

B.M. #1 : PK NAIL SET IN CONC. BASE OF SIGN FOR SOUTHWEST MIDDLE SCHOOL. BEING SET IN THE NORTHWEST CORNER. THE PLUS AND OVER IS A PROJECTION OF BASELINE -BL- STA. 9+35.00 ELEV. 2700.88  
DATUM : NGVD 29

**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.

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.

THE EXISTING STRUCTURE CONSISTING OF 4 CONTINUOUS SPANS 1 @ 20'-6", 1 @ 19'-10", 1 @ 17'-2" AND 1 @ 18'-2" WITH TIMBER FLOOR ON STEEL I-BEAMS SUPERSTRUCTURE AND A CLEAR ROADWAY WIDTH OF 24'-11" WITH AN ATTACHED SIDEWALK ON A SUBSTRUCTURE CONSISTING OF TIMBER CAP ON TIMBER PILE AND SILL END BENT ABUTMENTS AND TIMBER CAP ON TIMBER PILE AND SILL INTERIOR BENTS AND LOCATED 50' UPSTREAM FROM THE PROPOSED STRUCTURE SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY NOT POSTED FOR LOAD LIMIT. SHOULD 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. SEE SPECIAL PROVISIONS FOR REMOVAL OF EXISTING STRUCTURE.

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 24 FT. EACH SIDE OF CENTERLINE ROADWAY 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.

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 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", 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.

FOR LIMITS OF TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC SEE TRAFFIC CONTROL PLANS. FOR PAY ITEM FOR TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE ROADWAY PLANS.

FOR DRILLED PIERS, 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 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.

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 10+87.50 -L-"

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 RAP SLOPE PROTECTION. SEE SPECIAL PROVISIONS FOR CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY ACCESS AT STATION 10+87.50 -L-.

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

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

THE DRILLED PIERS AT END BENT NO.1 HAVE BEEN DESIGNED FOR BOTH SKIN FRICTION AND TIP BEARING. THE REQUIRED TIP BEARING CAPACITY IS 15 TSF.

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

DRILLED PIERS FOR END BENT NO.1 HAVE BEEN DESIGNED FOR AN APPLIED LOAD OF 176 TONS EACH AT THE TOP OF THE COLUMN.

PERMANENT STEEL CASING IS NOT REQUIRED FOR DRILLED PIERS AT END BENT NO.1.

DRILLED PIERS AT END BENT NO.1 SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 2660 FT. SATISFY THE REQUIRED TIP BEARING CAPACITY, AND HAVE A MINIMUM PENETRATION OF 5 FT. INTO ROCK AS DEFINED BY THE DRILLED PIERS SPECIAL PROVISION.

SLURRY CONSTRUCTION SHALL NOT BE USED FOR THIS PROJECT.

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

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

FOR DRILLED PIERS, SEE SPECIAL PROVISIONS.

PILES FOR END BENT NO.2 SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 50 TONS EACH.

