

FAYETTE COUNTY MORNING DOVE DR
CULVERT REPLACEMENT PROJECT
PROJECT NUMBER 17SAJ



1899 POWERS FERRY ROAD SE, SUITE 400
ATLANTA, GEORGIA 30339
TEL: (770) 850-0949 FAX: (770) 850-0950

www.tetratech.com



PROJECT LOCATION:
115-130 N. MORNING DOVE DRIVE
FAYETTEVILLE, GA 30215

CLIENT INFORMATION:
FAYETTE COUNTY
140 STONEWALL AVE W, STE 203
FAYETTEVILLE, GA 30214

Tt PROJECT No.:
200-01297-17038

CLIENT PROJECT No.:
17SAJ

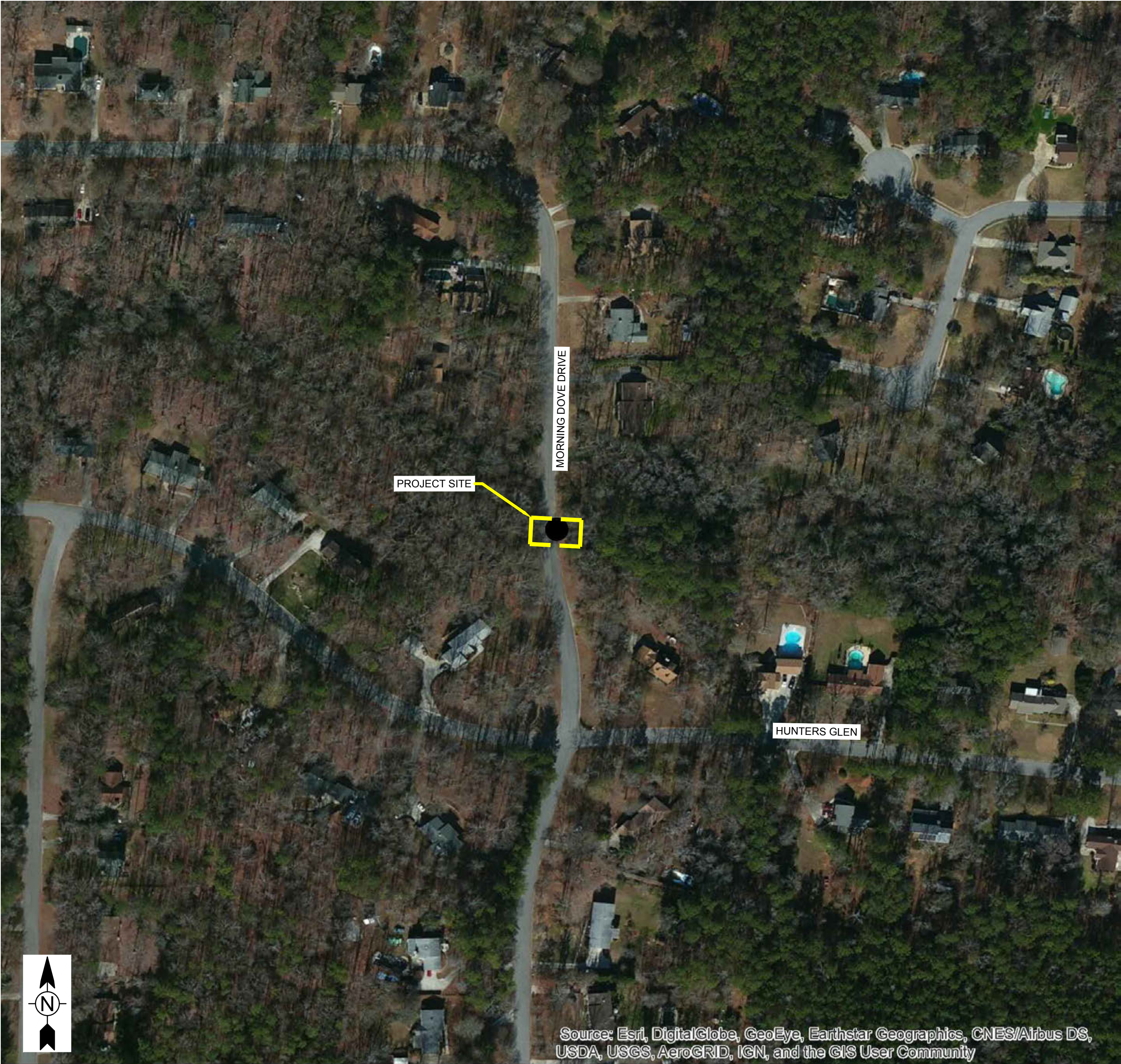
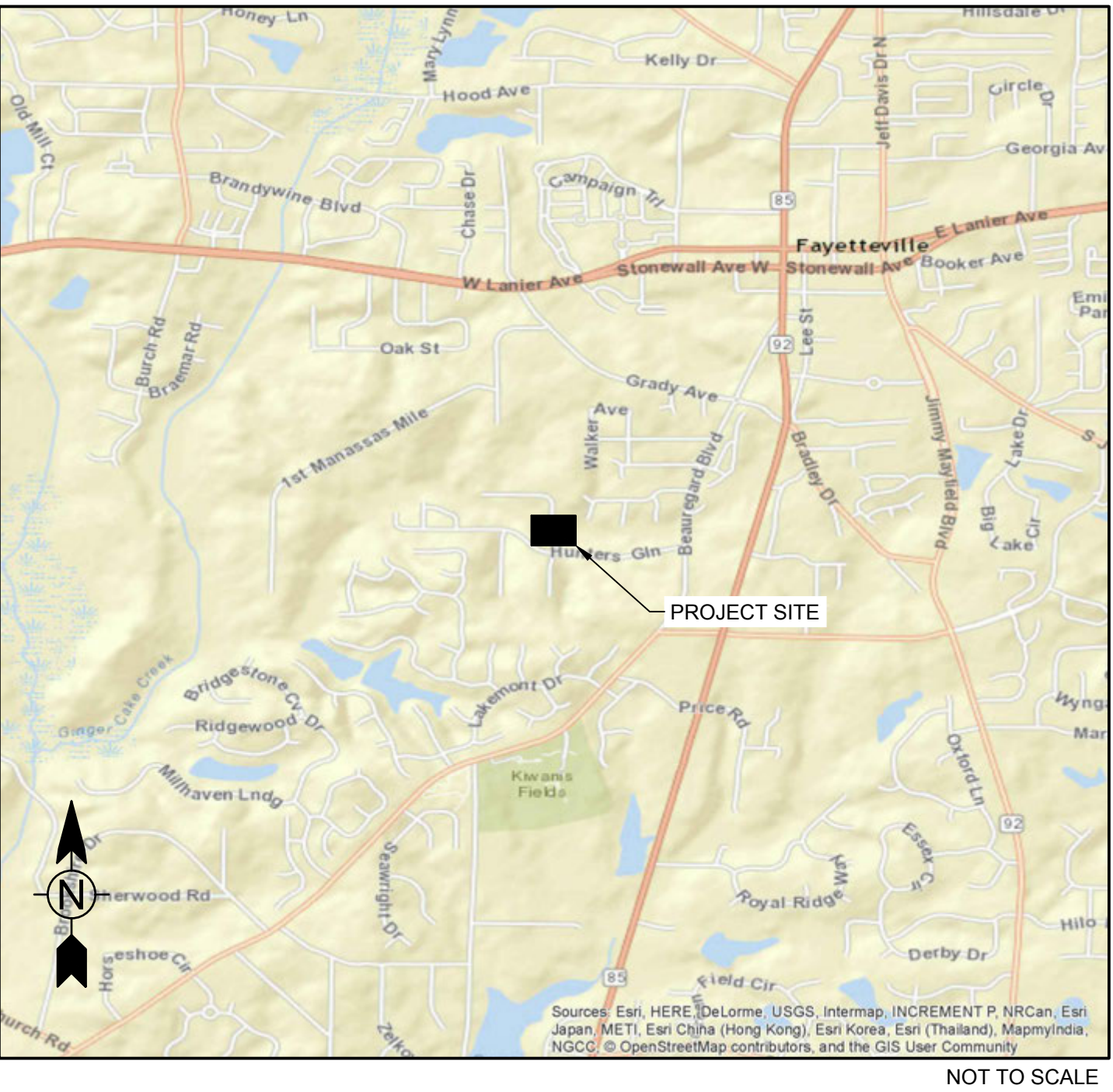
PROJECT DESCRIPTION / NOTES:

REFERENCE DATUM: NAD83 GEORGIA STATE PLANE, WEST ZONE, US FOOT

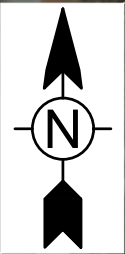
ISSUED:

ISSUED FOR CONSTRUCTION - 12/21/18

VICINITY MAP:



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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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GENERAL NOTES

PROJECT INFORMATION:

1. THE PROJECT SHALL CONSIST OF THE DEMOLITION OF THE EXISTING CULVERTS UNDER NORTH MORNING DOVE DRIVE AND THE INSTALLATION OF 78 LINEAR FEET OF A DOUBLE 8' X 8' CONCRETE BOX CULVERT ALONG WITH THE RELOCATION OF THE EXISTING UTILITIES IN THE AREA AND THE DESIGN AND INSTALLATION OF A 47'-LONG, 7'- TO 1.8'-HIGH RETAINING WALL.
2. THE ORDER OF MAJOR LAND DISTURBING ACTIVITIES IS INDICATED IN THE ACTIVITY SCHEDULE LOCATED ON SHEET C-505.
3. THE DISTURBED ACREAGE FOR THE PROJECT IS 0.73 ACRES.
4. THE CULVERT REPLACEMENT PROJECT LOCATION IS:
33.43445° -84.46671°

FAYETTE COUNTY WATER SYSTEM NOTES:

1. CITY OF FAYETTEVILLE WATER SYSTEM SPECIFICATIONS AND DETAILS SHALL GOVERN ALL WATER MAIN CONSTRUCTION.
2. ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH CITY OF FAYETTEVILLE WATER SYSTEM AND AWWA STANDARDS AND SPECIFICATIONS.
3. DUCTILE IRON PIPE (D.I.P.) SHALL BE MINIMUM PRESSURE CLASS 350 CEMENT MORTAR LINED, PER ANSI C151/A21.51. ALL FITTINGS SHALL BE MECHANICAL JOINT DUCTILE IRON PER ANSI A21.10 OR A21.53. ALL SERVICE PIPING SHALL BE COPPER.
4. PROVIDE THRUST RESTRAINT (THRUST BLOCKS OR RESTRAINED JOINTS) AT ALL BENDS, TEES, CROSSES AND END OF LINES. (EOL) SIDE FORMS SHALL BE USED TO PREVENT ENCASEMENT OF BOLTS. SERVICE TAPS SHALL NOT BE LOCATED BENEATH PAVEMENT.
5. MAINTAIN 24" MINIMUM CLEARANCE BETWEEN WATERLINE AND OTHER STRUCTURES.
6. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 4' OVER ALL WATER LINES.
7. CONTRACTOR SHALL FLAG WATER LINE AND SERVICE LOCATIONS TO PREVENT DAMAGE BY OTHER UTILITY CONTRACTORS.
8. PROPER COMPACTION IS REQUIRED THROUGHOUT THE PROJECT. (95% PERVIOUS, 98% IMPERVIOUS)
9. UNSUITABLE SOIL MATERIALS SHALL BE REPLACED WITH SUITABLE MATERIALS.
10. NEW WATER LINE SHALL BE PRESSURE TESTED FOR 2 HOURS AT 200 P.S.I. UNACCEPTABLE LEAKAGE SHALL BE REPAIRED AND WATER LINE SHALL BE RETESTED PRIOR TO ACCEPTANCE BY CITY OF FAYETTEVILLE WATER SYSTEM. MAIN MUST BE DISINFECTED PRIOR TO BEING PLACED IN SERVICE.
11. TOP OF CURBS SHALL BE PERMANENTLY MARKED AND PAINTED BLUE AT MAIN AND SERVICE CROSSINGS, AS WELL AS, VALVE AND METER LOCATIONS.
12. WATERLINE CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL, INCLUDING SIGNAGE AND FLAGMEN, WHILE WORKING WITHIN THE RIGHT OF WAY OF ANY EXISTING ROAD.
13. WATERLINE CONTRACTOR PERFORMING ANY WORK WITHIN AN EXISTING RIGHT OF WAY MUST COMPLY WITH THE MUTCD 2003 EDITION WITH REVISIONS NUMBER 1 AND 2 INCORPORATED, DATED DECEMBER 2007. FLAGGERS MUST POSSESS A CURRENT CERTIFICATION CARD. DOCUMENTATION SHALL BE AVAILABLE UPON REQUEST BY ANY CITY EMPLOYEE.
14. WATER TO BE PROVIDED BY CITY OF FAYETTEVILLE WATER SYSTEM.
15. ALL TIE-INS SHALL BE COORDINATED WITH CITY OF FAYETTEVILLE WATER SYSTEM. EXISTING VALVES SHALL BE OPERATED BY CITY PERSONNEL ONLY.
16. CONTRACTOR MUST NOTIFY CITY OF FAYETTEVILLE WATER SYSTEM 24 HOURS PRIOR TO BEGINNING CONSTRUCTION OR REQUESTING INSPECTIONS. ALL WORK MUST BE INSPECTED PRIOR TO BACKFILL AND COMPACTION. ANY WORK COVERED PRIOR TO INSPECTION IS SUBJECT TO REJECTION UNTIL IT HAS BEEN EXPOSED AND INSPECTED BY CITY OF FAYETTEVILLE WATER PERSONNEL.
17. NO TRENCHES OR PITS ARE TO BE LEFT OPEN OVERNIGHT OR THROUGH A WEEKEND. IF CREW VACATES JOB SITE DURING DAYTIME HOURS, A PROPERLY CONSTRUCTED, HIGHLY VISIBLE BARRICADE MUST BE ERECTED.
18. WHILE THE EXCAVATION IS OPEN, UNDERGROUND INSTALLATIONS SHALL BE PROTECTED, SUPPORTED OR REMOVED AS NECESSARY TO SAFEGUARD EMPLOYEES.
19. MEANS OF EGRESS FROM TRENCH EXCAVATIONS. A STAIRWAY, LADDER, RAMP OR OTHER SAFE MEANS OF EGRESS SHALL BE LOCATED IN TRENCH EXCAVATIONS THAT ARE 4 FEET OR MORE IN DEPTH SO AS TO REQUIRE NO MORE THAN 25 FEET OF LATERAL TRAVEL FOR EMPLOYEES.
20. CONTACT MARC MATHEWS AT THE CITY OF FAYETTEVILLE WATER SYSTEM TO SCHEDULE A PRECONSTRUCTION MEETING PRIOR TO BEGINNING ANY WORK. PHONE: 770-460-4665.
21. ALL CONTRACTORS MUST HAVE A CERTIFIED COMPETENT PERSON ON SITE WHILE WORK IS BEING PERFORMED. DOCUMENTATION SHALL BE AVAILABLE UPON REQUEST BY ANY CITY EMPLOYEE.
22. ALL CONTRACTORS PERFORMING ANY LAND DISTURBING ACTIVITY SHALL HAVE ATTENDED THE GSWCC SUB CONTRACTOR AWARENESS COURSE WHEN WORKING IN A COMMON DEVELOPMENT WHERE THE PRIMARY PERMITTEE HAS OBTAINED A LEVEL 1A CERTIFICATION. THE PRIMARY PERMITTEE IS REQUIRED TO HAVE A LEVEL 1A CERTIFIED REPRESENTATIVE ON SITE AT ALL TIMES. DOCUMENTATION SHALL BE AVAILABLE UPON REQUEST BY ANY COUNTY EMPLOYEE.
23. BEFORE RELEASE OF THE WATER LINES, 2 CERTIFIED AS - BUILTS (24 X 36) MUST BE SUBMITTED ALONG WITH 2 SIGNED FINAL PLATS OR FINAL SITE PLANS. ONE ELECTRONIC COPY OF EACH DOCUMENT SHOULD BE SENT TO THE INSPECTOR UPON ACCEPTANCE.

