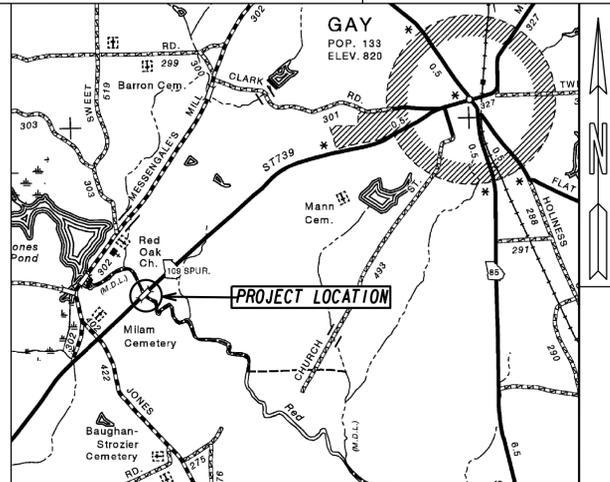


# DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

## PLAN AND PROFILE OF PROPOSED BRIDGE REPLACEMENT PROJECT SR 109 SPUR OVER RED OAK CREEK

FEDERAL AID PROJECT  
MERWETHER COUNTY

SR 109 WILL BE CLOSED TO TRAFFIC DURING CONSTRUCTION.



LOCATION SKETCH

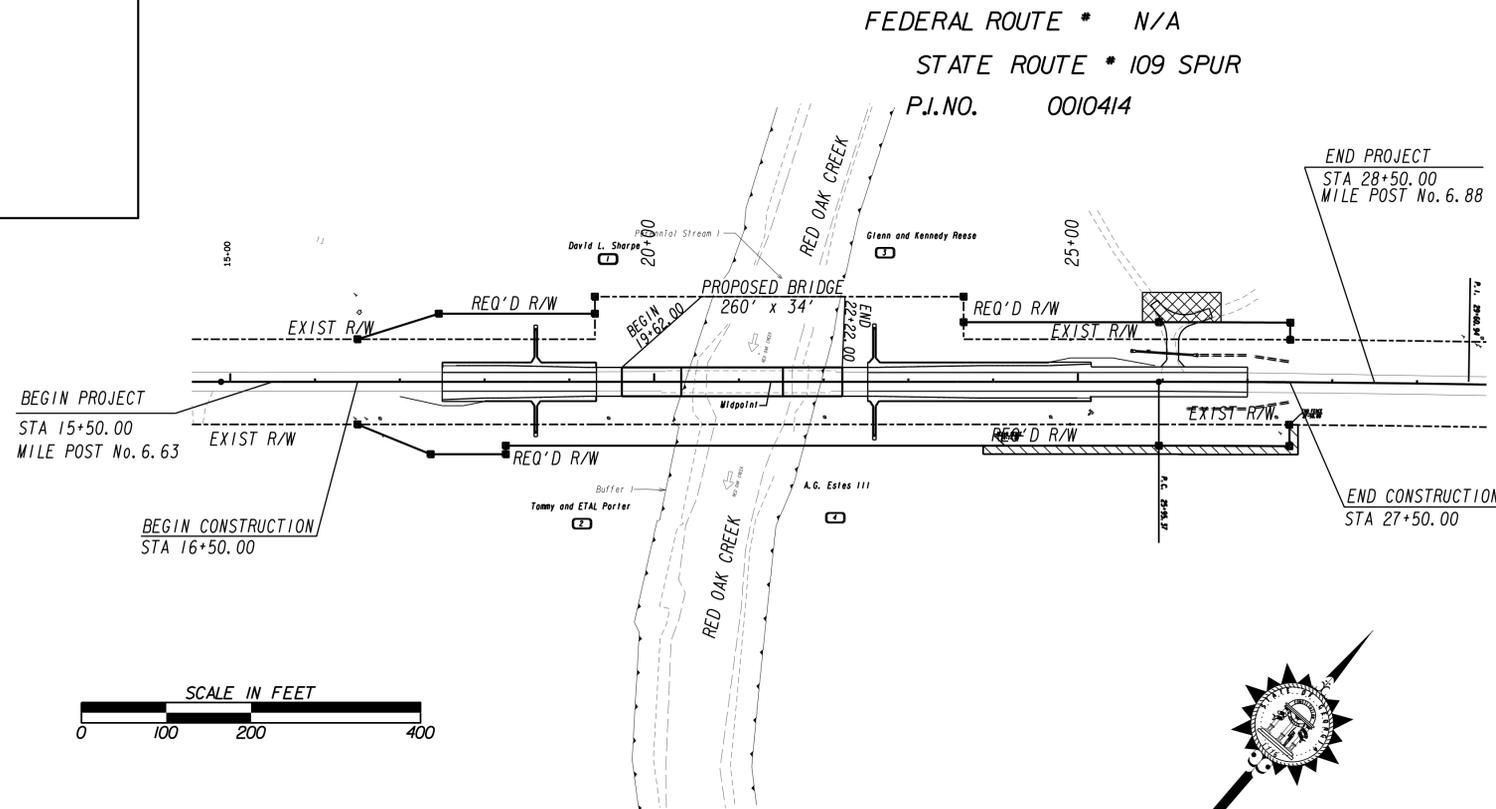
**DESIGN DATA:**  
 TRAFFIC A.D.T.: 450 (2018)  
 TRAFFIC A.D.T.: 600 (2038)  
 TRAFFIC D.H.V.: 60  
 DIRECTIONAL DIST: 65%  
 % TRUCKS: 6.5%  
 24 HR. TRUCKS %: 9.5%  
 SPEED DESIGN: 55 mph

**LOCATION & DESIGN APPROVAL DATE:** 6-19-15  
**FUNCTIONAL CLASS:**  
 RURAL MAJOR COLLECTOR  
 THIS PROJECT IS 100% IN MERWETHER COUNTY AND IS 100% IN CONG. DIST. NO. 3  
**PROJECT DESIGNATION:** EXEMPT

THIS PROJECT HAS BEEN PREPARED USING THE HORIZONTAL GEORGIA COORDINATE SYSTEM OF 1984 (NAD 1983/94 WEST ZONE, AND THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.

MIDPOINT COORDINATES	
STA.	21+37.66
N	1120023.5530
E	2161227.1798

THE DATA, TOGETHER WITH ALL OTHER INFORMATION SHOWN ON THESE PLANS OR IN ANYWAY 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 DEPARTMENT OF TRANSPORTATION IN ANY WAY. THE ATTENTION OF BIDDER IS SPECIFICALLY DIRECTED TO SUBSECTIONS 102.04, 102.05, AND 104.03 OF THE SPECIFICATIONS.



FEDERAL ROUTE \* N/A  
 STATE ROUTE \* 109 SPUR  
 P.J. NO. 0010414

**NOTE:**  
 ALL REFERENCES IN THIS DOCUMENT, WHICH INCLUDES ALL PAPERS, WRITINGS, DOCUMENTS, DRAWINGS, OR PHOTOGRAPHS USED, OR TO BE USED IN CONNECTION WITH THIS DOCUMENT, TO "STATE HIGHWAY DEPARTMENT OF GEORGIA," "STATE HIGHWAY DEPARTMENT," "GEORGIA STATE HIGHWAY DEPARTMENT," "HIGHWAY DEPARTMENT," OR "DEPARTMENT" WHEN THE CONTEXT THEREOF MEANS THE STATE HIGHWAY DEPARTMENT OF GEORGIA, AND SHALL BE DEEMED TO MEAN THE DEPARTMENT OF TRANSPORTATION.

PREPARED BY: DISTRICT THREE DESIGN

RECOMMENDED FOR SUBMISSION BY: DISTRICT DESIGN ENGINEER

SUBMITTED BY: STATE PROGRAM DELIVERY ENGINEER

LENGTH OF PROJECT	
NET LENGTH OF ROADWAY	0.20
NET LENGTH OF BRIDGES	0.05
NET LENGTH OF PROJECT	0.25
NET LENGTH OF EXCEPTIONS	0.00
GROSS LENGTH OF PROJECT	0.25

COUNTY No. 99  
 Merwether  
 Project No.  
 0010414

MILES

DATE	CHIEF ENGINEER
PLANS COMPLETED	- -
REVISIONS	

DRAWING No.  
01-001

UTILITY OWNER	SERVICE	CONTACT NUMBERS	SHEET NUMBERS
AT&T	TELEPHONE		
SOUTHERN RIVERS	ELECTRICITY		



THERE IS NO SUITABLE PLACE TO BURY EXISTING BRIDGE/CONSTRUCTION DEBRIS WITHIN THE PROJECT LIMITS. THE CONTRACTOR SHALL PROVIDE AN ENVIRONMENTALLY APPROVED SITE TO DISPOSE OF EXISTING BRIDGE/CONSTRUCTION DEBRIS AT NO ADDITIONAL COST TO THE DEPARTMENT.

ALL EXISTING PIPES ARE TO BE REMOVED UNLESS OTHERWISE NOTED IN THE PLANS.

ALL BORROW AND WASTE SITES FOR THIS PROJECT SHALL BE ENVIRONMENTALLY APPROVED PRIOR TO CONSTRUCTION ACTIVITIES OCCURING IN THEM. 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. SEE SECTION 201 OF THE STANDARD SPECIFICATIONS AND SUPPLEMENTS THERETO FOR ADDITIONAL INFORMATION.

ALL DRIVEWAYS THAT ARE TO BE RECONSTRUCTED SHALL BE REPLACED IN KIND. I.E. ASPHALT FOR ASPHALT, CONCRETE FOR CONCRETE, AND ASPHALT FOR DIRT DRIVES. DRIVEWAY RELOCATIONS ARE SHOWN FROM THE BEST AVAILABLE DATA. THE CONTRACTOR SHALL CONSTRUCT NEW DRIVEWAYS TO MATCH THE ACTUAL FILED LOCATION OF EXISTING DRIVEWAYS, OR AS LOCATED IN THE PLANS. RESIDENTIAL DRIVES SHALL BE 14 FEET WIDE AT THE THROAT UNLESS OTHERWISE NOTED IN THE PLANS. COMMERCIAL DRIVES SHALL BE 24 FEET WIDE UNLESS OTHERWISE NOTED IN THE PLANS. THE CONTRACTOR SHALL OBTAIN THE APPROVAL FROM THE ENGINEER PRIOR TO MAKING ANY REVISIONS TO LOCATION, WIDTH, AND/OR NUMBER OF DRIVES TO BE CONSTRUCTED. REQUIRED DRIVEWAY EASEMENTS NOT SHOWN ON THE PLANS SHALL BE ACQUIRED. DRIVES SHALL BE CONSTRUCTED USING:

- ASPHALT - ASPH CONC 9.5mm SUPERPAVE (135 LB/SY)  
GRADED AGGREGATE BASE, 6"
- CONCRETE - RESIDENTIAL - DRIVEWAY CONCRETE, 6" THICK

THERE MAY LARGE BOULDERS, AND ROCK PILES, WITHIN THE PROJECT LIMITS. THE COST OF REMOVING THESE ROCKS WILL BE INCLUDED IN GRADING COMPLETE.

Pipe Culvert Material Alternates For Piedmont/Blue Ridge Region									
TYPE OF PIPE INSTALLATION	C O N C R E T E	CORRUGATED STEEL AASHTO M-36		CORRUGATED ALUMINUM AASHTO M-196	PLASTIC				
		ALUMINUM COATED (TYPE 2) CORR. STEEL	PLAIN ZINC COATED	PLAIN UNCOATED ALUMINUM	CORR. POLY- ETHYLENE AASHTO M-252	CORR.POLY- ETHYLENE SMOOTHED LINED AASHTO M-294 TYPE "S"	POLY VINYL CHLORIDE (PVC) PROFILE WALL AASHTO M-304	POLY VINYL CHLORIDE (PVC) CORRUGATED SMOOTH INTERIOR ASTM F-949	
LONGITUDINAL INTERSTATE AND TRAVEL BEARING	X								
LONGITUDINAL NON-INTERSTATE AND NON-TRAVEL BEARING	X				X	X	X		
S T O R M D R A I N	C R O S S D R A I N	ADT < 250	X			X	X	X	
		250 < ADT < 1,500	X	*		X	X	X	
		1,500 < ADT < 15,000	X			X	X	X	
		ADT > 15,000	X						
GRADE > 10%	ADT < 250				X	X	X		
	ADT > 250				X	X	X		
SIDE DRAIN	X				X	X	X		
PERMANENT SLOPE DRAIN		X	X	X	X	X	X		
PERFORATED UNDERDRAIN		X	X	X	X	X		X	

\* This type pipe can be used if the addition of Type 'B' Coating (AASHTO M-190, Half Bituminous Coated with Paved Invert) is utilized.

NOTES:

1. Allowable materials are indicated by an "X".
2. Structural requirements of storm drain pipe will be in accordance with Georgia Standard 1030-D or 1030-P, whichever is applicable, and the Standard Specifications.
3. Graded aggregate backfill shall be used in cross drain applications for all plastic pipes (AASHTO M-294, HDPE pipe; AASHTO M-304, PVC pipe; ASTM F-949, PVC pipe).
4. The Contractor shall provide additional storm sewer capacity calculations if a pipe material other than concrete is selected.
5. Pipe used under mechanically stabilized earth (MSE) walls, within MSE wall backfill, or within five feet of an MSE wall face shall be Class V Concrete Pipe.
6. Project specific pH and Resistivity values are entered into the respective boxes above to determine allowable pipe materials.

Rev. 03-22-10

	<b>GEORGIA</b> DEPARTMENT OF TRANSPORTATION		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="2">REVISION DATES</th> </tr> <tr><td> </td><td> </td></tr> </table>	REVISION DATES													
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		STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE: DISTRICT THREE DESIGN <b>GENERAL NOTES</b>															
		DRAWING No. <b>04-001</b>															

### Environmental Resources Impact Table

*These resources and the restrictions listed are governed by state and federal law.*

Resource Name (from Section A of the ECT)	Location			Permitted Construction Activity (from Section A of the ECT)	Special Provision (from Section B of the ECT)	Comments (from Section C of the ECT, comments only)
	Begin STA	End STA	Side			
Perennial Stream 1	20+61.85	21+62.98	Both	BRIDGE AND ROADWAY CONSTRUCTION	None	The contractor shall ensure that no construction related activities, other than those shown in the approved plans, occur within the boundaries of this resource.
Buffer 1	20+36.70	21+97.03	Both	BRIDGE AND ROADWAY CONSTRUCTION	None	The contractor shall ensure that no construction related activities, other than those shown in the approved plans, occur within the boundaries of this resource.
Migratory Birds				Demolition of old bridge such that harm to migratory birds is avoided.	SP 107.23G	For the protection of migratory birds and listed speceis.
Listed Species				Bridge demolition and construction such that harm to listed aquatic specids is avoided.	SP 107.23G	For the protection of migratory birds and listed speceis.
<b>404 Permits and Variances</b> (from Section D of the ECT)		Expiration dates (if applicable) Contact GDOT OES 6 months prior to expiration, if work will extend beyond this date.				
Notice of Intent (NOI) for NPDES						
Nationwide 404 Permit						

## GENERAL NOTES – STANDARD SIGNS

1. ALL STANDARD HIGHWAY SIGNS SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE DETAILS SHOWN IN THE PLANS, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION, AND THE GEORGIA SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS, AND/OR SPECIAL PROVISIONS.
2. SIGN ERECTION STATIONS ARE APPROXIMATE AND MAY BE ADJUSTED TO MEET FIELD CONDITIONS WHERE NECESSARY, BUT SHALL BE WITHIN THE LIMITATIONS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION. NO SIGN LOCATION SHALL BE CHANGED BY THE CONTRACTOR OR BY THE PROJECT ENGINEER WITHOUT PRIOR APPROVAL FROM THE OFFICE OF TRAFFIC OPERATIONS.
3. ALL STANDARD HIGHWAY SIGNS SHALL BE ERECTED AT A HEIGHT OF 7 FEET ABOVE THE NORMAL EDGE OF PAVEMENT TO THE BOTTOM OF THE SIGN OR ASSEMBLY,
- 4a. HORIZONTAL CLEARANCE FOR STANDARD HIGHWAY SIGNS ON INTERSTATE HIGHWAYS SHALL BE 32 FEET FROM THE NORMAL EDGE OF PAVEMENT TO THE NEARER EDGE OF THE SIGN(S), UNLESS SPECIFIED OTHERWISE IN THE PLANS. HORIZONTAL CLEARANCE FOR STANDARD HIGHWAY SIGNS ON RAMPS SHALL BE 2 FEET FROM THE NORMAL EDGE OF PAVED SHOULDER, OR EDGE OF GRADED SHOULDER WHEN PRESENT.
- 4b. HORIZONTAL CLEARANCE FOR STANDARD HIGHWAY SIGNS ON ALL OTHER ROADWAYS SHALL BE 6 FEET FROM THE EDGE OF THE PAVED SHOULDER OR 12 FEET FROM THE NORMAL EDGE OF PAVEMENT TO THE NEARER EDGE OF THE SIGN(S), WHICHEVER IS GREATER. THE HORIZONTAL CLEARANCE IN NON-MOUNTABLE CURB SECTIONS SHALL BE AT LEAST 2 FEET FROM THE CURB FACE TO THE NEARER EDGE OF THE SIGN(S).
- 4c. HORIZONTAL CLEARANCE FOR STANDARD HIGHWAY SIGNS MOUNTED BEHIND GUARD RAIL SHALL BE 6 FEET FROM THE FACE OF THE GUARD RAIL TO THE NEARER EDGE OF THE SIGN(S).
5. SINGLE PLATE, HORIZONTAL RECTANGULAR SIGNS OVER 48 INCHES IN WIDTH SHALL BE MOUNTED ON TWO POSTS WITH 2 EACH 2 INCH x 1/2 INCH x (WIDTH OF SIGN) ALUMINUM OR GALVANIZED STEEL STRAPS. THE STRAPS SHALL BE FLUSH WITH THE BACK OF THE SIGN WITH ONE EACH ACROSS THE TOP AND BOTTOM OF THE SIGN. THE CENTERLINE OF EACH POST SHALL BE INSET 1/6TH OF THE SIGN WIDTH FROM THE EDGE OF THE SIGN. SIGN PLATE BOLT HOLES SHALL BE 3/8 INCH DIAMETER, DRILLED OR PUNCHED, AS SHOWN ON THE SIGN PLATE DETAILS.
6. EACH 42 OR 48 INCH WIDE x 18 OR 24 INCH HIGH SIGN REQUIRES ONE 2 INCH x 1/2 INCH x (WIDTH OF SIGN) ALUMINUM OR GALVANIZED STEEL STRAP LOCATED IN THE CENTER OF THE SIGN AND FLUSH WITH THE BACK OF THE SIGN.
7. SIGN ASSEMBLIES SHALL BE MOUNTED ON ALUMINUM OR GALVANIZED STEEL STRAP FRAMES. FOR DETAILS AND STRAP SPECIFICATIONS REFER TO SIGN ASSEMBLY-TYPICAL FRAMING DETAILS.
8. TYPE 9 (VERY HIGH INTENSITY) REFLECTIVE SHEETING SHALL BE USED FOR ALL STANDARD HIGHWAY SIGNS REQUIRING REFLECTORIZED BACKGROUNDS EXCEPT AS SPECIFIED BELOW OR SPECIFIED OTHERWISE IN THE PLANS. EITHER CLASS 1 OR CLASS 2 ADHESIVE BACKING IS PERMISSIBLE.
9. TYPE 11 (VERY HIGH INTENSITY) REFLECTIVE SHEETING SHALL BE USED FOR ALL RED SERIES SIGNS (R1-1, R1-2, R1-3P, R5-1, R5-1A, R5-1B).
10. TYPE 11 (VERY HIGH INTENSITY) REFLECTIVE SHEETING SHALL BE USED FOR ALL WARNING SIGNS.
11. TYPE 11 (VERY HIGH INTENSITY) FLUORESCENT YELLOW GREEN REFLECTIVE SHEETING SHALL BE USED FOR SCHOOL ZONE (S1-1, S2-1, S3-1, S4-3, AND THE TOP PORTION OF THE S5-1) SIGNS. ALL REGULATORY SIGNS WITHIN THE SCHOOL ZONE SHALL HAVE TYPE 9 (VERY HIGH INTENSITY) REFLECTIVE SHEETING.
12. A 1/2 INCH MINIMUM AIR SPACE SHALL BE REQUIRED BETWEEN ALL SIGN PLATES WITHIN AN ASSEMBLY.
13. WHERE SIGNS WITHIN AN ASSEMBLY EXTEND BELOW THE STANDARD MOUNTING HOLES ON THE POST(S), ADDITIONAL 3/8 INCH DIAMETER HOLE(S), DRILLED OR PUNCHED, SHALL BE REQUIRED TO PROPERLY MOUNT THE ASSEMBLY.
14. INTERSTATE SHIELDS SHALL CONTAIN THE WORD GEORGIA. ALL INTERSTATE, U.S., AND GEORGIA SHIELDS REQUIRING ALT, BUS, CONN, LOOP, OR SPUR SHALL USE 4 INCH SERIES "D" LETTERS. REFER TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION, FOR DETAILS.
15. FOR DETAILS OF SPECIAL DESIGN HIGHWAY SIGNS, SEE DETAILS OF MISCELLANEOUS SIGNS.
16. REFER TO PLAN SHEETS FOR LOCATION OF THE DISTRICT ENGINEERS OFFICE TO BE SHOWN ON ALL R552-1 (LIMITED ACCESS) SIGNS IN THIS PROJECT, IF ANY.
17. THE CONTRACTOR WILL, AS REQUESTED BY THE DISTRICT TRAFFIC OPERATIONS ENGINEER, BE REQUIRED TO REMOVE ANY EXISTING SIGNS THAT ARE DUPLICATED OR ARE CONTRARY TO THESE SIGN PLANS.

**GEORGIA**  
DEPARTMENT  
OF  
TRANSPORTATION

DATE	REVISIONS

STATE OF GEORGIA  
DEPARTMENT OF TRANSPORTATION  
OFFICE: TRAFFIC SAFETY & DESIGN  
**SIGNING AND MARKING PLANS**

STANDARD SIGNS  
GENERAL NOTES

JULY 2002

TO3  
NUMBER  
**4 -003**

## GENERAL NOTES - SPECIAL ROADSIDE SIGNS

- SPECIAL ROADSIDE SIGNS SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION, AND ALL SUPPLEMENTS THERETO, AS WELL AS TO THE GEORGIA STANDARD SPECIFICATIONS AND/OR SPECIAL PROVISIONS.
- SPECIAL ROADSIDE SIGNS SHALL BE FABRICATED USING ALUMINUM BOLTED EXTRUDED PANELS.
- BACKGROUND FOR SPECIAL ROADSIDE SIGNS SHALL BE STANDARD INTERSTATE GREEN, TYPE 9 (VERY HIGH INTENSITY), REFLECTIVE SHEETING, UNLESS SPECIFIED OTHERWISE IN THE PLANS.
- LEGENDS FOR SPECIAL ROADSIDE SIGNS SHALL BE WHITE, TYPE II (VERY HIGH INTENSITY), REFLECTIVE SHEETING LETTERS, NUMERALS, SYMBOLS, AND BORDERS ON 0.032 INCH ALUMINUM CUTOUTS.
- SHIELDS SHALL BE 0.08 INCH ALUMINUM OF THE SIZE AND SHAPE SPECIFIED IN THE PLANS. U.S. AND GEORGIA SHIELD LEGENDS SHALL BE BLACK NUMERALS AND LETTERS SILK SCREENED ON WHITE, TYPE 9 (VERY HIGH INTENSITY), REFLECTIVE SHEETING BACKGROUNDS WITH NO BORDERS. INTERSTATE SHIELDS SHALL BE PER THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION.
- FOR DETAILS OF U.S. AND INTERSTATE SHIELDS AND ARROWS, REFER TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION.
- LEGENDS FOR SPECIAL ROADSIDE SIGNS SHALL BE FASTENED TO SIGN PANELS WITH ALUMINUM PULL-THROUGH BLIND RIVETS OR WITH AN APPROVED NON-CORROSIVE FASTENER.
- SPACING BETWEEN LETTERS OR OTHER CHARACTERS THAT IS NOT SHOWN IN THE PLANS MAY BE RECOMMENDED BY THE MANUFACTURER, BUT SHALL CONFORM TO INTERSTATE SIGNING REQUIREMENTS.
- FOR ASSEMBLY DETAILS AND ASSEMBLY COMPONENTS DETAILS ON ALUMINUM BOLTED EXTRUDED PANELS, REFER TO GEORGIA STANDARDS 9041 AND 9042.
- FOR DETAILS OF SPECIAL ROADSIDE SIGNS SEE DETAILS OF SPECIAL ROADSIDE SIGNS.
- SIGN ERECTION STATIONS ARE APPROXIMATE AND MAY BE ADJUSTED TO MEET FIELD CONDITIONS WHERE NECESSARY, BUT SHALL BE WITHIN THE LIMITATIONS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION. NO SIGN LOCATION SHALL BE CHANGED BY THE CONTRACTOR OR BY THE PROJECT ENGINEER WITHOUT PRIOR APPROVAL FROM THE DISTRICT OFFICE OF TRAFFIC OPERATIONS.
- HORIZONTAL CLEARANCE FOR SPECIAL ROADSIDE SIGNS SHALL BE 32 FEET FROM THE NORMAL EDGE OF PAVEMENT TO THE NEAR EDGE OF THE SIGN UNLESS SPECIFIED OTHERWISE IN THE PLANS.
- SPECIAL ROADSIDE SIGNS ERECTED ON STEEP CUT SLOPES SHALL HAVE A MINIMUM CLEARANCE OF 1 FOOT ABOVE THE GROUNDLINE AND MAXIMUM HEIGHT OF 10 FEET ABOVE THE NORMAL EDGE OF PAVEMENT TO THE BOTTOM OF THE SIGN.
- EXIT GORE SIGNS SHALL BE ERECTED WITHIN A RANGE OF 25 FEET MINIMUM TO 100 FEET MAXIMUM FROM THE PHYSICAL NOSE OF THE RAMP. A MINIMUM CLEARANCE OF 2 FEET FROM THE EDGES OF THE RAMP AND MAINLINE PAVED SHOULDERS TO THE RIGHT AND LEFT EDGES OF THE SIGN, RESPECTIVELY SHALL BE MAINTAINED.
- POST LENGTHS, POST SIZES, AND FOOTING SIZES FOR SPECIAL ROADSIDE SIGNS ARE ESTIMATED, ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE CORRECT LENGTHS AND SIZES ACCORDING TO GEORGIA STANDARDS PRIOR TO ORDERING MATERIALS. FOR ERECTION AND FOUNDATION DETAILS FOR SPECIAL ROADSIDE SIGNS WITH BREAK-AWAY POSTS, REFER TO GEORGIA STANDARDS 9054A, 9054B, AND 9054C.
- GALVANIZED STEEL I-BEAMS SHALL HAVE ALL IDENTIFICATION NUMBERS RE-ESTABLISHED AFTER COMPLETION OF GALVANIZING.
- FOR BREAK-AWAY POSTS THE CONTRACT BID PRICE FOR CLASS "A" CONCRETE SHALL INCLUDE THE COST OF FURNISHING AND PLACING REINFORCEMENT STEEL AND STUB POSTS AS SHOWN IN THE FOOTING DETAILS ON GEORGIA STANDARD 9054A.
- THE NEAR EDGE OF SIGNS ERECTED BEHIND GUARD RAIL SHALL BE 6 FEET BEHIND THE FACE OF THE GUARD RAIL.
- THE CONTRACTOR SHALL ENSURE THAT ALL SPECIAL ROADSIDE SIGNS INSTALLED BY THIS PROJECT HAVE A MINIMUM SIGHT DISTANCE OF 1000 FEET. CLEARING OF OBSTACLES TO OBTAIN THE MINIMUM SIGHT DISTANCE SHALL BE IN ACCORDANCE WITH SECTION 201 OF THE GEORGIA STANDARD SPECIFICATIONS. THE COST FOR THIS WORK SHALL BE INCLUDED IN THE OVERALL PRICE BID FOR THE PROJECT.
- BREAK-AWAY POSTS MARKED WITH AN (\*) ARE SPECIAL DESIGN. THE CONTRACTOR SHALL NOT CHANGE THESE POSTS IN ANY WAY WITHOUT APPROVAL FROM THE DISTRICT OFFICE OF TRAFFIC OPERATIONS.

## GENERAL NOTES - OVERHEAD HIGHWAY SIGNS

- OVERHEAD HIGHWAY SIGNS SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION, AND ALL SUPPLEMENTS THERETO, AS WELL AS TO THE GEORGIA STANDARD SPECIFICATIONS AND/OR SPECIAL PROVISIONS.
- OVERHEAD HIGHWAY SIGNS SHALL BE FABRICATED WITH ALUMINUM BOLTED EXTRUDED PANELS.
- BACKGROUNDS FOR OVERHEAD HIGHWAY SIGNS SHALL BE STANDARD INTERSTATE GREEN, TYPE 9 (HIGH INTENSITY) REFLECTIVE SHEETING, UNLESS SPECIFIED OTHERWISE IN THE PLANS.
- LEGENDS FOR OVERHEAD HIGHWAY SIGNS SHALL BE WHITE, TYPE 11 (VERY HIGH INTENSITY) REFLECTIVE SHEETING LETTERS, NUMERALS, SYMBOLS, AND BORDERS ON 0.032 INCH ALUMINUM CUTOUTS.
- SHIELDS SHALL BE 0.08 INCH ALUMINUM OF THE SIZE AND SHAPE SPECIFIED IN THE PLANS. U.S. AND GEORGIA SHIELD LEGENDS SHALL BE BLACK NUMERALS AND LETTERS SILK SCREENED ON WHITE, TYPE 9 (VERY HIGH INTENSITY) REFLECTIVE SHEETING BACKGROUNDS WITH NO BORDERS. INTERSTATE SHIELDS SHALL BE PER THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION.
- FOR DETAILS OF U.S. AND INTERSTATE SHIELDS AND ARROWS, REFER TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION.
- LEGENDS FOR OVERHEAD HIGHWAY SIGNS SHALL BE FASTENED TO SIGN WITH ALUMINUM PULL-THROUGH BLIND RIVETS OR WITH AN APPROVED NON-CORROSIVE FASTENER.
- SPACING BETWEEN LETTERS OR OTHER CHARACTERS THAT IS NOT SHOWN IN THE PLANS MAY BE RECOMMENDED BY THE MANUFACTURER, BUT SHALL CONFORM TO INTERSTATE SIGNING REQUIREMENTS.
- YELLOW OVERLAYS SHALL BE 0.08 INCH ALUMINUM OF THE SIZE SPECIFIED IN THE PLANS. LEGENDS SHALL BE BLACK LETTERS, NUMERALS, AND SYMBOLS SILK SCREENED ON STANDARD INTERSTATE YELLOW, TYPE III (HIGH INTENSITY) REFLECTIVE SHEETING BACKGROUNDS. SEE GENERAL NOTE NO. 4 FOR BORDER. SIGN PANELS BEHIND YELLOW OVERLAYS SHALL BE THE SAME COLOR AS THE REST OF THE SIGN.
- ALL OVERHEAD STRUCTURES SHALL BE DESIGNED FOR EXTERNAL ILLUMINATION, ALTHOUGH ILLUMINATION IS NOT REQUIRED ON THIS PROJECT. FOR SPECIFICATIONS ON STRUCTURAL SUPPORTS FOR OVERHEAD HIGHWAY SIGNS, SEE SECTION 638 OF THE GEORGIA STANDARD SPECIFICATIONS AND SUPPLEMENTS THERETO.
- STRUCTURE NUMBER SHALL BE PLACED ON OUTSIDE SHOULDER VERTICAL SUPPORT OF STRUCTURE USING DIE CUT, 6 INCH SERIES "D," WHITE, TYPE I (ENCLOSED LENS) REFLECTIVE SHEETING CHARACTERS ON STANDARD INTERSTATE GREEN, TYPE I (ENCLOSED LENS) REFLECTIVE SHEETING. THE STRUCTURE NUMBER, WHICH SHALL READ FROM TOP TO BOTTOM, SHALL BE PLACED AT EYE LEVEL AND POSITIONED SO THAT IT IS VISIBLE TO ONCOMING TRAFFIC. COAT AREA WHERE STRUCTURE NUMBER IS TO BE PLACED WITH PRIMER AND ALLOW TO DRY BEFORE PLACING STRUCTURE NUMBER.  
  
