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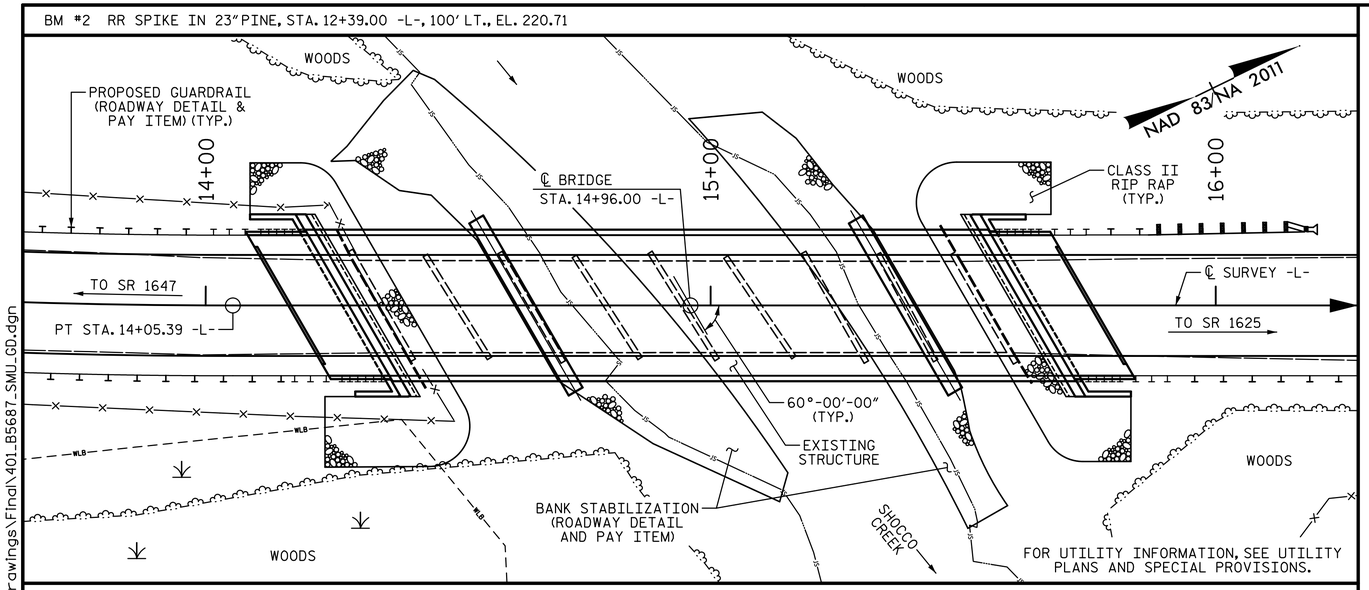

LOCATION SKETCH

TOTAL BILL OF MATERIAL

	REMOVAL OF EXISTING STRUCTURE	ASBESTOS ASSESSMENT	3'-0" DIA. DRILLED PIER IN SOIL	3'-0" DIA. DRILLED PIER NOT IN SOIL	PERMANENT STEEL CASING FOR 3'-0" DIA. DRILLED PIERS	SID INSPECTIONS	CSL TESTING	UNCLASSIFIED STRUCTURE EXCAVATION	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL
	LS	LS	LF	LF	LF	EA	EA	LS	CY	LS	LB
SUPERSTRUCTURE										LS	
END BENT 1								LS	22.4		2,736
BENT 1			55.5	30.0	48.6				16.9		9,596
BENT 2			37.5	30.0	27.6				17.1		8,698
END BENT 2								LS	22.4		2,736
TOTAL	LS	LS	93.0	60.0	76.2	2	3	LS	78.8	LS	23,766

TOTAL BILL OF MATERIAL

	SPIRAL COLUMN REINFORCING STEEL	PILE DRIVING EQUIPMENT SETUP FOR HP 12 X 53 STEEL PILES	HP 12 X 53 STEEL PILES		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	
	LB	EA	NO.	LF	LF	TON	SY	LS	NO.	LF	NO.	LF
SUPERSTRUCTURE					270.87			LS	20	600.00	10	750.00
END BENT 1		5	5	125		125	140					
BENT 1	1,692											
BENT 2	1,413											
END BENT 2		5	5	100		130	145					
TOTAL	3,105	10	10	225	270.87	255	285	LS	20	600.00	10	750.00

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.

USE IMPERVIOUS DIKE NCDOT STANDARD BMP ALONG STREAM BANKS TO DEWATER AND ISOLATE ADJACENT WORK AREAS TO INSTALL PROPOSED INTERIOR BENTS IN THE DRY. IMPERVIOUS DIKES SHALL BE CONSIDERED INCIDENTAL TO THE LUMP SUM PAY ITEM FOR REMOVAL OF EXISTING STRUCTURE.

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 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 MATERIAL SHOWN IN THE CROSS-HATCHED AREA SHALL BE EXCAVATED FOR A DISTANCE OF 25 FT. LEFT AND 30 FT. RIGHT 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.

THE EXISTING STRUCTURE CONSISTS OF 4 SPANS @ 15'-0", 2 @ 15'-1" AND 2 @ 15'-3½". THE SUPERSTRUCTURE HAS A CLEAR ROADWAY WIDTH OF 19'-3" WITH TIMBER FLOOR ON CONTINUOUS STEEL I-BEAMS. THE END BENTS AND INTERIOR BENTS CONSIST OF TIMBER CAPS ON TIMBER PILES. THE EXISTING STRUCTURE, WHICH IS LOCATED AT THE SITE OF 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, THE LOAD LIMIT 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. 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."

