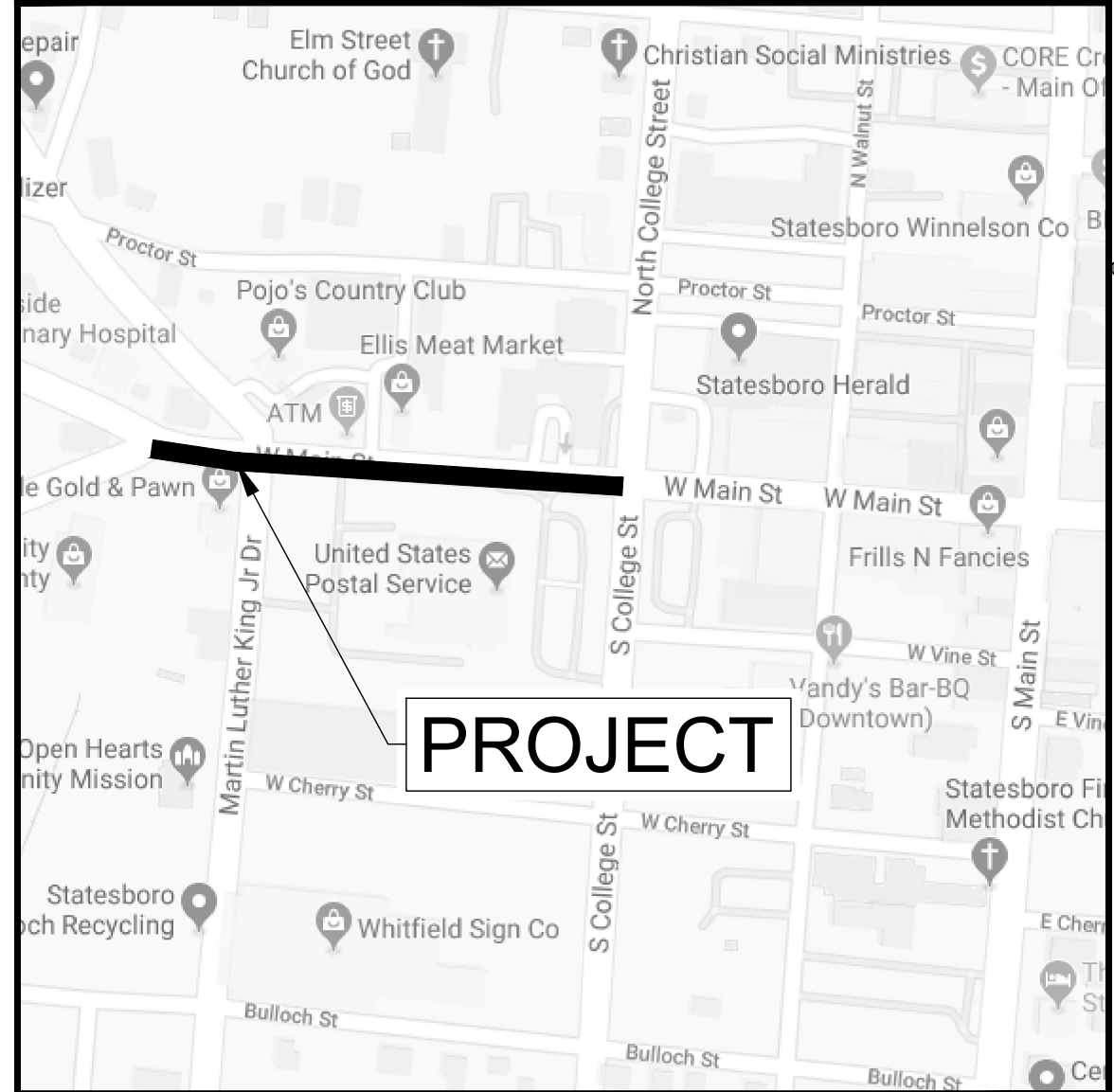
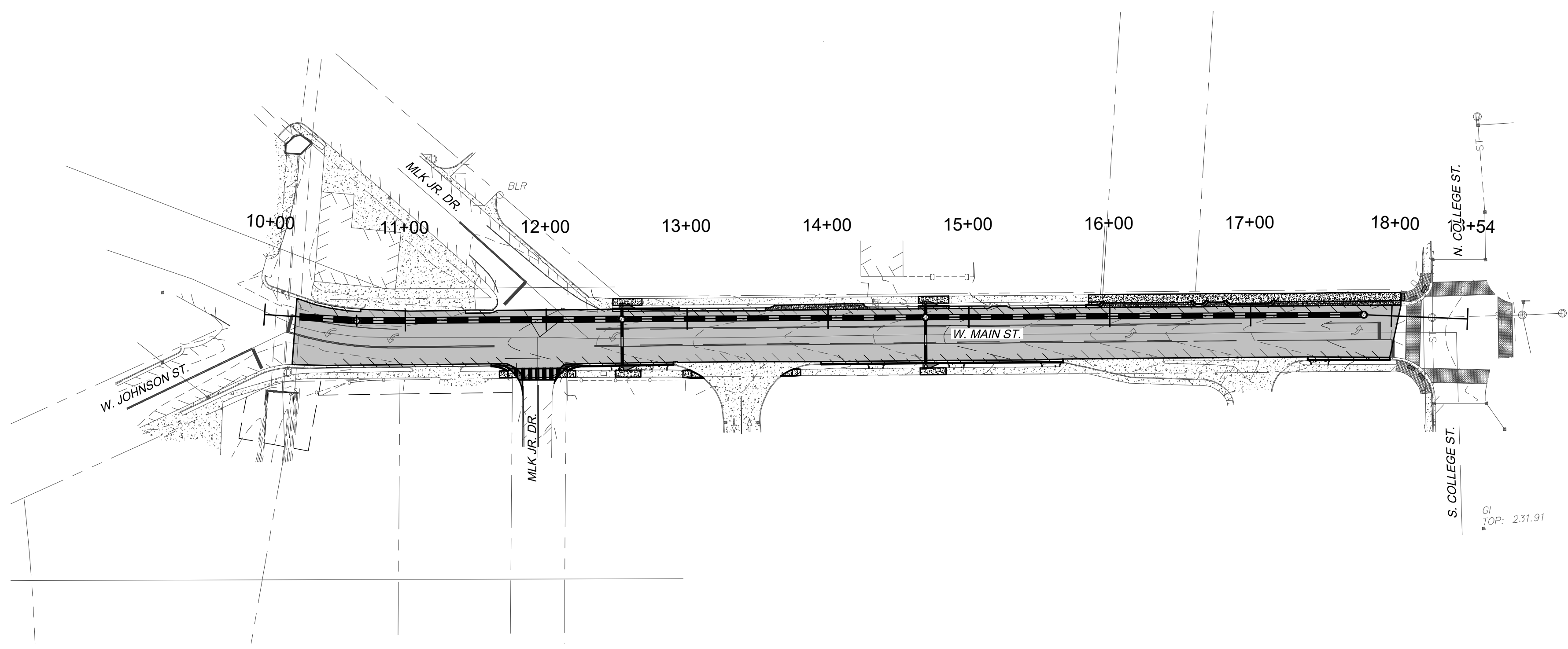


# CONSTRUCTION PLANS FOR WEST MAIN STREET DRAINAGE IMPROVEMENTS STATESBORO, BULLOCH COUNTY, GEORGIA

Prepared for  
CITY OF STATESBORO



VICINITY MAP  
NOT TO SCALE



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06	CONSTRUCTION DETAILS
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**UTILITY LOCATION DISCLAIMER**

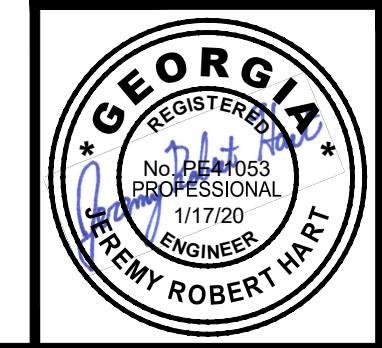
THE UTILITIES ARE SHOWN AS PER THE LOCATION OF POLES, MANHOLES, VALVES, PEDESTALS, ETC., EXISTING DRAWINGS AND INFORMATION PROVIDED BY UTILITY PERSONNEL. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE THE EXACT LOCATION INDICATED, ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE.

PROJECT LOCATION:  
1209TH GEORGIA MILITIA DISTRICT  
STATESBORO, BULLOCH COUNTY, GEORGIA  
EMC PROJECT# 19-2042  
January 24, 2020

REVISION	DESCRIPTION	DATE
01	35% Design	10/10/19
02	65% Design	12/09/19
03	100% Design	01/27/20
04	BID REVISIONS	08/13/20
-	-	-
-	-	-
-	-	-



**EMC ENGINEERING SERVICES, INC.**  
ENVIRONMENTAL- MARINE - CIVIL - SURVEY



EMC ENGINEERING SERVICES, INC.  
P.O. BOX 2088  
1211 MERCHANT WAY, SUITE 201  
STATESBORO, GEORGIA 30458  
PHONE: (912) 764-7022  
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statesboro@emc-eng.com  
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ALBANY • ATLANTA • AUGUSTA • BRUNSWICK • COLUMBUS • SAVANNAH  
STATESBORO • THOMASTON • VALDOSTA • WARNER ROBINS

PROJECT DESCRIPTION:

- 1. THE CLIENT'S INTENT IS TO REMOVE AND REPLACE A SECTION OF A DEFICIENT EXISTING STORM SEWER SYSTEM INCLUDING TRUNK LINE AND SIDE DRAIN STRUCTURES ALONG WEST MAIN STREET.
2. AN EXISTING CONDITIONS / TOPOGRAPHIC SURVEY OF THIS PARCEL WAS PERFORMED BY EMC ENGINEERING SERVICES, INC ON JUNE 14, 2019.
3. THE PROJECT IS LOCATED ALONG WEST MAIN STREET IN THE 1209TH GEORGIA MILITIA DISTRICT, STATESBORO, BULLOCH COUNTY, GEORGIA.
4. EMC REVIEWED THE U.S. FISH AND WILDLIFE SERVICE NATIONAL WETLAND INVENTORY (NWI) MAP, WHICH DOCUMENTED NO REGULATED WETLANDS ON THE SUBJECT PROPERTY OR ADJOINING PROPERTIES.
5. THERE ARE WATERS OF THE STATE PRESENT WITHIN 200 FEET OF THE DISTURBED AREA.
6. THERE ARE NO IMPAIRED STREAM SEGMENTS WITHIN ONE MILE OF THE PROJECT SITE.
7. THE INITIAL RECEIVING WATER FOR STORMWATER RUNOFF FROM THE SITE IS A STORM WATER CANAL SYSTEM WHICH FLOWS INTO LITTLE LOTS CREEK THAT IS CONSIDERED A WARM WATER FISHERY.
8. THE PROPERTY SHOWN HEREON IS LOCATED ON MAP NO. 130310208D OF THE FEMA FLOOD INSURANCE RATE MAP COVERING CITY OF STATESBORO, EFFECTIVE DATE: AUGUST 5, 2010, AND SHOWS THAT PORTIONS OF THIS PROJECT ARE LOCATED IN A DESIGNATED FLOOD HAZARD AREA.
9. THE POINT OF CONTACT FOR CIVIL SITE WORK FOR THIS PROJECT IS:
ENGINEER OF RECORD / PROJECT MANAGER:
JEREMY R. HART, PE
EMC ENGINEERING SERVICES INC.
PO BOX 2086
1211 MERCHANT WAY, SUITE 201
STATESBORO, GEORGIA 30458
PHONE: (912) 764-7022
jeremy\_hart@emc-eng.com
DEVELOPER/OWNER:
MARCOS TREJO, JR., STORMWATER MANAGER
CITY OF STATESBORO
50 EAST MAIN STREET
STATESBORO, GEORGIA 30458
PHONE: (912) 764-0647
10. TWENTY-FOUR HOUR CONTACT RESPONSIBLE FOR EROSION AND SEDIMENT CONTROL:
MARCOS TREJO, JR.
(912) 764-0647

GENERAL NOTES:

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY AND ALL WAYS, MEANS, AND METHODS OF CONSTRUCTION.
2. THE SAFE AND ORDERLY PASSAGE OF TRAFFIC AND PEDESTRIANS SHALL BE PROVIDED WHERE CONSTRUCTION OPERATIONS ABUT PUBLIC THROUGH-FARES AND ADJACENT PROPERTY.
3. THE CONTRACTOR WILL COORDINATE THE WORK WITH THE UTILITY COMPANIES AND WILL VERIFY ALL EXISTING PIPE INVERTS AND EXISTING ROAD ELEVATIONS PRIOR TO CONSTRUCTION.
4. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT ALL REQUIRED PERMITS ARE OBTAINED AND IN HAND PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
5. THE DATA, TOGETHER WITH ALL OTHER INFORMATION SHOWN ON THESE PLANS, OR IN ANY WAY INDICATED THEREBY, WHETHER BY DRAWINGS OR NOTES, OR IN ANY OTHER MANNER, ARE BASED UPON FIELD INVESTIGATIONS AND ARE BELIEVED TO BE INDICATIVE OF ACTUAL CONDITIONS, HOWEVER, THE SAME ARE SHOWN AS INFORMATION ONLY, ARE NOT GUARANTEED AND DO NOT BIND THE ENGINEER IN ANY WAY.
6. UNDERGROUND UTILITY INFORMATION SHOWN HEREON IS BASED ON GROUND MARKINGS BY OTHERS. NO CERTIFICATION IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THIS INFORMATION. VISIBLE EVIDENCE OF UTILITY STRUCTURES OBSERVED DURING THE COURSE OF THE FIELD SURVEY IS SHOWN HEREON.
7. PRIOR TO INSTALLATION OF ANY UTILITY LINES, THE CONTRACTOR SHALL GIVE THE UTILITY COMPANIES THREE (3) WORKING DAYS NOTICE TO ALLOW TIME FOR EXISTING UTILITIES TO BE STAKED. BEFORE CALLING (811) THE CONTRACTOR SHALL HAVE THE FOLLOWING INFORMATION READY: COUNTY, TOWN, LOCATION, NEAREST STREET INTERSECTIONS, TYPE OF WORK (SEWER, WATER, PAVING, ETC.) YOUR COMPANY NAME, TELEPHONE NUMBER, OWNER'S NAME, DATE AND TIME YOU EXPECT TO COMMENCE CONSTRUCTION, AND WHERE AND HOW YOU CAN BE REACHED AND THE BEST TIME TO CONTACT YOU. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING AN UNDERGROUND UTILITY, WHETHER SHOWN ON THE PLAN OR LOCATED BY THE UTILITY COMPANY. ALL UTILITIES WHICH INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE RELOCATED BY THE RESPECTIVE UTILITY COMPANIES, AND THE CONTRACTOR SHALL COOPERATE WITH THEM DURING RELOCATION OPERATIONS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY VARIANCES PRIOR TO COMMENCEMENT OF WORK OR PURCHASING ANY MATERIALS.
8. IT IS THE OBLIGATION OF THE CONTRACTOR TO MAKE HIS OWN INTERPRETATION OF ALL SURFACE AND SUBSURFACE DATA THAT IS AVAILABLE AS TO THE NATURE AND EXTENT OF THE MATERIALS TO BE EXCAVATED AND WASTED, AND/OR GRADED AND COMPACTED. THE INFORMATION SHOWN ON THESE PLANS AND SPECIFICATIONS DOES NOT IN ANY WAY GUARANTEE THE AMOUNT OR NATURE OF THE MATERIAL WHICH MAY BE ENCOUNTERED.
9. ALL DISTURBED AREAS, NOT DESIGNATED TO BE PAVED, SHALL BE GRASSED WITH TEMPORARY SEEDING OR PLANTED WITH PERMANENT VEGETATION, EXCEPT WHERE PROPOSED CONSTRUCTION INDICATES OTHERWISE.
10. THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND FURNISHING OF BORROW MATERIAL AS NECESSARY FOR THE CONSTRUCTION OF THIS PROJECT. FILL MATERIAL SHALL BE CLEAN AND FREE OF ALL DEBRIS AND ORGANIC MATERIAL.
11. ALL ITEMS REMOVED FROM THE PROJECT WHICH ARE NOT TO BE REUSED SHALL BE MOVED TO A LOCATION APPROVED BY THE OWNER.
12. ALL STRIPING AND SIGNS SHALL BE IN CONFORMITY WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITION.
13. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL/STAGING PLAN FOR ENGINEER REVIEW PRIOR TO CONSTRUCTION. PLAN SHALL BE IN ACCORDANCE WITH APPLICABLE DEPARTMENT OF TRANSPORTATION CONSTRUCTION STANDARDS AND DETAILS AND MANUAL ON UNIFORM TRAFFIC CONTROL, CURRENT EDITION.
14. CONTRACTOR SHALL MAINTAIN DRIVEWAY ACCESS TO ALL DRIVES THROUGHOUT THE DURATION OF CONSTRUCTION.
15. ANY SURVEY MARKER OR MONUMENTS DISTURBED DURING CONSTRUCTION REQUIRES RE-ESTABLISHMENT BY A LICENSED SURVEYOR AT THE CONTRACTOR'S EXPENSE.
16. ANY INFORMATION BY THE GOVERNING AGENCY INCLUDING BUT NOT LIMITED TO STANDARDS, REQUIREMENTS, SPECIFICATIONS, NOTES, AND DETAILS SUPERCEDE THE CONFLICTING INFORMATION HEREIN.
17. IF ANY CONFLICTS, DISCREPANCIES, OR OTHER UNSATISFACTORY CONDITIONS ARE DISCOVERED, EITHER ON THE CONSTRUCTION DOCUMENTS OR THE FIELD CONDITIONS, THE CONTRACTOR MUST NOTIFY THE ENGINEER IMMEDIATELY IN WRITING, AND SHALL NOT COMMENCE OPERATION UNTIL CONFLICTS, DISCREPANCIES, OR OTHER UNSATISFACTORY CONDITIONS ARE RESOLVED.
18. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE THROUGH THE DURATION OF CONSTRUCTION.
19. ANY ROADWAY SIGNAGE DISTURBED DURING CONSTRUCTION SHALL BE REPLACED IN ITS ORIGINAL LOCATION.

STORM SYSTEM NOTES:

- 1. ALL BORROW AND WASTE SITES FOR THIS PROJECT SHALL BE ENVIRONMENTALLY APPROVED PRIOR TO CONSTRUCTION ACTIVITIES. ALL COMMON FILL OR EXCESS MATERIAL DISPOSED OUTSIDE THE PROJECT RIGHT OF WAY SHALL BE PLACED IN EITHER A PERMITTED SOLID WASTE FACILITY, A PERMITTED INERT WASTE LANDFILL OR IN AN ENGINEERED FILL.
2. THERE IS NO SUITABLE PLACE TO DISPOSE OF CONSTRUCTION DEBRIS WITHIN THE PROJECTS LIMITS, THE CONTRACTOR SHALL PROVIDE AN ENVIRONMENTALLY APPROVED SITE TO DISPOSE OF CONSTRUCTION DEBRIS AT NO ADDITIONAL COST TO THE CLIENT.
3. THE CONTRACTOR SHALL KEEP ALL PROPOSED AND EXISTING STORM DRAINS AND STRUCTURES WITHIN THE PROJECT LIMITS CLEAN OF SEDIMENT DEPOSITS AND DEBRIS FOR THE DURATION OF THE CONTRACT. THE COST OF THIS WORK SHALL BE INCLUDED IN THE OVERALL BID PRICE.
4. ALL PROPOSED STORM DRAIN PIPE SHALL BE REINFORCED CONCRETE IN ACCORDANCE WITH GDOT STANDARD SPECIFICATIONS CONSTRUCTION OF TRANSPORTATION SYSTEMS CURRENT EDITION SECTION 550--STORM DRAIN PIPE, PIPE-ARCH CULVERTS, AND SIDE DRAIN PIPE CONCRETE PIPE AND BOX CULVERT CONCRETE PIPE AND BOX CULVERT JOINTS SHALL BE SEALED WITH AN EXTERIOR JOINT WRAP SIMILAR TO THE INFI-SHIELD SEAL WRAP. THE SEAL SHALL OVERLAP JOINT 4 INCHES AND BE MADE OF EPDM (ETHYLENE PROPYLENE DIENE MONOMER) RUBBER WITH A MINIMUM THICKNESS OF 85 MILS. EACH UNIT SHALL HAVE A MASTIC STRIP ON THE TOP AND BOTTOM EDGE OF THE RUBBER WRAP. THE MASTIC SHALL BE NON-HARDENING BUTYL RUBBER SEALANT, WITH A MINIMUM THICKNESS OF 250 MILS. THE SEAL SHALL BE DESIGNED TO PREVENT LEAKAGE OF WATER THROUGH THE JOINT SECTIONS OF A MANHOLE, CATCH BASIN OR CONCRETE PIPE.

PROPOSED FEATURES LEGEND

Legend for proposed features including Demolition, Erosion Control, Property, Utilities, Topography, and Pavement Hatching. Includes symbols for asphalt milling, erosion control, property lines, utilities, topography, and pavement types.

EXISTING FEATURES LEGEND

Legend for existing features including Symbols and Linetypes. Includes symbols for various found features like iron pipe, manholes, and linetypes for property lines, easements, and utilities.

Table with columns: NO., REVISION DESCRIPTION, DATE. Contains revision history for the project.



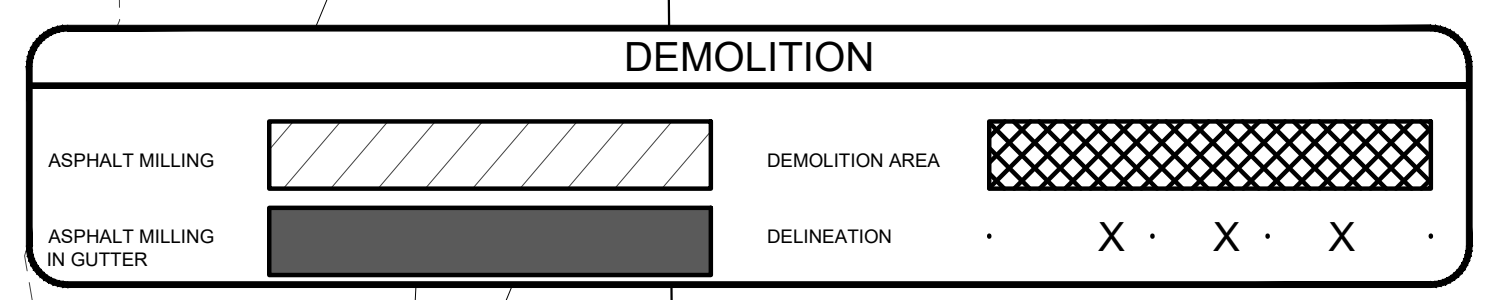
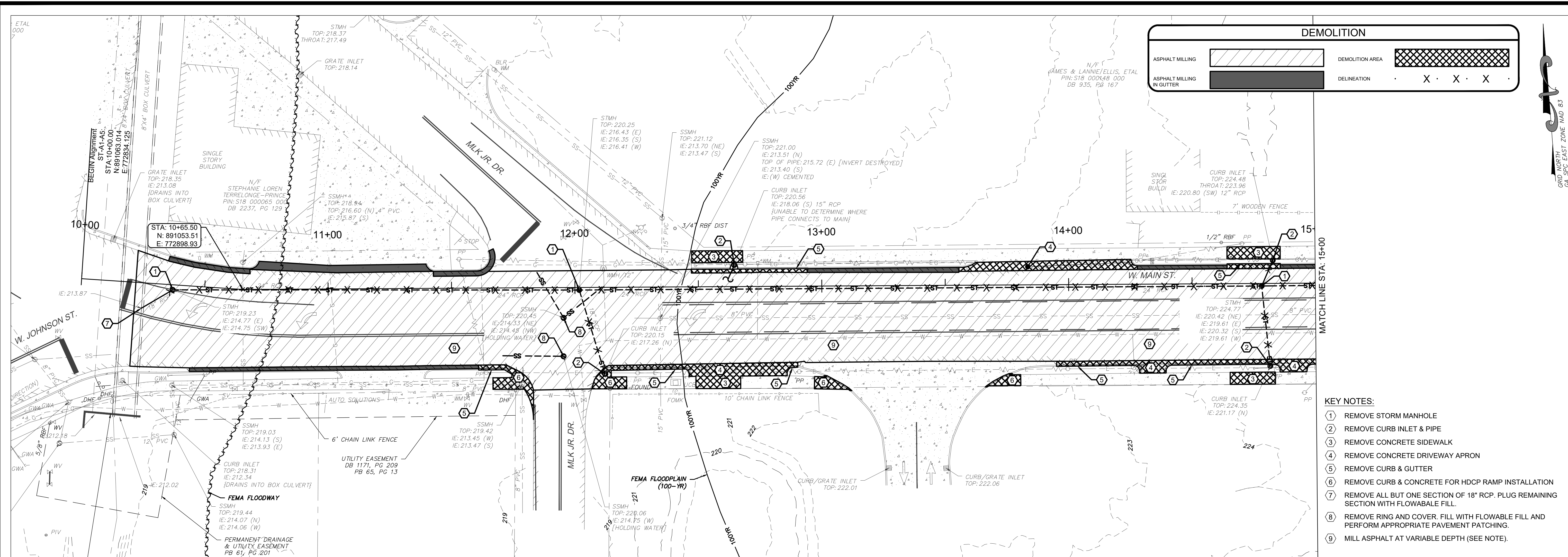
EMC ENGINEERING SERVICES, INC. logo and contact information: PO Box 2086, 1211 Merchant Way, Suite 201, Statesboro, GA 30458. Phone: (912) 764-7022. Fax: (912) 764-4880. Website: www.emc-eng.com.

