CONSTRUCTION DRAWINGS
FOR
5TH STREET WEST - 20" FORCE MAIN EXTENSION
PREPARED FOR:

JEA
Building Community®

JEA PROJECT NO.: 8004781
MM PROJECT NO.: 502402368
100% SUBMITTAL
JULY 2020

CITY OF JACKSONVILLE NOTES

GENERAL

All construction shall be performed in accordance with the approved plans and comply with all standard city policies and practices. City approval is contingent upon any required state or federal permit approvals such as those from the Department of Environmental Protection or the St. Johns River Water Management District (SJRWMD).

UTILITY WORK

Plan approval through Development Services does not include utilities. Proposed water, sewer or electric construction must be approved separately through the respective utility company. In most cases, this will be:

JEA
JEA Tower - 4th Floor
21 W. Church Street
Jacksonville, FL 32202
http://www.jea.com/business/services/devandbuild/developers.asp

WORK WITHIN THE RIGHT-OF-WAY

CITY: Except for new subdivision infrastructure construction, all work performed within a City of Jacksonville right-of-way or easement requires a Right-of-way Permit. The contractor performing the proposed work must have a current Right-of-way Bond on file with Development Services. Right-of-way Permit applications are processed at:

Development Services Customer Service Counter
Edward Ball Building, 2nd Floor
214 N. Hogan St.
Jacksonville, FL 32202
(904) 255-8572
http://row.jaxdev.info/

STATE: All work performed within a state right-of-way requires a permit from the Florida Department of Transportation (FDOT). It is the developer's responsibility to obtain required FDOT permits or maintenance-of-traffic approvals for work within FDOT right-of-ways. The FDOT regional office can be contacted at (904) 825-5036 Any changes to the approved plans needed for FDOT approval must be submitted to Development Services as revisions.

Adjacent State Roads: _____

RAILROAD: Railroad companies may require special approvals or permits to work within their right-of-ways. It is the developer's responsibility to obtain permission from any railroad right-of-way owner before performing any work within their right-of-way.

STORMWATER

Annual reports in compliance with the SJRWMD stormwater permits are required from the maintenance entity of all stormwater management facilities. Send copies of the reports to:

Engineering and Construction Management
Edward Ball Building, 10th Floor
214 N. Hogan St.
Jacksonville, FL 32202
http://www.coj.net/Departments/Public+Works/Engineering+and+Construction+Management/

The owner of any project one (1) acre or larger is required to provide a Notice of Intent (NOI) in accordance with criteria set forth in the city's NPDES permit within 48 hours of beginning construction. Send NOI and NOI fee to:

Florida Department of Environmental Protection
NPDES Stormwater Notices Center, Mail Station #2510
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
(866) 336-6312
http://www.dep.state.fl.us/water/stormwater/npdes/

The contractor shall contact the Environmental Quality Division, Erosion and Sedimentation Control Section (ESC) to provide verification that applicable stormwater permits have been obtained and to schedule a pre-construction ESC site inspection:

Environmental Quality Division
407 North Laura Street, Third Floor
Jacksonville, FL, 32202
(904) 255-7222

FIRE MARSHALL

Plan review and approval does not relieve the contractor of complying with all applicable State Fire Codes.

Underground mains and hydrants shall be installed, completed, and in service prior to construction work.

Underground contractor shall submit to the Fire Marshall for approval complete specs for all underground pipe and fittings relating to fire protection PRIOR to installation and inspection. Contractor shall include manufacturer's name and pipe ID along with contractor's state license number.

LANDSCAPE

A Site Work Permit is required for this project.

☐ Tree Fund payment is due: _____ inches at $_____ = $_____

☐ Article 25 funds are due: _____ inches at $_____ = $_____

TRAFFIC ENGINEERING

TRAFFIC SIGNS

Metro Name (each) _____

Standard (each) _____

Stop/Yield (each) _____

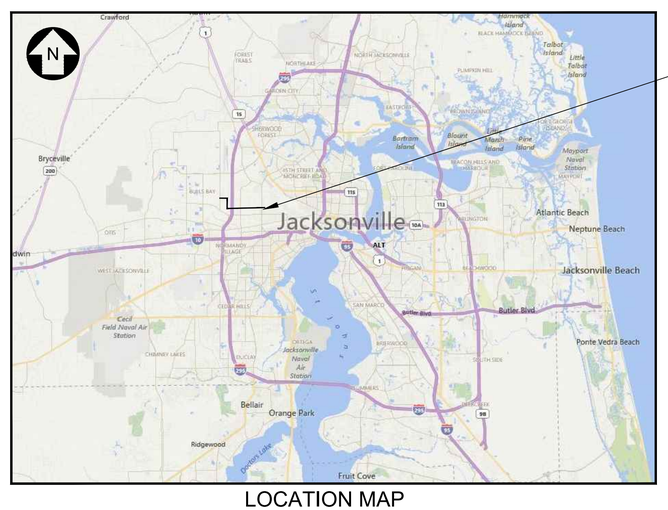
Design (per plat) 1 per plat

Installation (per hour) 1 per 2 signs (rounded up)

____ Streetlights Required

NOTE: Traffic sign costs change from time to time. Consult Attachment 8 of the Land Development Procedures Manual (http://ldpm.jaxdev.com/) for the current rates before paying for any sign installations.

No lane closures allowed from 7 a.m. till 9 a.m. and from 4 p.m. till 7 p.m.



PROJECT LOCATION

LOCATION MAP
SCALE: NTS

MOTT MACDONALD
Mott MacDonald Florida, LLC

Architects Engineers Surveyors
AA - C0000035 EB - 0000155 LB - 0006783
10245 Centurion Pkwy. N., Suite 320
Jacksonville, Florida 32256
Telephone: (904) 203-1090

PLAN APPROVAL

_____ Date _____ Development Services Division (Chief)

_____ Date _____ Review Group (Reviewer)

Plan approval is valid for five years after the initial approval date. Revisions made after the initial approval date do not extend this five-year time frame.

PLAN APPROVAL IS SUBJECT TO THE FOLLOWING NOTES AND CONDITIONS:

GENERAL PROJECT INFORMATION

GENERAL	
City Development Number	4161.285
Concurrency Application Number	N/A
Property Appraiser Number (RE #)	*
Zoning Designation	
Zoning Application(s) (if any)	N/A
PUD Ordinance Number	
FIRM – Community – Panel	-
Flood Zones (Show in Plans)	
Base Flood Elev. (Show in Plans)	
Vertical Datum Used for Project	NAVD 1988
JEA Availability Number	-
SUBDIVISION	
PSD Number	N/A
City or Private Inspection	N/A
Public or Private Roads	N/A
Subdivision ("911") Disk Provided?	N/A
NON-SUBDIVISION	
North American Industry Classification System (NAICS)	23711
Impervious Area (Sq. Ft.)	

NOT APPLICABLE | APPLICABLE

SURVEY AND LOCATE DATA:

☐ ☒ 1. ALL ELEVATIONS ARE BASED ON NAVD 88 DATUM AND SHOWN IN FEET.

☒ ☐ 2. ELEVATIONS ARE BASED ON N.G.V.D. 1929.

☐ ☒ 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 OR SUPPLEMENTED WITH 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 NORTH RIM 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: NAVD 88 SEE SURVEYORS NOTES

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 FLORIDA DEPARTMENT OF TRANSPORTATION, CSX 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, LATEST EDITION, CSX RAILROAD 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 FDOT, CSX AND COJ 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 HORIZONTAL DIRECTIONAL DRILLING AND JACK AND AUGER BORE 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.

NOTE:

JEA STANDARD DRAWINGS AND DETAILS ARE APPLICABLE FOR ALL PROJECTS, INCORPORATED BY REFERENCE AND ARE AVAILABLE AT JEA.COM/WORKING_WITH_JEA/ENGINEERING_AND_CONSTRUCTION/REFERENCE_MATERIALS

NOTE:

COJ STANDARD DRAWINGS AND DETAILS ARE APPLICABLE FOR ALL PROJECTS, INCORPORATED BY REFERENCE AND ARE AVAILABLE AT UPON REQUEST FROM COJ - PLANNING AND DEVELOPMENT SERVICES DIVISION

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 DIVISIONS.
2. THE CONTRACTOR SHALL RESTORE/REPLACE ALL CULVERTS, HEADWALLS AND STORM DRAIN INLETS REMOVED OR DISTURBED BY THE CONSTRUCTION OPERATION IN ACCORDANCE WITH FDOT AND COJ STANDARDS.
3. TRAFFIC SIGNS AND PAVEMENT MARKINGS SHALL BE RESTORED TO THEIR PRE-CONSTRUCTION CONDITION IN ACCORDANCE WITH FDOT AND CITY OF JACKSONVILLE STANDARD SPECIFICATIONS.
4. SIDEWALKS, DRIVEWAYS AND CURBING DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED IN ACCORDANCE WITH CITY OF JACKSONVILLE OR FDOT STANDARD SPECIFICATIONS AS REQUIRED. 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, CSX RAILROAD, AND FDOT STANDARD DETAILS AND SPECIFICATIONS LATEST EDITION.
7. UNLESS OTHERWISE NOTED, REMOVE AND REPLACE EXISTING PAVEMENT AS PER C.O.J. CASE X (10) AND C.O.J. 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. — 904-255-8762
E. CITY OF JACKSONVILLE ~ TRAFFIC OPERATIONS — 904-387-8861
F. FLORIDA DEPT. OF TRANSPORTATION — 904-825-5036
G. JEA ~ WATER COLLECTION & DISTRIBUTION ~ RANDY ELLIS — 904-665-7133
H. JEA ~ SEWER COLLECTION & DISTRIBUTION ~ NATHANIAL ROUSE — 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. COMCAST ~ EMERGENCY HOTLINE — 904-380-6274
P. JACKSONVILLE TRANSIT AUTHORITY (JTA) ~ IVAN MITCHELL — 904-633-8523
Q. TECO/PEOPLES GAS ~ BEN MOBLEY — 904-545-8958
R. SUNSHINE ONE CALL — 811
S. FDOT - ITS - FOC ~ JOSH REICHERT — 904-360-5642
T. JEA ENVIRONMENTAL GROUP — 904 665-4517
U. COJ TRAFFIC MOT ~ RONNIE THIGPEN — 904-255-8704
V. COJ TRAFFIC SIGNALS ~ MIGUEL CAMACHO — 904-255-7549
W. FLORIDA GAS TRANSMISSION ~ JACOB WALLACE — 325-494-0028
X. FLORIDA POWER AND LIGHT ~ ROB HELFER — 904-824-7617
Y. ST JOHNS COUNTY ~ RIGHT-OF-WAY PERMITTING ~ RICK MAULDIN — 904-209-0134
Z. ST JOHNS COUNTY ~ TRAFFIC SIGNALS ~ HANK MEIN — 904-209-0173
AA. CSX ~ GENERAL NUMBER — 904-359-3100

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. PIPE DEFLECTION SHALL BE NO MORE THAN 80% OF MANUFACTURER'S RECOMMENDATION 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.

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		COVER
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4	G-4	SHEET KEY PLAN
5	G-5	SHEET KEY PLAN
6	G-6	TEMPORARY SEWAGE BYPASS PUMPING AND PIPING - CONCEPTUAL LAYOUT
7	G-7	PROJECT SCOPE AND LAYOUT
8	C-1	STA 0+00 TO STA 5+00
9	C-2	STA 5+00 TO STA 10+00
10	C-3	STA 10+00 TO STA 15+00
11	C-4	STA 15+00 TO STA 20+00
12	C-5	STA 20+00 TO STA 25+00
13	C-6	STA 25+00 TO STA 29+50
14	C-7	STA 29+50 TO STA 34+50
15	C-8	STA 34+50 TO STA 38+00
16	C-9	STA 38+00 TO STA 43+00
17	C-10	STA 43+00 TO STA 48+00
18	C-11	STA 48+00 TO STA 53+00
19	C-12	STA 53+00 TO STA 58+00
20	C-13	STA 58+00 TO STA 63+00
21	C-14	STA 63+00 TO STA 68+00
22	C-15	STA 68+00 TO STA 73+00
23	C-16	STA 73+00 TO STA 78+00
24	C-17	STA 78+00 TO STA 83+00
25	C-18	STA 83+00 TO STA 88+00
26	C-19	STA 88+00 TO STA 93+00
27	C-20	STA 93+00 TO STA 98+00
28	C-21	STA 98+00 TO STA 103+00
29	C-22	STA 103+00 TO STA 108+00
30	C-23	STA 108+00 TO STA 113+00
31	C-24	STA 113+00 TO STA 118+00
32	C-25	STA 118+00 TO STA 123+00
33	C-26	STA 123+00 TO STA 128+00
34	C-27	STA 128+00 TO STA 133+00
35	C-28	STA 133+00 TO STA 138+00
36	C-29	STA 138+00 TO STA 143+00
37	C-30	STA 143+00 TO STA 148+00
38	C-31	STA 148+00 TO STA 153+00
39	C-32	STA 153+00 TO STA 158+00
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48	CD-6	STANDARD CIVIL DETAILS
49	CD-7	STANDARD CIVIL DETAILS
50	CD-8	STANDARD CIVIL DETAILS
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55	CD-13	UNSUITABLE SOILS LIMITS
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DRAWING INDEX

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80	TTC-20	TEMPORARY TRAFFIC CONTROL PLAN WORK ZONE 19 DETOUR
81	TTC-21	TEMPORARY TRAFFIC CONTROL PLAN WORK ZONE 21 DETOUR
82	TTC-22	TEMPORARY TRAFFIC CONTROL PLAN WORK ZONE 23 DETOUR
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84	TTC-24	TRAFFIC FLOW PLAN AT SCHOOLS - WORK ZONES 22, 23, AND 24
85	TTC-25	TEMPORARY TRAFFIC CONTROL DETAILS - FDOT INDEX 102 - 603
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MOTT MACDONALD
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Jacksonville, Florida 32256
Telephone: (904) 203-1090
Architects AA - C0000035
Engineers EB - 0000155
Surveyors LB - 0006783

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

DESIGN ENGINEER: BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER: B. NEU
DRAWN BY: F. NGUYEN
DATE: JULY 2020
CHECKED BY: P. MOURT
DATE: JULY 2020

JEA Building Community[sm]

5TH STREET WEST 20" FORCE MAIN EXTENSION

JEA GENERAL NOTES AND SHEET INDEX

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: NTS

NO. SHEETS 88
SHEET NO. 1
DRAWING NO. G-1

100% SUBMITTAL

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Xrefs Attached= JEA_SHT22x34_BOR [..\d0426985\JEA_SHT22x34_BOR.dwg]

GENERAL NOTES

1. THE CONTRACTOR SHALL CONTACT THE LOCAL PUBLIC UTILITIES LOCATING SERVICE TO LOCATE UTILITIES IN THE AREA PRIOR TO ANY EXCAVATION. ALL EXISTING UTILITIES MAY NOT BE SHOWN ON THE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING EXISTING UTILITIES, WHETHER SHOWN OR NOT, AND FOR REPAIRING ALL DAMAGE TO UTILITIES.
2. DISTURBANCE SHALL BE LIMITED TO THE TEMPORARY CONSTRUCTION EASEMENTS AND PERMANENT FDOT, CSX AND COJ RIGHT OF WAYS. IF TRAVEL LANES ARE DAMAGED DURING CONSTRUCTION IN FDOT AND COJ ROW, REMOVAL AND REPLACEMENT OF FRICTION COURSE MAY BE REQUIRED.
3. THE CONTRACTOR IS RESPONSIBLE FOR PROCURING ALL MOBILIZATION, STORAGE, AND STAGING AREAS AS WELL AS ACCESS TO THE CONSTRUCTION SITES WITHIN THE TEMPORARY AND PERMANENT RIGHT OF WAYS. EROSION CONTROL DEVICES AND BEST MANAGEMENT PRACTICES SHALL BE INSTALLED AND MAINTAINED AT ALL WORK SITES AND STAGING AREAS. THE CONTRACTOR SHALL FOLLOW ALL LOCAL GUIDELINES AND REGULATIONS REGARDING THE WORK, INCLUDING KEEPING MUD AND DIRT OFF PUBLIC ROADS AND PRIVATE ENTRANCES.
4. SOIL EXPLORATION WORK WAS PERFORMED BY MESKEL AND ASSOCIATES ENGINEERING OF JACKSONVILLE FLORIDA (MAE PROJECT No. 0103-0018). SOILS EXPLORATION WORK IS SOLELY TO ASSIST BIDDERS IN ASSESSING THE NATURE AND EXTENT OF TESTING PROCEDURES REQUIRED TO MAKE THEIR OWN DETERMINATION OF ACTUAL SUBSURFACE CONDITIONS THAT WILL BE ENCOUNTERED DURING THE COURSE OF CONSTRUCTION. NO REPRESENTATION IS MADE OR WILL BE GIVEN BY THE ENGINEER CONCERNING ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED. ALL BIDDERS ARE DIRECTED PRIOR TO BIDDING TO CONDUCT ALL INVESTIGATIONS THEY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING SUCH CONDITIONS.
5. ALL OPEN ENDS OF PIPE SHALL BE SECURED TO PREVENT WATER INTRUSION AND ENTRY AT THE END OF EACH WORK DAY.
6. ALL AREAS WITH OPEN EXCAVATIONS, OPEN VAULTS OR MANHOLES, OR EQUIPMENT SHALL BE FENCED WITH TEMPORARY SECURE FENCING AT LEAST FOUR FEET HIGH OR CLOSED AT THE END OF EACH WORK DAY. NO OPEN HOLES, VAULTS, EXCAVATIONS, ETC. SHALL BE ALLOWED TO BE LEFT OPEN DURING NON-WORKING HOURS WITHIN COJ AND FDOT RIGHT OF WAY.
7. ANY PUBLIC LAND CORNER, PROPERTY MONUMENTATION, OR BENCH MARK WITHIN THE LIMITS OF CONSTRUCTION SHALL BE PROTECTED. IF A MONUMENT IS IN DANGER OF BEING DESTROYED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY. ANY CORNER MONUMENT DISTURBED OR DESTROYED SHALL BE RESET BY A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF FLORIDA AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL IMPLEMENT ONLY MAINTENANCE OF TRAFFIC SPECIFIED BY THE ENGINEER.
8. THE CONTRACTOR SHALL CONTACT THE ENGINEER OR OWNER IMMEDIATELY SHOULD ANY ISSUE BETWEEN CONSTRUCTION AND THE DRAWINGS ARISE. THE CONTRACTOR SHALL ADHERE TO ALL CONDITIONS AND REQUIREMENTS OF ALL PERMITS THAT HAVE BEEN OBTAINED. SHOULD ANY ISSUES BETWEEN CONSTRUCTION AND THE DRAWINGS ARISE IN FDOT, COJ, OR CSX ROW, THE CONTRACTOR SHALL ALSO CONTACT THE FDOT, COJ, OR CSX, RESPECTIVELY, PRIOR TO ANY DEVIATIONS FROM THE CONSTRUCTION DRAWINGS.
9. FOR ALL TIE-IN PIPING, CROSSINGS, CONNECTING MANHOLES, OR VALVES, THE CONTRACTOR SHALL VERIFY ALL EXISTING PIPELINE ELEVATIONS, LOCATIONS, DIAMETERS, AND MATERIALS PRIOR TO SHOP DRAWING SUBMITTALS, NOTIFYING THE ENGINEER OF ANY CONFLICTS.
10. ALL DRIVEWAYS, DRAINAGE PIPES, AND HEADWALLS SHALL BE RESTORED TO EQUAL OR BETTER THAN EXISTING CONDITION IN BOTH NEW AND EXISTING RIGHT OF WAYS AND WITHIN ANY TEMPORARY EASEMENT AREAS IN ACCORDANCE WITH FDOT AND COJ STANDARDS. ANY STRUCTURES OR DRIVEWAYS DISTURBED OUTSIDE OF THE RIGHT OF WAY SHALL BE FULLY RESTORED AT NO COST TO THE PROPERTY OWNER.
11. THE CONTRACTOR SHALL LOCATE AND PROTECT ALL WATER AND SEWER LATERALS SERVICING RESIDENTS AND BUSINESSES THROUGHOUT CONSTRUCTION.
12. WHEN EXCAVATED MATERIALS ARE PLACED ON ROADWAY SURFACES, THE CONTRACTOR SHALL PLACE SAND OR STONE SCREENING UNDERNEATH THE EXCAVATED MATERIALS AND SHALL REMOVE SAID MATERIALS AND SWEEP CLEAN ALL RESIDUES FROM THE SURFACES DAILY.
13. THE CONTRACTOR SHALL PROVIDE AN ACCESS CORRIDOR FOR EMERGENCY SERVICES AT ALL TIMES.
14. THE CONTRACTOR SHALL PROVIDE 24 HOURS NOTICE TO TECO GAS PRIOR TO WORK WHICH MAY IMPACT GAS MAINS.
15. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE CLEAN AND EFFICIENT OPERATIONS OF ALL STORM WATER CONVEYANCE STRUCTURES IN THE AREA IMPACTED BY CONSTRUCTION. THE CONTRACTOR SHALL ENSURE THAT THE CONVEYANCE CAPACITY OF THE STORM WATER INFRASTRUCTURE IS MAINTAINED TO AVOID FLOODING. THE CONTRACTOR SHALL INSTALL STABILIZED CONSTRUCTION ENTRANCES AS DIRECTED BY THE ENGINEER AT LOCATIONS WHERE VEHICULAR TRAFFIC PASSES FROM DISTURBED AREAS TO UNDISTURBED AREAS. THE CONTRACTOR SHALL IMPLEMENT THE EROSION AND SEDIMENT CONTROL MEASURES DESIGNATED BY THE ENGINEER OR BY THE CONTRACTOR'S RECOMMENDATION.
16. THE CONTRACTOR SHALL IMPLEMENT EROSION CONTROL MEASURES IN COMPLIANCE WITH FEDERAL, STATE, AND LOCAL STORM WATER EROSION CONTROL PERMITS AND STANDARDS FOR ALL LAND DISTURBANCES NOT SHOWN IN THESE DRAWINGS.
17. PAVEMENT, DRIVEWAYS AND SIDEWALKS SHALL BE REMOVED BY FULL DEPTH SAW CUTTING IN STRAIGHT VERTICAL LINES.
18. BORING LOCATIONS SHOWN ON THE DRAWINGS ARE FOR INFORMATIONAL PURPOSES ONLY FOR THE CONTRACTORS CONVENIENCE. GEOTECHNICAL DATA SHALL BE GOVERNED BY THE GEOTECHNICAL REPORT PREPARED BY MESKEL AND ASSOCIATES ENGINEERING (MAE PROJECT No. 0103-0018).
19. THE CONTRACTOR SHALL REFERENCE SECTIONS 5.2 AND 5.4 OF THE GEOTECHNICAL REPORT PROVIDED BY MESKEL AND ASSOCIATES ENGINEERING FOR DETAILS ON POTENTIAL GROUND WATER FLUCTUATIONS (MAE PROJECT No. 0103-0018).
20. JEA WATER AND WASTEWATER STANDARDS MANUAL, LATEST EDITION, AS REVISED, SHALL BE THE GOVERNING SPECIFICATION FOR ALL MATERIALS AND METHODS REQUIRED FOR INSTALLATION OF THE WATER AND FORCE MAINS SHALL SUPERSEDE ALL CONFLICTING RECOMMENDATIONS UNLESS EXPLICITLY STATED BY THE OWNER (JEA) OR AN AUTHORIZED OWNERS REPRESENTATIVE.
21. WORK WITHIN THE FDOT, CSX AND COJ ROW IS WITHIN CONGESTED UTILITY CORRIDORS. THE CONTRACTOR WILL BE REQUIRED TO LOCATE AND SUPPORT ANY EXISTING UTILITIES WITHIN THE OPEN CUT TRENCH OR PIT AREA FOR INSTALLATION VIA HDD OR JACK AND AUGER BORE.
22. ANY CONSTRUCTION IN FDOT, CSX AND COJ RIGHT OF WAY WILL REQUIRE A RIGHT OF WAY PERMIT. THE CONTRACTOR IS RESPONSIBLE FOR CALLING 904-255-8366 DAILY FROM 7:30 A.M. TO 8:30 A.M., WHEN WORKING IN COJ RIGHT OF WAY.
23. THE CONTRACTOR'S EMPLOYEES AND EQUIPMENT MUST MAINTAIN A CLEARANCE OF AT LEAST TWENTY (20) FEET HORIZONTALLY OR VERTICALLY TO THE ENERGIZED TRANSMISSION PHASE CONDUCTORS DURING CONSTRUCTION. IF A CLEARANCE OF 20 FEET CANNOT FEASIBLY BE MAINTAINED, OUTAGES WILL HAVE TO BE SCHEDULED AND COORDINATED. ALL OUTAGES NEED TO BE COORDINATED AND SCHEDULED THROUGH SEBASTIAN CHMIST (JEA ELECTRICAL STAFF ENGINEER, PHONE: 904-665=7016, EMAIL: CHMISM@JEA.COM). THE CONTRACTOR SHALL PROVIDE JEA WITH A 3 MONTH NOTICE TO SCHEDULE OUTAGES. OUTAGES MUST TAKE PLACE IN THE FALL OR SPRING MONTHS AND ARE WEATHER/ LOAD DEPENDENT.
24. THE CONTRACTOR SHALL COORDINATE WITH JEA'S MICHAEL SULAYMAN (PHONE: 904-665-8713, EMAIL: SULAMS@JEA.COM) FOR COORDINATION WITH THE JTA 5TH STREET WEST RECONSTRUCTION PROJECT EAST OF THE 5TH STREET WEST AND MELSON AVENUE INTERSECTION.

CITY OF JACKSONVILLE EROSION CONTROL NOTES

1. CAUTION: ALL UTILITY LOCATIONS ARE APPROXIMATE AND MUST BE LOCATED PRIOR TO CONSTRUCTION.
2. VEGETATION CLEARING WILL BE KEPT TO THE ABSOLUTE MINIMUM NECESSARY FOR CONSTRUCTION.
3. MATERIAL RESULTING FROM EXCAVATION WILL NOT BE PLACED IN SUCH A MANNER THAT IT IS DISPERSED BY CURRENT OR OTHER FORCES. THE MATERIAL SHOULD BE COLLECTED AND CONTAINED AT ONE SITE AS APPROPRIATE.
4. HEAVY EQUIPMENT WORKING IN WETLANDS WILL BE PLACED ON MATS OR LOW GROUND PRESSURE EQUIPMENT USED DURING CONSTRUCTION TO LIMIT SOIL DISTURBANCE TO THE MINIMUM AREA REQUIRED TO INSTALL THE UTILITY.
5. NO STAGING AREAS OR TEMPORARY ACCESS ROADS WILL BE PLACED IN WETLANDS
6. APPROPRIATE SILTATION AND EROSION CONTROLS WILL BE USED AND MAINTAINED IN EFFECTIVE OPERATING CONDITION DURING CONSTRUCTION, AND ALL EXPOSED SOIL AND FILLS WILL BE PERMANENTLY STABILIZED AT THE EARLIEST PRACTICABLE DATE.
7. SEDIMENT CONTROL FENCE (SILT FENCE) SHOULD BE INSTALLED AND MAINTAINED FOR THE DURATION OF THE CONSTRUCTION. SILT FENCE WILL BE INSTALLED ALONG AND WITHIN THE RIGHT-OF-WAY LINE (12 FT. AWAY FROM THE EDGE OF THE RIGHT-OF-WAY), IF A BODY OF WATER OR POTENTIAL WETLAND IS LOCATED WITHIN 60 FT. FROM THE EDGE OF THE RIGHT-OF-WAY. ANY OTHER SITUATIONS WILL BE APPROVED BY ENGINEER.
8. WHEN CONSTRUCTING IN WETLANDS, THE TOP 6 TO 12 INCHES OF THE TRENCH WILL BE BACK FILLED WITH TOP SOIL FROM THE TRENCH.
9. EXCESS MATERIAL WILL BE REMOVED FROM THE WETLAND AND PLACE ON UPLAND AREAS IMMEDIATELY UPON COMPLETION OF CONSTRUCTION.
10. EXPOSED SLOPES OF STREAM BANKS WILL BE RESTORED TO THEIR ORIGINAL CONTOURS AND STABILIZED IMMEDIATELY UPON COMPLETION OF CONSTRUCTION.
11. ANY TEMPORARY FILLS MUST BE REMOVED IN THEIR ENTIRETY AND THE AFFECTED AREAS RETURNED TO THEIR PRE-EXISTING ELEVATION.
12. ANY DISTURBED AREA WILL BE RESEEDED WITH NATIVE GRASS SEED, AND SEDIMENT CONTROL FENCE SHOULD BE REMOVED IMMEDIATELY UPON COMPLETION OF CONSTRUCTION.
13. WHEN CONSTRUCTING IN CITY LIMITS, ALL ROADWAY DRAINS, SUCH AS INLETS NEAR CURBS OR DROP INLETS ON ROADWAYS WHICH ARE LOCATED WITHIN THE RIGHT-OF-WAY, SHALL BE PROTECTED WITH TYPICAL INLET SEDIMENT FILTERS. THESE FILTERS WILL BE REMOVED IMMEDIATELY UPON COMPLETION OF CONSTRUCTION.
14. ALL CABLE MARKERS TO BE PLACED AS FAR BACK TO RIGHT-OF-WAY LINE AS POSSIBLE.

FDOT GENERAL NOTES

1. ALL WORK PERFORMED WITHIN THE FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY SHALL CONFORM TO THE MOST CURRENT EDITION OF THE FOLLOWING PUBLICATIONS:
   a. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (ENGLISH).
   b. FDOT STANDARDS INDEX (ENGLISH)
   c. FDOT PLANS PREP MANUAL
   d. FDOT FLEXIBLE PAVEMENT DESIGN MANUAL FOR NEW CONSTRUCTION AND PAVEMENT REHABILITATION
   e. FDOT UTILITY ACCOMMODATION MANUAL
2. SHOULD A CONFLICT ARISE BETWEEN THE DETAILS SHOWN IN THE PLANS AND THE DEPARTMENT OF TRANSPORTATION STANDARDS THE ENGINEER/ PERMITTEE SHALL IMMEDIATELY CONFER WITH THE DEPARTMENT'S ENGINEER IN ORDER TO RESOLVE THE DISCREPANCY. IN NO CASE WILL ANYTHING LESS THAT THE DEPARTMENT'S MINIMUM STANDARD BE ALLOWED.
3. ALL TRAFFIC STRIPING AND MARKINGS ARE TO BE LEAD-FREE, NON-SOLVENT BASED THERMOPLASTIC.
4. REMOVAL OF EXISTING STRIPING SHALL BE ACCOMPLISHED USING THE "HYDRO-BLAST" METHOD. IF THIS PROCESS DAMAGES/SCARS PAVEMENT, THEN THE PAVEMENT SHALL BE MILLED AND RESURFACED PER FDOT STANDARDS.
5. EXISTING PAVED SHOULDER SHALL BE REMOVED FULL DEPTH PRIOR TO WIDENING OF THE ROADWAY.
6. ALL CURB AND GUTTER AND SIDEWALK WILL BE REMOVED AND REPLACED JOINT TO JOINT.
7. TEMPORARY STABILIZE SIDEWALK AT END OF WORK DAY AND REOPEN. PERMANENT REPAIR WITHIN 7 DAYS. SIDEWALK REPLACEMENT FROM JOINT TO JOINT.
8. ALL DISTURBED AREA WITH THE DEPARTMENT OF TRANSPORTATION RIGHT OF WAY WILL RESTORED TO ORIGINAL OR BETTER CONDITION BY GRADING AND SODDING THE AREA DISTURBED (BERMUDA IN RURAL, CENTIPEDE IN UTILITY STRIPS).
9. BURNING OF MATERIAL AND/OR DEBRIS IS PROHIBITED WITHIN FDOT RIGHT-OF-WAY.
10. ALL LANES MUST BE OPENED FOR TRAFFIC DURING AN EVACUATION NOTICE OF A HURRICANE OR OTHER CATASTROPHIC EVENT AND SHALL REMAIN OPEN FOR THE DURATION OF THE EVACUATION OR EVENT.
11. THE FDOT REGIONAL DISTRICT 2 - JACKSONVILLE OFFICE CAN BE CONTACTED AT (904) 360-5400.
12. JEA & FDOT INSPECTOR MUST BE ON SITE TO VERIFY VALVE PLACEMENT, LOCATION, & GRADE. (VALVES TO BE LOCATED OUTSIDE OF DITCH LINE AS TO NOT IMPEDE FUTURE MAINTENANCE OF SAID DITCHES.)

DETAIL NUMBER — XX
SHEET NUMBER — XX-X

GENERAL LEGEND

	EXISTING	PROPOSED
RIGHT OF WAY LINE		
FENCE (HEIGHT & MAT'L. INDICATED)	6' CHAIN LINK	6' CHAIN LINK
DITCH OR SWALE		
SPOT ELEVATION	x (100.00)	x 100.00
WETLAND FLAG	WF D-26	
IRON PIPE	I.P.	
CONCRETE MONUMENT	CM	
SOIL BORING AT PROPOSED FM (NUMBER INDICATED)	FM-XX	
SOIL BORING AT PROPOSED HDD (NUMBER INDICATED)	HDD-XX	
TEST HOLE (NUMBER INDICATED)	TH-XX	
ASPHALT OR CONCRETE CORE SAMPLE (NUMBER INDICATED)	PC-XX	
BENCHMARK (NUMBER INDICATED)	BM-XX	
CONTROL POINT (NUMBER INDICATED)	CP-XX	
EXPLORATORY HOLE (NUMBER INDICATED)	EH-XX	
GROUND MONITORING WELL	GW-XX	
SIGN - TYPE INDICATED	OR SIGN	
BUSH, SHRUB OR HEDGE	SHRUB	
SILT BERM		
SILT FENCE		
TREE, SIZE & TYPE INDICATED	12" O	
MAIL BOX	MB	
SPRINKLER HEAD		
POST (AS NOTED)		
BOLLARD/POST (AS NOTED)		
SIDEWALK		
JACK AND BORE/ HDD PIT AREA		
FULL DEPTH TRENCH AND PAVEMENT REPLACEMENT		
MILL AND OVERLAY		
CURB REMOVAL AND REPLACEMENT		
ASPHALT ACCESS ROAD REPLACEMENT		
UNPAVED ROAD REPLACEMENT		
DRIVEWAY REPAIR - GRASS		
DRIVEWAY REPAIR - GRAVEL		
DRIVEWAY REPAIR - ASPHALT/CONCRETE		

UTILITY SYMBOLS

	EXISTING
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)
POWER POLE	
GUY WIRE	
TRAFFIC SIGNAL POLE	TS
WATER METER	WM
WATER METER WITH TOUCHREAD	WM(TR)
TELEPHONE BOX	T
CATV BOX	CATV
GAS VALVE	
TELEPHONE MANHOLE	TEL
DRAINAGE MANHOLE	SD
ELECTRIC MANHOLE	E
SANITARY MANHOLE	SAN
UNKNOWN MANHOLE	
SANITARY SEWER VALVE	SAN
NON-POTABLE WATER VALVE	WPB
WATER VALVE COVER	WATER
WATER METER	W
WATER VALVE	WATER
UTILITY SERVICE BOX	
GAS MARKER	GAS MRKR

UTILITY SYMBOLS (CONT.)

	EXISTING	PROPOSED
DRAIN PIPE	D D	
CATCH BASIN		
STORM DRAIN GRATE		
CULVERT (SIZE & MAT'L. INDICATED)	18" CMP	
CULVERT W/ENDWALLS (SIZE & MAT'L. INDICATED)	18" CMP	
UNDERGROUND CABLE TV	CATV	
UNDERGROUND GAS LINE	G	
BURIED TELEPHONE	BT	
BURIED ELECTRIC LINE	BE	
BURIED FIBER OPTIC	BFO	
OVERHEAD ELECTRIC LINE	OHE	
OVERHEAD TELEPHONE LINE	OT	
TRAFFIC SENSOR	TS	
UNDERGROUND UNKNOWN UTILITY	UNK	
GATE VALVE		
FIRE HYDRANT		
REDUCER		
FLUSHING MANUAL AIR RELEASE VALVE/ TEMPORARY SAMPLE TEST TAP		
STORM SEWER (SIZE & MAT'L. INDICATED)	SD 12" RCP	
WATER MAIN (SIZE & MAT'L. INDICATED)	W 6" PVC	
GRAVITY SEWER (SIZE & MAT'L. INDICATED)	8" PVC	
SEWER FORCE MAIN (SIZE & MAT'L. INDICATED)	FM 10" PVC	
RECLAIMED WATER (SIZE & MAT'L. INDICATED)	RE 10" PVC	

ABBREVIATIONS:

AC	ASBESTOS CEMENT	EXP JT	EXPANSION JOINT	PRM	PERMANENT REFERENCE MONUMENT
AG	ALLEY GRATE	F	FILL	PVC	POLYVINYL CHLORIDE
B	BASE LINE	FH	FIRE HYDRANT	r	RADIUS
BM	BENCH MARK	FL	FLOW LINE	R	RATE
BC	BOTTOM OF CURVE	FM	FORCE MAIN	RE	RECLAIMED WATER
BE	BURIED ELECTRIC	FO & FOC	FIBER OPTIC CABLE UNDERGROUND	RCP	REINFORCED CONCRETE PIPE
BT	BURIED TELEPHONE	FOTC	FIBER OPTIC TOWER CLOUD	RT	RIGHT
CATV	CABLE TV UNDERGROUND		UNDERGROUND	R/W	RIGHT OF WAY
CB	CATCH BASIN	GALV / GLV	GALVANIZED	RD	ROOF DRAIN
CI	CAST IRON	G	GAS LINE	SJC	ST. JOHNS COUNTY
℄	CENTER LINE	GV	GAS VALVE	SJRWMD	ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
CEP	CITY ELECTRIC POLE	HDD	HORIZONTAL DIRECTIONAL DRILL	SL	STREET LIGHT POWER
COJ	CITY OF JACKSONVILLE	HDPE	HIGH DENSITY POLYETHYLENE PIPE	S/W	SIDE WALK
CONC	CONCRETE	HW	HEAD WALL	STA	STATION
CONST	CONSTRUCTION	HC	HIGH CURB	TCP	TERRA COTTA PIPE
CMP	CORRUGATED METAL PIPE	ID	INSIDE DIAMETER	TOP	TOP OF PIPE
CMPA	CORRUGATED METAL PIPE ARCH	INT	INTERSECTION	TS	TRAFFIC SENSOR
CPP	CONCRETE POWER POLE	INV	INVERT	UNK	UNKNOWN
CULV	CULVERT	IP	IRON PIPE	USC & GS	UNITED STATES COASTAL & GEODETIC SURVEY
C&G	CURB & GUTTER	IRR	IRRIGATION PIPE	VC	VITRIFIED CLAY
C	CUT	LT	LEFT	WM	WATER MAIN
DBI	DITCH BOTTOM INVERT	MB	MAIL BOX	WV	WATER VALVE
DW OR DR	DRIVEWAY	MH	MANHOLE	WLP	WOOD LIGHT POLE
DI	DUCTILE IRON	NTS	NOT TO SCALE	WPP	WOOD POWER POLE
EOP	EDGE OF PAVEMENT	OD	OUTSIDE DIAMETER	WTP	WOOD TELEPHONE POLE
ELEV	ELEVATION	OHE	OVERHEAD ELECTRIC		
ERCP	ELLIPTICAL REINFORCED CONC. PIPE	OT	OVERHEAD TELEPHONE		

100% SUBMITTAL

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

DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

ABBREVIATIONS, GENERAL LEGEND & SYMBOLS

PROJ. NO.	502402388
DATE:	JULY 2020
SCALE:	NTS

NO. SHEETS 88
SHEET NO. 2
DRAWING NO. G-2

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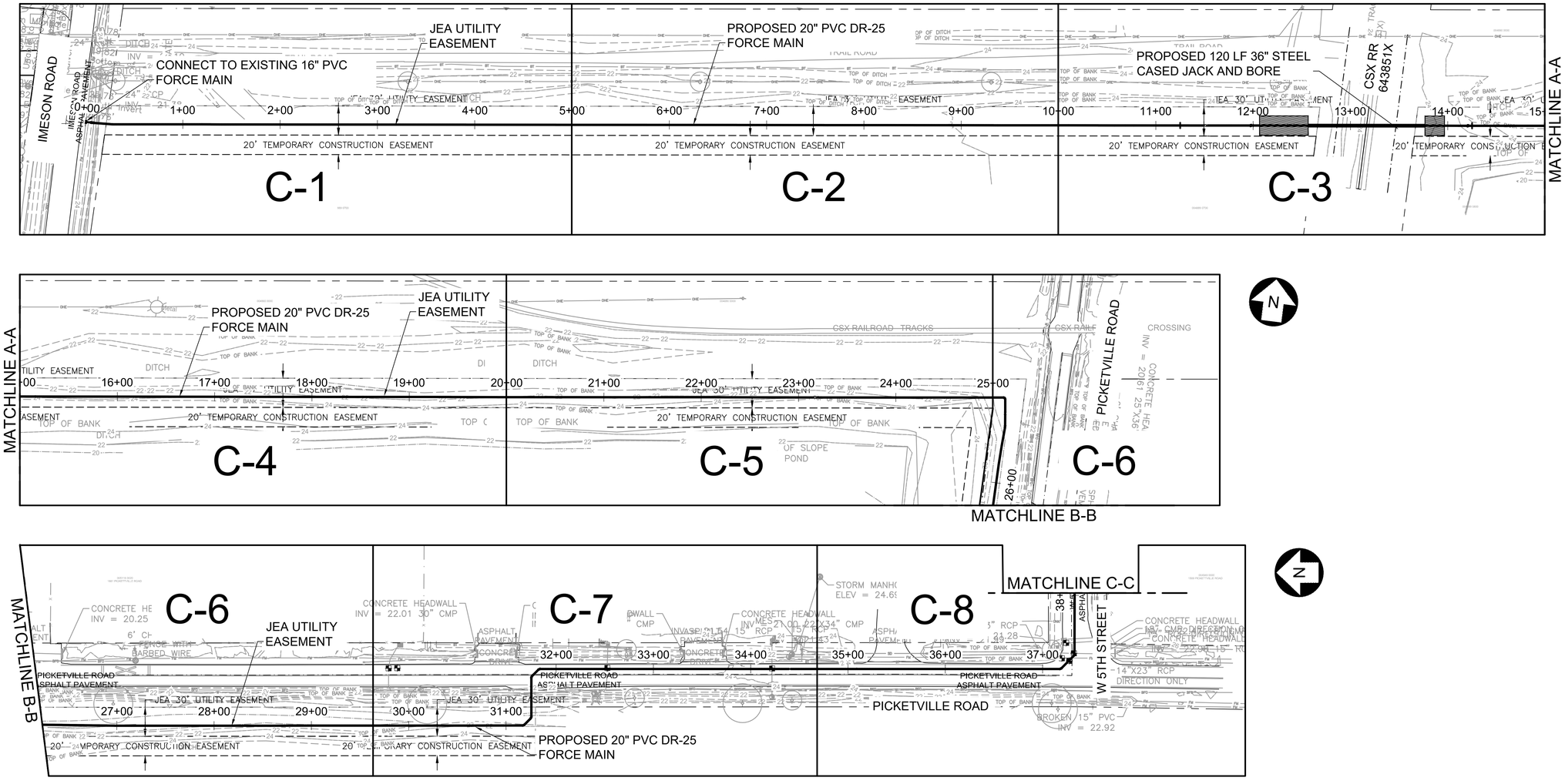

HORZ SCALE: 1" = 60 FT. (22x34)
1" = 120 FT. (11x17)

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NO.	BY	DATE	REVISIONS
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3.			
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1.			

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JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

SHEET KEY PLAN

PROJ. NO.	502402368
DATE:	JULY 2020
SCALE:	AS NOTED
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DRAWING NO.	G-3

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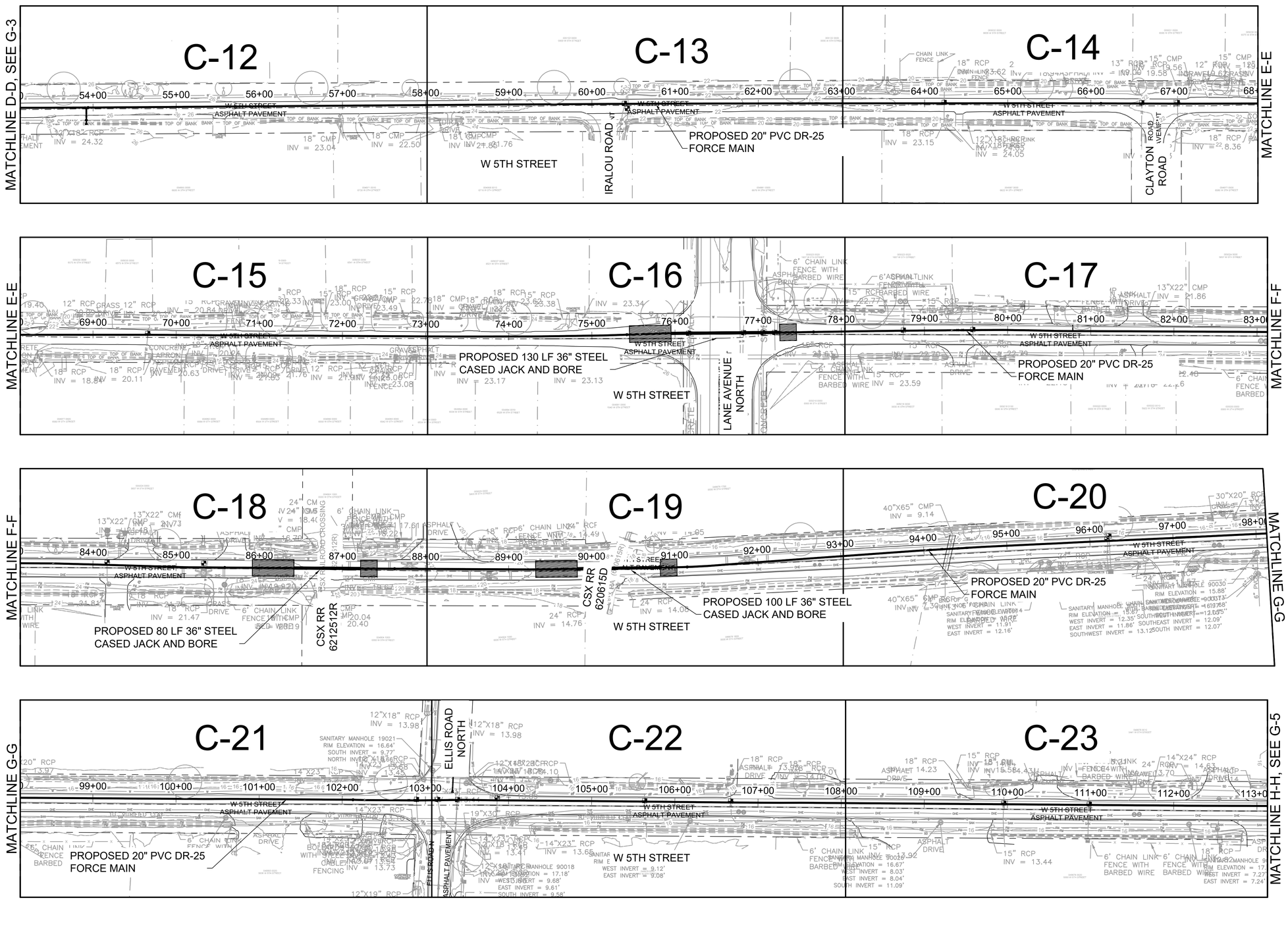

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NO.	BY	DATE	REVISIONS
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1.			

DESIGN ENGINEER
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FLORIDA REGISTRATION NO.
51672

DESIGNER: B. NEU
DRAWN BY: F. NGUYEN
DATE: JULY 2020
CHECKED BY: P. MOURT
DATE: JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

SHEET KEY PLAN

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: AS NOTED

NO. SHEETS 88
SHEET NO. 4
DRAWING NO. G-4

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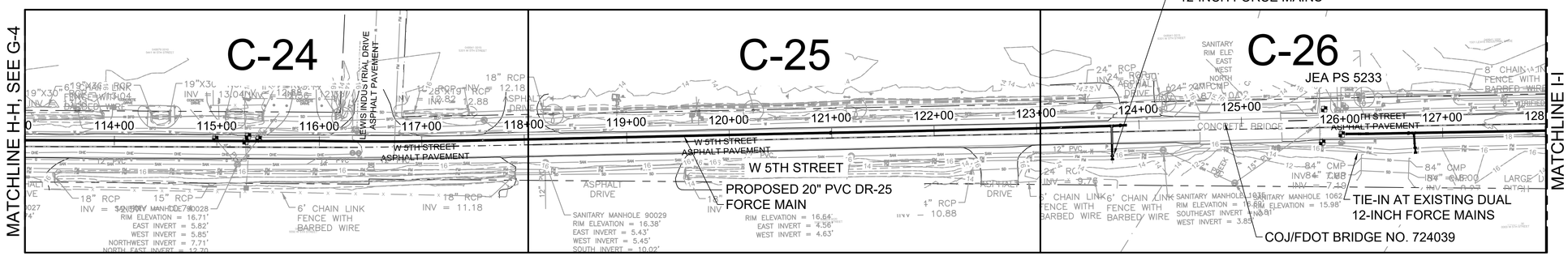

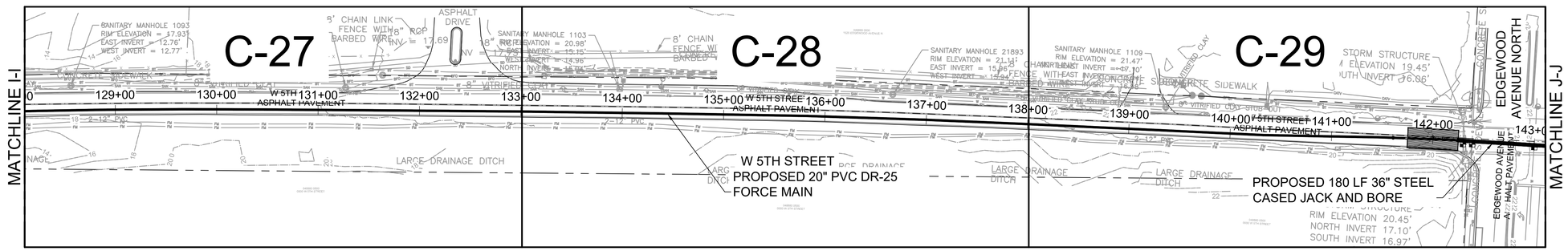

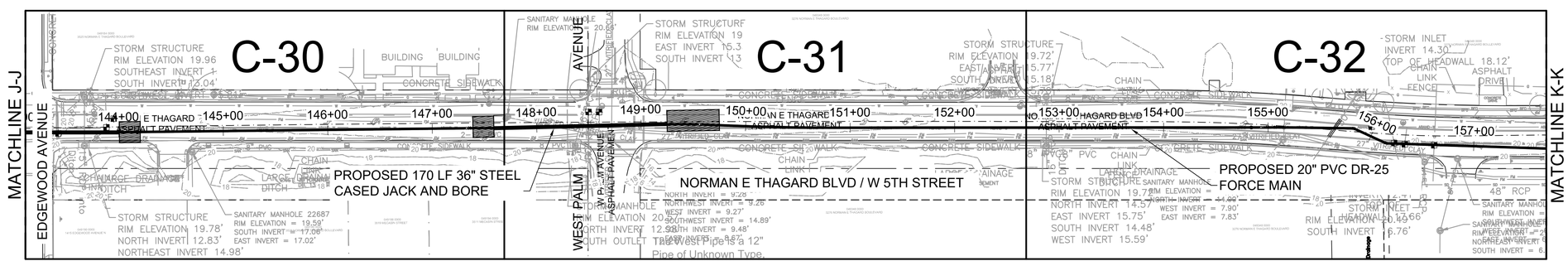

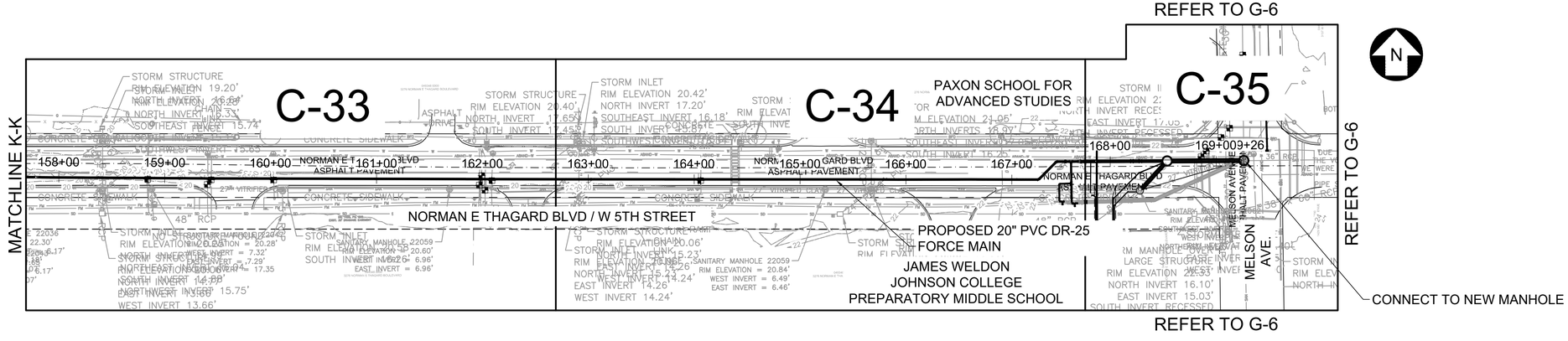

HORZ SCALE: 1" = 60 FT. (22x34)
1" = 120 FT. (11x17)

100% SUBMITTAL

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1800
Architects AA : C000105
Engineers EB : 0000505
Surveyors LB : 0000783
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
6.			
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DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO.
51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

SHEET KEY PLAN

PROJ. NO.	502402368
DATE:	JULY 2020
SCALE:	AS NOTED
NO. SHEETS	88
SHEET NO.	5
DRAWING NO.	G-5

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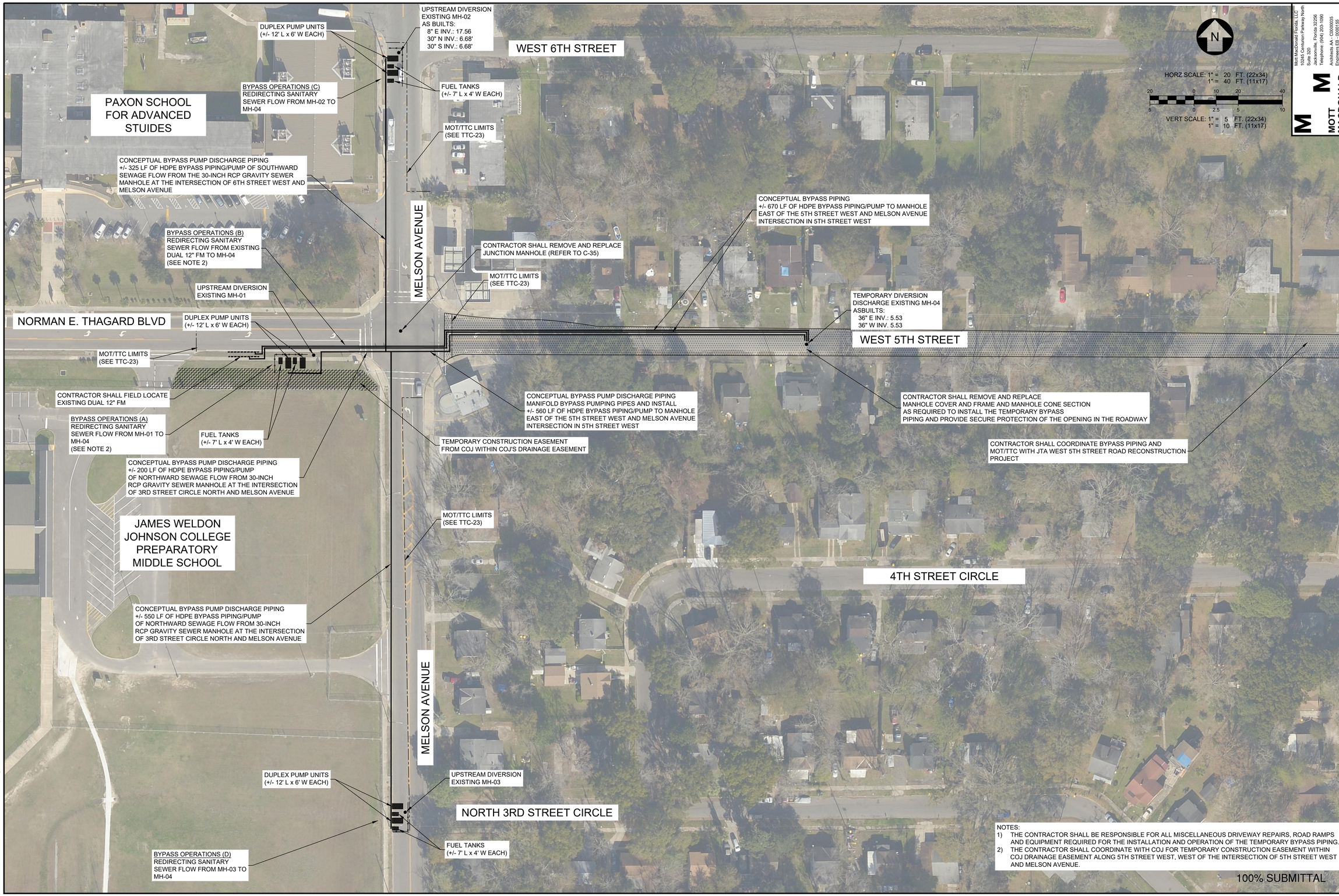
x-Proposed Force Main [..\d0426960\x-Proposed Force Main.dwg]
x-survey [..\d0426960\x-survey.dwg]



NOTES:
1) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MISCELLANEOUS DRIVEWAY REPAIRS, ROAD RAMPS AND EQUIPMENT REQUIRED FOR THE INSTALLATION AND OPERATION OF THE TEMPORARY BYPASS PIPING.
2) THE CONTRACTOR SHALL COORDINATE WITH COJ FOR TEMPORARY CONSTRUCTION EASEMENT WITHIN COJ DRAINAGE EASEMENT ALONG 5TH STREET WEST, WEST OF THE INTERSECTION OF 5TH STREET WEST AND MELSON AVENUE.

100% SUBMITTAL

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Architect AA : C000055
Engineers EB : 0000155
Surveyors LB : 0000763
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
6.			
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DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER: B. NEU
DRAWN BY: F. NGUYEN
DATE: JULY 2020
CHECKED BY: P. MOURT
DATE: JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION
TEMPORARY SEWAGE BYPASS PIPING AND PUMPING - CONCEPTUAL LAYOUT

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: HORIZ. 1" = 20' VERT. 1" = 5'

NO. SHEETS 88
SHEET NO. 6
DRAWING NO. G-6

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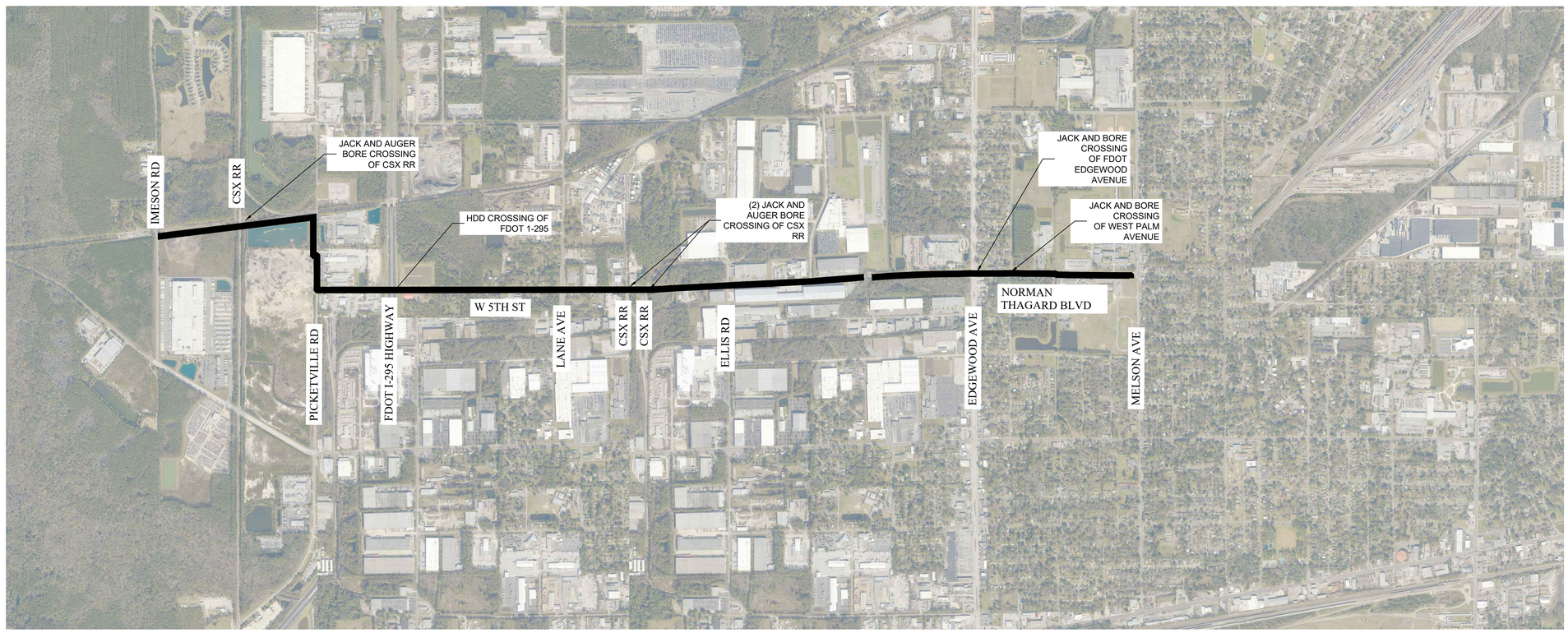
Xrefs Attached= JEA_SHT22x34_BOR [..\d0426985\JEA_SHT22x34_BOR.dwg]

HORZ SCALE: 1" = 1000 FT. (22x34)
1" = 2000 FT. (11x17)

1000 0 500 1000 2000



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Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Architect AA : C000055
Engineers EB : 0000155
Surveyors LB : 0000763
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
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DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO.
51672

DESIGNER: B. NEU
DRAWN BY: F. NGUYEN
DATE: DECEMBER 2019
CHECKED BY: P. MOURT
DATE: DECEMBER 2019

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

PROJECT SCOPE AND LAYOUT

PROJ. NO. 502402368
DATE: JULY 20202
SCALE: NTS

NO. SHEETS 88
SHEET NO. -
DRAWING NO. G-7

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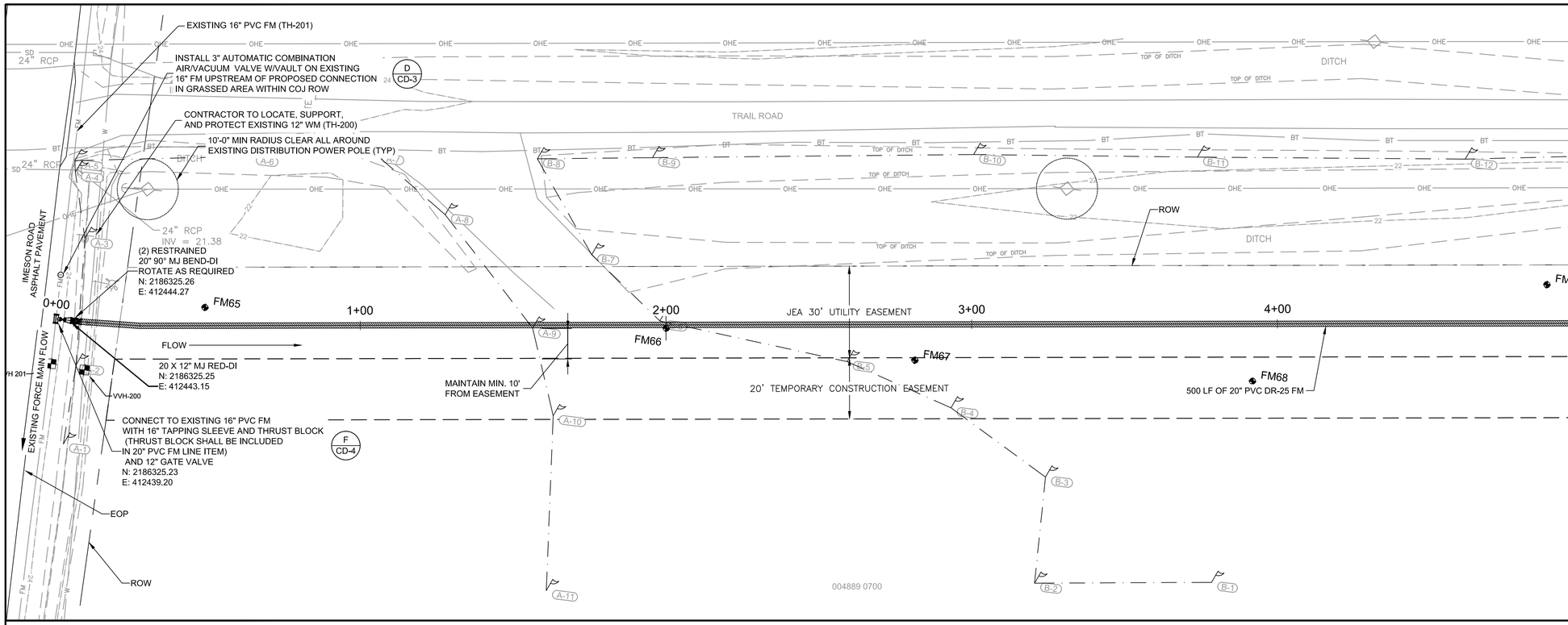
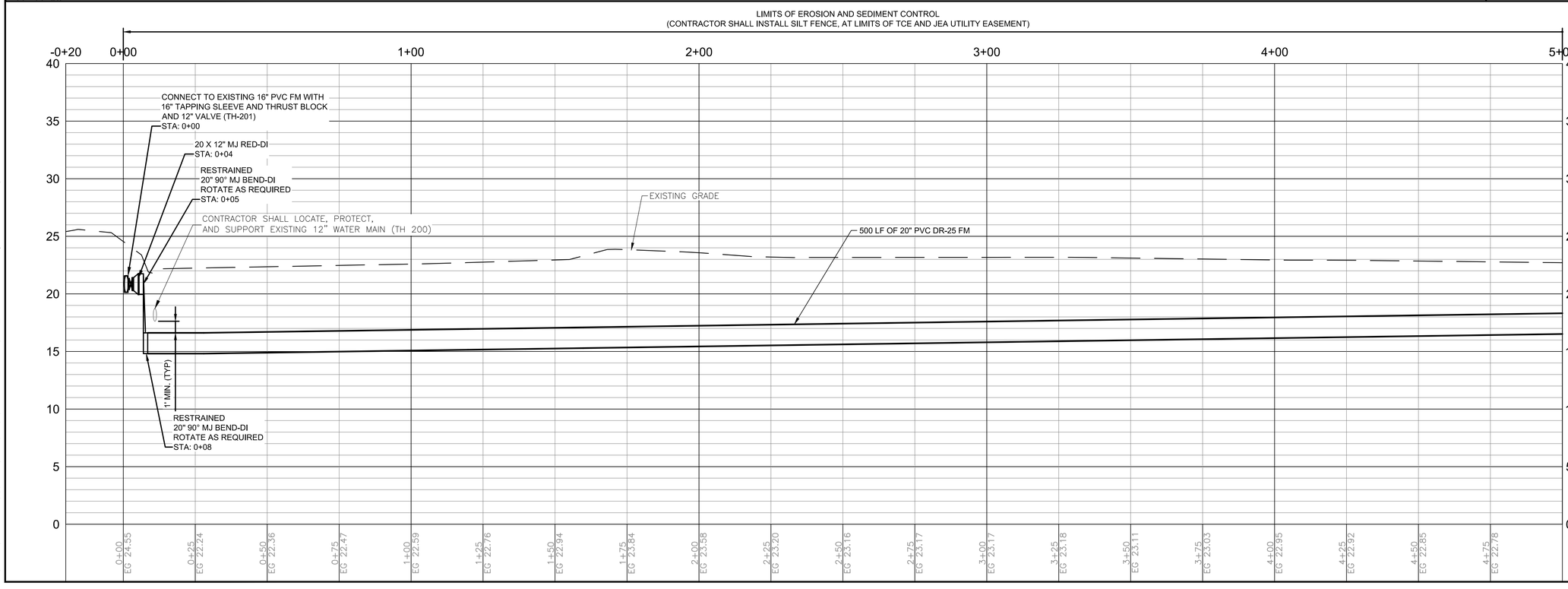
x-Proposed Force Main [..\d0426960\x-Proposed Force Main.dwg]
x-survey [..\d0426960\x-survey.dwg]



HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)



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Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Certificate of Authorization:
Engineers AA - 00000055
Engineers EB - 0000155
Surveyors LB - 0000763
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
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DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community sm

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 0+00 TO STA 5+00

PROJ. NO. 502402368	
DATE:	JULY 2020
SCALE:	HORIZ. 1" = 20' VERT. 1" = 5'

NO. SHEETS 88	
SHEET NO. 7	
DRAWING NO. C-1	

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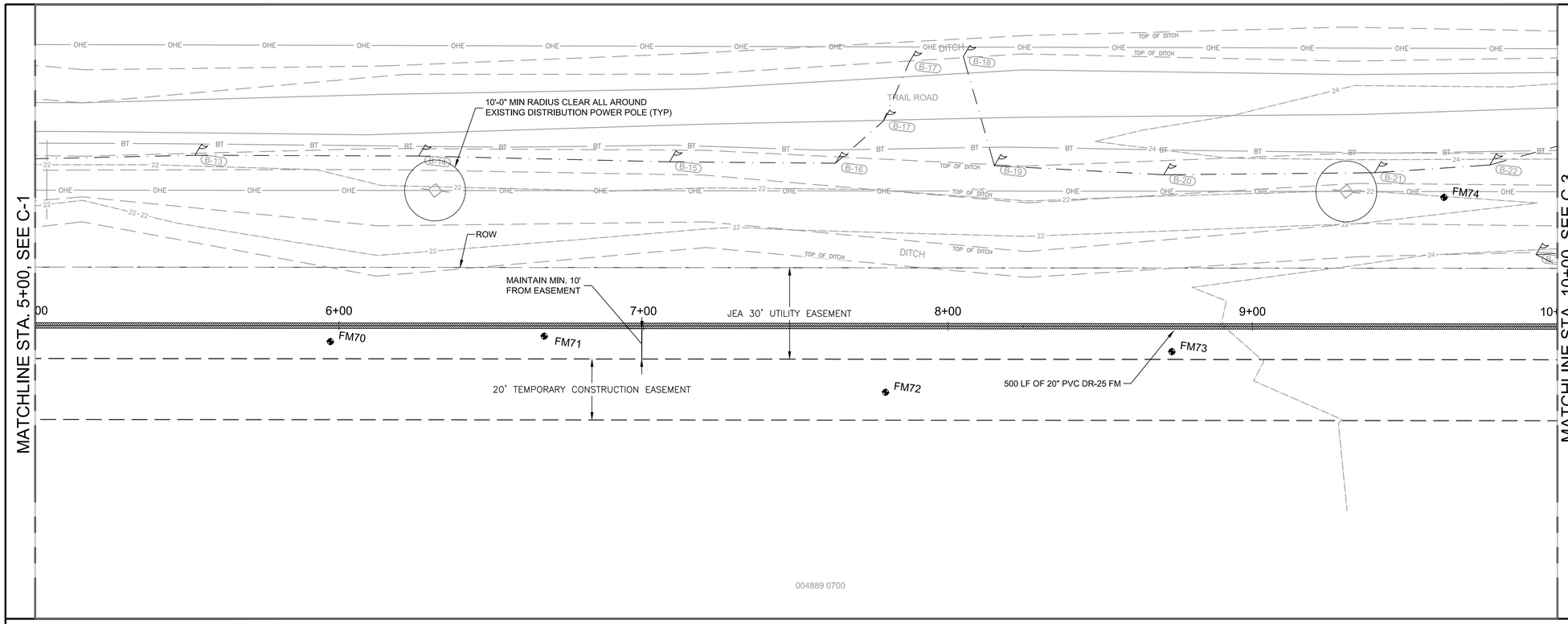

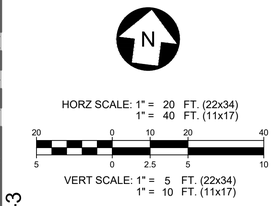

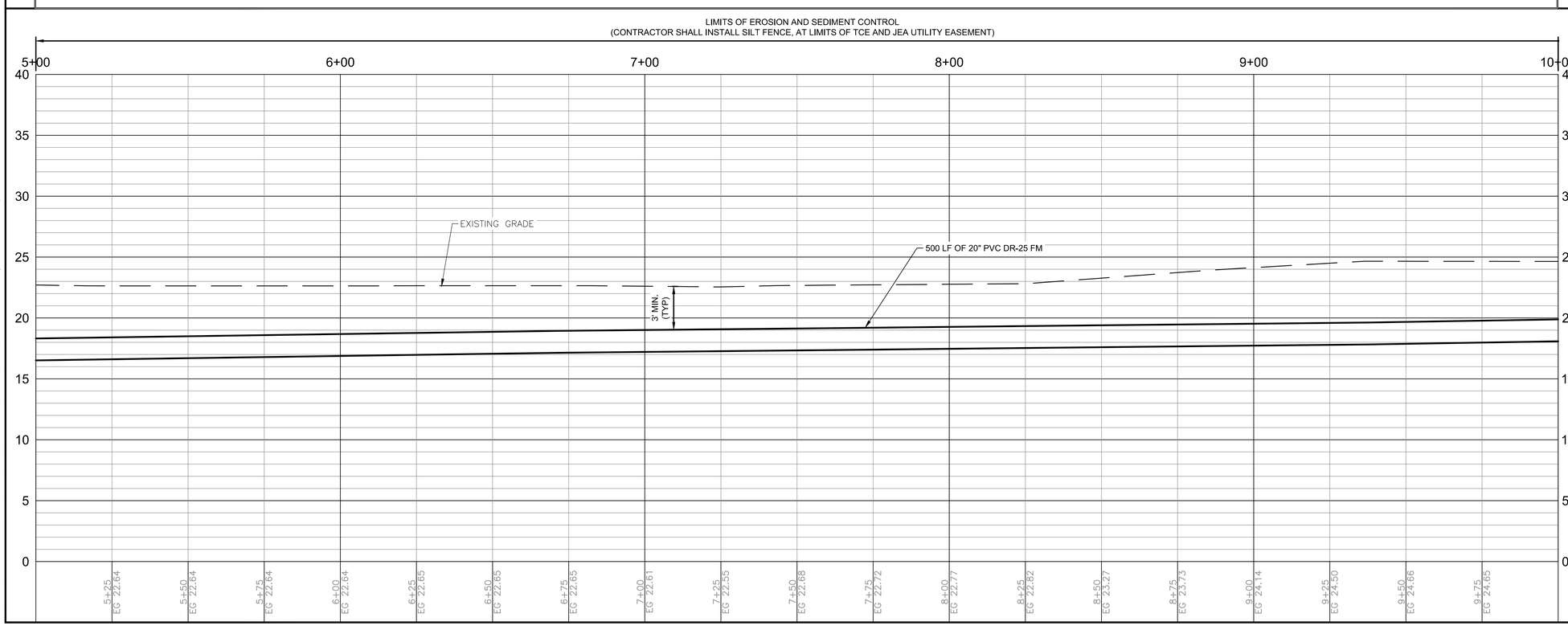

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Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Architect AA - 0026035
Engineers EB - 0000155
Surveyors LB - 0000763
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
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DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO.
51672

DESIGNER: B. NEU
DRAWN BY: F. NGUYEN
DATE: JULY 2020
CHECKED BY: P. MOURT
DATE: JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 5+00 TO STA 10+00

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: HORIZ: 1" = 20' VERT: 1" = 5'

NO. SHEETS 88
SHEET NO. 8
DRAWING NO. C-2

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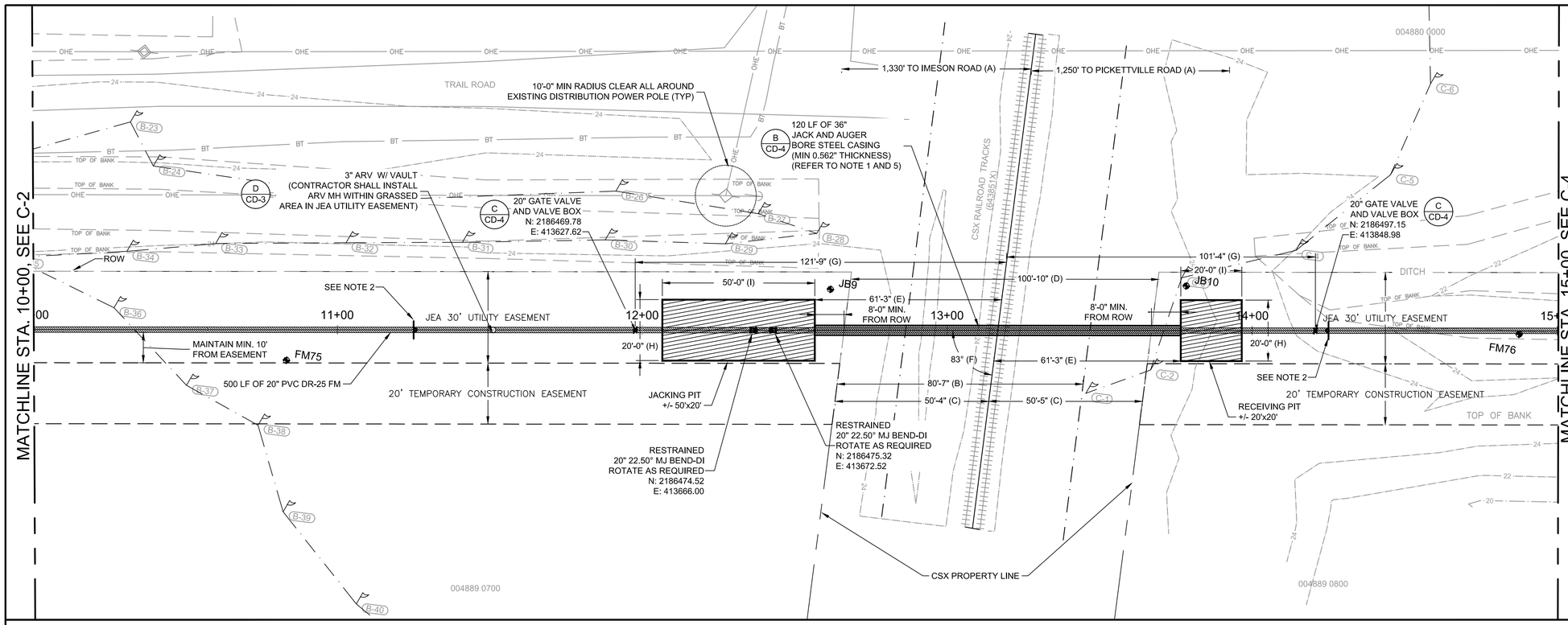

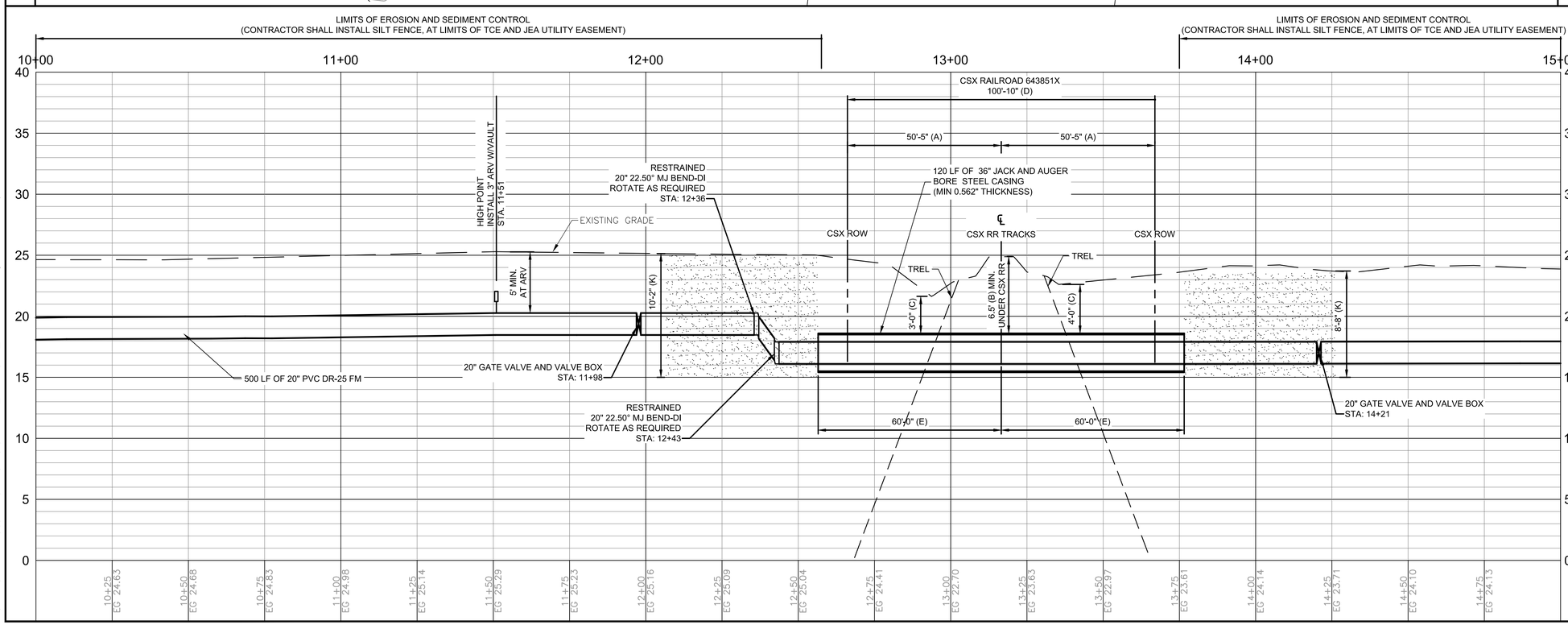

HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

NOTE:

1. CONTRACTOR SHALL FOLLOW ALL CSX REQUIREMENTS AS PER CSX'S LATEST EDITION DESIGN AND CONSTRUCTION STANDARD SPECIFICATIONS. CONTRACTOR SHALL LOCATE AND PROTECT ALL CSX SIGNAL FACILITIES, TRAFFIC CONTROL DEVICES/CONDUITS AND RESTORE CSX RAILROAD PAVEMENT MARKINGS AND SIGNS TO CSX STANDARDS. SEE SHEET CD-9 FOR ADDITIONAL DETAILS.
2. CONTRACTOR SHALL INSTALL WEATHERPROOF SIGN LOCATED OVER THE CENTERLINE OF THE FORCE MAIN AS PER CSX SPECIFICATIONS INCLUDING THE FOLLOWING INFORMATION. CONTRACTOR SHALL SPECIFY FIELD INSTALLED PIPE DEPTH FOR SIGN. CONTRACTOR SHALL SUBMIT SIGN INFORMATION FOR JEA'S APPROVAL BEFORE ORDERING.
   OWNER OF PIPELINE:
   JEA
   21 W CHURCH ST T-4
   JACKSONVILLE, FL, 32202
   20" SANITARY SEWER FORCE MAIN
   MAXIMUM INTERNAL PRESSURE: 165 PSI
   APPROXIMATELY XX' BELOW GRADE
   AT POINT OF A SIGN
   EMERGENCY NUMBER: (904) 665-6000
3. STEEL CASING SHALL HAVE A MINIMUM YIELD STRENGTH OF 35,000 PSI AND CONFORM TO ASTM A139 OR API-5LX GRADE X-42. REFER TO CSX ENGINEERING SPECIFICATIONS FOR ADDITIONAL INFORMATION.
4. THE FRONT OF THE CASING PIPE SHALL BE PROVIDED WITH MECHANICAL ARRANGEMENTS OR DEVICES THAT WILL POSITIVELY PREVENT THE AUGER FROM LEADING THE PIPE SO THAT NO UNSUPPORTED EXCAVATION IS AHEAD OF THE PIPE.
5. CASING PIPE ENDS SHALL BE SEALED PER JEA W/WW STANDARDS (SECTION 429-III.13) AND CSX STANDARDS.
6. DIMENSIONS PAIRED WITH ALPHABETIC LETTERS A-I CORRESPOND TO REQUIREMENTS PER CSX PERMIT APPLICATION.

