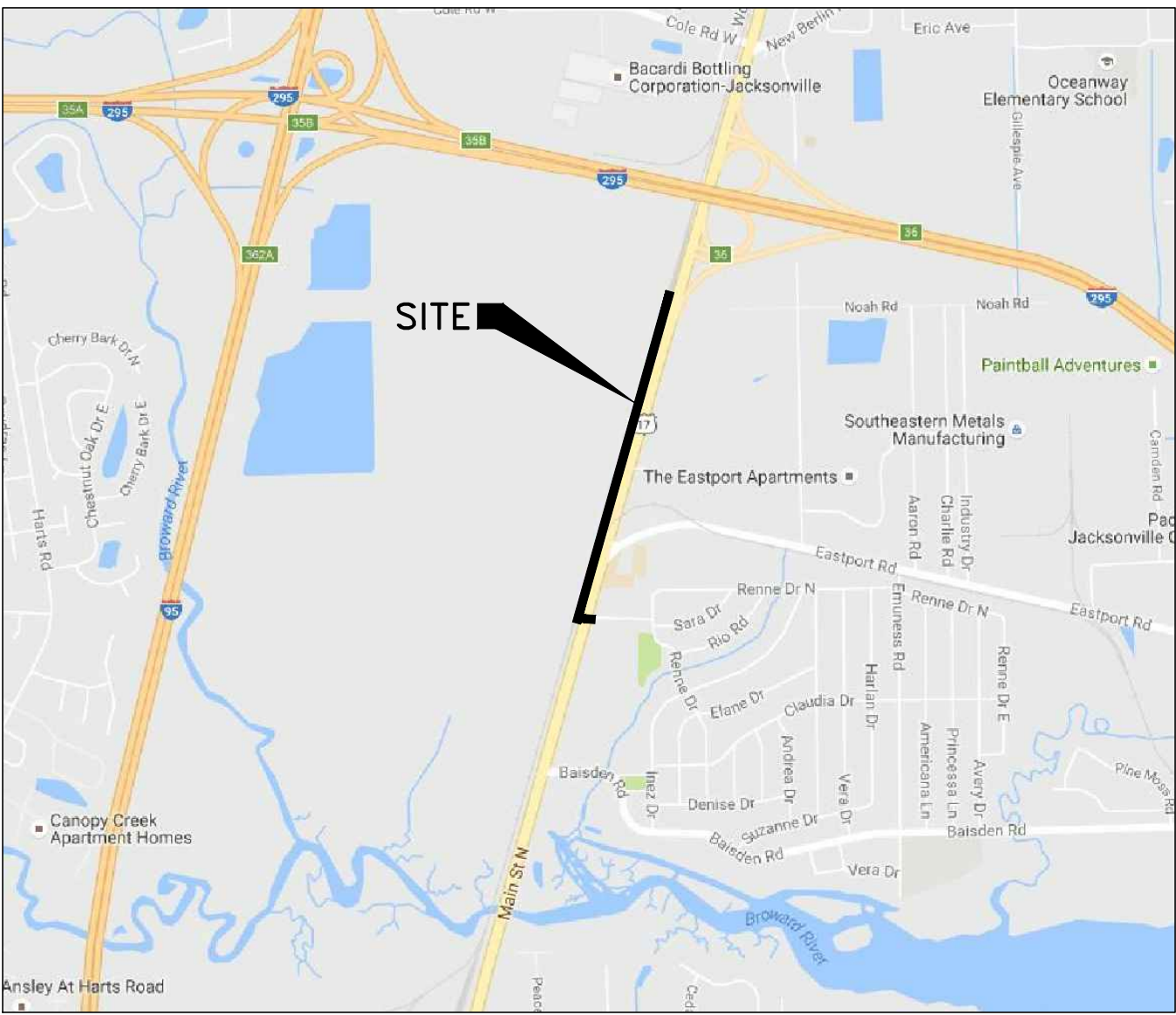


CONSTRUCTION DRAWINGS FOR MAIN STREET FORCE HDD PROJECT

JEA PROJ NO.: 8003022
AVAILABILITY NO.: 2016-2025

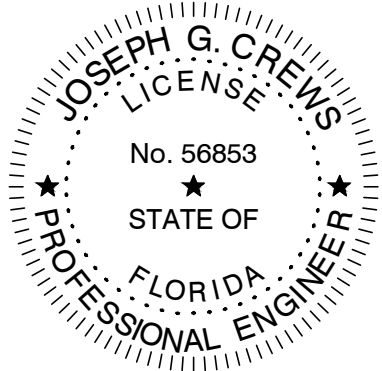


VICINITY MAP
NOT TO SCALE

IFB BID NO.: _____
BID DUE DATE: _____
TIME OF RECEIPT: _____
TIME OF OPENING: _____
BID PLACE: 21 W. CHURCH ST.
TOWER LOBBY, SUITE 103
JACKSONVILLE, FL 32202



ST. AUGUSTINE, FLORIDA
100 CENTER CREEK ROAD, SUITE 108,
ST. AUGUSTINE, FL 32084
904-562-2185



BID SET

NO. SHEETS	PROJ. NO.	DATE	SCALE	NO.	BY	DATE	REVISIONS
1	100433.01	DECEMBER 2018	NONE	6			
2				5			
3				4			
4				3			
5				2			
6				1			
DESIGNER: JGC				DESIGN ENGINEER			
DRAWN BY: WMC				JOSEPH G. CREWS			
DATE: DECEMBER 2018				FLORIDA REGISTRATION NO.			
CHECKED BY: JGC				56853			
DATE: DECEMBER 2018							



MAIN STREET FORCE MAIN
HDD PROJECT
COVER SHEET

JEA PROJ NO.: 8003022

PROJ TITLE:

BID DATE:

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

ABBREVIATIONS:

- 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.
- 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.
- 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.

EXISTING UTILITY PROTECTION:

- | | | | |
|-------------------------------------|-------------------------------------|-----|---|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 1. | CONTRACTOR TO OBTAIN ALL REQUIRED RIGHT-OF-WAY PERMITS. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 2. | CONTRACTOR SHALL NOT OPEN CUT STREETS IN THE PROJECT AREA UNLESS SPECIFICALLY SHOWN ON PLANS |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. | THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A CONSUMPTIVE USE PERMIT (C.U.P.) THROUGH THE ST. JOHNS WATER MANAGEMENT DISTRICT SHOULD DEWATERING ACTIVITIES BE REQUIRED. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 4. | THE DEPARTMENT OF TRANSPORTATION, RAILROAD COMPANIES AND C.O.J. ARE TO BE NOTIFIED IN ADVANCE OF CONSTRUCTION PER THEIR RESPECTIVE PERMIT CONDITIONS. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 5. | ALL WORK SHALL BE IN ACCORDANCE WITH BID DOCUMENTS, JEA WATER AND SEWER STANDARDS, DETAILS AND MATERIALS MANUAL, REV. 01/15, AND CITY OF JACKSONVILLE STANDARD SPECIFICATIONS AND DETAILS AND ALL APPLICABLE STATE AND LOCAL REGULATIONS. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 6. | IF SOLVENT CONTAMINATION IS FOUND IN THE PIPE TRENCH, WORK SHALL BE STOPPED AND THE PROPER AUTHORITIES NOTIFIED. WITH APPROVAL OF THE PERMITTING AGENCY, DUCTILE IRON PIPE, FITTINGS AND SOLVENT RESISTANT GASKET MATERIAL SHALL BE USED IN THE CONTAMINATED AREA. THE DUCTILE IRON PIPE SHALL EXTEND AT LEAST 100 FEET BEYOND ANY SOLVENT NOTED. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 7. | THE CONTRACTOR SHALL NOTIFY APPLICABLE UTILITY CONTACT PERSONNEL NOT LESS THAN ONE WEEK PRIOR TO CONSTRUCTION OF FACILITIES IN THEIR RESPECTIVE AREAS. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 8. | TREE PROTECTION SHALL BE IN ACCORDANCE WITH JACKSONVILLE ORDINANCE CODE 656 AND/OR AS DETAILED ON SPECIFIC PLAN SHEETS. NO TRIMMING OF OVERHANGING TREE LIMBS WILL BE ALLOWED. USE SMALLER EQUIPMENT IF NECESSARY. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 9. | THE CONTRACTOR SHALL LOCATE THE DRAINAGE INLET STRUCTURES IN THE PROJECT AREA AND ERECT SEDIMENTATION CONTROL DEVICES AS NECESSARY PER THE CITY OF JACKSONVILLE STORMWATER POLLUTION PREVENTION PLAN. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 10. | CONTRACTOR TO COORDINATE WORK WITH OTHER UTILITIES DURING CONSTRUCTION. |

SURVEY AND LOCATE DATA:

- | | | | |
|-------------------------------------|-------------------------------------|----|--|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 1. | ALL ELEVATIONS ARE BASED ON U.S.C.&G.S. DATUM AND SHOWN IN FEET. |
| <input type="checkbox"/> | <input type="checkbox"/> | 2. | ELEVATIONS ARE BASED ON N.G.V.D. 1929. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 3. | LOCATION OF EXISTING UTILITIES OBTAINED BY SOFT DIG LOCATES WHERE SHOWN ON PLANS, OR INCLUDED WITH BID SPECS. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 4. | EXISTING WATER AND SEWER LINES ARE SHOWN AS PER FIELD LOCATES AND SUBDIVISION AS-BUILT PLANS. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 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. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 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. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 7. | INVERT ELEVATIONS SHOWN ON DRAWINGS REFER TO THE CENTERLINE OF MANHOLES, UNLESS OTHERWISE INDICATED. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 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. |
| <input type="checkbox"/> | <input type="checkbox"/> | 9. | BENCHMARK DATA: <u>N.A.</u> |

PERMIT REQUIREMENTS (NOT ALL INCLUSIVE):


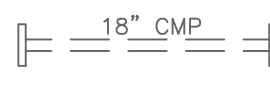










RESTORATION NOTES:

- 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.
- THE CONTRACTOR SHALL RESTORE/REPLACE ALL CULVERTS, HEADWALLS AND STORM DRAIN INLETS REMOVED OR DISTURBED BY THE CONSTRUCTION OPERATION.
- TRAFFIC SIGNS AND PAVEMENT MARKINGS SHALL BE RESTORED TO THEIR PRE-CONSTRUCTION CONDITION IN ACCORDANCE WITH CITY OF JACKSONVILLE/FDOT STANDARD SPECIFICATIONS.
- 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.
- GRASS SOD SHALL BE FURNISHED AND PLACED IN THE AREAS DISTURBED OR DAMAGED BY THE CONSTRUCTION OPERATION.
- ALL PAVEMENT REPAIR SHALL BE IN ACCORDANCE WITH THE CITY OF JACKSONVILLE/FDOT STANDARD DETAILS AND SPECIFICATIONS LATEST EDITION.
- UNLESS OTHERWISE NOTED, REMOVE AND REPLACE EXISTING PAVEMENT AS PER C.O.J. CASE X (10) PAVEMENT REPLACEMENT DETAIL.
- CONTRACTOR MUST MAINTAIN AND PRESERVE NEWLY GRADED AREAS AND REPAIR AREAS WHERE SETTLING AND EROSION HAVE OCCURRED.
- THE CONTRACTOR SHALL RESTORE/REPLACE ALL REMOVED PAVEMENT ACCORDING TO FDOT STANDARDS.
- SAW CUT AND REPAIR ALL DRIVEWAYS TO PRE-CONSTRUCTION CONDITION OR BETTER.
- MILL AND OVERLAY ENTIRE TRAVEL LANE WHERE NOTED. RESTORE ALL PAVEMENT MARKINGS TO EXISTING CONDITION.

