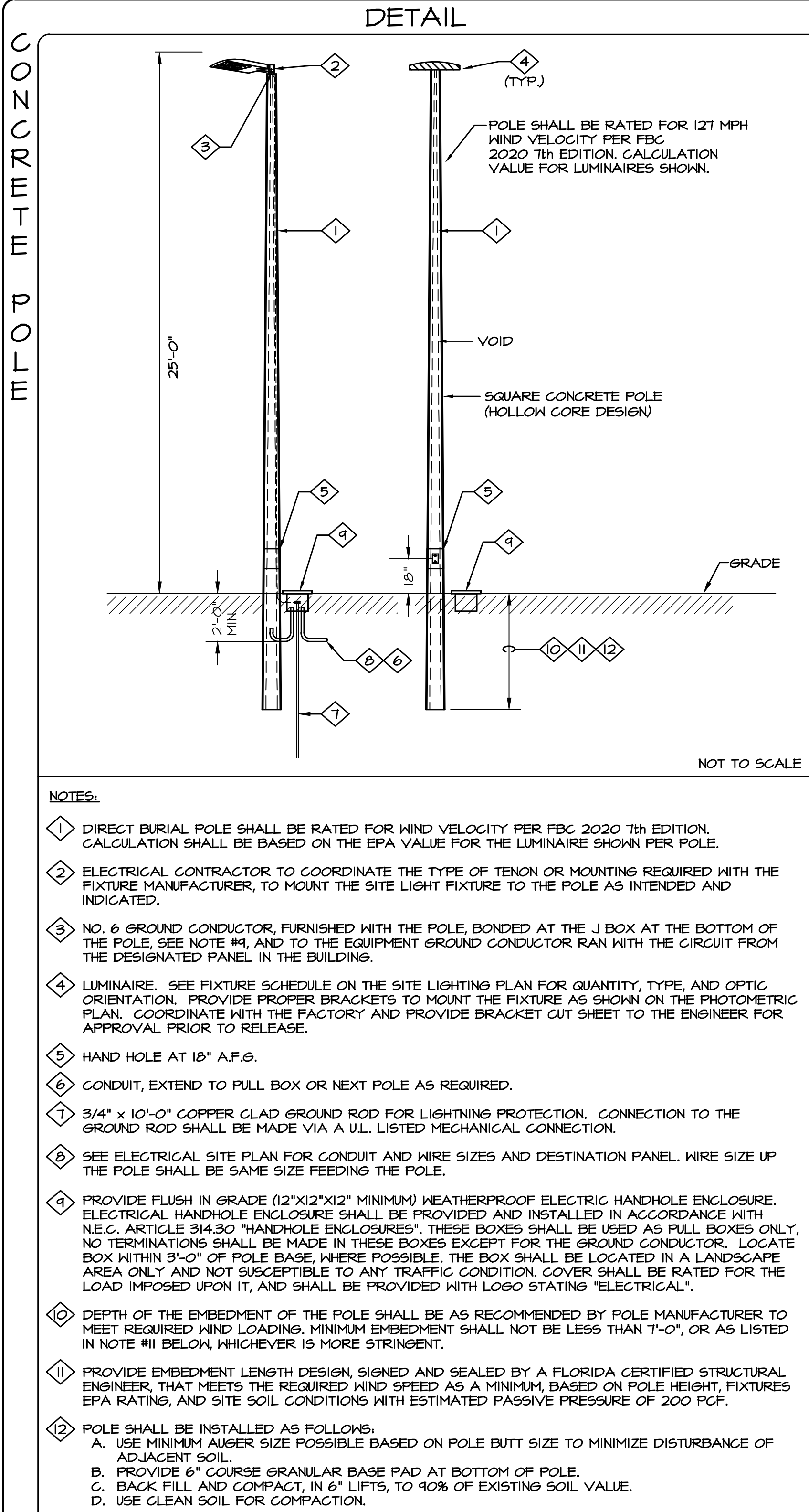
DESIGNED BY:

CHECKED BY:

DATE: Issue Date

PLANS PREPARED UNDER THE
DIRECTION OF:

ANDREW J. BOOTH
P.E. NUMBER: 92302

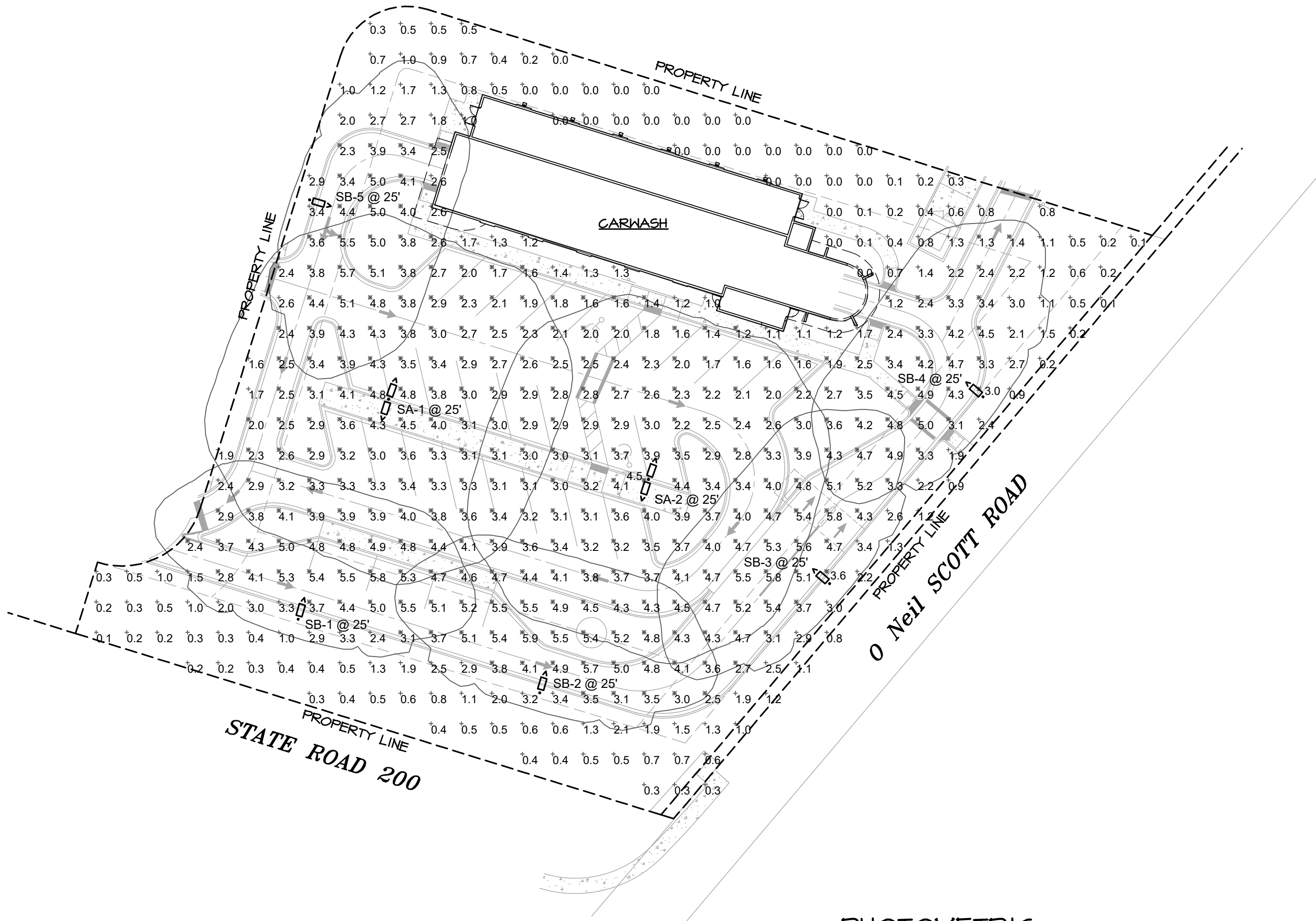


Surface Schedule						
Name	Reflectance		Normal			
	Front	Back	X	Y	Z	Area(ft2)
Solid						
Bottom	0%	0%	0.00	0.00	-1.00	5264.70
Side 1	0%	0%	0.30	0.96	0.00	3300.02
Side 2	0%	0%	0.96	-0.30	0.00	280.02
Side 3	0%	0%	0.30	0.96	0.00	223.01
Side 4	0%	0%	0.96	-0.30	0.00	245.00
Side 5	0%	0%	0.30	0.96	0.00	160.48
Side 6	0%	0%	-0.96	0.30	0.00	89.94
Side 7	0%	0%	0.30	0.96	0.00	20.01
Side 8	0%	0%	0.96	-0.30	0.00	89.94
Side 9	0%	0%	0.30	0.96	0.00	221.72
Side 10	0%	0%	0.30	0.92	0.00	108.00
Side 11	0%	0%	0.76	0.65	0.00	119.50
Side 12	0%	0%	-0.49	0.87	0.00	88.98
Side 13	0%	0%	1.00	0.00	0.00	25.92
Side 14	0%	0%	0.45	-0.89	0.00	77.28
Side 15	0%	0%	0.97	0.23	0.00	75.44
Side 16	0%	0%	1.00	0.05	0.00	62.20
Side 17	0%	0%	0.98	-0.20	0.00	98.12
Side 18	0%	0%	0.89	-0.45	0.00	57.96
Side 19	0%	0%	0.77	-0.63	0.00	61.40
Side 20	0%	0%	0.52	-0.85	0.00	65.95
Side 21	0%	0%	0.91	0.41	0.00	94.75
Side 22	0%	0%	0.00	-1.00	0.00	30.23
Side 23	0%	0%	-0.95	-0.32	0.00	81.97
Side 24	0%	0%	0.50	-0.87	0.00	69.66
Side 25	0%	0%	0.00	-1.00	0.00	56.16
Side 26	0%	0%	-0.27	-0.96	0.00	80.73
Side 27	0%	0%	-0.25	-0.97	0.00	241.03
Side 28	0%	0%	0.96	-0.29	0.00	90.21
Side 29	0%	0%	-0.27	-0.96	0.00	31.45
Side 30	0%	0%	-0.94	0.35	0.00	87.48
Side 31	0%	0%	-0.32	-0.95	0.00	150.27
Side 32	0%	0%	0.95	-0.31	0.00	245.03
Side 33	0%	0%	-0.30	-0.96	0.00	690.00
Side 34	0%	0%	-0.93	0.36	0.00	144.05
Side 35	0%	0%	-0.31	-0.95	0.00	2992.32
Side 36	0%	0%	-0.96	0.30	0.00	745.00
Side 37	0%	0%	0.30	0.96	0.00	150.01
Side 38	0%	0%	-0.96	0.30	0.00	429.99
Top	0%	0%	0.00	0.00	1.00	5264.70

Luminaire Locations										
		Location					Aim			
No.	Label	X	Y	Z	MH	Orientation	Tilt	X	Y	Z
1	SA	2521.37	511.16	25.00	25.00	22.76	0.00			
2	SA	2606.78	484.84	25.00	25.00	18.72	0.00			
1	SB	2491.55	438.74	25.00	25.00	16.39	0.00	2492.33	441.38	0.00
2	SB	2570.89	414.68	25.00	25.00	15.90	0.00	2571.65	417.33	0.00
3	SB	2686.30	150.52	25.00	25.00	310.78	0.00	2684.22	463.32	0.00
4	SB	2716.69	511.96	25.00	25.00	305.60	0.00	2714.45	513.56	0.00
5	SB	2495.32	576.55	25.00	25.00	108.68	0.00	2497.93	575.67	0.00

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
overall parcel	+	2.6 fc	5.9 fc	0.0 fc	N/A	N/A
parking and paved areas	⌘	3.6 fc	5.9 fc	1.2 fc	4.9:1	3.0:1

Schedule									
Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Wattage
⌘	SA	2	Lithonia Lighting	DSX1 LED P6 40K T5W MVOLT	DSX1 LED P6 40K T5W MVOLT	LED	1	DSX1_LED_P6_40K_T5W_MVOLT.tes	326
⌘	SB	5	Lithonia Lighting	DSX1 LED P6 40K BLC MVOLT	DSX1 LED P6 40K BLC MVOLT	LED	1	DSX1_LED_P6_40K_BLC_MVOLT.tes	163



NORTH

PHOTOMETRIC SITE PLAN

SCALE: 1" = 30'-0"

ALL SITE AND BUILDING LIGHTS PROPOSED ON THIS PROJECT ARE DESIGNED AS FULL CUTOFF CLASSIFICATION WITH ZERO UP LIGHT COMPONENTS.

THESE PHOTOMETRICS ARE INTENDED FOR DESIGN AND EVALUATION PURPOSES ONLY. THE POINT-BY-POINT SHOWN IS BASED ON A COMPUTER LIGHTING PROGRAM WITH APPROXIMATED PARAMETERS. THEREFORE, THESE PHOTOMETRICS MAY VARY FROM ACTUAL FIELD CONDITIONS.

FIXTURE NOTE:

FIXTURE SHOWN ON THIS SHEET IS FOR REFERENCE ONLY. SEE ACTUAL FIXTURE SCHEDULE ELSE WHERE IN THIS DOCUMENTS FOR ACTUAL CATALOG NUMBER AND DESCRIPTION.

PROJECT LOCATION

Naussa County Car Wash

Site Lighting

E. State Rd 200 & O Neil Scott Rd
Fernandina Beach, FL 32034

CHECKED BY: S.C.

DATE: _____

REVISION

NO.	DATE	REVISION

SHEET TITLE

PHOTOMETRIC SITE PLAN

CHEHAYEB & ASSOCIATES, INC.

CONSULTING PROFESSIONAL ENGINEERS

9702 AZERLE ST
TAMPA, FL 33609

(813) 876-1415
(fax) 876-0918

U.C. #49521 SOUHEL CHEHAYEB 21-12 CERT. #7340

SHEET NO.

EO.2

JOB NO.

21-12

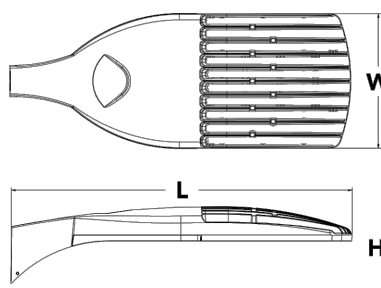


D-Series Size 1 LED Area Luminaire



Specifications

EPA: 1.01 ft²
(0.09 m²)
Length: 33"
(0.84 m)
Width: 13"
(0.33 m)
Height H1: 7-1/2"
(0.6 m)
Height H2: 3-1/2"
(0.3 m)
Weight (max): 27 lbs
(12.2 kg)



Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 750W metal halide in pedestrian and area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX1 LED P7 40K T3M MVOLT SPA NLTAR2 PIRHN DDBXD

DSX1 LED					
Series	LEDs	Color temperature	Distribution		Voltage
DSX1 LED	Forward optics	S0K 3000 K	T1S	TSVS	WVOLT
P1	P4 ¹	P7 ¹	T2S	TSS	XXOLT
P2	P5 ¹	P8	T2M	TSM	(277V-480V) ^{1,10,11}
P3	P6 ¹	P9 ¹	T3S	T3M	120 ⁹
P10 ¹	P12 ¹		T3M	T3M	208 ⁹
P11 ¹	P13 ^{1,2}		T4M	T4M	240 ⁹
	Rotated optics		TFTM	TFTM	347 ⁹
					480 ⁹

Control options	Other options		Finish (optional)
Shipped installed	PIR	High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5K ^{10,11}	DDBK Dark bronze
NLTAR2	HS	House-side shield ¹¹	DBLK Black
PIRHN	PIRHN	High/low, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5K ^{10,11}	DNAX Natural aluminum
PER	SF	Single fuse (120, 277, 347V) ¹	DWHD White
PER	PIRHTCV	High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1K ^{10,11}	DDBKTD Textured dark bronze
PER	L90	Left rotated optics ¹	DBLKTD Textured black
PER	PER	Five-pin receptacle only (controls ordered separately) ^{1,10,11}	DNATD Textured natural aluminum
PER	PER	Seven-pin receptacle only (controls ordered separately) ^{1,10,11}	DNATD Textured natural aluminum
DMG	DMG	0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately) ^{1,11}	DWHDG Textured white
DS	DS	Dual switching ^{10,12}	

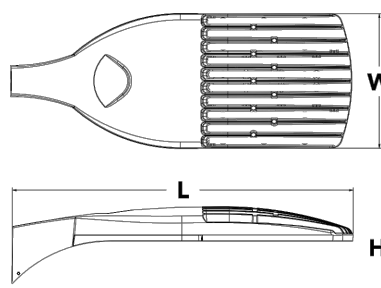


D-Series Size 1 LED Area Luminaire



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	Rotated optics		TFTM	TFTM	347 ⁹
					480 ⁹

