

# CONTRACT DOCUMENTS

FOR THE CONSTRUCTION OF

## JEA NASSAU REGIONAL WATER TREATMENT PLANT WELLHEAD No. 3 AND WATER MAIN IMPROVEMENTS

### 24-INCH FINISHED WATER MAIN



 **LOCATION MAP**



24-INCH FWM  
NASSAU REGIONAL WTP  
96362 PIEDMONT DRIVE  
FERNANDINA BEACH, FL 32034

24-INCH FWM  
AMELIA CONCOURSE  
FERNANDINA BEACH, FL 32034

 **PROJECT SITE MAP**  
NTS

VOLUME 2 OF 3  
DRAWINGS

For Information regarding this project contact:

Allan D. Boree, P.E.  
21 West Church St  
Jacksonville, Florida 32202  
(904) 665-4468



245 RIVERSIDE AVE, SUITE 300  
JACKSONVILLE, FLORIDA 32202  
STATE OF FLORIDA  
ARCHITECTURAL BUSINESS NO. AA001992  
ENGINEERING BUSINESS NO. EB0000072

JEA No. 8004327  
CH2M Proj No. 697176  
APRIL 2019

# BID DOCUMENTS

## INDEX TO DRAWINGS

<u>SHEET</u> <u>NUMBER</u>	<u>DRAWING</u> <u>NUMBER</u>	<u>DRAWING TITLE</u>
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4	0-G-040	PROCESS MECHANICAL GENERAL NOTES

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### JEA REFERENCE DETAILS

W-STD-1	JEA WATER MAIN DETAILS
W-STD-2	JEA WATER MAIN DETAILS
W-STD-3	JEA WATER MAIN DETAILS
W-STD-4	JEA WATER MAIN DETAILS
W-STD-5	JEA WATER MAIN DETAILS
W-STD-6	JEA WATER MAIN DETAILS
W-STD-7	JEA WATER MAIN DETAILS
W-STD-8	JEA WATER MAIN DETAILS
W-STD-9	JEA WATER MAIN DETAILS
W-STD-10	JEA WATER MAIN DETAILS
W-STD-11	JEA WATER MAIN DETAILS
W-STD-12	JEA WATER MAIN DETAILS
W-STD-13	JEA WATER MAIN DETAILS
W-STD-14	JEA WATER MAIN DETAILS
W-STD-15	JEA WATER MAIN DETAILS
W-STD-16	JEA WATER MAIN DETAILS
W-STD-17	JEA WATER MAIN DETAILS
W-STD-18	JEA WATER MAIN DETAILS
W-STD-19	JEA WATER MAIN DETAILS
W-STD-20	JEA WATER MAIN DETAILS
W-STD-21	JEA WATER MAIN DETAILS
W-STD-22	JEA WATER MAIN DETAILS
W-STD-23	JEA WATER MAIN DETAILS
W-STD-24	JEA WATER MAIN DETAILS
W-STD-25	JEA WATER MAIN DETAILS
W-STD-26	JEA WATER MAIN DETAILS
W-STD-27	JEA WATER MAIN DETAILS
W-STD-28	JEA WATER MAIN DETAILS
W-STD-29	JEA WATER MAIN DETAILS
W-STD-30	JEA WATER MAIN DETAILS
W-STD-31C, (D)	JEA WATER MAIN DETAILS
W-STD-32	JEA WATER MAIN DETAILS
W-STD-33	JEA WATER MAIN DETAILS
W-STD-34	JEA WATER MAIN DETAILS
W-STD-35	JEA WATER MAIN DETAILS
W-STD-36	JEA WATER MAIN DETAILS
W-STD-37	JEA WATER MAIN DETAILS
W-STD-38	JEA WATER MAIN DETAILS
W-STD-39	JEA WATER MAIN DETAILS
W-STD-40	JEA WATER MAIN DETAILS
W-STD-41	JEA WATER MAIN DETAILS
W-STD-42, (A)	JEA WATER MAIN DETAILS
W-STD-43	JEA WATER MAIN DETAILS
W-STD-44, (B)	JEA WATER MAIN DETAILS
W-STD-45	JEA WATER MAIN DETAILS

**NOTE:**

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

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[illegible]


245 RIVERSIDE AVE. SUITE 300 JACKSONVILLE, FLORIDA 32202 904-241-1722 EBOROFF & ZIMMERMAN, P.A. Lawrence Bradley Gunn PE 65697	JEA NASSAU REGIONAL WTP WELLHEAD NO. 3 & WATER MAIN IMPROVEMENTS JEA PROJECT NUMBER 8004327 JACKSONVILLE, FLORIDA	DOCUMENTS: THIS CONTRACT AND THE DESIGN AND DESIGNER'S RESPONSIBILITIES SHALL BE THE PROPERTY OF THE USER AND NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF THE DESIGNER.
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# ch2m<sup>®</sup>

## GENERAL

### 24" FINISHED WATER MAIN

#### INDEX TO DRAWING

NTS	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING. 0  1"	
DATE	APRIL 2019
PROJ	697176
DWG	0-G-002
SHEET	2 of 15



## VALVES

1. ALL MATERIALS THAT COME IN CONTACT WITH FINISHED OR RAW WATER SHALL BE NSF 61 APPROVED. PROVIDE NSF 61 CERTIFICATE FOR EACH VALVE.
2. UNLESS OTHERWISE SPECIFIED, ALL VALVES SHALL CONFORM TO JEA WATER AND SEWER STANDARDS, LATEST EDITION.
3. VALVE FACTORY FINISHING EPOXY LINING AND COATING A. SHALL BE IN ACCORDANCE WITH AWWA C550  
B. SHALL BE EITHER TWO-PART LIQUID MATERIAL OR HEAT-ACTIVATED (FUSION) MATERIAL EXCEPT ONLY HEAT-ACTIVATED MATERIAL IF SPECIFIED AS "FUSION" OR "FUSION BONDED" EPOXY.  
C. MINIMUM 7-MIL DRY FILM THICKNESS EXCEPT WHERE LIMITED BY VALVE OPERATING TOLERANCES

## PIPING GENERAL

1. ALL MATERIALS THAT COME IN CONTACT WITH FINISHED OR RAW WATER SHALL BE NSF 61 APPROVED.
2. ALL PIPING MATERIAL AND INSTALLATION SHALL CONFORM TO JEA WATER AND SEWER STANDARDS, LATEST EDITION.
3. PRESSURE TESTING AND FLUSHING: PER JEA STANDARDS- SECTION 350, POTABLE WATER PIPING, LATEST EDITION.
4. DISINFECTION: PER JEA STANDARDS- SECTION 350, POTABLE WATER PIPING, LATEST EDITION.
5. ALL DUCTILE IRON AND PVC PIPE SHALL CONFORM TO JEA STANDARDS-SECTION 350, POTABLE WATER PIPING. DUCTILE IRON PIPE SHALL BE LINED WITH CEMENT-MORTAR CONFORMING TO AWWA C104/A21.4-9
6. ALL PIPING IN THIS PROJECT SHALL BE RESTRAINED. RESTRAINTS SHALL CONFORM TO JEA STANDARDS-SECTION 350, POTABLE WATER PIPING, LATEST EDITION.
7. SERVICE SADDLES: REQUIRED ON ALL DUCTILE IRON PIPE TAPS.
  - A. DOUBLE-STRAP DESIGN RATED 150 PSI MINIMUM WORKING PRESSURE.
  - B. RUN DIAMETERS COMPATIBLE WITH THE OUTSIDE DIAMETER OF THE PIPE ON WHICH THE SADDLE IS INSTALLED.
  - C. TAPS WITH IRON PIPE THREADS.
  - D. MANUFACTURERS AND MODELS: PER JEA STANDARDS APPROVED MATERIAL.
8. ALL DUCTILE IRON PIPE AND VALVES SHALL COME FACTORY PRIMED WITH 4 TO 6 MDT WITH TNMEC SERIES N 140 POTA POX PLUS.

## PIPING CONNECTION NOTES

1. PRIOR TO CONNECTING TO EXISTING MAINS, CONTRACTOR SHALL VERIFY EXISTING MAIN IS RESTRAINED IN ACCORDANCE WITH JEA WATER AND WASTEWATER STANDARDS - DETAILS W-31A, 31B, 31C, 31D AND W-38.
2. ALL NEW PIPING, VALVES, AND APPURTENANCES SHALL BE PROPERLY RESTRAINED IN ACCORDANCE WITH JEA WATER AND WASTEWATER STANDARDS - DETAILS W-31A, 31B, 31C, 31D. THRUST BLOCKS ARE NOT ALLOWED UNLESS APPROVED BY JEA.
3. CONTRACTOR SHALL COORDINATE WITH JEA PRIOR TO INSTALLING CUT-IN TEES AND VALVES TO MINIMIZE UTILITY OUTAGES AND SCHEDULE THE WORK.
4. ALL FIELD TESTING INCLUDING PRESSURE, LEAKAGE, AND DISINFECTION TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH JEA WATER AND WASTEWATER STANDARDS AND FDEP REQUIREMENTS, LATEST ADDITION.
5. CONTRACTOR SHALL REPAIR OR REPLACE, MATCHING EXISTING AT A MINIMUM, ALL PAVEMENT, CURB & GUTTER AND SIDEWALKS THAT ARE DAMAGED AS A RESULT OF THIS WORK.

## PIPE PAINTING AND PROTECTIVE COATINGS

1. COLOR: PER JEA WATER AND SEWER STANDARDS, LATEST EDITION.

RAW WATER PIPING	OLIVE GREEN FED STD 5958 #34258
FINISHED WATER PIPING	BLUE
DO NOT PAINT ANY STAINLESS STEEL PIPING	

ch2m<sup>SM</sup>

GENERAL  
24" FINISHED WATER MAIN  
PROCESS MECHANICAL  
GENERAL NOTES

245 RIVERSIDE AVE, SUITE 300  
JACKSONVILLE, FLORIDA 32202  
E8B0000072 AAC001992 LC26000188  
Dustin Michael Dykes PE FL #81388

JEA NASSAU REGIONAL WTP  
WELLHEAD No. 3 & WATER MAIN IMPROVEMENTS  
JEA PROJECT NUMBER 8004327  
JACKSONVILLE, FLORIDA

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OF CH2M HILL

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ANY OTHER PR

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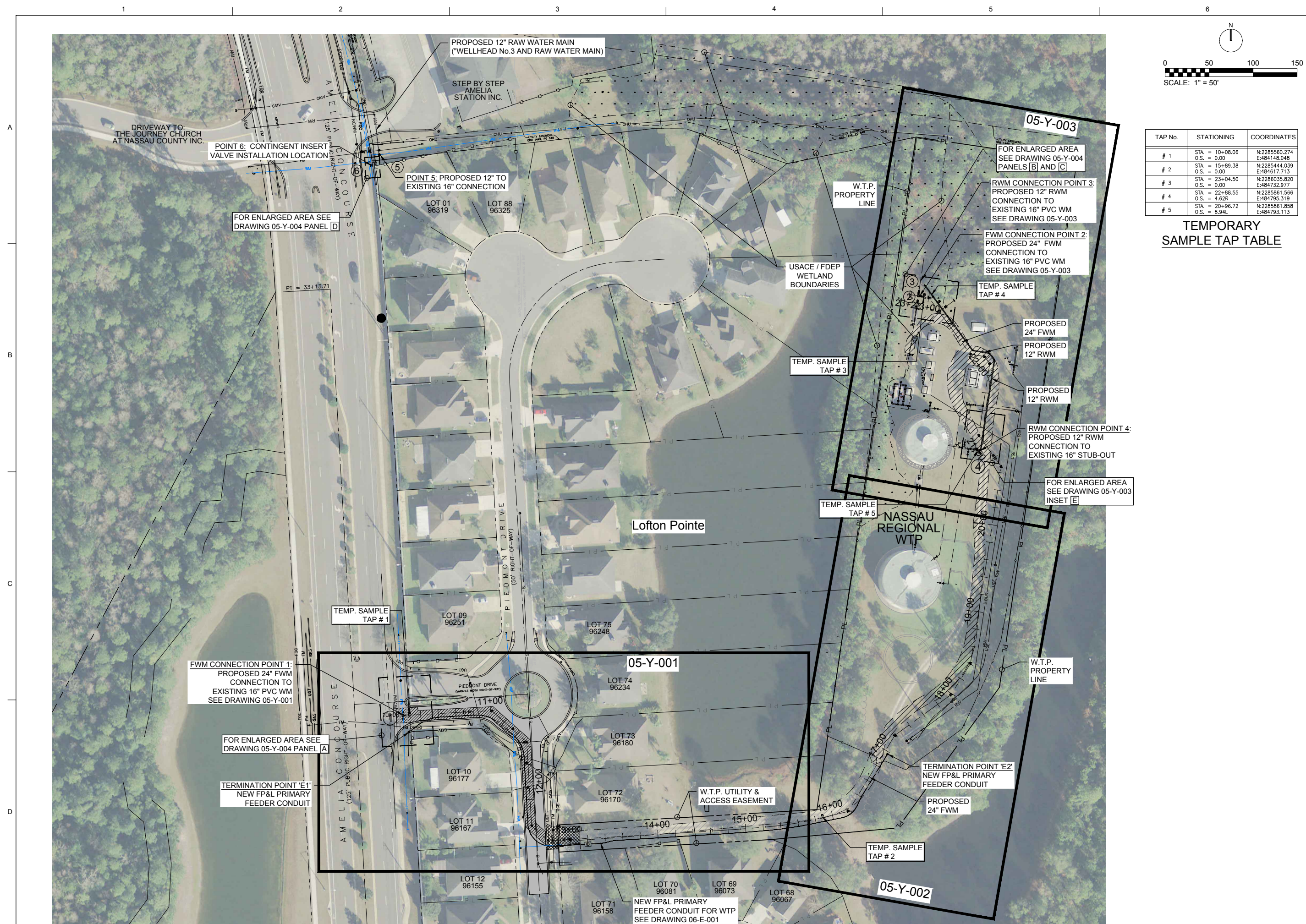
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5