GENERAL NOTES & LEGEND. WEST MAIN STREET DRAINAGE IMPROVEMENTS. 1209TH GEORGIA MILITIA DISTRICT. STATESBORO, BULLOCH COUNTY, GEORGIA. Prepared for: CITY OF STATESBORO.

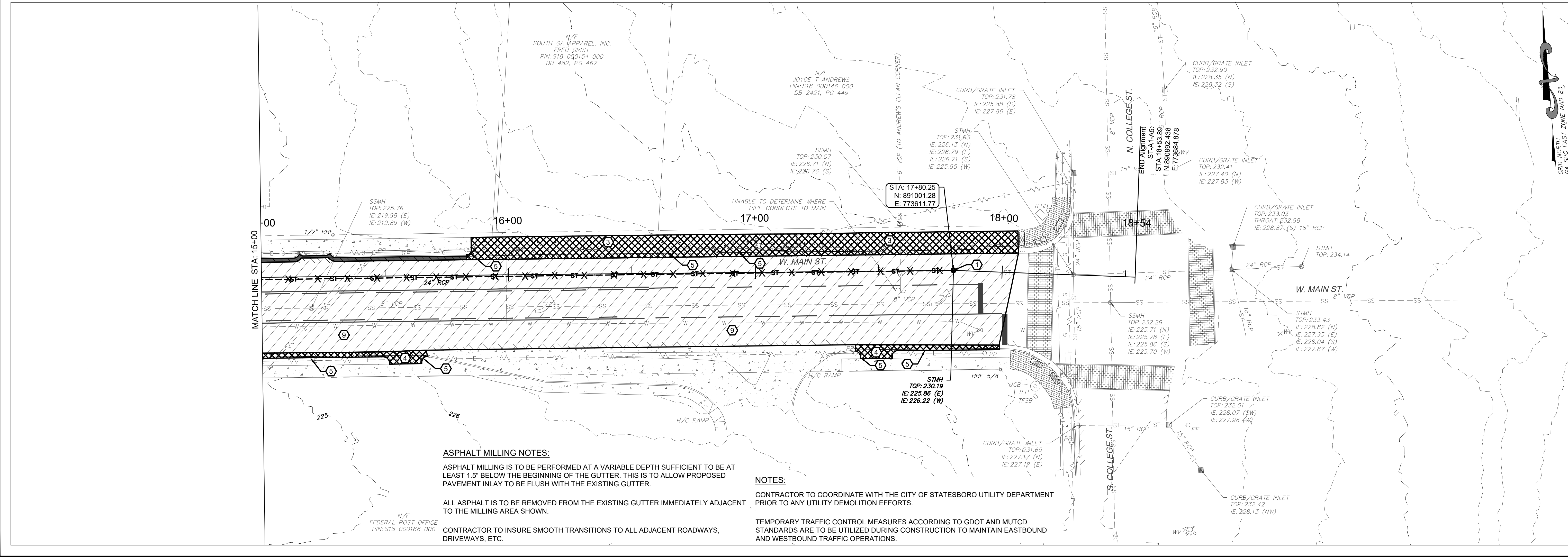
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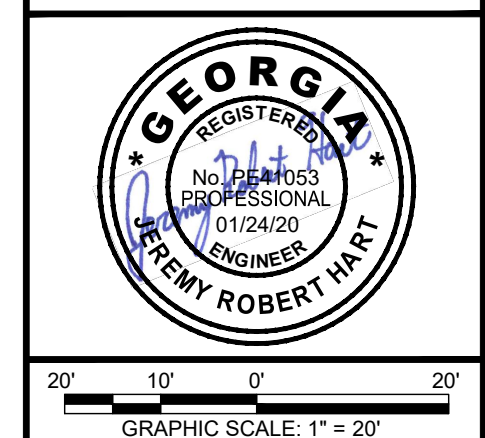
- KEY NOTES:**
- ① REMOVE STORM MANHOLE
  - ② REMOVE CURB INLET & PIPE
  - ③ REMOVE CONCRETE SIDEWALK
  - ④ REMOVE CONCRETE DRIVEWAY APRON
  - ⑤ REMOVE CURB & GUTTER
  - ⑥ REMOVE CURB & CONCRETE FOR HDPC RAMP INSTALLATION
  - ⑦ REMOVE ALL BUT ONE SECTION OF 18" RCP. PLUG REMAINING SECTION WITH FLOWABLE FILL.
  - ⑧ REMOVE RING AND COVER. FILL WITH FLOWABLE FILL AND PERFORM APPROPRIATE PAVEMENT PATCHING.
  - ⑨ MILL ASPHALT AT VARIABLE DEPTH (SEE NOTE).



**ASPHALT MILLING NOTES:**  
 ASPHALT MILLING IS TO BE PERFORMED AT A VARIABLE DEPTH SUFFICIENT TO BE AT LEAST 1.5" BELOW THE BEGINNING OF THE GUTTER. THIS IS TO ALLOW PROPOSED PAVEMENT INLAY TO BE FLUSH WITH THE EXISTING GUTTER.  
 ALL ASPHALT IS TO BE REMOVED FROM THE EXISTING GUTTER IMMEDIATELY ADJACENT TO THE MILLING AREA SHOWN.  
 CONTRACTOR TO INSURE SMOOTH TRANSITIONS TO ALL ADJACENT ROADWAYS, DRIVEWAYS, ETC.

**NOTES:**  
 CONTRACTOR TO COORDINATE WITH THE CITY OF STATESBORO UTILITY DEPARTMENT PRIOR TO ANY UTILITY DEMOLITION EFFORTS.  
 TEMPORARY TRAFFIC CONTROL MEASURES ACCORDING TO GDOT AND MUTCD STANDARDS ARE TO BE UTILIZED DURING CONSTRUCTION TO MAINTAIN EASTBOUND AND WESTBOUND TRAFFIC OPERATIONS.

NO.	REVISION DESCRIPTION	DATE
01	35% DESIGN	10/01/19
02	65% DESIGN	12/09/19
03	100% DESIGN	01/24/20
04	BID REVISIONS	08/13/20



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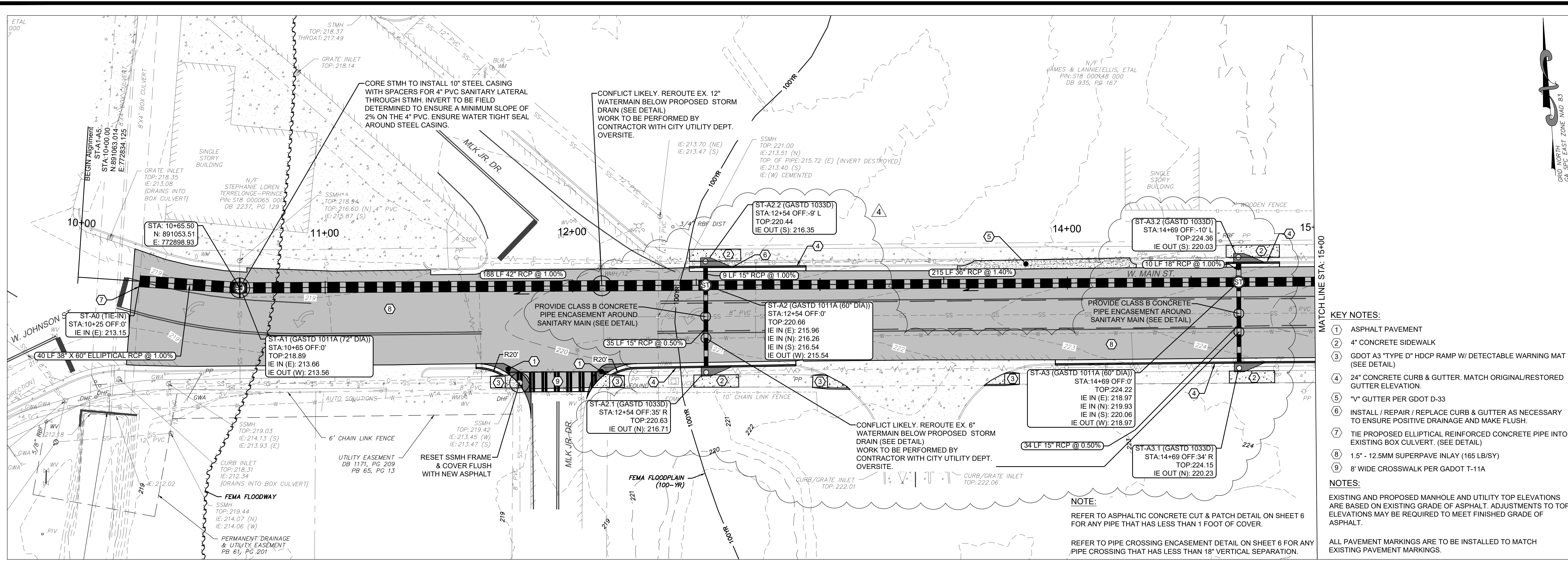
CIVIL MARINE ENVIRONMENTAL  
 ALBANY • ATLANTA • AUGUSTA • BRUNSWICK • COLUMBUS  
 SAVANNAH • STATESBORO • THOMASTON • VALDOSTA • WARNER ROBINS

**EXISTING CONDITIONS & DEMOLITION PLAN**  
**WEST MAIN STREET DRAINAGE IMPROVEMENTS**  
 1209TH GEORGIA MILITIA DISTRICT  
 STATESBORO, BULLOCH COUNTY, GEORGIA  
 Prepared for:  
**CITY OF STATESBORO**

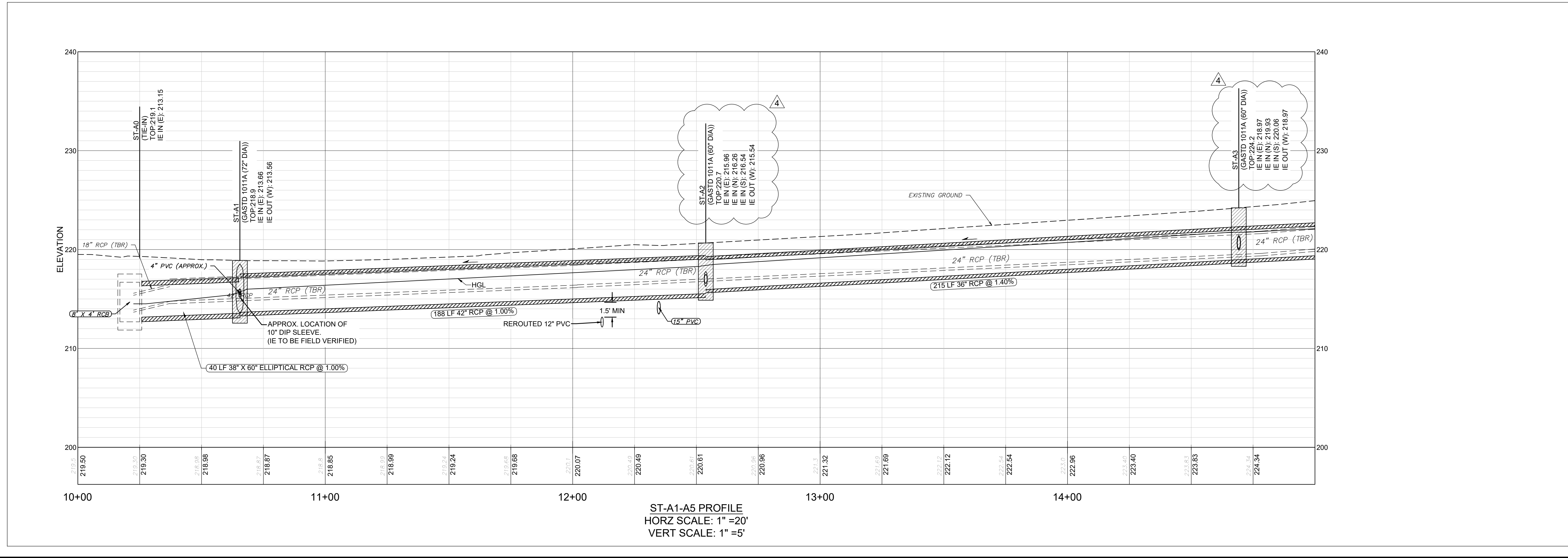
PROJECT NO.:	19-2042
DRAWN BY:	CWB
DESIGNED BY:	CWB
SURVEYED BY:	EMC
CHECKED BY:	JRH
SCALE:	1" = 20'
DATE:	01/24/2020

**SHEET 03 OF 08**

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- KEY NOTES:**
- ASPHALT PAVEMENT
  - CONCRETE SIDEWALK
  - GDOT A3 "TYPE D" HDPC RAMP W/ DETECTABLE WARNING MAT (SEE DETAIL)
  - 24" CONCRETE CURB & GUTTER. MATCH ORIGINAL/RESTORED GUTTER ELEVATION.
  - "V" GUTTER PER GDOT D-33
  - INSTALL / REPAIR / REPLACE CURB & GUTTER AS NECESSARY TO ENSURE POSITIVE DRAINAGE AND MAKE FLUSH.
  - TIE PROPOSED ELLIPTICAL REINFORCED CONCRETE PIPE INTO EXISTING BOX CULVERT. (SEE DETAIL)
  - 1.5" - 12.5MM SUPERPAVE INLAY (165 LB/SY)
  - 8' WIDE CROSSWALK PER GDOT T-11A
- NOTES:**
- EXISTING AND PROPOSED MANHOLE AND UTILITY TOP ELEVATIONS ARE BASED ON EXISTING GRADE OF ASPHALT. ADJUSTMENTS TO TOP ELEVATIONS MAY BE REQUIRED TO MEET FINISHED GRADE OF ASPHALT.
- ALL PAVEMENT MARKINGS ARE TO BE INSTALLED TO MATCH EXISTING PAVEMENT MARKINGS.



