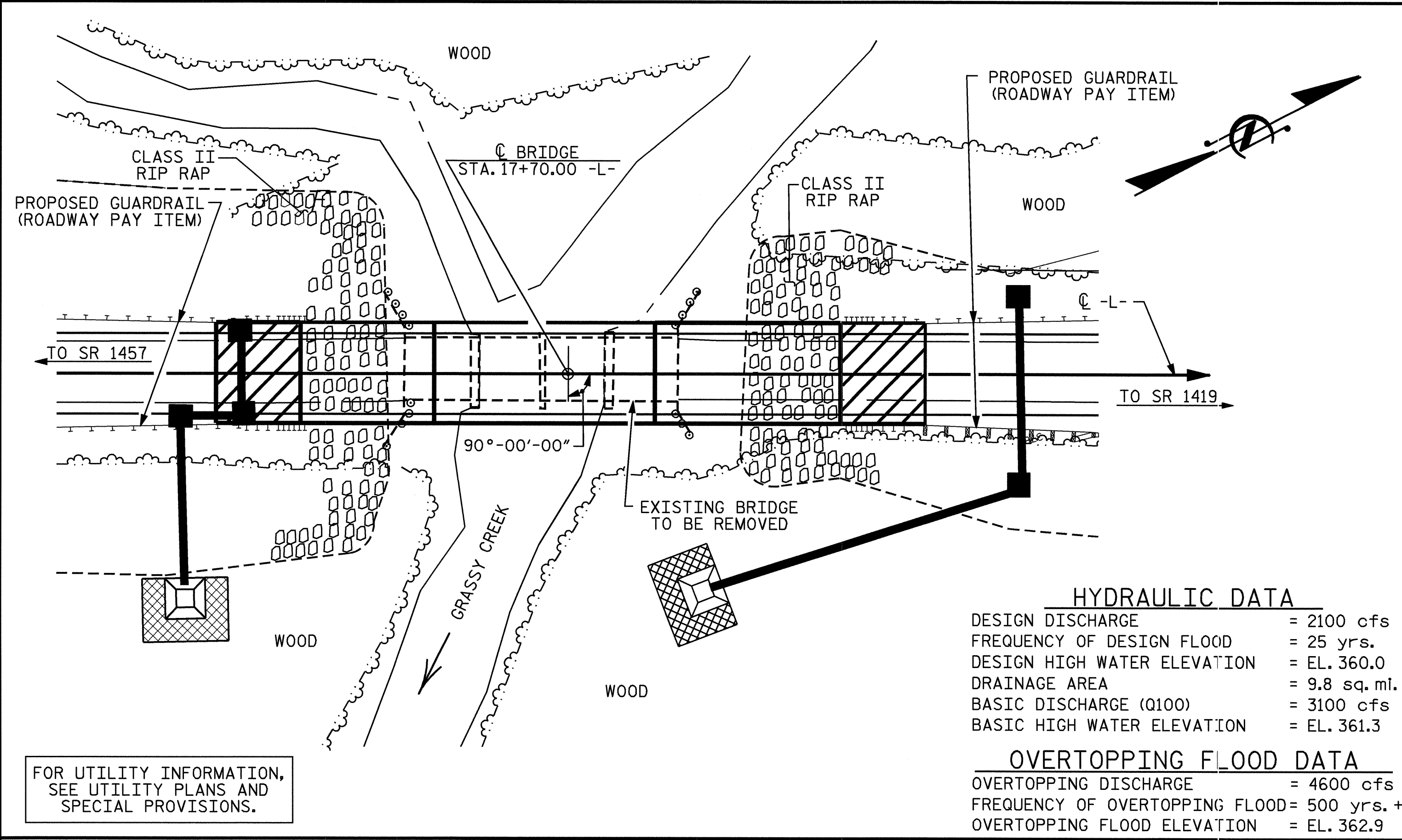


BM# 2 ELEV. 380.07' -L- STA. 21+50.58, 155.90' LEFT RAILROAD SPIKE IN BASE OF POWER POLE



LOCATION SKETCH

HYDRAULIC DATA

DESIGN DISCHARGE = 2100 cfs
 FREQUENCY OF DESIGN FLOOD = 25 yrs.
 DESIGN HIGH WATER ELEVATION = EL. 360.0
 DRAINAGE AREA = 9.8 sq. mi.
 BASIC DISCHARGE (Q100) = 3100 cfs
 BASIC HIGH WATER ELEVATION = EL. 361.3

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE = 4600 cfs
 FREQUENCY OF OVERTOPPING FLOOD = 500 yrs. +
 OVERTOPPING FLOOD ELEVATION = EL. 362.9

FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

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.