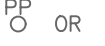
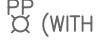




















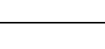

UTILITY CONTACTS:

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.	904-255-8762
E. CITY OF JACKSONVILLE - TRAFFIC OPERATIONS	904-387-8861
F. FLORIDA DEPT. OF TRANSPORTATION	904-360-5200
G. JEA - WATER COLLECTION & DISTRIBUTION - SCOTT BOYLE	904-665-7907
H. JEA - SEWER COLLECTION & DISTRIBUTION - BILL GREEN	904-665-8183
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	904-545-8858
T. SUNSHINE ONE CALL	811

GENERAL LEGEND:

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

UTILITY SYMBOLS:

ELECTRIC POLE OR S.B.T. POLE (WOOD)	 PP OR  PP (WITH LIGHT)
WOOD POWER POLE	 WPP
ELECTRIC POLE OR S.B.T. POLE (CONC.)	 PP OR  PP (WITH LIGHT)
CONCRETE POWER POLE	 CPP
GUY WIRE	→
TRAFFIC SIGNAL POLE	 TSP
IRON PIPE	 I.P.
OVERHEAD ELECTRIC	--- OHE ---
UNDERGROUND ELECTRIC	--- UGE ---
OVERHEAD TELEPHONE	--- OT ---
UNDERGROUND TELEPHONE	--- UGT ---
GAS MAIN (SIZE & MAT'L. INDICATED)	--- GAS ---
CABLE TELEVISION	--- CATV ---
FIBER OPTIC LINE	--- FO ---
UNDERGROUND CABLE (TYPE UNDETERMINED)	--- UG ---
WATER METER	
WATER METER WITH TOUCHREAD	
TELEPHONE BOX	
CATV BOX	
CONCRETE MONUMENT	
GAS VALVE	
SOIL BORING (NUMBER INDICATED)	 SB-1
SOFT DIG (NUMBER INDICATED)	 SD1
TREE, SIZE & TYPE INDICATED	 12" O
MAIL BOX	
SIGN - TYPE INDICATED	 OR  SIGN
BUSH, SHRUB OR HEDGE	
MILL AND OVERLAY (TYP.)	
ASPHALT PAVEMENT OVERLAY	
INDICATES DRIVEWAY/SIDEWALK TO BE REMOVED AND REPLACED	
TRAVEL LANE DASHED WHITE STRIPING	----
TRAVEL LANE SOLID WHITE STRIPING	=====

INSTALLATION NOTES:

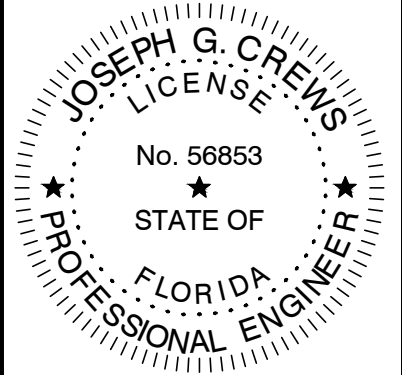
- | | | | |
|-------------------------------------|-------------------------------------|-----|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1. | CONTRACTOR TO REHABILITATE ALL MANHOLES ON PIPE BURST SEWERS VIA COATING/LINING PER JEA SPECIFICATION 446-2, UNLESS OTHERWISE NOTED ON THE PLANS. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 2. | CONTRACTOR TO RENEW, REHABILITATE, REPLACE OR REINSTALL AS APPLICABLE ALL SERVICE LATERALS TO R.O.W. LINE. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 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. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 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 @ 665-8847 (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. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 5. | ALL NEW STORM DRAIN PIPE JOINTS SHALL BE WRAPPED WITH FILTER FABRIC. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 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. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 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. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 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). |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 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. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 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. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 11. | CONTRACTOR SHALL REPLACE EXISTING WATER METER BOXES WHEN DEEMED NECESSARY BY THE JEA INSPECTOR. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 12. | CONTRACTOR TO PROVIDE ADDITIONAL DEPTH OF BURY VIA PIPE JOINT DEFLECTION TO ACCOMMODATE VALVE SELECTION PER JEA STANDARDS. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 13. | WATER METERS MAY REQUIRE RELOCATION FOR CONSTRUCTION. CONTRACTOR SHALL CONTACT JEA METER DEPARTMENT AND RELOCATE WATER METERS AS NECESSARY. |
| <input type="checkbox"/> | <input type="checkbox"/> | 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. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 15. | SHEET PILING WILL BE REQUIRED ON ALL EXCAVATIONS DEEPER THAN 16 FEET. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 16. | THE CONTRACTOR SHALL FOLLOW FDOT MAINTENANCE OF TRAFFIC STANDARDS FOR ALL INSTALLATIONS IN THE FDOT R.O.W. |

INDEX OF DRAWINGS:

SHEET NUMBER	DRAWING NUMBER	SHEET TITLE	NOT APPLICABLE	APPLICABLE	DRAWING NUMBER	SHEET TITLE
1	G-0	COVER SHEET	<input checked="" type="checkbox"/>	<input type="checkbox"/>	REFERENCE DRAWINGS	
2	G-1	GENERAL NOTES, LEGEND AND SHEET INDEX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	W-STD-1	WATER MAIN DETAILS
3	G-2	KEY SHEET	<input checked="" type="checkbox"/>	<input type="checkbox"/>	W-STD-2	WATER MAIN DETAILS
4	C-1	PLAN AND PROFILE - MAIN STREET	<input checked="" type="checkbox"/>	<input type="checkbox"/>	W-STD-3	WATER MAIN DETAILS
5	CD-1	DETAIL - CSX RAILROAD CROSSING	<input checked="" type="checkbox"/>	<input type="checkbox"/>	W-STD-4	WATER MAIN DETAILS
6	CD-2	HDD DETAILS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	W-STD-5	WATER MAIN DETAILS
7	CD-3	STANDARD DETAILS	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
8	CD-4	STANDARD DETAILS	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
9	CD-5	STANDARD DETAILS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	S-STD-1	SANITARY SEWER DETAILS
10	TTC-1	TTC - STANDARD DETAILS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	S-STD-2	SANITARY SEWER DETAILS
11	TTC-2	TTC - STANDARD DETAILS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	S-STD-3	SANITARY SEWER DETAILS
			<input checked="" type="checkbox"/>	<input type="checkbox"/>	S-STD-4	SANITARY SEWER DETAILS
			<input checked="" type="checkbox"/>	<input type="checkbox"/>	S-STD-5	SANITARY SEWER DETAILS
			<input checked="" type="checkbox"/>	<input type="checkbox"/>	PUMP STATION CONSTRUCTION DETAILS	
			<input checked="" type="checkbox"/>	<input type="checkbox"/>	PS-STD-1	MISCELLANEOUS DETAILS
			<input checked="" type="checkbox"/>	<input type="checkbox"/>	PUMP STATION ELECTRIC DETAILS	
			<input checked="" type="checkbox"/>	<input type="checkbox"/>	PS-STD-2	ELECTRIC DETAILS
			<input checked="" type="checkbox"/>	<input type="checkbox"/>	PS-STD-3	DEMARCATION BOX & POWER DISTRIBUTION PANEL
			<input checked="" type="checkbox"/>	<input type="checkbox"/>	PS-STD-4	SCADA INSTALLATION
			<input checked="" type="checkbox"/>	<input type="checkbox"/>	PS-STD-5	SCADA INSTALLATION
			<input checked="" type="checkbox"/>	<input type="checkbox"/>	PS-STD-6	GROUNDING PLAN
			<input checked="" type="checkbox"/>	<input type="checkbox"/>	PS-STD-7	GROUNDING DETAILS
			<input checked="" type="checkbox"/>	<input type="checkbox"/>	PS-STD-8	ELECTRIC SINGLE LINE DIAGRAM

NOTE:

STANDARD DRAWINGS ARE APPLICABLE FOR ALL PROJECTS. INCORPORATED BY REFERENCE AND ARE AVAILABLE AT JEA.COM



DESIGN ENGINEER
JOSEPH G. CREWS
FLORIDA REGISTRATION NO. 56853

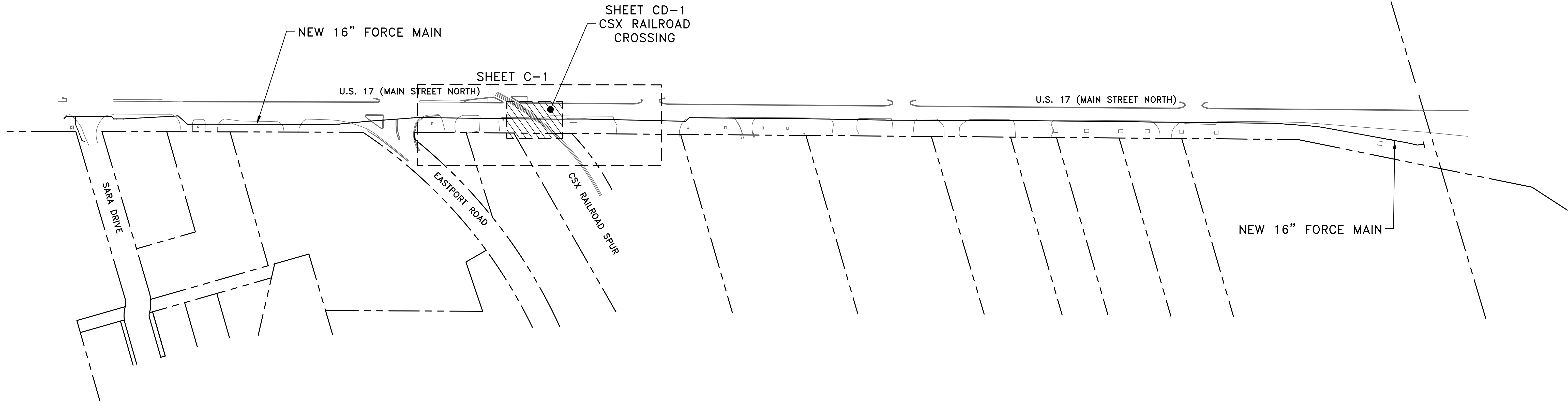
DESIGNER: JGC
DATE: DECEMBER 2018
CHECKED BY: JGC
DATE: DECEMBER 2018



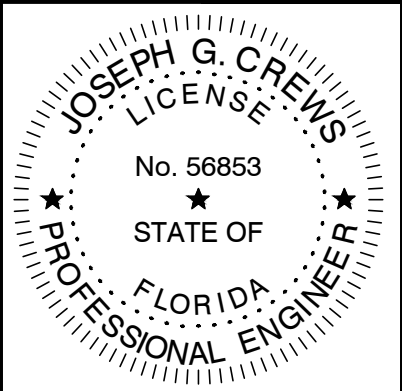
MAIN STREET FORCE MAIN
HDD PROJECT
GENERAL NOTES, LEGEND, INDEX TO DRAWINGS

PROJ. NO. 100433.01
DATE: DECEMBER 2018
SCALE: AS SHOWN
NO. SHEETS 1
SHEET NO. 1
DRAWING NO. G-1

Main Street Forcemain Baseline Coordinates				
Point #	Description	Northing	Easting	Station #
9029	PIPE	2,223,382.0	454,829.0	8+00
	SOLID SLEEVE	2,223,417.9	454,839.9	8+39
9030	PIPE	2,223,429.8	454,843.5	8+50
	11.25 BEND	2,223,445.9	454,848.3	8+66
	18"x16" ADAPT	2,223,450.4	454,849.7	8+72
9031	PIPE	2,223,477.7	454,858.0	9+00
9032	PIPE	2,223,525.5	454,872.4	9+50
9033	PIPE	2,223,573.5	454,886.6	10+00
9034	PIPE	2,223,621.5	454,900.7	10+50
9035	PIPE	2,223,669.6	454,914.3	11+00
9036	PIPE	2,223,717.5	454,928.4	11+50
	18"x16" ADAPT	2,223,733.3	454,993.5	11+66
	11.25 BEND	2,223,738.4	454,935.0	11+72
9037	PIPE	2,223,765.3	454,943.3	12+00
	SOLID SLEEVE	2,223,783.5	454,948.9	12+19
9038	PIPE	2,223,813.0	454,958.2	12+50
9039	PIPE	2,223,860.7	454,973.0	13+00



KEY SHEET
NOT TO SCALE



NO.	BY	DATE	REVISIONS
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DESIGN ENGINEER	JOSEPH G. CREWS
FLORIDA REGISTRATION NO.	56853