ST-A1-A5 PROFILE  
HORZ SCALE: 1" = 20'  
VERT SCALE: 1" = 5'

NO.	REVISION DESCRIPTION	DATE
01	35% DESIGN	10/01/19
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03	100% DESIGN	01/24/20
04	BID REVISIONS	08/13/20



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**STORM SEWER REMEDIATION PLAN & PROFILE**

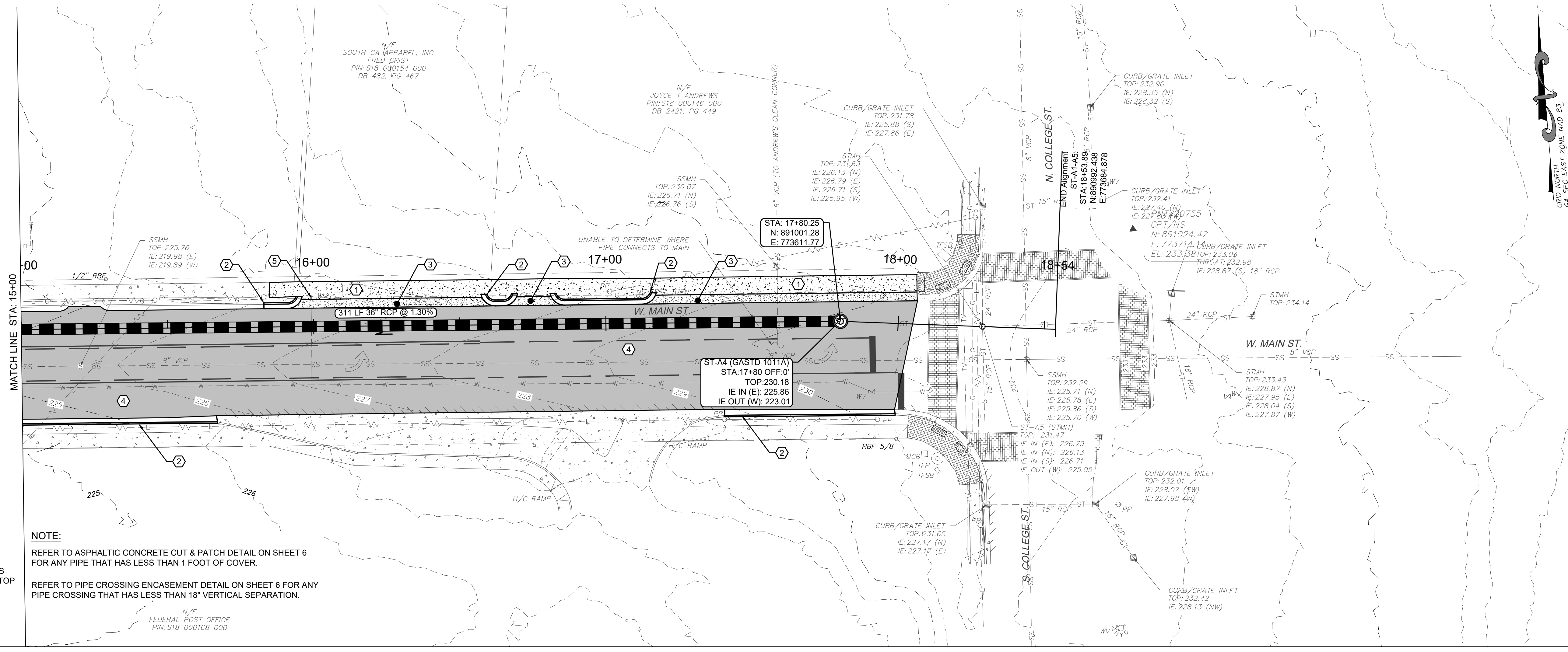
**WEST MAIN STREET DRAINAGE IMPROVEMENTS**  
 1209TH GEORGIA MILITIA DISTRICT  
 STATESBORO, BULLOCH COUNTY, GEORGIA

Prepared for:  
**CITY OF STATESBORO**

PROJECT NO.: 19-2042  
 DRAWN BY: CWB  
 DESIGNED BY: CWB  
 SURVEYED BY: EMC  
 SURVEY DATE: 6/14/2019  
 CHECKED BY: JRH  
 SCALE: 1" = 20'  
 DATE: 01/24/2020

SHEET  
**04**  
 OF 08

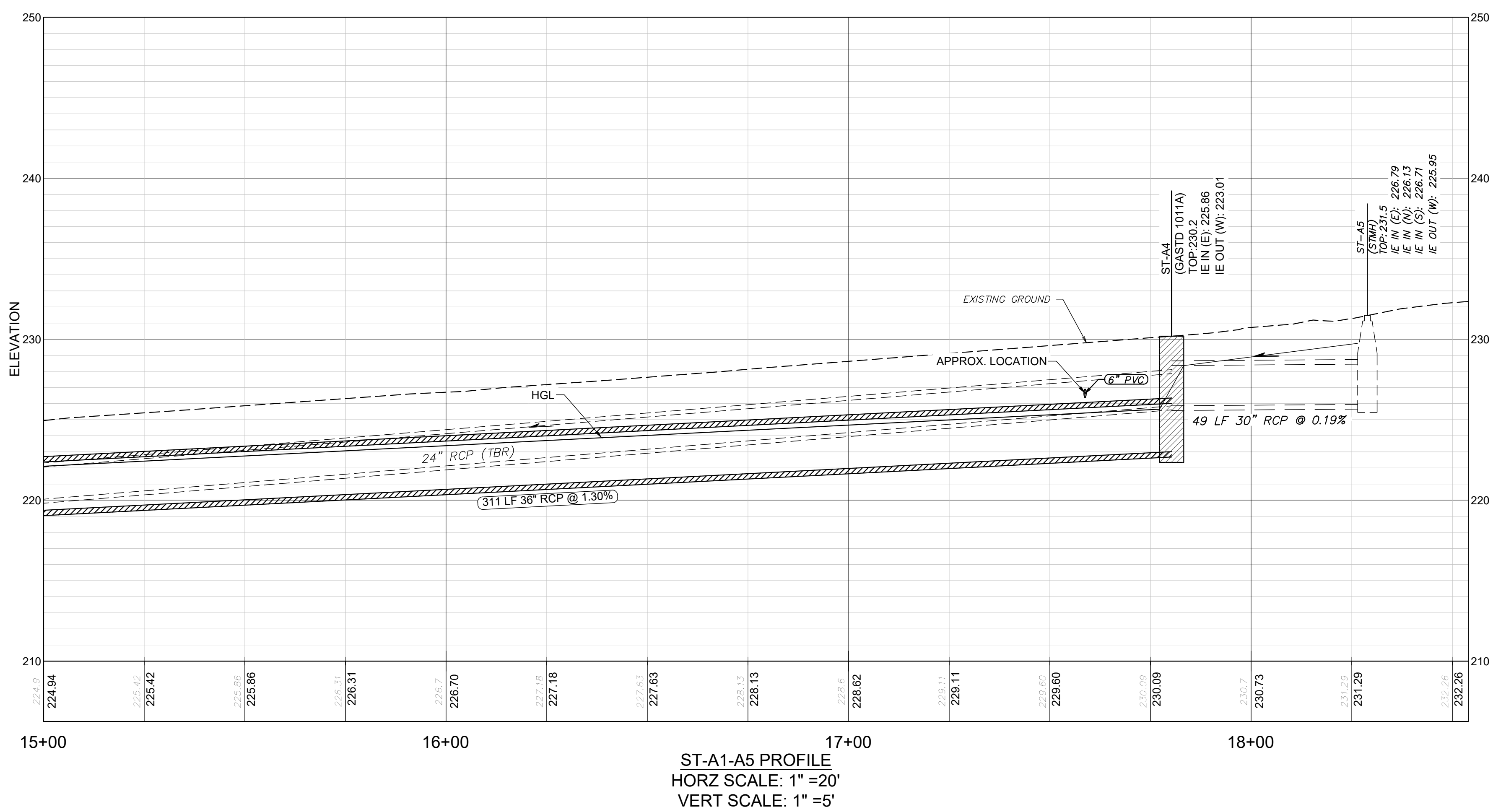
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- KEY NOTES:**
- 6" CONCRETE SIDEWALK
  - 24" CONCRETE CURB & GUTTER
  - "V" GUTTER PER GDOT D-33
  - 1.5" - 12.5MM SUPERPAVE INLAY (165 LB/SY)
  - RESET WATER METER BOX

**NOTES:**  
 EXISTING AND PROPOSED MANHOLE AND UTILITY TOP ELEVATIONS ARE BASED ON EXISTING GRADE OF ASPHALT. ADJUSTMENTS TO TOP ELEVATIONS MAY BE REQUIRED TO MEET FINISHED GRADE OF ASPHALT.  
 ALL PAVEMENT MARKINGS ARE TO BE INSTALLED TO MATCH EXISTING PAVEMENT MARKINGS.

**NOTE:**  
 REFER TO ASPHALTIC CONCRETE CUT & PATCH DETAIL ON SHEET 6 FOR ANY PIPE THAT HAS LESS THAN 1 FOOT OF COVER.  
 REFER TO PIPE CROSSING ENCASUREMENT DETAIL ON SHEET 6 FOR ANY PIPE CROSSING THAT HAS LESS THAN 18" VERTICAL SEPARATION.



ST-A1-A5 PROFILE  
 HORZ SCALE: 1" = 20'  
 VERT SCALE: 1" = 5'

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01	35% DESIGN	10/01/19
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04	BID REVISIONS	08/13/20

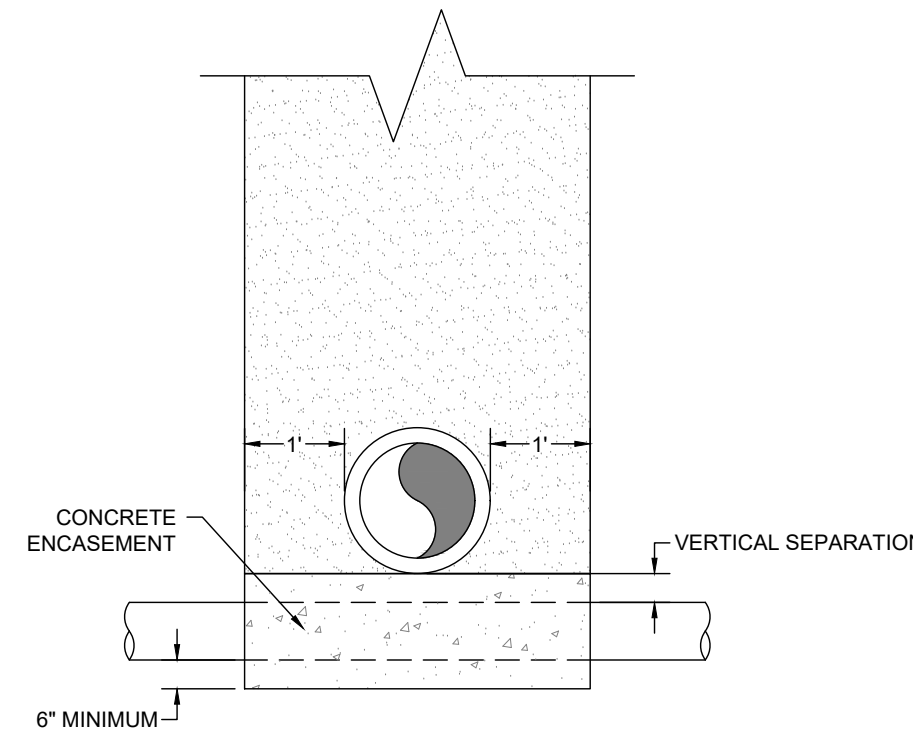


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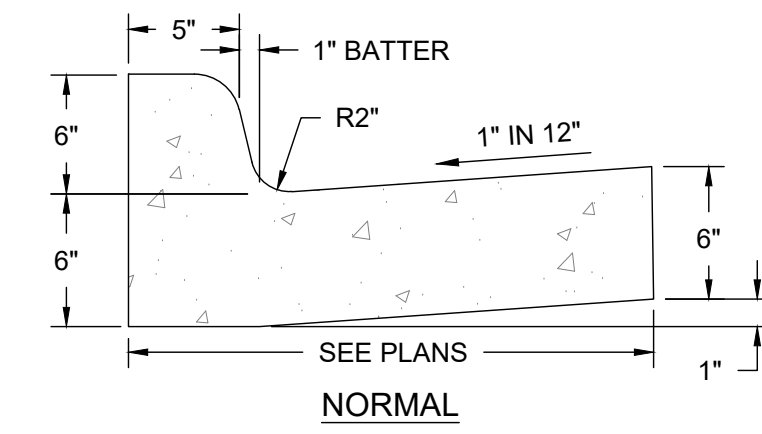
STORM SEWER REMEDIATION PLAN & PROFILE  
**WEST MAIN STREET DRAINAGE IMPROVEMENTS**  
 1209TH GEORGIA MILITIA DISTRICT  
 STATESBORO, BULLOCH COUNTY, GEORGIA  
 Prepared for:  
 CITY OF STATESBORO

