

NOTES

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 CONCRETE 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 EXISTING STRUCTURE CONSISTING OF FIVE SPANS (1 @ 30.5', 3 @ 30.0' & 1 @ 30.5'), WITH A CLEAR ROADWAY WIDTH OF 29.1' AND HAVING A CONCRETE DECK WITH ASPHALT WEARING SURFACE SUPPORTED BY PRESTRESSED CONCRETE CHANNELS ON REINFORCED CONCRETE CAP ON TIMBER PILES 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.

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 MATERIAL SHOWN IN THE CROSS-HATCHED AREA SHALL BE EXCAVATED FOR A DISTANCE OF 35 FT. EACH SIDE OF CENTERLINE ROADWAY AS DIRECTED BY THE ENGINEER. THE ESTIMATED QUANTITY IS LESS THAN 500 CUBIC YARDS. THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR UNCLASSIFIED STRUCTURE EXCAVATION. FOR UNCLASSIFIED STRUCTURE EXCAVATION, SEE SPECIAL PROVISIONS.

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 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 ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

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.

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.

FOR FABRICATED METAL STAY IN PLACE FORMS, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR PRESTRESSED CONCRETE MEMBERS, SEE SPECIAL PROVISIONS.

FOR CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY ACCESS, SEE SPECIAL PROVISIONS.

PILES AT BENTS NO. 1, 2 & 3 SHALL BE DRIVEN TO AN ELEVATION NO HIGHER THAN 32.0, 27.0 AND 34.0 FT. RESPECTIVELY AND SATISFY THE BEARING CAPACITY OF 85 TONS EACH.

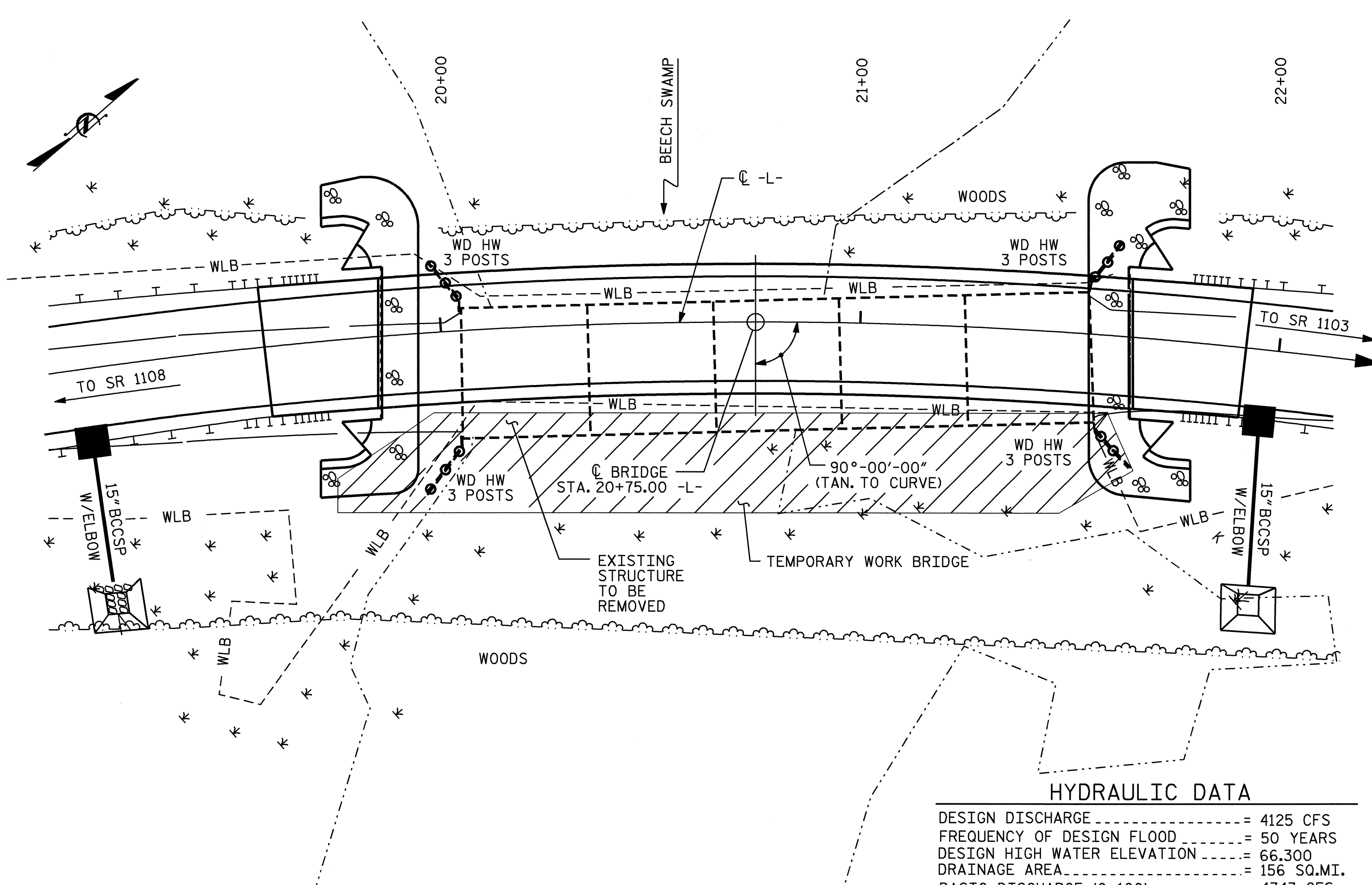
THE SCOUR CRITICAL ELEVATION FOR BENT NO. 1 IS 50.0 FT., BENT NO. 2 IS 45.0 FT. AND BENT NO 3 IS 52.0 FT. THE SCOUR CRITICAL ELEVATIONS ARE FOR USE BY MAINTENANCE FORCES TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

