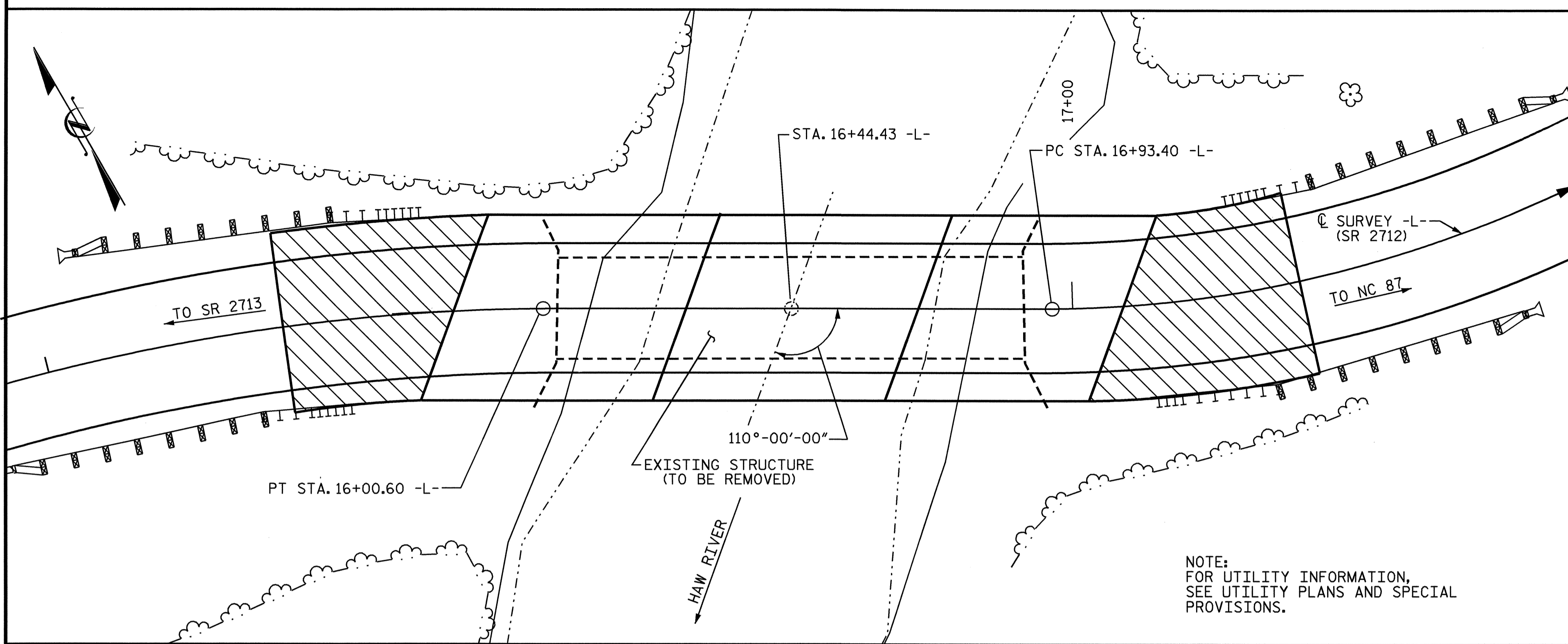


BENCH MARK #2 R/R SPIKE IN 13" OAK 46.01' RT. OF -L- STA. 15+51.88 EL. 625.43 NGVD 29



LOCATION SKETCH

NOTES: (CONTINUED FROM SHEET 2 OF 3)