PROJECT NO.:	19-2042
DRAWN BY:	CWB
DESIGNED BY:	CWB
SURVEYED BY:	EMC
SURVEY DATE:	6/14/2019
CHECKED BY:	JRH
SCALE:	1" = 20'
DATE:	01/24/2020



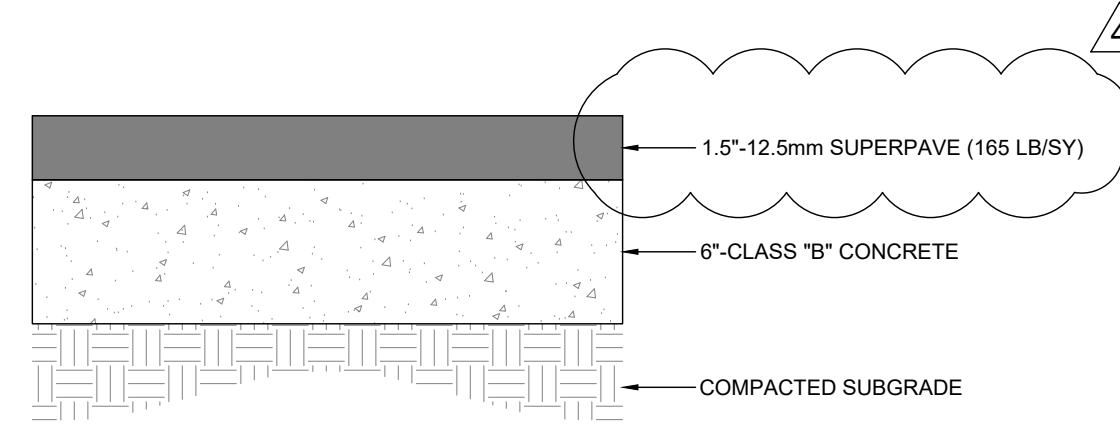
NOTES:  
 CONCRETE ENCASUREMENT SHALL BE REQUIRED WHEN VERTICAL SEPARATION IS LESS THAN 18".  
 FLOWABLE FILL IS TO BE USED FOR CONCRETE ENCASUREMENT.

PIPE CROSSING ENCASUREMENT DETAIL  
 NOT TO SCALE



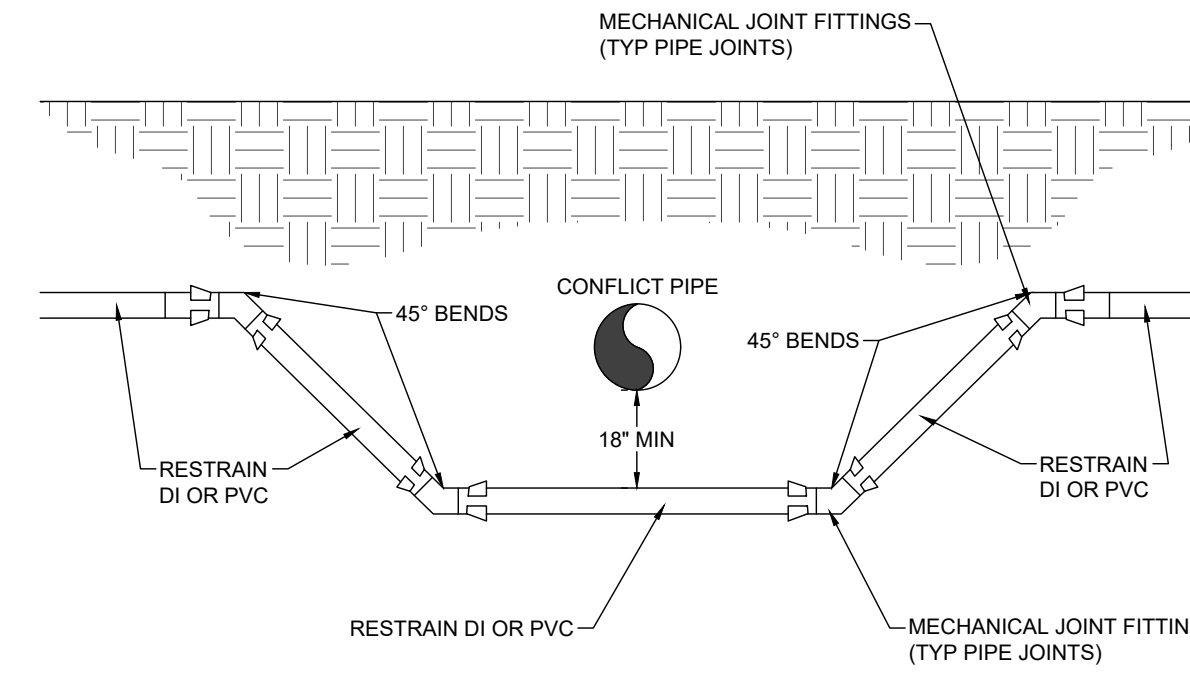
NOTES:  
 1. ALL CONCRETE SHALL BE 3000 PSI.  
 2. 1/2" INCH EXPANSION JOINTS SHALL BE LOCATED AT ALL RADIUS POINTS, TRAPS, COLD JOINTS AND AT ANY POINT WHERE THE NEW CURB AND GUTTER ABUTS OTHER CONCRETE STRUCTURES OR INTERVALS NOT TO EXCEED 50'.  
 3. CONTRACTION JOINTS SHALL BE PLACED AT 10' INTERVALS.  
 4. PITCHED GUTTER SHALL BE USED WHEN ADJACENT ASPHALT IS SLOPING AWAY FROM GUTTER.  
 5. 5 FOOT LONG TRANSITIONS SHALL BE PROVIDED BETWEEN NORMAL GUTTER AND PITCHED GUTTER, UNLESS OTHERWISE NOTED.  
 6. SUBBASE & BASE MATERIAL SHALL BE COMPACTED TO 100% MAX. DRY DENSITY AT STANDARD PROCTOR AND INSPECTED BEFORE PLACING CONCRETE.  
 7. SUBBASE AND BASE SHALL MEET COUNTY SPECIFICATIONS AND THAT OF THE DESIGN ENGINEER.

STANDARD CONCRETE CURB AND GUTTER  
 NOT TO SCALE

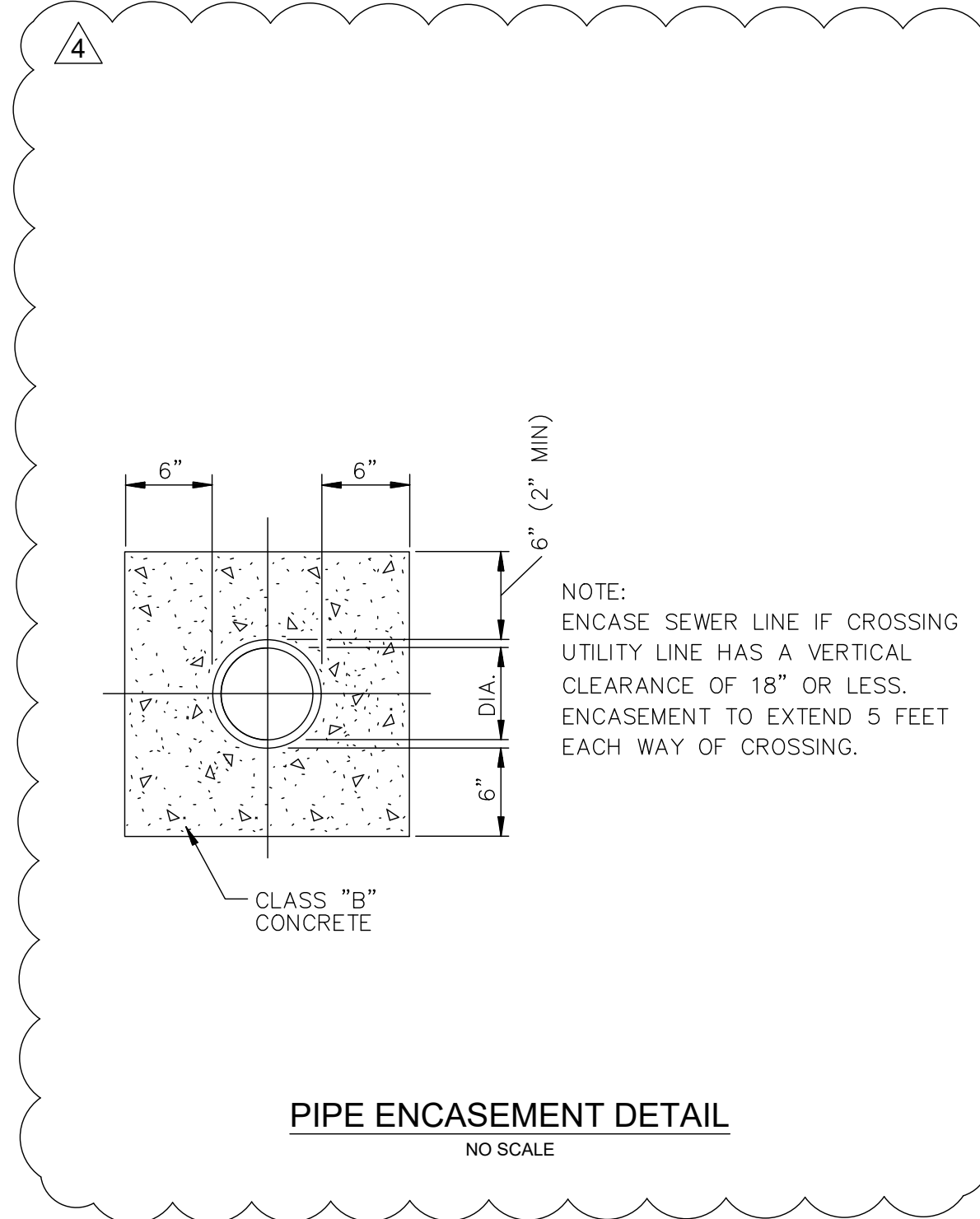


NOTES:  
 • TOP 12" OF SUBGRADE TO BE MIXED IN PLACE AND COMPACTED TO 98% MAXIMUM DRY DENSITY.  
 • THE CONTRACTOR SHALL PROVIDE COMPACTION TEST AND SOIL ANALYSIS TEST RESULTS FROM AN APPROVED TESTING LABORATORY.