Control options	Other options		Finish (optional)
Shipped installed	PIR	High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5K ^{10,11}	DDBK Dark bronze
NLTAR2	HS	House-side shield ¹¹	DBLK Black
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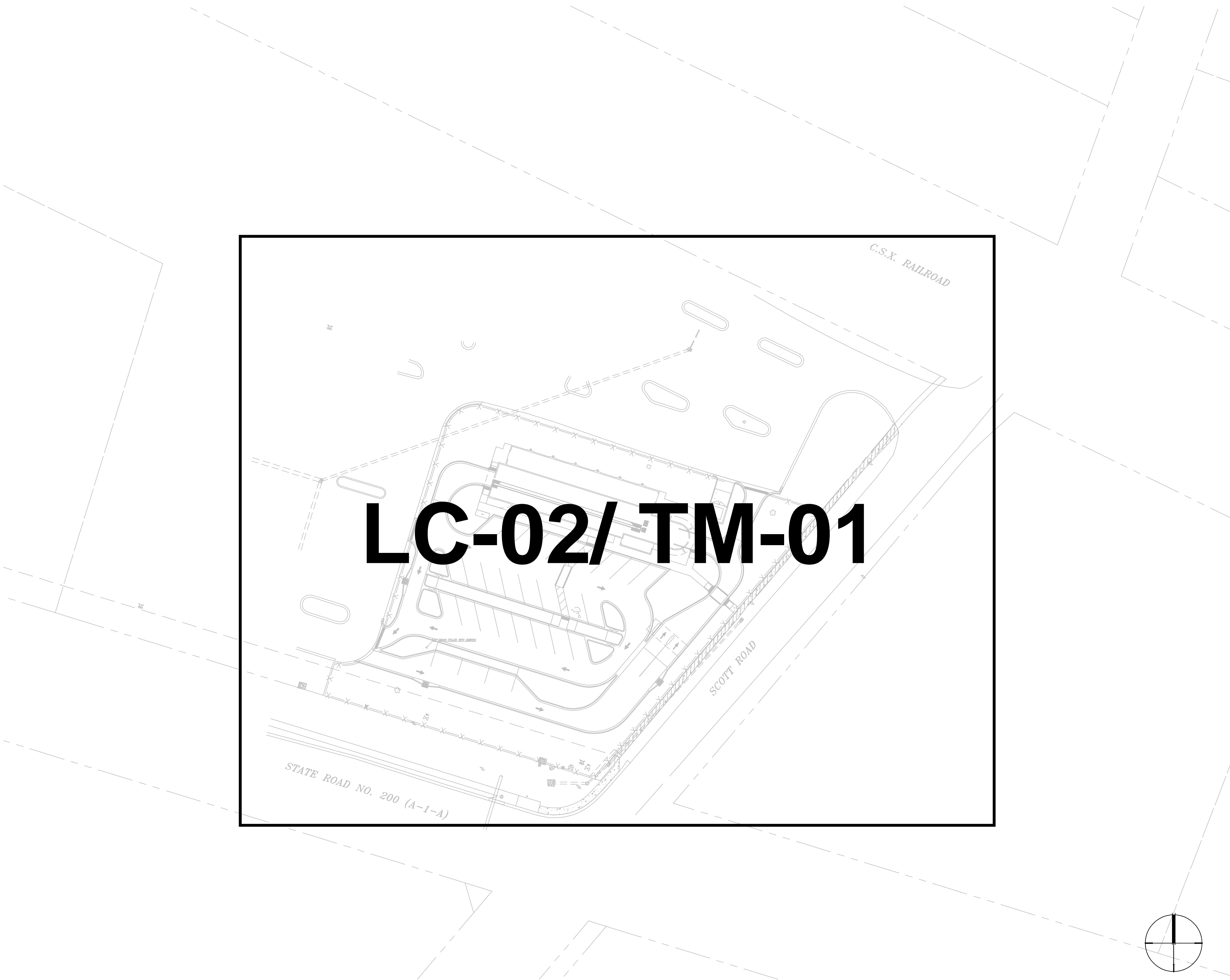
PROJECT LOCATION
Naussa County Car Wash
Site Lighting
E. State Rd 200 & O Neil Scott Rd
Fernandina Beach, FL 32034

CHEHAYEB & ASSOCIATES, INC.
CONSULTING PROFESSIONAL ENGINEERS
9702 AZERLE ST
TAMPA, FL 33609
LIC. #49521
SOUHEL CHEHAYEB
21-12
CERT. #7340

SHEET NO.
E0.3
JOB NO.
21-12

NASSAU CARWASH

LANDSCAPE ARCHITECTURE DOCUMENTS



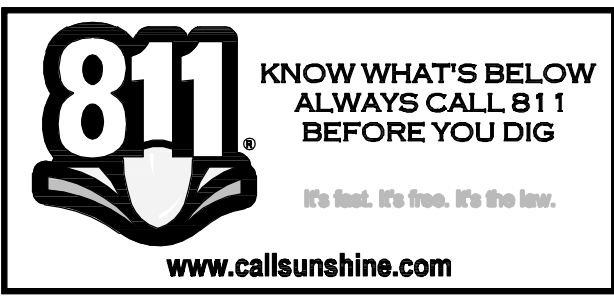
LC-02/TM-01

LANDSCAPE SHEET INDEX:	
SHEET NO.:	DRAWING DESCRIPTION
LC-00	LANDSCAPE COVER SHEET
LC-01	LANDSCAPE CODE SUMMARY
LC-02	LANDSCAPE PLAN
LC-03	LANDSCAPE SPECIFICATIONS, CODE CALCULATIONS AND DETAILS
TM-01	TREE MITIGATION PLAN

INDEX PLAN

PERMIT SET

CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING WITH THE LANDSCAPE ARCHITECT THAT CURRENT PLANS ARE BEING USED FOR BIDDING AND INSTALLATION



LANDSCAPE COVER

NASSAU CARWASH SITE FOR FOWLER PROPERTIES, INC.

DRAWING NUMBER

LC-00

ETM

England, Thins & Miller, Inc.
1715 Old St. Augustine Road
Jacksonville, FL 32208
TEL: (904) 642-8890
FAX: (904) 642-9485
CA - 00002584 LC - 0000316

VISION • EXPERIENCE • RESULTS

REVISIONS:

07-28-20 REVISED PER NASSAU COUNTY

ETM NO. 20-207

DRAWN BY: LL

DESIGNED BY: LL

CHECKED BY:

DATE: FEBRUARY 2021

PLANS PREPARED UNDER THE DIRECTION OF:

CERARD, K. WHITE

L.A. NUMBER: 6667024

PLOTTED: May 26, 2021 – 11:56 AM. BY: AJ Booth

LANDSCAPE CODE SUMMARY

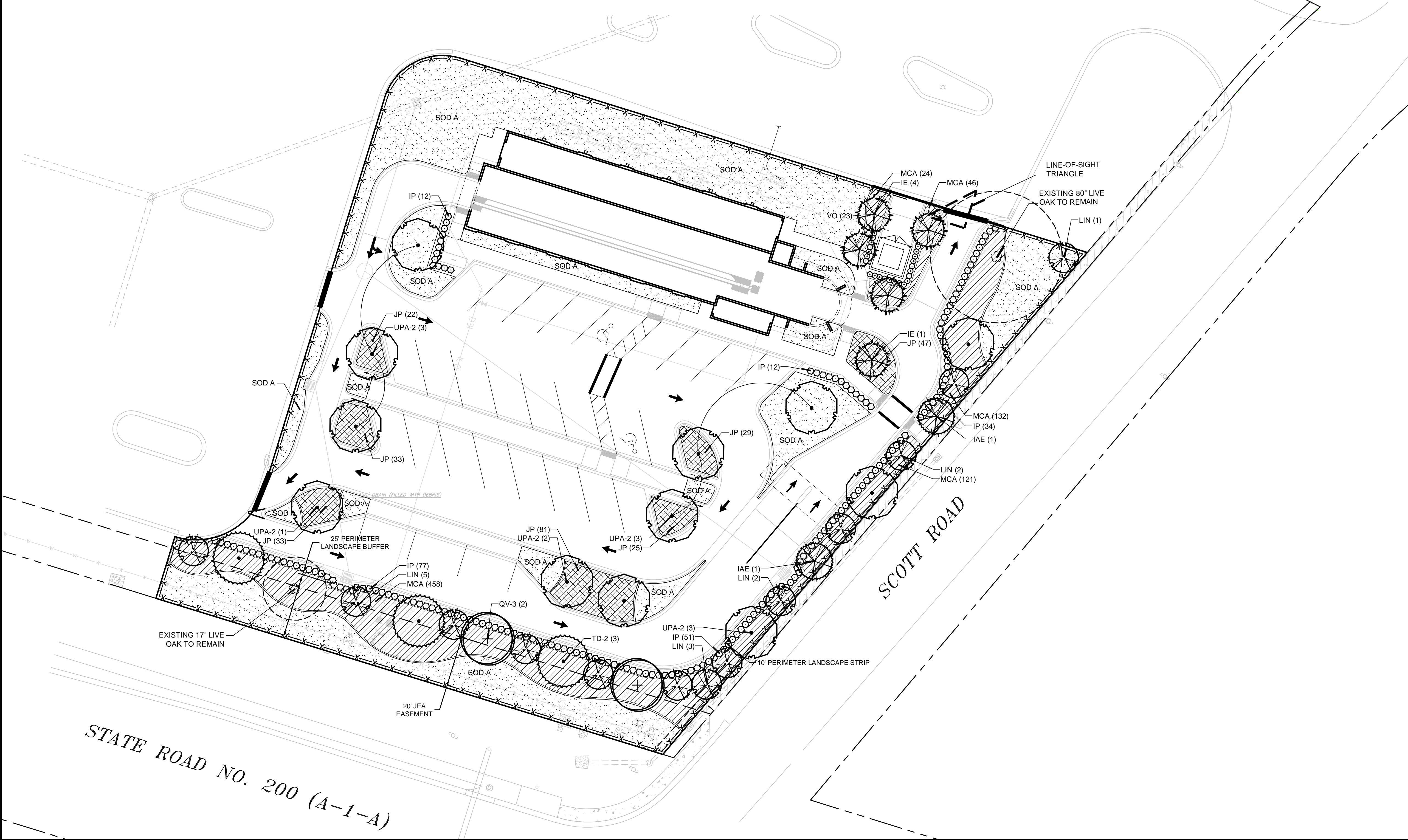
Article 37 – NATURAL RESOURCE PROTECTION			REFERENCE	DESCRIPTION	NOTES/ COMPLIANCE?
REFERENCE	DESCRIPTION	NOTES/ COMPLIANCE?	Section 37.05. – LANDSCAPING		
Section 37.02. – NATIVE CANOPY TREE PROTECTION (UNINCOPORATED AMELIA ISLAND)					
37.02.D.1	A tree inventory and retention/landscape plan has been prepared, pursuant to section 5.2(10) and 5.3 of the Nassau County Development Review Regulations.	N/A	37.05.B.1	The minimum number of trees required by this section shall be either qualifying existing trees preserved on-site or more than one species listed in Tables 37–1 or 37–2. new landscaping should not include more than fifty (50) percent of any one genus or twenty-five (25) percent of any one species. All trees shall be planted in a minimum dimension of ten (10) feet.	YES
37.02.D.2	The removal of healthy native canopy trees may be allowed for construction purposes where all reasonable alternatives have been documented and exhausted for relocating the specific construction.	N/A			
37.02.D.3	The removal/replacement of native canopy trees that are twenty-four (24) inches dbh or greater is strongly discouraged. Therefore, all reasonable alternatives or methods that are available, such as design modifications, shall be closely examined before removal.	N/A	37.05.B.2	Shrubs shall have a minimum height of eighteen (18) inches when planted. When planted as a hedge, the maximum spacing is 30 inches on center. All shrubs used for visual screening shall be of a plant species that is capable of reaching a height of four (4) feet within twenty-four (24) months under normal growing conditions.	YES
37.02.D.5	The removal of protected native canopy trees shall be allowed, as determined by the development review committee, if one (1) or more of the following conditions exists: Street Opening, Utilities and Drainage, Property Access, Property Use, Hazard, Poor Tree.	N/A	37.05.B.3	Groundcovers shall be planted in such manner as to present a finished appearance and complete coverage within one (1) year after planting.	YES
37.02.E.1	All new Class II, III and IV residential developments shall submit a streetscape plan, including proposed tree retention and landscaping.	N/A			
37.02.F.1	The minimum number of protected native canopy trees to be preserved upon any development site is equal to forty-five (45) percent of caliper inches within the development site. A protected native canopy tree is defined as a healthy tree as determined by an ISA certified arborist listed in Table 37–4[A] and is at least six (6) inches dbh in size. Healthy trees (and other vegetation) lying within designated conservation areas, jurisdictional wetlands and adjacent upland buffers must be retained but are not counted in the minimum preservation requirement. As an incentive for property owners to retain large trees, the preservation of any tree that is eightieth percentile or larger in inches dbh (of all qualifying/protected native canopy trees on the proposed development site) will generate a bonus credit value of one hundred twenty-five (125) percent of the diameter of the preserved tree. In all cases, qualifying preserved and replacement trees are credited toward the minimum landscaping requirement of each property upon which they are located. Included in the forty-five (45) percent of caliper inches for preservation shall include a perimeter preservation requirement for any six-inch or larger, healthy Table 37–1 tree located within a required roadway buffer and/or within ten (10) feet of a ROW. Perimeter preservation trees can only be removed as per section 37.02(C) or 37.02(D)5.	N/A	37.05.C.1	One and two-family dwellings. Each single-family and two-family lot must provide at least one (1) tree per three thousand (3,000) square feet of lot area for the first quarter acre of lot area. For lots exceeding one-quarter (¼) acre, one (1) tree for every additional one-quarter (¼) acre, or major fraction thereof, must be preserved or planted. Existing canopy trees, sabal palms and pine trees may be used to satisfy this requirement, in whole or in part, provided that they have a minimum caliper of four (4) inches DBH. When trees are planted to meet the minimum requirement they must be more than one species of tree listed in Tables 37–1 or 37–2 and meeting the material standards of this section. The foregoing represent the entire requirement applicable to individual one and two-family dwellings.	N/A
			37.05.C.2	Multi-family, mobile home park and travel trailer parks. In addition to the use buffer and perimeter landscaping adjacent to a right-of-way requirements found in this section, each multi-family, mobile home park and travel trailer park must plant or preserve an additional one tree for every two (2) dwelling units. When trees are planted to meet the minimum requirement they must be more than one species of tree listed in Tables 37–1 or 37–2 and meeting the material standards of this section.	N/A
			37.05.C.3	Non-residential developments. In addition to the buffer and perimeter landscaping adjacent to a right-of-way requirements found in this section, each commercial and/or industrial development must provide a minimum of ten (10) percent of the lot or parcel as pervious green space planted with one or more species of tree listed in Tables 37–1 or 37–2 for every five hundred (500) square feet of such green space.	YES
37.02.F.2	Unique development scenarios that prevent the forty-five (45) percent preservation or perimeter preservation requirement from being met will require replacement on an inch for inch (dbh) basis with native canopy trees but only if approved by the planning and zoning board.	N/A			
37.02.F.3	All replacement native canopy trees shall be a minimum of three (3) inches dbh, at the time of planting.	N/A	37.05.D.1	A1A/S.R. 200, U.S. Highway 1 and U.S. 301. A strip parallel to the right-of-way line having an average width of twenty-five (25) feet and a minimum width of ten feet along the entire street frontage except for permitted driveways. This perimeter landscaping strip shall contain a minimum of three (3) canopy trees per one hundred (100) linear feet of property frontage and three (3) understory trees per one hundred (100) linear feet of property frontage. The canopy trees shall consist of more than one (1) species listed in Tables 37–1 or 37–2. Planted trees are not meant to be spaced evenly but rather randomly distributed by species.	YES
37.02.F.4	Replacement trees shall be planted on-site, if practical, otherwise the developer shall donate to the county and plant the required trees on public property, or alternatively, on private property where a conservation easement exists, subject to approval by the planning and zoning board.	N/A			
37.02.F.5	All replacement trees shall be in good health, conform to the standards for Florida No. 1 or better.	N/A			
37.02.H.1	Credit on a one (1) tree for one (1) tree basis toward the minimum tree requirements shall be given for each native canopy tree retained on site.	N/A	37.05.D.2	Other arterial and collector roadways. All other arterial and collector roadways, as identified by the comprehensive plan, shall provide a strip parallel to the right-of-way line having an average width of fifteen (15) feet and a minimum width of seven and one-half (7½) feet along the entire street frontage except for permitted driveways. This perimeter landscaping strip shall contain a minimum of three (3) canopy trees per one hundred (100) linear feet of property frontage and three (3) understory trees per one hundred (100) linear feet of property frontage. The canopy trees shall consist of more than one species listed in Tables 37–1 or 37–2. Planted trees are not meant to be spaced evenly but rather randomly distributed by species within the largest open spaces.	N/A
37.02.H.2	Any native canopy trees planted to meet the minimum tree requirements shall be a minimum of three (3) inches dbh, ten (10) feet tall, and five (5) feet wide at the time of planting.	N/A			
37.05.B	All installed trees, shrubs and groundcovers shall conform to the standards for Florida Grade #1 or better.	YES			

REFERENCE	DESCRIPTION	NOTES/ COMPLIANCE?
37.05.D.3	Local streets. A strip parallel to the street line having a minimum width of ten (10) feet along the entire street frontage except for permitted driveways. This perimeter landscaping strip shall contain a minimum of two (2) canopy trees per one hundred (100) linear feet of property frontage and three (3) understory trees per one hundred (100) linear feet of property frontage. The canopy trees shall consist of more than one species listed in Tables 37–1 or 37–2.	YES
37.05.D.5	Except for one– and two–family dwellings, all off–street parking areas, drive aisles, and paved storage areas lying within fifty (50) feet of, and visible from any street right–of–way, the perimeter landscaping requirement of this section shall also include shrubs	YES
37.05.D.6	Dumpsters and mechanical equipment shall be screened through the use of a wall, which is one hundred (100) percent opaque in conjunction with landscaping. Minimum landscaping shall include one (1) shrub every two (2) feet. The shrub shall be maintained at a minimum of four (4) feet in height. One (1) canopy tree or understory tree per ten (10) linear feet of wall or fence unless said fence or wall is less than eight (8) feet in length. Where a transformer pad is located along a public right–of–way, it shall be screened using a hedge meeting the standards of section 37.05.B.2 of this Code along the sides visible from the right–of–way.	YES
37.05.D.7	Use of understory trees (ref. Table 37–4 LDC) are permitted in lieu of native canopy trees listed in Table 37–1 and 37–2 as determined to be practical by the director of planning and economic opportunity or designee because of overhead utility lines or other overhead restrictions that cannot otherwise be mitigated through design modifications. Understory trees may be permitted at a rate of one (1) tree for every fifteen (15) feet of site/lot frontage along the right–of–way or street. At the time of planting, Grape Myrtles shall be a minimum of eight (8) feet in height and measure three (3) caliper inches if a single trunk or an aggregate of six (6) inches if a multi–trunk.	YES
37.05.D.8	Perimeter landscape strips required by this section shall not be encumbered by a utility easement, unless 1) the utilities are located underground; 2) will not prevent trees from reaching maturity; and, 3) approval for tree planting is granted by the utility provider in writing, on utility provider letterhead, to Nassau County. The perimeter landscape strip required by this section shall not include any portion of a stormwater management facility, borrow–pit, fishing pond or similar excavation.	YES
37.05.D.10	Back flow preventer(s) and lift stations shall generally be to the side or rear of a building. Where they cannot be placed at the side or rear of a building, it shall be screened from public rights–of–way through the use of shrubs planted as a hedge meeting the standards of section 37.05.B.2 of the Code.	YES
37.05.E.1	At the intersection of two (2) streets, all landscaping within that area defined by the Florida Department of Transportation sight triangle, as outlined in the FDOT Design Standards for Design, Construction, Maintenance and Utility Operations on the State Highway System shall be installed and maintained below three (3) feet in height or above eight (8) feet in height.	YES
37.05.E.2	When a driveway intersects a right–of–way, clear unobstructed cross visibility shall be provided within the site triangle formed by such intersection. The sight triangle shall be measured from the point of intersection, fifteen (15) feet along the access way and then fifteen (15) feet along the right–of–way, with the third side being a line connecting the two (2) points. Cross visibility within the sight triangle shall be unobstructed between the height of three (3) feet and eight (8) feet measured from the ground line. Only ground cover type plants shall be allowed within the sight triangle.	YES
37.05.F.1	Except for one– and two–family dwellings, all off–street parking areas shall contain interior landscaping islands at a ratio of one (1) island for each ten (10) parking spaces. Rows of parking spaces abutting a sidewalk adjacent to a building are exempt from required landscape islands except for terminal islands at the end of each row.	YES