GENERAL:

1. BENCHMARK FOR CONSTRUCTION HAS BEEN PROVIDED ON SHEET C-101.
2. ALL LABOR, MATERIALS, AND METHODS OF CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH THE MINIMUM ENGINEERING AND CONSTRUCTION STANDARDS ADOPTED BY FAYETTE COUNTY, WHERE CONFLICTS OR OMISSIONS EXIST, THE FAYETTE COUNTY STANDARDS SHALL DICTATE. SUBSTITUTIONS AND DEVIATION FROM PLANS AND SPECIFICATIONS SHALL BE PERMITTED ONLY WHEN WRITTEN APPROVAL HAS BEEN ISSUED BY THE ENGINEER.
3. SHOP DRAWINGS OF ALL MATERIALS BEING USED SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
4. ALL MATERIALS AND CONSTRUCTION TO BE IN ACCORDANCE WITH THE FAYETTE COUNTY DEVELOPMENT REGULATIONS, LATEST EDITION, UNLESS OTHERWISE WAIVED.
5. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL REQUIRED PERMITS ARE OBTAINED AND IN HAND BEFORE BEGINNING ANY CONSTRUCTION. NO CONSTRUCTION OR FABRICATION OF ANY ITEM SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED ALL PLANS AND ANY OTHER DOCUMENTATION FROM ALL OF THE PERMITTING AND ANY OTHER REGULATORY AUTHORITIES. ANY PENALTIES, STOP WORK ORDERS OR ADDITIONAL WORK RESULTING FROM THE CONTRACTOR BEING IN VIOLATION OF THE REQUIREMENTS ABOVE, SHALL BE FULLY BORNE BY THE CONTRACTOR.
6. THE LOCATION OF ALL EXISTING UTILITIES AND STORM DRAINAGE SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR INACCURACY. PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE VARIOUS UTILITIES AND TO MAKE THE NECESSARY ARRANGEMENTS FOR ANY RELOCATION OF THESE UTILITIES WITH THE OWNER OF THE UTILITY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING UNDERGROUND UTILITIES, WHETHER SHOWN ON THE PLAN OR LOCATED BY THE UTILITY COMPANY. ALL UTILITIES WHICH INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FIRST. ANY FEES ASSOCIATED WITH UTILITY RELOCATIONS SHALL BE BORNE IN ACCORDANCE WITH RESPECTIVE UTILITY COMPANY STANDARDS.

GENERAL (CONTINUED):

6. IT IS REQUESTED UTILITY COMPANIES MOVE THEIR PARTICULAR UTILITIES. ANY DELAY OR INCONVENIENCE CAUSED TO THE CONTRACTOR BY THE RELOCATION OF THE VARIOUS UTILITIES SHALL BE INCIDENTAL TO THE CONTRACT AND NO EXTRA COMPENSATION WILL BE ALLOWED.
7. THE CONTRACTOR SHALL SCHEDULE A PRECONSTRUCTION MEETING TO BE HELD BETWEEN FAYETTE COUNTY, UTILITIES, ENGINEER OF RECORD, AND CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION.
8. THE SEQUENCE OF CONSTRUCTION SHALL BE SUCH THAT ALL UNDERGROUND INSTALLATIONS OF EVERY KIND, INCLUDING LANDSCAPE SPRINKLERS, SHALL BE PLACED BENEATH THE PAVEMENT AND ITS EDGES PRIOR TO THE CONSTRUCTION OF THE PAVEMENT. THE PAVEMENT SHALL NOT BE CUT WITHOUT PRIOR APPROVAL OF THE ENGINEER.
9. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION AND AT LEAST 48 HOURS HOURS BEFORE REQUIRED INSPECTION ON EACH AND EVERY PHASE OF WORK. THE CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 48 HOURS NOTICE PRIOR TO ANY SCHEDULED TESTING. NO PRESSURE TESTING, OR FINAL TESTING WILL BE ACCEPTED UNLESS WITNESSED BY THE ENGINEER'S REPRESENTATIVE.
10. ALL CONTRACTORS, CITY REPRESENTATIVES, COUNTY REPRESENTATIVES, AND UTILITY COMPANIES ARE RESPONSIBLE FOR THEIR RESPECTIVE SURVEYING AND LAYOUT FROM BENCHMARK PROVIDED ON CONSTRUCTION PLANS. ANY SURVEY MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE REPLACED UPON COMPLETION OF THE WORK BY A REGISTERED LAND SURVEYOR.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING ANY CONSTRUCTION ACTIVITIES FROM TAKING PLACE OUTSIDE OF THE LIMITS OF CONSTRUCTION SHOWN ON THE PLANS. ANY ON-SITE OR OFFSITE AREAS DISTURBED SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER.
12. THE CONTRACTOR SHALL MAINTAIN A CURRENT SET OF CONSTRUCTION PLANS AND ALL PERMITS ON THE JOB SITE DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE TWO (2) SETS OF RECORD DRAWINGS TO THE ENGINEER OF RECORD WITHIN TWO (2) WEEKS AFTER CONSTRUCTION HAS BEEN COMPLETED ON EACH PHASE.
13. TOPOGRAPHIC INFORMATION SHOWN ON THESE PLANS WERE TAKEN FROM SURVEY PROVIDED BY: ROCHESTER AND ASSOCIATES, INC.
14. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE EXISTING SITE CONDITIONS OF SOIL PRIOR TO N.T.P. CONSTRUCTION TO DETERMINE IF ANY OFF SITE MATERIALS WILL NEED TO BE IMPORTED TO ACHIEVE THE GRADES SPECIFIED ON THE PLANS.
15. CLEAR AREAS INDICATED SHALL BE COMPLETELY CLEAR OF ALL TIMBER, BRUSH, STUMPS, ROOTS, GRASS, WEEDS, RUBBISH, AND ALL OTHER DEBRIS AND OBSTRUCTIONS RESTING ON OR PROTRUDING THROUGH THE SURFACE OF THE GROUND.
16. PRIOR TO BID PREPARATION, THE CONTRACTOR MUST BECOME FAMILIAR WITH THE OVERALL SITE CONDITIONS AND PERFORM ADDITIONAL INVESTIGATIONS AS DETERMINED NECESSARY TO UNDERSTAND THE LIMIT AND DEPTH OF EXPECTED ORGANIC SILT PEAT AREAS, ADEQUACY OF EXISTING MATERIALS AS FILL, DEWATERING REQUIREMENTS, CLEAN FILL REQUIRED FROM OFFSITE, AND MATERIALS TO BE DISPOSED OF OFFSITE, ALL OF WHICH WILL AFFECT HIS PRICING. ANY DELAY, INCONVENIENCE, OR EXPENSE CAUSED TO THE CONTRACTOR DUE TO INADEQUATE INVESTIGATION OF EXISTING CONDITIONS SHALL BE INCIDENTAL TO THE CONTRACT, AND NO EXTRA COMPENSATION WILL BE ALLOWED. THE MATERIALS ANTICIPATED TO BE ENCOUNTERED DURING CONSTRUCTION MAY REQUIRE DRYING PRIOR TO USE AS BACKFILL, AND THE CONTRACTOR MAY HAVE TO IMPORT MATERIALS, AT NO EXTRA COST, FROM OFFSITE TO MEET THE REQUIREMENTS FOR COMPACTION AND PROPER FILL.

DEMOLITION:

1. THE CONTRACTOR SHALL OBTAIN NECESSARY PERMITS AND LICENSES FOR PERFORMING THE DEMOLITION WORK AND SHALL FURNISH A COPY OF THESE ITEMS TO THE ENGINEER PRIOR TO COMMENCING THE WORK. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE PERMITS.
2. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES OR LOCAL AUTHORITIES FURNISHING GAS, WATER, ELECTRICAL, TELEPHONE, OR SEWER SERVICE SO THEY CAN REMOVE, RELOCATE, DISCONNECT, CAP OR PLUG THEIR EQUIPMENT IN ORDER TO FACILITATE DEMOLITION.
3. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL TREES, STRUCTURES, AND UTILITIES NOT MARKED FOR REMOVAL OR DEMOLITION AND SHALL PROMPTLY REPAIR ANY DAMAGE AS DIRECTED BY THE ENGINEER AT NO COST TO THE OWNER.
4. THE CONTRACTOR SHALL REMOVE PAVING MARKED FOR DEMOLITION WHICH INCLUDES ALL ASPHALT, CONCRETE, BASE, AND RETAINING WALLS (INCLUDING THE FOOTERS).
5. THE CONTRACTOR SHALL REMOVE TREES MARKED FOR REMOVAL WHICH INCLUDES THE ROOTS ASSOCIATED WITH THE TREE. TREES NOT MARKED FOR REMOVAL SHALL BE PROTECTED IN ACCORDANCE WITH THE FAYETTE COUNTY REGULATIONS.
6. THE CONTRACTOR SHALL REMOVE UNSALVAGEABLE MATERIALS AND YARD WASTE FROM THE SITE IMMEDIATELY AND DISPOSE OF IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.
7. THE CONTRACTOR SHALL SAW-CUT A SMOOTH STRAIGHT EDGE ON ANY PAVEMENT PROPOSED FOR DEMOLITION PRIOR TO ITS REMOVAL. PRIOR TO CONNECTING PROPOSED PAVEMENT TO EXISTING PAVEMENT, THE CONTRACTOR SHALL ENSURE THAT THE EDGE OF THE EXISTING PAVEMENT IS STRAIGHT AND UNIFORM.
8. THE DEMOLITION SHALL BE PHASED TO PROVIDE 1 LANE OF TRAFFIC AT ALL TIMES.

EARTHWORK, GRADING, STABILIZATION, PAVING AND DRAINAGE:

1. COMPACT ALL UTILITY TRENCHES WITHIN ROADWAYS TO 98% OF THE MODIFIED PROCTOR MAXIMUM DENSITY (AASHTO T - 180) AND TO 95% WITHIN OTHER AREAS.
2. ALL ORGANIC SOILS BELOW UTILITY TRENCHES SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL AND COMPACTED TO NO LESS THAN 98% OF THE MODIFIED PROCTOR MAXIMUM DENSITY (AASHTO T - 180).
3. STABILIZED SUBGRADE TO MEET SPECIFIED REQUIREMENTS.
4. ASPHALTIC CONCRETE TO GDOT STANDARD SPECIFICATION (LATEST EDITION) SECTION 916.1 AND FAYETTE COUNTY, WHICHEVER IS GREATER.
5. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.
6. ALL CONCRETE FLUMES, WALKS, AND CURBS SHALL BE CONSTRUCTED WITH 3000 PSI CONCRETE.
7. ALL ON-SITE AREAS DISTURBED BY THE CONSTRUCTION SHALL BE STABILIZED WITH SOD (SAME AS SURROUNDING AREA OR BETTER) OR APPROVED EQUAL. CONTRACTOR IS RESPONSIBLE FOR IRRIGATION OF PERMANENT GRASSING.
8. THE REINFORCED CONCRETE PIPE SHALL BE CLASS III WITH WALL THICKNESS "B" CONFORMING TO ASTM C - 76 OR AWWA 302 - 74 AND GASKETS SHALL BE IN ACCORDANCE WITH ASTM C - 443 OR ASTM D - 412.
9. ALL PIPE CALL OUTS ARE MEASURED CENTER LINE TO CENTER LINE FOR MANHOLES AND INLETS AND FROM THE END OF THE PIPE FOR MITERED END SECTIONS.
10. ALL DEWATERING COSTS ASSOCIATED WITH THE INSTALLATION AND CONSTRUCTION OF THE UNDERGROUND UTILITIES; STORM WATER PIPES AND MANHOLES; SANITARY SEWER MAINS, FORCE MAINS, MANHOLES, AND LIFT STATIONS; AND STORM WATER MANAGEMENT SYSTEMS SHALL BE INCLUDED AS PART OF THE CONSTRUCTION BID COSTS. THE CONTRACTOR SHALL SUBMIT FOR WATER USE PERMITS IF REQUIRED FOR DEWATERING ACTIVITIES.
11. ALL PIPES SHALL HAVE 3 FEET MINIMUM COVER UNLESS OTHERWISE SPECIFIED IN PLANS, CONTRACTOR SHALL TAKE CARE TO PROVIDE PROPER GRADE ELEVATIONS AND ALIGNMENTS.
12. THE CONTRACTOR MUST INSTALL AND MAINTAIN GRASS OR SOD ON EXPOSED SLOPES WITHIN 48 HOURS OF COMPLETED FINAL GRADES, AS NOTED ON PLANS, AND AT ANY OTHER TIME AS NECESSARY TO PREVENT EROSION, SEDIMENTATION OR TURBID DISCHARGES TO ANY DOWNSTREAM WATER BODY, WETLAND, OR OFF-SITE PROPERTY. SODDING ON SLOPES 3:1 AND STEEPER SHALL BE STAKED.