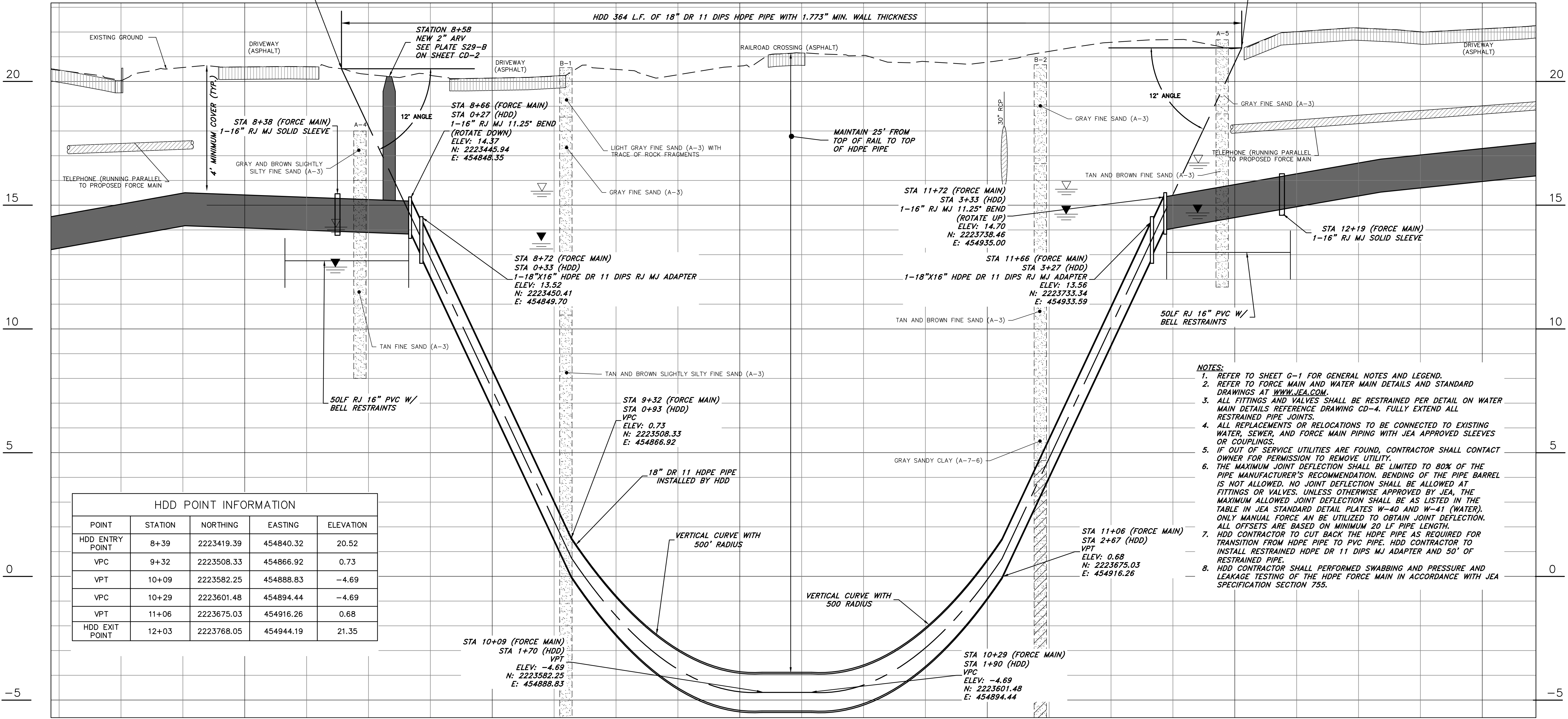
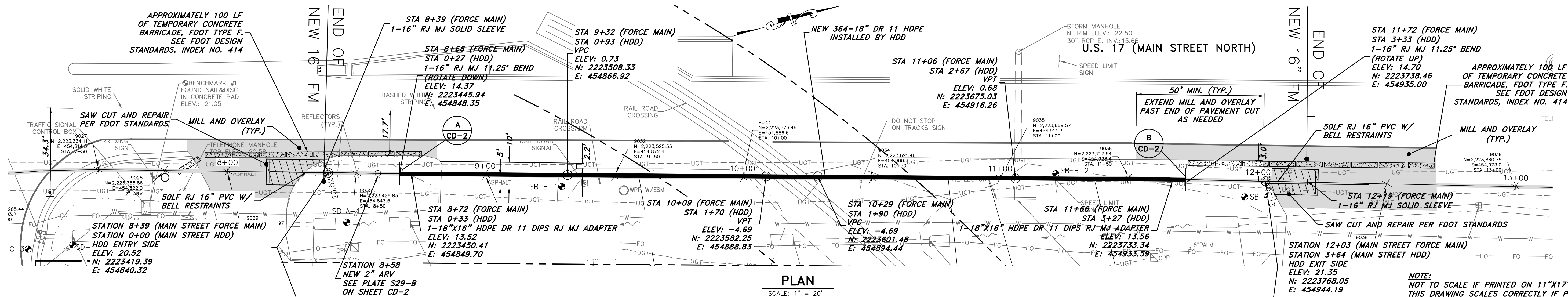
DESIGNER	JGC
DRAWN BY	WMC
DATE	DECEMBER 2018
CHECKED BY	JGC
DATE	DECEMBER 2018



MAIN STREET FORCE MAIN HDD PROJECT KEY SHEET
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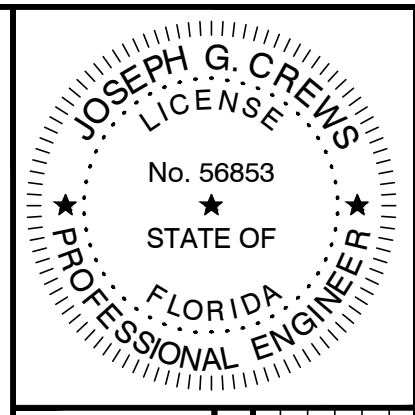
NO. SHEETS	PROJ. NO. 100433.01
SHEET NO.	DATE: DECEMBER 2018
DRAWING NO. G-2	SCALE: NONE

THIS BLOCK HAS ATTRIBUTES – DO NOT EXPLODE THIS BLOCK



HDD POINT INFORMATION				
POINT	STATION	NORTHING	EASTING	ELEVATION
HDD ENTRY POINT	8+39	2223419.39	454840.32	20.52
VPC	9+32	2223508.33	454866.92	0.73
VPT	10+09	2223582.25	454888.83	-4.69
VPC	10+29	2223601.48	454894.44	-4.69
VPT	11+06	2223675.03	454916.26	0.68
HDD EXIT POINT	12+03	2223768.05	454944.19	21.35

- NOTES:
1. REFER TO SHEET G-1 FOR GENERAL NOTES AND LEGEND.
 2. REFER TO FORCE MAIN AND WATER MAIN DETAILS AND STANDARD DRAWINGS AT WWW.JEA.COM.
 3. ALL FITTINGS AND VALVES SHALL BE RESTRAINED PER DETAIL ON WATER MAIN DETAILS REFERENCE DRAWING CD-4. FULLY EXTEND ALL RESTRAINED PIPE JOINTS.
 4. ALL REPLACEMENTS OR RELOCATIONS TO BE CONNECTED TO EXISTING WATER, SEWER, AND FORCE MAIN PIPING WITH JEA APPROVED SLEEVES OR COUPLINGS.
 5. IF OUT OF SERVICE UTILITIES ARE FOUND, CONTRACTOR SHALL CONTACT OWNER FOR PERMISSION TO REMOVE UTILITY.
 6. THE MAXIMUM JOINT DEFLECTION SHALL BE LIMITED TO 80% OF THE PIPE MANUFACTURER'S RECOMMENDATION. BENDING OF THE PIPE BARREL IS NOT ALLOWED. NO JOINT DEFLECTION SHALL BE ALLOWED AT FITTINGS OR VALVES. UNLESS OTHERWISE APPROVED BY JEA, THE MAXIMUM ALLOWED JOINT DEFLECTION SHALL BE AS LISTED IN THE TABLE IN JEA STANDARD DETAIL PLATES W-40 AND W-41 (WATER). ONLY MANUAL FORCE AN BE UTILIZED TO OBTAIN JOINT DEFLECTION. ALL OFFSETS ARE BASED ON MINIMUM 20 LF PIPE LENGTH.
 7. HDD CONTRACTOR TO CUT BACK THE HDPE PIPE AS REQUIRED FOR TRANSITION FROM HDPE PIPE TO PVC PIPE. HDD CONTRACTOR TO INSTALL RESTRAINED HDPE DR 11 DIPS MJ ADAPTER AND 50' OF RESTRAINED PIPE.
 8. HDD CONTRACTOR SHALL PERFORMED SWABBING AND PRESSURE AND LEAKAGE TESTING OF THE HDPE FORCE MAIN IN ACCORDANCE WITH JEA SPECIFICATION SECTION 755.



NO.	BY	DATE	REVISIONS
1	JGC	12/20/18	ISSUED FOR PERMIT
2	JGC	12/20/18	REVISED
3	JGC	12/20/18	REVISED
4	JGC	12/20/18	REVISED
5	JGC	12/20/18	REVISED
6	JGC	12/20/18	REVISED

DESIGN ENGINEER
JOSEPH G. CREWS
FLORIDA REGISTRATION NO.
56853

DESIGNER
JGC
DRAWN BY
WMC
DATE
12/20/18
CHECKED BY
JGC
DATE
12/20/18



MAIN STREET FORCE MAIN
HDD PROJECT
PLAN AND PROFILE - MAIN STREET

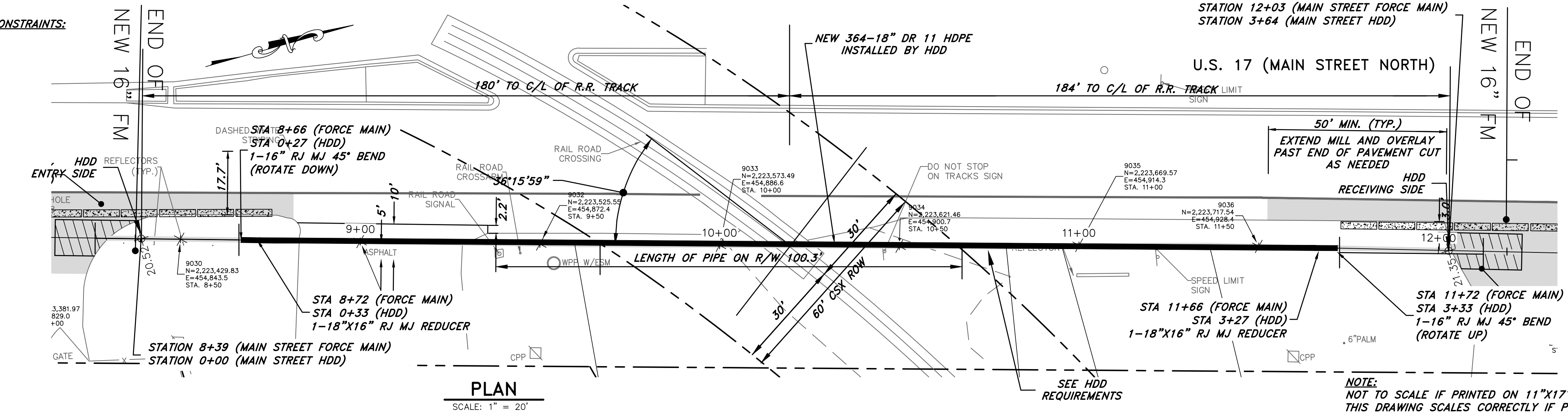
PROJ. NO. 100433.01
DATE: DECEMBER 2018
SCALE: AS SHOWN
NO. SHEETS
SHEET NO.
DRAWING NO. C-1