100% SUBMITTAL

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Architect AA: C000055
Engineers EB: 0000155
Surveyors LB: 0000763
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
6.			
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DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 10+00 TO STA 15+00

PROJ. NO.	502402368
DATE:	JULY 2020
SCALE:	HORIZ: 1" = 20' VERT: 1" = 5'

NO. SHEETS 88
SHEET NO. 9
DRAWING NO. C-3

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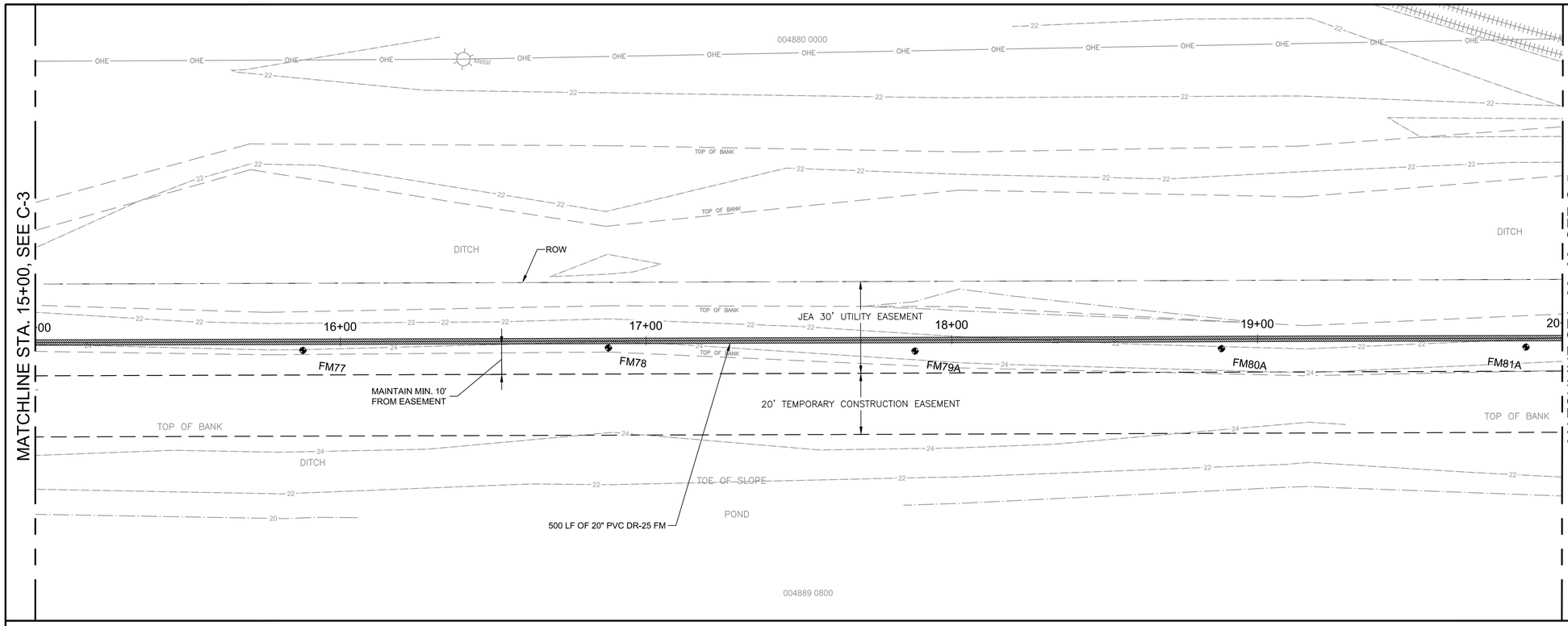
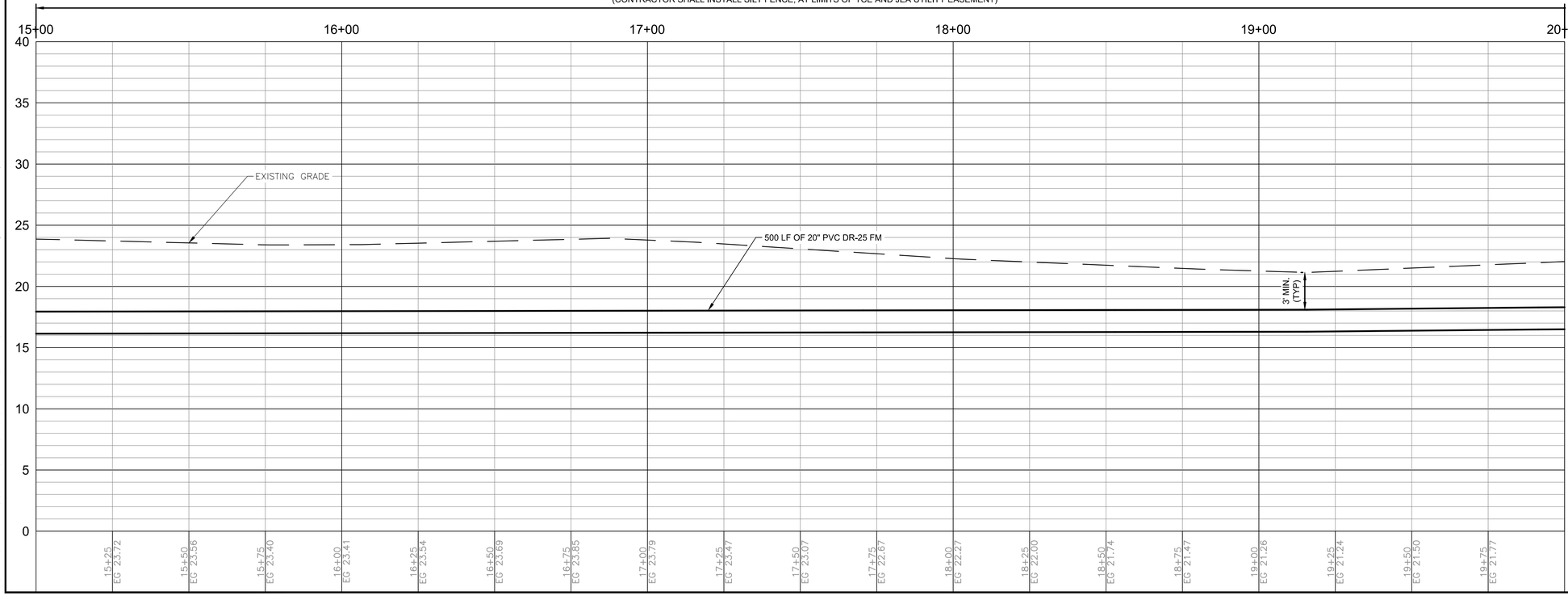


HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

LIMITS OF EROSION AND SEDIMENT CONTROL
(CONTRACTOR SHALL INSTALL SILT FENCE, AT LIMITS OF TCE AND JEA UTILITY EASEMENT)



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Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Architect AA : C000055
Engineers EB : 0000155
Surveyors LB : 0000763
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
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DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO.
51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 15+00 TO STA 20+00

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: HORIZ: 1" = 20' VERT: 1" = 5'

NO. SHEETS 88
SHEET NO. 10
DRAWING NO. C-4

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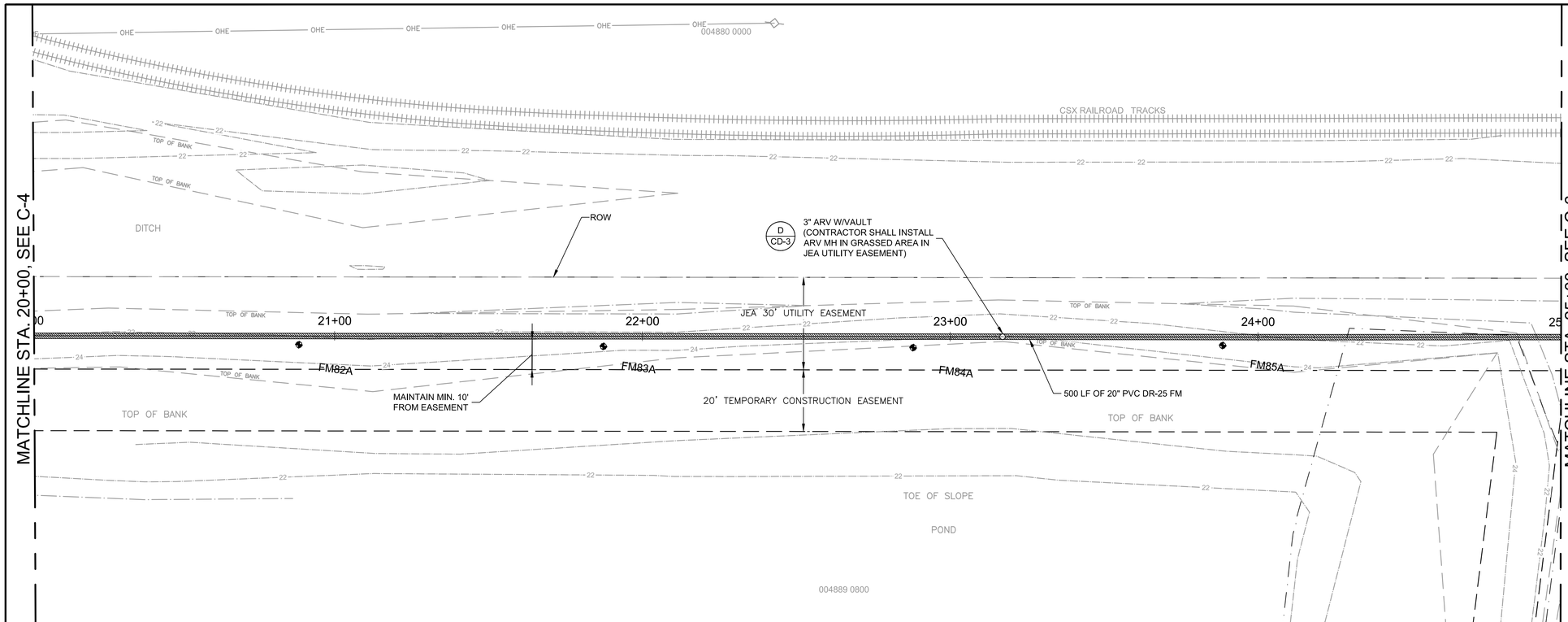

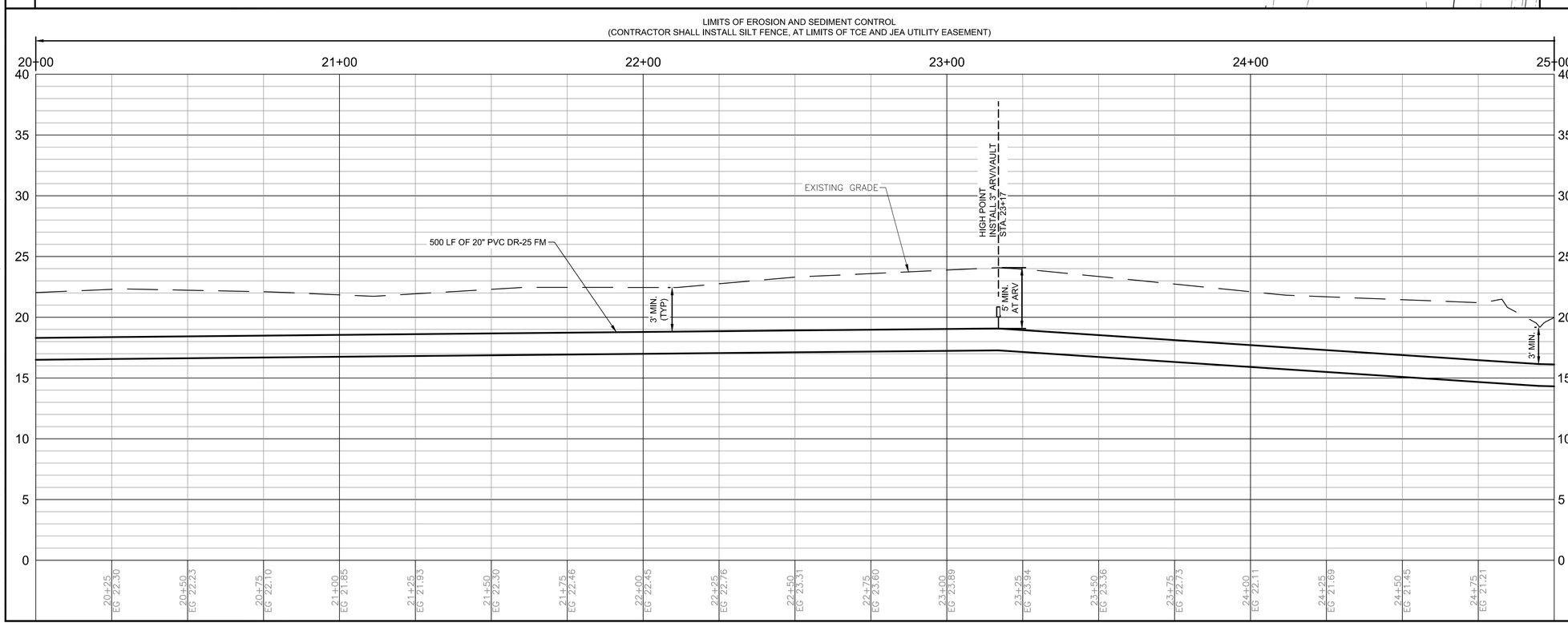

HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Architect AA : 00026055
Engineers EB : 00000155
Surveyors LB : 0000763
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
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DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO.
51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 20+00 TO STA 25+00

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: HORIZ: 1" = 20'
VERT: 1" = 5'

NO. SHEETS 88
SHEET NO. 11
DRAWING NO. C-5

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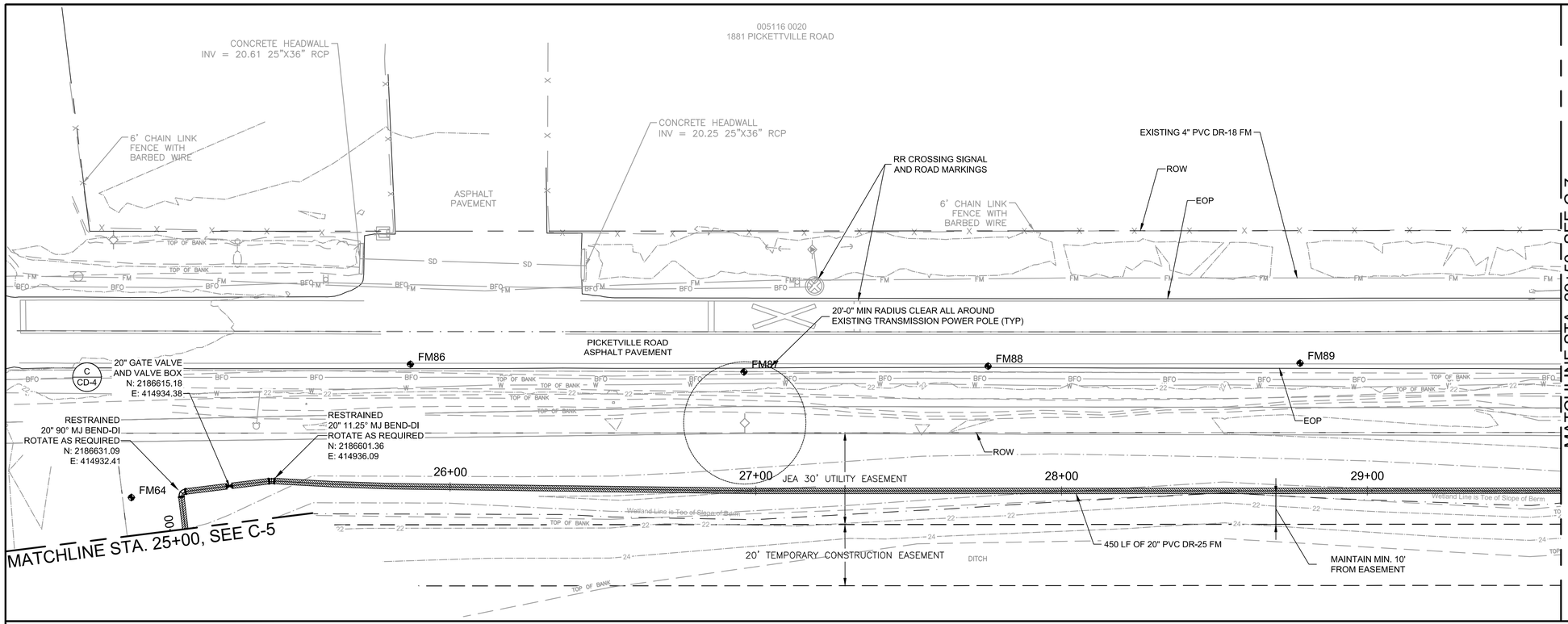
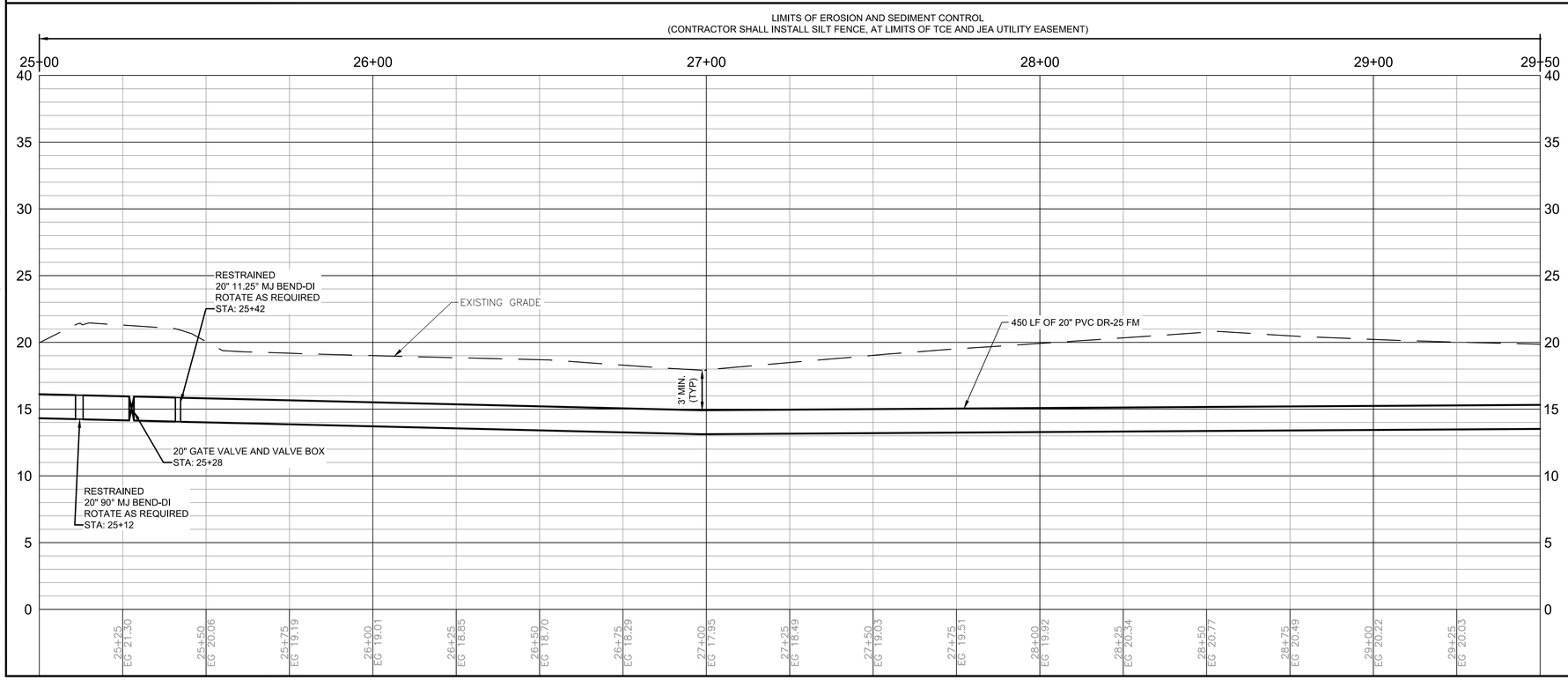


HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.
2. THE CONTRACTOR SHALL NOTE THAT, BETWEEN STATION 25+00 AND 31+00, THE PROPOSED FORCE MAIN WILL BE PARALLEL TO 69KV CIRCUITS 670 AND 665. AT THIS LOCATION, THE LOWEST PHASE CONDUCTOR CLEARANCE IS +/- 42 FEET ABOVE EXISTING GRADE.



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Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Architect AA : C000055
Engineers EB : 0000155
Surveyors LB : 0000763
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
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DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO.
51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 25+00 TO STA 29+50

PROJ. NO.	502402368
DATE:	JULY 2020
SCALE:	HORIZ: 1" = 20' VERT: 1" = 5'

NO. SHEETS	88
SHEET NO.	12
DRAWING NO.	C-6

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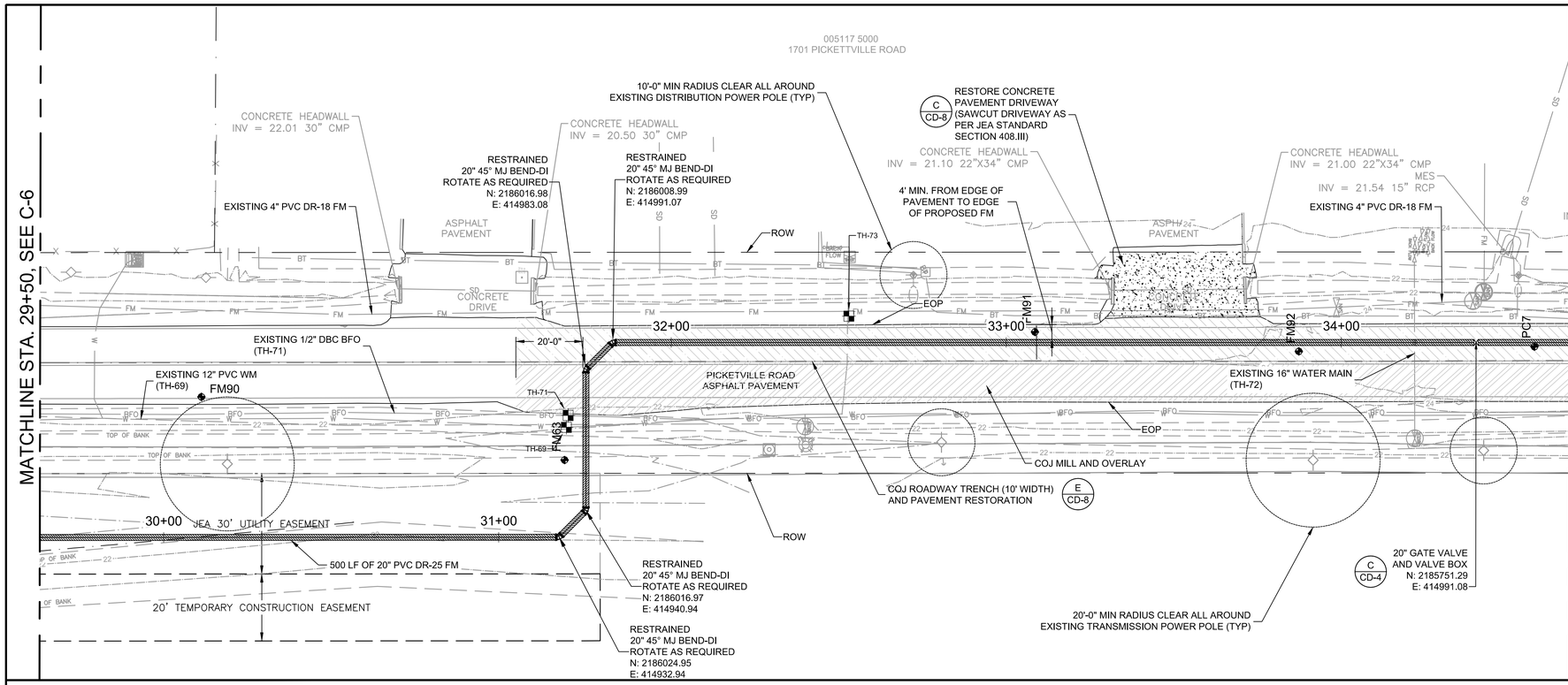

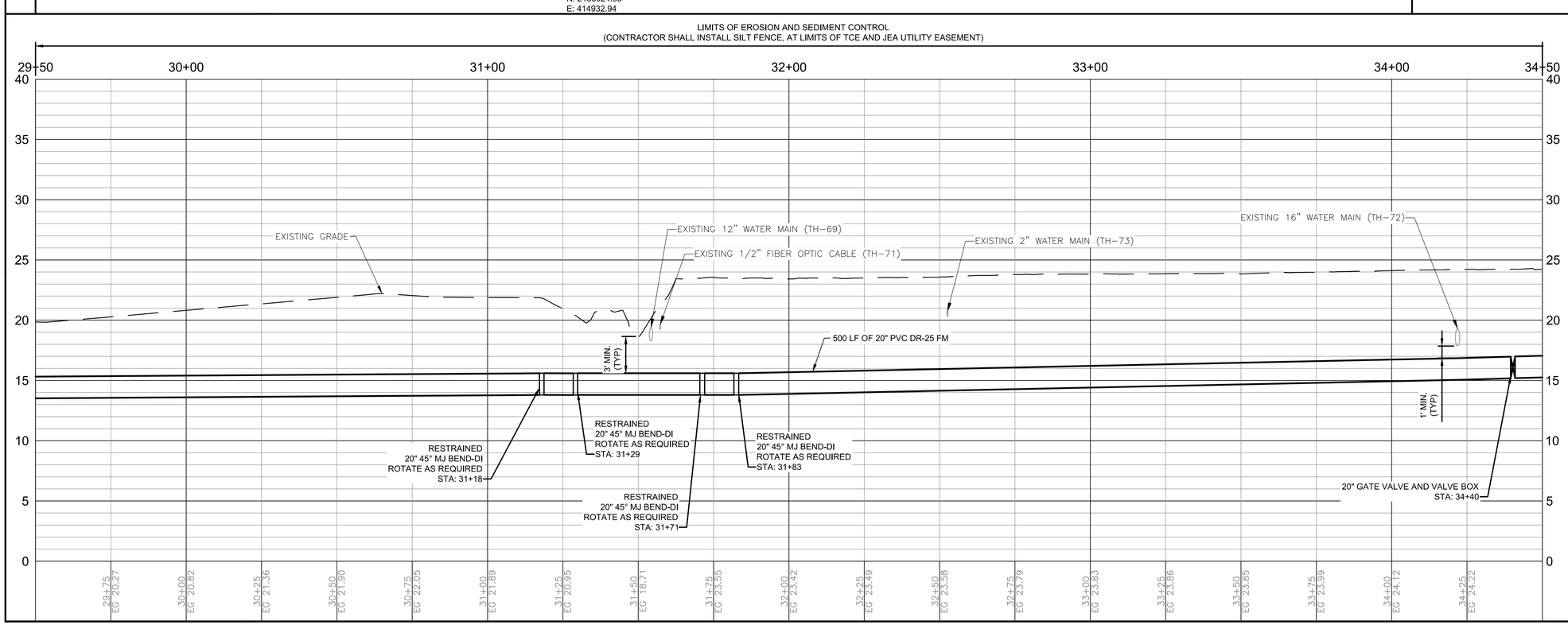

HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.
2. BETWEEN STATION 31+00 AND 32+00, THE PROPOSED FORCE MAIN WILL BE CROSSING UNDERNEATH 69KV CIRCUITS 670 AND 665. AT THIS LOCATION, THE LOWEST PHASE CONDUCTOR CLEARANCE IS +/- 41 FEET ABOVE EXISTING GRADE. SINCE THE CONTRACTOR WILL BE WORKING DIRECTLY UNDERNEATH THE CIRCUITS, WORK HEIGHT CANNOT EXCEED 21 FEET ABOVE GRADE. IF THIS IS NOT FEASIBLE, THE CONTRACTOR SHALL COORDINATE WITH JEA TO SCHEDULE AN OUTAGE ON BOTH CIRCUITS 670 AND 665.
3. THE CONTRACTOR SHALL NOTE THAT BETWEEN STATION 32+00 AND 37+00, THE PROPOSED FORCE MAIN WILL BE PARALLEL TO 69KV CIRCUITS 670 AND 665. AT THIS LOCATION, THE LOWEST PHASE CONDUCTOR CLEARANCE IS +/- 42 FEET ABOVE EXISTING GRADE.

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Firm Numbers AA - 00003605
Engineers EB - 00000155
Surveyors LB - 0000763
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
6.			
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DESIGN ENGINEER: BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER: B. NEU
DRAWN BY: F. NGUYEN
DATE: JULY 2020
CHECKED BY: P. MOURT
DATE: JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 29+50 TO STA 34+50

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: HORIZ: 1" = 20' VERT: 1" = 5'

NO. SHEETS 88
SHEET NO. 13
DRAWING NO. C-7

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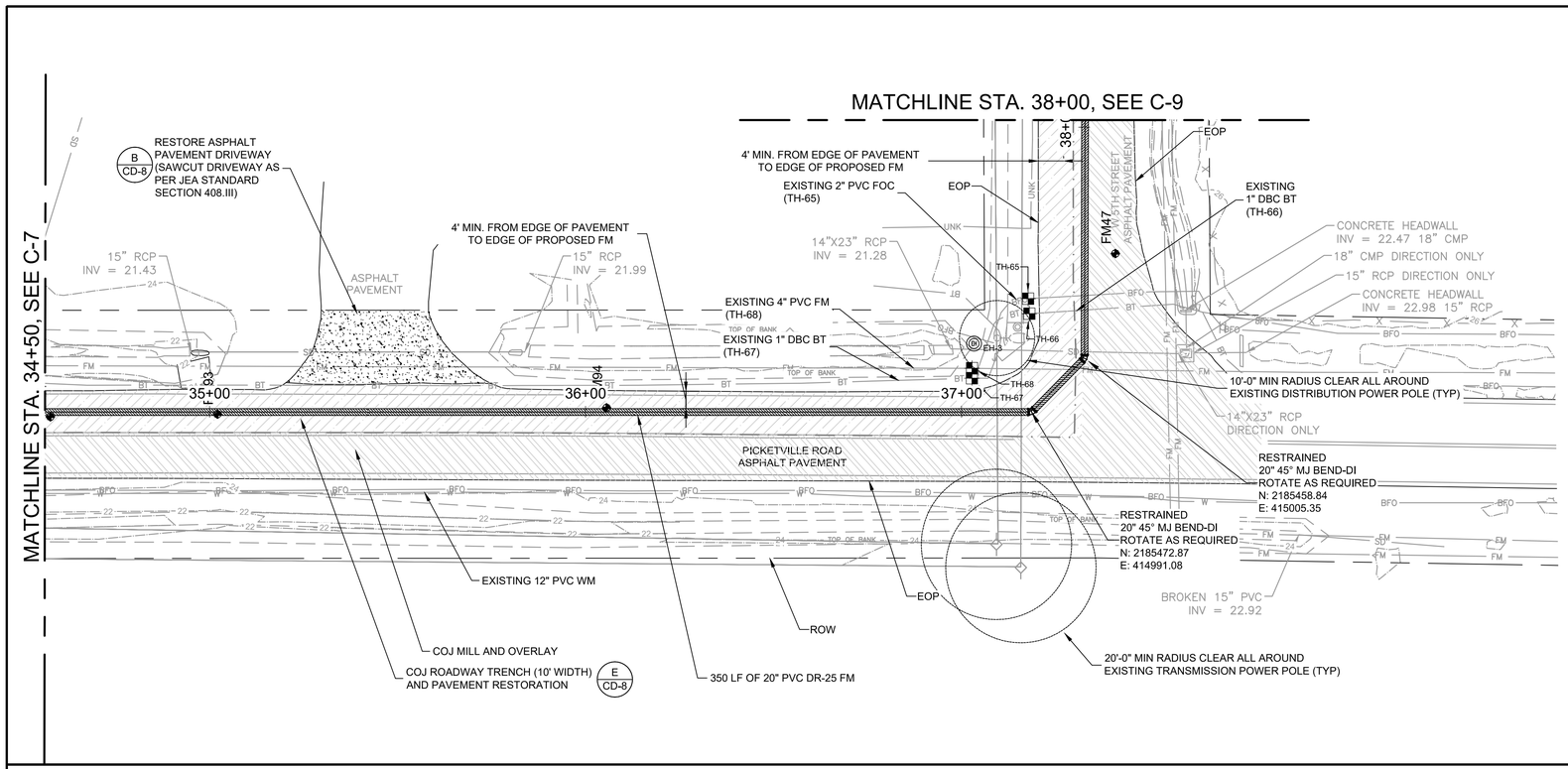

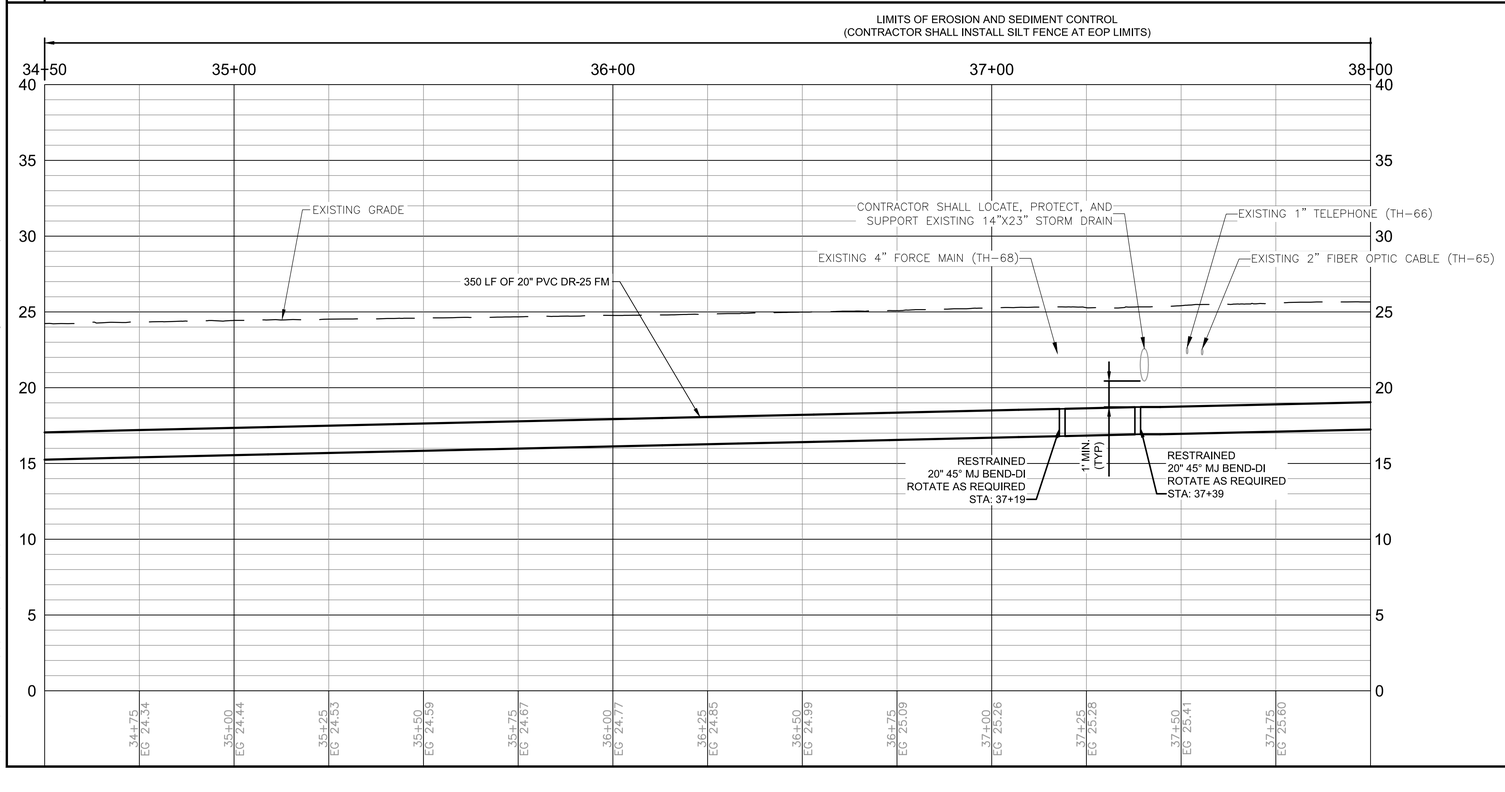

HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.
2. THE CONTRACTOR SHALL NOTE THAT BETWEEN STATION 32+00 AND 37+00, THE PROPOSED FORCE MAIN WILL BE PARALLEL TO 69KV CIRCUITS 670 AND 665. AT THIS LOCATION, THE LOWEST PHASE CONDUCTOR CLEARANCE IS +/- 42 FEET ABOVE EXISTING GRADE.
3. BETWEEN STATION 37+00 AND 37+30, THE PROPOSED FORCE MAIN WILL BE CROSSING UNDERNEATH 69KV CIRCUITS 670 AND 665. AT THIS LOCATION, THE LOWEST PHASE CONDUCTOR CLEARANCE IS +/- 51 FEET ABOVE EXISTING GRADE. SINCE THE CONTRACTOR WILL BE WORKING DIRECTLY UNDERNEATH THE CIRCUITS, WORK HEIGHT CANNOT EXCEED 31 FEET ABOVE GRADE. IF THIS IS NOT FEASIBLE, THE CONTRACTOR SHALL COORDINATE WITH JEA TO SCHEDULE AN OUTAGE ON BOTH CIRCUITS 670 AND 665.
4. THE CONTRACTOR SHALL NOTE THAT BETWEEN STATION 37+30 AND 47+00, THE PROPOSED FORCE MAIN WILL BE PARALLEL TO 69KV CIRCUITS 670 AND 665. AT THIS LOCATION, THE LOWEST PHASE CONDUCTOR CLEARANCE IS +/- 44 FEET ABOVE EXISTING GRADE.

100% SUBMITTAL

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Firm Numbers AA - 00003605
Engineers EB - 0000155
Surveyors LB - 0000763
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
6.			
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DESIGN ENGINEER: BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER: B. NEU
DRAWN BY: F. NGUYEN
DATE: JULY 2020
CHECKED BY: P. MOURT
DATE: JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 34+50 TO STA 38+00

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: HORIZ: 1" = 20' VERT: 1" = 5'

NO. SHEETS 88
SHEET NO. 14
DRAWING NO. C-8

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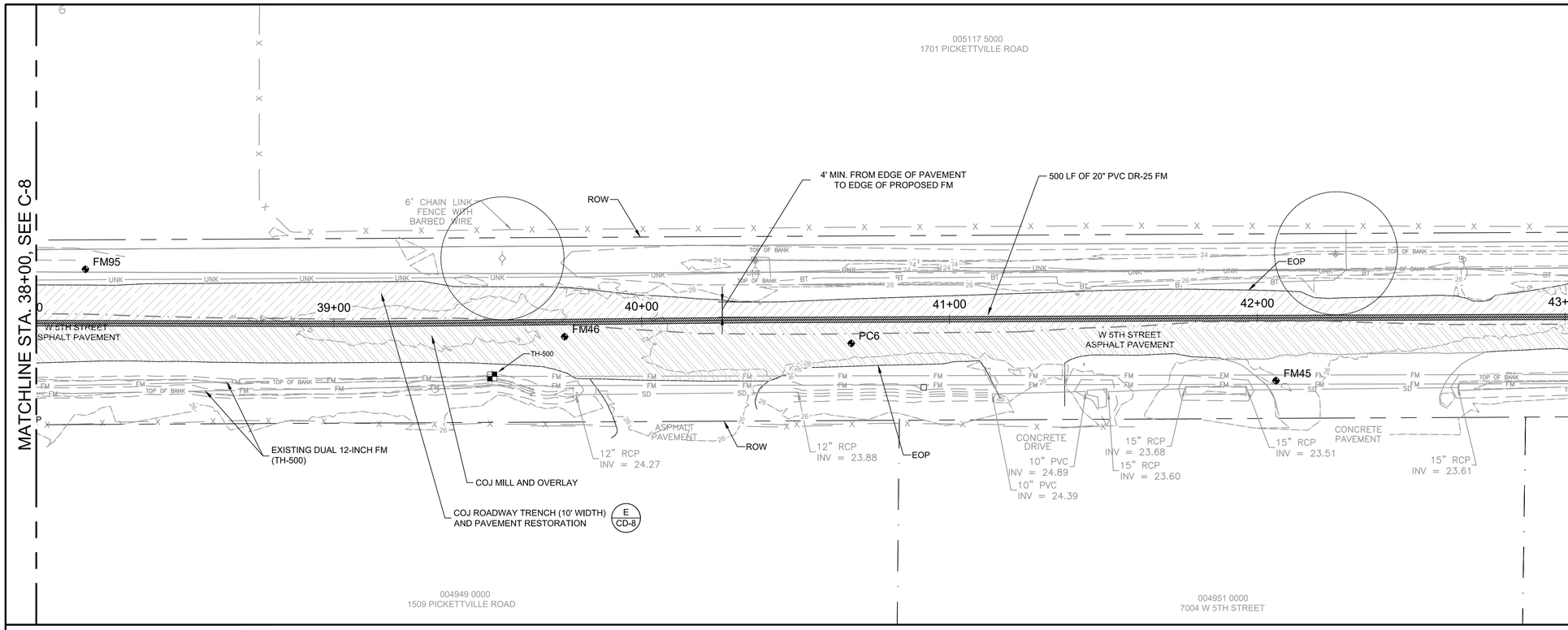

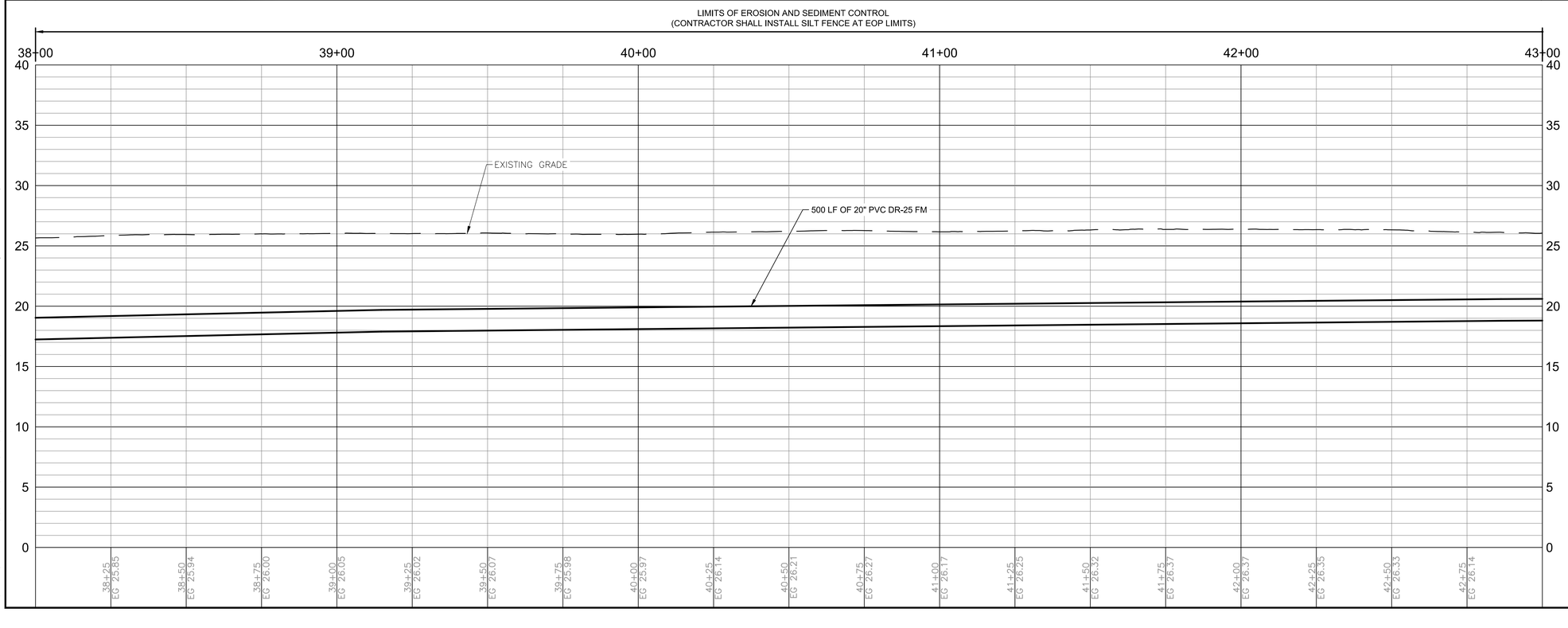

HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.
2. THE CONTRACTOR SHALL NOTE THAT BETWEEN STATION 37+30 AND 47+00, THE PROPOSED FORCE MAIN WILL BE PARALLEL TO 69KV CIRCUITS 670 AND 665. AT THIS LOCATION, THE LOWEST PHASE CONDUCTOR CLEARANCE IS +/- 44 FEET ABOVE EXISTING GRADE.

100% SUBMITTAL

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Certificate of Authorization:
Engineers AA - 00000055
Engineers EB - 00001155
Surveyors LB - 0000763
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
6.			
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DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO.
51672

DESIGNER: B. NEU
DRAWN BY: F. NGUYEN
DATE: JULY 2020
CHECKED BY: P. MOURT
DATE: JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 38+00 TO STA 43+00

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: HORIZ: 1" = 20' VERT: 1" = 5'

NO. SHEETS 88
SHEET NO. 15
DRAWING NO. C-9

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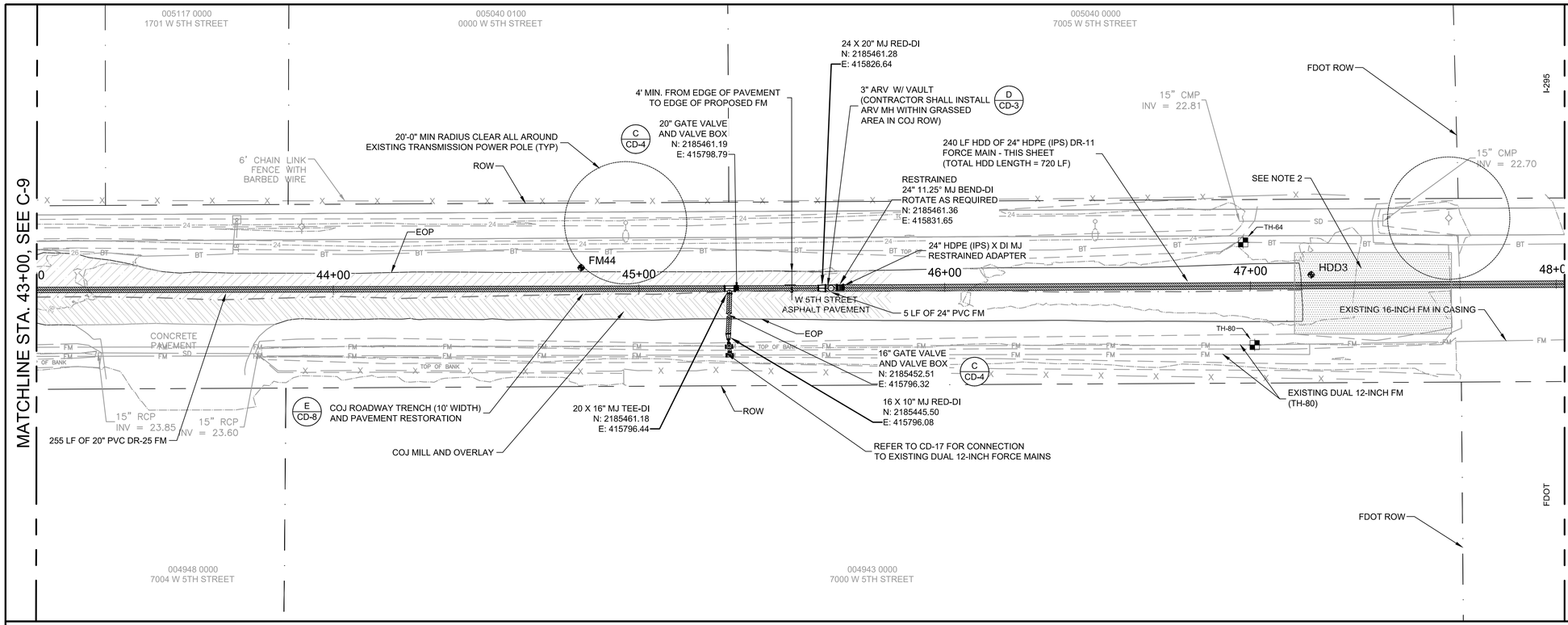
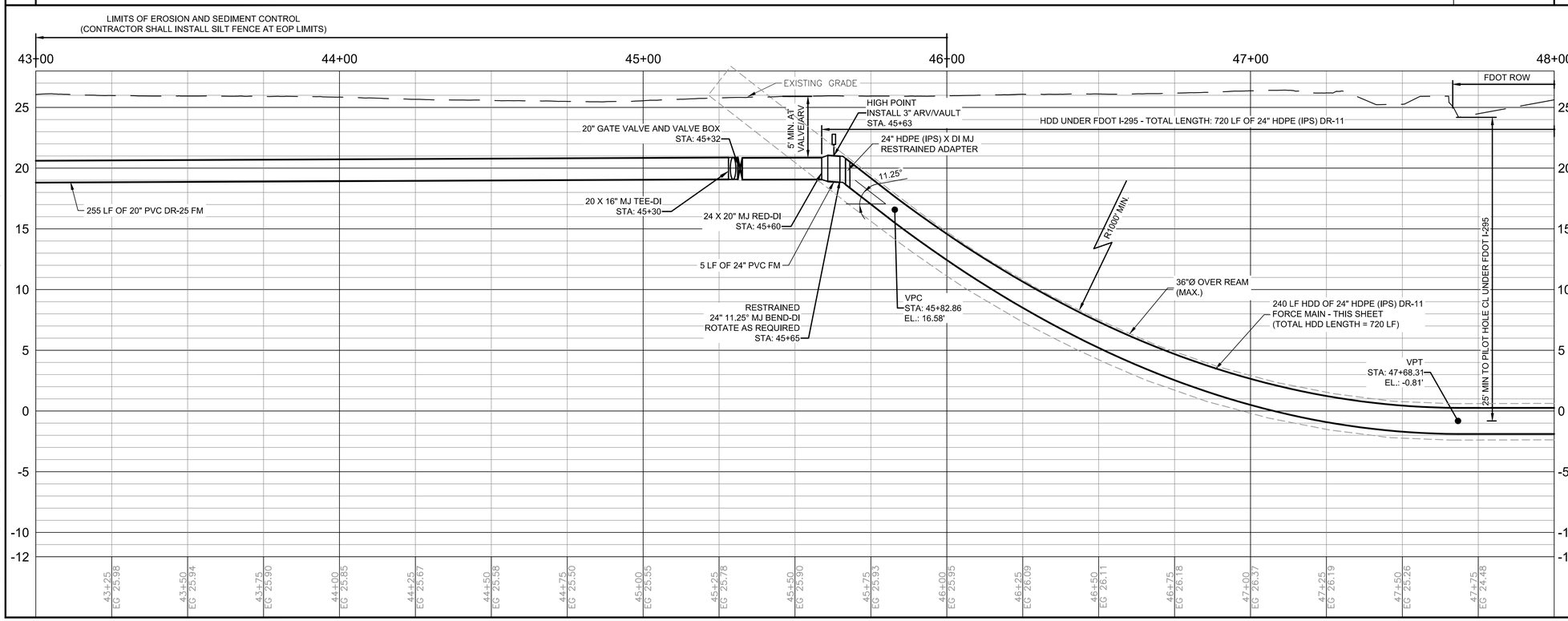


HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.
2. AT THIS LOCATION ON 5TH STREET WEST, THERE IS A PARKED RECREATIONAL VEHICLE. THE CONTRACTOR SHALL COORDINATE WITH JEA'S OUTREACH COMMUNITY STAFF TO NOTIFY THE OWNERS OF THIS RV TO RELOCATE THE VEHICLE DURING CONSTRUCTION.
3. THE CONTRACTOR SHALL NOTE THAT BETWEEN STATION 37+30 AND 47+00, THE PROPOSED FORCE MAIN WILL BE PARALLEL TO 69KV CIRCUITS 670 AND 665. AT THIS LOCATION, THE LOWEST PHASE CONDUCTOR CLEARANCE IS +/- 44 FEET ABOVE EXISTING GRADE.



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Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Architect AA : C000055
Engineers EB : 0000155
Surveyors LB : 0000763

MOTT MACDONALD

NO.	BY	DATE	REVISIONS
6.			
5.			
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1.			

DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO.
51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 43+00 TO STA 48+00

PROJ. NO. 502402368	
DATE:	JULY 2020
SCALE:	HORIZ: 1" = 20' VERT: 1" = 5'

NO. SHEETS 88	
SHEET NO. 16	
DRAWING NO. C-10	

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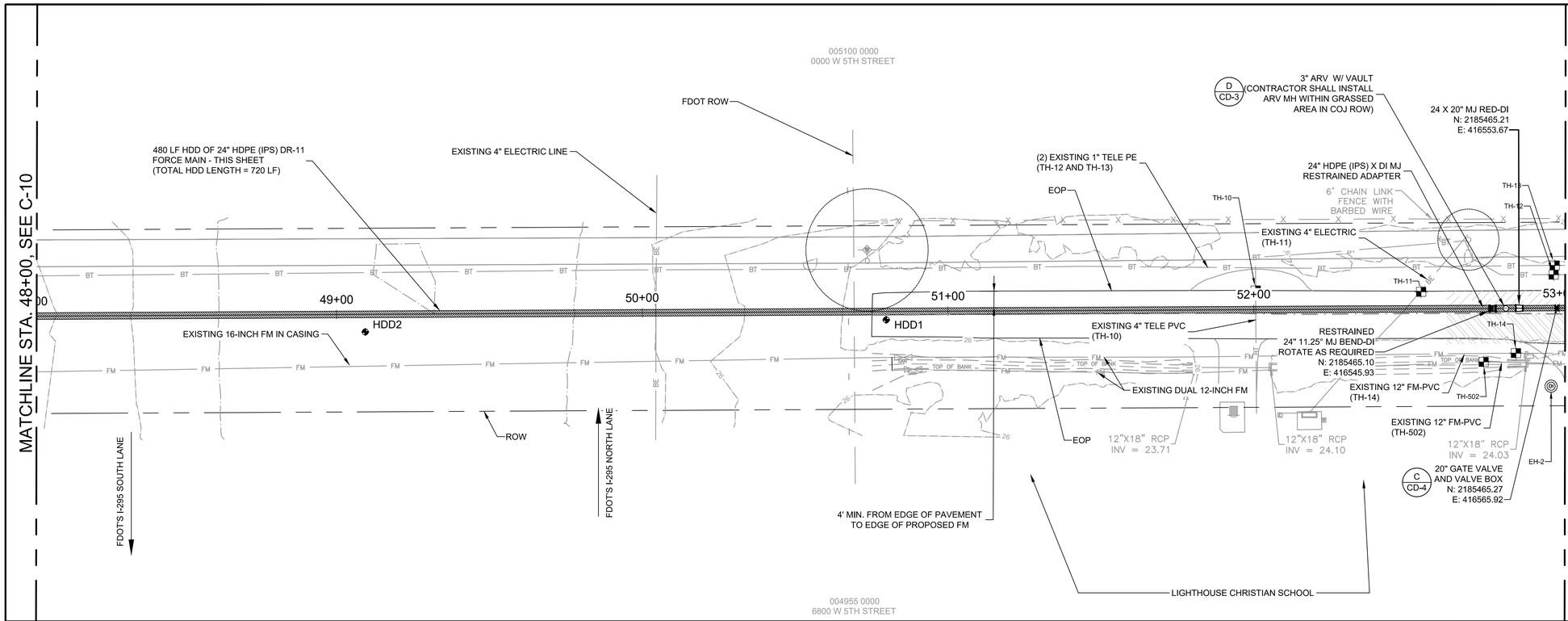

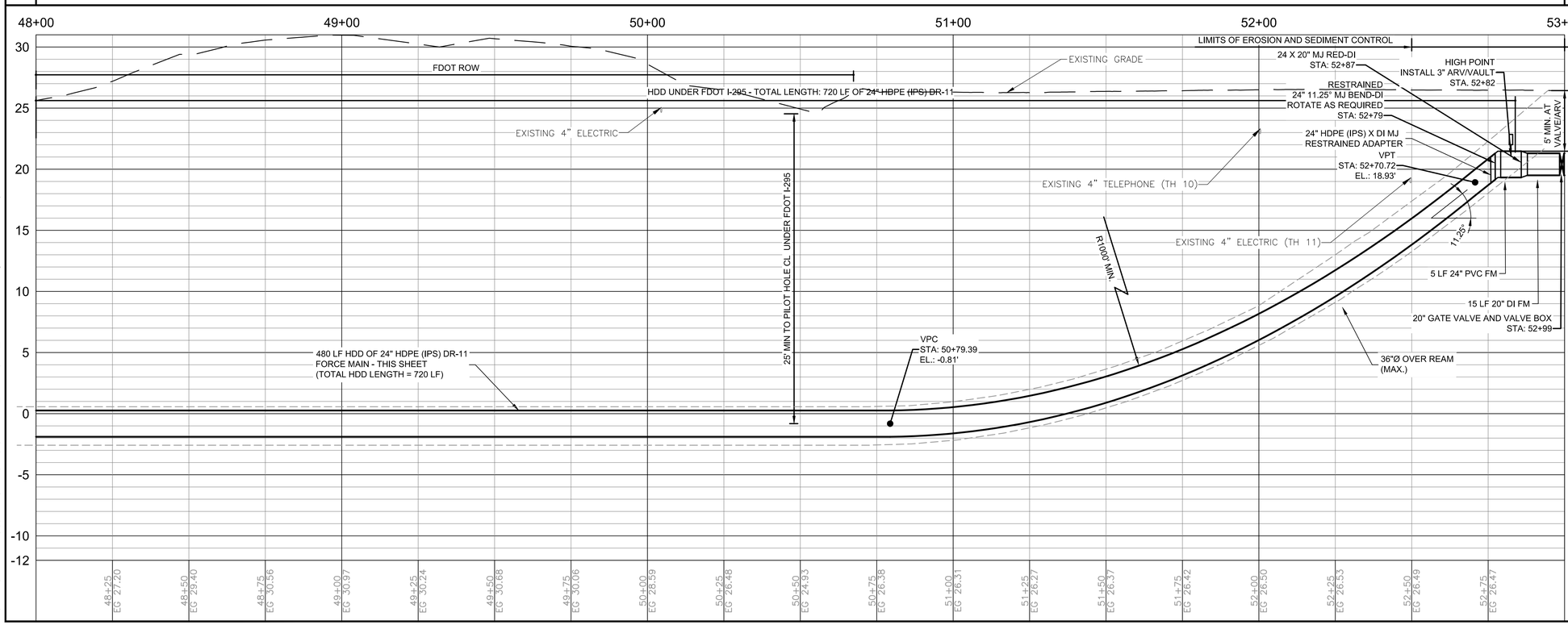

HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.
2. THE CONTRACTOR SHALL NOTE THAT BETWEEN STATION 51+00 AND 74+00, THE PROPOSED FORCE MAIN WILL BE PARALLEL TO 69KV CIRCUITS 670 AND 665. AT THIS LOCATION, THE LOWEST PHASE CONDUCTOR CLEARANCE IS +/- 42 FEET ABOVE EXISTING GRADE.

100% SUBMITTAL

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Architect AA : C000055
Engineers EB : 0000155
Surveyors LB : 0000763
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
6.			
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DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO.
51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community℠

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 48+00 TO STA 53+00

PROJ. NO.	502402368
DATE:	JULY 2020
SCALE:	HORIZ.:1" = 20' VERT.:1" = 5'

NO. SHEETS	88
SHEET NO.	17
DRAWING NO.	C-11

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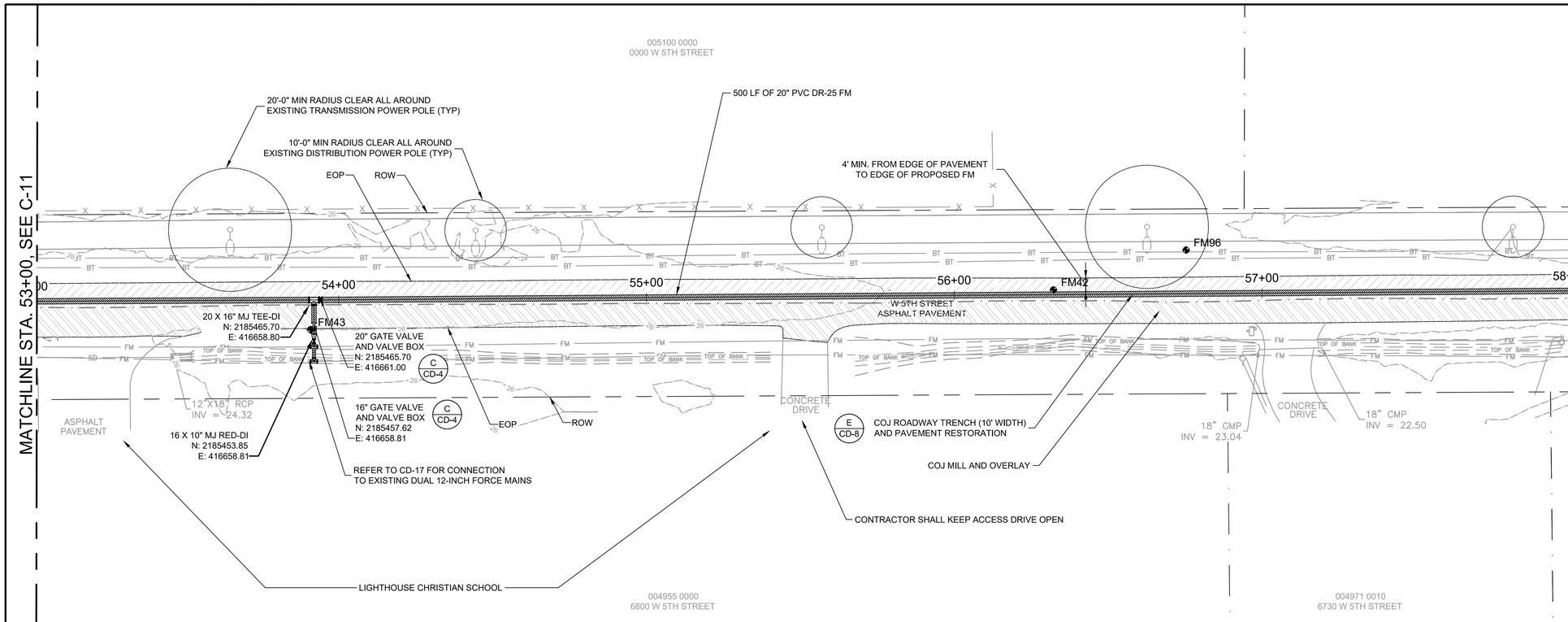

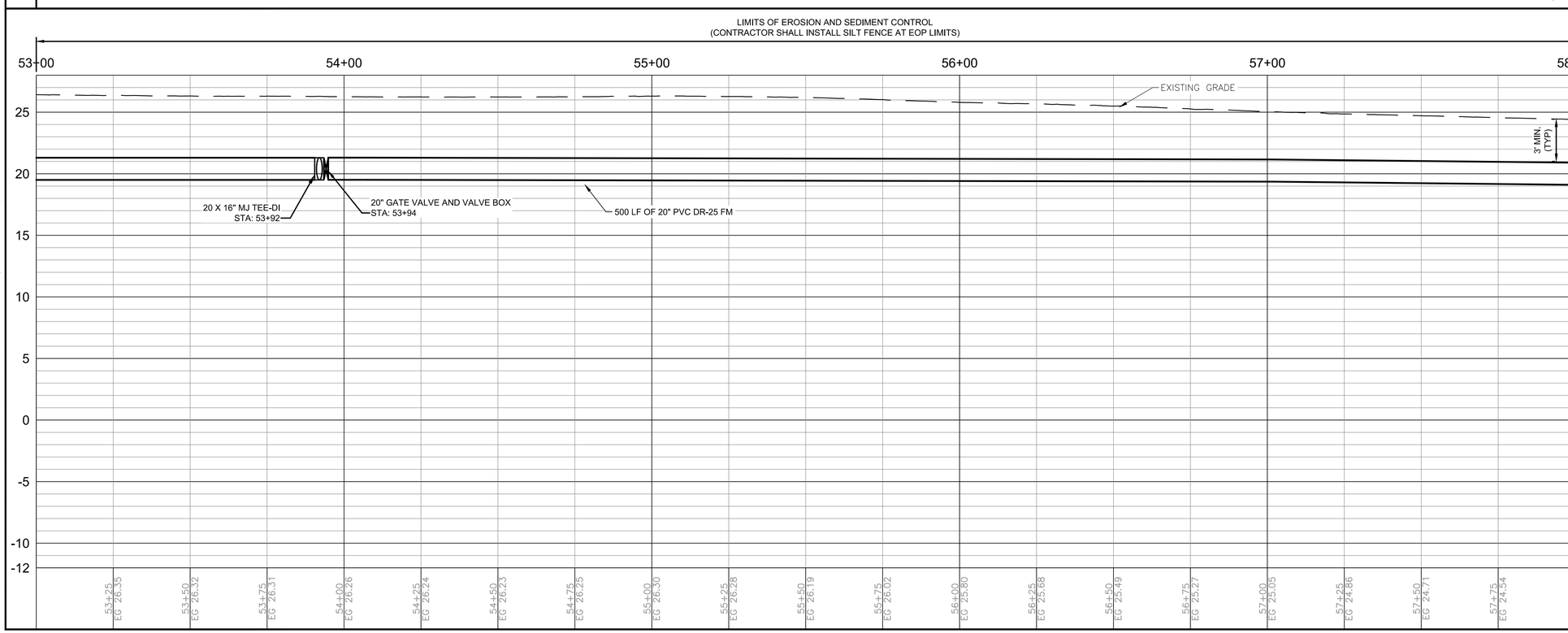

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HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

20 0 10 20 40

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

5 0 2.5 5 10

NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.
2. THE CONTRACTOR SHALL NOTE THAT BETWEEN STATION 51+00 AND 74+00, THE PROPOSED FORCE MAIN WILL BE PARALLEL TO 69KV CIRCUITS 670 AND 665. AT THIS LOCATION, THE LOWEST PHASE CONDUCTOR CLEARANCE IS +/- 42 FEET ABOVE EXISTING GRADE.

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Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Architect AA : C000055
Engineers EB : 0000155
Surveyors LB : 0000763
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
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DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO.
51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 53+00 TO STA 58+00

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: HORIZ: 1" = 20'
VERT: 1" = 5'

NO. SHEETS 88
SHEET NO. 18
DRAWING NO. C-12

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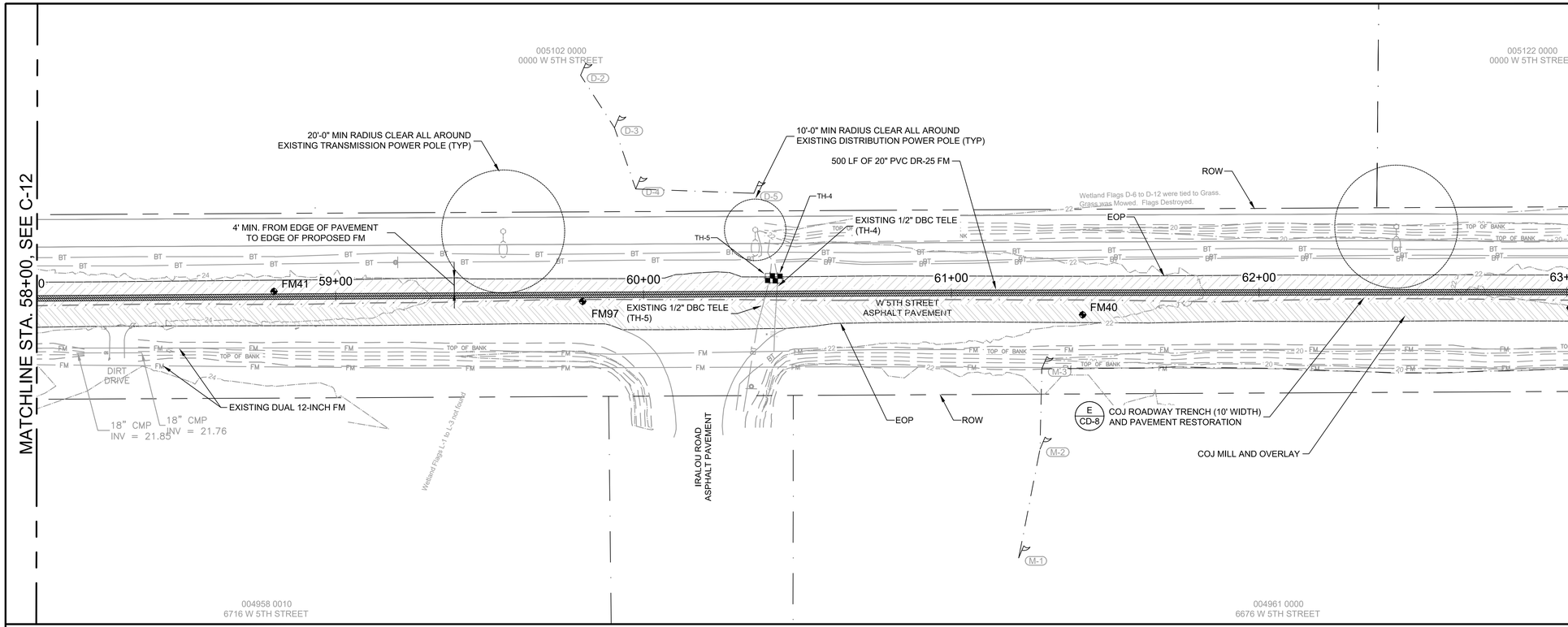
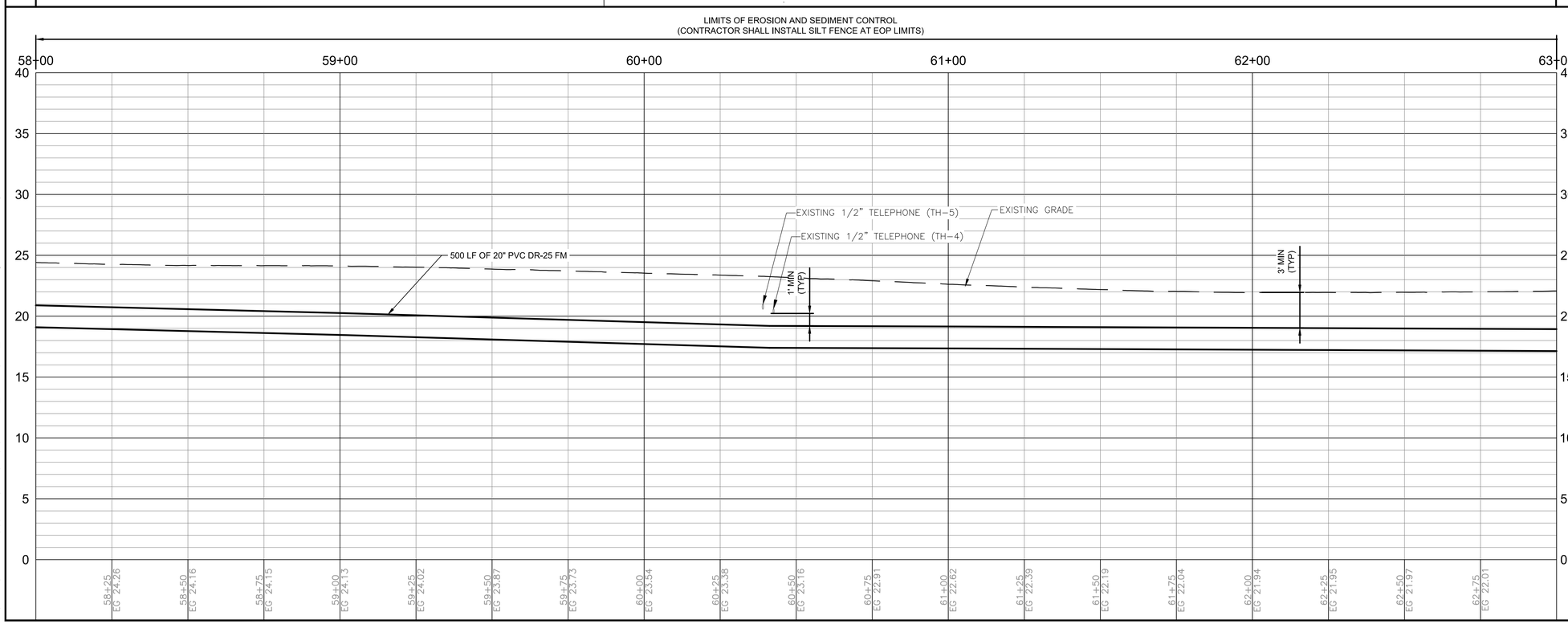


HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.
2. THE CONTRACTOR SHALL NOTE THAT BETWEEN STATION 51+00 AND 74+00, THE PROPOSED FORCE MAIN WILL BE PARALLEL TO 69KV CIRCUITS 670 AND 665. AT THIS LOCATION, THE LOWEST PHASE CONDUCTOR CLEARANCE IS +/- 42 FEET ABOVE EXISTING GRADE.



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Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 263-1090
Certificates AA : C000055
Engineers EB : 0000155
Surveyors LB : 0000763
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
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DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO.
51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 58+00 TO STA 63+00

PROJ. NO. 502402368	
DATE:	JULY 2020
SCALE:	HORIZ. 1" = 20' VERT. 1" = 5'

NO. SHEETS 88	
SHEET NO. 19	
DRAWING NO. C-13	

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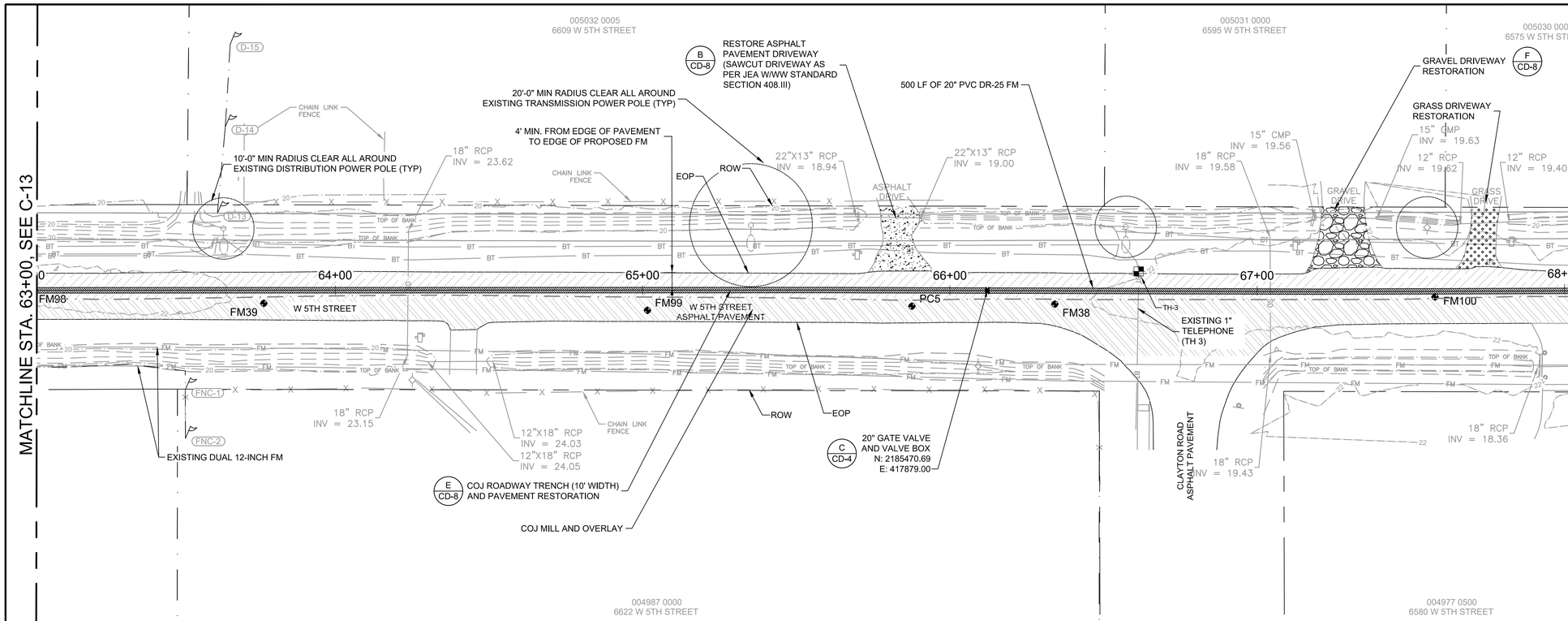

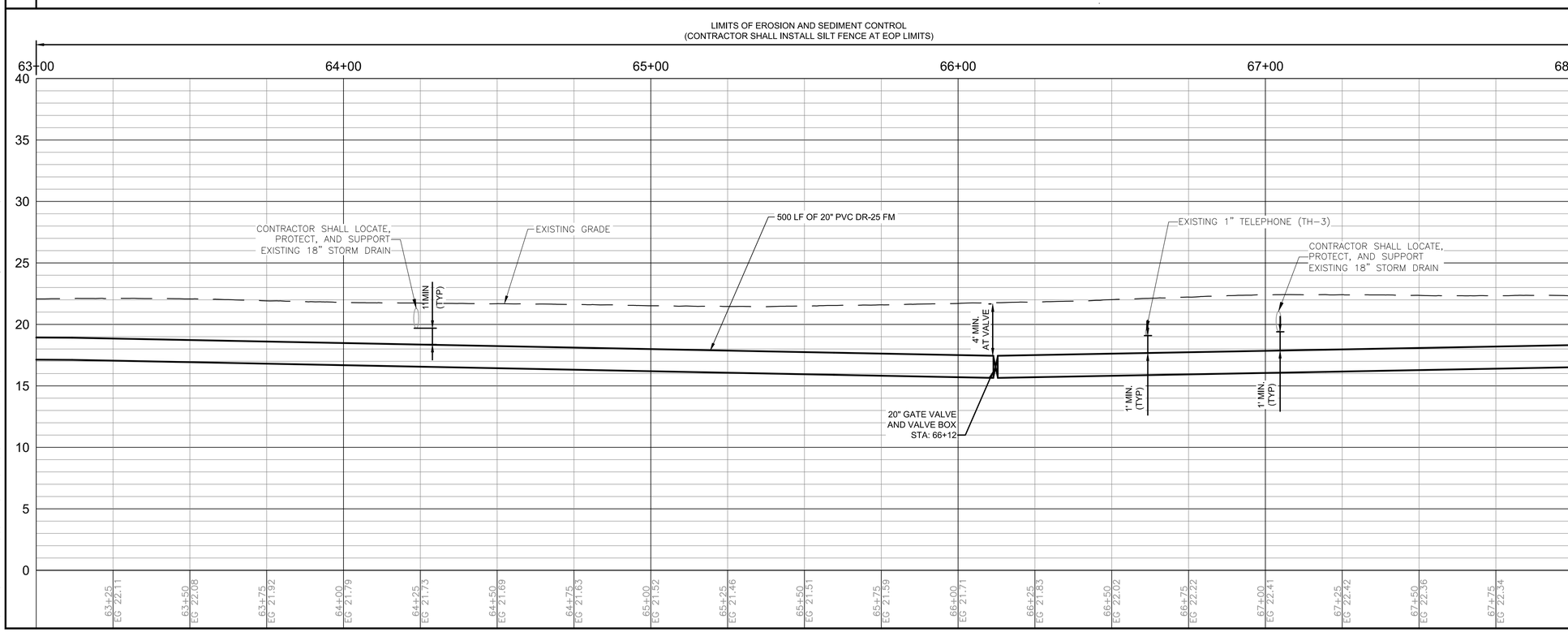

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HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

20 0 10 20 40
5 0 2.5 5 10

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.
2. THE CONTRACTOR SHALL NOTE THAT BETWEEN STATION 51+00 AND 74+00, THE PROPOSED FORCE MAIN WILL BE PARALLEL TO 69KV CIRCUITS 670 AND 665. AT THIS LOCATION, THE LOWEST PHASE CONDUCTOR CLEARANCE IS +/- 42 FEET ABOVE EXISTING GRADE.

100% SUBMITTAL

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Firm Numbers AA - 00003605
Engineers EB - 00006155
Surveyors LB - 0000763
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
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DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO.
51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 63+00 TO STA 68+00

PROJ. NO.	502402368
DATE:	JULY 2020
SCALE:	HORIZ: 1" = 20' VERT: 1" = 5'

NO. SHEETS	88
SHEET NO.	20
DRAWING NO.	C-14

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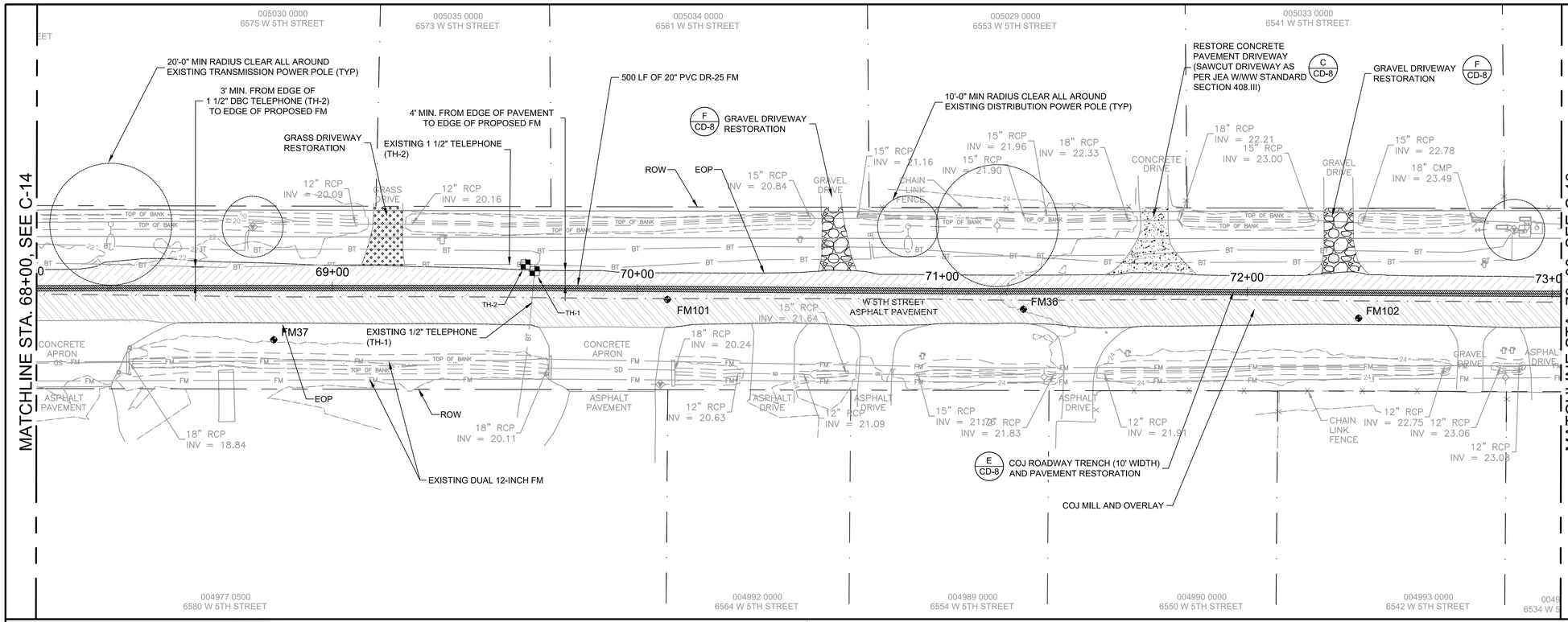

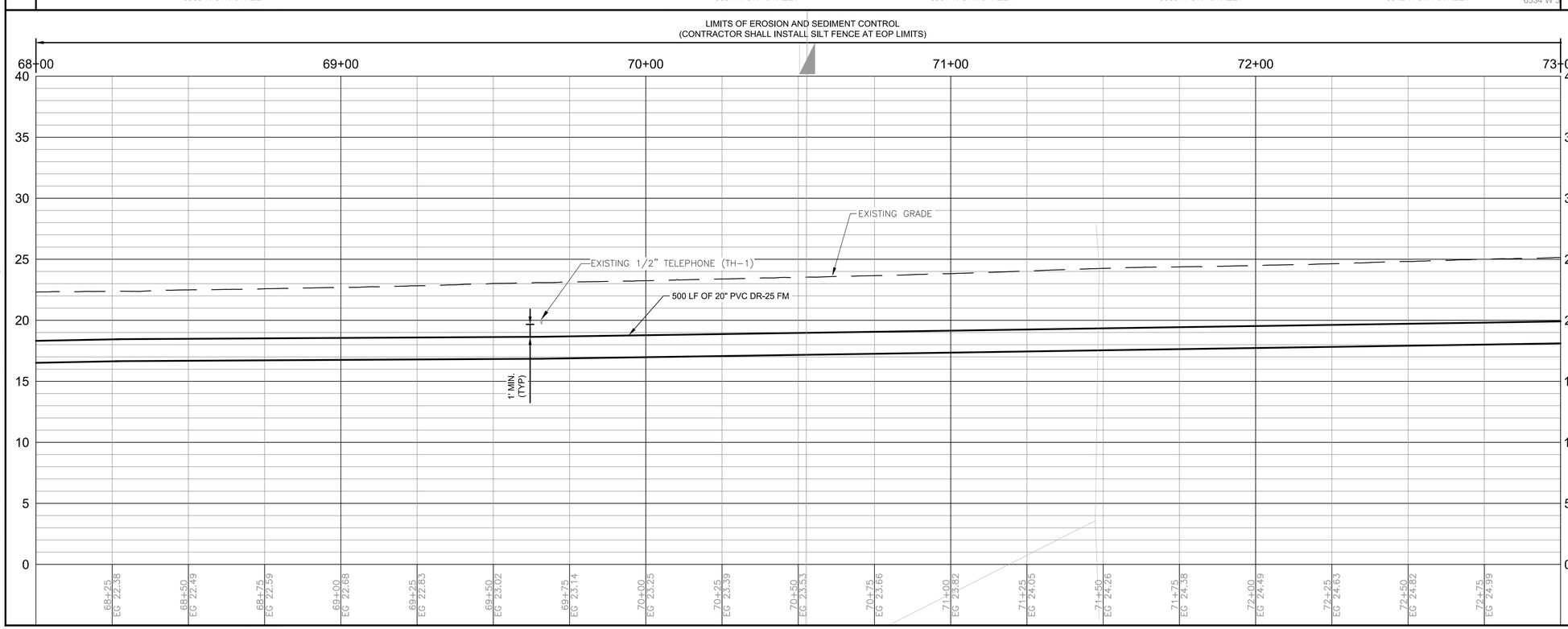

HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.
2. THE CONTRACTOR SHALL NOTE THAT BETWEEN STATION 51+00 AND 74+00, THE PROPOSED FORCE MAIN WILL BE PARALLEL TO 69KV CIRCUITS 670 AND 665. AT THIS LOCATION, THE LOWEST PHASE CONDUCTOR CLEARANCE IS +/- 42 FEET ABOVE EXISTING GRADE.

100% SUBMITTAL

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-7090
Architect AA : 0000055
Engineers EB : 0000155
Surveyors LB : 0000763
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
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DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO.
51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community sm

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 68+00 TO STA 73+00

PROJ. NO. 502402368	
DATE:	JULY 2020
SCALE:	HORIZ.:1" = 20' VERT.:1" = 5'

NO. SHEETS 88	
SHEET NO. 21	
DRAWING NO. C-15	

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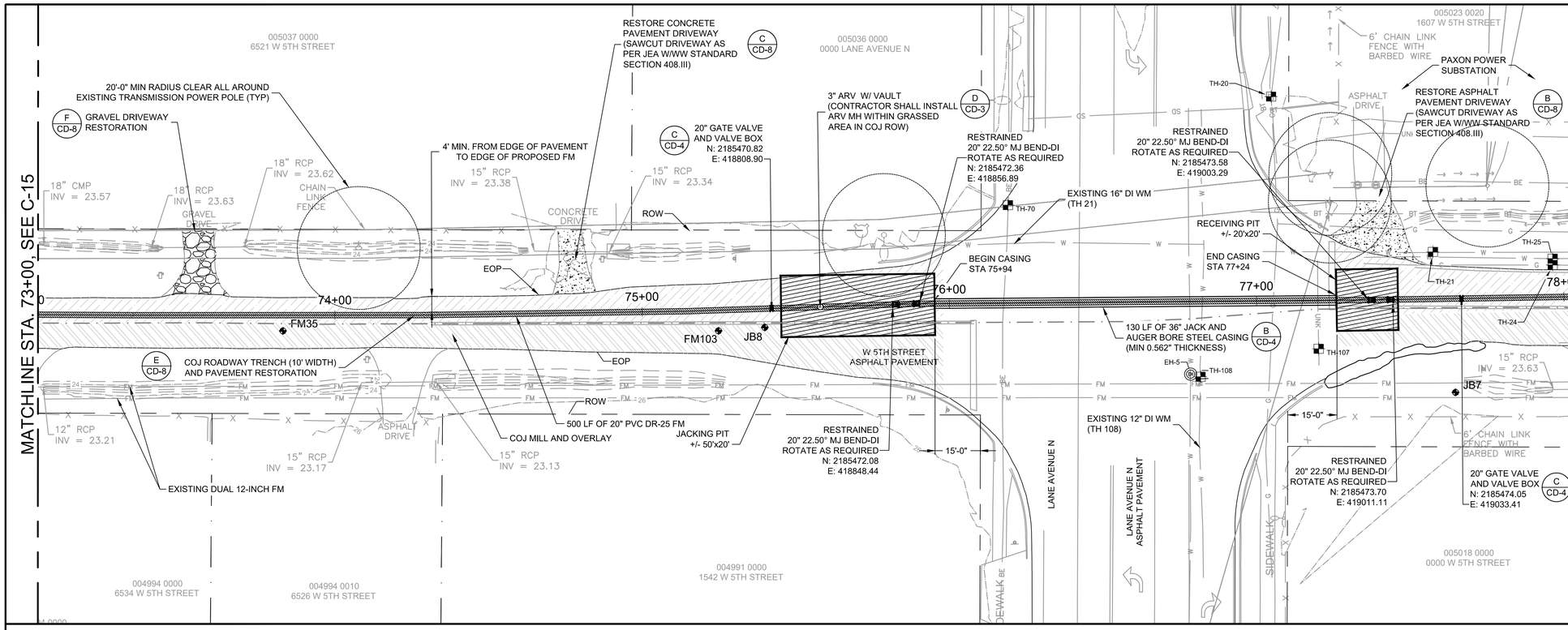


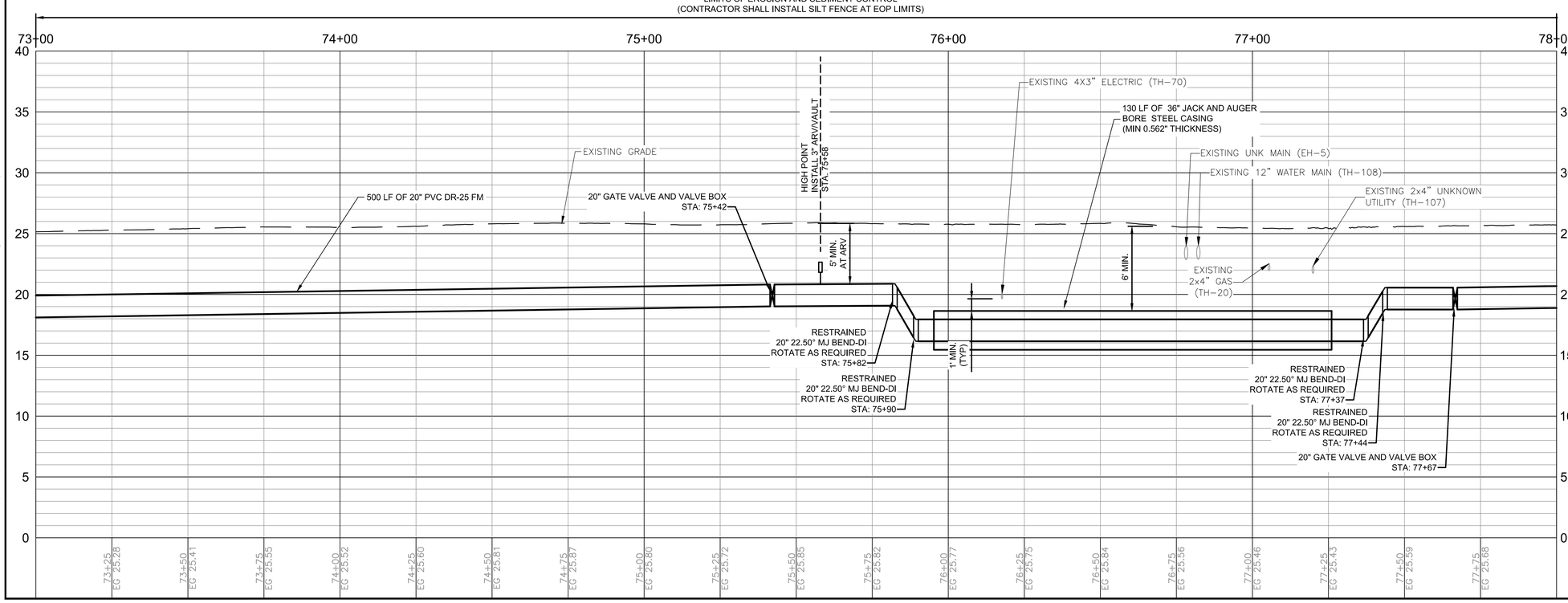
HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.
2. THE CONTRACTOR SHALL NOTE THAT BETWEEN STATION 21+00 AND 74+00, THE PROPOSED FORCE MAIN WILL BE PARALLEL TO 69KV CIRCUITS 670 AND 665. AT THIS LOCATION, THE LOWEST PHASE CONDUCTOR CLEARANCE IS +/- 42 FEET ABOVE EXISTING GRADE.
3. THE CONTRACTOR SHALL NOTE THAT BETWEEN STATION 74+00 AND 76+00, THE PROPOSED FORCE MAIN WILL BE PARALLEL TO 69KV CIRCUITS 670 AND 665. AT THIS LOCATION, THE LOWEST PHASE CONDUCTOR CLEARANCE IS +/- 48 FEET ABOVE EXISTING GRADE.
4. THE CONTRACTOR SHALL NOTE THAT BETWEEN STATION 76+00 AND 76+00, THE PROPOSED FORCE MAIN WILL BE PARALLEL TO 69KV CIRCUITS 670 AND 665. AT THIS LOCATION, THE LOWEST PHASE CONDUCTOR CLEARANCE IS +/- 51 FEET ABOVE EXISTING GRADE.