EARTHWORK, GRADING, STABILIZATION, PAVING AND DRAINAGE (CONTINUED):

13. THE CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO CONTROL TURBIDITY AND SEDIMENT INCLUDING, BUT NOT LIMITED TO, THE INSTALLATION OF TURBIDITY BARRIERS AND SILT FENCES AT ALL LOCATIONS WHERE THE POSSIBILITY OF TRANSFERRING SUSPENDED SOLIDS INTO THE RECEIVING WATER BODY EXISTS DUE TO THE PROPOSED WORK. TURBIDITY AND SEDIMENT BARRIERS MUST BE MAINTAINED AT ALL LOCATIONS UNTIL CONSTRUCTION IS COMPLETED AND DISTURBED SOIL AREAS ARE STABILIZED. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR REMOVING THE BARRIERS.
14. EXISTING RUNOFF COEFFICIENT, C, FOR THE PROJECT: 0.50.
PROPOSED RUNOFF COEFFICIENT, C, FOR THE PROJECT: 0.50.

OTHER UTILITY INFORMATION:

1. THE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES WHICH MAY HAVE THEIR UTILITIES WITHIN THE CONSTRUCTION AREAS TO LOCATE THEIR FACILITIES IN THE FIELD FORTY-EIGHT (48) HOURS PRIOR TO BEGINNING CONSTRUCTION.
 2. DUCTILE IRON PIPE SHALL BE ENCASED IN POLYETHYLENE TWENTY-FIVE (25) FEET ON EACH SIDE OF ANY PERPENDICULAR CROSSING OF METALLIC GAS MAINS OR ANY OTHER CATHODICALLY PROTECTED PIPELINE AND FOR LOCATIONS PARALLEL TO AND WITHIN TEN FEET OF METALLIC GAS MAINS OR OTHER CATHODICALLY PROTECTED PIPE AND THROUGH THE AREA OF INFLUENCE OF CATHODIC PROTECTION ANODE BED.
- SPILL CONTROL NOTES:**
1. IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS NOTES OF THIS PLAN, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP.
 - a. MANUFACTURERS' RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.
 - b. ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.
 - c. SPILLS OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF SIZE.
 - d. THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED.
 - e. THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR.
 2. PETROLEUM BASED PRODUCTS - CONTAINERS FOR PRODUCTS SUCH AS FUELS, LUBRICANTS, AND TARS WILL BE INSPECTED DAILY FOR LEAKS AND SPILLS. THIS INCLUDES ON-SITE VEHICLE AND MACHINERY DAILY INSPECTIONS AND REGULAR PREVENTATIVE MAINTENANCE OF SUCH EQUIPMENT. EQUIPMENT MAINTENANCE AREAS WILL BE LOCATED AWAY FROM STATE WATERS, NATURAL DRAINS AND STORM WATER DRAINAGE INLETS. IN ADDITION, TEMPORARY FUELING TANKS SHALL HAVE A SECONDARY CONTAINMENT LINER TO PREVENT/MINIMIZE SITE CONTAMINATION. DISCHARGE OF OILS, FUELS AND LUBRICANTS IS PROHIBITED. PROPER DISPOSAL METHODS WILL INCLUDE IN A SUITABLE CONTAINER AND DISPOSAL AS REQUIRED BY LOCAL AND STATE REGULATIONS.



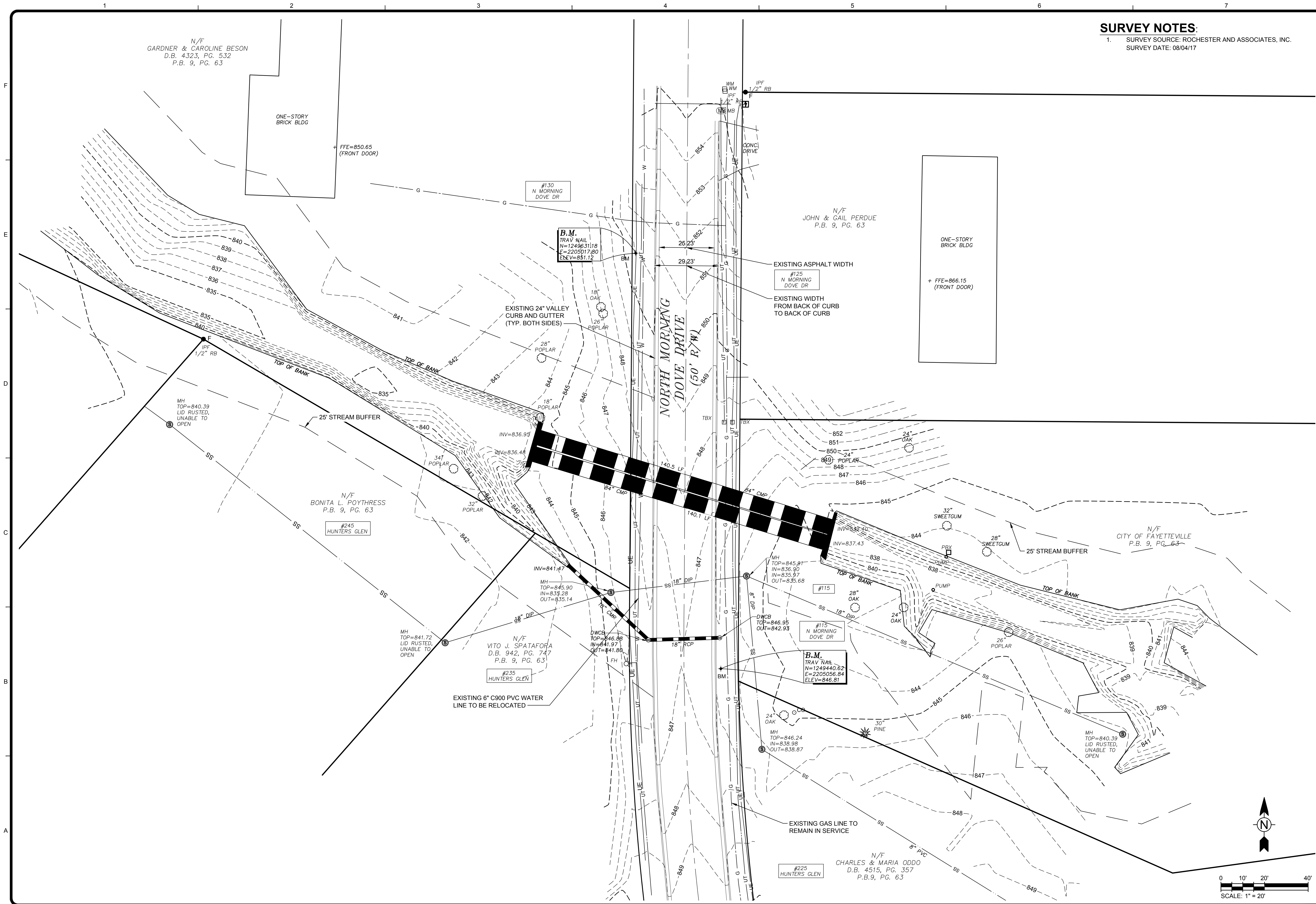
GSWCC LEVEL II
CERT. # 0000073529

MARK	DATE	DESCRIPTION	BY	
			HA	
0	12/21/18	ISSUED FOR CONSTRUCTION		

Project No.:	200-01297-17038
Designed By:	CG
Drawn By:	MR
Checked By:	DL

G-002

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SURVEY NOTES:
1. SURVEY SOURCE: ROCHESTER AND ASSOCIATES, INC.
SURVEY DATE: 08/04/17

TETRA TECH

GSWCC LEVEL II
CERT. # 0000073529

MARK	DATE	DESCRIPTION	BY
0	12/21/18	ISSUED FOR CONSTRUCTION	HA

FAYETTE COUNTY
MORNING DOVE DR CULVERT REPLACEMENT

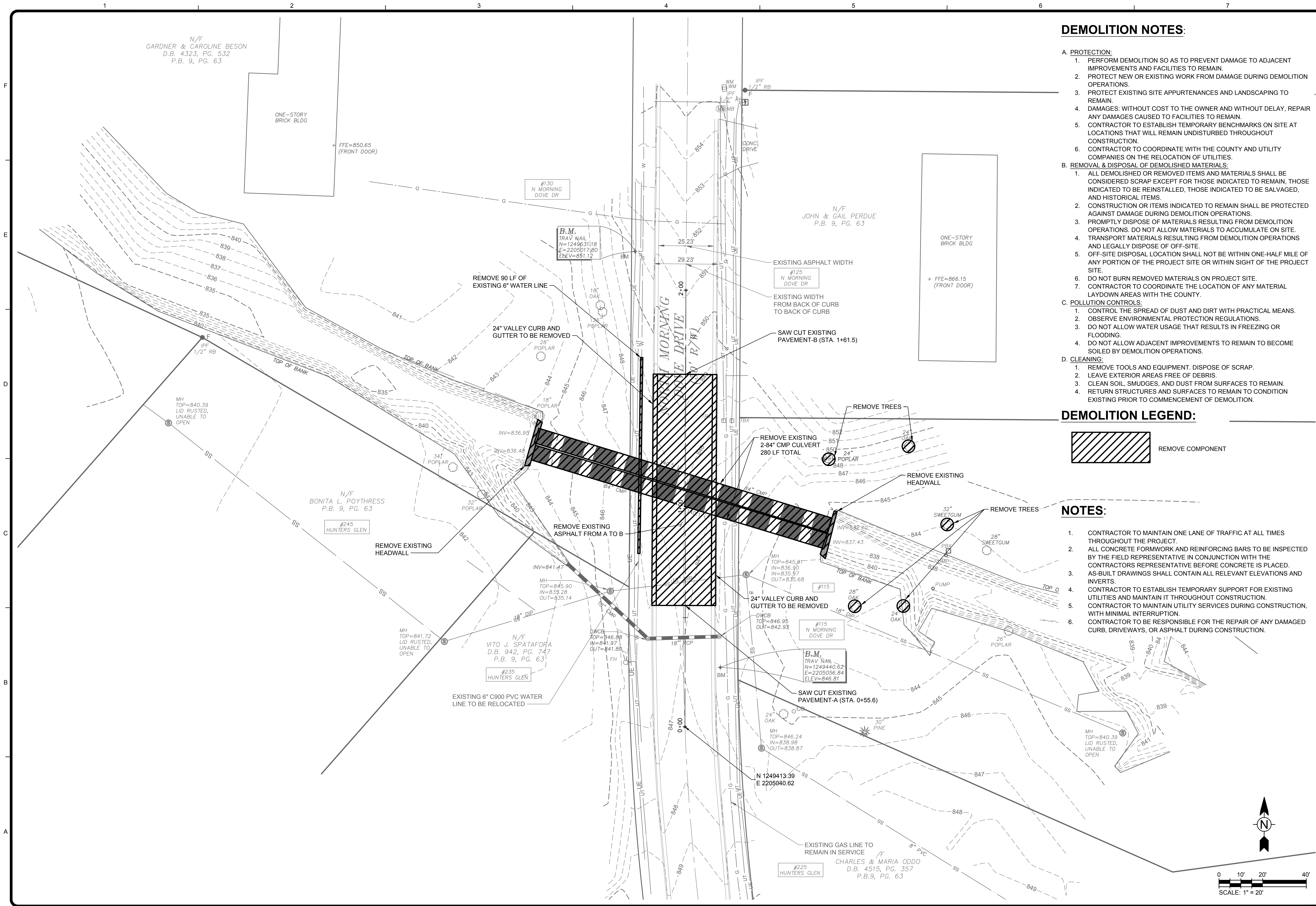
EXISTING CONDITIONS

Project No.: 200-01297-17038
Designed By: CG
Drawn By: HA
Checked By: DL

C-101

Bar Measures 1 inch

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DEMOLITION NOTES:

- A. PROTECTION:
- PERFORM DEMOLITION SO AS TO PREVENT DAMAGE TO ADJACENT IMPROVEMENTS AND FACILITIES TO REMAIN.
 - PROTECT NEW OR EXISTING WORK FROM DAMAGE DURING DEMOLITION OPERATIONS.
 - PROTECT EXISTING SITE APPURTENANCES AND LANDSCAPING TO REMAIN.
 - DAMAGES: WITHOUT COST TO THE OWNER AND WITHOUT DELAY, REPAIR ANY DAMAGES CAUSED TO FACILITIES TO REMAIN.
 - CONTRACTOR TO ESTABLISH TEMPORARY BENCHMARKS ON SITE AT LOCATIONS THAT WILL REMAIN UNDISTURBED THROUGHOUT CONSTRUCTION.
 - CONTRACTOR TO COORDINATE WITH THE COUNTY AND UTILITY COMPANIES ON THE RELOCATION OF UTILITIES.
- B. REMOVAL & DISPOSAL OF DEMOLISHED MATERIALS:
- ALL DEMOLISHED OR REMOVED ITEMS AND MATERIALS SHALL BE CONSIDERED SCRAP EXCEPT FOR THOSE INDICATED TO REMAIN, THOSE INDICATED TO BE REINSTALLED, THOSE INDICATED TO BE SALVAGED, AND HISTORICAL ITEMS.
 - CONSTRUCTION OR ITEMS INDICATED TO REMAIN SHALL BE PROTECTED AGAINST DAMAGE DURING DEMOLITION OPERATIONS.
 - PROMPTLY DISPOSE OF MATERIALS RESULTING FROM DEMOLITION OPERATIONS. DO NOT ALLOW MATERIALS TO ACCUMULATE ON SITE.
 - TRANSPORT MATERIALS RESULTING FROM DEMOLITION OPERATIONS AND LEGALLY DISPOSE OF OFF-SITE.
 - OFF-SITE DISPOSAL LOCATION SHALL NOT BE WITHIN ONE-HALF MILE OF ANY PORTION OF THE PROJECT SITE OR WITHIN SIGHT OF THE PROJECT SITE.
 - DO NOT BURN REMOVED MATERIALS ON PROJECT SITE.
 - CONTRACTOR TO COORDINATE THE LOCATION OF ANY MATERIAL LAYDOWN AREAS WITH THE COUNTY.
- C. POLLUTION CONTROLS:
- CONTROL THE SPREAD OF DUST AND DIRT WITH PRACTICAL MEANS.
 - OBSERVE ENVIRONMENTAL PROTECTION REGULATIONS.
 - DO NOT ALLOW WATER USAGE THAT RESULTS IN FREEZING OR FLOODING.
 - DO NOT ALLOW ADJACENT IMPROVEMENTS TO REMAIN TO BECOME SOILED BY DEMOLITION OPERATIONS.
- D. CLEANING:
- REMOVE TOOLS AND EQUIPMENT. DISPOSE OF SCRAP.
 - LEAVE EXTERIOR AREAS FREE OF DEBRIS.
 - CLEAN SOIL, SMUDGES, AND DUST FROM SURFACES TO REMAIN.
 - RETURN STRUCTURES AND SURFACES TO REMAIN TO CONDITION EXISTING PRIOR TO COMMENCEMENT OF DEMOLITION.

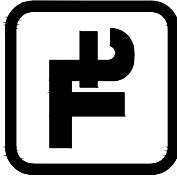
DEMOLITION LEGEND:



NOTES:

- CONTRACTOR TO MAINTAIN ONE LANE OF TRAFFIC AT ALL TIMES THROUGHOUT THE PROJECT.
- ALL CONCRETE FORMWORK AND REINFORCING BARS TO BE INSPECTED BY THE FIELD REPRESENTATIVE IN CONJUNCTION WITH THE CONTRACTORS REPRESENTATIVE BEFORE CONCRETE IS PLACED.
- AS-BUILT DRAWINGS SHALL CONTAIN ALL RELEVANT ELEVATIONS AND INVERTS.
- CONTRACTOR TO ESTABLISH TEMPORARY SUPPORT FOR EXISTING UTILITIES AND MAINTAIN IT THROUGHOUT CONSTRUCTION.
- CONTRACTOR TO MAINTAIN UTILITY SERVICES DURING CONSTRUCTION, WITH MINIMAL INTERRUPTION.
- CONTRACTOR TO BE RESPONSIBLE FOR THE REPAIR OF ANY DAMAGED CURB, DRIVEWAYS, OR ASPHALT DURING CONSTRUCTION.

TETRA TECH



GSWCC LEVEL II
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MARK	DATE	DESCRIPTION	BY
0	12/21/18	ISSUED FOR CONSTRUCTION	HA

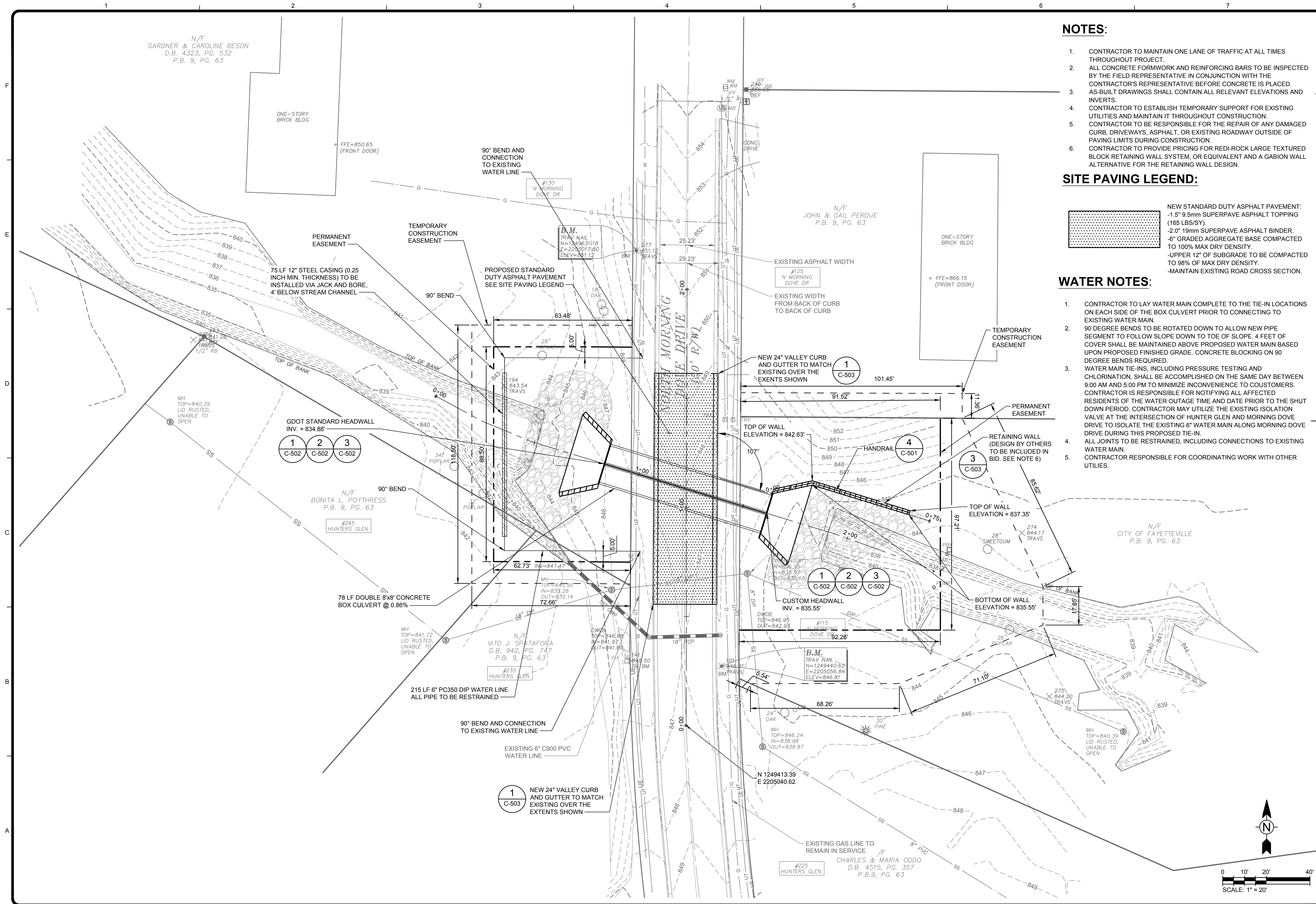
FAYETTE COUNTY
MORNING DOVE DR CULVERT REPLACEMENT
DEMOLITION PLAN

Project No.:	200-01297-17038
Designed By:	CG
Drawn By:	MR
Checked By:	DL

C-102

Bar Measures 1 inch

12/21/2018 9:47:28 AM - O:\PROJECTS\ATLANTA\A1001297-17038\CAD\SHEETFILES\C-103 SITE PLAN.DWG - ACKERMANN, HANNAH



NOTES:

1. CONTRACTOR TO MAINTAIN ONE LANE OF TRAFFIC AT ALL TIMES THROUGHOUT PROJECT.
2. ALL CONCRETE FORMWORK AND REINFORCING BARS TO BE INSPECTED BY THE FIELD REPRESENTATIVE IN CONJUNCTION WITH THE CONTRACTOR'S REPRESENTATIVE BEFORE CONCRETE IS PLACED.
3. AS-BUILT DRAWINGS SHALL CONTAIN ALL RELEVANT ELEVATIONS AND INVERTS.
4. CONTRACTOR TO ESTABLISH TEMPORARY SUPPORT FOR EXISTING UTILITIES AND MAINTAIN IT THROUGHOUT CONSTRUCTION.
5. CONTRACTOR TO BE RESPONSIBLE FOR THE REPAIR OF ANY DAMAGED CURB, DRIVEWAYS, ASPHALT, OR EXISTING ROADWAY OUTSIDE OF PAVING LIMITS DURING CONSTRUCTION.
6. CONTRACTOR TO PROVIDE PRICING FOR REDI-ROCK LARGE TEXTURED BLOCK RETAINING WALL SYSTEM, OR EQUIVALENT AND A GABION WALL ALTERNATIVE FOR THE RETAINING WALL DESIGN.

SITE PAVING LEGEND:

- NEW STANDARD DUTY ASPHALT PAVEMENT:
- 1.5" 9.5mm SUPERPAVE ASPHALT TOPPING (165 LBS/SY).
 - 2.0" 19mm SUPERPAVE ASPHALT BINDER.
 - 6" GRADED AGGREGATE BASE COMPACTED TO 100% MAX DRY DENSITY.
 - UPPER 12" OF SUBGRADE TO BE COMPACTED TO 98% OF MAX DRY DENSITY.
 - MAINTAIN EXISTING ROAD CROSS SECTION.

WATER NOTES:

1. CONTRACTOR TO LAY WATER MAIN COMPLETE TO THE TIE-IN LOCATIONS ON EACH SIDE OF THE BOX CULVERT PRIOR TO CONNECTING TO EXISTING WATER MAIN.
2. 90 DEGREE BENDS TO BE ROTATED DOWN TO ALLOW NEW PIPE SEGMENT TO FOLLOW SLOPE DOWN TO TOE OF SLOPE. 4 FEET OF COVER SHALL BE MAINTAINED ABOVE PROPOSED WATER MAIN BASED UPON PROPOSED FINISHED GRADE. CONCRETE BLOCKING ON 90 DEGREE BENDS REQUIRED.
3. WATER MAIN TIE-INS, INCLUDING PRESSURE TESTING AND CHLORINATION, SHALL BE ACCOMPLISHED ON THE SAME DAY BETWEEN 9:00 AM AND 5:00 PM TO MINIMIZE INCONVENIENCE TO CUSTOMERS. CONTRACTOR IS RESPONSIBLE FOR NOTIFYING ALL AFFECTED RESIDENTS OF THE WATER OUTAGE TIME AND DATE PRIOR TO THE SHUT DOWN PERIOD. CONTRACTOR MAY UTILIZE THE EXISTING ISOLATION VALVE AT THE INTERSECTION OF HUNTER GLEN AND MORNING DOVE DRIVE TO ISOLATE THE EXISTING 6" WATER MAIN ALONG MORNING DOVE DRIVE DURING THIS PROPOSED TIE-IN.
4. ALL JOINTS TO BE RESTRAINED, INCLUDING CONNECTIONS TO EXISTING WATER MAIN.
5. CONTRACTOR RESPONSIBLE FOR COORDINATING WORK WITH OTHER UTILITIES.