ON TYPE VII STRUCTURES, STRUCTURE NUMBER SHALL BE PLACED ON TYPE 1 ALUMINUM SIGN MATERIAL WITH GREEN, ENGINEERING GRADE, REFLECTIVE SHEETING BACKGROUND AND ATTACHED TO BRIDGE PIER ON OUTSIDE SHOULDER IN THE SAME ORIENTATION AS ABOVE.
- FOR ASSEMBLY DETAILS AND ASSEMBLY COMPONENTS DETAILS ON ALUMINUM BOLTED EXTRUDED PANELS, REFER TO GEORGIA STANDARDS 9041 AND 9042.
- ANCHOR BOLTS SHALL MEET THE REQUIREMENTS OF ASSHTO M 314 GRADE 55.
- THE RESPONSIBILITY TO DETERMINE THAT THE SPAN LENGTHS SHOWN ON THE PLANS ARE CORRECT AND TO DETERMINE THE ELEVATION OF THE HIGHEST POINT OF THE PAVEMENT OR SHOULDER AND OF THE GROUNDLINE AT THE CENTERLINE OF EACH VERTICAL SUPPORT FOR ALL OVERHEAD STRUCTURES PRIOR TO THEIR DESIGN AND FABRICATION SHALL BE THE CONTRACTOR'S.
- SHORING SHALL BE INCLUDED AT NO COST TO THE DEPARTMENT IF REQUIRED FOR FOOTING CONSTRUCTION ON SIGN PROJECTS WITH NO ROADWAY CONSTRUCTION.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO AVOID ANY INTERFERENCE WITH UNDERGROUND UTILITIES. ANY DAMAGE TO UTILITIES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL CALL GEORGIA811 PRIOR TO ANY DIGGING.
- COST FOR ANY REQUIRED TEMPORARY EROSION CONTROL SHALL BE INCLUDED IN PRICE BID FOR SIGN STRUCTURE.
- ANY TREES, SHRUBS, OR FLOWERS THAT ARE DAMAGED DURING INSTALLATION OF NEW SIGN STRUCTURES SHALL BE REPLACED IN KIND AT NO ADDITIONAL COST TO THE DEPARTMENT IN ACCORDANCE WITH SECTION 702 OF THE GEORGIA STANDARD SPECIFICATIONS, EXCEPT THAT SECTION 702.17 SHALL NOT APPLY TO THIS PROJECT.
- CONTRACTOR SHALL ENSURE THAT ALL OVERHEAD SIGNS INSTALLED BY THIS PROJECT HAVE MINIMUM SIGHT DISTANCE OF 1000 FEET. CLEARING OF OBSTACLES TO OBTAIN THE MINIMUM SIGHT DISTANCE SHALL BE IN ACCORDANCE WITH SECTION 201 OF THE GEORGIA STANDARD SPECIFICATIONS. THE COST FOR THIS WORK SHALL BE INCLUDED IN THE OVERALL PRICE BID FOR THE PROJECT.

**GEORGIA**  
DEPARTMENT  
OF  
TRANSPORTATION

DATE	REVISIONS

STATE OF GEORGIA  
DEPARTMENT OF TRANSPORTATION  
OFFICE: TRAFFIC OPERATIONS  
**SIGNING AND MARKING PLANS**

OVERHEAD / SPECIAL SIGNS  
GENERAL NOTES  
JANUARY 2008

DRAWING No.  
**4-004**

**ALLOWABLE RANGES TABLE**

FOR THIS PROJECT, CROSS SLOPES THAT ARE ADJUSTED TO "BEST FIT"  
EXISTING PAVEMENT SLOPES ARE SUBJECT TO THE FOLLOWING LIMITS:

**A. NORMAL CROWN**

SECTION WITH GRADES 0.5% OR GREATER	SECTION WITH GRADES LESS THAN 0.5%
0.0150 FT/FT - MINIMUM	0.0156 FT/FT - MINIMUM
0.0208 FT/FT - DESIRABLE	0.0208 FT/FT - DESIRABLE
0.0250 FT/FT - MAXIMUM	0.0300 FT/FT - MAXIMUM

**B. SUPERELEVATION RATE**

S.E. RATE SHOWN ON PLANS OR SE RATE EXISTING IN FIELD,  
WHICHEVER IS GREATER.

**C. SUPERELEVATION TRANSITION LENGTH (LENGTH FROM FLAT POINT TO FULL SE)**

RATE OF CHANGE	CORRESPONDING DIFFERENCE IN GRADE BETWEEN PIVOT POINT AND EDGE OF PAVEMENT
MINIMUM 1:150	0.67%
DESIRABLE 1:200	0.50%
MAXIMUM 1:300	0.33%

LENGTH SHALL BE SET TO AVOID CREATING A FLAT GUTTER GRADE  
ON LOW SIDE AND TO AVOID FLAT CROSS SLOPES AT OR NEAR THE  
LOW POINT OF VERTICAL CURVES.

**D. POSITIONING OF SUPERELEVATION TRANSITION LENGTH ON SIMPLE CURVES**

50% OF TRANSITION INSIDE CURVE - MAXIMUM  
33% OF TRANSITION INSIDE CURVE - DESIRABLE  
20% OF TRANSITION INSIDE CURVE - MINIMUM

NOTE: CROWN WIPE-OUT SHALL BE AT THE SAME RATE AS THE SE TRANSITION.

**E. SMOOTHING OF BREAKS IN EDGE PROFILE AT BEGIN AND END OF TRANSITION  
SHALL BE ACCOMPLISHED BY VERTICAL CURVE WITH A MINIMUM LENGTH  
(IN FEET) EQUAL TO THE SPEED DESIGN (IN MPH).**

SLOPE CONTROLS		
SLOPE	CUT	FILL
4:1	—	0-10'
2:1	ALL	OVER 10'

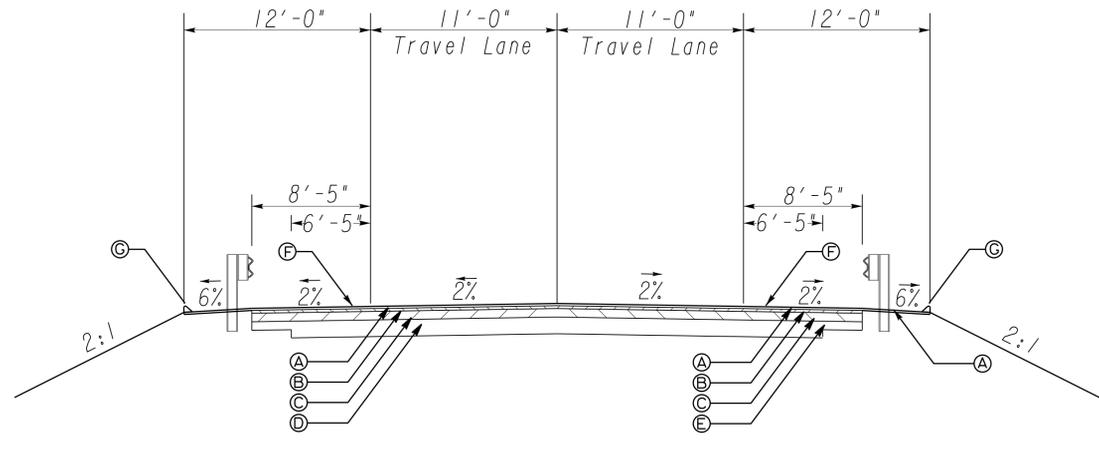
**GEORGIA**  
DEPARTMENT  
OF  
TRANSPORTATION

REVISION DATES

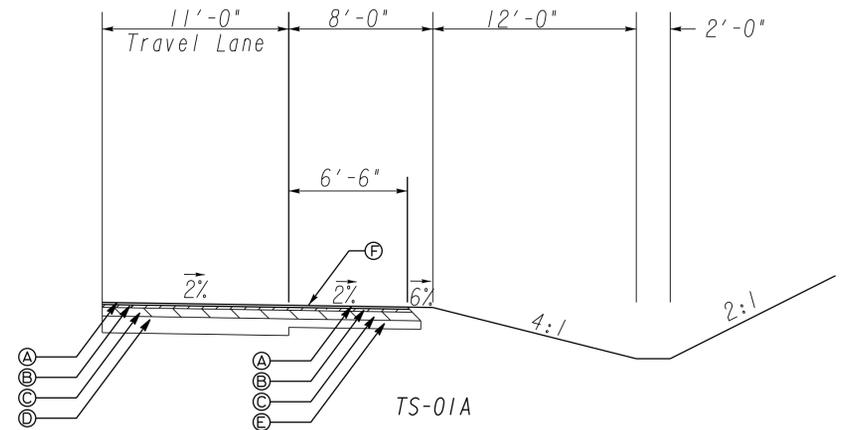

STATE OF GEORGIA  
DEPARTMENT OF TRANSPORTATION  
OFFICE: District 3 Design  
**TYPICAL SECTIONS**

DRAWING No.  
**05-001**

- A. RECYCLED ASPH CONC 9.5 mm SUPERPAVE, TYPE 1, GP 2 ONLY, INCL BITUM MATL & H LIME, 135 LBS/SY
- B. RECYCLED ASPH CONC 19 mm SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME, 220 LBS/SY
- C. RECYCLED ASPH CONC 25 mm SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME, 330 LBS/SY
- D. GR AGGR BASE CRS, 10 in, INCL MATL
- E. GR AGGR BASE CRS, 6 in, INCL MATL
- F. INDENTATION RUMBLE STRIPS - GROUND IN PLACE (SKIP)
- G. ASPH CONC CURB, 5"



TS-01  
 ROADWAY SECTION WITH GUARDRAIL SHOULDER  
 STA 17+50.00 TO 19+62.00  
 STA 22+22.00 TO 25+15.71



TS-01A  
 ALTERNATIVE SHOULDER TO BE USED WHERE NO GUARDRAIL PRESENT  
 STA 25+15.71 TO 27+00.00  
 SEE CONSTR DTL P-7 FOR ASPH PVMT EDGE TREATMENTS

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REVISION DATES	

STATE OF GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE: District 3 Design  
**TYPICAL SECTIONS**

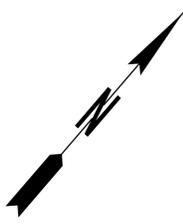
DRAWING No.  
**05-002**



BEGIN PROJECT  
 SR 109 SPUR  
 STA 15+50.00  
 M. P. 6.63  
 N 1119639.5063  
 E 2160782.3738

END PROJECT  
 SR 109 SPUR  
 STA 28+50.00  
 M. P. 6.88  
 N 1120488.0064  
 E 1119639.5063

Curve 1  
 PI Sta= 29+60.94  
 N= 1120561.58  
 E= 2161850.33  
 DELTA= 01° 49' 39.6" (RT)  
 D= 00° 15' 00.00"  
 T= 365.57  
 L= 731.07  
 R= 22918.31  
 E= 2.92  
 S. E. = NC



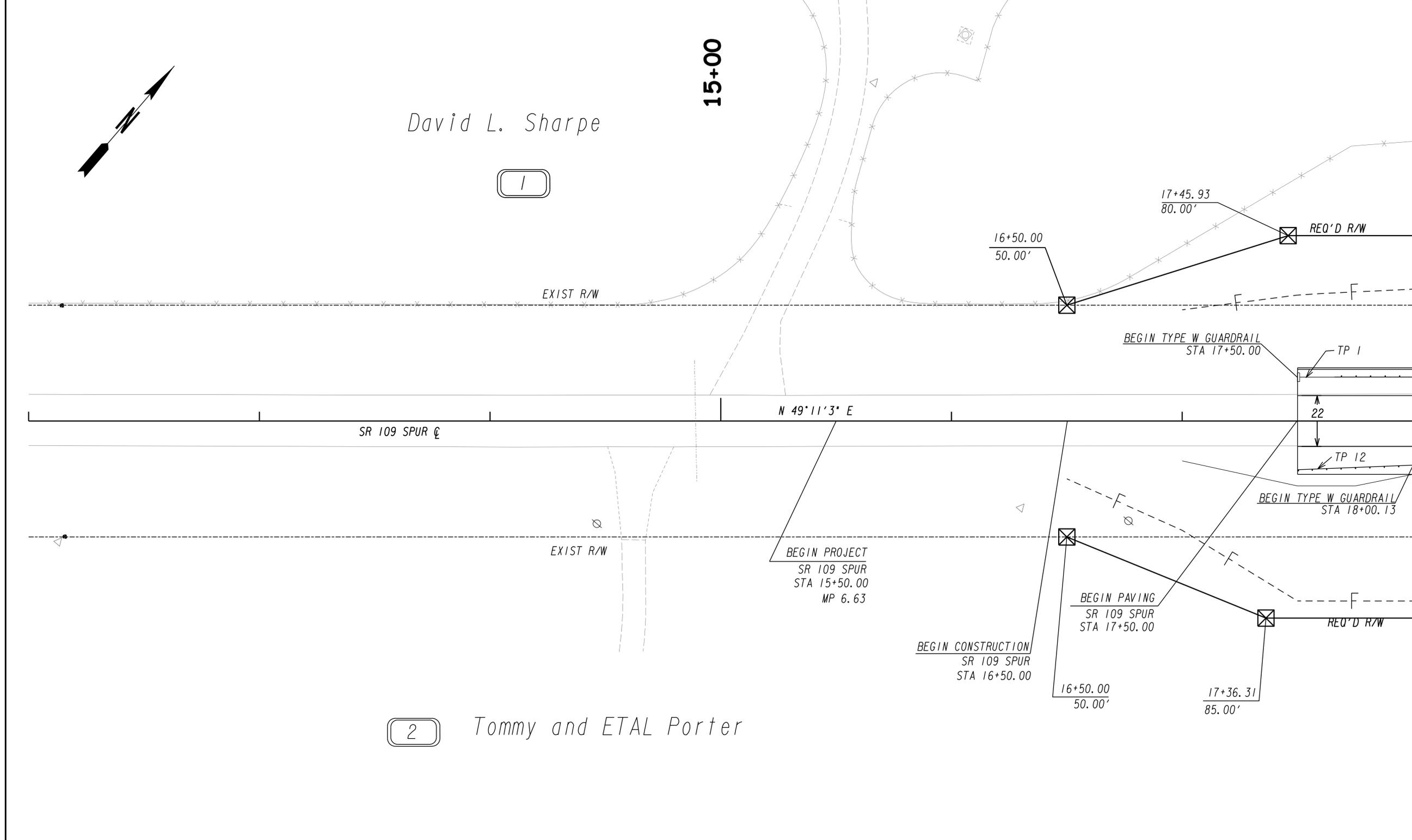
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 OF  
 TRANSPORTATION



REVISION DATES		

STATE OF GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE: DISTRICT THREE DESIGN  
**CONSTRUCTION LAYOUT**

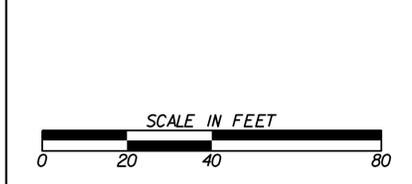
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**11-001**



DRAWING No. 13-002  
MATCH LINE STA. 18+00.00

PROPERTY AND EXISTING R/W LINE  
 REQUIRED R/W LINE  
 CONSTRUCTION LIMITS  
 EASEMENT FOR CONSTR  
 & MAINTENANCE OF SLOPES  
 EASEMENT FOR CONSTR OF SLOPES  
 EASEMENT FOR CONSTR OF DRIVES

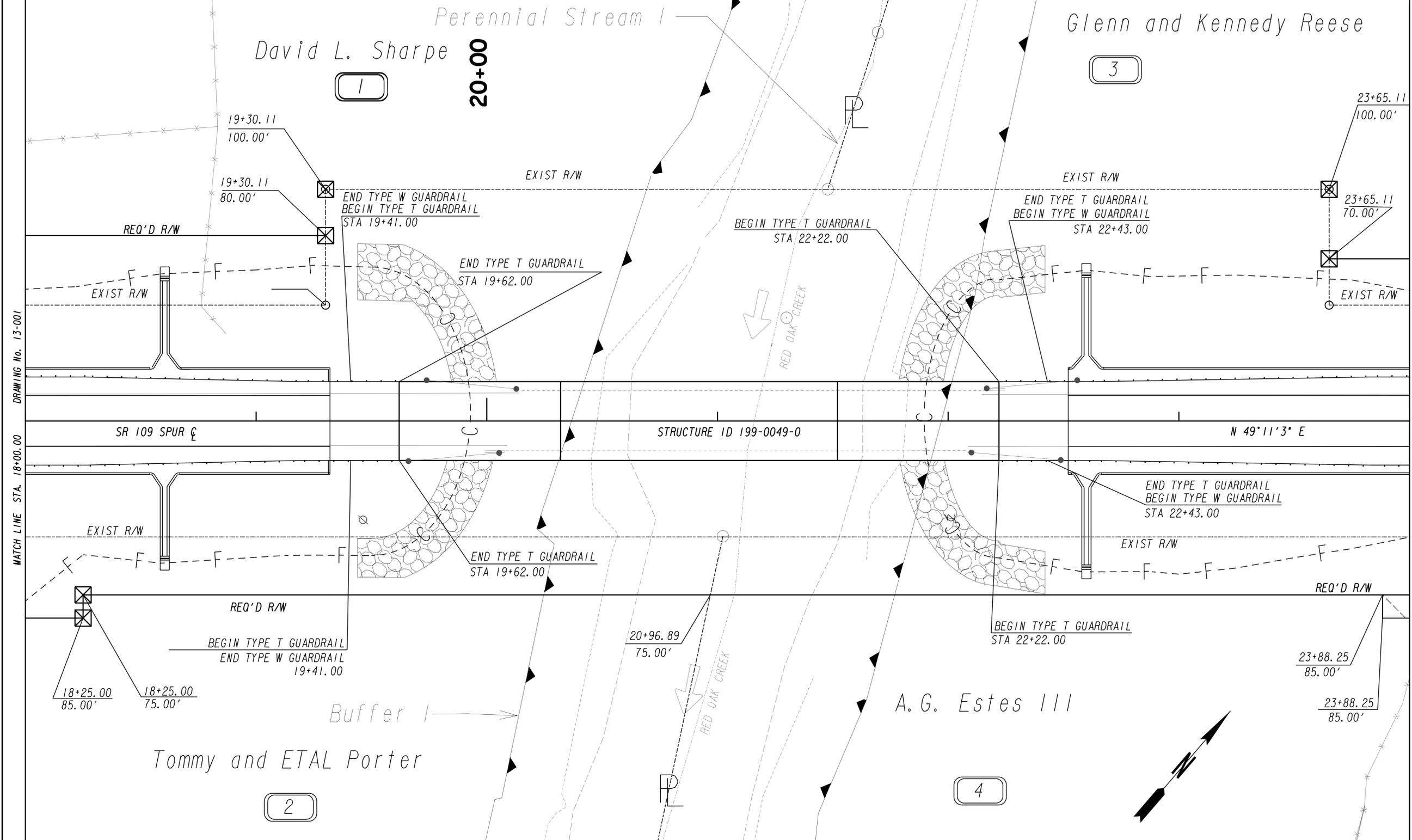
-----BLA  
 -----ELA  
 - - - - -  
 - - - - -  
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REVISION DATES		

STATE OF GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE: DISTRICT THREE DESIGN  
**MAINLINE PLAN**  
 SR 109 SPUR

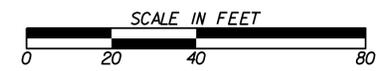
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PROPERTY AND EXISTING R/W LINE  
 REQUIRED R/W LINE  
 CONSTRUCTION LIMITS  
 EASEMENT FOR CONSTR  
 & MAINTENANCE OF SLOPES  
 EASEMENT FOR CONSTR OF SLOPES  
 EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA  
 END LIMIT OF ACCESS.....ELA  
 LIMIT OF ACCESS  
 REQ'D R/W & LIMIT OF ACCESS

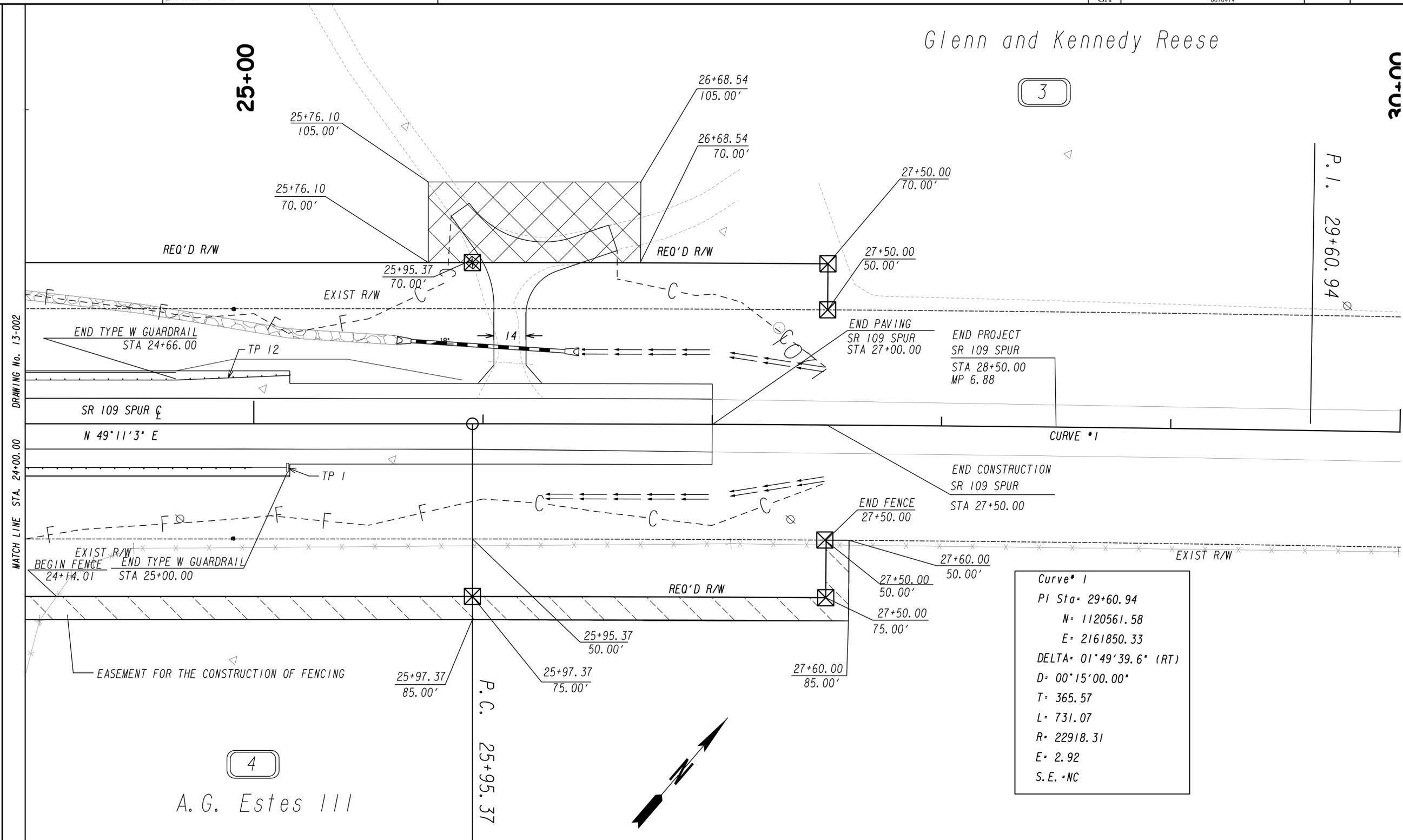
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 TRANSPORTATION



REVISION DATES	

STATE OF GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE: DISTRICT THREE DESIGN  
**MAINLINE PLAN**  
 SR 109 SPUR  
 DRAWING No. 13-002

Glenn and Kennedy Reese



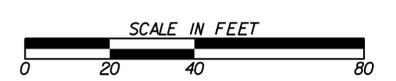
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 E= 2161850.33  
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 D= 00°15'00.00"  
 T= 365.57  
 L= 731.07  
 R= 22918.31  
 E= 2.92  
 S.E.=NC

DRAWING No. 13-002  
 MATCH LINE STA. 24+00.00

PROPERTY AND EXISTING R/W LINE  
 REQUIRED R/W LINE  
 CONSTRUCTION LIMITS  
 EASEMENT FOR CONSTR  
 & MAINTENANCE OF SLOPES  
 EASEMENT FOR CONSTR OF SLOPES  
 EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA  
 END LIMIT OF ACCESS.....ELA  
 LIMIT OF ACCESS  
 REQ'D R/W & LIMIT OF ACCESS

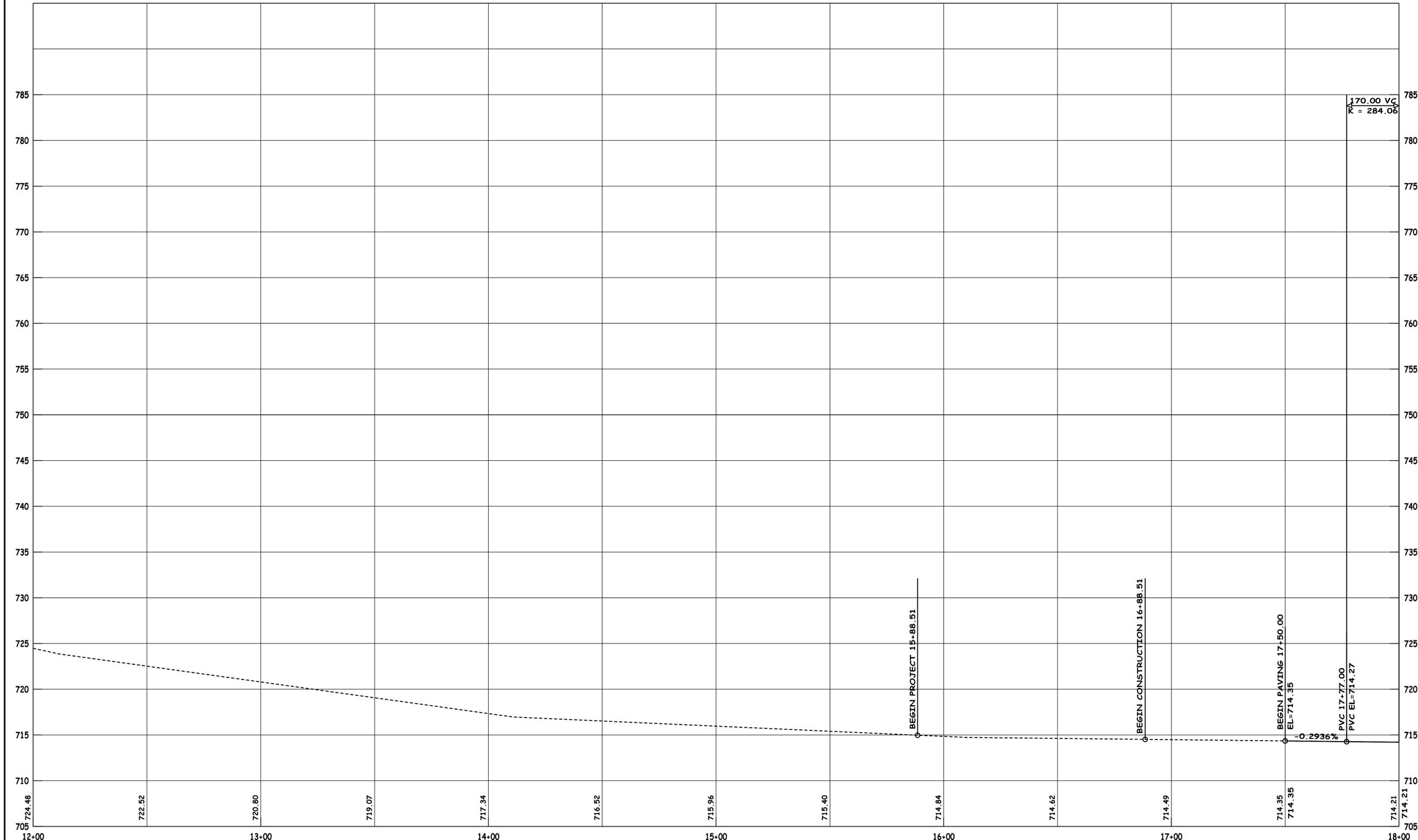
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 TRANSPORTATION



REVISION DATES	

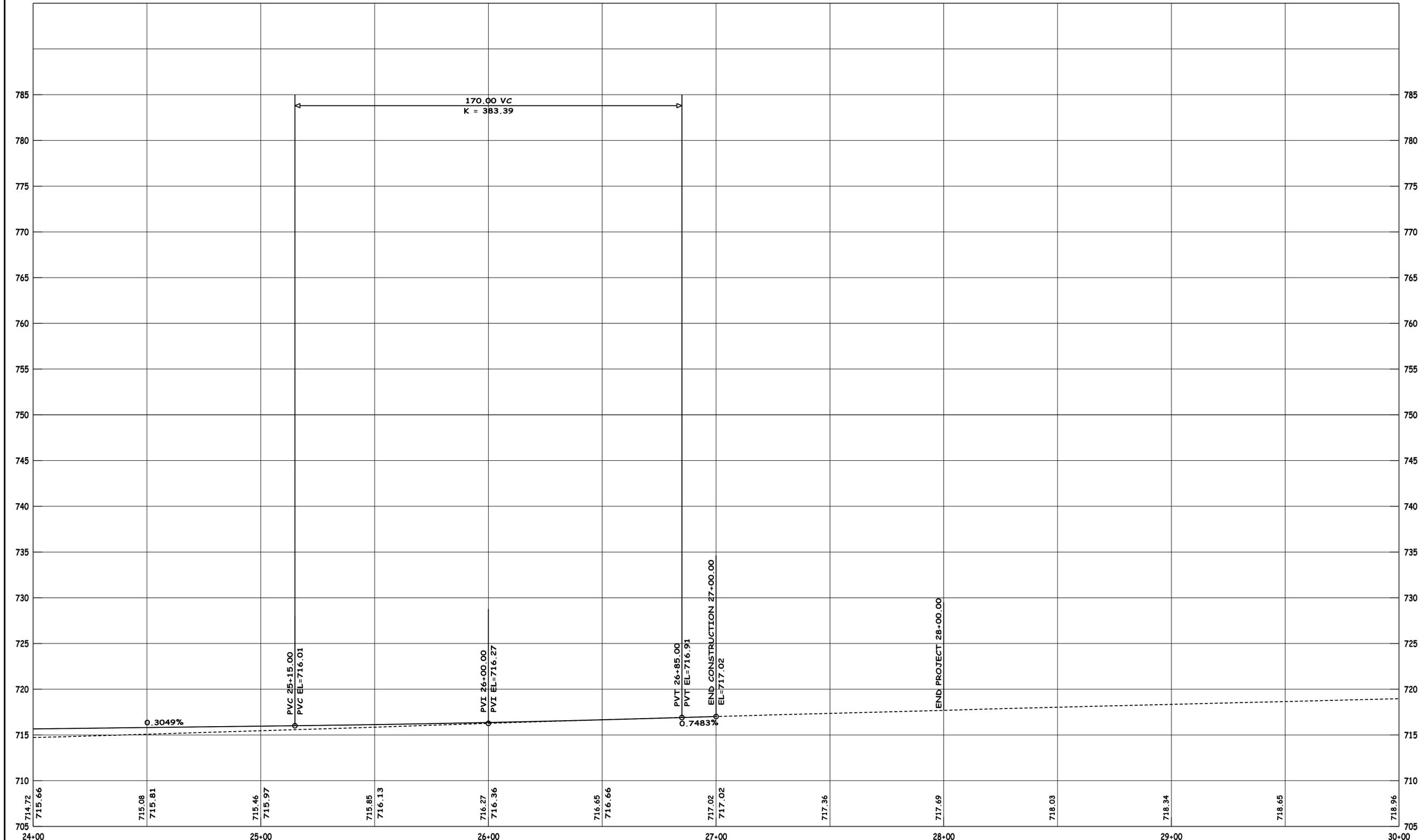
STATE OF GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE: DISTRICT THREE DESIGN  
**MAINLINE PLAN**  
 SR 109 SPUR