LIMITS OF EROSION AND SEDIMENT CONTROL
(CONTRACTOR SHALL INSTALL SILT FENCE AT EOP LIMITS)



100% SUBMITTAL

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Engineers AA : 00000165
Engineers EB : 00000165
Surveyors LB : 0000763

MOTT MACDONALD

NO.	BY	DATE	REVISIONS
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DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO.
51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 73+00 TO STA 78+00

PROJ. NO.	502402368
DATE:	JULY 2020
SCALE:	HORIZ: 1" = 20' VERT: 1" = 5'

NO. SHEETS	88
SHEET NO.	22
DRAWING NO.	C-16

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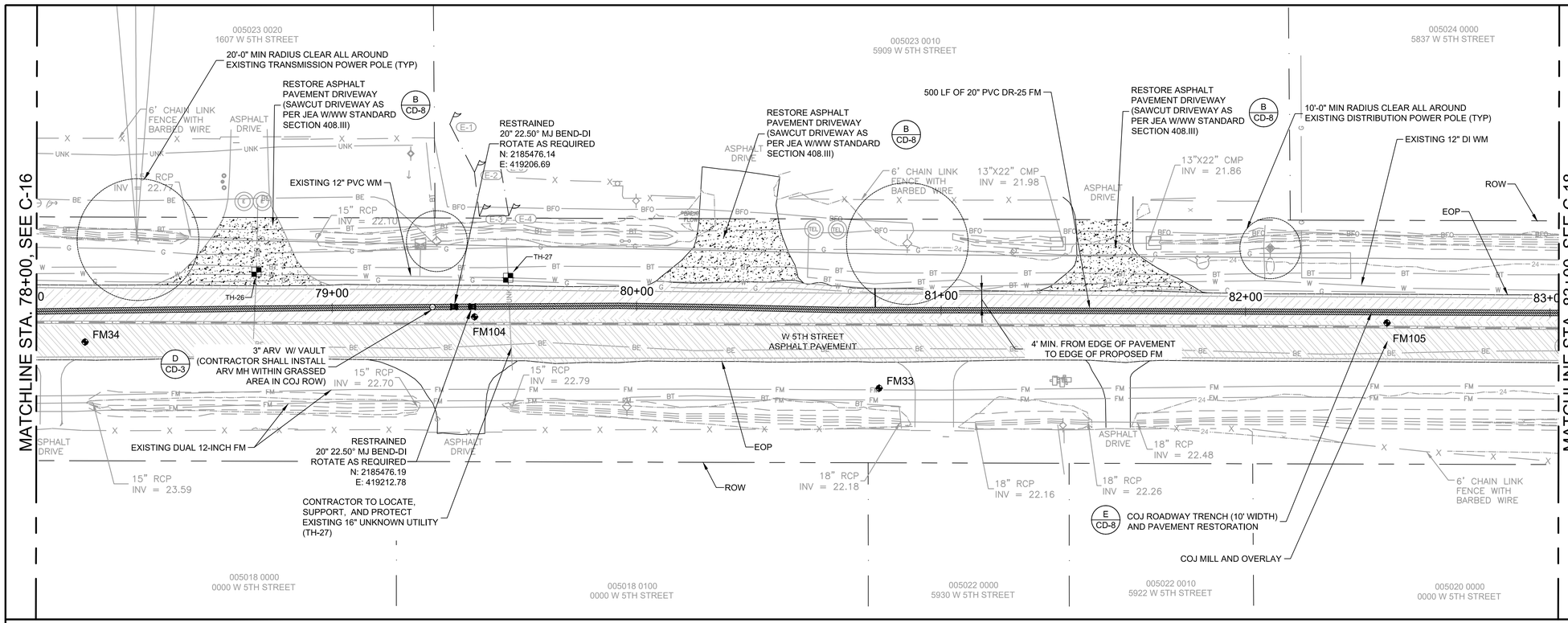

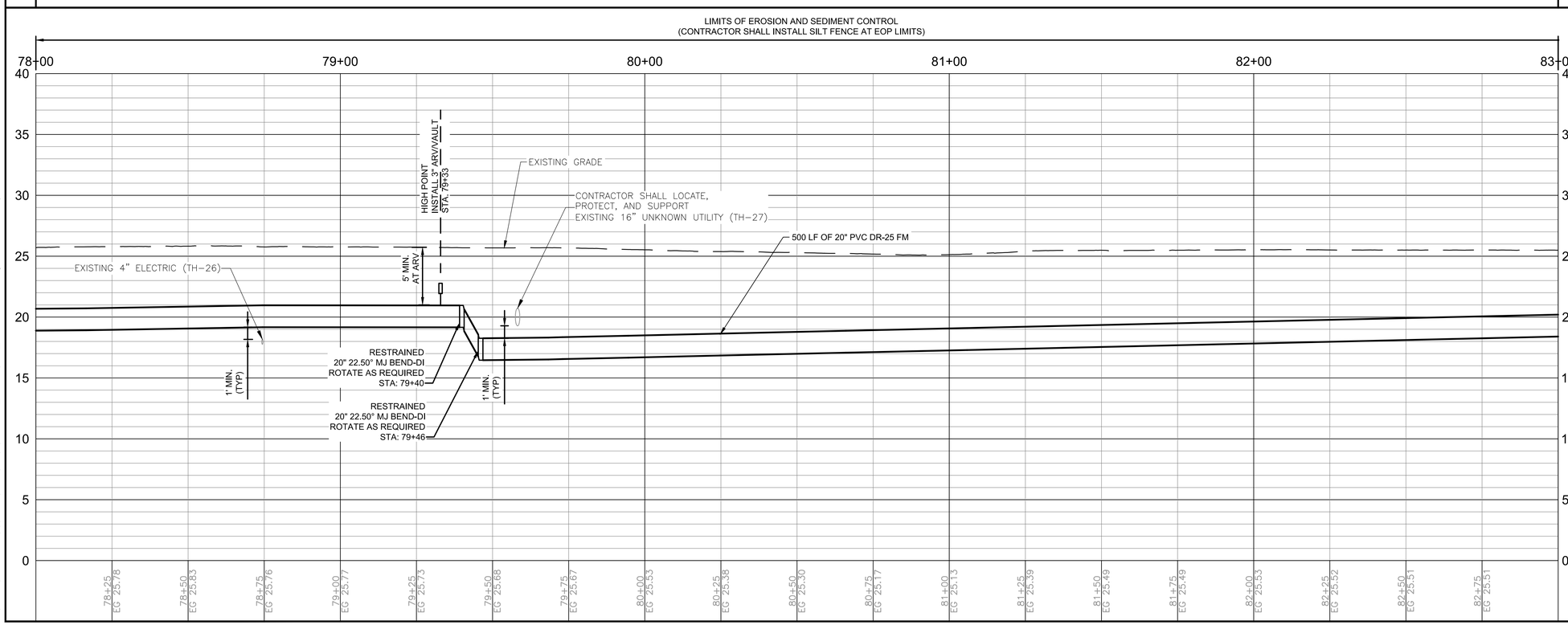

N

HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Architect AA: C000055
Engineers EB: 0000155
Surveyors LB: 0000763
MOTT MACDONALD

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

DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 78+00 TO STA 83+00

PROJ. NO. 502402368	
DATE:	JULY 2020
SCALE:	HORIZ: 1" = 20' VERT: 1" = 5'

NO. SHEETS 88	
SHEET NO. 23	
DRAWING NO. C-17	

100% SUBMITTAL

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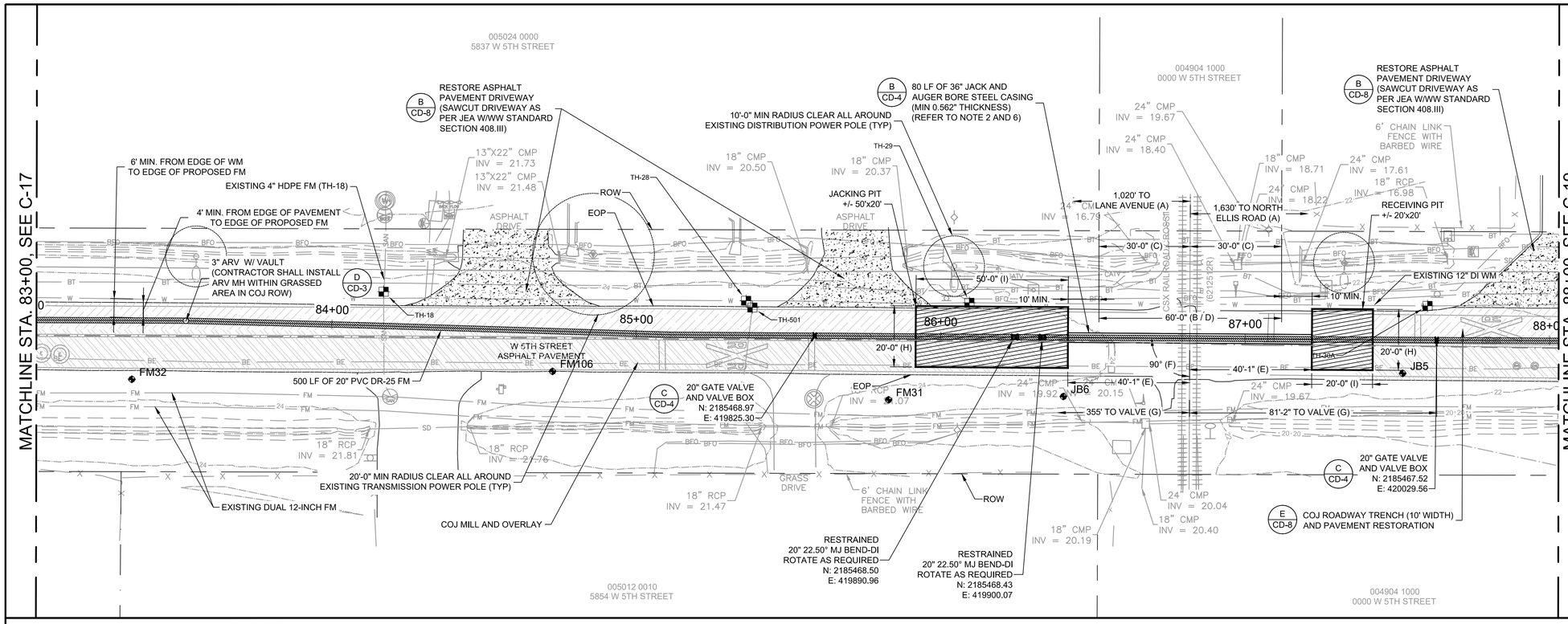

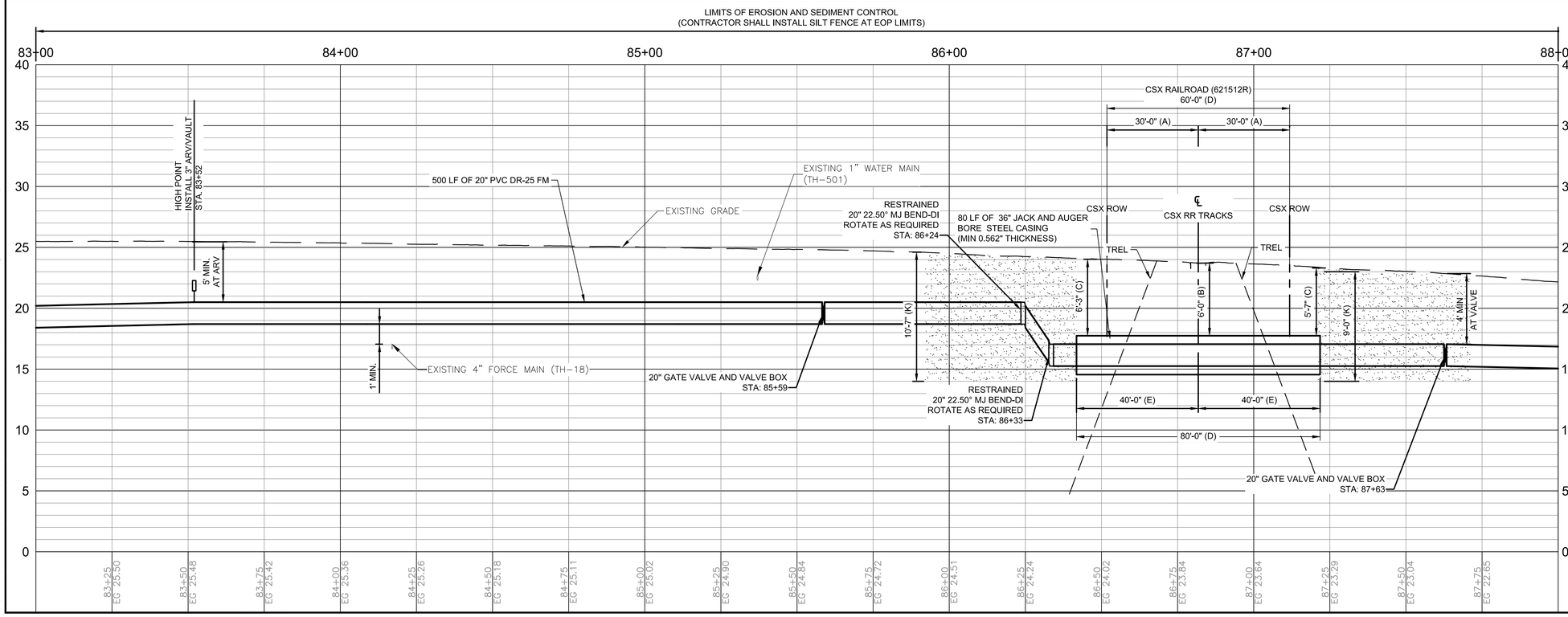

HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.
2. CONTRACTOR SHALL FOLLOW ALL CSX REQUIREMENTS AS PER CSX'S LATEST EDITION DESIGN AND CONSTRUCTION STANDARD SPECIFICATIONS. CONTRACTOR SHALL LOCATE AND PROTECT ALL CSX SIGNAL FACILITIES, TRAFFIC CONTROL DEVICES/CONDUITS AND RESTORE CSX RAILROAD PAVEMENT MARKINGS AND SIGNS TO CSX STANDARDS. SEE SHEET CD-9 FOR ADDITIONAL DETAILS.
3. CONTRACTOR SHALL INSTALL WEATHERPROOF SIGN AS PER CSX SPECIFICATIONS INCLUDING THE FOLLOWING INFORMATION. CONTRACTOR SHALL SPECIFY FIELD INSTALLED PIPE DEPTH FOR SIGN. CONTRACTOR SHALL SUBMIT SIGN INFORMATION FOR JEA'S APPROVAL BEFORE ORDERING.
   OWNER OF PIPELINE:
   JEA
   21 W CHURCH ST T-4
   JACKSONVILLE, FL, 32202
   20" SANITARY SEWER FORCE MAIN
   MAXIMUM INTERNAL PRESSURE: 165 PSI
   APPROXIMATELY XX' BELOW GRADE
   AT POINT OF A SIGN
   EMERGENCY NUMBER: (904) 665-6000
4. STEEL CASING SHALL HAVE A MINIMUM YIELD STRENGTH OF 35,000 PSI AND CONFORM TO ASTM A139 OR API-5LX GRADE X-42. REFER TO CSX ENGINEERING SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. THE FRONT OF THE CASING PIPE SHALL BE PROVIDED WITH MECHANICAL ARRANGEMENTS OR DEVICES THAT WILL POSITIVELY PREVENT THE AUGER FROM LEADING THE PIPE SO THAT NO UNSUPPORTED EXCAVATION IS AHEAD OF THE PIPE.
6. CASING PIPE ENDS SHALL BE SEALED PER JEA W/WW STANDARDS (SECTION 429-III.13) AND CSX STANDARDS.
7. DIMENSIONS PAIRED WITH ALPHABETIC LETTERS A-I CORRESPOND TO REQUIREMENTS PER CSX PERMIT APPLICATION.
8. THE CONTRACTOR SHALL NOTE THAT BETWEEN STATION 85+00 AND 89+00, THE PROPOSED FORCE MAIN WILL BE PARALLEL TO 69KV CIRCUITS 659. AT THIS LOCATION, THE LOWEST PHASE CONDUCTOR CLEARANCE IS +/- 43 FEET ABOVE EXISTING GRADE.

100% SUBMITTAL

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Architect AA : C000055
Engineers EB : 0000155
Surveyors LB : 0000763
MOTT MACDONALD

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

DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 83+00 TO STA 88+00

PROJ. NO.	502402368
DATE:	JULY 2020
SCALE:	HORIZ: 1" = 20' VERT: 1" = 5'

NO. SHEETS	88
SHEET NO.	24
DRAWING NO.	C-18

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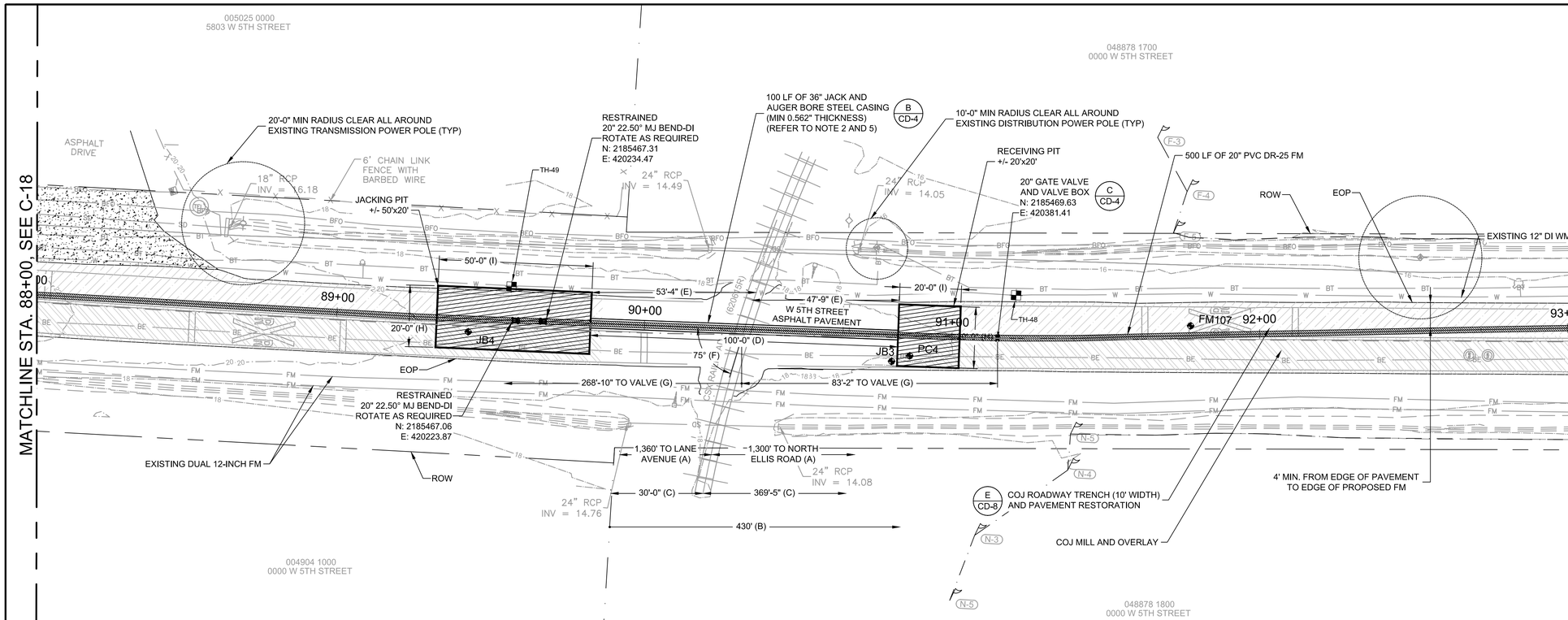

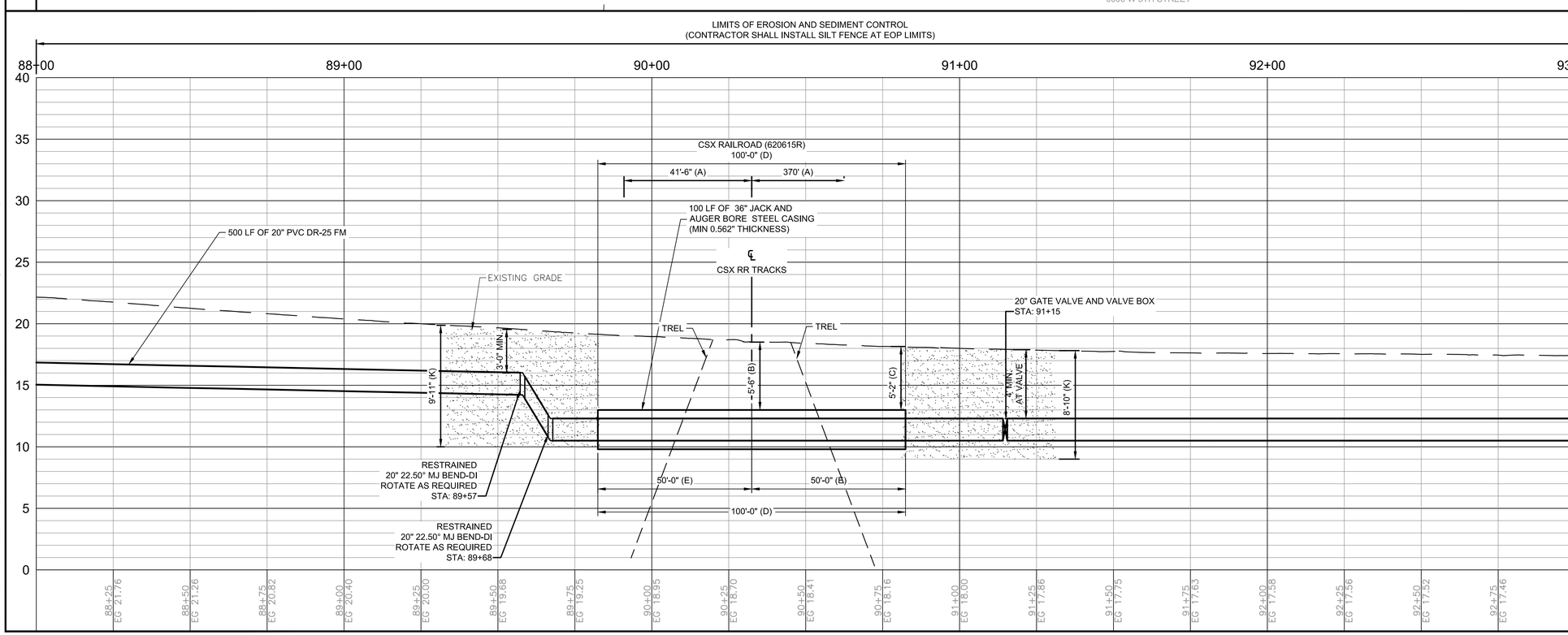

HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.
2. CONTRACTOR SHALL FOLLOW ALL CSX REQUIREMENTS AS PER CSX'S LATEST EDITION DESIGN AND CONSTRUCTION STANDARD SPECIFICATIONS. CONTRACTOR SHALL LOCATE AND PROTECT ALL CSX SIGNAL FACILITIES, TRAFFIC CONTROL DEVICES/CONDUITS AND RESTORE CSX RAILROAD PAVEMENT MARKINGS AND SIGNS TO CSX STANDARDS. SEE SHEET CD-9 FOR ADDITIONAL DETAILS.
3. CONTRACTOR SHALL INSTALL WEATHERPROOF SIGN AS PER CSX SPECIFICATIONS INCLUDING THE FOLLOWING INFORMATION. CONTRACTOR SHALL SUBMIT SIGN INFORMATION FOR JEA'S APPROVAL BEFORE ORDERING.
   OWNER OF PIPELINE:
   JEA
   21 W CHURCH ST T-4
   JACKSONVILLE, FL, 32202
   20" SANITARY SEWER FORCE MAIN
   MAXIMUM INTERNAL PRESSURE: 165 PSI
   APPROXIMATELY XX' BELOW GRADE
   AT POINT OF A SIGN
   EMERGENCY NUMBER: (904) 665-6000
4. STEEL CASING SHALL HAVE A MINIMUM YIELD STRENGTH OF 35,000 PSI AND CONFORM TO ASTM A139 OR API-5LX GRADE X-42. REFER TO CSX ENGINEERING SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. THE FRONT OF THE CASING PIPE SHALL BE PROVIDED WITH MECHANICAL ARRANGEMENTS OR DEVICES THAT WILL POSITIVELY PREVENT THE AUGER FROM LEADING THE PIPE SO THAT NO UNSUPPORTED EXCAVATION IS AHEAD OF THE PIPE.
6. CASING PIPE ENDS SHALL BE SEALED PER JEA W/WW STANDARDS (SECTION 429-III.13) AND CSX STANDARDS.
7. DIMENSIONS PAIRED WITH ALPHABETIC LETTERS A-I CORRESPOND TO REQUIREMENTS PER CSX PERMIT APPLICATION.
8. THE CONTRACTOR SHALL NOTE THAT BETWEEN STATION 85+00 AND 89+00, THE PROPOSED FORCE MAIN WILL BE PARALLEL TO 69KV CIRCUITS 659. AT THIS LOCATION, THE LOWEST PHASE CONDUCTOR CLEARANCE IS +/- 43 FEET ABOVE EXISTING GRADE.
9. THE CONTRACTOR SHALL NOTE THAT BETWEEN STATION 89+00 AND 92+50, THE PROPOSED FORCE MAIN WILL BE PARALLEL TO 69KV CIRCUITS 659. AT THIS LOCATION, THE LOWEST PHASE CONDUCTOR CLEARANCE IS +/- 45 FEET ABOVE EXISTING GRADE.
10. THE CONTRACTOR SHALL NOTE THAT BETWEEN STATION 92+50 AND 100+00, THE PROPOSED FORCE MAIN WILL BE PARALLEL TO 69KV CIRCUITS 659. AT THIS LOCATION, THE LOWEST PHASE CONDUCTOR CLEARANCE IS +/- 44 FEET ABOVE EXISTING GRADE.

100% SUBMITTAL

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Firm Numbers AA - 00003605
Engineers EB - 0000155
Surveyors LB - 0000763
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
6.			
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4.			
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DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER: B. NEU
DRAWN BY: F. NGUYEN
DATE: JULY 2020
CHECKED BY: P. MOURT
DATE: JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 88+00 TO STA 93+00

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: HORIZ: 1" = 20' VERT: 1" = 5'

NO. SHEETS 88
SHEET NO. 25
DRAWING NO. C-19

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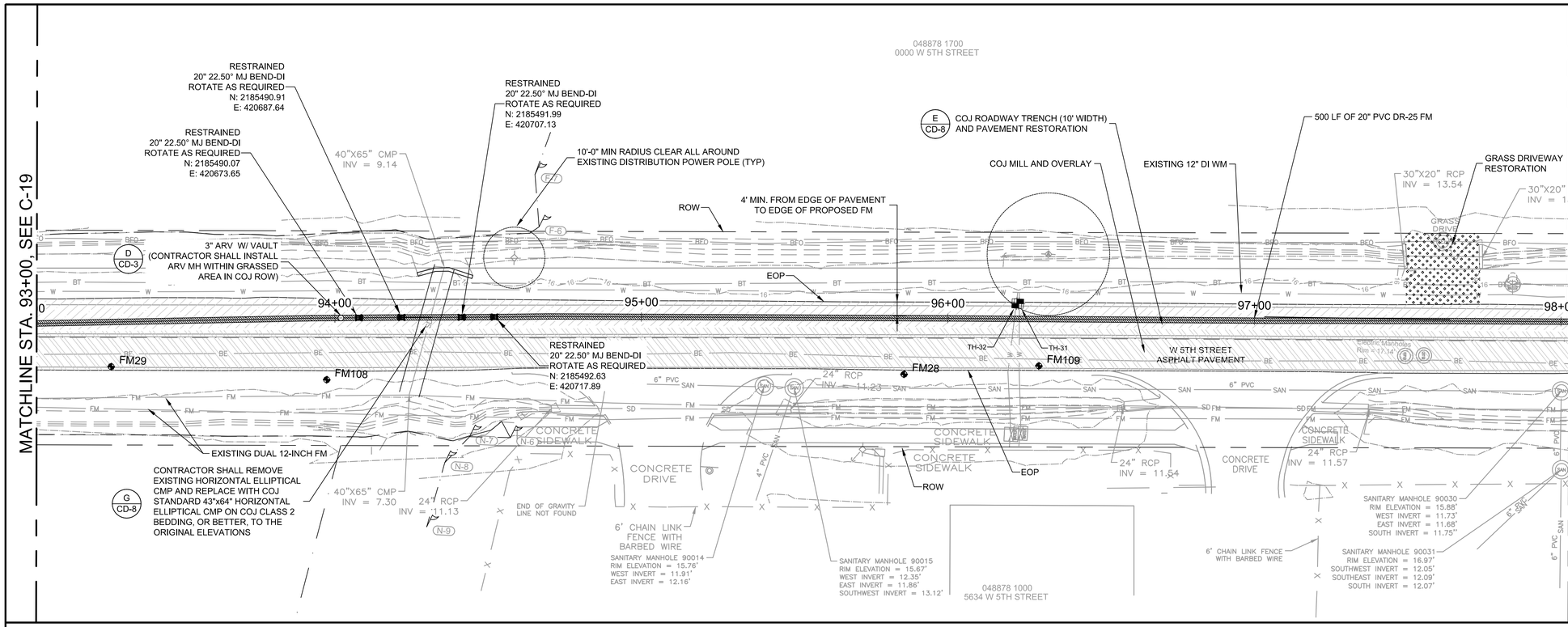

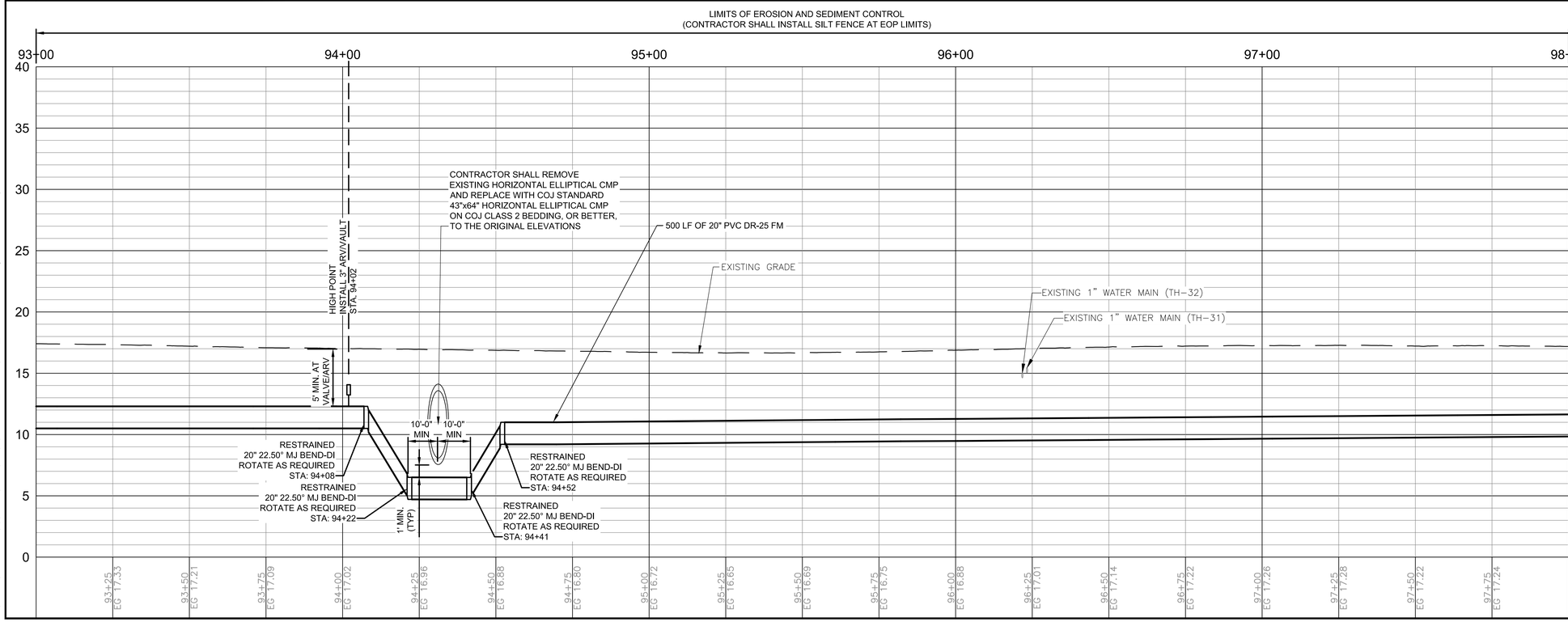

HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.
2. THE CONTRACTOR SHALL NOTE THAT BETWEEN STATION 92+50 AND 100+00, THE PROPOSED FORCE MAIN WILL BE PARALLEL TO 69KV CIRCUITS 659. AT THIS LOCATION, THE LOWEST PHASE CONDUCTOR CLEARANCE IS +/- 44 FEET ABOVE EXISTING GRADE.

100% SUBMITTAL

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Firm Numbers AA - 00003055
Engineers EB - 0000155
Surveyors LB - 0000763
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
6.			
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DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO.
51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 93+00 TO STA 98+00

PROJ. NO.	502402368
DATE:	JULY 2020
SCALE:	HORIZ: 1" = 20' VERT: 1" = 5'

NO. SHEETS	88
SHEET NO.	26
DRAWING NO.	C-20

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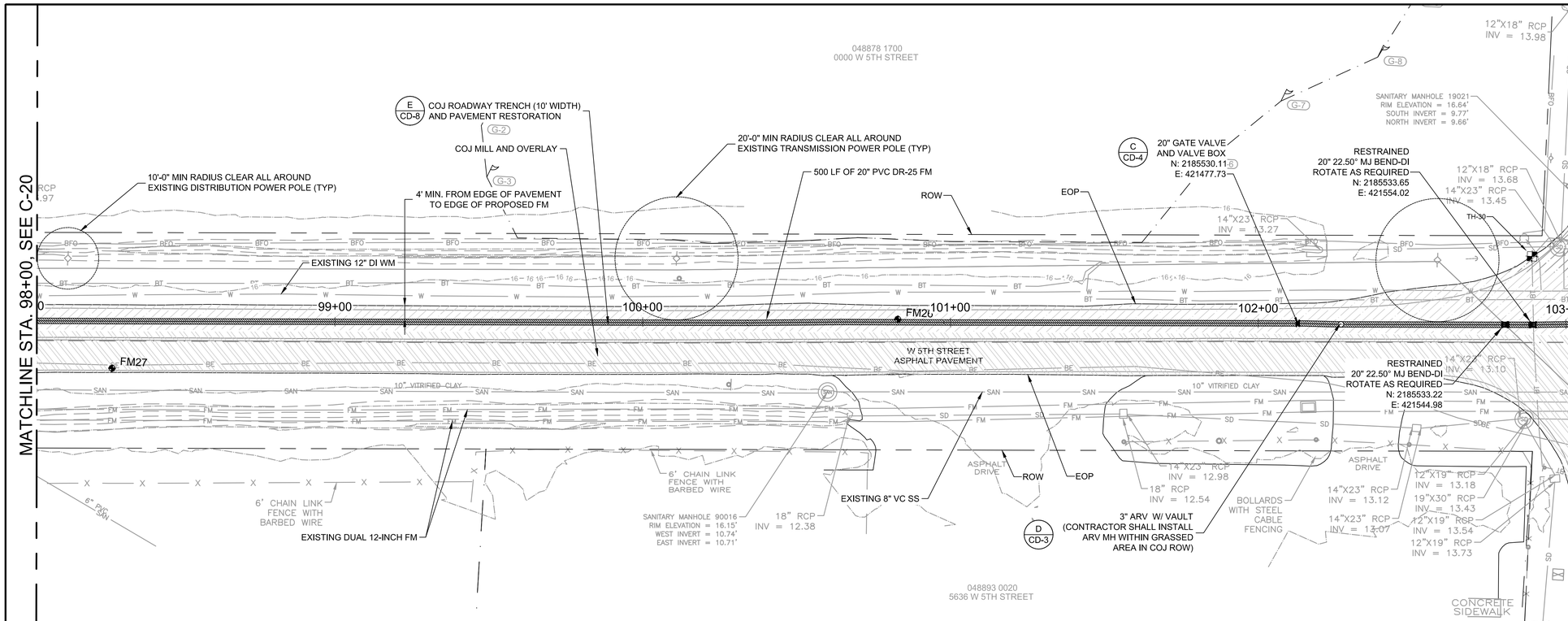

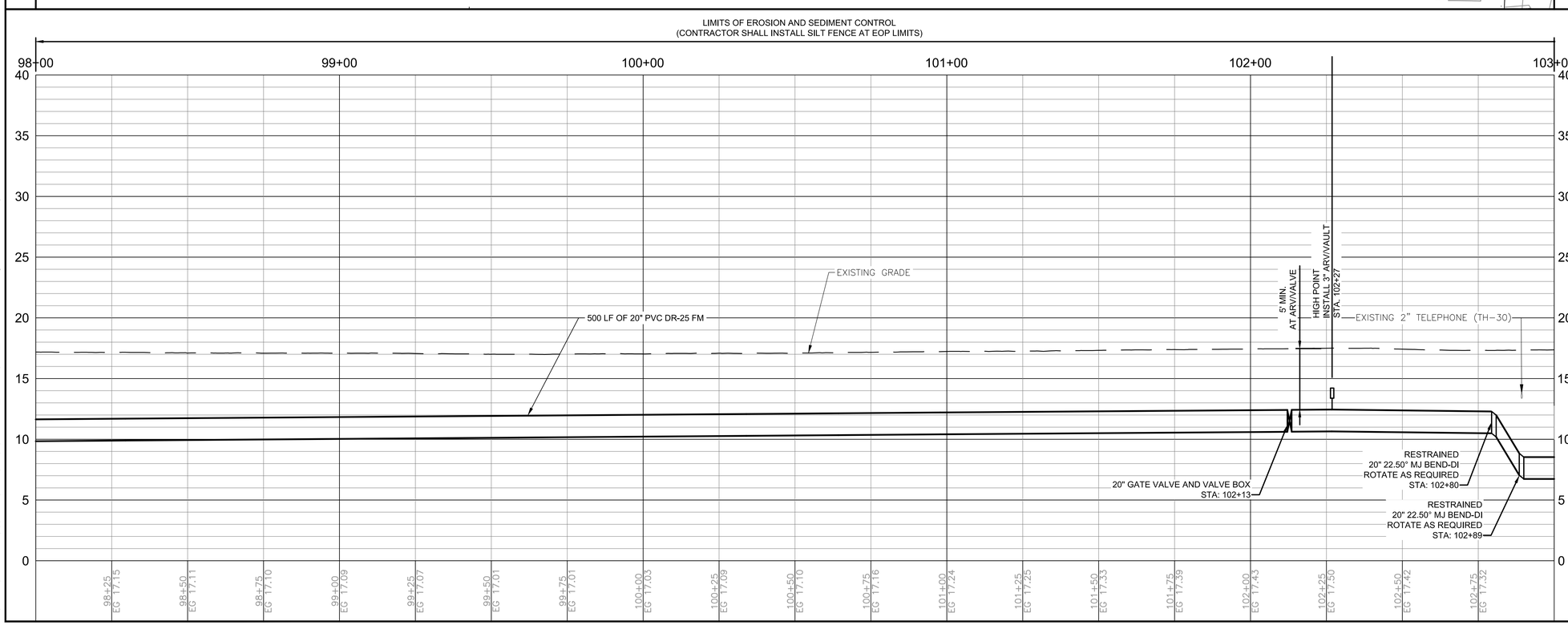

HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.
2. THE CONTRACTOR SHALL NOTE THAT BETWEEN STATION 92+50 AND 100+00, THE PROPOSED FORCE MAIN WILL BE PARALLEL TO 69KV CIRCUITS 659. AT THIS LOCATION, THE LOWEST PHASE CONDUCTOR CLEARANCE IS +/- 44 FEET ABOVE EXISTING GRADE.
3. THE CONTRACTOR SHALL NOTE THAT BETWEEN STATION 100+50 AND 102+50, THE PROPOSED FORCE MAIN WILL BE PARALLEL TO 69KV CIRCUITS 659. AT THIS LOCATION, THE LOWEST PHASE CONDUCTOR CLEARANCE IS +/- 50 FEET ABOVE EXISTING GRADE.
4. THE CONTRACTOR SHALL NOTE THAT BETWEEN STATION 102+50 AND 104+00, THE PROPOSED FORCE MAIN WILL BE PARALLEL TO 69KV CIRCUITS 659. AT THIS LOCATION, THE LOWEST PHASE CONDUCTOR CLEARANCE IS +/- 46 FEET ABOVE EXISTING GRADE.

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Firm Numbers AA - 00003605
Engineers EB - 0000155
Surveyors LB - 0000763
MOTT MACDONALD

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

DESIGN ENGINEER: BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER: B. NEU
DRAWN BY: F. NGUYEN
DATE: JULY 2020
CHECKED BY: P. MOURT
DATE: JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 98+00 TO 103+00

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: HORIZ: 1" = 20' VERT: 1" = 5'

NO. SHEETS 88
SHEET NO. 27
DRAWING NO. C-21

100% SUBMITTAL

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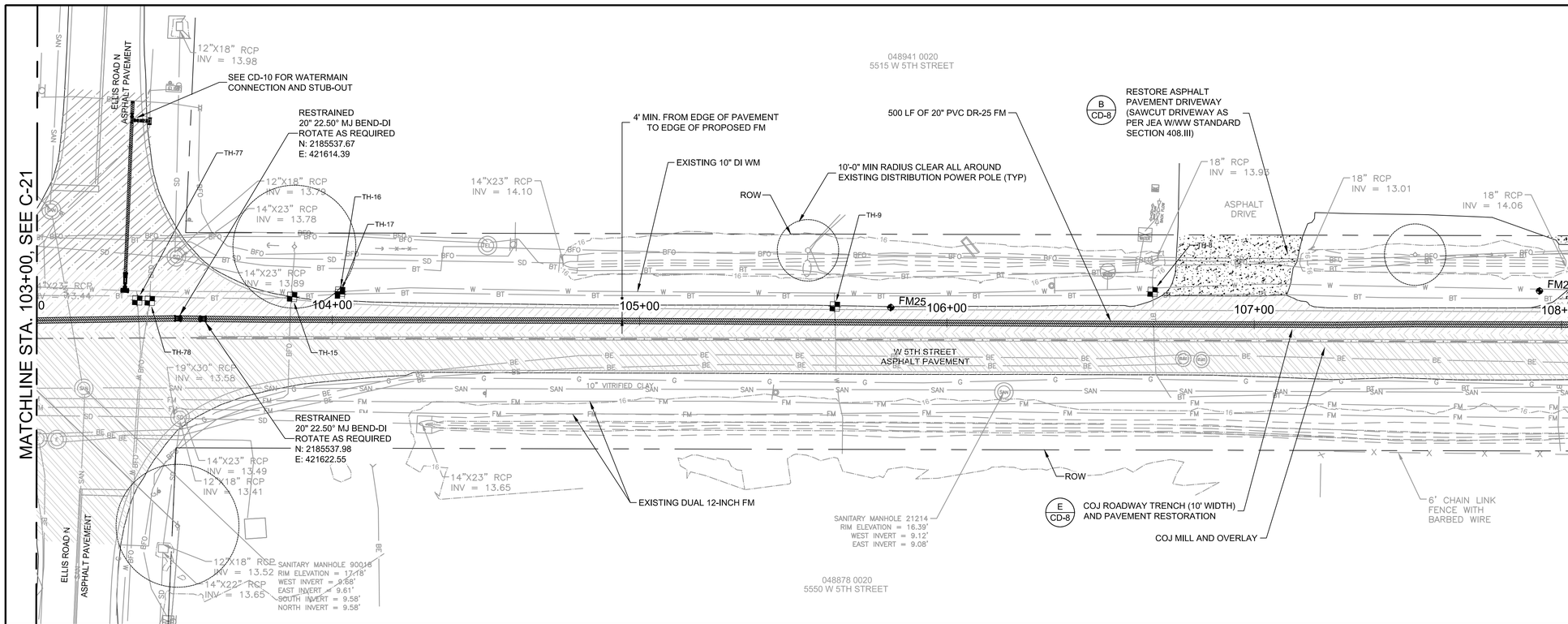
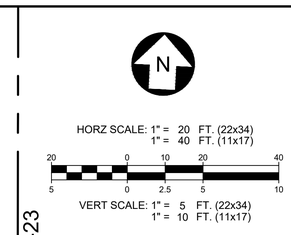
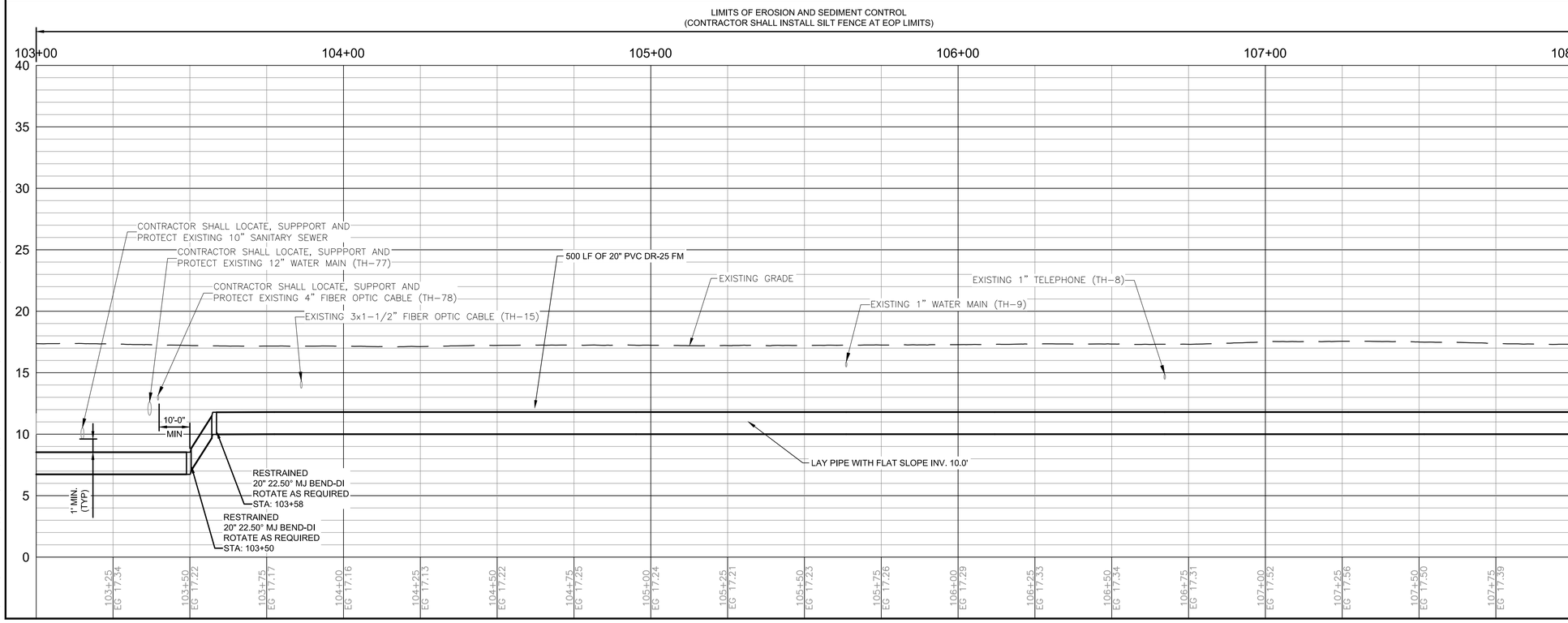




NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.
2. THE CONTRACTOR SHALL NOTE THAT BETWEEN STATION 102+50 AND 104+00, THE PROPOSED FORCE MAIN WILL BE PARALLEL TO 69KV CIRCUITS 659. AT THIS LOCATION, THE LOWEST PHASE CONDUCTOR CLEARANCE IS +/- 46 FEET ABOVE EXISTING GRADE.



100% SUBMITTAL

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Architect AA: C000055
Engineers EB: 0000155
Surveyors LB: 0000763
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
6.			
5.			
4.			
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DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO.
51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 103+00 TO STA 108+00

PROJ. NO.	502402368
DATE:	JULY 2020
SCALE:	HORIZ: 1" = 20' VERT: 1" = 5'

NO. SHEETS	88
SHEET NO.	28
DRAWING NO.	C-22

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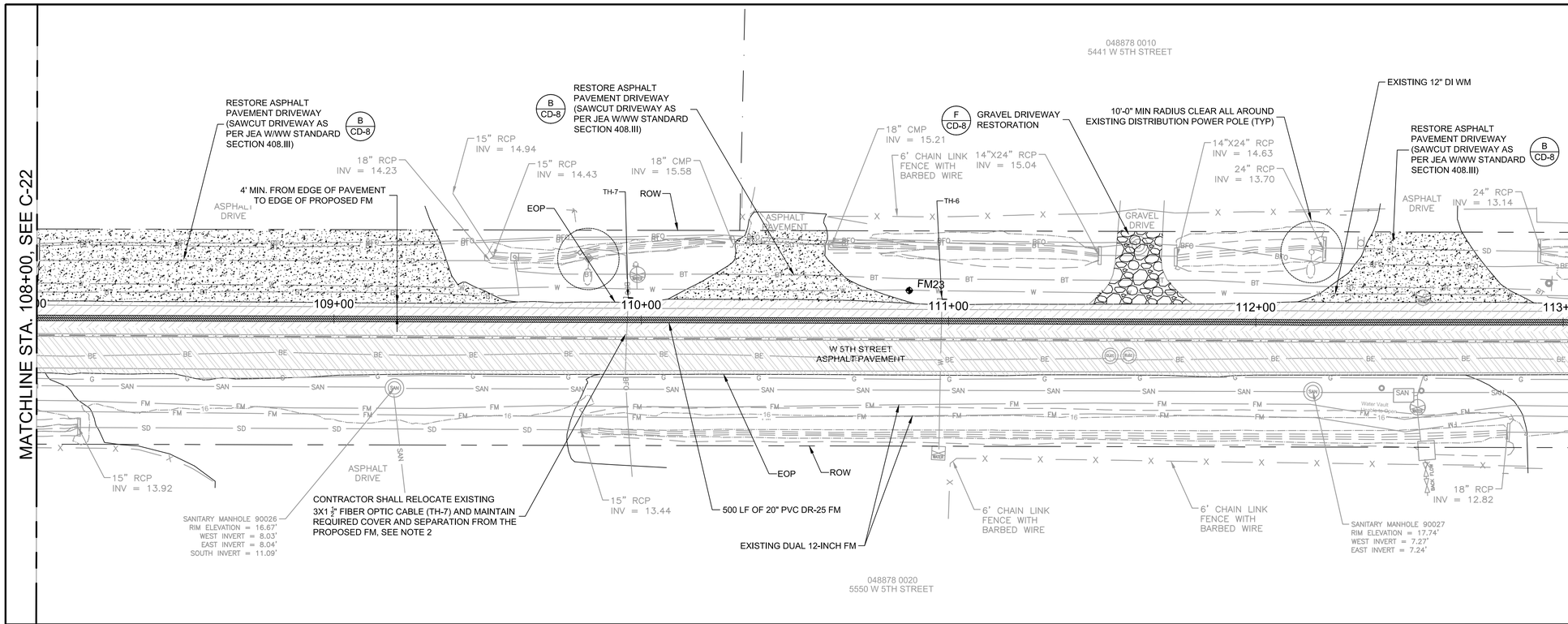


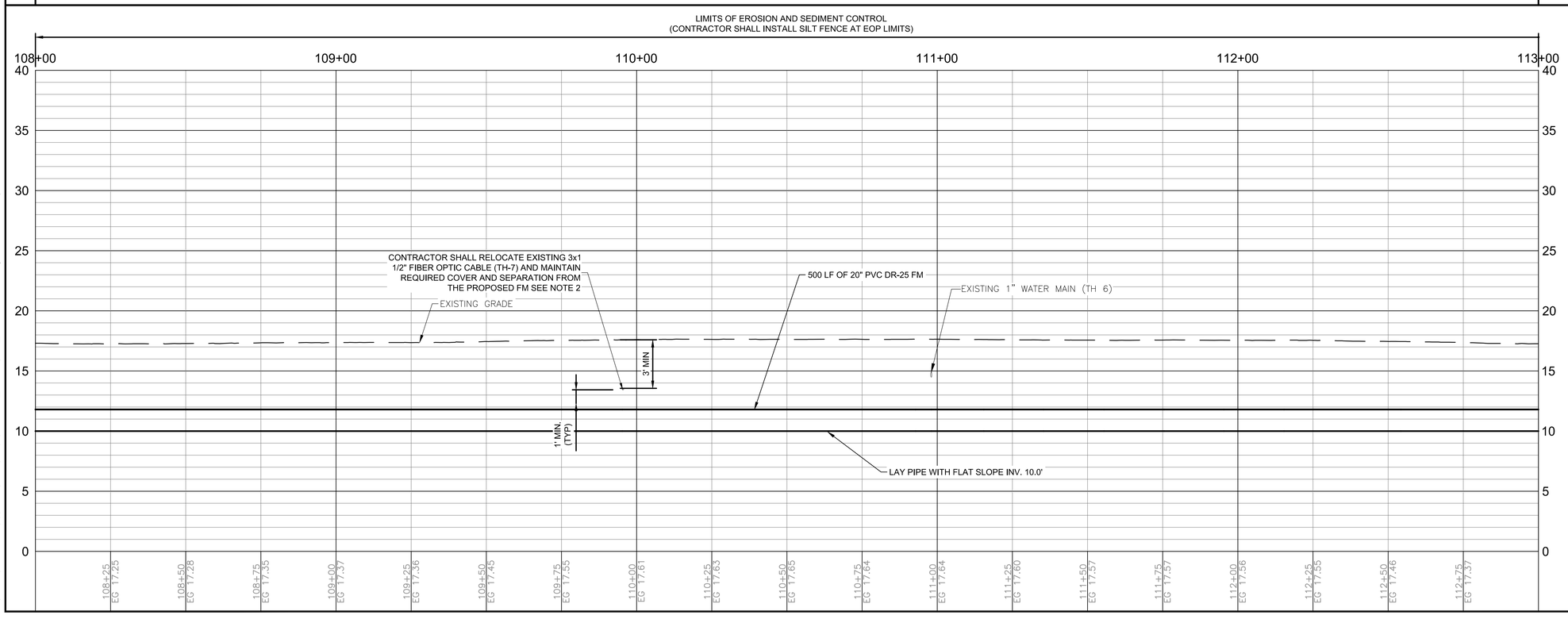
HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.

2. THE CONTRACTOR SHALL FIELD CONFIRM THE LOCATION OF THE FOC AND VERIFY ITS POSSIBLE CONFLICT UPON RECEIVING THE NTP. THE CONTRACTOR SHALL COORDINATE WITH THE FOC COMPANY TO SUPPORT AND PROTECTION OF THE FOC. SHOULD THE FOC REQUIRE RELOCATION, THE CONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO JEA AND FOC COMPANY TO BEGIN THE PROCESS OF THE FOC RELOCATION. THE CONTRACTOR'S NOTIFICATION SHALL BE PROVIDED A MONTH PRIOR TO THE FOC COMPANY BEING ABLE TO SCHEDULE THE WORK.THE CONTRACTOR SHALL REFLECT ESTIMATED TIMEFRAME FOR RELOCATION WITHIN ITS PROJECT SCHEDULE. COORDINATION OF THE RELOCATION WORK IN THIS AREA SHALL BE THE OVERALL RESPONSIBILITY OF THE CONTRACTOR. JEA WILL NOT ENTERTAIN CONTRACTOR DELAY CLAIMS RELATED TO PERFORMING THE SPECIFIED WORK IN THE AREA DUE TO RELOCATION OF THE FOC.



100% SUBMITTAL

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Certificates AA : 00003605
Engineers EB : 00001155
Surveyors LB : 0000763
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
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DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 108+00 TO STA 113+00

PROJ. NO.	502402368
DATE:	JULY 2020
SCALE:	HORIZ. 1" = 20' VERT. 1" = 5'

NO. SHEETS	88
SHEET NO.	29
DRAWING NO.	C-23

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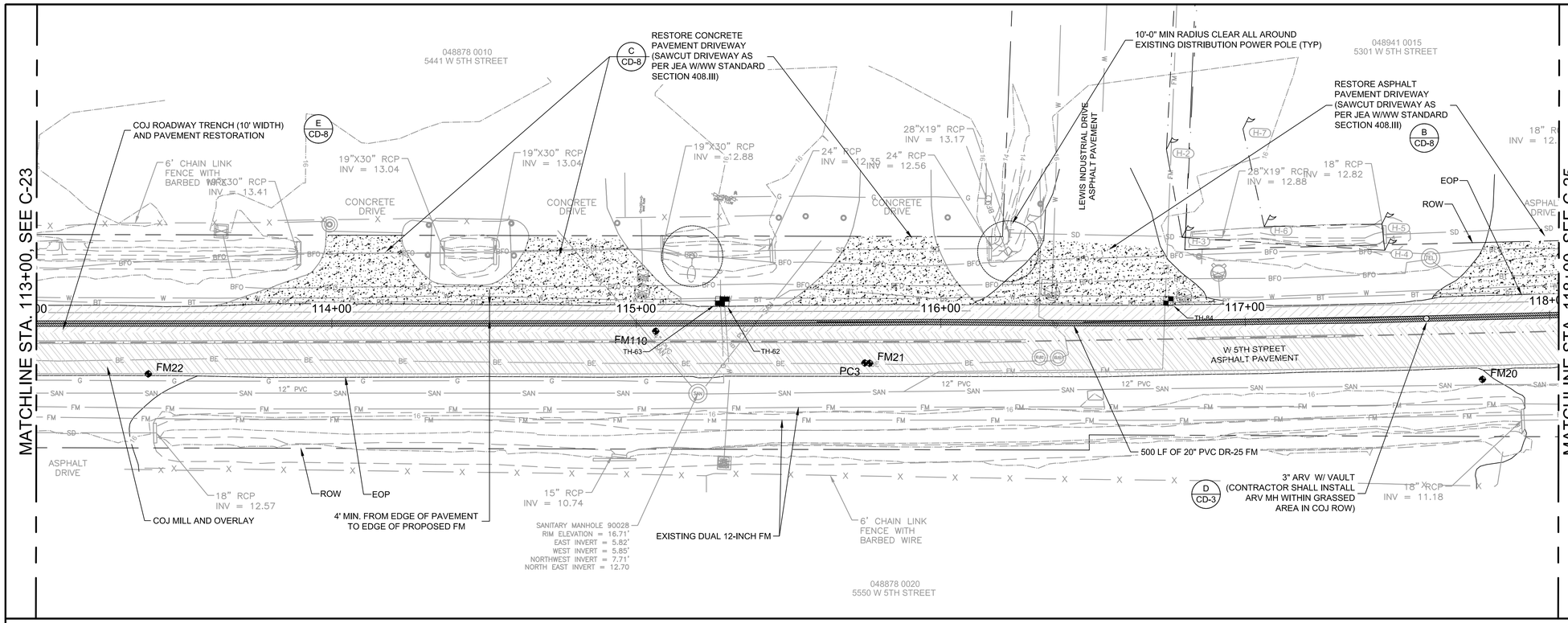
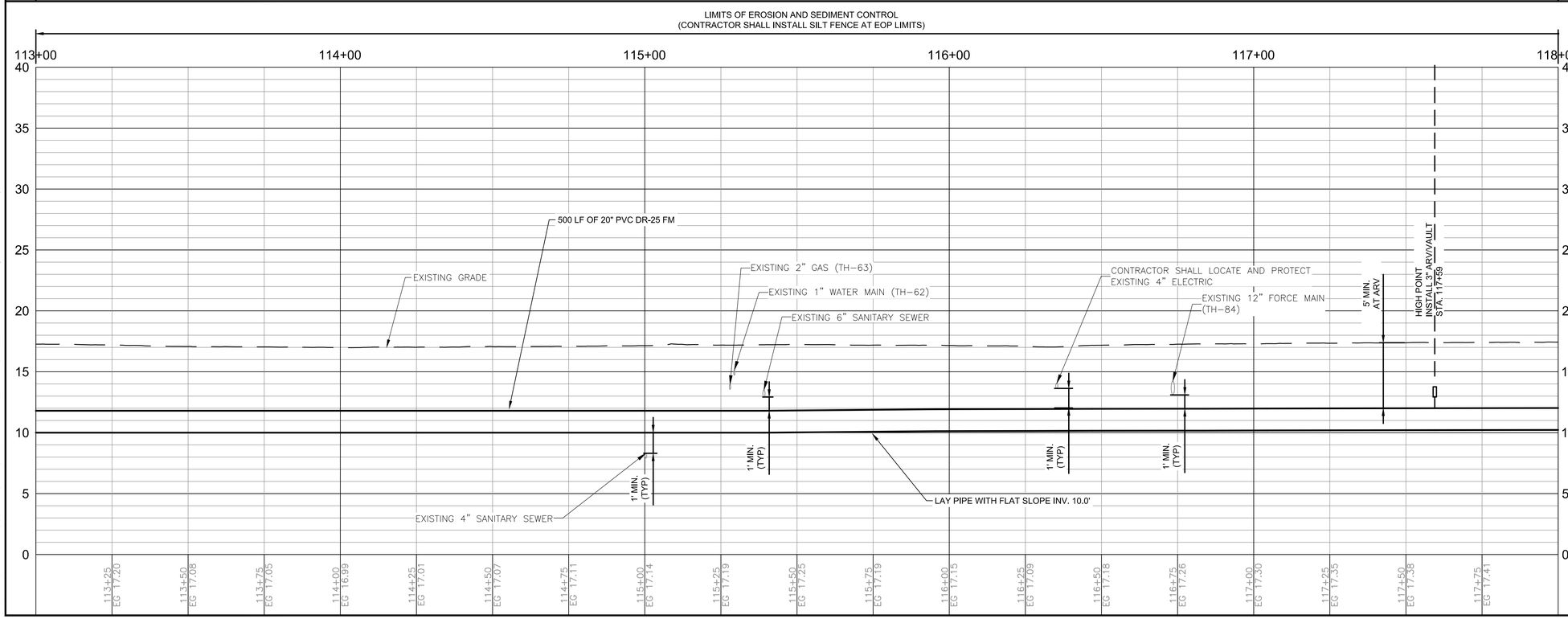


HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.



100% SUBMITTAL

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 263-1090
Amelnumber AA - 00000055
Engineers EB - 0000155
Surveyors LB - 0000763
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
6.			
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DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO.
51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 113+00 TO STA 118+00

PROJ. NO.	502402368
DATE:	JULY 2020
SCALE:	HORIZ: 1" = 20' VERT: 1" = 5'

NO. SHEETS	88
SHEET NO.	30
DRAWING NO.	C-24

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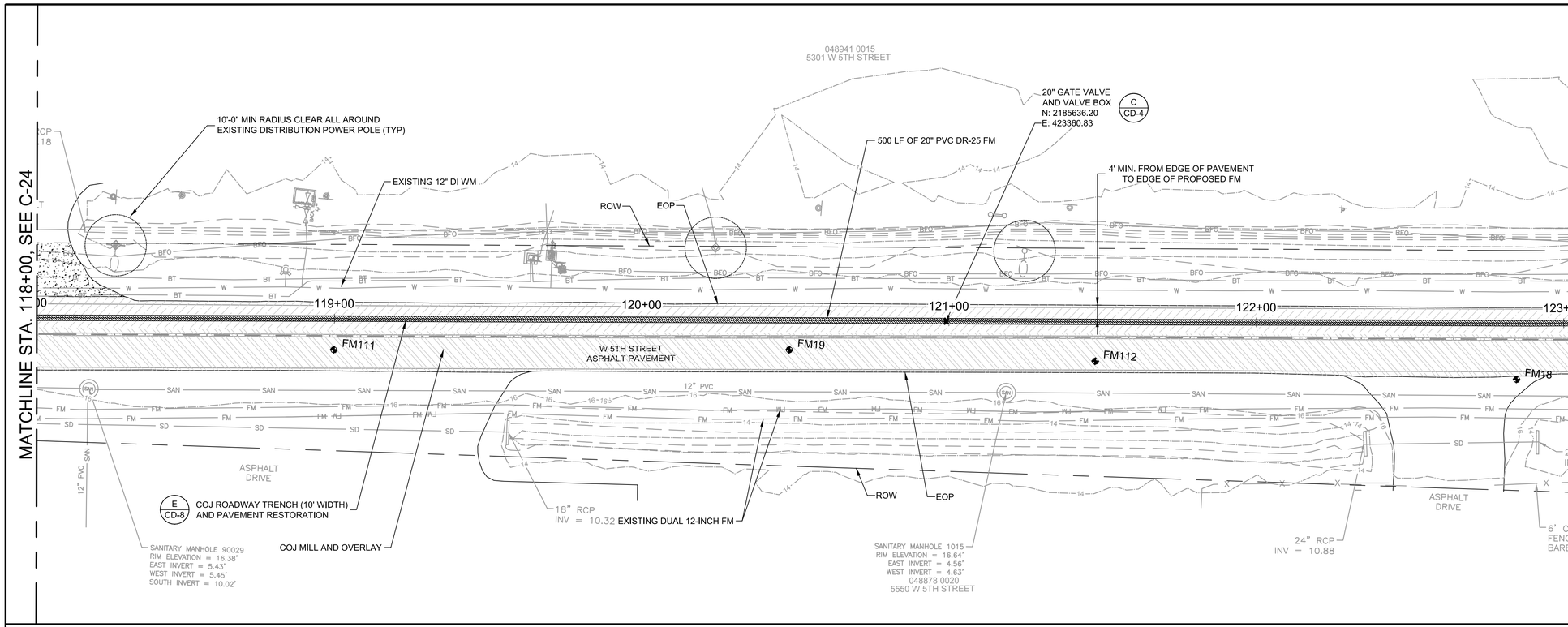

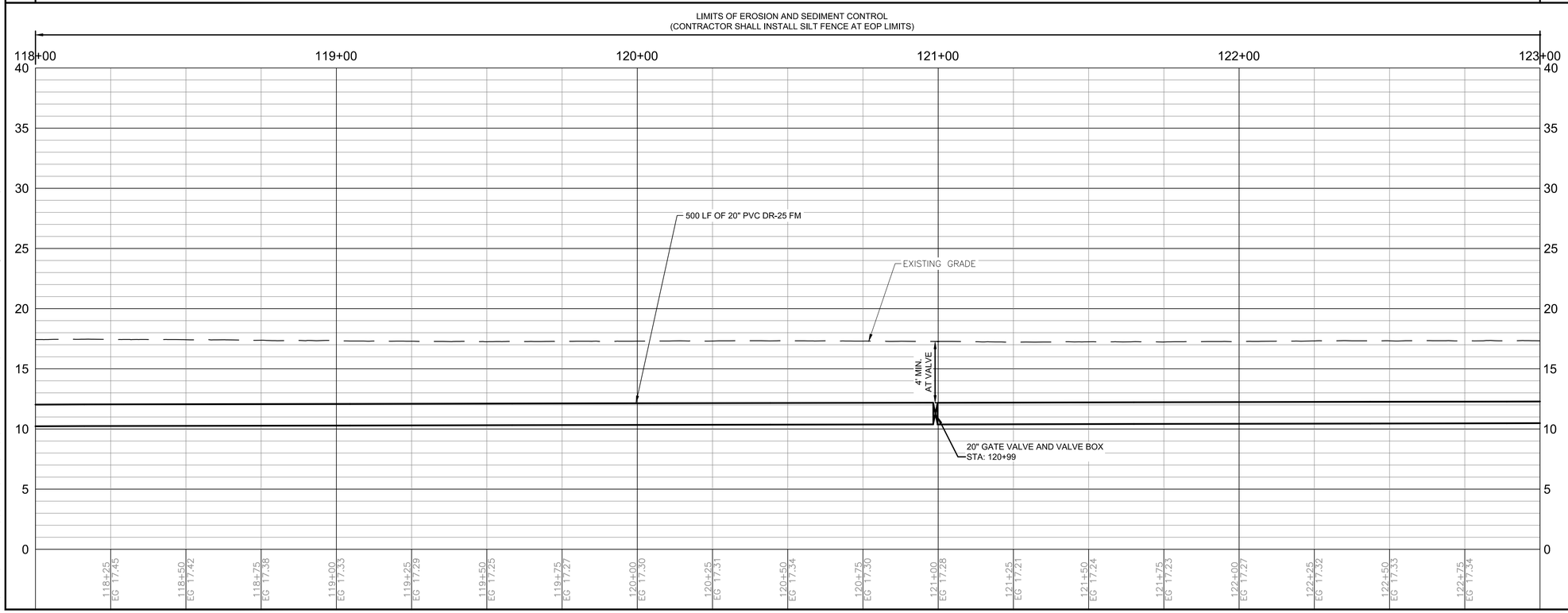

HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.

100% SUBMITTAL

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Architect AA : C000055
Engineers EB : 0000155
Surveyors LB : 0000763
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
6.			
5.			
4.			
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DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO.
51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 118+00 TO STA 123+00

PROJ. NO.	502402368
DATE:	JULY 2020
SCALE:	HORIZ: 1" = 20' VERT: 1" = 5'

NO. SHEETS 88
SHEET NO. 31
DRAWING NO. C-25

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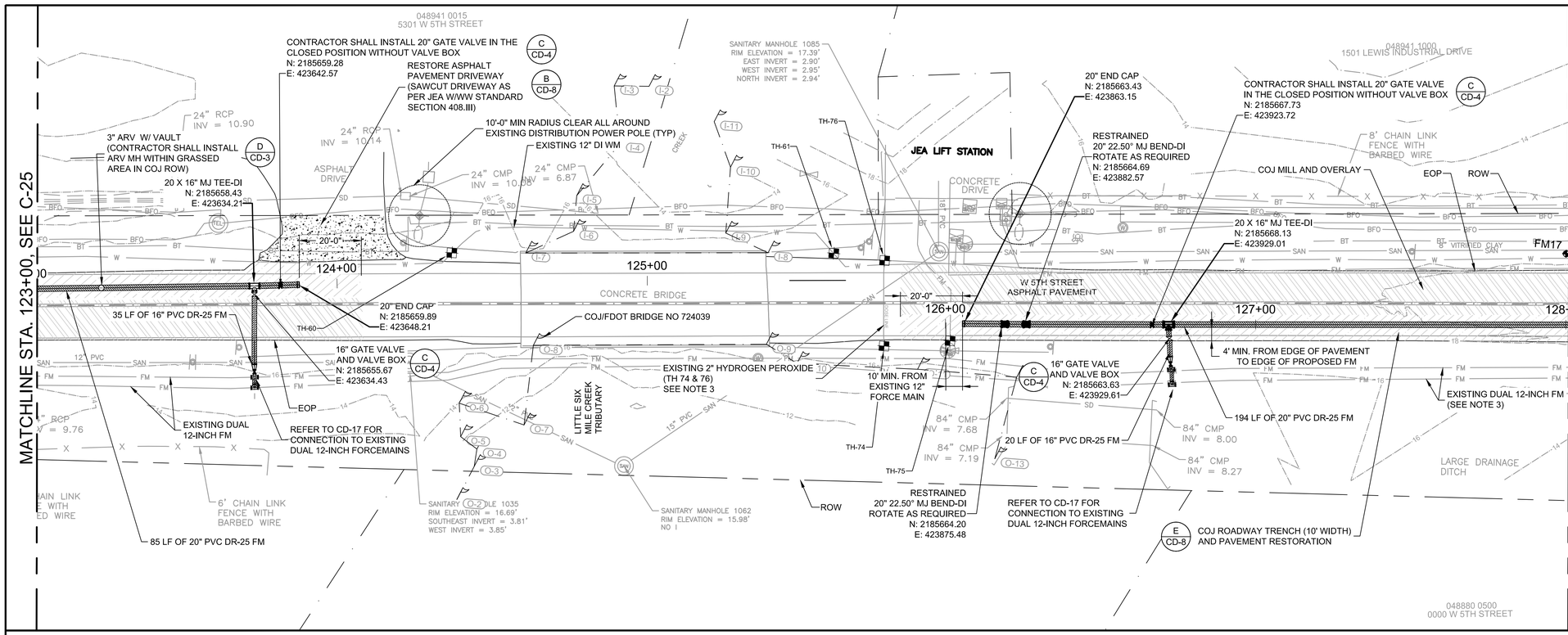
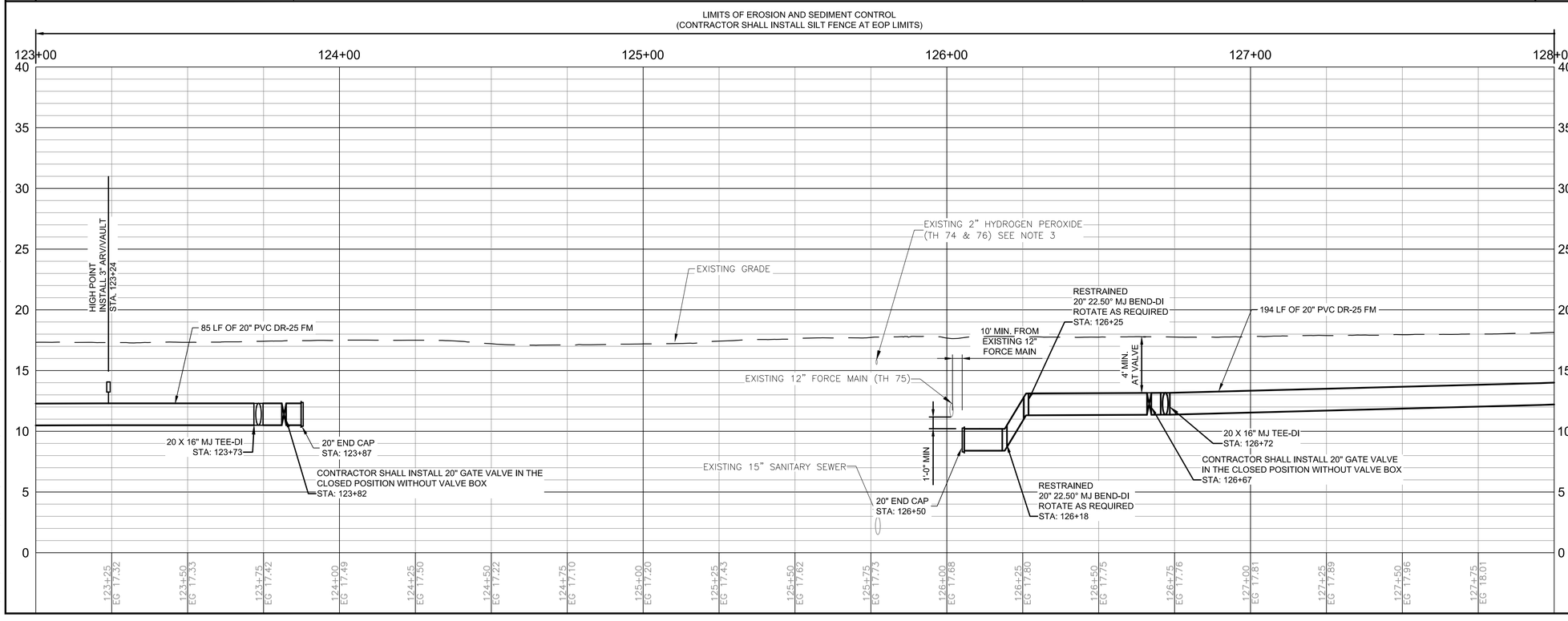


HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.
2. THE CONTRACTOR SHALL MILL AND RESURFACE THE ENTIRE WIDTH OF THE ROADWAY FROM EOP TO EOP WITHIN THIS PROJECT'S LIMITS TO COJ STANDARDS. THE CONTRACTOR SHALL RESTORE THE ROADWAY TRENCH AND PAVEMENT. SEE DETAIL E/CD-8 FOR ADDITIONAL DETAILS.
3. THE CONTRACTOR SHALL COORDINATE WITH JEA'S TREATMENT ENGINEERING ODOR CONTROL ENGINEERS ONE MONTH PRIOR TO CONSTRUCTION AND DURING CONSTRUCTION FROM STA 123+00 AND 131+00. PLEASE NOTE THAT THE CHEMICAL IS USED TO CONTROL ODORS, PRIMARILY HYDROGEN SULFIDE (H2S). TURNING THE HYDROGEN PEROXIDE OFF WILL RESULT IN INCREASED LEVELS OF H2S THEREFORE APPROPRIATE SAFETY MEASURES MUST BE TAKEN INCLUDING GAS DETECTION AND PPE. REFER TO SUPPLEMENTAL SPECIFICATIONS - APPENDIX A - FOR SAFETY DATA SPECIFICATIONS IN THE EVENT OF AN EMERGENCY, CALL USP TECHNOLOGIES. OTHERWISE, CONTACT THE JEA TREATMENT ENGINEERING ODOR CONTROL ENGINEER FOR ASSISTANCE.



100% SUBMITTAL

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Architect AA: C000055
Engineers EB: 0000155
Surveyors LB: 0000763

MOTT MACDONALD

NO.	BY	DATE	REVISIONS
6.			
5.			
4.			
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DESIGN ENGINEER: BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER: B. NEU
DRAWN BY: F. NGUYEN
DATE: JULY 2020
CHECKED BY: P. MOURT
DATE: JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 123+00 TO STA 128+00

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: HORIZ: 1" = 20' VERT: 1" = 5'

NO. SHEETS 88
SHEET NO. 32
DRAWING NO. C-26

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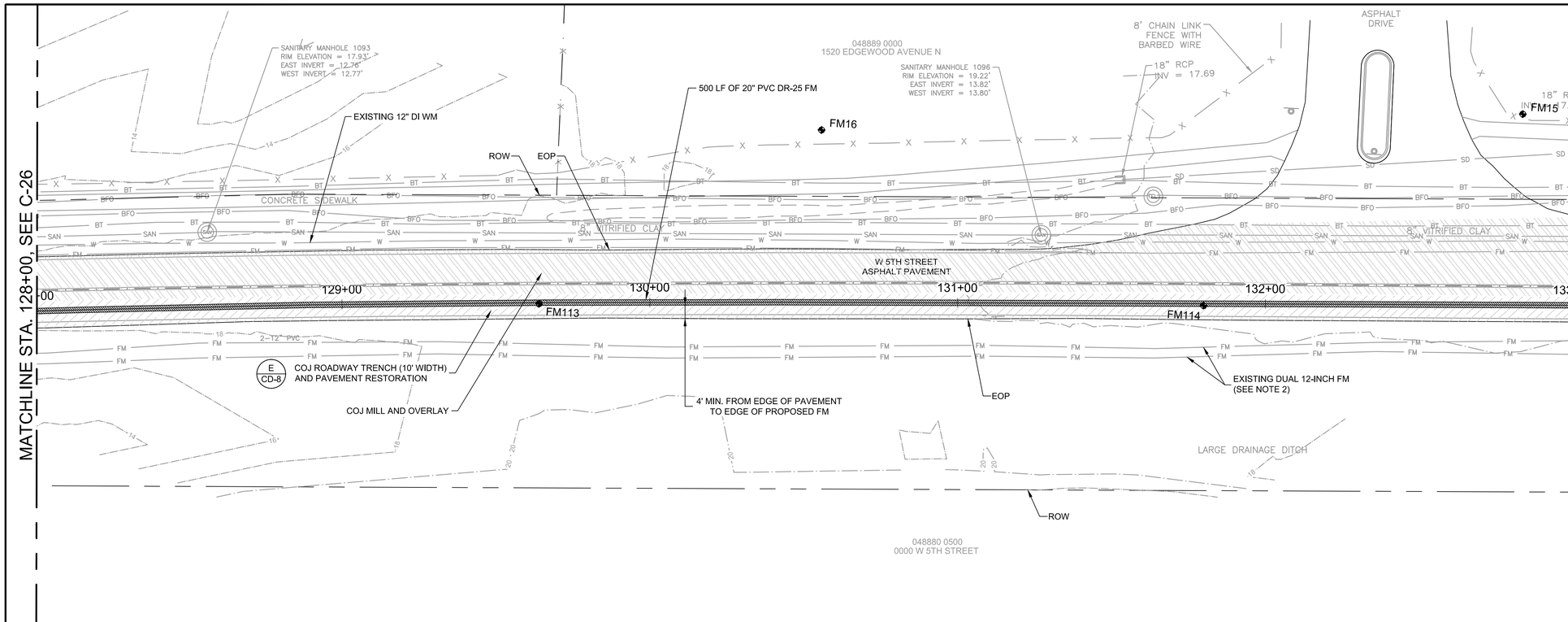

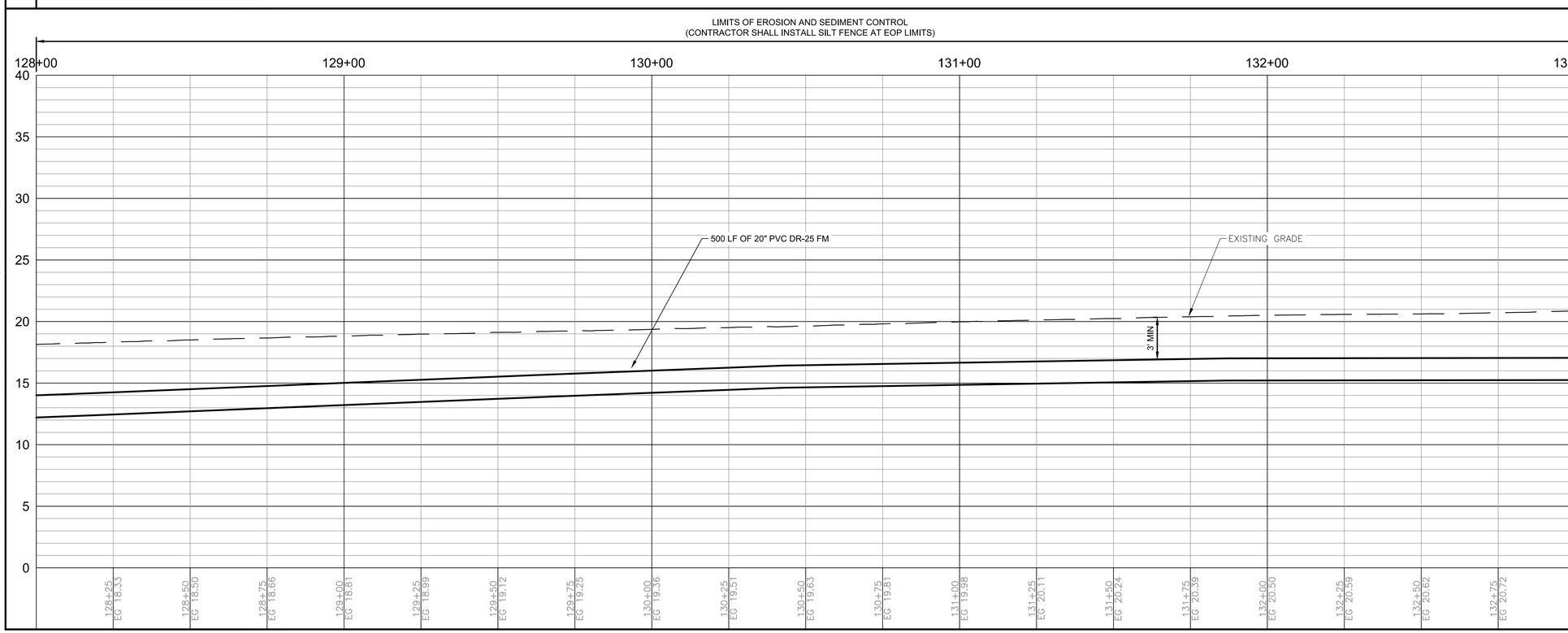

HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.

2. PLEASE NOTE THAT THE CHEMICAL IS USED TO CONTROL ODORS, PRIMARILY HYDROGEN SULFIDE (H2S) IN THE EXISTING DUAL 12-INCH FORCE MAINS. TURNING THE HYDROGEN PEROXIDE OFF WILL RESULT IN INCREASED LEVELS OF H2S THEREFORE APPROPRIATE SAFETY MEASURES MUST BE TAKEN INCLUDING GAS DETECTION AND PPE. REFER TO SUPPLEMENTAL SPECIFICATIONS - APPENDIX A - FOR SAFETY DATA SPECIFICATIONS IN THE EVENT OF AN EMERGENCY, CALL USP TECHNOLOGIES. OTHERWISE, CONTACT THE JEA TREATMENT ENGINEERING ODOR CONTROL ENGINEER FOR ASSISTANCE.

