

BRIDGE CONSISTS OF

- 2 - 46'-0" TYPE I MOD PSC BEAM SPANS ----- SPECIAL DESIGN
- 1 - 125'-0" BULB TEE, 63 IN, PSC BEAM SPAN ----- SPECIAL DESIGN
- 1 - 93'-0" BULB TEE, 54 IN, PSC BEAM SPAN ----- SPECIAL DESIGN
- 1 - MICRO-PILE END BENT ----- SPECIAL DESIGN
- 1 - STEEL H PILE END BENT ----- SPECIAL DESIGN
- 1 - STEEL H PILE INTERMEDIATE BENT ----- SPECIAL DESIGN
- 2 - CONCRETE INTERMEDIATE BENTS ----- SPECIAL DESIGN
- 4 - END POST AND GUARDRAIL ATTACHMENT DETAIL ----- GA. STD. 3054 (9-30-02)
(L = 4'-3"; W = 1'-1"; H = 3'-6")
(L = 5'-0"; W = 1'-1"; H = 3'-6")
- 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)

DRAINAGE DATA

DRAINAGE AREA ----- 81.7 SQ MILES

FLOOD FREQUENCY	TOTAL DISCHARGE	MEAN VELOCITY	AREA OF OPENING UNDER FLOODSTAGE	BACKWATER
50 YEAR	9,305 CFS	4.54 FPS	2,049 SQ FT	0.50 FT
100 YEAR	10,558 CFS	4.79 FPS	2,206 SQ FT	0.59 FT
500 YEAR	14,183 CFS	5.43 FPS	2,612 SQ FT	0.95 FT

TRAFFIC DATA

TRAFFIC ----- ADT = 22,150 (2020)
ADT = 30,450 (2040)

DESIGN SPEED ----- 45 MPH

% TRUCKS ----- 11 %

UTILITIES

NO UTILITIES ON BRIDGE

GENERAL NOTES

SPECIFICATIONS - GEORGIA STANDARD SPECIFICATIONS, 2013 EDITION, AND 2016 SUPPLEMENTAL SPECIFICATIONS 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. MAINTAIN 2 INCH MINIMUM CLEARANCE ON ALL REINFORCEMENT UNLESS OTHERWISE NOTED.

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 I - PLACE TEMPORARY BARRIERS AS SHOWN ON THE PLANS AND GEORGIA STANDARD NOS. 4960 AND 4961 TO PROVIDE FOR 2'-12" TRAFFIC LANES. SUPPLY AND USE THE BARRIER IN ACCORDANCE WITH SECTION 520 OF THE GEORGIA DOT SPECIFICATIONS.

TRAFFIC CONTROLS - SEE ROADWAY PLANS FOR 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
THE ORIGINAL BRIDGE WAS BUILT UNDER PROJECT NUMBER F010-1(8) (PROJECT ID NO. H007817).

DIMENSIONS AND ELEVATIONS - VERIFY ALL DIMENSIONS AND ELEVATIONS IN THE FIELD PRIOR TO ORDERING MATERIALS OR BUILDING FORMS. MEASURE CAMBER OF STAGE III BEAMS AND ADJUST "D" DIMENSION AND GAP ELEVATIONS AS NECESSARY FOR MEASURED CAMBER.

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 APPLICATION IN THE OVERALL BID SUBMITTED.

WAITING PERIOD - NONE REQUIRED.

COFFERDAMS - PROVIDE COFFERDAMS AT BENTS 3 AND 4.

FOUNDATION BACKFILL MATERIAL - PLACE 1'-0" OF TYPE II FOUNDATION BACKFILL MATERIAL UNDER EACH FOOTING AT BENTS 3 AND 4. THE QUANTITY IS BASED ON THE PLAN FOOTING DIMENSIONS PLUS 2'-0". USE OF THIS MATERIAL MAY BE ELIMINATED BY THE ENGINEER IF THE FOOTING AREA IS DRY.

GENERAL NOTES (CONT'D)

PLAN DRIVING OBJECTIVE - SEE SUBSTRUCTURE DETAILS.

MICROPILE INSTALLATION OBJECTIVE - SEE FOUNDATION DETAILS.

MICROPILES - USE TYPE A MICROPILES AS DESCRIBED IN THE AASHTO LRFD SPECIFICATIONS.