DOCU





TAP No.	STATIONING	COORDINATES
# 1	STA. = 10+08.06 O.S. = 0.00	N:2285560.274 E:484148.048
# 2	STA. = 15+89.38 O.S. = 0.00	N:2285444.039 E:484617.713
# 3	STA. = 23+04.50 O.S. = 0.00	N:2286035.820 E:484732.977
# 4	STA. = 22+88.55 O.S. = 462R	N:2285861.566 E:484795.319
# 5	STA. = 20+96.72 O.S. = 8.94L	N:2285861.858 E:484793.113

## TEMPORARY SAMPLE TAP TABLE

[illegible]

245 RIVERSIDE AVE, SUITE 300  
JACKSONVILLE, FL 32202


JEA NASSAU REGIONAL WTP  
WELLHEAD No. 3 & WATER MAIN IMPROVEMENTS  
JEA PROJEC NUMBER 8004327  
JACKSONVILLE, FLORIDA

**ch2m**

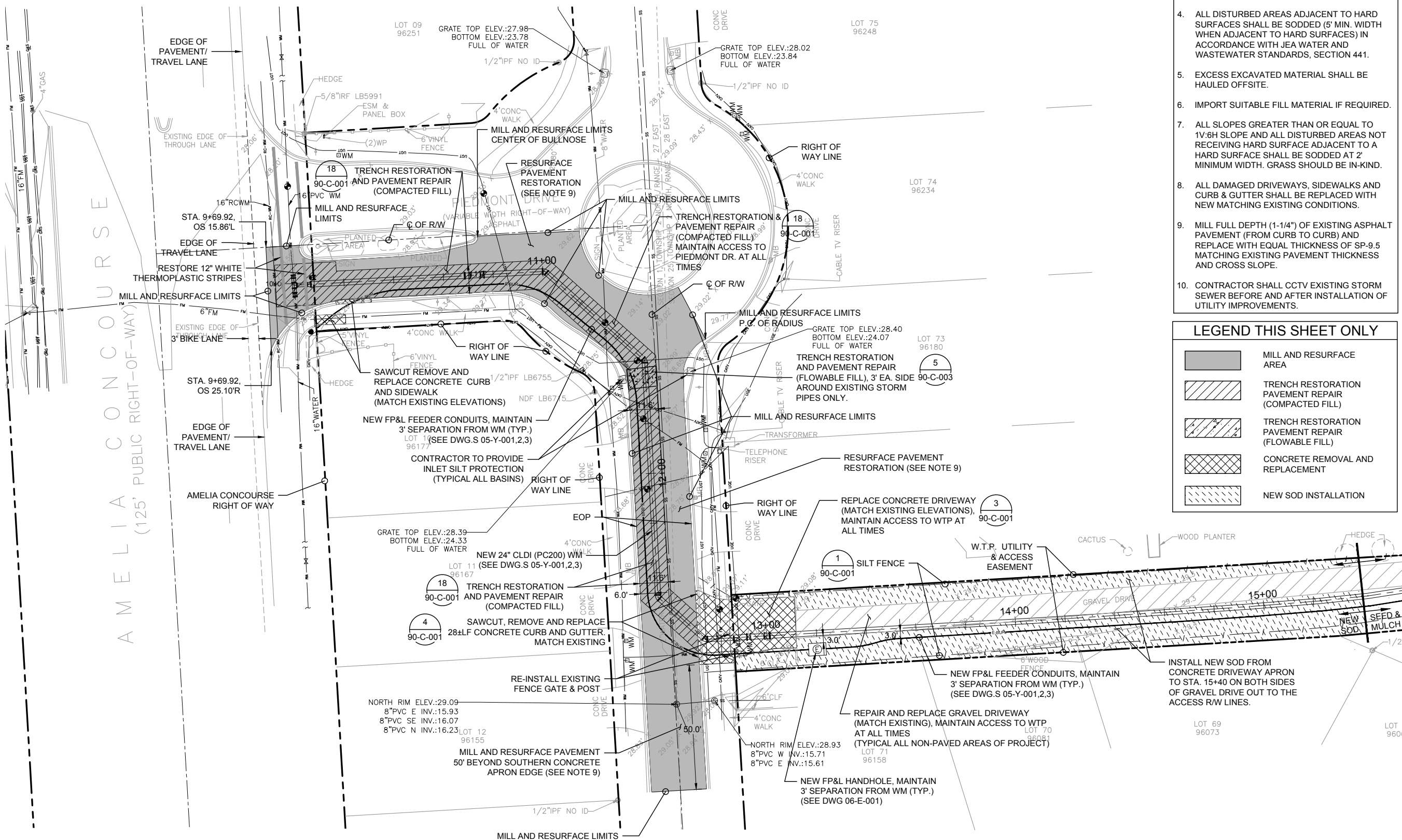
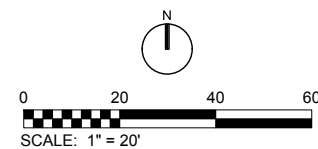
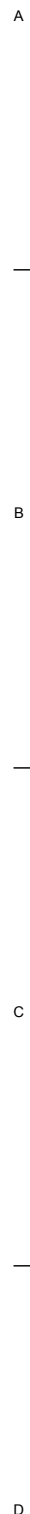
CIVILSITE

24" FINISHED WATER MAIN

KEY MAP

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING. 0  1"	
DATE	APRIL 2019
PROJ	697176
DWG	05-C-001
SHEET	5 OF 15

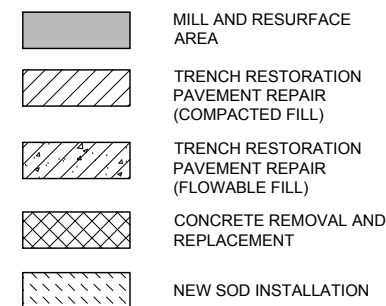




## GENERAL NOTES

1. CONTRACTOR TO REVIEW AND IMPLEMENT THE MAINTENANCE OF TRAFFIC PLAN (MOT) DURING CONSTRUCTION (SEE DRAWING 05-C-003).
2. CONTRACTOR TO MAINTAIN ALL RESIDENTIAL SERVICES DURING CONSTRUCTION.
3. CONTRACTOR TO INSTALL SILT FENCE AND INLET SEDIMENT PROTECTION AS NECESSARY PER THE NASSAU COUNTY AND FDEP REQUIREMENTS AND MAINTAIN ALL DRAINAGE FACILITIES DURING CONSTRUCTION.
4. ALL DISTURBED AREAS ADJACENT TO HARD SURFACES SHALL BE SODDED (5' MIN. WIDTH WHEN ADJACENT TO HARD SURFACES) IN ACCORDANCE WITH JEA WATER AND WASTEWATER STANDARDS, SECTION 441.
5. EXCESS EXCAVATED MATERIAL SHALL BE HAULED OFFSITE.
6. IMPORT SUITABLE FILL MATERIAL IF REQUIRED.
7. ALL SLOPES GREATER THAN OR EQUAL TO 1V:6H SLOPE AND ALL DISTURBED AREAS NOT RECEIVING HARD SURFACE ADJACENT TO A HARD SURFACE SHALL BE SODDED AT 2' MINIMUM WIDTH. GRASS SHOULD BE IN-KIND.
8. ALL DAMAGED DRIVEWAYS, SIDEWALKS AND CURB & GUTTER SHALL BE REPLACED WITH NEW MATCHING EXISTING CONDITIONS.
9. MILL FULL DEPTH (1-1/4") OF EXISTING ASPHALT PAVEMENT (FROM CURB TO CURB) AND REPLACE WITH EQUAL THICKNESS OF SP-9.5 MATCHING EXISTING PAVEMENT THICKNESS AND CROSS SLOPE.
10. CONTRACTOR SHALL CCTV EXISTING STORM SEWER BEFORE AND AFTER INSTALLATION OF UTILITY IMPROVEMENTS.


LEGEND THIS SHEET ONLY



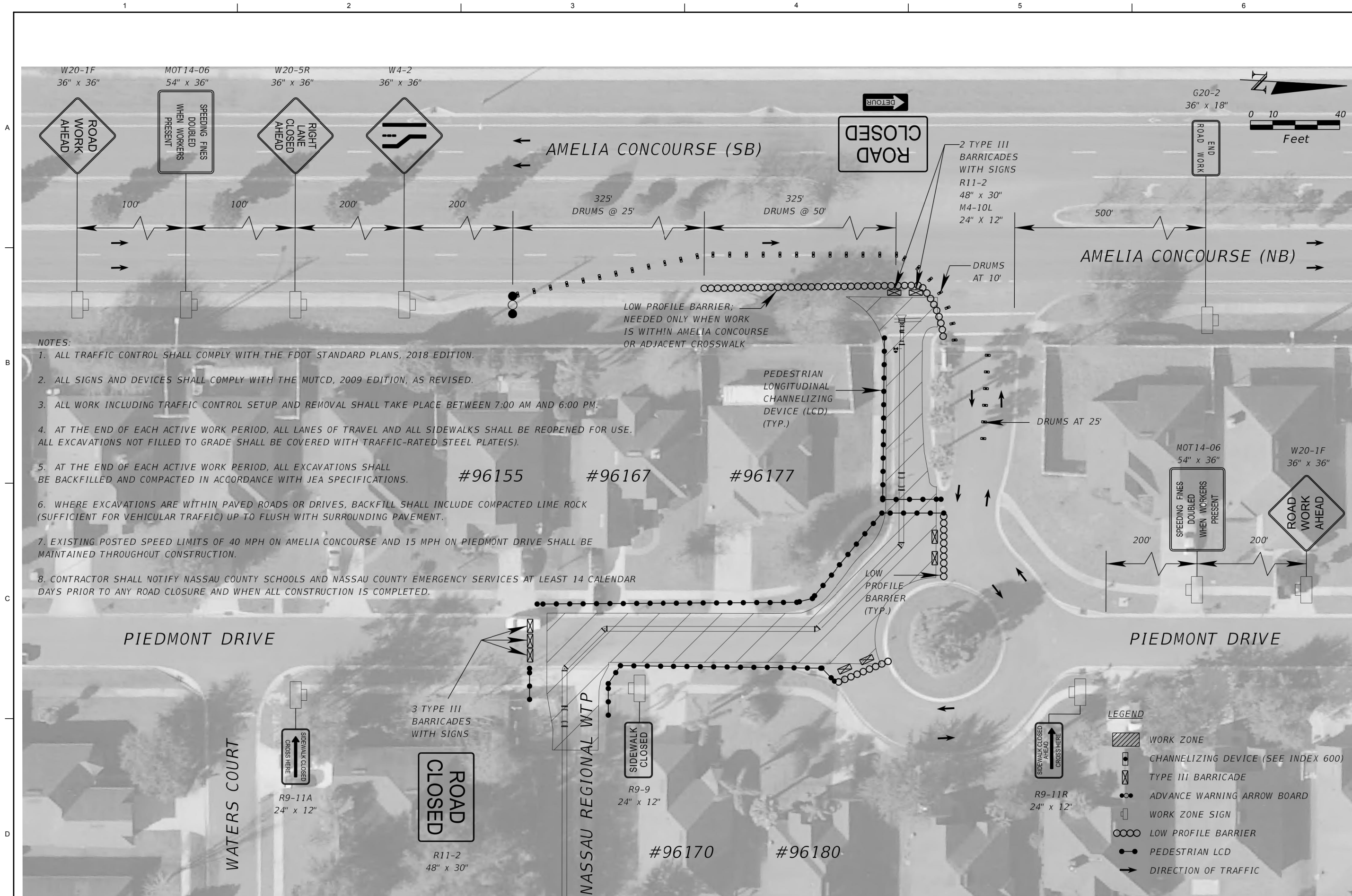
245 RIVERSIDE AVE, SUITE 300  
JACKSONVILLE, FL 32202  
EB 0000072 AA 001992 LC 26000188  
DUSTIN MICHAEL DYKES PE FL #81388

