TOTAL BILL OF MATERIAL

	FOUNDATION EXCAVATION	4'-6" DIA. DRILLED PIERS IN SOIL	4'-6" DIA. DRILLED PIERS NOT IN SOIL	PERMANENT STEEL CASING FOR 4'-6" DIA. DRILLED PIERS	CSL TESTING	REINFORCED CONCRETE DECK SLAB	GROOVING BRIDGE FLOORS	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	SPIRAL COLUMN REINFORCING STEEL	54" PRESTESSED CONCRETE GIRDERS		HP12X53 STEEL PILES		CONCRETE BARRIER RAIL	RIP RAP CLASS II (2'-0" THICK)	GEOTEXTILE FOR DRAINAGE	ELASTOMERIC BEARINGS	EXPANSION JOINT SEALS	SOUND BARRIER WALL (BRIDGE MOUNTED)
	LUMP SUM	LIN. FT.	LIN. FT.	LIN. FT.	EACH	SQ. FT.	SQ. FT.	CU. YDS.	LUMP SUM	LBS.	LBS.	NO.	FEET	NO.	LIN. FT.	LIN. FT.	TONS	SQ. YDS.	LUMP SUM	LUMP SUM	LUMP SUM
SUPERSTRUCTURE						15,741	14,994		LUMP SUM			25	1871.67			834.64			LUMP SUM	LUMP SUM	LUMP SUM
END BENT #1								49.3		7348				9	790		1625	1806			
BENT #1	LUMP SUM							200.6		30983	5662			36	1440						
BENT #2		234.7	22.0	138.4				122.5		52075	12949										
BENT #3		148.3	45.0	103.2				122.8		43981	11117										
BENT #4	LUMP SUM							207.5		31524	5753			36	720						
END BENT #2								54.5		8602				10	700		2208	2453			
TOTAL	LUMP SUM	383.0	67.0	241.6	1	15,741	14,994	757.2	LUMP SUM	174,513	35,481	25	1871.67	91	3650	834.64	3833	4259	LUMP SUM	LUMP SUM	LUMP SUM