100% SUBMITTAL

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Firm Numbers
Architect AA : C000055
Engineers EB : 0000155
Surveyors LB : 0000763
MOTT MACDONALD

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

DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO.
51672

DESIGNER: B. NEU
DRAWN BY: F. NGUYEN
DATE: JULY 2020
CHECKED BY: P. MOURT
DATE: JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 128+00 TO 133+00

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: HORIZ: 1" = 20'
VERT: 1" = 5'

NO. SHEETS 88
SHEET NO. 33
DRAWING NO. C-27

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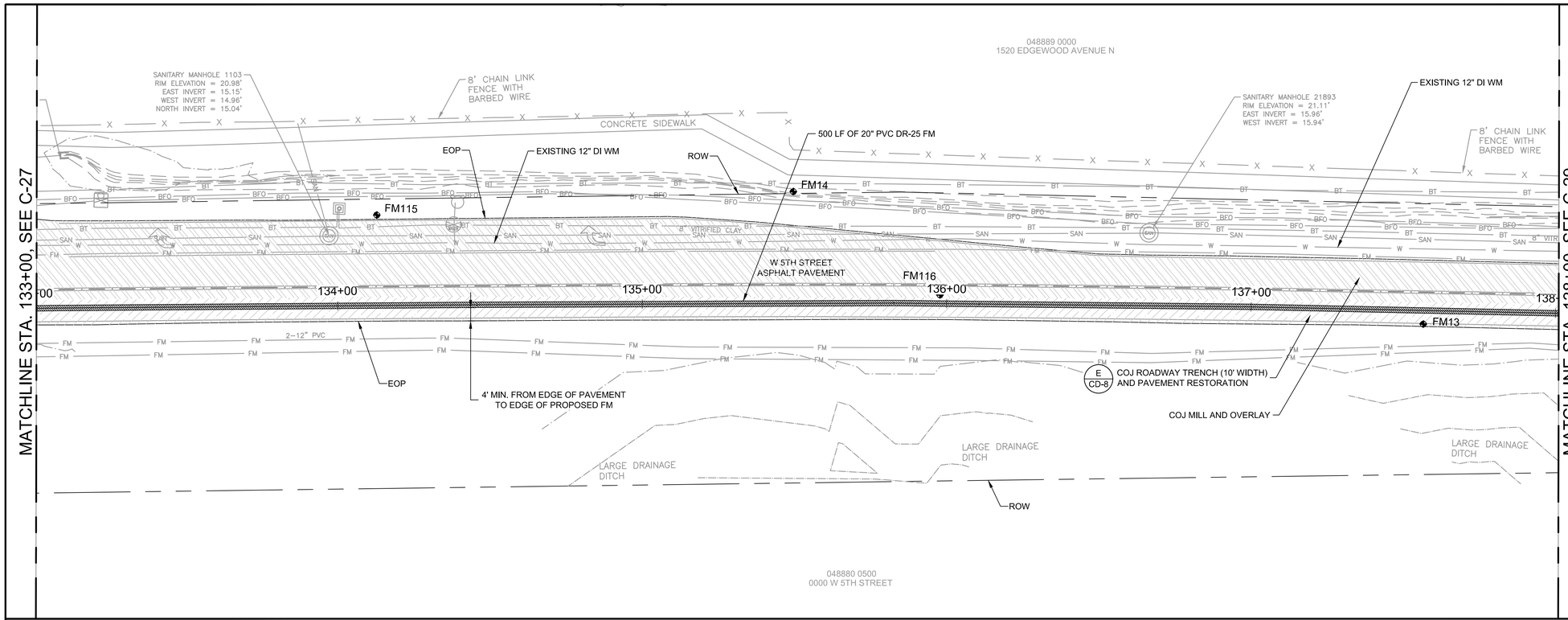

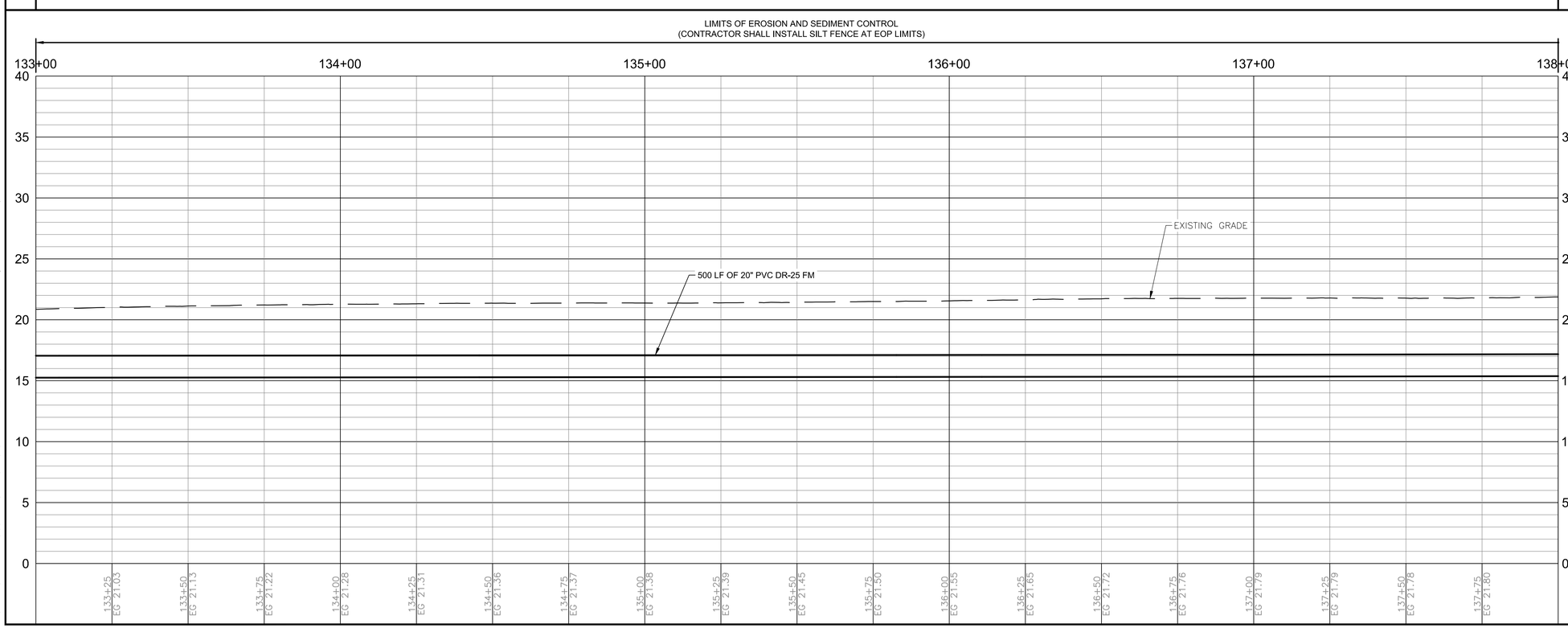

100% SUBMITTAL

HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Architect AA : 0000055
Engineers EB : 0000155
Surveyors LB : 0000763
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
6.			
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DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO.
51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community sm

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 133+00 TO STA 138+00

PROJ. NO.	502402368
DATE:	JULY 2020
SCALE:	HORIZ.:1" = 20' VERT.:1" = 5'

NO. SHEETS	88
SHEET NO.	34
DRAWING NO.	C-28

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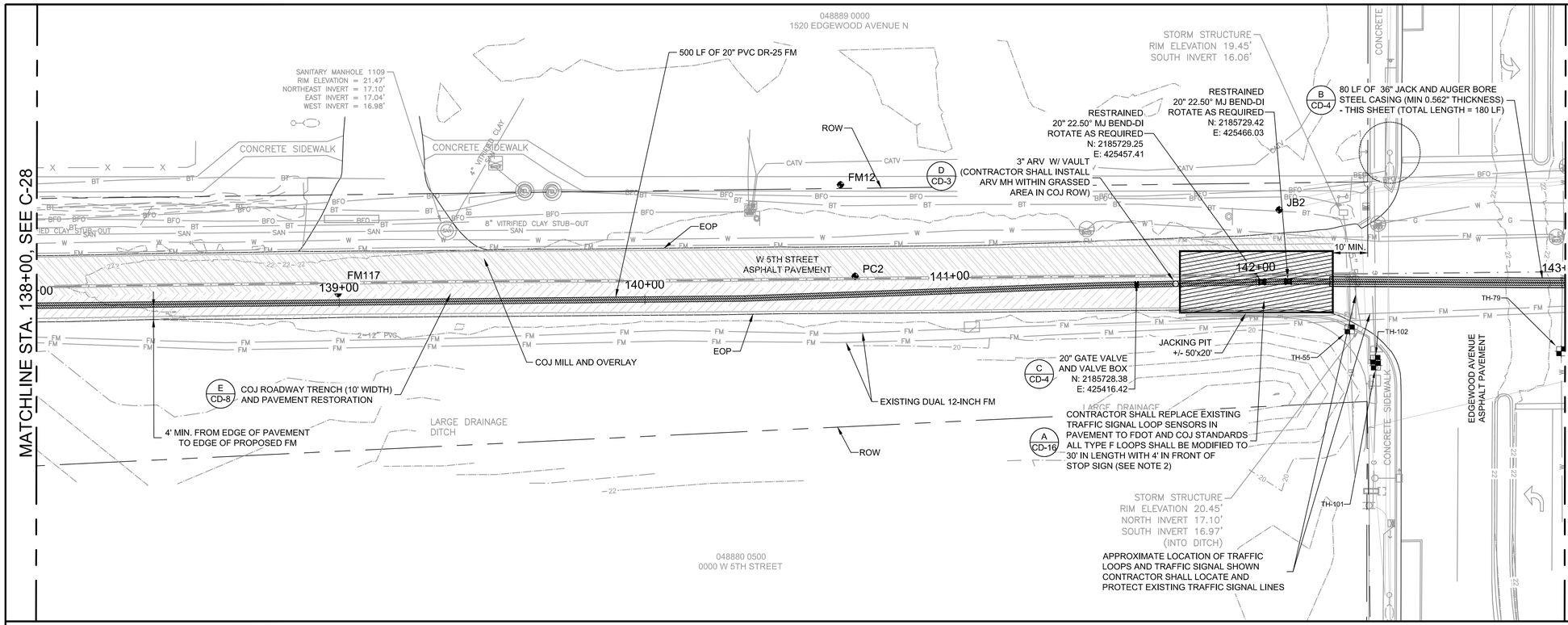
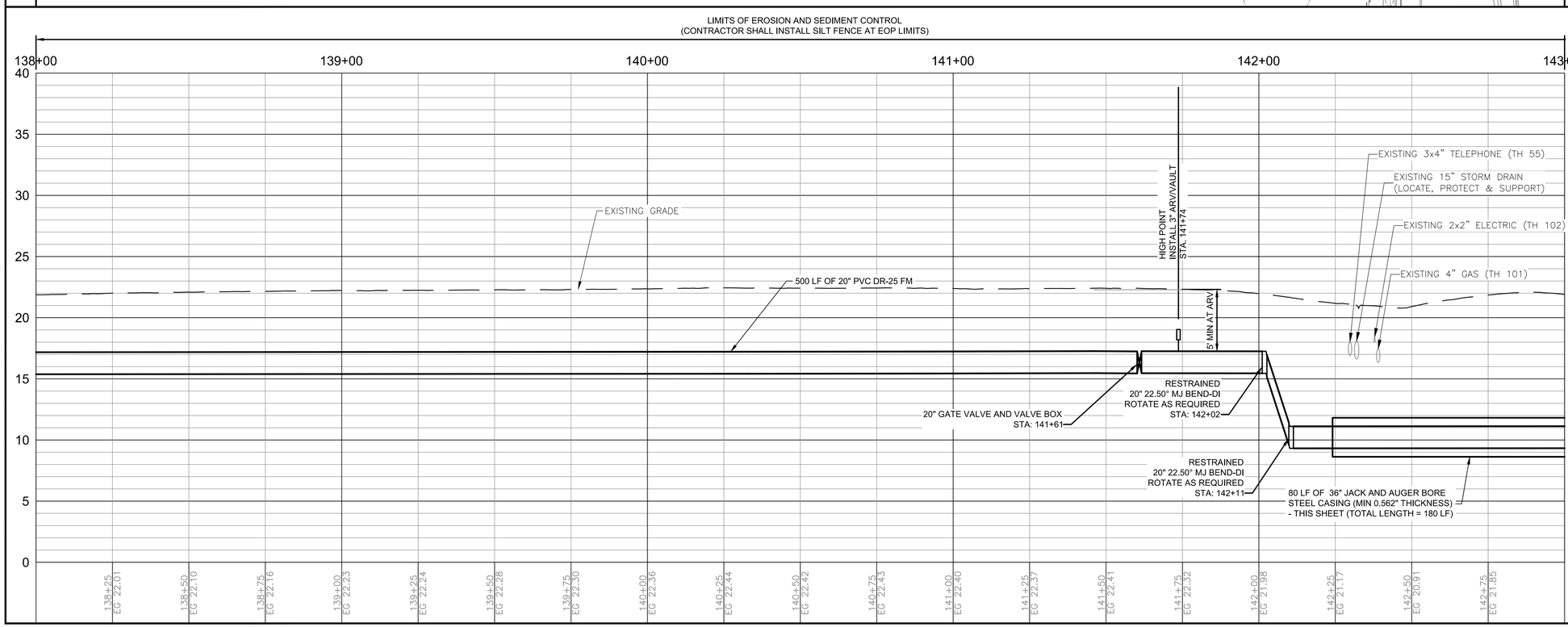


HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.
2. THE CONTRACTOR SHALL NOTIFY THE CITY OF JACKSONVILLE TRAFFIC ENGINEERING DIVISION 48 HOURS IN ADVANCE OF BEGINNING SIGNAL WORK TO OBSERVE INSTALLATION.
   CONTACT: MIKE CAMACHO
   PHONE: 904-255-7549,
   EMAIL: MCAMACHO@COJ.NET



100% SUBMITTAL

MOTT MACDONALD
Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Architect AA: C000055
Engineers EB: 0000155
Surveyors LB: 0000763

NO.	BY	DATE	REVISIONS
6.			
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DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO.
51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community sm

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 138+00 TO 143+00

PROJ. NO.	502402368
DATE:	JULY 2020
SCALE:	HORIZ: 1" = 20' VERT: 1" = 5'

NO. SHEETS	88
SHEET NO.	35
DRAWING NO.	C-29

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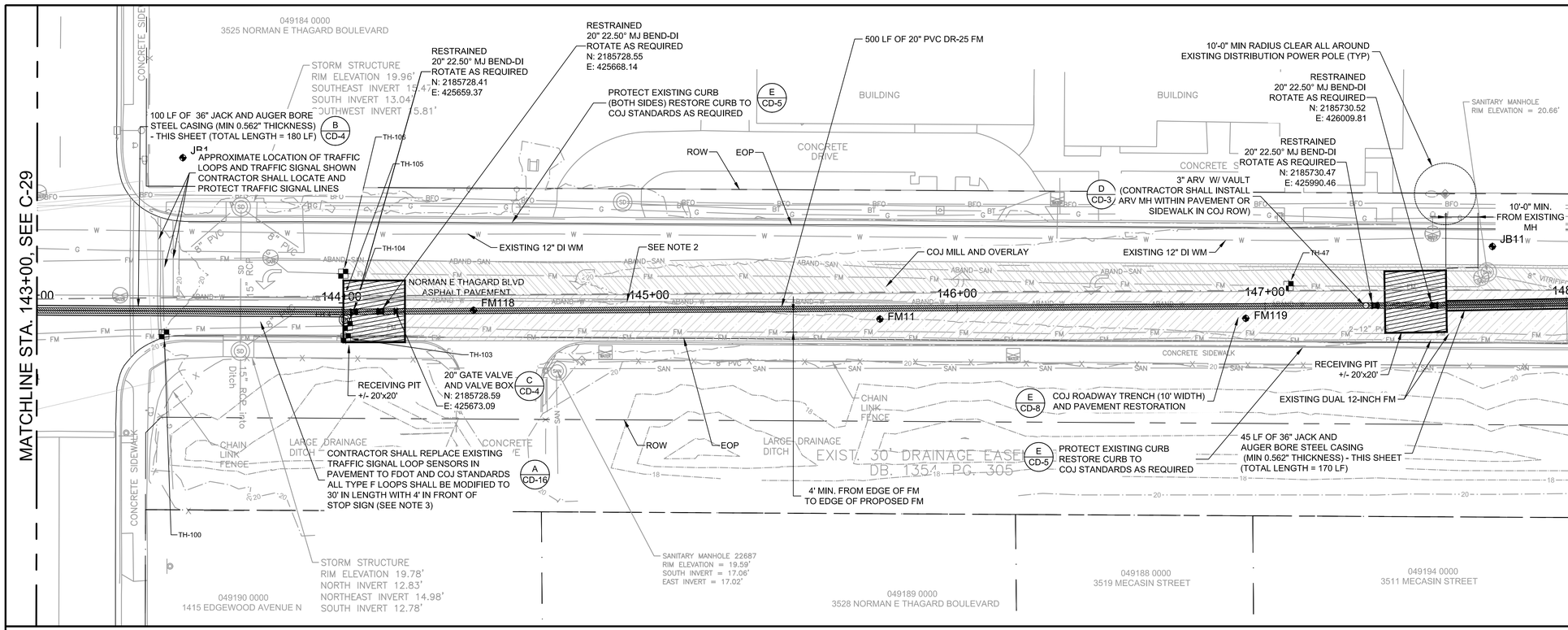

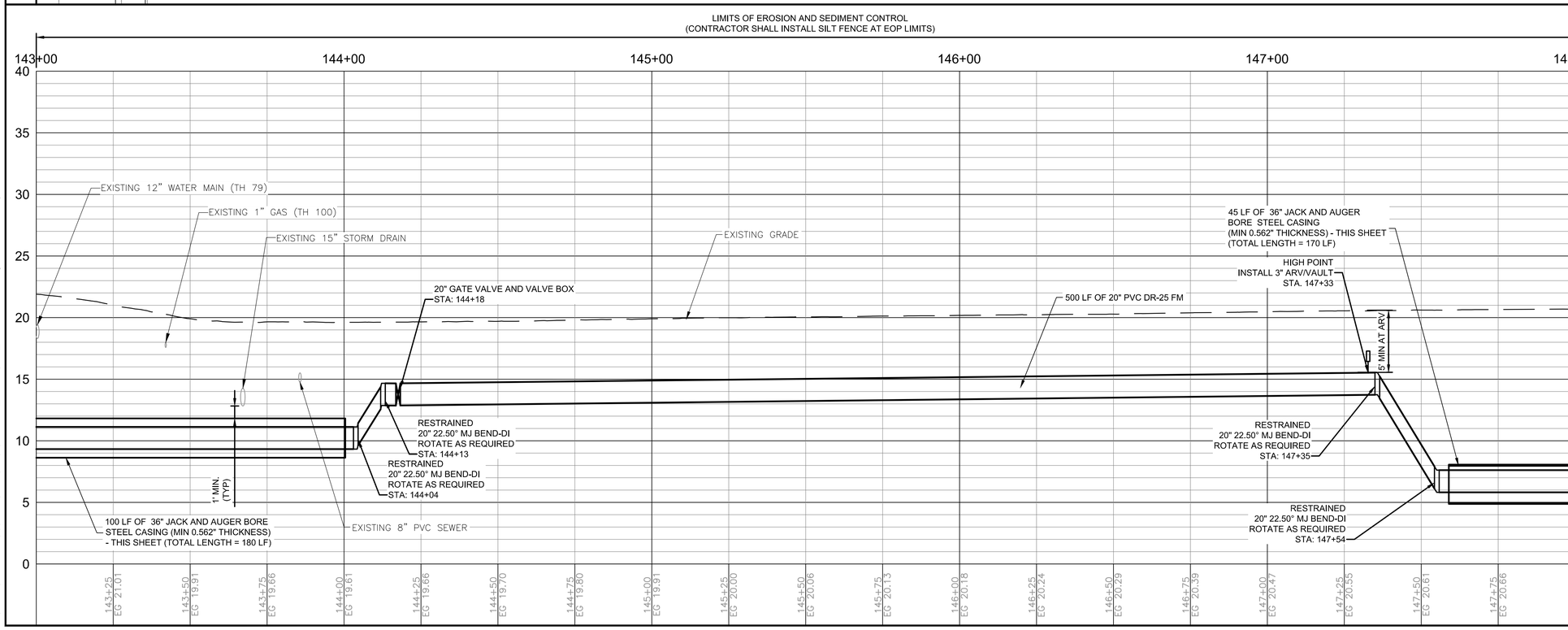

HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.
2. FROM STA 143+90 TO 156+00 REMOVE EXISTING ABANDONED WATER MAIN REQUIRED FOR THE INSTALLATION OF THE PROPOSED 20-INCH FM.
3. THE CONTRACTOR SHALL NOTIFY THE CITY OF JACKSONVILLE TRAFFIC ENGINEERING DIVISION 48 HOURS IN ADVANCE OF BEGINNING SIGNAL WORK TO OBSERVE INSTALLATION.
   CONTACT: MIKE CAMACHO
   PHONE: 904-255-7549,
   EMAIL: MCAMACHO@COJ.NET

100% SUBMITTAL

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Firm Numbers AA - 00000105
Engineers EB - 0000155
Surveyors LB - 0000763
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
6.			
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DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO.
51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 143+00 TO STA 148+00

PROJ. NO.	502402368
DATE:	JULY 2020
SCALE:	HORIZ: 1" = 20' VERT: 1" = 5'

NO. SHEETS 88
SHEET NO. 36
DRAWING NO. C-30

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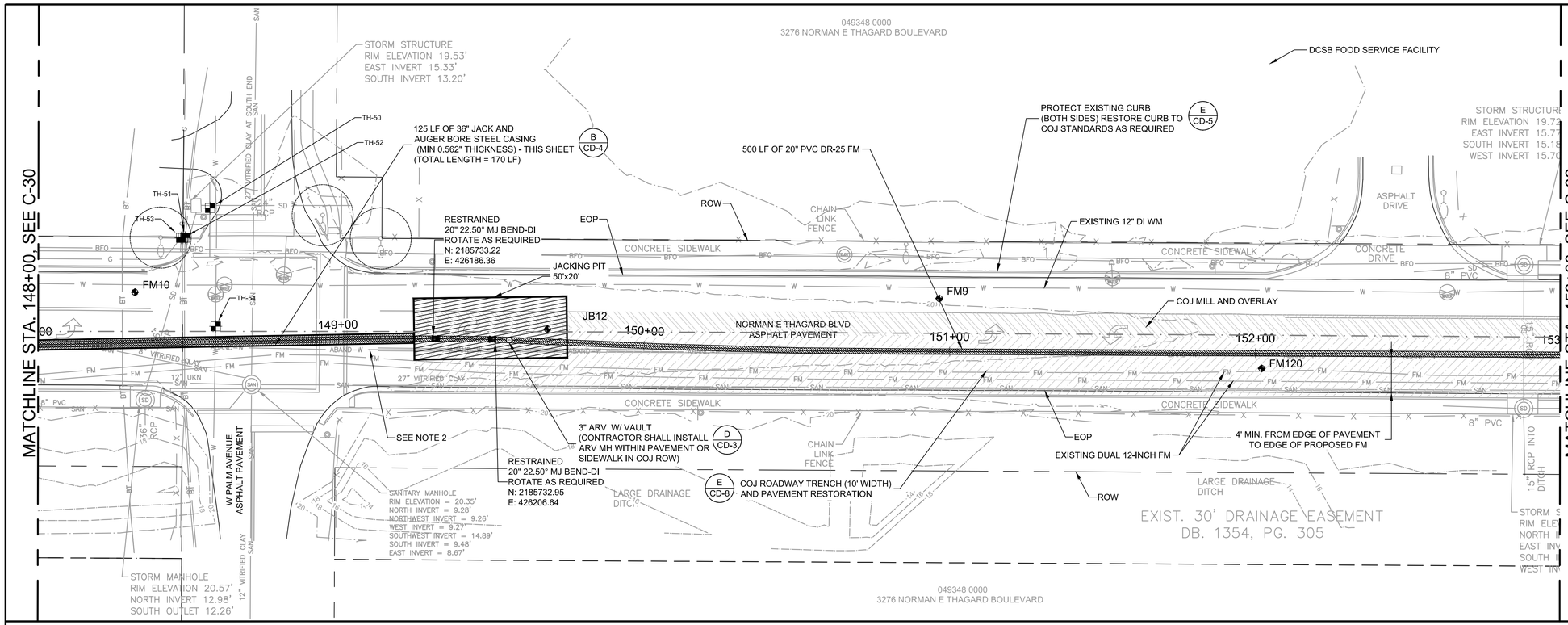

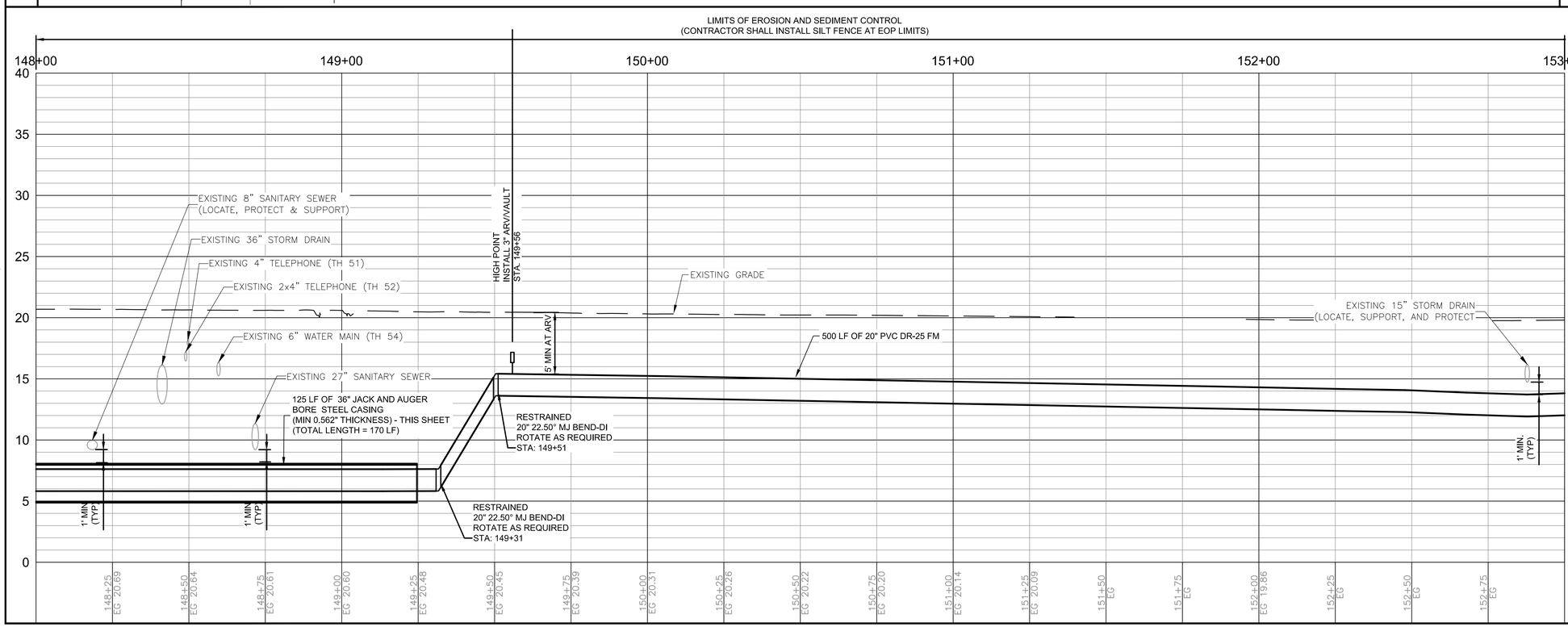

HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.
2. FROM STA 143+90 TO 156+05 REMOVE ABANDONED WATER MAIN IN CONFLICT WITH FORCE MAIN INSTALLATION.

100% SUBMITTAL

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Architect AA: C000055
Engineers EB: 0000155
Surveyors LB: 0000763
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
6.			
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DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 148+00 TO STA 153+00

PROJ. NO.	502402368
DATE:	JULY 2020
SCALE:	HORIZ.: 1" = 20' VERT.: 1" = 5'

NO. SHEETS 88
SHEET NO. 37
DRAWING NO. C-31

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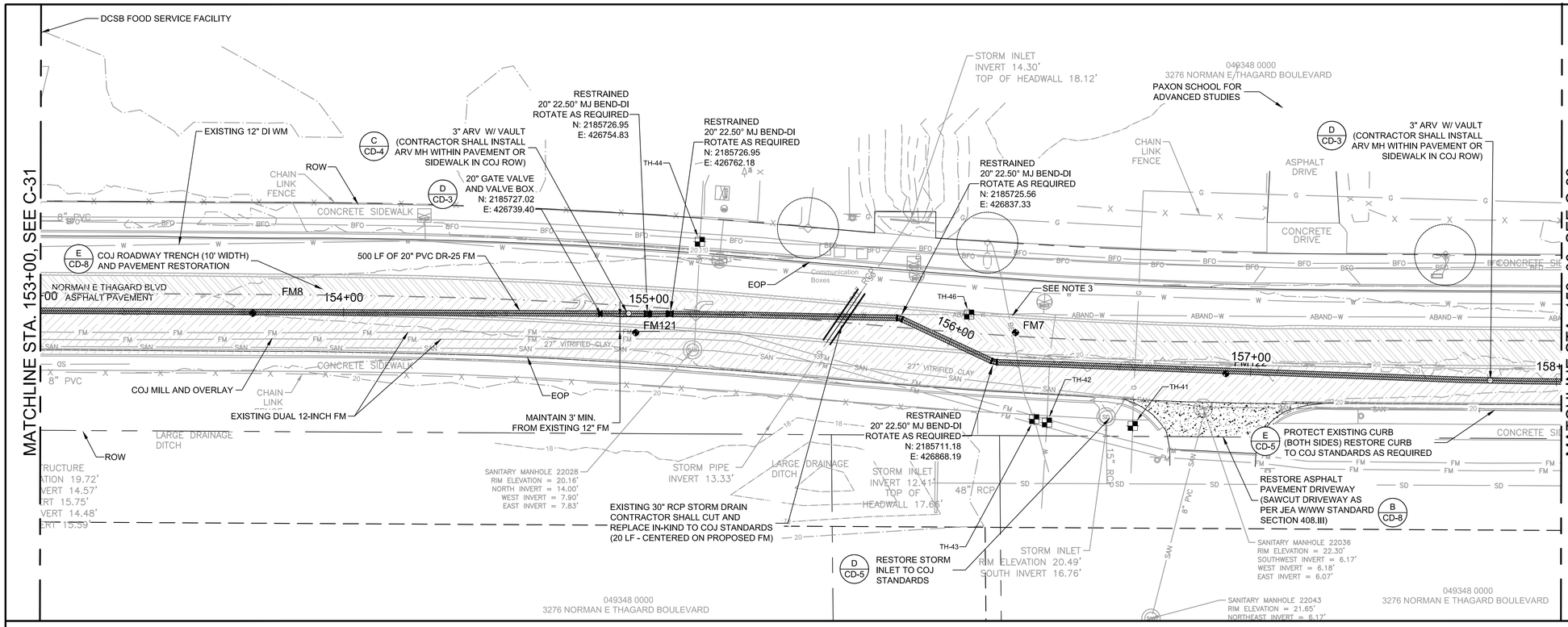
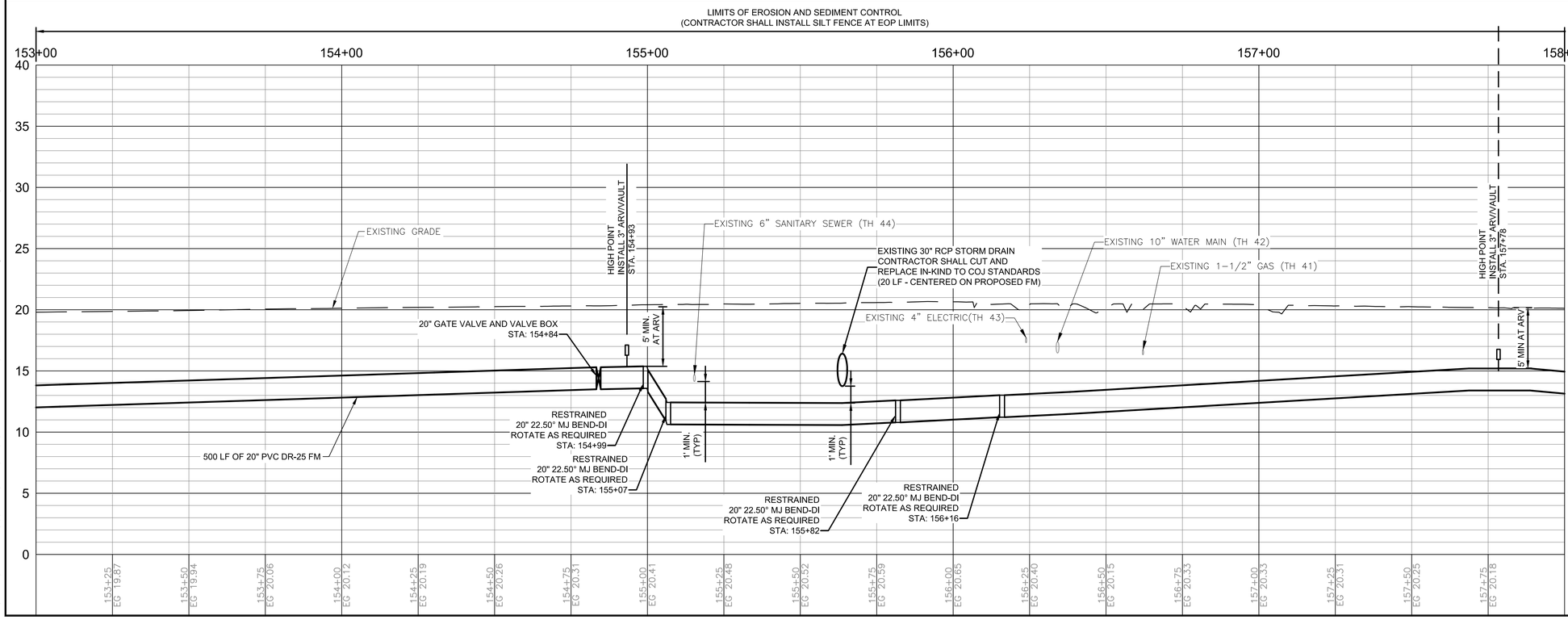


HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.
2. THE CONTRACTOR SHALL MILL AND RESURFACE THE ENTIRE WIDTH OF THE ROADWAY FROM EOP TO EOP WITHIN THIS PROJECT'S LIMITS TO COJ STANDARDS. THE CONTRACTOR SHALL RESTORE THE ROADWAY TRENCH AND PAVEMENT. SEE DETAIL E/CD-8 FOR ADDITIONAL DETAILS.
3. FROM STA 143+90 TO 156+05, REMOVE ABANDONED WATER MAIN IN CONFLICT WITH FORCE MAIN INSTALLATION.



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Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Architect AA: C000055
Engineers EB: 0000155
Surveyors LB: 0000763
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
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DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 153+00 TO STA 158+00

PROJ. NO.	502402368
DATE:	JULY 2020
SCALE:	HORIZ: 1" = 20' VERT: 1" = 5'

NO. SHEETS	88
SHEET NO.	38
DRAWING NO.	C-32

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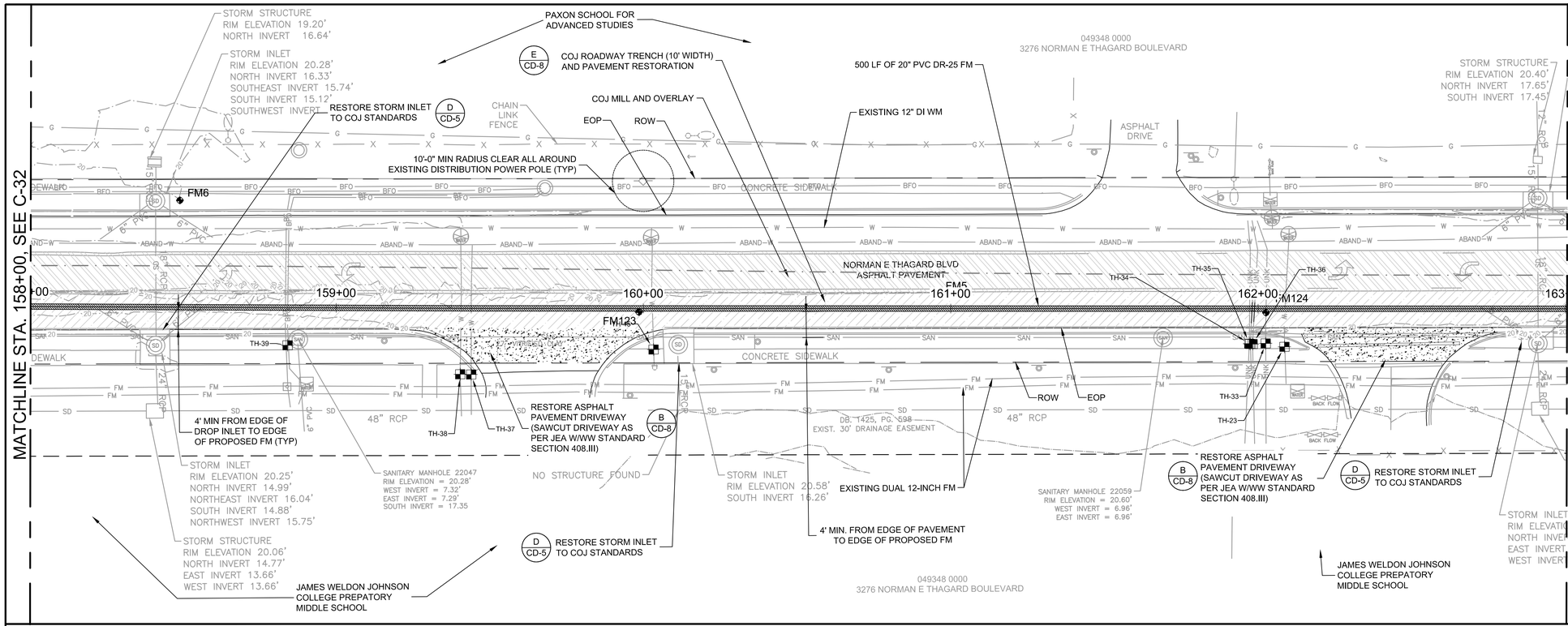

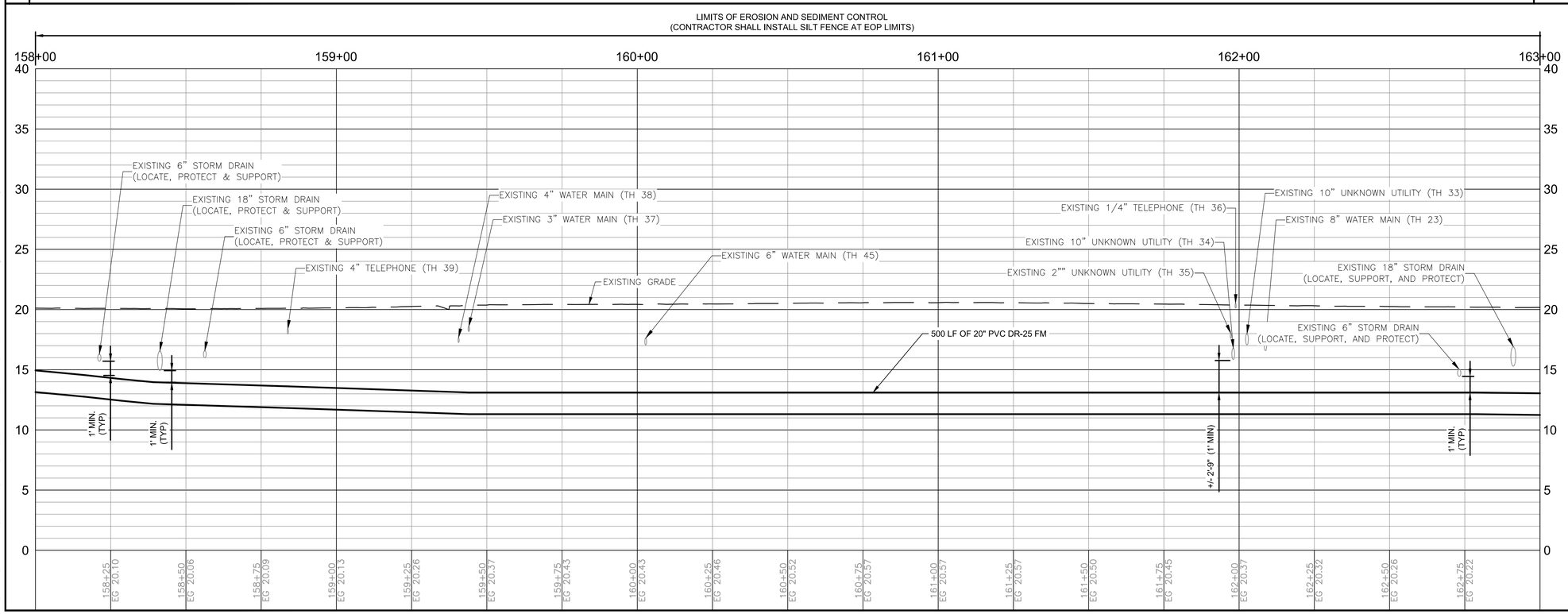

100% SUBMITTAL

HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Architect AA : 0000055
Engineers EB : 0000155
Surveyors LB : 0000763
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
6.			
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DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO.
51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 158+00 TO STA 163+00

PROJ. NO. 502402368	
DATE:	JULY 2020
SCALE:	HORIZ: 1" = 20' VERT: 1" = 5'

NO. SHEETS 88	
SHEET NO. 39	
DRAWING NO. C-33	

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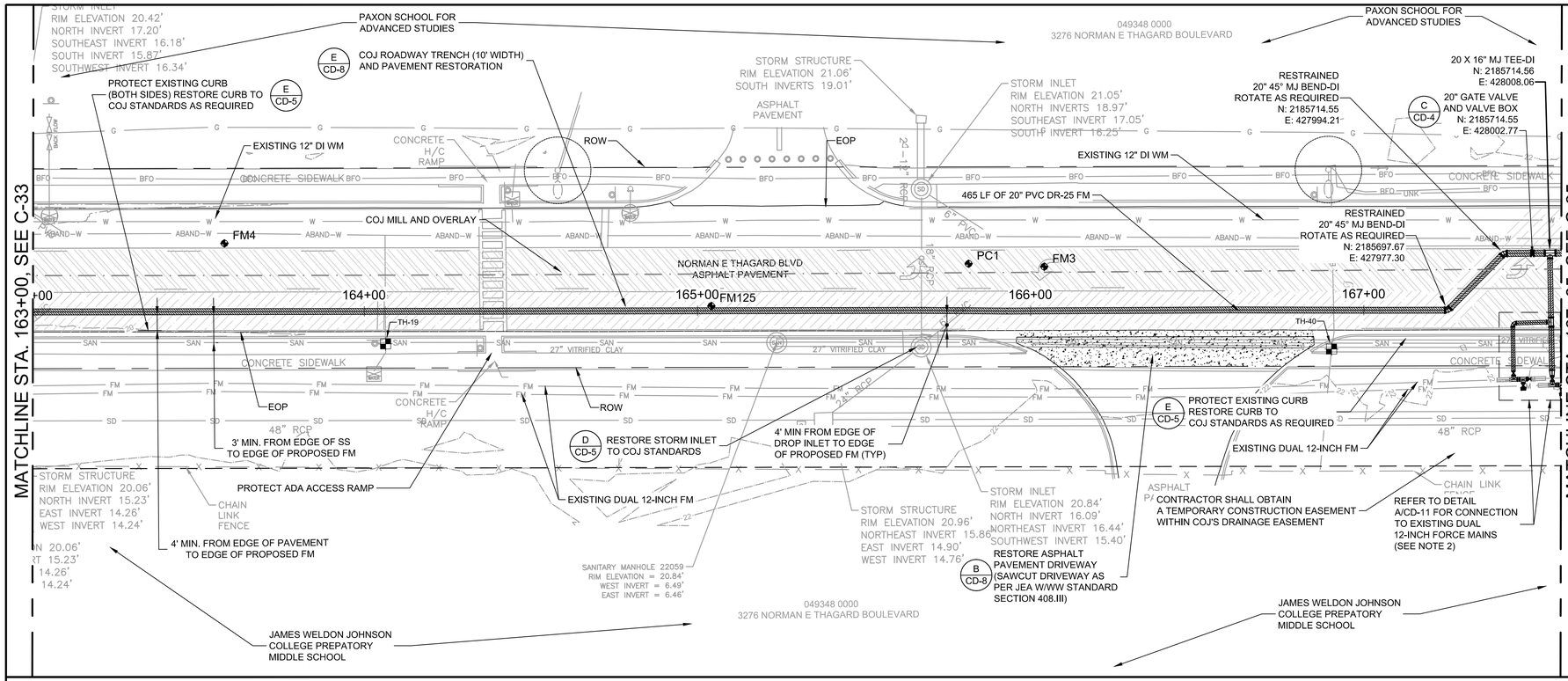

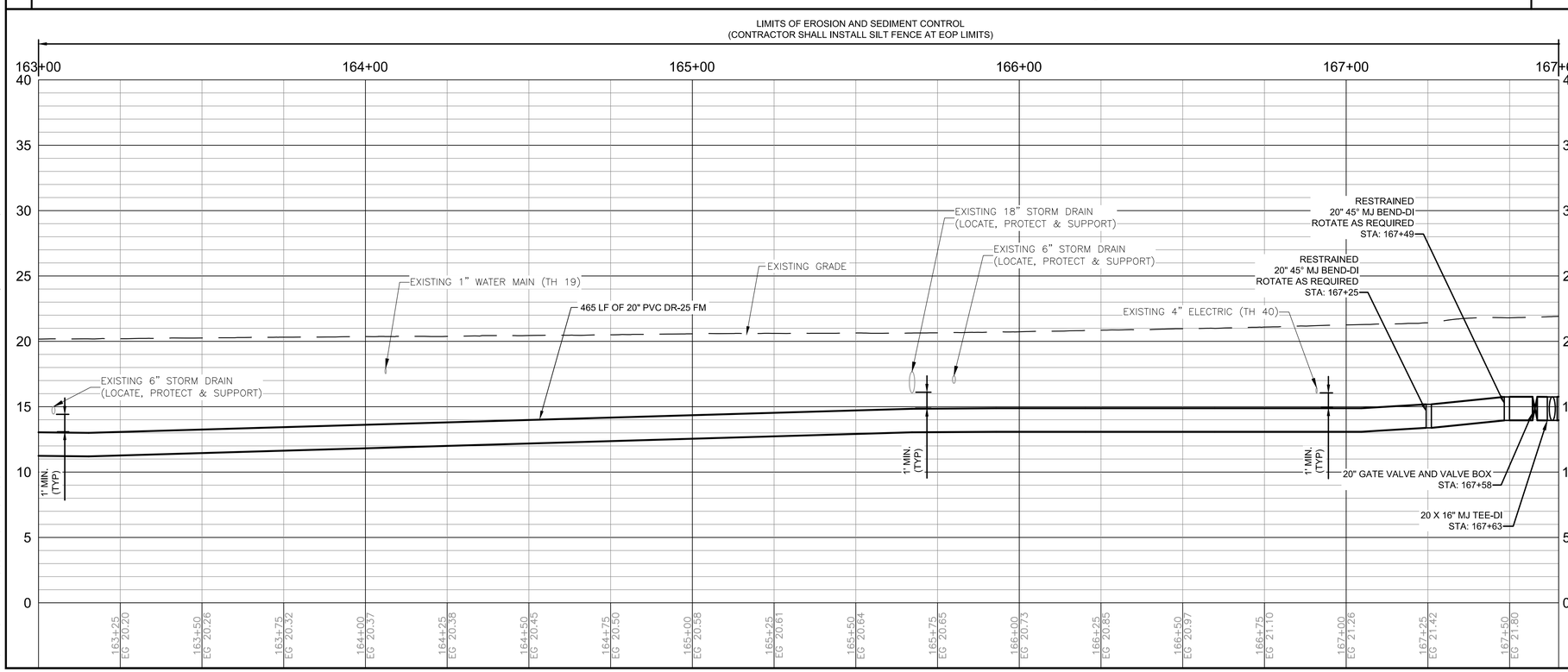

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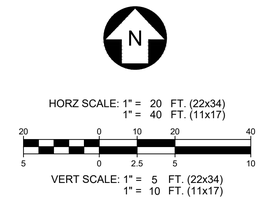

NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.
2. PRIOR TO THE START OF CONSTRUCTION WITHIN 500 LF OF THIS LOCATION, THE CONTRACTOR SHALL PERFORM EXPLORATORY EXCAVATIONS TO CONFIRM THE LOCATION AND PIPE MATERIAL OF THE DUAL 12-INCH EXISTING FORCE MAINS TO BE DIVERTED TO THE NEW 16-INCH FORCE MAIN. (SEE SUPPLEMENTAL SPECIFICATIONS SECTION 02999).
3. FROM STA 167+60 TO 169+60, REMOVE ABANDONED WATER MAIN IN CONFLICT WITH FORCE MAIN AND GRAVITY SEWER INSTALLATION.

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Firm Numbers AA - 00003605
Engineers EB - 00001193
Surveyors LB - 0000783
MOTT MACDONALD

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

DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community℠

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 163+00 TO STA 167+65

PROJ. NO. 502402368	
DATE:	JULY 2020
SCALE:	HORIZ. 1" = 20' VERT. 1" = 5'

NO. SHEETS	88
SHEET NO.	40
DRAWING NO.	C-34

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NOTE:

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL COMMERCIAL, INSTITUTIONAL AND EDUCATIONAL PROPERTIES ALONG THE FORCE MAIN ROUTE FOR VEHICLE ACCESS.
2. THE CONTRACTOR SHALL COORDINATE WITH JEA'S TREATMENT ENGINEERING ODOR CONTROL ENGINEERS ONE MONTH PRIOR TO CONSTRUCTION AND DURING CONSTRUCTION IN THIS AREA. PLEASE NOTE THAT THE CHEMICAL IS USED TO CONTROL ODORS, PRIMARILY HYDROGEN SULFIDE (H2S). TURNING THE HYDROGEN PEROXIDE OFF WILL RESULT IN INCREASED LEVELS OF H2S THEREFORE APPROPRIATE SAFETY MEASURES MUST BE TAKEN INCLUDING GAS DETECTION AND PPE. REFER TO SUPPLEMENTAL SPECIFICATIONS - APPENDIX A - FOR SAFETY DATA SPECIFICATIONS IN THE EVENT OF AN EMERGENCY, CALL USP TECHNOLOGIES. OTHERWISE, CONTACT THE JEA TREATMENT ENGINEERING ODOR CONTROL ENGINEER FOR ASSISTANCE.
3. FROM STA 167+60 TO 169+60, REMOVE ABANDONED WATER MAIN IN CONFLICT WITH FORCE MAIN AND GRAVITY SEWER INSTALLATION.
4. CONTRACTOR SHALL REPLACE EXISTING TRAFFIC SIGNAL LOOP SENSORS IN PAVEMENT TO FDOT AND COJ STANDARDS.
5. THE WATER MAIN STUB OUT AND TEMPORARY SEWAGE BY-PASS PUMPING AND PIPING REQUIRED THROUGH THE 5TH STREET WEST AND MELSON AVENUE INTERSECTION WILL REQUIRE COORDINATION WITH THE JTA 5TH STREET WEST RECONSTRUCTION PROJECT EAST OF THE INTERSECTION. ALL WORK AND TTC IMPLEMENTATION SHALL BE COORDINATED WITH THE JTA'S PROJECT JEA LIAISON:

   MICHAEL SULAYMAN, PE
   EMAIL: SULAMS@JEA.COM
   PHONE: (904) 665-8713

6. CONTRACTOR SHALL LOCATE TRAFFIC LOOPS AND TRAFFIC SIGNAL LINES AT THE INTERSECTION OF MELSON AVENUE AND 5TH STREET WEST. CONTRACTOR SHALL LOCATE AND PROTECT TRAFFIC SIGNAL LINES. ALL TYPE F LOOPS SHALL BE MODIFIED TO 30' IN LENGTH WITH 4' IN FRONT OF THE STOP SIGN. THE CONTRACTOR SHALL NOTIFY THE CITY OF JACKSONVILLE TRAFFIC ENGINEERING DIVISION 48 HOURS IN ADVANCE OF BEGINNING SIGNAL WORK TO OBSERVE INSTALLATION.
   CONTACT: MIKE CAMACHO
   PHONE: 904-255-7549
   EMAIL: MCAMACHO@COJ.NET

HORZ SCALE: 1" = 20 FT. (22x34)
1" = 40 FT. (11x17)

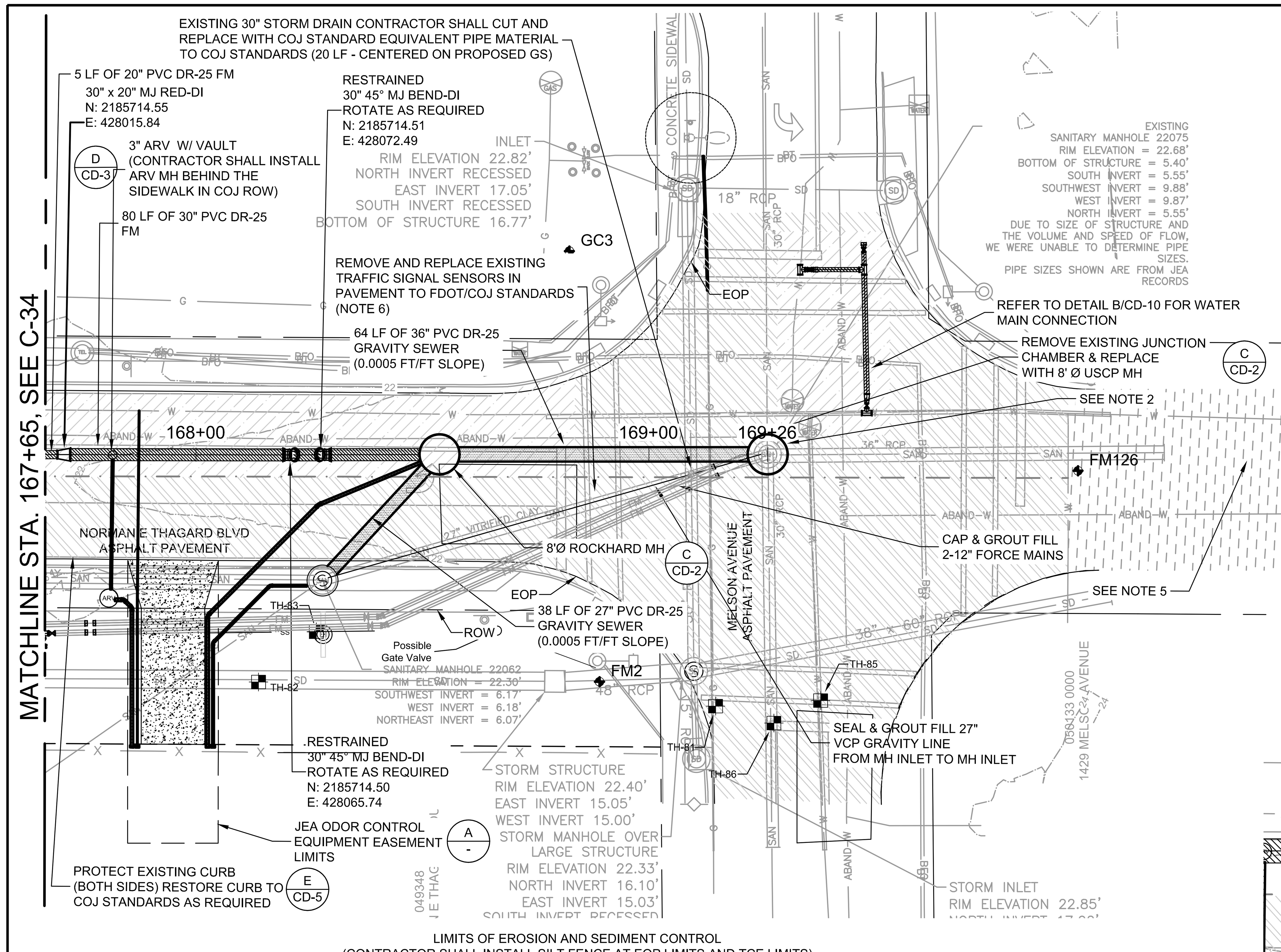
VERT SCALE: 1" = 5 FT. (22x34)
1" = 10 FT. (11x17)

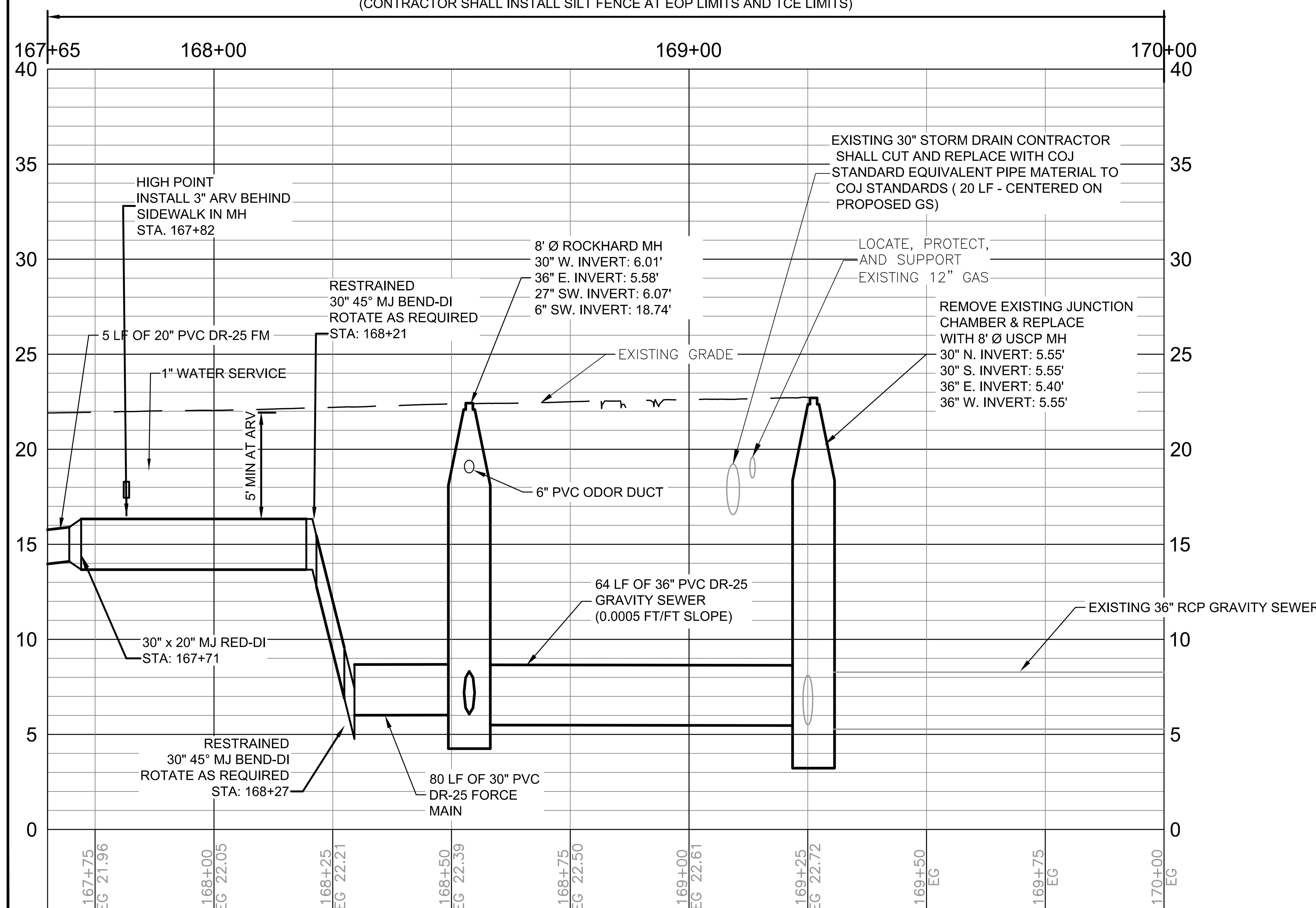
JEA INDUSTRIAL PRETREATMENT GROUNDWATER DISCHARGE (DEWATERING) PERMIT REQUIREMENTS

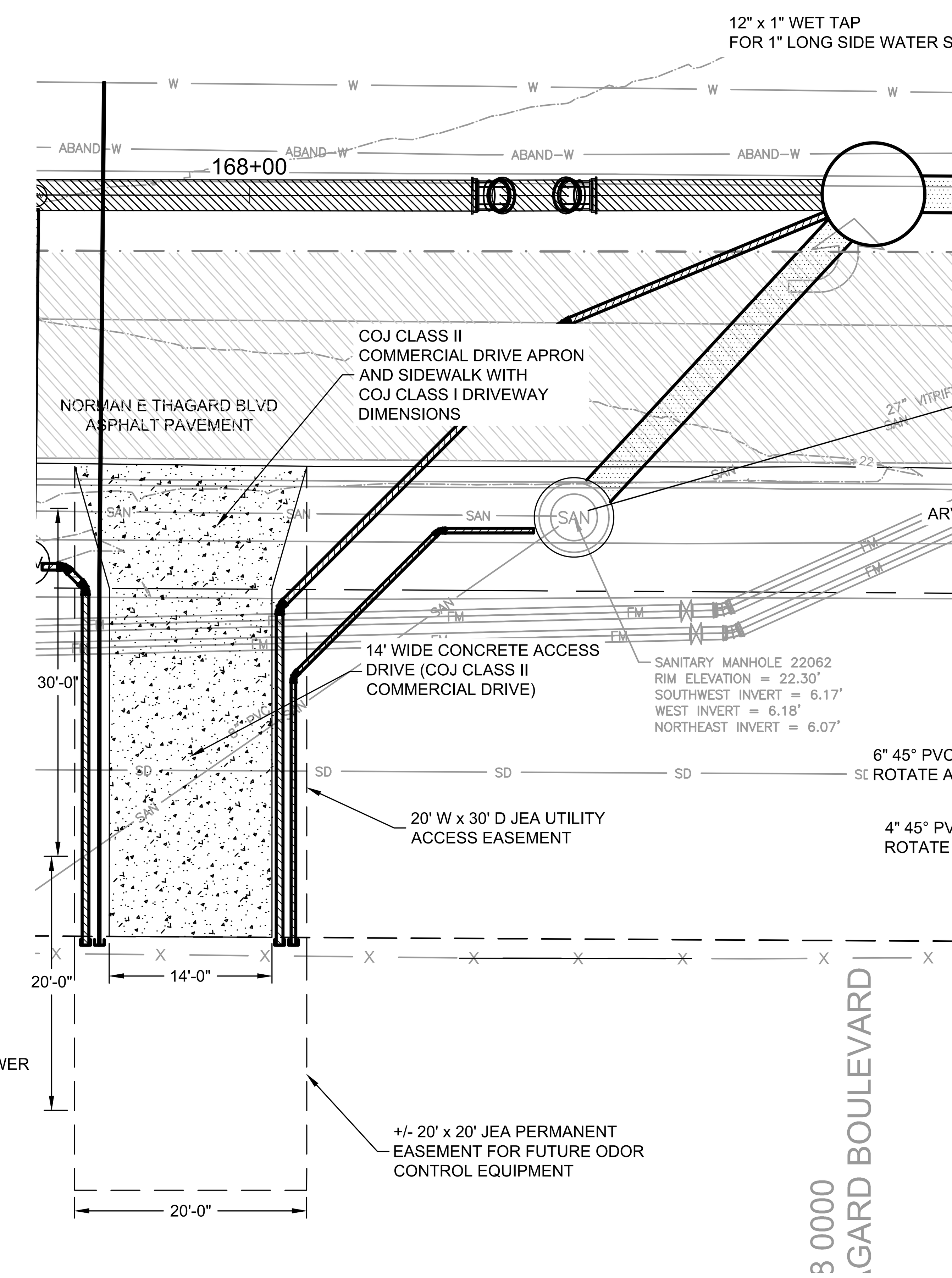
THE CONTRACTOR IS ADVISED THAT THE MAE GROUNDWATER SAMPLING REPORT (PROJ. NO 0103-0018) INDICATES THAT THE COLLECTED GROUNDWATER SAMPLES, FOR THE PROPERTY ON THE NORTHEAST CORNER OF 5TH STREET W AND MELSON AVENUE, AND THEIR ANALYSIS DID NOT DETECT ANY CONTAMINANTS AT OR ABOVE REGULATORY ACTION LEVELS. AS THE SITE OF THE PROPOSED CONSTRUCTION IN THE INTERSECTION OF 5TH STREET W AND MELSON AVENUE IS LOCATED WITHIN A 500-FOOT RADIUS OF THE AREA OF CONCERN, BASED ON FDEP RECORDS, THE CONTRACTOR WILL REQUIRE AN ALTERNATE DISCHARGE POINT FOR GROUND EXCAVATION DEWATERING AND MUST RECEIVE APPROVAL THROUGH JEA'S GENERAL DEWATERING DISCHARGE PERMIT TO DISCHARGE TO ITS SANITARY SEWER COLLECTION SYSTEM. JEA HAS INDICATED THAT THE PERMITTING PROCESS COULD TAKE APPROXIMATELY 30 DAYS. THE CONTRACTOR SHALL ACCOUNT FOR OBTAINING THE PERMIT THROUGH JEA IN ITS SCHEDULE. JEA WILL NOT ENTERTAIN PROJECT SCHEDULE DELAYS RELATED TO OBTAINING THIS PERMIT. IN ORDER TO GET A GROUNDWATER DISCHARGE PERMIT FROM THE JEA INDUSTRIAL PRETREATMENT PROGRAM, GROUNDWATER SAMPLES LESS THAN 3 MONTHS OLD THAT TEST FOR CONTAMINATES OF CONCERN, AS WELL AS JEA'S LOCAL LIMITS, MUST BE SUBMITTED TO JEA USING THE APPLICATION FORM (SUPPLEMENTAL SPECIFICATIONS - APPENDIX B)

POTENTIAL ENCOUNTER WITH PETROLEUM CONTAMINATED SOIL

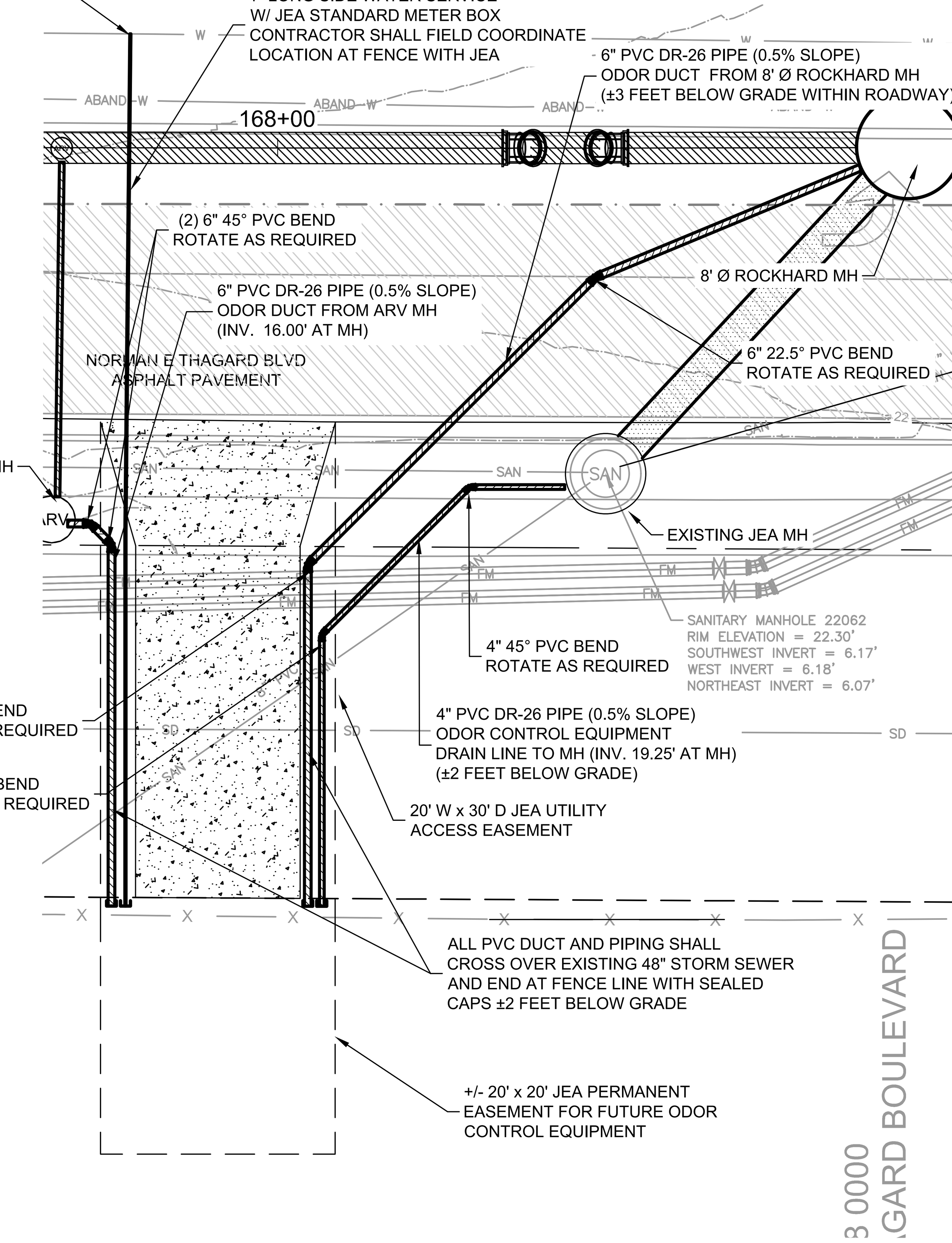
WITHIN THE PROPOSED INTERSECTION ON THE CORNER OF 5TH STREET W AND MELSON AVENUE, SHOULD THE CONTRACTOR ENCOUNTER SOILS THEY BELIEVE COULD BE CONTAMINATED WITH PETROLEUM, THE CONTRACTOR SHOULD IMMEDIATELY HALT ANY WORK AND CONTACT JEA FOR FURTHER TESTING AND STOCK PILING OF THE SOILS. JEA AND THE CONTRACTOR WILL AGREE ON A PLAN FOR REMOVAL AND REPLACEMENT OF ANY SUCH SOILS AS PART OF A CHANGE ORDER.I F PETROLEUM CONTAMINATED SOILS ARE ENCOUNTERED, THE CONTRACTOR SHALL SUBCONTRACT AN ENVIRONMENTAL CONSULTING FIRM TO DEVELOP A SOIL MANAGEMENT PLAN, COLLECT THE SOIL SAMPLES AND ENSURE PROPER DISPOSAL AND DOCUMENTATION.







ODOR CONTROL DRIVEWAY DETAILS



ODOR CONTROL DUCT DETAILS

A FUTURE ODOR CONTROL SITE
SCALE: 1" = 10'

100% SUBMITTAL

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Mott MacDonald Florida, LLC
10245 Centurion Parkway North
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Telephone: (904) 203-1090
Architects AA - C000035
Engineers EB - 0000155
Surveyors LB - 0006783

MOTT MACDONALD

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

DESIGN ENGINEER: BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STA 167+65 TO STA 170+00

PROJ. NO.	502402368
DATE:	JULY 2020
SCALE:	HORIZ: 1" = 20' VERT: 1" = 5'
NO. SHEETS	88
SHEET NO.	41
DRAWING NO.	C-35

LENGTH (L) TO BE RESTRAINED

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

NOMINAL PIPE SIZE (IN.)	HORIZONTAL BENDS				VERTICAL OFFSETS 45° BENDS (SEE NOTE 4)		VALVES OR DEAD ENDS
	90° BENDS L (FT.)	45° BENDS L (FT.)	22.5° BENDS L (FT.)	11.25° BENDS L (FT.)	UPPER L (FT.)	LOWER L (FT.)	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

REDUCERS	
SIZE (IN.)	L (FT.)
6x4	34
8x6	36
8x4	62
10x8	35
10x6	63
12x10	36
12x8	64
16x12	66
16x10	92
20x18	35
20x16	66
20x12	117
24x20	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 4 < LESS	10 F.O.
8	8 6 < LESS	29 F.O.
10	10 8 6 < LESS	45 13 F.O.
12	12 10 8 < LESS	62 32 F.O.
16	16 12 10 10 < LESS	94 39 5 F.O.
20	20 16 12 10 < LESS	125 76 14 F.O.
24	24 20 16 12 < LESS	124 84 36 F.O.
30	30 24 20 16 16 < LESS	159 104 60 5 F.O.
36	36 30 24 20 16 < LESS	192 142 83 33 F.O.
42	42 36 30 24 20 16 < LESS	223 178 124 59 5 F.O.
48	48 42 36 30 24 20 < LESS	253 209 162 104 34 F.O.

F.O. = FITTING ONLY

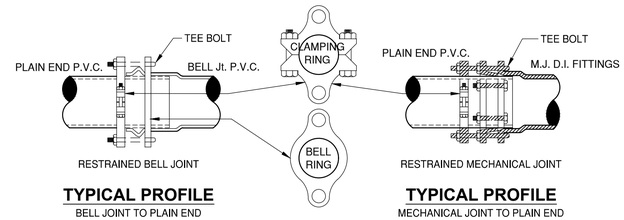
PVC PIPE RESTRAINT NOTES:

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, Lu IS THE RESTRAINED LENGTH FOR THE UPPER (TOP) LEVEL. Li 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 FT (MIN).
7. 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.

A - PVC PIPE RESTRAINT JOINT SCHEDULE

NTS

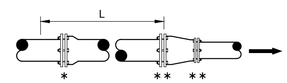
JANUARY 2019
PLATE S-38A



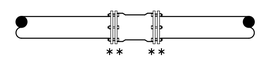
TYPICAL PROFILE
BELL JOINT TO PLAIN END
W/MECHANICAL RESTRAINERS

SECTION

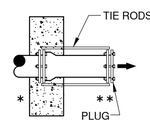
TYPICAL PROFILE
MECHANICAL JOINT TO PLAIN END
W/MECHANICAL RESTRAINERS



REDUCER



MECHANICAL JOINT SLEEVES



NO. OF TIE RODS REQUIRED

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)

DEAD - END THRUST COLLAR ANCHOR

TO BE USED INSTEAD OF TOTAL RESTRAINED LENGTH (OPTIONAL) SIZE AS PER THRUST BLOCK DETAIL (W-38). SEE DETAILS W-36 & W-37.

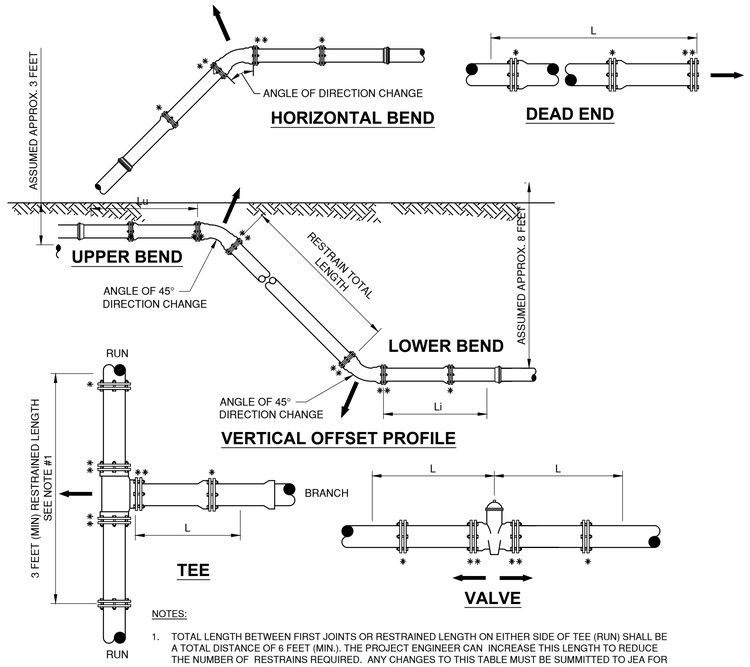
GENERAL NOTE:

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

B - MECHANICAL RESTRAIN DETAILS - I

NTS

JANUARY 2019
PLATE S-38C



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 SUMMITTED 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.

C - MECHANICAL RESTRAIN DETAILS - II

NTS

JANUARY 2019
PLATE S-38D

100% SUBMITTAL

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Engineers EB - 0000155
Surveyors LB - 0000763

MOTT MACDONALD

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

DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STANDARD CIVIL DETAILS

NO. SHEETS 88	PROJ. NO. 502402368	
SHEET NO. 42	DATE: JULY 2020	
DRAWING NO. CD-1	SCALE: AS NOTED	

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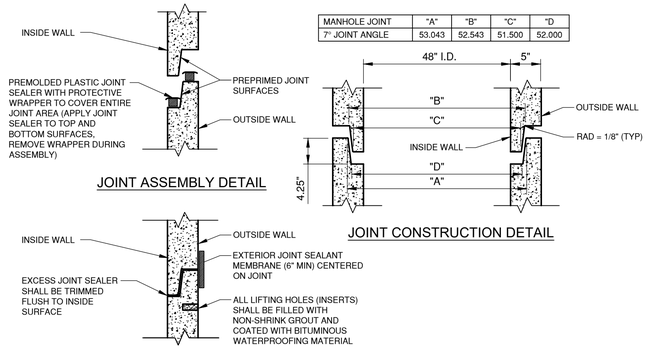
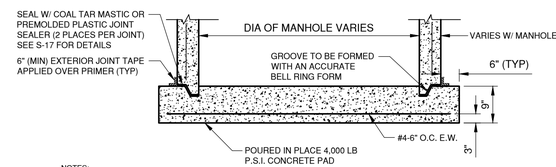


MANHOLE JOINT	"A"	"B"	"C"	"D"
7° JOINT ANGLE	53.043	52.543	51.500	52.000

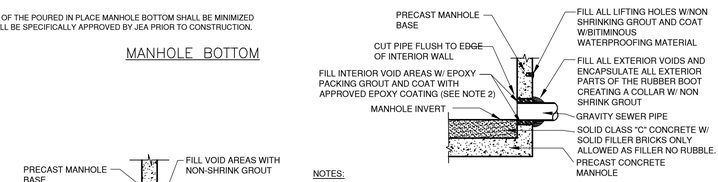
A - NTS
PRECAST CONCRETE SEWER MANHOLE JOINT
JANUARY 2019
PLATE S-17



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

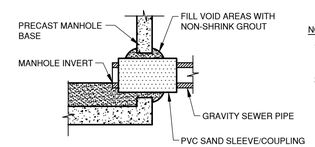


NOTES:

1) 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.
2) EPOXY GROUT MATERIAL SHALL BE AN EPOXY VINYL, CORROSION RESISTANT EPOXY MORTAR, VINYL ESTER MORTAR OR OTHER JEA APPROVED MATERIAL. THE MATERIAL SHOULD HAVE LITTLE TO NO SHRINKAGE AND MUST BE CORROSION RESISTANT. MANUFACTURERS INCLUDE XYPEX, BASF, OR OTHER JEA APPROVED MANUFACTURER.

RUBBER BOOT

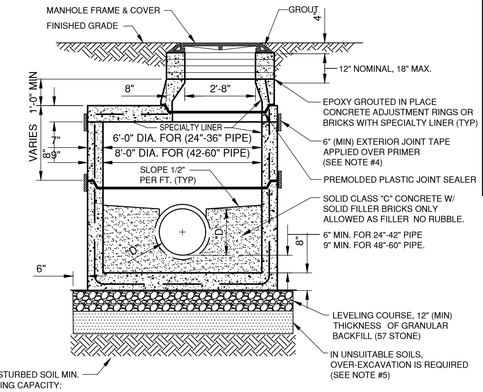
(FOR NEW M/H CONSTRUCTION ONLY, MAXIMUM DEPTH 15FT)



PVC SAND SLEEVE

(FOR EXISTING AND NEW M/H CONSTRUCTION)

B - NTS
CONCRETE MANHOLE PIPE CONNECTION DETAIL
JANUARY 2019
PLATE S-15

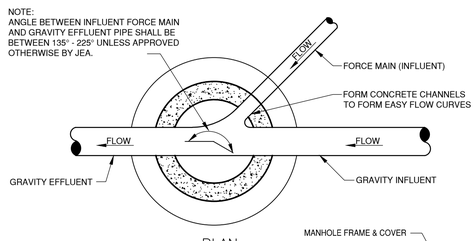


SECTION VIEW

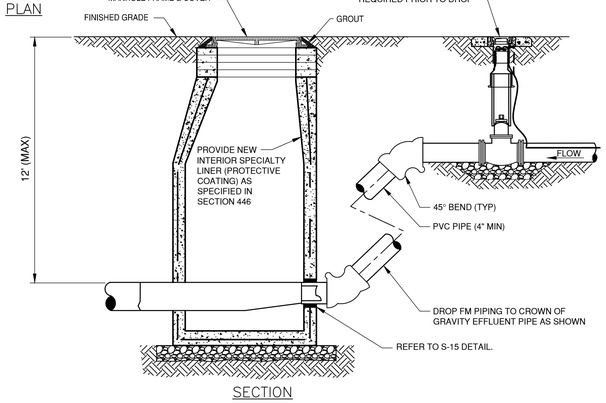
NOTES:

1. 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.
2. THE EXTERIOR ONLY OF MANHOLE SHALL BE GIVEN TWO COATS OF BITUMINOUS WATERPROOFING MATERIAL.
3. SPECIALTY LINER IS TO BE INSTALLED ON INSIDE SURFACE OF MANHOLE IN ACCORDANCE WITH AS-602, THEREFORE, THE BITUMINOUS WATERPROOFING SHALL BE OMITTED ON INSIDE.
4. ALL M/H JOINTS BELOW THE TOP CONE SECTION SHALL INCLUDE A 6" WIDE (MIN) EXTERIOR JOINT TAPE (W/PRIMER). TAPE ON THE CONE SECTION IS OPTIONAL.
5. 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).

C - NTS
SANITARY SEWER CONCRETE TYPE "G" MANHOLE
JANUARY 2019
PLATE S-11

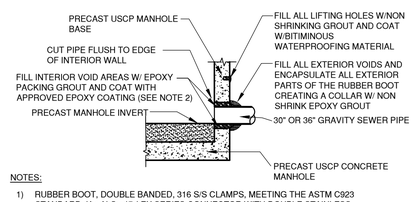


PLAN



SECTION

D - NTS
TYPICAL FORCE MAIN CONNECTION TO MANHOLE
JANUARY 2019
PLATE S-18



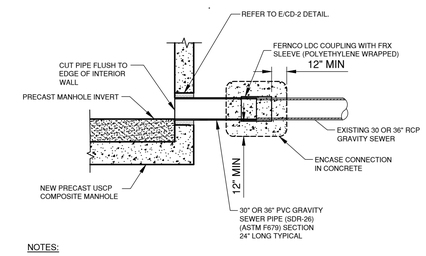
NOTES:

1) 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.
2) PACKING GROUT MATERIAL SHALL BE QUICKRETE NON-SHRINK PRECISION GROUT NO. 1585-00, SIKA USA SIKA QUICK VOH, LAMBERT CORPORATION VIBROPRUF #11, OR ENGINEER APPROVED EQUIVALENT.
3) COATING SYSTEMS IN SECTION 446 OF THE JEA STANDARDS THAT ARE COMPATIBLE FOR ADHESION TO THE PRE-CAST MANHOLE SURFACES OR ENGINEER APPROVED EQUIVALENT.

RUBBER BOOT

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

E - NTS
USCP MANHOLE PIPE CONNECTION DETAIL
JANUARY 2019
(MODIFIED FOR PROJECT)
PLATE S-15



NOTES:

1) PACKING GROUT MATERIAL SHALL BE QUICKRETE NON-SHRINK PRECISION GROUT NO. 1585-00, SIKA USA SIKA QUICK VOH, LAMBERT CORPORATION VIBROPRUF #11, OR ENGINEER APPROVED EQUIVALENT.
2) COATING SYSTEMS IN SECTION 446 OF THE JEA STANDARDS THAT ARE COMPATIBLE FOR ADHESION TO THE PRE-CAST MANHOLE SURFACES OR ENGINEER APPROVED EQUIVALENT.

F - NTS
USCP MANHOLE CONNECTIONS
JANUARY 2019
(MODIFIED FOR PROJECT)
PLATE S-16

100% SUBMITTAL

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Architect AA : C000055
Engineers EB : 0000155
Surveyors LB : 0000763
MOTT MACDONALD

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

DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STANDARD CIVIL DETAILS

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: AS NOTED

NO. SHEETS 88
SHEET NO. 43
DRAWING NO. CD-2

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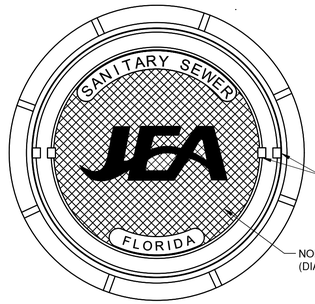
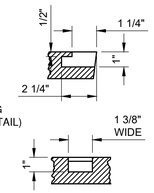
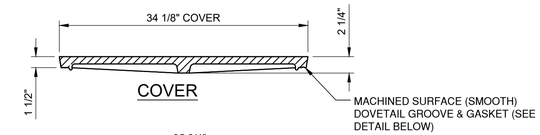
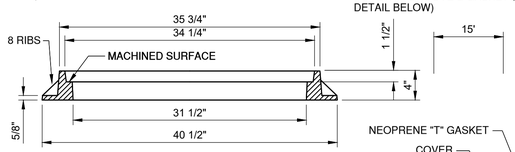




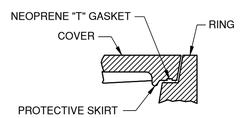
PICKHOLE DETAIL



COVER



RING



GROOVE & GASKET DETAIL

NOTES:

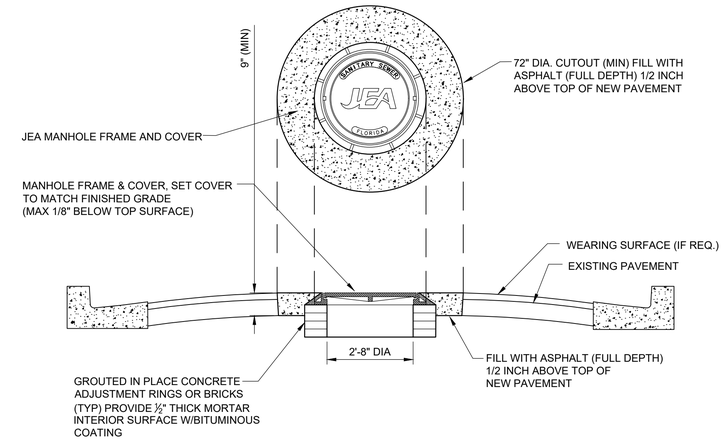
1. MATERIAL: ASTM A-48 CLASS 35B GRAY IRON.
2. RING WEIGHT 230 LBS APPROX.
3. COVER WEIGHT 230 LBS. APPROX.
4. ALL DIMENSIONS ARE SHOWN IN INCHES.
5. FOR MANHOLES WHICH WILL BE MAINTAINED BY JEA (INCLUDING UTILITY DEDICATION PROJECTS), THE COVER SHALL INCLUDE THE "JEA" LOGO AND A NEOPRENE GASKET.
6. 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).

A - SANITARY SEWER MANHOLE FRAME AND COVER DETAIL

NTS

JANUARY 2019

PLATE S-1



NOTES :

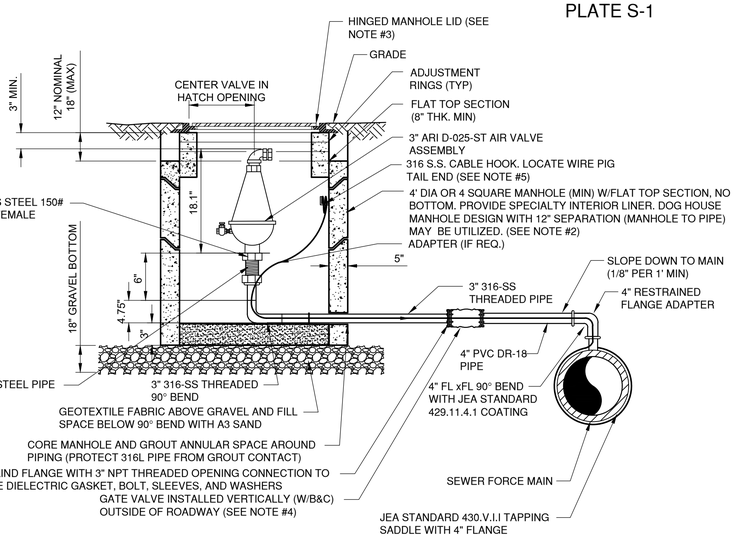
1. PROVIDE FULL DEPTH ASPHALT 1/2 INCH ABOVE TOP OF NEW PAVEMENT LEVEL, TO ALLOW FOR FUTURE ASPHALT MATERIAL COMPACTION. PLACE AND COMPACT ASPHALT IN 2" (MAX) LIFTS.

C - MANHOLE FRAME AND COVER ROADWAY RE-SURFACING

NTS

JANUARY 2019

PLATE S-34



NOTES:

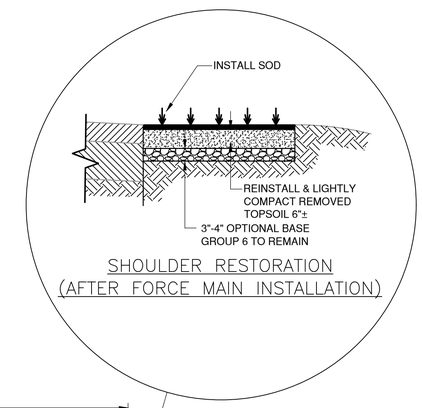
1. THE AIR ASSEMBLY MANHOLE SHALL BE LOCATED OUTSIDE OF THE ROADWAY PAVEMENT AREA (I.E. LOCATED IN NON-TRAFFIC AREAS). IF OFF-SET PIPING IS REQUIRED, THE PIPING SHALL BE 2 INCH MINIMUM, (SAME SIZE AS AIR VALVE INLET). FOR PIPE SIZES 3 INCH AND SMALLER: PIPING SHALL BE 316L STAINLESS STEEL SCH.40, STD GRADE, THREADED. FOR PIPE SIZES 4 INCH AND LARGER:
   PIPING SHALL BE 316L STAINLESS STEEL SCH. 10 (MIN), WELDED OR PVC DR-18 PIPE AND FITTINGS-RESTRAINED.
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. MANHOLE SHALL HAVE A HINGED LID. US FOUNDRY 324-UT OR JEA APPROVED EQUAL.
4. FOR OFF-SET PIPING LARGER THAN 2 INCH SIZE, PROVIDE A GATE VALVE (INSTALLED VERTICALLY NEAR MANHOLE, OUT OF ROADWAY AND SIDEWALK). GATE VALVE SHOULD BE MJT TO FLANGED FITTING. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
5. GREEN LOCATE WIRE SHALL HAVE ENOUGH SLACK TO REACH 4' ABOVE FINAL GRADE.
6. CONTRACTOR SHALL COORDINATE FINAL LOCATION OF ARV MANHOLE WITH OWNER OR OWNER'S INSPECTOR.

D - AIR VALVE ASSEMBLY INSIDE MANHOLE

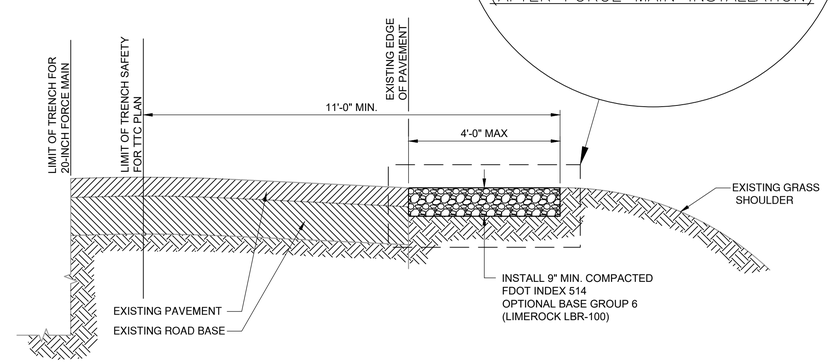
NTS

JANUARY 2019

PLATE S-29/29A/29B



SHOULDER RESTORATION
(AFTER FORCE MAIN INSTALLATION)



E - TEMPORARY STONE ROAD SHOULDER AS - REQUIRED FOR TTC

NTS

100% SUBMITTAL

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
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Jacksonville, Florida 32256
Telephone: (904) 263-1090
Architect AA : C000055
Engineers EB : 0000155
Surveyors LB : 0000763
MOTT MACDONALD

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

DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community sm

5TH STREET WEST 20" FORCE MAIN EXTENSION

STANDARD CIVIL DETAILS

PROJ. NO.	502402368
DATE:	JULY 2020
SCALE:	AS NOTED

NO. SHEETS	88
SHEET NO.	44
DRAWING NO.	CD-3

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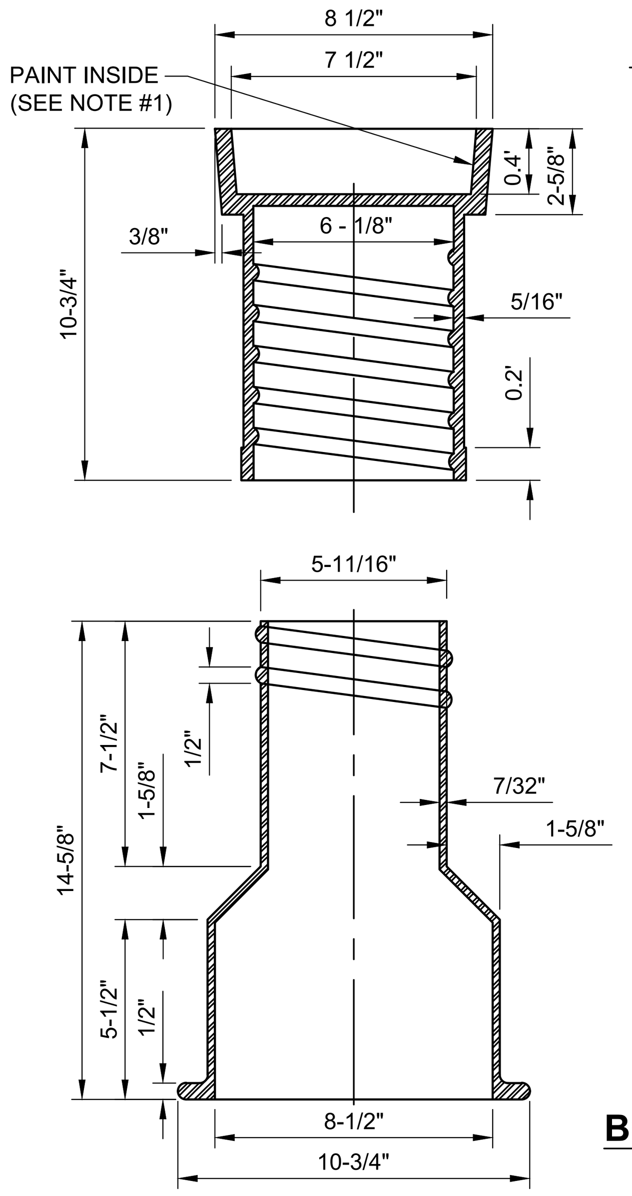
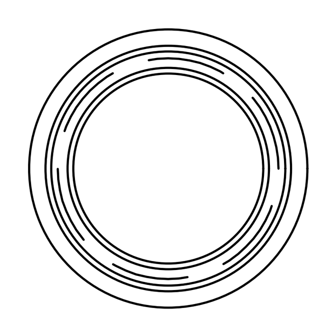
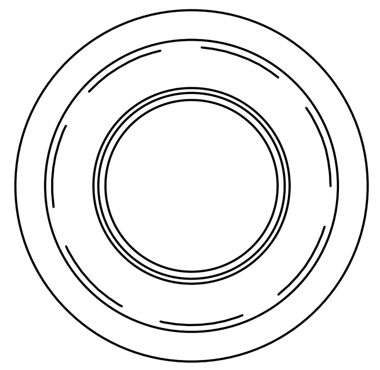


HEAVY DUTY RATING



TOP SECTION VIEW

(23 LBS. APPROX.)