DRAWING No.  
**13-003**

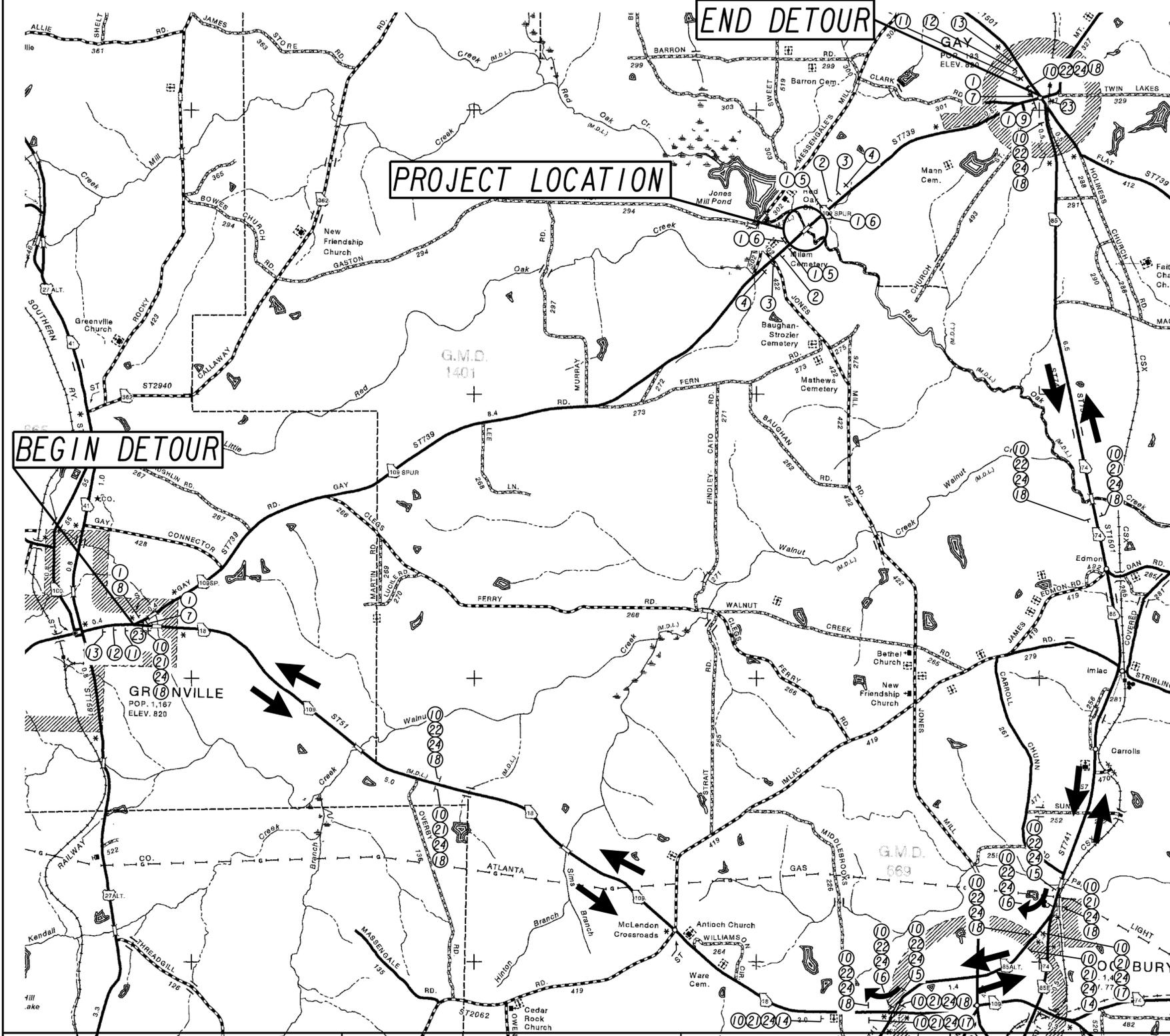


	<b>GEORGIA</b> DEPARTMENT OF TRANSPORTATION		REVISION DATES	STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE: DISTRICT THREE DESIGN <b>MAINLINE PROFILE</b> SR 109 SPUR
				DRAWING No. <b>15-001</b>





	<b>GEORGIA</b> DEPARTMENT OF TRANSPORTATION		REVISION DATES	STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE: DISTRICT THREE DESIGN <b>MAINLINE PROFILE</b> SR 109 SPUR
				DRAWING No. <b>15-003</b>



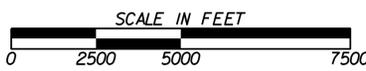
**SR 109 SPUR WILL BE CLOSED TO THROUGH TRAFFIC DURING THIS PROJECT**  
**DETOUR LENGTH = 16.12 MILES**



<p>Type III Barricade</p>					
<p>2 ROAD CLOSED 500 FT W20-3 48" X 48"</p>	<p>3 ROAD CLOSED 1000 FT W20-3 48" X 48"</p>	<p>4 ROAD CLOSED 1500 FT W20-3 48" X 48"</p>	<p>5 ROAD CLOSED R11-2A 48" X 30"</p>	<p>6 BRIDGE OUT R11-2B 48" X 30"</p>	<p>7 ROAD CLOSED LOCAL TRAFFIC ONLY R11-3 60" X 30"</p>
<p>8 DETOUR M4-10R 48" X 18"</p>	<p>9 DETOUR M4-10L 48" X 18"</p>	<p>10 DETOUR M4-8 24" X 12"</p>	<p>11 DETOUR 500 FT W20-2 48" X 48"</p>	<p>12 DETOUR 1000 FT W20-2 48" X 48"</p>	<p>13 DETOUR 1500 FT W20-2 48" X 48"</p>
<p>14 M5-1L 21" X 15"</p>	<p>15 M5-1R 21" X 15"</p>	<p>16 M6-1R 21" X 15"</p>	<p>17 M6-1L 21" X 15"</p>	<p>18 M6-3 21" X 15"</p>	
<p>19 NORTH M3-1</p>	<p>20 SOUTH M3-3</p>	<p>21 EAST M3-2</p>	<p>22 WEST M3-4</p>		
<p>23 END DETOUR M4-8a 24" X 12"</p>	<p>24 SPUR 109</p>				

...Detours\SR 154 RR Detour.dgn 2/16/2015 3:32:15 PM

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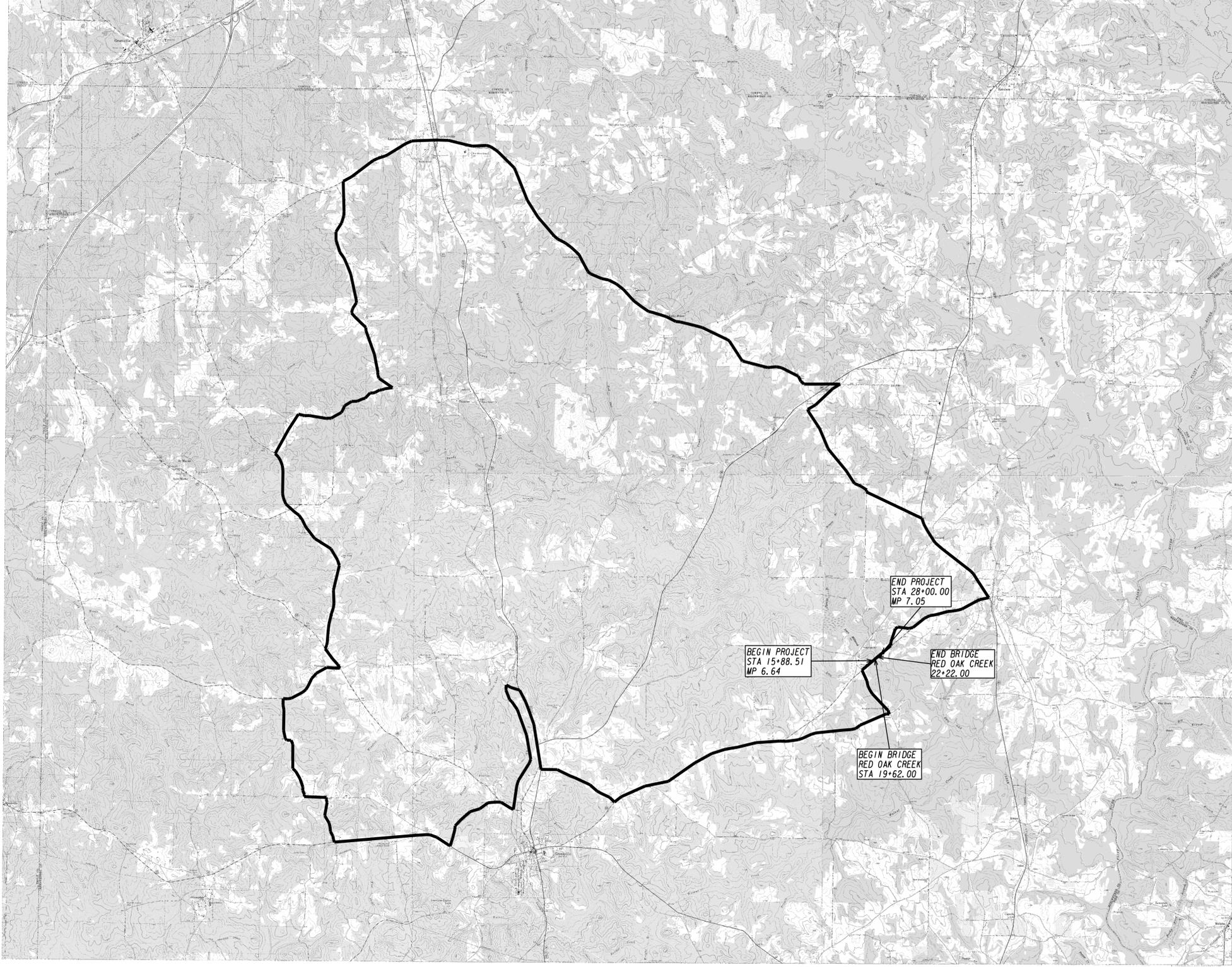


REVISION DATES


STATE OF GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE: DISTRICT THREE DESIGN  
**STAGING DETAILS**

OFF-SITE DETOUR PLAN

DRAWING No.  
**20-001**

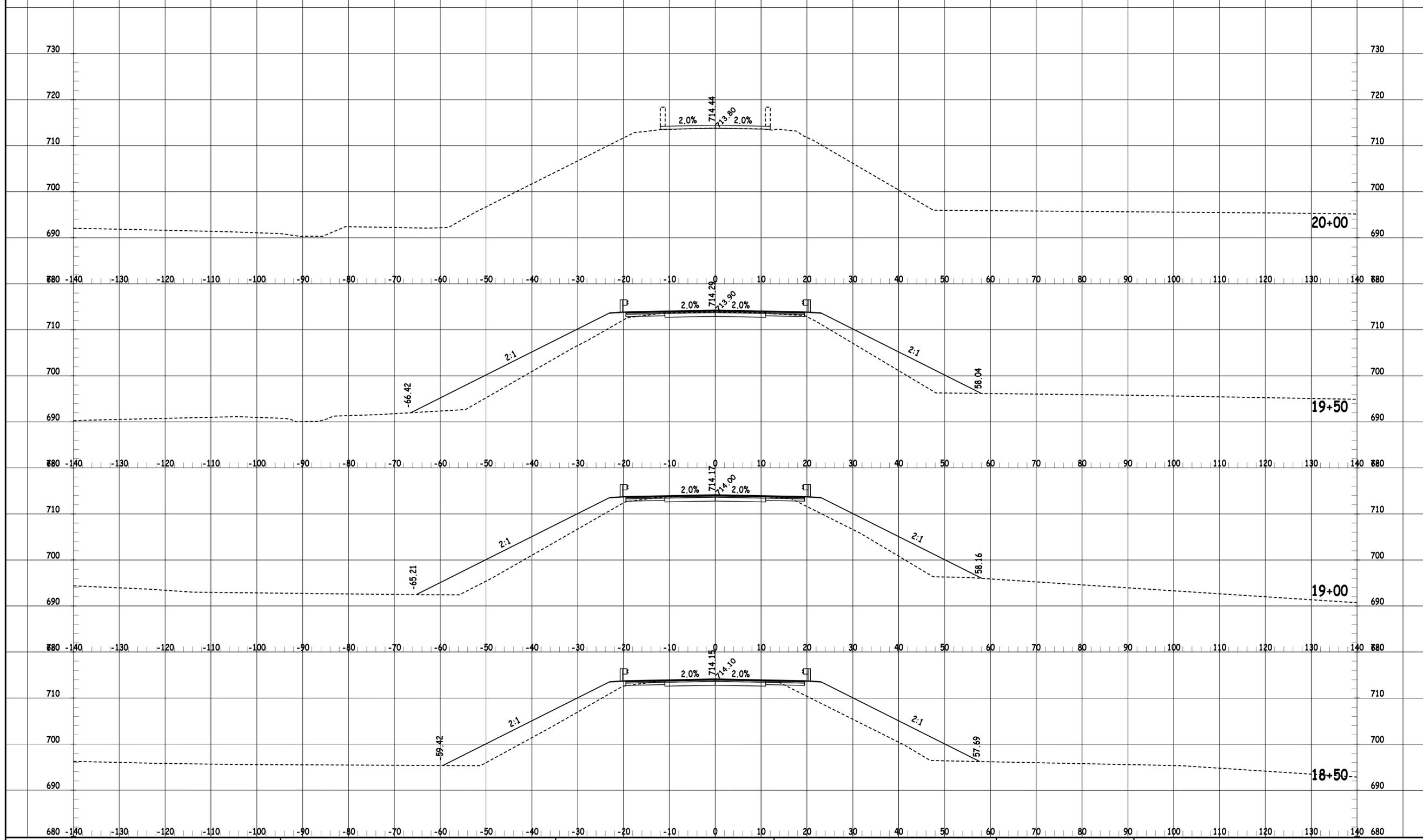


TOTAL PROJECT SIZE • 3.52 ACRES  
 TOTAL DISTURBED AREA • 3.14 ACRES  
 TOTAL DRAIAGE AREA • 90.77 SQ MI  
 RECEIVING WATERS • RED OAK CREEK



	<b>GEORGIA</b> DEPARTMENT OF TRANSPORTATION	SCALE IN FEET 	REVISION DATES <table border="1" style="width:100%; height: 40px;"> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>													STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE: DISTRICT THREE DESIGN <b>DRAINAGE AREA MAP</b>
12/14/2012 GPLM				DRAWING No. <b>21-001</b>												





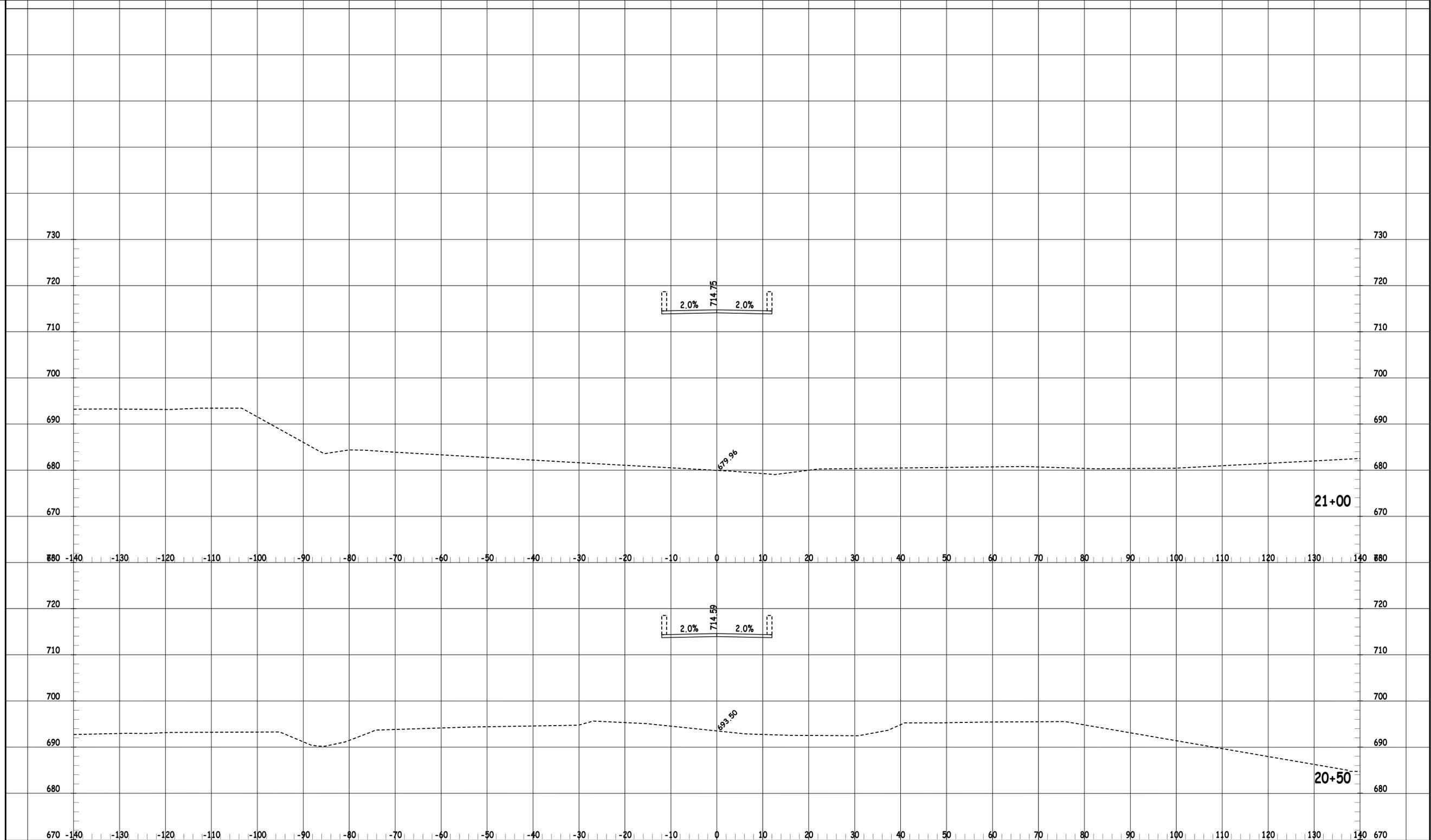
**GEORGIA**  
DEPARTMENT  
OF  
TRANSPORTATION

REVISION DATES

STATE OF GEORGIA  
DEPARTMENT OF TRANSPORTATION  
OFFICE: DISTRICT THREE DESIGN  
**CROSS SECTIONS**

SR 109 SPUR

DRAWING No. <b>23-002</b>
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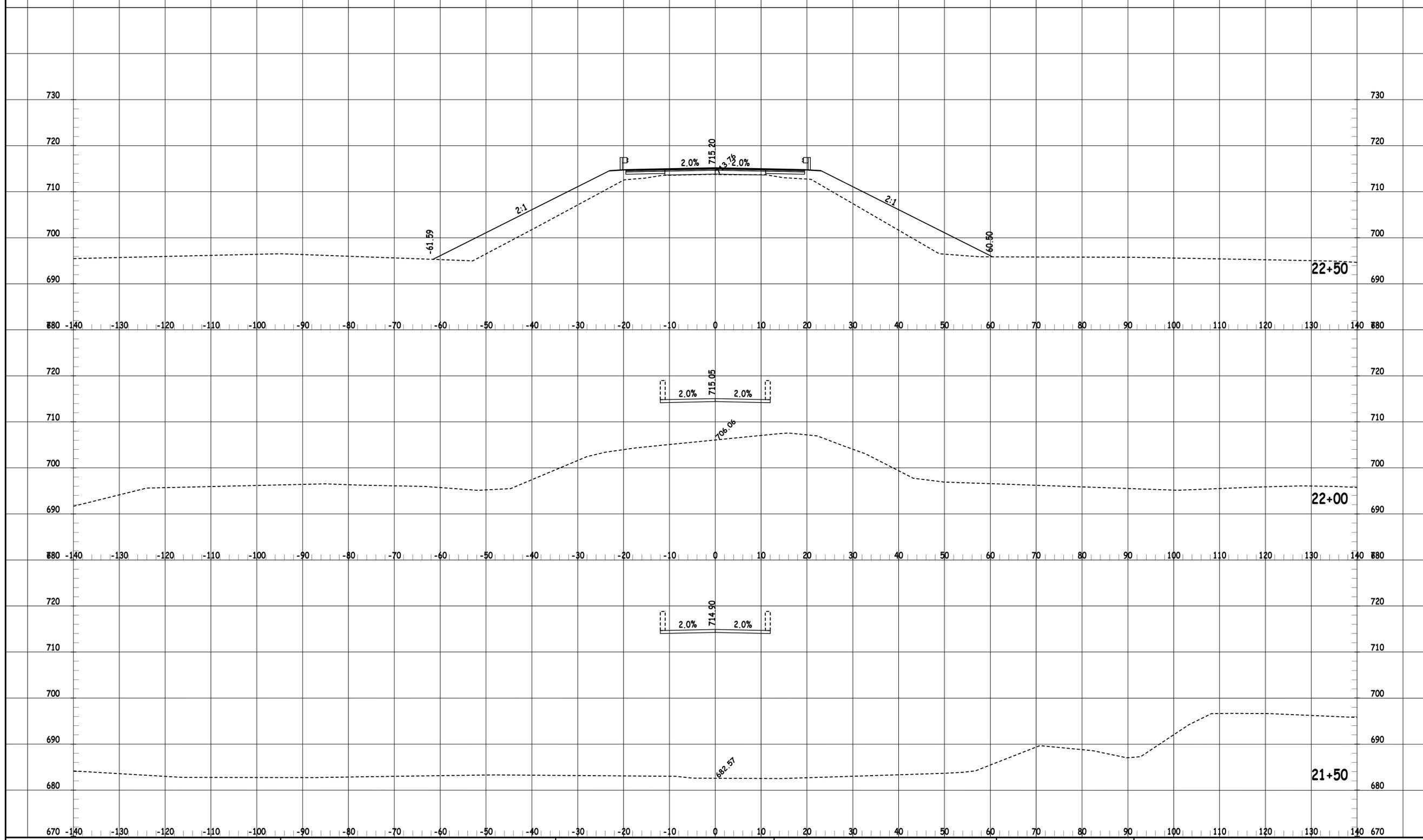


**GEORGIA**  
DEPARTMENT  
OF  
TRANSPORTATION

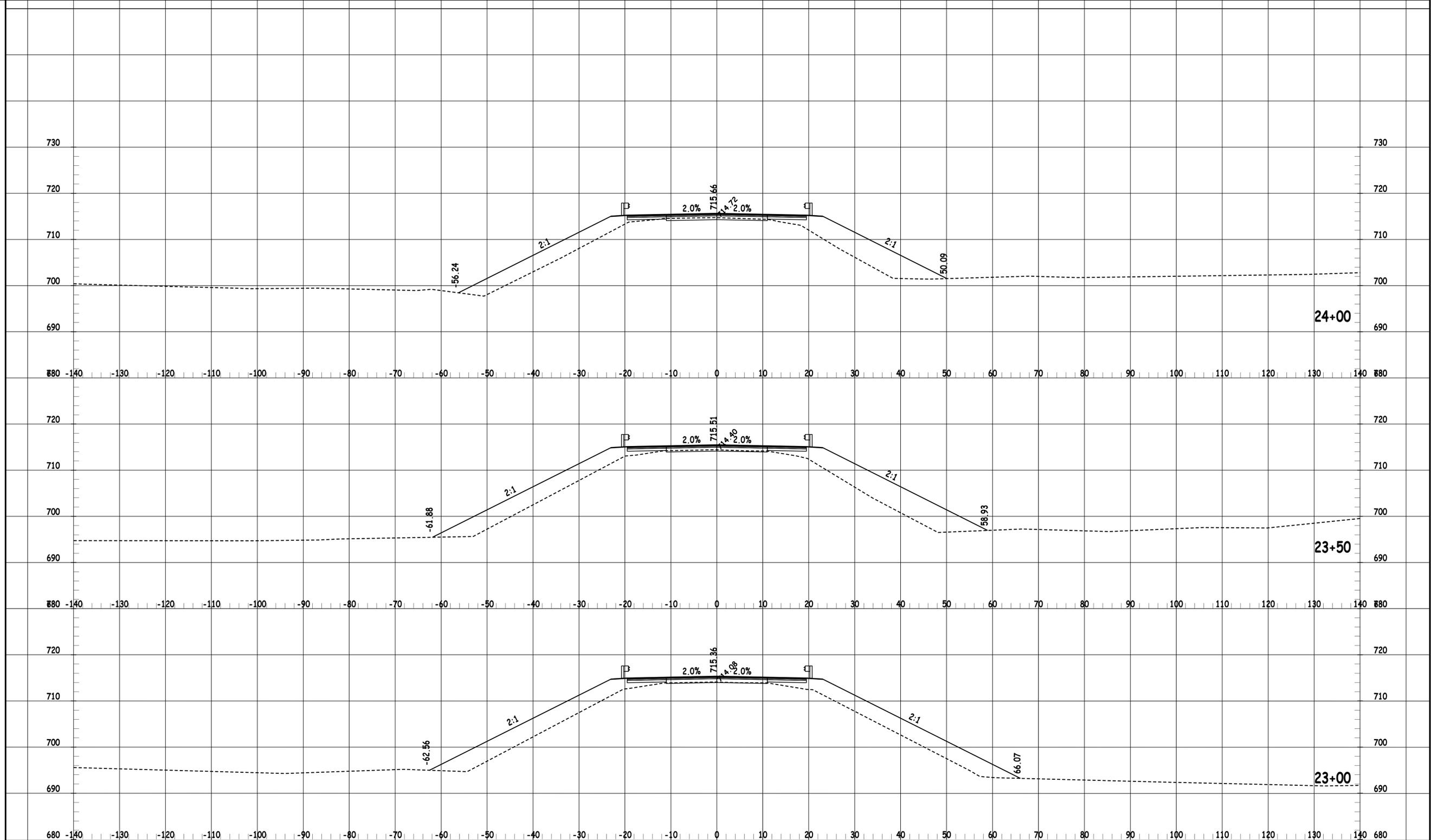
REVISION DATES

STATE OF GEORGIA  
DEPARTMENT OF TRANSPORTATION  
OFFICE: DISTRICT THREE DESIGN  
**CROSS SECTIONS**  
SR 109 SPUR

DRAWING No. <b>23-003</b>
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	<b>GEORGIA</b> DEPARTMENT OF TRANSPORTATION	REVISION DATES <table border="1" style="width:100%; height: 40px;"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>									STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE: DISTRICT THREE DESIGN <b>CROSS SECTIONS</b> SR 109 SPUR
06/18/14 SUXSEW			DRAWING No. <b>23-004</b>								



**GEORGIA**  
DEPARTMENT  
OF  
TRANSPORTATION

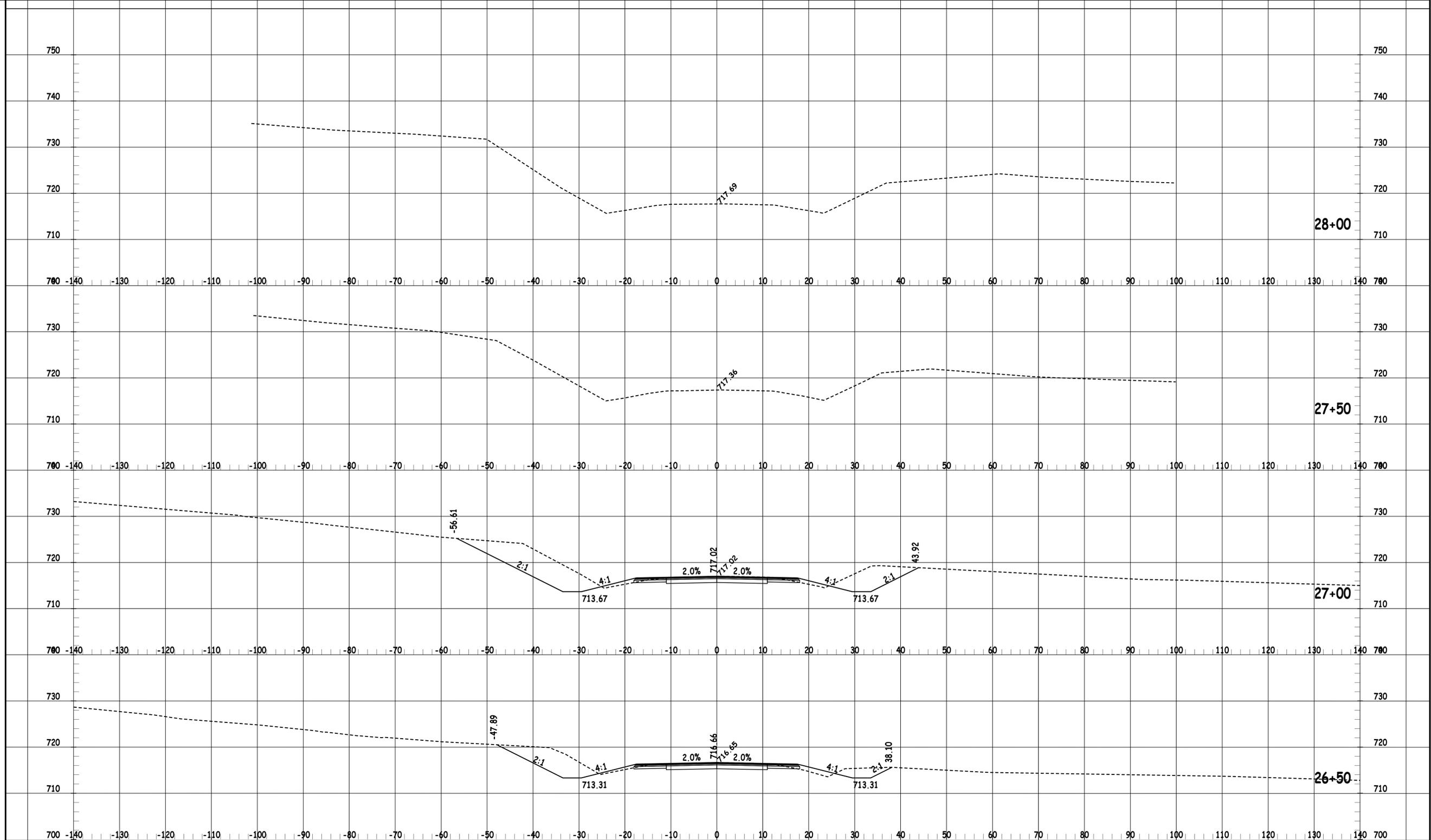
REVISION DATES

STATE OF GEORGIA  
DEPARTMENT OF TRANSPORTATION  
OFFICE: DISTRICT THREE DESIGN  
**CROSS SECTIONS**

SR 109 SPUR

DRAWING No.  
**23-005**





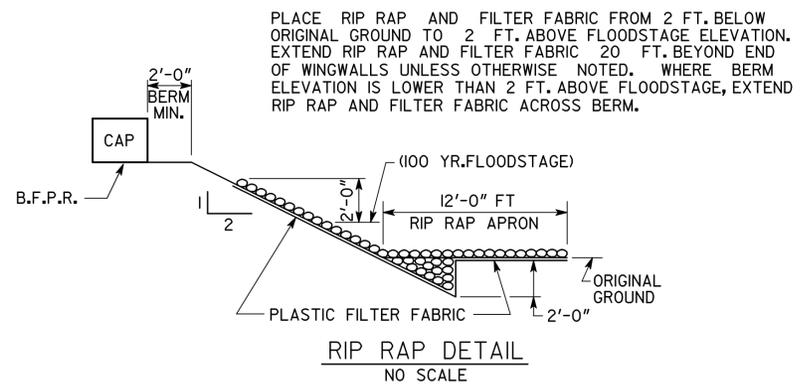
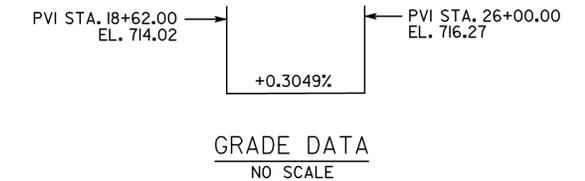
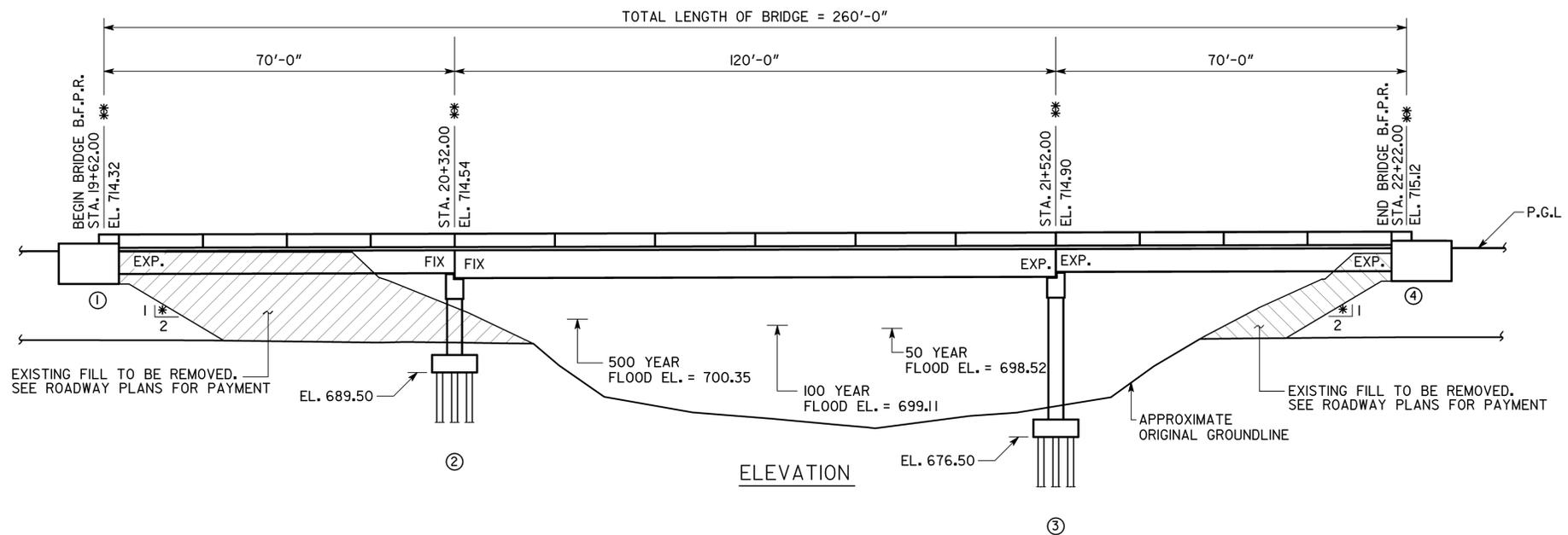
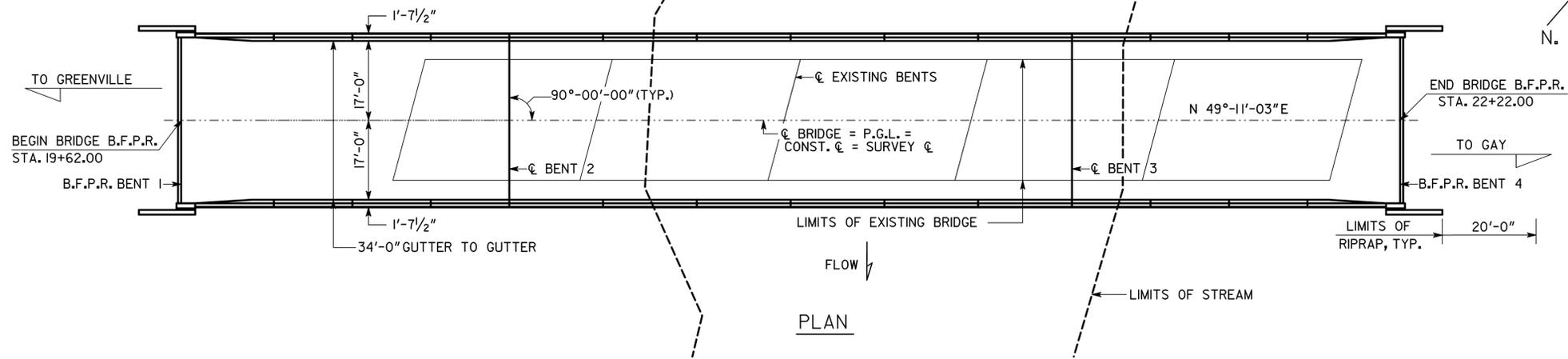
**GEORGIA**  
DEPARTMENT  
OF  
TRANSPORTATION

REVISION DATES

STATE OF GEORGIA  
DEPARTMENT OF TRANSPORTATION  
OFFICE: DISTRICT THREE DESIGN  
**CROSS SECTIONS**

SR 109 SPUR

DRAWING No.
<b>23-007</b>



- NOTES:
- ALL BENTS ARE PARALLEL TO BENT 1.
  - SLOPE NORMAL TO END BENT.
  - STATIONS AND ELEVATIONS ARE ALONG PROFILE GRADE LINE AT THE INTERSECTION OF PROFILE GRADE LINE AND B.F.P.R. OR  $\phi$  BENT.
  - END BENT PILES NOT SHOWN.