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.

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

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+96.00 -L-."

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

BEST MANAGEMENT PRACTICES FOR BRIDGE DEMOLITION AND REMOVAL WILL BE IMPLEMENTED DURING THE REMOVAL OF THE EXISTING BRIDGE.

THE BRIDGE WILL BE REMOVED FROM THE TOP DOWN, FIRST REMOVING THE ASPHALT WITH CONTAINMENT MEASURES IN PLACE TO PREVENT ASPHALT FROM DROPPING INTO THE STREAM. THE METHOD OF CONTAINMENT WILL BE PROPOSED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. THIS WILL BE FOLLOWED BY REMOVAL OF THE DECKING, BEAMS, ETC., AND FINALLY THE WOODEN PILES. AN ATTEMPT WILL BE MADE TO REMOVE THE PILES; HOWEVER, IF THIS CANNOT BE ACCOMPLISHED WITH MINIMAL SUBSTRATE DISTURBANCE, THE PILES WILL BE PINCHED OFF ONE FOOT BELOW THE MUD LINE AS DIRECTED BY THE ENGINEER. THE CONTRACTOR WILL NOT BE ALLOWED TO DRAG REMOVED TIMBER PILES ON OR ACROSS THE STREAMBED.

EXISTING TIMBER ABUTMENTS WILL BE COMPLETELY REMOVED.

FOUNDATION NOTES:

FOR DRILLED PIERS, SEE SECTION 411 OF THE STANDARD SPECIFICATIONS.

DRILLED PIERS AT BENT 1 ARE DESIGNED FOR A FACTORED RESISTANCE OF 340 TONS PER PIER. CHECK FIELD CONDITIONS FOR THE REQUIRED TIP RESISTANCE OF 65 TSF.

PERMANENT STEEL CASINGS ARE REQUIRED FOR DRILLED PIERS AT BENT 1. DO NOT EXTEND PERMANENT STEEL CASINGS BELOW ELEVATION 197.0 FT. WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

INSTALL DRILLED PIERS AT BENT 1 TO A TIP ELEVATION NO HIGHER THAN 185.0 FT. AND WITH THE REQUIRED TIP RESISTANCE.

THE SCOUR CRITICAL ELEVATION FOR BENT 1 IS 204.0 FT. SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

DRILLED PIERS AT BENT 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 340 TONS PER PIER. CHECK FIELD CONDITIONS FOR THE REQUIRED TIP RESISTANCE OF 65 TSF.

PERMANENT STEEL CASINGS ARE REQUIRED FOR DRILLED PIERS AT BENT 2. DO NOT EXTEND PERMANENT STEEL CASINGS BELOW ELEVATION 204.0 FT. WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

INSTALL DRILLED PIERS AT BENT 2 TO A TIP ELEVATION NO HIGHER THAN 191.0 FT. AND WITH THE REQUIRED TIP RESISTANCE.

THE SCOUR CRITICAL ELEVATION FOR BENT 2 IS 201.0 FT. SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

SID INSPECTIONS MAY BE REQUIRED FOR DRILLED PIERS. THE ENGINEER WILL DETERMINE THE NEED FOR SID INSPECTIONS. FOR SID INSPECTIONS, SEE SECTION 411 OF THE STANDARD SPECIFICATIONS.

CSL TUBES ARE REQUIRED AND CSL TESTING MAY BE REQUIRED FOR DRILLED PIERS. THE ENGINEER WILL DETERMINE THE NEED FOR CSL TESTING. FOR CSL TESTING, SEE SECTION 411 OF THE STANDARD SPECIFICATIONS.

FOR PILES, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

PILES AT END BENT 1 ARE DESIGNED FOR A FACTORED RESISTANCE OF 70 TONS PER PILE.

DRIVE PILES AT END BENT 1 TO A REQUIRED DRIVING RESISTANCE OF 120 TONS PER PILE.

PILES AT END BENT 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 55 TONS PER PILE.

DRIVE PILES AT END BENT 2 TO A REQUIRED DRIVING RESISTANCE OF 95 TONS PER PILE.

PROJECT NO. B-5687
WARREN COUNTY
STATION: 14+96.00 -L-

SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE ON SR 1620 (LICKSKILLET RD) OVER SHOCCO CREEK BETWEEN SR 1647 AND SR 1625
27'-10" CLEAR ROADWAY - 60° SKEW

PLANS PREPARED BY:
SIMPSON ENGINEERS & ASSOCIATES
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(919) 852-0598 (Fax)
www.simpsonengr.com
LICENSURE NO. C-2521

NORTH CAROLINA PROFESSIONAL SEAL 11268 ENGINEER BETSY S. COX
4/3/2018

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-2
1			3			TOTAL SHEETS
2			4			24

DRAWN BY: S.D. COOPER DATE: 4-18
CHECKED BY: B.S. COX DATE: 4-18
DESIGN ENGINEER OF RECORD: B.S. COX DATE: 4-18

4/3/2018 2:03:50 PM G:\Projects\2016\Division 5 (Mott Macdonald)\B-5687 Warren #43 (60 212421CS VCBR)\Structures\Drawings\Final\401_B5687_SMU_GD.dgn