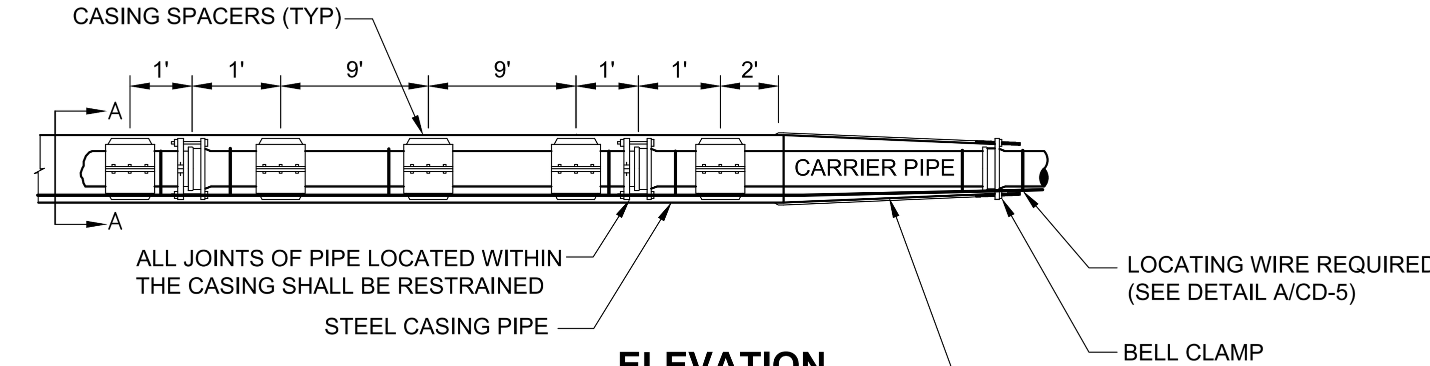
BOTTOM SECTION VIEW

(26 LBS. APPROX.)

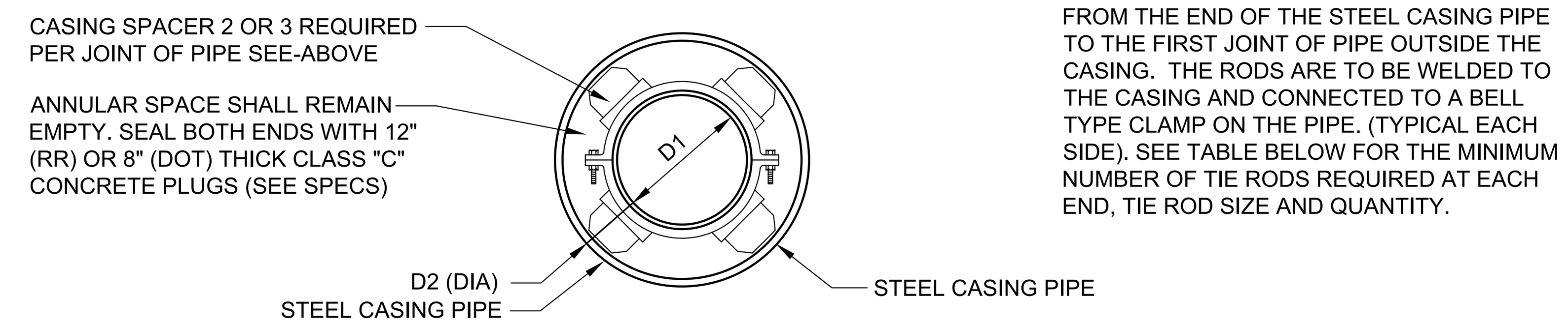
NOTES:

1. PAINT THE INSIDE OF THE TOP SECTION OF THE BOX WITH GREEN COLOR.
2. HEAVY DUTY RATING (TOTAL WEIGHT APPROX. 50 LBS.).
3. REFERENCE SECTION 430, PARAGRAPH VI.2.

(A) SEWER SYSTEM VALVE BOX
NTS
JANUARY 2019
PLATE S-32



ELEVATION



SECTION "A-A"

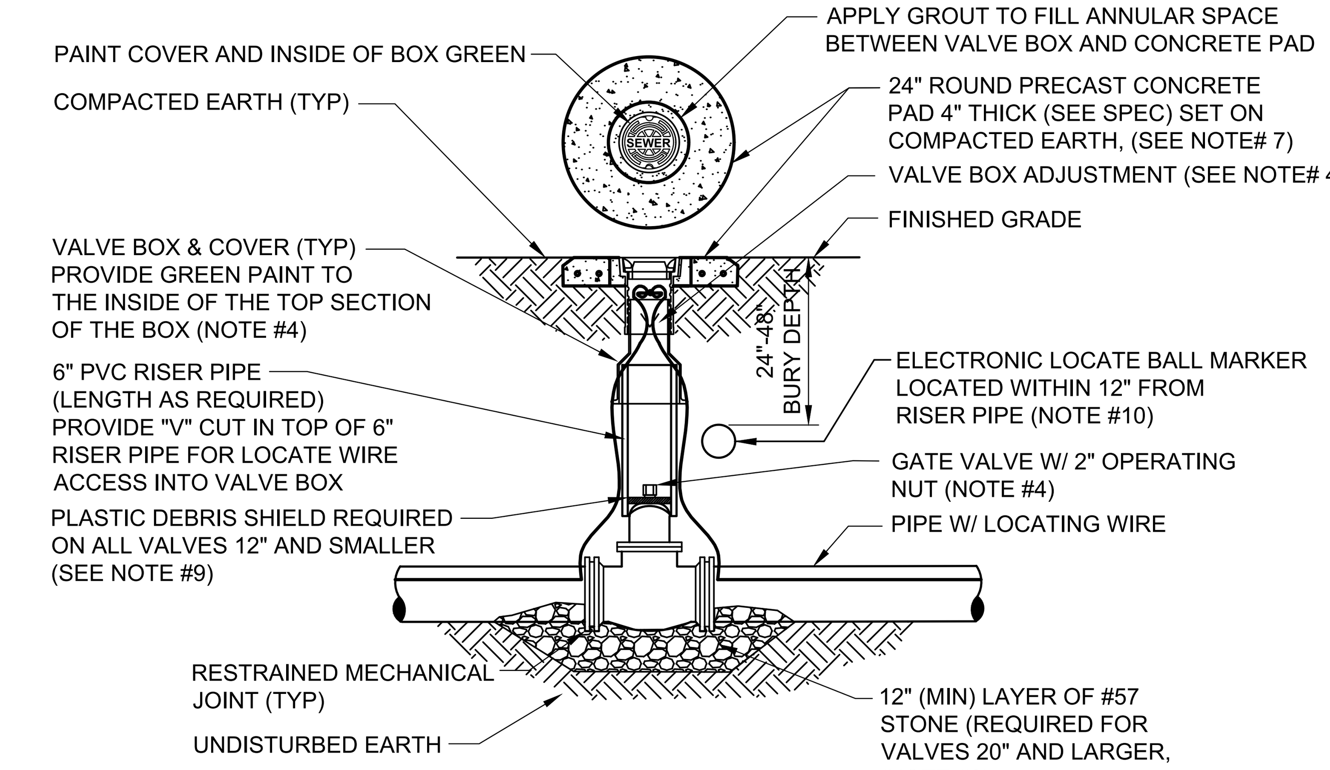
CARRIER TYPE AND CASING PIPE SIZES (MIN) IN INCHES														
CARRIER PIPE NO. DIA. (D_1)	4	6	8	10	12	14	16	18	20	24	30	36	42	48
CASING PIPE NOM. DIA. (D_2)	14	16	20	20	24	30	30	30	36	42	48	54	60	66
WALL THICKNESS RAILROAD-(FEC)	0.25	1.25	0.375	0.375	0.375	0.50	0.50	0.50	0.562	0.625	0.625	0.688	0.781	0.781
WALL THICKNESS RAILROAD-(CSX)	0.25	0.281	0.375	0.375	0.375	0.469	0.469	0.469	0.562	0.625	0.688	0.781	0.844	0.938
WALL THICKNESS DOT	0.25	0.25	0.25	0.25	0.25	0.312	0.312	0.312	0.375	0.50	0.50	0.50	0.50	0.50
NUMBER OF TIE RODS (EACH END)	2	2	2	4	4	6	6	8	8	12	14	14	16	16
TIE ROD SIZE (DIA.)	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	1"	1"	1 1/4"	1 1/4"

PIPE MAIN CROSSINGS FOR RAILROADS OR HIGHWAYS

NOTES:

1. MIN. COVER TO TOP OF CASING; a) FDOT-3.0' b)RAILROAD-5.5' TO BASE OF RAIL, 4.5' FOR SECONDARY OR INDUSTRIAL TRACKS. EXCEPT FOR F..E.C. (SEE NOTE 3)
2. THE INSIDE DIAMETER OF THE CASING PIPE SHALL BE A MINIMUM OF 4 INCHES GREATER THAN THE OUTSIDE DIAMETER OF THE CARRIER PIPE BELL OR COUPLING. HOWEVER, A MINIMUM OF 6 INCHES IS REQUIRED FOR FLORIDA EAST COAST R.R. CROSSINGS.
3. THE MINIMUM COVER FOR CASING UNDER FLORIDA EAST COAST RAILROAD SHALL BE 5.0 FEET BELOW THE BOTTOM OF TIES FOR ALL TRACKS.
4. ALL JOINTS WITHIN CARRIER PIPE SHALL BE MECHANICAL RESTRAINED JOINTS.
5. FOR STREET USES WHICH ARE NOT DOT OR RAILROAD, USE DOT CASING THICKNESS UNLESS OTHERWISE INDICATED BY ENGINEER.
6. CASING PIPE SHALL BE FURNISHED IN NOMINAL 8 FOOT LENGTHS (MIN.) UNLESS OTHERWISE INDICATED ON THE DRAWING OR APPROVED BY JEA.
7. PIPE TO BE USED AS A CASING SHALL CONFORM TO EITHER ASTM STANDARD A139 FOR "ELECTRIC FUSION (ARC) WELDED STEEL PIPE". WITH A MINIMUM YIELD STRENGTH OF 35,000 PSI OR "API SPECIFICATION API-5LX, GRADE X-42 WELDED STEEL PIPE".

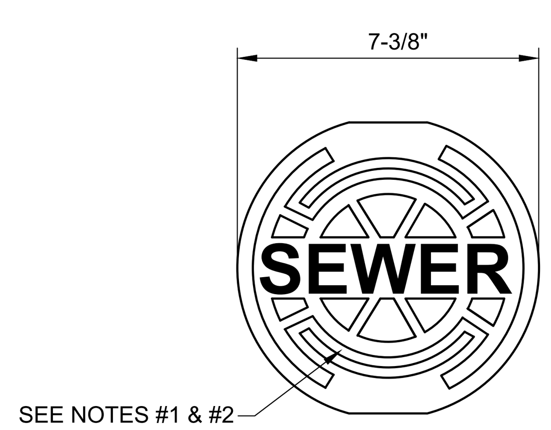
(B) TYPICAL CASING DETAIL - SEWER
NTS
JANUARY 2019
PLATE S-25



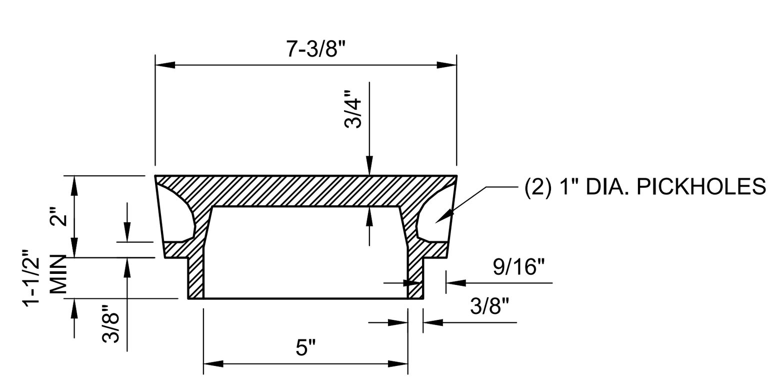
NOTES:

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 A/CD-5).
3. A "V" CUT SHALL BE CARVED IN THE CURB CLOSEST/(ASPHALT IF NO CURB) ADJACENT TO ALL BELOW GRADE VALVES. THE "V" CUT IS TO BE PAINTED GREEN.
4. IN PAVED AREAS, INSTALL VALVE AT A DEPTH TO ALLOW A 12" MIN. DISTANCE BETWEEN THE VALVE COVER PLATE AND THE TOP OF THE VALVE OPERATING NUT. OUTSIDE OF PAVED AREAS (GRASS), INSTALL VALVE AT A DEPTH TO ALLOW A 6" MINIMUM DISTANCE BETWEEN THE VALVE COVER AND THE TOP OF THE VALVE OPERATING NUT. OPERATING NUT/STEM EXTENSION SHALL BE PROVIDED (WHERE APPLICABLE) SO THAT THE OPERATING NUT WILL BE NO MORE THAN 30 INCHES BELOW FINISHED GRADE.
5. FOR NEW CONSTRUCTION, THE VALVE BOX SHALL BE ADJUSTED TO MIDRANGE TO ALLOW FOR FUTURE BOX ADJUSTMENTS. 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 "SEWER", VALVE SIZE, DIRECTION AND TURNS TO OPEN & VALVE TYPE. PROVIDE A ¼" 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 ⅓ 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).

(C) SEWER VALVE DETAIL
NTS
JANUARY 2019
PLATE S-30



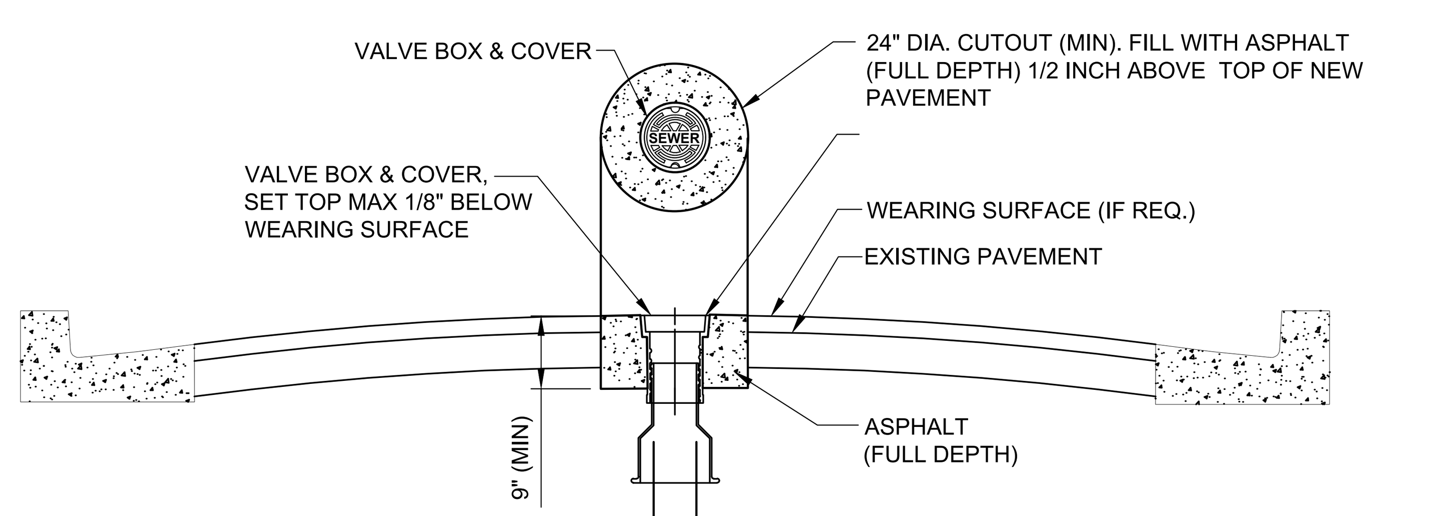
HEAVY DUTY RATING



NOTES:

1. PAINT TOP OF THE COVER WITH ENAMEL PAINT (GREEN COLOR).
2. LID WEIGHT: APPROX. 12 LBS.

(D) SEWER SYSTEM VALVE BOX COVER
NTS
JANUARY 2019
PLATE S-31

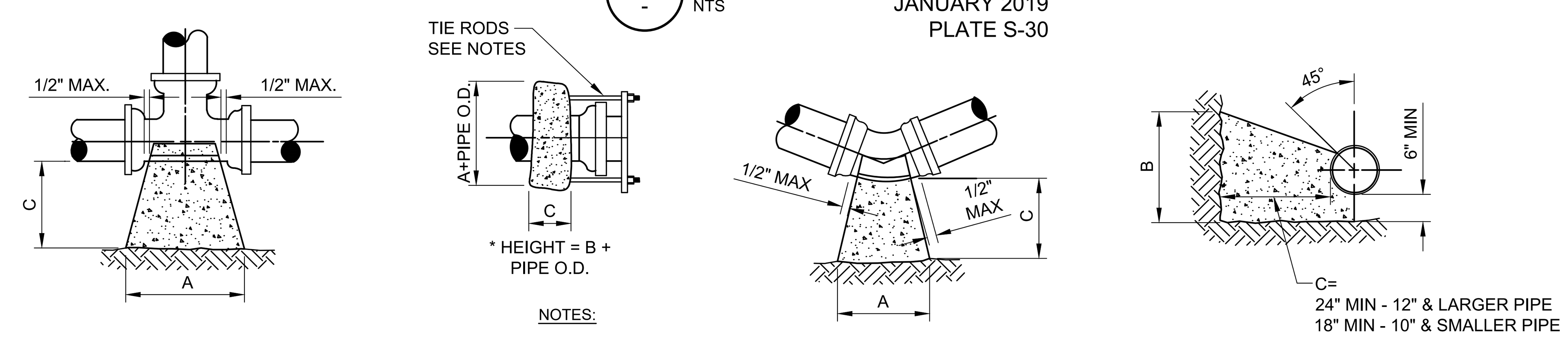


COVER TO BE SET 1/8" (MAX) BELOW TOP SURFACE

NOTES :

1. PROVIDE FULL DEPTH ASPHALT 1/2 INCH ABOVE TOP OF NEW PAVEMENT LEVEL, TO ALLOW FOR FUTURE ASPHALT MATERIAL COMPACTION. PLACE AND COMPACT ASPHALT IN 2" (MAX) LIFTS.

(E) SEWER VALVE JACKET ADJUSTMENT AFTER ROADWAY RE-SURFACING
NTS
JANUARY 2019
PLATE S-33



NOTES:

1. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED SOIL.
2. THESE TABLES SHOW MINIMUM SIZES FOR THRUST BLOCKS IN GOOD SOIL (A-1 THRU A-3, CLEAN SANDS AND GRAVELS) WITH MINIMUM BEARING CAPACITY OF 2000 psi.
3. POOR SOILS A-4 THRU A-8, SILTY SOILS, CLAYS, MUCK AND PEAT WILL REQUIRE LARGER THRUST BLOCKING.
4. BOTH CONCRETE THRUST BLOCKS AND TIE RODS MUST BE USED WHEN, IN THE JUDGEMENT OF THE ENGINEER, THE NATURE AND CRITICALITY OF AN INSTALLATION IS SUCH AS TO REQUIRE POSITIVE ASSURANCE OF STABILITY.
5. THE USE OF THRUST BLOCKS SHALL BE LIMITED TO SITUATIONS SUCH AS POINT REPAIR WHERE EXPOSING SEVERAL JOINTS OF PIPE IS NOT FEASIBLE DUE TO EXISTING GROUND CONDITIONS.
6. CONCRETE COLLARS WITH TIE RODS MAY BE USED ON DEAD END LINES AT THE CONTRACTOR'S DISCRETION. 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)
7. MAXIMUM TEST PRESSURE TO BE 150 PSI.

THRUST BLOCK FOR TEES & PLUGS

SIZE	90° BEND			S.F. BEARING SURFACE
	A	B	C	
4"	16"	16"	18"	1.78
6"	20"	24"	18"	3.33
8"	26"	32"	18"	5.78
10"	32"	40"	18"	8.89
12"	36"	48"	24"	12.00
14"	40"	56"	24"	15.56
16"	48"	60"	24"	20.00
18"	56"	64"	24"	24.89
20"	60"	76"	24"	31.67
24"	72"	90"	24"	45.00
30"	86"	102"	24"	60.67
36"	116"	108"	24"	86.11

THRUST BLOCK FOR BENDS

SIZE	90° BEND			S.F. BEARING SURFACE	45° BEND			S.F. BEARING SURFACE	22-1/2° BEND			S.F. BEARING SURFACE	11-1/4° BEND			S.F. BEARING SURFACE
	A	B	C		A	B	C		A	B	C		A	B	C	
4"	16"	16"	18"	1.78	14"	16"	18"	1.56	14"	16"	18"	1.56	14"	16"	18"	1.56
6"	22"	32"	18"	4.89	16"	18"	18"	2.00	14"	16"	18"	1.56	14"	16"	18"	1.56
8"	32"	36"	18"	8.00	24"	28"	18"	4.67	16"	18"	18"	2.00	14"	16"	18"	1.56
10"	36"	46"	18"	11.50	26"	36"	18"	6.50	20"	24"	18"	3.33	14"	18"	18"	1.75
12"	44"	56"	24"	17.11	32"	40"	24"	8.89	24"	30"	24"	5.00	16"	20"	24"	2.22
14"	52"	62"	24"	22.39	36"	48"	24"	12.00	26"	36"	24"	6.50	20"	24"	24"	3.33
16"	58"	72"	24"	29.00	40"	54"	24"	15.00	32"	38"	24"	8.44	22"	26"	24"	3.97
18"	64"	80"	24"	35.56	46"	60"	24"	19.17	36"	42"	24"	10.50	24"	32"	24"	5.33
20"	72"	88"	24"	44.00	52"	66"	24"	23.83	38"	48"	24"	12.67	26"	36"	24"	6.50
24"	96"	96"	24"	36.89	64"	78"	24"	34.67	46"	56"	24"	17.89	32"	40"	24"	8.89
30"	122"	102"	24"	86.11	72"	94"	24"	47.00	56"	62"	24"	24.11	36"	48"	24"	12.00
36"	166"	104"	24"	123.33	88"	108"	24"	66.00	64"	78"	24"	34.67	44"	54"	24"	16.50

(F) THRUST BLOCK SIZE CHART
NTS
JANUARY 2019
PLATE S-45

100% SUBMITTAL

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 203-1090
Architects AA - C0000035
Engineers EB - 0000155
Surveyors LB - 0006783

MOTT MACDONALD

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

DESIGN ENGINEER: BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STANDARD CIVIL DETAILS

PROJ. NO. 502402368	
DATE:	JULY 2020
SCALE:	AS NOTED

NO. SHEETS 88
SHEET NO. 45
DRAWING NO. CD-4

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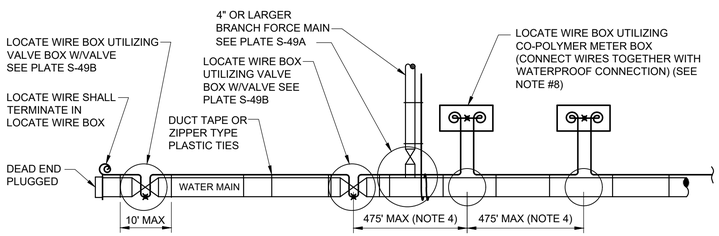
Xrefs Attached= JEA_SHT22x34_BOR [C:\pworking\hmm\water_wastewater\mottmac_ngu85083\d0426985\JEA_SHT22x34_BOR.dwg]

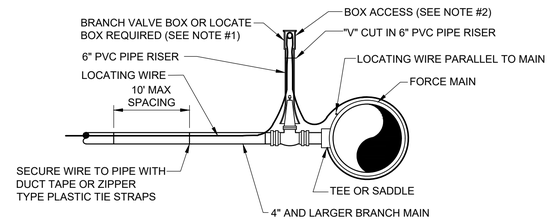


LOCATE WIRE SYSTEM

NOTES:

1. LOCATING WIRE TO BE INSTALLED IN EITHER THE ONE OR ELEVEN O'CLOCK POSITION ON ALL DUCTILE IRON 0R 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 (MINUMUM) HDPE INSULATION THICKNESS, 0.141 INCHES (MINIMUN) O.D. RATED BREAK LOAD 250LBS., UF RATED (DIRECT BURIAL), GREEN COLOR. FOR HDD INSTALLATIONS, THE LOCATE WIRE SHALL BE COPPER CODED STEEL AS SPECIFIED IN SPEC. SECTION 750.
6. "⊗" INDICATES THAT THE WIRES ARE CONNECTED TOGETHER WITH WATERPROOF CONNECTION. (SEE DETAIL W-49B)
7. "⊙" INDICATES A WIRE PIG-TAIL (24" LONG)
8. AN "LW" CUT SHALL BE CARVED IN THE CONCRETE CURB AND PAINTED AT ALL LOCATE WIRE BOXES.
9. FOUR LANES OF TRAFFIC (HAVING TWO LANES OF TRAFFIC IN EACH DIRECTION) OR GREATER THE LOCATE WIRE AND VALVE BOX SHALL BE OFF-SET TO THE RIGHT-OF-WAY.

A - LOCATE WIRE CONSTRUCTION FOR FORCE MAINS
NTS
JANUARY 2019
PLATE S-49



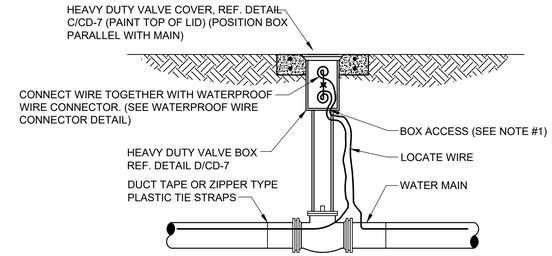
BRANCH FORCE MAIN

(4" AND LARGER SEWER MAIN)

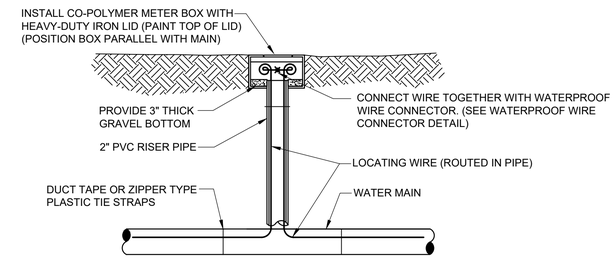
NOTE:

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

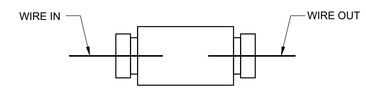
B - LOCATE WIRE FOR BRANCH MAIN
NTS
JANUARY 2019
PLATE S-49A



LOCATE WIRE BOX UTILIZING VALVE BOX



LOCATE WIRE BOX UTILIZING METER BOX

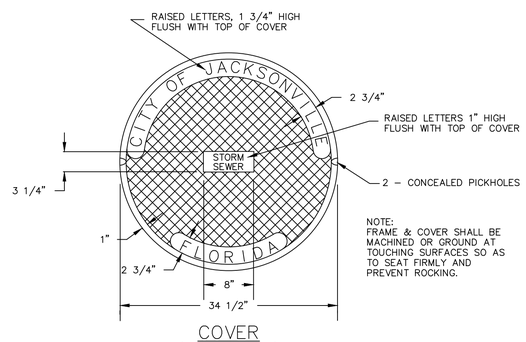


WATERPROOF WIRE CONNECTOR DETAIL

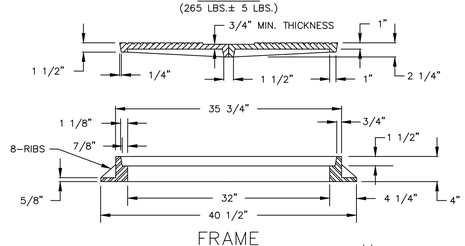
NOTES:

1. LOCATE WIRE SHALL ENTER THE VALVE BOX THROUGH A "V" CUT IN THE 6" PVC RISER PIPE (SEE DETAIL A/CD-8).
2. LOCATE WIRE SHALL HAVE ENOUGH SLACK TO REACH 4' ABOVE FINAL GRADE AND LOCATE POINTS.
3. LOCATE WIRE CONNECTION SHALL ONLY BE A 2 WAY CONNECTION.

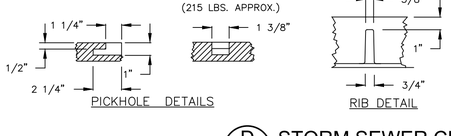
C - LOCATE WIRE BOX
NTS
JANUARY 2019
PLATE S-49B



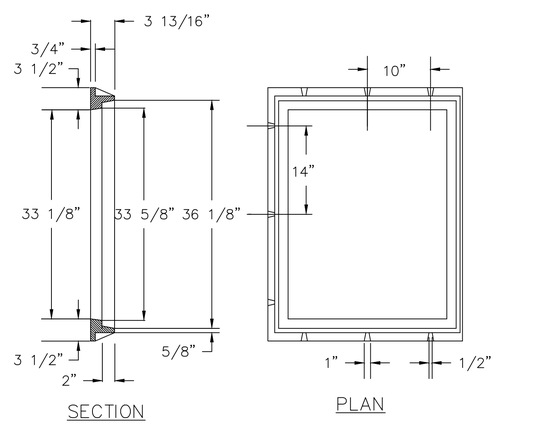
COVER
(265 LBS.± 5 LBS.)



FRAME
(215 LBS. APPROX.)

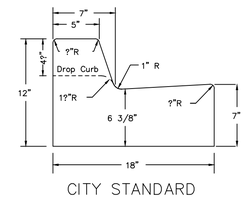


PICKHOLE DETAILS
RIB DETAIL



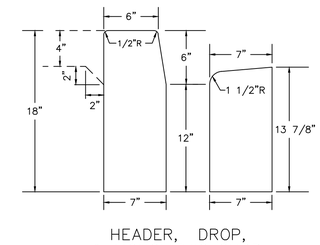
APPROX. 180 LBS.

D - STORM SEWER CURB INLET FRAME AND COVER
NTS
MAY 1994
PLATE D-301/302



CITY STANDARD

MONOLITHIC CURB & SIDEWALK



HEADER, DROP, & MONOLITHIC CURB

CONCRETE QUANTITES

CITY STANDARD CURB	.0388889 CU. YD./LIN. FT.
STANDARD DROP CURB	.0322222 CU. YD./LIN. FT.
MEDIAN CURB	.0411111 CU. YD./LIN. FT.
MIAMI CURB	.0325926 CU. YD./LIN. FT.
HEADER CURB	.0314815 CU. YD./LIN. FT.
HEADER DROP CURB	.0244444 CU. YD./LIN. FT.

E - CITY STANDARD CURB TEMPLATES
NTS
APRIL 2009
PLATE P-301

100% SUBMITTAL

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10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Architect AA : 0000055
Engineers EB : 0000155
Surveyors LB : 0000763
MOTT MACDONALD

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

DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community sm

5TH STREET WEST 20" FORCE MAIN EXTENSION

STANDARD CIVIL DETAILS

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: AS NOTED

NO. SHEETS 88
SHEET NO. 46
DRAWING NO. CD-5

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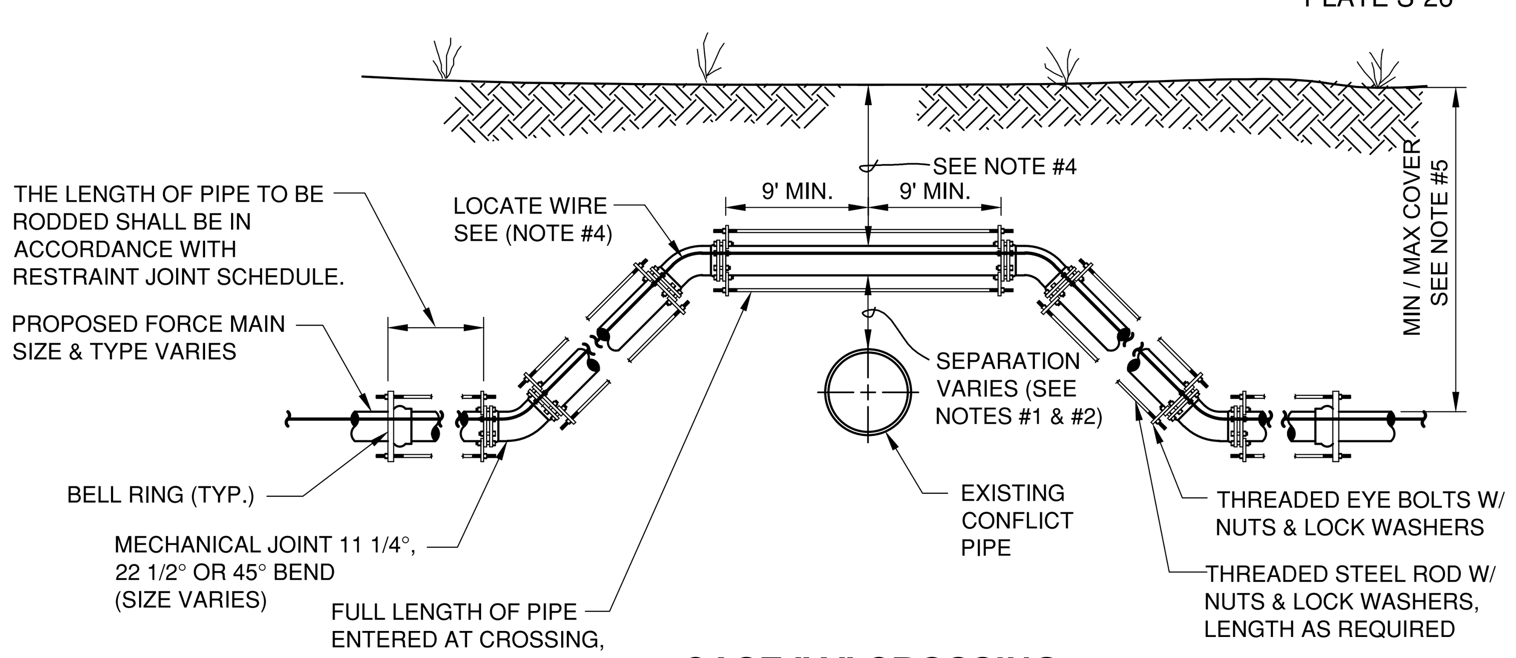
HORIZONTAL & VERTICAL SEPARATION REQUIREMENTS

CONFLICTING UTILITY	PROPOSED UTILITY: POTABLE WATER HORIZ.	POTABLE WATER VERT.	POTABLE WATER JOINT SPACING*	WASTEWATER GRAVITY AND FORCE MAIN HORIZ.	WASTEWATER VERT.	WASTEWATER JOINT SPACING*	RECLAIMED WATER HORIZ.	RECLAIMED WATER VERT.	RECLAIMED WATER JOINT SPACING*	VACUUM SEWERS HORIZ.	VACUUM SEWERS VERT.	VACUUM SEWERS 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 (BUILDINGS, SIGNS, POLES, ETC.)	SEE NOTE 7	N/A	N/A	SEE NOTE 7	N/A	N/A	SEE NOTE 7	N/A	N/A	SEE NOTE 7	N/A	N/A
STORM SEWERS	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2
GAS	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2
TREES	3'-6' NOTE 6	N/A	N/A	3'-6' NOTE 6	N/A	N/A	3'-6' NOTE 6	N/A	N/A	3'-6' NOTE 6	N/A	N/A
ALL OTHER UTILITIES	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2

NOTES:

1. THIS SEPARATION REQUIREMENT IS TO PROVIDE ACCESSIBILITY FOR CONSTRUCTION AND MAINTENANCE. THREE FEET OF HORIZONTAL SEPARATION IS THE MINIMUM FOR PIPES WITH THREE FEET OF COVER. FOR PIPES INSTALLED AT GREATER DEPTH, PROVIDE AN ADDITIONAL FOOT OF SEPARATION FOR EACH ADDITIONAL FOOT OF DEPTH.
2. THE MINIMUM JOINT SPACING REQUIRED FROM CROSSING FROM OTHER UTILITIES WHILE STILL MAINTAINING MINIMUM VERTICAL SEPARATION.
3. DISTANCES GIVEN ARE FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE.
4. NO WATER PIPE SHALL PASS THROUGH OR COME INTO CONTACT WITH ANY PART OF SANITARY OR STORM WATER MANHOLE OR STRUCTURES.
5. WATER MAIN SHOULD CROSS ABOVE OTHER PIPES WHENEVER POSSIBLE. WHEN WATER MAIN MUST BE BELOW OTHER UTILITY PIPING, THE MINIMUM SEPARATION SHALL BE 12 INCHES.
6. REFER TO SECTION 429, III.4.3.
7. REFER TO SECTION 429, III.4.2 FOR MINIMUM SEPARATION REQUIREMENTS FROM PIPE TO STRUCTURES.

A - SEPARATION REQUIREMENTS FOR WATER, WASTEWATER AND RECLAIMED WATER MAINS
NTS
JANUARY 2019
PLATE S-26



CASE "A" CROSSING

NOTES:

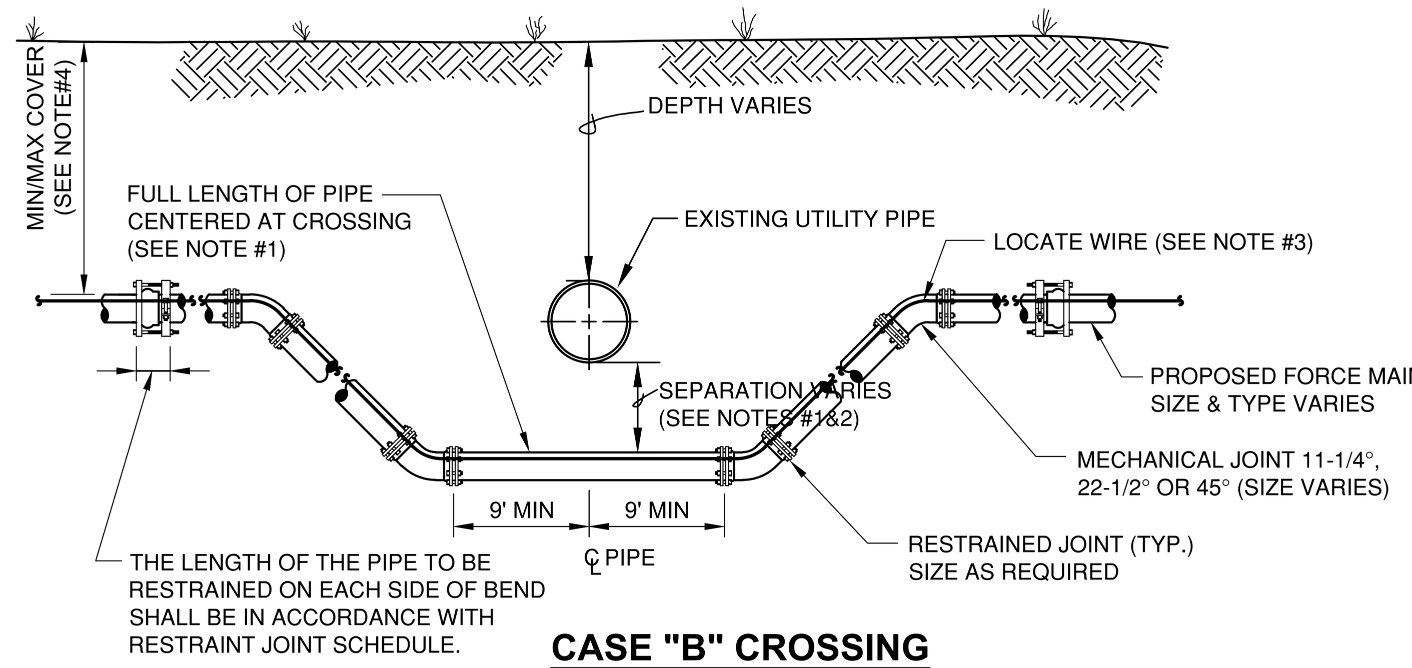
1. IF EXISTING CONFLICT PIPE IS A WATER MAIN12-INCHES OF SEPARATION IS REQUIRED. A FULL LENGTH OF PIPE SHALL BE CENTERED OVER EXISTING UTILITY MAIN TO PROVIDE MAXIMUM JOINT SPACING FOR ALL CROSSINGS.
2. FOR OTHER LOCATION LIMITATIONS SEE DETAIL (S-26 & S-27).
3. NUMBER OF TIE RODS REQUIRED IS AS FOLLOWS:
   - 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)
4. LOCATING WIRE REQUIRED: SEE DETAIL S-49.
5. 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 APPROVE BY JEA.
6. 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.

D - ADJUSTMENT OVER EXISTING UTILITIES TIE RODS
NTS
JANUARY 2019
PLATE S-40

WATER MAIN AND NON-WATER MAIN SEPARATION REQUIREMENTS - NOTES

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

B - NOTES ON UTILITY SEPARATION REQUIREMENTS - SEWER
NTS
JANUARY 2019
PLATE S-27

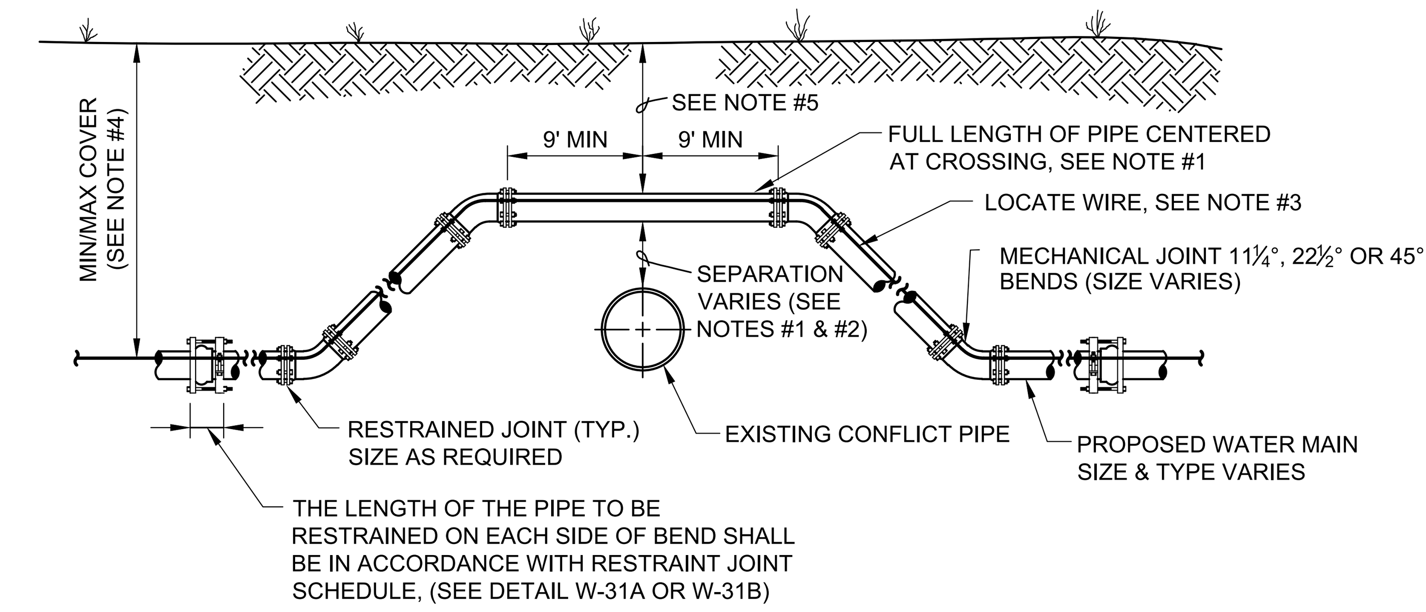


CASE "B" CROSSING

NOTES:

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

E - ADJUSTMENT UNDER EXISTING UTILITIES MECHANICAL RESTRAINTS
NTS
JANUARY 2019
PLATE S-41

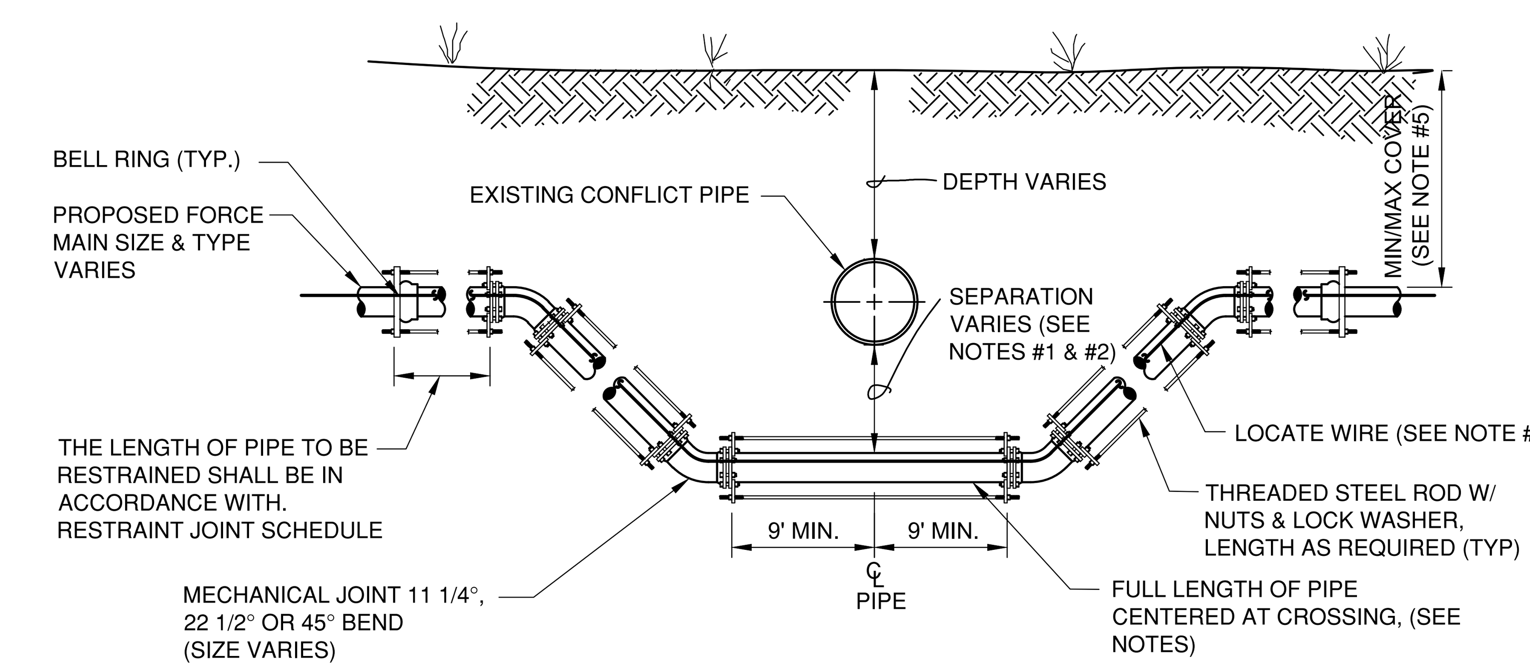


CASE "A" CROSSING

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).

C - ADJUSTMENT OVER EXISTING UTILITIES PIPE JOINT DEFLECTION
NTS
JANUARY 2019
PLATE S-39



CASE "B" CROSSING

NOTES:

1. IF EXISTING CONFLICT PIPE IS A WATER OR RECLAIM 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. 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)
4. LOCATING WIRE REQUIRED: SEE DETAIL S-49.
5. 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 APPROVE BY JEA.
6. 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.

F - ADJUSTMENT UNDER EXISTING UTILITIES TIE RODS
NTS
JANUARY 2019
PLATE S-42

100% SUBMITTAL

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Engineers EB - 0000155
Surveyors LB - 0006783

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

DESIGN ENGINEER: BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER: B. NEU
DRAWN BY: F. NGUYEN
DATE: JULY 2020
CHECKED BY: P. MOURT
DATE: JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION
STANDARD CIVIL DETAILS

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: AS NOTED
NO. SHEETS 88
SHEET NO. 47
DRAWING NO. CD-6

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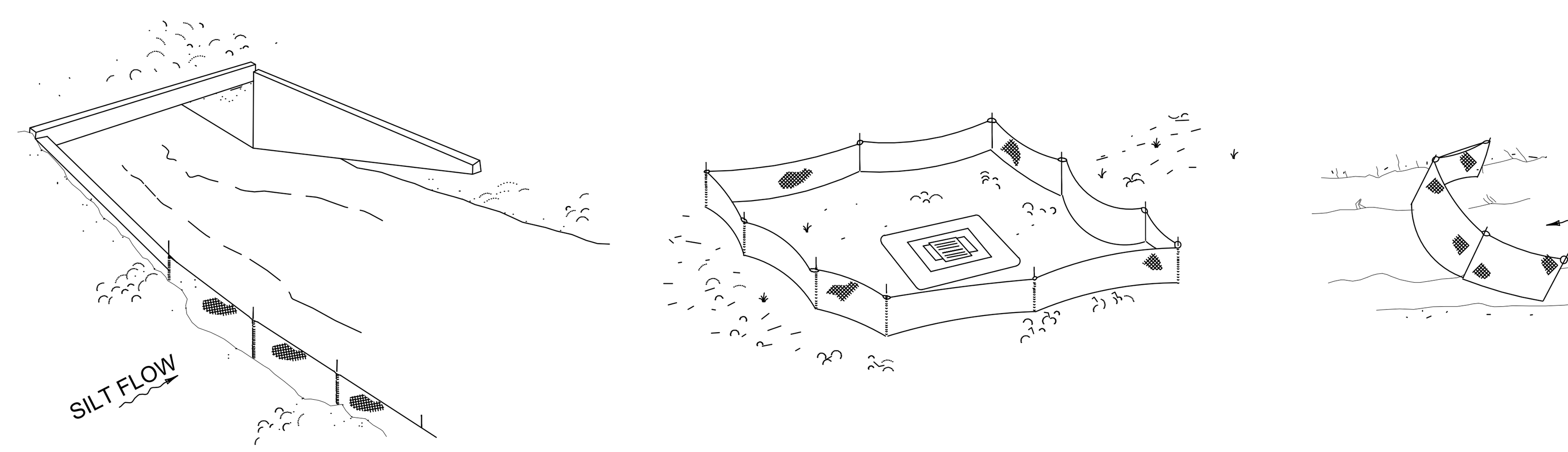
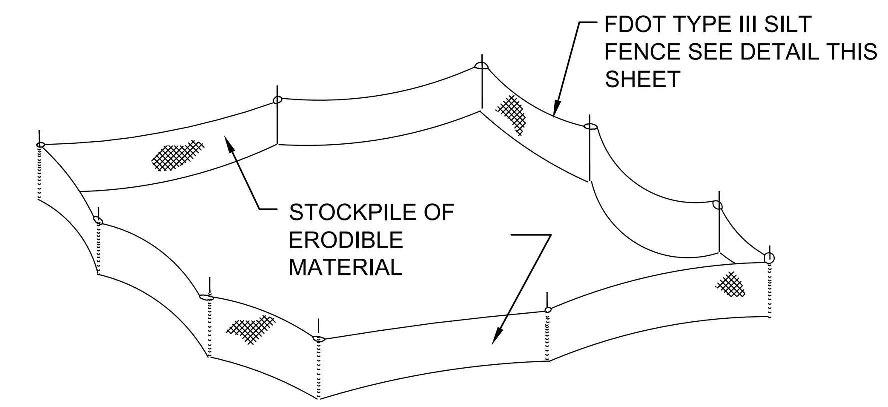
GENERAL NOTES FOR SOIL EROSION, SEDIMENT CONTROL, AND TREE PROTECTION:

1. ALL EROSION AND SEDIMENT CONTROL PRACTICES TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
2. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN 30 DAYS, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO STATE STANDARDS.
3. PERMANENT VEGETATION TO BE SEEDED OR SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER GRADING. MULCH TO BE USED AS NECESSARY FOR PROTECTION UNTIL SEEDING IS ESTABLISHED.
4. ALL WORK AND MATERIALS TO BE IN ACCORDANCE WITH THE FDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", LATEST EDITION, SECTIONS 104, 570, 575 AND 980 TO 986 AND CITY OF JACKSONVILLE "EROSIONS AND SEDIMENT CONTROLS FOR CONSTRUCTION SITES".
5. UNFILTERED DEWATERING IS NOT PERMITTED. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS DURING ALL DEWATERING OPERATIONS TO MINIMIZE SEDIMENT TRANSFER.
6. SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET, TEMPORARY VEGETATION COVER SHALL BE ESTABLISHED OR MULCH SHALL BE APPLIED IN ACCORDANCE WITH STATE STANDARDS FOR EROSION CONTROL.
7. ALL SOIL WASHED, DROPPED, SPILLED OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHTS-OF-WAY WILL BE REMOVED IMMEDIATELY.
8. ANY AREAS USED FOR THE CONTRACTOR'S STAGING, INCLUDING BUT NOT LIMITED TO, TEMPORARY STORAGE OF STOCKPILED MATERIALS (E.G. CRUSHED STONE, QUARRY PROCESS STONE, SELECT FILL, EXCAVATED MATERIALS, ETC.), SHALL BE ENTIRELY PROTECTED BY A SILT FENCE ALONG THE LOW ELEVATION SIDE TO CONTROL SEDIMENT RUNOFF.
9. ADDITIONAL SEDIMENT AND EROSION CONTROL MEASURES MAY BE REQUIRED, DURING ANY PHASE OF DEVELOPMENT, AT THE DISCRETION OF THE JEA APPOINTED CONSTRUCTION INSPECTOR.
10. THE EROSION AND SEDIMENTATION CONTROLS SHOWN ON THE PLANS ARE THE MINIMUM REQUIRED. ADDITIONAL SEDIMENT AND EROSION CONTROL MEASURES MAY BE REQUIRED, DURING ANY PHASE OF DEVELOPMENT, AT THE DISCRETION OF THE JEA APPOINTED CONSTRUCTION INSPECTOR.
11. THE CONTRACTOR SHALL ENSURE THAT A FOREMAN OR SUPERVISOR WHO HAS BEEN CERTIFIED UNDER FLORIDA STORMWATER, EROSION AND SEDIMENTATION CONTROL INSPECTOR TRAINING PROGRAM IS AVAILABLE IN PERSON OR BY PHONE AT ALL TIMES DURING THE CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL DESIGNATE THAT PERSON OR PERSONS AT THE PRE-CONSTRUCTION MEETING AND THAT PERSON OR PERSONS MUST ATTEND THE PRE-CONSTRUCTION MEETING.
12. EROSION CONTROL MEASURES DEPICTED IN THE PLANS ARE LIMITED TO INLET PROTECTION AND SILT FENCES. THE INLET PROTECTION SHALL BE LIMITED TO INLETS WITHIN THE ACTIVE CONSTRUCTION LIMITS AND A MINIMUM OF TWO INLETS DOWNSTREAM OF THE ACTIVE CONSTRUCTION LIMITS. THE CONTRACTOR SHALL MONITOR THE EFFECTIVENESS OF SUCH INLET PROTECTION AND PROVIDE ADDITIONAL PROTECTION IF WARRANTED. NO SEDIMENTS ARE INTENDED TO ENTER THE CURB INLETS. THE CONTRACTOR SHALL CONDUCT AND MAINTAIN THE WORK IN SUCH CONDITION TO PROVIDE ADEQUATE DRAINAGE AT ALL TIMES AND SHALL MONITOR THE PERFORMANCE OF THE STORM WATER INLETS WHILE IMPEDED BY THE INLET PROTECTION. STREET FLOODING IS NOT TO BE INTRODUCED AS A RESULT OF THE INLET PROTECTION. SAFETY OF THE TRAVELING PUBLIC, AS RELATED TO THE ADEQUACY OF THE DRIVING SURFACE AS A RESULT OF STANDING STORMWATER RUNOFF CREATED BY THE INTRODUCTION OF INLET PROTECTION, IS THE RESPONSIBILITY OF THE CONTRACTOR.
13. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN A CLEAN WORK ZONE TO LIMIT THE RELEASE OF SEDIMENTS INTO STORMWATER COLLECTION SYSTEMS AND TO LIMIT THE TRACKING OF MATERIALS BEYOND THE ACTIVE WORK LIMITS. THE CONTRACTOR IS REQUIRED TO MECHANICALLY SWEEP THE ACTIVE CONSTRUCTION LIMITS TO REMOVE SEDIMENTS AND LIKE MATERIALS FROM THE CORRIDOR AT THE END OF EACH WORKDAY. ADDITIONAL OR MORE FREQUENT SWEEPING MAY BE REQUIRED BY THE JEA APPOINTED CONSTRUCTION INSPECTOR.
14. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL TREES AND LANDSCAPING ON ADJACENT PROPERTIES, AND WILL BE SOLELY LIABLE FOR DAMAGE TO VEGETATION ON PROPERTIES ADJACENT TO CONSTRUCTION WORK ZONES. ALL TREES WITHIN THE LIMITS OF CONSTRUCTION ARE TO BE PROTECTED UNLESS SPECIFICALLY IDENTIFIED ON THE PLANS TO BE REMOVED. ALL TRESS OUTSIDE THE CONSTRUCTION WORK ZONE ARE TO BE PROTECTED TO THE MAXIMUM EXTENT PRACTICABLE. TREE BARRICADES WILL BE INSTALLED AND MAINTAINED AROUND ALL TREES TO BE PROTECTED OR AS DIRECTED BY THE ENGINEER/JEA APPOINTED CONSTRUCTION INSPECTOR. THE CONTRACTOR SHALL EMPLOY A CERTIFIED ARBORIST TO MITIGATE IMPACTS TO TREES AS A RESULT OF CONSTRUCTION ACTIVITIES AND SHALL COORDINATE THESE TREE-RELATED ISSUES WITH THE JEA APPOINTED CONSTRUCTION INSPECTOR. NO TRENCHING OR EXCAVATION SHALL BE ALLOWED WITHIN THE CRITICAL PROTECTION ZONE OF ANY PROTECTED TREE, EXCEPT WHERE DEBITS HAVE BEEN NOTED ON THE PLANS OR MITIGATION HAS BEEN PERFORMED. ANY TREE-RELATED DAMAGE DUE TO CONSTRUCTION SHALL BE PAID BY THE CONTRACTOR.
15. ALL DISTURBED AREAS, EXCEPT FOR AREAS THAT ARE LANDSCAPED, PAVED, OR OTHERWISE DESIGNATED, ARE TO BE SODDED. EXISTING GRASSED AREAS THAT ARE DISTURBED WILL BE SODDED WITH THE SAME GRASS TYPE AS EXISTING, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. CENTIPEDE SOD WILL BE USED FOR ALL DISTURBED AREAS NOT CURRENTLY GRASSED. WHERE SOD IS PLACED ON SLOPES OF 2:1 OR STEEPER, AN EROSION MAT WILL BE INSTALLED BENEATH THE SOD, AND THE SOD WILL BE STAKED. AREAS THAT ARE SODDED SHALL BE FERTILIZED AT AN APPLICATION RATE OF 450 LBS. /AC AND WILL BE WATERED AT A RATE OF 5,000 GAL/AC. NO SEPARATE PAYMENT WILL BE MADE AND ALL COSTS FOR FERTILIZING, WATERING, STAKING, AND FURNISHING AND INSTALLING EROSION MAT SHALL BE CONSIDERED INCIDENTAL TO OTHER PAY ITEMS IN THE CONTRACT.
16. A DEWATERING PLAN IS REQUIRED AND SHALL DETAIL THE MEASURES TO BE EMPLOYED TO LOWER THE GROUNDWATER TABLE AND/OR TO DIVERT SURFACE WATER DURING EXCAVATION AND CONSTRUCTION INCLUDING THE INSTALLATION AND MAINTENANCE OF ALL DEVICES TO BE USED DURING EACH PHASE OF CONSTRUCTION TO CONTROL EROSION AND THE TRANSPORTATION OF ERODED MATERIALS OFF SITE. TRENCH SHEETING AND BRACING SHALL BE ADEQUATE TO PREVENT CAVE-IN OF TRENCH WALLS, SUBSIDENCE OF AREAS ADJACENT TO THE TRENCH, DAMAGE TO UTILITIES, AND SLOUGHING OF THE BASE OF THE EXCAVATION DUE TO SEEPAGE. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT ALL DEWATERING ACTIVITIES ADHERE TO ALL LOCAL, STATE AND FEDERAL REGULATIONS . IT IS THE CONTRACTORS RESPONSIBILITY FOR THE ADEQUACY OF ANY SHEETING AND BRACING. THE COST OF DEWATERING, SHEETING AND BRACING IS CONSIDERED INCIDENTAL TO THE PAY ITEMS IN THE CONTRACT. NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK.
17. PAYMENT FOR PREPARING AND SUBMITTING THE DEWATERING PLAN IS CONSIDERED INCIDENTAL TO THE PAY ITEMS IN THE CONTRACT. NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK.
18. ALL DISTURBED AREAS TO BE LEFT IDLE LONGER THAN 14 DAYS MUST BE STABILIZED WITH QUICK GROW GRASS SEED AND MULCH.



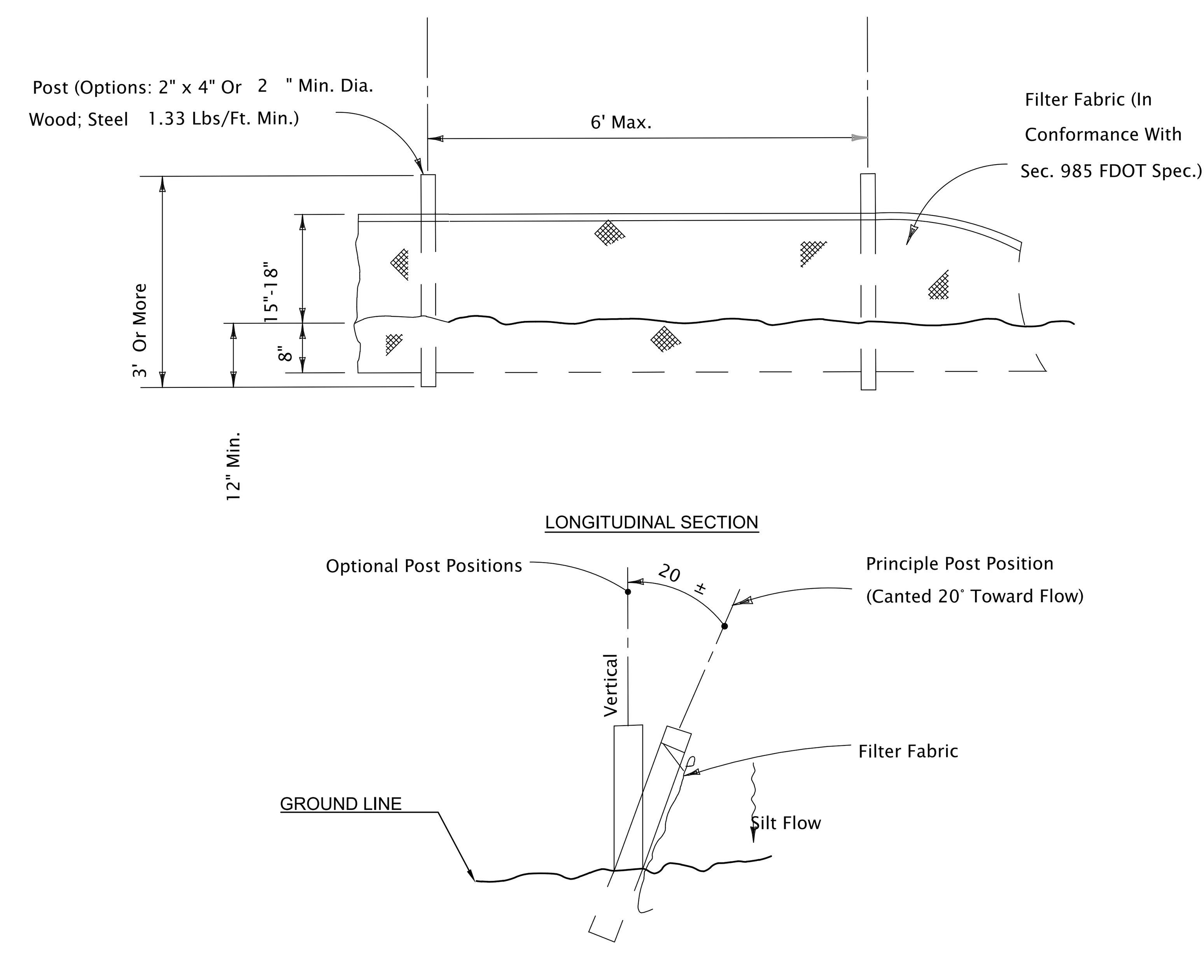
A SILT FENCE APPLICATIONS
NTS

DO NOT DEPLOY IN A MANNER THAT SILT FENCES WILL ACT AS A DAM ACROSS PERMANENT FLOWING WATERCOURSES. SILT FENCES ARE TO BE USED AT UPLAND LOCATIONS AND TURBIDITY BARRIERS USED AT PERMANENT BODIES OF WATER.

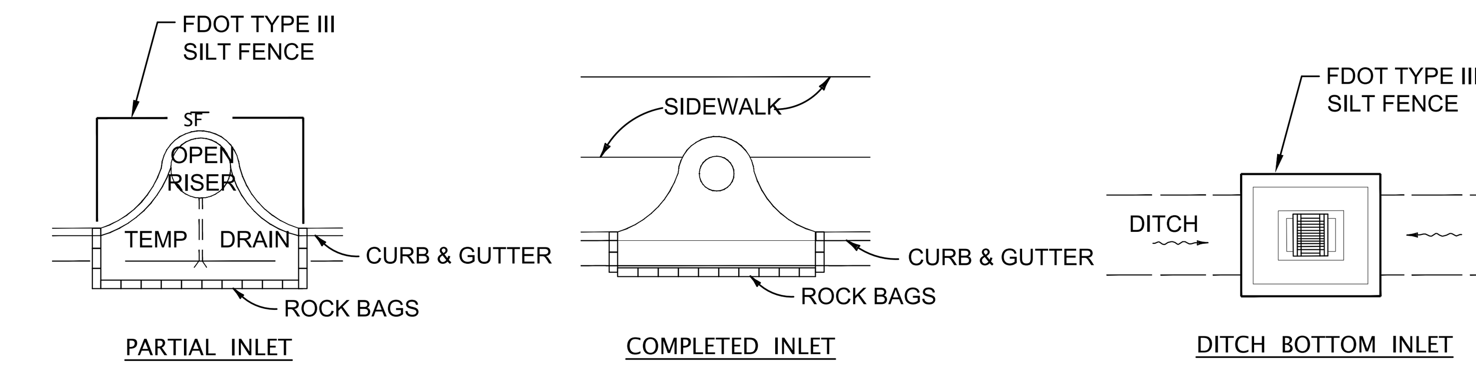


NOTE:
THE STORAGE OF ALL MATERIAL SHALL BE OUTSIDE THE 100-YEAR FLOOD PLAIN.

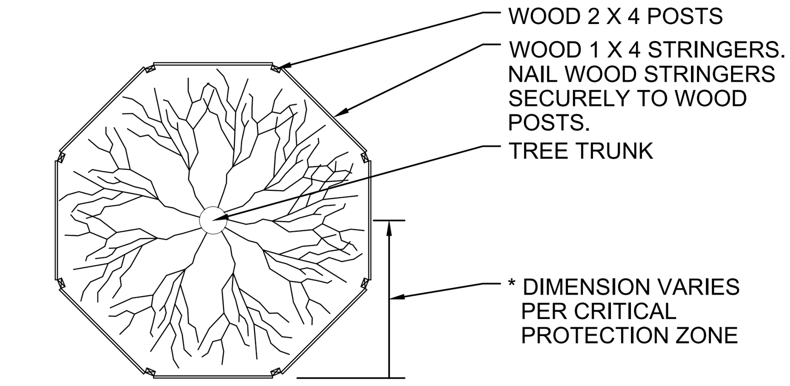
B MATERIAL STOCKPILE DETAIL
NTS



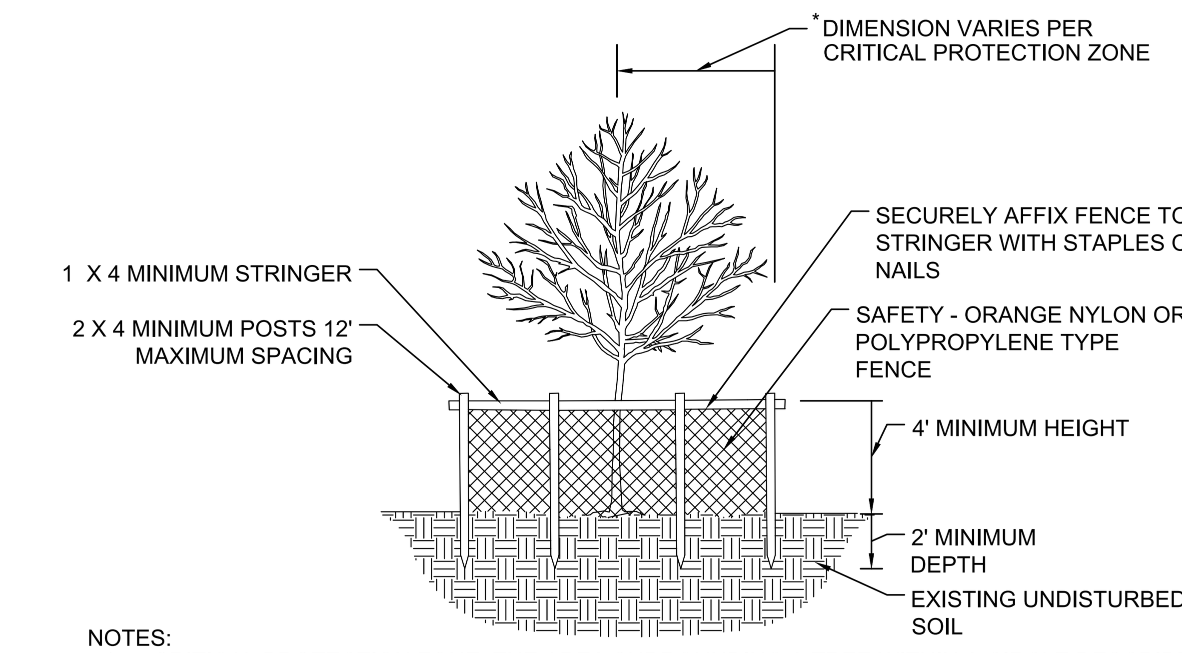
C TYPE III SILT FENCE
NTS



D INLET PROTECTION
NTS



NOTE: FOR GROUPS OF TREES, PLACE BARRICADES BETWEEN TREES AND CONSTRUCTION ACTIVITY.



NOTES:
1. CRITICAL PROTECTION ZONE: THE AREA SURROUNDING A TREE WITHIN A CIRCLE DESCRIBED BY A RADIUS OF ONE FOOT FOR EACH INCH OF THE TREE TRUNK DIAMETER AT 54" ABOVE FINISHED GRADE. FOR GROUPS OF TREES, PLACE BARRICADES BETWEEN TREES AND CONSTRUCTION ACTIVITY.
2. TREE PROTECTION BARRICADES SHALL BE LOCATED TO PROTECT A MINIMUM OF 75% OF THE CRITICAL PROTECTION ZONE.

E TREE PROTECTION
NTS

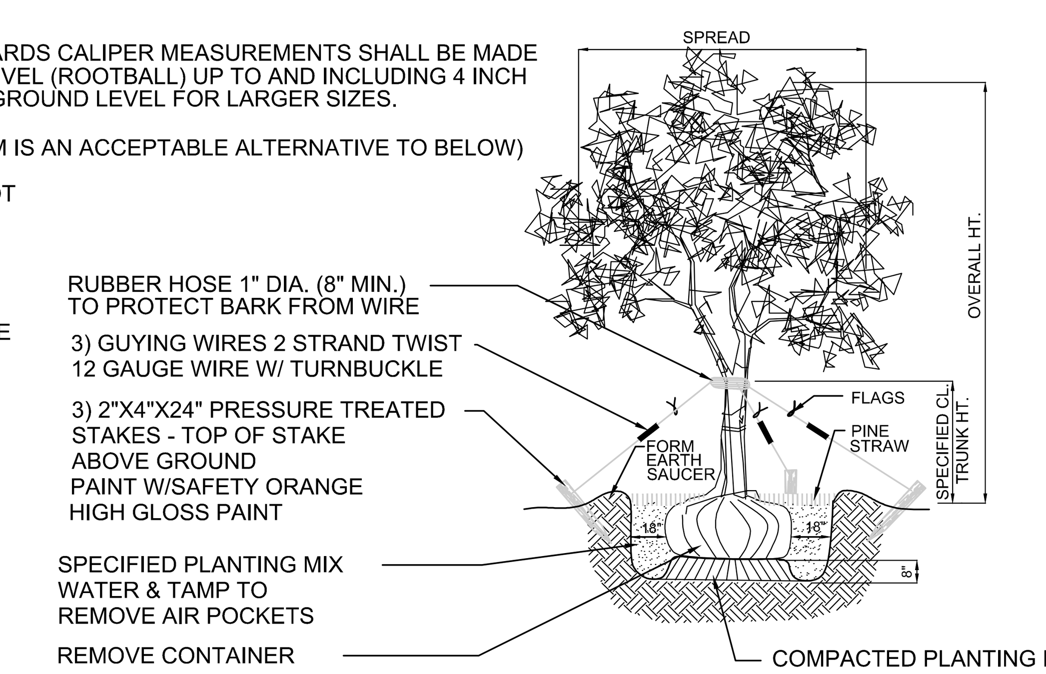
PURSUANT TO A.A.N. STANDARDS CALIPER MEASUREMENTS SHALL BE MADE 6 INCHES ABOVE GROUND LEVEL (ROOTBALL) UP TO AND INCLUDING 4 INCH CALIPER; 12 INCHES ABOVE GROUND LEVEL FOR LARGER SIZES.

("DUCKBILL" GUYING SYSTEM IS AN ACCEPTABLE ALTERNATIVE TO BELOW)

PLANT SO THAT TOP OF ROOT BALL IS EVEN WITH THE FINISHED GRADE

FLAG GUYING WIRES WITH SAFETY ORANGE COLORED SURVEYOR'S FLAGGING TAPE

MAINTAIN GUYING & SAFETY FLAGS FOR ONE YEAR; THEN REMOVE



TREE TRUNK DIAMETER	SETUP (SINGLE/DOUBLE)	WATER CAPACITY (PER BAG)	FILLS REQ'D PER WEEK
2 TO 3 INCH	SINGLE BAG	14.5 GALLONS	2 FILLS PER WEEK
4 TO 5 INCH	DOUBLE BAG	23.5 GALLONS	1 FILL PER WEEK

F TREE PLANTING
NTS

100% SUBMITTAL

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Telephone: (904) 203-1090
Architects AA - C0000035
Engineers EB - 0000155
Surveyors LB - 0006783

MOTT MACDONALD

REVISIONS

NO.	BY	DATE
6.		
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4.		
3.		
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DESIGN ENGINEER: BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER: F. NGUYEN
DRAWN BY: B. LEE
DATE: JULY 2020
CHECKED BY: P. MOURT
DATE: JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STANDARD CIVIL DETAILS

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: AS NOTED

NO. SHEETS 88
SHEET NO. 48
DRAWING NO. CD-7

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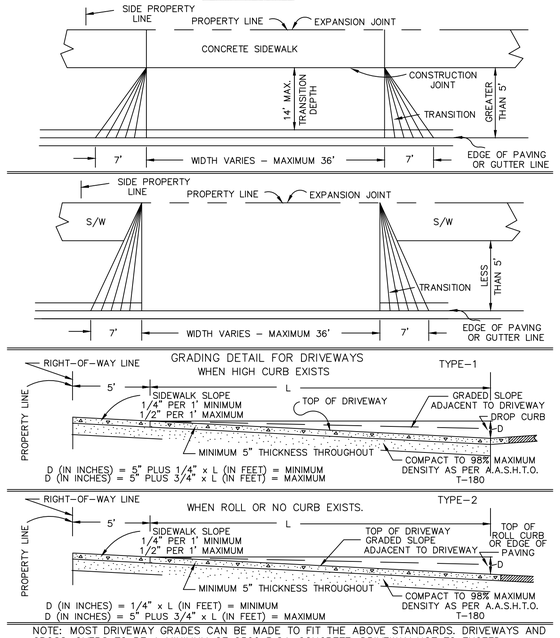
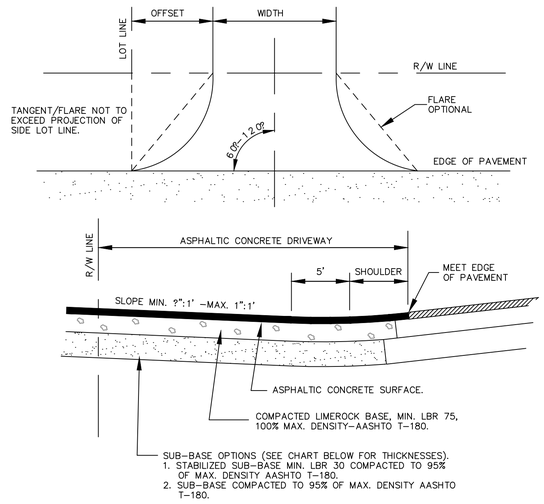
STANDARD DRIVEWAY CONSTRUCTION
ENGINEERING DIVISION – CITY OF JACKSONVILLE, FLORIDA
PERMIT REQUIRED



NOTE: MOST DRIVEWAY GRADES CAN BE MADE TO FIT THE ABOVE STANDARDS. DRIVEWAYS AND CROSS–OVERS TO BE A MINIMUM OF 2500 P.S.I. CONCRETE. DRIVEWAY NOT TO EXCEED LIMIT OF SIDE PROPERTY LINE. UNDERGROUND UTILITIES MAY EXIST ON SITE. CONTACTOR SHALL CONTACT PROPER AUTHORITIES PRIOR TO CONSTRUCTION.

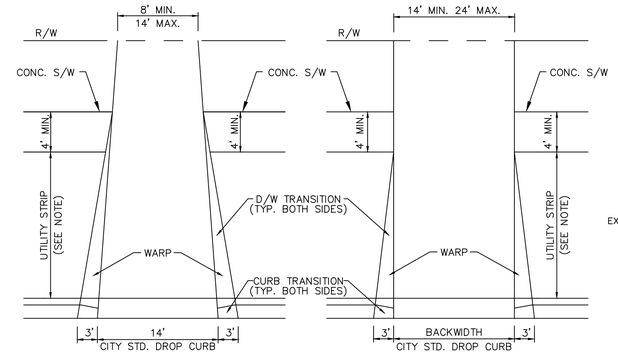
A CLASS II COMMERCIAL CONCRETE DRIVEWAY
NTS — IN STATE ROAD RIGHT -OF-WAY — SEPTEMBER 2003 — PLATE P-206



1. ALL DRIVEWAYS CONSTRUCTED WITHIN CITY MAINTAINED RIGHT–OF–WAYS SHALL CONFORM TO CITY STANDARDS. A PERMIT MUST BE ISSUED BY THE DEPARTMENT OF PUBLIC WORKS FOR ALL SUCH WORK.
2. ALL MATERIALS SHALL CONFORM TO CITY STANDARDS.
3. ALL DRIVEWAYS CONSTRUCTED WITHIN STATE MAINTAINED RIGHT–OF–WAYS SHALL CONFORM TO D.O.T. STANDARDS.

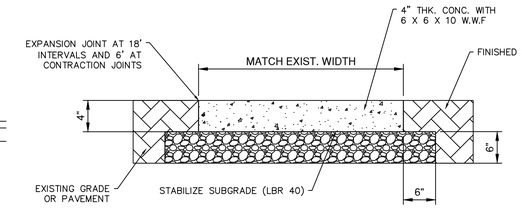
DRIVEWAY TYPE	MIN. WIDTH	MAX. WIDTH	PAVEMENT OPTION #1			PAVEMENT OPTION #2			MIN. RADIUS	MIN. OFFSET	OPTIONAL FLARE
			ASPHALT	LIMEROCK	STABILIZED SUB–BASE	ASPHALT	LIMEROCK	STABILIZED SUB–BASE			
CLASS I RESIDENTIAL	8'	24'	1 1/4"	6"	6"	1 1/4"	8"	4"	3'	3'	3'
CLASS II COMMERCIAL	24'	36'	1 1/4"	6"	12"	1 1/4"	8"	6"	30'	30'	7'
CLASS III HIGH VOLUME	24'	36'	1 1/4"	8"	12"	1 1/4"	12"	12"	30'	30'	N/A

B STANDARD ASPHALTIC CONCRETE DRIVEWAY
NTS — OCTOBER 1997 — PLATE P-204



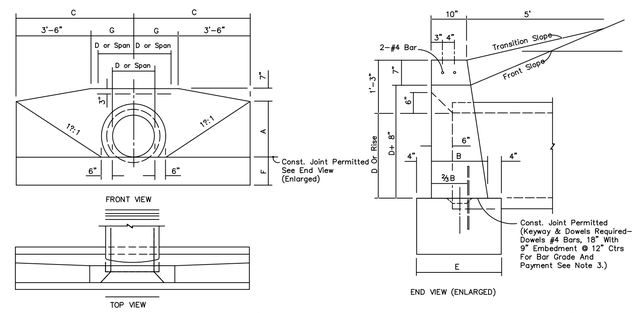
NOTE: WHERE UTILITY STRIP IS LESS THAN 5', D/W TRANS. TO MEET BACK OF S/W. WHERE UTILITY STRIP IS 5' OR GREATER, D/W TRANS. TO MEET FRONT OF S/W.

C CLASS I CONCRETE DRIVEWAY
NTS — SEPTEMBER 2003 — COJ



NOTE: WHERE THE SIDEWALK IS ADJACENT TO THE PAVEMENT, THE SIDEWALK SHALL ABUT THE PAVEMENT AND BE AT THE SAME ELEVATION.

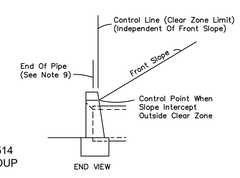
D COJ SIDEWALK DETAIL
NTS



ENDWALL DIMENSIONS (EXCLUSIVE OF MULTIPLE PIPE SPACING)

GENERAL NOTES

1. Endwall dimensions, locations and positions are for round and elliptical concrete pipe and for round and pipe–arch corrugated metal pipe. Round concrete pipe shown. See plates D–403, 404, & 405.
2. Endwalls may be cast in place or precast concrete. Reinforcing steel shall be Grades 40 or 60. Additional reinforcement necessary for handling precast units shall be determined by the Contractor or the supplier. Cost of reinforcement shall be included in the contract unit price for concrete, (endwalls).
3. All exposed corners and edges of concrete are to be chamfered ?".
4. Concrete meeting the requirements of ASTM C–478 (4000 psi) may be used in lieu of Class ~ concrete in precast items manufactured in plants which are under the Standard Operating Procedures for the inspection of precast drainage products.
5. On outfall ditches with side slopes flatter than 1?:1 provide 20' transitions from the endwall to the flatter side slopes, right of way permitting.
6. Pipe length plan quantities shall be based on the pipe end locations shown in the standard location control end view, or lengths based on special endwall locations called for in the plans.

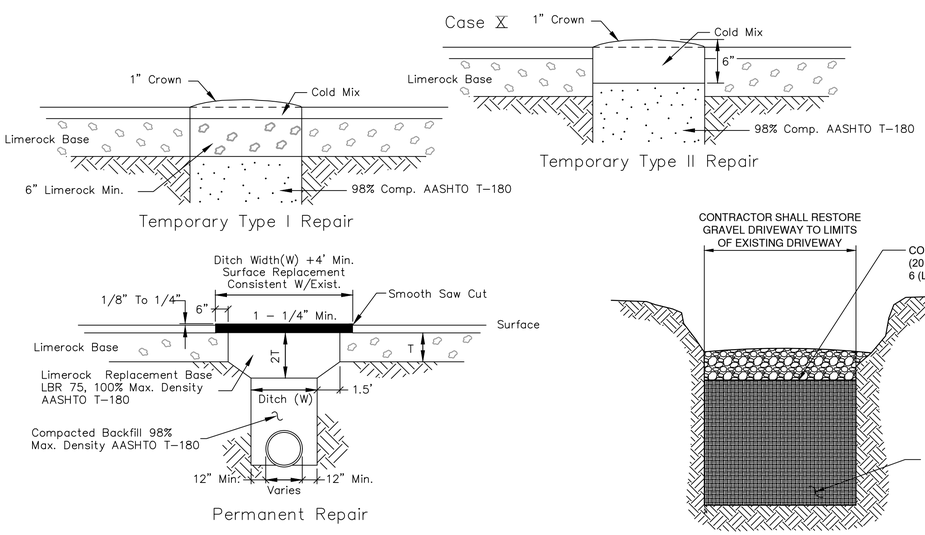


STANDARD LOCATION CONTROL

CORRUGATED METAL PIPE ARCH																		
Concrete (CY)																		
Number Of Pipe And Skew Angle Of Pipe																		
Single	Double				Triple				Quadruple				Span	Rise	Appx. Equiv. Round Pipe
0?	0?	15?	30?	45?	0?	15?	30?	45?	0?	15?	30?	45?			
1.16	1.47	1.48	1.52	1.60	1.78	1.80	1.88	2.04	2.09	2.12	2.23	2.48	17'	13'	15'
1.33	1.69	1.70	1.75	1.84	2.04	2.06	2.15	2.33	2.40	2.44	2.57	2.84	21'	15'	18'
1.78	2.31	2.33	2.39	2.53	2.83	2.87	2.99	3.26	3.36	3.42	3.60	4.01	28'	20'	18'
2.34	3.03	3.05	3.14	3.32	3.72	3.77	3.93	4.29	4.40	4.47	4.72	5.25	35'	24'	30'
3.13	4.06	4.09	4.20	4.45	4.99	5.06	5.28	5.76	5.93	6.03	6.36	7.09	42'	29'	36'
3.83	5.00	5.04	5.18	5.48	6.16	6.24	6.52	7.12	7.32	7.44	7.86	8.76	49'	33'	42'
4.87	6.31	6.36	6.53	6.91	7.74	7.84	8.18	8.93	9.18	9.33	9.85	11.0	57'	38'	48'
5.88	7.64	7.70	7.91	8.37	9.40	9.52	9.94	10.9	11.2	11.3	12.0	13.3	64'	43'	54'
7.80	10.2	10.2	10.5	11.1	12.5	12.7	13.2	14.4	14.9	15.1	15.9	17.8	71'	47'	60'

CORRUGATED METAL PIPE ARCH																		
SPAN	RISE	Opening Area (SF)				Dimensions												
		Number of Pipes											X					
		1	2	3	4	A	B	C	E	F	G	S	0?	15?	30?	45?		
17'	13'	1.1	2.2	3.3	4.4	1'–9"	1'–2"	3'–10"	1'–10"	1'–2"	0'–4"	2'–6"	2'–6"	2'–7"	2'–11"	3'–6"		
21'	15'	1.6	3.2	4.8	6.4	1'–11"	1'–2"	4'–3"	1'–10"	1'–2"	0'–9"	2'–10"	2'–10"	2'–11"	3'–3"	4'–0"		
28'	20'	2.8	5.6	8.4	11.2	2'–4"	1'–3"	5'–2"	1'–11"	1'–3"	1'–8"	3'–5"	3'–5"	3'–6"	3'–11"	4'–10"		
35'	24'	4.3	8.6	12.9	17.2	2'–8"	1'–4"	5'–111/2"	2'–0"	1'–4"	2'–51/2"	4'–0"	4'–0"	4'–2"	4'–7"	5'–8"		
42'	29'	5.9	11.8	17.7	23.6	3'–1"	1'–5"	6'–101/2"	2'–1"	1'–5"	3'–41/2"	4'–9"	4'–9"	4'–11"	5'–6"	6'–9"		
49'	33'	8.4	16.8	25.2	33.6	3'–5"	1'–6"	7'–8"	2'–2"	1'–6"	4'–2"	5'–6"	5'–6"	5'–8"	6'–4"	7'–9"		
57'	38'	10.6	21.2	31.8	42.4	3'–10"	1'–7"	8'–71/2"	2'–3"	1'–7"	5'–11/2"	6'–4"	6'–4"	6'–7"	7'–4"	8'–11"		
64'	43'	13.2	26.4	39.6	52.8	4'–3"	1'–8"	9'–61/2"	2'–4"	1'–8"	6'–01/2"	7'–1"	7'–1"	7'–4"	8'–2"	10'–0"		
71'	47'	16.9	33.8	50.7	67.6	4'–7"	1'–10"	10'–4"	2'–6"	2'–0"	6'–10"	7'–10"	7'–10"	8'–1"	9'–1"	11–1'		

G STRAIGHT CONCRETE ENDWALLS- SINGLE AND MULTIPLE PIPE
NTS — MAY 1994 — PLATE D-401, D-404



Note: In Some Cases Portland Cement Concrete May Be Considered Or Required By City Engineer For Surface Replacement.