REFERENCE	DESCRIPTION	NOTES/ COMPLIANCE?
37.05.F.2	Each separate interior landscaped island shall contain a minimum of one hundred sixty–six (166) square feet and shall be at least ten (10) feet wide as measured from back of curb. A minimum of one (1) canopy tree shall be planted in each interior landscaping island.	YES
37.05.H.2	Fifty (50) percent of the plants used in all vehicular use area landscape designs should be drought tolerant and located in groupings according to zones designated by the water requirements.	YES
37.05.H.3	Turf grass areas should be consolidated and limited to those areas on the site that receive pedestrian traffic, provide for recreational uses, provide soil erosion control such as berms, slopes and swales, where turf grass is used as a design unifier or other similar practical use.	YES
37.05.H.4	All planting areas shall be mulched with approximately three (3) inches of organic mulch, such as pine bark or shredded hardwood chips.	YES
Section 37.06. – BUFFERS BETWEEN CERTAIN USES		
37.06.4.a	Medium and fast growing canopy trees shall be chosen from Table 37–1 having a dense, evergreen crown to provide maximum visual separation between abutting properties.	N/A
37.06.4.b	Shrubs shall be spaced to provide a natural appearance and inhibit free movement of pedestrian traffic except at a mutually agreed upon pedestrian connection. Where screening is proposed consisting of a fence or wall, shrubs are not required.	N/A
37.06.4.c	Where screening is required, it shall consist of one or more of the following materials: A five (5) foot masonry wall stuccoed on the side facing the abutting property; A solid six (6) foot fence constructed of resistant materials such as vinyl, cypress or pressure treated wood; Existing dense vegetation; A berm three (3) feet in height located entirely within the buffer and having the requisite number of shrubs planted along the crown.	N/A
Section 37.05. – IRRIGATION		
37.05.H.1	All plantings shall be grouped in zones according to water requirements and shall be irrigated in zones separating high use areas from drought tolerant zones. The zones are as follows:	N/A
37.05.H.1.a	High water use zone: A zone containing plants which are associated with moist soils and require supplemental water in addition to natural rainfall to survive. This zone includes most turf grasses.	N/A
37.05.H.1.b	Moderate water use zone: A zone containing plants which survive on natural rainfall with supplemental water during seasonal dry periods.	N/A
37.05.H.1.c	Low water use zone: A zone containing plants which survive on natural rainfall without supplemental water.	N/A

PLANT SCHEDULE

LARGE TREES		QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE	REMARKS
QV-3		2	QUERCUS VIRGINIANA	SOUTHERN LIVE OAK	SIZE AS NEEDED	3" CAL.	12-14' HT. X 5' SPD.	
TD-2		3	TAXODIUM DISTICHUM	BALD CYPRESS	SIZE AS NEEDED	3" CAL.	10' - 12' HT. X 3' - 4' SPD.	
UPA-2		12	ULMUS PARVIFOLIA 'ALLEE'	ALLEE LACEBARK ELM	SIZE AS NEEDED	3" CAL.	10'-12' HT X 3'-4' SPD	
MEDIUM TREES		QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE	REMARKS
IAE		2	ILEX X ATTENUATA 'EAST PALATKA'	EAST PALATKA HOLLY	SIZE AS NEEDED	3" CAL.	12-14' HT. X 5' SPD.	4" CLEAR TRUNK
IE		5	ILEX X ATTENUATA 'EAGLESTON'	EAGLESTON HOLLY	SIZE AS NEEDED	3" CAL.	12-14' HT. X 5' SPD.	CLEAR TRUNK
SMALL TREES		QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE	REMARKS
LIN		13	LAGERSTROEMIA X 'NATCHEZ'	WHITE CRAPE MYRTLE MULTI-TRUNK	SIZE AS NEEDED	6", MT;	12-14' HT. X 5' SPD.	
SHRUBS		QTY	BOTANICAL NAME	COMMON NAME	CONT			REMARKS
IP		186	ILICLIUM PARVIFLORUM	ANISE	3 GAL., 2.5' O.C., 18" HT. X 18" SPR.	SPACING		30" o.c.
VO		23	VIBURNUM ODORATISSIMUM	SWEET VIBURNUM	3 GAL. 18" MIN. HT.	SPACING		24" o.c.
SHRUB AREAS		QTY	BOTANICAL NAME	COMMON NAME	CONT			REMARKS
MCA		781	MUHLENBERGIA CAPILLARIS	PINK MUHLY	1 GAL	SPACING		30" o.c.
GROUND COVERS		QTY	BOTANICAL NAME	COMMON NAME	CONT			REMARKS
JP		270	JUNIPERUS CHINENSIS 'PARSONII'	PARSONI JUNIPER	3 GAL	SPACING		30" o.c.
SOD/SEED		QTY	BOTANICAL NAME	COMMON NAME	CONT			REMARKS
SOD-A		11,785 SF	STENOTAPHRUM SECUNDATUM 'FLORITAM'	'FLORITAM' ST. AUGUSTINE SOD	SOD	SPACING		
MULCH		TBD	NATURAL COLOR HARDWOOD MULCH					3" DEPTH



PLANT SCHEDULE		
LARGE TREES	CODE	COMMON NAME
QV-3		SOUTHERN LIVE OAK
TD-2		BALD CYPRESS
UPA-2		ALLEE LACEBARK ELM
MEDIUM TREES	CODE	COMMON NAME
IAE		EAST PALATKA HOLLY
IE		EAGLESTON HOLLY
SMALL TREES	CODE	COMMON NAME
LIN		WHITE CRAPE MYRTLE MULTI-TRUNK
SHRUBS	CODE	COMMON NAME
IP		ANISE
VO		SWEET VIBURNUM
SHRUB AREAS	CODE	COMMON NAME
MCA		PINK MUHLY
GROUND COVERS	CODE	COMMON NAME
JP		PARSONI JUNIPER
SOD/SEED	CODE	COMMON NAME
SOD-A		'FLORITAM' ST. AUGUSTINE SOD

LANDSCAPE PLAN

NASSAU CARWASH SITE FOR FOWLER PROPERTIES, INC.

ETM

England-Thins & Miller, Inc.
17500 St. Augustine Road
Jacksonville, FL 32228
TEL: (904) 642-8890
FAX: (904) 646-9485
CA 00002584 LC 0000316

VISION • EXPERIENCE • RESULTS

LANDSCAPE PLAN

PLANS PREPARED UNDER THE DIRECTION OF:

REVISIONS:
07-28-20 REVISED PER NASSAU COUNTY

ETM NO. 20-207
DRAWN BY: LL
DESIGNED BY: LL
CHECKED BY:
DATE: FEBRUARY 2021

DRAWING NUMBER
LC-02

PLOTTED: May 26, 2021 - 12:07 PM, BY: A.J. Booth

CERARD, K. WHITE
L.C.A. NUMBER: 56657024

LANDSCAPE SPECIFICATIONS:

PART 1 GENERAL NOTES

- 1.1 Scope. This section includes all planting of shrubs, trees, ground covers, and other supplementary work shown on the drawings and specified herein, complete.
- 1.2 Applicable Documents. The following publications, specifications, and standards of the issues listed in this paragraph (including the amendments and addenda designated), but referred to hereinafter by basic designation only, form a part of this specification to the extent required by the references thereto.
- 1.3 Publication of Reference. Publications as herein listed shall be held in basic reference:
- 1.3.1 Grades and Standards for Nursery Plants, Parts I and II, State Department of Agriculture and/or State Plant Board of Florida, Seagle Building, Gainesville, Florida.
- 1.3.2 State of Florida Fertilizer Law, Office of the Secretary of State, Tallahassee, Florida.
- 1.3.3 American Standard for Nursery Stock (ANSI Z60.1--), American Association of Nurserymen.
- 1.3.4 Tree Care Operations (ANSI Z133.1--)
- 1.3.5 Guideline Specifications to Sodding, America Sod Producers Association (ASPA).
- 1.4 Substitutions of Plant Material. If a plant is found to be unavailable, submit proof of non-availability and a proposal for use of equivalent material. When authorized, adjustment of contract amount will be made. No substitutions will otherwise be authorized. To prove non-availability, The Contractor must provide at least five (5) letters from growers or dealers from the States of Florida and Georgia explaining the non-availability of the plant material. Substitutions made without prior approval may be rejected after planting and any replacement of materials will be at the contractors expense.
- 1.5 On-Site Conditions and Adjustments. The locations of plants as shown on the plans are approximate. Planting shall be adjusted to fit actual as-built conditions on the site, including but not limited to separation from hardscapes and utilities as governed by municipal codes. Any changes in locations caused thereby shall be made without additional cost to the Owner, Owner's Representative, or Landscape Architect. The Contractor shall immediately notify the Owner's Representative when conditions detrimental to plant growth are encountered, such as rubble fill, lime rock, or obstructions; and when field conditions are different than portrayed on the plans prior to planting. The Owner or Owner's Representative may adjust the layout or location of specified plant materials to avoid these areas without additional costs.
- 1.6 Coordination of Plantings. Coordinate all landscape work with the Owner's Representative and other contractors. Plant trees and shrubs after final grades are established and prior to planting of lawns, unless otherwise directed by the Owners Representative.
- 1.7 Fine Grading. Provide fine grading necessary to establish finish grade in all landscape areas. Fine grading shall include only minor grading to correct random or infrequent grade irregularities of 12" or less; unless otherwise noted on plans.
- 1.8 Liability of Contractor. The contractor shall be liable for any and all damages to property that result from his performance, including damage to preserved trees. He shall, without extra cost, mitigate or restore to original condition any areas and/or construction damaged, defaced, disturbed, or destroyed by him or his workmen.
- 1.9 Tree Tagging. A tree tagging trip may be requested by Owner's Representative prior to approval of plant material. Landscape contractor shall be responsible for providing transportation and accommodations if necessary.
- 1.10 Inferior Materials. Contractor shall be responsible for rejecting inferior materials. Materials in a damaged or unhealthy state may be rejected by the Owners Representative if necessary.
- 1.11 Onsite Debris. Contractor shall be responsible for removing and disposing of offsite all stones over 1" in diameter, sticks, roots, and other extraneous matter in planted areas to a depth of 2'. If debris is excessive and results from construction waste please contact owners representative for appropriate actions.

PART 2 SUBMITTALS

- 2.1 Soil Testing for Plant Material. The Contractor shall be responsible for testing soils in planted areas to confirm that soil is suitable for healthy plant growth.
- 2.2 Seed Certification. All seed must comply with regulatory agencies for fertilizer and herbicide composition.
- 2.3 Inspection Certificates, Manufacturer's Data. Upon request of Owners representative copies of inspection certificates or manufacturer's data shall be provided for any material used onsite; in addition to existing materials found onsite.

PART 3 MATERIALS

- 3.1 General Plant Materials Requirements. Provide state inspected, nursery grown plants, unless otherwise specified. Conform to the plant schedule, "Florida Department of Agriculture Grades and Standards for Nursery Plants", local landscape ordinance, and, where applicable, to ANSI Z60.1 All plant materials shall be nursery grown, Florida No.1 stock. Any material not consistent with Florida Number 1 standards may be rejected after planting and replacement of materials will be at the contractors expense. All materials shall be healthy, vigorous, free of diseases and insects, pruned for best shape without appearance of "de-horning", and without symptoms of nutritional deficiency. Furnish plants grown under climatic conditions similar to those in the locality of the project. All plants must be true of variety, cultivars, and/or species. Plants must measure according to sizing requirements detailed on the drawings. Plants must be naturally bushy, dense, in good foliage, well branched, and of good appearance. The nursery/nurseries from which they are derived shall be under regulatory inspection by the Florida State Department of Agriculture and/or the Florida State Plant Board or an equivalent agency, if derived from outside the State of Florida. Plants entering from outside the State of Florida must bear the entry certificate of the State Department of Agriculture of the State of Florida. All plant materials will be subject to approval of the Owner or Owner's Representative for quality, size and color.
- 3.2 Soil Additives. Contractor shall be responsible for adding peat, humus, fertilizer, manure, pH adjusters or any other commercially accepted soil additive to insure normal, healthy plant growth.
- 3.3 Balled and Burlapped Trees. Ensure that field grown material follows local industry standards for root pruning, digging, baling and burlapping, etc. All balled and burlapped materials must be hardened off before shipment. All materials are subject to approval by the Owners Representative prior to shipping to project site.
- 3.4 Spaded Trees. Trees shall have been spaded from a commercial nursery field that has been inspected by The Department of Agriculture and Consumer Services within the last 9 months. The Contractor shall provide a copy of the most recent Nursery, Stock dealer and Special Inspection Report for verification upon Owners Representative request. Ball size shall be at least one size greater than recommended by ANSI Z60.1, American Standard for Nursery Stock, unless otherwise specified. Spaded material is subject to approval and tagging by the Owner's Representative prior to shipping to project site.

- 3.5 Container Plants. Provide container grown plants with sufficient roots to hold the container soil together after removal from the container. Root bound plants and plants with inadequate root systems are not acceptable.
- 3.6 Surface Mulch. Plans shall specify mulch type. Mulch shall be in a non-decomposed state; not more than one (1) season old.
- 3.7 Herbicides, Insecticides. Chemical sprays, dusts, or gaseous compounds used on or around plant materials, including but not limited to trees, shall be approved for such uses by the environmental protection agency and the Florida department of agriculture and consumer services. Such materials as may be used shall not constitute a hazard to human health or interfere with site working conditions and habitation.
- 3.8 General Seed Requirements. Where seeding may be required on the plans, the seed required shall comply with all minimum provisions of the Florida seed certification and testing law. Noxious weed seeds shall be non-existent and foreign materials shall not exceed two percent. All disturbed areas not shown as sodded shall be seeded.
- 3.9 General Sod Requirements. See plan for specified sod. All sod shall be healthy, strongly rooted and not less than two (2) years old, free of weeds and undesirable native grasses in 16" x 24" pads, 1-1/2" thick. Sod shall conform to "nursery grown" grade as established by American Sod Producers Association (ASPA). Sod shall be considered free of weeds if less than 5 weeds are found per 100 square feet of area. Brown, dry, irregularly smooth, and/or un-fresh sod will be rejected.

PART 4 PLANTING PROCEDURES

- 4.1 General. Prior to commencement of any work, the landscape contractor shall inspect the site, locate planting areas, placement of guying devices, locate electrical cables, conduits, and other underground and above utilities so that proper precautions and procedures may be followed during and throughout construction. The contractor shall become familiar with other job trade activity which has an impact upon his work or upon which his work has an impact and shall arrange to carefully coordinate his work with other trades through the owner's representative on-site. All planting practices listed herein shall insure healthy plant growth.
- 4.2 Layout. The location of plants and planting beds, as shown on these plans, are approximate. The locations and bed lines shall be staked on the project site by the contractor and approved by the owner's representative before any plant pits or beds are dug. The contractor is responsible for verifying that proper setbacks, as defined by local codes and rules, are provided between trees and their proximity to utilities and hardscapes. Unless otherwise noted, no tree shall be planted closer than four feet to a hardscape surface. The owner's representative may adjust plant material locations to meet field conditions. Contractor shall make minor adjustments without additional cost to the owner.
- 4.3 Finish Grades. The landscape contractor is responsible for all fine grading and preparation for planting. Finish grades (top of soil) for all sod areas after settlement shall be one-half inch below the top of abutting curbs, walks, walls and abutments. The finish grade of all plant beds prior to mulching shall be three inches below finish grade of sod, abutting curbs, walks and walls. Three inches of mulch shall be added after planting.
- 4.4 Planting Seasons/Times. The planting of plant materials and lawns may proceed at any time, period, or season agreed upon by the contractor and the owner or owner's representative.
- 4.5 Plant Pits. The contractor shall excavate plant pits, unless otherwise approved, according to the drawings.
- 4.6 Setting Plants. Each plant shall be established in a manner consistent with plant details. All plants shall be set plumb and straight. Plants shall be established to a depth that is not greater than that at which they grew when in the nursery container or field. All back fill shall be tamped and worked firmly under and around the root ball to fill all voids.
- 4.7 Soil Preparation for Trees, Shrubs and Groundcover. All areas to be planted shall be prepared in a manner to insure normal, vigorous and healthy growth of plant material.
- 4.8 Staking. All trees are to be staked unless otherwise instructed by owner or owner's representative. Refer general staking details on the drawings. Materials used shall insure healthy plant growth.
- 4.9 Mulching. All plant beds and plant saucers shall be uniformly covered with a three-inch (3") layer of mulch. Hedges shall be mulched the full width of the hedge bed. Contain mulch within landscape borders.
- 4.10 Sod. All areas to be either seeded, sprigged, or sodded shall be prepared in a manner to insure normal, vigorous and healthy growth.
- 4.10.1 Fine grade lawn areas to smooth, even surface with loose, uniformly fine texture. Roll, rake and drag lawn areas, remove ridges and fill depressions with topsoil as required to meet finish grades. In areas to be sodded, allow for sod thickness.
- 4.10.2 Sod Installation. Lay sod in straight, parallel rows to form a solid mass with tightly fitted joints, without overlap. Stagger strips to offset joints. Work topsoil into minor cracks. On 1:3 slopes or greater, lay sod with long dimension of pads parallel to contours and stake sod as necessary to stabilize. Drive sod stakes flush with top of sod.
- 4.10.3 Sprigging and Seeding. Sprigging/seeding shall be done in a manner to insure a quick grow in period achieving a uniform green lawn prior to final acceptance.