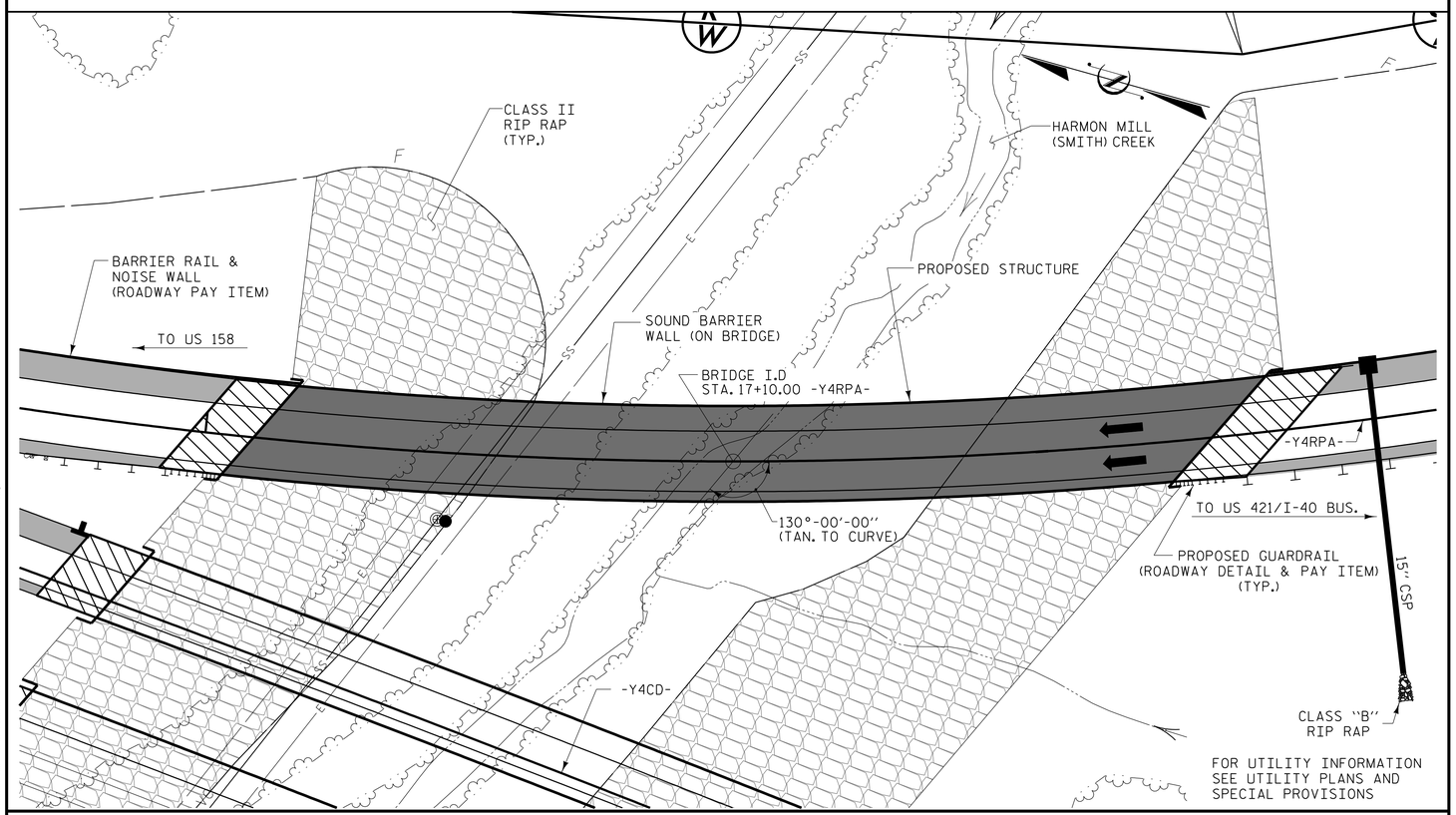
HYDRAULIC DATA

DESIGN DISCHARGE	= 2400 C.F.S.
FREQUENCY OF DESIGN FLOOD	= 50 YR.
DESIGN HIGH WATER ELEVATION	= 830.7 FT.
DRAINAGE AREA	= 3.9 SQ. MI.
BASE DISCHARGE (Q 100)	= 2700 C.F.S.
BASE HIGH WATER ELEVATION	= 831.2 FT.

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE	= 4300 C.F.S. +
FREQUENCY OF OVERTOPPING FLOOD	= 500 YR. +
OVERTOPPING FLOOD ELEVATION	= 865.0 FT.

BM #9: R/R SPIKE SET IN PAVEMENT OF RACHEL ST. AT INTERSECTION OF GERRY RD; 702' RT STA. 637+58 -L- ELEV. 899.76



LOCATION SKETCH

DRAWN BY :	W. B. ALLEN	DATE :	1/14
CHECKED BY :	T. R. PETERSON	DATE :	2/14
DESIGN ENGINEER OF RECORD:	T. R. PETERSON	DATE :	4/23/14

NOTES

ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.

THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIRMENT 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 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.

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 SHALL BE MADE FOR THIS SUBSTITUTION AS IT IS CONSIDERED INCIDENTAL TO THE COST OF THE REINFORCED CONCRETE DECK SLAB.

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.

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.

FOR PLACING LOAD ON STRUCTURE MEMBERS, SEE SPECIAL PROVISIONS.

PROJECT NO. U-2579B
FORSYTH COUNTY
STATION: 17+10.00 -Y4RPA-

SHEET 4 OF 5

PLANS PREPARED BY:
MULKEY ENGINEERS & CONSULTANTS
PO BOX 33127
RALEIGH, N.C. 27636
(919) 851-1912
(919) 851-1918 (FAX)
WWW.MULKEYINC.COM
NC LICENSE NO. C-1021

NORTH CAROLINA PROFESSIONAL SEAL 034352 ENGINEER TERRE R. PETERSON
5/19/2014
DocuSigned by: Terre R. Peterson
EDC41716ATCD40F

DWG. NO. RPA-4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

FOR BRIDGE ON -Y4RPA- OVER HARMON MILL (SMITH) CREEK BETWEEN US 158 AND US 421/I-40 BUS.

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-221
1			3			TOTAL SHEETS
2			4			707

STR #7

5/19/2014 7:58:55 AM R:\Structures\U-2579B Romp A\U-2579B_RPA_SD_GD_03.dgn