EXISTING BRIDGE SERIAL NO. 199-0049-0  
 EXISTING BRIDGE I.D. NO. 199-00109P-006.84E  
 PROJECT P.L. NO. 0010414

BRIDGE NO. 1

DATE	GEORGIA <b>DEPARTMENT OF TRANSPORTATION</b> ENGINEERING DIVISION-OFFICE OF BRIDGES AND STRUCTURES		
	PLAN AND ELEVATION SR 109 SPUR OVER RED OAK CREEK MERIWETHER COUNTY 0010414		
REVISIONS	SCALE: 1" = 15'-0"		SEPTEMBER 2015
	DESIGNED KNR	CHECKED EJC	REVIEWED DLC/WMD
BY	DRAWN KNR	DESIGN GROUP EJC	APPROVED BFR

DRAWING NO.  
35-001  
BRIDGE SHEET  
1 OF 13

1 INCH WHEN PRINTED FULL SIZE

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9/4/2015

BRIDGE CONSISTS OF

- 2 - 70'-0" TYPE III PSC BEAM SPANS ----- SPECIAL DESIGN
- 1 - 120'-0" BULB TEE, 63 IN, PSC BEAM SPANS ----- SPECIAL DESIGN
- 2 - STEEL H PILE END BENTS ----- SPECIAL DESIGN
- 2 - CONCRETE INTERMEDIATE BENTS ----- SPECIAL DESIGN
- 4 - END POST AND GUARDRAIL ATTACHMENT DETAIL ----- GA. STD. 3054 (9-30-02)  
(L = 4'-0"; W = 1'-1"; H = 2'-8")
- BAR BENDING DETAILS ----- GA. STD. 3901 (8-69)
- TYPICAL FILL DETAIL AT END OF BRIDGE ----- GA. STD. 9037 (9-99)

DRAINAGE DATA

DRAINAGE AREA ----- 90.8 SQ MILES

FLOOD FREQUENCY	TOTAL DISCHARGE	MEAN VELOCITY	AREA OF OPENING UNDER FLOODSTAGE	BACKWATER
50 YEAR	9,880 CFS	5.76 FPS	1,716 SQ FT	0.08 FT
100 YEAR	11,300 CFS	6.15 FPS	1,838 SQ FT	0.12 FT
500 YEAR	14,800 CFS	7.08 FPS	2,089 SQ FT	0.22 FT

TRAFFIC DATA

TRAFFIC ----- ADT = 450 (2018)  
ADT = 600 (2038)

DESIGN SPEED ----- 55 MPH

TRUCKS ----- 6.5 %

24 HR TRUCKS ----- 9.5 %

DIRECTIONAL ----- 65 %

UTILITIES

NO UTILITIES ON BRIDGE

GENERAL NOTES

SPECIFICATIONS - GEORGIA STANDARD SPECIFICATIONS, 2013 EDITION, AS MODIFIED BY CONTRACT DOCUMENTS.

REINFORCING STEEL - PLACE AND TIE ALL REINFORCING STEEL IN ACCORDANCE WITH THE GEORGIA DOT SPECIFICATIONS. DO NOT WELD REINFORCING STEEL.

CHAMFER - CHAMFER ALL EXPOSED CONCRETE EDGES 3/4" UNLESS OTHERWISE NOTED.

TRAFFIC CONTROLS - ROAD TO BE CLOSED DURING BRIDGE CONSTRUCTION. SEE ROADWAY PLANS FOR DETOUR, TRAFFIC CONTROLS AND TRAFFIC CONTROL PAYMENT.

EXISTING BRIDGE PLANS - ORIGINAL BRIDGE PLANS MAY BE OBTAINED ON THE GEORGIA DOT WEBSITE AT:  
[HTTP://WWW.DOT.GA.GOV/BS/PROJECTS/PROJECTSEARCH](http://www.dot.ga.gov/bs/projects/projectsearch)

THE ORIGINAL BRIDGE WAS BUILT UNDER PROJECT NUMBER RAB(4)-SP1512-A(6) (PROJECT ID NO. H017660).

GENERAL NOTES - CONTINUED

WAITING PERIOD - NONE REQUIRED.

COFFERDAMS - PROVIDE COFFERDAMS AT BENT 3.

PLAN DRIVING OBJECTIVE - SEE SUBSTRUCTURE DETAILS.

DRIVING RESISTANCE - DETERMINE DRIVING RESISTANCE FOR PILES USING DYNAMIC PILE TESTING IN ACCORDANCE WITH SPECIAL PROVISION 520. DYNAMIC PILE TESTING SHALL BE REQUIRED FOR ONE PILE AT EACH OF BENT 1 RIGHT AND BENT 3 LEFT.

DYNAMIC PILE TESTING - PERFORM PILE TESTING USING THE PILE DRIVING ANALYZER (PDA) IN ACCORDANCE WITH SPECIAL PROVISION SECTION 523. NOTIFY THE GEOTECHNICAL BUREAU OF THE GEORGIA DOT OFFICE OF MATERIALS AND TESTING AT 404-608-4720 TWO WEEKS PRIOR TO DRIVING PILES.

WAVE EQUATION - PERFORM WAVE EQUATION ANALYSIS (WEAP) IN ACCORDANCE WITH SPECIAL PROVISION 520. PROVIDE RESULTS OF THE WEAP TO THE GEOTECHNICAL BUREAU OF THE GEORGIA DOT OFFICE OF MATERIALS AND TESTING FOR REVIEW AND APPROVAL TWO WEEKS PRIOR TO DRIVING PILES.

STEEL H-PILES - USE STEEL FOR H-PILES THAT MEETS THE REQUIREMENTS OF ASTM A 709 GR 50.

PILE POINTS - REINFORCE ALL PILE TIPS AT BENTS 2, 3 AND 4 IN ACCORDANCE WITH SECTIONS 520 AND 855 OF THE GEORGIA DOT SPECIFICATIONS.

SMOOTH DOWEL BARS - PLACE SMOOTH DOWEL BARS IN FORMED 3" DIAMETER X 12" DEEP HOLES AND GROUT IN PLACE SIMILAR TO ANCHOR BOLTS, SEE SUB-SECTION 501.3.05.B.3 OF THE GEORGIA DOT SPECIFICATIONS. STIRRUPS MAY BE SHIFTED SLIGHTLY TO CLEAR FORMED HOLES.

STANDARD PLAN MODIFICATION - MODIFY THE APPROACH SLAB STANDARD TO INCREASE THE 3/4" EXPANSION JOINT SHOWN BETWEEN THE APPROACH SLAB AND THE BACK FACE PAVING REST AND END POST TO 1 1/2" AT BENT 4. SEE ROADWAY PLANS FOR APPROACH SLAB PAYMENT.

GROOVED CONCRETE - GROOVE THE ENTIRE LENGTH OF THE BRIDGE TRANSVERSELY AS PER SUB-SECTION 500.3.05.T.9.C OF THE GEORGIA DOT SPECIFICATIONS.

RIDING QUALITY - THE FINISHED BRIDGE DECK AND APPROACH SLABS SHALL MEET THE RIDE QUALITY REQUIREMENTS AS SPECIFIED IN SUB-SECTION 500.3.06.E OF THE GEORGIA DOT SPECIFICATIONS FOR STATE ROUTES WITH FOUR LANES OR MORE.

WELDING - ALL WELDING ON GEORGIA DOT PROJECTS SHALL BE PERFORMED BY CERTIFIED WELDERS THAT HAVE IN THEIR POSSESSION A CURRENT WELDING CERTIFICATION CARD ISSUED BY THE OFFICE OF MATERIALS AND TESTING. USE ONLY E70XX (EXCLUDING E7014 AND E7024) LOW HYDROGEN ELECTRODES FOR MANUAL SHIELDED METAL ARC WELDING.

BRIDGE REMOVAL - REMOVE EXISTING BRIDGE AS PER SUB-SECTION 540.3.05 OF THE GEORGIA DOT SPECIFICATIONS.

SALVAGE MATERIAL - NO MATERIAL REMOVED FROM THE EXISTING STRUCTURE SHALL BE SALVAGED FOR USE BY THE GEORGIA DOT.

INCIDENTAL ITEMS - INCLUDE THE COST INCIDENTAL TO THE WORK THAT IS NOT SPECIFICALLY COVERED BY THE GEORGIA STANDARD SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS AND/OR SPECIAL PROVISIONS IN THE OVERALL BID SUBMITTED. THIS INCLUDES THE COST OF WATERPROOFING, JOINT FILLERS, AND OTHER INCIDENTAL ITEMS NECESSARY TO COMPLETE THE WORK.

DESIGN DATA

SPECIFICATIONS ----- AASHTO LRFD 7TH EDITION, 2014  
(DESIGNED FOR SEISMIC PERFORMANCE ZONE 1, SD1 = 0.116)

DESIGN VEHICLE LIVE LOAD ----- HL-93

FUTURE PAVING ALLOWANCE ----- 30 LBS PER SQ FT

CONCRETE: SUPERSTRUCTURE ----- CLASS D, f<sub>c</sub> = 4,000 PSI  
BARRIER ----- CLASS D, f<sub>c</sub> = 4,000 PSI  
PSC BEAMS ----- CLASS AAA, f<sub>c</sub> = SEE BEAM SHEETS  
PSC BEAM ALLOWABLE TENSION ----- SEE BEAM SHEETS  
SUBSTRUCTURE ----- CLASS AA, f<sub>c</sub> = 3,500 PSI

REINFORCEMENT STEEL: ----- GRADE 60, f<sub>y</sub> = 60,000 PSI

PRETENSIONING STRANDS: ----- f<sub>p</sub> = 270,000 PSI

STEEL H-PILES: ----- GRADE 50, f<sub>y</sub> = 50,000 PSI

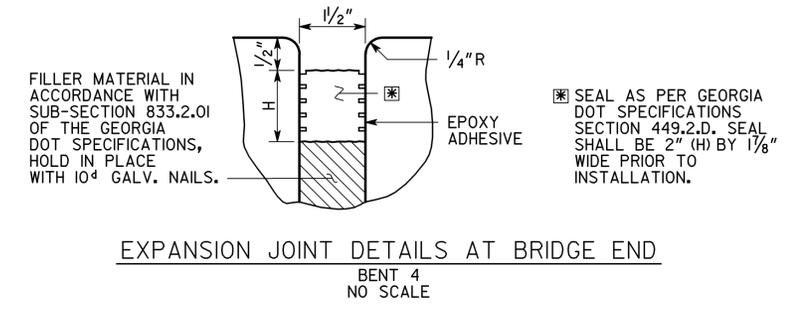
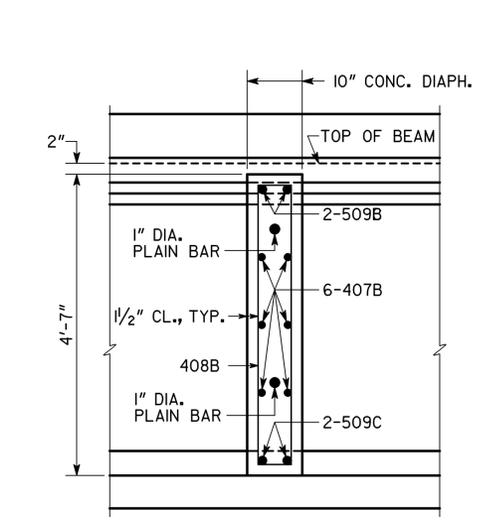
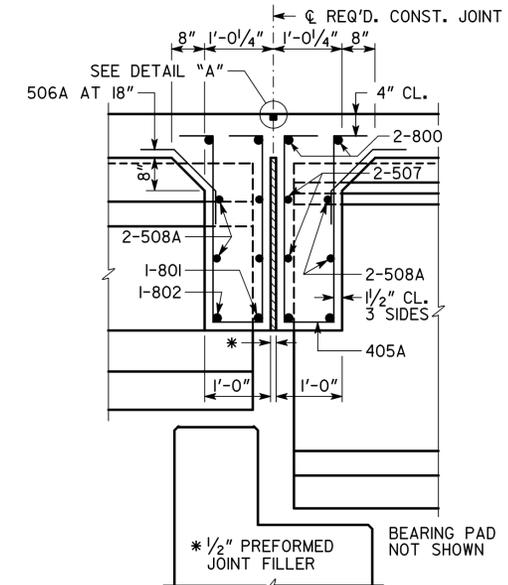
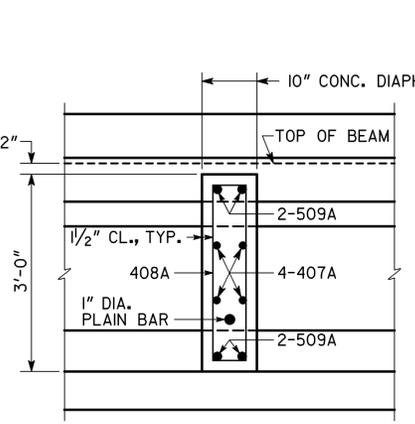
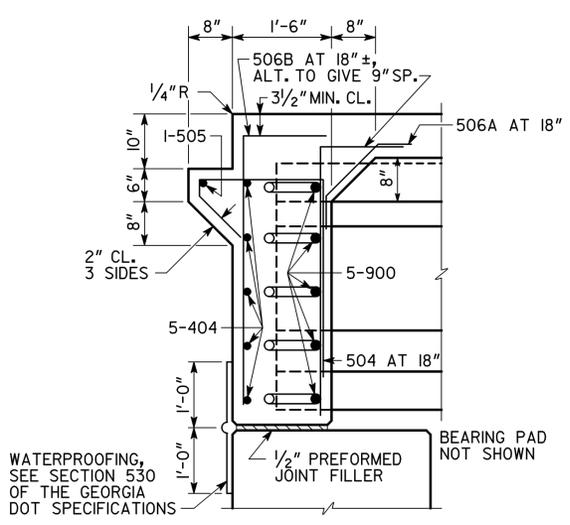
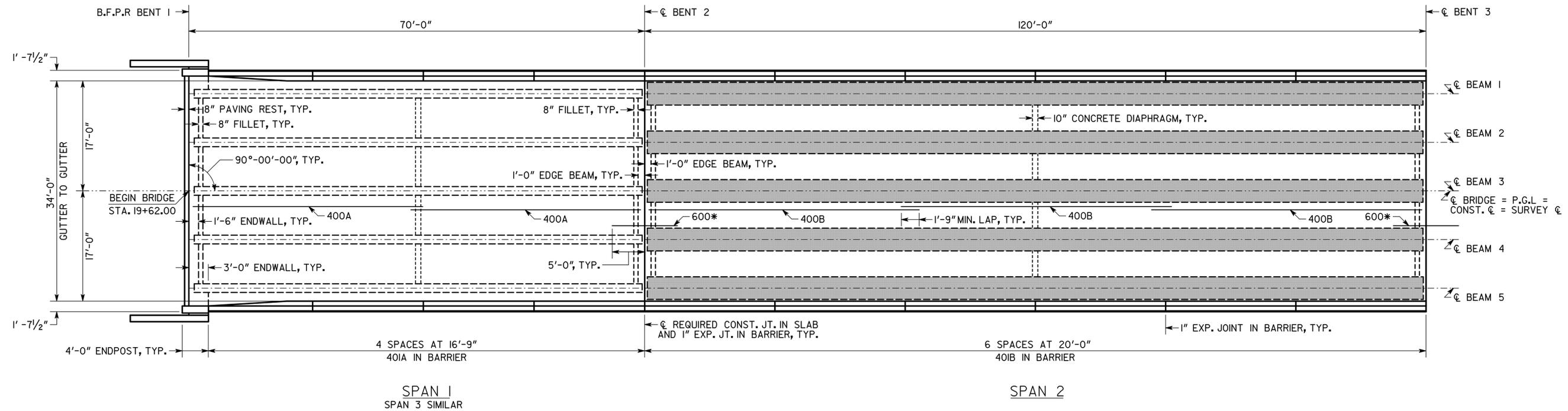
SUMMARY OF QUANTITIES

PAY ITEM NUMBER	QUANTITY	UNIT	PAY ITEM
211-0300	134	CY	BRIDGE EXCAVATION, STREAM CROSSING
500-0100	925	SY	GROOVED CONCRETE
500-1011	LUMP	LS	SUPERSTR CONCRETE, CL D, BR NO - 1 (303)
500-2100	508	LF	CONCRETE BARRIER
500-3002	142	CY	CLASS AA CONCRETE
507-9003	689	LF	PSC BEAMS, AASHTO TYPE III, BR NO - 1
507-9031	596	LF	PSC BEAMS, AASHTO, BULB TEE, 63 IN, BR NO - 1
511-1000	26167	LB	BAR REINF STEEL
511-3000	LUMP	LS	SUPERSTR REINF STEEL, BR NO - 1 (70887)
520-0573	25	EA	H-PILE POINTS, HP 14 X 73
520-1147	1115	LF	PILING IN PLACE, STEEL H, HP 14 X 73
520-4147	1	EA	LOAD TEST, STEEL H, HP 14 X 73 (IF REQD)
523-1100	2	EA	DYNAMIC PILE TEST
525-1000	2	EA	COFFERDAM
540-1101	LUMP	LS	REMOVAL OF EXISTING BR, STA NO - 20+90
603-2024	991	SY	STN DUMPED RIP RAP, TP 1, 24 IN
603-7000	991	SY	PLASTIC FILTER FABRIC

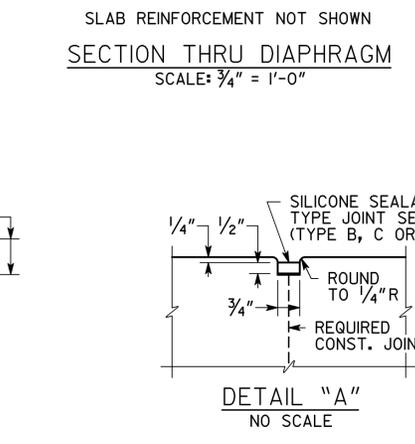
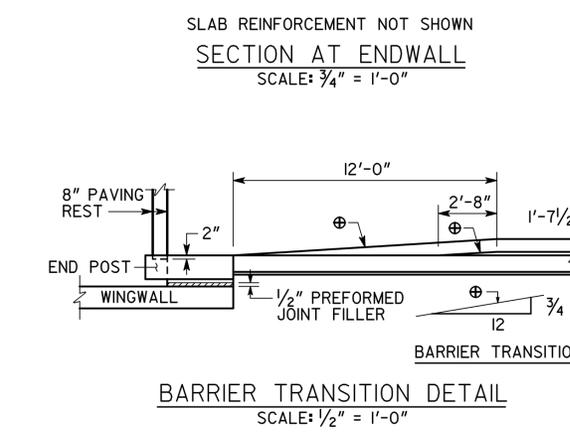
BRIDGE NO. 1

DATE		GEORGIA <b>DEPARTMENT OF TRANSPORTATION</b> ENGINEERING DIVISION-OFFICE OF BRIDGES AND STRUCTURES	
		GENERAL NOTES SR 109 SPUR OVER RED OAK CREEK MERIWETHER COUNTY 0010414	
REVISIONS		NO SCALE SEPTEMBER 2015	
BY	DESIGNED	CHECKED	REVIEWED
2 OF 13	KNR	EJC	DLC/WMD
	DRAWN	DESIGN GROUP	APPROVED
	KNR	EJC	BFR

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- NOTES:
- MAINTAIN 2" CL. ON ALL REINFORCEMENT UNLESS OTHERWISE NOTED.
  - 2-600 BARS BETWEEN 400 BARS IN TOP OF SLAB, TYP.



NOTE: DO NOT REMOVE EDGE BEAM FORMS UNTIL DECK IS POURED AND REACHES 28-DAY CONCRETE STRENGTH.

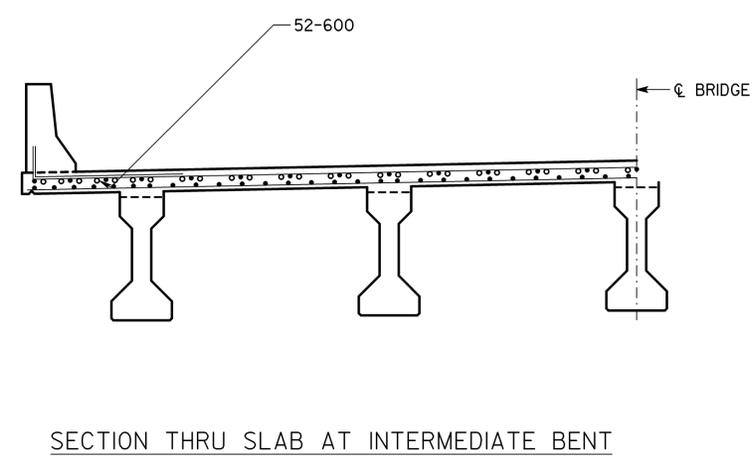
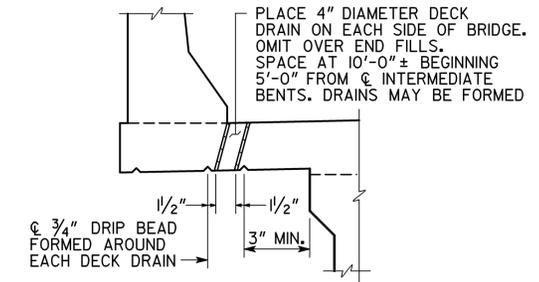
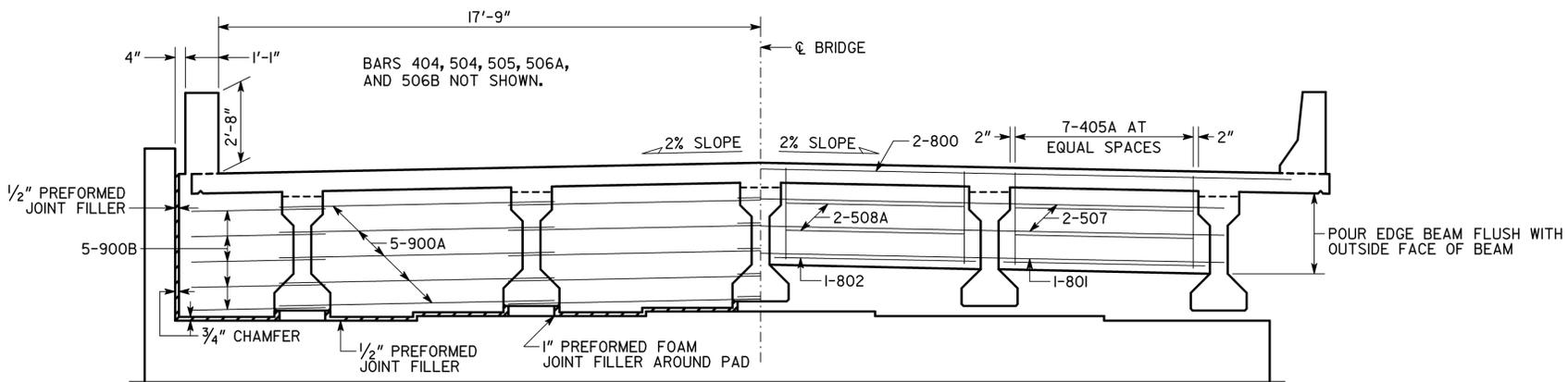
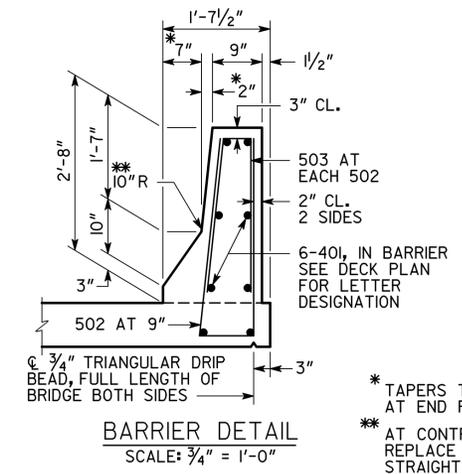
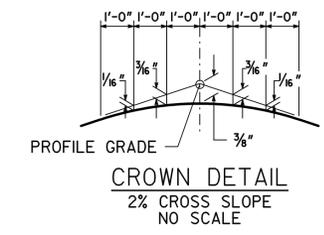
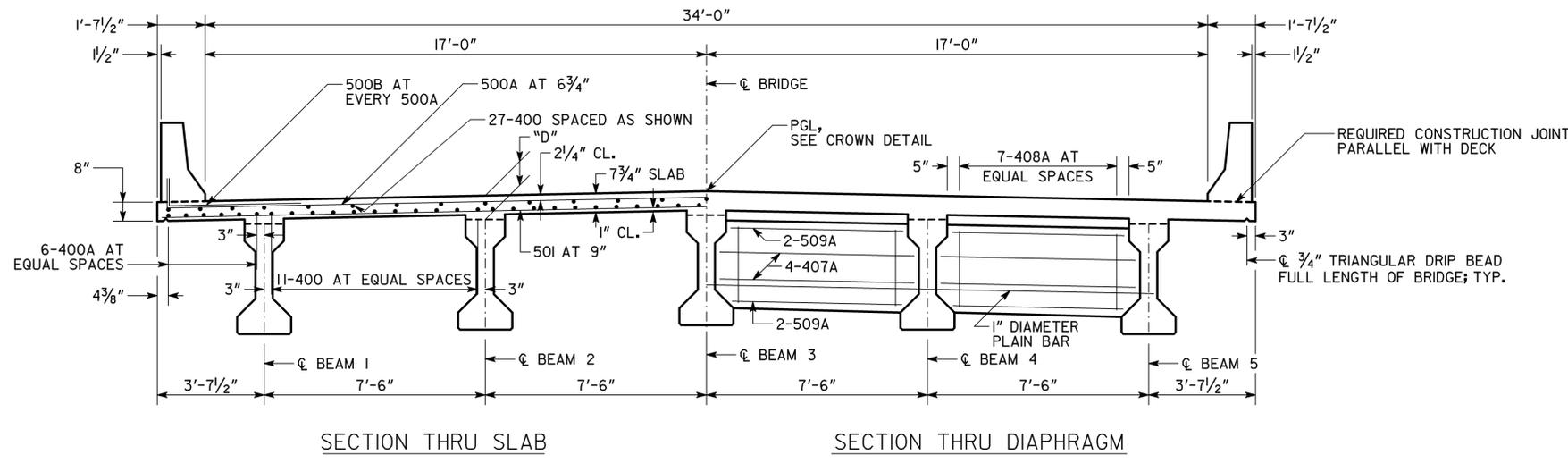
SUPERSTRUCTURE QUANTITIES				
ITEM	SPAN 1	SPAN 2	SPAN 3	TOTAL
LUMP - CY SUPERSTR CONCRETE, CL D	82.5	137.3	82.5	302.3
LUMP - LB SUPERSTR REINF STEEL	20,793	29,301	20,793	70,887

END POST CONCRETE AND BAR REINFORCEMENT STEEL INCLUDED IN END SPAN QUANTITIES.  
600 BARS INCLUDED IN SPANS 1 AND 3.

