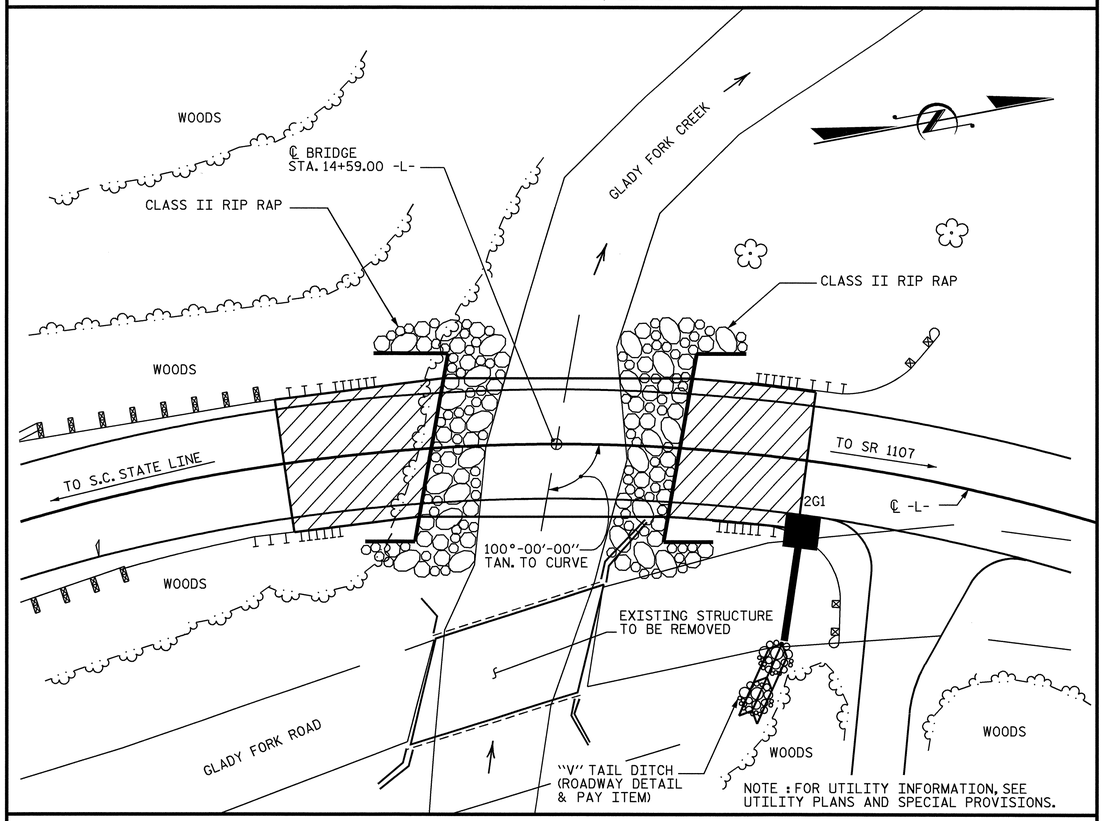
B.M. : A RR SPIKE IN THE BASE OF A 20 INCH WHITE PINE 80.83 FEET RIGHT OF STA. 14+61.68 -L-, EL. 2308.18



LOCATION SKETCH

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.

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.

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

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 B.

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.

AFTER SERVING AS A TEMPORARY STRUCTURE, THE EXISTING STRUCTURE CONSISTING OF 1 SPAN @ 36'-0" WITH TIMBER FLOOR ON STEEL I-BEAMS SUPERSTRUCTURE AND A CLEAR ROADWAY WIDTH OF 19'-1" ON A SUBSTRUCTURE CONSISTING OF TIMBER CAP ON TIMBER PILES AND STILL END BENTS AND LOCATED 45'-0" UPSTREAM FROM THE 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. SEE SPECIAL PROVISION FOR 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.

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 14+59.00 -L-."

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

THE DRILLED PIERS AT END BENT 1 AND END BENT 2 HAVE BEEN DESIGNED FOR TIP BEARING AND SKIN FRICTION. THE REQUIRED TIP BEARING CAPACITY IS 30 TONS/FT^2.