E STANDARD TRENCH AND PAVING REPAIR DETAILS
NTS — SEPTEMBER 1996 — PLATE P-409

F GRAVEL DRIVE RESTORATION
NTS

100% SUBMITTAL

Matt MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Architect AA: C000055
Engineers EB: 0000155
Surveyors LB: 0000763
MOTT MACDONALD

REVISIONS

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

DESIGN ENGINEER: BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER:	F. NGUYEN
DRAWN BY:	B. LEE
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STANDARD CIVIL DETAILS

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: AS NOTED

NO. SHEETS 88
SHEET NO. 49
DRAWING NO. CD-8

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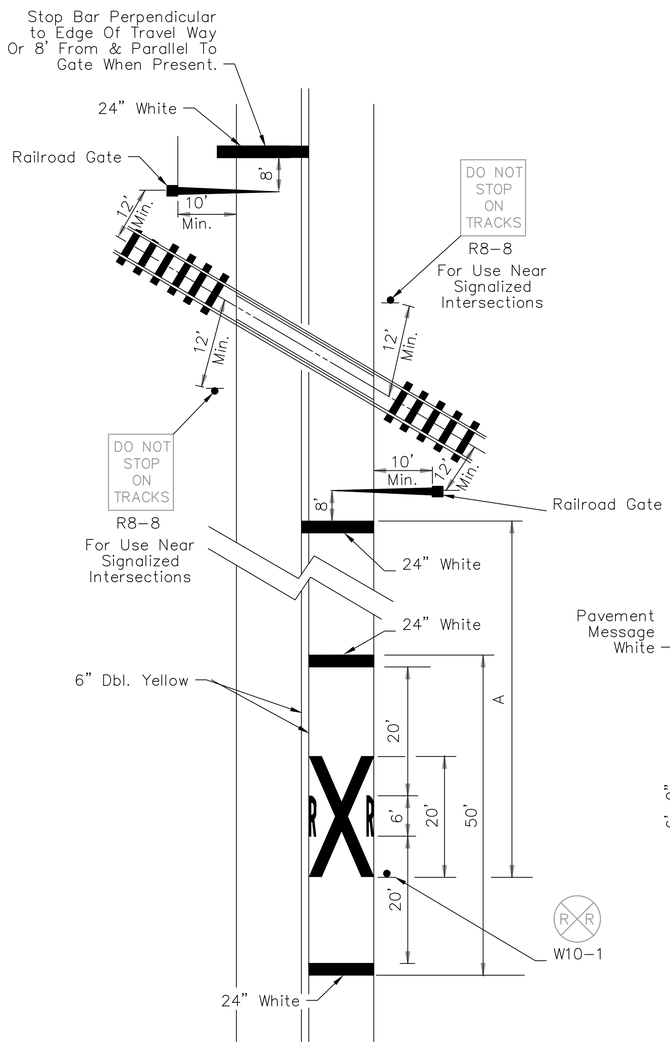
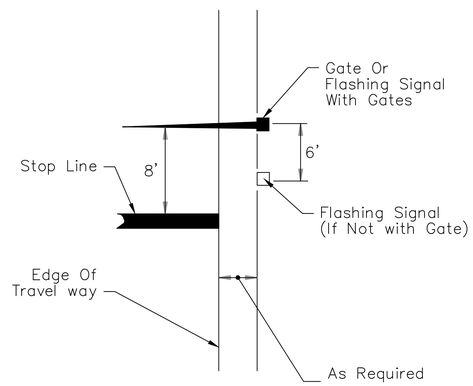
Xrefs Attached= JEA_SHT22x34_BOR [C:\pwworking\hmm\water_wastewater\mottmac_ngu85083\d0426985\JEA_SHT22x34_BOR.dwg]

NOTES:

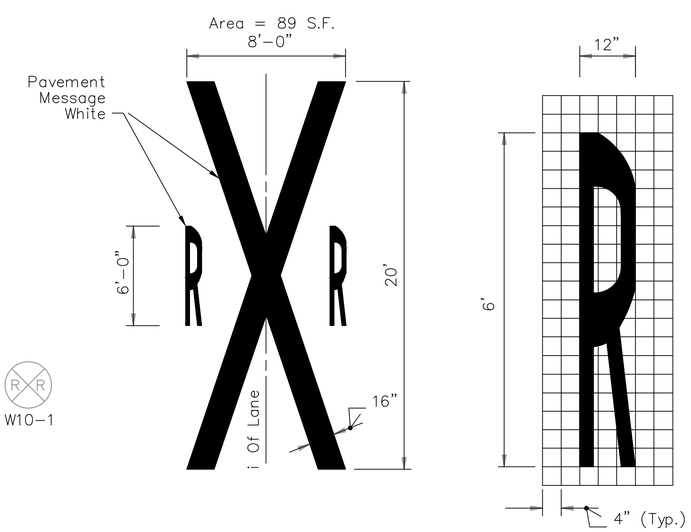
1. PLACE AN ADDITIONAL W10-1 SIGN WHERE INTERSECTIONS OCCUR BETWEEN THE R/R PAVEMENT MESSAGE AND THE TRACKS.
2. PLACE FTP-61-06 OR FTP-62-06 SIGN 100' IN ADVANCE OF CROSSING FOR URBAN CONDITIONS AND 300' IN ADVANCE OF CROSSING FOR RURAL CONDITIONS. SEE INDEX 700-102 FOR SIGN DETAILS.
3. ONLY PAVING STRIPPING AND RR MARKINGS ARE APPLICABLE TO THIS PROJECT. UNLESS DAMAGED BY CONTRACTOR, NO REPLACEMENT OR ADDITIONAL RR SIGNAGE, GATES OR SIGNAL ARMS AND CONTROLS ARE TO BE FURNISHED UNDER THIS PROJECT.



RAILROAD CROSSING AT TWO-LANE ROADWAY



RELATIVE LOCATION OF CROSSING TRAFFIC CONTROL DEVICES



RAILROAD CROSSING PAVEMENT MESSAGE

Design Speed (mph)	Distance "A" (ft)
60	400
55	325
50	250
45	175
40	125
35	100
URBAN	85 Min.

100% SUBMITTAL

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Architect AA - C000055
Engineers EB - 0000155
Surveyors LB - 0000763
MOTT MACDONALD

REVISIONS

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

DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER: F. NGUYEN
DRAWN BY: B. LEE
DATE: JULY 2020
CHECKED BY: P. MOURT
DATE: JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

CSX RR CROSSING DETAILS

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: AS NOTED

NO. SHEETS 88
SHEET NO. 50
DRAWING NO. CD-9

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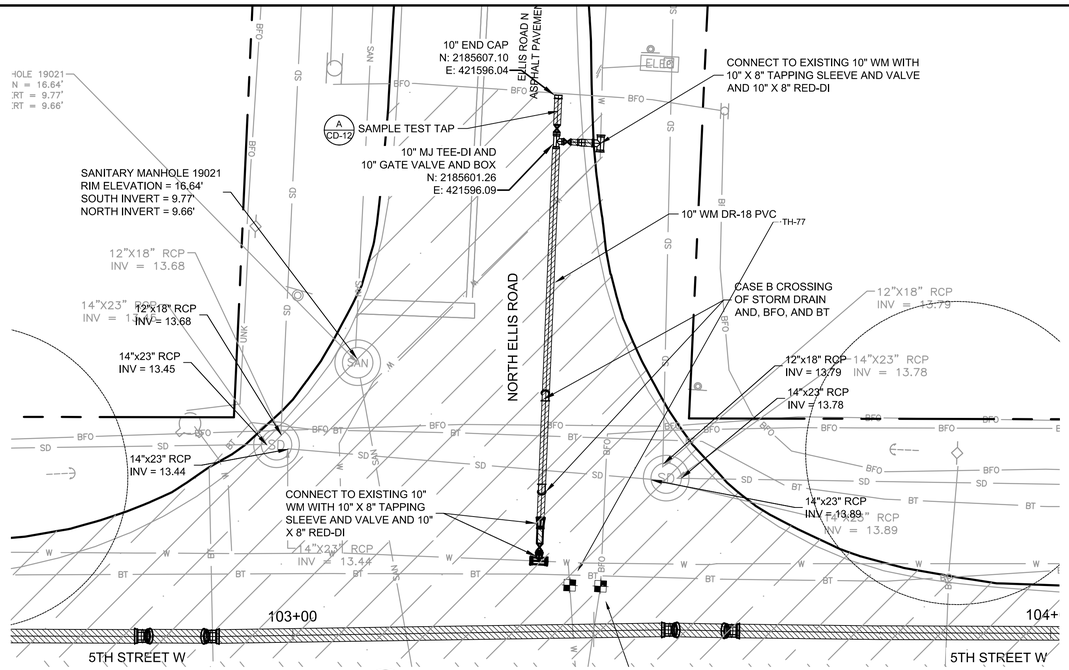
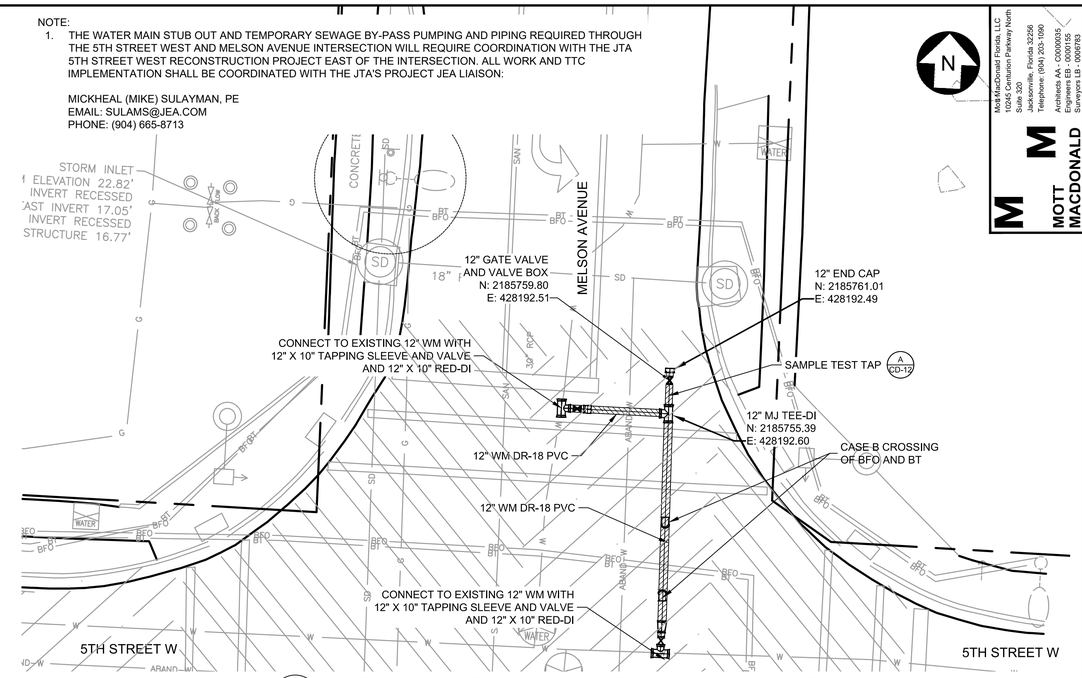


A - WATER MAIN STUBOUT AT NORTH ELLIS ROAD (SEE C-22)
SCALE: 1" = 10'

NOTE:
1. THE WATER MAIN STUB OUT AND TEMPORARY SEWAGE BY-PASS PUMPING AND PIPING REQUIRED THROUGH THE 5TH STREET WEST AND MELSON AVENUE INTERSECTION WILL REQUIRE COORDINATION WITH THE JTA 5TH STREET WEST RECONSTRUCTION PROJECT EAST OF THE INTERSECTION. ALL WORK AND TTC IMPLEMENTATION SHALL BE COORDINATED WITH THE JTA'S PROJECT JEA LIAISON:

MICKHEAL (MIKE) SULAYMAN, PE
EMAIL: SULAMS@JEA.COM
PHONE: (904) 665-8713



B - WATER MAIN STUB-OUT AT MELSON AVENUE (SEE C-35)
SCALE: 1" = 10'

100% SUBMITTAL

MOTT MACDONALD
Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Architect AA - C000055
Engineers EB - 0000155
Surveyors LB - 0000763

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

DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER: B. NEU
DRAWN BY: F. NGUYEN
DATE: JULY 2020
CHECKED BY: P. MOURT
DATE: JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STANDARD CIVIL DETAILS

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: HORIZ: 1" = 20' VERT: 1" = 5'

NO. SHEETS 88
SHEET NO. 51
DRAWING NO. CD-10

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x-Proposed Force Main [C:\pwworking\hmm\water_wastewater\mottmac_ngu85083\d0426960\x-Proposed Force Main.dwg]
18-0276.003 W 5th Street Vlhts [C:\pwworking\hmm\water_wastewater\mottmac_ngu85083\d0426960\18-0276.003 W 5th Street Vlhts.dwg]
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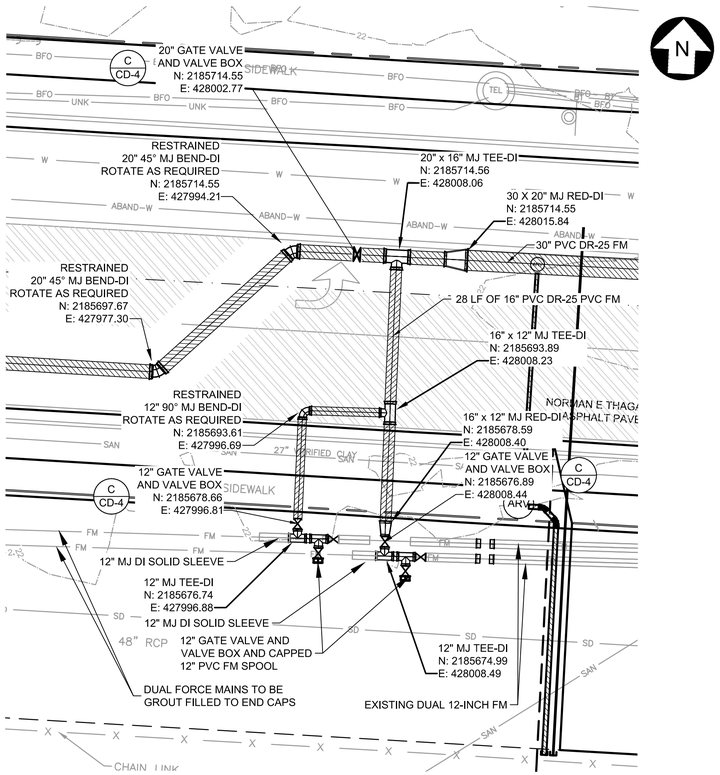
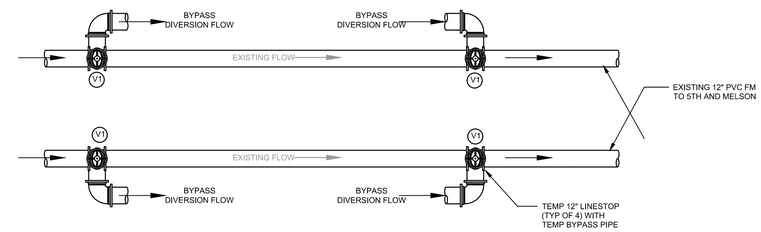


NOTE:

THE ENGINEER'S SURVEYOR LOCATED A SINGLE, EXISTING 12-INCH FORCE MAIN (TH-83) DISCHARGING INTO THE 5TH STREET WEST-MELSON AVENUE MANHOLE BUT WAS UNABLE TO LOCATE THE SECOND 12-INCH FORCE MAIN DISCHARGING TO SAID MANHOLE AS SHOWN ON AVAILABLE JEA FURNISHED DOCUMENTS. THE ENGINEER'S SURVEYOR CONDUCTED GPR SCANS FROM THE SOUTH EDGE OF THE 5TH STREET WEST PAVEMENT TO SOUTH OF THE 48-INCH RCP, PERFORMED VACUUM POTHOLE EXCAVATIONS, AND MANUALLY PROBED BELOW THE SIDEWALK IN AN ATTEMPT TO LOCATE THE SECOND FORCE MAIN. BASED ON LIMITED TESTING COMPLETED BY JEA, IT APPEARS THAT BOTH 12-INCH FORCE MAINS DISCHARGE TO THE EXISTING JUNCTION MANHOLE AT 5TH STREET WEST-MELSON. REFER TO SUPPLEMENTAL SPECIFICATIONS SECTION 02999. THIS DESIGN ASSUMES THAT THE TWIN 12-INCH FORCE MAINS ARE FOUND IN A SIMILAR CONFIGURATION IN THE GROUND AS SHOWN. THE CONTRACTOR SHALL PROVIDE ADDITIONAL FITTINGS NEEDED TO PERFORM THE CONNECTION.

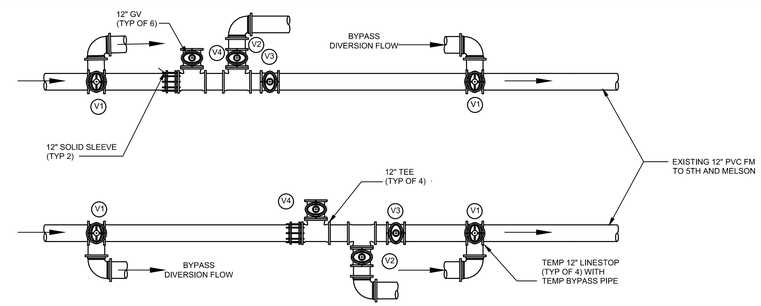
A - DUAL 12" FORCEMAIN TIE-IN CONNECTION DETAIL

SCALE: 1" = 10'



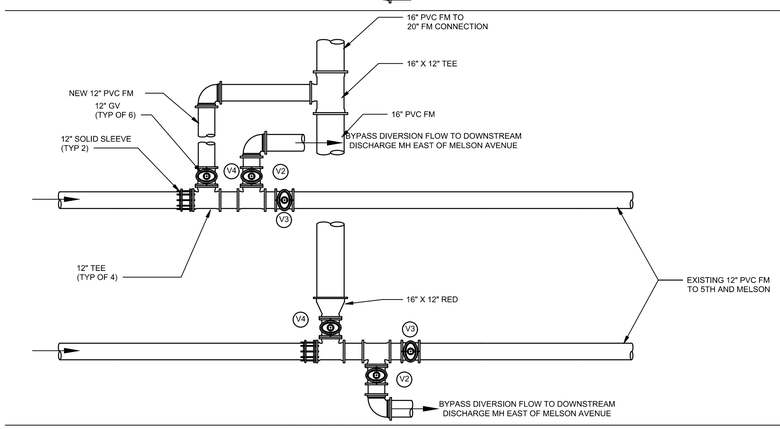
TEMPORARY SEWAGE BYPASS PUMPING AND PIPING NARRATIVE - PHASE I

1) LAY 12-INCH TEMPORARY PIPING EITHER INDIVIDUALLY (2 PIPES) OR MANIFOLDED WITH BY-PASS PUMPING PIPING SYSTEM TO THE TEMPORARY RECEIVING BUCKMAN TRUNK SEWER MANHOLE EAST OF MELSON AVENUE.
2) INSTALL (4) 12-INCH TEMPORARY LINE STOP BYPASS VALVES (VALVE NO. 1) WITH SHORT TERM, TEMPORARY BY-PASS PIPING.
3) ONCE ITEM 1 AND 2 ARE INSTALLED AND TESTED, CLOSE LINE STOP BY PASS VALVES (VALVE NO. 1) AND ALLOW FLOW AROUND THE EXISTING 12-INCH FORCE MAINS.



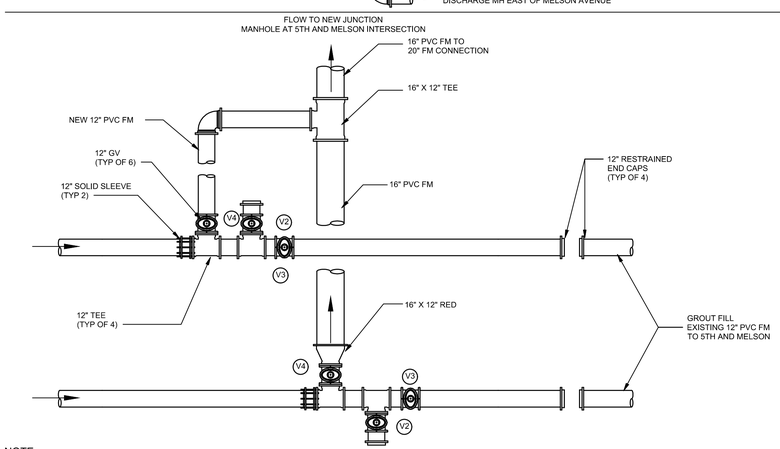
TEMPORARY SEWAGE BYPASS PUMPING AND PIPING NARRATIVE - PHASE II

1) CUT IN THE (2) 12-INCH TEE, (3) 12-INCH GATE VALVE AND 12" SOLID SLEEVE ASSEMBLY ONTO EACH EXISTING 12-INCH PVC FORCE MAIN. VALVES NO. 2, 3, AND 4 ARE CLOSED.
2) ONCE THE CUT IN ASSEMBLIES ARE IN PLACE AND LEAK TESTED, CONNECT PHASE I'S ITEM 1 TO THE CONNECTION POINTS ON VALVE NO. 2.
3) OPEN VALVE NO. 2.



TEMPORARY SEWAGE BYPASS PUMPING AND PIPING NARRATIVE - PHASE III

1) REMOVE TEMPORARY LINE STOPS WITH BY PASS AND TEMPORARY BY-PASS PIPING.
2) INSTALL AND MAKE OPERATIONAL THE TEMPORARY BY-PASS PUMPING SYSTEMS FOR THE 27-INCH VCP AND 2-30-INCH RCP GRAVITY SEWER LINES THAT CURRENTLY DISCHARGE TO THE JUNCTION MANHOLE IN THE CENTER OF 5TH STREET AND MELSON AVENUE.
3) DEMOLISH EXISTING JUNCTION MANHOLE IN 5TH AND MELSON AND INSTALL USCP AND ROCKHARD COMPOSITE MANHOLES AND 12-INCH, 16-INCH, 20-INCH, 30-INCH AND 36-INCH PIPING AND FITTINGS TO CONNECTION POINT FOR PERMANENT 12-INCH PVCP FM CONNECTION TO THE NEW DIVERSION FORCE MAIN (VALVE NO. 4).



TEMPORARY SEWAGE BYPASS PUMPING AND PIPING NARRATIVE - PHASE IV

1) AFTER ALL PIPING HAS BEEN INSTALLED AND TESTED, OPEN VALVE NO. 4 AND CLOSE VALVE NO. 2.
2) INSTALL RESTRAINED 12-INCH CAP IN END OF VALVE NO. 2.
3) CUT AND RESTRAINED CAP EXISTING 12-INCH PVC FORCE MAIN EAST OF VALVE NO. 3 AND WEST OF LINE STOP VALVE SADDLE.

NOTE:
THE CONTRACTOR SHALL PROVIDE CONTINUOUS FLOW OPERATION OF THE EXISTING TWIN 12-INCH PVC FORCE MAINS NEAR THE 5TH AND MELSON INTERSECTION WHILE THE NEW 20-INCH FORCE MAIN, 30 AND 36-INCH GRAVITY SEWERS STUBS AND MANHOLES ARE INSTALLED. THIS SCHEMATIC ASSUMES THAT THE TWIN 12-INCH FORCE MAINS ARE FOUND IN A SIMILAR CONFIGURATION IN THE GROUND AS SHOWN.

B - DUAL 12" FORCEMAIN TEMPORARY BYPASS DETAIL

NTS

100% SUBMITTAL

Mott MacDonald Florida, LLC
10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Architect AA : C000055
Engineers EB : 0000155
Surveyors LB : 0000763
MOTT MACDONALD

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

DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO.
51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

DUAL 12-INCH FORCEMAIN CONNECTION

PROJ. NO.	502402368
DATE:	JULY 2020
SCALE:	HORIZ: 1" = 20' VERT: 1" = 5'

NO. SHEETS	88
SHEET NO.	51
DRAWING NO.	CD-11

Xrefs Attached= JEA_SHT22x34_BOR [C:\pwworking\hmm\water_wastewater\mottmac_ngu85083\d0426985\JEA_SHT22x34_BOR.dwg]
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x-overlay-hatch [C:\pwworking\hmm\water_wastewater\mottmac_ngu85083\d0426960\x-overlay-hatch.dwg]
18-0276.003 W 5th Street VWhs [C:\pwworking\hmm\water_wastewater\mottmac_ngu85083\d0426960\18-0276.003 W 5th Street VWhs.dwg]
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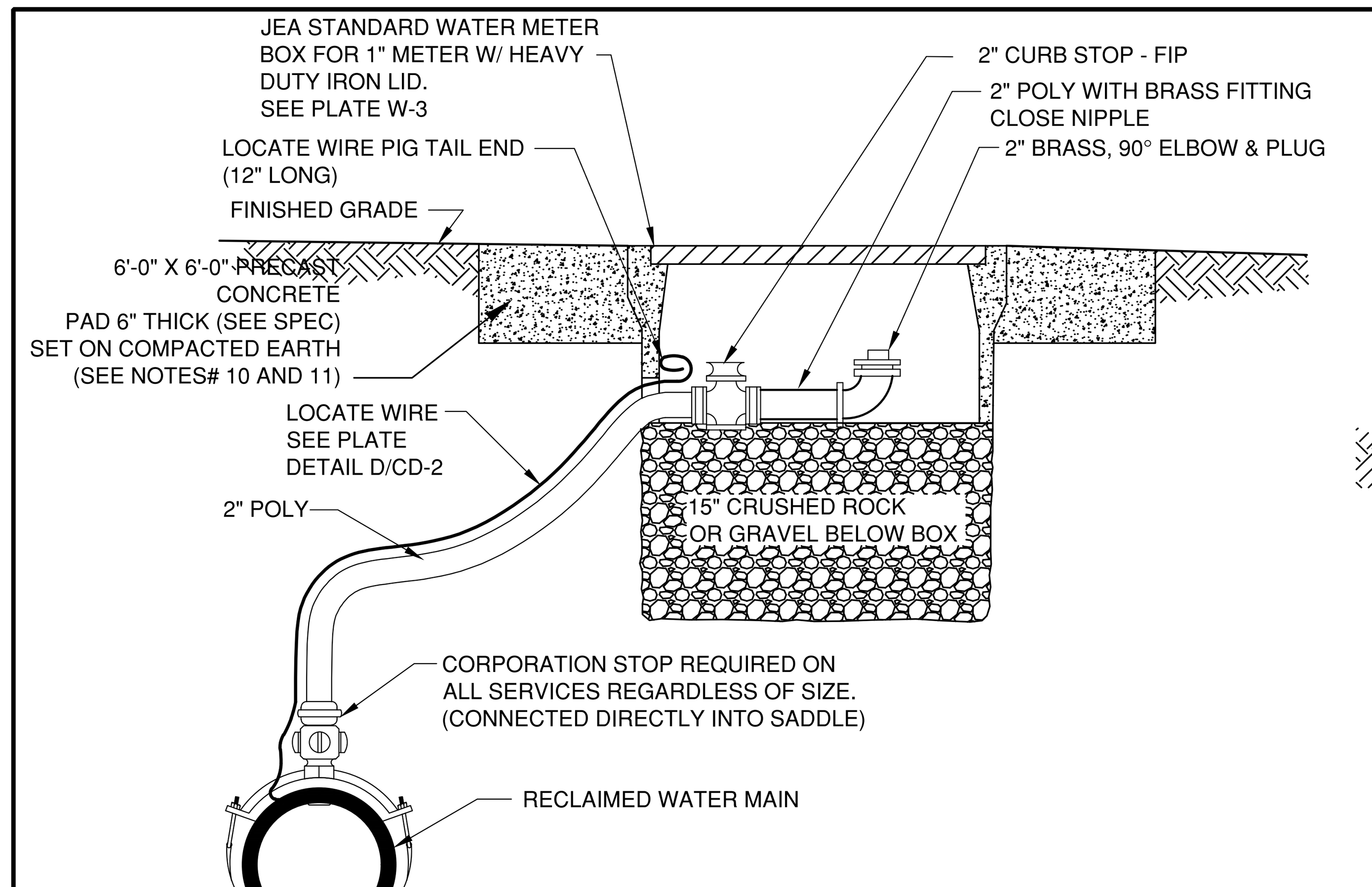


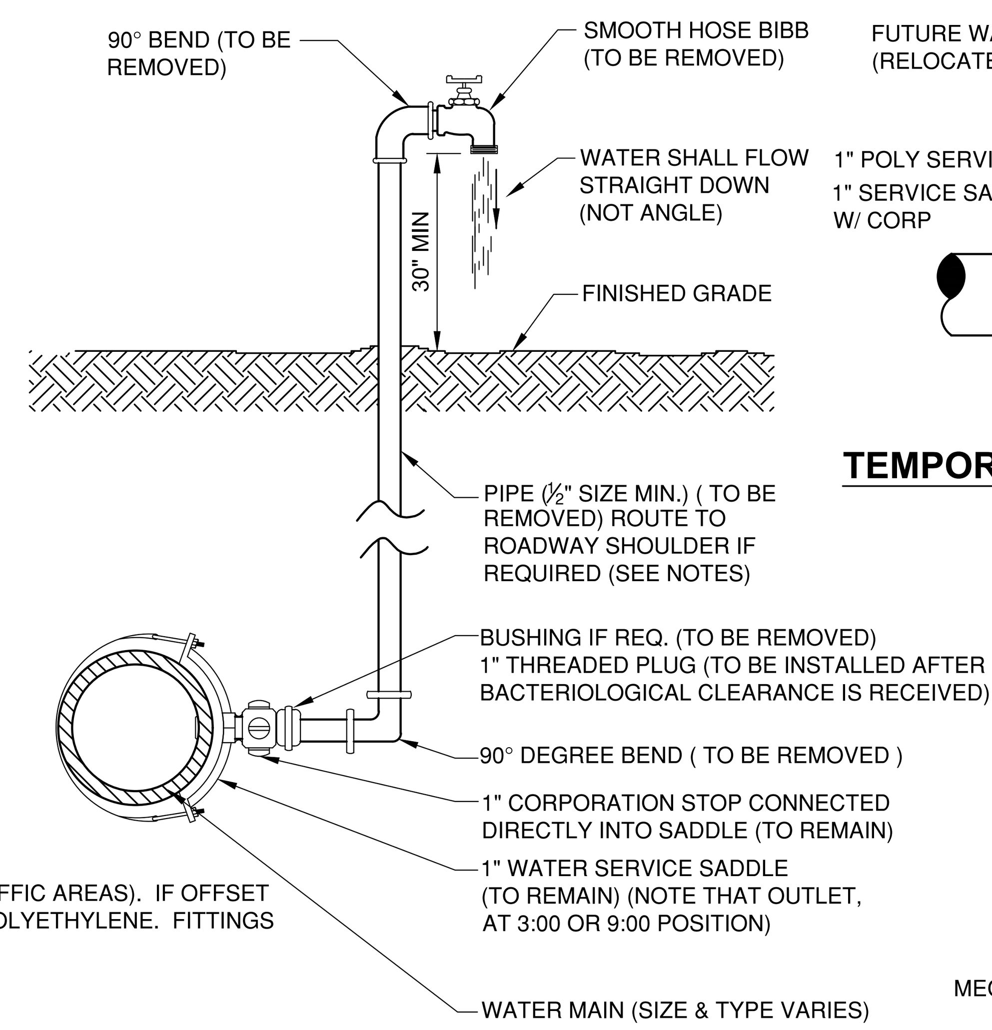
NOTES:

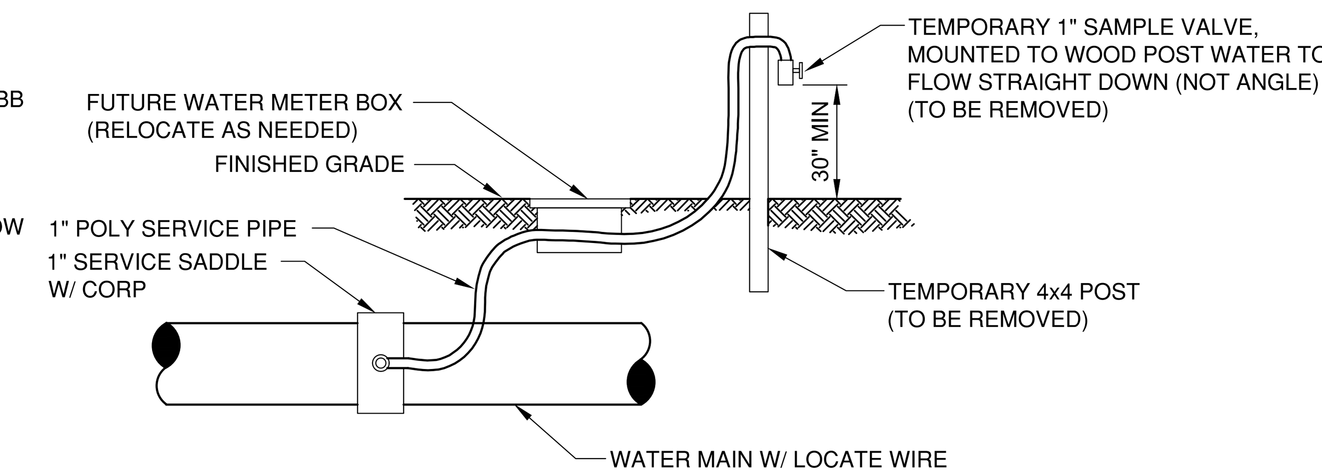
1. THE ASSEMBLY BOX SHALL BE LOCATED OUTSIDE OF THE ROADWAY PAVEMENT AREA (I.E. LOCATED IN NON-TRAFFIC AREAS). IF OFFSET PIPING IS REQUIRED, THE PIPING SHALL BE 2-INCH MIN. (SAME SIZE AS AIR VALVE INLET). ALL PIPING SHALL BE POLYETHYLENE. FITTINGS SHALL BE BRASS.
2. THE 2" CURB STOP SHALL BE ALL BRONZE. FITTINGS SHALL BE BRASS.
3. ANY RECLAIMED WATER VALVE SHALL HAVE RECLAIMED EMBLEM.
4. LOCATE WIRE FOR 10' OR GREATER IN LENGTH. LOCATED WIRE FOR MAIN CAN BE INCORPORATED WITH ASSEMBLY, SEE PLATE W-44 FOR DETAILS.
5. FOR DEAD-END MAINS ASSEMBLY TO BE LOCATED 2 FEET PAST LAST WATER MAIN SERVICE CONNECTION.
6. FOR DEAD-END MAINS ASSEMBLY TO BE LOCATED 2 FEET PAST LAST WATER MAIN SERVICE CONNECTION.
7. BRASS IDENTIFICATION TAG INDICATING "WATER", VALVE SIZE, DIRECTION AND TURNS TO OPEN & VALVE TYPE. PROVIDE A ¼" 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.
8. 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.
9. FOR UNPAVED LOCATIONS, A PRECAST CONCRETE VALVE/FLUSH BOX PAD SHALL BE PROVIDED AND INSTALLED FLUSH WITH GRADE. CONCRETE PAD IS NOT REQUIRED FOR VALVE/FLUSH BOX LOCATED IN THE ROADWAY, UNLESS SHOWN OR NOTED OTHERWISE.
10. GRAVEL SHALL BE PROVIDED UNDER ALL VALVES 20" AND LARGER. THE MAXIMUM VERTICAL LIMIT OF GRAVEL IS 12" UNDER THE VALVE UP TO ⅓ THE OVERALL HEIGHT OF THE VALVE.
11. 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.

A - BELOW GRADE FLUSHING/MANUAL AIR RELEASE VALVE/TEMPORARY SAMPLE TAP ASSEMBLY DETAIL

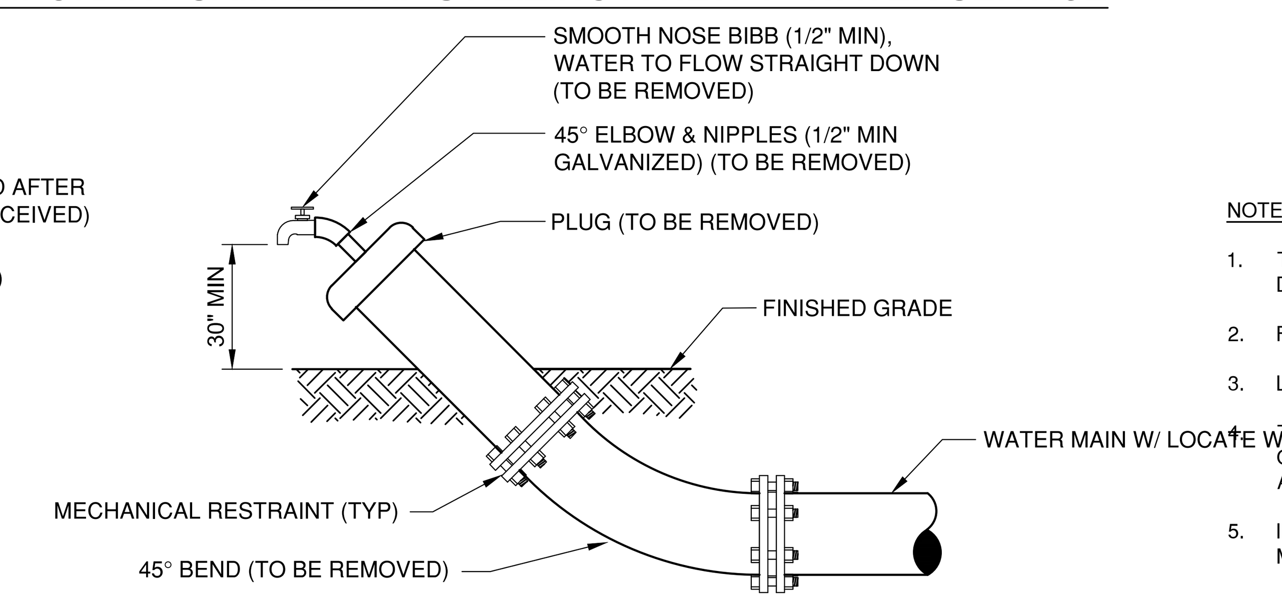
NTS

SEPTEMBER 2011
(MODIFIED FOR PROJECT - JANUARY 2020)
PLATE W-28B





TEMPORARY SAMPLE TAP UTILIZING A NEW 1" WATER SERVICE



TEMPORARY SAMPLE TAP UTILIZING PLUG AT FLUSHING LOCATION

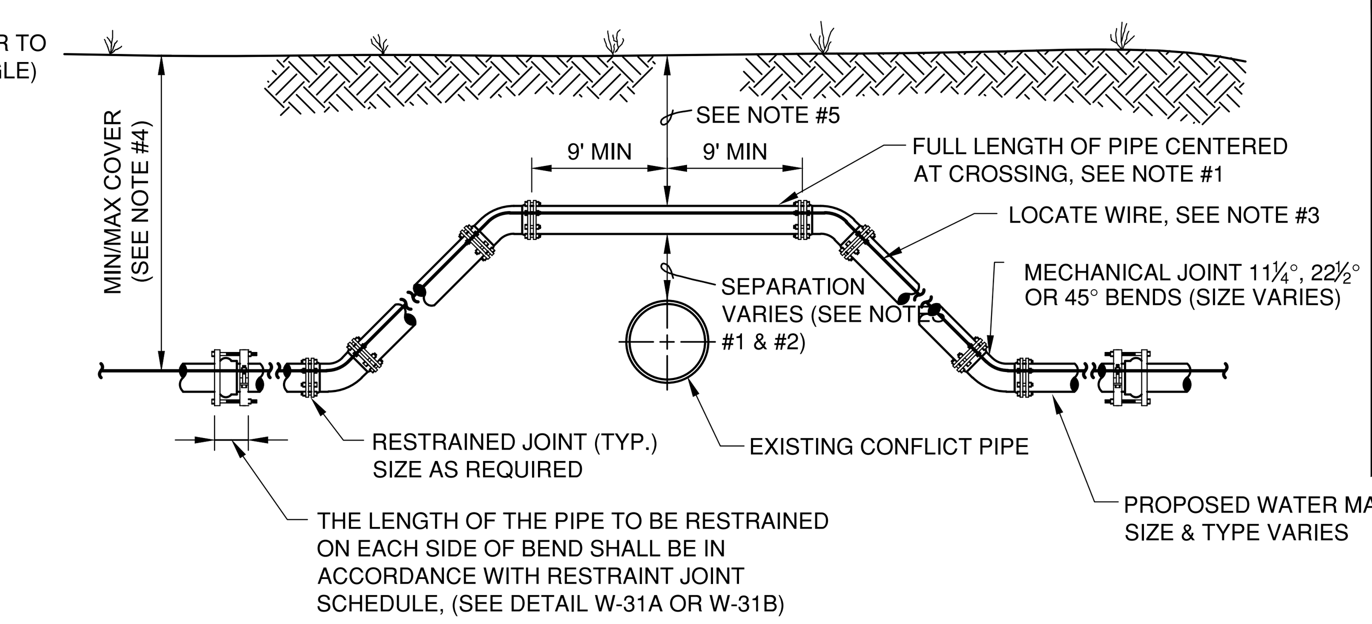
NOTES::

1. LOCATION OF SAMPLE POINT BIBB SHALL NOT BE WITHIN THE ROADWAY BUT ROUTED TO THE ROAD SHOULDERS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY PIPING & FITTINGS (AS NOTED) AFTER BACTERIOLOGICAL CLEARANCE IS RECEIVED.
3. THE CONTRACTOR SHALL UTILIZE THE ABOVE ALTERNATIVE METHODS FOR CONSTRUCTION OF TEMPORARY SAMPLE POINTS IN ALL AREAS, WHERE POSSIBLE.
4. 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.

B - TEMPORARY SAMPLE TAP ALTERNATIVE METHODS

NTS

JANUARY 2020
PLATES W-24, W-24A, W-25



CASE "A" CROSSING

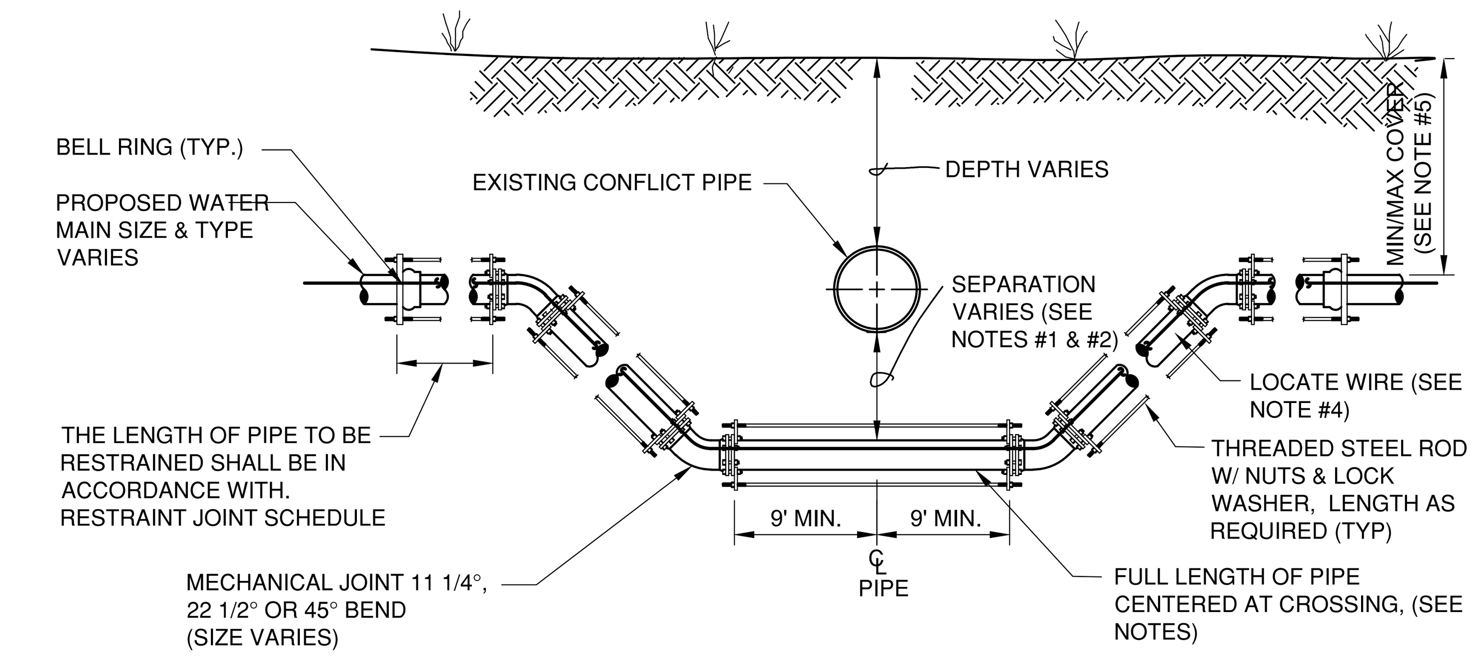
NOTES:

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).

C - ADJUSTMENT OVER EXISTING UTILITIES MECHANICAL RESTRAINTS

NTS

JANUARY 2020
PLATE W-32



CASE "B" CROSSING

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 CROSSINGS.
2. FOR OTHER LOCATION LIMITATIONS SEE PLATE W-10 & W-11.
3. NUMBER OF TIE RODS REQUIRED IS AS FOLLOWS:

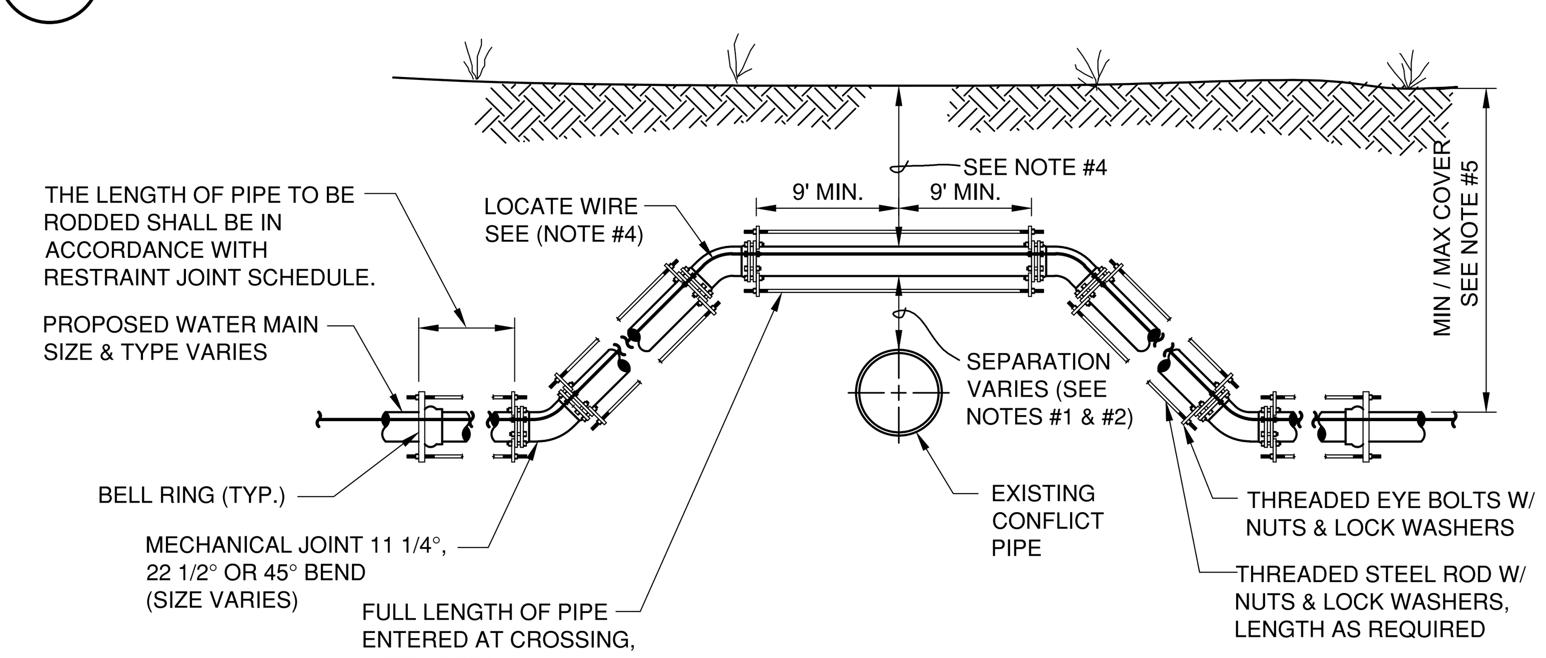
3" - 8"	DIAMETER MAIN - 2 TIE RODS REQUIRED PER JOINT (3/4" ROD)
10" - 12"	DIAMETER MAIN - 4 TIE RODS REQUIRED PER JOINT (3/4" ROD)
14" - 16"	DIAMETER MAIN - 6 TIE RODS REQUIRED PER JOINT (3/4" ROD)
18" - 20"	DIAMETER MAIN - 8 TIE RODS REQUIRED PER JOINT (3/4" ROD)
24"	DIAMETER MAIN -12 TIE RODS REQUIRED 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)

4. LOCATING WIRE REQUIRED: SEE PLATE W-44.
5. 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 APPROVE BY JEA.
6. 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.

F - ADJUSTMENT UNDER EXISTING UTILITIES TIE RODS

NTS

JANUARY 2020
PLATE W-35



CASE "A" CROSSING

NOTES:

1. IF EXISTING CONFLICT PIPE IS A WATER MAIN12-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 PLATES W-10 & W-11.
3. 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)
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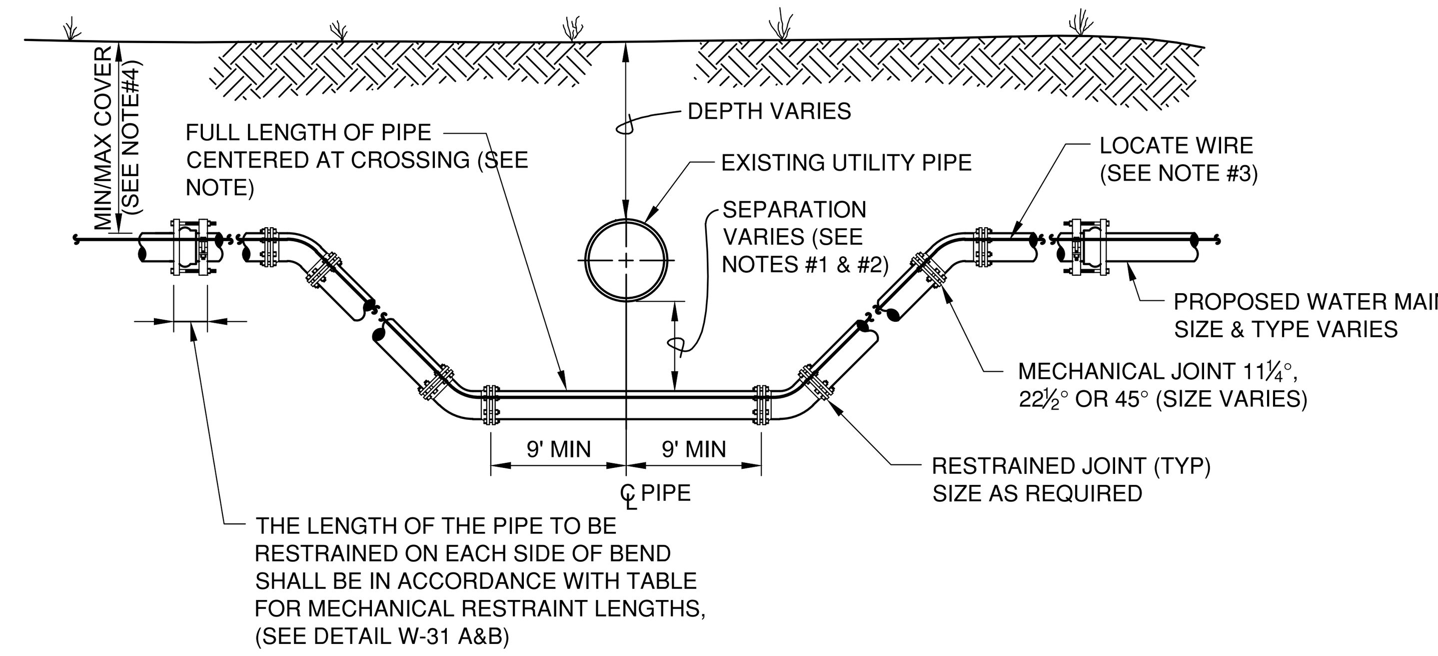
30" - 36"	DIAMETER MAIN -14 TIE RODS REQUIRED PER JOINT (1" ROD)
42" - 48"	DIAMETER MAIN -16 TIE RODS REQUIRED PER JOINT (1 1/4" ROD)
54"	DIAMETER MAIN -18 TIE RODS REQUIRED PER JOINT (1 1/4" ROD)

4. LOCATING WIRE REQUIRED: SEE PLATE W-44.
5. 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 APPROVE BY JEA.
6. 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.

D - ADJUSTMENT OVER EXISTING UTILITIES TIE RODS

NTS

JANUARY 2020
PLATE W-33



CASE "B" CROSSING

NOTES:

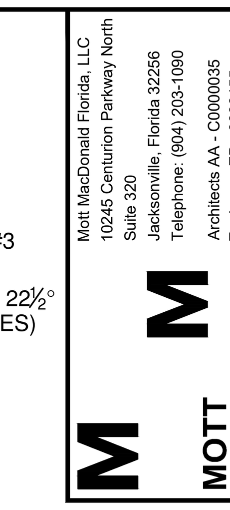
1. THE SOILS BETWEEN THE NEW MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST, ASTM D 1557
2. FOR MINIMUM VERTICAL SEPARATION REQUIREMENTS SEE DETAILS (W-10 AND W-11)
3. LOCATING WIRE REQUIRED: SEE DETAIL W-44.
4. THE COVER 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.

E - ADJUSTMENT UNDER EXISTING UTILITIES MECHANICAL RESTRAINTS

NTS

JANUARY 2020
PLATE W-34

100% SUBMITTAL



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Architects AA - C000035
Engineers EB - 0000155
Surveyors LB - 0006783

REVISIONS

NO.	BY	DATE
6		
5		
4		
3		
2		
1		

DESIGN ENGINEER: BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER: B. NEU
DRAWN BY: F. NGUYEN
DATE: JULY 2020
CHECKED BY: P. MOURT
DATE: JULY 2020

5TH STREET WEST 20" FORCE MAIN EXTENSION

STANDARD CIVIL DETAILS

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: AS NOTED

NO. SHEETS 88
SHEET NO. 47
DRAWING NO. CD-12

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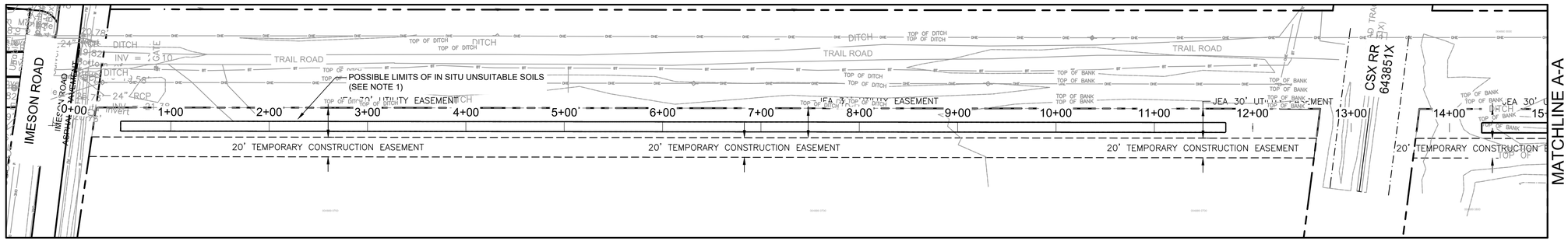

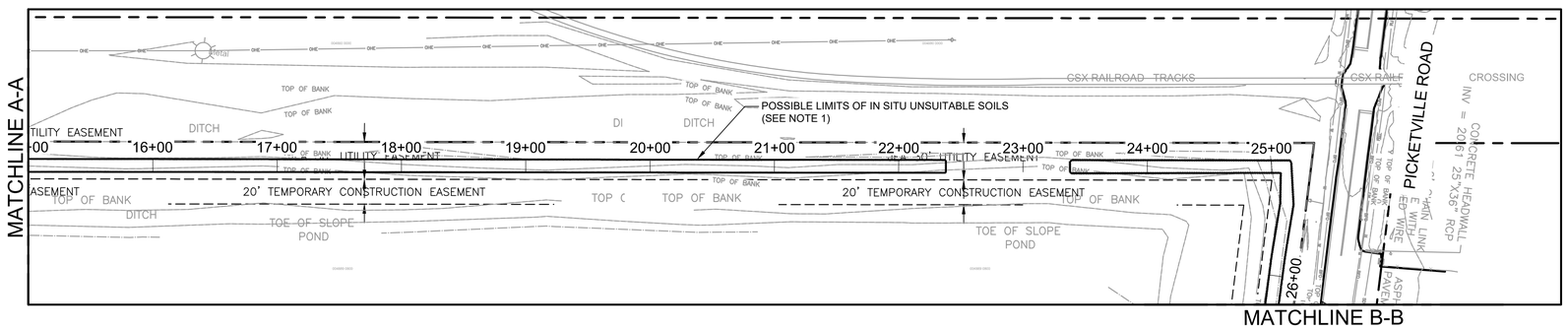

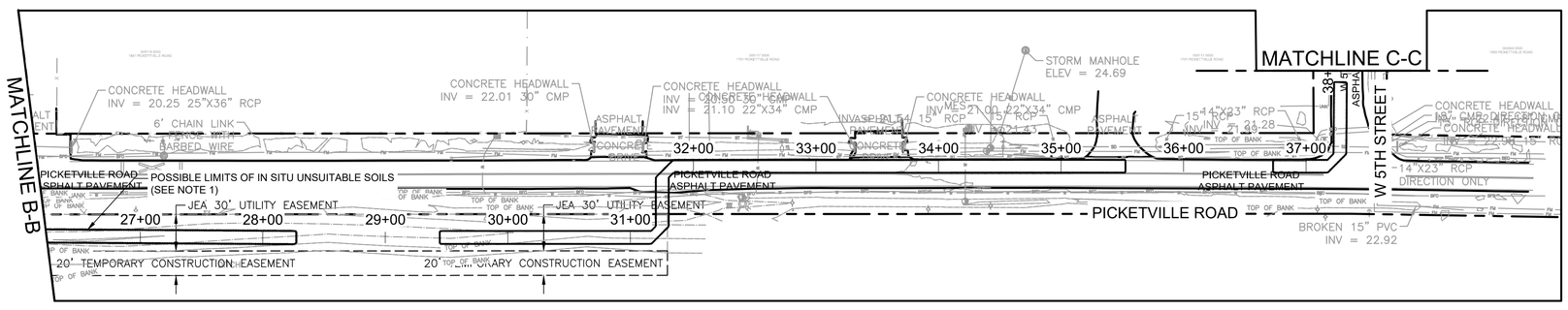

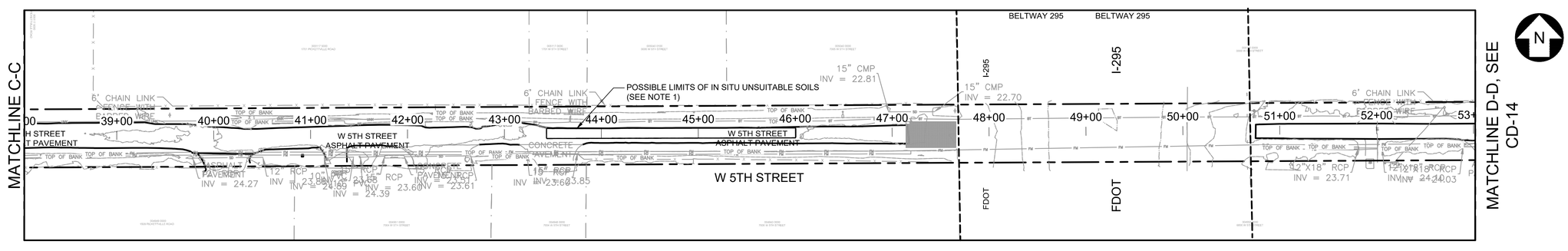

NOTES:

1) POSSIBLE LIMITS OF IN SITU UNSUITABLE SOILS FOR BEDDING AND/OR BACKFILL OF PROPOSED FORCE MAIN AT THE THICKNESS AND DEPTH BELOW GRADE SHOWN ON THE SOIL BORING LOGS IN MAE GEOTECHNICAL EXPLORATION REPORT (MAY 8, 2020 - MAE PROJ. NO. 0103-0018). THE CONTRACTOR SHALL REMOVE AND REPLACE UNSUITABLE SOILS.

HORZ SCALE: 1" = 60 FT. (22x34)
1" = 120 FT. (11x17)

100% SUBMITTAL

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Engineers EB : 0000026
Surveyors LB : 0000783
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
6.			
5.			
4.			
3.			
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DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

UNSUITABLE SOIL LIMITS

PROJ. NO.	502402368
DATE:	JULY 2020
SCALE:	AS NOTED
NO. SHEETS	88
SHEET NO.	3
DRAWING NO.	CD-13

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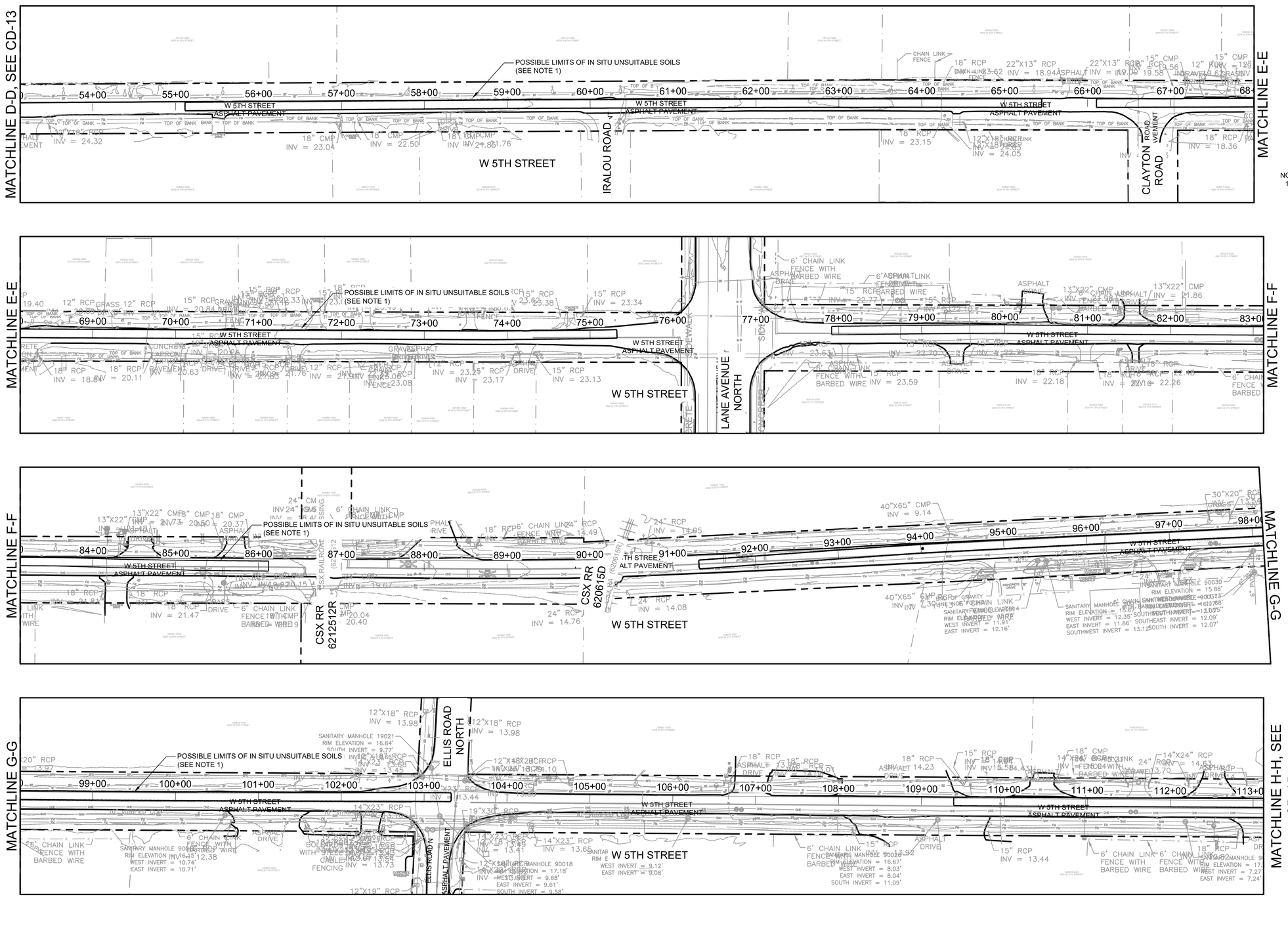

NOTES:

1) POSSIBLE LIMITS OF IN SITU UNSUITABLE SOILS FOR BEDDING AND/OR BACKFILL OF PROPOSED FORCE MAIN AT THE THICKNESS AND DEPTH BELOW GRADE SHOWN ON THE SOIL BORING LOGS IN MAE GEOTECHNICAL EXPLORATION REPORT (MAY 8, 2020 - MAE PROJ. NO. 0103-0018). THE CONTRACTOR SHALL REMOVE AND REPLACE UNSUITABLE SOILS.

HORZ SCALE: 1" = 60 FT. (22x34)
1" = 120 FT. (11x17)

60 0 30 60 120
120 0 60 120 240

100% SUBMITTAL

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Engineers EB : 0000505
Surveyors LB : 0000783
MOTT MACDONALD

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

DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO.
51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

UNSUITABLE SOIL LIMITS

PROJ. NO.	502402368
DATE:	JULY 2020
SCALE:	AS NOTED
NO. SHEETS	88
SHEET NO.	4
DRAWING NO.	CD-14

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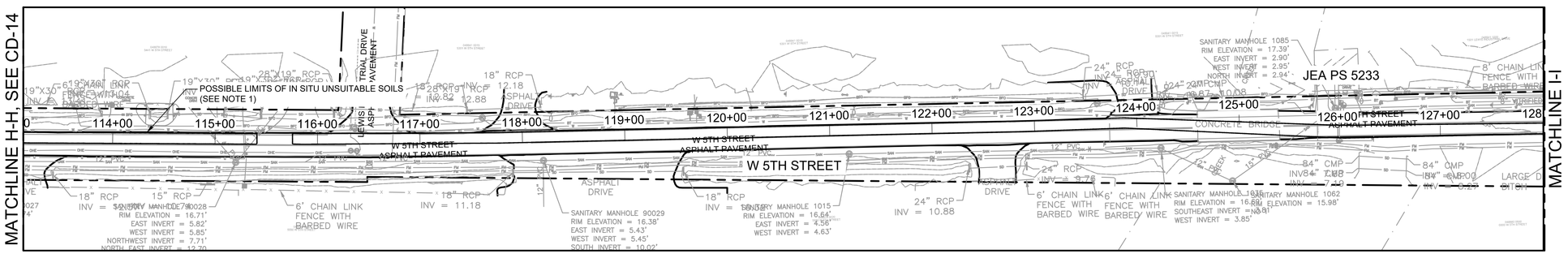

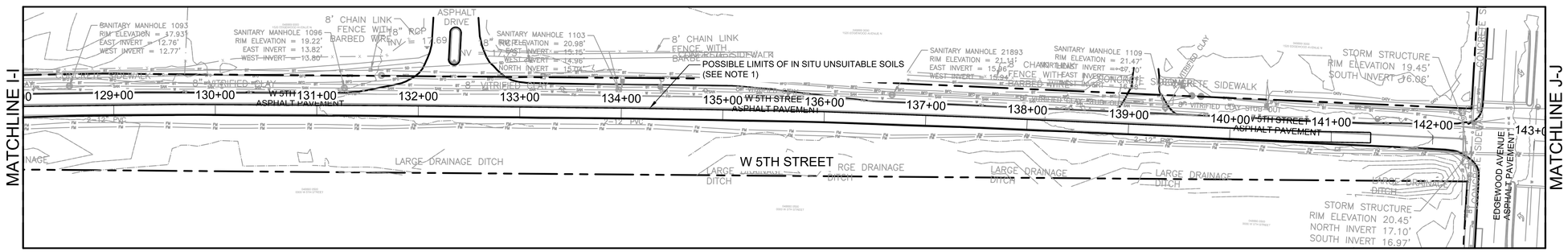

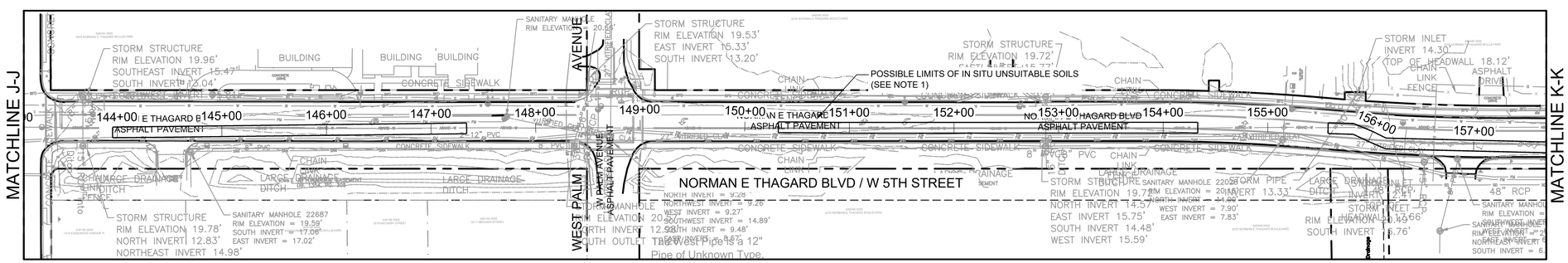

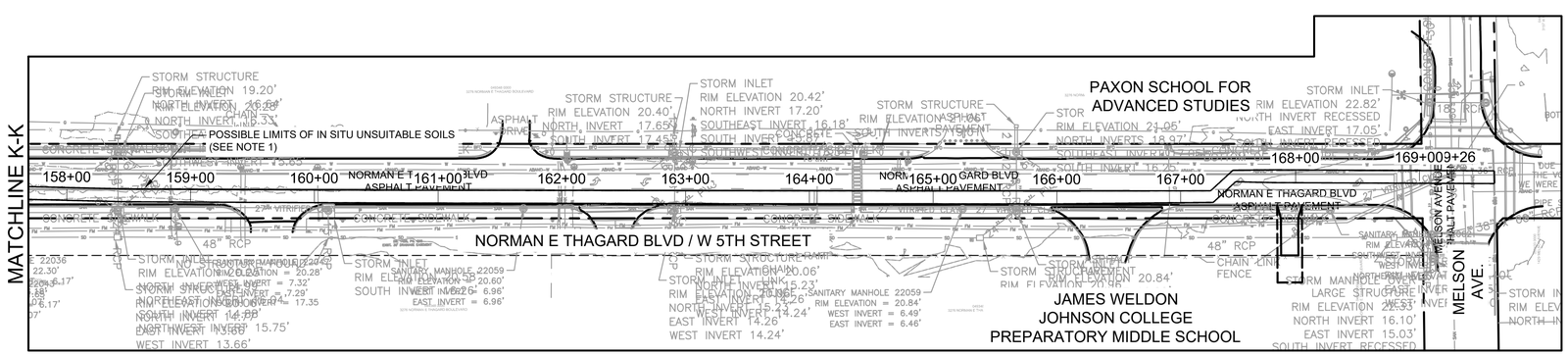

NOTES:

1) POSSIBLE LIMITS OF IN SITU UNSUITABLE SOILS FOR BEDDING AND/OR BACKFILL OF PROPOSED FORCE MAIN AT THE THICKNESS AND DEPTH BELOW GRADE SHOWN ON THE SOIL BORING LOGS IN MAE GEOTECHNICAL EXPLORATION REPORT (MAY 8, 2020 - MAE PROJ. NO. 0103-0018). THE CONTRACTOR SHALL REMOVE AND REPLACE UNSUITABLE SOILS.

HORZ SCALE: 1" = 60 FT. (22x34)
1" = 120 FT. (11x17)

60 0 30 60 120
120 0 60 120 240

100% SUBMITTAL

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

DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

UNSUITABLE SOIL LIMITS

PROJ. NO.	502402368
DATE:	JULY 2020
SCALE:	AS NOTED

NO. SHEETS	88
SHEET NO.	5
DRAWING NO.	CD-15

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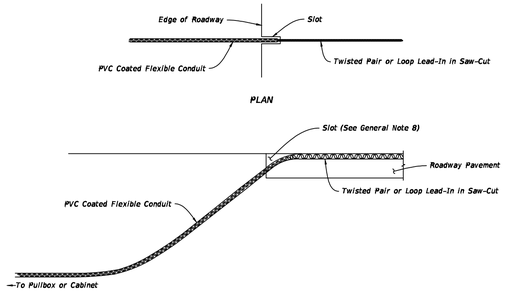
x-survey [C:\pwworking\hmm\water_wastewater\mottmac_ngu85083\d0426960\x-survey.dwg]

GENERAL NOTES:

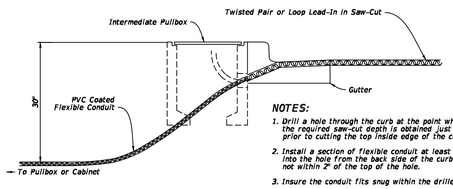
1. If the loop lead-in is 75' or less from the edge of the loop detector to controller cabinet, continue the twisted pair to the cabinet. If the loop lead-in is greater than 75' continue the twisted pair an intermediate Pullbox, splice to shielded lead-in wire and continue to the controller cabinet.
2. Provide sufficient saw-cut width to allow unforced placement of loop wires or lead-in cables into the saw-cut. Except across expansion joints, saw-cut to a standard depth of 3", but no more than 4" below the top of the final surface.
3. On resurfacing or new roadway construction projects, install the loop wires and lead-in cables in the asphalt structural course prior to the placement of the asphalt friction course. Place the loop wires and lead-in cables in a saw cut in the structural course.
4. Use nonmetallic hold down material to secure loop wires and lead-ins to the bottom of saw-cuts. Place the hold down material approximately 12" intervals around loops and 24" intervals on lead-ins.
5. The minimum distance between the twisted pairs of loop lead-in wire is 6" from the loop to 12" from the pavement edge or curb.
6. Splice Connections in pull boxes with UL listed, watertight, insulated enclosures. Place one enclosure over the end of each conductor and place a third enclosure over the exposed end of the shielded cable. As an alternate, a larger diameter enclosure that will accommodate both the splices of the conductors and the exposed end of the shielded cable may be used.
7. Do not disturb more than a 6" x 6' area of asphalt. Restore asphalt as directed by the Engineer.
8. Alternative installations may be approved by the State Traffic Operations Engineer.



NOTES:

1. Cut a slot in the edge of the roadway of sufficient size and depth to snugly place the end of the flexible conduit.
2. Install the conduit at least 6" into the roadway pavement and approximately 2" below the top of the roadway surface.
3. The departure angle of the conduit from the roadway is between 30° to 45°.

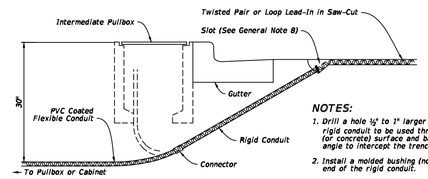
INSTALLATION WITHOUT CURB & GUTTER



NOTES:

1. Drill a hole through the curb at the point which the required saw-cut depth is obtained just prior to cutting the top inside edge of the curb.
2. Install a section of flexible conduit at least 6" into the hole from the back side of the curb but not within 2" of the top of the hole.
3. Insure the conduit fits snug within the drilled hole.
4. Fill the top of the hole with loop sealant to the level of the curb surface.
5. Use a nonmetallic material to prevent excessive loop sealant from entering the flexible conduit.

ALTERNATIVE 1



NOTES:

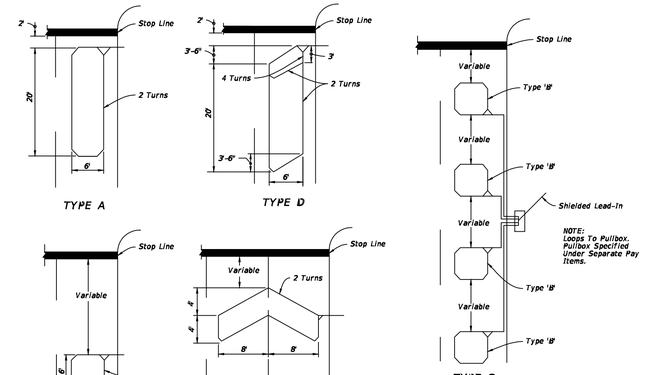
1. Drill a hole ½" to 1" larger in diameter than the rigid conduit to be used through the roadway asphalt (or concrete) surface and base at an appropriate angle to intercept the trench or pull box hole.
2. Install a molded bushing (nonmetallic) on the roadway end of the rigid conduit.
3. Place the top of the rigid conduit approximately 2" below the roadway surface.
4. Fill the hole with loop sealant to the level of the roadway surface.
5. Use a nonmetallic material to prevent excessive loop sealant from entering the rigid conduit.

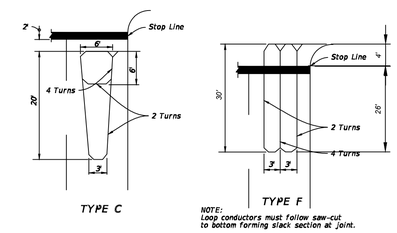
ALTERNATIVE 2

INSTALLATION WITH CURB & GUTTER

TWISTED PAIR AND LOOP LEAD-IN INSTALLATION

LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
11/01/18			FY 2020-21 STANDARD PLANS	VEHICLE LOOP INSTALLATION DETAILS	660-001	1 of 2

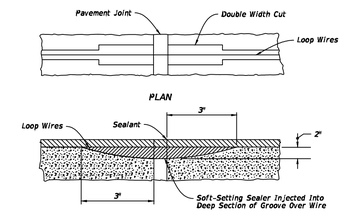




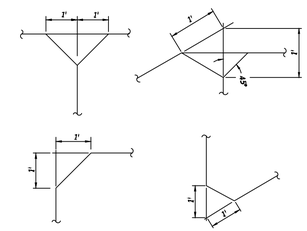
NOTES:

1. The number of "Turns" indicated at the specified point on the loop refers to the number of passes of loop wires which are placed in the saw-cut forming the complete loop.
2. Loop types or details not drawn to scale.
3. Loop Types are centered in a single lane except Type E which is centered on two lanes.
4. The number of individual loops in the Type G loop may vary up to a maximum of four (4).
5. Lead-in may be connected to either end of loop.
6. When shown in the Plans, the leading edge of loop Types A, C, D, G & F may extend past the stop line a maximum of 10' and the length of these loops may be extended to a maximum of 60'.
7. Do not install loop lead-in wires in the same pull box with signal power cable.

LOOP TYPES



CONCRETE PAVEMENT EXPANSION JOINTS



LOOP CORNER AND LEAD-IN DETAILS

LOOP TYPES, EXPANSION JOINTS, AND DETAILS

LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
11/01/18			FY 2020-21 STANDARD PLANS	VEHICLE LOOP INSTALLATION DETAILS	660-001	2 of 2

A - FDOT TYPE F VEHICLE LOOP DETAIL
NTS

100% SUBMITTAL

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10245 Centurion Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 283-1090
Architect AA: C000055
Engineers EB: 0000155
Surveyors LB: 0000763
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
6.			
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4.			
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1.	MM	08/2020	CO/ 10-SET REVISION COMMENTS

DESIGN ENGINEER: BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

STANDARD FDOT TRAFFIC LOOP DETAILS

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: HORIZ: 1" = 20' VERT: 1" = 5'

NO. SHEETS 88
SHEET NO. 51
DRAWING NO. CD-16

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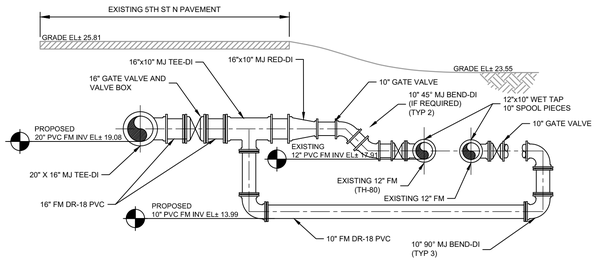
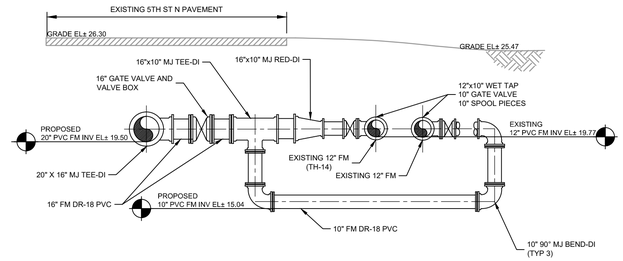
Xrefs Attached= JEA_SHT22x34_BGR [C:\pwworking\hmm\water_wastewater\mottmac_ngu85083\d0426985\JEA_SHT22x34_BGR.dwg]



SECTION VIEW C-10 - WEST OF I-295 (NTS)



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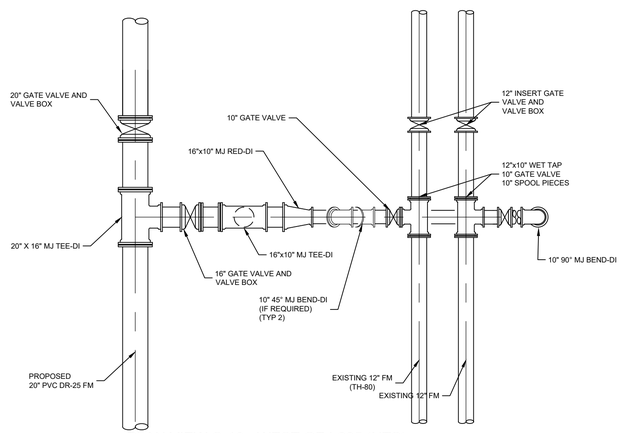
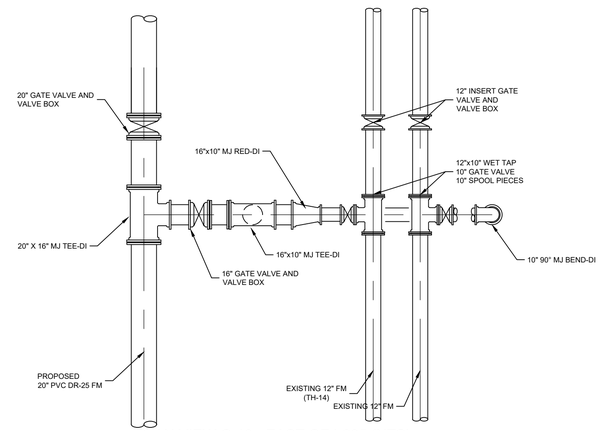
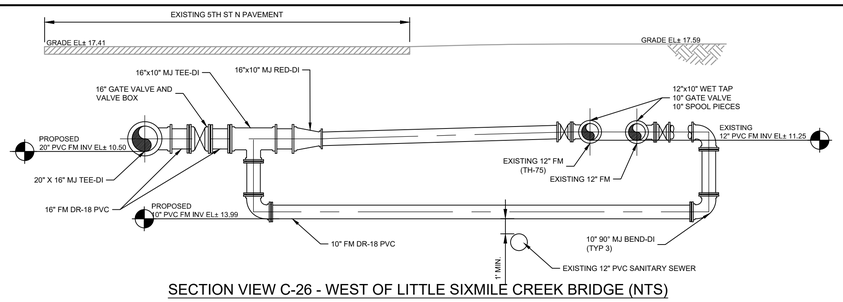


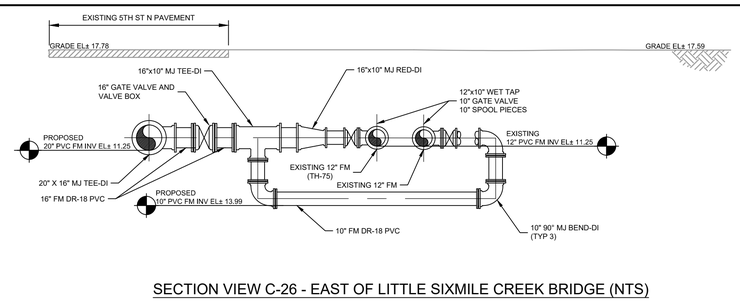
PLAN VIEW C-10 - WEST OF I-295 (NTS)



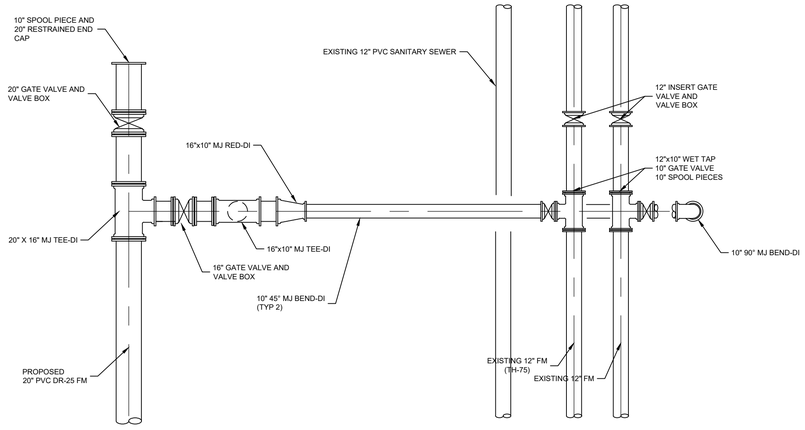
PLAN VIEW C-10 - EAST OF I-295 (NTS)



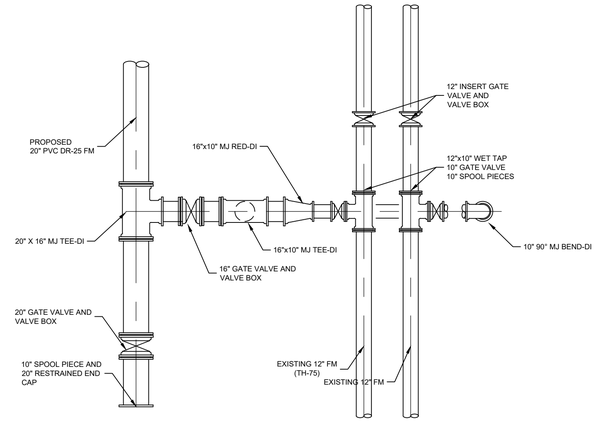
SECTION VIEW C-26 - WEST OF LITTLE SIXMILE CREEK BRIDGE (NTS)



SECTION VIEW C-26 - EAST OF LITTLE SIXMILE CREEK BRIDGE (NTS)



PLAN VIEW C-26 - WEST OF LITTLE SIXMILE CREEK BRIDGE (NTS)



PLAN VIEW C-26 - EAST OF LITTLE SIXMILE CREEK BRIDGE (NTS)

NOTE:

1) THE CONTRACTOR SHALL FIELD VERIFY LOCATION, DEPTH, AND MATERIAL OF EXISTING DUAL 12" FORCE MAINS TO CONFIRM PIPING ARRANGEMENT BEFORE BEGINNING BYPASS CONSTRUCTION WORK IN THE AREA.
2) THE CONTRACTOR SHALL FULLY SUPPORT TAPPING VALVES. THE CONTRACTOR SHALL COMPACT THE EXCAVATED AREA UNDER THE TAPPING VALVES DURING BACKFILLING.

100% SUBMITTAL

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Telephone: (904) 283-1090
Architect AA : C000055
Engineers EB : 0000155
Surveyors LB : 0000763
MOTT MACDONALD

NO.	BY	DATE	REVISIONS
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1.			