GSWCC LEVEL II
CERT. # 0000073529

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FAYETTE COUNTY
MORNING DOVE DR CULVERT REPLACEMENT
SITE PLAN

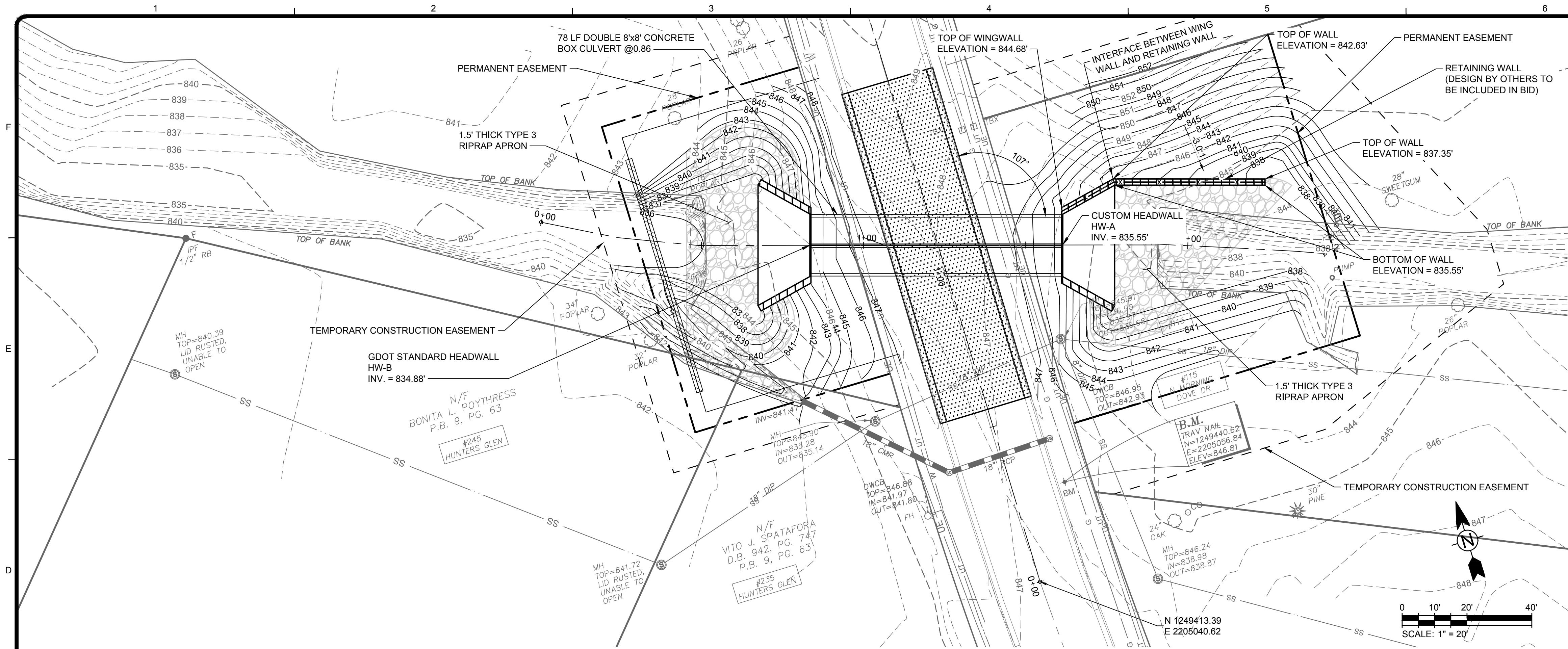
Project No.:	200-01297-17038
Designed By:	CG
Drawn By:	MR
Checked By:	DL

C-103

Sheet

Bar Measures 1 inch

12/21/2018 9:47:37 AM - O:\PROJECTS\ATLANTA\A1001\297\200-01297-17038\CAD\DWG\104 GRADING AND DRAINAGE PLAN.DWG - ACKERMANN, HANNAH



NOTES:

1. CONTRACTOR TO MAINTAIN ONE TRAVEL LANE THROUGHOUT THE DURATION OF THE PROJECT.
2. ALL CONCRETE FORMWORK AND REINFORCING BARS TO BE INSPECTED BY THE FIELD REPRESENTATIVE IN CONJUNCTION WITH THE CONTRACTOR'S REPRESENTATIVE BEFORE CONCRETE IS PLACED.
3. AS-BUILT DRAWINGS SHALL CONTAIN ALL RELEVANT ELEVATIONS AND INVERTS.
4. CONTRACTOR TO ESTABLISH TEMPORARY SUPPORT FOR EXISTING UTILITIES AND MAINTAIN IT THROUGHOUT CONSTRUCTION.
5. CONTRACTOR TO BE RESPONSIBLE FOR THE REPAIR OF ANY DAMAGED CURB, DRIVEWAYS, ASPHALT OR EXISTING ROADWAY OUTSIDE OF PAVING LIMITS DURING CONSTRUCTION.
6. CONTRACTOR TO PROVIDE BYPASS PUMPING PLAN TO BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.

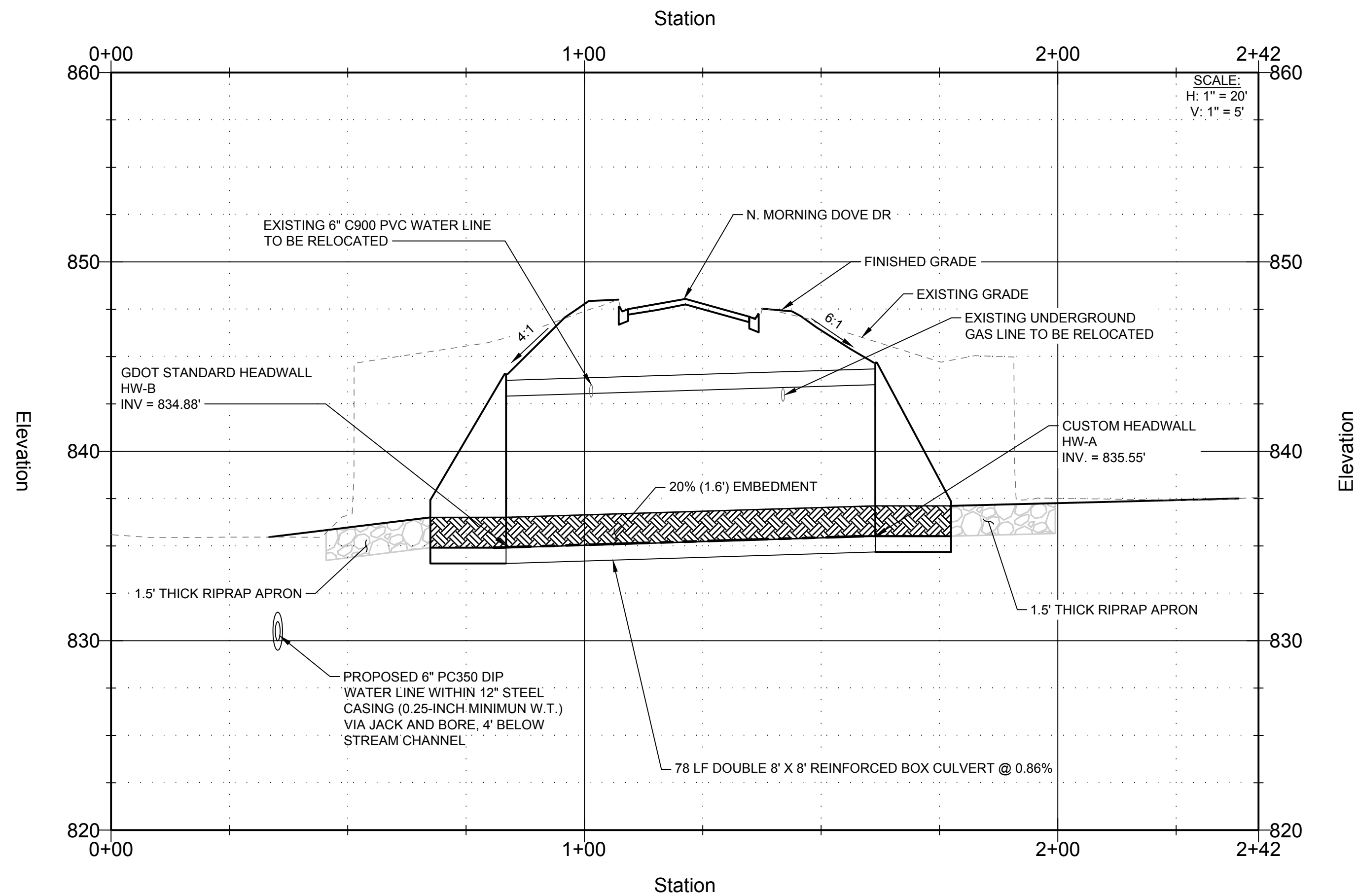
GRADING NOTES:

1. ALL RIPRAP TO BE GDOT TYPE 3.
2. ROAD TO BE GRADED FROM CROWN TO EDGE OF ASPHALT AT $\frac{1}{2}$ " PER 1'.
3. MINIMUM SHOULDER WIDTH TO BE PROVIDED IS 6'. SHOULDER SHALL BE GRADED AT $\frac{1}{2}$ " PER 1'.
4. SIDE SLOPES TO BE GRADED AT 3:1 WHERE POSSIBLE. MAXIMUM SLOPE TO BE PROVIDED IS 2:1.

WATER NOTES:

1. CONTRACTOR TO LAY WATER MAIN COMPLETE TO THE TIE-IN LOCATIONS ON EACH SIDE OF THE BOX CULVERT PRIOR TO CONNECTING TO EXISTING WATER MAIN.
2. 90 DEGREE BENDS TO BE ROTATED DOWN TO ALLOW NEW PIPE SEGMENT TO FOLLOW SLOPE DOWN TO TOE OF SLOPE. 4 FEET OF COVER SHALL BE MAINTAINED ABOVE PROPOSED WATER MAIN BASED UPON PROPOSED FINISHED GRADE. CONCRETE BLOCKING ON 90 DEGREE BENDS REQUIRED.
3. WATER MAIN TIE-INS, INCLUDING PRESSURE TESTING AND CHLORINATION, SHALL BE ACCOMPLISHED ON THE SAME DAY BETWEEN 9:00 AM AND 5:00 PM TO MINIMIZE INCONVENIENCE TO CUSTOMERS. CONTRACTOR IS RESPONSIBLE FOR NOTIFYING ALL AFFECTED RESIDENTS OF THE WATER OUTAGE TIME AND DATE PRIOR TO THE SHUT DOWN PERIOD. CONTRACTOR MAY UTILIZE THE EXISTING ISOLATION VALVE AT THE INTERSECTION OF HUNTER GLEN AND MORNING DOVE DRIVE TO ISOLATE THE EXISTING 6" WATER MAIN ALONG MORNING DOVE DRIVE DURING THIS PROPOSED TIE-IN.
4. ALL JOINTS TO BE RESTRAINED, INCLUDING CONNECTIONS TO EXISTING WATER MAIN.
5. CONTRACTOR RESPONSIBLE FOR COORDINATING WORK WITH OTHER UTILITIES.

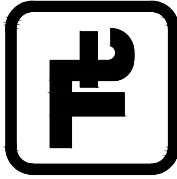
MORNING DOVE DR CULVERT TYPICAL PROFILE



FLOW SUMMARY TABLE			
STORM FREQUENCY	FLOW (CFS)	OUTLET VELOCITY (FPS)	DOWNSSTREAM VELOCITY (FPS)
25-YEAR	642	7.9	7.6
50-YEAR	790	8.6	8.1
100-YEAR	946	9.3	8.5

DRAINAGE AREA = 326 ACRES
STREAM SLOPE = 0.87%

TETRA TECH



GSWCC LEVEL II
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MARK	DATE	DESCRIPTION	BY
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FAYETTE COUNTY
MORNING DOVE DR CULVERT REPLACEMENT

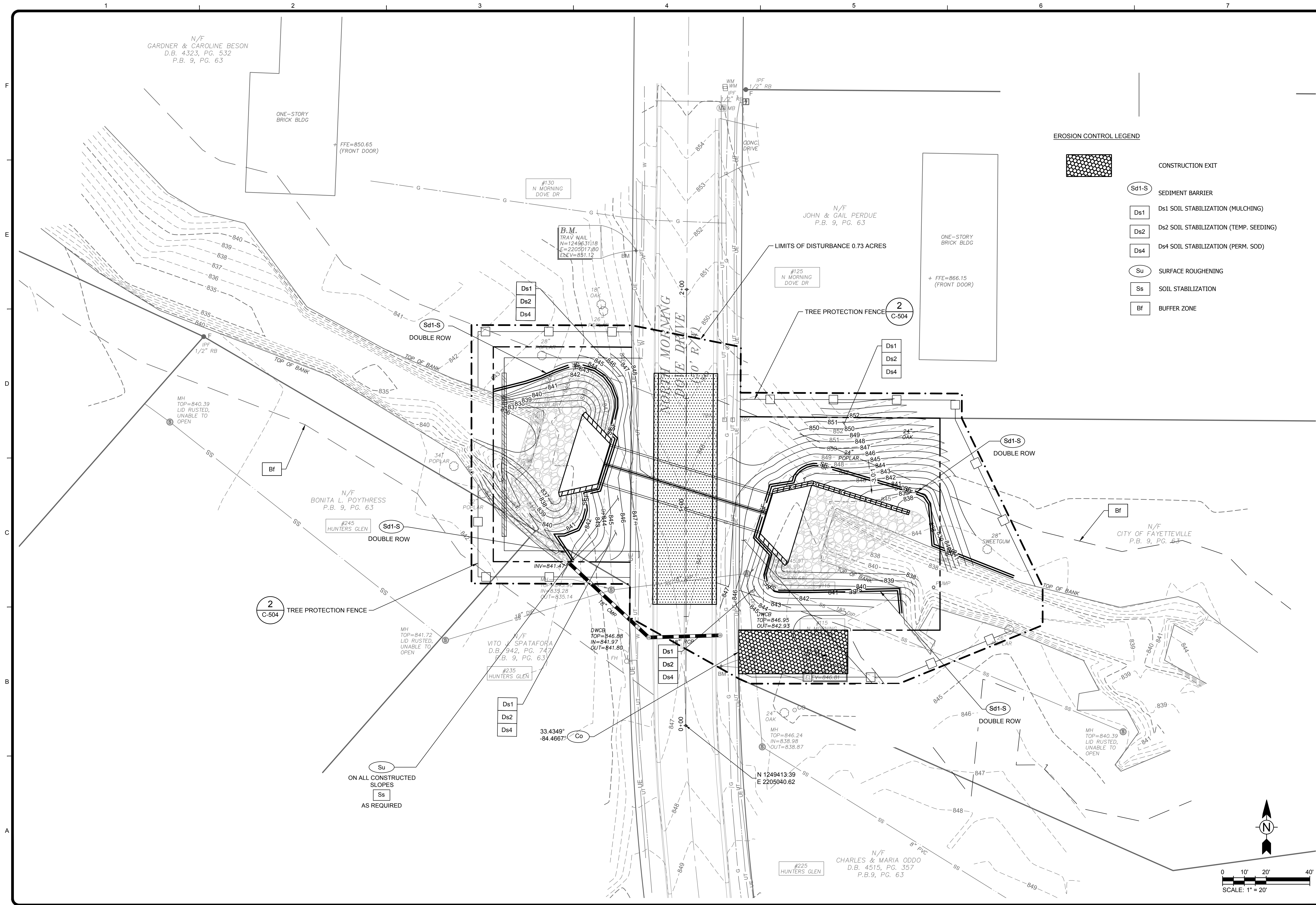
GRAIDING AND
DRAINAGE PLAN

Project No.: 200-01297-17038
Designed By: CG
Drawn By: MR
Checked By: DL

C-104

Bar Measures 1 inch

12/21/2018 9:47:45 AM - O:\PROJECTS\ATLANTA\TAIER01297\200-01297-17038\CAD\SHEET\ESC-105 EROSION AND SEDIMENTATION CONTROL PLAN.DWG - ACKERMANN, HANNAH