THIS BLOCK HAS ATTRIBUTES - DO NOT EXPLODE THIS BLOCK

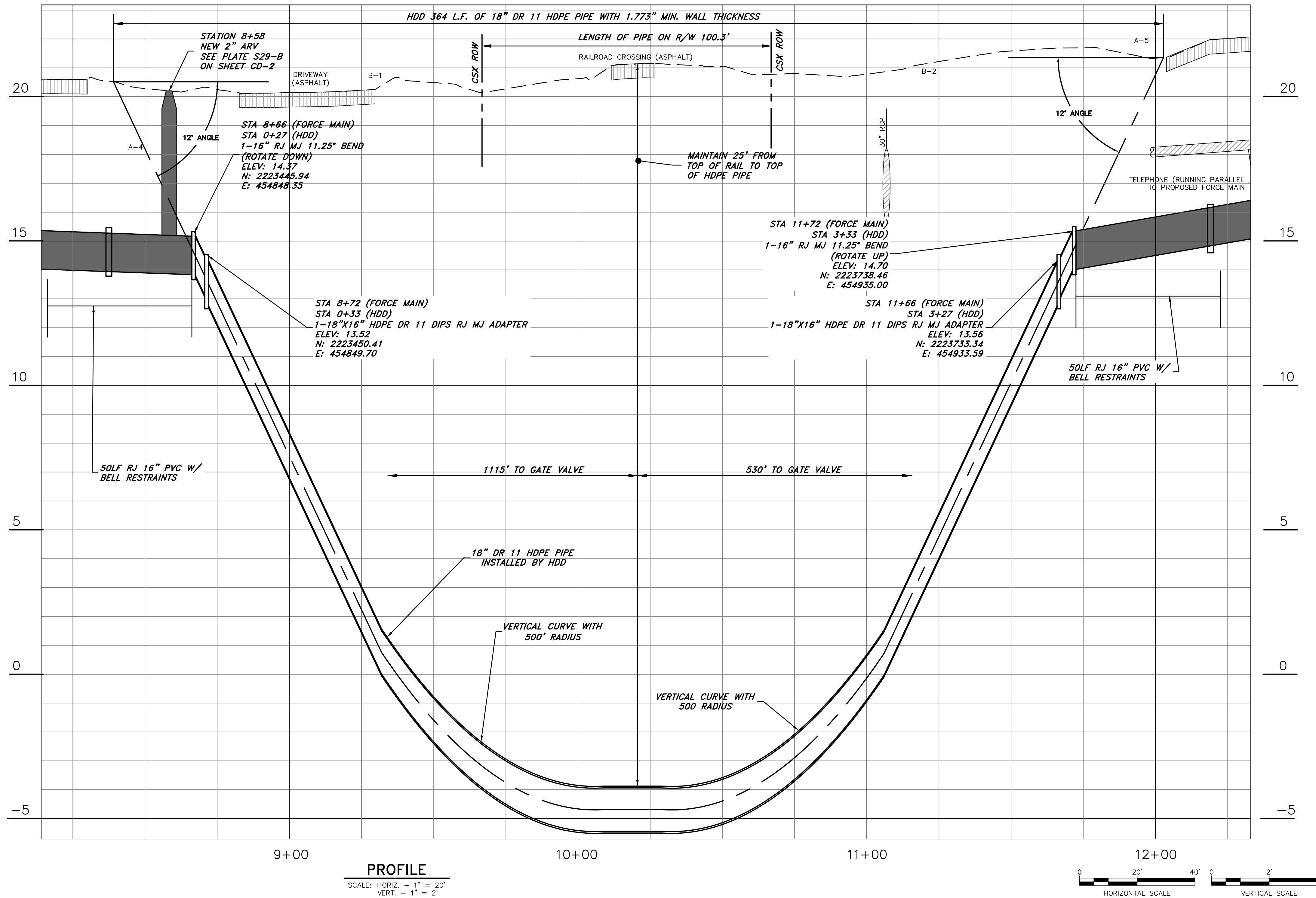
NOT DIMENSIONED HERE DUE TO SIZE CONSTRAINTS:

1. PERPENDICULAR DISTANCE FROM
C/L TO ENTRY PIT = 144.1'
2. PERPENDICULAR DISTANCE FROM
C/L TO EXIT PIT = 146.2'

- CSX GENERAL NOTES:
 - FOR ALL LIQUID OR GAS INSTALLATIONS, OR FOR NOMINAL PIPE SIZES EXCEEDING SIX (6) INCHES OUTSIDE DIAMETER, MINIMUM COVER (MEASURED FROM BASE-OF-RAIL TO TOP-OF-PIPE) SHALL BE TWENTY FIVE (25) FEET, REGARDLESS OF PRODUCT. CSXT HDD GUIDELINE SPECS. PAGE 1, 3).
 - AS PER CSXT PIPELINE DESIGN AND SPECS, SPECIAL CONSIDERATION WILL BE GIVEN FOR HDD INSTALLATION METHOD WHERE THE DEPTH OF COVER IS SUBSTANTIAL, 15 FEET OR GREATER, OR IF THE BORE IS IN ROCK. CSXT PIPELINE SPECS. PAGE 33, 4.1.5, A).
 - PLEASE REFERENCE CSXT INTERIM GUIDELINES FOR HORIZONTAL DIRECTIONAL DRILLING (HDD) UNDER THE PROPERTY AND TRACK(S) OF CSX TRANSPORTATION, INC. FOR ADDITIONAL CONSTRUCTION GUIDELINES.



NOTE:
NOT TO SCALE IF PRINTED ON 11"X17".
THIS DRAWING SCALES CORRECTLY IF PRINTED ON
24"X36" OR HALF SCALE IF PRINTED ON 12"X18".



NO.	BY	DATE	REVISIONS
6.			
5.			
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DESIGN ENGINEER
JOSEPH G. CREWS
FLORIDA REGISTRATION NO.
56853

DESIGNER:	JGC
DRAWN BY:	WMC
DATE:	DECEMBER 2018
CHECKED BY:	JGC
DATE:	DECEMBER 2018

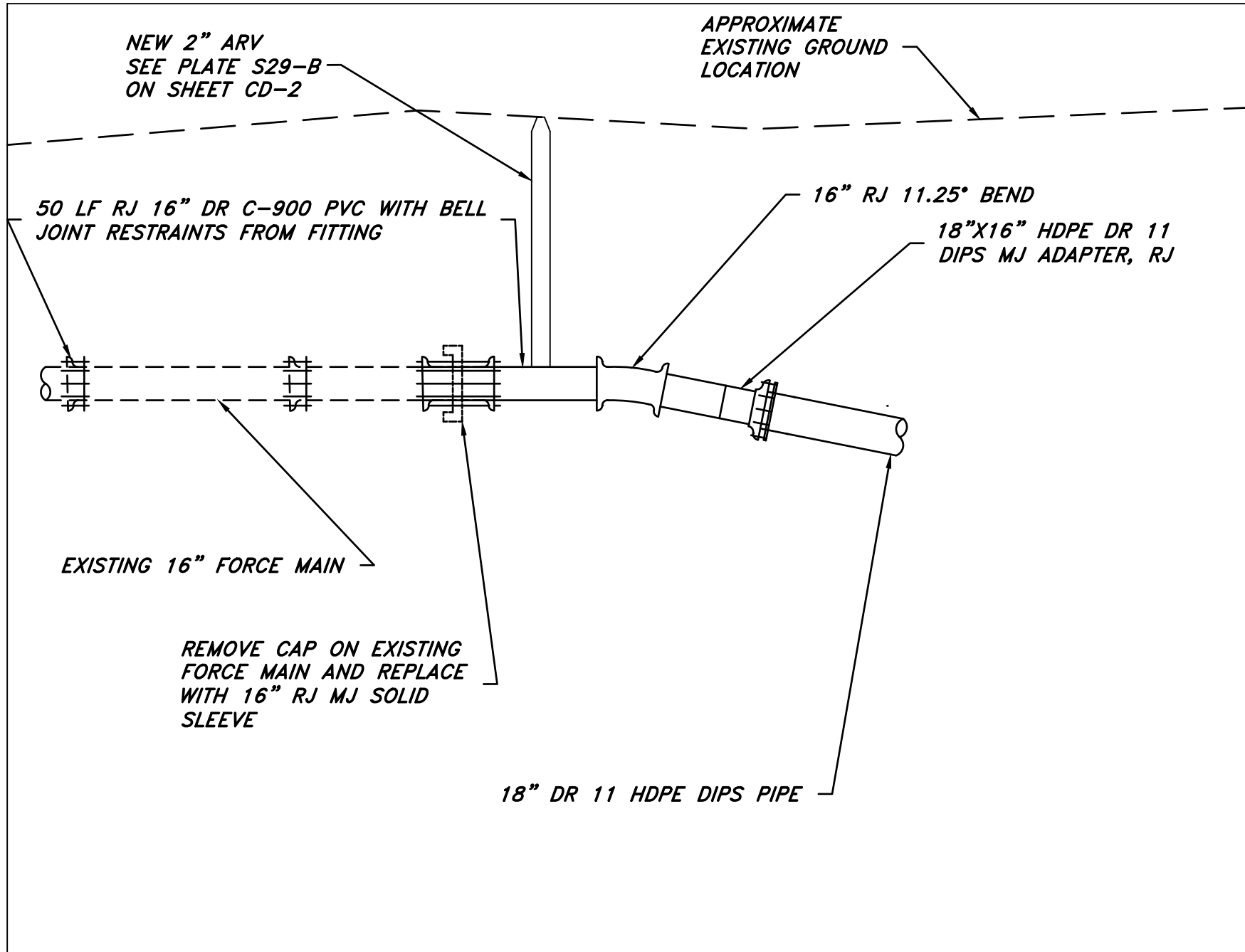
JEAsm
Building Communitysm

MAIN STREET FORCE MAIN
HDD PROJECT
DETAIL - CSX ROAD CROSSING

NO. SHEETS	PROJ. NO.	100433.01
	SHEET NO.	DATE: DECEMBER 2018
	DRAWING NO. CD-1	SCALE: AS SHOWN

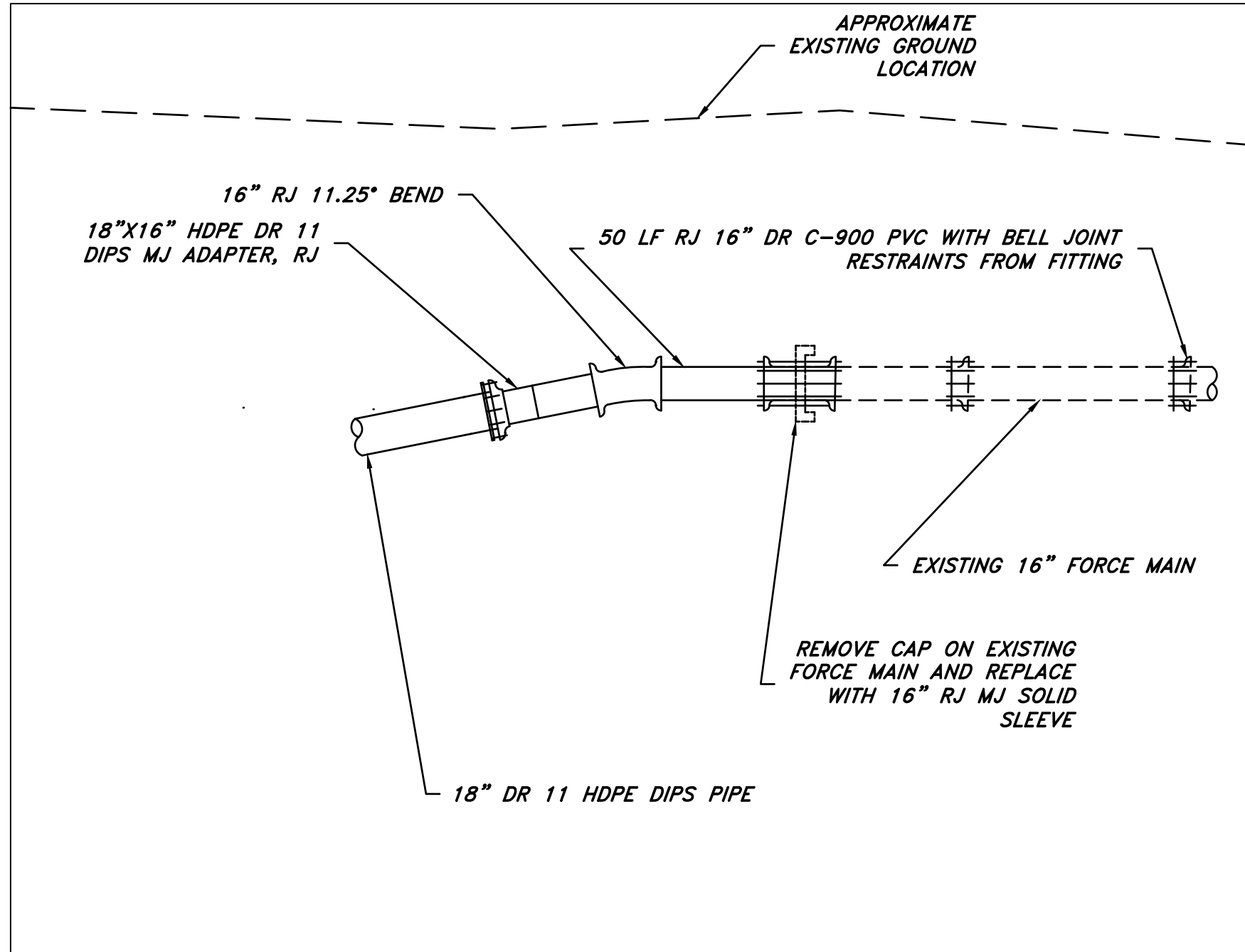
THIS BLOCK HAS ATTRIBUTES - DO NOT EXPLODE THIS BLOCK

Z:\Project Files\100433 JEA Pipelines MSA\100433.01 JEA Main St FM Replacement\HDD Design instead of J&B\300 Design\365 Intermediate Drawings\JEA-MAIN STREET FORCE MAIN pipe ending HDPE HDD and PERMIT.dwg Current Layout Tab = CD-2 Thu Jan 31, 2019 - 13:00



