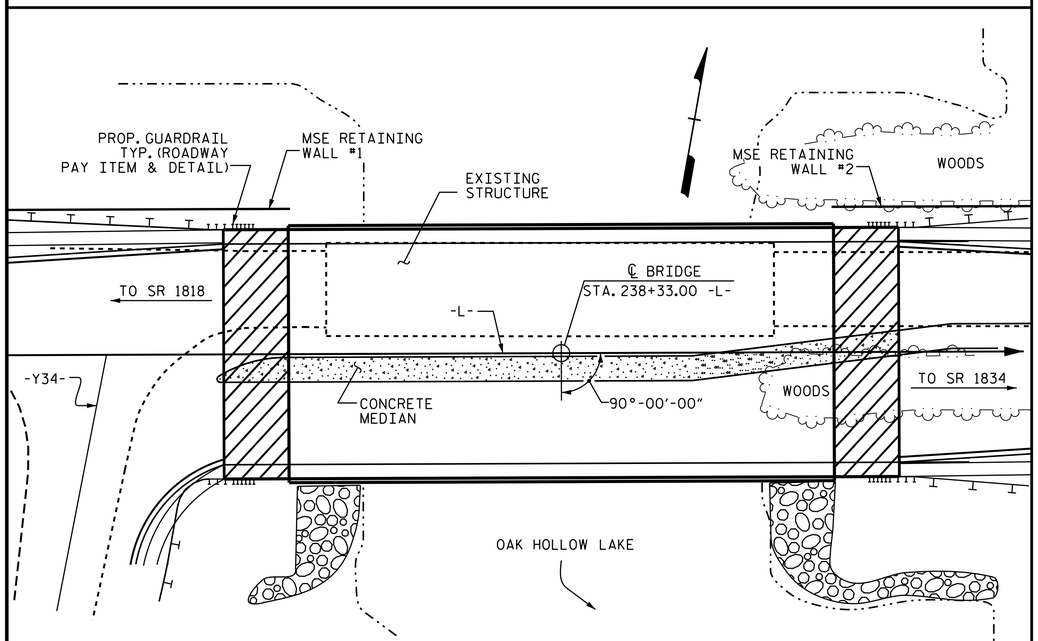
TOTAL BILL OF MATERIAL

	CONST. MAINT. & REMOVAL OF TEMP. ACCESS	REMOVAL OF EXISTING STRUCTURE	PILE EXCAVATION IN SOIL	PILE EXCAVATION NOT IN SOIL	3'-6" Ø DRILLED PIERS IN SOIL	3'-6" Ø DRILLED PIERS NOT IN SOIL	PERMANENT STEEL CASING FOR 3'-6" Ø DRILLED PIER	SID INSPECTION	CSL TESTING	UNCLASSIFIED STRUCTURE EXCAVATION	REINFORCED CONCRETE DECK SLAB	GROOVING BRIDGE FLOORS	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	SPIRAL COLUMN REINFORCING STEEL	54" PRESTRESSED CONCRETE GIRDERS		HP 12 X 53 STEEL PILES		STEEL PILE POINTS	THREE BAR METAL RAIL	RIP RAP CLASS II (2'-0" THICK)	GEOTEXTILE FOR DRAINAGE	ELASTOMERIC BEARINGS
			LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH	LUMP SUM	SQ. FT.	SQ. FT.	CU. YDS	LUMP SUM	LBS.	LBS.	NO.	LIN. FT.	NO.	LIN. FT.	NO.	LIN. FT.	TONS	SQ. YDS.	LUMP SUM
SUPERSTRUCTURE	LUMP SUM	LUMP SUM									20,702	17,409					36	2,478				401.67			LUMP SUM
END BENT 1			294	14									46.0		5,873				14	350	14		295	330	
BENT 1					91.5	36	97.8						75.1		17,804	3,650									
BENT 2					116	39	110.8						74.2		18,803	4,168									
END BENT 2			314	15									46.0		5,873				14	350	14		295	325	
TOTAL	LUMP SUM	LUMP SUM	608	29	207.5	75	208.6	2	2	LUMP SUM	20,702	17,409	241.3	LUMP SUM	48,353	7,818	36	2,478	28	700	28	401.67	590	655	LUMP SUM

BM #14: NAIL IN ROOT OF 18 INCH ELM, 213' RT, -L- STA. 231+69.0, EL. 820.88'



HYDRAULIC DATA

DESIGN DISCHARGE---------- 5200 CFS
FREQUENCY OF DESIGN FLOOD---- 50 YR
DESIGN HIGH WATER EL.-------- 805.1
DRAINAGE AREA---------- 21.0 SQ MI
BASIC DISCHARGE (Q100)------- 6600 CFS
BASIC HIGH WATER EL.--------- 805.9

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE---------- N/A
FREQUENCY OF OVERTOPPING FLOOD--- N/A
OVERTOPPING FLOOD EL.---------- N/A

FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

LOCATION SKETCH

NOTES

ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.

