

BRIDGE CONSISTS OF

- 9 - 50'-0" TYPE II PSC BEAM SPANS ----- SPECIAL DESIGN
- 2 - METAL SHELL PILE END BENTS ----- SPECIAL DESIGN
- 8 - METAL SHELL PILE 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)
- CONCRETE BARRIERS - TEMPORARY ----- GA. STD. 4960 (5-10-07)
- DETAILS OF PRECAST TEMPORARY BARRIERS ----- GA. STD. 4961 (9-8-06)
- TYPICAL FILL DETAIL AT END OF BRIDGE ----- GA. STD. 9037 (9-99)

TRAFFIC DATA

TRAFFIC ----- ADT = 2,400 (2015)
ADT = 3,000 (2035)

DESIGN SPEED ----- 55 MPH

TRUCKS ----- 17.5%

24 HR TRUCKS ----- 22%

DIRECTIONAL ----- 60%

UTILITIES

NO UTILITIES ON BRIDGE

DESIGN DATA

SPECIFICATIONS ----- AASHTO LRFD 5TH EDITION, 2010
(DESIGNED FOR SEISMIC PERFORMANCE ZONE I)

TYPICAL HL-93 LOADING ----- IMPACT ALLOWED

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

CONCRETE: SUPERSTRUCTURE ----- CLASS D, $f_c = 4,000$ PSI
BARRIER ----- CLASS D, $f_c = 4,000$ PSI
PSC BEAMS ----- CLASS AAA, $f_c = 5,500$ PSI
PSC BEAM ALLOWABLE TENSION ----- 445 PSI
SUBSTRUCTURE ----- CLASS A, $f_c = 3,000$ PSI

REINFORCEMENT STEEL: ----- GRADE 60, $f_y = 60,000$ PSI

PRETENSIONING STRANDS: ----- $f_p = 270,000$ PSI

METAL SHELL PILING: ----- GRADE 3, $f_y = 45,000$ PSI

DRAINAGE DATA

DRAINAGE AREA ----- 132.9 SQ MILES

FLOOD FREQUENCY	TOTAL DISCHARGE	MEAN VELOCITY	AREA OF OPENING UNDER FLOODSTAGE	BACKWATER
50 YEAR	5360 CFS	2.67 FPS	2008 SQ FT	0.90 FT
100 YEAR	6100 CFS	2.83 FPS	2156 SQ FT	0.98 FT
500 YEAR	8010 CFS	3.20 FPS	2503 SQ FT	1.15 FT

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.

TEMPORARY SHORING - INCLUDE THE COST OF TEMPORARY SHORING AS NECESSARY FOR BRIDGE CONSTRUCTION IN THE OVERALL BID SUBMITTED.

TEMPORARY BARRIERS, METHOD 2 - PLACE TEMPORARY BARRIERS AS SHOWN ON THE PLANS AND GEORGIA STANDARD NO. 4960 TO PROVIDE FOR 1 - 13'-0" TRAFFIC LANE (STAGE I) AND 2 - 11'-0" TRAFFIC LANES (STAGE II). SUPPLY AND USE THE BARRIER IN ACCORDANCE WITH SPECIAL PROVISION SECTION 620.

TRAFFIC CONTROLS - SEE ROADWAY PLANS FOR TRAFFIC CONTROLS AND TRAFFIC CONTROL PAYMENT.

EXISTING BRIDGE PLANS - ORIGINAL BRIDGE PLANS MAY BE PURCHASED BY SUBMITTING A REQUEST ON THE GEORGIA DOT WEBSITE AT:

HTTP://WWW.DOT.GA.GOV/DOINGBUSINESS/RESEARCH/PAGES/ROADDESIGNSEARCH.ASPX

THE ORIGINAL BRIDGE WAS BUILT UNDER PROJECT NUMBER S-0802(3).

EPOXY RESIN ADHESIVE - APPLY EPOXY RESIN ADHESIVE TYPE II TO ALL HARDENED CONCRETE SURFACES JUST PRIOR TO POURING THE CONCRETE FOR THE NEXT STAGE OF CONSTRUCTION, SEE SECTION 886 OF THE GEORGIA DOT SPECIFICATIONS. INCLUDE THE COST OF EPOXY ADHESIVE AND ITS APPLICATION IN THE OVERALL BID SUBMITTED.

WAITING PERIOD - DO NOT BEGIN WORK AT BENTS 1 AND 10 UNTIL THE COMPLETED END FILLS HAVE BEEN IN PLACE FOR AN ESTIMATED PERIOD OF 45 DAYS.

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" AT BENTS 1 AND 10. 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.