DRAWING NO.  
35-003  
BRIDGE SHEET  
3 OF 13

DATE	GEORGIA DEPARTMENT OF TRANSPORTATION ENGINEERING DIVISION-OFFICE OF BRIDGES AND STRUCTURES		
	SUPERSTRUCTURE DETAILS SR 109 SPUR OVER RED OAK CREEK MERIWETHER COUNTY 0010414		
REVISIONS	SCALE: 1/8" = 1'-0" SEPTEMBER 2015		
	DESIGNED KNR	CHECKED EJC	REVIEWED DLC/WMD
BY	DRAWN KNR	DESIGN GROUP EJC	APPROVED BFR

DIMENSION "D" IS MEASURED FROM TOP OF SLAB TO TOP OF BEAMS AT CENTERLINE BEARING. VARY "D" BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTION. MAINTAIN A CONSTANT SLAB THICKNESS OF 7 3/4" BETWEEN BEAMS AND 8" AT THE OVERHANGS.  
 "D" = 9 3/4" FOR INTERIOR BEAMS  
 "D" = 10" FOR EXTERIOR BEAMS

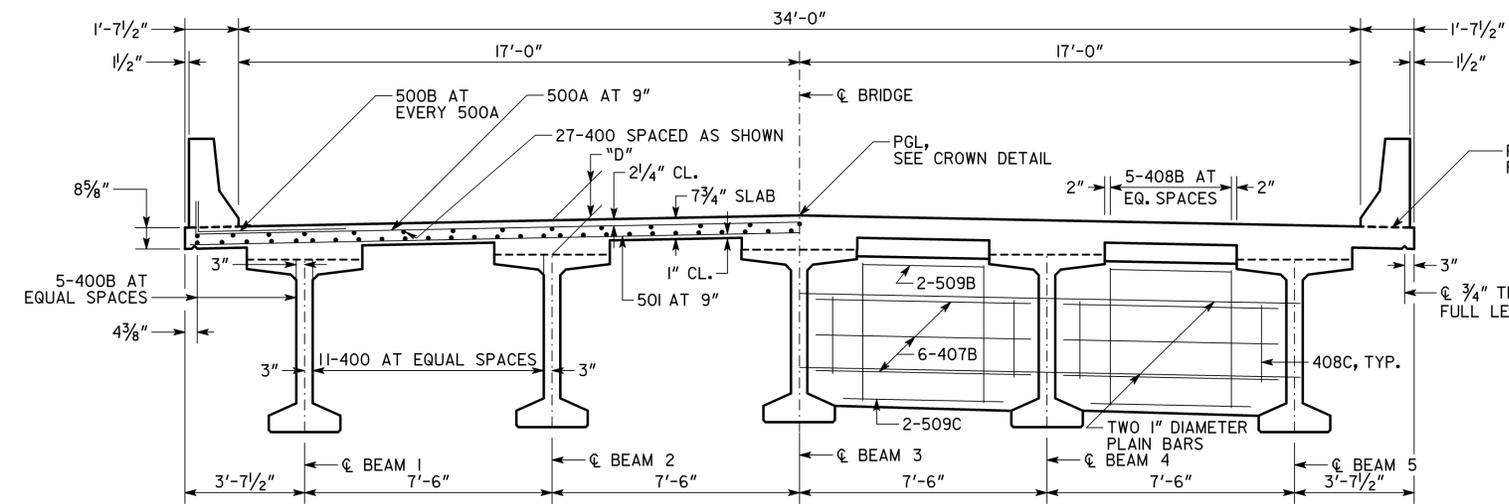
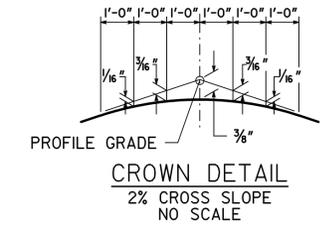


NOTE: MAINTAIN 2" CL. ON ALL REINFORCEMENT UNLESS OTHERWISE NOTED.

BRIDGE NO. 1		GEORGIA	
<b>DEPARTMENT OF TRANSPORTATION</b>			
ENGINEERING DIVISION-OFFICE OF BRIDGES AND STRUCTURES			
SUPERSTRUCTURE DETAILS - SPANS 1 AND 3		SR 109 SPUR OVER RED OAK CREEK	
MERIWETHER COUNTY		0010414	
SCALE: 3/8" = 1'-0"		SEPTEMBER 2015	
DESIGNED	KNR	CHECKED	EJC
DRAWN	KNR	DESIGN GROUP	EJC
REVIEWED	DLC/WMD	APPROVED	BFR

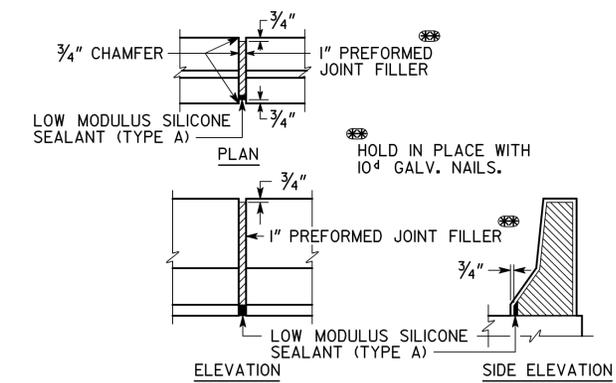
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DIMENSION "D" IS MEASURED FROM TOP OF SLAB TO TOP OF BEAMS AT CENTERLINE BEARING. VARY "D" BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTION. MAINTAIN A CONSTANT SLAB THICKNESS OF 7 3/4" BETWEEN BEAMS AND 8 5/8" AT THE OVERHANGS.  
 "D" = 12 3/8" FOR INTERIOR BEAMS  
 "D" = 13 1/4" FOR EXTERIOR BEAMS

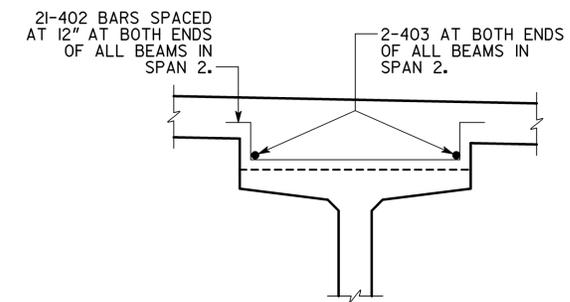


SECTION THRU SLAB

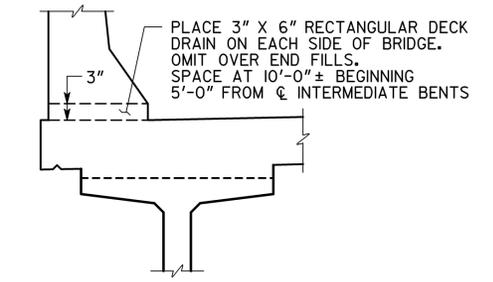
SECTION THRU DIAPHRAGM



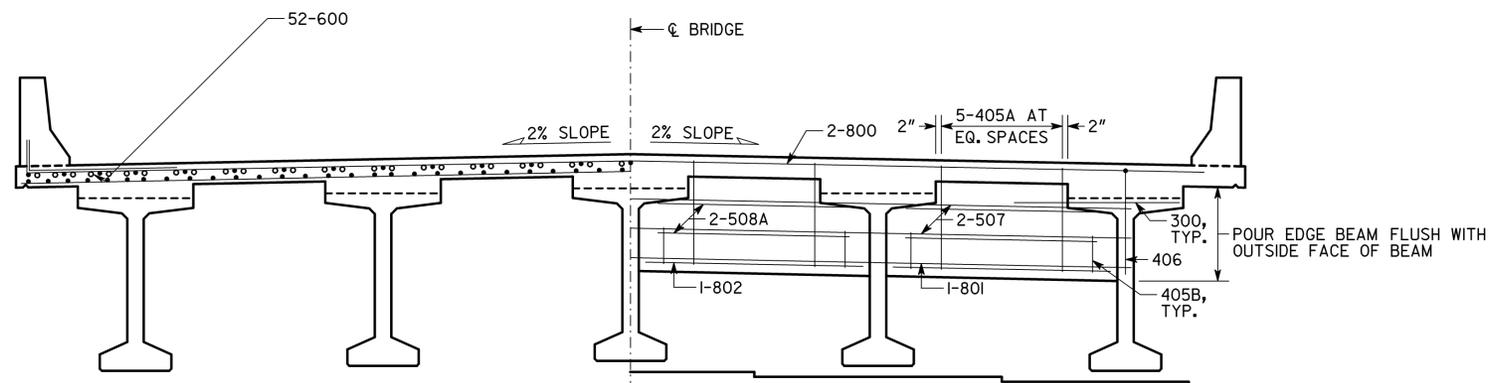
DETAILS OF 1" EXPANSION JOINT IN BARRIER  
SCALE: 1/2" = 1'-0"



REBAR DETAIL IN COPING  
SPAN 2 ONLY  
SCALE: 3/4" = 1'-0"



DECK DRAIN DETAIL  
SCALE: 3/4" = 1'-0"



SECTION THRU SLAB AT INTERMEDIATE BENT

SECTION THRU EDGE BEAM

NOTE: MAINTAIN 2" CL. ON ALL REINFORCEMENT UNLESS OTHERWISE NOTED.

BRIDGE NO. 1

GEORGIA  
**DEPARTMENT OF TRANSPORTATION**  
 ENGINEERING DIVISION-OFFICE OF BRIDGES AND STRUCTURES

SUPERSTRUCTURE DETAILS - SPAN 2  
 SR 109 SPUR OVER RED OAK CREEK  
 MERIWETHER COUNTY 0010414

SCALE: 3/8" = 1'-0" SEPTEMBER 2015

DESIGNED	KNR	CHECKED	EJC	REVIEWED	DLC/WMD
DRAWN	KNR	DESIGN GROUP	EJC	APPROVED	BFR

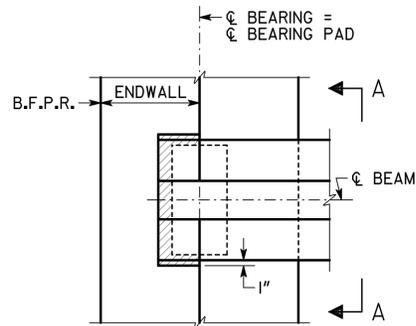
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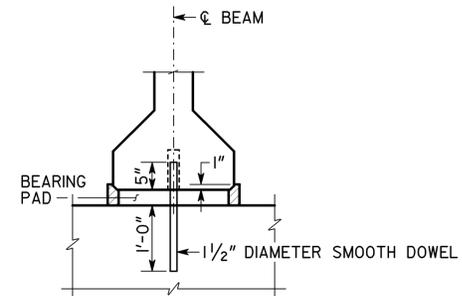
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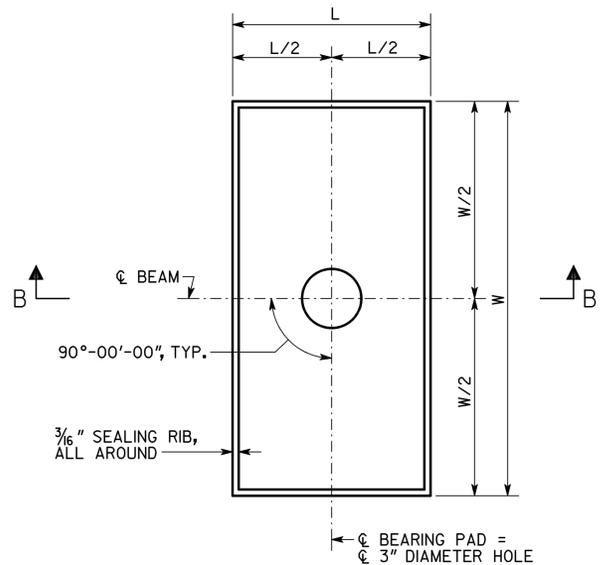


PLAN  
BENT 1 SHOWN  
BENT 4 SIMILAR

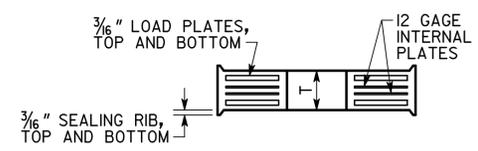


PREFORMED FOAM JOINT FILLER SHALL BE FURNISHED IN ACCORDANCE WITH SUB-SECTION 833.2.10 OF THE GEORGIA DOT SPECIFICATIONS.

ENDWALL NOT SHOWN  
SECTION A-A



PLAN



SECTION B-B  
BEARING PAD

NOTES

- BEARING PADS HAVE BEEN DESIGNED ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 14.7.6 METHOD A AND SHALL BE FURNISHED IN ACCORDANCE WITH AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS, SECTION 18, BEARING DEVICES.
- 1 1/2" DIAMETER SMOOTH DOWELS SHALL BE ASTM A 709 GRADE 50.
- BEARING PADS SHALL BE MADE OF 60 DUROMETER HARDNESS NEOPRENE, GRADE 2 OR HIGHER.
- 3" DIAMETER HOLE IN BEARING PADS MAY BE FORMED OR DRILLED.
- BEARING PADS SHALL HAVE 1/4" COVER ON THE TOP, BOTTOM, AND SIDES AND AROUND THE HOLE.
- 3/16" LOAD PLATES AND 12 GAGE INTERNAL PLATE(S) (IF REQUIRED) SHALL BE ASTM A 709 GRADE 36 OR ASTM A 1011 GRADE 36.
- NUMBER OF INTERNAL PLATES SHOWN FOR ILLUSTRATION PURPOSES ONLY. THE NUMBER OF INTERNAL PLATE(S) SPECIFIED SHALL BE EQUALLY SPACED BETWEEN LOAD PLATES.
- USE OF 1 1/2° MOLD DRAFT IS OPTIONAL.

BENT	BEARING PADS							
	W	L	T	NUMBER OF INTERNAL PLATE(S)	DESIGN SHEAR DEFLECTION	DESIGN LOADS (KIPS)		
						DEAD LOAD	LIVE LOAD (NO IMPACT)	DEAD LOAD + LIVE LOAD
1	18"	9"	2 7/8"	3	0.48"	80	65	145
2 BK	18"	9"	2 7/8"	3	0.00"	68	65	133
2 AH	22"	9"	1 3/4"	1	0.00"	131	81	212
3 BK	22"	9"	1 3/4"	1	0.55"	131	81	212
3 AH	18"	9"	2 7/8"	3	0.55"	68	65	133
4	18"	9"	2 7/8"	3	1.03"	80	65	145

BRIDGE NO. 1

GEORGIA  
DEPARTMENT OF TRANSPORTATION  
ENGINEERING DIVISION-OFFICE OF BRIDGES AND STRUCTURES

BEARING PAD DETAILS  
SR 109 SPUR OVER RED OAK CREEK  
MERIWETHER COUNTY 0010414

NO SCALE SEPTEMBER 2015

DRAWING NO.  
35-008  
BRIDGE SHEET  
8 OF 13

DATE	
REVISIONS	
BY	

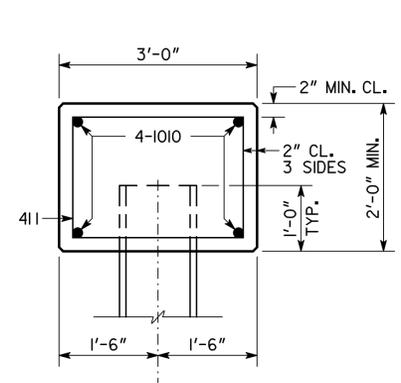
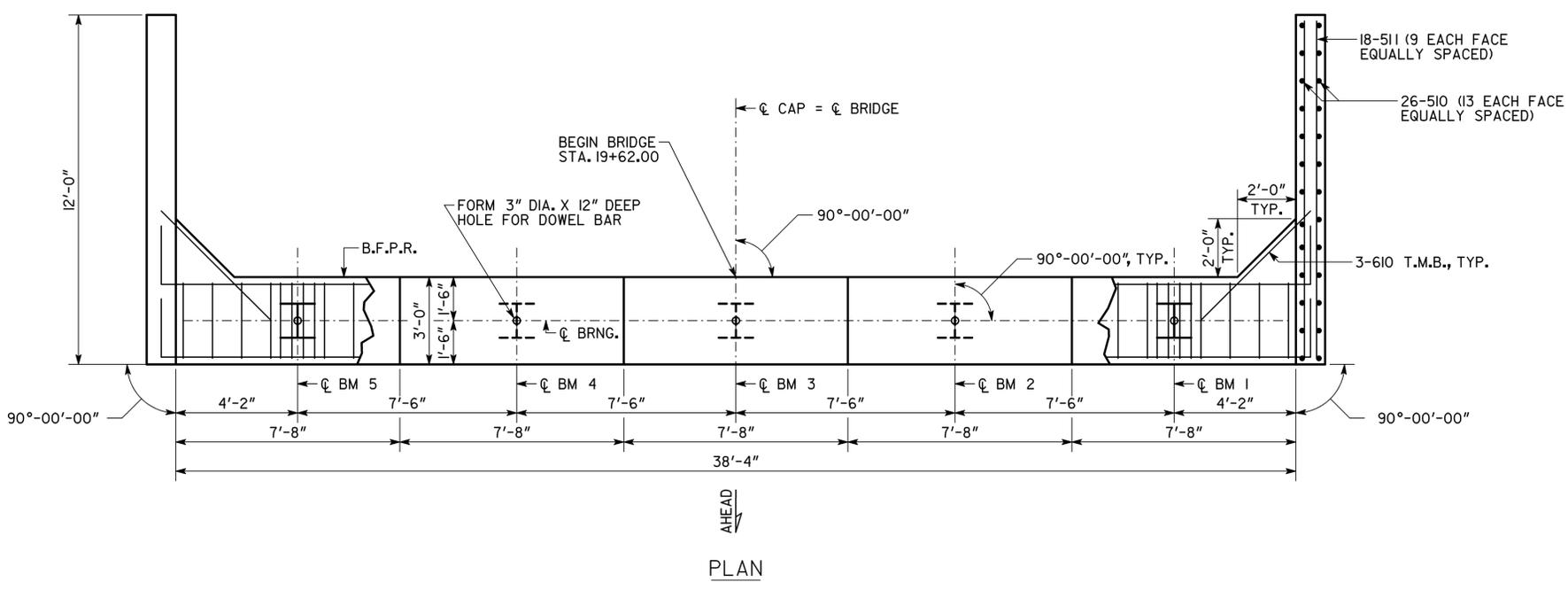
DESIGNED	KNR	CHECKED	EJC	REVIEWED	DLC/WMD
DRAWN	KNR	DESIGN GROUP	EJC	APPROVED	BFR

1 INCH WHEN PRINTED FULL SIZE

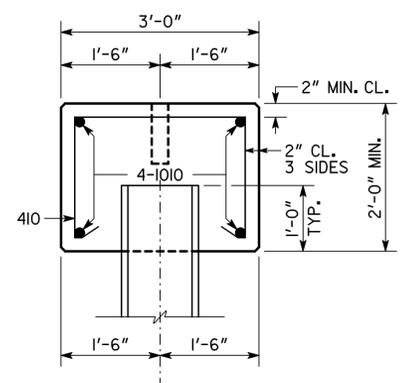
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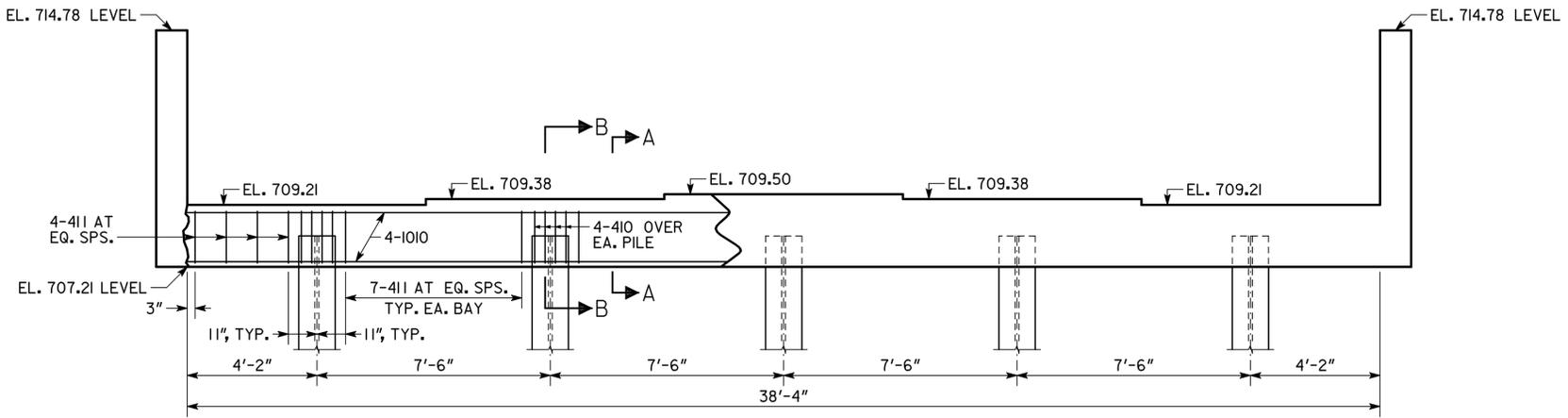
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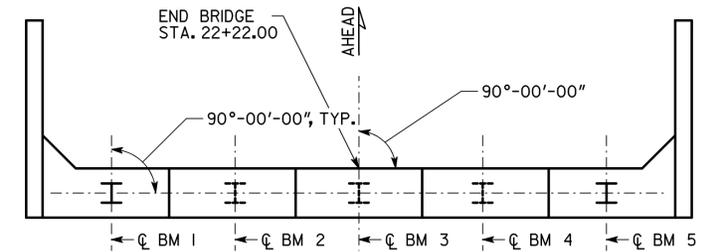
SECTION A-A  
SCALE: 3/4" = 1'-0"



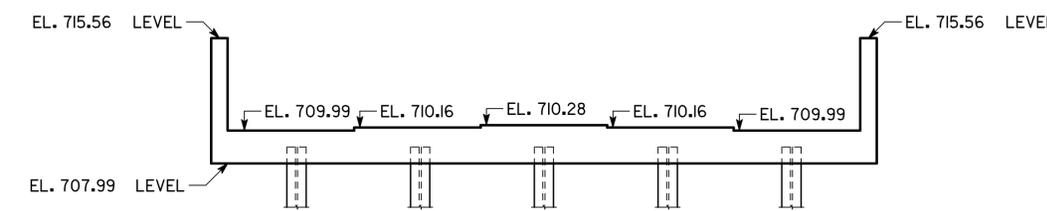
SECTION B-B  
SCALE: 3/4" = 1'-0"



ELEVATION  
BENT 1  
LOOKING BACK



PLAN



ELEVATION  
BENT 4  
LOOKING AHEAD  
NO SCALE

PILES ARE DESIGNED FOR A MAXIMUM FACTORED AXIAL LOAD OF 244 KIPS.

ALL PILES SHALL BE STEEL H, HP 14 X 73.

PLAN DRIVING OBJECTIVE

ALL PILES SHALL BE DRIVEN TO A DRIVING RESISTANCE OF 375 KIPS AFTER ACHIEVING A MINIMUM TIP ELEVATION OF 680 AT BENT 1 AND A MINIMUM TIP ELEVATION OF 662 AT BENT 4.

NOTES:

1. MAINTAIN 2" CL. ON ALL REINFORCEMENT UNLESS OTHERWISE NOTED.
2. SEE GA STD. 9037 FOR DRAINAGE DETAILS AT END BENTS.
3. POUR WINGWALLS MONOLITHICALLY WITH CAP.
4. T.M.B. = TOP, MIDDLE, AND BOTTOM.

SUBSTRUCTURE QUANTITIES		
ITEM	BENT 1	BENT 4
CY CLASS AA CONCRETE	16.1	16.1
LB BAR REINF STEEL	1,932	1,932

BRIDGE NO. 1

GEORGIA  
DEPARTMENT OF TRANSPORTATION  
ENGINEERING DIVISION-OFFICE OF BRIDGES AND STRUCTURES

END BENTS 1 AND 4  
SR 109 SPUR OVER RED OAK CREEK  
MERIWETHER COUNTY 0010414

SCALE: 3/8" = 1'-0" SEPTEMBER 2015

DRAWING NO.	35-009
BRIDGE SHEET	9 OF 13

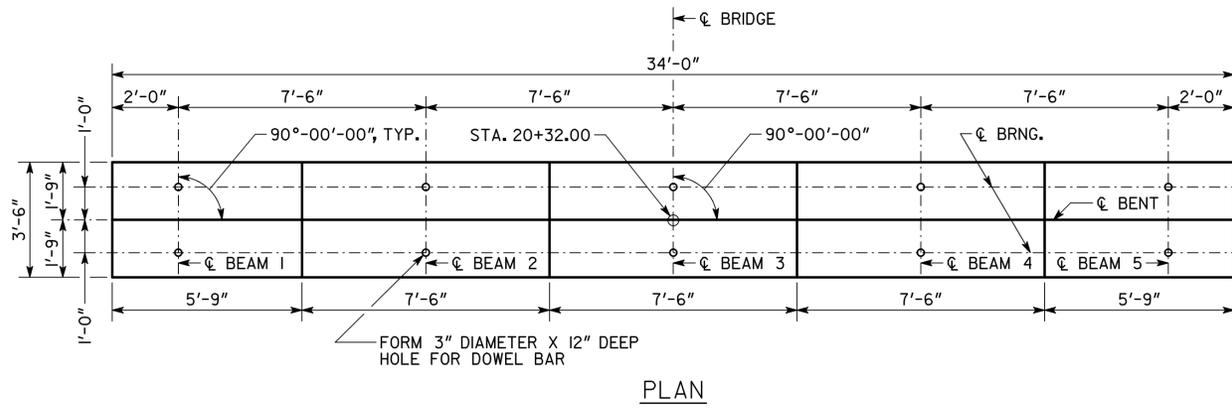
DESIGNED	KNR	CHECKED	EJC	REVIEWED	DLC/WMD
DRAWN	KNR	DESIGN GROUP	EJC	APPROVED	BFR

1 INCH WHEN PRINTED FULL SIZE

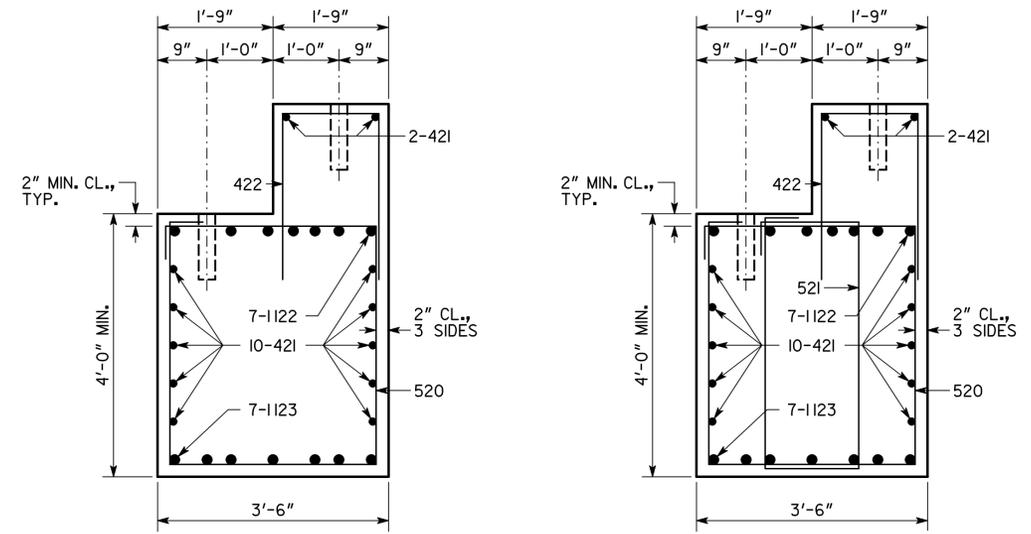
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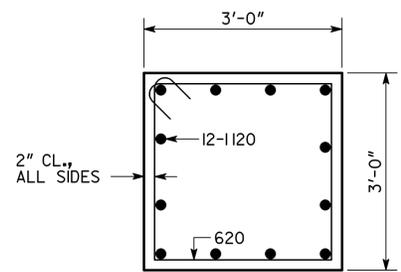


PLAN

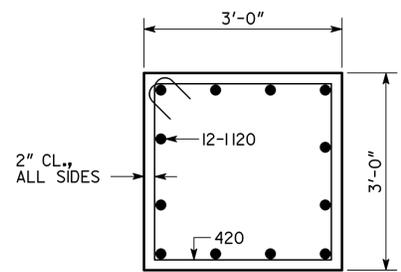


SECTION A-A  
SCALE: 3/4" = 1'-0"

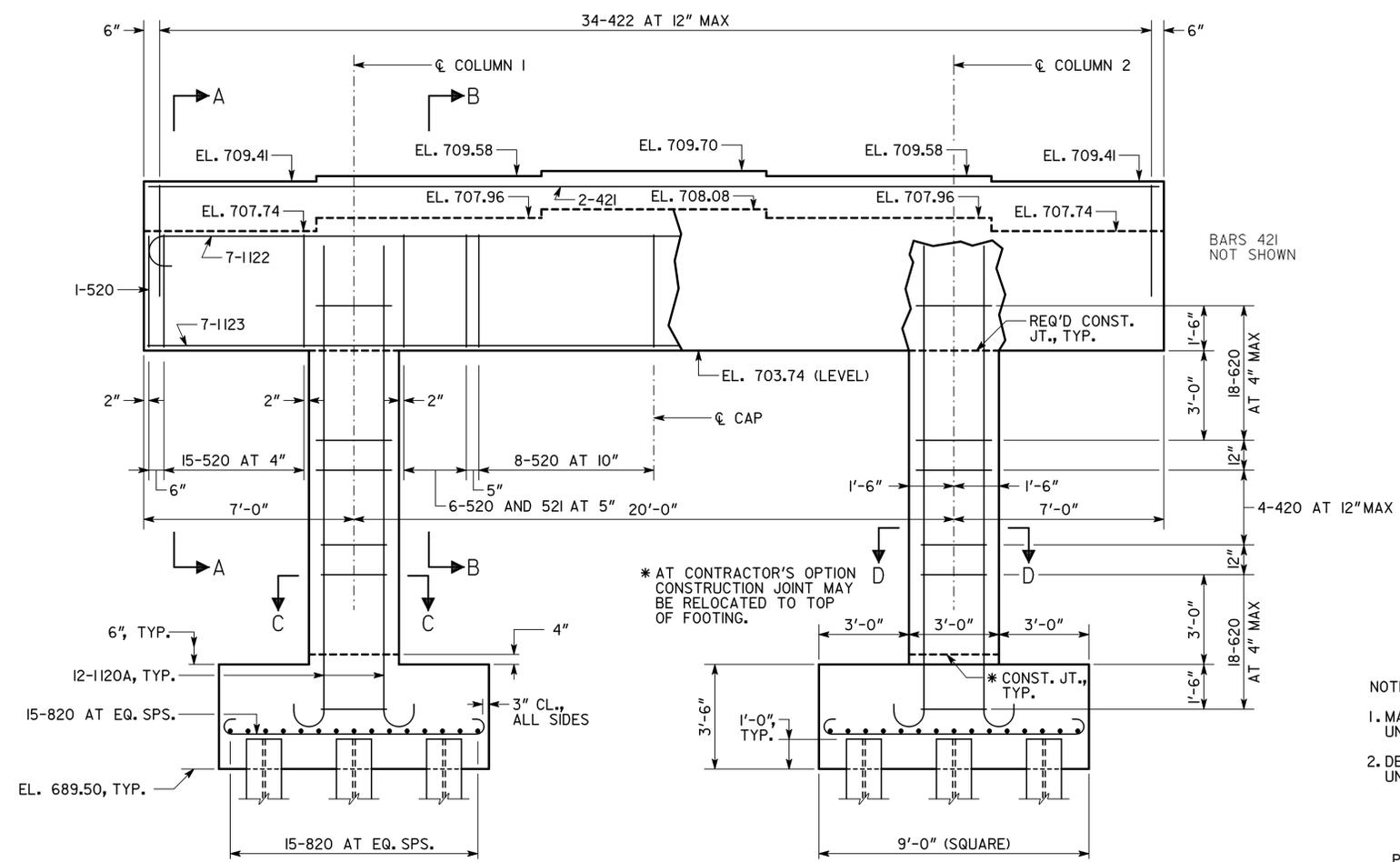
SECTION B-B  
SCALE: 3/4" = 1'-0"



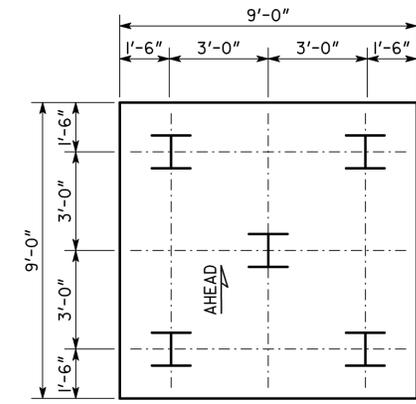
SECTION C-C  
SCALE: 3/4" = 1'-0"



SECTION D-D  
SCALE: 3/4" = 1'-0"



ELEVATION  
LOOKING AHEAD



PILE LAYOUT

- NOTES:
1. MAINTAIN 2" CL. ON ALL REINFORCEMENT UNLESS OTHERWISE NOTED.
  2. DETAILS SYMMETRICAL ABOUT  $\phi$  CAP UNLESS OTHERWISE NOTED.

PILES ARE DESIGNED FOR A MAXIMUM FACTORED AXIAL LOAD OF 266 KIPS.

ALL PILES SHALL BE STEEL H, HP 14 X 73.

