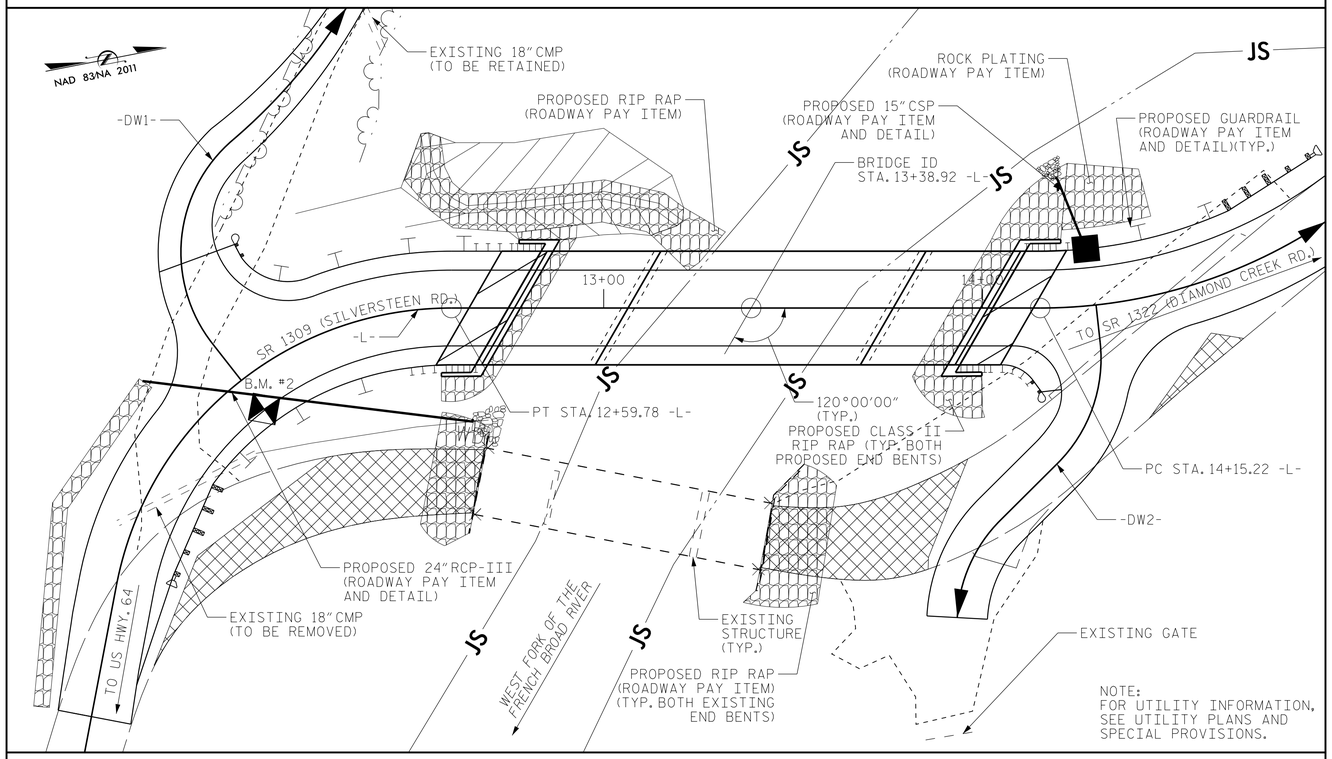
DocuSign Envelope ID: F214CB2F-50C6-422B-B9FE-DB1D0C2DAAEA

BENCHMARK #2 - RAILROAD SPIKE IN BASE OF 30"PINE 9.7' RIGHT OF -L- STA. 12+00, EL. 2,540.05



LOCATION SKETCH

NOTES

ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING

THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

THIS BRIDGE IS LOCATED IN SEISMIC ZONE 1.

THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA ON SHEET 1 OF 3 SHALL BE EXCAVATED FOR A DISTANCE OF 20 FT. ± LEFT AND 32 FT. ± RIGHT OF THE ROADWAY CENTERLINE AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR UNCLASSIFIED STRUCTURE EXCAVATION. SEE SECTION 412 OF THE STANDARD SPECIFICATIONS.

AFTER SERVING AS A TEMPORARY STRUCTURE. THE EXISTING STRUCTURE CONSISTING OF 1 @ 19'-10", 1 @ 39'-2", AND 1 @ 18'-10" I-BEAM SPANS WITH 18'-2" OUT-TO-OUT TIMBER FLOOR ON TIMBER PILES AND SILLS/CONCRETE FOOTINGS AND LOCATED 63 FT. ± DOWNSTREAM FROM THE PROPOSED STRUCTURE SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY POSTED FOR LOAD LIMIT. SHOULD THE STRUCTURAL INTEGRITY OF THE BRIDGE DETERIORATE DURING CONSTRUCTION OF THE PROPOSED BRIDGE, A LOAD LIMIT MAY BE POSTED AND MAY BE REDUCED AS FOUND NECESSARY DURING THE LIFE OF THE PROJECT.

THE SUBSTRUCTURE OF THE EXISTING BRIDGE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. 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.

REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED IN A MANNER THAT PREVENTS DEBRIS FROM FALLING INTO THE WATER. THE CONTRACTOR SHALL SUBMIT DEMOLITION PLANS FOR REVIEW AND REMOVE THE BRIDGE 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 13+38.92 -L-".

