

BENCH MARK : TBM #B TRR SPIKE SET IN 13" MAPLE TREE STA. 22+59.36 -BL- 21.5' RT.
 N= 874630.6253 E= 1734240.4425 ELEV. 767.49 DATUM : NGVD 29

HYDROGRAPHIC DATA

DESIGN DISCHARGE = 3500 CFS.
 FREQUENCY OF DESIGN FLOOD = 25 YEARS
 DESIGN HIGH WATER ELEVATION = 767.7 FT.
 DRAINAGE AREA = 10.4 SQ. MI.
 BASIC DISCHARGE(Q100) = 4800 CFS.
 BASIC HIGH WATER ELEVATION = 769.5 FT.

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE = 8950 CFS.
 FREQUENCY OF OVERTOPPING FLOOD = 500 YEARS (-)
 OVERTOPPING FLOOD ELEVATION = 772.7 FT.

NOTES

ASSUMED LIVE LOAD = HS20 OR ALTERNATE LOADING, EXCEPT THAT CORED SLAB UNITS HAVE BEEN DESIGNED FOR HS25.

THIS BRIDGE SHALL BE CONSTRUCTED USING TOP-DOWN CONSTRUCTION METHODS. THE USE OF A TEMPORARY CAUSEWAY OR WORK BRIDGE IS NOT PERMITTED.

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.

THE EXISTING STRUCTURE CONSISTS OF 5 SPANS (1 @ 18'- 3", 1 @ 16'- 3", 1 @ 40'- 9", 1 @ 16'- 6", AND 1 @ 17'- 6"), WITH A 2.5" ASPHALT WEARING SURFACE ON 4 X 8 TIMBER FLOOR ON 17 LINES OF 6 X 12 TIMBER JOISTS IN SPANS 1, 2, 4 AND 5, AND 10 LINES OF 16" I-BEAMS IN SPAN 3, WITH A CLEAR ROADWAY WIDTH OF 19.1'. THE SUBSTRUCTURE CONSISTS OF TIMBER CAPS ON TIMBER PILES, AT THE END BENTS AND INTERIOR BENTS 1 AND 4, AND REINFORCED CONCRETE CAPS ON TIMBER PILES AT INTERIOR BENTS 2 AND 3, WITH A STEEL CRUTCH AT INTERIOR BENT 2. THE EXISTING BRIDGE IS LOCATED AT THE SAME LOCATION AS THE PROPOSED STRUCTURE AND SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY POSTED BELOW THE LEGAL LOAD LIMIT. SEE SPECIAL PROVISIONS FOR "REMOVAL OF EXISTING STRUCTURE @ STA. 13+54.50 -L-."

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.

THE SUBSTRUCTURE OF THE EXISTING BRIDGE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE SUBSTRUCTURE SHOWN THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

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 SAMPLES OF EACH SIZE BAR USED. THE BAR FROM WHICH THE SAMPLES ARE TAKEN MUST THEN BE SPLICED WITH REPLACEMENT BARS OF THE SIZE AND LENGTH OF THE SAMPLE, PLUS A MINIMUM LAP SPLICE OF THIRTY BAR DIAMETERS.

THE SCOUR CRITICAL ELEVATION FOR BENTS NO. 1 AND NO. 2 IS ELEVATION 734. THE SCOUR CRITICAL ELEVATIONS ARE FOR USE BY MAINTENANCE FORCES TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

PILES FOR END BENT NO. 1 AND END BENT NO. 2 SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 50 TONS EACH.

PILES FOR BENT NO. 1 AND BENT NO. 2 SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 50 TONS EACH PLUS CAPACITY TO ACCOUNT FOR DOWN DRAG OR NEGATIVE SKIN FRICTION AND SCOUR.

PROVIDE GALVANIZED STEEL PILES AT BENT 1 AND BENT 2 IN ACCORDANCE WITH SECTION 1076 OF THE STANDARD SPECIFICATIONS AND THE GALVANIZING STEEL PILES SPECIAL PROVISION.

WHEN DRIVING PILES, THE MAXIMUM BLOW COUNT SHALL NOT BE EXCEEDED.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

ASPHALT WEARING SURFACE IS INCLUDED IN ROADWAY QUANTITY ON ROADWAY PLANS.

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 13+54.50 -L-."