DRIVING RESISTANCE - DETERMINE DRIVING RESISTANCE FOR PILES USING DYNAMIC PILE TESTING IN ACCORDANCE WITH SPECIAL PROVISION 520. DYNAMIC PILE TESTING SHALL BE REQUIRED AT BENTS 2 LT, 4 LT AND 5 RT.

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. ALL DYNAMIC PILE TESTING SHALL BE COMPLETED IN STAGE II CONSTRUCTION.

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.

VIBRATION MONITORING - THE PROJECT ENGINEER SHOULD CONTACT THE GEOTECHNICAL BUREAU OF THE GEORGIA DOT OFFICE OF MATERIALS AND TESTING AT 404-608-4720 TWO WEEKS PRIOR TO DRIVING PILES. SEE SPECIAL PROVISION 154 - CONSTRUCTION VIBRATION MONITORING.

MICROPILE TESTING - PERFORM STATIC LOAD TESTS AND PROOF TESTING AT BENT 1 IN ACCORDANCE WITH SPECIAL PROVISION 999 - MICROPILE. THE MAXIMUM APPLIED LOAD REQUIRED FOR STATIC LOAD TESTS, IN COMPRESSION AND TENSION, IS 360 KIPS.

PILE LENGTHS - ERRATIC PILE LENGTHS CAN BE EXPECTED.

PILE POINTS - REINFORCE ALL PILE TIPS AT BENTS 3, 4 AND 5 IN ACCORDANCE WITH SECTIONS 520 AND 855 OF THE GEORGIA DOT SPECIFICATIONS.

PILE ENCASEMENT - ENCASE PILES AT BENT 2 IN CONCRETE UP TO ELEVATION 569.25 OR 2'-0" ABOVE GROUND, WHICHEVER IS HIGHER. PROVIDE ENCASEMENT IN ACCORDANCE WITH SECTION 547 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. STRUTS MAY BE SHIFTED SLIGHTLY TO CLEAR FORMED HOLES.

STEEL DIAPHRAGMS - AT CONTRACTOR'S OPTION, STEEL DIAPHRAGMS MAY BE USED IN LIEU OF THE CONCRETE DIAPHRAGMS SHOWN IN THE PLANS. AT A MINIMUM, STEEL DIAPHRAGMS ARE TO BE DESIGNED FOR APPLIED INDOOR LOADS. STABILITY OF THE BEAMS AND STRUCTURE DURING ALL PHASES OF CONSTRUCTION ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. SUBMIT SHOP DRAWINGS AND CALCULATIONS FOR THE STEEL DIAPHRAGMS TO THE ENGINEER FOR REVIEW AND ACCEPTANCE. THE USE OF STEEL DIAPHRAGMS SHALL BE INCLUDED IN THE PRICE BID FOR "LUMP - SUPERSTR CONCRETE." OPTIONAL STEEL DIAPHRAGM SHALL NOT CONFLICT WITH DECK DRAIN SYSTEM.

STANDARD PLAN MODIFICATION - MODIFY THE APPROACH SLAB STANDARD TO INCREASE THE 3/4" EXPANSION JOINT BETWEEN THE APPROACH SLAB AND THE BACK FACE PAVING REST AND END POST TO 1 1/2" AT BENT 1 ONLY. KEEP THE EXPANSION JOINT AT END BENT CONTINUOUS AROUND END POST. INCLUDE COST OF JOINT IN APPROACH SLAB PAYMENT. SEE ROADWAY PLANS FOR APPROACH SLAB PAYMENT.

POUR STRIP - CONCRETE FOR THE POUR STRIP SHALL BE CLASS AA-1 CONCRETE AND SHALL BE PAID FOR IN "LUMP - SUPERSTR CONCRETE."

LIGHTWEIGHT CONCRETE - FOR SIDEWALKS, MEDIAN, AND PARAPETS, USE LIGHTWEIGHT CONCRETE IN ACCORDANCE WITH SPECIAL PROVISION 500. INCLUDE ALL COSTS ASSOCIATED WITH PROVIDING LIGHTWEIGHT CONCRETE IN THE PRICE BID FOR "LUMP - SUPERSTR CONCRETE."

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. DO NOT GROOVE UNDER SIDEWALK OR RAISED MEDIAN.