JEA NASSAU REGIONAL WTP  
WELLHEAD No. 3 & WATER MAIN IMPROVEMENTS  
JEA PROJEC NUMBER 8004327  
JACKSONVILLE, FLORIDA

**ch2m**  
CIVIL / PAVING  
24" FINISHED WATER MAIN  
PAVEMENT RESTORATION PLAN

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING. 0  1"	
DATE	APRIL 20
PROJ	6971
DWG	05-C-0
SHEET	6 OF

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- NOTES:
1. ALL TRAFFIC CONTROL SHALL COMPLY WITH THE FDOT STANDARD PLANS, 2018 EDITION.
  2. ALL SIGNS AND DEVICES SHALL COMPLY WITH THE MUTCD, 2009 EDITION, AS REVISED.
  3. ALL WORK INCLUDING TRAFFIC CONTROL SETUP AND REMOVAL SHALL TAKE PLACE BETWEEN 7:00 AM AND 6:00 PM.
  4. AT THE END OF EACH ACTIVE WORK PERIOD, ALL LANES OF TRAVEL AND ALL SIDEWALKS SHALL BE REOPENED FOR USE. ALL EXCAVATIONS NOT FILLED TO GRADE SHALL BE COVERED WITH TRAFFIC-RATED STEEL PLATE(S).
  5. AT THE END OF EACH ACTIVE WORK PERIOD, ALL EXCAVATIONS SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH JEA SPECIFICATIONS.
  6. WHERE EXCAVATIONS ARE WITHIN PAVED ROADS OR DRIVES, BACKFILL SHALL INCLUDE COMPACTED LIME ROCK (SUFFICIENT FOR VEHICULAR TRAFFIC) UP TO FLUSH WITH SURROUNDING PAVEMENT.
  7. EXISTING POSTED SPEED LIMITS OF 40 MPH ON AMELIA CONCOURSE AND 15 MPH ON PIEDMONT DRIVE SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
  8. CONTRACTOR SHALL NOTIFY NASSAU COUNTY SCHOOLS AND NASSAU COUNTY EMERGENCY SERVICES AT LEAST 14 CALENDAR DAYS PRIOR TO ANY ROAD CLOSURE AND WHEN ALL CONSTRUCTION IS COMPLETED.

- LEGEND
- WORK ZONE
  - CHANNELIZING DEVICE (SEE INDEX 600)
  - TYPE III BARRICADE
  - ADVANCE WARNING ARROW BOARD
  - WORK ZONE SIGN
  - LOW PROFILE BARRIER
  - PEDESTRIAN LCD
  - DIRECTION OF TRAFFIC

ch2m

CIVIL / PAVING

24" FINISHED WATER MAIN

MAINTENANCE OF TRAFFIC PLAN

245 RIVERSIDE AVE, SUITE 300  
JACKSONVILLE, FL 32202  
EB 0000072, AA 001692, LC 26000188  
DUSTIN MICHAEL DYKES PE FL #91388

JEA NASSAU REGIONAL WTP  
WELLHEAD No. 3 & WATER MAIN IMPROVEMENTS  
JEA PROJEC NUMBER 8004327  
JACKSONVILLE, FLORIDA

NO.	DATE	DSGN	DR	CHK	APVD	BY	APVD
			S CARTER	J WHITE	K FALKENBERRY		S CARTER
				REVISION			

VERIFY SCALE

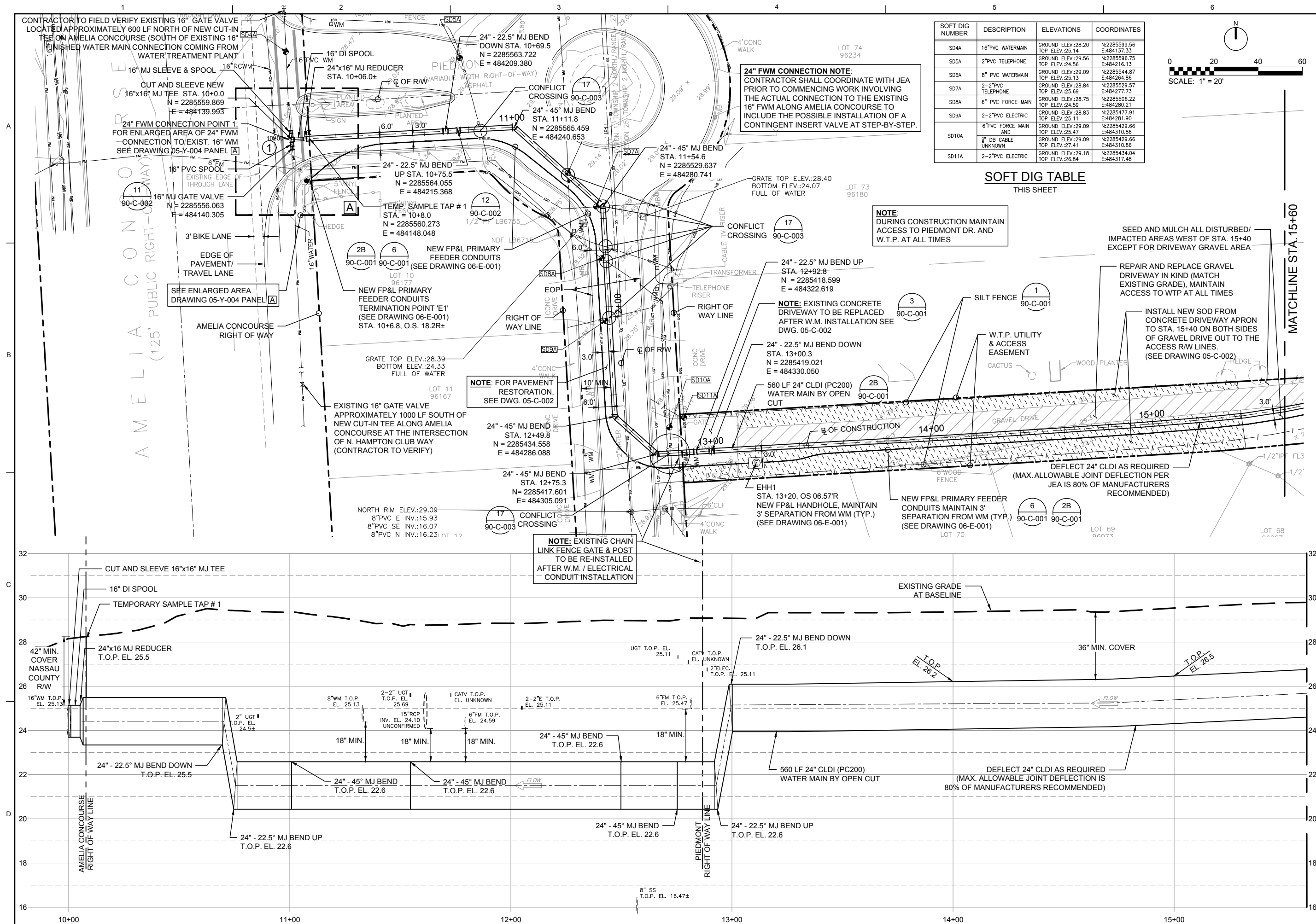
BAR IS ONE INCH ON ORIGINAL DRAWING.

0 1"

DATE	APRIL 2019
PROJ	697176
DWG	05-C-003
SHEET	7 OF 15

BID DOCUMENTS

FILENAME: WM\_0501-C-003\_697176.dwg PLOT DATE: Apr09, 2019 PLOT TIME: 11:57am



SOFT DIG NUMBER	DESCRIPTION	ELEVATIONS	COORDINATES
SD4A	16" PVC WATERMAIN	GROUND ELEV.:28.20 TOP ELEV.:25.14	N:2285599.56 E:484137.33
SD5A	2" PVC TELEPHONE	GROUND ELEV.:29.56 TOP ELEV.:24.56	N:2285596.75 E:484216.13
SD6A	8" PVC WATERMAIN	GROUND ELEV.:29.09 TOP ELEV.:25.13	N:2285544.87 E:484264.86
SD7A	2-2" PVC TELEPHONE	GROUND ELEV.:28.84 TOP ELEV.:25.69	N:2285529.57 E:484277.73
SD8A	6" PVC FORCE MAIN	GROUND ELEV.:28.75 TOP ELEV.:24.59	N:2285506.22 E:484260.21
SD9A	2-2" PVC ELECTRIC	GROUND ELEV.:28.83 TOP ELEV.:25.11	N:2285477.91 E:484281.90
SD10A	6" PVC FORCE MAIN AND UNKNOWN	GROUND ELEV.:29.09 TOP ELEV.:25.47	N:2285429.66 E:484130.86
SD11A	1" DB CABLE UNKNOWN	GROUND ELEV.:29.09 TOP ELEV.:27.41	N:2285429.66 E:484130.86
SD11A	2-2" PVC ELECTRIC	GROUND ELEV.:29.18 TOP ELEV.:26.84	N:2285434.04 E:484317.48

## SOFT DIG TABLE

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THIS SHEET

**NOTE:**  
DURING CONSTRUCTION MAINTAIN  
ACCESS TO PIEDMONT DR. AND  
W.T.P. AT ALL TIMES

SEED AND MULCH ALL DISTURBED/  
IMPACTED AREAS WEST OF STA. 15+40  
EXCEPT FOR DRIVEWAY GRAVEL AREA

— REPAIR AND REPLACE GRAVEL DRIVEWAY IN KIND (MATCH EXISTING GRADE), MAINTAIN ACCESS TO WTP AT ALL TIMES

INSTALL NEW SOD FROM  
CONCRETE DRIVEWAY APRON  
TO STA. 15+40 ON BOTH SIDES  
OF GRAVEL DRIVE OUT TO THE  
ACCESS R/W LINES.  
(SEE DRAWING 05-C-002)

DEFLECT 24" CLDI AS REQUIRED  
(MAX. ALLOWABLE JOINT DEFLECTION PER  
JEA IS 80% OF MANUFACTURERS  
RECOMMENDED)

NEW FP&L PRIMARY FEEDER  
CONDUITS MAINTAIN 3'  
SEPARATION FROM WM (TYP  
(SEE DRAWING 06-E-001)

STA. 13+20, OS 06.57'R  
NEW FP&L HANDHOLE, MAINTAIN  
3' SEPARATION FROM WM (TYP.)  
(SEE DRAWING 06-E-001)

**NOTE:** EXISTING CHAIN  
LINK FENCE GATE & POST  
TO BE RE-INSTALLED  
BY W.M. / ELECTRICAL  
CONDUIT INSTALLATION

**NOTE:** FOR PAVEMENT  
RESTORATION,  
SEE DWG. 05-C-002

NEW FP&L PRIMARY  
FEEDER CONDUITS  
(DRAWING 06-E-001)

TEMP. SAMPLE TAP # 1  
STA. = 10+8.0  
N = 2285560.273  
E = 484148.048

UP STA. 10+75.5  
N = 2285564.055  
E = 484215.368

UCR

An aerial photograph showing a fence line running horizontally across the upper portion of the frame. A label 'FENCE' is positioned above the line, with a line pointing to it. To the right of the fence, a location is marked with a box containing the text 'SD5A'. Below the fence, there are some curved lines and a small structure.