ASSUMED LIVE LOAD = HS 20 OR ALTERNATE LOADING.  
 FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.  
 FOR EROSION CONTROL MEASURES SEE EROSION CONTROL PLANS.  
 THIS BRIDGE HAS BEEN DESIGNED BY THE STRENGTH DESIGN METHOD AS SPECIFIED IN AASHTO STANDARD SPECIFICATIONS.  
 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 STRUCTURE CONSISTING OF 2 SPANS, 1 AT 45'-5" AND 1 AT 45'-3", WITH A CLEAR ROADWAY WIDTH OF 18'-1" CONSISTING OF TIMBER DECK ON STEEL FLOOR BEAM SYSTEM AND SUBSTRUCTURE CONSISTING OF TIMBER CAP ON TIMBER PILES AT END BENT No. 1, CONCRETE CAP ON REINFORCED CONCRETE COLUMNS AND FOOTING AT INTERIOR BENT, AND TIMBER CAP ON TIMBER PILES AT END BENT No. 2 WITH A CRUTCH BENT CONSISTING OF A STEEL BEAM ON H-PILES APPROXIMATELY 2 FEET FROM END BENT No. 2 SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY POSTED BELOW THE LEGAL LOAD LIMIT. SHOULD THE STRUCTURAL INTEGRITY OF THE BRIDGE FURTHER DETERIORATE, THIS LOAD LIMITATION MAY BE REDUCED AS FOUND NECESSARY DURING THE LIFE OF THE PROJECT.  
 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 16+44.43 -L-".  
 THE ENTIRE COST OF FURNISHING AND INSTALLING THE DROP INLET, INCLUDING GRATES, FRAMES, AND ANY NECESSARY HARDWARE WILL BE A ROADWAY PAY ITEM.  
 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 SHALL BE EXCAVATED FOR A DISTANCE OF 40 FT. LEFT AND RIGHT OF THE CENTERLINE ROADWAY AT END BENT No. 1 AND 60 FT. LEFT AND 20 FT. RIGHT OF THE CENTERLINE ROADWAY AT END BENT No. 2 AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR UNCLASSIFIED STRUCTURE EXCAVATION. FOR UNCLASSIFIED STRUCTURE EXCAVATION, SEE SPECIAL PROVISIONS.  
 ASPHALT WEARING SURFACE IS INCLUDED IN ROADWAY QUANTITY ON ROADWAY PLANS.  
 THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH HEC 18, "EVALUATING SCOUR AT BRIDGES", NOVEMBER, 1995.  
 THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AASHTO STANDARD SPECIFICATIONS FOR SEISMIC DESIGN OF HIGHWAY BRIDGES FOR SEISMIC PERFORMANCE CATEGORY A.  
 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 SAMPLE 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.

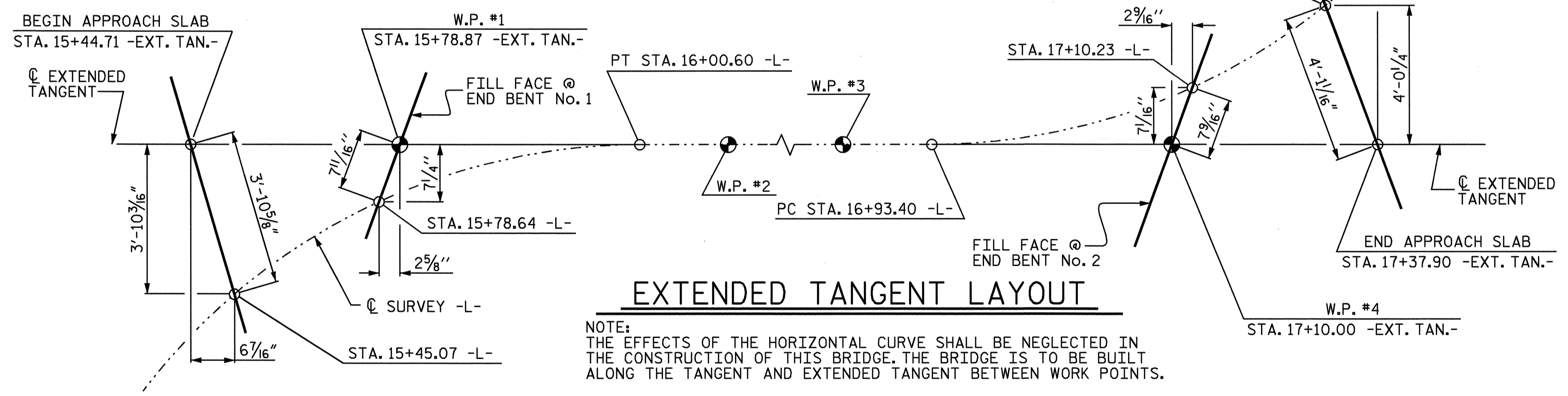
NOTE:  
 FOR UTILITY INFORMATION,  
 SEE UTILITY PLANS AND SPECIAL  
 PROVISIONS.