WELDING - ALL WELDING ON GEORGIA DOT PROJECTS SHALL BE PERFORMED BY GDOT CERTIFIED WELDERS THAT HAVE IN THEIR POSSESSION A CURRENT WELDING CERTIFICATION CARD ISSUED BY THE OFFICE OF MATERIALS AND TESTING. USE ONLY EE70XX (EXCLUDING E7014 AND E7024) LOW HYDROGEN ELECTRODES FOR MANUAL SHIELDED METAL ARC WELDING.

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

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 = 0.112)

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

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

CONCRETE: SUPERSTRUCTURE ----- CLASS D, $f_c = 4,000$ PSI
PARAPET ----- CLASS D, $f_c = 4,000$ PSI
PSC BEAMS ----- CLASS AAA, $f_c =$ SEE BEAM SHEETS
PSC BEAM ALLOWABLE TENSION ----- SEE BEAM SHEETS
SUBSTRUCTURE ----- CLASS AA, $f_c = 3,500$ PSI

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

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

STEEL H-PILES: ----- GRADE 36, $f_y = 36,000$ PSI

SUMMARY OF QUANTITIES

PAY ITEM NUMBER	QUANTITY	UNIT	PAY ITEM
207-0203	4	CY	FOUND BK FILL MATL, TP II
2-0300	549	CY	BRIDGE EXCAVATION, STREAM CROSSING
500-1100	1804	SY	GROOVED CONCRETE
500-1011	LUMP	LS	SUPERSTR CONCRETE, CL D, BR NO - 1 (1335)
500-3002	476	CY	CLASS AA CONCRETE
507-8900	1250	LF	PSC BEAMS, AASHTO TYPE I MOD, BR NO - 1
507-9030	1281	LF	PSC BEAMS, AASHTO, BULB TEE, 54 IN, BR NO - 1
507-9031	1737	LF	PSC BEAMS, AASHTO, BULB TEE, 63 IN, BR NO - 1
511-1000	70962	LB	BAR REINF STEEL
511-3000	LUMP	LS	SUPERSTR REINF STEEL, BR NO - 1 (248773)
520-0595	44	EA	H-PILE POINTS, HP 14 X 102
520-0597	28	EA	H-PILE POINTS, HP 14 X 117
520-1151	1025	LF	PILING IN PLACE, STEEL H, HP 14 X 89
520-1173	2490	LF	PILING IN PLACE, STEEL H, HP 14 X 102
520-1179	1235	LF	PILING IN PLACE, STEEL H, HP 14 X 117
520-4151	1	EA	LOAD TEST, STEEL H, HP 14 X 89 (IF REQD)
520-4173	1	EA	LOAD TEST, STEEL H, HP 14 X 102 (IF REQD)
520-4179	1	EA	LOAD TEST, STEEL H, HP 14 X 117 (IF REQD)
523-1100	3	EA	DYNAMIC PILE TEST
525-1000	12	EA	COFFERDAM
540-1102	LUMP	LS	REMOVAL OF EXISTING BR, BR NO - 1 LT
540-1102	LUMP	LS	REMOVAL OF EXISTING BR, BR NO - 1 RT
544-1000	LUMP	LS	DECK DRAIN SYSTEM, BR NO - 1
547-2014	56	LF	PILE ENCASEMENT, 14 IN PILE
603-2024	1248	SY	STN DUMPED RIP RAP, TP 1, 24 IN
603-7000	1248	SY	PLASTIC FILTER FABRIC
999-7500	925	LF	MICROPILE 7.625 IN
999-7510	2	EA	LOAD TEST MICROPILE 7.625 IN
999-7520	1	EA	PROOF TEST MICROPILE 7.625 IN

BRIDGE NO. 1

DATE		REVISIONS		BY	
GEORGIA DEPARTMENT OF TRANSPORTATION ENGINEERING DIVISION-OFFICE OF BRIDGES AND STRUCTURES					
GENERAL NOTES SR 18 OVER LONG CANE CREEK TROUP COUNTY 0013999					
NO SCALE			NOVEMBER 2020		
DESIGNED JNA	CHECKED SAW	REVIEWED DLC/SKG			
DRAWN DLR	DESIGN GROUP DPD	APPROVED WMD			



DRAWING NO. 35-0002
BRIDGE SHEET 2 OF 34