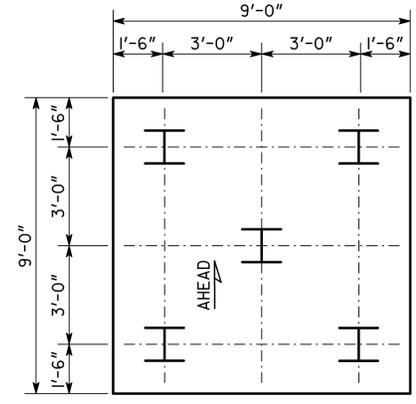
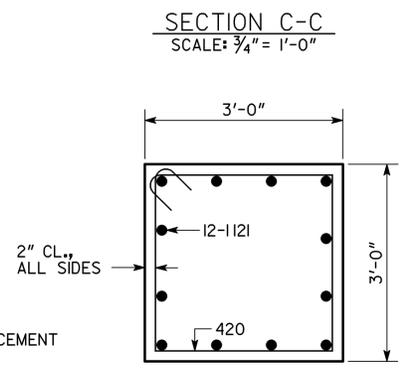
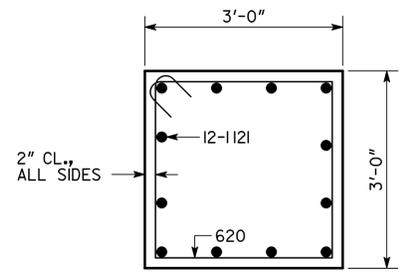
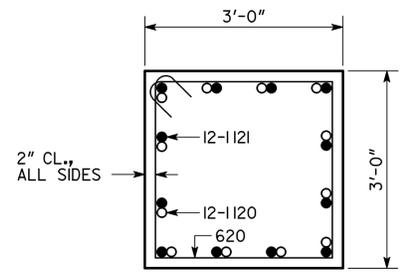
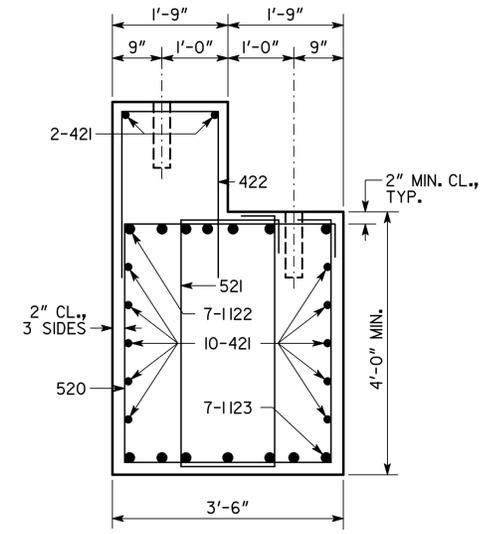
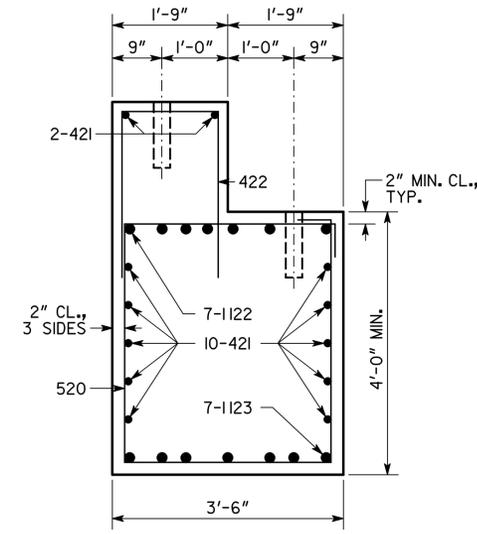
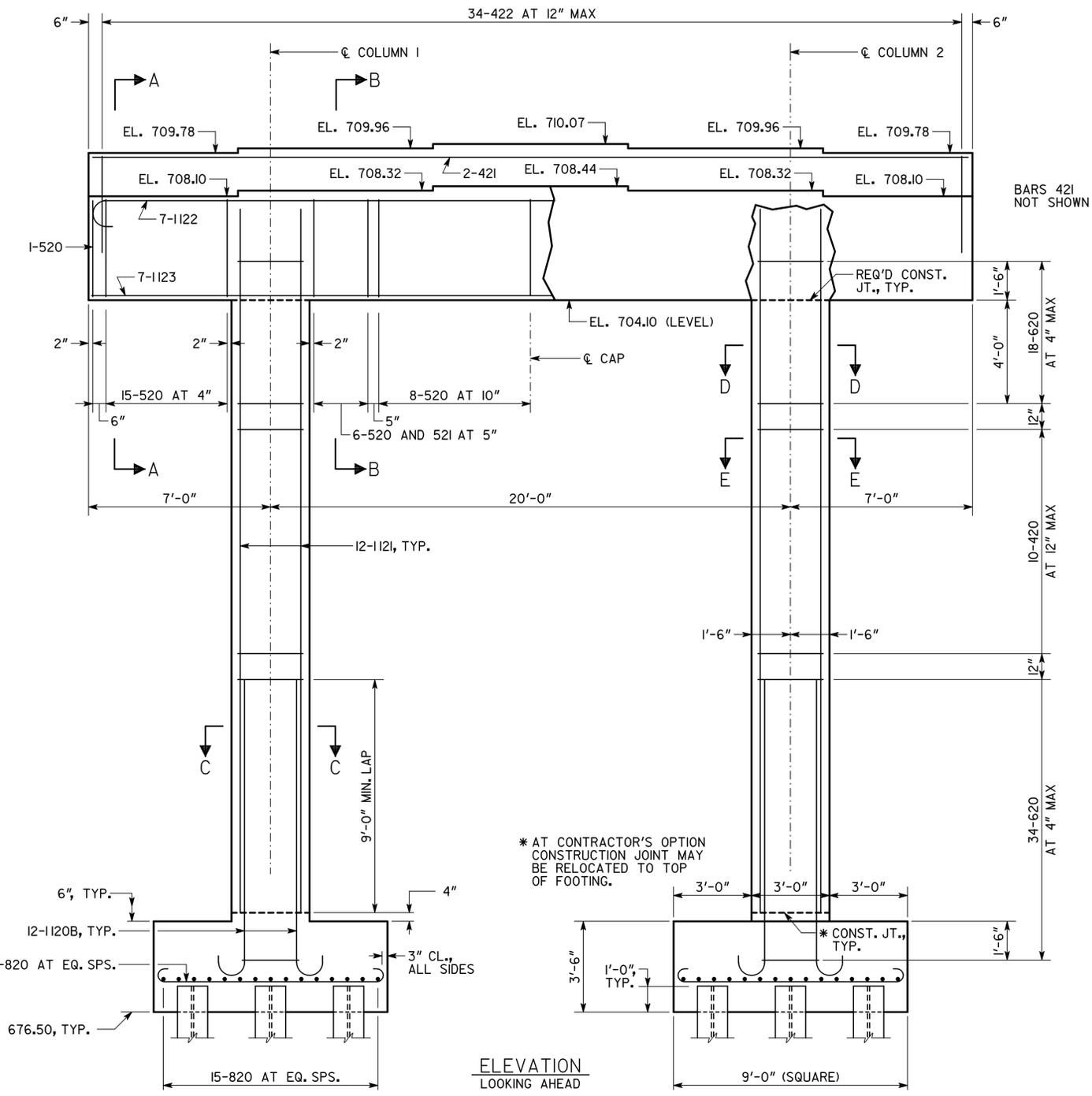
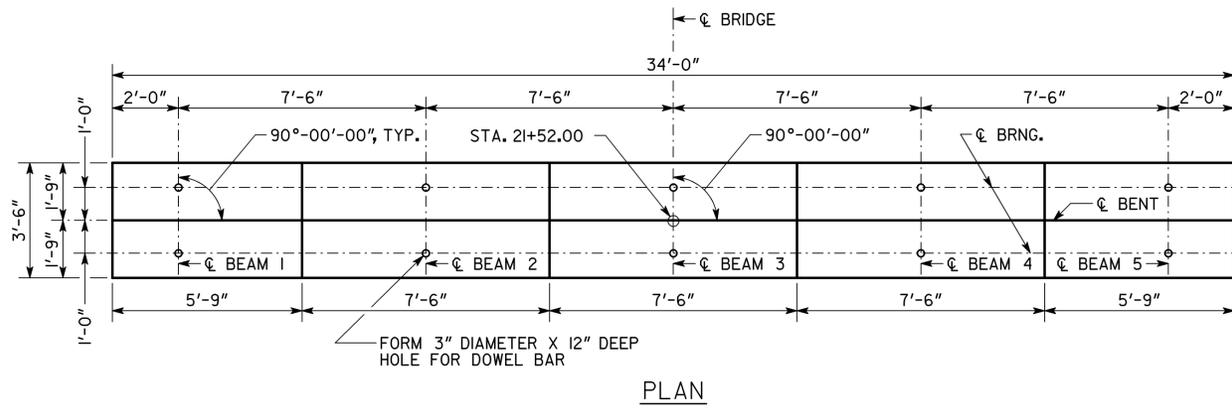
PLAN DRIVING OBJECTIVE

ALL PILES SHALL BE DRIVEN TO A DRIVING RESISTANCE OF 419 KIPS AFTER A MINIMUM TIP ELEVATION OF 675 IS ACHIEVED.

SUBSTRUCTURE QUANTITIES	
ITEM	BENT 2
CY CLASS AA CONCRETE	50.1
LB BAR REINF STEEL	9,394

DATE		BRIDGE NO. 1	
REVISIONS		GEORGIA DEPARTMENT OF TRANSPORTATION ENGINEERING DIVISION-OFFICE OF BRIDGES AND STRUCTURES	
BY		INTERMEDIATE BENT 2 SR 109 SPUR OVER RED OAK CREEK MERIWETHER COUNTY 0010414	
DRAWING NO. 35-010		SCALE: 3/8" = 1'-0"	
BRIDGE SHEET 10 OF 13		SEPTEMBER 2015	
DESIGNED	KNR	CHECKED	EJC
DRAWN	KNR	DESIGN GROUP	EJC
REVIEWED	DLC/WMD	APPROVED	BFR

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- NOTES:
1. MAINTAIN 2" CL. ON ALL REINFORCEMENT UNLESS OTHERWISE NOTED.
  2. DETAILS SYMMETRICAL ABOUT  $\phi$  CAP UNLESS OTHERWISE NOTED.

PILES ARE DESIGNED FOR A MAXIMUM FACTORED AXIAL LOAD OF 307 KIPS.

ALL PILES SHALL BE STEEL H, HP 14 X 73.

PLAN DRIVING OBJECTIVE

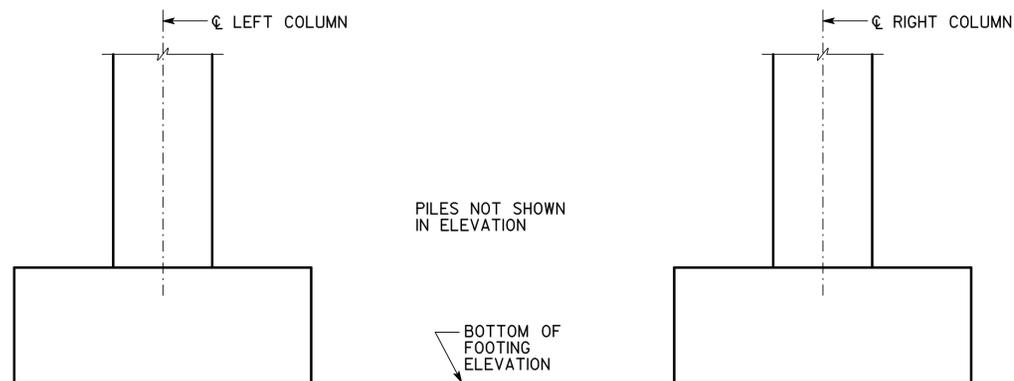
ALL PILES SHALL BE DRIVEN TO A DRIVING RESISTANCE OF 482 KIPS AFTER A MINIMUM TIP ELEVATION OF 660 IS ACHIEVED.

SUBSTRUCTURE QUANTITIES	
ITEM	BENT 3
CY CLASS AA CONCRETE	59.0
LB BAR REINF STEEL	12,909

DATE	REVISIONS	GEORGIA <b>DEPARTMENT OF TRANSPORTATION</b> ENGINEERING DIVISION-OFFICE OF BRIDGES AND STRUCTURES	
		INTERMEDIATE BENT 3 SR 109 SPUR OVER RED OAK CREEK MERIWETHER COUNTY 0010414	
DRAWING NO. 35-011 BRIDGE SHEET 11 OF 13		SCALE: 3/8" = 1'-0" SEPTEMBER 2015	
DESIGNED	KNR	CHECKED	EJC
DRAWN	KNR	DESIGN GROUP	EJC
REVIEWED	DLC/WMD	APPROVED	BFR

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 9/4/2015

BEAMS ARE NUMBERED FROM LEFT TO RIGHT LOOKING AHEAD.



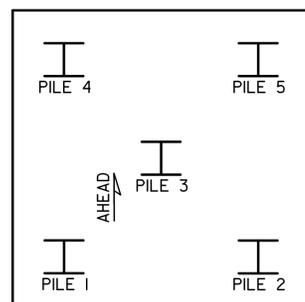
AS BUILT FOUNDATION INFORMATION		
END BENT	PILE LOCATION	PILE TIP ELEVATION
1	BEAM 1	
	BEAM 2	
	BEAM 3	
	BEAM 4	
	BEAM 5	
4	BEAM 1	
	BEAM 2	
	BEAM 3	
	BEAM 4	
	BEAM 5	

ELEVATION - INTERMEDIATE BENT  
LOOKING AHEAD  
BENTS 2 AND 3 SHOWN

AS BUILT FOUNDATION INFORMATION					
BENT	FOOTING LOCATION	BOTTOM FOOTING ELEVATION	PILE LOCATION	PILE TIP ELEVATION	
2	LEFT COLUMN		PILE 1		
			PILE 2		
			PILE 3		
			PILE 4		
			PILE 5		
	RIGHT COLUMN			PILE 1	
				PILE 2	
				PILE 3	
				PILE 4	
				PILE 5	
3	LEFT COLUMN		PILE 1		
			PILE 2		
			PILE 3		
			PILE 4		
			PILE 5		
	RIGHT COLUMN			PILE 1	
				PILE 2	
				PILE 3	
				PILE 4	
				PILE 5	

THIS SHEET IS TO BE FILLED IN BY THE PROJECT ENGINEER AND FORWARDED TO THE BRIDGE OFFICE AFTER INSTALLATION OF ALL PILES AND FOOTINGS, BUT BEFORE THE SUPERSTRUCTURE WORK HAS BEGUN, FOR POSTING TO THE PLANS AS A PERMANENT RECORD OF THE BRIDGE CONSTRUCTION.

PROJECT ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_  
( )  
( AREA CODE ) TELEPHONE NUMBER \_\_\_\_\_



PILE LAYOUT  
BENTS 2 AND 3

BRIDGE NO. 1

DATE	GEORGIA DEPARTMENT OF TRANSPORTATION ENGINEERING DIVISION-OFFICE OF BRIDGES AND STRUCTURES		
	AS BUILT FOUNDATION INFORMATION SR 109 SPUR OVER RED OAK CREEK MERIWETHER COUNTY 0010414		
REVISIONS	NO SCALE		SEPTEMBER 2015
	DESIGNED KNR	CHECKED EJC	REVIEWED DLC/WMD
BY	DRAWN KNR	DESIGN GROUP EJC	APPROVED BFR

DRAWING NO.  
35-012  
BRIDGE SHEET  
12 OF 13

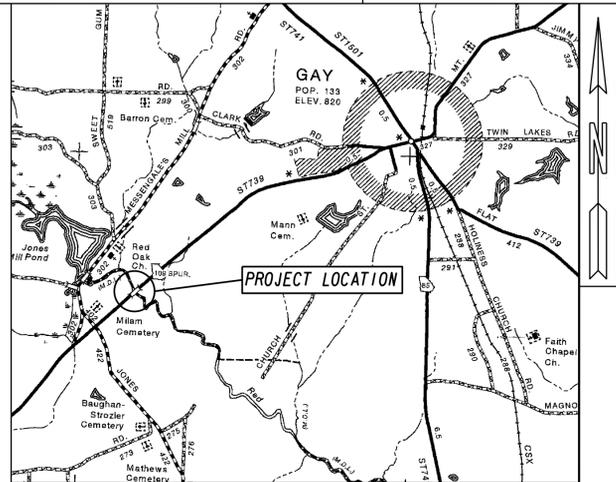
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9/4/2015





LOCATION SKETCH

This project has been prepared using the Horizontal Georgia Coordinate System of 1984 (NAD1983) / 94 WEST Zone, and the North American Vertical Datum (NAVD) of 1988.

# DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

## EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN BRIDGE REPLACEMENT PROJECT SR 109 SPUR OVER RED OAK CREEK

FEDERAL AID PROJECT

MERIWETHER COUNTY

FEDERAL ROUTE \* N/A  
STATE ROUTE \* 109 SPUR  
P.J. NO. 0010414 Glenn and Kennedy Reese

PRIMARY PERMITTEE

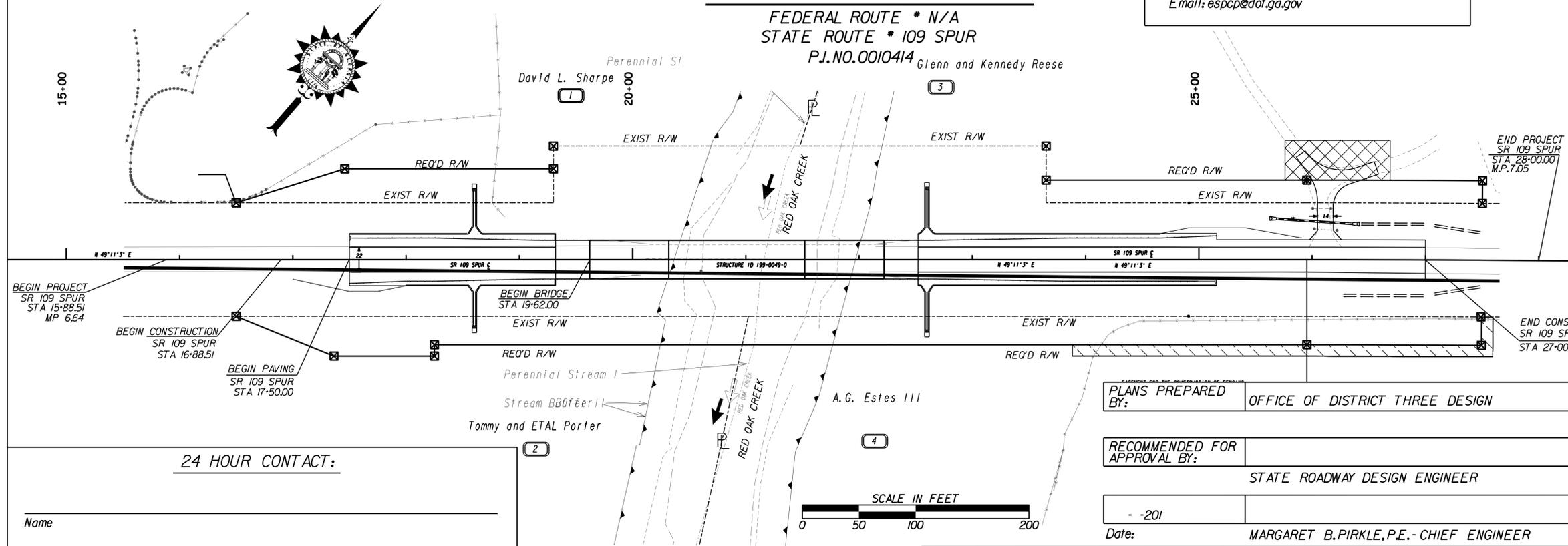
GEORGIA DEPARTMENT OF TRANSPORTATION  
600 West Peachtree Street North West  
Atlanta, Georgia 30308  
Phone: (404) 631-1990  
Email: espcc@dot.ga.gov

*"I certify that this Erosion, Sedimentation and Pollution Control Plan has been prepared in accordance with Part IV of the General NPDES Permit No. GARI00002."*

*"I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of best management practices required by the Georgia Water Quality Control Act and the document 'Manual for Erosion and Sediment Control in Georgia' (Manual) published by the State Soil and Water Conservation Commission as of January 1 of the year in which the land disturbing activity was permitted, provides for sampling of the receiving water(s) or the sampling of the storm water outfalls and that the designed system of best management practices and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GARI00002."*

*"I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for the monitoring of: (a) all perennial and intermittent streams and other water bodies shown on the USGS topographic map and all other field verified perennial and intermittent streams and other water bodies, or (b) where any such specific identified perennial or intermittent stream and other water body is not proposed to be sampled, I have determined in my professional judgment, utilizing the factors required in the General NPDES Permit No. GARI00002, that the increase in the turbidity of each specific identified sampled receiving water will be representative of the increase in the turbidity of a specific identified un-sampled receiving water."*

*"I certify under penalty of law that this plan was prepared after a site visit to the location described herein by myself or my authorized agent, under my direct supervision."*



<b>BEGIN-POINT COORDINATES</b> STA 15+50.00 Longitude: 84°36'30.88" Latitude: 33°04'38.47"
<b>MID-POINT COORDINATES</b> STA 21+37.66 Longitude: 84°36'30.90" Latitude: 33°04'42.27"
<b>END-POINT COORDINATES</b> STA 28+50.00 Longitude: 84°36'24.57" Latitude: 33°04'46.89"

PLANS PREPARED BY:	OFFICE OF DISTRICT THREE DESIGN
RECOMMENDED FOR APPROVAL BY:	STATE ROADWAY DESIGN ENGINEER
Date: - -201	MARGARET B. PIRKLE, P.E. - CHIEF ENGINEER
	GSWCC LEVEL II Certification Number 0000072890

24 HOUR CONTACT:

Name \_\_\_\_\_

Street Address \_\_\_\_\_

City, State Zip \_\_\_\_\_

Phone Number \_\_\_\_\_

Email Address \_\_\_\_\_

Contractor shall complete the information in this box.

<b>LENGTH OF PROJECT</b>	COUNTY No. 199
	MILES
NET LENGTH OF ROADWAY	0.16
NET LENGTH OF BRIDGES	0.04
NET LENGTH OF PROJECT	0.20
NET LENGTH OF EXCEPTIONS	0.00
GROSS LENGTH OF PROJECT	0.20

PLANS COMPLETED - -				
REVISIONS				
DATE	ENTITY REQUESTING REVISION(S)	DRAWING NUMBER(S)	SIGNATURE	GSWCC LEVEL II CERT.*

**ESPCP GENERAL NOTES**

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.

Erosion and sedimentation control measures will be maintained at all times. If full implementation of the approved plan does not provide for effective control, additional erosion and sedimentation control measures shall be implemented to control or treat the sediment source.

**PLAN ALTERATIONS**

This Erosion, Sedimentation, and Pollution Control Plan (ESPCP) is provided by the Department. It addresses the staged construction of the project on the basis of common construction methods and techniques. If the Contractor elects to alter the staged construction from that shown in the plans or utilize construction techniques that render this plan ineffective, the Contractor shall revise the plans in accordance to Special Provision 161 of the contract.

The Contractor, the Certified Design Professional, and the WECS shall carefully evaluate this plan prior to commencing land-disturbing activities. A major modification or deletion of structural BMP's with a hydraulic component requires a formal revision of the ESPCP and the signature of a GSWCC level-II-certified design professional. Additional BMP's may be added per Special Provision 161 Control of Soil Erosion and Sedimentation.

**TEMPORARY MULCHING**

EPD General Permit GAR 100002 states that any disturbed area where construction activities have temporarily or permanently ceased shall be stabilized within 14 days of such cessation as soon as practicable with a suitable material listed in Standard Specification (or Special Provision) Sections 163, 700, or 711. However in special cases, the Project Engineer may require the contractor to perform stabilization more often than 14 days.

**VEGETATION AND PLANTING SCHEDULE**

All temporary and permanent vegetative practices including plant species, planting dates, seeding, fertilizing, liming, and mulching for this project can be found in Section 700 of the current edition of the Department's Standard Specifications (or special provisions) and other applicable contract documents, or landscaping plans.

**SEQUENCE OF MAJOR ACTIVITIES**

The Contractor is responsible for developing the construction schedule for the project. The construction schedule for this project shall be submitted after the project is awarded along with the NOI. A copy of the construction schedule shall be maintained at the project site.

The project budget includes sufficient funds for the payment of construction exits. The Contractor is responsible for establishing at least one (1) construction exit per the specifications of the construction exit detail included in this ESPCP. To facilitate project logistics, the Contractor is also responsible for selecting the location(s) of the construction exit(s).

In the pregrading phase all BMP's are to be installed prior to any clearing and grubbing. Items to be installed include perimeter silt fencing, silt control gates, and a double row of silt fence with hay bales inbetween on either side of the creek.

In the intermediate phase all items are to be installed as needed as construction proceeds. Temporary grassing and mulching shall be installed as needed every day. Items to be installed in this phase of construction include silt fencing at the toe of all proposed fill slopes, a proposed area of silt fence with hay bales inbetween, and silt control gates.

In the final phase all items are to be installed that are needed for final stabilization. These BMP's include erosion control mats for slope stabilization, rip rap out let protection for pipes, and rip rap around the bridge end rolls.

**PETROLEUM STORAGE, SPILLS AND LEAKS**

These plans expressly delegate the responsibility of proper on-site hazardous material management to the Contractor. The Contractor shall at a minimum provide an action plan and keep the necessary materials on site for the capture, clean up, and disposal of any petroleum product, or other hazardous material, leaks or spills associated with the servicing, refueling or operation of any equipment utilized at the site. A copy of the action plan shall be submitted to the Project Engineer and maintained on the project site. All personnel operating or servicing equipment shall be familiar with the action plan. The Contractor shall not park, refuel, or maintain equipment within stream buffers.

If the Contractor elects to store petroleum products on site, the Contractor shall prepare an ESPCP addendum that addresses the additional BMPs needed for onsite storage and spill prevention for petroleum products. This plan shall be prepared by a Certified Design Professional as required by GARI00002 for inclusion with these plans. The Contractor's attention is specifically directed to Standard Specification 107- Legal Regulations and Responsibility to the public for additional requirements.

**SOIL SERIES INFORMATION**

The following is a summary of the soils that are expected to be found on the project site:

MAP UNIT SYMBOL	MAP UNIT NAME	RATING	COMPONENT NAME (PERCENT)	ACRES IN AOI	PERCENT OF AOI
Cs1	CHEWACLA SILT LOAM	SLIGHT	CHEWACLA (95%) WEHADKEE (5%)	1.3	36.8%
CZD3	CECIL SANDY LOAM 10-15% SLOPES, SEVERELY ERODED	SLIGHT	CECIL (100%)	0.9	25.4%
LdC2	LLOYD SANDY LOAM 6-10% SLOPES, ERODED	SLIGHT	LLOYD (100%)	0.0	0.1%
LdD2	LLOYD SANDY LOAM 10-15% SLOPES, ERODED	SLIGHT	LLOYD (100%)	1.1	31.5%
W	WATER	NOT RATED	WATER (100%)	0.2	6.2%
<b>TOTALS FOR AREA OF INTEREST</b>				<b>3.5</b>	<b>100%</b>

Due to the size and scope of this project and the nature of the soil series maps, it is not reasonably practical to delineate the precise locations of the above listed soils on the construction plans. The NRCS soil survey and soil series map for the project site are also available online at <http://websoilsurvey.nrcs.usda.gov>.

**POSTCONSTRUCTION BMP'S FOR STORMWATER MANAGEMENT**

All permanent postconstruction BMP's are shown in the construction plans and in the ESPCP plan. The postconstruction BMP's for this project consist of permanent detention ponds, sand filter basins, vegetation, permanent slope drains and/or flumes, riprap at pipe outlets for velocity dissipation and outlet stabilization, vegetated swales/ditches where practical, channel/ditch stabilization with turf reinforcing mats, riprap and concrete ditch lining where necessary. The postconstruction BMP's will provide permanent stabilization of the site and prevent abnormal transportation of sediment and pollutants into receiving waters.)

**SILT FENCE INSTALLATION WITH J HOOKS AND SPURS**

Silt fence should never be run continuously. The silt fence should turn back into the fill or slope to create small pockets that trap silt and force stormwater to flow through the silt fence. This technique is called using J hooks (or spurs). The J hooks shall be utilized on all silt fences that are located around the perimeter of the project and along the toe of embankments or slopes. The J hooks shall be spaced in accordance with GDOT Construction Detail D-24C. The maximum J-hook spacing is reached when the top of the J hook is at the same elevation as the bottom of the immediately upgradient J hook. J Hooks shall be paid for as silt fence items per linear foot. All costs and other incidental items are included in cost of installing and maintaining the silt fence.

**SITE STABILIZATION AND BMP MAINTENANCE MEASURES**

See the Department's Standard Specifications (or Special Provisions) 161, 163, 165, 700, 711, and other contract documents for stabilization and maintenance measures

**WASTE DISPOSAL**

Where attainable, locate waste collection areas, dumpsters, trash cans and portable toilets at least 50 feet away from streets, gutters, watercourses and storm drains. Secondary containment shall be provided around liquid waste collection areas to minimize the likelihood of contaminated discharges. The Contractor shall comply with applicable state and local waste storage and disposal regulations and obtain all necessary permits. Solid materials, including building materials, shall not be discharged to Waters of the State, unless authorized by a Section 404 Permit.

**INSPECTIONS**

The primary permittee (GDOT) must retain the design professional who prepared the ESPCP, or an alternative design professional approved by EPD in writing, to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within seven (7) days of installation over the entire infrastructure project. Alternatively, for linear infrastructure projects, the permittee must retain either of these personnel to inspect the initial sediment storage requirements and perimeter control BMPs for the initial segment, as defined by Part IV.A.5. of the current GARI00002 Permit, within seven (7) days of installation and all sediment basins within the entire linear infrastructure project within seven (7) days of installation. The inspecting design professional shall report the results to the primary permittee within seven (7) days, and the permittee must correct all deficiencies within two (2) business days of receipt of the inspection report, unless on-site weather conditions are such that more time is required. Additionally, the Department's Construction Project Engineer will be responsible for all subsequent seven-day inspections for all new BMP installations.

All other inspections shall be documented on the appropriate Department inspection forms. See Standard Specification (or Special Provision) 167 and other contract documents for inspection requirements. These inspections shall continue until the Notice of Termination (NOT) is submitted.

Failure to perform inspections as required by the contract documents and the NPDES permit shall result in the cessation of all construction activities with the exception of Traffic Control and Erosion Control. Continued failure to perform inspections shall result in non-refundable deductions as specified in the contract documents.

**NONSTORMWATER DISCHARGES**

Nonstormwater discharges defined in Part III.A.2 of the NPDES Permit will be identified after stormwater has commenced. These discharges shall be subject to the same requirements as storm water discharges required by the Georgia Erosion and Sedimentation Control Act, the NPDES Permit, the Clean Water Act, the Manual for Erosion and Sediment Control in Georgia, Department Standards, and other contract documents. The NPDES does not authorize the discharge of soaps or solvents used in vehicle and equipment washing or the discharge of wastewater containing stucco, paint, oils, curing compounds, and other construction materials.

**DEWATERING AND PUMPING ACTIVITIES**

Any pumped discharge from an excavation or disturbed area shall be routed through an appropriately sized sediment basin, silt filter bag, or shall be treated equivalently with suitable BMP's. The contractor shall ensure the post BMP treated discharge is sheet flowing. Failure to create sheet flow will obligate the contractor to perform water quality sampling of pumped discharges. The contractor shall prepare sampling plans in accordance with the current GARI00002 NPDES permit by utilizing a Certified Design Professional. No separate payment will be made for water quality sampling of pump discharges.

**OTHER CONTROLS**

The Contractor shall follow this ESPCP and ensure and demonstrate compliance with all applicable State and/or local regulations for waste disposal, sanitary sewer and septic systems, and petroleum storage.

The Contractor shall control dust from the site in accordance with Section 161 of the current edition of the Department's Standard Specifications.

**RETENTION OF RECORDS**

The Department will retain all records related to the implementation of this ESPCP in accordance with Part IV.F of the General Permit GARI00002.

**SEDIMENT STORAGE**

The site has a total disturbed area of 3.14 acres. The following table summarizes the required and available sediment storage for every outfall on this project. The Contractor shall provide and maintain the storage volumes for the BMP's specified in this table.