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.

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

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

REMOVABLE FORMS MAY BE USED IN LIEU OF METAL STAY-IN-PLACE FORMS IN ACCORDANCE WITH ARTICLE 420-3 OF THE STANDARD SPECIFICATIONS.

PRESTRESSED CONCRETE DECK PANELS MAY BE USED IN LIEU OF METAL STAY-IN-PLACE FORMS IN ACCORDANCE WITH ARTICLE 420-3 OF THE STANDARD SPECIFICATIONS.

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. PAYMENT FOR THE SAMPLES OF REINFORCING STEEL SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

AFTER SERVING AS A TEMPORARY STRUCTURE, THE EXISTING STRUCTURE CONSISTING OF 3 SPANS; 1 @ 58'-1", 1 @ 56'-8", 1 @ 58'-1" WITH 36.0 FEET CLEAR ROADWAY WIDTH HAS A RC DECK ON PRESTRESSED CONCRETE GIRDERS; END BENTS CONSISTING OF RC CAPS & PPC PILES INTERIOR BENTS CONSISTING OF RC POST & BEAM AND LOCATED AT THE SITE OF PROPOSED STRUCTURE 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 EXISTING PAVEMENT WITHIN THE AREA OF THE END BENT PILES SHALL BE REMOVED AND THE ROADBED SCARIFIED TO A MINIMUM DEPTH OF 2'-0".

SEE TRAFFIC CONTROL PLAN FOR LOCATION AND PAY LIMITS OF PORTABLE CONCRETE BARRIER.

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.

THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA ON SHEET S-1 SHALL BE EXCAVATED FOR A DISTANCE OF 70 FT. LEFT SIDE AND 50 FT. RIGHT OF CENTERLINE ROADWAY AT END BENT 1 AND 70 FT. LEFT SIDE AND 25 FT. RIGHT SIDE OF CENTERLINE ROADWAY AT END BENT 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.

NEEDLE BEAMS WILL NOT BE ALLOWED UNLESS OTHERWISE CALLED FOR ON THE PLANS OR APPROVED BY THE ENGINEER.

THE CLASS AA CONCRETE IN THE BRIDGE DECK SHALL CONTAIN FLY ASH OR GROUND GRANULATED BLAST FURNACE SLAG AT THE SUBSTITUTION RATE SPECIFIED IN ARTICLE 1024-1 AND IN ACCORDANCE WITH ARTICLES 1024-5 AND 1024-6 OF THE STANDARD SPECIFICATIONS. NO PAYMENT WILL BE MADE FOR THIS SUBSTITUTION AS IT IS CONSIDERED INCIDENTAL TO THE COST OF THE REINFORCED CONCRETE DECK SLAB.

FOR LIMITS OF TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE TRAFFIC CONTROL PLANS. FOR PAY ITEM FOR TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE ROADWAY PLANS.

TEMPORARY ROCK CAUSEWAYS FOR WORK PAD SHALL BE CONSTRUCTED IN A SEQUENCE AS SHOWN ON SHEET S-1 IN ORDER TO MAINTAIN AN OPEN CHANNEL FLOW AND SHOULD NOT OBSTRUCT THE WATERWAY MORE THAN 50 PERCENT AT ANY TIME DURING CONSTRUCTION.

AT THE CONTRACTOR'S OPTION, AND UPON REMOVAL OF THE CAUSEWAY, THE CLASS II RIP RAP USED IN THE CAUSEWAY MAY BE PLACED AS RIP RAP SLOPE PROTECTION. SEE SPECIAL PROVISIONS FOR CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY ACCESS AT STATION 238+33.00 -L-

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 PLACING LOAD ON STRUCTURE MEMBERS, SEE SPECIAL PROVISIONS.

PROJECT NO. U-3615B
GUILFORD COUNTY
STATION: 238+33.00 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

FOR BRIDGE ON SR 1820 OVER WEST FORK DEEP RIVER & OAK HOLLOW LAKE BETWEEN SR 1818 & SR 1834

NORTH CAROLINA PROFESSIONAL SEAL 16301 ENGINEER TING HSIUNG FANG

DocuSigned by: Ting H. Fang
E72088400977435...
12/3/2014

REVISIONS								SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:			S-3
1			3					TOTAL SHEETS
2			4					91

DRAWN BY : R.P. PATEL DATE : 9-21-12
CHECKED BY : T. H. FANG DATE : 9-24-12
DESIGN ENGINEER OF RECORD: T. H. FANG DATE : 1-7-14

03-DEC-2014 11:03
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STR. #1