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BM #1: SPIKE SET IN 12" OAK, 36.85' LEFT OF STA. 20+82.24 -L-, N 1000025, E 2657530, ELEV. 23.76

LOCATION SKETCH

GENERAL 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.

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

FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.

THE EXISTING STRUCTURE, CONSISTING OF 3 SPANS; 1 @ 21'-9", 1 @ 22'-2", 1 @ 21'-9", WITH REINF CONC DECK AND 7 LINES OF W16X36 I-BEAMS ON REINF CONC CAP END BENTS ON TIMBER PILES, AND WITH A CLEAR ROADWAY WIDTH OF 26'-2", LOCATED AT THE PROPOSED SITE SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY NOT 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.

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 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.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA ON SHEET S-1 SHALL BE EXCAVATED FOR A DISTANCE OF 25 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. SEE SECTION 412 OF THE STANDARD SPECIFICATIONS.

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

FOR ASBESTOS ASSESSMENT FOR BRIDGE DEMOLITION AND RENOVATION ACTIVITIES, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

INASMUCH AS THE PAINT SYSTEM ON THE EXISTING STRUCTURAL STEEL CONTAINS LEAD, THE CONTRACTOR'S ATTENTIONIS DIRECTED TO ARTICLE 107-1 OF THE STANDARD SPECIFICATIONS. ANY COSTS RESULTING FROM COMPLIANCE WITH APPLICABLE STATE OR FEDERAL REGULATIONS PERTAINING TO HANDLING OF MATERILS CONTAINING LEAD BASED PAINT SHALL BE INCLUDED IN THE BID PRICE FOR "REMOVAL OF EXISTING STRUCTURE AT STATION 18+41.00 -L-.

HYDRAULIC DATA

DESIGN DISCHARGE	=	1100	CFS
DESIGN FREQUENCY	=	50	YRS
DESIGN HW ELEVATION	=	25.1	FT
BASE DISCHARGE	=	1300	CFS
BASE FREQUENCY	=	100	YRS
BASE HW ELEVATION	=	25.5	FT

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE	=	1470	CFS
OVERTOPPING FREQUENCY	=	100+	YRS
OVERTOPPING ELEVATION	=	26.0	FT
DRAINAGE AREA	=	8.0	SQ. MI.

OVERTOPPING OCCURS AT SAG POINT AT APPROX. STA. 20+50 (CENTERLINE)

TOTAL BILL OF MATERIAL

	REMOVAL OF EXISTING STRUCTURE	ASBESTOS ASSESSMENT	PDA TESTING	UNCLASSIFIED STRUCTURE EXCAVATION	CONCRETE WEARING SURFACE	GROOVING BRIDGE FLOORS	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	PILE DRIVING EQUIP. SETUP FOR HP 12x53 GALVANIZED STEEL PILES	HP 12 X 53 GALVANIZED STEEL PILES		PILE REDRIVES	TWO BAR METAL RAIL	1'-2" x 2'-11 1/4" CONCRETE PARAPET	RIP RAP CLASS II (2'-0" THICK)	GEOTEXTILE FOR DRAINAGE	ELASTOMERIC BEARINGS	3'-0" x 2'-9" PRESTRESSED CONCRETE BOX BEAMS	
	LUMP SUM	LUMP SUM	EACH	LUMP SUM	SQ. FT.	SQ. FT.	CU. YARDS	LUMP SUM	LBS.	NO.	NO.	LIN. FT.	EACH	LIN. FT.	LIN. FT.	TONS	SQ. YARDS	LUMP SUM	NO.	LIN. FT.
SUPERSTRUCTURE					3103.0	3584.0		LUMP SUM						155.0	170.0			LUMP SUM	13	1105.0
END BENT 1				LUMP SUM			27.6		3992	7	7	630	5			70	78			
END BENT 2				LUMP SUM			27.6		3992	7	7	665	5			56	62			
TOTAL	LUMP SUM	LUMP SUM	1	LUMP SUM	3103.0	3584.0	55.2	LUMP SUM	7984	14	14	1295	10	155.0	170.0	126	140	LUMP SUM	13	1105.0

FOUNDATION NOTES

FOR PILES, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

PILES AT END BENT NO. 1 AND END BENT NO. 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 111 TONS PER PILE.

DRIVE PILES AT END BENT NO. 1 AND END BENT NO. 2 TO A REQUIRED DRIVING RESISTANCE OF 185 TONS PER PILE.

IT HAS BEEN ESTIMATED THAT A HAMMER WITH AN EQUIVALENT RATED ENERGY IN THE RANGE OF 45,000 TO 55,000 FT-LBS PER BLOW WILL BE REQUIRED TO DRIVE PILES AT END BENT NO. 1 AND END BENT NO. 2. THIS ESTIMATED ENERGY RANGE DOES NOT RELEASE THE CONTRACTOR FROM PROVIDING DRIVING EQUIPMENT IN ACCORDANCE WITH SUBARTICLE 450-3(D)(2) OF THE STANDARD SPECIFICATIONS.

TESTING THE FIRST PRODUCTION PILE WITH THE PDA DURING DRIVING, RESTRIKING OR REDRIVING IS REQUIRED AT END BENT NO. 1 OR END BENT NO. 2. FOR PDA TESTING, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

PROJECT NO. 17BP.1.R.78

GATES COUNTY

STATION: 18+41.00 -L-

SHEET 2 OF 2

NORTH CAROLINA PROFESSIONAL SEAL 18090 ENGINEER THOMAS PAUL CARRIGAN
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DWN. BY: FRJ	DATE: 1/18	
CHKD. BY: TPG	DATE: 1/18	
DES. EGR. OF RECORD: RTS	DATE: 1/18	

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE OVER BUCKLAND MILL BRANCH ON NC 37 BETWEEN PARKER ROAD (SR 1303) AND SAREM ROAD (SR 1219)

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-2
1			3			TOTAL SHEETS
2			4			19