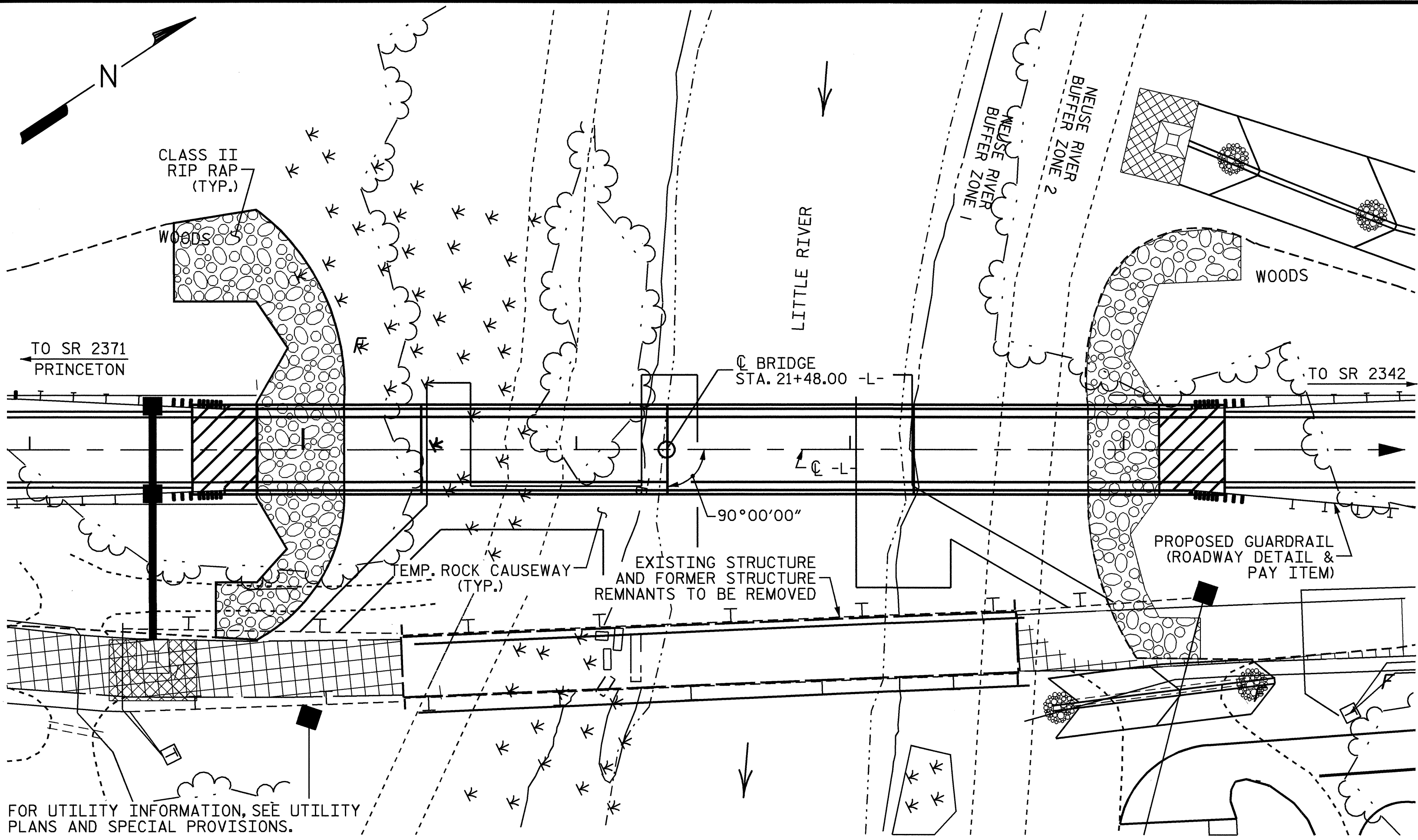


BM-2: RR SPIKE STAMPED "BM2" SET IN 30" OAK TREE 214' RT. OF BL STA. 15+51.13, EL. 102.66, DATUM NAVD 88

NOTES



LOCATION SKETCH

ASSUMED LIVE LOAD = HS 20 OR ALTERNATE LOADING.  
 FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.  
 FOR EROSION CONTROL MEASURES SEE EROSION CONTROL PLANS.  
 THIS BRIDGE HAS BEEN DESIGNED BY THE STRENGTH DESIGN METHOD AS SPECIFIED IN AASHTO STANDARD SPECIFICATIONS.  
 PRESTRESSED CONCRTE DECK PANELS MAY BE USED IN LIEU OF METAL STAY-IN-PLACE FORMS IN ACCORDANCE WITH ARTICLE 420-3 OF THE STANDARD SPECIFICATIONS.  
 REMOVABLE FORMS MAY BE USED IN LIEU OF METAL STAY-IN-PLACE FORMS IN ACCORDANCE WITH ARTICLE 420-3 OF THE STANDARD SPECIFICATIONS.  
 THE LOCATION OF THE CONSTRUCTION JOINT IN THE DRILLED PIERS IS BASED ON AN APPROXIMATE GROUND LINE ELEVATION. IF THE CONSTRUCTION JOINT IS ABOVE THE ACTUAL GROUND ELEVATION, THE CONTRACTOR SHALL PLACE THE CONSTRUCTION JOINT 1 FT. BELOW THE GROUND LINE.  
 AFTER SERVING AS A TEMPORARY STRUCTURE THE EXISTING STRUCTURE CONSISTING OF 5 @ 45'-0" SIMPLE I-BEAM SPANS; CLEAR ROADWAY WIDTH OF 22'-0" AND REINFORCED CONCRETE FLOOR ON REINFORCED CONCRETE POST AND BEAM BENTS AND LOCATED 80'± DOWNSTREAM FROM PROPOSED STRUCTURE SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY POSTED BELOW THE LEGAL LOAD LIMIT. SHOULD THE STRUCTURAL INTEGRITY OF THE BRIDGE FURTHER DETERIORATE, THIS LOAD LIMITATION MAY BE REDUCED AS FOUND NECESSARY DURING THE LIFE OF THE PROJECT.  
 THE FORMER STRUCTURE REMNANTS DIRECTLY UNDER THE EXISTING BRIDGE SHALL BE REMOVED AS PART OF THE EXISTING STRUCTURE REMOVAL. PAYMENT FOR THIS REMOVAL SHALL BE INCLUDED IN THE REMOVAL OF EXISTING STRUCTURE.  
 REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL INTO THE WATER. THE CONTRACTOR SHALL REMOVE THE BRIDGE AND SUBMIT PLANS FOR DEMOLITION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.  
 WHEN DRIVING PILES, THE MAXIMUM BLOW COUNT SHALL NOT BE EXCEEDED.  
 THE DRILLED PIERS AT BENTS NO. 1, NO. 2 AND NO. 3 HAVE BEEN DESIGNED FOR BOTH SKIN FRICTION AND TIP BEARING. THE REQUIRED TIP BEARING CAPACITY IS 20 TSF.  
 FOR DRILLED PIERS, SEE SPECIAL PROVISIONS.  
 DRILLED PIERS AT BENT NO. 1, NO. 2 AND NO. 3 SHALL EXTEND TO AN ELEVATION NO HIGHER THAN EL. 86.00, EL. 87.00 AND EL. 88.00 RESPECTFULLY AND SATISFY THE REQUIRED TIP BEARING CAPACITY.  
 PERMANENT STEEL CASING MAY BE REQUIRED FOR DRILLED PIERS AT BENTS NO. 1, NO. 2 AND NO. 3. IF REQUIRED THE CASING SHALL NOT EXTEND BELOW EL. 93.00, EL. 93.00 AND EL. 94.00 RESPECTFULLY WITHOUT THE ENGINEER'S PERMISSION. THE NEED FOR PERMANENT STEEL CASING WILL BE DETERMINED BY THE ENGINEER.  