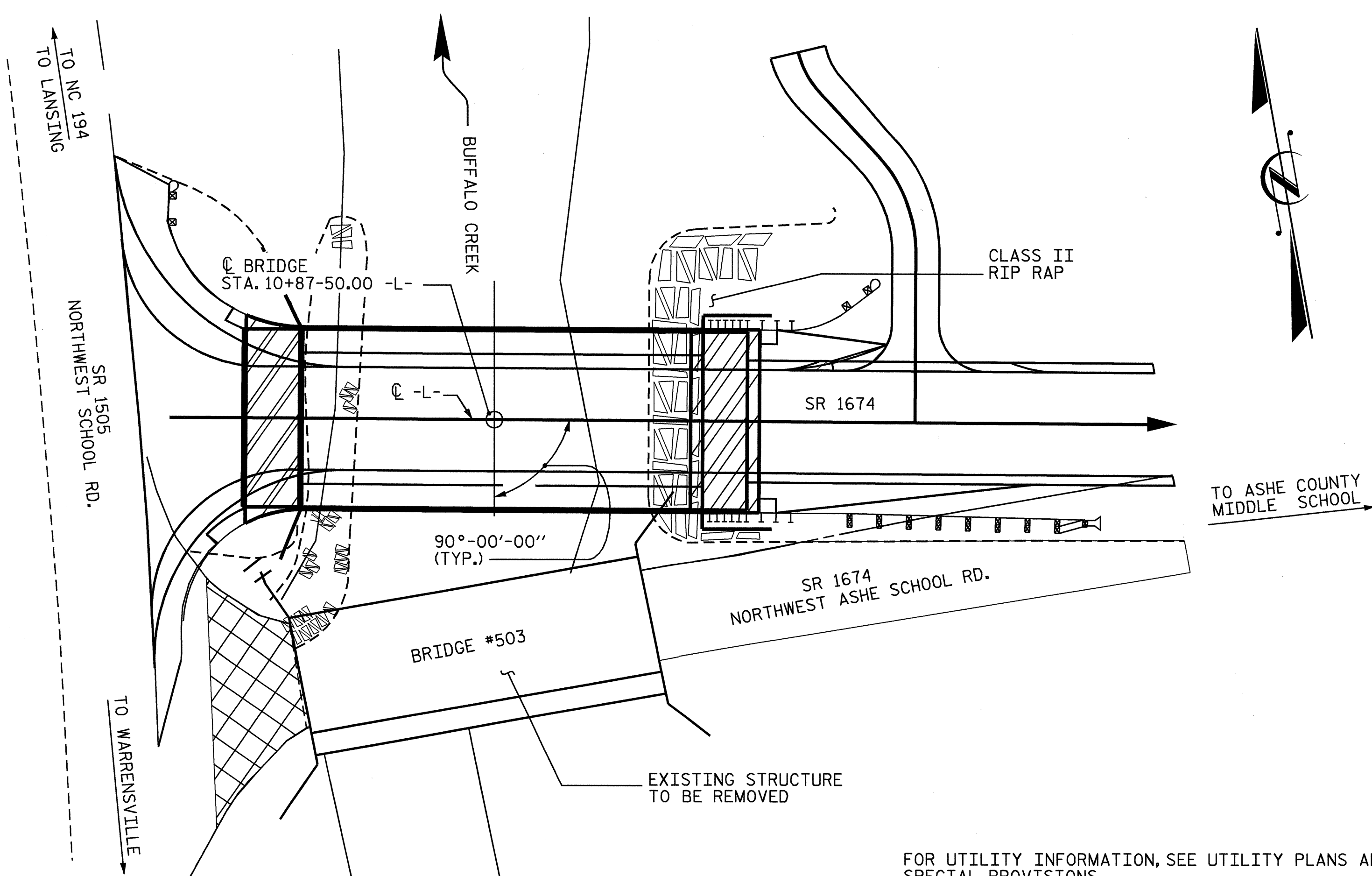
WHEN DRIVING PILES, THE MAXIMUM BLOW COUNT SHALL NOT BE EXCEEDED.

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

WING WALLS AND END BENT WALL AT END BENT 1 SHALL BE KEYED AT LEAST 12 INCHES INTO ROCK WITH A MINIMUM THICKNESS AS SHOWN ON PLAN. IF THE ELEVATION OF THE ROCK IS HIGHER THAN THAT SHOWN ON THE PLANS RAISE THE BOTTOM OF WALL ELEVATION SO THAT THE END BENT WALL AND THE WING WALLS ARE KEYED NO MORE THAN 18 INCHED INTO ROCK.