PART 5 MAINTENANCE

- 5.1 Plant Material. Maintain all plant materials until final acceptance. Maintenance shall include all required watering, cultivation, weeding, mowing, pruning, wound dressing, immediate replacement of dead and unacceptable material, straightening plants which lean or sag, adjustments of plants which are planted too low, and any other procedure consistent with good horticultural practice necessary to insure normal, vigorous and healthy growth of all planting under this contract.
- 5.2 Lawn. Maintain lawns until final acceptance. Reset settled or eroded sod areas to proper grade. Fill open joints with topsoil. Keep sod free of insects and disease.

PART 6 FINAL INSPECTION AND ACCEPTANCE

- 6.1 Final Cleanup. Upon final completion of work and before inspection and acceptance, all aspects of the project site shall be thoroughly and completely cleaned of debris, stains, materials, defacements, and temporary facilities. Likewise, any repairs, which are the obligation of this contractor, shall be completed.

- 6.2 Initial Inspection and Acceptance. Inspection shall be made by the owner or owner's representative within (10) ten days of written notification from the contractor that installation is complete. If all work and materials meet specifications project will be accepted as is. Materials and work not in compliance with specifications shall be rejected by owners representative and replaced by the contractor within (15) fifteen days of notification by owner's representative. Notification will graphically depict all rejected material on plans. Upon replacement of all rejected work and materials by the contractor the owner's representative shall conduct a final inspection within ten (10) days of written notification from the contractor that all rejected work has been replaced according to specifications. Approval will be granted upon the acceptance of all replaced material noted on plans. After final acceptance, the landscape contractor will not be responsible for damage to work resulting from:neglect by owner, damage by others; abnormal weather conditions such as floods, excessive wind, severe freezing or abnormal rains; or other activities clearly beyond the landscape contractor's control.

PART 7 GUARANTEE

- 7.1 Guarantee. All plant materials and trees installed by the contractor shall be guaranteed for 365 days from the date of final inspection and acceptance. The contractor shall replace at no additional cost to the owner, all plant materials which die and/or which are not healthy and in a good growing condition during the guarantee period. Replacement of such material shall occur within ten (10) days from owner's written notification to the contractor. The 365 day guarantee period for replaced plant materials shall commence on the date of acceptance of the replaced item or items of plant material. The contractor shall not be required to replace, repair, or restore any portion of the work that is damaged, defaced, disturbed, and/or destroyed by others after final acceptance.

NOTE: IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY WITH THE LANDSCAPE ARCHITECT THAT THEY ARE USING THE MOST CURRENT PLAN SET FOR BIDDING AND INSTALLATION. FAILURE TO VERIFY CURRENT PLAN SET COULD RESULT IN CORRECTIVE WORK, INCLUDING DESIGN REVISIONS AND PERMITTING FEES TO BE PERFORMED AT THE CONTRACTORS EXPENSE.

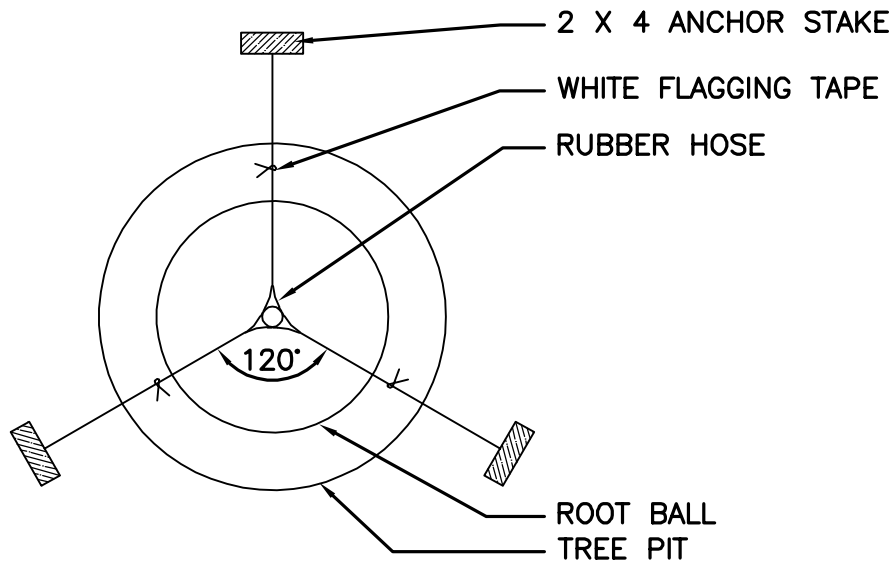
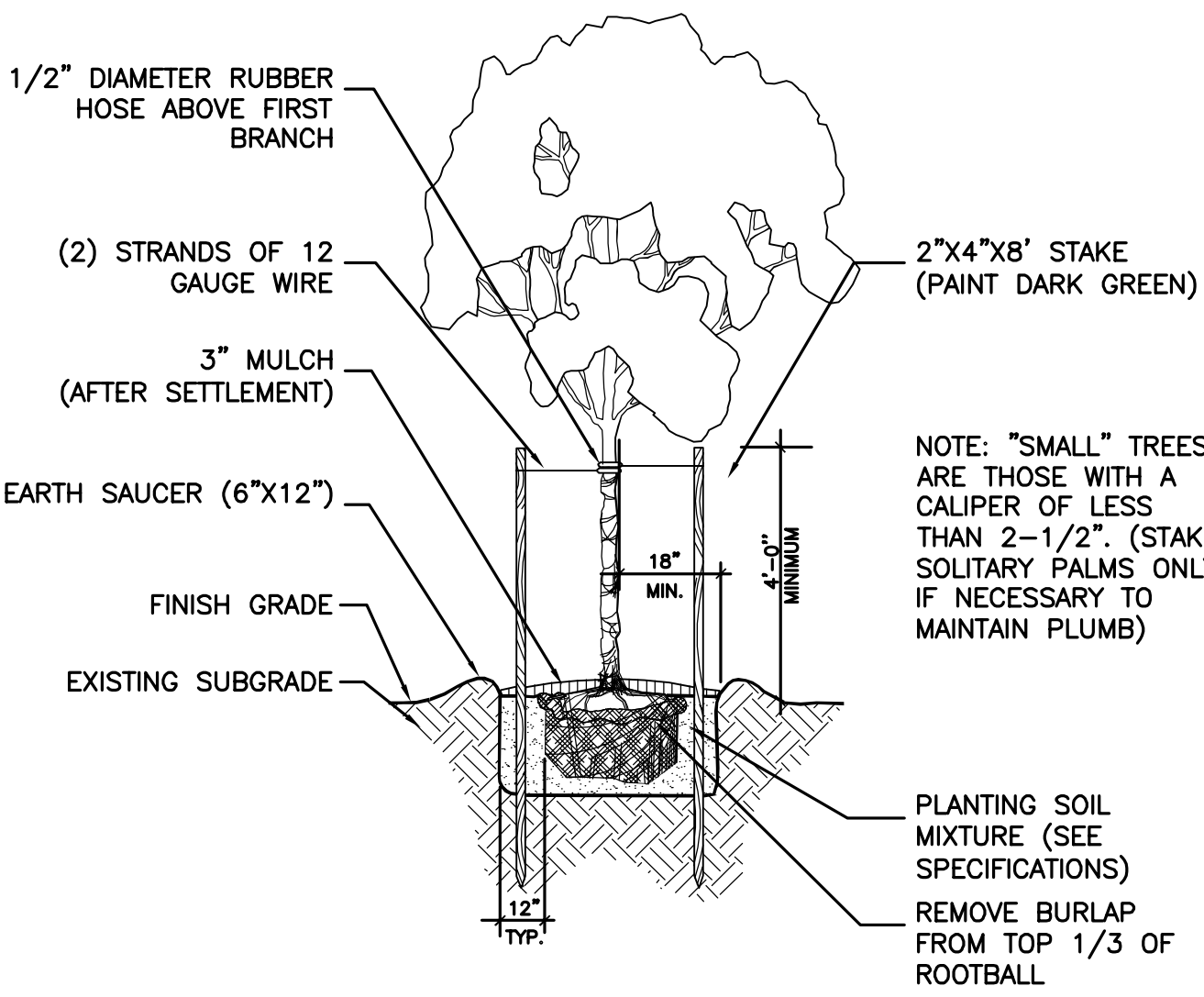
NASSAU COUNTY NOTES:

- 1) ALL PLANTS WILL BE FULLY IRRIGATED AS PER 37.05(G)(1).
- 2) ALL TREES PLANTED WILL BE STAKED OR GUYED FOR A PERIOD OF AT LEAST 6 MONTHS AS PER 37.05(B)(2).
- 3) THE PROPERTY OWNER IS RESPONSIBLE FOR THE MAINTENANCE OF ALL LANDSCAPE AREAS, INCLUDING IRRIGATION, MOWING, TRIMMING, FERTILIZING, & CARRYING OUT THE ACTIVITIES TO KEEP THE PLANT MATERIAL IN A HEALTHY AND GROWING CONDITION, MAINTAIN VISUAL CLEARANCE, & ALLOW PASSAGE OF VEHICLES & PEDESTRIANS ON PUBLIC ROADS & NON-EXCLUSIVE EASEMENTS AS PER 37.05(J).
- 4) THE PROPERTY OWNER WILL REPLACE, PER THE LANDSCAPE PLAN ON SHEET LC--02, ANY LANDSCAPING IN THE PERIMETER STRIP DEEMED NECESSARY BY JEA TO BE REMOVED UPON JEA'S ACCESSING OF UNDERGROUND UTILITIES IN THIS AREA.