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GEORGIA
Professional Engineer
No. PE040217
12/21/18
DAVID N. LAVERGNE

GSWCC LEVEL II
CERT. # 0000073529

MARK	DATE	DESCRIPTION	BY
0	12/21/18	ISSUED FOR CONSTRUCTION	HA

FAYETTE COUNTY

MORNING DOVE DR CULVERT REPLACEMENT

EROSION AND SEDIMENTATION CONTROL PLAN

Project No.: 200-01297-17038

Designed By: CG

Drawn By: HA

Checked By: DL

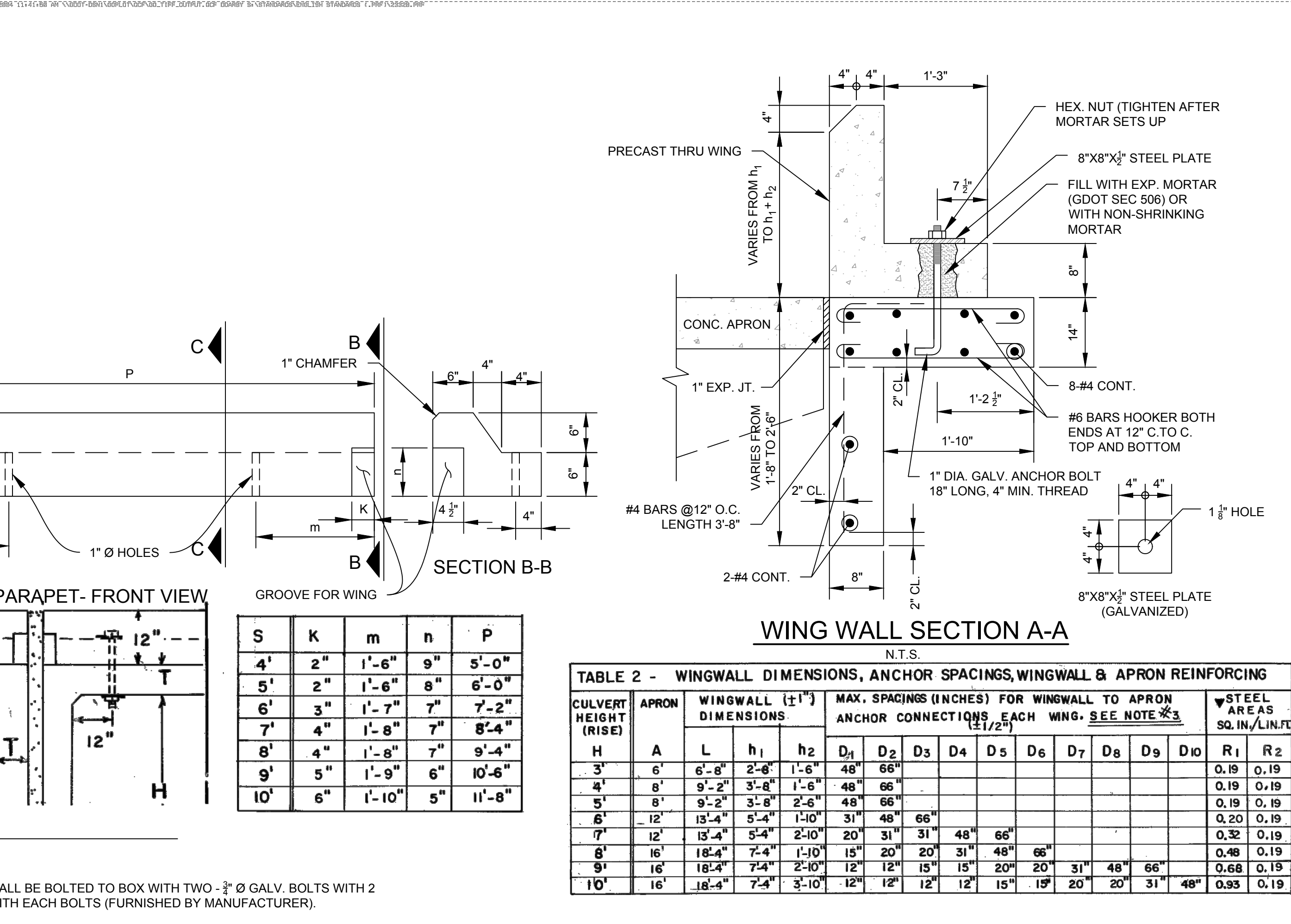
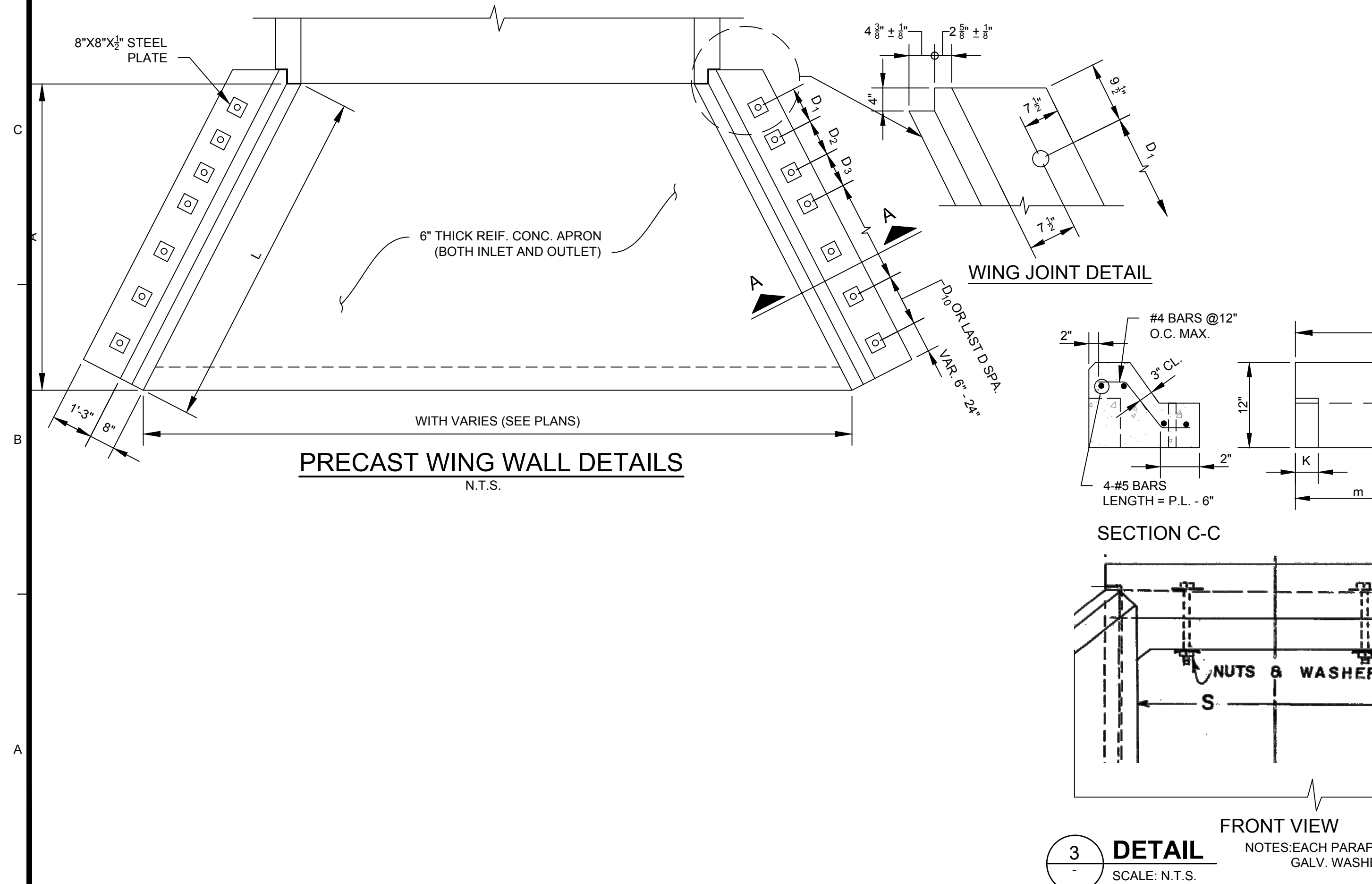
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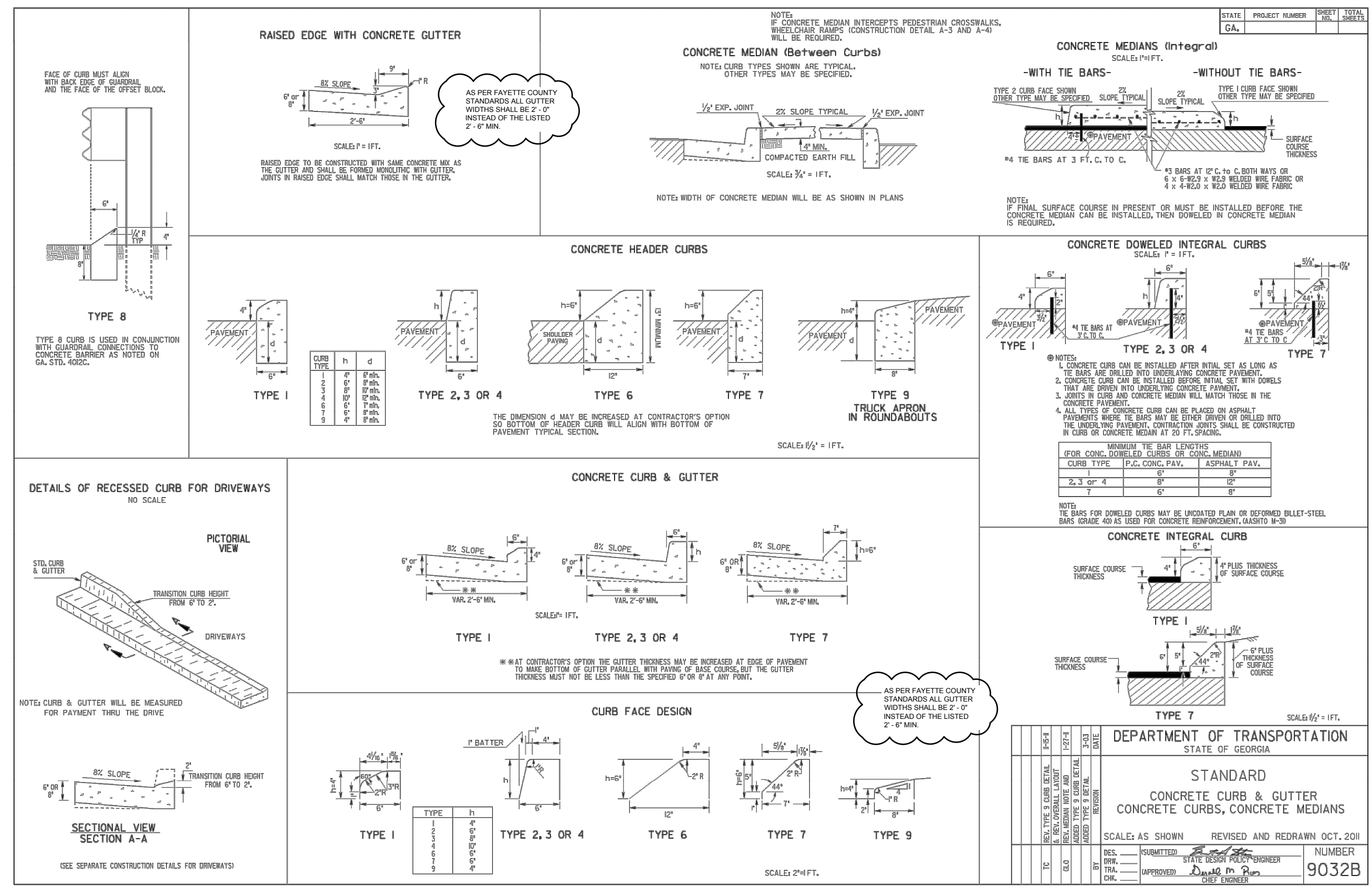
Bar Measures 1 inch

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GENERAL NOTES:
1. SPECIFY TYPE OF SPECIAL DESIGN STANDARD CURRENT EDITION AND SUPPLEMENTS THERETO.
2. CONCRETE APRONS AND BAPFLES ARE REQUIRED AT ALL OUTLETS OF ALL BUILT DRAINAGE APRONS AND IS NOT TO BE OMITTED AT OUTLETS UNLESS THE ENGINEER DETERMINES THAT RED ROCK WILL PREVENT EROSION AND MAKE THE APRON DIFFICULT TO CONSTRUCT. APRONS WITHOUT BAPFLES ARE USED AT INLETS ONLY IF PLANS SPECIFY.
3. DETAILS HEREUNDER APPLY TO BOTH STANDARD AND SPECIAL DESIGN BOX CULVERTS UNLESS OTHERWISE NOTED.
4. WHERE CONCRETE APRONS ARE REQUIRED, THE TOWELWALL OF THE BOX CULVERT MAY BE REDUCED AS SHOWN IN SECTION 9-8 OF MAY BE AS SHOWN OR APPLICABLE STANDARDS FOR THE BOX CULVERTS, WHERE APRON IS NOT REQUIRED, DO NOT USE TOWELWALL AS SHOWN IN SECTION 9-8, BUT SEE BOX CULVERT STANDARD TOWELWALL.
5. ALL CONCRETE SHALL BE CLASS A CONCRETE.
6. SEE SEPARATE STANDARD DETAILS AND/OR SPECIAL DESIGNS AS APPLICABLE FOR DETAILS OF BOX CULVERTS, WINGWALLS, PARAPETS, ETC.