 DRILLED PIERS FOR BENT NO. 1, BENT NO. 2 AND BENT NO. 3 HAVE BEEN DESIGNED FOR AN APPLIED LOAD OF 287, 328 AND 333 TONS EACH RESPECTFULLY AT THE TOP OF THE COLUMN.

SPT TESTING IS NOT REQUIRED TO DETERMINE THE TIP BEARING CAPACITY OF THE DRILLED PIERS AT BENT NO. 1, NO. 2 OR NO. 3.  
 SID INSPECTIONS ARE NOT REQUIRED TO DETERMINE THE BOTTOM CLEANLINESS OF THE DRILLED PIERS AT BENT NO. 1, NO. 2 OR NO. 3.  
 CSL TUBES ARE REQUIRED AND CSL TESTING MAY BE REQUIRED FOR THE DRILLED PIERS AT BENT NO. 1, NO. 2 AND NO. 3. SEE SPECIAL PROVISION FOR CROSSHOLE SONIC LOGGING.  
 THE SCOUR CRITICAL ELEVATION FOR BENT NO. 1, BENT NO. 2 AND BENT NO. 3 IS EL. 92.000, EL. 90.000 AND EL. 93.000 RESPECTFULLY. THE SCOUR CRITICAL ELEVATIONS ARE FOR USE BY MAINTENANCE FORCES TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.  
 SLURRY CONSTRUCTION SHALL NOT BE USED FOR THIS PROJECT.  
 THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH HEC 18, "EVALUATING SCOUR AT BRIDGES", NOVEMBER, 1995.  
 THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AASHTO STANDARD SPECIFICATIONS FOR SEISMIC DESIGN OF HIGHWAY BRIDGES FOR SEISMIC PERFORMANCE CATEGORY A.  
 THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 400 TONS OF REINFORCING STEEL, ONE 30 INCH SAMPLE OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 400 TONS OF REINFORCING STEEL, TWO 30 INCH SAMPLE OF EACH SIZE BAR USED. THE BARS FROM WHICH THE SAMPLES ARE TAKEN MUST THEN BE SPICED WITH REPLACEMENT BARS OF THE SIZE AND LENGTH OF THE SAMPLE, PLUS A MINIMUM LAP SPLICE OF THIRTY BAR DIAMETERS.  
 INASMUCH AS THE PAINT SYSTEM ON THE EXISTING STRUCTURAL STEEL CONTAINS LEAD, THE CONTRACTOR'S ATTENTION IS DIRECTED TO ARTICLE 107-1 OF THE STANDARD SPECIFICATIONS. ANY COSTS RESULTING FROM COMPLIANCE WITH APPLICABLE STATE OR FEDERAL REGULATIONS PERTAINING TO HANDLING OF MATERIALS CONTAINING LEAD BASED PAINT SHALL BE INCLUDED IN THE BID PRICE FOR "REMOVAL OF EXISTING STRUCTURE AT STATION 21+48.00-L-".  
 AT THE CONTRACTOR'S OPTION, AND UPON REMOVAL OF THE CAUSEWAY, THE CLASS II RIP RAP USED IN THE CAUSEWAY MAY BE PLACED AS RIP RAP SLOPE PROTECTION. SEE SPECIAL PROVISIONS FOR CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY ACCESS AT STATION 21+48.00-L-.  
 NEEDLE BEAMS WILL NOT BE ALLOWED UNLESS OTHERWISE CALLED FOR ON THE PLANS OR APPROVED BY THE ENGINEER.  
 FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.  
 FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.  
 PILES FOR END BENT NO. 1 AND NO. 2 SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 50 TONS EACH.