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. USE ONLY E70XX (EXCLUDING E7014 AND E7024) LOW HYDROGEN ELECTRODES FOR MANUAL SHIELDED METAL ARC WELDING.

SPECIAL PROTECTIVE COATING - CLEAN AND PAINT EXPOSED BENT PILING WITH SPECIAL PROTECTIVE COATING NO. 2P IN ACCORDANCE WITH SECTIONS 520 AND 535 OF THE GEORGIA DOT SPECIFICATIONS.

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

OLD TIMBER PILES IN CHANNEL - REMOVE OLD TIMBER PILES IN CHANNEL PRIOR TO FOUNDATION CONSTRUCTION. INCLUDE COST IN OVERALL BID SUBMITTED.

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. OLD TIMBER PILES CAN BE SEEN IN THE RIVER, THE CONTRACTOR SHOULD REMOVE THESE PRIOR TO FOUNDATION CONSTRUCTION

DRIVEN PILE FOUNDATION NOTES

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 - 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 AT 404-608-4720 TWO WEEKS PRIOR TO DRIVING PILES. PERFORM FULL LENGTH TESTS FOR ONE PILE AT EACH OF BENT(S) 1, 6, AND 8, DURING STAGE I. PERFORM RESTRIKE TESTS FOR ONE PILE AT EACH OF THE REMAINING BENTS.

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 FOR REVIEW AND APPROVAL TWO WEEKS PRIOR TO DRIVING PILES.

PILE DRIVING - SHOULD PILES FAIL TO OBTAIN DRIVING RESISTANCE AFTER ACHIEVING THE PILE TIP ELEVATIONS SHOWN, ALLOW PILES TO FREEZE A MINIMUM OF 24 HOURS AND RESTRIKE WITH A WARM HAMMER.

BENT NUMBER	PILE TIP ELEVATION
1	247.00
2, 3, 4	249.00
5, 6, 7, 8, 9	246.00
10	250.00

METAL SHELL PILES - THE MINIMUM SHELL THICKNESS FOR PILES HAVING AN OUTSIDE DIAMETER OF 16" OR LESS SHALL BE 1/4" AND FOR PILES HAVING AN OUTSIDE DIAMETER GREATER THAN 16" THRU 18" SHALL BE 5/16". USE THIS SHELL THICKNESSES IN LIEU OF THOSE CALLED FOR IN SUB-SECTION 520.3.05.M AND SUB-SECTION 855.2.01.A.1 OF THE GEORGIA DOT SPECIFICATIONS.

PILE CLOSURE PLATE DETAIL - USE CLOSURE PLATE OPTION 2 AT THIS SITE IN ACCORDANCE WITH SUB-SECTION 520.3.05.M OF THE GEORGIA DOT SPECIFICATIONS.

SUMMARY OF QUANTITIES

PAY ITEM NUMBER	QUANTITY	UNIT	PAY ITEM
500-0100	1900	SY	GROOVED CONCRETE
500-1011	LUMP	LS	SUPERSTR CONCRETE, CL D, BR NO - 1 (570)
500-2100	888	LF	CONCRETE BARRIER
500-3002	114	CY	CLASS AA CONCRETE
507-9002	2649	LF	PSC BEAMS, AASHTO TYPE II, BR NO - 1
511-1000	13628	LB	BAR REINF STEEL
511-3000	LUMP	LS	SUPERSTR REINF STEEL, BR NO - 1 (166379)
520-1318	2980	LF	PILING IN PLACE, METAL SHELL, 18 IN OD
520-4318	1	EA	LOAD TEST, METAL SHELL, 18 IN OD (IF REQ'D)
523-1100	10	EA	DYNAMIC PILE TEST
540-1101	LUMP	LS	REMOVAL OF EXISTING BR, STA NO - 383+15.00
603-2024	1901	SY	STN DUMPED RIP RAP, TP 1, 24 IN
603-7000	1901	SY	PLASTIC FILTER FABRIC
620-0200	900	LF	TEMPORARY BARRIER, METHOD NO. 2

BRIDGE NO. 1



DATE		REVISIONS		BRIDGE NO. 1 GEORGIA DEPARTMENT OF TRANSPORTATION ENGINEERING DIVISION - OFFICE OF BRIDGES AND STRUCTURES GENERAL NOTES SR 47 (US 221) OVER BRIER CREEK JEFFERSON-MCDUFFIE COUNTIES CSBRG-0007-00(041)	
DRAWING NO. 35-002		BRIDGE SHEET 2 OF 14		SCALE: NONE AUGUST 2013	
DESIGNED AOC	CHECKED FAQ	DESIGNED CAB	DESIGN GROUP EJC	REVIEWED DLC/WND	APPROVED BFR