SEE ENLARGED AREA  
DRAWING 05-Y-004 PANEL **A**

EDGE OF  
PAVEMENT/ -  
TRAVEL LANE

J GATE VALVE —  
= 2285556.063  
E = 484140.305

AREA OF 24" FWM  
TO EXIST. 16" WM  
05-Y-004 PANEL **A**

0 SLEEVE NEW  
EE STA. 10+0.0  
= 2285559.869

... OF NEW 30" IN  
... OF EXISTING 16"  
... ON COMING FROM  
... TREATMENT PLANT

16" GATE VALVE

**ch2m:**

24" FINISHED WATER MAIN  
PLAN AND PROFILE

WELLHEAD No. 3 & WATER MAIN IMPROVEMENTS  
JEA PROJEC NUMBER 8004327  
JACKSONVILLE, FLORIDA

[illegible]

		APVD
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245 RIVERSIDE AVE, SUITE 300  
JACKSONVILLE, FL 32202  
EEB 0000072 AA 001992 LC 260001888  
DUSTIN MICHAEL DYKES PE FL #81388


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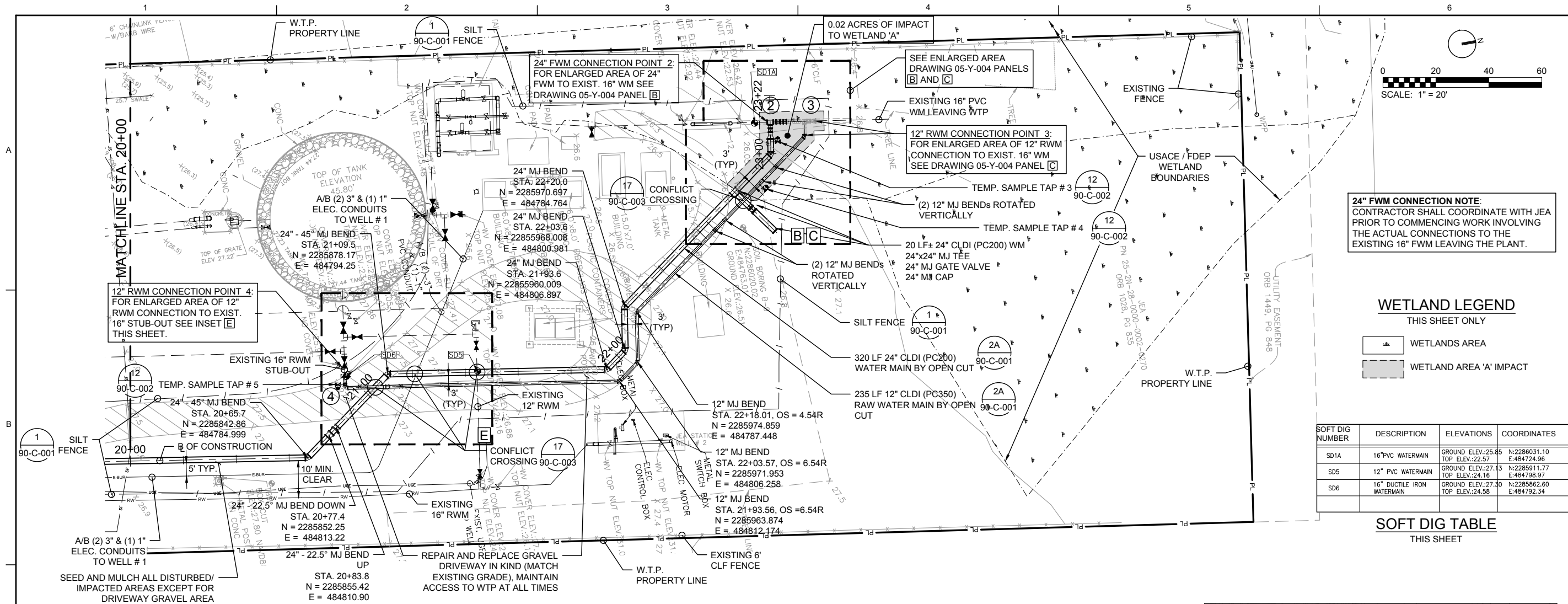
JULY 2010 ALL RIGHTS RESERVED

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 <span style="background-color: black; color: black;">XXXXXXXXXX</span> 1"	
DATE	APRIL 2019
PROJ	697176
DWG	05-Y-001
SHEET	8 OF 15

FILENAME: WM\_0501-Y-001\_697176.dwg PLOT DATE: Apr09, 2019 PLOT TIME: 11:57am

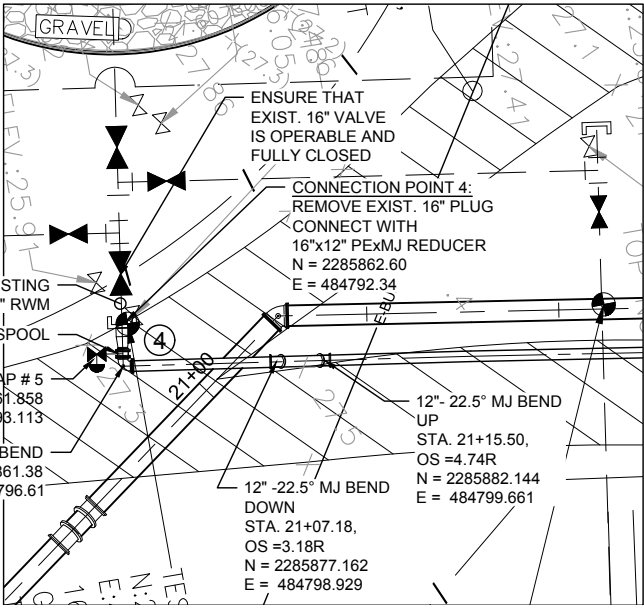






SOFT DIG NUMBER	DESCRIPTION	ELEVATIONS	COORDINATES
SD1A	16\"PVC WATERMAIN	GROUND ELEV.:25.45 TOP ELEV.:22.57	N:2286031.10 E:484724.96
SD5	12\" PVC WATERMAIN	GROUND ELEV.:27.13 TOP ELEV.:24.16	N:2285911.77 E:484798.97
SD6	16\" DUCTILE IRON WATERMAIN	GROUND ELEV.:27.30 TOP ELEV.:24.58	N:2285862.60 E:484792.34

SOFT DIG TABLE  
THIS SHEET



INSET E  
12\" RWM CONNECTION POINT 4:  
12\" RWM CONNECTION TO EXISTING 16\" RW  
STUB-OUT AT EXISTING TANK  
SCALE: 1\" = 10'

245 RIVERSIDE AVE, SUITE 300  
JACKSONVILLE, FL 32202  
EB 0000072, AA 001992, LC 26000188  
DUSTIN MICHAEL DYKES PE FL #91388