TREES TO BE REMOVED

Tree No.	Species Common Name	Previously Planted	D.B.H. per Trunk	Subtotal D.B.H
1	Holly		17	17
2	Wax Myrtle		12	12
3	Holly		6	6
4	Holly		8	8
5	Holly		8	8
6	Holly		17	17
7	Crape Myrtle		24	24

LANDSCAPING CALCULATIONS					
Item		Square Feet	Acres	Percentage	
Gross Site Area		52,033	1.19	100%	
Total Impervious Surface Calculations	Total building Area	5,151		10%	
	Total Paved Area	17,582		34%	
	Asphalt	6,870		13%	
	Concrete				
	Total Surface Area of Stormwater Pond at Top of Bank	0		0%	
Jurisdictional Wetlands		0		0%	
TOTAL IMPERVIOUS SURFACE >>>		29,603		57%	
Area of Perimeter Landscape Strip (s) - 37.05.D		Length	Avg. Width	Square Feet	
	A1A; US-1; US-301 - 25' Average Width	202	25	5,050	
	Arterial/Collector - 15' Average Width	0	15	0	
	Local Road - 10' Width	250	10	2,500	
	Total Perimeter Strip Area >>>			7,550	
Open Space Calculations 37.05.C		Square Feet	Required Open space Trees	Provided Open Space Trees Requirements [Including Uncomplimentary Land Use Buffer and Interior Landscaping (37.05.F.LDC)]	
	Gross Site Area	52,033			
	Site Area Less Perimeter Strip(s)	44,483			
	Required Open Space	4,448	9		
	Provided Open Space	19,756		12	
Sec. 37.06 Buffer Requirements		Width (ft.)	Area (Sqft.)	Trees Required	Screening Required
	High Density	none	0	0	No
	Medium Density	none	0	0	No
	Low Density	none	0	0	No
One and two-family dwellings. Each single-family and two-family lot must provide at least one (1) tree per three thousand (3,000) square feet of lot area for the first quarter acre of lot area. For lots exceeding one-quarter (¼) acre, one (1) tree for every additional one-quarter (¼) acre, or major fraction thereof, must be preserved or planted. Existing canopy trees, sabal palms and pine trees may be used to satisfy this requirement, in whole or in part, provided that they have a minimum caliper of four (4) inches DBH.					
Multi-family, mobile home park and travel trailer parks. In addition to the use buffer and perimeter landscaping adjacent to a right-of-way requirements found in this section, each multi-family, mobile home park and travel trailer park must plant or preserve an additional one tree for every two (2) dwelling units.					
Non-residential developments. In addition to the buffer and perimeter landscaping adjacent to a right-of-way requirements found in this section, each commercial and/or industrial development must provide a minimum of ten (10) percent of the lot or parcel as pervious green space planted with one or more species of tree listed in Tables 37-1 or 37-2 for every five hundred (500) square feet of such green space.					



NASSAU COUNTY TREE PLANTING DETAIL

SCALE: NTS

LANDSCAPE SPECIFICATIONS, CODE CALCULATIONS AND DETAILS

NASSAU CARWASH SITE FOR FOWLER PROPERTIES, INC.

DRAWING NUMBER

LC-03

PLANS PREPARED UNDER THE DIRECTION OF:

REVISIONS: 07-28-20 REVISED PER NASSAU COUNTY

ETM NO. 20-207

DRAWN BY: LL

DESIGNED BY: LL

CHECKED BY:

DATE: FEBRUARY 2021

England-Thins & Miller, Inc.

1500 S. Highway 1A, Suite 100

Jacksonville, FL 32208

TEL: (904) 642-8890

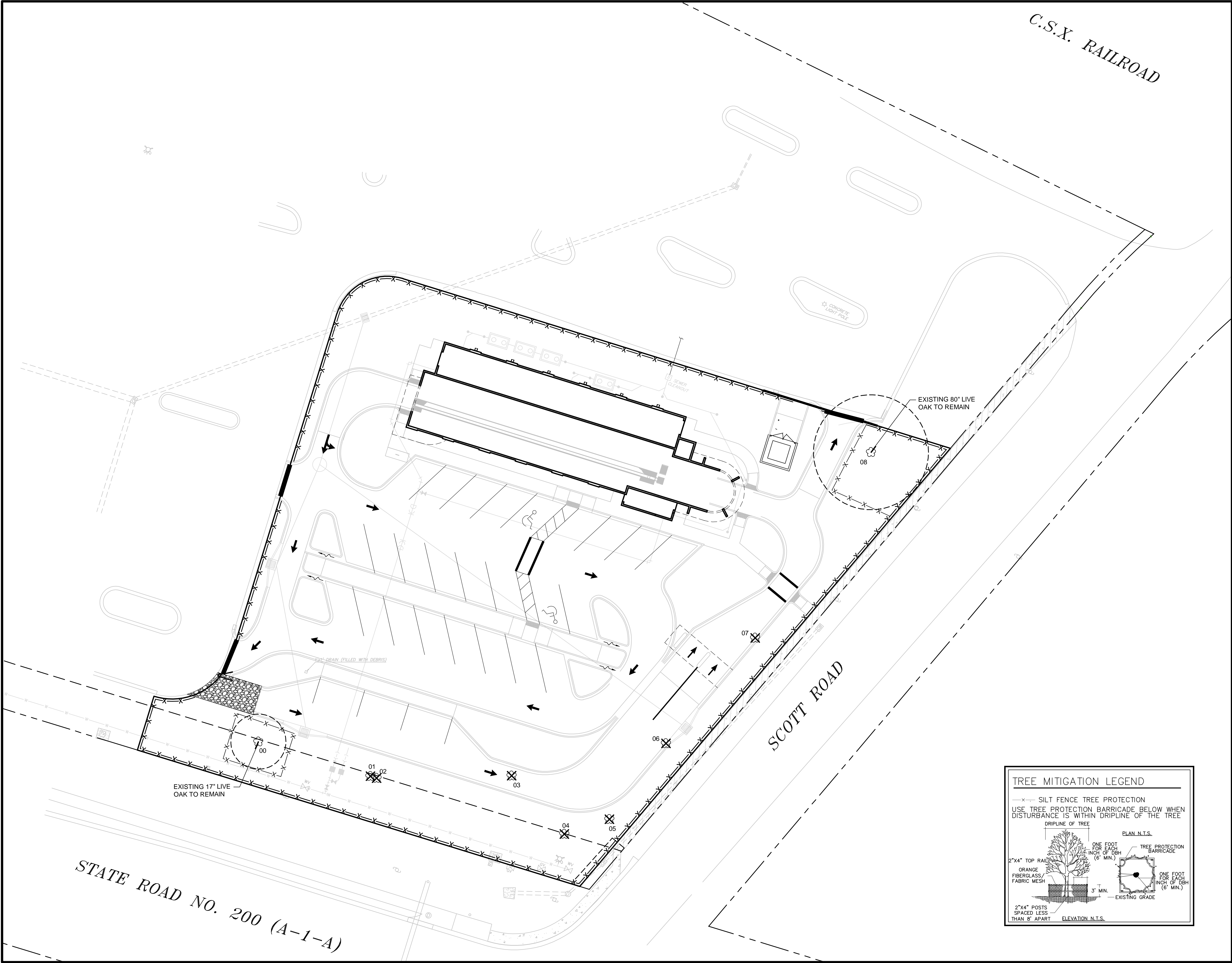
FAX: (904) 646-9485

CA -00002584 LC -0000316

ETM VISION • EXPERIENCE • RESULTS

T:\2020\20-207 Landscape\Plot\20-207-LC Plot.dwg

CECALD, K. WHITE
L.C.A. NUMBER: 6667024
PLOTTED: May 26, 2021 - 11:57 AM BY: AJ Booth



TREE MITIGATION LEGEND

—x— SILT FENCE TREE PROTECTION
USE TREE PROTECTION BARRICADE BELOW WHEN DISTURBANCE IS WITHIN DRIPLINE OF THE TREE

DRIPLINE OF TREE

2"X4" TOP RAIL
ORANGE FIBERGLASS/FABRIC MESH

ONE FOOT FOR EACH INCH OF DBH (6" MIN.)

3' MIN.

EXISTING GRADE

ELEVATION N.T.S.

PLAN N.T.S.

TREE PROTECTION BARRICADE

ONE FOOT FOR EACH INCH OF DBH (6" MIN.)

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0' 10' 20' 40'

1"=20'-0"

TREE MITIGATION PLAN		England-Thins & Miller, Inc. 10001 S. W. 10th Street Jacksonville, FL 32228 TEL: (904) 642-8890 FAX: (904) 646-9485 CA - 00002584 LC - 0000316		REVISIONS: 07-28-20 REVISED PER NASSAU COUNTY		PLANS PREPARED UNDER THE DIRECTION OF:	
NASSAU CARWASH SITE FOR FOWLER PROPERTIES, INC.		ETM VISION • EXPERIENCE • RESULTS		ETM NO. 20-207 DRAWN BY: LL DESIGNED BY: LL CHECKED BY: DATE: FEBRUARY 2021		CERARD, K. WHITE L.C. NUMBER: 6667024	
DRAWING NUMBER TM-01						PLOTTED: May 26, 2021 — 11:57 AM. BY: AJ Booth	