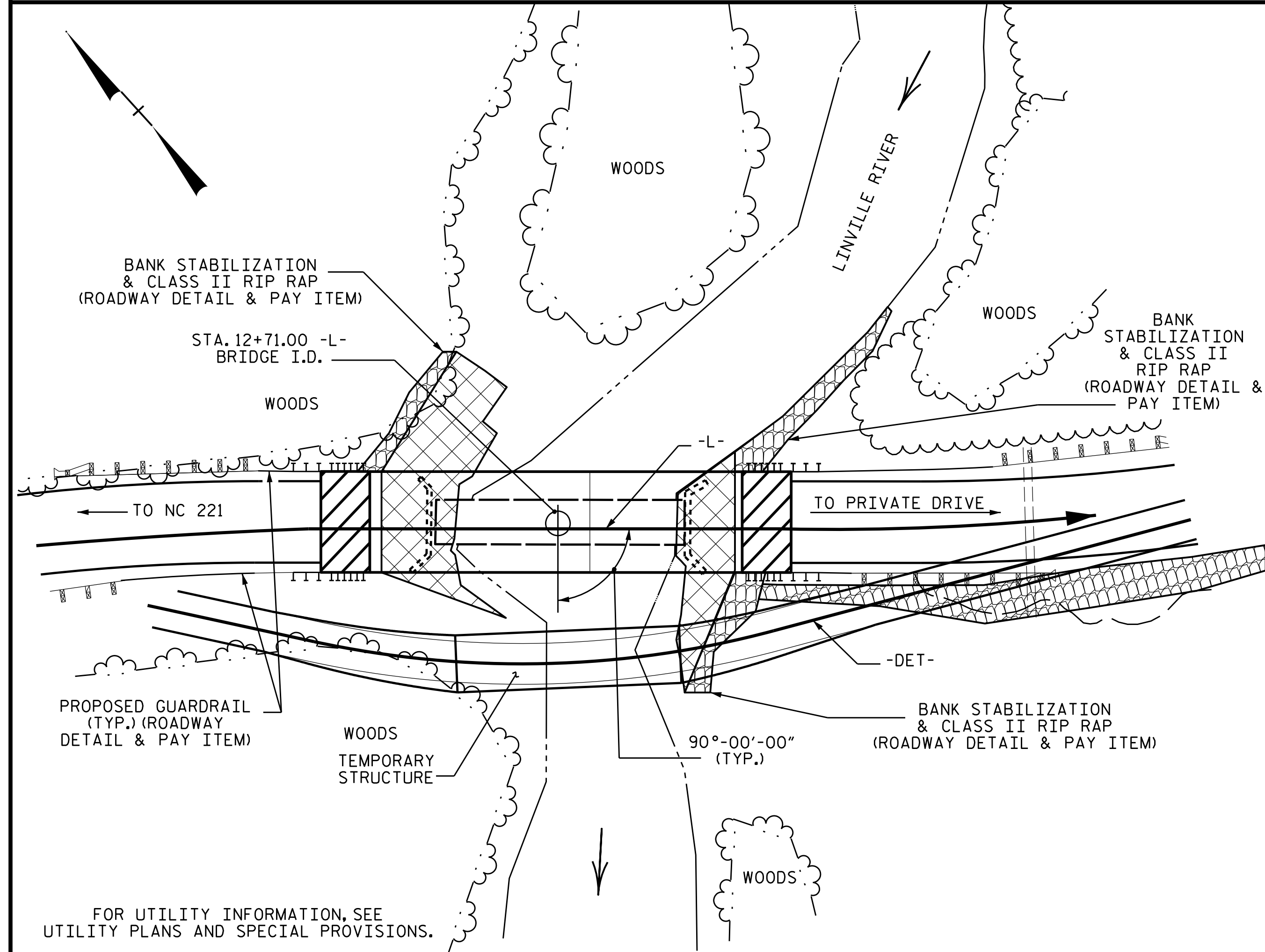


TOTAL BILL OF MATERIAL

	CONSTRUCTION, MAINTENANCE, AND REMOVAL OF TEMPORARY STRUCTURE	REMOVAL OF EXISTING STRUCTURE	UNCLASSIFIED STRUCTURE EXCAVATION	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	ELASTOMERIC BEARINGS	ASBESTOS ASSESSMENT	BRIDGE DECK GRINDING	T101 RAIL	3'-0" X 1'-7 1/2" PRESTRESSED CONCRETE CORED SLABS	2" Ø ANCHOR HOLE NOT IN SOIL	APPROACH SLAB SHOULDER PROTECTION	7" Ø MICROPILES	VERIFICATION TESTS	
	LUMP SUM	LUMP SUM	LUMP SUM	CU. YDS.	LUMP SUM	LBS.	LUMP SUM	LUMP SUM	LUMP SUM	LINE FT.	NO.	LINE FT.	LINE FT.	SQ. YDS.	EACH	EACH
SUPERSTRUCTURE					LUMP SUM		LUMP SUM		LUMP SUM	282.00	18	810.00				
END BENT No. 1			LUMP SUM	17.2		2230							21.1	5		
BENT No. 1				11.7		2421						37.00				1
END BENT No. 2			LUMP SUM	17.2		2230							21.1	5		
TOTAL	LUMP SUM	LUMP SUM	LUMP SUM	46.1	LUMP SUM	6881	LUMP SUM	LUMP SUM	LUMP SUM	282.00	18	810.00	37.00	42.2	10	1

BENCHMARK #1 : GPS B5383-1 STA. 10+41.70 -L-, 14.28 FT LEFT, ELEV. 3275.29



LOCATION SKETCH

NOTES

ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.
 THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.
 THIS BRIDGE IS LOCATED IN SEISMIC ZONE 1.
 FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.
 FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.
 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.