JEANASSAU REGIONAL WTP  
WELLHEAD No. 3 & WATER MAIN IMPROVEMENTS  
JEAN PROJEC NUMBER 8004327  
JACKSONVILLE, FLORIDA

24\" FINISHED WATER MAIN  
PLAN AND PROFILE

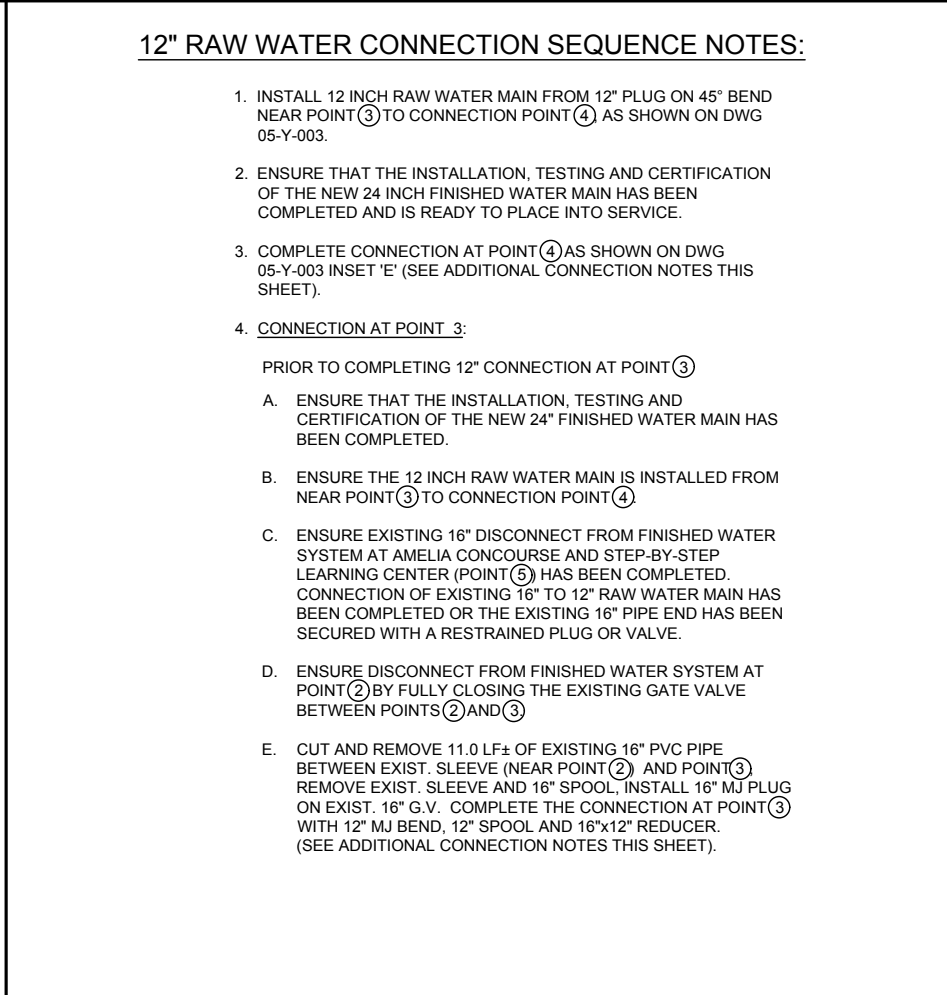
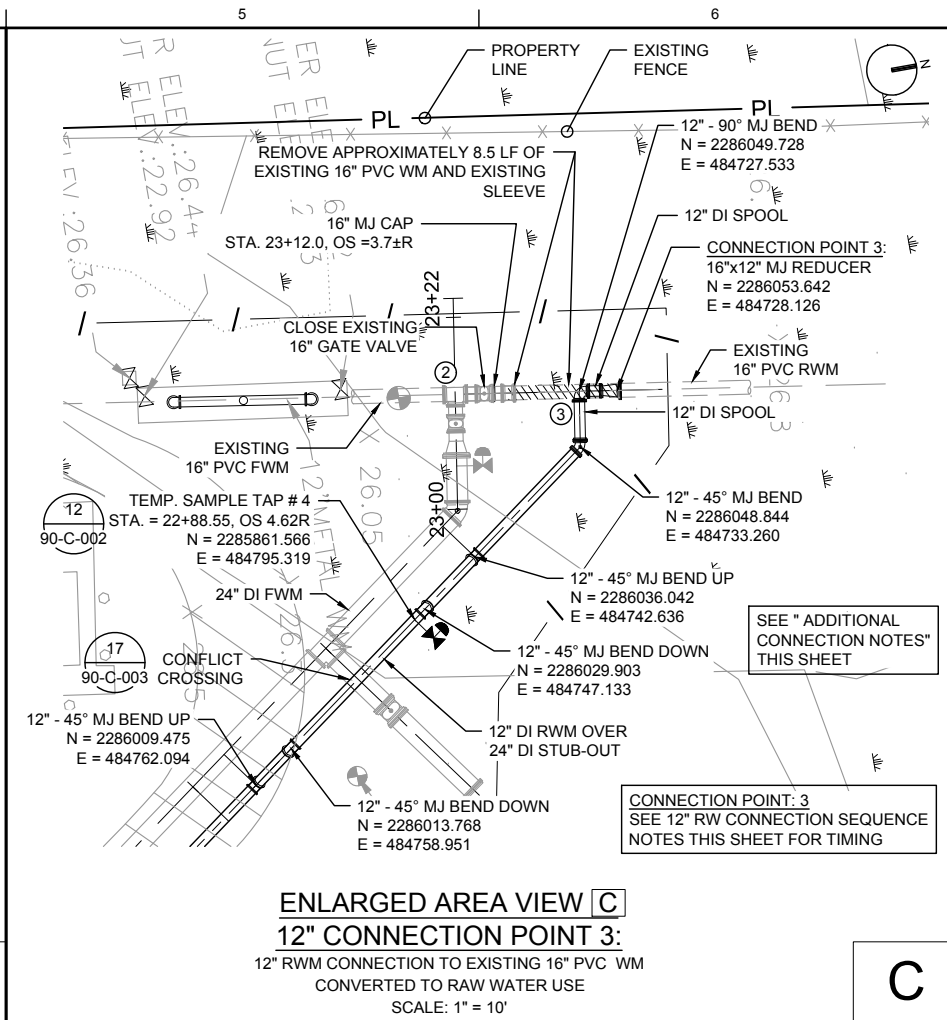
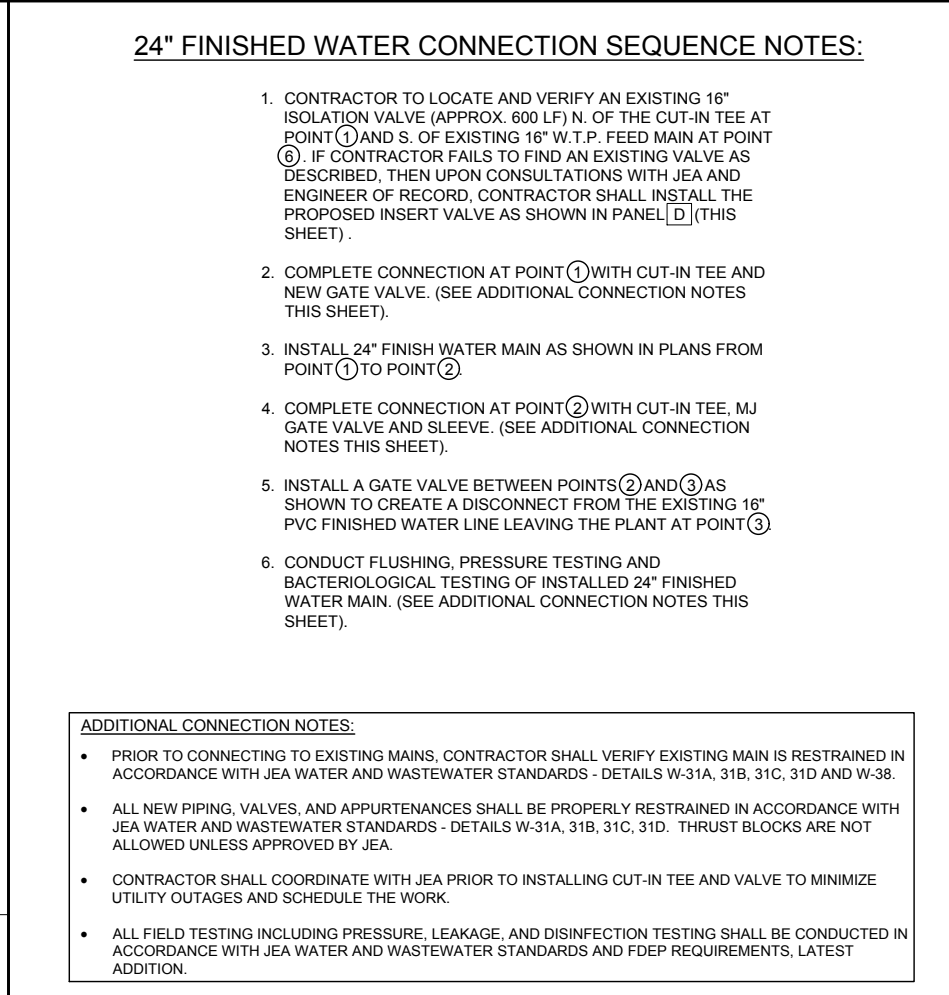
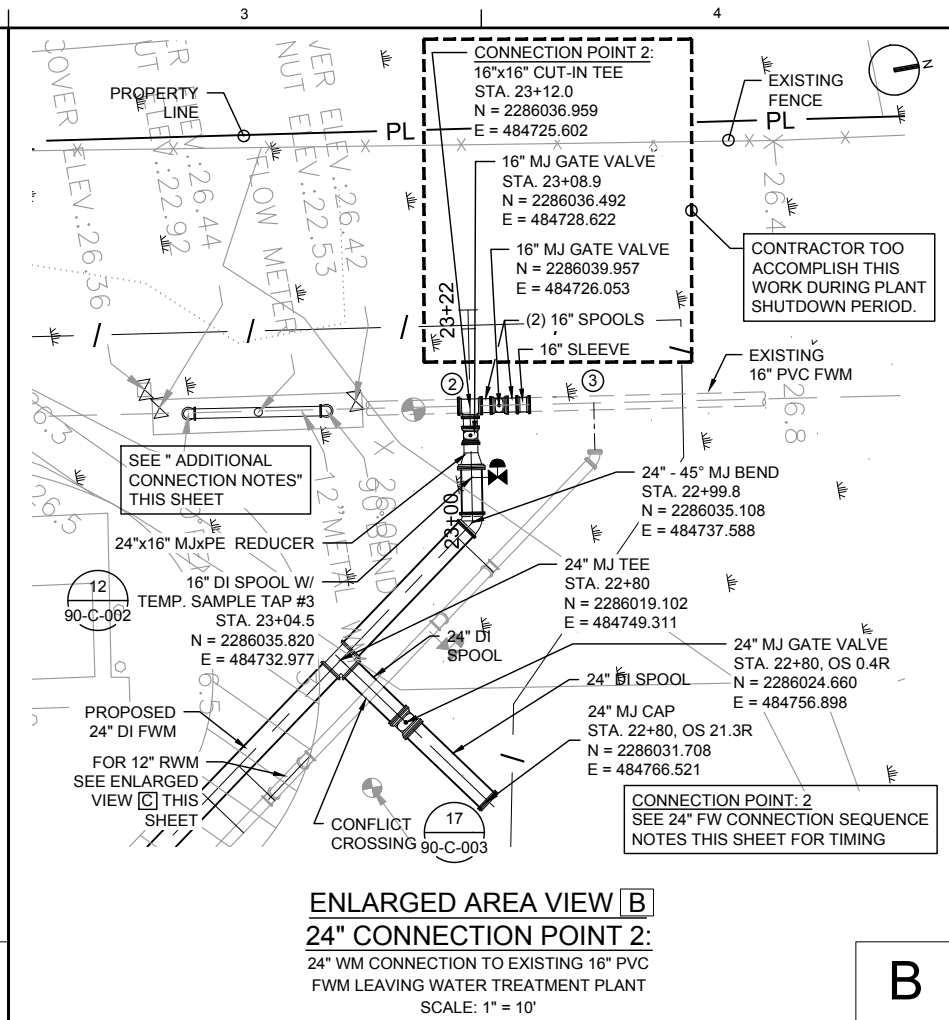
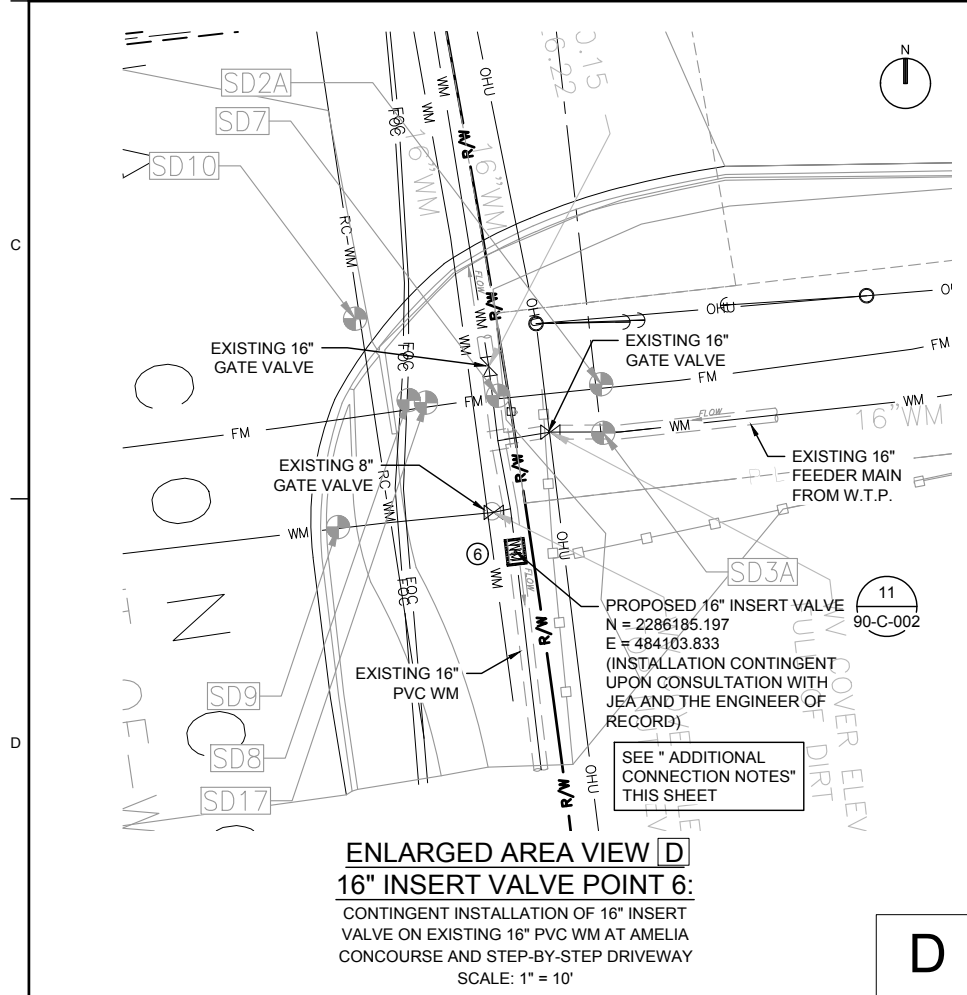
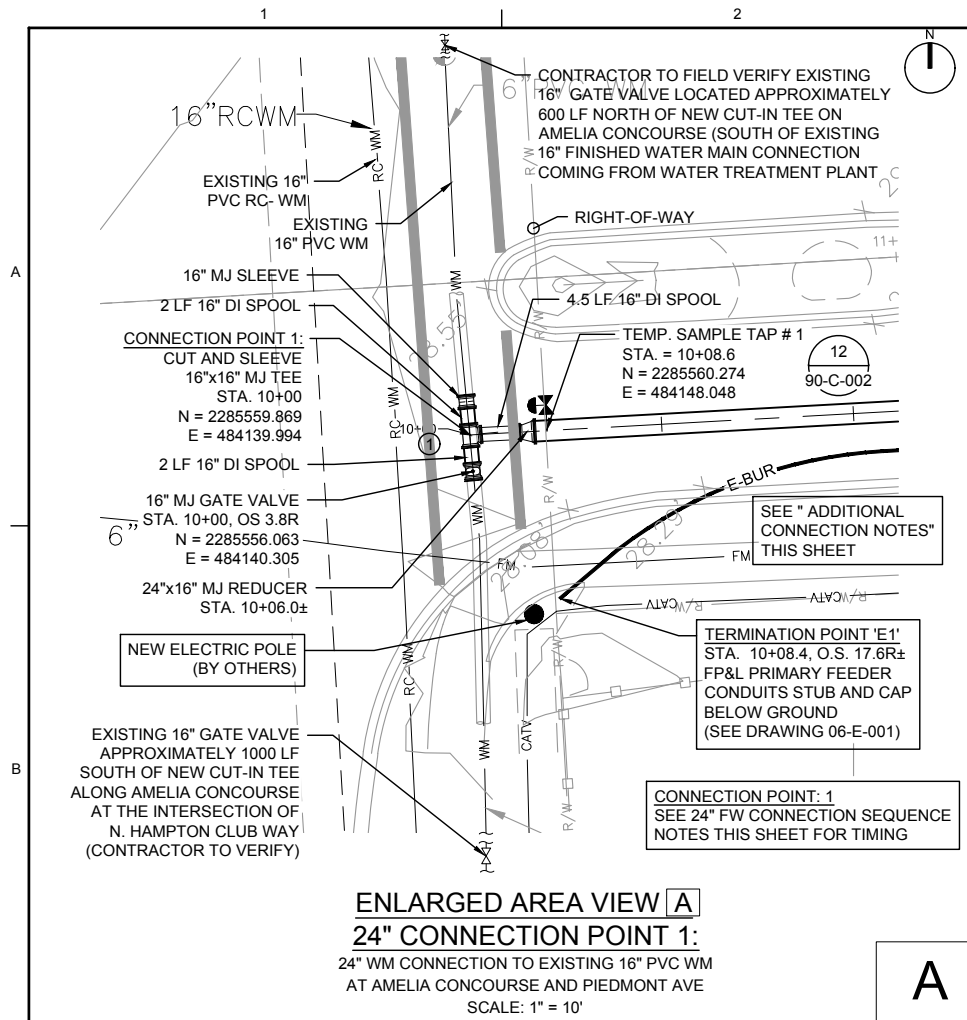
VERIFY SCALE  
BAR IS ONE INCH ON  
ORIGINAL DRAWING.  
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DATE APRIL 2019  
PROJ 697176  
DWG 05-Y-003  
SHEET 10 OF 15

