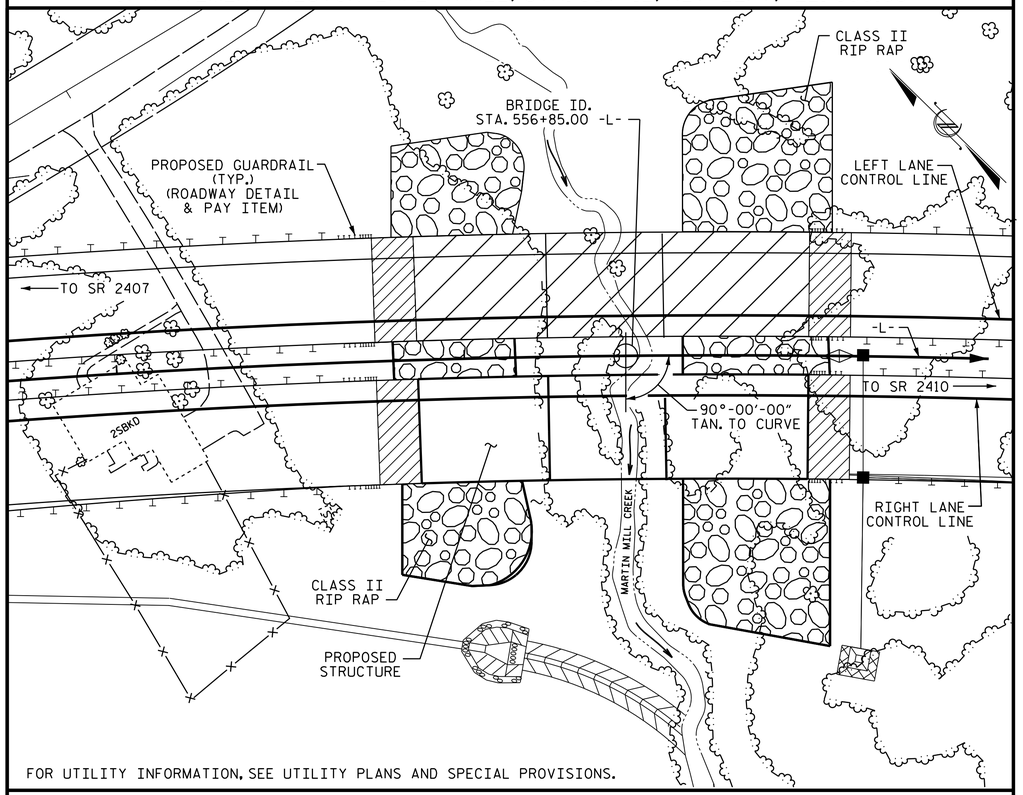
BENCH MARK #5: RAILROAD SPIKE IN BASE OF 42"Ø FORKED OAK. 19' OFF NORTH EDGE OF PAVEMENT WESTON LAKE TRAIL, STA. 557+12, 427' LEFT, EL. 866.68



FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

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 I.

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

FOR PLACING LOAD ON STRUCTURE MEMBERS, SEE SPECIAL PROVISIONS.

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.

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 THE REINFORCING STEEL SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

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.

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

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

FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.

THE LOCATION OF THE CONSTRUCTION JOINT IN THE DRILLED PIERS IS BASED ON AN APPROXIMATE GROUND LINE ELEVATION. IF THE CONSTRUCTION JOINT IS ABOVE THE ACTUAL GROUND ELEVATION, THE CONTRACTOR SHALL PLACE THE CONSTRUCTION JOINT 1 FT. BELOW THE GROUND LINE.

HYDRAULIC DATA

DESIGN DISCHARGE = 3,100 CFS.
FREQUENCY OF DESIGN FLOOD = 50 YR.
DESIGN HIGH WATER ELEVATION = 853.60
DRAINAGE AREA = 1.8 SQ. MI.
BASE DISCHARGE (Q100) = 3,550 CFS.
BASE HIGH WATER ELEVATION = 854.00

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE = 4,000+ CFS.
FREQUENCY OF OVERTOPPING FLOOD = 500 YR. +
OVERTOPPING FLOOD ELEVATION = 899.00±

TOTAL BILL OF MATERIAL

	4'-0"Ø DRILLED PIERS IN SOIL	4'-0"Ø DRILLED PIERS NOT IN SOIL	PERMANENT STEEL CASING FOR 4'-0"Ø DRILLED PIER	SID INSPECTIONS	CSL TESTING	REINFORCED CONCRETE DECK SLAB	GROOVING BRIDGE FLOORS	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	SPIRAL COLUMN REINFORCING STEEL	54" PRESTRESSED CONCRETE GIRDERS		HP 12X53 STEEL PILES		CONCRETE BARRIER RAIL	RIP RAP CLASS II (2'-0" THICK)	GEOTEXTILE FOR DRAINAGE	ELASTOMERIC BEARINGS
	LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH	SQ. FT.	SQ. FT.	CU. YDS.	LUMP SUM	LBS.	LBS.	NO.	LIN. FT.	NO.	LIN. FT.	LIN. FT.	TONS	SQ. YDS.	LUMP SUM
SUPERSTRUCTURE						14,231	15,604		LUMP SUM			18	1,328.50			446.67			LUMP SUM
END BENT 1								32.2		6,146				10	470		740	820	
BENT 1	129.50	35.00	28.00					90.9		33,421	7,907								
BENT 2	179.50	38.00	24.00					95.1		54,273	9,518								
END BENT 2								32.2		6,150				10	875		1,265	1,405	
TOTAL	309.00	73.00	52.00	1	1	14,231	15,604	250.4	LUMP SUM	99,990	17,425	18	1,328.50	20	1,345	446.67	2,005	2,225	LUMP SUM

PROJECT NO. U-2579B
FORSYTH COUNTY
STATION: 556+85.00 -L-

SHEET 4 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE OVER MARTIN MILL CREEK ON I-74 (FUTURE) BETWEEN SR 2407 AND SR 2410 (RIGHT LANE)

NORTH CAROLINA PROFESSIONAL SEAL 10730 ENGINEER D. ANDRÉ DAVENPORT, JR.

DocuSigned by: D. André Davenport, Jr.
B95DC284F664495...
8/4/2014

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-106
1			3			TOTAL SHEETS
2			4			707

STR. #4

DRAWN BY : D.A. DAVENPORT DATE : 4/11/14
CHECKED BY : M.K. BEARD DATE : 5/21/14
DESIGN ENGINEER OF RECORD: G.W. DICKEY DATE : 6/4/14

04-AUG-2014 13:44
R:\Structures\Plans\Str04\U2579B_SD_GD_04.dgn
lsutton