THE EXISTING STRUCTURE CONSISTING OF STEEL PLANK DECK ON STEEL GIRDER/FLOORBEAM SYSTEM (CONT.) WITH END & INT. BTS : TIMBER CAP & PILES, CONC. ENCASED AND SPANS OF 1 @ 20'-3", 1 @ 20'-0" (CONTINUOUS), 1 @ 19'-10", 1 @ 20'-3" (CONTINUOUS) WITH A CLEAR ROADWAY WIDTH OF 19.1 FT. SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY POSTED BELOW THE LEGAL LOAD LIMIT.

THE SUBSTRUCTURE OF 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.

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 ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

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 17+70.00 -L-."

THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 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 SAMPLES OF EACH BAR USED THE BARS FROM WHICH THE SAMPLES ARE TAKEN MUST THEN BE SPLICED WITH REPLACEMENT BARS OF THE SIZE AND LENGTH OF THE SAMPLES, PLUS A MINIMUM LAP SPLICE OF THIRTY BAR DIAMETERS.

THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH HEC 18, "EVALUATING SCOUR AT BRIDGES", NOVEMBER, 1995.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA SHALL BE EXCAVATED FOR A DISTANCE OF 25 FT. LEFT AND 25 FT. RIGHT EACH SIDE OF CENTERLINE ROADWAY AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE MEASURED AND PAID FOR AS UNCLASSIFIED STRUCTURE EXCAVATION.

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

THE CONTRACTOR MAY CHOOSE TO UTILIZE THE STANDARD OVERHANG FALSEWORK BRACING SYSTEM. SEE "STANDARD OVERHANG FALSEWORK" SHEETS.

THE DRILLED PIERS AT BENT NO.1 AND 2 HAVE BEEN DESIGNED FOR BOTH SKIN FRICTION AND TIP BEARING. THE REQUIRED TIP BEARING CAPACITY IS 25 tsf.

THE REQUIRED TIP BEARING CAPACITY AT BENT NO.1 AND 2 SHALL BE VERIFIED.

DRILLED PIERS FOR BENT NO.1 AND 2 HAVE BEEN DESIGNED FOR AN APPLIED LOAD OF 197 TONS EACH AT THE TOP OF THE COLUMN.

DRILLED PIERS AT BENT NO.1 AND NO.2 SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 345 FT, SATISFY THE REQUIRED TIP BEARING CAPACITY.

PERMANENT STEEL CASING MAY BE REQUIRED FOR DRILLED PIERS AT BENT NO.1. IF REQUIRED, THE CASING SHALL NOT EXTEND BELOW ELEVATION 352 FT WITHOUT THE ENGINEER'S PERMISSION. THE NEED FOR PERMANENT STEEL CASING WILL BE DETERMINED BY THE ENGINEER.

PERMANENT STEEL CASING MAY BE REQUIRED FOR DRILLED PIERS AT BENT NO.2. IF REQUIRED, THE CASING SHALL NOT EXTEND BELOW ELEVATION 353 FT WITHOUT THE ENGINEER'S PERMISSION. THE NEED FOR PERMANENT STEEL CASING WILL BE DETERMINED BY THE ENGINEER.

THE SCOUR CRITICAL ELEVATION FOR BENT NO.1 IS ELEVATION 351 FT. THE SCOUR CRITICAL ELEVATIONS ARE FOR USE BY MAINTENANCE FORCES TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

THE SCOUR CRITICAL ELEVATION FOR BENT NO.2 IS ELEVATION 353 FT. THE SCOUR CRITICAL ELEVATIONS ARE FOR USE BY MAINTENANCE FORCES TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

SPT TESTING IS NOT REQUIRED TO DETERMINE THE TIP BEARING CAPACITY OF THE DRILLED PIERS AT BENT NO.1 AND 2.