HYDRAULIC DATA

DESIGN DISCHARGE = 11200 CFS  
 FREQUENCY OF DESIGN FLOOD = 50 YRS.  
 DESIGN HIGH WATER ELEVATION = 110.600 FT.  
 DRAINAGE AREA = 263.0 SQ. MI.  
 BASIC DISCHARGE (Q100) = 14100 CFS  
 BASIC HIGH WATER ELEVATION = 112.400 FT.

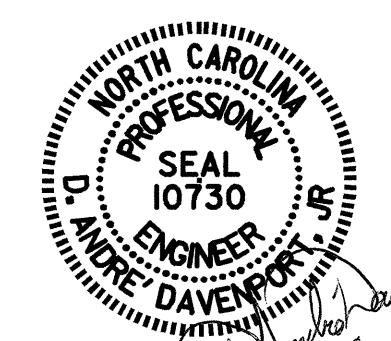
OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE = N/A  
 FREQUENCY OF OVERTOPPING FLOOD = 500 YRS.+  
 OVERTOPPING FLOOD ELEVATION = 127.900 FT.

TOTAL BILL OF MATERIAL

	CONST. MAINT. & REMOVAL OF TEMP. ACCESS	REMOVAL OF EXISTING STRUCTURE	3'-6" Ø DRILLED PIERS IN SOIL	3'-6" Ø DRILLED PIERS NOT IN SOIL	PERMANENT STEEL CASING FOR 3'-6" Ø DRILLED PIER	CROSSHOLE SONIC LOGGING	CSL TUBES	REINFORCED CONCRETE DECK SLAB	GROOVING BRIDGE FLOORS	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	SPIRAL COLUMN REINFORCING STEEL	54" PRESTRESSED CONCRETE GIRDERS	HP 12 X 53 STEEL PILES	CONCRETE BARRIER RAIL	PLAIN RIP RAP CLASS II (2'-0" THICK)	FILTER FABRIC FOR DRAINAGE	ELASTOMERIC BEARINGS	EVAZOTE JOINT SEALS		
	LUMP SUM	LUMP SUM	LIN. FT.	LIN. FT.	LIN. FT.	EACH	FEET	SQ. FT.	SQ. FT.	CU. YDS.	LUMP SUM	LBS.	LBS.	NO.	LIN. FT.	NO.	LIN. FT.	TONS	SQ. YDS.	LUMP SUM	LUMP SUM	
SUPERSTRUCTURE	LUMP SUM	LUMP SUM						11600	9530		LUMP SUM			16	1301.833			657.94		LUMP SUM	LUMP SUM	
END BENT NO.1										24.9		3588			9	180		380	420			
BENT NO.1			16	16	18		148			31.4		10672	1448									
BENT NO.1			6	16	10	1	108			34.0		10659	1455									
BENT NO.1			5	18	11		112			33.7		10633	1449									
END BENT NO.2										25.0		3772			10	225		355	395			
TOTAL	LUMP SUM	LUMP SUM	27	50	39	1	368	11600	9530	149.0	LUMP SUM	39324	4352	16	1301.833	19	405	657.94	735	815	LUMP SUM	LUMP SUM

DRAWN BY : D.A. DAVENPORT DATE : 2/19/04  
 CHECKED BY : M. PATTERSON DATE : 3/2/04



PROJECT NO. B-3865  
 JOHNSTON COUNTY  
 STATION: 21+48.00 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

GENERAL DRAWING  
 FOR BRIDGE OVER LITTLE RIVER ON SR 1002 BETWEEN SR 2371 AND SR 2342

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-3
1			3			TOTAL SHEETS 33
2			4			