Station

0+00 0+75

850

SCALE:
H: 1" = 20'
V: 1" = 5'

TOP OF WINGWALL
ELEV = 844.68'
STREAM 1+61.1
AND 9.4' OFFSET

TOP OF WALL
ELEV = 842.63'
STREAM 1+77.5
AND 18.45' OFFSET

TOP OF WALL
ELEV = 837.12'
STREAM 2+22.7
AND 19.74' OFFSET

INTERFACE BETWEEN WING
WALL AND RETAINING WALL

BOTTOM OF WALL
ELEV = 835.55
STREAM 2+22.8

WALL FOOTING

Elevation

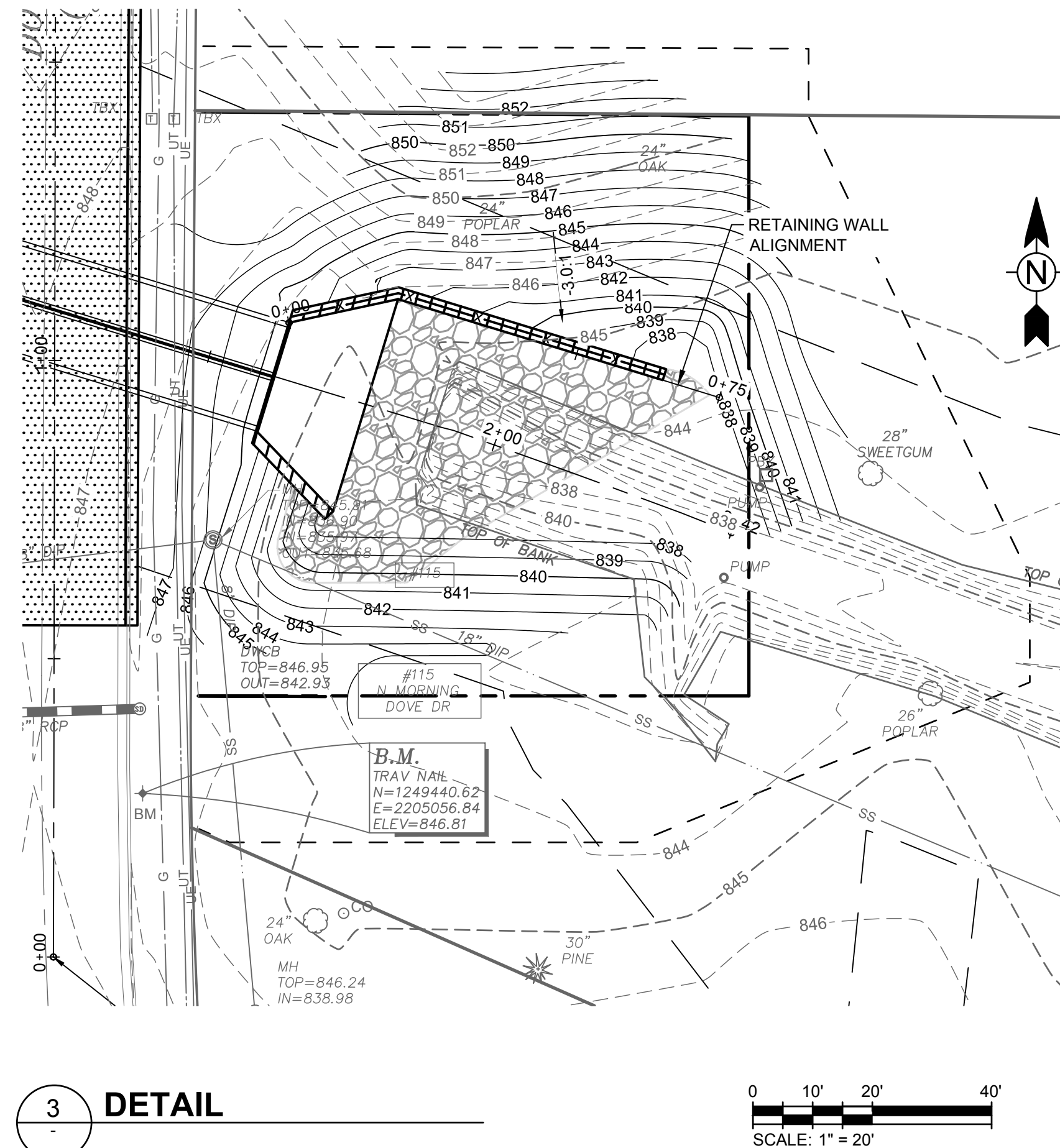
840

830

0+00 0+75

STA. 0+00 = FACE OF
8' X 8' BOX CULVERT
SEE SHEET C-103

Station



1. USE TRENCHER (I.E. DITCH WITCH) TO CUT A 4"-5" W X 18" D TRENCH ALONG DRIP LINE (LIMIT OF CLEARING) AND BACKFILL WITH SAND AND LIGHTLY COMPACT.
2. SPACE STAKES AT INTERVALS SUFFICIENT TO MAINTAIN ALL FENCING OUT OF DRIP LINE OR AS SHOWN BY ENGINEER (SET STAKES NO GREATER THAN 6 FEET ON CENTER-REBAR IS NOT TO BE USED FOR STAKES).
3. MAINTAIN FENCE BY REPAIRING AND/OR REPLACING DAMAGED FENCE. DO NOT REMOVE FENCING PRIOR TO LANDSCAPING OPERATIONS.
4. DO NOT STORE OR STACK MATERIALS, EQUIPMENT, OR VEHICLES WITHIN FENCED AREA.
5. FENCE SHALL BE ORANGE VINYL "SNOW FENCE" 4' HIGH MINIMUM.

SCALE: N.T.S.

[illegible]

FAYETTE COUNTY

MORNING DOVE DR CULVERT REPLACEMENT

CONSTRUCTION DETAILS

Project No.:	200-01297-17038
Designed By:	CG
Drawn By:	MR
Checked By:	DL

C-503

Bar Measures 1 inch

12/21/2016 4:47:28 PM - P:\NRI\01297\200-01297-17038\CAD\SHEETFILES\C-504 EROSION CONTROL DETAILS.DWG - GULMIRE, CALES

EROSION CONTROL ACTIVITIES

Co	CONSTRUCTION EXIT	DS3	DOWNSTREAM STABILIZATION (WITH SEEDING)	DA3	MB	MATTING AND BLANKETS	IN
Sd1	SEDIMENT BARRIER	Du	DUST CONTROL OR SEEDING	DN			
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)	CD	CHECK DAM				
Ds2	DISTURBED AREA STABILIZATION (WITH SEEDING)	CD	CRACK DAM PROTECTION				

FOR TEMPORARY PROTECTION OF CRITICAL AREAS WITHOUT SEEDING, THIS STANDARD APPLIES TO GRADES OR CLEARED AREAS WHICH MAY BE SUBJECT TO EROSION FOR 6 MONTHS OR LESS, WHERE SEEDINGS MAY NOT HAVE A SUITABLE GROWING SEASON TO PRODUCE AN EROSION RETARDANT COVER, BUT WHICH CAN BE STABILIZED WITH A MULCH COVER.

MATERIALS	INSTALLATION
DRY STRAW OR HAY	DEPTH OF 2 TO 4 INCHES PROVIDING COMPLETE SOIL COVERAGE
WOOD WASTE (CHIPS SAWDUST OR BARK)	DEPTH OF 2 TO 3 INCHES

EROSION CONTROL MATTING OR NETTING	APPLY IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS
------------------------------------	--

CUTBACK ASPHALT (SLOW CURING)	1200 GALLONS PER ACRE, OR 1/4 GALLON PER SQUARE YARD
POLYETHYLENE FILM	SECURED OVER BANKS OR STOCKPILED SOIL MATERIAL FOR TEMPORARY PROTECTION

Ds1

DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)

2014 MANUAL FOR EROSION AND SEDIMENT CONTROL (GREEN BOOK)

SPECIES	BROADCAST RATES 2' - 3' PER 1000 SF.	RESOURCE	PLANTING DATES	REMARKS
BARLEY (Hordeum vulgare)	3 bu. (144 LBS.) ALONE IN MIXTURES	M-L P C	J F M A M J J A S O N D	14,000 SEED PER POUND WINTERHARDY. USE ON PRODUCTIVE SOILS.
LESPEZEA, ANNUAL (Lespedeza bicolor)	40 LBS. IN MIXTURES	M-L P C	J F M A M J J A S O N D	200,000 SEED PER POUND. MAY VOLUNTARILY SPREAD FOR SEVERAL YEARS. USE INDULGENT CL.
LOVEGRASS, WEDDING (Eragrostis curvula)	4 LBS. IN MIXTURES	M-L P C	J F M A M J J A S O N D	3,500,000 SEED PER POUND. MAY LAST FOR SEVERAL YEARS. MIX WITH SEEDS LESPEZEA.
KILLET, BROWNTOP (Panicum fasciculatum)	40 LBS. IN MIXTURES	M-L P C	J F M A M J J A S O N D	137,000 SEED PER POUND. QUICK DENSE COVER. WILL PROVIDE TOO MUCH COMPETITION IN MIXTURES IF SEEDS AT HIGH RATES.
KILLET, PEARL (Panicum glabrum)	50 LBS. ALONE	M-L P C	J F M A M J J A S O N D	88,000 SEED PER POUND. QUICK DENSE COVER. MAY REACH 5 FEET IN HEIGHT. NOT RECOMMENDED FOR MIXTURES.
DATS (Avena sativa)	4bu. (128 LBS.) ALONE IN MIXTURES	M-L P C	J F M A M J J A S O N D	13,000 SEED PER POUND. USE ON PRODUCTIVE SOILS. NOT AS WINTERHARDY AS RYE OR BARLEY.
RYE (Secale cereale)	3 bu. (168 LBS.) ALONE IN MIXTURES	M-L P C	J F M A M J J A S O N D	18,000 SEED PER POUND. QUICK COVER. WINTERHARDY AND WINTERHARDY.
RYEGRASS, ANNUAL (Lolium temulentum)	40 LBS. ALONE	M-L P C	J F M A M J J A S O N D	227,000 SEED PER POUND. DENSE COVER VERY COMPETITIVE AND IS NOT TO BE USED IN MIXTURES.
SUDAN GRASS (Sorghum sudanense)	60 LBS. ALONE	M-L P C	J F M A M J J A S O N D	55,000 SEED PER POUND. GOOD ON DROUGHT SITES. NOT RECOMMENDED FOR MIXTURES.
TRITICALE (x-Triticosecale)	3 bu. (144 LBS.) ALONE IN MIXTURES	C	J F M A M J J A S O N D	USE ON LOWER PART OF SOUTHERN COASTAL PLAIN AND IN ATLANTIC COASTAL PLATWOODS ONLY.
WHEAT (Triticum aestivum)	3 bu. (180 LBS.) ALONE IN MIXTURES	M-L P C	J F M A M J J A S O N D	15,000 SEED PER POUND.

1/ TEMPORARY COVER CROPS ARE VERY COMPETITIVE AND WILL CROWN OUT PERENNIALS IF SEEDS TOO HEAVILY.
2/ REDUCE SEEDING RATES BY 50% WHEN DRILLED.
3/ PLS IS AN ABBREVIATION FOR PURE LIVE SEED.
4/ M-L REPRESENTS TO MOUNTAIN BLUE RIDGE, AND RIDGES AND VALLEYS MLRA'S
P REPRESENTS THE SOUTHERN PIEDMONT MLRA
C REPRESENTS THE SOUTHERN COASTAL PLAIN, SAND HILLS, BLACK LANDS, AND ATLANTIC COAST FLATWOODS MLRA'S
SEE FIGURE 6-41, P 6-40 IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL, FOR GEORGIA

MAJOR LAND RESOURCE AREAS (MLRA) OF GEORGIA

Ds2

DISTURBED AREA STABILIZATION (TMP. SEEDING)

2014 MANUAL FOR EROSION AND SEDIMENT CONTROL (GREEN BOOK)

Figure 6-27.2

SOD MAINTENANCE AND INSTALLATION

SOD LAYOUT AND PREPARATION

INCORRECT: BUTTING: ANGLED ENDS CAUSED BY THE AUTOMATIC SOD CUTTER MUST BE MATCHED CORRECTLY.

CORRECT: BUTTING: ANGLED ENDS CAUSED BY THE AUTOMATIC SOD CUTTER MUST BE MATCHED CORRECTLY.

DIRECTIONS FOR INITIAL MAINTENANCE

Step 1. ROLL SOD IMMEDIATELY TO ACHIEVE FIRM CONTACT WITH THE SOIL.

Step 2. WATER TO A DEPTH OF 4" AS NEEDED. WATER WELL AS SOON AS THE SOD IS LAID.

Step 3. MOW WHEN THE SOD IS ESTABLISHED -- IN 2-3 WEEKS. SET THE MOWER HIGH (2"-3").

APPEARANCE OF GOOD SOD

SHOOTS OR GRASS BLADES: GRASS SHOULD BE GREEN AND HEALTHY, MOWED AT A 2"-3" CUTTING HEIGHT.

THATCH: GRASS CLIPPINGS AND DEAD LEAVES (UP TO 1/2" THICK).