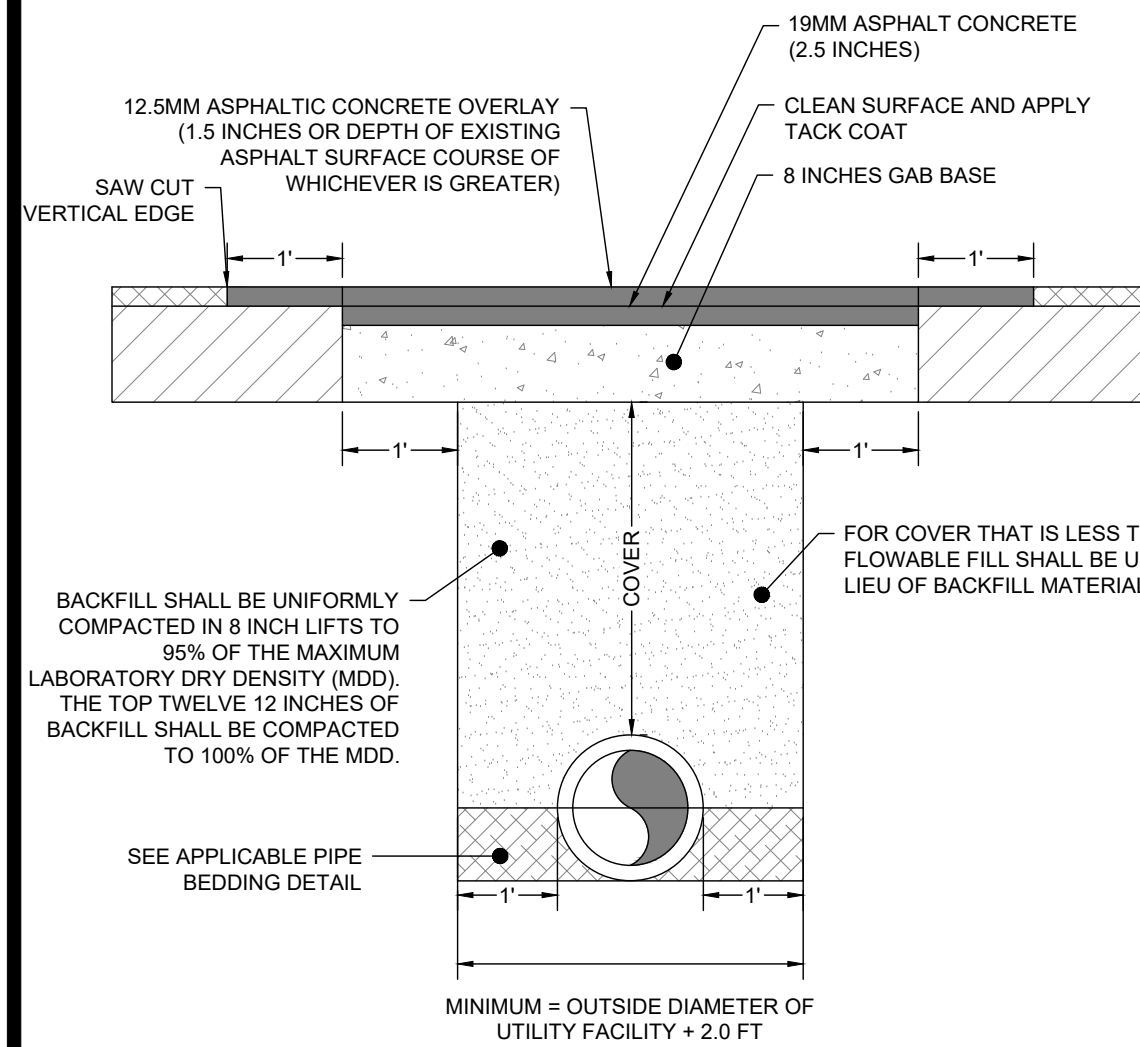
ASPHALT PAVEMENT SECTION  
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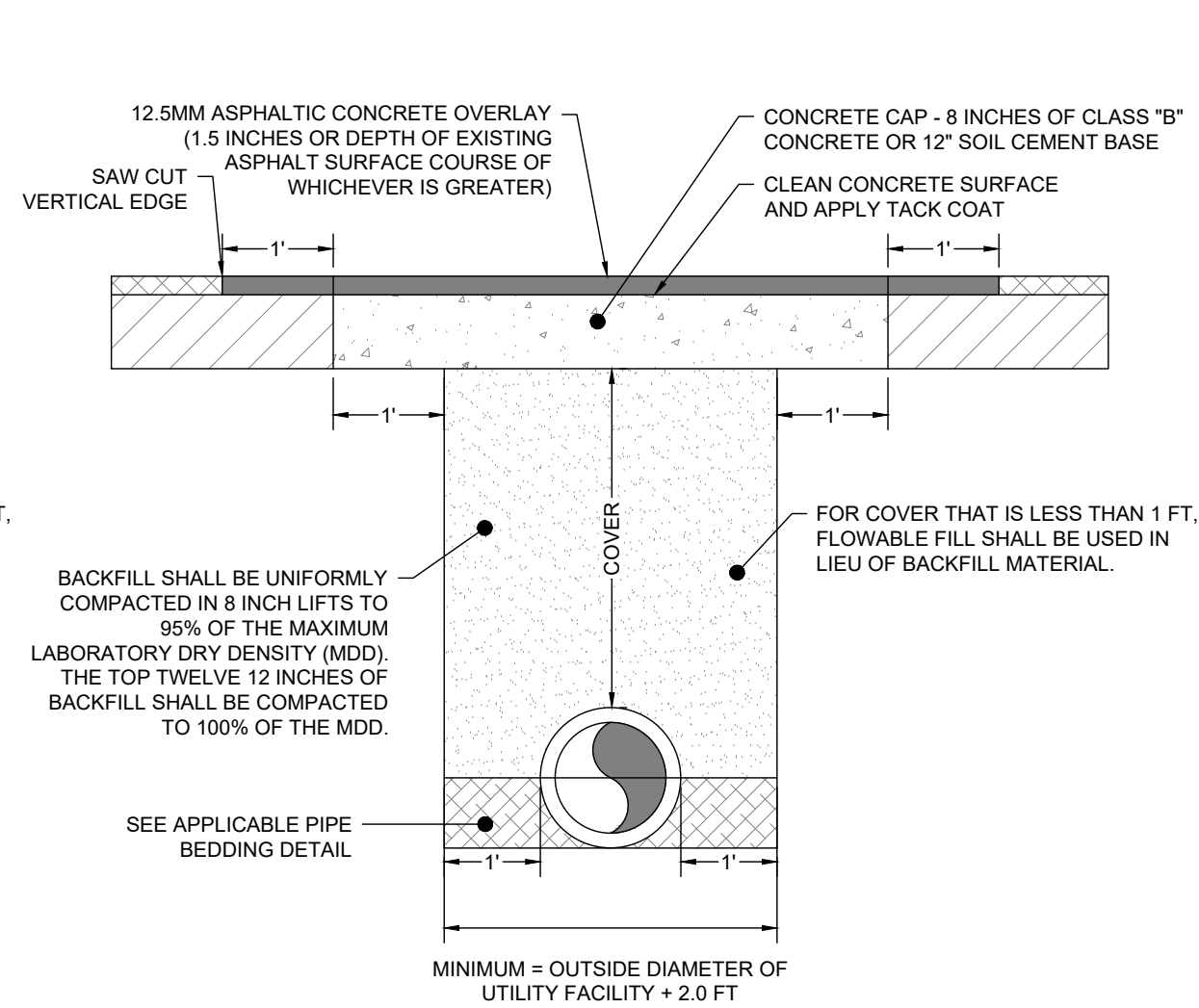
WATER MAIN VERTICAL CHANGE FOR CROSSING CONFLICT  
 NO SCALE



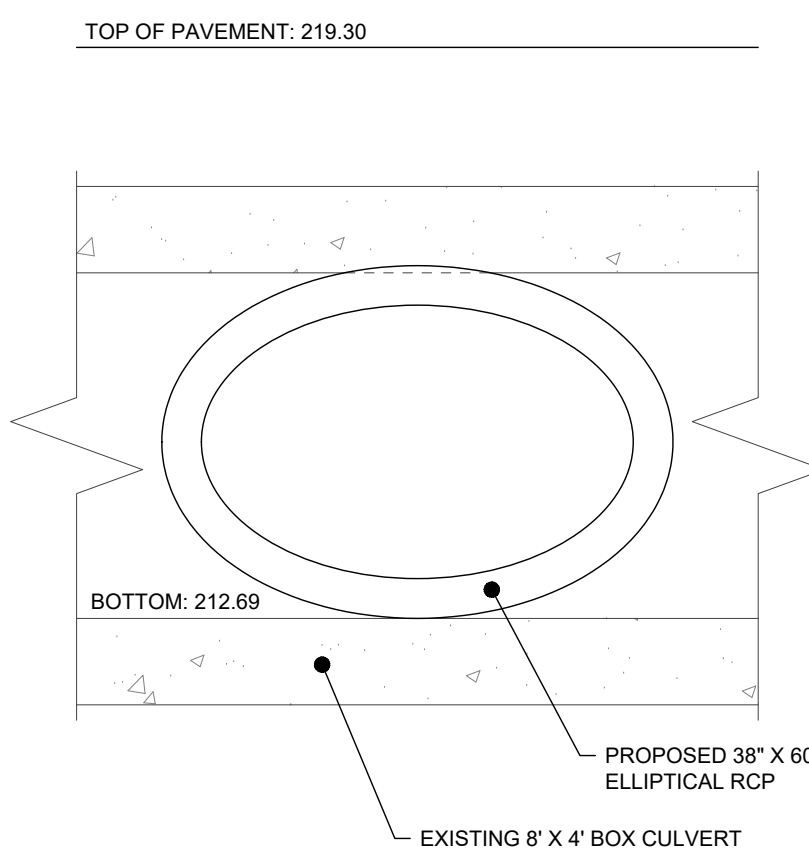
PIPE ENCASEMENT DETAIL  
 NO SCALE



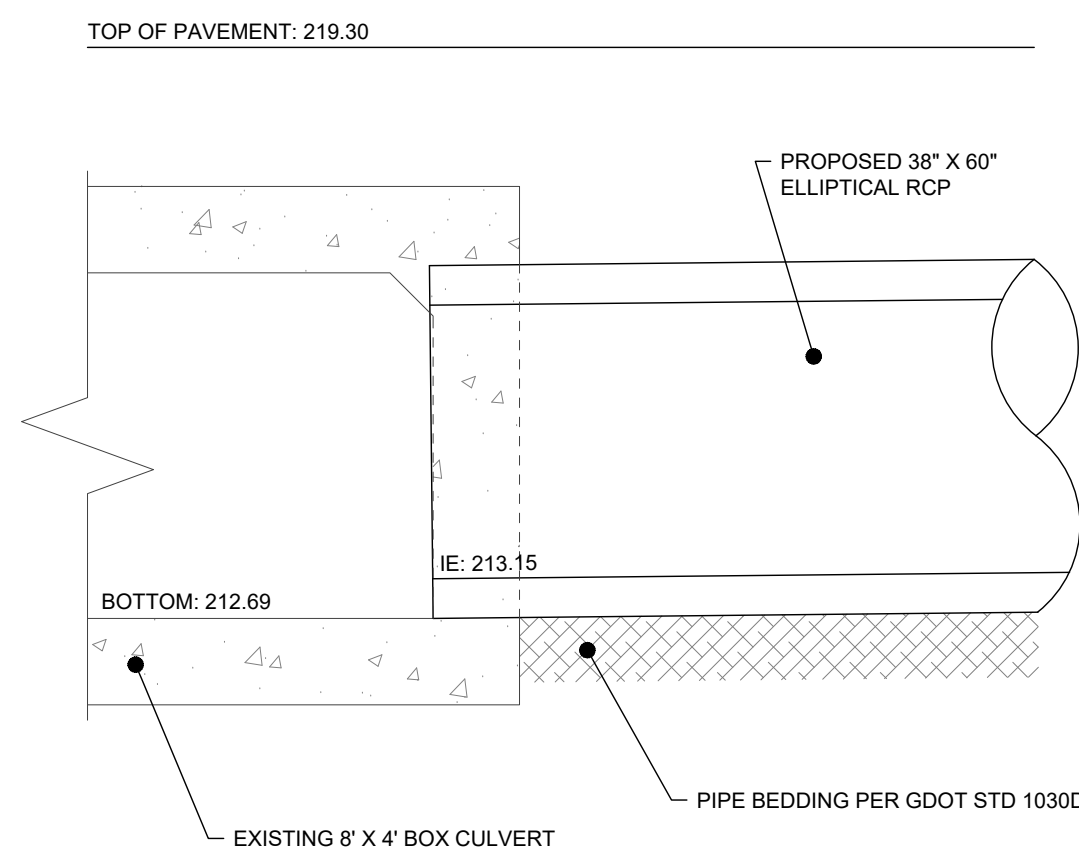
STORM MAIN TRUNK LINE CUT & PATCH  
 NOT TO SCALE