Location	Total Drainage Area (acres)	Disturbed Area (acres)	Sediment Storage Volume (yd <sup>3</sup> )	Total Storage Volume Provided (yd <sup>3</sup> )	Sediment Basins		Check Dam (# yd <sup>3</sup> /each)		Traps (# yd <sup>3</sup> /each)		Silt Fence (0.3 yd <sup>3</sup> /ft)	
					Pond #	Total Volume (yd <sup>3</sup> )	# of Devices	Total Volume (yd <sup>3</sup> )	# of Devices	Total Volume (yd <sup>3</sup> )	Length of Fence (ft)	Total Volume (yd <sup>3</sup> )
Total Sheet Flow	3.52	3.14	235.84	1556.12	0	0	0	0	0	0	5187.07	1556.12

To prevent runoff from bypassing inlet sediment traps, a temporary sump shall be installed around all inlet sediment traps that are not located in a low point or an excavated sump. Construct temporary sumps in accordance with Construction Detail D-24C. Temporary sumps shall be installed in a manner that ensures stormwater does not bypass the inlet. The Contractor may submit alternate temporary containment berm designs to the Project Engineer for approval.

<p><b>GEORGIA</b> DEPARTMENT OF TRANSPORTATION</p>	<p>REVISION DATES</p>	<p>STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE: DISTRICT THREE DESIGN <b>ESPCP GENERAL NOTES</b></p>
		<p>DRAWING No. <b>51-01</b></p>

**USE OF ALTERNATIVE AND/OR ADDITIONAL BMPs:**

Approved alternative BMPs will be used on this project. They are the following: . . .

Alternative BMPs are not used on this project. Silt gates are used on this project as additional BMPs at pipe inlets and are not being used in place of or as a substitute for other conventional BMPs. Temporary check dams are used in ditches to provide interim stabilization and flow velocity reduction. The stability of the site is maintained with other conventional BMPs as shown on the plans. This ESPCP would be fully compliant with permit requirements if the silt gates were removed and as a result are not considered alternative BMPs when used on this project. The silt gates help to prevent pipe clogging during construction that can result from the ingestion of sediments and other large debris like riprap, sand bags, roadway debris and other construction materials that when combined with sediments easily clog roadway drainage pipes. Sediment stored by silt gates is not included in the required minimum sediment storage volume or shown in the sediment storage table.

Fabric check dams will be used on this project as an alternative BMP. The use of the alternative BMP for stone check dams has been reviewed and has been determined to be allowable only for this ESPCP Plan. This review was site-specific based on the documentation submitted and certified by the Design Professional and requires by the Georgia Environmental Protection Division and the Georgia Soil and Water Conservation Commission.

**DISCHARGES INTO OR WITHIN ONE LINEAR MILE UPSTREAM OF AND WITHIN THE SAME WATERSHED AS, ANY PORTION OF A BIOTA IMPAIRED STREAM SEGMENT**

All outfalls are either located further than 1 linear mile upstream or outside of the watershed of an impaired stream segment that has been listed for criteria violated, "Bio F" (impaired fish community) and/or "Bio M" (impaired macro invertebrate community), within Category 4a, 4b or 5, and the potential cause is either "NP" (nonpoint source) or "UR" (urban runoff).

**STREAM AND OPEN-WATER BUFFER ENCROACHMENTS**

Stream Buffers, as defined by O.C.G.A. 12-7-1, are impacted by this project.

Non-exempt activities shall not be conducted within the 25- or 50-foot undisturbed stream buffers as measured from the point wrested vegetation without first acquiring the necessary variances and permits.

The Contractor is not authorized to enter into stream buffers, except as described in the table below:

Name or Number of Stream or Other Water Body Type	Location of Buffered Streams and State Waters**			Stream Type (Warm/Cold Water)*	Buffer Impacted? (Yes/No)	Buffer Variance Required? (Yes/No)
	Stream Alignment	Begin Station and Offset	End Station and Offset			
RED OAK CREEK	SR 109 SPUR	20+36.70	21+97.03	WARM	YES	NO

Permitted activities include the removal of the existing structure, construction of the proposed structure, and placement of BMP's including but not limited to rip rap, silt fence, and orange barrier fence.

Unless noted otherwise, utility companies will be submitting the required permits/variances in conjunction with the impacts caused by their activities. If utility impacts are covered by the Department's stream buffer variance, this shall be noted in the buffer-variance-required column.

\* Warm water streams have a 25-foot minimum buffer as measured from the wrested vegetation. Cold water streams have a 50-foot buffer as measured from the wrested vegetation.  
 \*\*Locations are approximate, a detailed location of stream buffers and authorized work areas are shown on the individual BMP sheets

**WATER QUALITY INSPECTING AND SAMPLING PROCEDURES**

See Special Provision 167 and other contract documents for the inspecting and sampling procedures.

**READY MIX CHUTE WASH DOWN**

The washing of ready-mix concrete drums and dump truck bodies used in the delivery of Portland cement concrete is prohibited on this site.

In accordance with Standard Specification 107: Legal Regulations and Responsibility to the Public, only the discharge chute utilized in the delivery of Portland cement concrete may be rinsed free of fresh concrete remains. The Contractor shall excavate a pit outside of State water buffers, at least 25 feet from any storm drain and outside of the travelled way, including shoulders, for a wash-down pit. The pit shall be large enough to store all wash-down water without overtopping. Immediately after the wash-down operations are completed and after the wash-down water has soaked into the ground, the pit shall be filled in, and the ground above it shall be graded to match the elevation of the surrounding areas. Alternate wash-down plans must be approved by the Project Engineer.

Wash-down plans describe procedures that prevent wash-down water from entering streams and rivers. Never dispose of wash-down water down a storm drain. Establish a wash-down pit that includes the following: (1) a location away from any storm drain, stream, or river; (2) access to the vehicle being used for wash down; (3) sufficient volume for wash-down water; and (4) permission to use the area for wash down.

On sites where permission or access to excavate a wash-down pit is unavailable, the Contractor may have to wash-down into a sealable 55-gallon drum or other suitable container and then transport the container to a proper disposal site. For additional information, refer to the Georgia Small Business Environmental Assistance Program's "A Guide for Ready Mix Chute/Hopper Wash-down".

**SAMPLING GENERAL NOTES:**

Representative sampling may be utilized on this project as explained here. The individual outfall drainage basins along the project corridor have been carefully evaluated and compared on the basis of four characteristics: the type of construction activity, the disturbed acreage, the average slope about the outfall, and the soil erosion index 0-10, 10 being the most erodible soil. The construction activity types are new road on fill, new road in cut, road widening, and maintenance/safety. The disturbed area classes are less than or equal to 1 acre, greater than 1 acre to less than 2 acres, and equal to or greater than 2 acres. The average outfall slope is mild if it is equal to or less than 0.03, and steep if it is greater than 0.03. The soil erosion index is low if it is less than or equal to 5 and high if it is greater than 5. After evaluation of these characteristics as presented in the project's drainage area map, hydrology and hydraulic studies, construction plans, geotechnical soil survey, and erosion sedimentation and pollution control plans, the Department has determined that the representative sampling scheme shown below is valid for the duration of the project. The table shows the groups of similar outfall drainage basins.

The increase in turbidity at the specified locations in the table below will be representative of the alternate outfall drainage basins when similar outfall drainage basins exist. Approved primary and alternate representative sampled features are identified in the table below.

Note: The Total site area is 3.52 acres.												Representative Sampling Scheme				
SAMPLING INFORMATION												OUTFALL CHARACTERISTICS				
Primary Sampled Feature	Location (Station and Offset)	Name of Receiving Water	Applicable Construction Stage for Sampling	Sampling Type (Outfall or Receiving water)	Drainage Area for receiving water (mi <sup>2</sup> )	Upstream Disturbed Area (acres)	Warm or Cold Water Stream	Appendix B NTU Value (Outfall Sampling only)	Allowable NTU Increase (Receiving water sampling only)	Location Description	Construction Activity	Disturbed Area (acres)	Average Outfall Slope (Rise/Run)	Soil Erosion Index	Represented Outfall Drainage Basins	
1 UP	21+12.46 100.00 LI	RED OAK CREEK	ALL	RECEIVING WATER	90.77	0	WARM	N/A	750	UPSTREAM	BRIDGE REPLACEMENT	N/A	N/A	N/A		
1 DN	20+09.69 75.00 RT					3.52			750	DOWNSSTREAM						

The primary sampled features specified should be used as the initial sampling locations. An alternate sampled feature may be used if additional sampling is required or to replace a primary sampled feature that is no longer located within the active phase of construction.

**GEORGIA**  
DEPARTMENT  
OF  
TRANSPORTATION

REVISION DATES


STATE OF GEORGIA  
DEPARTMENT OF TRANSPORTATION  
OFFICE: DISTRICT THREE DESIGN  
**ESPSP GENERAL NOTES**

DRAWING No.  
**51-02**

**EROSION, SEDIMENTATION, and POLLUTION CONTROL CHECKLIST:**



**Georgia Soil and Water Conservation Commission**  
**EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST**  
**INFRASTRUCTURE CONSTRUCTION PROJECTS**

SWCD: Roosevelt  
 Project Name: 10414 Address: \_\_\_\_\_  
 City/County: Meriwether Date on Plans: \_\_\_\_\_

Plan	Included	TO BE SHOWN ON ES&PC PLAN
51-03	Y	1. The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of January 1 of the year in which the land-disturbing activity was permitted. <small>(The completed Checklist must be submitted with the ES&amp;PC Plan or the Plan will not be reviewed)</small>
50-01	Y	2. Level II certification number issued by the Commission, signature and seal of the certified design professional. <small>(Signature, seal and Level II number must be on each sheet pertaining to ES&amp;PC plan or the Plan will not be reviewed)</small>
50-01	Y	3. The name and phone number of the 24-hour local contact responsible for erosion, sedimentation and pollution controls.
50-01	Y	4. Provide the name, address and phone number of primary permittee.
51-01	Y	5. Note total and disturbed acreage of the project or phase under construction.
53-01	Y	6. Provide the GPS locations of the Beginning and End of the Infrastructure project. Give the Latitude and Longitude in decimal degrees.
50-01	Y	7. Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.
53-01	Y	8. Description of the nature of construction activity.
50-01	Y	9. Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.
53-01	Y	10. Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, etc. which may be affected.
50-01	Y	11. Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on page 15 of the permit.
50-01	Y	12. Design professional's certification statement and signature that the permittee's ES&PC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated on page 15 of the permit.*
50-01	Y	13. Design professional certification statement and signature that the permittee's ES&PC plan provides for representative sampling as stated on page 26 of permit as applicable.
51-01	Y	14. Clearly note the statement that "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements, perimeter control BMPs and sediment basins in accordance with part IV.A.5. within 7 days after installation."
51-02	Y	15. Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wooded vegetation without first acquiring the necessary variances and permits."
51-01	Y	16. Clearly note the statement that "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional."
51-01	Y	17. Clearly note the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a section 404 permit."
51-01	Y	18. Clearly note statement that "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."
51-01	Y	19. Clearly note statement that "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."
51-01	Y	20. Clearly note the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."
51-02	Y	21. Any construction activity which discharges storm water into an Impaired Stream Segment, or within 1 linear mile upstream of and within the same watershed as, any portion of an Impaired Stream Segment must comply with Part III. C. of the Permit. Include the completed Appendix 1 listing all the BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment.*
N/A	N	22. If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in item 21 above) at least six months prior to submittal of NOI, the ES&PC Plan must address any site-specific conditions or requirements included in the TMDL Implementation Plan.*
51-01	Y	23. BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Washout of the drum at the construction site is prohibited.*
51-01	Y	24. Provide BMPs for the remediation of all petroleum spills and leaks.
51-02	Y	25. Description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed.*
51-01	Y	26. Description of the practices that will be used to reduce the pollutants in storm water discharges.*

Plan	Included	TO BE SHOWN ON ES&PC PLAN				
51-01	Y	27. Description and chart or timeline of the intended sequence of major activities which disturb soils for the major portions of the site (i.e., initial perimeter and sediment storage BMPs, clearing and grubbing activities, excavation activities, utility activities, temporary and final stabilization).				
51-01	Y	28. Provide complete requirements of inspections and record keeping by the primary permittee.*				
51-02	Y	29. Provide complete requirements of sampling frequency and reporting of sampling results.*				
51-01	Y	30. Provide complete details for retention of records as per Part IV.F. of the permit.*				
51-02	Y	31. Description of analytical methods to be used to collect and analyze the samples from each location.*				
51-02	Y	32. Appendix B rationale for NTU values at all outfall sampling points where applicable.*				
51-02	Y	33. Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged also provide a summary chart of the justification and analysis for the representative sampling as applicable.*				
54-01	Y	34. A description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the plan may combine all of the brps into a single phase.*				
54-01	Y	35. Graphic scale and north arrow.				
53-01	Y	36. Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following: <table border="1" style="margin-left: 20px; border-collapse: collapse;"> <tr> <td>Existing Contours</td> <td>USGS 1": 2000' Topographical Sheets</td> </tr> <tr> <td>Proposed Contours</td> <td>1" : 400' Centerline Profile</td> </tr> </table>	Existing Contours	USGS 1": 2000' Topographical Sheets	Proposed Contours	1" : 400' Centerline Profile
Existing Contours	USGS 1": 2000' Topographical Sheets					
Proposed Contours	1" : 400' Centerline Profile					
54-01	Y	37. Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by EPD or the Georgia Soil and Water Conservation Commission). Please refer to the Alternative BMP Guidance Document found at www.gaswcc.org.				
54-01	Y	38. Delineation of the applicable 25-foot or 50-foot undisturbed buffers adjacent to state waters and any additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact.				
54-01	Y	39. Delineation of on-site wetlands and all state waters located on and within 200 feet of the project site.				
53-01	Y	40. Delineation and acreage of contributing drainage basins on the project site.				
53-01	Y	41. Delineate on-site drainage and off-site watersheds using USGS 1": 2000' topographical sheets.				
N/A	N	42. An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.				
N/A	N	43. Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points.				
51-01	Y	44. Soil series for the project site and their delineation.				
54-01	Y	45. The limits of disturbance for each phase of construction.				
51-01	Y	46. Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual must be included for structural BMPs and all calculations used by the design professional to obtain the required sediment storage when using equivalent controls. When discharging from sediment basins and impoundments, permittees are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface are not feasible, a written justification explaining this decision must be included in the plan.				
54-01	Y	47. Location of Best Management Practices that are consistent with and no less stringent than the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual, Chapter 6, with legend.				
54-01	Y	48. Provide detailed drawings for all structural practices. Specifications must, at a minimum, meet the guidelines set forth in the Manual for Erosion and Sediment Control in Georgia.				
N/A	N	49. Provide vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates and seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time of year that seeding will take place and for the appropriate geographic region of Georgia.				

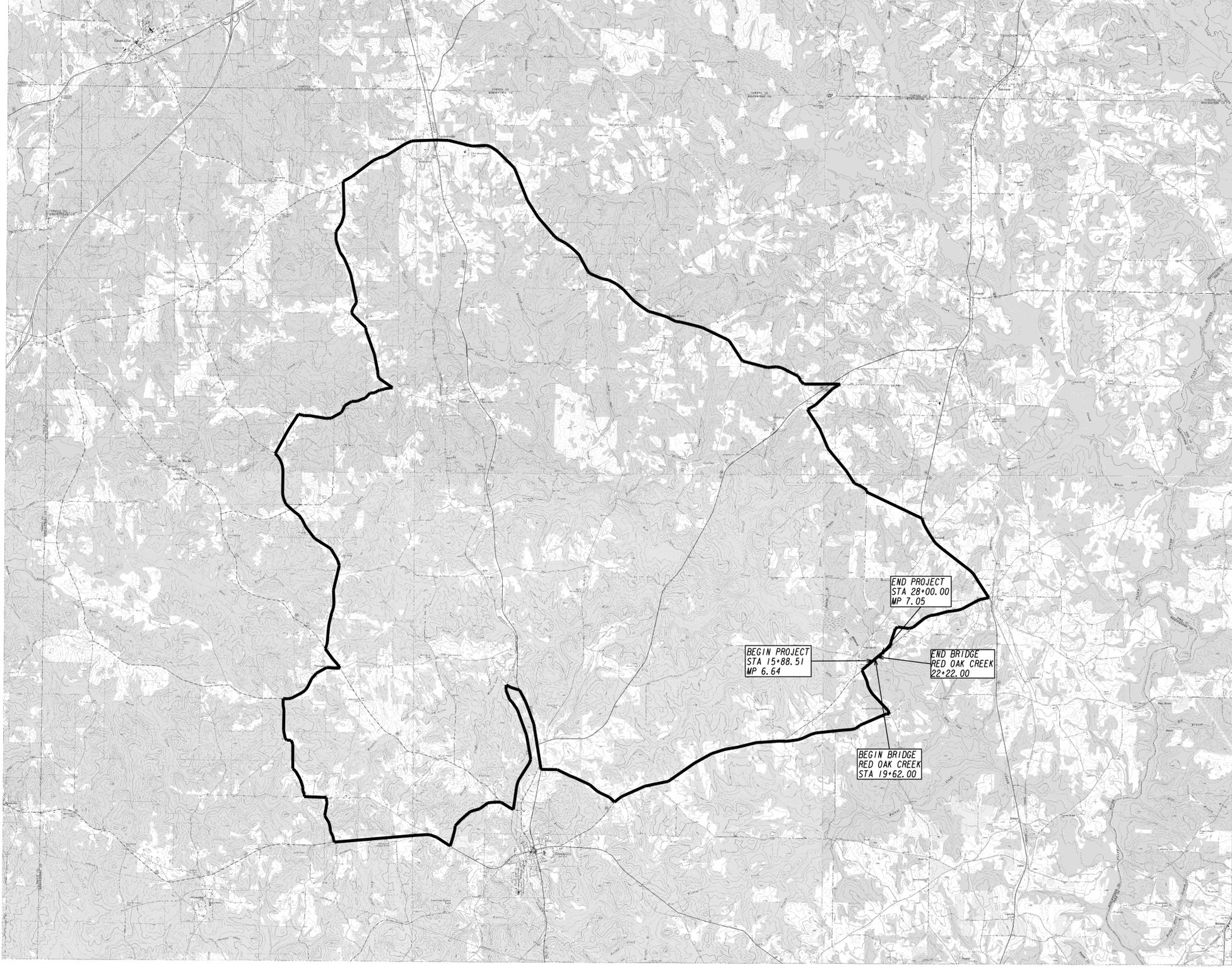
\*If using this checklist for a project that is less than 1 acre and not part of a common development but within 200 ft of a perennial stream the \* checklist items would be N/A. Effective January 1, 2015

**GEORGIA**  
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**REVISION DATES**


STATE OF GEORGIA  
DEPARTMENT OF TRANSPORTATION  
OFFICE: DISTRICT THREE DESIGN  
**ESPCP GENERAL NOTES**

DRAWING No.  
**51-03**



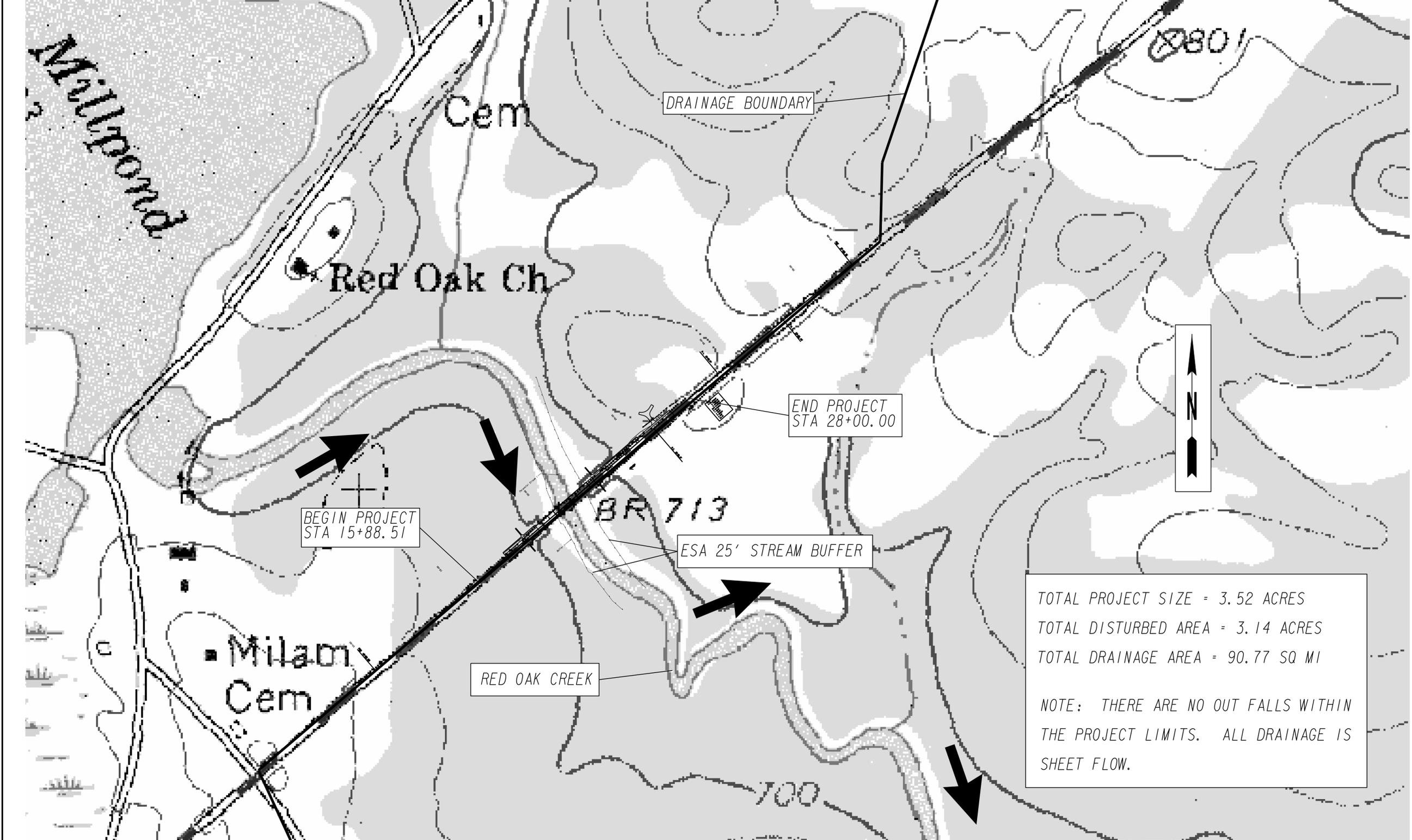
TOTAL PROJECT SIZE • 3.52 ACRES  
 TOTAL DISTURBED AREA • 3.14 ACRES  
 TOTAL DRAIAGE AREA • 90.77 SQ MI  
 RECEIVING WATERS • RED OAK CREEK

NOTE: THERE ARE NO OUTFALLS WITHIN THE PROJECT LIMITS. ALL DRAINAGE IS SHEET FLOW.

FOR A MORE DETAILED VIEW SEE SHEET 53-002.

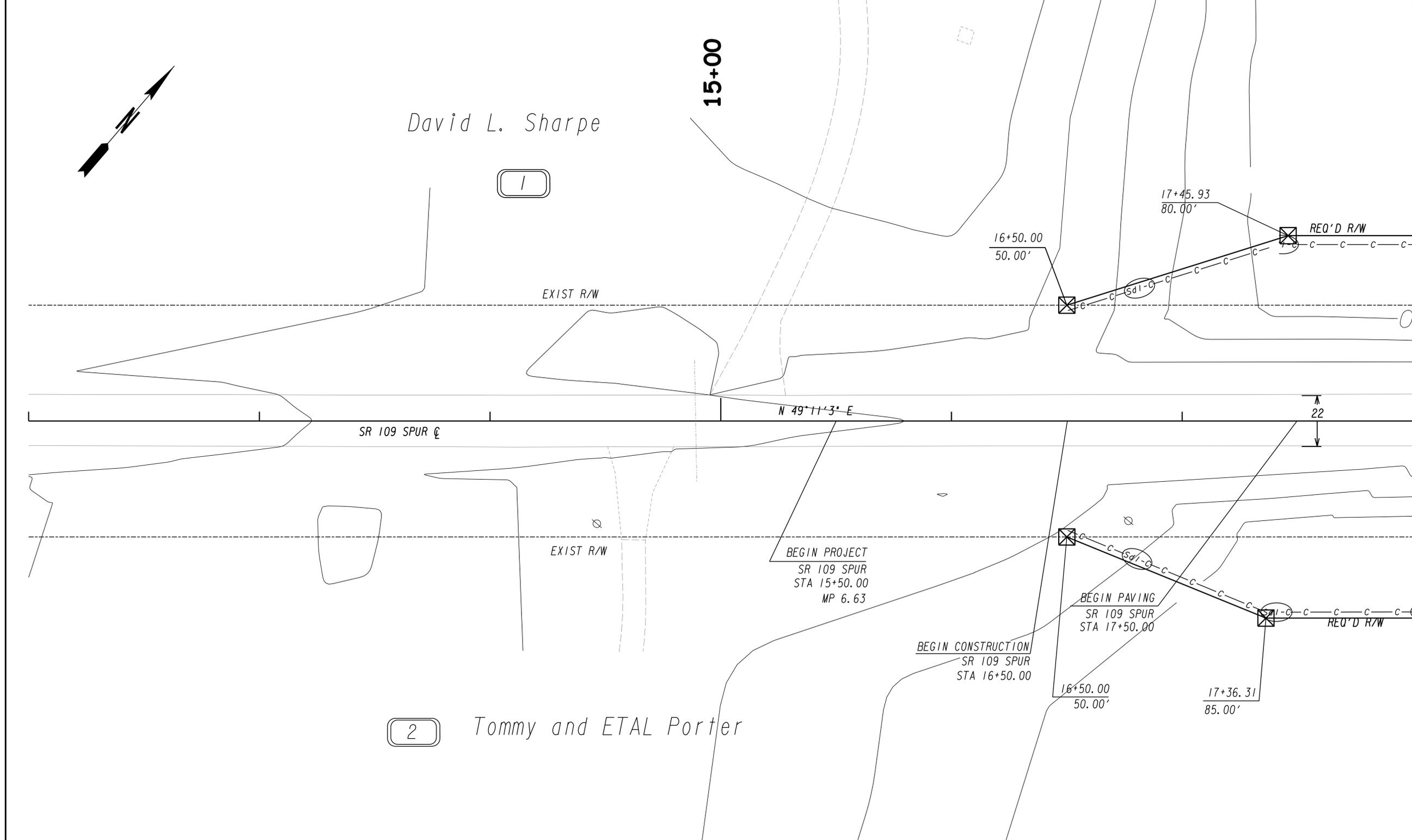


<b>GEORGIA</b> DEPARTMENT OF TRANSPORTATION	SCALE IN FEET 	REVISION DATES	STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION													
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12/14/2012 GPLM	DRAWING No. <b>53-001</b>															



TOTAL PROJECT SIZE = 3.52 ACRES  
 TOTAL DISTURBED AREA = 3.14 ACRES  
 TOTAL DRAINAGE AREA = 90.77 SQ MI

NOTE: THERE ARE NO OUT FALLS WITHIN THE PROJECT LIMITS. ALL DRAINAGE IS SHEET FLOW.

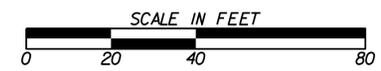


DRAWING No. 13-002  
MATCH LINE STA. 18+00.00

PROPERTY AND EXISTING R/W LINE  
REQUIRED R/W LINE  
CONSTRUCTION LIMITS  
EASEMENT FOR CONSTR  
& MAINTENANCE OF SLOPES  
EASEMENT FOR CONSTR OF SLOPES  
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA  
END LIMIT OF ACCESS.....ELA  
LIMIT OF ACCESS  
REQ'D R/W & LIMIT OF ACCESS

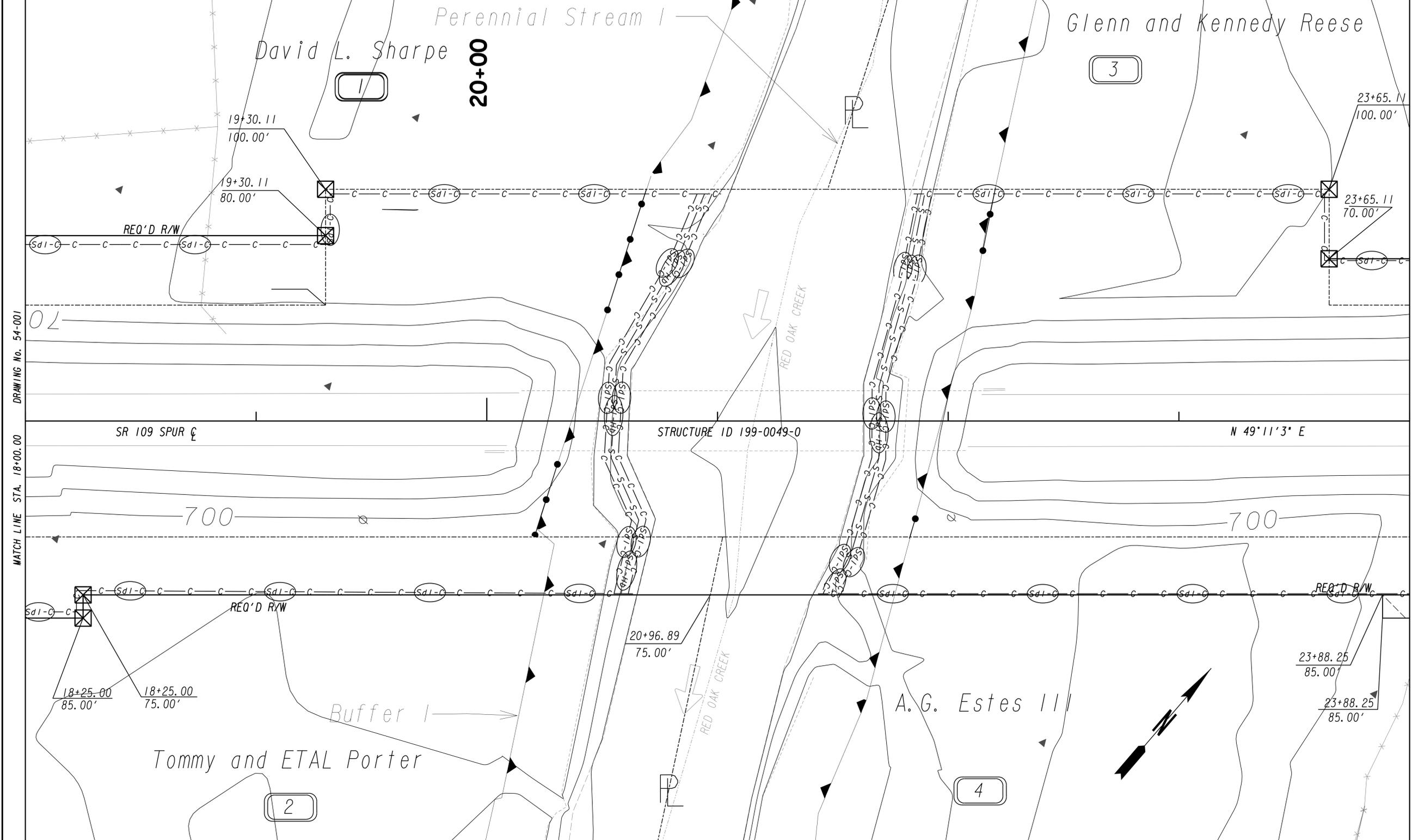
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DEPARTMENT  
OF  
TRANSPORTATION



REVISION DATES	

STATE OF GEORGIA  
DEPARTMENT OF TRANSPORTATION  
OFFICE: DISTRICT THREE DESIGN  
**BMP LOCATION DETAILS**  
SR 109 SPUR PREGRADING

DRAWING No. 54-001



PROPERTY AND EXISTING R/W LINE  
 REQUIRED R/W LINE  
 CONSTRUCTION LIMITS  
 EASEMENT FOR CONSTR  
 & MAINTENANCE OF SLOPES  
 EASEMENT FOR CONSTR OF SLOPES  
 EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA  
 END LIMIT OF ACCESS.....ELA  
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 REQ'D R/W & LIMIT OF ACCESS