THE REQUIRED TIP BEARING CAPACITY AT END BENT 1 AND END BENT 2 SHALL BE VERIFIED.

DRILLED PIERS FOR END BENT 1 AND END BENT 2 HAVE BEEN DESIGNED FOR AN APPLIED LOAD OF 145 TONS EACH AT THE TOP OF THE COLUMN.

PERMANENT STEEL CASING IS NOT REQUIRED FOR DRILLED PIERS AT END BENT 1 AND END BENT 2.

DRILLED PIERS AT END BENT 1 SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 2291.0 FT. AND SATISFY THE REQUIRED TIP BEARING CAPACITY.

DRILLED PIERS AT END BENT 2 SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 2286.0 FT. (LT.) AND 2291.0 FT. (RT.) AND SATISFY THE REQUIRED TIP BEARING CAPACITY.

FOR DRILLED PIERS, SEE SPECIAL PROVISIONS.

SID INSPECTIONS ARE NOT REQUIRED TO DETERMINE THE BOTTOM CLEANLINESS OF THE DRILLED PIERS AT END BENT 1 AND END BENT 2.

CSL TUBES ARE REQUIRED AND CSL TESTING MAY BE REQUIRED FOR THE DRILLED PIERS AT END BENT 1 AND END BENT 2. SEE SPECIAL PROVISIONS FOR CROSSHOLE LOGGING.

SPT TESTING IS NOT REQUIRED TO DETERMINE THE TIP BEARING CAPACITY OF THE DRILLED PIERS AT END BENT 1 AND END BENT 2.

SLURRY CONSTRUCTION IS NOT ALLOWED FOR THIS PROJECT.

HYDRAULIC DATA

DESIGN DISCHARGE_____1700 CFS.

FREQUENCY OF DESIGN FLOOD_____25 YEARS

DESIGN HIGH WATER ELEVATION_____ 2308.5

DRAINAGE AREA_____7.2 SQ. MI.

BASIC DISCHARGE(Q100)_____2400 CFS.

BASIC HIGH WATER ELEVATION_____2310.3

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE_____1930 CFS.

FREQUENCY OF OVERTOPPING FLOOD_____25 YRS.+

OVERTOPPING FLOOD ELEVATION_____ 2309.2

TOTAL BILL OF MATERIAL

	REMOVAL OF EXISTING STRUCTURE	3'-0" Ø DRILLED PIERS IN SOIL	3'-0" Ø DRILLED PIERS NOT IN SOIL	CROSSHOLE SONIC LOGGING	CSL TUBES	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	SPIRAL COLUMN REINFORCING STEEL	CONCRETE BARRIER RAIL	PLAIN RIP RAP CLASS II (2'-0" THICK)	FILTER FABRIC FOR DRAINAGE	ELASTOMERIC BEARINGS	3'-0" X 1'-9" PRESTRESSED CONCRETE CORED SLABS	
	LUMP SUM	LIN. FEET	LIN. FEET	EACH	LIN. FEET	CU. YDS.	LUMP SUM	LBS.	LBS.	LIN.FT.	TONS	SQ. YDS.	LUMP SUM	NO.	LIN.FT.
SUPERSTRUCTURE							LUMP SUM			95.30			LUMP SUM	11	524.85
END BENT 1		12.56	13.00	1	122.2	22.5		4279	495		142	158			
END BENT 2		4.30	25.00	1	137.2	22.5		4401	562		121	135			
TOTAL	LUMP SUM	16.86	38.00	2	259.4	45.0	LUMP SUM	8680	1057	95.30	263	293	LUMP SUM	11	524.85

PROJECT NO. B-3914

TRANSYLVANIA COUNTY

STATION: 14+59.00 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

FOR BRIDGE OVER GLADY FORK CREEK ON SR 1105 BETWEEN S.C. STATE LINE AND SR 1107

NORTH CAROLINA PROFESSIONAL SEAL 15779 ENGINEER JOHN R. DUGGINS, JR.
12/8/04

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-3
1			3			TOTAL SHEETS
2			4			18

DRAWN BY : M. POOLE DATE : 09-04
CHECKED BY : J. R. DUGGINS DATE : 10/04

08-DEC-2004 09:15
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