AT THE CONTRACTOR'S OPTION, PRESTRESSED CONCRETE END BENT CAPS MAY BE SUBSTITUTED IN PLACE OF THE CAST-IN-PLACE CAPS. THE CONTRACTOR SHALL COORDINATE WITH THE RESIDENT ENGINEER TO RECEIVE REVISED PLANS AND DETAILS FROM THE STRUCTURES MANAGEMENT UNIT. THE REDESIGN AND ANY ADDITIONAL MATERIALS NEEDED WILL BE AT NO ADDITIONAL COST TO THE CONTRACTOR.

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

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR ASBESTOS ASSESSMENT, SEE SPECIAL PROVISIONS.

FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.

HYDRAULIC DATA

DESIGN DISCHARGE	= 3,300 CFS
FREQUENCY OF DESIGN DISCHARGE	= 25 YRS
DESIGN HIGH WATER ELEVATION	= 2,526.6'
DRAINAGE AREA	= 18.8 SQ MI
BASE DISCHARGE (Q100)	= 4,700 CFS
BASE HIGH WATER ELEVATION	= 2,528.3'

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE	= 12,000 CFS
FREQUENCY OF OVERTOPPING	= 500+ YRS
△ OVERTOPPING ELEVATION	= 2,534.3'

△ OVERTOPPING ESTIMATED TO OCCUR WHERE THE NATURAL GROUND MEETS THE PROPOSED ROADWAY PROFILE AT APPROX. STA. 14+65 -L-.

TOTAL BILL OF MATERIALS

	REMOVAL OF EXISTING STRUCTURE @ STA. 13+38.92 -L-	ASBESTOS ASSESSMENT	3'-0"DIA DRILLED PIERS IN SOIL	3'-0"DIA DRILLED PIERS NOT IN SOIL	PERMANENT STEEL CASING FOR 3'-0"Ø DRILLED PIERS	CSL TESTING	UNCLASSIFIED STRUCTURE EXCAVATION	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL
	LUMP SUM	LUMP SUM	LIN. FT.	LIN. FT.	LIN. FT.	EACH	LUMP SUM	CU. YDS.	LUMP SUM	LBS.
SUPERSTRUCTURE	LUMP SUM	LUMP SUM	---	---	---	---	LUMP SUM	---	LUMP SUM	---
END BENT NO. 1	---	---	---	---	---	---	---	22.4	---	2,736
BENT NO. 1	---	---	84.3	42.0	83.1	1	---	19.3	---	12,440
BENT NO. 2	---	---	40.7	23.0	40.2	1	---	18.7	---	8,950
END BENT NO. 2	---	---	---	---	---	---	---	22.4	---	2,736
TOTAL	LUMP SUM	LUMP SUM	125.0	65.0	123.3	2	LUMP SUM	82.8	LUMP SUM	26,862

SPIRAL COLUMN REINFORCING STEEL	PILE DRIVING EQUIPMENT SETUP FOR HP 12X53 STEEL PILES	HP 12X53 STEEL PILES		STEEL PILE POINTS	VERTICAL CONCRETE BARRIER RAIL	RIP RAP CLASS II (2'-0" THICK)	GEOTEXTILE FOR DRAINAGE	ELASTOMERIC BEARINGS	3'-0" X 1'-9" PRESTRESSED CONCRETE CORED SLABS		3'-0" X 2'-0" PRESTRESSED CONCRETE CORED SLABS	
LBS.	EACH	NO.	LIN. FT.	EACH	LIN. FT.	TONS	SQ. YDS.	LUMP SUM	NO.	LIN. FT.	NO.	LIN. FT.
---	---	---	---	---	250.0	---	---	LUMP SUM	20	550.0	10	700.0
---	5	5	80	5	---	110	125	---	---	---	---	---
2,592	---	---	---	---	---	---	---	---	---	---	---	---
1,498	---	---	---	---	---	---	---	---	---	---	---	---
---	5	5	75	5	---	170	190	---	---	---	---	---
4,090	10	10	155	10	250.0	280	315	LUMP SUM	20	550.0	10	700.0

PROJECT NO. 17BP.14.R.183

TRANSYLVANIA COUNTY

STATION: 13+38.92 -L-

SHEET 3 OF 3

DRAWN BY : PDS DATE : 05/2017
CHECKED BY : TLC DATE : 09/2017
DESIGN ENGINEER OF RECORD: PDS DATE : 05/2017

17-OCT-2023 15:35
R:\Structures\Working DGN\063_005_17BP.14.R.183_SMU_GD03_S-3.dgn
$$$$USERNAME$$$$

DocuSigned by: Richard Leon Bollinger, Jr. 10/19/2023
NORTH CAROLINA PROFESSIONAL SEAL 18442 ENGINEER RICHARD LEON BOLLINGER, JR.

RS&H

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PRELIMINARY
GENERAL DRAWING
BRIDGE OVER WEST FORK OF THE FRENCH BROAD RIVER ON SR 1309 (SILVERSTEEN RD.) BETWEEN US HWY. 64 AND SR 1322 (DIAMOND CREEK RD.)

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-3
1			3			TOTAL SHEETS
2			4			23