 THE CONTRACTOR WILL BE REQUIRED TO CONSTRUCT, MAINTAIN AND AFTERWARDS REMOVE A TEMPORARY STRUCTURE AT STATION 12+71.00 -L- FOR USE DURING CONSTRUCTION OF THE PROPOSED STRUCTURE. FOR CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY STRUCTURE, SEE SPECIAL PROVISIONS.
 THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA SHALL BE EXCAVATED FOR A DISTANCE OF 40 FT LEFT AND 25 FT RIGHT OF THE CENTERLINE ROADWAY AT END BENT No. 1 AND A DISTANCE OF 20 FT LEFT AND 50 FEET RIGHT AT END BENT No. 2 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.
 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.
 THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH "HEC 18-EVALUATING SCOUR AT BRIDGES."
 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."
 FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
 FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
 FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
 FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
 FOR ASBESTOS ASSESSMENT FOR BRIDGE DEMOLITION AND RENOVATION ACTIVITIES, SEE SPECIAL PROVISIONS.
 FOR BRIDGE DECK GRINDING, SEE SPECIAL PROVISIONS.
 FOR T101 RAIL, SEE SPECIAL PROVISIONS.
 FOR 3'-0" X 1'-7 1/2" PRESTRESSED CONCRETE CORED SLABS, SEE SPECIAL PROVISIONS.
 THE EXISTING 2 SPAN STRUCTURE (1 @ 31'-6", 1 @ 32'-6") CONSISTING OF A TIMBER FLOOR ON 5 LINES OF STEEL I-BEAMS WITH AN 1" ASPHALT OVERLAY ON A SUBSTRUCTURE CONSISTING OF REINFORCED CONCRETE ABUTMENTS AND REINFORCED CONCRETE PIER 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. SEE SPECIAL PROVISIONS FOR REMOVAL OF EXISTING STRUCTURE.