STORM LATERALS / UTILITY CROSSING CONCRETE CUT & PATCH  
 NOT TO SCALE



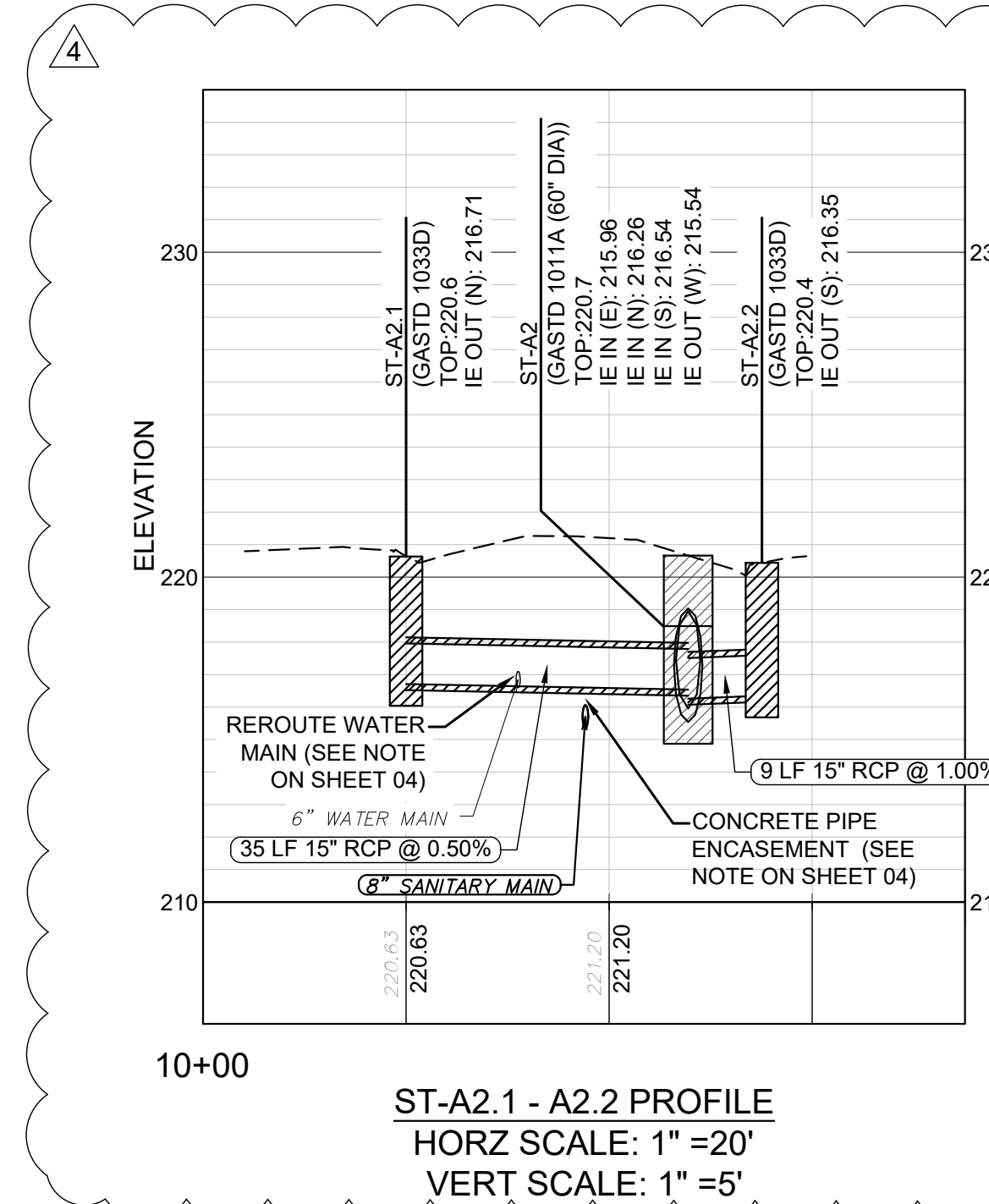
FRONT ELEVATION



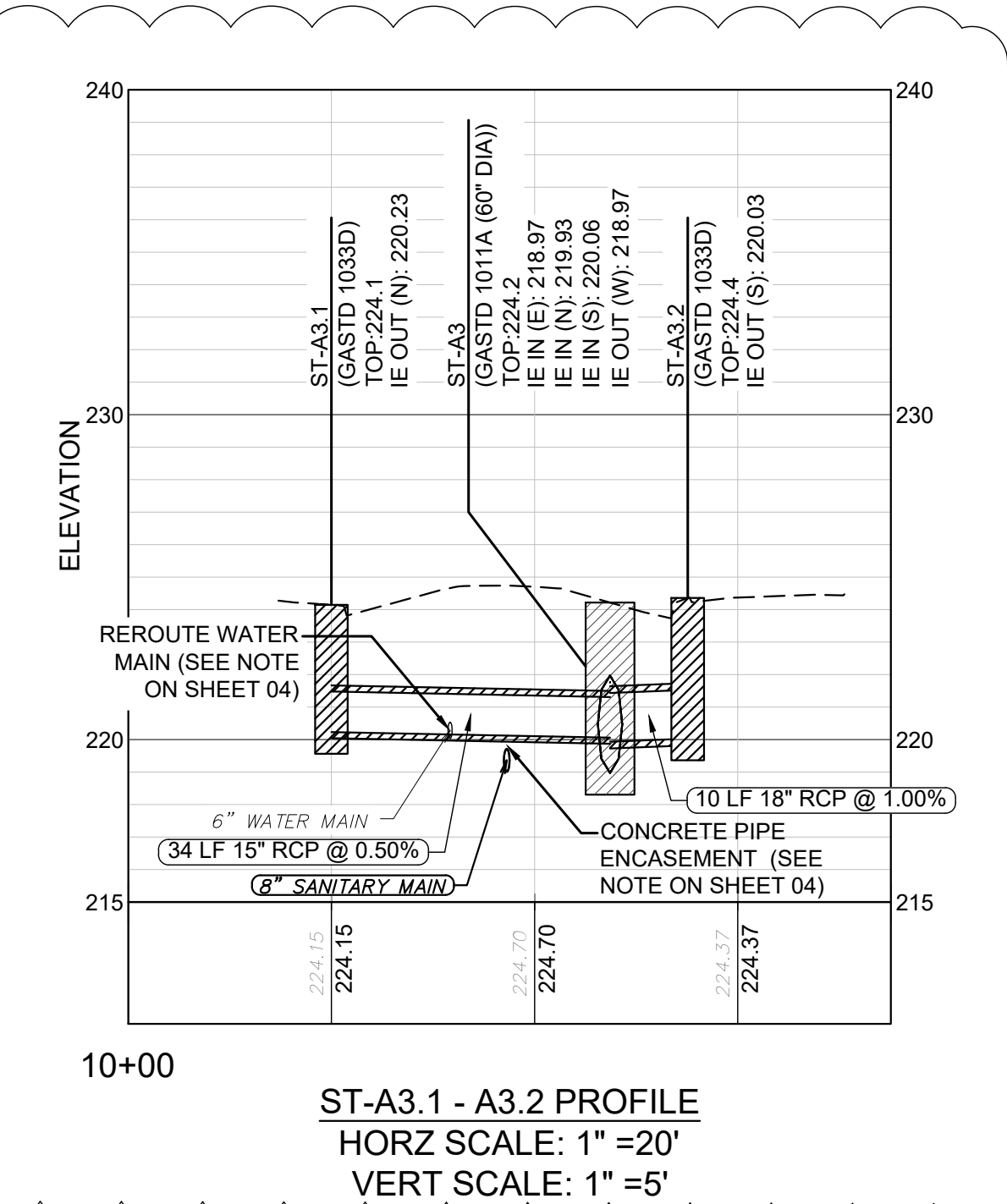
SIDE ELEVATION

BOX CULVERT CONNECTION  
 NOT TO SCALE

NOTES:  
 1. EXISTING BOX CULVERT SHALL BE SAW CUT AT TIE-IN LOCATION TO ALLOW FOR ELLIPTICAL PIPE INSTALLATION.  
 2. PROPOSED PIPE SHALL BE EXTENDED INTO THE STRUCTURE WALL A MINIMUM OF 4", BUT SHOULD NOT EXTEND BEYOND THE INTERIOR WALL OF THE BOX CULVERT.  
 3. SEAL WITH GROUT (0.5" MINIMUM THICKNESS).  
 4. CONTRACTOR SHALL CONTACT ENGINEER AT LEAST 24-HOURS PRIOR TO CONNECTION WORK TO REVIEW EXISTING BOX CULVERT CONDITIONS AND VERIFY FINAL PIPE CONNECTION AND GROUTING.

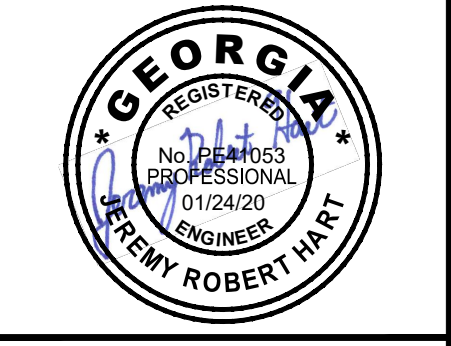


ST-A2.1 - A2.2 PROFILE  
 HORZ SCALE: 1" = 20'  
 VERT SCALE: 1" = 5'



ST-A3.1 - A3.2 PROFILE  
 HORZ SCALE: 1" = 20'  
 VERT SCALE: 1" = 5'

NO.	REVISION DESCRIPTION	DATE
01	35% DESIGN	10/01/19
02	65% DESIGN	12/09/19
03	100% DESIGN	01/24/20
04	BID REVISIONS	08/13/20



**EMC ENGINEERING SERVICES, INC.**  
 PO Box 2086  
 1211 Mercham Way, Suite 201  
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CIVIL MARINE ENVIRONMENTAL

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 SAVANNAH • STATESBORO • THOMASTON • VALDOSTA • WARNER ROBINS

CONSTRUCTION DETAILS

**WEST MAIN STREET DRAINAGE IMPROVEMENTS**  
 1209TH GEORGIA MILITIA DISTRICT  
 STATESBORO, BULLOCH COUNTY, GEORGIA

Prepared for:  
 CITY OF STATESBORO

PROJECT NO.: 19-2042  
 DRAWN BY: CWB  
 DESIGNED BY: CWB  
 SURVEYED BY: EMC  
 SURVEY DATE: 6/14/2019  
 CHECKED BY: JRH  
 SCALE: NO SCALE  
 DATE: 01/24/2020

SHEET  
**06**  
 OF 08

TABLE NO. 1 ROUNDPipe - CONCRETE - CORRUGATED STEEL - CORRUGATED ALUMINUM  
MINIMUM CLASS OF CONCRETE OR MINIMUM THICKNESS OF STEEL AND ALUMINUM  
HEIGHT OF FILL IN FEET ABOVE TOP OF PIPE

PIPE DIAMETER (INCHES)	PIPE TYPE	HEIGHT OF FILL IN FEET ABOVE TOP OF PIPE															
		1-10	10-15	15-20	20-25	25-30	30-35	35-40	40-50	50-60	60-70	70-80	80-90	90			
12	CONCRETE	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84		
15	ALUM.	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80		
18	CONCRETE	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76		
24	ALUM.	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72		
30	CONCRETE	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68		
36	ALUM.	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64		
42	CONCRETE	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60		
48	ALUM.	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56		
54	CONCRETE	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52		
60	ALUM.	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48		
66	CONCRETE	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44		
72	ALUM.	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40		
78	CONCRETE	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36		
84	ALUM.	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32		
90	CONCRETE	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28		
96	ALUM.	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24		
102	CONCRETE	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20		
108	ALUM.	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16		
114	CONCRETE	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12		
120	ALUM.	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08		

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA  
STANDARD  
CONCRETE & METAL PIPE CULVERTS  
SHEET 2 OF 3  
(FILL HEIGHTS FOR CONCRETE & CORRUGATED METAL PIPE)NO SCALE  
DESIGNED: *[Signature]* SUBMITTED: *[Signature]* OCTOBER 21, 1998  
CHECKED: *[Signature]* APPROVED: *[Signature]* NUMBER  
1030D

TABLE NO. 1 ROUNDPipe - ALUMINUM - CORRUGATED STEEL - CORRUGATED ALUMINUM  
MINIMUM CLASS OF CONCRETE OR MINIMUM THICKNESS OF STEEL AND ALUMINUM  
HEIGHT OF FILL IN FEET ABOVE TOP OF PIPE

PIPE DIAMETER (INCHES)	PIPE TYPE	HEIGHT OF FILL IN FEET ABOVE TOP OF PIPE															
		1-10	10-15	15-20	20-25	25-30	30-35	35-40	40-50	50-60	60-70	70-80	80-90	90			
12	CONCRETE	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84		
15	ALUM.	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80		
18	CONCRETE	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76		
24	ALUM.	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72		
30	CONCRETE	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68		
36	ALUM.	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64		
42	CONCRETE	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60		
48	ALUM.	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56		
54	CONCRETE	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52		
60	ALUM.	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48		
66	CONCRETE	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44		
72	ALUM.	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40		
78	CONCRETE	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36		
84	ALUM.	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32		
90	CONCRETE	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28		
96	ALUM.	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24		
102	CONCRETE	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20		
108	ALUM.	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16		
114	CONCRETE	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12		
120	ALUM.	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08		