SLURRY CONSTRUCTION SHALL NOT BE USED FOR THIS PROJECT.

SID INSPECTIONS ARE NOT REQUIRED TO DETERMINE THE BOTTOM CLEANLINESS OF THE DRILLED PIERS AT BENT NO.1 AND 2.

CSL TUBES ARE REQUIRED AND CSL TESTING MAY BE REQUIRED FOR THE DRILLED PIERS AT BENT NO.1 AND 2. SEE SPECIAL PROVISION FOR CROSSHOLE SONIC LOGGING.

FOR DRILLED PIERS, SEE SPECIAL PROVISIONS.

PILES FOR END BENT #1 SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 60 TONS.

WHEN DRIVING PILES, THE MAXIMUM BLOW COUNT SHALL NOT BE EXCEEDED.

THE REQUIRED BEARING CAPACITY OF THE SPREAD FOOTINGS AT END BENT 2 IS 4 tsf. THE REQUIRED BEARING CAPACITY SHALL BE VERIFIED.

FOR "FABRICATED METAL STAY-IN-PLACE FORMS", SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

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.

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 SLOPE PROTECTION. SEE SPECIAL PROVISIONS FOR CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY ACCESS AT STATION 17+70.00 -L-.

THE ENTIRE COST OF FURNISHING AND INSTALLING THE DROP INLET, INCLUDING GRATES, FRAMES, AND ANY NECESSARY HARDWARE WILL BE A ROADWAY PAY ITEM.