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

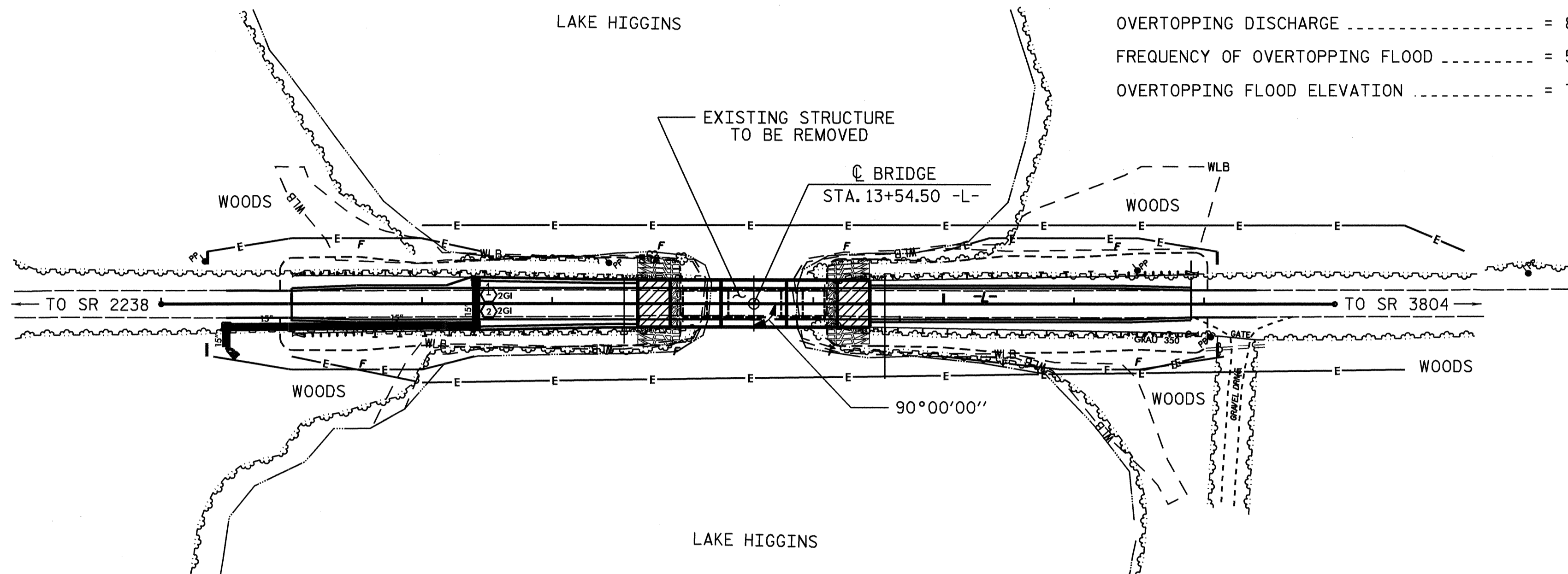
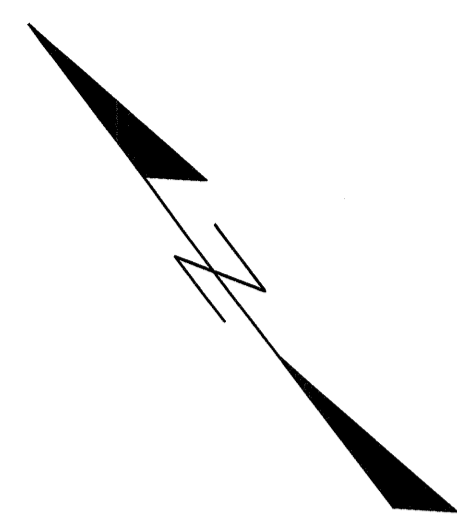
FOR STEEL H PILES, SEE SPECIAL PROVISIONS.

THE COST OF THE 2 BAR METAL RAIL (INCLUDING ALL HARDWARE AND ANY INCIDENTALS) AND CONCRETE PARAPET SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR CONSTRUCTION OF SUPERSTRUCTURE. SEE SPECIAL PROVISIONS FOR CONSTRUCTION OF SUPERSTRUCTURE.

THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA SHALL BE EXCAVATED FOR A DISTANCE OF 25 FT. EACH SIDE OF CENTERLINE ROADWAY AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR UNCLASSIFIED STRUCTURE EXCAVATION. FOR UNCLASSIFIED STRUCTURE EXCAVATION, SEE SPECIAL PROVISIONS.

FOR CONSTRUCTION OF SUPERSTRUCTURE, SEE SPECIAL PROVISIONS.

FOR CONSTRUCTION OF SUBSTRUCTURE, SEE SPECIAL PROVISIONS.



LOCATION SKETCH

FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

TOTAL BILL OF MATERIAL										
	REMOVAL OF EXISTING STRUCTURE	UNCLASSIFIED STRUCTURE EXCAVATION	HP 12 X 53 STEEL PILES		HP 14 X 73 STEEL PILES		GALVANIZING STEEL PILES	PLAIN RIP RAP CLASS II (2'- 0" THICK)	CONSTRUCTION OF SUPERSTRUCTURE	CONSTRUCTION OF SUBSTRUCTURE
			NO.	LIN. FT.	NO.	LIN. FT.				
SUPERSTRUCTURE	LUMP SUM	LUMP SUM							LUMP SUM	LUMP SUM
END BENT NO. 1		LUMP SUM	8	360				138		
BENT NO. 1					10	450	LUMP SUM			
BENT NO. 2					10	500	LUMP SUM			
END BENT NO. 2		LUMP SUM	8	360				141		
TOTAL	LUMP SUM	LUMP SUM	16	720	20	950	LUMP SUM	279	LUMP SUM	LUMP SUM

DRAWN BY : D. A. GLADDEN DATE : 8-2-05
 CHECKED BY : M. G. SHAIKH DATE : 8-26-05

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PROJECT NO. B-3848
GUILFORD COUNTY
 STATION: 13+54.50 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
GENERAL DRAWING					
FOR BRIDGE #102 OVER BRUSH CREEK/LAKE HIGGINS ON SR 2124 BETWEEN SR 2238 AND SR 3804					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					TOTAL SHEETS 27