HYDRAULIC DATA

DESIGN DISCHARGE = 2,000 CFS.  
 FREQUENCY OF DESIGN FLOOD = <2 YEARS  
 DESIGN HIGH WATER ELEVATION = 620.0  
 DRAINAGE AREA = 182 SQ. MI.  
 BASIC DISCHARGE(Q100) = 14,500 CFS.  
 BASIC HIGH WATER ELEVATION = 634.3

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE = 2000 CFS.  
 FREQUENCY OF OVERTOPPING FLOOD = <2 YRS  
 OVERTOPPING FLOOD ELEVATION = 619.9



EXTENDED TANGENT LAYOUT

NOTE:  
 THE EFFECTS OF THE HORIZONTAL CURVE SHALL BE NEGLECTED IN THE CONSTRUCTION OF THIS BRIDGE. THE BRIDGE IS TO BE BUILT ALONG THE TANGENT AND EXTENDED TANGENT BETWEEN WORK POINTS.  
 THE APPROACH SLABS WILL BE CONSTRUCTED AS A TRANSITION BETWEEN THE TANGENT BRIDGE AND THE CURVED ROADWAY ALIGNMENT.



TOTAL BILL OF MATERIAL

	CONSTRUCTION, MAINTENANCE, AND REMOVAL OF TEMPORARY ACCESS	REMOVAL OF EXISTING STRUCTURE	3'-6" Ø DRILLED PIERS IN SOIL	3'-6" Ø DRILLED PIERS NOT IN SOIL	PERMANENT STEEL CASING FOR 3'-6" Ø DRILLED PIER	CROSSHOLE SONIC LOGGING	CSL TUBES	UNCLASSIFIED STRUCTURE EXCAVATION	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	SPIRAL COLUMN REINFORCING STEEL	HP 12 X 53 STEEL PILES	CONCRETE BARRIER RAIL	PLAIN RIP RAP CLASS II (2'-0" THICK)	FILTER FABRIC FOR DRAINAGE	ELASTOMERIC BEARINGS	3'-0" X 1'-9" PRESTRESSED CONCRETE CORED SLABS		
	LUMP SUM	LUMP SUM	LIN. FT.	LIN. FT.	LIN. FT.	EACH	LIN. FT.	LUMP SUM	CU. YDS.	LUMP SUM	LBS.	LBS.	NO.	LIN. FT.	LIN. FT.	TONS	SQ. YDS.	LUMP SUM	NO.	LIN. FT.
SUPERSTRUCTURE										LUMP SUM				256.93				LUMP SUM	39	1670.03
END BENT No. 1									14.7		2,320		8	100		115	130			
BENT No. 1			44.2	31.8	37.6		334.0		24.8		8,238	2,124								
BENT No. 2			55.0	29.0	53.4	1	366.0		23.6		8,385	2,176								
END BENT No. 2									14.5		2,317		8	140		115	130			
TOTAL	LUMP SUM	LUMP SUM	99.2	60.80	91.0	1	700.0	LUMP SUM	77.6	LUMP SUM	21,260	4,300	16	240	256.93	230	260	LUMP SUM	39	1670.03

PROJECT NO. B-3646  
 GUILFORD COUNTY  
 STATION: 16+44.43 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 GENERAL DRAWING  
 BRIDGE OVER HAW RIVER ON  
 SR 2712 (BROOKS BRIDGE RD.)  
 BETWEEN SR 2713 AND NC 87

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-3
1			3			TOTAL SHEETS
2			4			28

DRAWN BY: P.C. BREWER DATE: 1/7/04  
 CHECKED BY: S.B. WILLIAMS DATE: 4/22/04