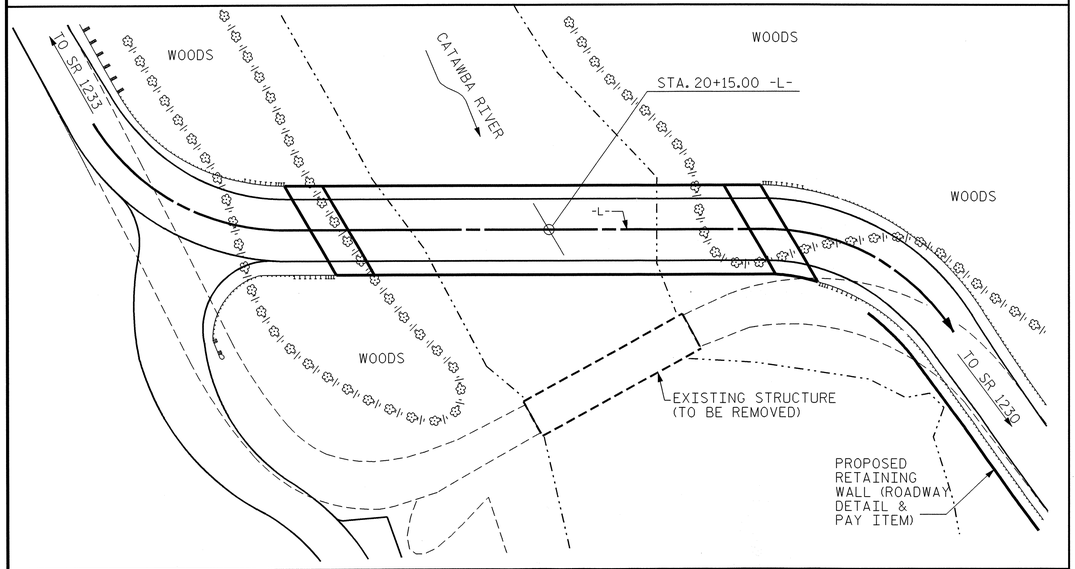
25-MAY-2004 10:55
W:\squads\B3419\FinalPlans\B3419_sd_GD_01.dgn
klayne

BENCH MARK : BM #1, 8" SPIKE IN ROOT OF 18" PINE TREE
-L- STA. 7+06.66 (71' LEFT) N 736784.6 E 1157752.5 ELEV. 1115.85 NGVD 1929



LOCATION SKETCH

HYDRAULIC DATA

DESIGN DISCHARGE ---------- (2 TURBINES) 2500 C.F.S.
DISCHARGE ---------- (1 TURBINE) 1300 C.F.S.
FREQUENCY OF DESIGN FLOOD---- **
DESIGN HIGH WATER EL.-------- (2 TURBINES) 1063.5
WATER EL. -------- (1 TURBINE) 1061.0
DRAINAGE AREA---------- 380 SQ. FT. **
BASIC DISCHARGE (0100)------- **
BASIC HIGH WATER EL.--------- **

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE---------- 11,080 C.F.S.
FREQUENCY OF OVERTOPPING FLOOD--- **
OVERTOPPING FLOOD EL.---------- 1076.2

** THIS SITE IS LOCATED SOUTH OF A POWER REGULATION FACILITY AT LAKE JAMES. WATER ELEVATIONS AND DISCHARGES ARE ALWAYS REGULATED. THE OUTFLOW POINTS CONTRUBUTING TO THE DRAINAGE AREA IS RELEASED OVER PADDY CREEK AND CATAWBA DAMS AND BYPASS THE PROJECT SITE COMPLETELY.

NOTES :

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.

ALL STRUCTURAL STEEL SHALL BE AASHTO M270 GRADE 50W AND PAINTED IN ACCORDANCE WITH SYSTEM 4 OF ARTICLE 442-7 OF THE STANDARD SPECIFICATIONS UNLESS OTHERWISE NOTED ON THE PLANS.

