

TOTAL BILL OF MATERIAL

	CONSTRUCTION, MAINTENANCE & REMOVAL OF TEMP. ACCESS	REMOVAL OF EXISTING STRUCTURE	FOUNDATION EXCAVATION FOR END BENT	3'-6" DIA DRILLED PIERS IN SOIL	3'-6" DIA DRILLED PIERS NOT IN SOIL	PERMANENT STEEL CASING FOR 3'-6" DIA DRILLED PIERS	CROSSHOLE SONIC LOGGING	CSL TUBES	UNCLASSIFIED STRUCTURE EXCAVATION	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	1 BAR METAL RAIL	1'-0" X 1'-6" CONCRETE PARAPET	PLAIN RIP RAP CLASS II (2'-0" THICK)	FILTER FABRIC FOR DRAINAGE	ELASTOMERIC BEARINGS	EVAZOTE JOINT SEALS		
	LUMP SUM	LUMP SUM	LUMP SUM	LIN.FT.	LIN.FT.	LIN.FT.	EACH	LIN.FT.	LUMP SUM	SQ.FT.	SQ.FT.	CU.YDS.	LUMP SUM	LBS.	LBS.	NO.	LIN.FT.	NO.	LIN.FT.	LIN.FT.	TONS	SQ. YARDS	LUMP SUM	LUMP SUM	
SUPERSTRUCTURE										5896	6141		LUMP SUM			12	771.33			374.67	389.83		LUMP SUM	LUMP SUM	
END BENT NO. 1			LUMP SUM									35.2		5517							45	50			
BENT NO. 1				3.0	16.0	6.0	1	96				26.2		6559	1556										
BENT NO. 2				3.0	16.0	6.0		96				25.6		6301	1135										
END BENT NO. 2												23.7		3415			8	120			235	260			
TOTAL	LUMP SUM	LUMP SUM	LUMP SUM	6.0	32.0	12.0	1	192	LUMP SUM	5,896	6,141	110.7	LUMP SUM	21,792	2,691	12	771.33	8	120	374.67	389.83	280	310	LUMP SUM	LUMP SUM

NOTES

THE CONTRACTOR'S ATTENTION IS DRAWN TO THE FACT THAT DUE TO THE LENGTH OF THE GIRDERS AND THE ALIGNMENT OF THE ROADS APPROACHING THE PROJECT SITE, IT WILL BE NECESSARY TO PROVIDE A SCHEME FOR DELIVERING THE GIRDERS FOR THE ENGINEER'S APPROVAL BEFORE ACTUALLY DELIVERING THE GIRDERS.

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 17+33.50 -L-.

THE CLASS AA CONCRETE IN THE BRIDGE DECK SHALL CONTAIN FLY ASH OR GROUND GRANULATED BLAST FURNACE SLAG AT THE SUBSTITUTION RATE SPECIFIED IN ARTICLE 1024-1 AND IN ACCORDANCE WITH ARTICLES 1024-5 AND 1024-6 OF THE STANDARD SPECIFICATIONS. NO PAYMENT WILL BE MADE FOR THIS SUBSTITUTION AS IT IS CONSIDERED INCIDENTAL TO THE COST OF THE REINFORCED CONCRETE DECK SLAB.

THIS BRIDGE HAS BEEN DESIGNED BY THE STRENGTH DESIGN METHOD AS SPECIFIED IN AASHTO STANDARD SPECIFICATIONS. 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.

THE LOCATION OF THE CONSTRUCTION JOINT IN THE DRILLED PIERS IS BASED ON THE 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.

THE CONTRACTOR MAY CHOOSE TO UTILIZE THE STANDARD OVERHANG FALSEWORK BRACING SYSTEM. SEE 'STANDARD OVERHANG FALSEWORK'

THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA SHALL BE EXCAVATED FOR A DISTANCE OF 15 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 ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH HEC 18, "EVALUATING SCOUR AT BRIDGES", NOVEMBER, 1995.

THE EXISTING STRUCTURE CONSISTING OF 4 SPANS @ 40' EACH, TIMBER DECK ON I-BMS, 19' CL. RDWY, EB: RC FULL HT., IB: 2 COL RC P&B, AND LOCATED AT THE PROPOSED STRUCTURE SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY POSTED BELOW THE LEGAL LOAD LIMIT. SEE SPECIAL PROVISIONS FOR REMOVAL OF EXISTING STRUCTURE.

THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR SEISMIC DESIGN OF HIGHWAY BRIDGES FOR SEISMIC PERFORMANCE CATEGORY A.

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 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 BARS 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 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 DRILLED PIERS AT BENT NO.1 AND 2 HAVE BEEN DESIGNED FOR BOTH SKIN FRICTION AND TIP BEARING. THE REQUIRED TIP BEARING CAPACITY IS 30 TONS/SF.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

THE REQUIRED TIP BEARING CAPACITY FOR BENT NO.1 AND 2 SHALL BE VERIFIED.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS. NEEDLE BEAMS WILL NOT BE ALLOWED UNLESS OTHERWISE CALLED FOR ON THE PLANS OR APPROVED BY THE ENGINEER.

DRILLED PIERS FOR BENT NO.1 AND 2 HAVE BEEN DESIGNED FOR AN APPLIED LOAD OF 248 TONS EACH AT THE TOP OF THE COLUMN.

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'.

PERMANENT STEEL CASING MAY BE REQUIRED FOR DRILLED PIERS AT BENT NO.1 AND 2. IF REQUIRED, THE CASING SHALL NOT EXTEND BELOW ELEVATION 857.50 WITHOUT THE ENGINEER'S PERMISSION. THE NEED FOR PERMANENT STEEL CASING WILL BE DETERMINED BY THE ENGINEER.

FOR BLASTING ADJACENT TO HIGHWAY STRUCTURES, SEE STANDARD SPECIFICATIONS ARTICLE 410-12.

FOR PERMANENT STEEL CASING, SEE SPECIAL PROVISIONS FOR DRILLED PIERS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

DRILLED PIERS AT BENT NO.1 AND 2 SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 851.00 FT. AND SATISFY THE REQUIRED TIP BEARING CAPACITY.

THE SCOUR CRITICAL ELEVATION FOR BENT NO.1 AND 2 IS ELEVATION 856.00 FT. THE SCOUR CRITICAL ELEVATION IS FOR USE BY MAINTENANCE FORCES TO MONITOR POSSIBLE PROBLEMS DURING THE LIFE OF THE STRUCTURE.

FOR DRILLED PIERS, SEE SPECIAL PROVISIONS.

SPT TESTING IS NOT REQUIRED TO DETERMINE THE TIP BEARING CAPACITY OF THE DRILLED PIERS AT BENT NO.1 AND 2.

SLURRY CONSTRUCTION SHALL NOT BE USED FOR THIS PROJECT.

SID INSPECTIONS ARE NOT REQUIRED TO DETERMINE THE BOTTOM CLEANLINESS OF THE DRILLED PIERS AT BENTS NO.1 AND 2.

CSL TUBES ARE REQUIRED AND CSL TESTING MAY BE REQUIRED FOR THE DRILLED PIERS AT BENT NO.1 AND BENT NO.2. SEE SPECIAL PROVISION FOR CROSSHOLE SONIC LOGGING.