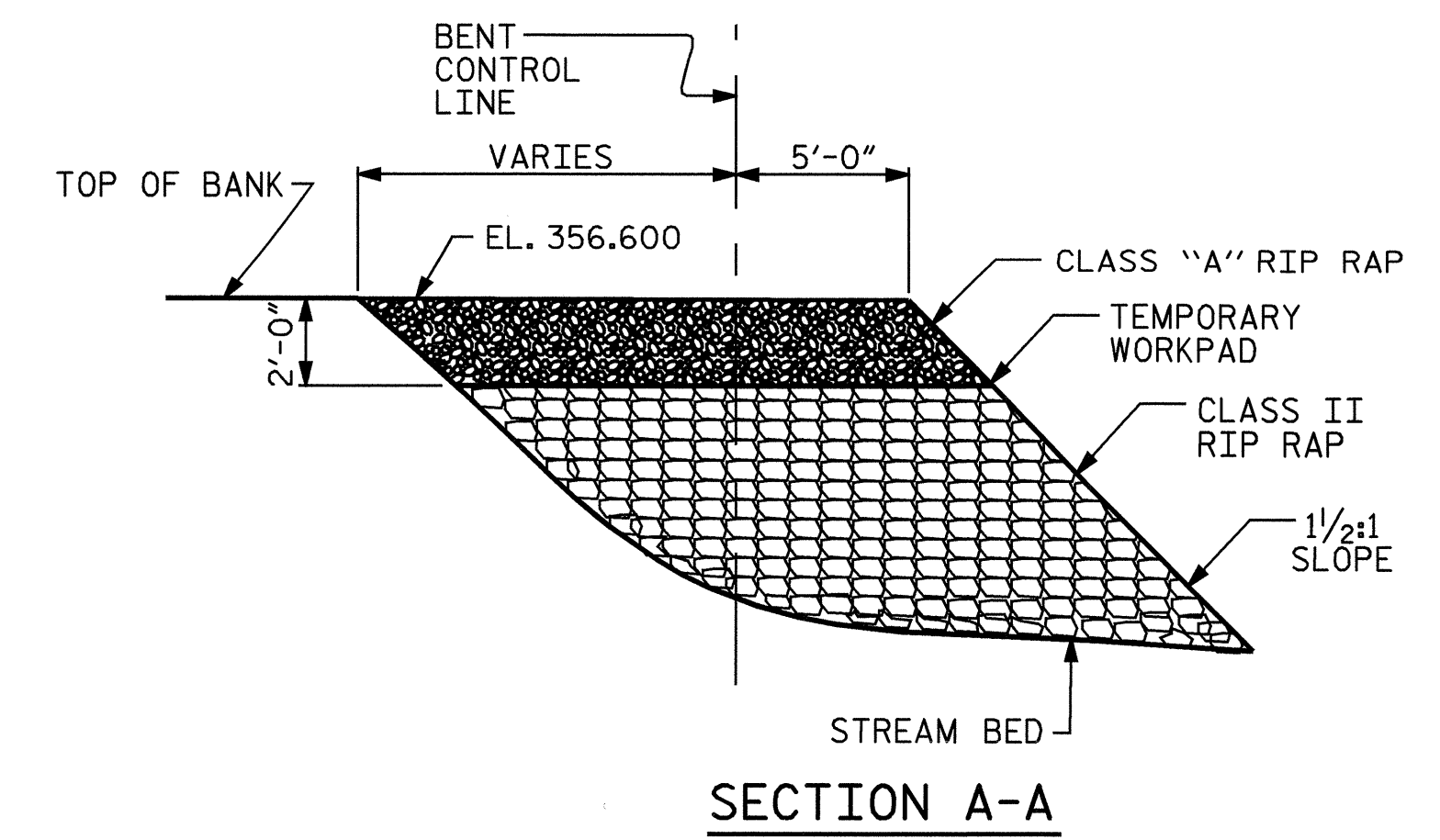
TOTAL BILL OF MATERIAL

	CONSTRUCTION, MAINTENANCE, & REMOVAL OF TEMP. ACCESS	REMOVAL OF EXISTING STRUCTURE	FOUNDATION EXCAVATION FOR END BENT #2	3'-6" DIA. DRILLED PIERS IN SOIL	3'-6" DIA. DRILLED PIERS NOT IN SOIL	PERMANENT STEEL CASING FOR 3'-6" DIA. DRILLED PIER	CROSSHOLE SONIC LOGGING	CSL TUBES	UNCLASSIFIED STRUCTURE EXCAVATION	REINFORCED CONCRETE DECK SLAB	GROOVING BRIDGE FLOORS
	LUMP SUM	LUMP SUM	LUMP SUM	LIN. FT.	LIN. FT.	LIN. FT.	EACH	LIN. FT.	CU. YDS.	SQ. FT.	SQ. FT.
SUPERSTRUCTURE										5251.0	5546.0
END BENT #1									415.0		
BENT #1				8.0	14.0	8.0	1	108.0			
BENT #2				6.0	16.0	6.0		108.0			
END BENT #2			LUMP SUM						935.0		
TOTAL	LUMP SUM	LUMP SUM	LUMP SUM	14.0	30.0	14.0	1	216.0	1350.0	5251.0	5546.0

TOTAL BILL OF MATERIAL

	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	SPIRAL COLUMN REINFORCING STEEL	45" PRESTRESSED CONCRETE GIRDERS	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
	CU. YDS.	LUMP SUM	LBS.	LBS.	NO. LIN. FT.	NO. LIN. FT.	LIN. FT.	TON	SQ. YD.	LUMP SUM	LUMP SUM
SUPERSTRUCTURE					12	623.32		315.83		LUMP SUM	LUMP SUM
END BENT #1	21.0		3225			7	105		489	543	
BENT #1	19.4		5702	1069							
BENT #2	19.8		5743	1102							
END BENT #2	39.8		4925					431	480		
TOTAL	100.0	LUMP SUM	19595	2171	12	623.32	7	105	315.83	920	1023

DRAWN BY : J. G. KHARVA DATE : 10-26-04
 CHECKED BY : W. A. DAVIS DATE : 1-28-05



SECTION A-A

PROJECT NO. B-3875
 MOORE COUNTY
 STATION: 17+70.00 -L-
 SHEET 3 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 FOR BRIDGE OVER
 GRASSY CREEK ON
 SR 1456 BETWEEN
 SR 1457 AND SR 1419

REVISIONS

NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO. S-3
 TOTAL SHEETS 33