THE EXISTING STRUCTURE CONSISTING OF 4 SPANS @ 20.7', 1 @ 19.8', 1 @ 19.7', AND 1 @ 21.5', CONSISTING OF STEEL PLANKS WITH AN ASPHALT OVERLAY ON TOP OF STEEL I-BEAMS, A CLEAR ROADWAY WIDTH OF 18.3' ON CONCRETE ABUTMENTS AND LOCATED 75 FEET DOWNSTREAM FROM 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 STRUCTURE, 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 MATERIAL SHOWN IN THE CROSS-HATCHED AREA SHALL BE EXCAVATED FOR A DISTANCE OF 32 FT. EACH SIDE OF CENTERLINE ROADWAY AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE MEASURED AND PAID FOR AS UNCLASSIFIED STRUCTURE EXCAVATION.

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.

THE CLASS AA CONCRETE IN THE BRIDGE DECK SHALL CONTAIN FLY ASH OR GROUND GRANULATED BLAST FURNACE SLAG AT THE SUBSTITUION RATE SPECIFIED IN ARTICLE 1024-1 AND IN ACCORDANCE WITH ARTICLE 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

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 STA. 20+15.00 -L-".

FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

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

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

TOTAL BILL OF MATERIAL

	REMOVAL OF EXISTING STRUCTURE @ STA. 20+15.00 -L-	PILE EXCAVATION IN SOIL	PILE EXCAVATION NOT IN SOIL	3'-6" Ø DRILLED PIERS IN SOIL	3'-6" Ø DRILLED PIERS NOT IN SOIL	CROSSHOLE SONIC LOGGING	CSL TUBES	UNCLASSIFIED STRUCTURE EXCAVATION	REINFORCED CONCRETE DECK SLAB	GROOVING BRIDGE FLOORS	CLASS A CONCRETE	BRIDGE APPROACH SLABS @ STA. 20+15.00 -L-	REINFORCING STEEL	SPIRAL COLUMN REINFORCING STEEL	STRUCTURAL STEEL	HP 12 X 53 STEEL PILES		CONCRETE BARRIER RAIL	PLAIN RIP RAP CLASS II (2'-0" THICK)	FILTER FABRIC FOR DRAINAGE	ELASTOMERIC BEARINGS	EVAZOTE JOINT SEALS
	LUMP SUM	LIN. FT.	LIN. FT.	LIN.FT.	LIN.FT.	EA.	LIN.FT.	CU.YDS.	SQ.FT.	SQ.FT.	CU.YDS.	LUMP SUM	LBS.	LBS.	APPROX.LBS.	NO.	LIN. FT.	LIN.FT.	TONS	SQ. YDS.	LUMP SUM	LUMP SUM
SUPERSTRUCTURE								707	7,649	8,422		LUMP SUM			392,000			355.09			LUMP SUM	LUMP SUM
END BENT NO.1		6	14	19.80	28.00	1	231.17				72.5		15,750	1,113		2	26		73	81		
END BENT NO.2		14	6	15.65	28.00		214.58				73.2		15,377	1,027		2	25		88	98		
TOTAL	LUMP SUM	20	20	35.45	56.00	1	445.75	707	7,649	8,422	145.7	LUMP SUM	31,127	2,140	392,000	4	51	355.09	161	179	LUMP SUM	LUMP SUM

PROJECT NO. B-3419
BURKE COUNTY
STATION: 20+15.00 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

FOR BRIDGE ON SR 1223
OVER CATAWBA RIVER
BETWEEN SR 1230 AND
SR 1233

NORTH CAROLINA PROFESSIONAL SEAL 20724 ENGINEER STEVEN DOUGLAS RACKLEY
5/26/04

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-3
1			3			TOTAL SHEETS
2			4			23

DRAWN BY : A.R.CHESSON DATE : 8-03
CHECKED BY : S.D. RACKLEY DATE : 1-04