DESIGN ENGINEER
BRUCE A. NEU
FLORIDA REGISTRATION NO. 51672

DESIGNER:	B. NEU
DRAWN BY:	F. NGUYEN
DATE:	JULY 2020
CHECKED BY:	P. MOURT
DATE:	JULY 2020

JEA Building Community

5TH STREET WEST 20" FORCE MAIN EXTENSION

EXISTING DUAL 12" FM CONNECTION

PROJ. NO.	502402368
DATE:	JULY 2020
SCALE:	HORIZ: 1" = 20' VERT: 1" = 5'

NO. SHEETS	88
SHEET NO.	58
DRAWING NO.	CD-17

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18-0276.003 W 5th Street VWHs [C:\pwworking\hmm\water_wastewater\mottmac_ngu85083\d0426960\18-0276.003 W 5th Street VWHs.dwg]

TEMPORARY TRAFFIC CONTROL GENERAL NOTES

1. ALL TTC SHALL BE IN CONFORMANCE WITH MUTCD STANDARDS.
2. CONTRACTOR SHALL NOTIFY THE CITY OF JACKSONVILLE TRAFFIC ENGINEERING DIVISION, RONALD THIGPEN (904-255-8704) OR THE MAIN OFFICE (904-255-7533) A MINIMUM OF 5 WORKING DAYS PRIOR TO IMPLEMENTATION OF THE TTC.
3. THE CONTRACTOR SHALL PROVIDE THE 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 TTC PRIOR TO THE BEGINNING OF CONSTRUCTION.
4. ANY EXISTING PAVEMENT MARKINGS WHICH ARE REMOVED FOR TTC 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 TTC 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 STANDARD DRAWING INDEX 102-600 (FY 20-21).
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 THE CITY OF JACKSONVILLE TRAFFIC ENGINEERING DIVISION OR THE JEA, WITHOUT DELAY.
10. TEMPORARY PAVEMENT, IF REQUIRED, SHALL CONSIST OF 1" OF TYPE S-III OR S-1 ASPHALT ON 6" OF LIMEROCK.
11. DUST CONTROL MEASURES SHALL BE IMPLEMENTED ON ALL UNPAVED SURFACES UNTIL PAVED OR GROUND COVER IS ESTABLISHED.
12. THE CONTRACTOR SHALL RETURN THE GROUND TO ITS ORIGINAL CONDITION AND ELEVATION WHEN REMOVING ANY TEMPORARY PAVEMENT.
13. THE CONTRACTOR SHALL, AS REQUIRED, PROVIDE TEMPORARY DRAINAGE DURING CONSTRUCTION, AS NEEDED.
14. SINCE WORK IN SOME AREAS (i.e. WORK ZONES 7, 7A AND 24) INVOLVES PERIODS WHERE THE ACCESS IS COMPLETELY BLOCKED FOR RESIDENTIAL TRAFFIC, THE CONTRACTOR SHALL MAINTAIN A METHOD FOR:
   a. PROVIDING CONVENIENT TRANSPORTATION FOR CITIZENS TO ACCESS THEIR HOMES (GOLF CART OR GATOR FOR TRANSPORTING RESIDENTS).
   b. CLOSING THE OPEN TRENCH TO PROVIDE TO PROVIDE EMERGENCY VEHICLES ACCESS TO THE RESIDENT'S HOMES (STEEL PLATES TO SPAN THE TRENCH OPENING QUICKLY).
15. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR THE PROJECT. I-295 AND EDGEWOOD AVENUE ARE FDOT RIGHTS-OF-WAY AND REQUIRES FDOT PERMITTING.

SPECIAL FLAGGER CONTROL NOTES

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.

TEMPORARY TRAFFIC CONTROL HURRICANE NOTE

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

PEDESTRIAN ACCESS REQUIREMENTS

1. THE CITY OF JACKSONVILLE PROHIBITS MID-BLOCK CROSSING OF PEDESTRIANS. WHEN AN ALTERNATIVE ROUTE IS NOT FEASIBLE, CONTRACTOR SHALL PROVIDE AN ADA COMPLIANT PEDESTRIAN PATHWAY THROUGH THE WORK ZONE WHEN SIDEWALK IS CLOSED.
2. COSTS FOR PEDESTRIAN ACCESS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR TEMPORARY TRAFFIC CONTROL.
3. IF SIDEWALKS ARE DISTURBED AND HAVE TO BE REPLACED, ADA COMPLIANT RAMPS WITH DETECTABLE WARNINGS ARE TO BE INSTALLED IN ACCORDANCE WITH FDOT STANDARD PLANS.

CITY OF JACKSONVILLE TEMPORARY TRAFFIC CONTROL STANDARD NOTES

1. ACCESS FOR LOCAL TRAFFIC WITH DESTINATIONS WITHIN THE WORK AREA SHALL BE MAINTAINED TO THE EXTENT SAFETY WILL PERMIT.
2. ACCESS TO INTERSECTING SIDE STREETS SHALL BE MAINTAINED AT ALL TIMES UNLESS OTHERWISE NOTED WITHIN THESE TTC PLANS.
3. IT IS ANTICIPATED THAT ALL EXISTING SIDEWALKS WILL REMAIN OPEN AND ACCESSIBLE DURING CONSTRUCTION.
4. ANY MODIFICATIONS TO THESE TEMPORARY TRAFFIC CONTROL PLANS SHALL BE SUBMITTED TO THE CITY OF JACKSONVILLE TRAFFIC ENGINEERING DIVISION FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.
5. THE CONTRACTOR HAS THE OPTION TO SUBMIT ALTERNATIVE TRAFFIC CONTROL PLANS FOR APPROVAL BY THE THE CITY OF JACKSONVILLE TRAFFIC ENGINEERING DIVISION. 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 TTC DESIGN PRACTICES. NO CONSTRUCTION ACTIVITY WILL BE ALLOWED UNTIL THE CONTRACTOR'S TTC PLANS ARE APPROVED IN WRITING.
6. THE ROADWAY SHALL BE RESTORED TO AT LEAST COJ CASE X, TEMPORARY REPAIR BEFORE IT IS REOPENED TO TRAFFIC AND BEFORE THE CONTRACTOR MOVES TO THE NEXT CONSTRUCTION ZONE.
7. CONTRACTOR IS ALLOWED TO USE UP TO A MAXIMUM OF 500 LINEAR FEET OF STEEL PLATE IN LIEU OF HOT MIX ASPHALT TEMPORARY PAVEMENT REPAIR. CONTRACTOR TO REMOVE ALL STEEL PLATE AND RESTORE EXCAVATION AREA SUBJECT TO VEHICULAR TRAFFIC WITH HOT MIX ASPHALT AT LEAST WEEKLY. CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN OF STEEL PLATE THICKNESS DEPENDING ON THE WIDTH OF THE TRENCH.
8. NO LANE CLOSURES ARE ALLOWED FROM 7:00 A.M. TO 9:00 A.M. AND 4:00 P.M. TO 7:00 P.M. MONDAY THROUGH FRIDAY.
9. THE CONTRACTOR SHALL COORDINATE TRAFFIC SIGNAL OPERATION WITHIN THE TRAFFIC ENGINEERING DIVISION.
10. TRAFFIC SIGNAL LOOPS SHALL BE RESTORED TO PROPER OPERATION WITHIN 36 HOURS OF BEING DESTROYED OR DAMAGED. CONTACT MIKE CAMACHO AT (904-255-7533) A MINIMUM OF 48 HOURS PRIOR TO CUTTING ANY VEHICLE LOOPS.
11. TRAFFIC SIGNAL ACTUATION SHALL BE MAINTAINED AT ALL TIMES, UNLESS OTHERWISE APPROVED BY THE TRAFFIC ENGINEERING DIVISION. INFRARED-DETECTION MAY BE USED IF REQUIRED.
12. THE CONTRACTOR SHALL COORDINATE TEMPORARY AND PERMANENT PAVEMENT MARKING REPLACEMENT WITH COJ TRAFFIC ENGINEERING DIVISION.
13. ALL ROAD CLOSURES SHALL BE COORDINATED WITH COJ TRAFFIC ENGINEERING. A MINIMUM OF 7 DAYS OF NOTICE SHALL BE GIVEN FOR EACH CLOSURE.

TEMPORARY TRAFFIC CONTROL SIGNING NOTES

1. THE CONTRACTOR SHALL INSURE THAT PERMANENT SIGNS DO NOT CONFLICT WITH TTC 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 CITY STANDARD SPECIFICATIONS AT NO ADDITIONAL COST TO JEA.

TTC LEGEND

- WORK ZONE
- CHANNELIZING DEVICE
- TYPE III BARRICADE
- TEMPORARY TRAFFIC CONTROL SIGN
- PCMS — PORTABLE CHANGEABLE (VARIABLE) MESSAGE SIGN (PCMS)
- ADVANCE WARNING ARROW BOARD
- LANE IDENTIFICATION PLUS DIRECTION OF TRAFFIC
- WORK ZONE SIGN
- FLAGGER
- TRENCHLESS CONSTRUCTION PIT

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY Claro N. Magpantay, P.E. ON

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED. THE SIGNATURE MUST BE VERIFIED ON THE ELECTRONIC DOCUMENTS.

C&ES
CONSTRUCTION & ENGINEERING SERVICES CONSULTANTS, INC.
9432 BAYMEADOWS ROAD, SUITE 100
JACKSONVILLE, FL 32256
CERTIFICATE OF AUTHORIZATION #27598
E.O.R.: Claro N. Magpantay, P.E., No. 60164

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.: GS-1, TTC-1 TO TTC-28.

CLARO NACU MAGPANTAY LICENSE No. 60164 STATE OF FLORIDA PROFESSIONAL ENGINEER

100% SUBMITTAL

Construction & Engineering Services Consultants, Inc.
9432 Baymeadows Road, Suite 100
Jacksonville, FL 32256
Tel: (904) 652-1186
Business Number CA 27598

MOTT MACDONALD
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10245 Centurion Parkway North
Suite 200
Jacksonville, Florida 32256
Telephone: (904) 233-1090
Architects AA - C000035
Engineers EB - 0000155
Surveyors LB - 0000783

NO.	BY	DATE	REVISIONS
6.			
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DESIGN ENGINEER
CLARO NACU MAGPANTAY, P.E.
FLORIDA REGISTRATION NO.
60164

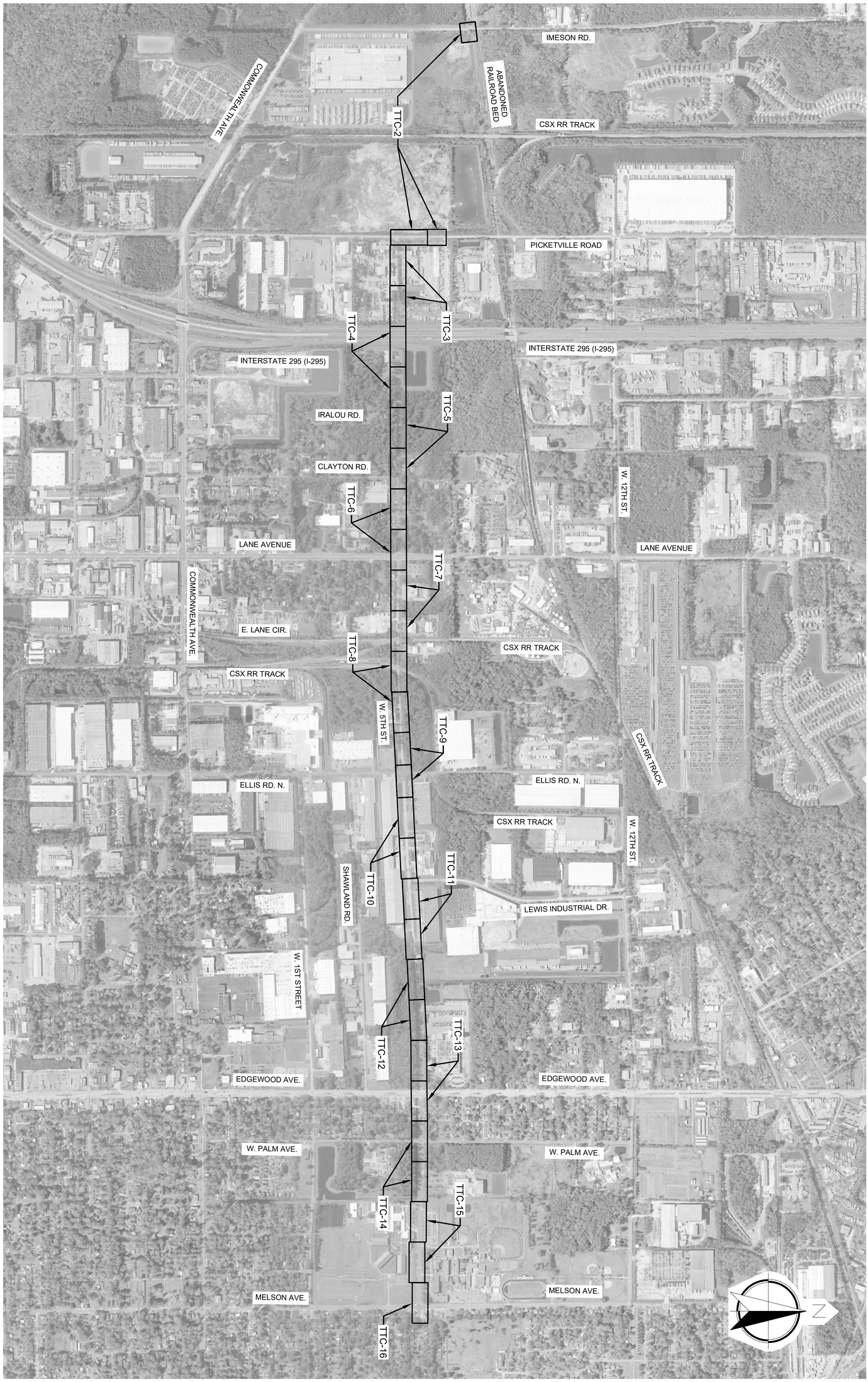
DESIGNER: C.N.M.
DRAWN BY: K.L.B.
DATE: JULY 2020
CHECKED BY: F.E.G.
DATE: JULY 2020

JEA Building Community

5TH STREET FORCE MAIN
TEMPORARY TRAFFIC CONTROL
NOTES AND LEGEND

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: NONE

NO. SHEETS 88
SHEET NO. 60
DRAWING NO. GS-1



100% SUBMITTAL

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Business Number CA 27598

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Architects AA - C00000035
Engineers EB - 00000155
Surveyors LB - 0006783

NO. SHEETS 88	PROJ. NO. 502402368	5TH STREET FORCE MAIN	DESIGNER: C.N.M.
SHEET NO. 61	DATE: JULY 2020	TEMPORARY TRAFFIC CONTROL	DRAWN BY: K.L.B.
DRAWING NO. TTC-1	SCALE: NTS	KEY MAP	DATE: JULY 2020
			CHECKED BY: F.E.G.
			DATE: JULY 2020

JEA Building Community sm

DESIGN ENGINEER
CLARO NACU MAGPANTAY, P.E.
FLORIDA REGISTRATION NO.
60164

NO.	BY	DATE	REVISIONS
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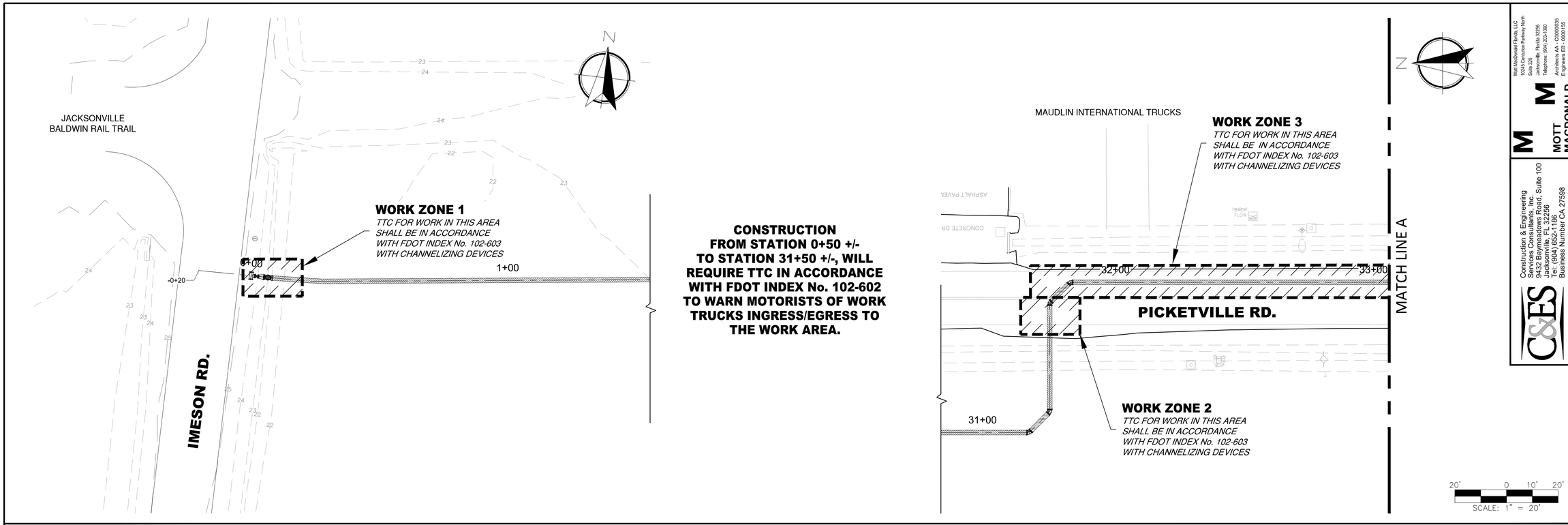

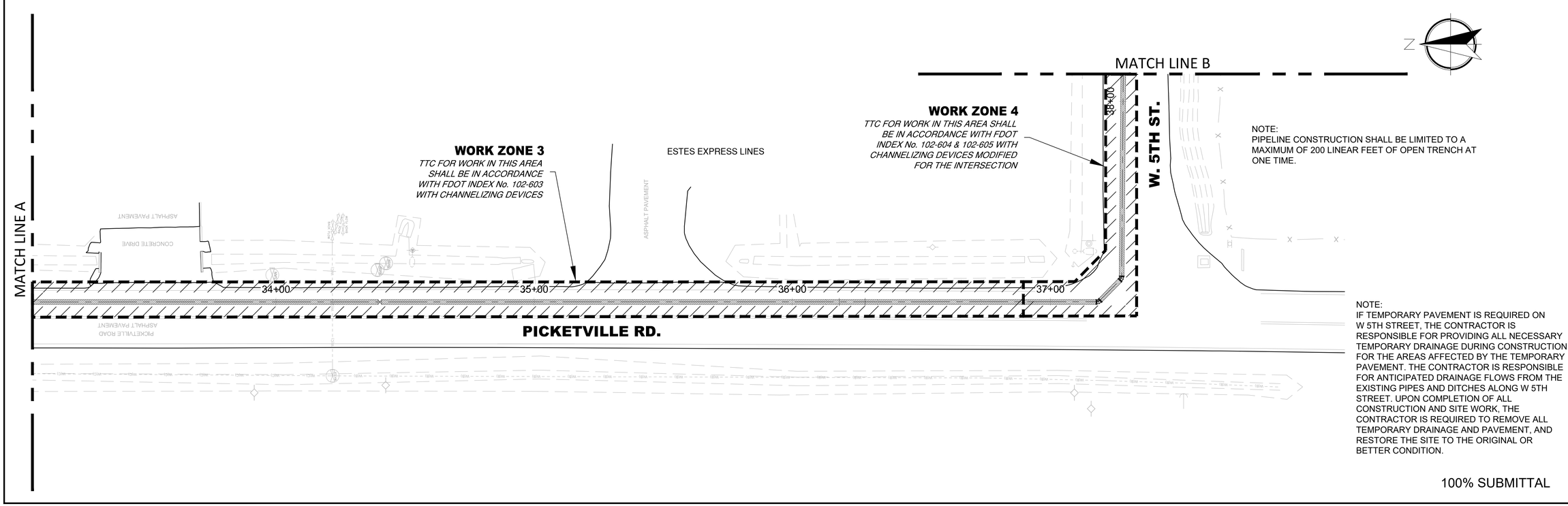

NOTE:
PIPELINE CONSTRUCTION SHALL BE LIMITED TO A MAXIMUM OF 200 LINEAR FEET OF OPEN TRENCH AT ONE TIME.

NOTE:
IF TEMPORARY PAVEMENT IS REQUIRED ON W 5TH STREET, THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY DRAINAGE DURING CONSTRUCTION FOR THE AREAS AFFECTED BY THE TEMPORARY PAVEMENT. THE CONTRACTOR IS RESPONSIBLE FOR ANTICIPATED DRAINAGE FLOWS FROM THE EXISTING PIPES AND DITCHES ALONG W 5TH STREET. UPON COMPLETION OF ALL CONSTRUCTION AND SITE WORK, THE CONTRACTOR IS REQUIRED TO REMOVE ALL TEMPORARY DRAINAGE AND PAVEMENT, AND RESTORE THE SITE TO THE ORIGINAL OR BETTER CONDITION.

100% SUBMITTAL

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Engineers EB - 0000155
Engineers LB - 0000152
MOTT MACDONALD

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Business Number CA 27598
C&ES

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DESIGN ENGINEER
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FLORIDA REGISTRATION NO.
60164

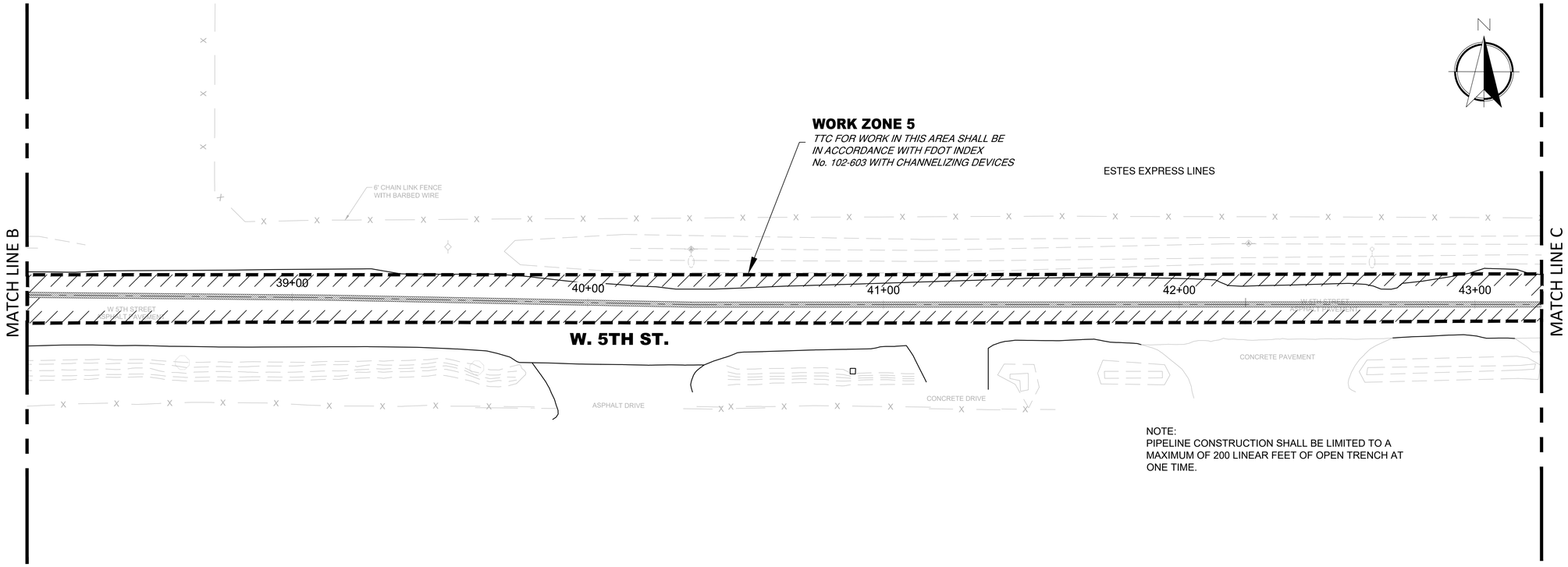
DESIGNER: C.N.M.
DRAWN BY: K.L.B.
DATE: JULY 2020
CHECKED BY: F.E.G.
DATE: JULY 2020

JEA Building Community

5TH STREET FORCE MAIN
TEMPORARY TRAFFIC CONTROL PLAN
WORK ZONE 1 TO 4

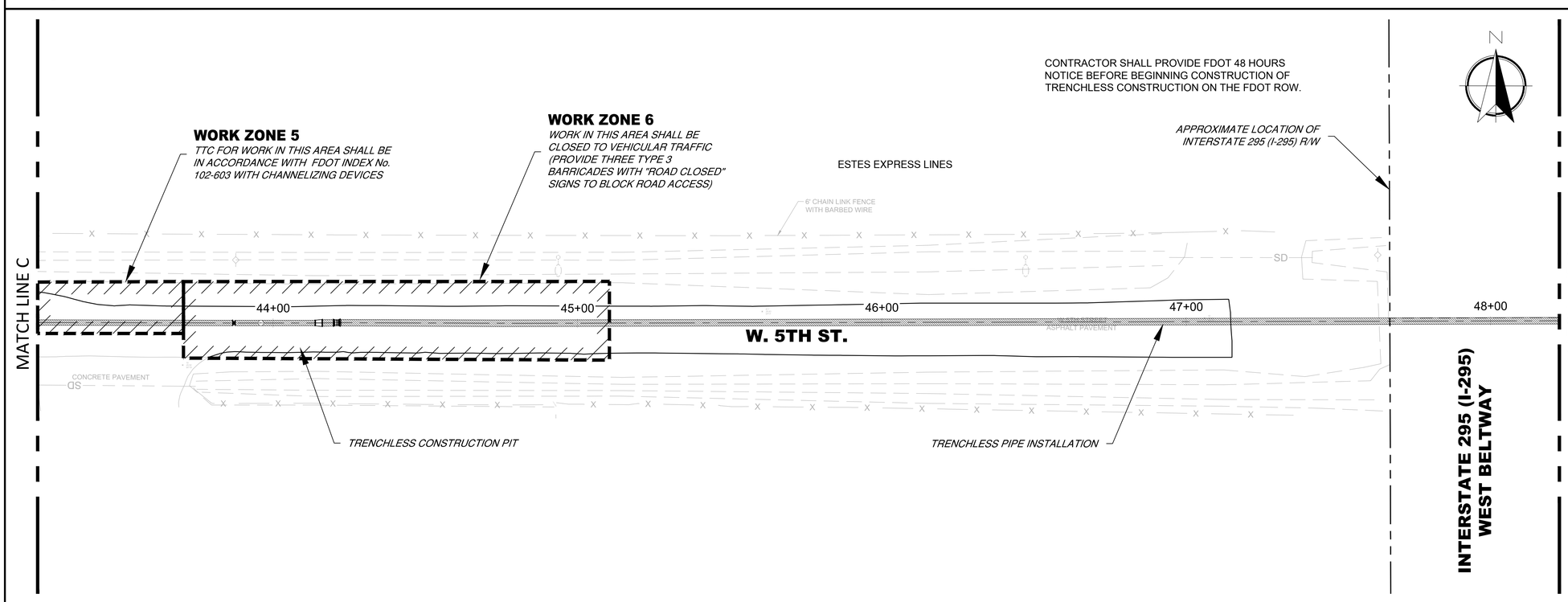
PROJ. NO. 502402368
DATE: JULY 2020
SCALE: 1" = 20'

NO. SHEETS 89
SHEET NO. 62
DRAWING NO. TTC-2



NOTE:
PIPELINE CONSTRUCTION SHALL BE LIMITED TO A MAXIMUM OF 200 LINEAR FEET OF OPEN TRENCH AT ONE TIME.

20' 0 10' 20'
SCALE: 1" = 20'



CONTRACTOR SHALL PROVIDE FDOT 48 HOURS NOTICE BEFORE BEGINNING CONSTRUCTION OF TRENCHLESS CONSTRUCTION ON THE FDOT ROW.

NOTES:
1. IF TEMPORARY PAVEMENT IS REQUIRED ON W 5TH STREET, THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY DRAINAGE DURING CONSTRUCTION FOR THE AREAS AFFECTED BY THE TEMPORARY PAVEMENT. THE CONTRACTOR IS RESPONSIBLE FOR ANTICIPATED DRAINAGE FLOWS FROM THE EXISTING PIPES AND DITCHES ALONG W 5TH STREET. UPON COMPLETION OF ALL CONSTRUCTION AND SITE WORK, THE CONTRACTOR IS REQUIRED TO REMOVE ALL TEMPORARY DRAINAGE AND PAVEMENT, AND RESTORE THE SITE TO THE ORIGINAL OR BETTER CONDITION.
2. DEAD END ROAD SHALL BE CLOSED FOR WORK IN ZONE 6 AT STA. 43+60.

100% SUBMITTAL

Mott MacDonald Florida, LLC
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Telephone: (904) 205-1090
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Surveyors LB - 0000152
MOTT MACDONALD

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Tel: (904) 652-1186
Business Number CA 27598
C&ES

NO.	BY	DATE	REVISIONS
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DESIGN ENGINEER
CLARO NACU MAGPANTAY, P.E.
FLORIDA REGISTRATION NO.
60164

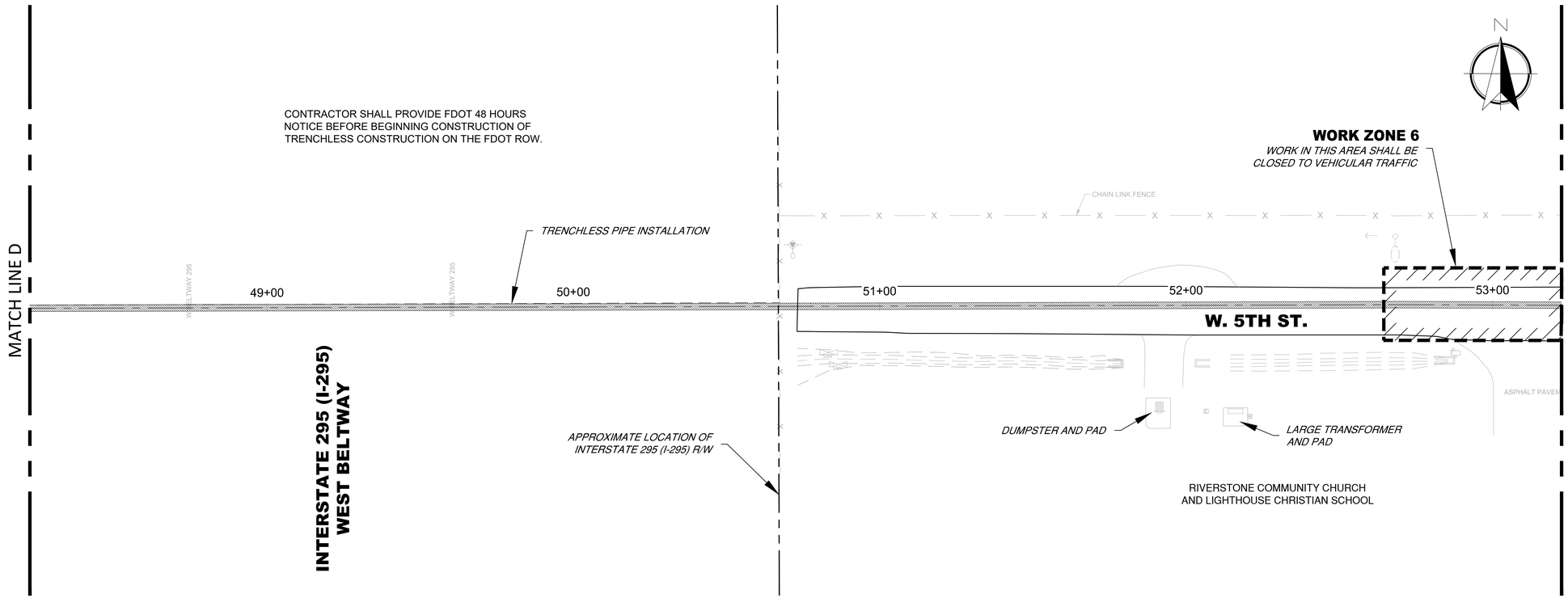
DESIGNER: C.N.M.
DRAWN BY: K.L.B.
DATE: JULY 2020
CHECKED BY: F.E.G.
DATE: JULY 2020

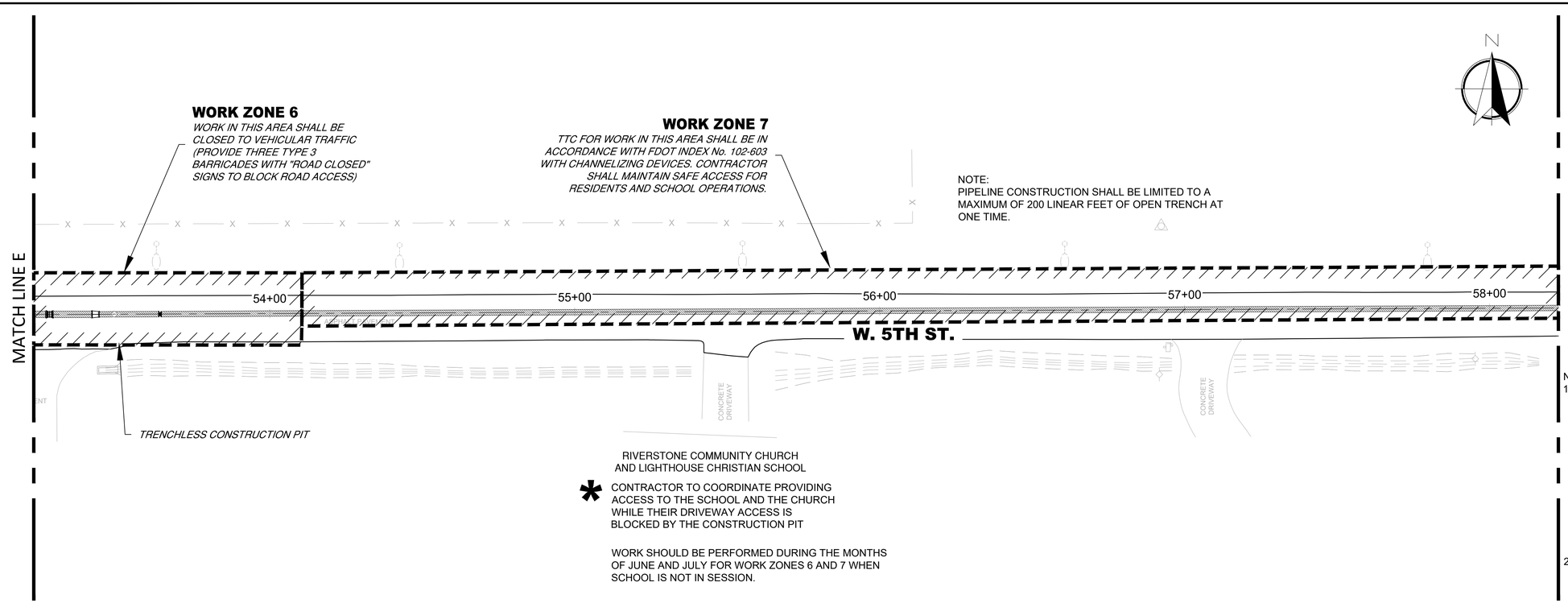
JEA Building Community sm

5TH STREET FORCE MAIN
TEMPORARY TRAFFIC CONTROL PLAN
WORK ZONE 5 TO 6

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: 1" = 20'

NO. SHEETS 89
SHEET NO. 63
DRAWING NO. TTC-3





* CONTRACTOR TO COORDINATE PROVIDING ACCESS TO THE SCHOOL AND THE CHURCH WHILE THEIR DRIVEWAY ACCESS IS BLOCKED BY THE CONSTRUCTION PIT

WORK SHOULD BE PERFORMED DURING THE MONTHS OF JUNE AND JULY FOR WORK ZONES 6 AND 7 WHEN SCHOOL IS NOT IN SESSION.

NOTES:

1. IF TEMPORARY PAVEMENT IS REQUIRED ON W 5TH STREET, THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY DRAINAGE DURING CONSTRUCTION FOR THE AREAS AFFECTED BY THE TEMPORARY PAVEMENT. THE CONTRACTOR IS RESPONSIBLE FOR ANTICIPATED DRAINAGE FLOWS FROM THE EXISTING PIPES AND DITCHES ALONG W 5TH STREET. UPON COMPLETION OF ALL CONSTRUCTION AND SITE WORK, THE CONTRACTOR IS REQUIRED TO REMOVE ALL TEMPORARY DRAINAGE AND PAVEMENT, AND RESTORE THE SITE TO THE ORIGINAL OR BETTER CONDITION.
2. DEAD END ROAD SHALL BE CLOSED FOR WORK IN ZONE 6 STA. 54+00

100% SUBMITTAL

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Telephone: (904) 205-1090
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C&ES

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DESIGN ENGINEER
CLARO NACU MAGPANTAY, P.E.
FLORIDA REGISTRATION NO.
60164

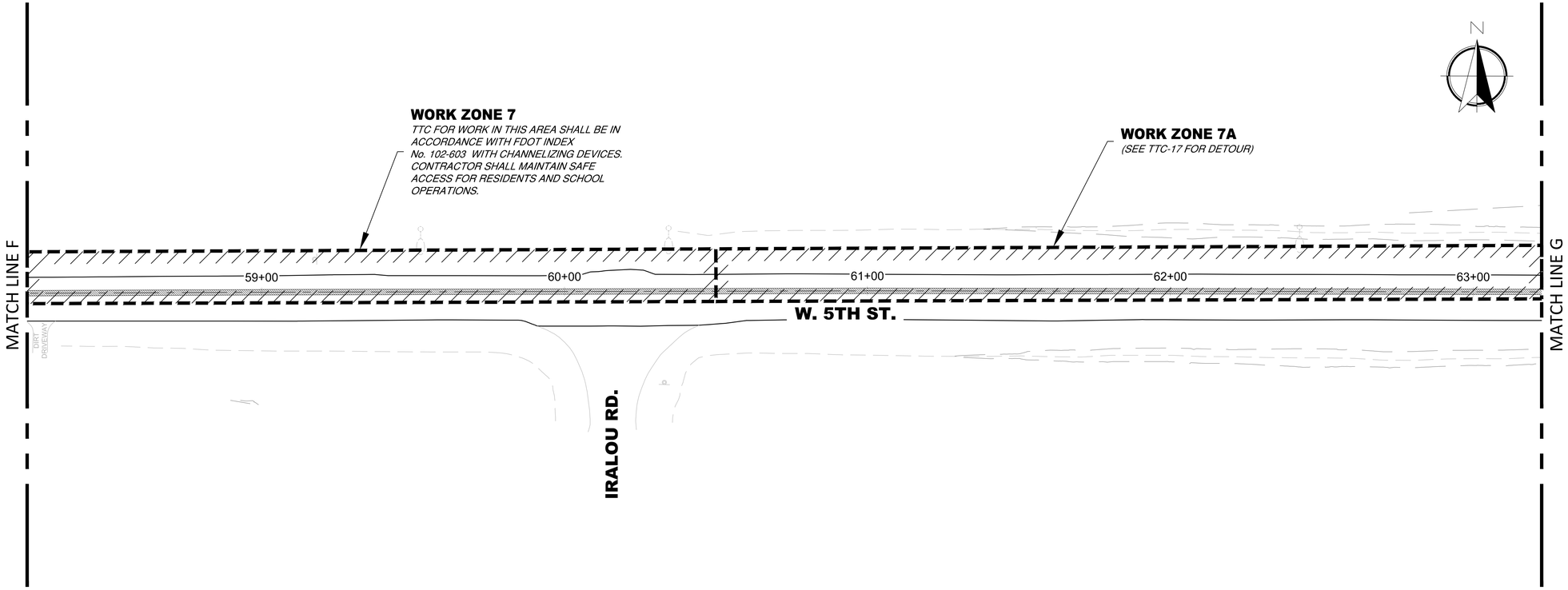
DESIGNER: C.N.M.
DRAWN BY: K.L.B.
DATE: JULY 2020
CHECKED BY: F.E.G.
DATE: JULY 2020

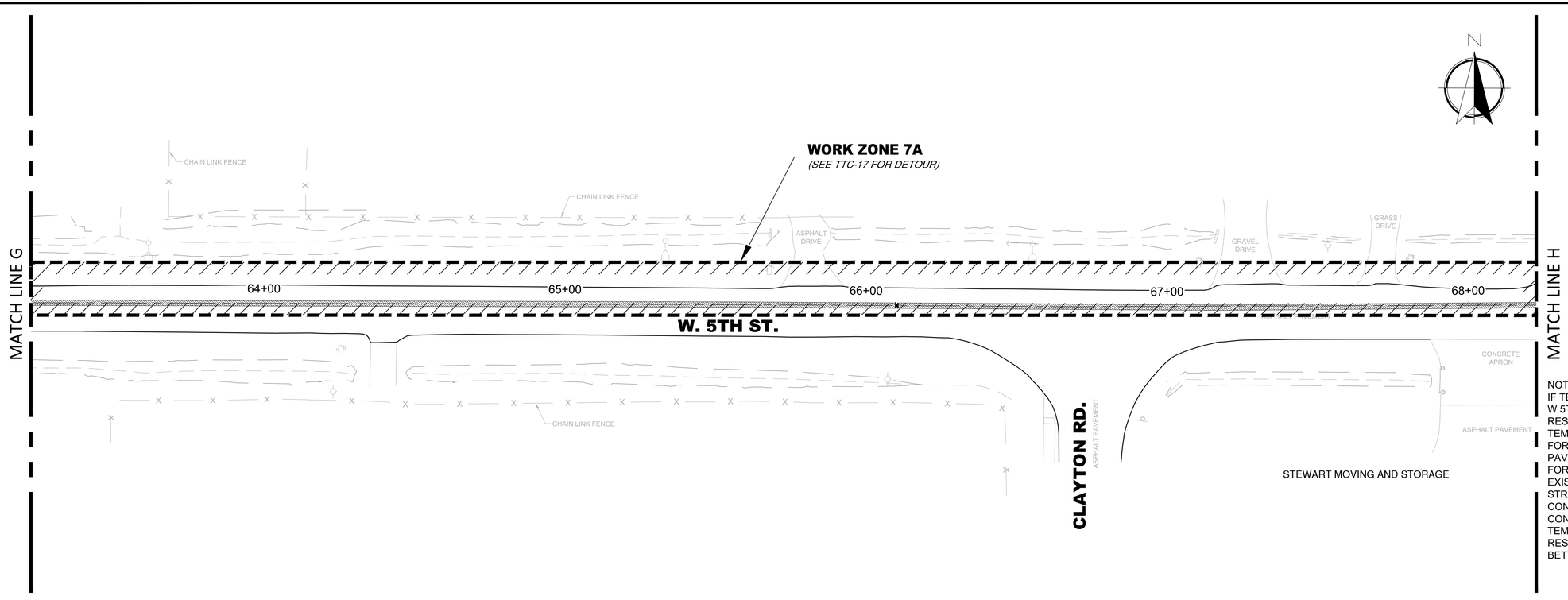
JEA Building Community

5TH STREET FORCE MAIN
TEMPORARY TRAFFIC CONTROL PLAN
WORK ZONE 6 TO 7

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: 1" = 20'

NO. SHEETS 88
SHEET NO. 64
DRAWING NO. TTC-4





NOTE:
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NO.	BY	DATE	REVISIONS
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DESIGN ENGINEER
CLARO NACU MAGPANTAY, P.E.
FLORIDA REGISTRATION NO.
60164

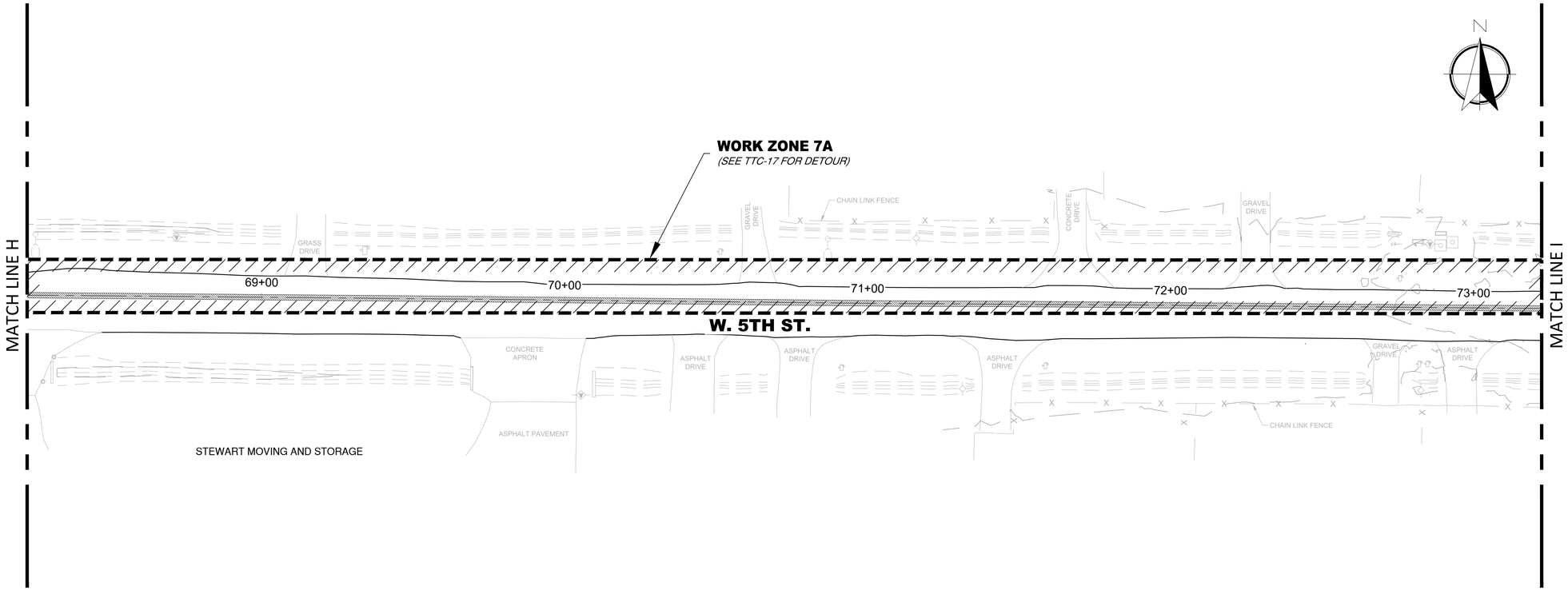
DESIGNER: C.N.M.
DRAWN BY: K.L.B.
DATE: JULY 2020
CHECKED BY: F.E.G.
DATE: JULY 2020

JEA Building Community℠

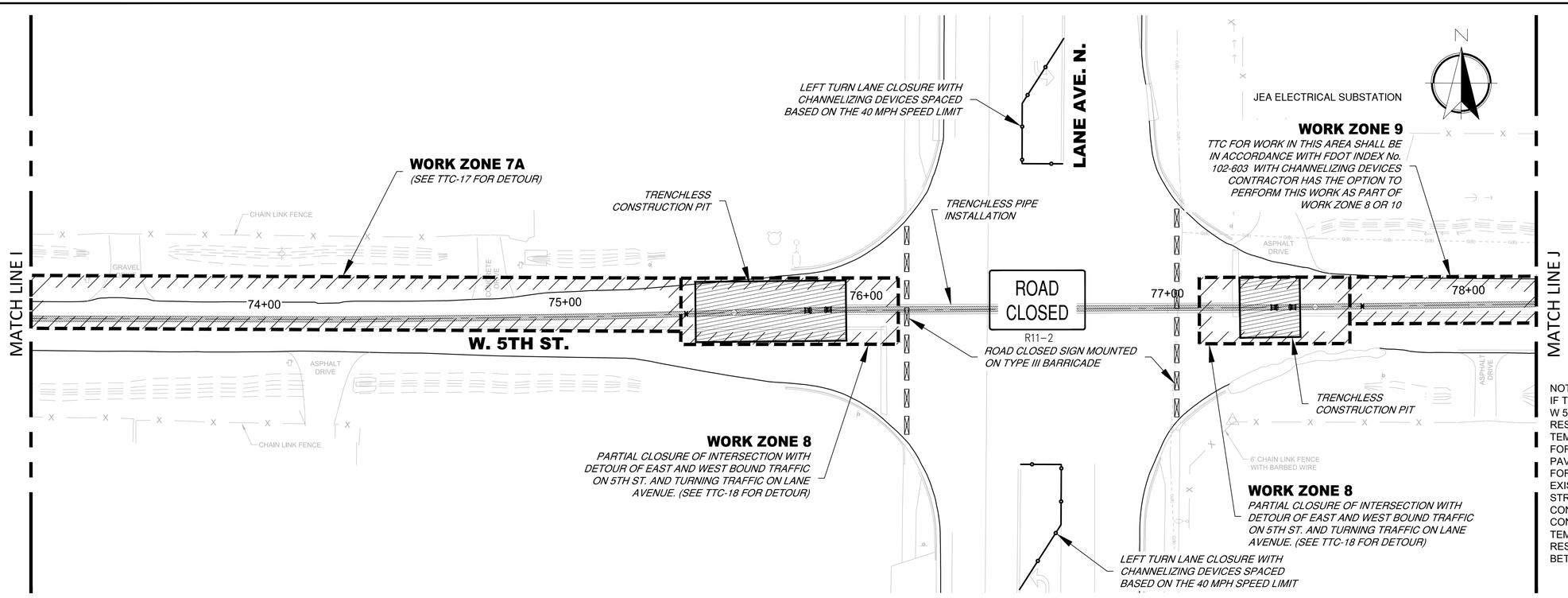
5TH STREET FORCE MAIN
TEMPORARY TRAFFIC CONTROL PLAN
WORK ZONE 7 TO 7A

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: 1" = 20'

NO. SHEETS 88
SHEET NO. 65
DRAWING NO. TTC-5



20' 0 10' 20'
SCALE: 1" = 20'



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CLARO NACU MAGPANTAY, P.E.
FLORIDA REGISTRATION NO.
60164

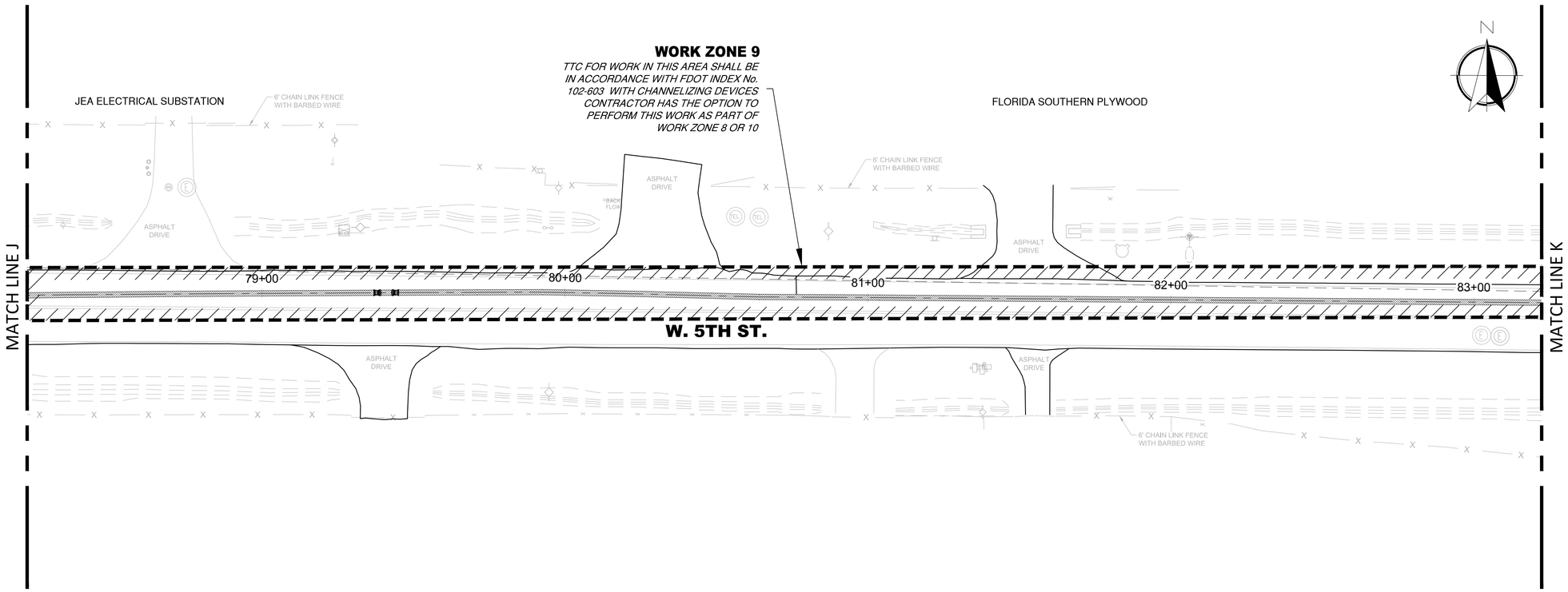
DESIGNER: C.N.M.
DRAWN BY: K.L.B.
DATE: JULY 2020
CHECKED BY: F.E.G.
DATE: JULY 2020

JEA Building Community sm

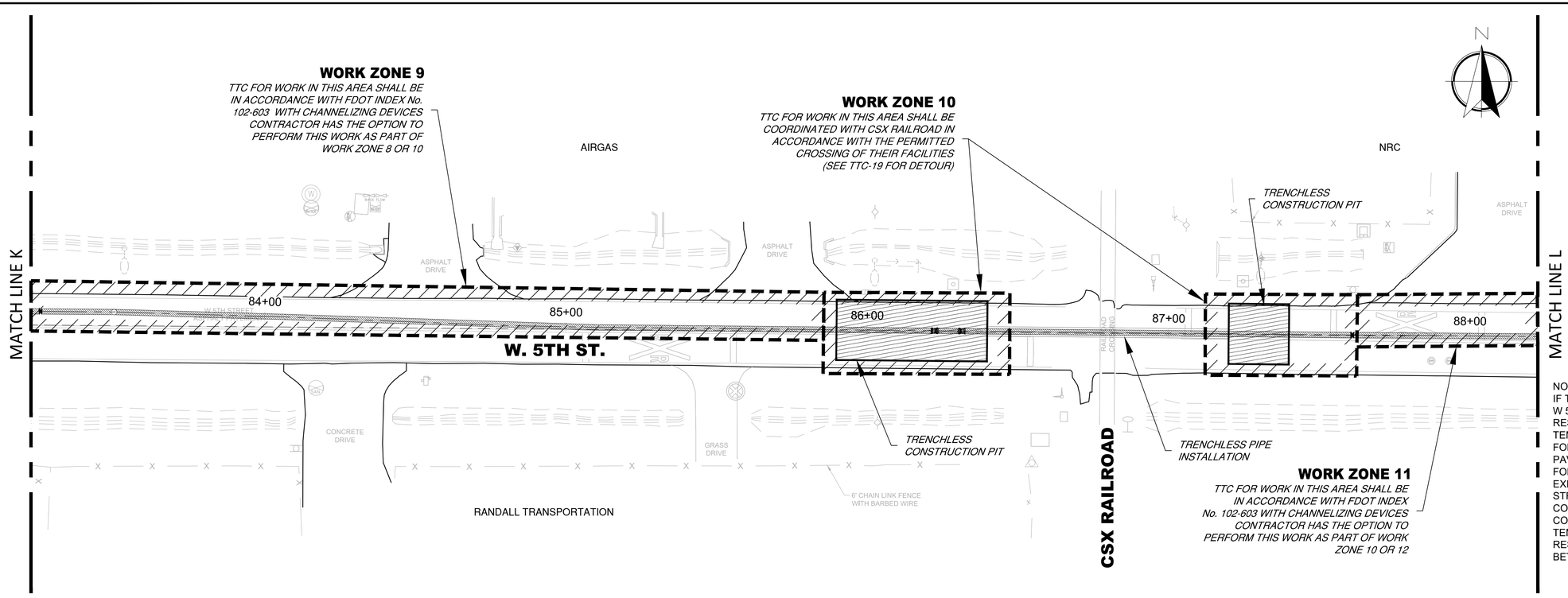
5TH STREET FORCE MAIN
TEMPORARY TRAFFIC CONTROL PLAN
WORK ZONE 7A TO 9

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: 1" = 20'

NO. SHEETS 88
SHEET NO. 66
DRAWING NO. TTC-6



20' 0 10' 20'
SCALE: 1" = 20'



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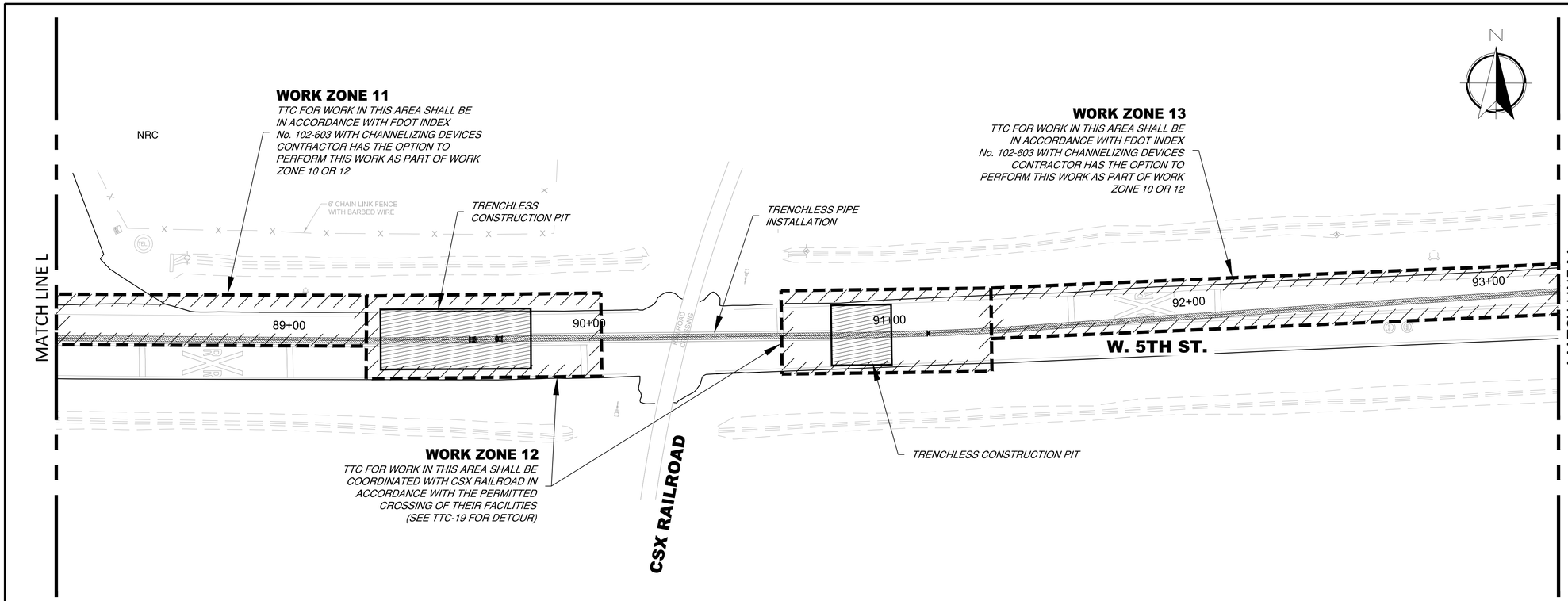
DATE: JULY 2020
CHECKED BY: F.E.G.
DATE: JULY 2020

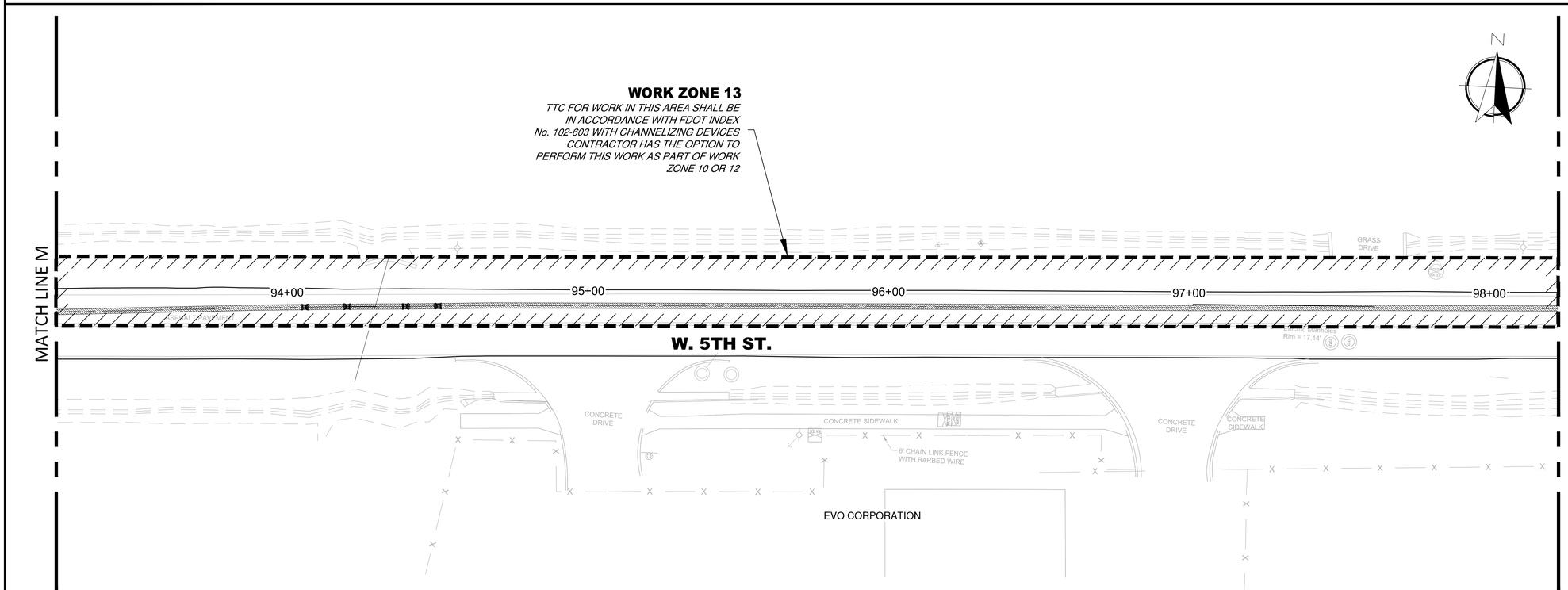
JEA Building Community

5TH STREET FORCE MAIN
TEMPORARY TRAFFIC CONTROL PLAN
WORK ZONE 9 TO 11

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: 1" = 20'

NO. SHEETS 88
SHEET NO. 67
DRAWING NO. TTC-7





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DESIGN ENGINEER
CLARO NACU MAGPANTAY, P.E.
FLORIDA REGISTRATION NO.
60164

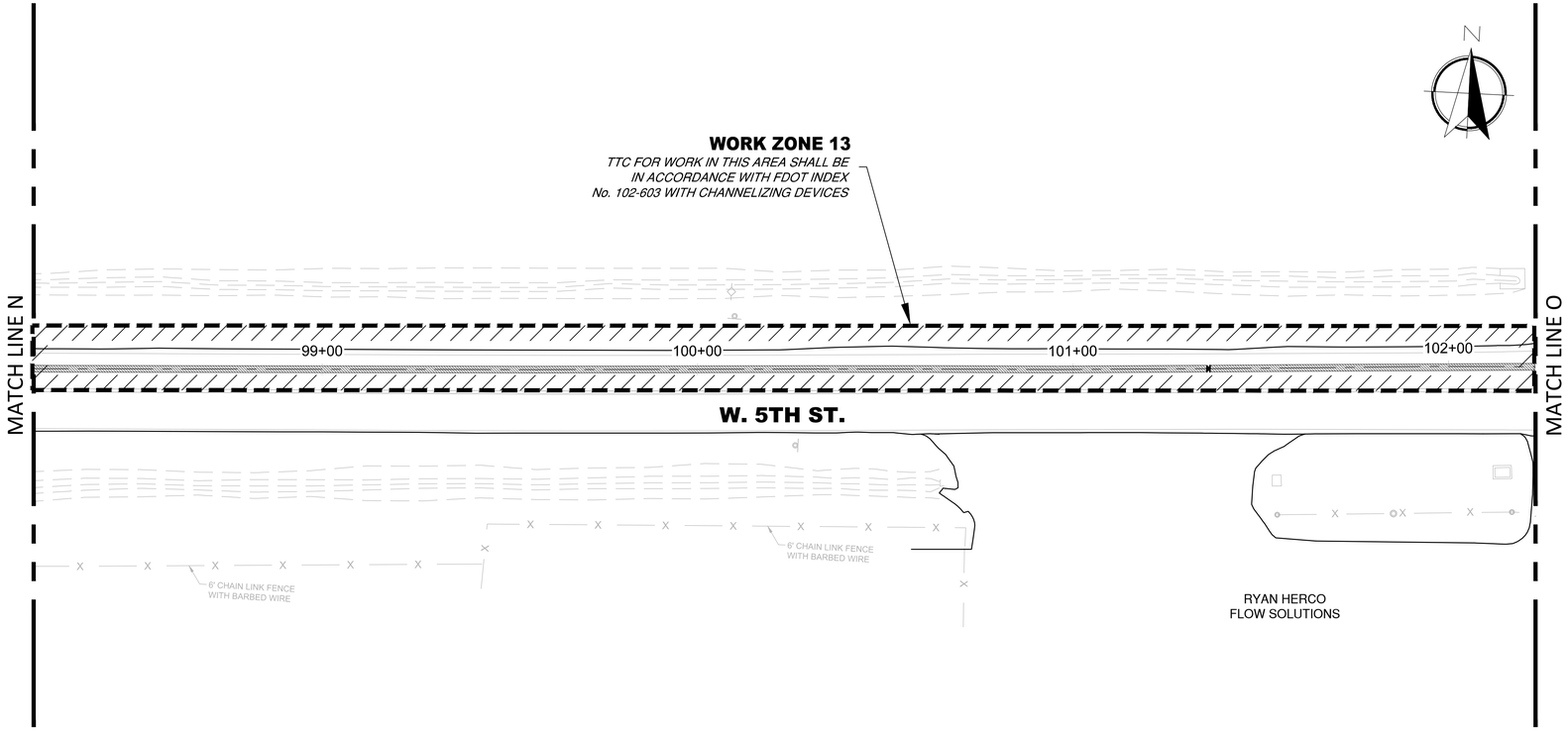
DESIGNER: C.N.M.
DRAWN BY: K.L.B.
DATE: JULY 2020
CHECKED BY: F.E.G.
DATE: JULY 2020

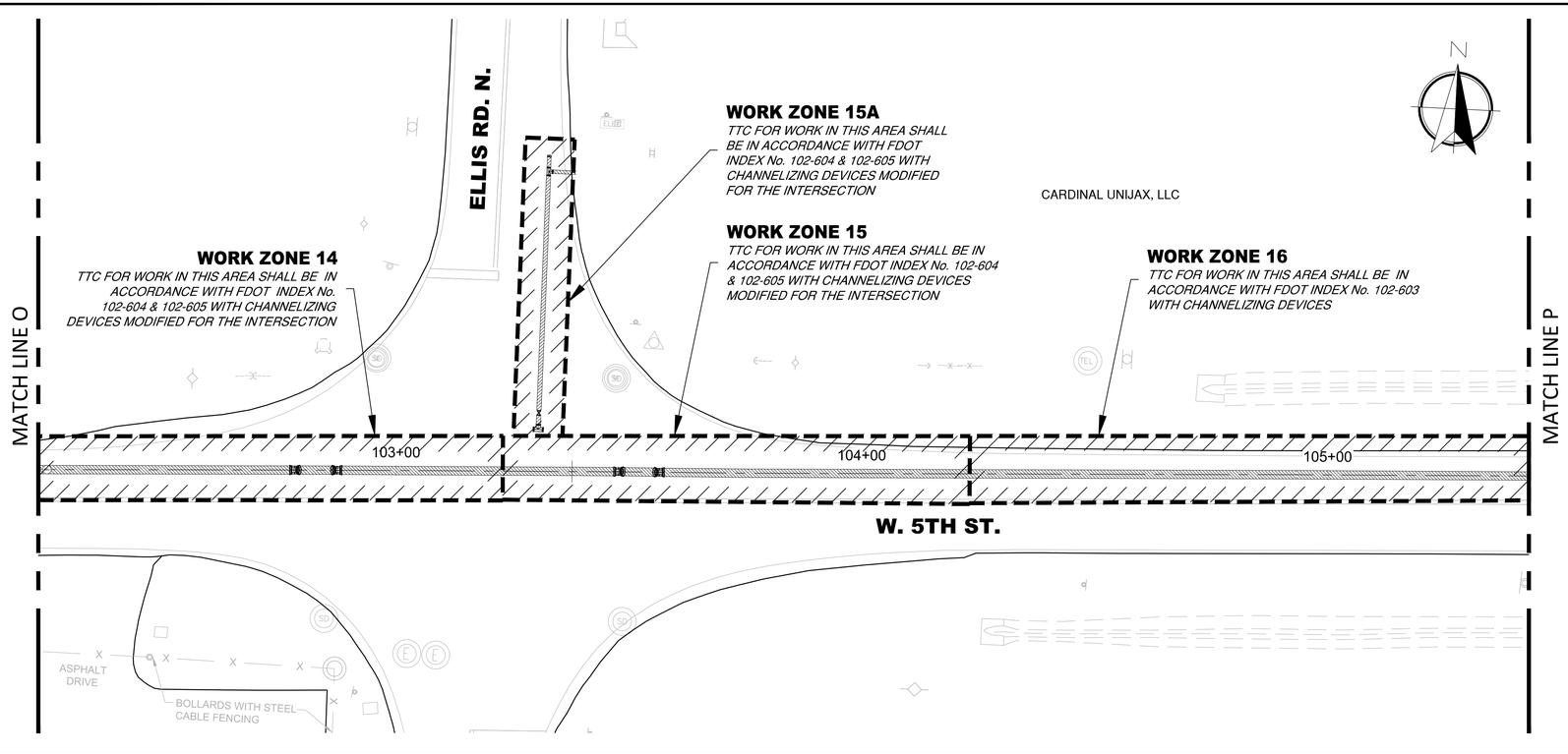
JEA Building Community

5TH STREET FORCE MAIN
TEMPORARY TRAFFIC CONTROL PLAN
WORK ZONE 11 TO 13

PROJ. NO. 50240368
DATE: JULY 2020
SCALE: 1" = 20'

NO. SHEETS 88
SHEET NO. 68
DRAWING NO. TTC-8





20' 0 10' 20'
SCALE: 1" = 20'

NOTE:
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10117 Princeton Parkway North
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Surveyors LB - LC0000152
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DESIGN ENGINEER
CLARO NACU MAGPANTAY, P.E.
FLORIDA REGISTRATION NO.
60164

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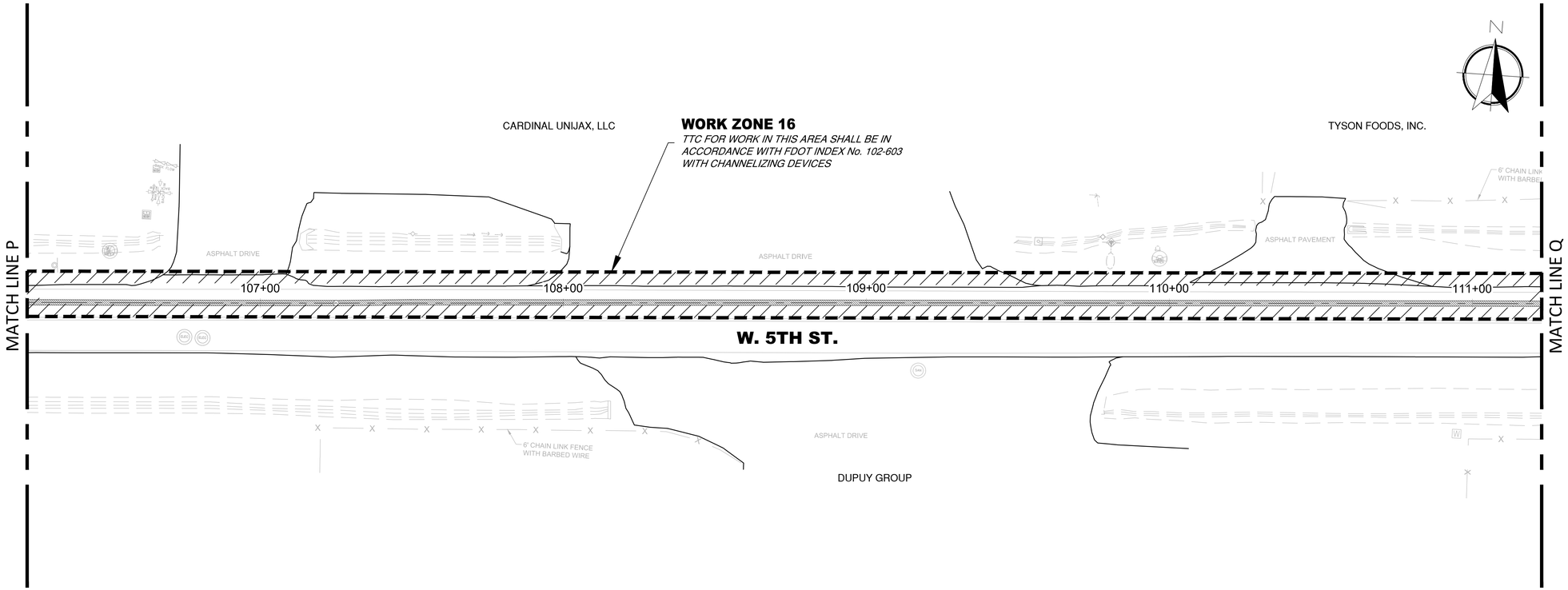
DATE: JULY 2020

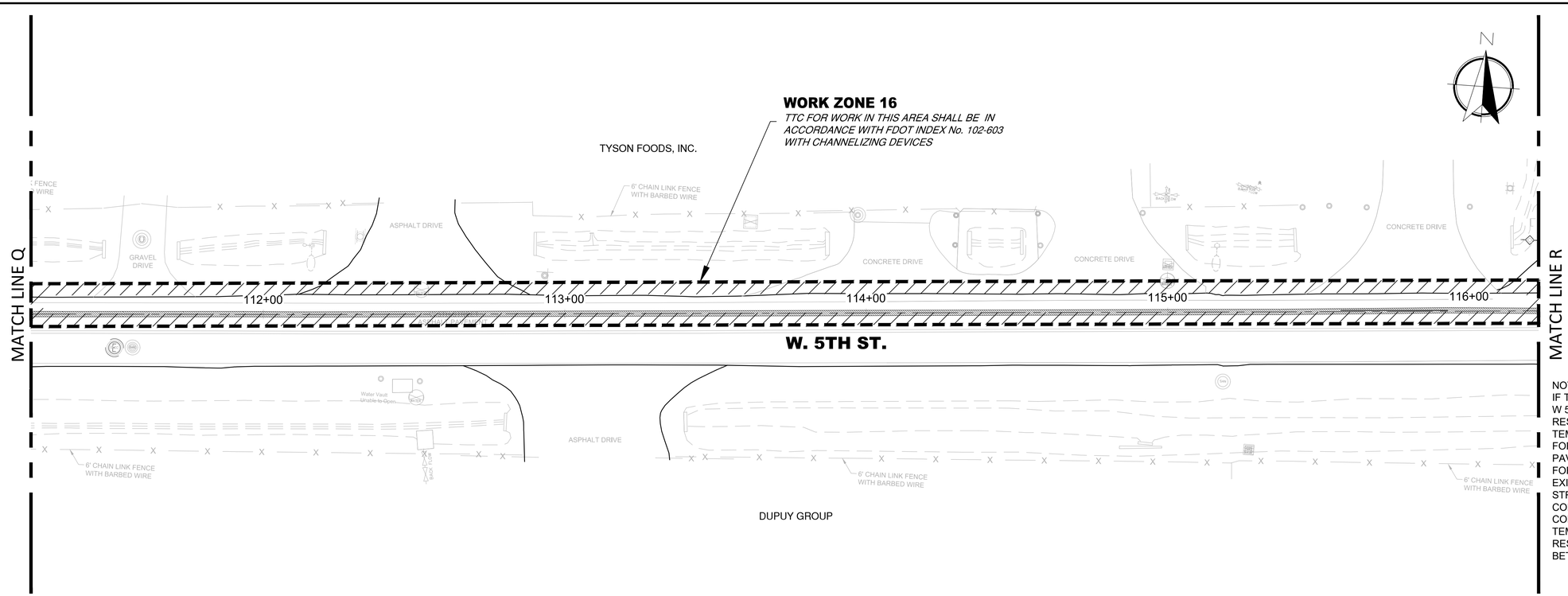
JEA Building Community sm

5TH STREET FORCE MAIN
TEMPORARY TRAFFIC CONTROL PLAN
WORK ZONE 13 TO 16

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: 1" = 20'

NO. SHEETS 88
SHEET NO. 69
DRAWING NO. TTC-9





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60164

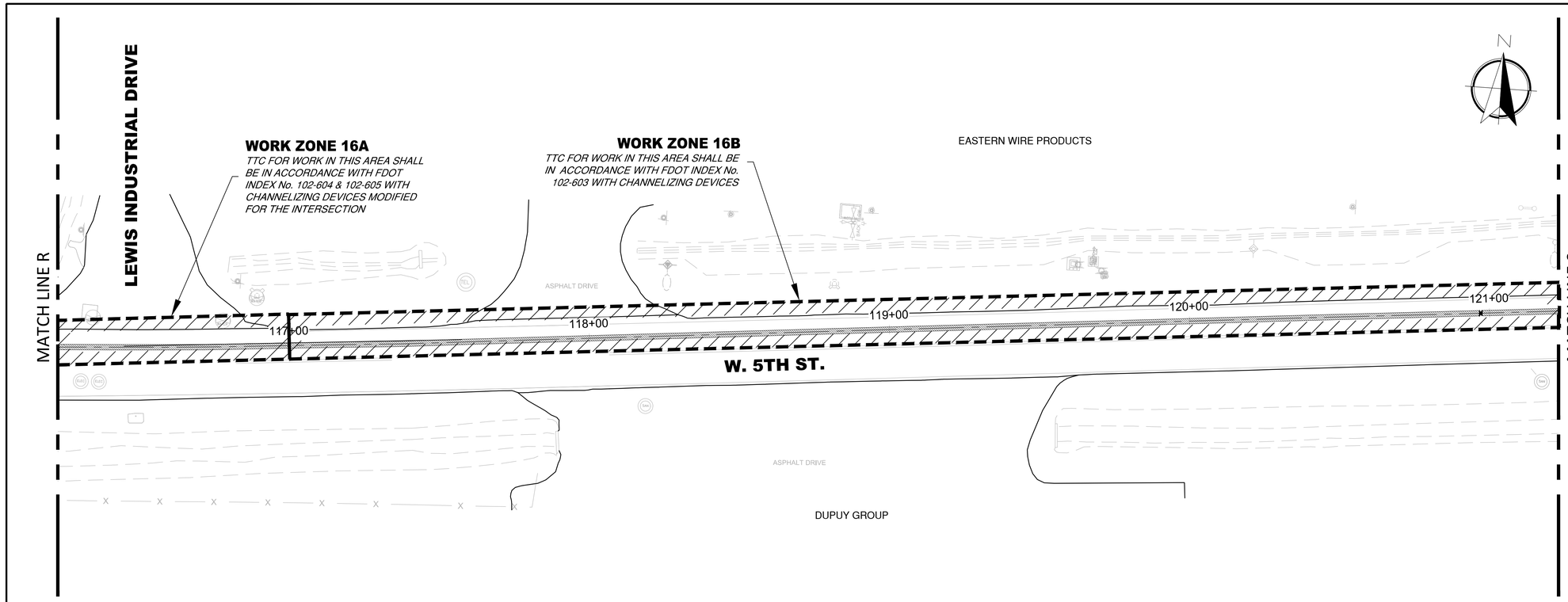
DESIGNER: C.N.M.
DRAWN BY: K.L.B.
DATE: JULY 2020
CHECKED BY: F.E.G.
DATE: JULY 2020

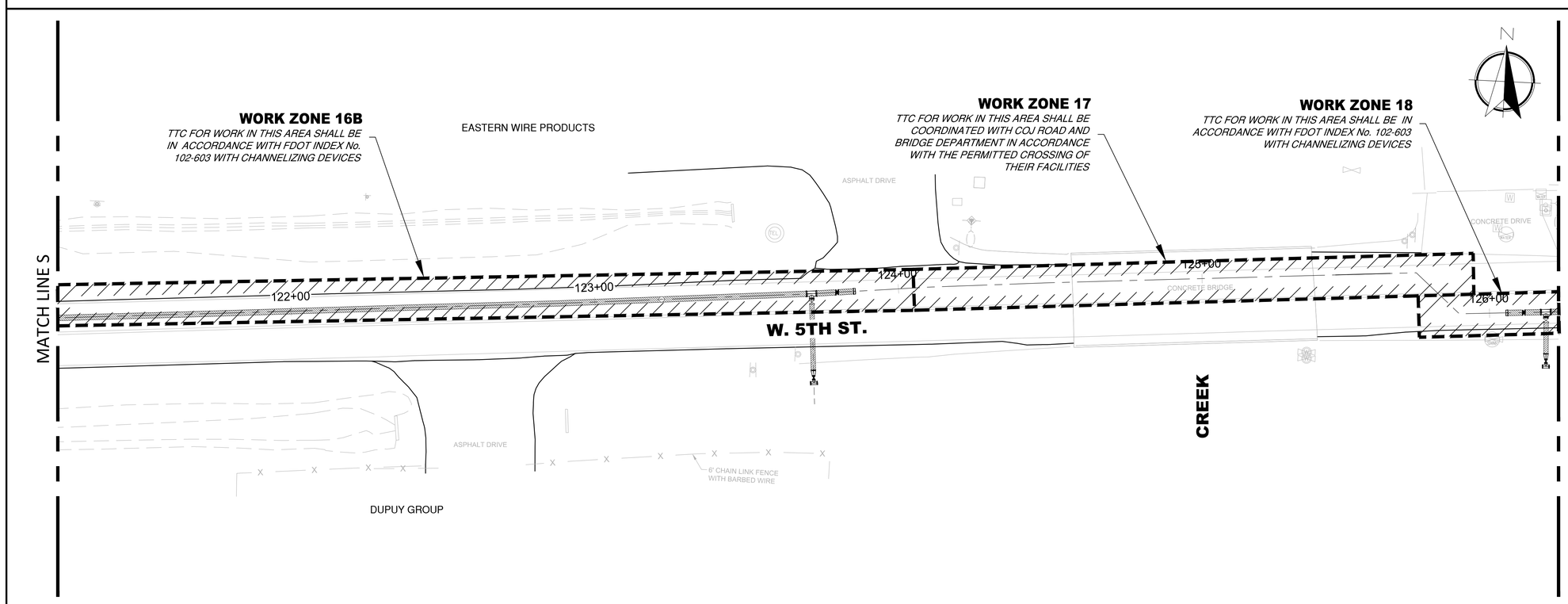
JEA Building Community sm

5TH STREET FORCE MAIN
TEMPORARY TRAFFIC CONTROL PLAN
WORK ZONE 16

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: 1" = 20'

NO. SHEETS 89
SHEET NO. 70
DRAWING NO. TTC-10





20' 0 10' 20'
SCALE: 1" = 20'

NOTE:
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DESIGN ENGINEER
CLARO NACU MAGPANTAY, P.E.
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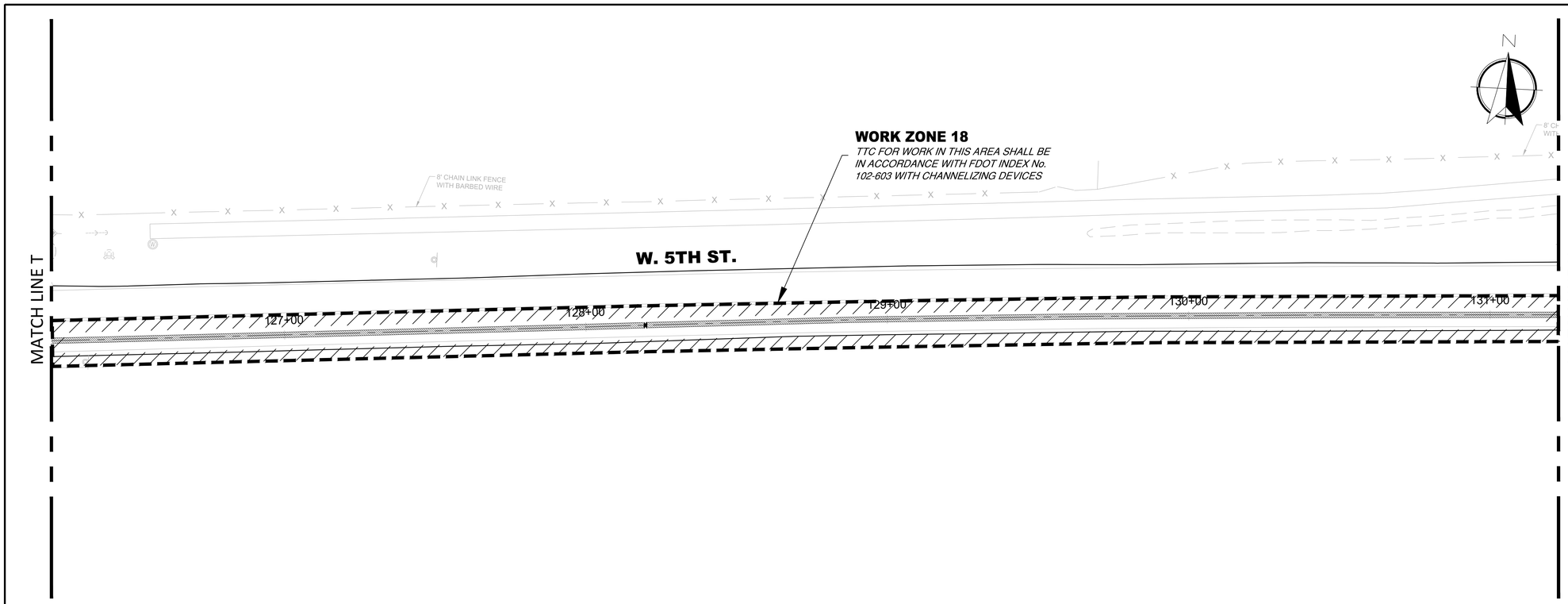
DESIGNER: C.N.M.
DRAWN BY: K.L.B.
DATE: JULY 2020
CHECKED BY: F.E.G.
DATE: JULY 2020

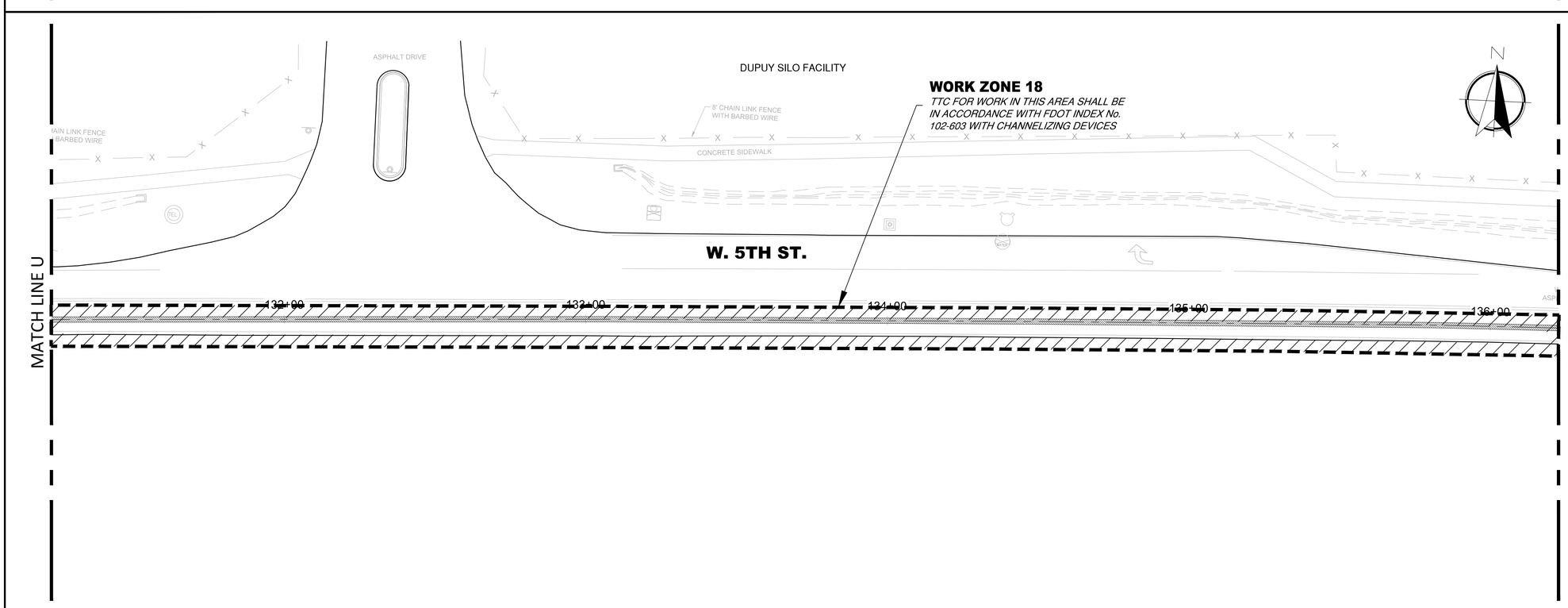
JEA Building Community

5TH STREET FORCE MAIN
TEMPORARY TRAFFIC CONTROL PLAN
WORK ZONE 16A TO 18

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: 1" = 20'

NO. SHEETS 88
SHEET NO. 71
DRAWING NO. TTC-11





20' 0 10' 20'
SCALE: 1" = 20'

NOTE:
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Mott MacDonald Florida, LLC
10117 Princeton Pinehurst Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 205-1090
Architects AA - C000005
Engineers EB - 0000155
Surveyors LB - 0000152

MOTT MACDONALD

Construction & Engineering Services Consultants, Inc.
9432 Baymeadows Road, Suite 100
Jacksonville, FL 32256
Tel: (904) 652-1186
Business Number CA 27598

NO.	BY	DATE	REVISIONS
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DESIGN ENGINEER
CLARO NACU MAGPANTAY, P.E.
FLORIDA REGISTRATION NO.
60164

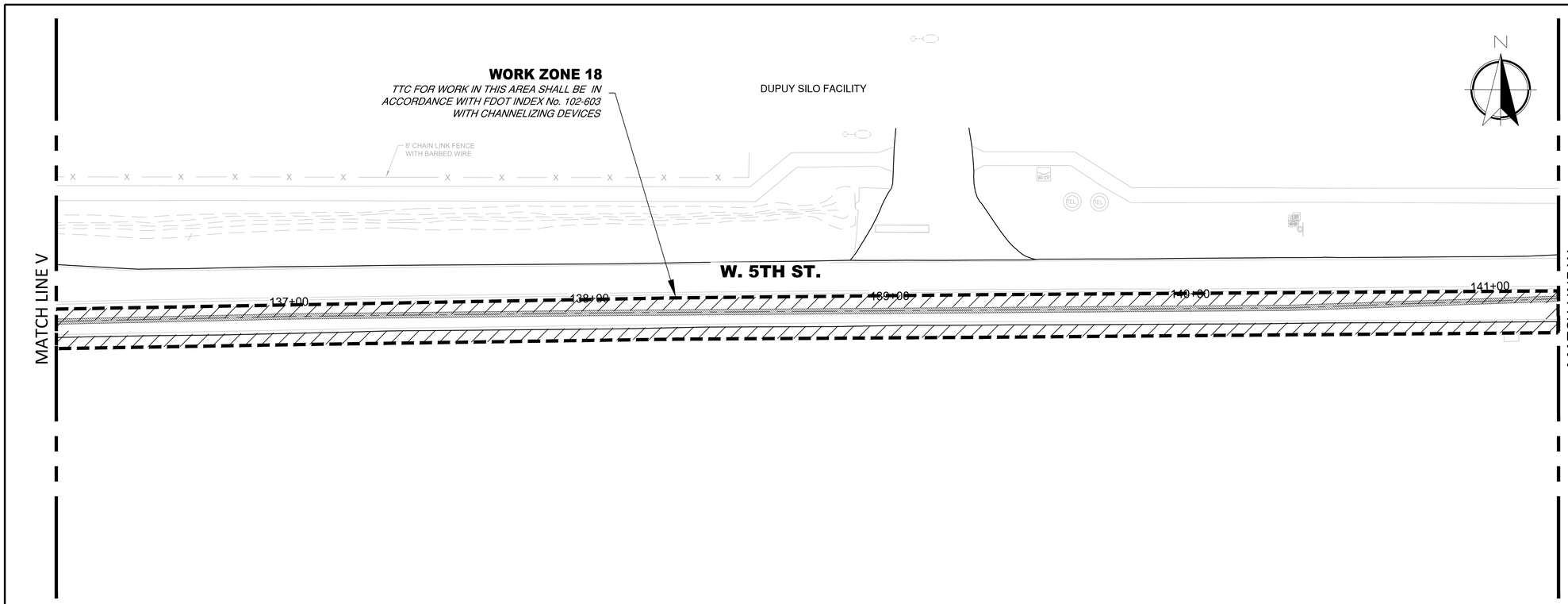
DESIGNER: C.N.M.
DRAWN BY: K.L.B.
DATE: JULY 2020
CHECKED BY: F.E.G.
DATE: JULY 2020

JEA Building Community℠

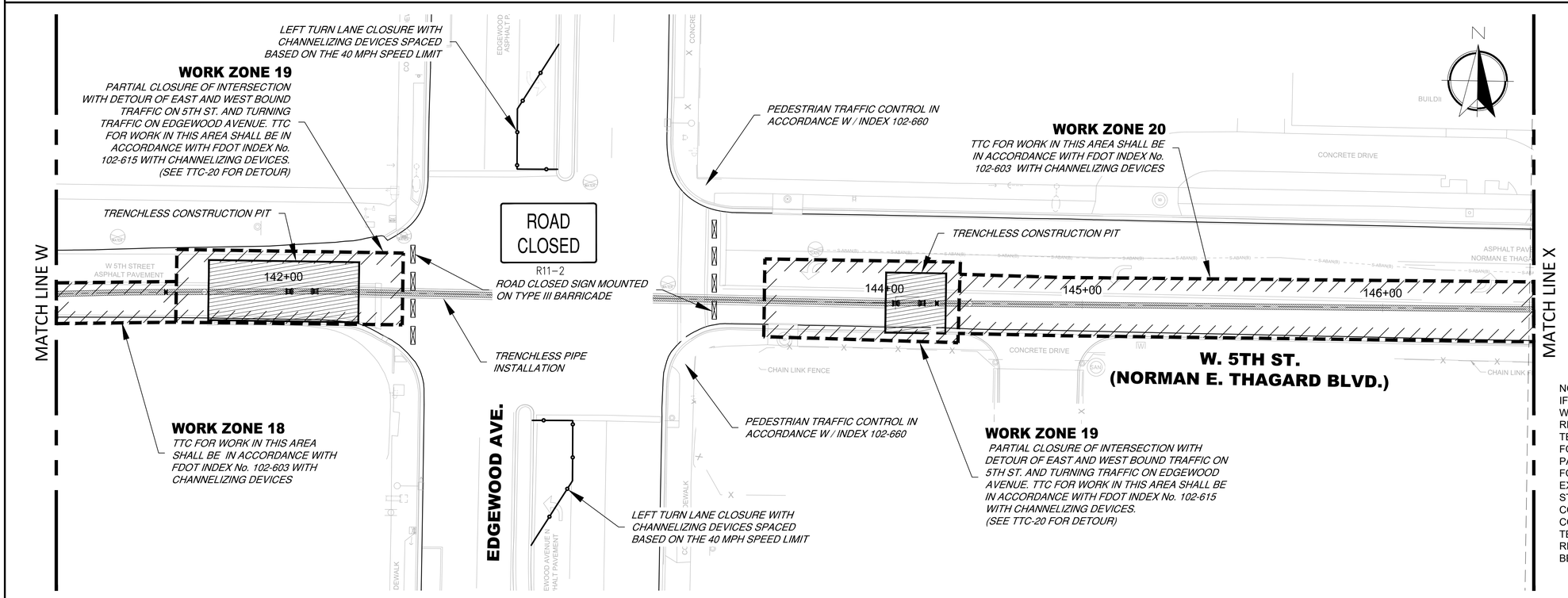
5TH STREET FORCE MAIN
TEMPORARY TRAFFIC CONTROL PLAN
WORK ZONE 18

PROJ. NO. 50240368
DATE: JULY 2020
SCALE: 1" = 20'

NO. SHEETS 88
SHEET NO. 72
DRAWING NO. TTC-12



20' 0 10' 20'
SCALE: 1" = 20'



NOTE:
IF TEMPORARY PAVEMENT IS REQUIRED ON W 5TH STREET, THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY DRAINAGE DURING CONSTRUCTION FOR THE AREAS AFFECTED BY THE TEMPORARY PAVEMENT. THE CONTRACTOR IS RESPONSIBLE FOR ANTICIPATED DRAINAGE FLOWS FROM THE EXISTING PIPES AND DITCHES ALONG W 5TH STREET. UPON COMPLETION OF ALL CONSTRUCTION AND SITE WORK, THE CONTRACTOR IS REQUIRED TO REMOVE ALL TEMPORARY DRAINAGE AND PAVEMENT, AND RESTORE THE SITE TO THE ORIGINAL OR BETTER CONDITION.