HYDRAULIC DATA

DESIGN DISCHARGE..... 2730 CFS
 FREQUENCY OF DESIGN FLOOD..... 5 YRS.
 DESIGN HIGH WATER ELEVATION..... 3270.4
 DRAINAGE AREA..... 30.9 SQ. MI.
 BASE DISCHARGE (Q100)..... 9980 CFS
 BASE HIGH WATER ELEVATION..... 3274.84

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE..... 2730 CFS
 FREQUENCY OF OVERTOPPING FLOOD..... 5 YRS.
 OVERTOPPING FLOOD ELEVATION..... 3270.2

FOUNDATION NOTES

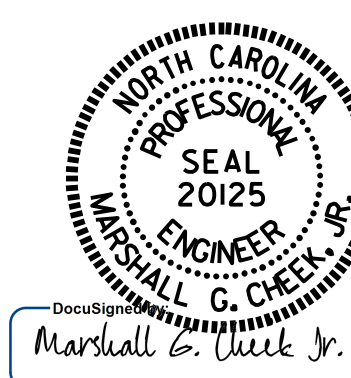
FOR 7" Ø MICROPILES, SEE MICROPILES SPECIAL PROVISION.
 DESIGN BOND LENGTH FOR MICROPILES AT END BENT No. 1 FOR A FACTORED RESISTANCE OF 150 TONS PER PILE.
 INSTALL REINFORCING CASINGS FOR MICROPILES AT END BENT No. 1 TO A TIP ELEVATION NO HIGHER THAN 3255.5 AND WITH A PENETRATION OF A LEAST 10 FT. INTO ROCK WHICH IS DEFINED AS CONTINUOUS INTACT NATURAL MATERIAL.
 USE REINFORCING CASINGS WITH YIELD STRENGTHS OF AT LEAST 45 KSI AND A MINIMUM WALL THICKNESS OF 0.5 INCHES FOR MICROPILES AT END BENT No. 1.
 FOR ROCK ANCHORS, SEE UNTENSIONED ROCK ANCHORS SPECIAL PROVISION.
 ROCK ANCHORS AT BENT No. 1 ARE DESIGNED FOR A FACTORED UPLIFT RESISTANCE OF 17.5 TONS PER ANCHOR WITH A MINIMUM BOND LENGTH OF 3.5 FT.
 BOTTOM OF CAP AT BENT No. 1 TO BE FORMED DIRECTLY ON EXPOSED ROCK OUTCROP.
 USE #8 GALVANIZED THREADED STEEL REBAR WITH YIELD STRENGTH OF AT LEAST 75 KSI FOR ANCHORS AT BENT No. 1.
 GROUT THE HOLES AT BENT No. 1 IN A MANNER THAT NO GROUT COMES IN CONTACT WITH THE STREAM. CONTRACTOR TO INCLUDE GROUTING SEQUENCE TO BE REVIEWED BY NCDOT.
 DESIGN BOND LENGTH FOR MICROPILES AT END BENT No. 2 FOR A FACTORED RESISTANCE OF 150 TONS PER PILE.
 INSTALL REINFORCING CASINGS FOR MICROPILES AT END BENT No. 2 TO A TIP ELEVATION NO HIGHER THAN 3249 AND WITH A PENETRATION OF AT LEAST 10 FT. INTO ROCK.
 USE REINFORCING CASINGS WITH YIELD STRENGTH OF AT LEAST 45 KSI AND A MINIMUM WALL THICKNESS OF 0.5 INCHES FOR MICROPILES AT END BENT No. 2.
 FOR VERIFICATION TESTS, SEE UNTENSIONED ROCK ANCHORS SPECIAL PROVISION.

PROJECT NO. B-5383

AVERY COUNTY

STATION: 12+71.00 -L-

SHEET 2 OF 2



1/4/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**GENERAL DRAWING
 FOR BRIDGE OVER
 LINVILLE RIVER
 ON SR 1536 BETWEEN
 NC 221 AND PRIVATE DRIVE**

DRAWN BY : M. POOLE DATE : 10-15
 CHECKED BY : M.G. CHEEK DATE : 11-16

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-2
2			4			16