**GEORGIA**  
 DEPARTMENT  
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REVISION DATES	

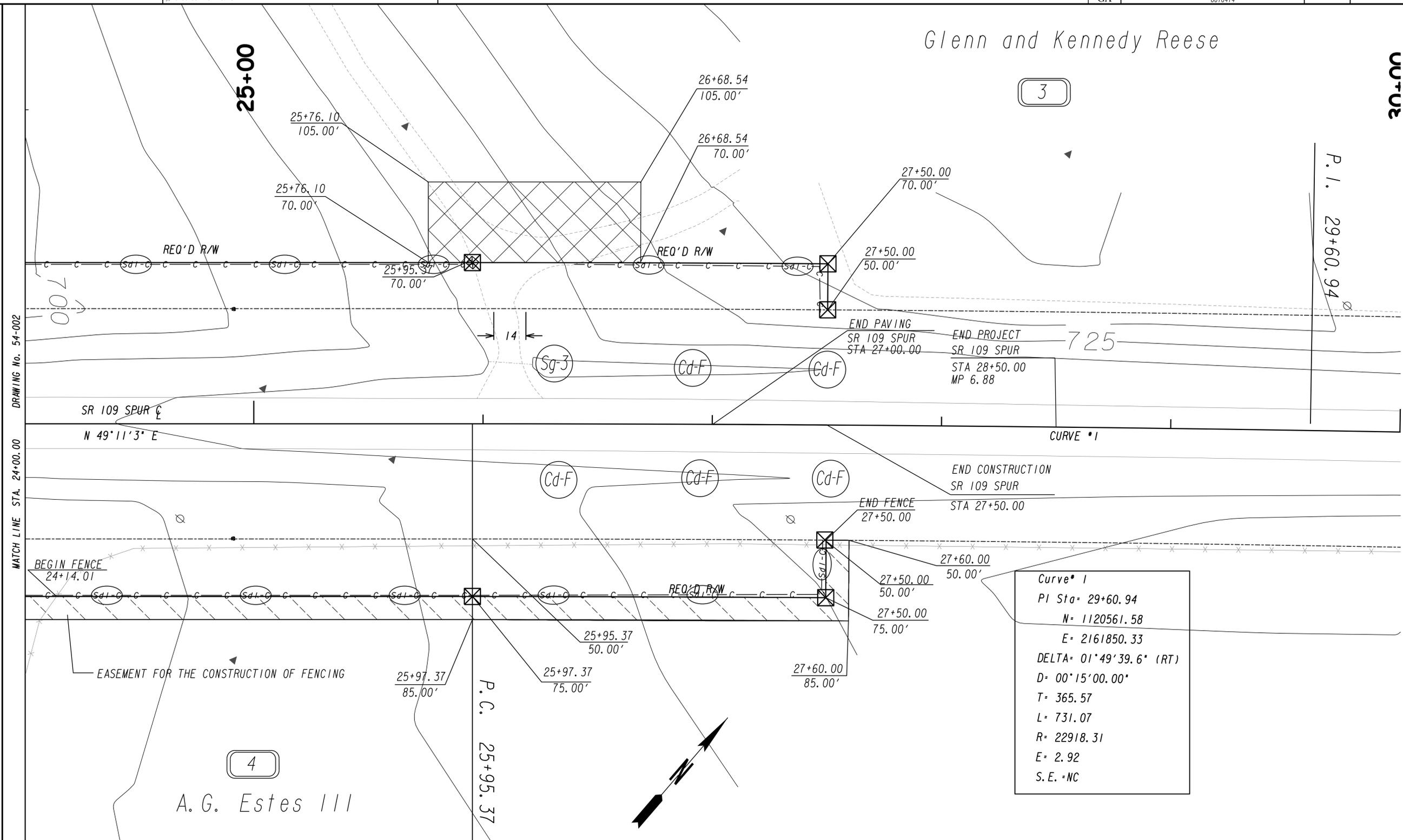
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 DEPARTMENT OF TRANSPORTATION  
 OFFICE: DISTRICT THREE DESIGN  
**BMP LOCATION DETAILS**  
 SR 109 SPUR PREGRADING  
 DRAWING No. 54-002

DRAWING No. 54-001  
 MATCH LINE STA. 18+00.00

DRAWING No. 54-003  
 MATCH LINE STA. 24+00.00

Glenn and Kennedy Reese

U+U

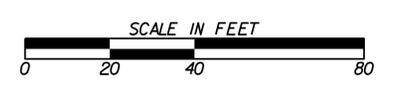


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 DELTA= 01°49'39.6" (RT)  
 D= 00°15'00.00"  
 T= 365.57  
 L= 731.07  
 R= 22918.31  
 E= 2.92  
 S.E. = NC

PROPERTY AND EXISTING R/W LINE  
 REQUIRED R/W LINE  
 CONSTRUCTION LIMITS  
 EASEMENT FOR CONSTR  
 & MAINTENANCE OF SLOPES  
 EASEMENT FOR CONSTR OF SLOPES  
 EASEMENT FOR CONSTR OF DRIVES

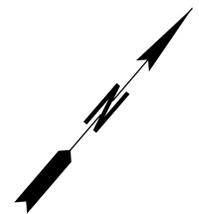
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 REQ'D R/W & LIMIT OF ACCESS

**GEORGIA**  
 DEPARTMENT  
 OF  
 TRANSPORTATION



REVISION DATES	

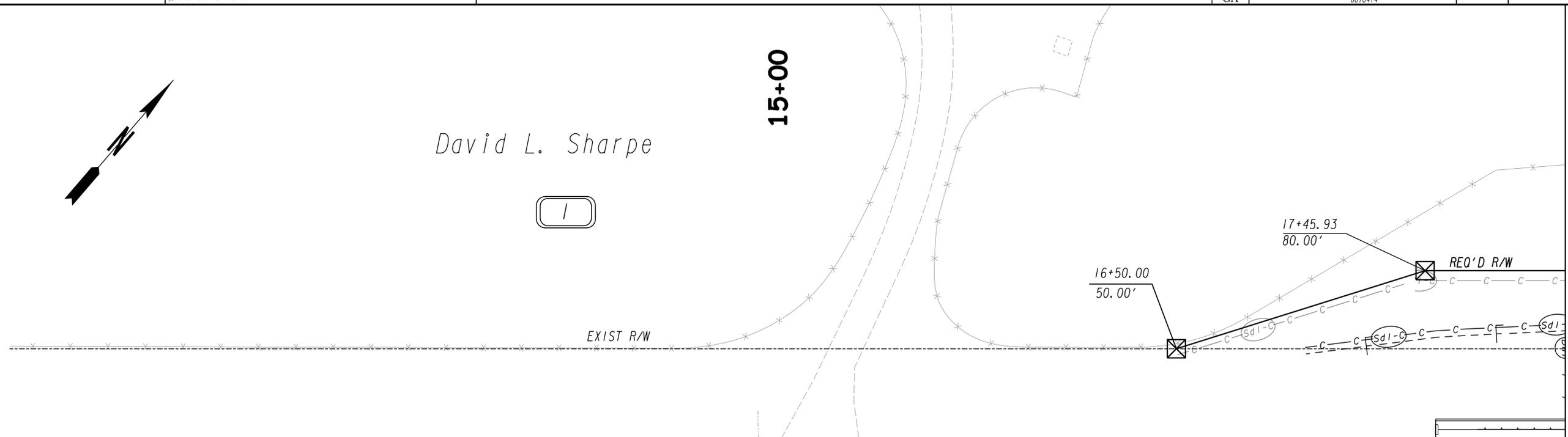
STATE OF GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE: DISTRICT THREE DESIGN  
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 DRAWING No. 54-003



David L. Sharpe

15+00

1



SR 109 SPUR

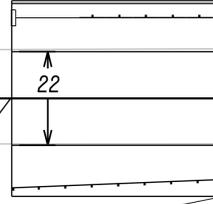
N 49°11'3" E

EXIST R/W

BEGIN PROJECT  
SR 109 SPUR  
STA 15+50.00  
MP 6.63

BEGIN CONSTRUCTION  
SR 109 SPUR  
STA 16+50.00

BEGIN PAVING  
SR 109 SPUR  
STA 17+50.00



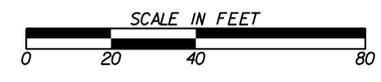
2

Tommy and ETAL Porter

PROPERTY AND EXISTING R/W LINE  
REQUIRED R/W LINE  
CONSTRUCTION LIMITS  
EASEMENT FOR CONSTR  
& MAINTENANCE OF SLOPES  
EASEMENT FOR CONSTR OF SLOPES  
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA  
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LIMIT OF ACCESS  
REQ'D R/W & LIMIT OF ACCESS

**GEORGIA**  
DEPARTMENT  
OF  
TRANSPORTATION

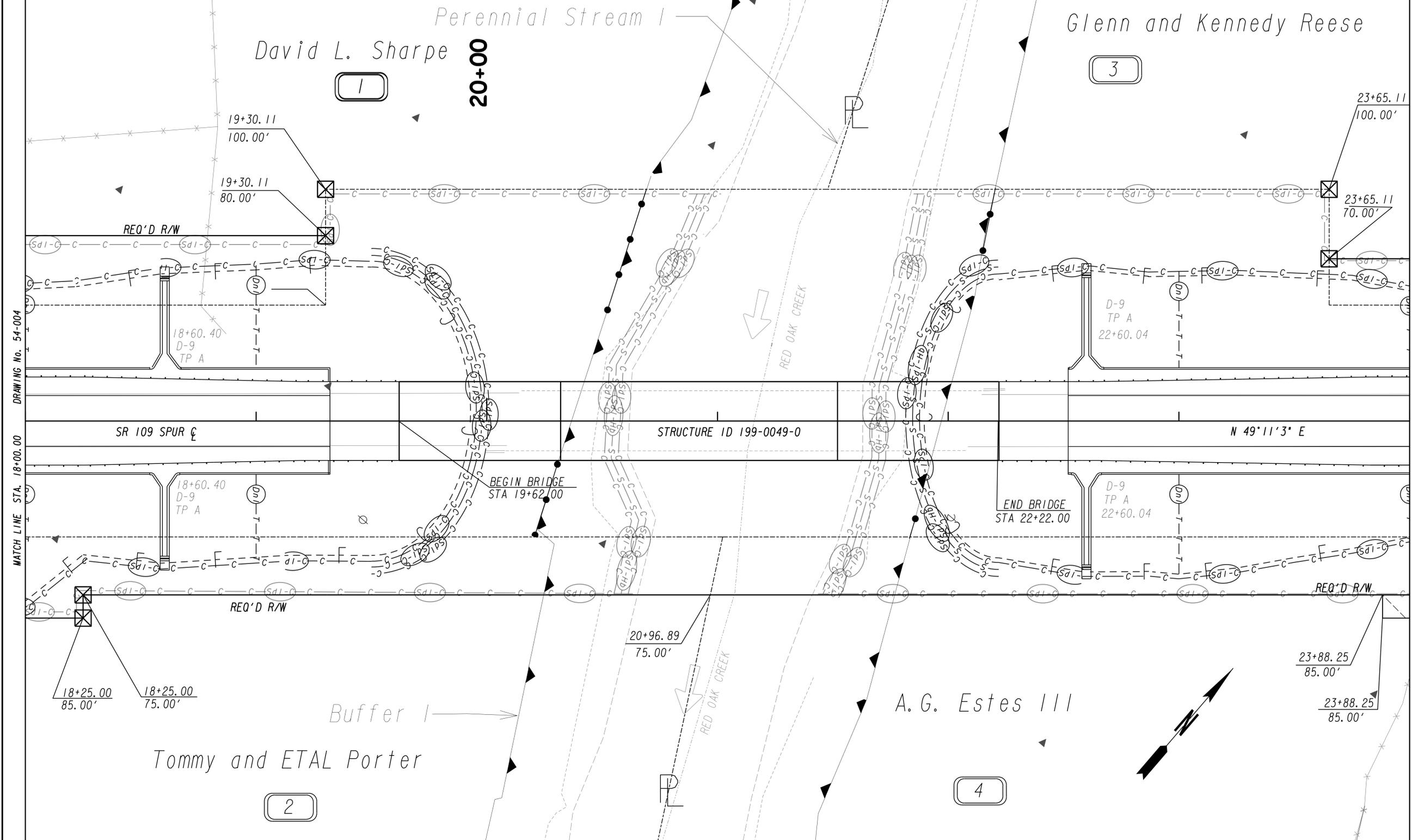


REVISION DATES	

STATE OF GEORGIA  
DEPARTMENT OF TRANSPORTATION  
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**BMP LOCATION DETAILS**  
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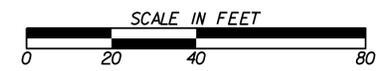
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MATCH LINE STA. 18+00.00



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 REQUIRED R/W LINE  
 CONSTRUCTION LIMITS  
 EASEMENT FOR CONSTRUCTION  
 & MAINTENANCE OF SLOPES  
 EASEMENT FOR CONSTRUCTION OF SLOPES  
 EASEMENT FOR CONSTRUCTION OF DRIVES

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 END LIMIT OF ACCESS.....ELA  
 LIMIT OF ACCESS  
 REQ'D R/W & LIMIT OF ACCESS

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REVISION DATES	

STATE OF GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE: DISTRICT THREE DESIGN  
**BMP LOCATION DETAILS**  
 SR 109 SPUR GRADING

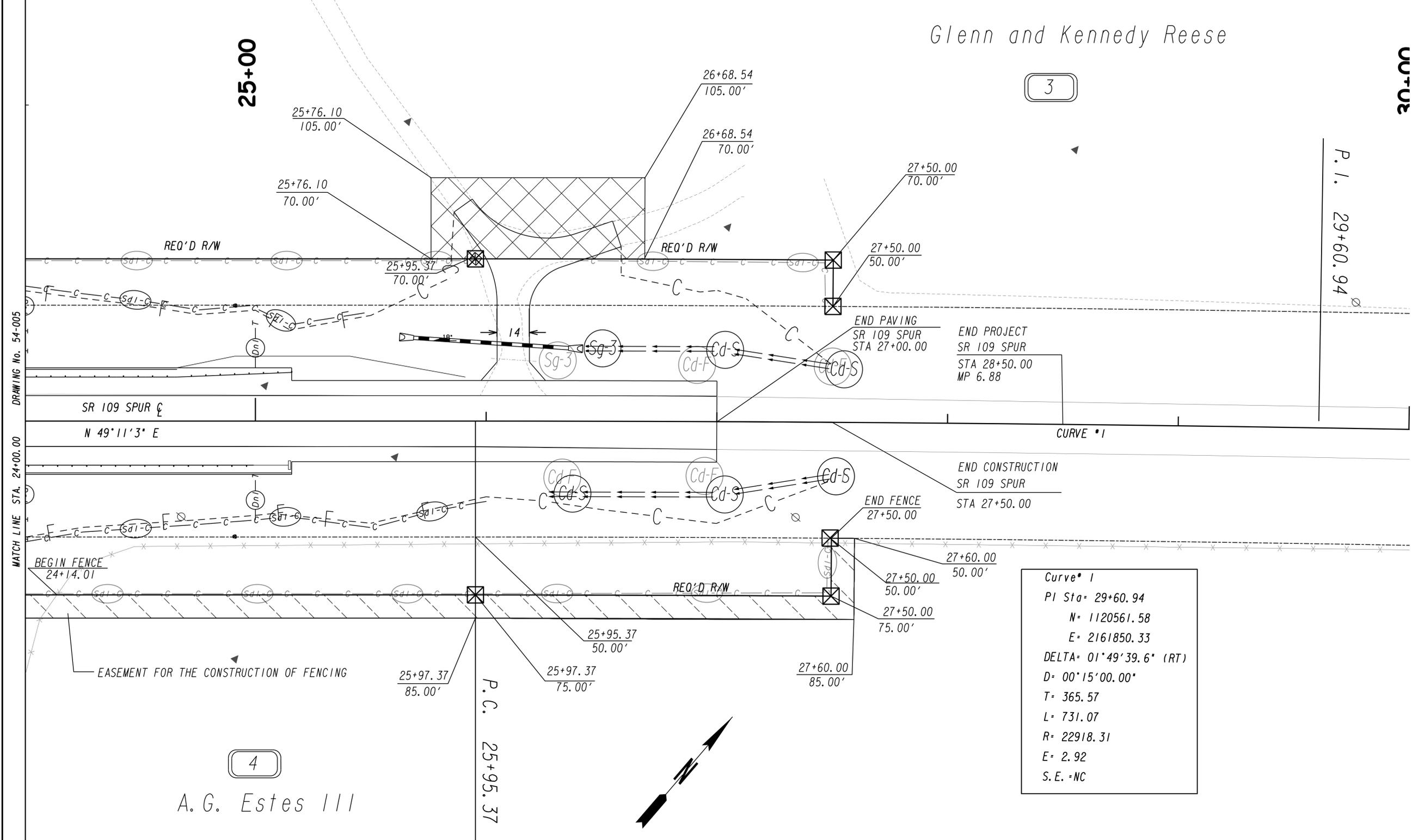
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DRAWING No. 54-006  
 MATCH LINE STA. 24+00.00

Glenn and Kennedy Reese

U+U

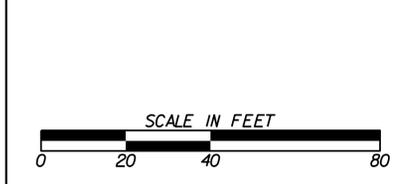


DRAWING No. 54-005  
MATCH LINE STA. 24+00.00

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REQUIRED R/W LINE	---
CONSTRUCTION LIMITS	---
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES	---
EASEMENT FOR CONSTR OF SLOPES	---
EASEMENT FOR CONSTR OF DRIVES	---

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END LIMIT OF ACCESS.....ELA	---
LIMIT OF ACCESS	---
REQ'D R/W & LIMIT OF ACCESS	---

**GEORGIA**  
DEPARTMENT  
OF  
TRANSPORTATION

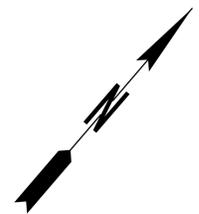


REVISION	DATE	DESCRIPTION

STATE OF GEORGIA  
DEPARTMENT OF TRANSPORTATION  
OFFICE: DISTRICT THREE DESIGN  
**BMP LOCATION DETAILS**

SR 109 SPUR GRADING

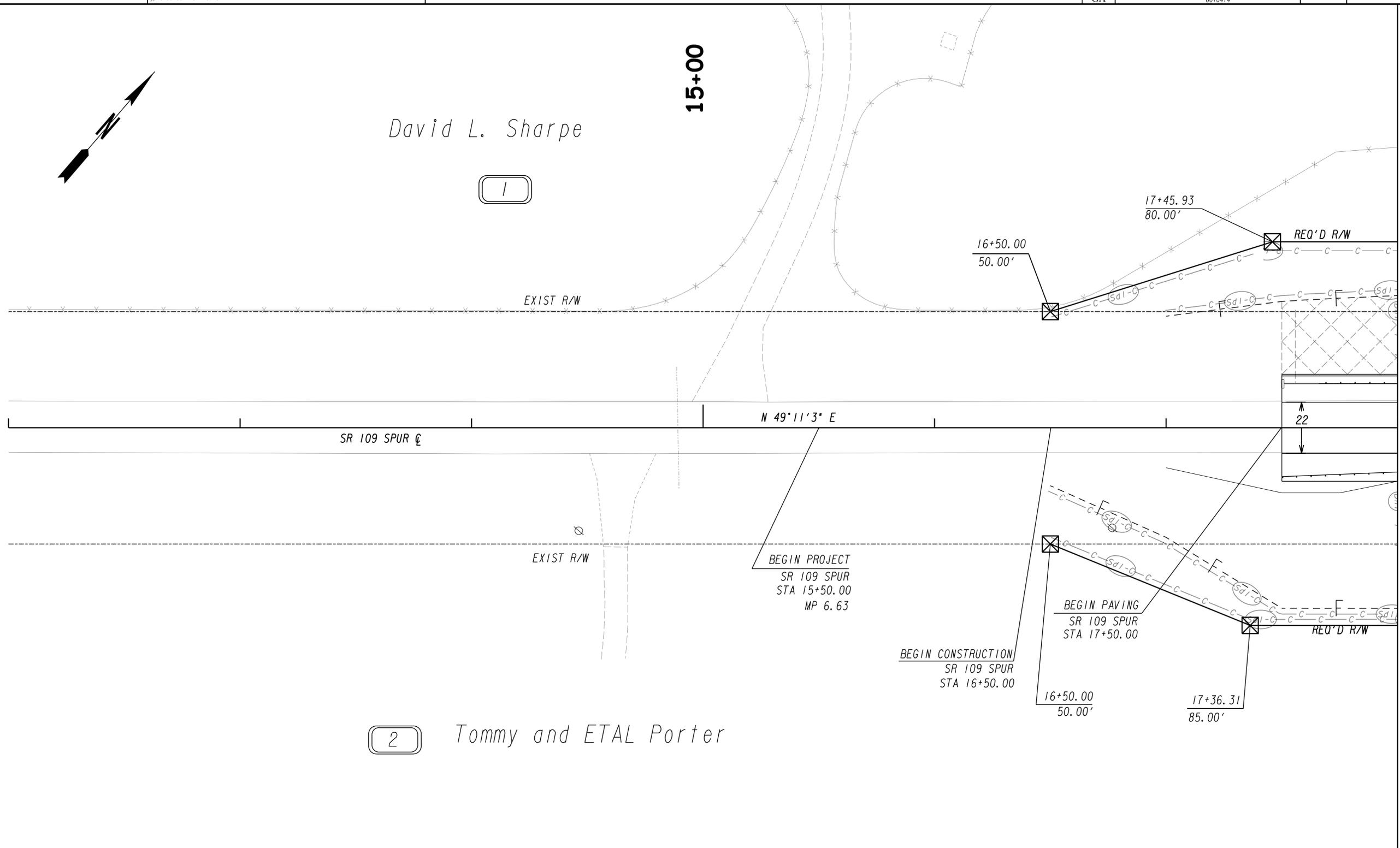
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**54-006**



David L. Sharpe

1

15+00

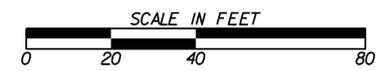


2 Tommy and ETAL Porter

PROPERTY AND EXISTING R/W LINE  
 REQUIRED R/W LINE  
 CONSTRUCTION LIMITS  
 EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES  
 EASEMENT FOR CONSTR OF SLOPES  
 EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA  
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 REQ'D R/W & LIMIT OF ACCESS

**GEORGIA**  
 DEPARTMENT  
 OF  
 TRANSPORTATION

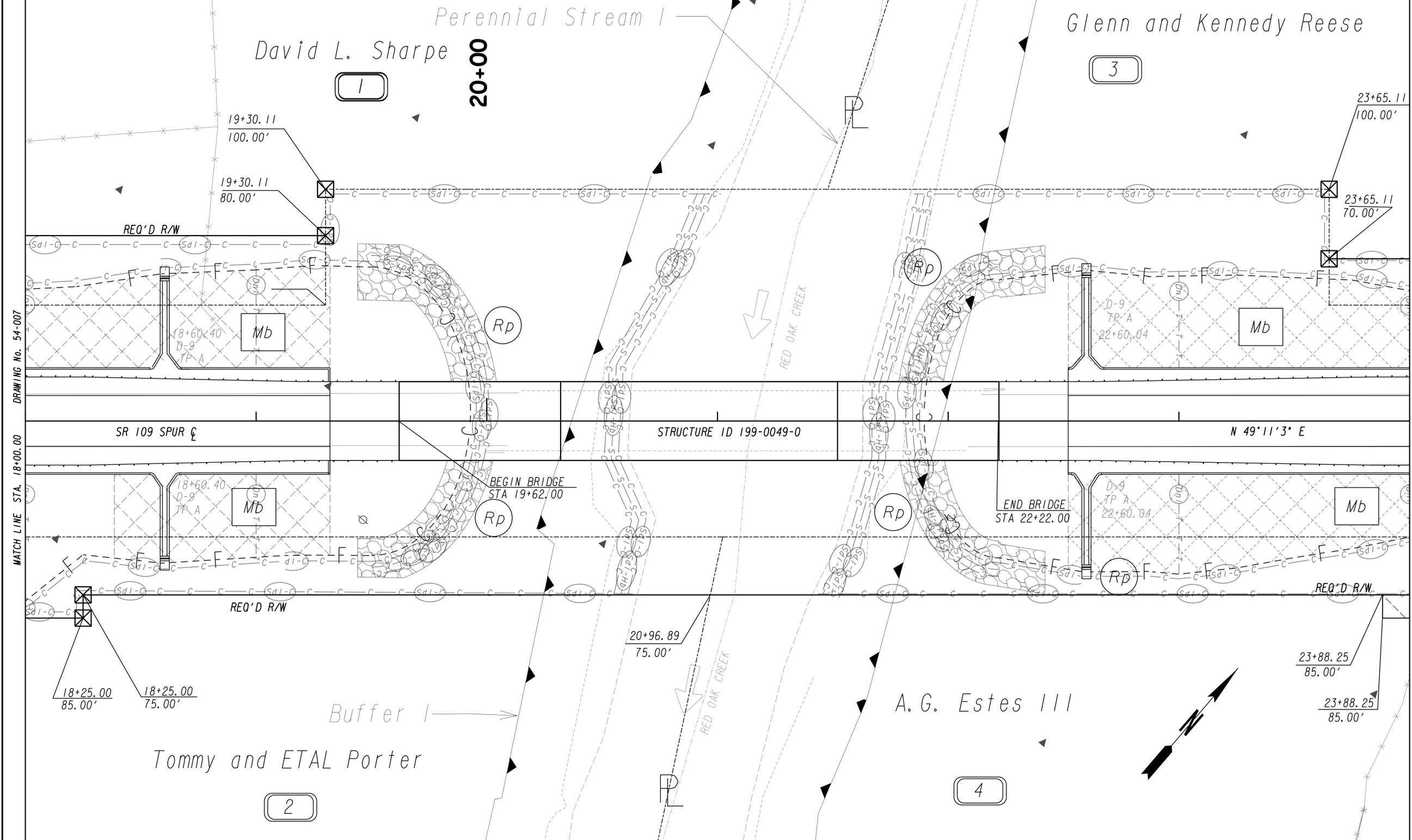


REVISION DATES	

STATE OF GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE: DISTRICT THREE DESIGN  
**BMP LOCATION DETAILS**  
 SR 109 SPUR FINAL

DRAWING No. 54-007

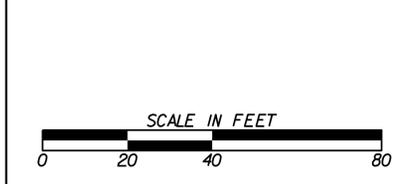
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 STA. 18+00.00  
 MATCH LINE



PROPERTY AND EXISTING R/W LINE  
 REQUIRED R/W LINE  
 CONSTRUCTION LIMITS  
 EASEMENT FOR CONSTR  
 & MAINTENANCE OF SLOPES  
 EASEMENT FOR CONSTR OF SLOPES  
 EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA  
 END LIMIT OF ACCESS.....ELA  
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**GEORGIA**  
 DEPARTMENT  
 OF  
 TRANSPORTATION



REVISION	DATE	DESCRIPTION

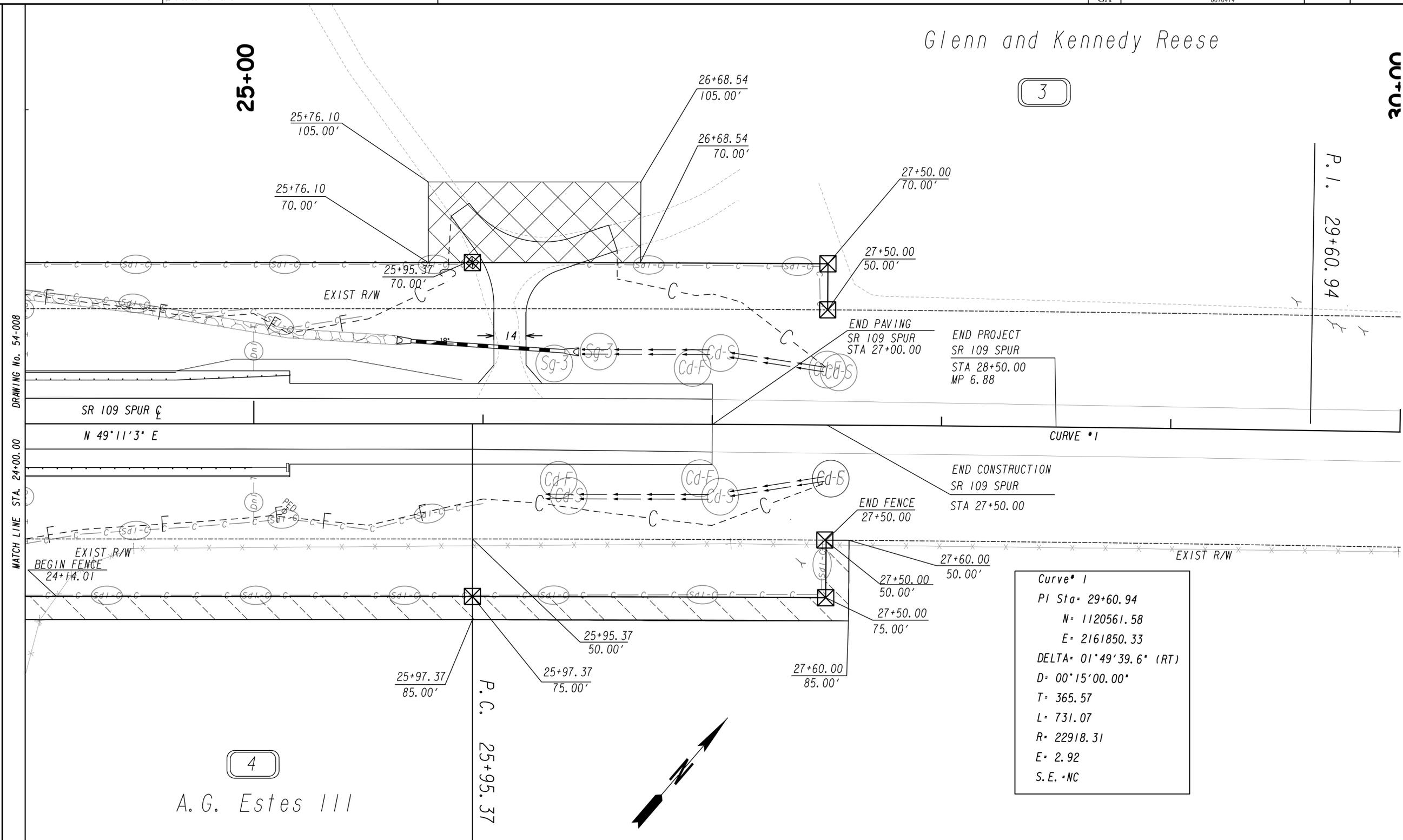
STATE OF GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE: DISTRICT THREE DESIGN  
**BMP LOCATION DETAILS**  
 SR 109 SPUR FINAL

DRAWING No. 54-008

Glenn and Kennedy Reese

3

U+U

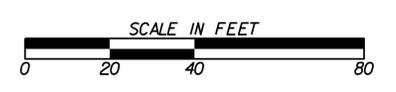


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 E= 2161850.33  
 DELTA= 01°49'39.6" (RT)  
 D= 00°15'00.00"  
 T= 365.57  
 L= 731.07  
 R= 22918.31  
 E= 2.92  
 S.E.=NC

DRAWING No. 54-008  
 MATCH LINE STA. 24+00.00

A.G. Estes III

**GEORGIA**  
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REVISION DATES	

STATE OF GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE: DISTRICT THREE DESIGN  
**BMP LOCATION DETAILS**  
 SR 109 SPUR FINAL

DRAWING No.  
**54-009**

PROPERTY AND EXISTING R/W LINE  
 REQUIRED R/W LINE  
 CONSTRUCTION LIMITS  
 EASEMENT FOR CONSTR  
 & MAINTENANCE OF SLOPES  
 EASEMENT FOR CONSTR OF SLOPES  
 EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA  
 END LIMIT OF ACCESS.....ELA  
 LIMIT OF ACCESS  
 REQ'D R/W & LIMIT OF ACCESS



DRAINAGE BOUNDARY  
 RED OAK CREEK  
 90.77 SQ. MI.  
 TOTAL BOUNDARY NOT SHOWN

UPSTREAM MONITORING LOCATION  
 STA 21+12.46  
 100' LT

END BRIDGE  
 STA 22+22.00

ESA 25 FT STREAM BUFFER

END PROJECT  
 STA 28+00.00  
 MP 7.05

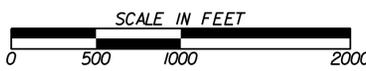
DOWNSTREAM MONITORING LOCATION  
 STA 20+09.69  
 75.00' RT

BEGIN BRIDGE  
 19+62.00

BEGIN PROJECT  
 STA 15+88.51  
 MP 6.87

RECEIVING WATERS  
 RED OAK CREEK

**GEORGIA**  
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 TRANSPORTATION



REVISION DATES

STATE OF GEORGIA  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE: DISTRICT THREE DESIGN  
**WATERSHED MAP**  
**SITE MONITORING PLAN**

DRAWING No.  
**55-001**