100% SUBMITTAL

Mott MacDonald Florida, LLC
10117 Princeton Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 205-1090
Architects AA - C000005
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Jacksonville, FL 32256
Tel: (904) 652-1186
Business Number CA 27598
C&ES

NO.	BY	DATE	REVISIONS
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DESIGN ENGINEER
CLARO NACU MAGPANTAY, P.E.
FLORIDA REGISTRATION NO.
60164

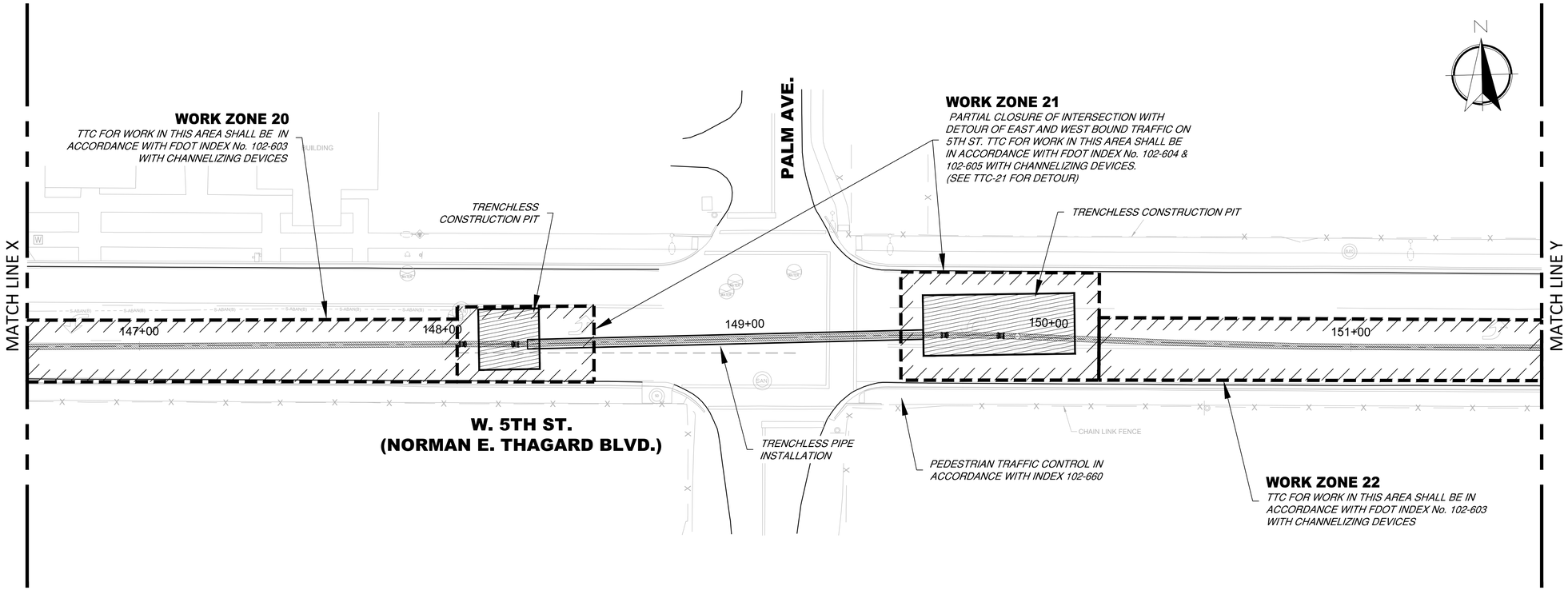
DESIGNER: C.N.M.
DRAWN BY: K.L.B.
DATE: JULY 2020
CHECKED BY: F.E.G.
DATE: JULY 2020

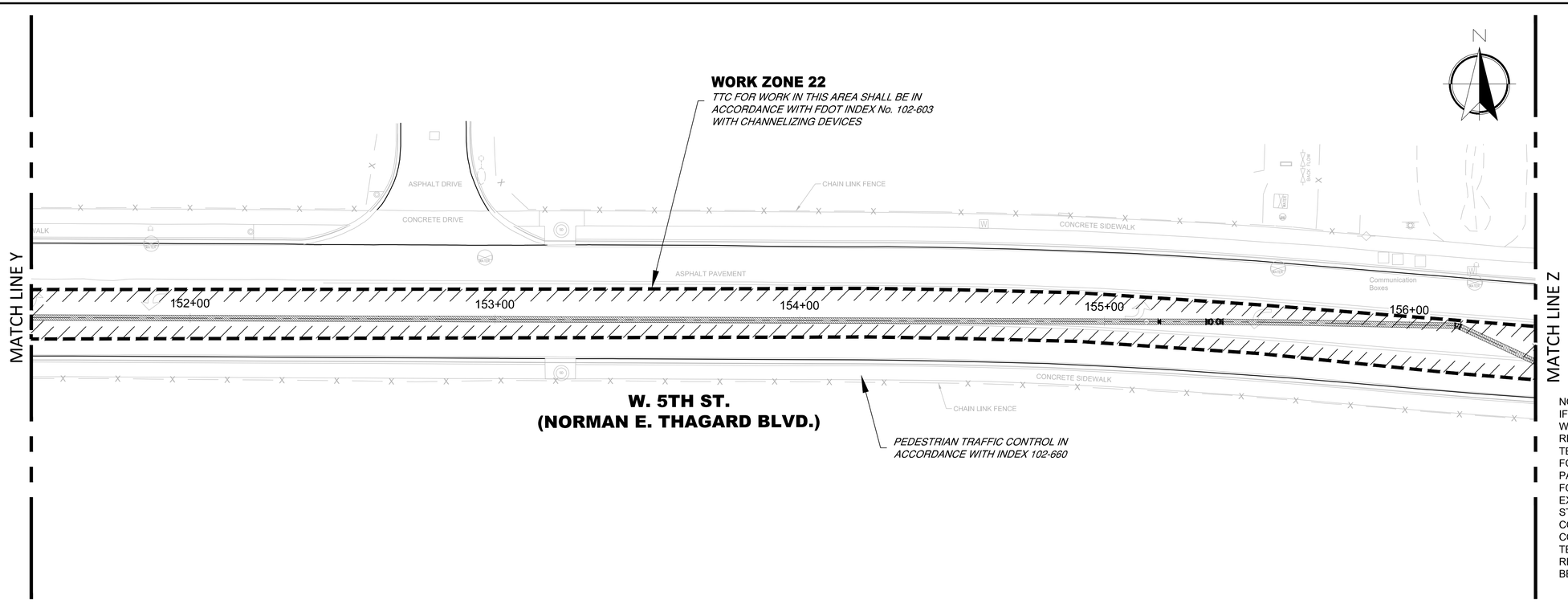
JEA Building Community

5TH STREET FORCE MAIN
TEMPORARY TRAFFIC CONTROL PLAN
WORK ZONE 18 TO 20

PROJ. NO. 50240368
DATE: JULY 2020
SCALE: 1" = 20'

NO. SHEETS 88
SHEET NO. 73
DRAWING NO. TTC-13





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Jacksonville, Florida 32256
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C&ES

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CLARO NACU MAGPANTAY, P.E.
FLORIDA REGISTRATION NO.
60164

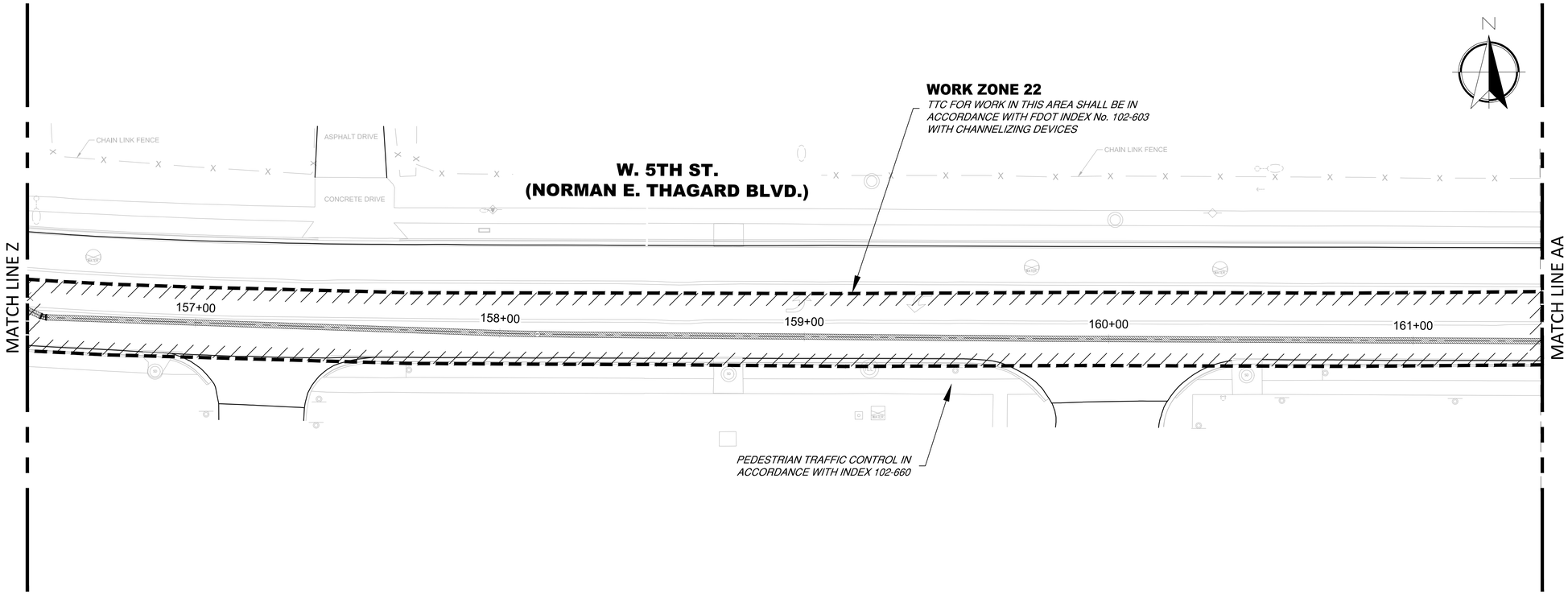
DESIGNER: C.N.M.
DRAWN BY: K.L.B.
DATE: JULY 2020
CHECKED BY: F.E.G.
DATE: JULY 2020

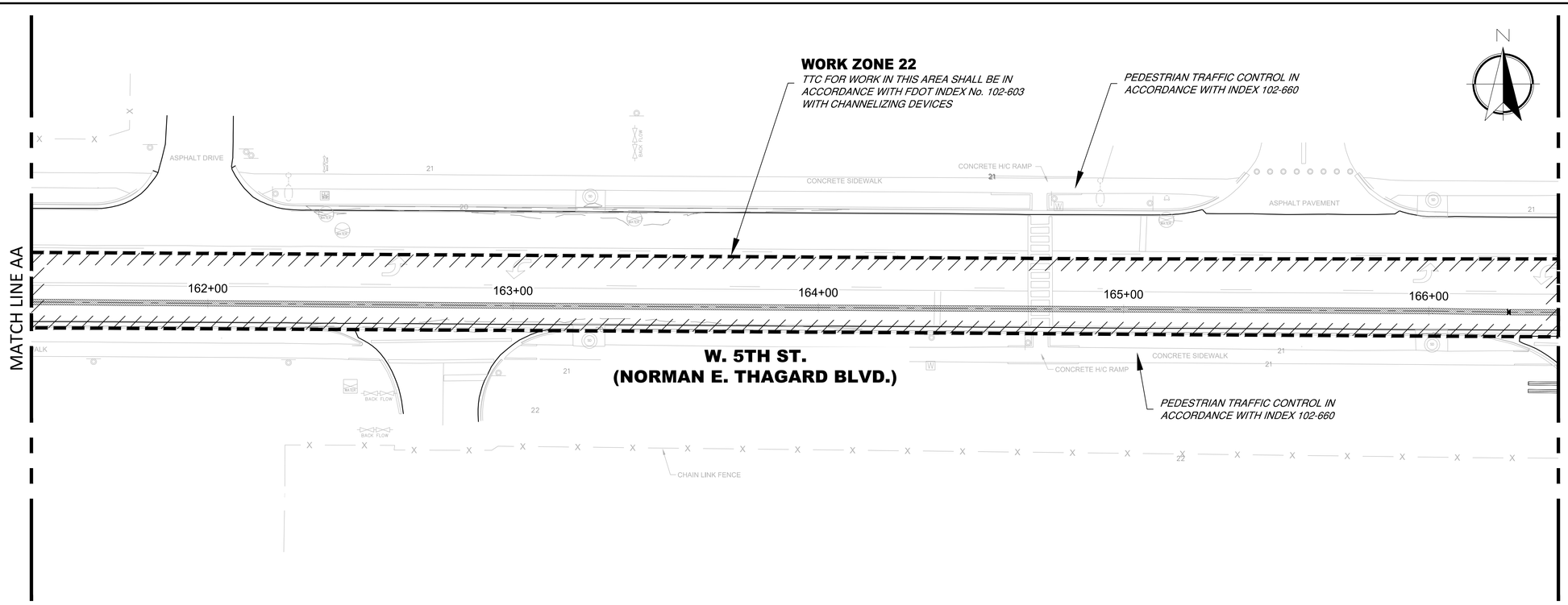
JEA Building Community

5TH STREET FORCE MAIN
TEMPORARY TRAFFIC CONTROL PLAN
WORK ZONE 20 TO 22

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: 1" = 20'

NO. SHEETS 89
SHEET NO. 74
DRAWING NO. TTC-14





NOTE:
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100% SUBMITTAL

Mott MacDonald Florida, LLC
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Jacksonville, Florida 32256
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C&ES

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DESIGN ENGINEER
CLARO NACU MAGPANTAY, P.E.
FLORIDA REGISTRATION NO.
60164

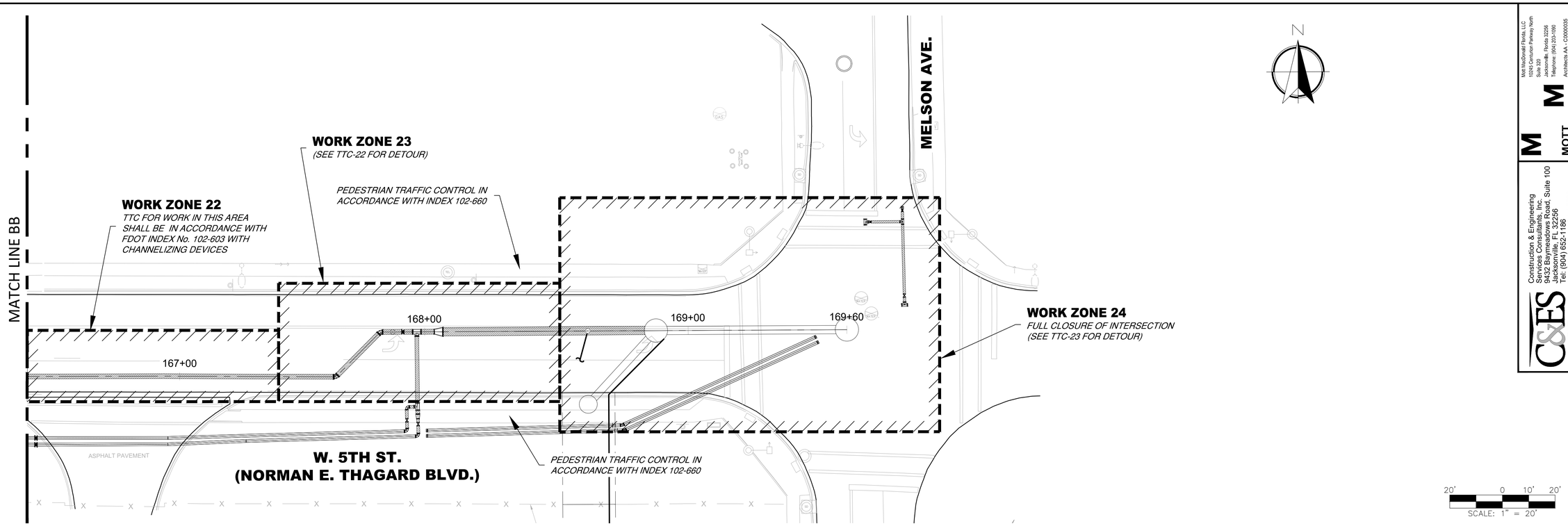
DESIGNER: C.N.M.
DRAWN BY: K.L.B.
DATE: JULY 2020
CHECKED BY: F.E.G.
DATE: JULY 2020

JEA Building Community sm

5TH STREET FORCE MAIN
TEMPORARY TRAFFIC CONTROL PLAN
WORK ZONE 22

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: 1" = 20'

NO. SHEETS 89
SHEET NO. 75
DRAWING NO. TTC-15



NOTE:
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100% SUBMITTAL

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Telephone: (904) 205-1090
Architects AA - C000005
Engineers EB - 0000155
Surveyors LB - 0000152
MOTT MACDONALD

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Jacksonville, FL 32256
Tel: (904) 652-1186
Business Number CA 27598
C&ES

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DESIGN ENGINEER
CLARO NACU MAGPANTAY, P.E.
FLORIDA REGISTRATION NO.
60164

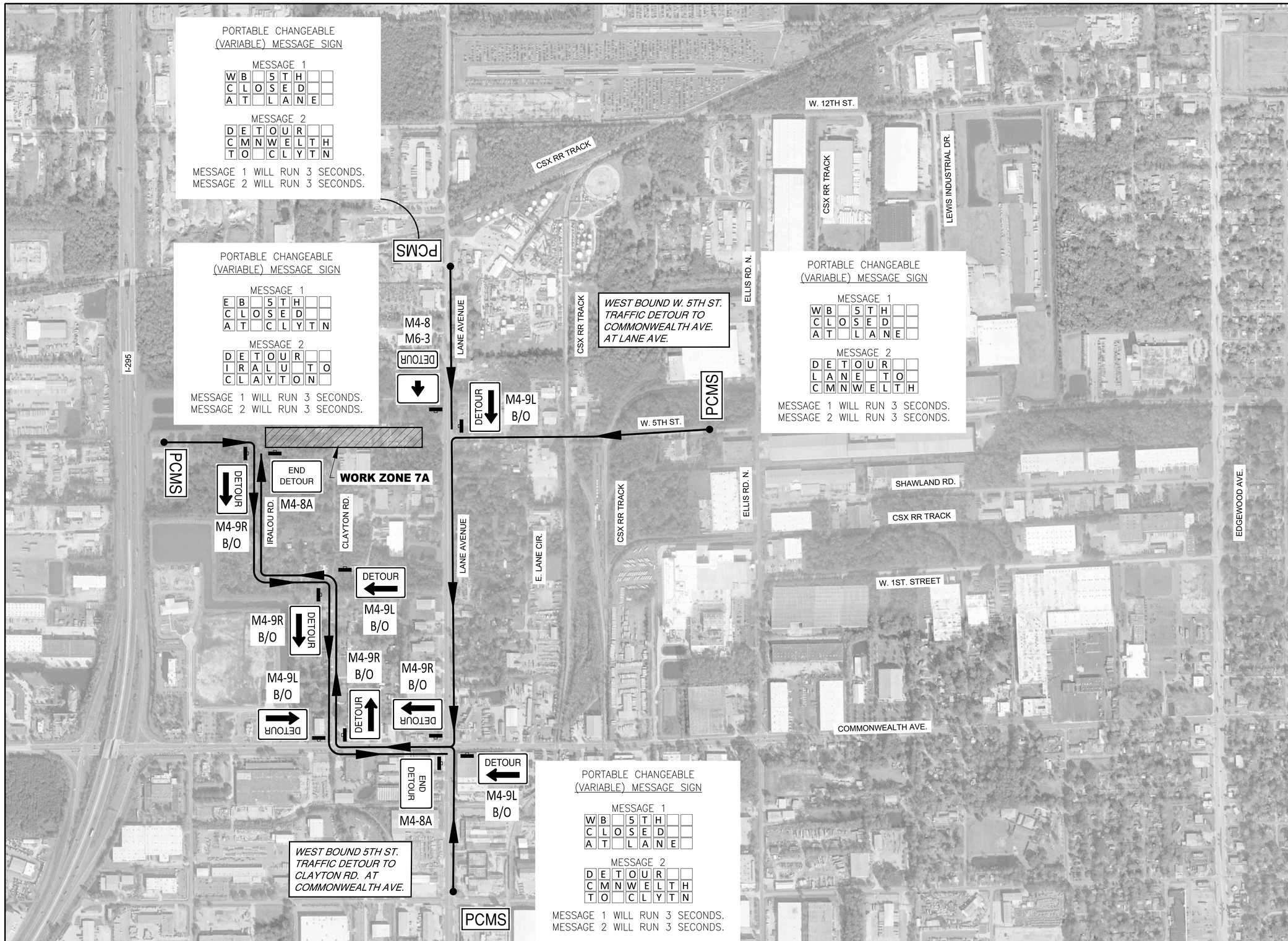
DESIGNER: C.N.M.
DRAWN BY: K.L.B.
DATE: JULY 2020
CHECKED BY: F.E.G.
DATE: JULY 2020

JEA Building Community℠

5TH STREET FORCE MAIN
TEMPORARY TRAFFIC CONTROL PLAN
WORK ZONE 22 TO 24

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: 1" = 20'

NO. SHEETS 88
SHEET NO. 76
DRAWING NO. TTC-16



N

100% SUBMITTAL

Mott MacDonald Florida, LLC
10117 Princeton Pinevery North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 205-1090
Architects AA - C000000335
Engineers EB - 0000155
Surveyors LB - 0000152

MOTT MACDONALD

C&ES
Construction & Engineering Services Consultants, Inc.
9432 Baymeadows Road, Suite 100
Jacksonville, FL 32256
Tel: (904) 652-1186
Business Number CA 27598

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DESIGN ENGINEER
CLARO NACU MAGPANTAY, P.E.
FLORIDA REGISTRATION NO.
60164

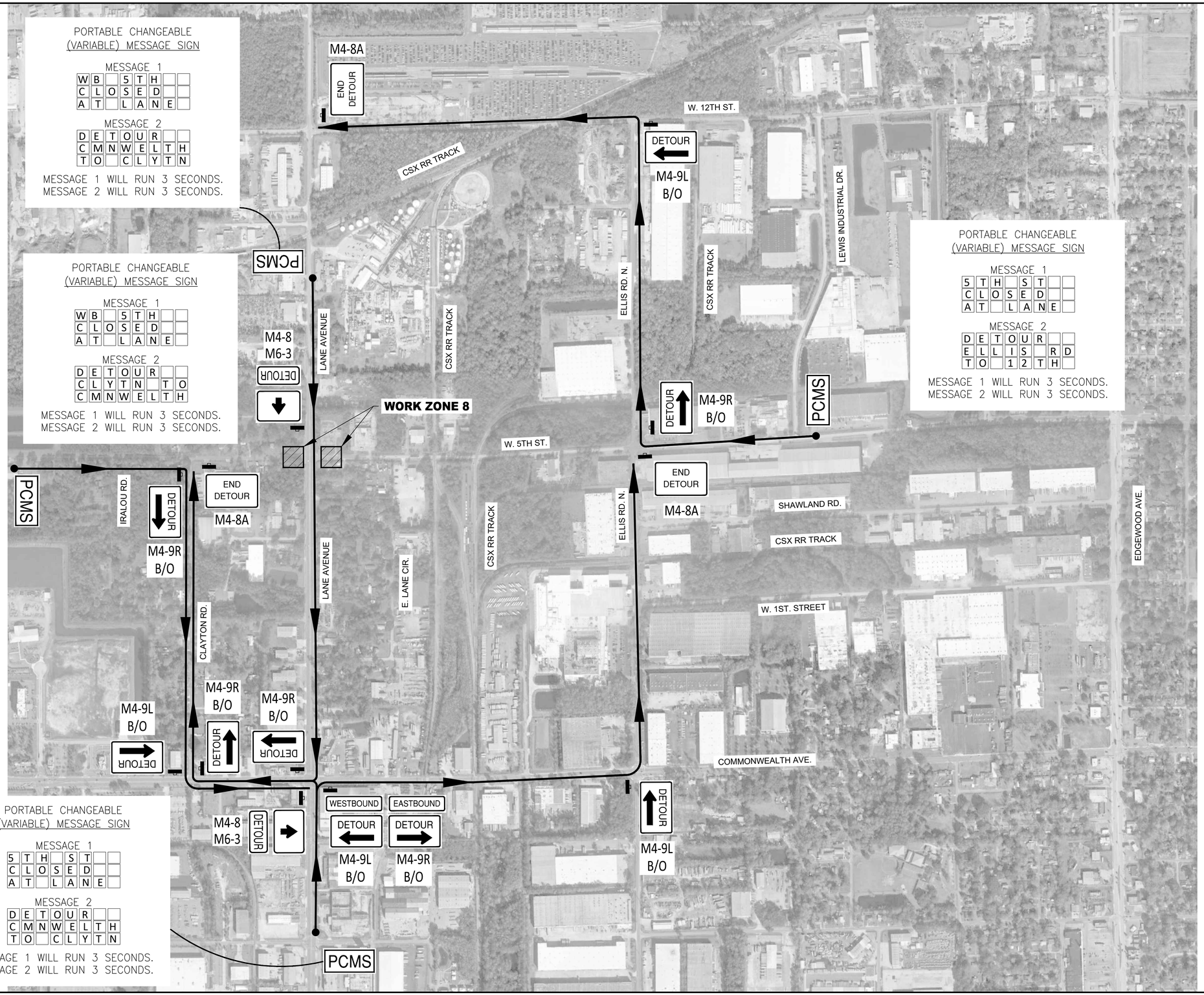
DESIGNER: C.N.M.
DRAWN BY: K.L.B.
DATE: JULY 2020
CHECKED BY: F.E.G.
DATE: JULY 2020

JEA Building Community

5TH STREET FORCE MAIN
TEMPORARY TRAFFIC CONTROL PLAN
WORK ZONE 7A DETOUR

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: NTS

NO. SHEETS 88
SHEET NO. 77
DRAWING NO. TTC-17



100% SUBMITTAL

Mott MacDonald Florida, LLC
Water Management Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 205-1090
Architects AA - C000000035
Engineers EB - 0000155
Surveyors LB - 0000152

MOTT MACDONALD

Construction & Engineering Services Consultants, Inc.
9432 Baymeadows Road, Suite 100
Jacksonville, FL 32256
Tel: (904) 652-1186
Business Number CA 27598

C&ES

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DESIGN ENGINEER
CLARO NACU MAGPANTAY, P.E.
FLORIDA REGISTRATION NO.
60164

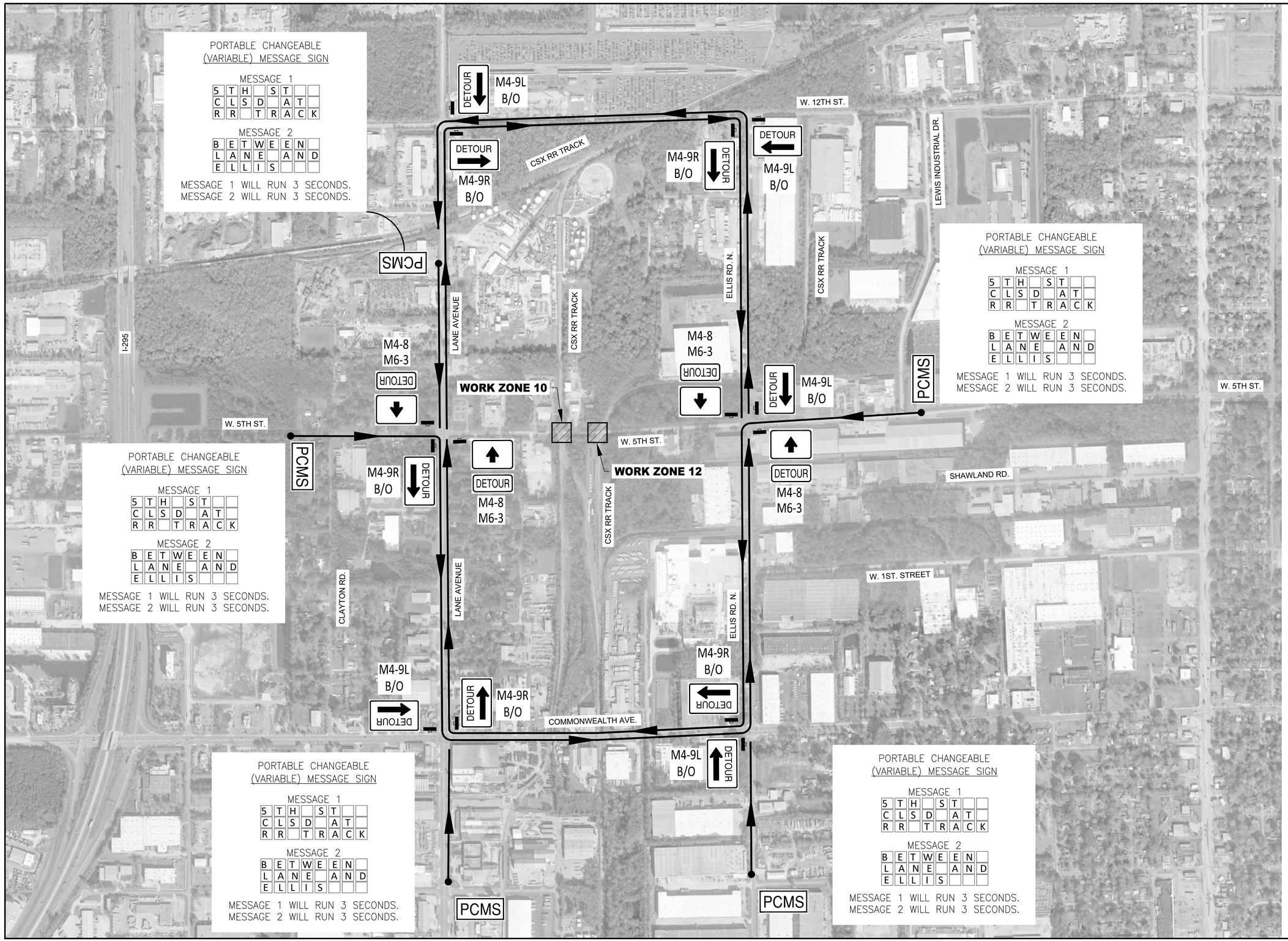
DESIGNER: C.N.M.
DRAWN BY: K.L.B.
DATE: JULY 2020
CHECKED BY: F.E.G.
DATE: JULY 2020

JEA Building Community sm

5TH STREET FORCE MAIN
TEMPORARY TRAFFIC CONTROL PLAN
WORK ZONE 8 DETOUR

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: NTS

NO. SHEETS 88
SHEET NO. 78
DRAWING NO. TTC-18



N

Mott MacDonald Florida, LLC
Water Resources Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 203-1050
Architects AA - C000000035
Engineers EB - 0000155
Surveyors LB - 0000152

MOTT MACDONALD

Construction & Engineering Services Consultants, Inc.
9432 Baymeadows Road, Suite 100
Jacksonville, FL 32256
Tel: (904) 652-1186
Business Number CA 27598

C&ES

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DESIGN ENGINEER
CLARO NACU MAGPANTAY, P.E.
FLORIDA REGISTRATION NO.
60164

DESIGNER: C.N.M.
DRAWN BY: K.L.B.
DATE: JULY 2020
CHECKED BY: F.E.G.
DATE: JULY 2020

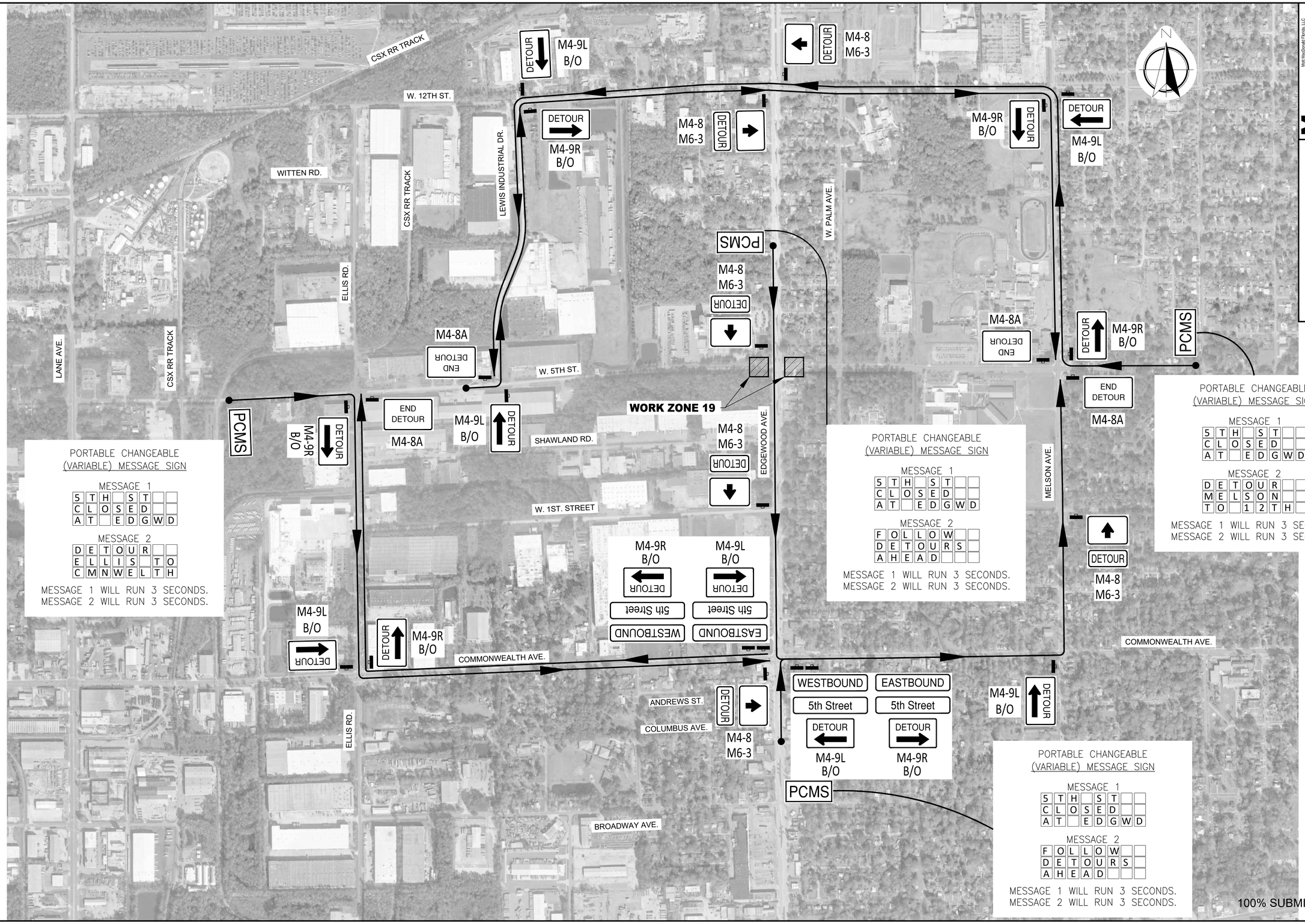
JEA Building Community

5TH STREET FORCE MAIN
TEMPORARY TRAFFIC CONTROL PLAN
WORK ZONE 10 & 12 DETOUR

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: NTS

NO. SHEETS 88
SHEET NO. 79
DRAWING NO. TTC-19

100% SUBMITTAL



Mott MacDonald Florida, LLC
9432 Baymeadows Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 203-1090
Architects AA - C000000335
Engineers EB - 0000155
Surveyors LB - 0000152

MOTT MACDONALD

C&ES
Construction & Engineering Services Consultants, Inc.
9432 Baymeadows Road, Suite 100
Jacksonville, FL 32256
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DESIGN ENGINEER
CLARO NACU MAGPANTAY, P.E.
FLORIDA REGISTRATION NO.
60164

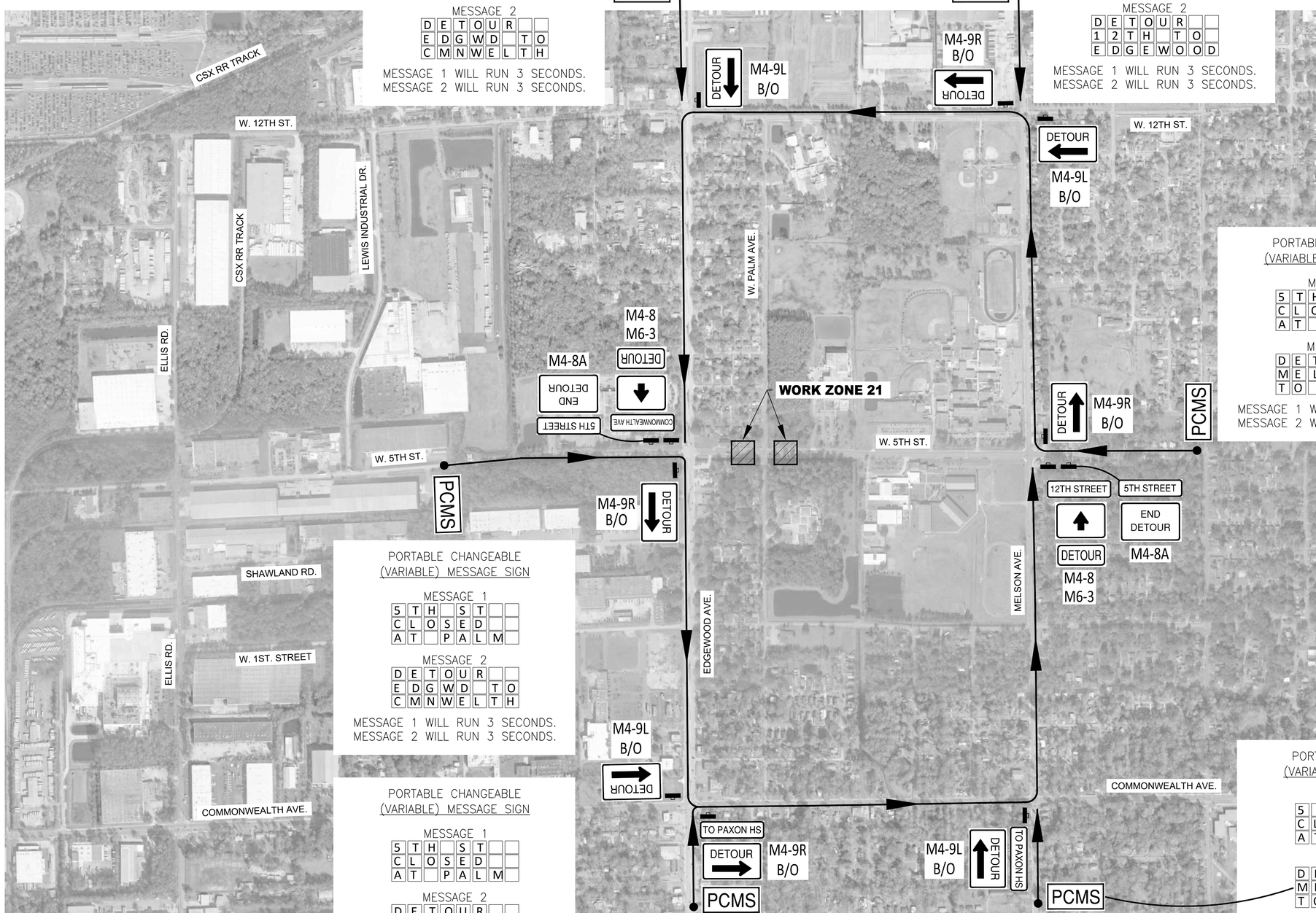
DESIGNER: C.N.M.
DRAWN BY: K.L.B.
DATE: JULY 2020
CHECKED BY: F.E.G.
DATE: JULY 2020

JEA Building Community

5TH STREET FORCE MAIN
TEMPORARY TRAFFIC CONTROL PLAN
WORK ZONE 19 DETOUR

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: NTS

NO. SHEETS 80
SHEET NO. 80
DRAWING NO. TTC-20



PORTABLE CHANGEABLE (VARIABLE) MESSAGE SIGN

MESSAGE 1: 5TH ST / CLOSED / AT PALM

MESSAGE 2: DETOUR / EDGWD TO / CMNWELTH

MESSAGE 1 WILL RUN 3 SECONDS.
MESSAGE 2 WILL RUN 3 SECONDS.

PORTABLE CHANGEABLE (VARIABLE) MESSAGE SIGN

MESSAGE 1: 5TH ST / CLOSED / AT PALM

MESSAGE 2: DETOUR / 12TH TO / EDGEWOOD

MESSAGE 1 WILL RUN 3 SECONDS.
MESSAGE 2 WILL RUN 3 SECONDS.

PORTABLE CHANGEABLE (VARIABLE) MESSAGE SIGN

MESSAGE 1: 5TH ST / CLOSED / AT PALM

MESSAGE 2: DETOUR / MELSON / TO 12TH

MESSAGE 1 WILL RUN 3 SECONDS.
MESSAGE 2 WILL RUN 3 SECONDS.

PORTABLE CHANGEABLE (VARIABLE) MESSAGE SIGN

MESSAGE 1: 5TH ST / CLOSED / AT PALM

MESSAGE 2: DETOUR / CMNWELTH / TO MELSN

MESSAGE 1 WILL RUN 3 SECONDS.
MESSAGE 2 WILL RUN 3 SECONDS.

PORTABLE CHANGEABLE (VARIABLE) MESSAGE SIGN

MESSAGE 1: 5TH ST / CLOSED / AT PALM

MESSAGE 2: DETOUR / MELSON / TO 12TH

MESSAGE 1 WILL RUN 3 SECONDS.
MESSAGE 2 WILL RUN 3 SECONDS.

100% SUBMITTAL

Mott MacDonald Florida, LLC
10117 Princeton Parkway North
Suite 320
Jacksonville, Florida 32256
Telephone: (904) 205-1090
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FLORIDA REGISTRATION NO.
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DESIGNER: C.N.M.
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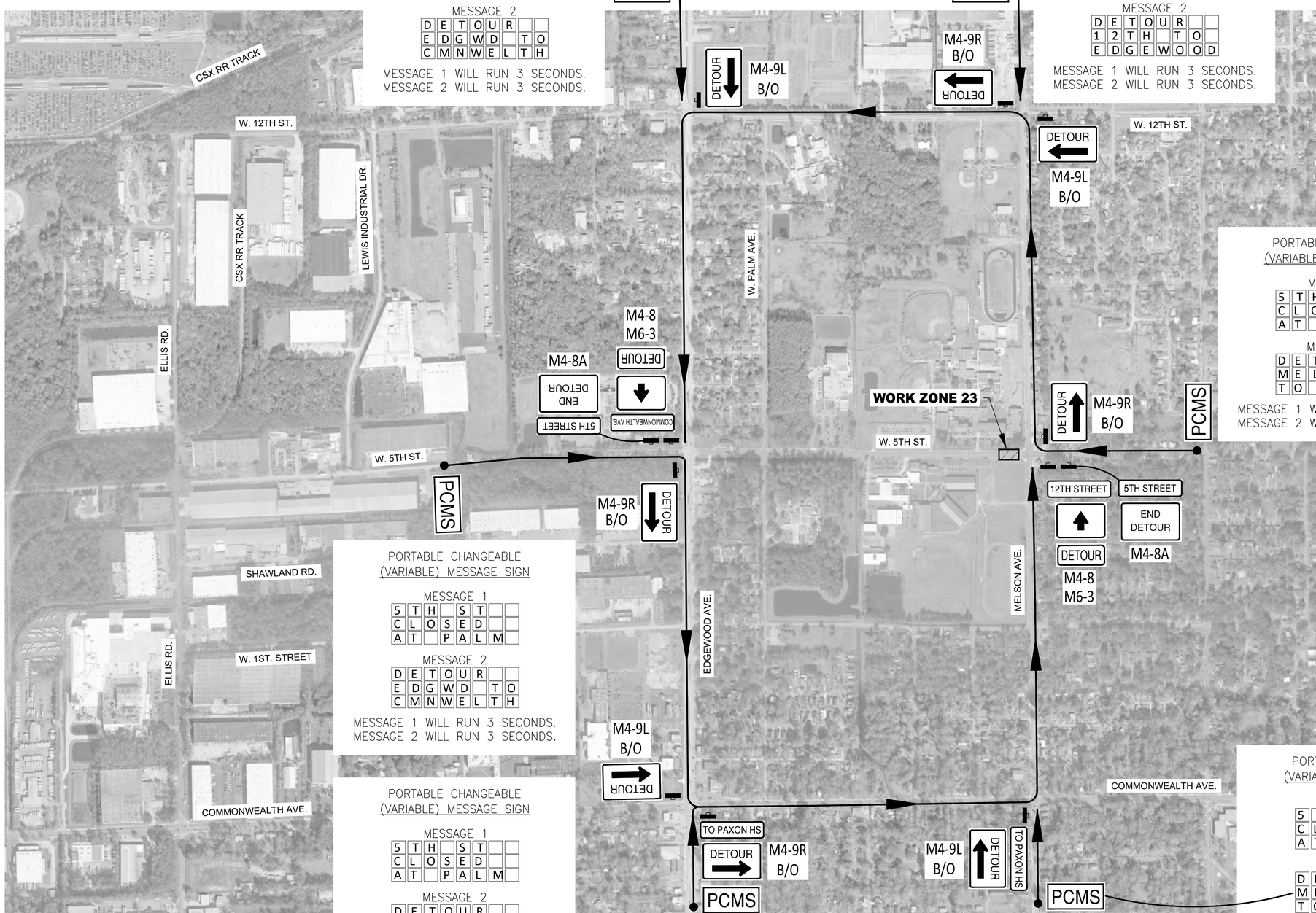
DATE: JULY 2020
CHECKED BY: F.E.G.
DATE: JULY 2020

JEA Building Community

5TH STREET FORCE MAIN
TEMPORARY TRAFFIC CONTROL PLAN
WORK ZONE 21 DETOUR

PROJ. NO. 50240368
DATE: JULY 2020
SCALE: NTS

NO. SHEETS 88
SHEET NO. 81
DRAWING NO. TTC-21



PORTABLE CHANGEABLE (VARIABLE) MESSAGE SIGN

MESSAGE 1
5TH ST
CLOSED
AT PALM

MESSAGE 2
DETOUR
EDGWD TO
CMNWELTH

MESSAGE 1 WILL RUN 3 SECONDS.
MESSAGE 2 WILL RUN 3 SECONDS.

PORTABLE CHANGEABLE (VARIABLE) MESSAGE SIGN

MESSAGE 1
5TH ST
CLOSED
AT PALM

MESSAGE 2
DETOUR
12TH TO
EDGEWOOD

MESSAGE 1 WILL RUN 3 SECONDS.
MESSAGE 2 WILL RUN 3 SECONDS.

PORTABLE CHANGEABLE (VARIABLE) MESSAGE SIGN

MESSAGE 1
5TH ST
CLOSED
AT PALM

MESSAGE 2
DETOUR
MELSON
TO 12TH

MESSAGE 1 WILL RUN 3 SECONDS.
MESSAGE 2 WILL RUN 3 SECONDS.

PORTABLE CHANGEABLE (VARIABLE) MESSAGE SIGN

MESSAGE 1
5TH ST
CLOSED
AT PALM

MESSAGE 2
DETOUR
CMNWELTH
TO MELSN

MESSAGE 1 WILL RUN 3 SECONDS.
MESSAGE 2 WILL RUN 3 SECONDS.

PORTABLE CHANGEABLE (VARIABLE) MESSAGE SIGN

MESSAGE 1
5TH ST
CLOSED
AT PALM

MESSAGE 2
DETOUR
MELSON
TO 12TH

MESSAGE 1 WILL RUN 3 SECONDS.
MESSAGE 2 WILL RUN 3 SECONDS.

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FLORIDA REGISTRATION NO.
60164

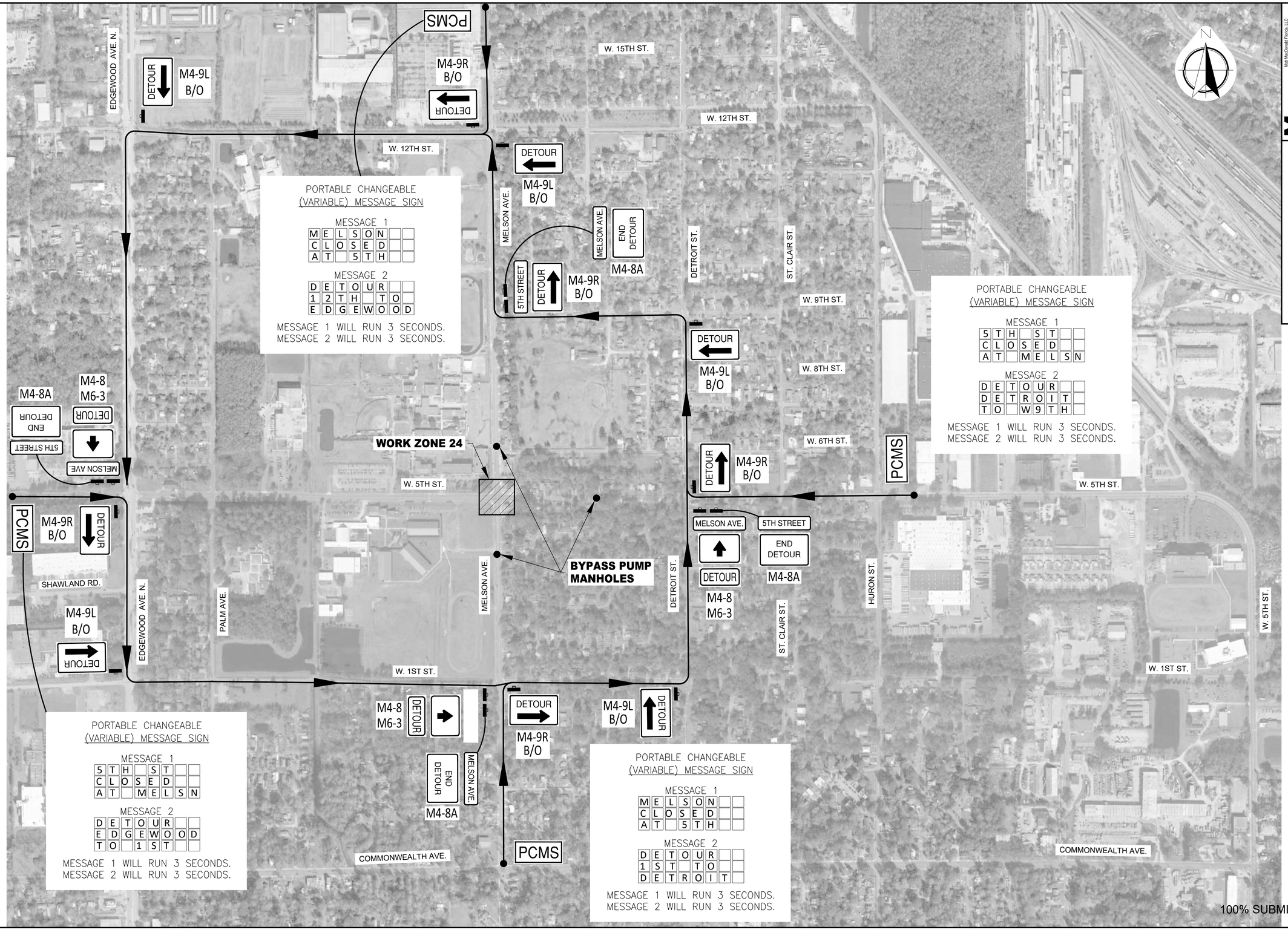
DESIGNER: C.N.M.
DRAWN BY: K.L.B.
DATE: JULY 2020
CHECKED BY: F.E.G.
DATE: JULY 2020

JEA Building Community

5TH STREET FORCE MAIN
TEMPORARY TRAFFIC CONTROL PLAN
WORK ZONE 23 DETOUR

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: NTS

NO. SHEETS 88
SHEET NO. 82
DRAWING NO. TTC-22



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Suite 320
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Telephone: (904) 203-1090
Architects AA - C000000335
Engineers EB - 0000155
Surveyors LB - 0000152

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Services Consultants, Inc.
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60164

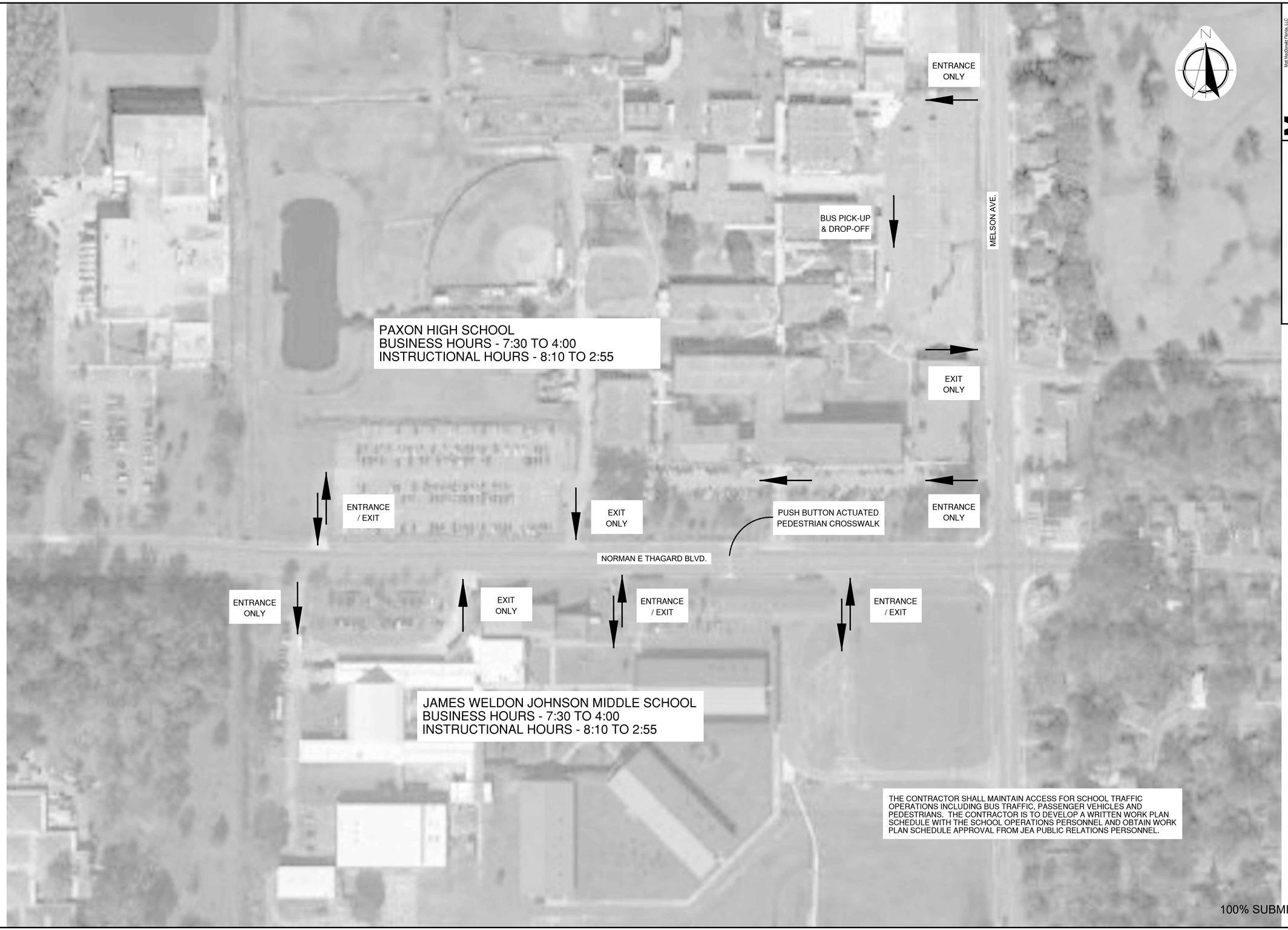
DESIGNER: C.N.M.
DRAWN BY: K.L.B.
DATE: JULY 2020
CHECKED BY: F.E.G.
DATE: JULY 2020

JEA Building Community

5TH STREET FORCE MAIN
TEMPORARY TRAFFIC CONTROL PLAN
WORK ZONE 24 DETOUR

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: NTS

NO. SHEETS 88
SHEET NO. 83
DRAWING NO. TTC-23



THE CONTRACTOR SHALL MAINTAIN ACCESS FOR SCHOOL TRAFFIC OPERATIONS INCLUDING BUS TRAFFIC, PASSENGER VEHICLES AND PEDESTRIANS. THE CONTRACTOR IS TO DEVELOP A WRITTEN WORK PLAN SCHEDULE WITH THE SCHOOL OPERATIONS PERSONNEL AND OBTAIN WORK PLAN SCHEDULE APPROVAL FROM JEA PUBLIC RELATIONS PERSONNEL.

100% SUBMITTAL

Mott MacDonald Florida, LLC
Construction & Engineering Services
9432 Baymeadows Parkway North
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Telephone: (904) 203-1050
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DRAWN BY: K.L.B.
DATE: JULY 2020
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DATE: JULY 2020

JEA Building Community sm

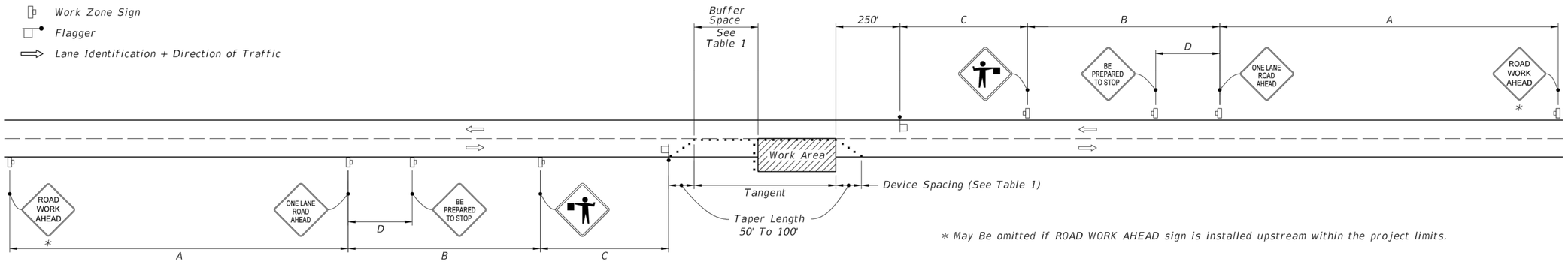
5TH STREET FORCE MAIN
TRAFFIC FLOW PLAN AT SCHOOLS
WORK ZONES 22, 23 AND 24

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: NTS

NO. SHEETS 89
SHEET NO. 84
DRAWING NO. TTC-24

SYMBOLS:

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Flagger
- Lane Identification + Direction of Traffic



* May Be omitted if ROAD WORK AHEAD sign is installed upstream within the project limits.

WITHOUT TEMPORARY RAISED RUMBLE STRIPS

GENERAL NOTES:

1. Special Conditions may be required in accordance with these notes and the following sheets:

   A. Railroad Crossings:
      a. If an active railroad crossing is located closer to the Work Area than the queue length plus 300 feet, extend the Buffer Space as shown on Sheet 3.
      b. If the queuing of vehicles across an active railroad crossing cannot be avoided, provide a uniformed traffic control officer or flagger at the highway-rail grade crossing to prevent vehicles from stopping within the highway-rail grade crossing, even if automatic train warning devices are in place.
   B. If the Work Area encroaches on the Centerline, use the Layout for Temporary Lane Shift to Shoulder on Sheet 3 only if the Existing Paved Shoulder width is sufficient to provide for an 11' lane between the Work Area and the Edge of Existing Paved Shoulder. Reduce the posted speed when appropriate.

2. Temporary Raised Rumble Strips:

   A. Use when both of the following conditions are met concurrently:
      a. Existing Posted Speed is 55 mph or greater;
      b. Work duration is greater than 60 minutes.
   B. Use a consistent Strip color throughout the work zone.
   C. Place each Rumble Strip Set transversely across the lane at locations shown.
   D. Use Option 1 or Option 2 as shown on Sheet 2. Use only one option throughout work zone.

3. Additional one-way control may be provided by the following means:
   A. Flag-carrying vehicle;
   B. Official vehicle;
   C. Pilot vehicles;
   D. Traffic signals.

   When flaggers are the sole means of one-way control, the flaggers must be in sight of each other or in direct communication at all times.

4. When a side road intersects the highway within the TTC zone, place additional TTC devices in accordance with other applicable TCZ Indexes.

5. The two channelizing devices directly in front of the work area may be omitted provided vehicles in the work area have high-intensity rotating, flashing, oscillating, or strobe lights operating.

6. When Buffer Space cannot be attained due to geometric constraints, use the greatest attainable length, not less than 200 ft, for posted speeds greater than 25 mph.

7. ROAD WORK AHEAD and the BE PREPARED TO STOP signs may be omitted if all of the following conditions are met:

   A. Work operations are 60 minutes or less.
   B. Speed limit is 45 mph or less.
   C. There are no sight obstructions to vehicles approaching the work area for a distance equal to the Buffer Space shown in Table 1.
   D. Vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.
   E. Volume and complexity of the roadway has been considered.
   F. If a railroad crossing is present, vehicles will not queue across rail tracks.
   G. AFADs are not in use.

8. See Index 102-600 for general TCZ requirements and additional information.

9. Automated Flagger Assistance Devices (AFADs) may be used in accordance with Specifications Section 102, 990 and the APL vendor drawings.

TABLE 1

Posted Speed	DEVICE SPACING: Maximum Spacing of Cones or Tubular Markers		DEVICE SPACING: Maximum Spacing of Type I or Type II Barricades/Panels/Drums		Distance Between Signs				Buffer Space
	On a Taper	On a Tangent	On a Taper	On a Tangent	A	B	C	D	
25	20'	50'	20'	50'	200'	200'	200'	100'	155'
30	20'	50'	20'	50'	200'	200'	200'	100'	200'
35	20'	50'	20'	50'	200'	200'	200'	100'	250'
40	20'	50'	20'	50'	200'	200'	200'	100'	305'
45	20'	50'	20'	50'	350'	350'	350'	175'	360'
50	20'	50'	20'	100'	500'	500'	500'	250'	425'
55	20'	50'	20'	100'	2640'	1500'	1000'	500'	495'
60	20'	50'	20'	100'	2640'	1500'	1000'	500'	570'
65	20'	50'	20'	100'	2640'	1500'	1000'	500'	645'
70	20'	50'	20'	100'	2640'	1500'	1000'	500'	730'

CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH THE AREA BETWEEN THE CENTERLINE AND A LINE 2' OUTSIDE THE EDGE OF TRAVEL WAY.

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2019-20 STANDARD PLANS	TWO-LANE, TWO-WAY, WORK WITHIN THE TRAVEL WAY	INDEX	SHEET
11/01/17						102-603	1 of 3

100% SUBMITTAL

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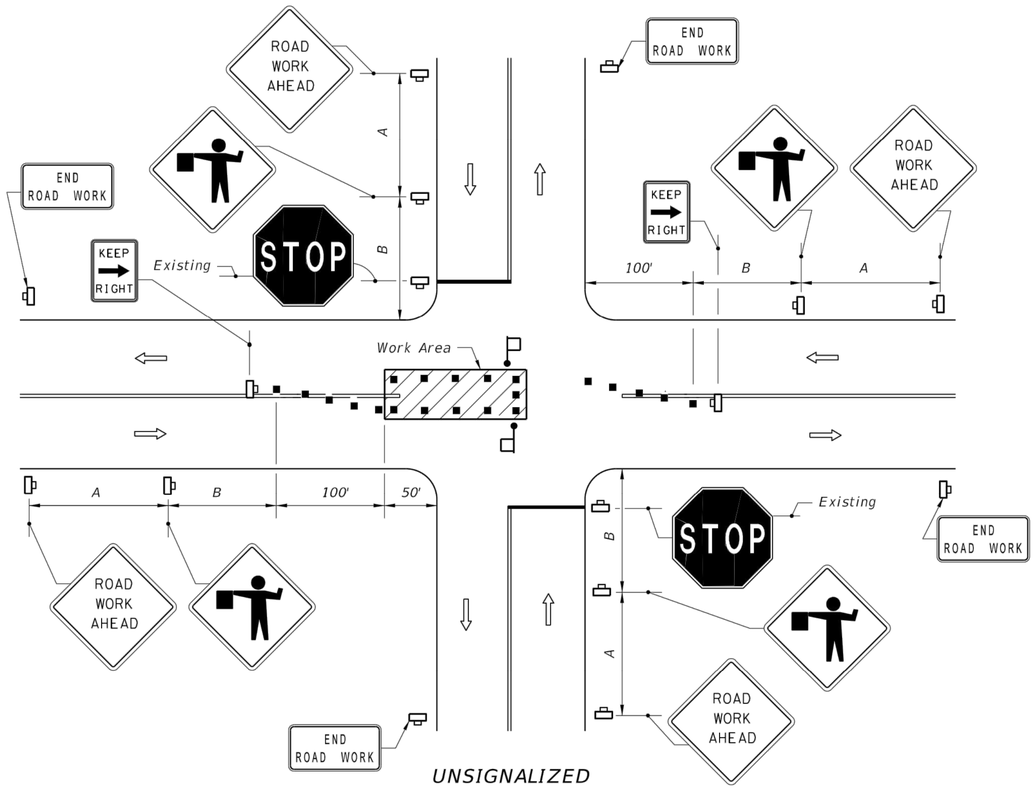
JEA Building Community

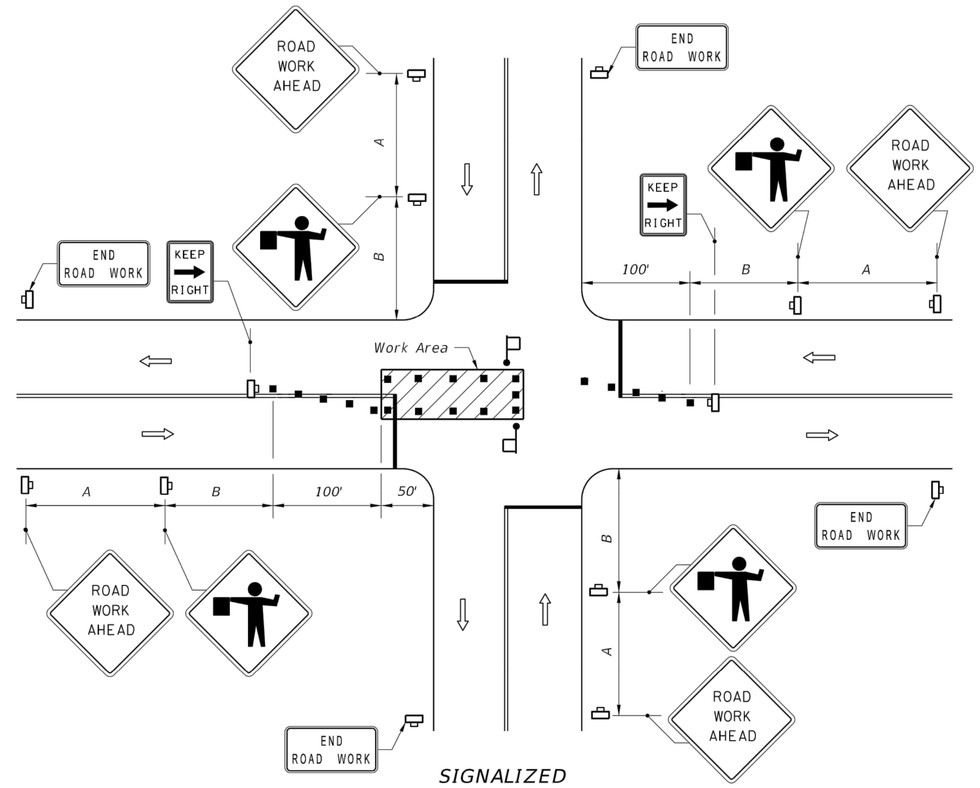
5TH STREET FORCE MAIN
TEMPORARY TRAFFIC CONTROL DETAILS
FDOT INDEX 102-603

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: NONE

NO. SHEETS 88
SHEET NO. 85
DRAWING NO. TTC-23



UNSIGNALIZED



SIGNALIZED

SYMBOLS

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Flagger
- Stop Bar
- Lane Identification + Direction of Traffic

GENERAL NOTES

1. The FLAGGER legend sign may be substituted for the symbol sign.
2. When vehicles in a parking zone block the line of sight to TCZ signs, the signs shall be post mounted and located in accordance with Index 700-101.
3. If the work space extends across a crosswalk, the crosswalk should be closed using the information in Index 102-660.
4. Flaggers shall be located where they can control more than one direction of traffic.

   Flaggers shall be in sight of each other or in direct communication at all times.
5. Maximum spacing between channelizing devices shall be not greater than 20'.
6. Temporary signal phasing modifications are to be approved by the District Traffic Operations Engineer prior to the beginning of work.
7. For general TCZ requirements and additional information, refer to Index 102-600.
8. For unsignalized intersections, use Temporary Raised Rumble Strips in accordance with Index 102-603. Placement of Rumble Strips and additional signs should begin at FLAGGER sign location.

DURATION NOTES

1. ROAD WORK AHEAD AND END ROAD WORK sign may be omitted if all of the following conditions are met:
   a. Work operations are 60 minutes or less.
   b. Speed is 45 mph or less.
   c. No sight obstructions to vehicles approaching the work area for a distance equal to A plus B.
   d. Vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.
   e. Volume and complexity of the roadway has been considered.

DISTANCE BETWEEN SIGNS

Speed	Spacing (ft.)	
	A	B
40 mph or less	200	200
45 mph	350	350

CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH ON THE PAVEMENT REQUIRING THE CLOSURE OF A PORTION OF ONE OR MORE TRAFFIC LANES IN AN INTERSECTION.

LAST REVISION	REVISION	DESCRIPTION:
11/01/17		

FY 2019-20 STANDARD PLANS

TWO-LANE, TWO-WAY, WORK IN INTERSECTION

INDEX 102-604

SHEET 1 of 1

100% SUBMITTAL

9/18/2018 10:25:01 AM

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CHECKED BY: F.E.G.
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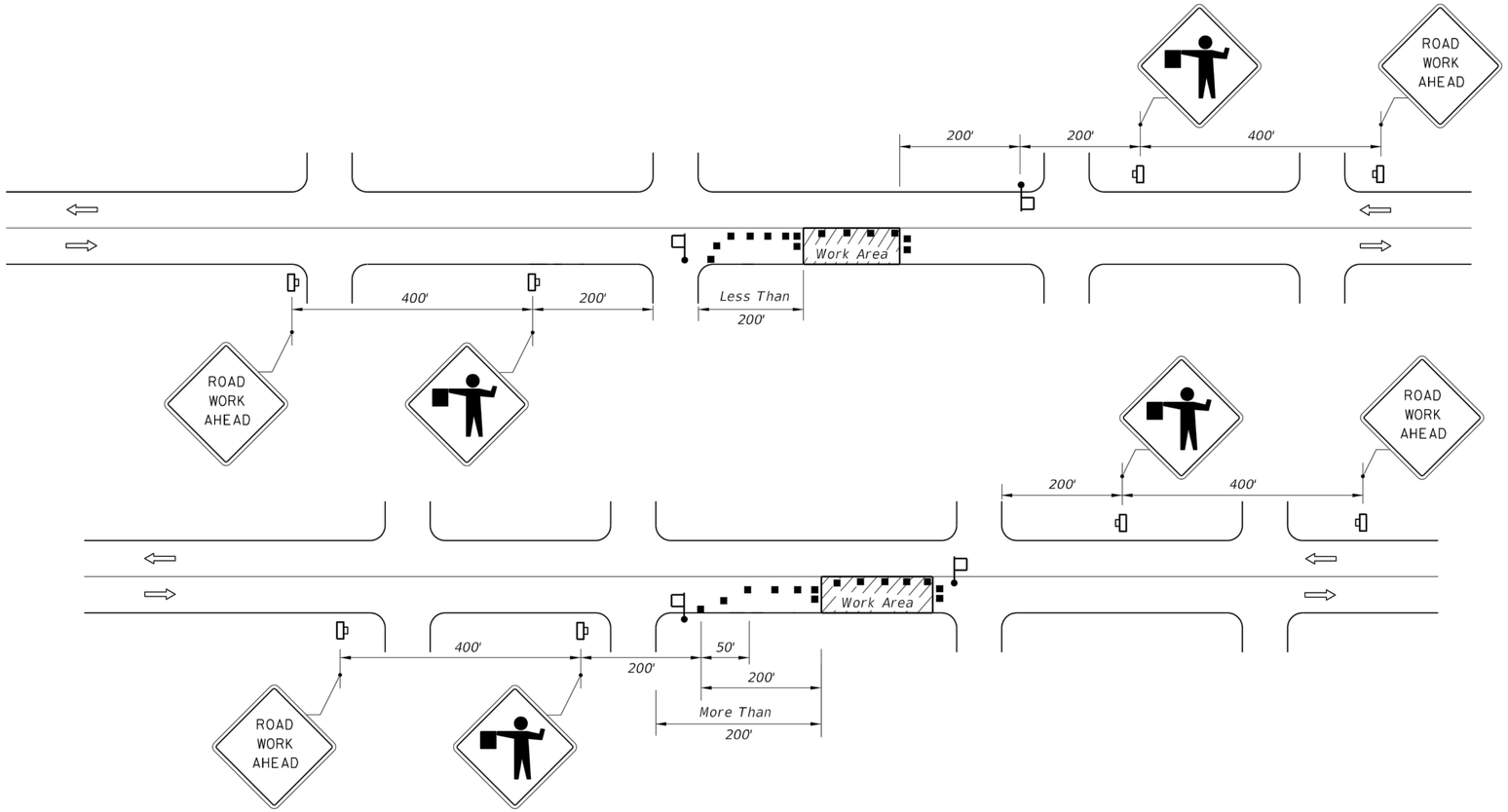
5TH STREET FORCE MAIN
TEMPORARY TRAFFIC CONTROL DETAILS
FDOT INDEX 102-604

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: NONE

NO. SHEETS 88
SHEET NO. 86
DRAWING NO. TTC-20



CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH ON THE PAVEMENT REQUIRING THE CLOSURE OF ONE TRAFFIC LANE, FOR WORK AREAS LESS THAN 200' DOWNSTREAM FROM AN INTERSECTION FOR A PERIOD OF MORE THAN 60 MINUTES.

CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH ON THE PAVEMENT REQUIRING THE CLOSURE OF ONE TRAFFIC LANE, FOR WORK AREAS 200' OR MORE DOWNSTREAM FROM AN INTERSECTION FOR A PERIOD OF MORE THAN 60 MINUTES.

SYMBOLS

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Flagger
- Lane Identification + Direction of Traffic

GENERAL NOTES

1. Work operations shall be confined to one travel lane, leaving the opposing travel lane open to traffic.
2. When vehicles in a parking zone block the line of sight to TCZ signs or when TCZ signs encroach on a normal pedestrian walkway, the signs shall be post mounted and located in accordance with Index 700-101.
3. If work area is confined to an outside auxiliary lane, the work area shall be barricaded and the FLAGGER signs replaced by ROAD WORK AHEAD signs. Flaggers are not required.
4. Flaggers shall be in sight of each other or in direct communication at all times.
5. The FLAGGER legend sign may be substituted for the symbol sign.
6. The maximum spacing between devices shall be no greater than 25.'
7. For general TCZ requirements and additional information, refer to Index 102-600.
8. The two channelizing devices directly in front and directly at the end of the work area may be omitted provided vehicles in the work area have high-intensity rotating, flashing, oscillating, or strobe lights operating.
9. Use Temporary Raised Rumble Strips in accordance with Index 102-603. Placement of Rumble Strips and additional signs should begin at FLAGGER sign location.

DURATION NOTES

1. ROAD WORK AHEAD sign may be omitted if all of the following conditions are met:

   a. Work operations are 60 minutes or less.
   b. Speed is 45 mph or less.
   c. No sight obstructions to vehicles approaching the work area for a distance of 600 feet.
   d. Vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.
   e. Volume and complexity of the roadway has been considered.

LAST REVISION	REVISION	DESCRIPTION:	FY 2019-20 STANDARD PLANS	TWO-LANE, TWO-WAY, WORK NEAR INTERSECTION	INDEX	SHEET
11/01/17					102-605	1 of 1

100% SUBMITTAL

9/18/2018 10:25:41 AM

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5TH STREET FORCE MAIN
TEMPORARY TRAFFIC CONTROL DETAILS
FDOT INDEX 102-605

PROJ. NO. 502402368
DATE: JULY 2020
SCALE: NONE

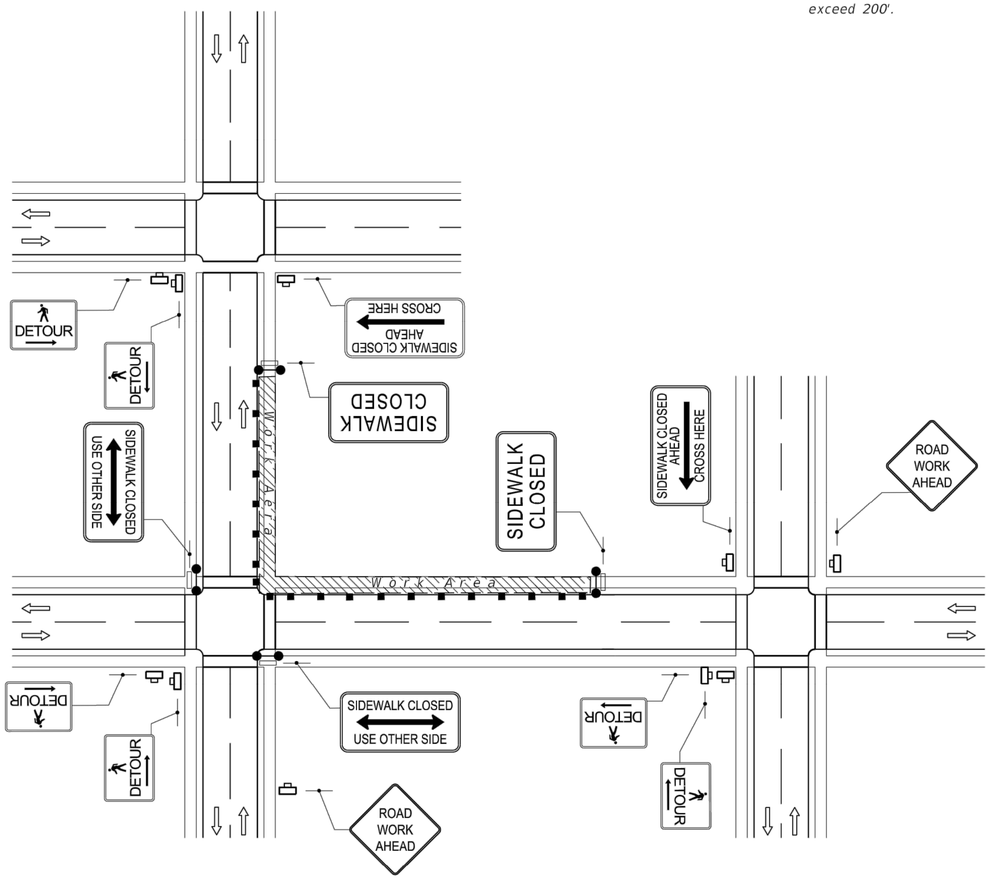
NO. SHEETS 88
SHEET NO. 87
DRAWING NO. TTC-27

SYMBOLS

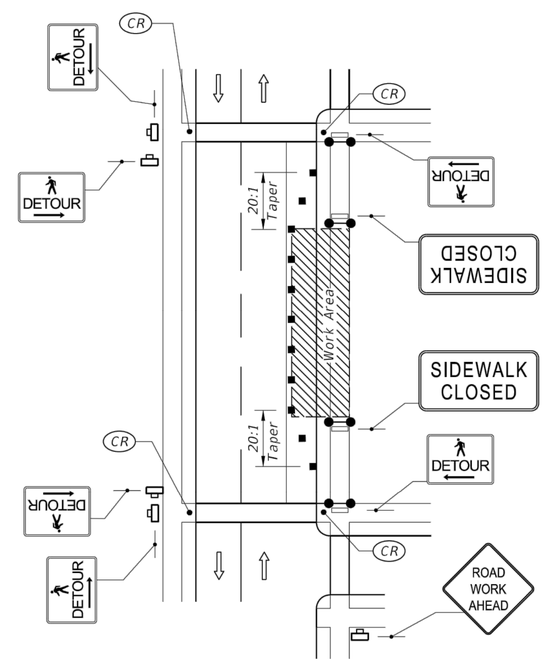
- Work Area
- Channelizing Device
- Work Zone Sign
- CR — Required Locations For Either Temporary Or Permanent Curb Ramps.
- Lane Identification + Direction of Traffic
- Pedestrian Longitudinal Channelizing Device (LCD) with Mounted Work Zone Sign or separate Work Zone Sign
- Pedestrian Longitudinal Channelizing Device (LCD)
- Temporary Sidewalk

GENERAL NOTES:

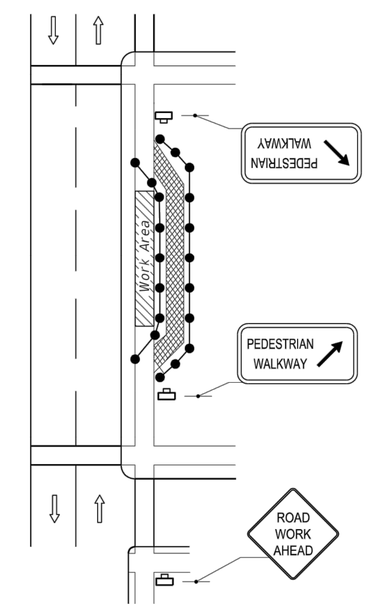
1. When encroaching work requires a sidewalk closure for 60 minutes or greater, provide an alternate pedestrian route.
2. For spacing of vehicular Channelizing Devices, see applicable vehicular temporary traffic control Indexes.
3. Cover or deactivate pedestrian traffic signal display(s) controlling closed crosswalks.
4. For post mounted signs located near or adjacent to a sidewalk, maintain a minimum 7' clearance from the bottom of the sign panel to the surface of the sidewalk.
5. Provide a 5' wide temporary walkway, except where space restrictions warrant a minimum width of 4'. Provide a 5' x 5' passing space for temporary walkways less than 5' in width at intervals not to exceed 200'.
6. Provide a cross-slope with a maximum value of 0.02 for all temporary walkways.
7. Maintain temporary walkway surfaces and ramps that are stable, firm, slip-resistant, and free of any obstructions or hazards such as holes, debris, mud, construction equipment, and stored material.
8. Remove temporary walkways immediately after reopening of the sidewalk, unless otherwise noted in the plans.
9. Meet the requirements of Index 522-002 for temporary curb ramps.
10. Place pedestrian longitudinal channelizing device(s) across the full width of the closed sidewalk. For temporary walkways, similar to the Sidewalk Diversion, place LCDs to delineate both sides of the temporary walkway.
11. For sidewalk diversions, ensure that there is sufficient R/W for placement of temporary sidewalk and pedestrian longitudinal channelizing devices.



CROSSWALK CLOSURE AND PEDESTRIAN DETOUR



SIDEWALK DETOUR



SIDEWALK DIVERSION

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2019-20 STANDARD PLANS	PEDESTRIAN CONTROL FOR CLOSURE OF SIDEWALKS	INDEX	SHEET
11/01/17						102-660	1 of 1

100% SUBMITTAL

10/24/2018 7:36:35 AM

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5TH STREET FORCE MAIN
TEMPORARY TRAFFIC CONTROL DETAILS
FDOT INDEX 102-660

PROJ. NO. 502402368
DATE: JULY 2020
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NO. SHEETS 88
SHEET NO. 88
DRAWING NO. TTC-29