ROOT ZONE: SOIL AND ROOTS SHOULD BE 1/2"-3/4" THICK WITH DENSE ROOT MAT FOR STRENGTH.

Ds4 DISTURBED AREA STABILIZATION (SOD MAINTENANCE AND INSTALLATION)

CRUSHED STONE CONSTRUCTION EXIT

EXIT DIAGRAM

NOTES:

1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE).
4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
5. PAD WIDTH SHALL BE EQUAL TO FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%.
7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (OVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
9. WASHRACKS AND/OR THE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVE MUD AND DIRT.
10. MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

CONSTRUCTION EXIT

2014 MANUAL FOR EROSION AND SEDIMENT CONTROL (GREEN BOOK)

Figure 6-14.1

SILT FENCE-TYPE SENSITIVE

SIDE VIEW

FRONT VIEW

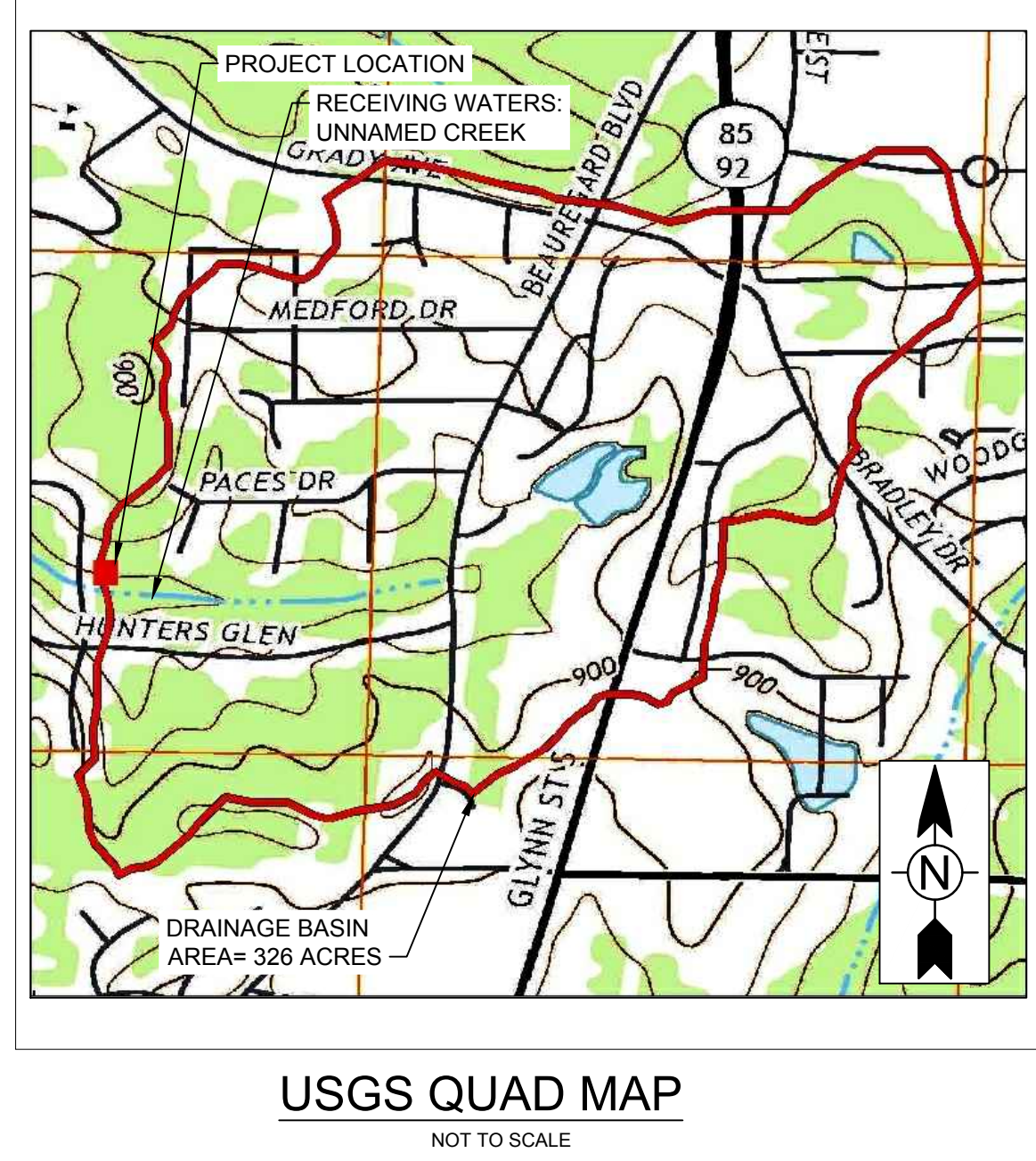
NOTES:

1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
2. HEIGHT (H) IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

Sd1-S

2014 MANUAL FOR EROSION AND SEDIMENT CONTROL (GREEN BOOK)

Figure 6-27.2



- EROSION CONTROL NOTES:

 1. EROSION CONTROL PRACTICES MUST COMPLY WITH THE MINIMUM BEST MANAGEMENT PRACTICES FOR EROSION CONTROL AND SHALL COMPLY WITH THE STANDARDS AND SPECIFICATIONS IN THE "MANUAL FOR EROSION CONTROL AND SEDIMENT CONTROL IN GEORGIA".
 2. EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSTALLED AND INSPECTED PRIOR TO ANY GRADING ON SITE.
 3. DISTURBED AREAS LEFT IDLE FOR FIVE DAYS, AND NOT TO FINAL GRADE, WILL BE ESTABLISHED WITH TEMPORARY MULCH (DS1) OR VEGETATION (DS2). DISTURBED AREAS LEFT IDLE FOR TWO WEEKS OR MORE WILL BE ESTABLISHED WITH PERMANENT VEGETATION (DS3). ALL AREAS AT FINAL GRADE WILL BE ESTABLISHED WITH PERMANENT VEGETATION IMMEDIATELY UPON COMPLETION. WHEN HAND PLANTING, MULCH (HAY OR STRAW) SHOULD BE UNIFORMLY SPREAD OVER SEEDS WITHIN 24 HOURS OF SEEDING. DURING UNSUITABLE GROWING SEASONS, MULCH WILL BE USED AS A TEMPORARY COVER (DS3). ON SLOPES THAT ARE 2:1 OR STEEPER, MULCH WILL BE ANCHORED.
 4. IN CONCENTRATED FLOW AREAS: ALL SLOPES STEEPER THAN 2.5:1, HEIGHT TEN FEET OR GREATER, AND CUTS AND FILLS WITHIN STREAM BUFFER, STABILIZE WITH THE APPROPRIATE EROSION CONTROL MATTING OR BLANKET.
 5. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
 6. SEDIMENT/EROSION CONTROL DEVICES MUST BE CHECKED AFTER EACH STORM EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE THIRD THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MUST BE INSTALLED IF NEW CHANNELS HAVE DEVELOPED.
 7. THE USE OF POLYMERS (PAMS) IS ACCEPTED AS A BMP AS RECOMMENDED BY THE STATE SOIL & WATER CONSERVATION COMMISSION BMP "GREEN BOOK". POLYMERS USED TO STABILIZE CONSTRUCTION SITES MUST BE USED IN CONJUNCTION WITH MULCHING AND OR HYDROSEEDING.
 8. MULCH, TEMPORARY VEGETATION, AND PERMANENT (PERENNIAL) VEGETATION SHALL BE COMPLETED ON ALL EXPOSED AREAS WITHIN 14 DAYS AFTER DISTURBANCE.
 9. ADDITIONAL EROSION CONTROL DEVICES MAY BE REQUIRED BY ENGINEER DURING CONSTRUCTION.
 10. DUE TO THE NATURE AND LOCATION OF THE CONSTRUCTION ACTIVITY, PROVIDING SEDIMENT STORAGE FOR 67 CUBIC YARDS OF SEDIMENT PER ACRE DISTURBED IS NOT FEASIBLE. APPROPRIATE BMPs THAT LIMIT THE TRANSPORT OF SEDIMENT FROM THE SITE WILL BE UTILIZED. THESE BMPs INCLUDE BUT ARE NOT LIMITED TO SILT FENCE AND TEMPORARY MULCHING, GRASSING OR PERMANENT GRASSING FOR THE DISTURBED AREAS OF THE PROJECT.
 11. CONTRACTOR TO REPLACE ALL VEGETATION IN-KIND.
 12. THE COMPOSITE CURVE NUMBER FOR THE BASIN BEFORE AND AFTER CONSTRUCTION IS 71.1

- EROSION CONTROL CHECKLIST CERTIFICATIONS:

 1. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25-FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.
 2. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES.
 3. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
 4. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.
 5. ALL STREAM BUFFER DISTURBANCES ARE ASSOCIATED WITH THE CULVERT REPLACEMENT. THE PROJECT DISTURBS LESS THAN 100 LINEAR FEET OF STREAM AND IS CLASSIFIED AS A UTILITY CROSSING. AS SUCH NO USAGE PERMIT OR BUFFER VARIANCE IS ANTICIPATED.

"I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY SUPERVISION."

STRUCTURAL PRACTICES

Co

CONSTRUCTION EXIT

DS1

DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)

DS1

Sd1-S

SEDIMENT BARRIER

DS2

DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)

DS2

Su

SURFACE ROUGHENING

DS3

PERMANENT VEGETATION

DS3

Ss

SLOPE STABILIZATION

Bf

BUFFER ZONE

Bf

VEGETATIVE PRACTICES

DS1

DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)

DS1

DS2

DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)

DS2

DS3

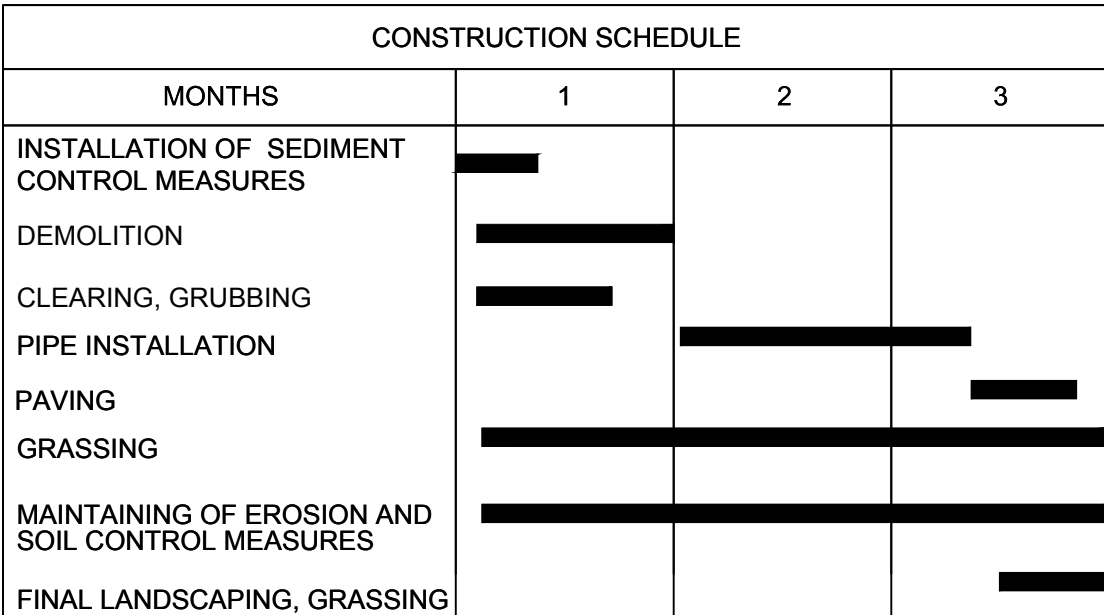
PERMANENT VEGETATION

DS3

Bf

BUFFER ZONE

Bf



TYPICAL INSTALLATION GUIDELINES FOR ROLLED EROSION CONTROL PRODUCTS (RECP)

BLANKET AND MATTING CROSS-SECTIONS

UPSTREAM TERMINAL

TRANSVERSE CHECK SLOT

DOWNSTREAM TERMINAL

SEQUENTIAL ROLL RUN OUT IN CHANNELS

PICTORIAL VIEW OF TRANSVERSE SLOT

NOTES:

1. START AT DOWNSTREAM TERMINAL AND PROGRESS UPSTREAM.
2. FIRST ROLL TO CENTER OF CHANNEL WITH ROLLERS IN MICH-CHANNELS AND FINISHED WITH TEMPORARY STAKES TO MAINTAIN ALIGNMENT.
3. SUBSEQUENT ROLLS FOLLOW IN STAGGERED SLOTTING BEHIND THE FIRST ROLL. USE THE CENTER ROLL FOR ALIGNMENT TO THE CHANNEL CENTER.
4. WORK OUTWARDS FROM THE CHANNEL CENTER TO THE EDGE.
5. USE 3" OVERLAPS AND STAKE AT 4' INTERVALS ALONG THE SEAMS.
6. USE 3" OVERLAPS AND SHINGLE DOWNSTREAM TO CONNECT THE LING AT THE ROLL ENDS.

Ss

SLOPE STABILIZATION

2014 MANUAL FOR EROSION AND SEDIMENT CONTROL (GREEN BOOK) Figure 6-10.1

TETRA TECH

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GEORGIA
No. PE040210
12/21/18
DAVID N. LAVERGNE
ENGINEER

GSWCC LEVEL II
CERT. #: 0000073529

BY	HA								
DATE	12/21/18								
MARK	0								
DESCRIPTION	ISSUED FOR CONSTRUCTION								
FAYETTE COUNTY	MORNING DOVE DR CULVERT REPLACEMENT								
EROSION CONTROL DETAILS									
Project No.:	200-01297-17038								
Designed By:	CG								
Drawn By:	MR								
Checked By:	DL								
C-504									

Bar Measures 1 inch