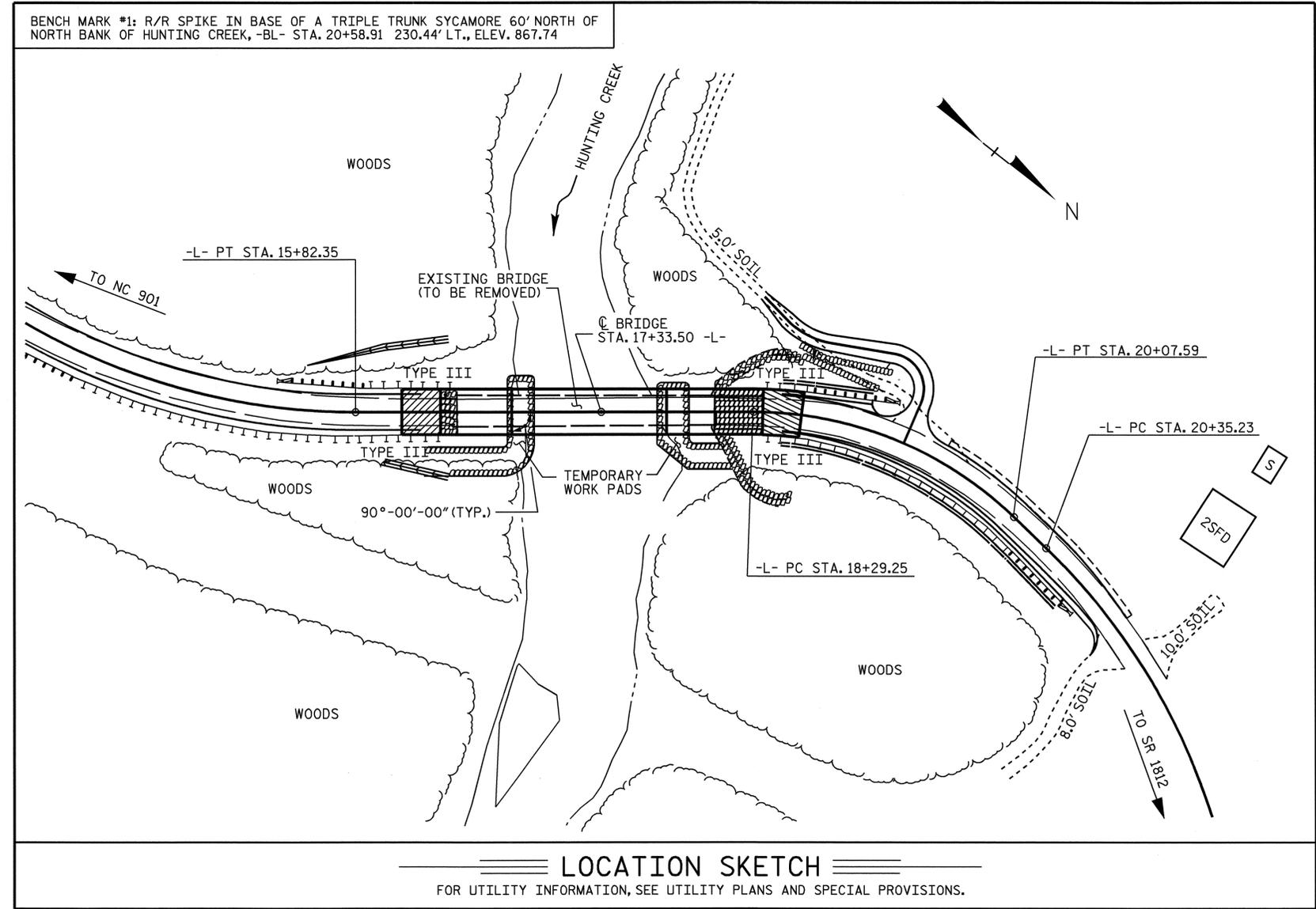
THE REQUIRED BEARING CAPACITY OF THE SPREAD FOOTINGS AT END BENT NO.1 IS 4.0 TSF. THE REQUIRED BEARING CAPACITY SHALL BE VERIFIED.

PILES FOR 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.

REMOVABLE FORMS MAY BE USED IN LIEU OF METAL STAY-IN-PLACE FORMS IN ACCORDANCE WITH ARTICLE 420-3 OF THE STANDARD SPECIFICATIONS.

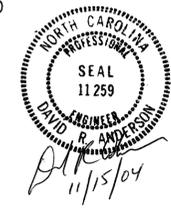
PRESTRESSED CONCRETE DECK PANELS MAY BE USED IN LIEU OF METAL STAY-IN-PLACE FORMS IN ACCORDANCE WITH ARTICLE 420-3 OF THE STANDARD SPECIFICATIONS.



LOCATION SKETCH

FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

DRAWN BY : W.K. FISCHER DATE : 8/19/04
CHECKED BY : M.A. ALLEN DATE : 9/27/04



PROJECT NO. B-3350
IREDELL COUNTY
STATION: 17+33.50 -L-

SHEET 3 OF 3
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
GENERAL DRAWING
FOR BRIDGE ON SR 1832 OVER
HUNTING CREEK BETWEEN
NC 901 AND SR 1812

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			35
2			4			