THE SCOUR CRITICAL ELEVATIONS FOR THE WING WALLS AND ABUTMENT WALL AT END BENT 1 ARE THE SAME AS BOTTOM OF WALL ELEVATIONS. THE SCOUR CRITICAL ELEVATIONS ARE FOR USE BY MAINTENANCE FORCES TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

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



**LOCATION SKETCH**

FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

**TOTAL BILL OF MATERIAL**

	CONSTR. MAINT. & REMOVAL TEMP. ACCESS	REMOVAL OF EXISTING STRUCTURE	FOUNDATION EXCAVATION	3'-6" Ø DRILLED PIER NOT IN SOIL	CROSSHOLE SONIC LOGGING	CSL TUBES	UNCLASSIFIED STRUCTURE EXCAVATION	REINFORCED CONCRETE DECK SLAB	GROOVING BRIDGE FLOORS	CLASS A CONCRETE	BRIDGE APPROACH SLABS
	LUMP SUM	LUMP SUM	CU.YDS.	SQ.FT.	EACH	LIN. FT.	LUMP SUM	SQ.FT.	SQ.FT.	CU.YDS.	LUMP SUM
SUPERSTRUCTURE											LUMP SUM
END BENT 1			21	54.97	1	289.9		3448	2060	84.7	
END BENT 2										31.9	
TOTAL	LUMP SUM	LUMP SUM	21	54.97	1	289.9	LUMP SUM	3448	2060	116.6	LUMP SUM

**TOTAL BILL OF MATERIAL**

	REINFORCING STEEL	SPIRAL COLUMN REINFORCING STEEL	54" PRESTRESSED CONCRETE GIRDERS	HP 12 X 53 STEEL PILES	TWO BAR METAL RAIL	1'-2" X 3'-3" CONCRETE PARAPET	PLAIN RIP RAP CLASS II (2'-0" THICK)	FILTER FABRIC FOR DRAINAGE	ELASTOMERIC BEARINGS	EVAZOTE JOINT SEALS
	LBS.	LBS.	NO. LIN.FT.	NO. LIN.FT.	LIN.FT.	LIN.FT.	TONS	SQ. YDS.	LUMP SUM	LUMP SUM
SUPERSTRUCTURE			5	411.67		150.67	165.83		LUMP SUM	LUMP SUM
END BENT 1	15472	2471					59	65		
END BENT 2	4408			12	180		268	298		
TOTAL	19880	2471	5	411.67	12	180	327	363	LUMP SUM	LUMP SUM

**HYDRAULIC DATA**

DESIGN DISCHARGE.....3600 CFS.  
 FREQUENCY OF DESIGN FLOOD.....25 YEARS  
 DESIGN HIGH WATER ELEVATION.....2675.6  
 DRAINAGE AREA.....23.1SQ. MI.  
 BASIC DISCHARGE(Q100).....5400 CFS.  
 BASIC HIGH WATER ELEVATION.....2677.5

**OVERTOPPING FLOOD DATA**

OVERTOPPING DISCHARGE.....10200 CFS.  
 FREQUENCY OF OVERTOPPING FLOOD.....500 YRS.+  
 OVERTOPPING FLOOD ELEVATION.....2681.8

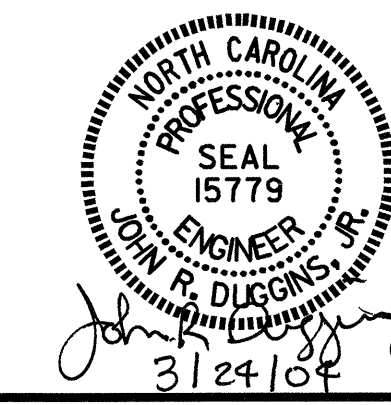
PROJECT NO. B-3607  
 ASHE COUNTY  
 STATION: 10+87.50 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**GENERAL DRAWING**  
 FOR BRIDGE ON SR 1674 (NORTHWEST ASHE SCHOOL RD.) OVER BUFFALO CREEK

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-3
1			3			TOTAL SHEETS 32
2			4			



DRAWN BY : M. POOLE DATE : 1/2004  
 CHECKED BY : J. R. DUGGINS DATE : 2/2004