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

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

IT HAS BEEN ESTIMATED THAT A HAMMER WITH A EQUIVALENT RATED ENERGY IN THE RANGE OF 40,000 TO 70,000 FT-POUNDS PER BLOW WILL BE REQUIRED TO DRIVE THE 18 INCH STEEL PIPE PILES. THIS ESTIMATED ENERGY RANGE DOES NOT RELEASE THE CONTRACTOR FROM THE PROVISIONS OUTLINED IN ARTICLE 450-6 OF THE STANDARD SPECIFICATIONS.

THE FIRST PRODUCTION 18 INCH PIPE PILE SHALL BE DRIVEN AS A DYNAMIC LOAD TEST PILE AS DIRECTED BY THE ENGINEER. SEE BEARING PILES SPECIAL PROVISION. THE PILE DRIVEN ANALYZER AND WAVE EQUATION SHALL BE USED TO DETERMINE THE BEARING CAPACITY OF THE 18 INCH PIPE PILE.



HYDRAULIC DATA

DESIGN DISCHARGE	=	4125 CFS
FREQUENCY OF DESIGN FLOOD	=	50 YEARS
DESIGN HIGH WATER ELEVATION	=	66.300
DRAINAGE AREA	=	156 SQ.MI.
BASIC DISCHARGE (Q 100)	=	4743 CFS
BASIC HIGH WATER ELEVATION	=	67.000

OVERTOPPING FLOOD DATA

OVERTOPPING FLOOD DISCHARGE	=	6006 CFS
FREQUENCY OF OVERTOPPING FLOOD	=	100+ YEARS
OVERTOPPING ELEVATION	=	67.900

NOTE: FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

LOCATION SKETCH

TOTAL BILL OF MATERIAL

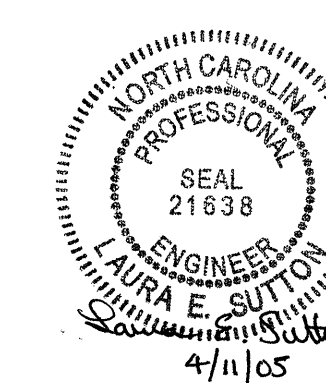
	CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY ACCESS	REMOVAL OF EXISTING STRUCTURE	DYNAMIC LOAD TEST	UNCLASSIFIED STRUCTURE EXCAVATION	REINFORCED CONCRETE DECK SLAB	GROOVING BRIDGE FLOORS	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	36" PRESTRESSED CONCRETE GIRDERS	HP 12 x 53 STEEL PILES	PP 18 x 0.50 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	EA.	LUMP SUM	SQ.FT.	SQ.FT.	CU.YDS.	LUMP SUM	LBS.	NO. LIN.FT.	NO. LIN.FT.	NO. LIN.FT.	LIN.FT.	TONS	SQ.YDS.	LUMP SUM	LUMP SUM
SUPERSTRUCTURE					6093	6369		LUMP SUM		16 699.33			355.83			LUMP SUM	LUMP SUM
END BENT NO. 1							21.8		3230		8 440			376	418		
BENT NO. 1			1				12.7		1754			5 350					
BENT NO. 2							12.7		1754			5 350					
BENT NO. 3							12.7		1754			5 350					
END BENT NO. 2							21.8		3230		8 400			416	463		
TOTAL	LUMP SUM	LUMP SUM	1	LUMP SUM	6093	6369	81.7	LUMP SUM	11722	16 699.33	16 840	15 1050	355.83	792	881	LUMP SUM	LUMP SUM

DRAWN BY: B.N.BARODAWALA DATE: 3-11-04
 CHECKED BY: J.H. MILLER DATE: 1-10-05

PROJECT NO. B-3467
 HALIFAX COUNTY
 STATION: 20+75.00 -L-

SHEET 4 OF 4

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 FOR BRIDGE OVER
 BEECH SWAMP
 ON SR 1003 BETWEEN
 SR 1108 AND SR 1103



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-4
1			3			TOTAL SHEETS 60
2			4			