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA  
STANDARD  
CONCRETE & METAL PIPE CULVERTS  
SHEET 3 OF 3  
(FILL HEIGHTS FOR CONCRETE & CORRUGATED METAL PIPE)  
NO SCALE  
DESIGNED: *[Signature]* SUBMITTED: *[Signature]* OCTOBER 21, 1998  
CHECKED: *[Signature]* APPROVED: *[Signature]* NUMBER  
1030D

TABLE NO. 1 ROUNDPipe - ALUMINUM - CORRUGATED STEEL - CORRUGATED ALUMINUM  
MINIMUM CLASS OF CONCRETE OR MINIMUM THICKNESS OF STEEL AND ALUMINUM  
HEIGHT OF FILL IN FEET ABOVE TOP OF PIPE

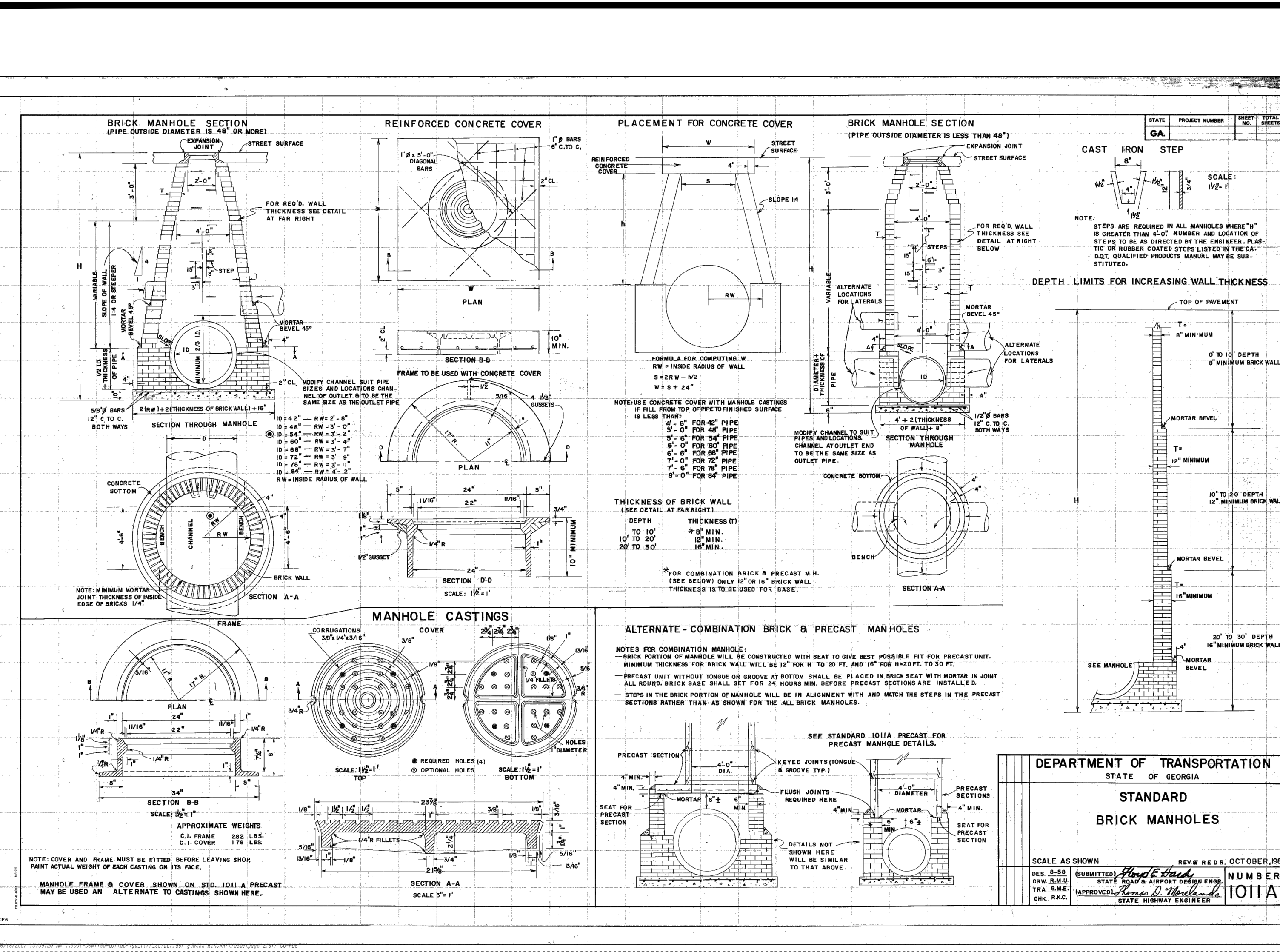
PIPE DIAMETER (INCHES)	PIPE TYPE	HEIGHT OF FILL IN FEET ABOVE TOP OF PIPE															
		1-10	10-15	15-20	20-25	25-30	30-35	35-40	40-50	50-60	60-70	70-80	80-90	90			
12	CONCRETE	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84		
15	ALUM.	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80		
18	CONCRETE	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76		
24	ALUM.	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72		
30	CONCRETE	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68		
36	ALUM.	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64		
42	CONCRETE	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60		
48	ALUM.	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56		
54	CONCRETE	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52		
60	ALUM.	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48		
66	CONCRETE	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44		
72	ALUM.	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40		
78	CONCRETE	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36		
84	ALUM.	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32		
90	CONCRETE	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28		
96	ALUM.	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24		
102	CONCRETE	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20		
108	ALUM.	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16		
114	CONCRETE	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12		
120	ALUM.	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08		

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA  
STANDARD  
CONCRETE & METAL PIPE CULVERTS  
SHEET 3 OF 3  
(FILL HEIGHTS FOR CONCRETE & CORRUGATED METAL PIPE)  
NO SCALE  
DESIGNED: *[Signature]* SUBMITTED: *[Signature]* OCTOBER 21, 1998  
CHECKED: *[Signature]* APPROVED: *[Signature]* NUMBER  
1030D

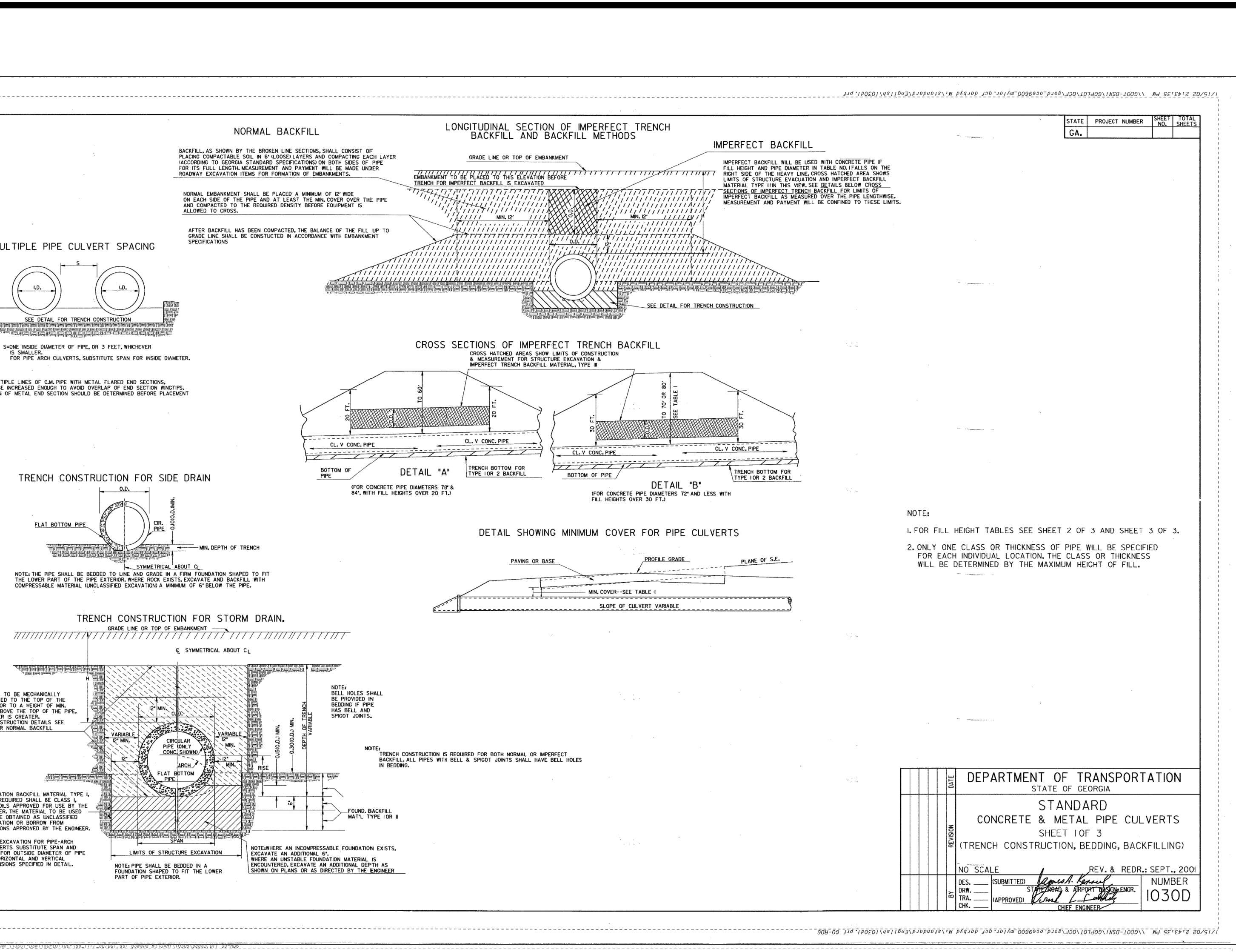
R DENOTES SPIRAL RIB PROFILE 3/4" X 3/4" X 7/16"  
TABLE VALUES FOR ALUMINUM SPIRAL RIB PIPE ARE COMPUTED BASED UPON ALUMINUM ALLOY 3004-H14 HAVING MINIMUM YIELD STRENGTH TH. 24.000PSI.  
TABLE VALUES FOR ALUMINUM SPIRAL RIB PIPE ARE COMPUTED BASED UPON ALUMINUM ALLOY 3004-H14 HAVING MINIMUM YIELD STRENGTH TH. 24.000PSI.  
A. ALL MINIMUM COVER VALUES SHALL BE INCREASED BY 15 PERCENT. (EXAMPLE: 35.40 FT. BECOMES 40.21 FT.)  
B. ALL HEIGHT OF FILL VALUES SHALL BE DECREASED BY 15 PERCENT. (EXAMPLE: 35.40 FEET BECOMES 30.18 FEET.)  
MINIMUM COVER VALUES APPLY TO H-20 LIVE LOAD. MINIMUM COVER NEEDED FOR CONSTRUCTION VEHICLES MAY BE GREATER AND IS THE RESPONSIBILITY OF THE CONTRACTOR.  
TRENCH CONSTRUCTION IS REQUIRED FOR ALL INSTALLATIONS.

CONSTRUCTION DETAILS  
WEST MAIN STREET DRAINAGE IMPROVEMENTS  
1209TH GEORGIA MILITIA DISTRICT  
STATESBORO, BULLOCH COUNTY, GEORGIA  
Prepared for:  
CITY OF STATESBORO

PROJECT NO.: 19-2042  
DRAWN BY: CWB  
DESIGNED BY: CWB  
SURVEYED BY: EMC  
SURVEY DATE: 6/14/2019  
CHECKED BY: JRH  
SCALE: NO SCALE  
DATE: 01/24/2020



DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA  
STANDARD  
BRICK MANHOLES  
SCALE AS SHOWN  
REVISED OCTOBER, 1988  
SUBMITTED: *[Signature]*  
APPROVED: *[Signature]*  
NUMBER  
1011A



DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA  
STANDARD  
CONCRETE & METAL PIPE CULVERTS  
SHEET 3 OF 3  
(FILL HEIGHTS FOR CONCRETE & CORRUGATED METAL PIPE)  
NO SCALE  
DESIGNED: *[Signature]* SUBMITTED: *[Signature]* OCTOBER 21, 1998  
CHECKED: *[Signature]* APPROVED: *[Signature]* NUMBER  
1030D

NO.	REVISION DESCRIPTION	DATE	
		BY	DATE
01	55% DESIGN		10/01/19
02	65% DESIGN		12/09/19
03	100% DESIGN		01/24/20
04	BID REVISIONS		08/13/20

EMC ENGINEERING SERVICES, INC.  
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www.emc-eng.com

REGISTERED PROFESSIONAL ENGINEER  
NO. 1012420  
EXPIRES 12/31/2023  
ROBERT HART

CIVIL MARINE ENVIRONMENTAL  
ALBANY - ATLANTA - AUGUSTA - BRUNSWICK - COLUMBUS  
SAVANNAH - STATESBORO - THOMASTON - VALDOSTA - WARNER ROBINS