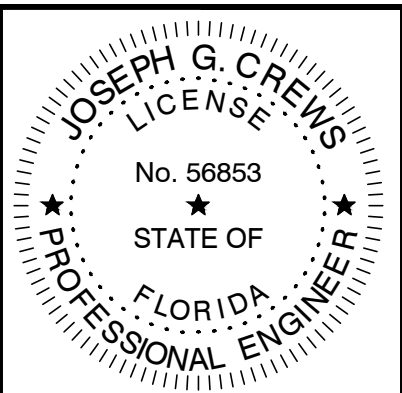
HDD ENTRY POINT CONNECTION DETAIL A
CD-2

NOT TO SCALE



HDD EXIT POINT CONNECTION DETAIL B
CD-2

NOT TO SCALE



NO.	BY	DATE	REVISIONS
6.			
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DESIGN ENGINEER	JOSEPH G. CREWS
FLORIDA REGISTRATION NO.	56853

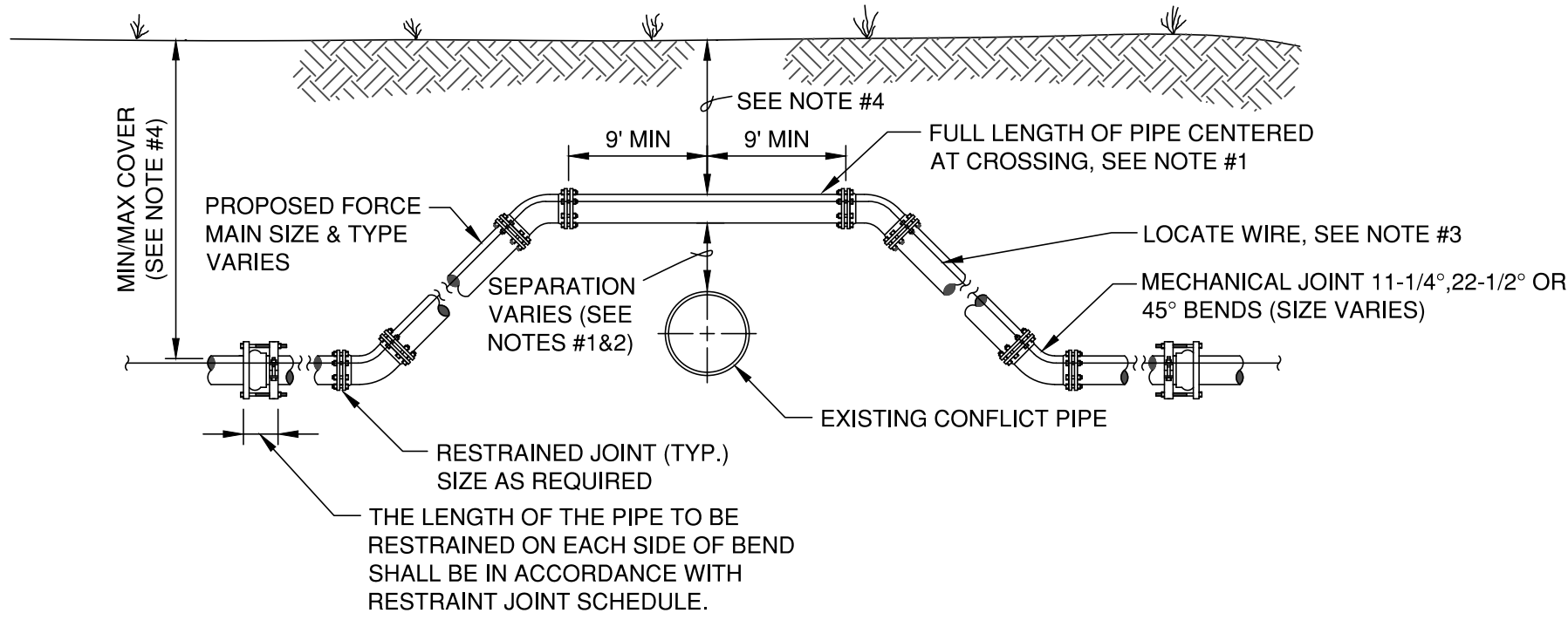
DESIGNER	JGC
DRAWN BY	WMC
DATE	DECEMBER 2018
CHECKED BY	JGC
DATE	DECEMBER 2018



MAIN STREET FORCE MAIN HDD PROJECT
DETAIL - HDD CONNECTIONS

NO. SHEETS	PROJ. NO. 100433.01
SHEET NO.	DATE: DECEMBER 2018
DRAWING NO. CD-2	SCALE: AS SHOWN

THIS BLOCK HAS ATTRIBUTES - DO NOT EXPLODE THIS BLOCK



CASE "A" CROSSING

NOTES:

1. IF EXISTING CONFLICT PIPE IS A WATER OR RECLAIMED WATER MAIN, 12-INCHES OF SEPARATION IS REQUIRED. A FULL LENGTH OF PIPE SHALL BE CENTERED OVER EXISTING UTILITY MAIN TO PROVIDE MAXIMUM JOINT SPACING FOR ALL CROSSINGS.
2. FOR OTHER LOCATION LIMITATIONS SEE DETAIL (S-26 & S-27).
3. LOCATING WIRE REQUIRED: SEE DETAIL S-49.
4. THE COVER FOR PIPING LESS THAN 24" SIZE SHALL BE 30" (MIN) IN UNPAVED AREAS, 36" (MIN) IN PAVED AREAS AND A MAXIMUM COVER OF 60". UNLESS PRE-APPROVED BY JEA, THE COVER FOR PIPING 24" SIZE AND LARGER SHALL BE 36" (MIN) IN PAVED AND UNPAVED AREAS AND A MAXIMUM COVER OF 64". UNLESS APPROVED BY JEA.
5. THE SOILS BETWEEN THE MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST ASTM D 1557.

ADJUSTMENT OVER EXISTING UTILITIES
MECHANICAL RESTRAINTS

JANUARY 2016 PLATE S-39

HORIZONTAL & VERTICAL SEPARATION REQUIREMENTS

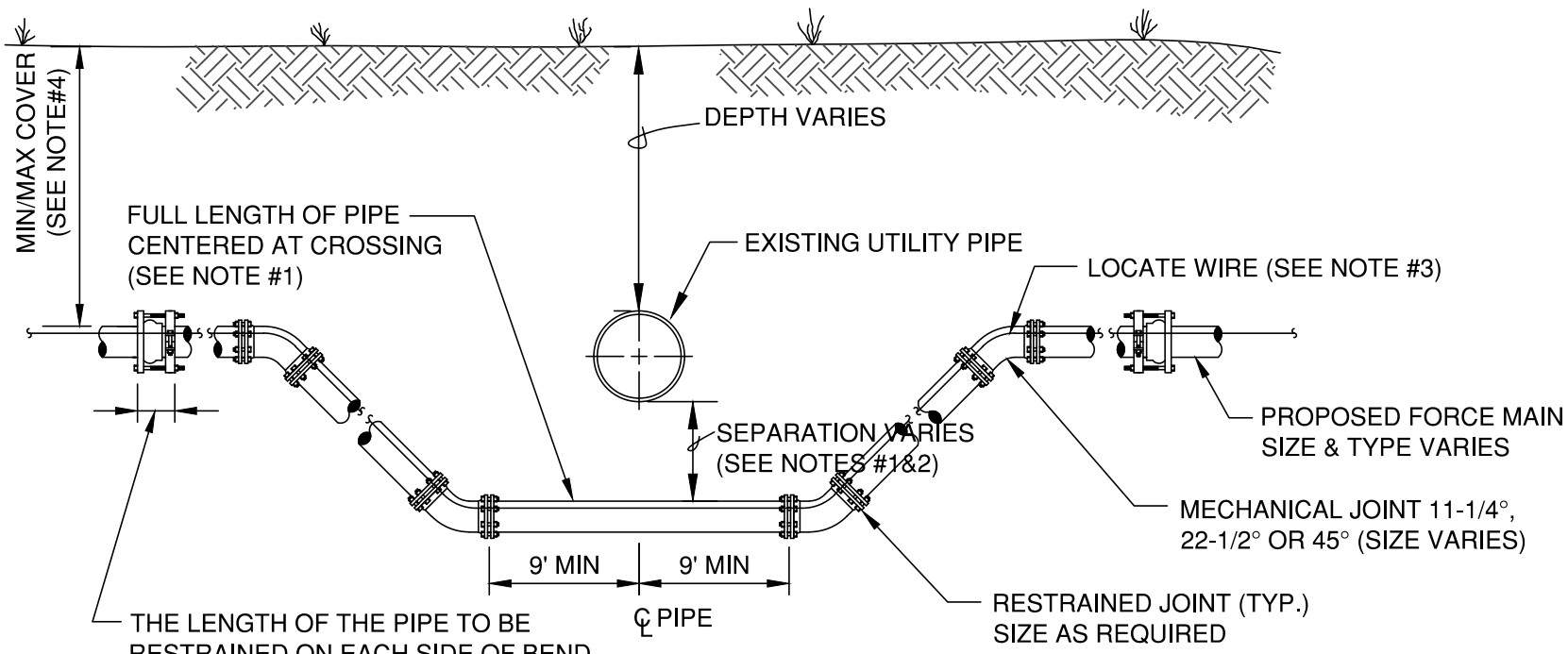
CONFLICTING UTILITY	POTABLE WATER			WASTEWATER GRAVITY AND FORCEMAIN			RECLAIMED WATER			VACUUM SEWERS		
	HORIZ.	VERT.	JOINT SPACING*	HORIZ.	VERT.	JOINT SPACING*	HORIZ.	VERT.	JOINT SPACING*	HORIZ.	VERT.	JOINT SPACING*
POTABLE WATER	3' NOTE 1	12"	3' NOTE 2	6' to 10'	12" NOTE 5	6' NOTE 2	3'	12"	6' NOTE 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, TREES, 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
ALL OTHER UTILITIES	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2

NOTES:

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

SEPARATION REQUIREMENTS FOR
WATER, WASTEWATER AND RECLAIMED WATER MAINS

January 2016 PLATE W-10



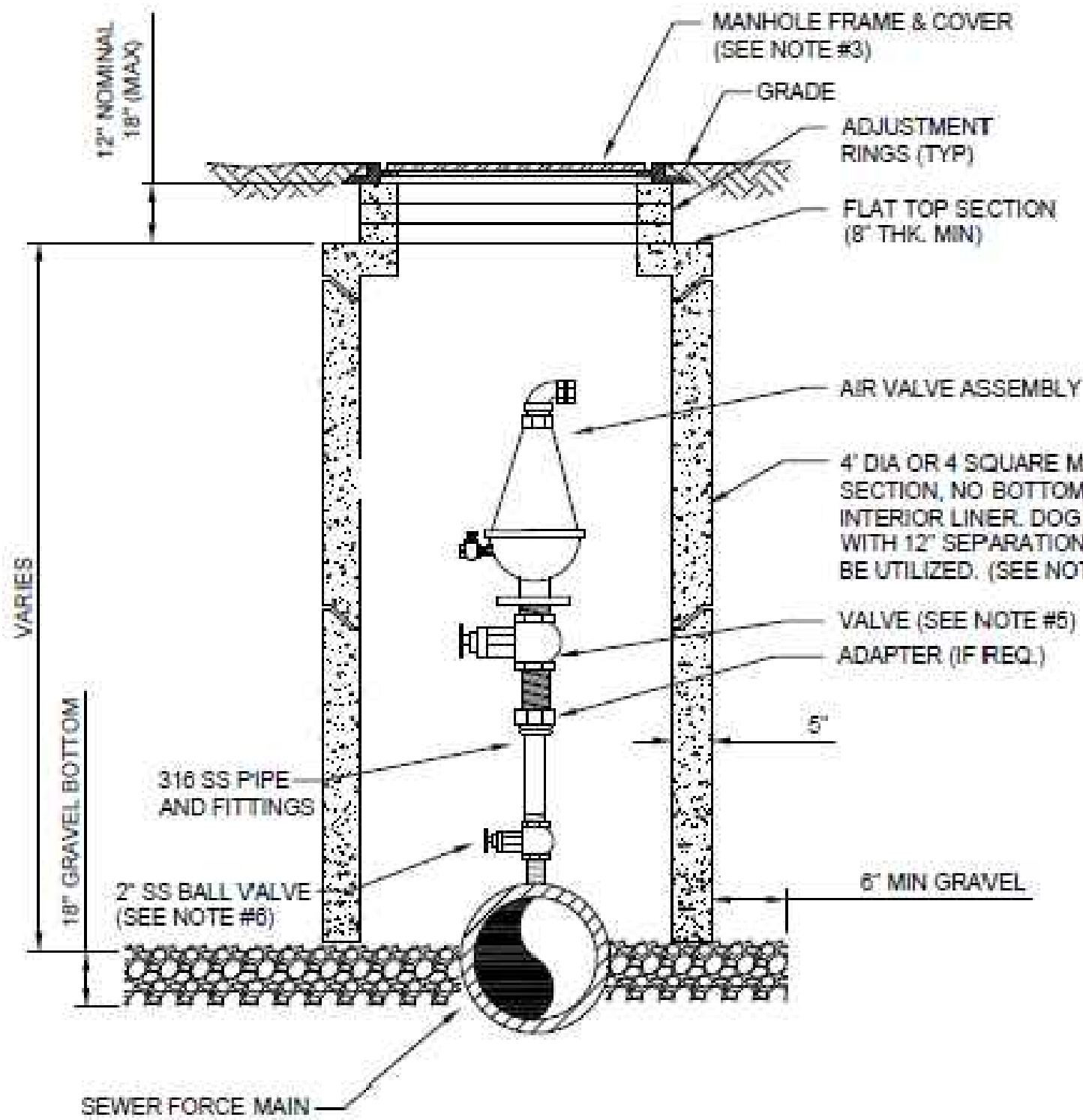
CASE "B" CROSSING

NOTES:

1. IF EXISTING CONFLICT PIPE IS A WATER OR RECLAIMED WATER MAIN, 12-INCHES OF SEPARATION IS REQUIRED. A FULL LENGTH OF PIPE SHALL BE CENTERED OVER EXISTING UTILITY MAIN TO PROVIDE MAXIMUM JOINT SPACING FOR ALL CROSSINGS.
2. FOR OTHER LOCATION LIMITATIONS SEE DETAIL (S-26 & S-27).
3. LOCATING WIRE REQUIRED: SEE DETAIL S-49.
4. THE COVER FOR PIPING LESS THAN 24" SIZE SHALL BE 30" (MIN) IN UNPAVED AREAS, 36" (MIN) IN PAVED AREAS AND A MAXIMUM COVER OF 60". UNLESS PRE-APPROVED BY JEA, THE COVER FOR PIPING 24" SIZE AND LARGER SHALL BE 36" (MIN) IN PAVED AND UNPAVED AREAS AND A MAXIMUM COVER OF 64". UNLESS APPROVED BY JEA.
5. THE SOILS BETWEEN THE MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST ASTM D 1557.

ADJUSTMENT UNDER EXISTING UTILITIES
MECHANICAL RESTRAINTS

JANUARY 2016 PLATE S-41

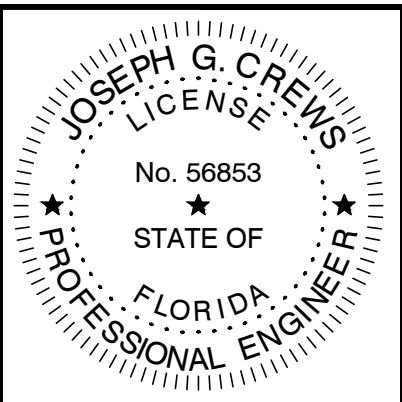


NOTES:

1. THE AIR ASSEMBLY MANHOLE SHALL BE LOCATED OUTSIDE OF THE ROADWAY PAVEMENT AREA (I.E. LOCATED IN NON-TRAFFIC AREAS).
2. THE CONCRETE MANHOLE SHALL INCLUDE A POLYURETHANE SPECIALTY LINER (PER SPEC SECTION 446) TO BE INSTALLED ON THE INTERIOR SURFACES INCLUDING THE RISER SECTION TOP AND THE ADJUSTMENT RINGS. A BITUMINOUS WATERPROOFING MATERIAL SHALL BE PROVIDED ON THE OUTSIDE SURFACES OF THE MANHOLE.
3. FRAME AND COVER SHALL BE JEA STANDARD. THE COVER SHALL HAVE NO GASKET TO ALLOW AIR TO EXIT VAULT (REMOVE GASKET IF NECESSARY FROM THE UNDER SIDE OF STANDARD JEA COVER). THE COVER (WHEN FLIPPED OPEN) MUST CLEAR THE AIR VALVE ASSEMBLY AT ALL TIMES OR A SQUARE TOP WITH ALUMINUM DOOR SHALL BE PROVIDED (NON-TRAFFIC LOCATIONS ONLY).
4. FOR PIPE SIZES 3 INCH AND SMALLER, PROVIDE A STAINLESS STEEL BALL VALVE (2" MIN). FOR PIPE SIZES 4 INCH AND LARGER, PROVIDE A FLANGE GATE VALVE (WHEEL OPERATOR) OR PLUG VALVE (LEVER ARM OPERATOR) SEE SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
5. FOR A 2" AIR VALVE, PROVIDE 2" STAINLESS STEEL BALL VALVE AT THE MAIN. FOR AIR VALVES LARGER THAN 2" SIZE, PROVIDE A TAPPING SLEEVE OR DUCTILE IRON TEE FITTING. ALSO, FOR OFF-SET PIPING LARGER THAN 2 INCH SIZE, PROVIDE A GATE VALVE (INSTALLED VERTICALLY NEAR MAIN). SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

AIR VALVE ASSEMBLY INSIDE MANHOLE IN ROW

JANUARY 2018 PLATE S-29B



NO.	BY	DATE	REVISIONS
6			
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2			
1			

DESIGN ENGINEER
JOSEPH G. CREWS
FLORIDA REGISTRATION NO.
56853

DESIGNER: JGC
DRAWN BY: WMC
DATE: DECEMBER 2018
CHECKED BY: JGC
DATE: DECEMBER 2018



MAIN STREET FORCE MAIN
HDD PROJECT
STANDARD DETAILS

NO. SHEETS	PROJ. NO. 100433.01
SHEET NO.	DATE: DECEMBER 2018
DRAWING NO. CD-3	SCALE: NONE

THIS BLOCK HAS ATTRIBUTES – DO NOT EXPLODE THIS BLOCK

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_d 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 RESTRAINT LENGTH ON TEE "BRANCH" LINE.
6. HDPE TO PVC TRANSITIONS: THE PVC PIPE SIDE SHALL BE RESTRAINED 35" (MIN).
7. THE INSTALLATION OF BELL HARNES RESTRAINTS AT PVC JOINTS (DR-18 & 25 PIPE) SHALL BE COMPLETED PER THE MANUFACTURERS RECOMMENDATION, WHICH INCLUDES NOT OVER TIGHTENING THE PARALLEL RODNUTS. THESE NUTS SHOULD ONLY BE SNUG TIGHT. THE HOME MARKS ON THE PIPE SHOULD ALWAYS BE VISIBLE AFTER THE RESTRAINT IS INSTALLED. OVERWORKING THE JOINT MAY CAUSE A FAILURE AT THE BELL RESULTING IN A SERVICE OUTAGE.

F.O. = FITTING ONLY

PLATE S-38A

JANUARY 2016



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

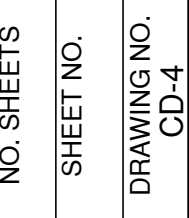
JANUARY 2016

NOTES:

1. TOTAL LENGTH BETWEEN FIRST JOINTS OR RESTRAINED LENGTH ON EITHER SIDE OF TEE (RUN) SHALL BE A TOTAL DISTANCE OF 6 FEET (MIN.). THE PROJECT ENGINEER CAN INCREASE THIS LENGTH TO REDUCE THE NUMBER OF RESTRAINS REQUIRED. ANY CHANGES TO THIS TABLE MUST BE SUBMITTED TO JEA FOR APPROVAL.
2. PAY ITEM **** DENOTES A RESTRAINT WHICH IS PAID FOR ON A PER EACH BASIC.
3. PAY ITEM ***** DENOTES A RESTRAINT WHICH IS INCLUDED IN THE UNIT PRICE BID FOR FITTING OR VALVE.

JANUARY 2016

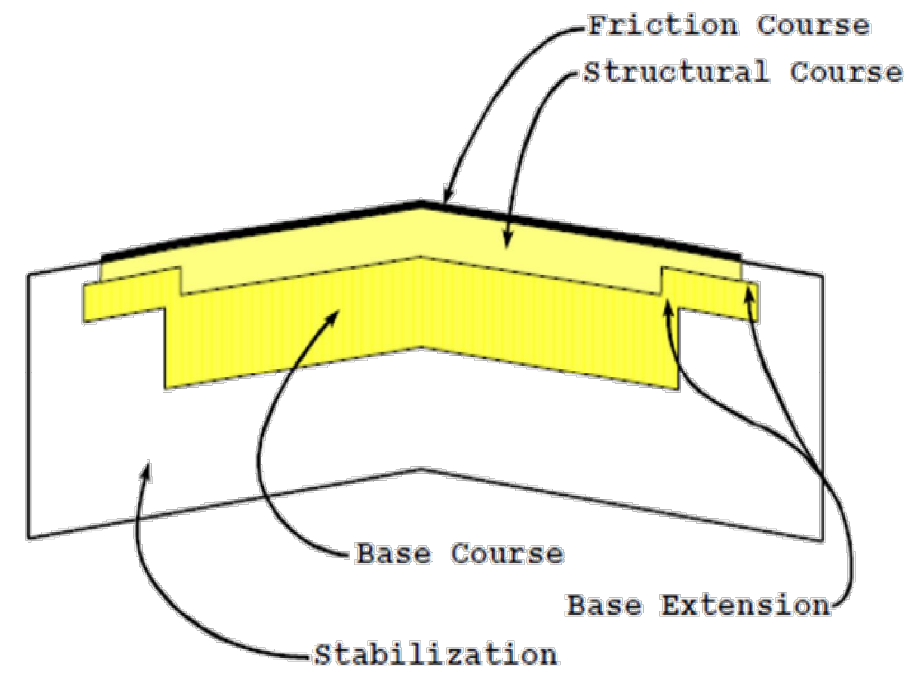
PLATE S-38D



THIS BLOCK HAS ATTRIBUTES - DO NOT EXPLODE THIS BLOCK

PAVEMENT RESTORATION DETAIL

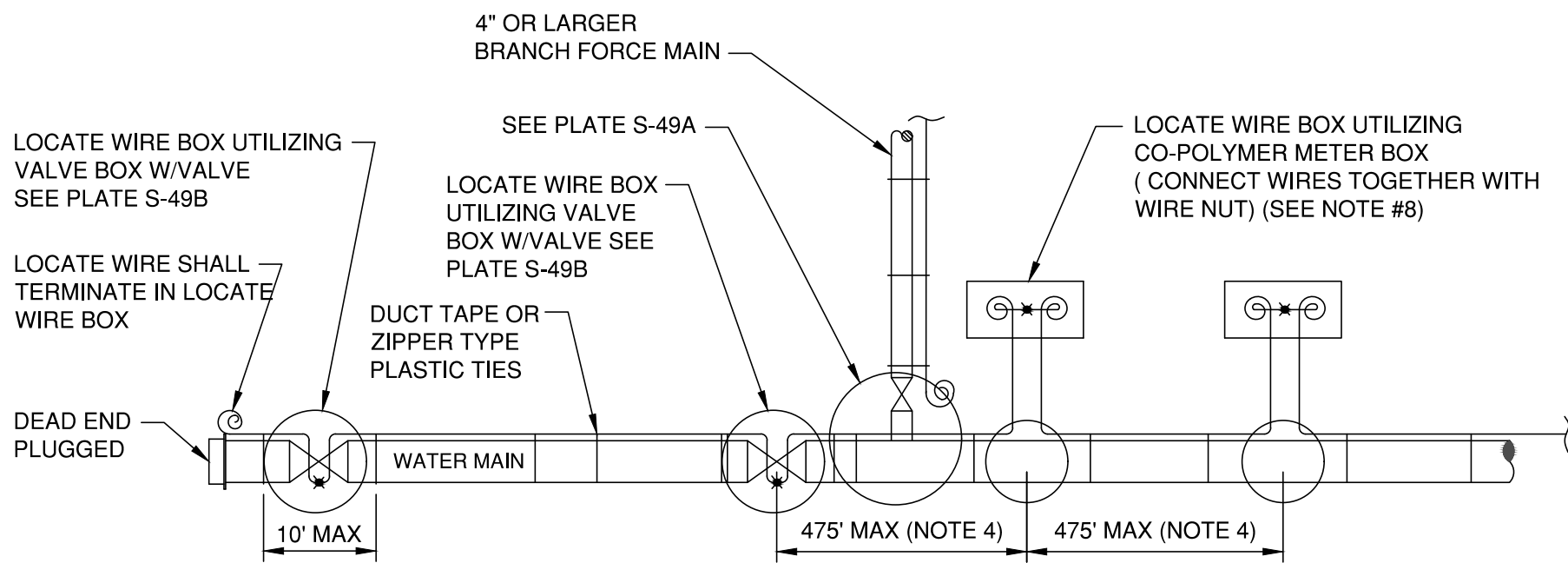
The Contractor shall restore all damaged pavement within the FDOT right of way in accordance with the following:



NOTE:

- 1. Stabilization - 12" Stabilized Subgrade, MIN LBR 40, 98% Max Density
- 2. Base Course - 10" Limerock, MIN LBR 109, 100% Max Density
- 3. Structural Course - 2.5" 12.5 TL-C
- 4. Friction Course - 1.5", Mix to be FC 12.5 with PG 76-22 binder

Once Paved Sections are restored to this standard, the pavement shall be milled and overlaid as shown on the contract drawings.



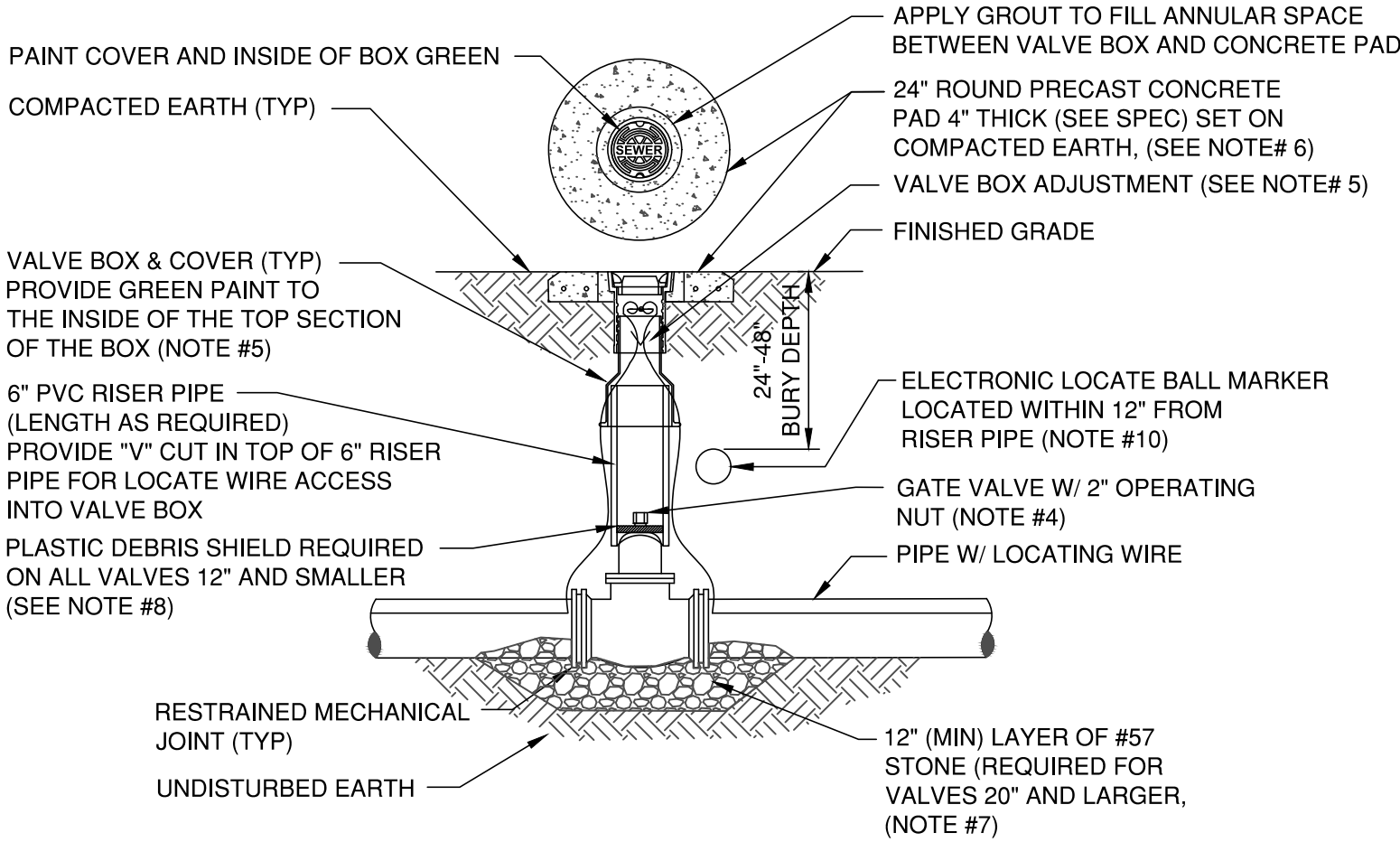
NOTES:

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

LOCATE WIRE CONSTRUCTION FOR FORCE MAINS

JANUARY 2016

PLATE S-49



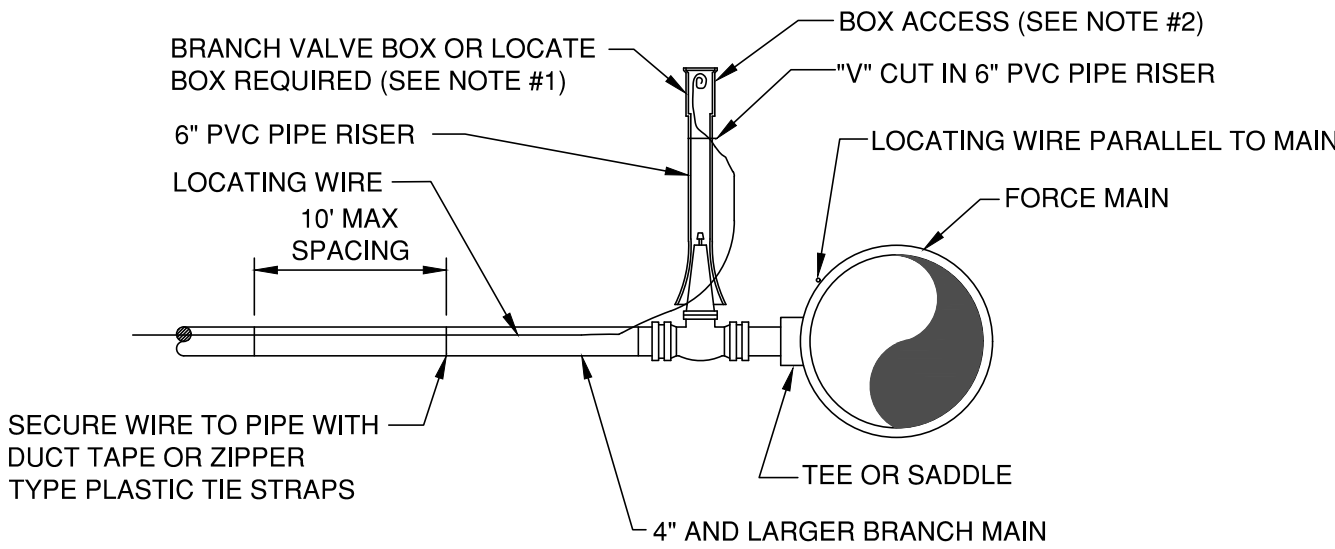
NOTES:

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

SEWER VALVE DETAIL

JANUARY 2016

PLATE S-30



BRANCH FORCE MAIN

(4" AND LARGER SEWER MAIN)

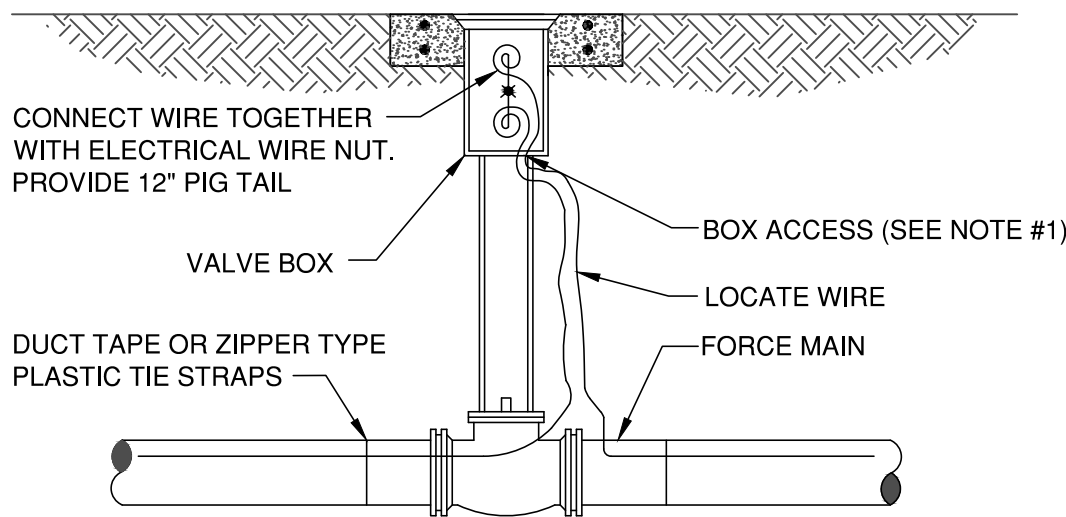
NOTE:

- 1. NOTE THAT THE BRANCH WIRE IS NOT CONNECTED TO THE MAIN WIRE.
- 2. LOCATE WIRE SHALL ENTER THE VALVE BOX THROUGH A "V" CUT IN THE 6" PVC RISER PIPE SECTION (SEE S-30).

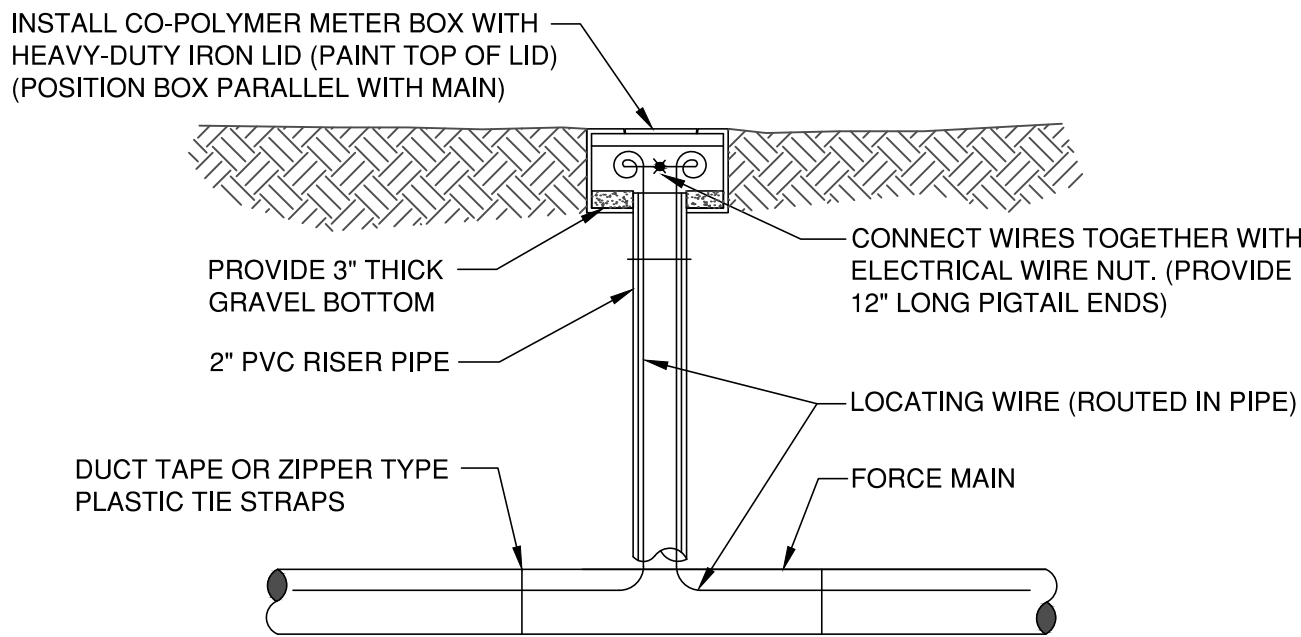
LOCATE WIRE FOR BRANCH MAIN

JANUARY 2016

PLATE S-49A



LOCATE WIRE BOX UTILIZING VALVE BOX



LOCATE WIRE BOX UTILIZING METER BOX

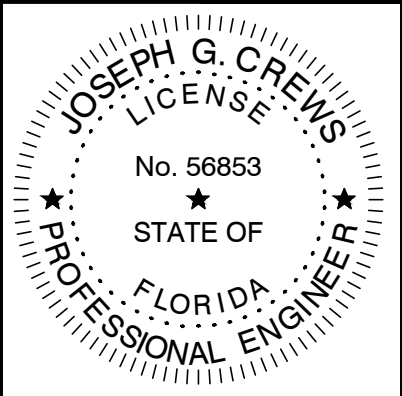
NOTES:

- 1. LOCATE WIRE SHALL ENTER THE VALVE BOX THROUGH A "V" CUT IN THE 6" PVC RISER PIPE (SEE S-30).