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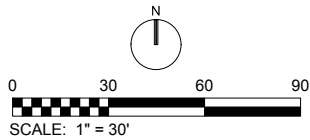
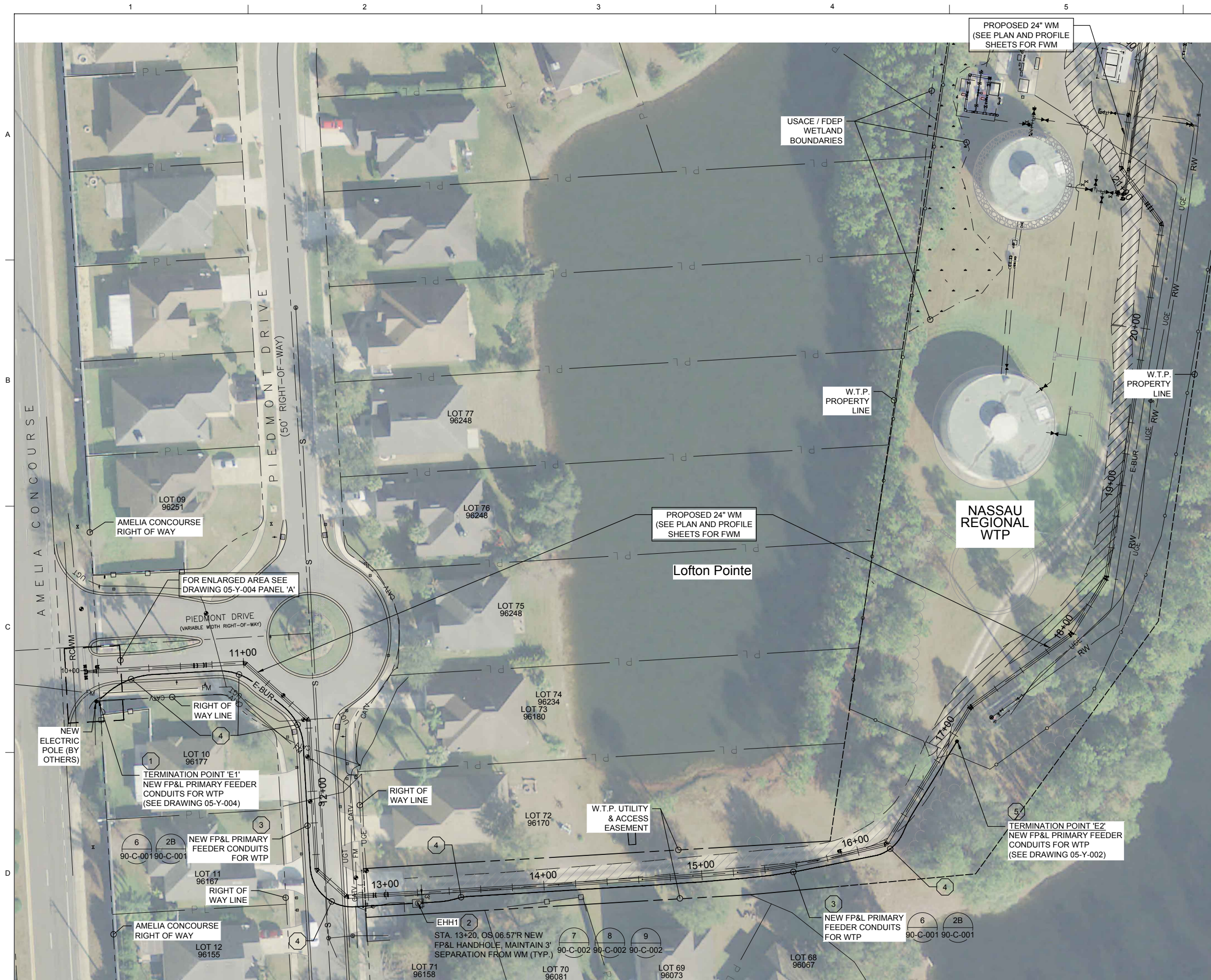
BID DOCUMENTS





245 RIVERSIDE AVE, SUITE 300 JACKSONVILLE, FL 32202 EB 0000072, AA 001992, LC 26000188 DUSTIN MICHAEL DYKES PE FL #91388				JEA NASSAU REGIONAL WTP WELLHEAD No. 3 & WATER MAIN IMPROVEMENTS JEA PROJEC NUMBER 8004327 JACKSONVILLE, FLORIDA			
ch2m				CIVIL/YARD PIPING			
24" FINISHED WATER MAIN				ENLARGED PLAN VIEWS			
VERIFY SCALE				DATE			
BAR IS ONE INCH ON ORIGINAL DRAWING.				PROJ			
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				DIGN			





GENERAL NOTES  
FOR ELECTRICAL

1. ALL EQUIPMENT AND MATERIALS SHALL BE, AS A MINIMUM, PER FP&L'S MOST CURRENT EDITION OF STANDARDS AND METHODS OF INSTALLATION. REFER TO CIVIL AND YARD PIPING DRAWINGS FOR DIMENSIONS OF THE SITE AND CONDUIT ROUTING, AND FOR EXISTING UNDERGROUND UTILITIES. PROVIDE FOR UTILITY LOCATES AS NEEDED OR DIRECTED.
2. ELECTRICAL EQUIPMENT AND CONDUIT LOCATIONS SHOWN ARE SCHEMATIC IN NATURE AND SHOULD NOT BE USED TO DIMENSION FROM. CONTRACTOR SHALL CONFIRM WITH OTHER DISCIPLINES THE LOCATION OF ALL EQUIPMENT BEING INSTALLED TO MEET THE INTENTIONS AS SHOWN ON THE PLANS AND DESCRIBED IN THE SPECIFICATIONS.

SHEET KEYNOTES  
FOR ELECTRICAL

1. COORDINATE LOCATION WITH FP&L AND STUB CONDUITS TO A LOCATION WITHIN THE GRASSY AREA SOUTH OF THE CONCRETE WALKWAY. LOCATE EXISTING BURIED CCTV CABLING PRIOR TO EXCAVATION AND HAND DIG AROUND CABLES TO AVOID DAMAGE. CAP CONDUITS UNDERGROUND AND MARK LOCATION ABOVEGROUND. UTILITY SHALL BE RESPONSIBLE TO PICK UP AND EXTEND CONDUIT TO FUTURE POLE DROP.
2. HANDHOLE SHALL BE PRECAST CONCRETE, MIN 3,000 PSI COMPRESSIVE STRENGTH, H-20 LOAD RATED, MIN INTERIOR DIMENSIONS OF 4'-0" X 6'-0" AND 4'-0" HIGH. FURNISH 6- OR 12-INCH RISERS AND ACCESS HOLE ADAPTERS BETWEEN HANDHOLE AND FINISHED GRADE/PAVEMENT. INCLUSIVE OF SLOPED FLOOR, 4-INCH DRAINAGE OUTLET AND OUTLET PIPE, GROUND ROD OPENING, EMBEDDED PULLING IRONS IN EACH WALL, RACEWAY ENTRANCES ON ALL FOUR SIDES, NON-METALLIC CABLE RACKS AND SUPPORTS, 36-1/2 INCH MANHOLE FRAME AND COVER H-20 LOAD RATED. COVER SHALL READ "FP&L ELECTRIC MV". LOCATE TOP OF HANDHOLE A MINIMUM OF 24-INCHES BELOW FINISHED GRADE OR PAVEMENT. COORDINATE WITH CIVIL DESIGN FOR ACTUAL BURIAL DEPTH.
3. PRIMARY CONDUITS FOR SUPPLYING ELECTRIC UTILITY (FP&L). FURNISH AND INSTALL TWO (2) 5-INCH PVC SCH 80 CONDUITS AS SHOWN IN DETAIL '6' ON DWG 90-C-001. DETAIL '6' IS BASED ON ENGINEER'S PRELIMINARY COORDINATION WITH THE UTILITY. CONTRACTOR TO COORDINATE ALL REQUIREMENTS WITH UTILITY PRIOR TO INSTALLATION. INSTALLATION OF PRIMARY CABLING BY UTILITY IN THE FUTURE. INSTALL MULE ROPE IN ALL CONDUIT SECTIONS.
4. CONTRACTOR TO PROVIDE GENTLE CONDUIT SWEEPS TO ALLOW FOR GENTLE PULLING OF CONDUCTORS. NO SHARP ANGLES OR BENDS ALLOWED.
5. CAP CONDUITS UNDERGROUND AND MARK LOCATION ABOVEGROUND. CONDUITS WILL BE EXTENDED TO LOCATION OF SERVICE TRANSFORMER IN THE FUTURE.

**ch2m**

CIVIL SITE  
24" FINISHED WATER MAIN  
FP&L PRIMARY FEEDER CONDUITS  
SITE PLAN

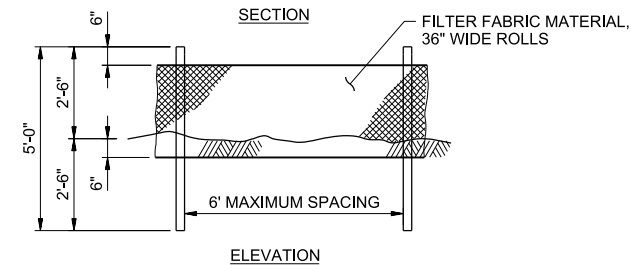
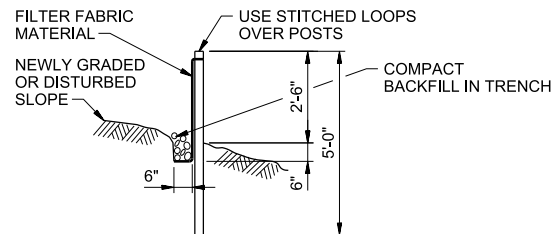
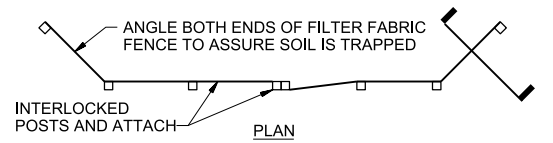
246 RIVERSIDE AVE, SUITE 300  
JACKSONVILLE, FL 32202  
EB 0000072; AA 001992; LC 26000188  
DUSTIN MICHAEL DYKES PE FL #91388

JEA NASSAU REGIONAL WTP  
WELLHEAD No. 3 & WATER MAIN IMPROVEMENTS  
JEA PROJEC NUMBER 8004327  
JACKSONVILLE, FLORIDA

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	APRIL 2019
PROJ	697176
DWG	06-E-001
SHEET	12 OF 15

BID DOCUMENTS





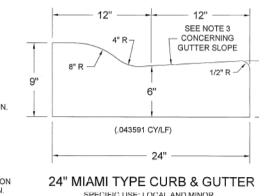
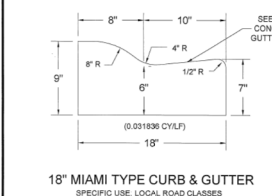
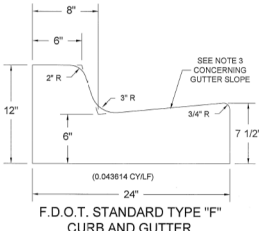
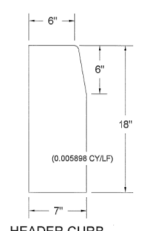
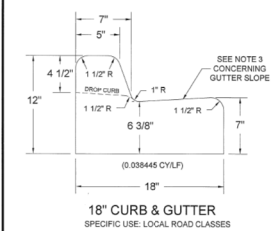
## NOTES:

- BURY BOTTOM OF FILTER FABRIC 6" VERTICALLY BELOW FINISHED GRADE.
- WOOD OR STEEL FENCE POSTS.
- STITCHED LOOPS TO BE INSTALLED DOWNHILL SIDE OF SLOPE.
- COMPACT ALL AREAS OF FILTER FABRIC TRENCH.

# 1 SILT FENCE

NTS

C



## GENERAL NOTES:

- MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE FOOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- CONCRETE SHALL BE CLASS 1 CONCRETE WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI.
- WHEN USED ON THE HIGH SIDE OF SUPER ELEVATED 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. SPECIFICS SHOWN HEREON.

ROADWAY AND DRAINAGE STANDARDS  
NASSAU COUNTY PUBLIC WORKS  
ENGINEERING SERVICES DEPARTMENT

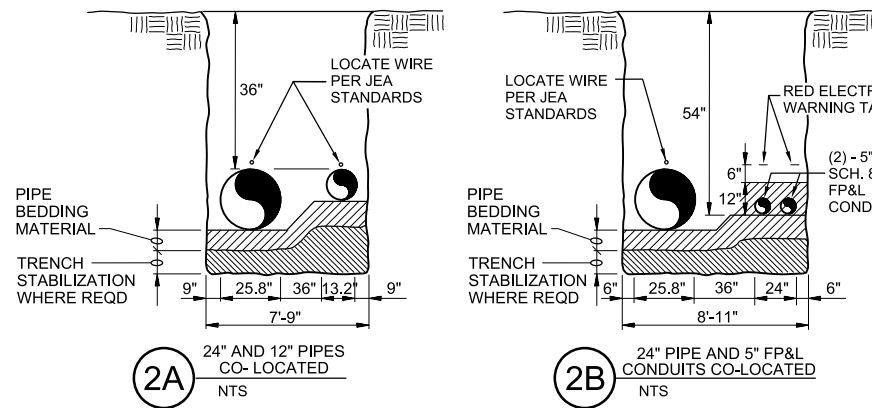
REVISION DATES

CURB AND CURB & GUTTER  
TYPICAL CONSTRUCTION DETAILSDETAIL NO. 14  
DWG:  
ADOPTED:

## CONCRETE CURB REQUIREMENTS NASSAU COUNTY

### 4

NTS

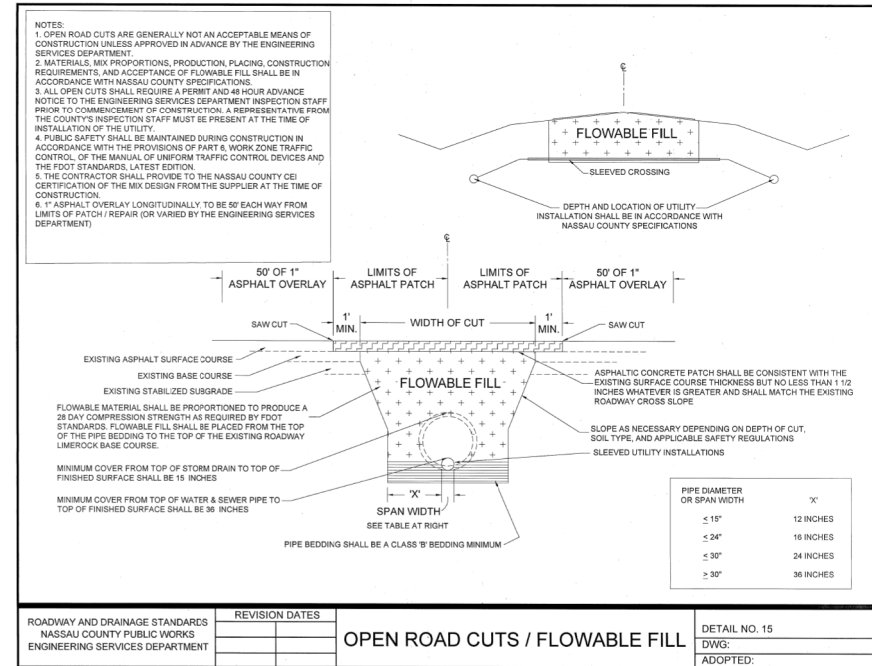
NEW SURFACING,  
OR SURFACE  
RESTORATION,  
SEE PLANSTRENCH  
BACKFILL  
ABOVE  
PIPE ZONE12" MIN  
PIPE OUTSIDE  
DIAMETERPIPE BEDDING  
MATERIALTRENCH  
STABILIZATION  
WHERE REQDMIN WIDTH  
PIPE OD+1'-6"NOTE: SEE DETAIL 6 THIS SHEET  
FOR ADDITIONAL INFORMATIONDEPTH OF COVER:  
NASSAU COUNTY RIGHT OF WAY  
42" IN PAVED AREAS  
36" IN UNPAVED AREAS  
JEA EASEMENT OR PROPERTY  
36" IN PAVED AND UNPAVED AREASLOCATE WIRE PER  
JEA STANDARDS

PIPE ZONE

NOTE:  
SEE JEA STANDARD WATER DETAILS PLATES  
NUMBER W-42 AND W-42A FOR SPECIFIC  
INFORMATION AND NOTES WHEN WORKING  
WITHIN CITY RIGHT-OF-WAYS OR COUNTY  
RIGHT-OF-WAYS.

# 2 TYPICAL TRENCH

NTS

NOTE:  
ONLY APPLIES TO PIPE INSTALLATION  
UNDER PAVED ROADS WITHIN NASSAU  
COUNTY RIGHT-OF-WAYS.ROADWAY AND DRAINAGE STANDARDS  
NASSAU COUNTY PUBLIC WORKS  
ENGINEERING SERVICES DEPARTMENT

REVISION DATES

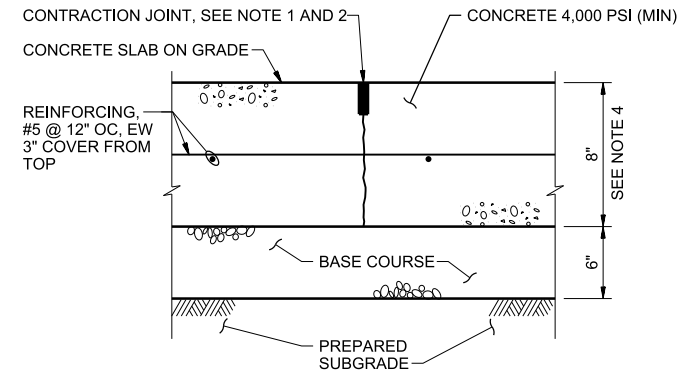
OPEN ROAD CUTS / FLOWABLE FILL

DETAIL NO. 15  
DWG:  
ADOPTED:

## STANDARD PAVING REPAIR / FLOWABLE FILL NASSAU COUNTY

### 5

NTS

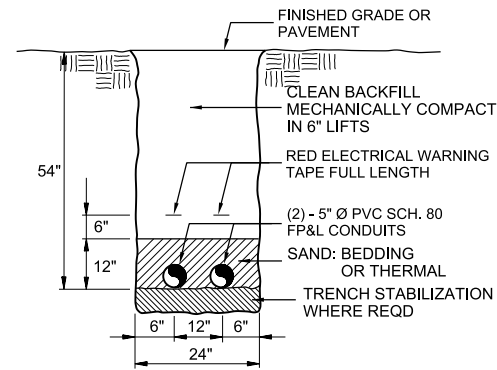


## NOTES:

- CONTRACTION JOINT SHALL BE MADE, CLEANED WITH COMPRESSED AIR, INSTALL BACKER-ROD AND AND FILL SAWCUT WITH SIKAFLEX 1A.
- CONCRETE JOINT SPACING: AS SHOWN OR MAXIMUM 8'x8'.
- INSTALL 1/2" PREMOLDED JOINT FILLER FULL DEPTH WHERE CONCRETE PAVEMENT ABUTS CONCRETE CURB, BUILDING OR ANY RIGID STRUCTURE.
- PROVIDE A 12" THICK BY 18" WIDE THICKENED EDGE AROUND PERIMETER OF SLAB. TRANSITION THICKENED EDGE TO NORMAL 8" THICKNESS IN 18".

# 3 CONCRETE DRIVEWAY

NTS



# 6 TYPICAL TRENCH 5" FP&L CONDUITS

NTS

245 RIVERSIDE AVE, SUITE 300  
JACKSONVILLE, FLORIDA 32202  
EB0000072 - AAC001992 - LC2600188  
Dustin Michael Dykes PE FL #81388JEA NASSAU REGIONAL WTP  
WELLHEAD No. 3 & WATER MAIN IMPROVEMENTS  
JEA PROJECT NUMBER 8004327  
JACKSONVILLE, FLORIDA

DETAILS

24" FINISHED WATER MAIN

CIVIL DETAILS

NTS

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE APRIL 2019

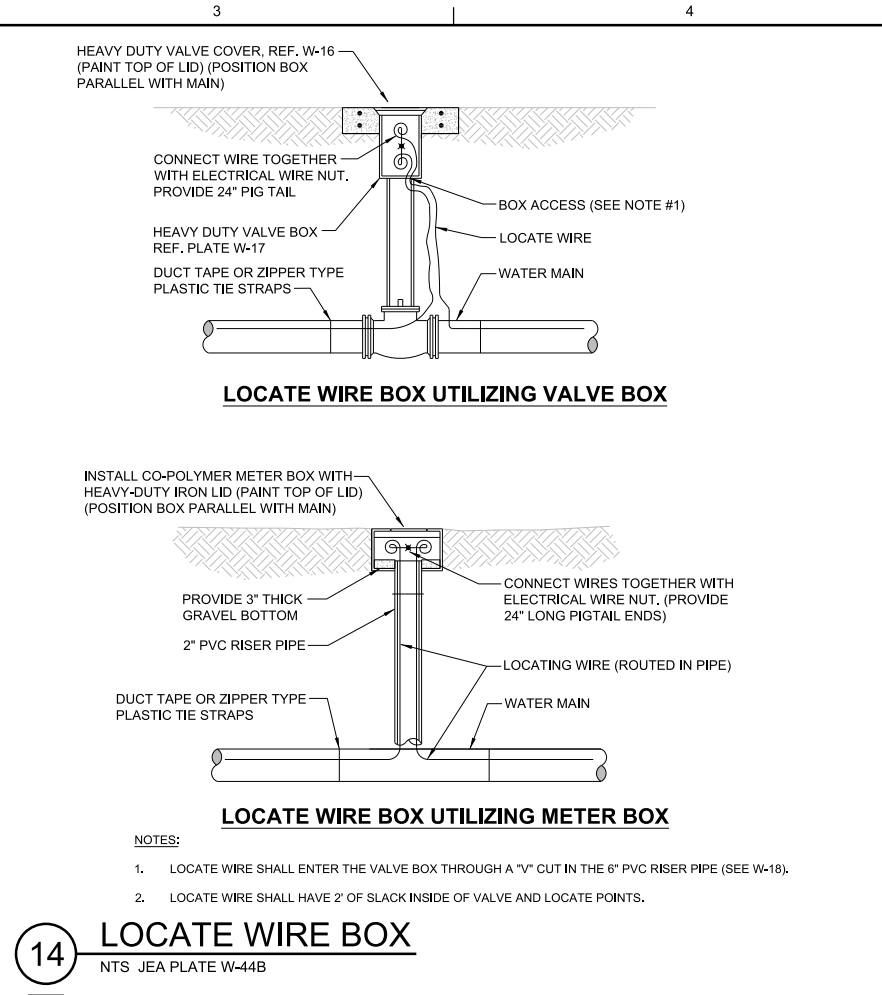
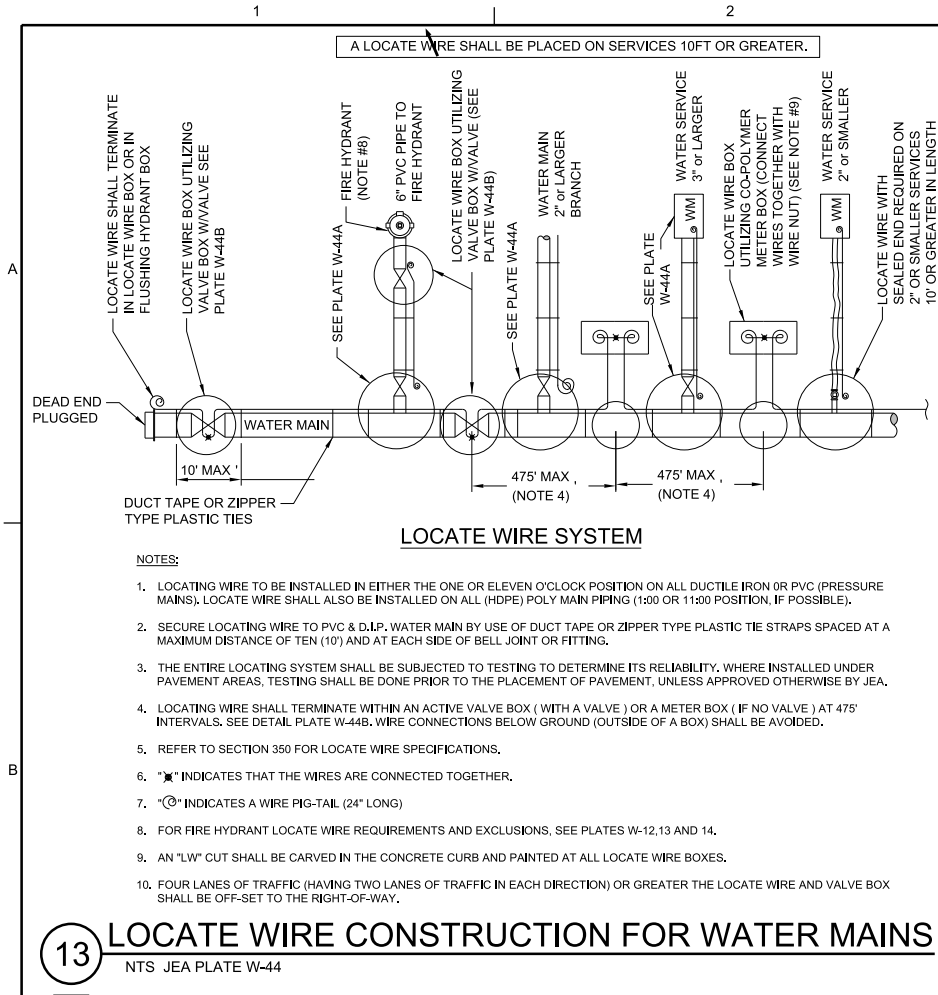
PROJ 697176