LOCATE WIRE BOX

JANUARY 2016

PLATE S-49B



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

DESIGN ENGINEER	JOSEPH G. CREWS
FLORIDA REGISTRATION NO.	56853

DESIGNER	JGC
DRAWN BY	WMC
DATE	DECEMBER 2018
CHECKED BY	JGC
DATE	DECEMBER 2018



MAIN STREET FORCE MAIN
HDD PROJECT
STANDARD DETAILS

PROJ. NO.	100433.01
DATE	DECEMBER 2018
SHEET NO.	
DRAWING NO.	CD-5
SCALE	NONE

THIS BLOCK HAS ATTRIBUTES – DO NOT EXPLODE THIS BLOCK

1. ALL MOT SHALL BE IN CONFORMANCE WITH FDOT AND MUTCD STANDARDS.
2. CONTRACTOR SHALL NOTIFY THE FDOT AND CITY OF JACKSONVILLE TRAFFIC ENGINEERING DIVISION (904-530-6225) A MINIMUM OF 5 WORKING DAYS PRIOR TO IMPLEMENTATION OF THE MOT.
3. THE CONTRACTOR SHALL PROVIDE THE FDOT AND CITY OF JACKSONVILLE TRAFFIC ENGINEERING DIVISION WITH THE NAME OF THE PERSON ON THE CONTRACTOR'S STAFF DESIGNATED TO BE RESPONSIBLE FOR THE IMPLEMENTATION OF ALL PHASES OF MOT PRIOR TO THE BEGINNING OF CONSTRUCTION.
4. ANY EXISTING PAVEMENT MARKINGS WHICH ARE REMOVED FOR MOT PURPOSES SHALL BE REPLACED BEFORE COMPLETION OF THE PROJECT.
5. THE REFLECTIVE SHEETING ON SIGNS, DRUMS OR BARRICADES SCRATCHED OR DAMAGED TO THE POINT THAT REFLECTIVITY IS IMPAIRED SHALL BE REPLACED. DAMAGED, DEFACED OR DIRTY SIGNS, CONES OR BARRICADES SHALL IMMEDIATELY BE REPAIRED, REPLACED OR CLEANED BY THE CONTRACTOR.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING FORMAL MOT INSPECTIONS AND SHALL IMMEDIATELY REPLACE ALL EQUIPMENT AND DEVICES NOT CONFORMING TO FDOT STANDARDS. THESE INSPECTIONS SHALL TAKE PLACE AT LEAST ONCE A DAY AND SOME OF THESE INSPECTIONS SHALL BE CONDUCTED AT NIGHT. THE JEA SHALL BE ADVISED OF THE SCHEDULE OF THE INSPECTIONS AND BE GIVEN THE OPPORTUNITY TO JOIN IN THE INSPECTION.
7. SHORT TERM STOPPING OR PARKING OF A VEHICLE, OR PLACING ANYTHING ELSE NEXT TO THE WORK AREA (FOR EXAMPLE, A STACK OF CONES, PARKED CONSTRUCTION EQUIPMENT/VEHICLES, ETC.) CREATES A CHANNEL EFFECT WHICH CAN ADVERSELY AFFECT TRAFFIC FLOW. THEREFORE, ALL CONSTRUCTION EQUIPMENT SHALL BE PLACED A MINIMUM OF 15 FEET FROM THE TRAVEL LANE WHEN NOT IN USE.
8. ALL DROP OFFS ALONG CONSTRUCTION WORK AREAS SHALL BE HANDLED AS PER FDOT INDEX 600 CURRENT EDITION.
9. TRAFFIC CONDITIONS, ACCIDENTS AND OTHER EMERGENCY CONDITIONS MAY REQUIRE THE OWNER TO MODIFY ANY CHANNELIZATION SHOWN IN THESE PLANS, THE CONTRACTOR SHALL MAKE THE NECESSARY ADJUSTMENTS, AS DIRECTED BY NASSAU COUNTY OR THE JEA, WITHOUT DELAY.




10. WARNING LIGHTS SHALL BE USED TO MARK PLASTIC DRUMS OR BARRICADES AT NIGHT AS NEEDED.
11. TEMPORARY PAVEMENT, IF REQUIRED, SHALL CONSIST OF 1" OF TYPE S-III OR S-1 ASPHALT ON 6" OF LIMEROCK.
12. DUST CONTROL MEASURES SHALL BE IMPLEMENTED ON ALL UNPAVED SURFACES UNTIL PAVED OR GROUND COVER IS ESTABLISHED.
13. THE CONTRACTOR SHALL RETURN THE GROUND TO ITS ORIGINAL CONDITION AND ELEVATION WHEN REMOVING ANY TEMPORARY PAVEMENT.
14. THE CONTRACTOR SHALL, AS REQUIRED, PROVIDE TEMPORARY DRAINAGE DURING CONSTRUCTION, AS NEEDED.

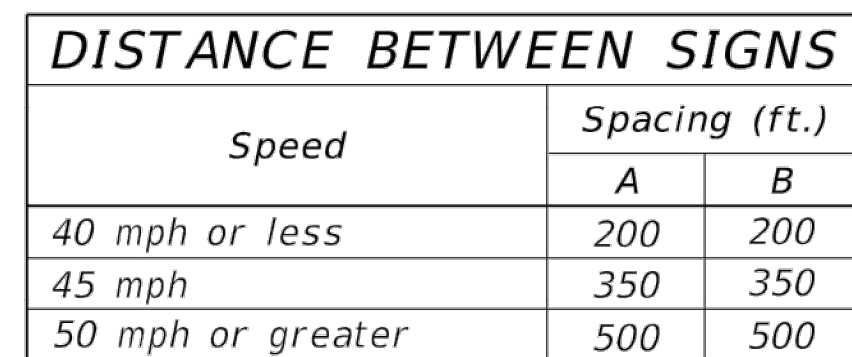
1. THE CONTRACTORS SELECTION OF MEANS, METHODS, TECHNIQUES AND SEQUENCE OF CONSTRUCTION MAY REQUIRE PERIODIC FLAGGER CONTROL.
2. IT MAY BE ADVISABLE TO EMPLOY FLAGGERS FOR THE SAFETY OF THE MOTORING PUBLIC WHEN MOVING EQUIPMENT AND HANDLING MATERIAL.
3. IT WILL BE INCUMBENT UPON THE CONTRACTOR TO DETERMINE WHEN HIS OR HER OPERATIONS REQUIRE FLAGGER CONTROL.

1. IN THE EVENT A HURRICANE IS THREATENING THE JACKSONVILLE AREA, IMPLEMENTATION OF THESE MOT PLANS SHALL BE HELD IN ABEYANCE UNTIL THE THREAT PASSES.

1. PROJECT WORK HOURS ARE BETWEEN 7:00 A.M. AND 7:00 P.M. UNLESS OTHERWISE DIRECTED BY THE JEA.
2. ACCESS FOR LOCAL TRAFFIC WITH DESTINATIONS WITHIN THE WORK AREA SHALL BE MAINTAINED TO THE EXTENT SAFETY WILL PERMIT.
3. ACCESS TO INTERSECTING SIDE STREETS SHALL BE MAINTAINED AT ALL TIMES UNLESS OTHERWISE NOTED WITHIN THESE MOT PLANS.
4. IT IS ANTICIPATED THAT ALL EXISTING SIDEWALKS WILL REMAIN OPEN AND ACCESSIBLE DURING CONSTRUCTION.
5. ANY MODIFICATIONS TO THESE MAINTENANCE OF TRAFFIC PLANS SHALL BE SUBMITTED TO THE FDOT FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.
6. THE CONTRACTOR HAS THE OPTION TO SUBMIT ALTERNATIVE TRAFFIC CONTROL PLANS FOR APPROVAL BY THE FDOT. ALTERNATE TRAFFIC CONTROL PLANS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA AND SHALL BE CONSISTENT WITH STANDARD MOT DESIGN PRACTICES. NO CONSTRUCTION ACTIVITY WILL BE ALLOWED UNTIL THE CONTRACTOR'S MOT PLANS ARE APPROVED IN WRITING.

1. THE CONTRACTOR SHALL INSURE THAT PERMANENT SIGNS DO NOT CONFLICT WITH MOT SIGNS. THE CONTRACTOR SHALL COVER ALL SIGNS, BOTH PERMANENT AND TEMPORARY, THAT CONFLICT WITH TRAFFIC CONTROL DURING CONSTRUCTION OPERATIONS.
2. THE EXISTING POSTED SPEED LIMIT SIGNS SHALL REMAIN THROUGHOUT ALL PHASES UNLESS OTHERWISE NOTED. THE CONTRACTOR MAY ADD ORANGE AND BLACK ADVISORY SPEED PLATES TO EXISTING SPEED LIMIT SIGNS.
3. ANY EXISTING STREET AND ROAD NAME SIGNS THAT ARE IMPACTED BY CONSTRUCTION SHALL BE TEMPORARILY RELOCATED AND KEPT VISIBLE AT ALL TIMES FOR THE FACILITATION OF ACCESS BY EMERGENCY VEHICLE TRAFFIC.
4. CONTRACTOR MUST MAINTAIN EXISTING SIGNING. IF SIGNS ARE DAMAGED DUE TO HIS ACTIVITY, THE CONTRACTOR IS REQUIRED TO REPLACE THEM IN ACCORDANCE WITH CURRENT COUNTY OR FDOT STANDARD SPECIFICATIONS AT NO ADDITIONAL COST TO JEA.

NO. SHEETS SHEET NO. DRAWING NO.	PROJ. NO. 100435.01 DATE: DECEMBER 2018 SCALE: AS SHOWN	MAIN STREET FORCE MAIN HDD PROJECT TTC - GENERAL NOTES		DESIGNER: JWC DRAWN BY: WMC DATE: DECEMBER 2018 CHECKED BY: WMC DATE: DECEMBER 2018	DESIGN ENGINEER JOSEPH G. CREWS FLORIDA REGISTRATION NO. 56653		



JOSEPH G. CREWS
LICENSE
No. 56853
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			
2			
1			

DESIGN ENGINEER	JOSEPH G. CREWS	FLORIDA REGISTRATION NO.	56853
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DESIGNER:	JGC
DRAWN BY:	WMC
DATE:	DECEMBER 2018
CHECKED BY:	JGC
DATE:	DECEMBER 2018

JEA sm
Building Community sm

MAIN STREET FORCE MAIN
HDD PROJECT
TTC - GENERAL NOTES

NO. SHEETS	PROJ. NO. 100433.01	N
SHEET NO.	DATE: DECEMBER 2018	
DRAWING NO. TTC-2	SCALE: AS SHOWN	

THIS BLOCK HAS ATTRIBUTES - DO NOT EXPLODE THIS BLOCK