DWG 90-C-001

SHEET 13 of 15

BID DOCUMENTS





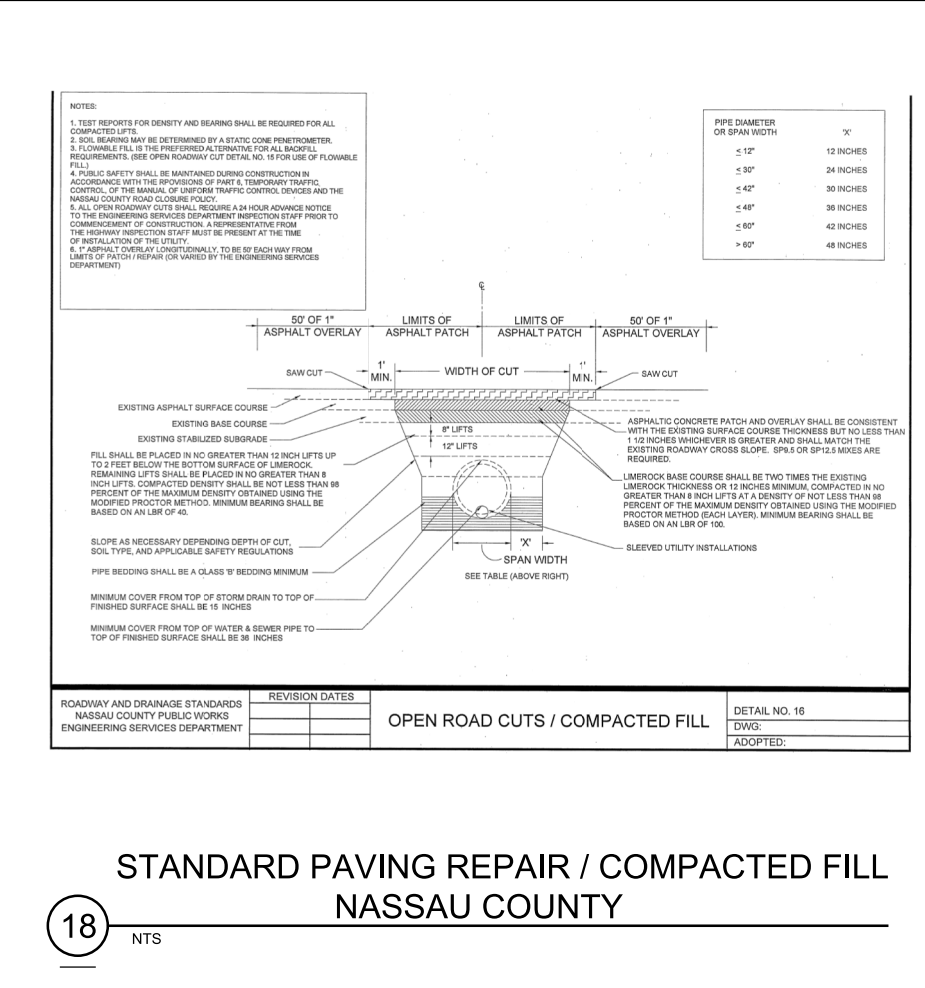
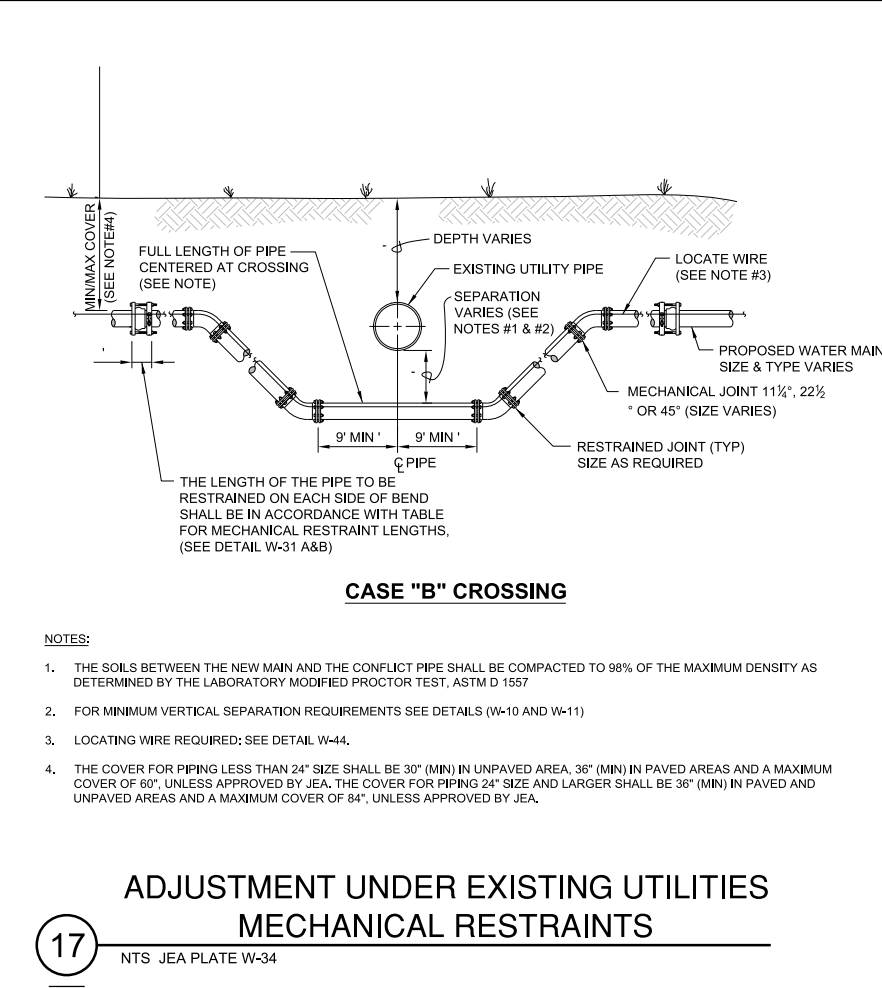
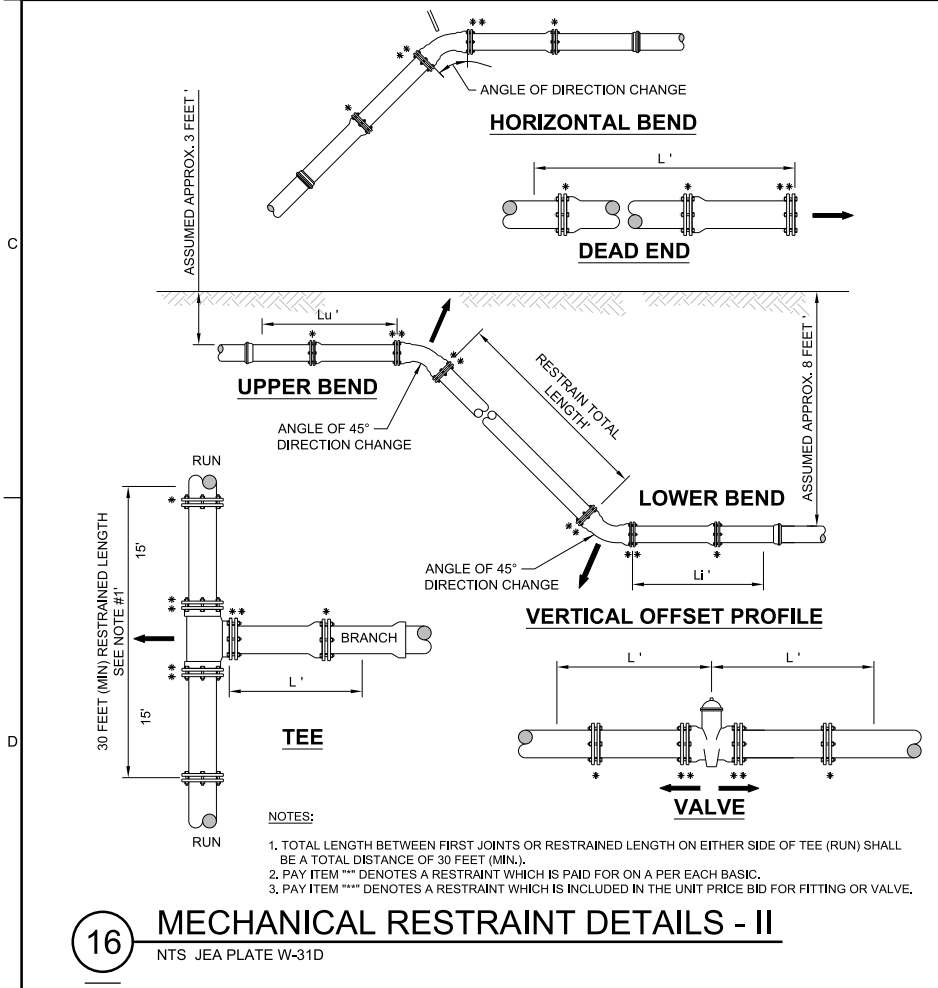
LENGTH (L) TO BE RESTRAINED

NOMINAL PIPE SIZE (IN.)	HORIZONTAL BENDS				VERTICAL OFFSETS 45° BENDS (SEE NOTE 4)		VALVES OR DEAD ENDS L (FT.)	REDUCERS		TEE SEE NOTE 5		
	90° BENDS L (FT.)	45° BENDS L (FT.)	22.5° BENDS L (FT.)	11.25° BENDS L (FT.)	UPPER L (FT.)	LOWER L (FT.)		SIZE (IN.)	L (FT.)	RUN SIZE (IN.)	BRANCH SIZE (IN.)	L (FT.)
4	17	7	4	2	11	3	30	6x4	22	4	4	F.O.
6	24	15	5	3	15	4	42	8x6	23	4	6	F.O.
8	31	13	6	3	20	5	55	8x4	39	8	4 < LESS	6
10	36	15	8	4	23	6	65	10x8	22	8	6 < LESS	19
12	42	18	9	5	27	7	77	10x6	40	10	8	F.O.
14	48	20	10	5	31	7	87	12x8	41	10	8 < LESS	29
16	53	22	11	6	35	8	97	16x12	42	12	10	F.O.
18	58	24	12	6	39	9	107	16x10	58	12	12	F.O.
20	63	27	13	6	42	10	118	20x18	22	16	16	F.O.
24	63	27	13	7	49	12	118	20x16	42	12	12	F.O.
30	75	31	15	8	59	14	141	20x12	74	16	16	F.O.
36	86	36	17	9	68	17	163	24x20	36	20	20	F.O.
42	95	40	19	10	76	19	183	24x18	51	24	24	F.O.
48	117	43	21	11	84	21	203	30x24	50	24	24	F.O.
								30x20	77	24	24	F.O.
								36x30	50	30	30	F.O.
								36x24	89	30	30	F.O.
								42x36	48	36	36	F.O.
								42x30	89	36	36	F.O.
								48x42	48	42	42	F.O.
								48x36	88	42	42	F.O.

**PVC PIPE RESTRAINT NOTES:**

- THIS SCHEDULE SHALL BE UTILIZED ON ALL WATER, SEWER FORCE MAIN OR RECLAIMED WATER SYSTEMS, ALL FITTINGS SHALL BE RESTRAINED TO LENGTHS INDICATED ON THE ABOVE SCHEDULE, AT A MINIMUM.
- ASSUMPTIONS: PVC PIPE, SAFETY FACTOR=1.5, TEST PRESSURE=150PSI, SOIL=GM OR SM, TRENCH TYPE 3, DEPTH OF COVER=30 INCHES FOR 20" AND SMALLER PIPE SIZE OR 36 INCHES FOR 24" AND LARGER PIPE SIZE.
- BENDS AND VALVES: SHALL BE RESTRAINED ON EACH SIDE OF FITTING.
- VERTICAL OFFSETS: ARE APPROX. 3 FEET COVER ON TOP AND APPROX. 8 FEET COVER ON BOTTOM. PER THE DETAILS, 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.

**15 DUCTILE IRON PIPE RESTRAINT JOINT SCHEDULE**  
NTS JEA PLATE W-31B



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Dustin Michael Dykes PE FL #81398

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JACKSONVILLE, FLORIDA

DETAILS  
24" FINISHED WATER MAIN  
CIVIL DETAILS

NTS  
VERIFY SCALE  
BAR IS ONE INCH ON ORIGINAL DRAWING, 1" = 10'

DATE APRIL 2019  
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DWG 90-C-003  
SHEET 15 of 15

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