

LOCATION SKETCH

HYDRAULIC DATA

DESIGN DISCHARGE	7000 CFS
FREQUENCY OF DESIGN FLOOD	25 YRS
DESIGN HIGH WATER ELEVATION	158.89 FT.
DRAINAGE AREA	65.2 SQ.MI.
BASIC DISCHARGE (Q100)	10,100 CFS
BASIC HIGH WATER ELEVATION	160.78 FT.

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE	12,925 CFS
FREQUENCY OF OVERTOPPING FLOOD	+ 200 YRS
OVERTOPPING FLOOD ELEVATION	161.74 FT.

NOTE: 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.
 THIS BRIDGE HAS BEEN DESIGNED BY THE STRENGTH DESIGN METHOD AS SPECIFIED IN AASHTO 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.
 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 40 TONS OF REINFORCING STEEL, ONE 30 INCH SAMPLE OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 40 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.
 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 25+80.65 -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 EXISTING STRUCTURE CONSISTING OF 3 SPANS, 1 @ 40'-6", AND 2 @ 40'-3", WITH A 4 X 12 TIMBER DECK AND 2.5" ASPHALT WEARING SURFACE ON 8 LINES OF W16 X 45 I-BEAMS @ 2'-7" CENTERS, WITH A CLEAR ROADWAY WIDTH OF 19'-1", ON TIMBER CAPS AND TIMBER PILES AT END BENT 1 AND 2, AND TIMBER PILES AND TIMBER PILES WITH STEEL CRUTCHES AT INTERIOR BENTS, LOCATED AT THE SAME LOCATION AS THE 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.

PILES FOR END BENT NO.1 AND 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.
 FOR DRILLED PIERS, SEE SPECIAL PROVISIONS.
 THE DRILLED PIERS AT BENTS NO.1 AND NO.2 HAVE BEEN DESIGNED FOR BOTH SKIN FRICTION AND TIP BEARING. THE REQUIRED TIP BEARING CAPACITY IS 15 TONS/FT².
 DRILLED PIERS FOR BENT NO.1 AND NO.2 HAVE BEEN DESIGNED FOR AN APPLIED LOAD OF 224 TONS AND 204 TONS RESPECTIVELY, AT THE TOP OF THE COLUMN.
 PERMANENT STEEL CASING IS REQUIRED FOR DRILLED PIERS AT BENTS NO.1 AND NO.2. THE CASING SHALL NOT EXTEND BELOW ELEVATION 136.5 FT. WITHOUT THE ENGINEER'S PERMISSION.
 DRILLED PIERS FOR BENT NO.1 SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 124 FT. AND SATISFY THE REQUIRED TIP BEARING CAPACITY.
 DRILLED PIERS FOR BENT NO.2 SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 119 FT. AND SATISFY THE REQUIRED TIP BEARING CAPACITY.
 SPT TESTING IS NOT REQUIRED TO DETERMINE THE TIP BEARING CAPACITY OF THE DRILLED PIERS AT BENT NO.1 AND NO.2.
 SLURRY CONSTRUCTION SHALL NOT BE USED FOR THIS PROJECT.
 CSL TUBES ARE REQUIRED AND CSL TESTING MAY BE REQUIRED FOR THE DRILLED PIERS AT BENT NO.1 AND NO.2. SEE SPECIAL PROVISION FOR CROSSHOLE SONIC LOGGING.
 SID INSPECTIONS MAY BE REQUIRED TO INSPECT THE BOTTOM CLEANLINESS OF THE DRILLED PIERS. THE ENGINEER WILL DETERMINE THE NEED FOR SID INSPECTIONS. SEE DRILLED PIERS SPECIAL PROVISIONS.
 FOR EROSION CONTROL MEASURES SEE EROSION CONTROL PLANS.
 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 LOCATION OF THE CONSTRUCTION JOINT IN THE DRILLED PIERS AT BENT 1 IS BASED ON 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.
 THE LOCATION OF THE CONSTRUCTION JOINT IN THE DRILLED PIERS AT BENT 2 IS APPROXIMATELY 1 FT. ABOVE THE NORMAL WATER SURFACE ELEVATION.
 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 25+80.65 -L-
 FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
 FOR STEEL H PILES, SEE SPECIAL PROVISIONS,
 FOR FABRICATED METAL SIP FORMS, SEE SPECIAL PROVISIONS.
 FOR TEMPORARY WORK BRIDGE, SEE SPECIAL PROVISIONS FOR CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY ACCESS AT STATION 25+80.65 -L-.

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 35'-0" FT. LEFT SIDE AND 75'-0" FT. RIGHT SIDE OF CENTERLINE ROADWAY AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE MEASURED AND PAID FOR AS UNCLASSIFIED STRUCTURE EXCAVATION.

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

THE SCOUR CRITICAL ELEVATION FOR BENTS NO.1 AND NO.2 IS 135 FT. THESE SCOUR CRITICAL ELEVATIONS ARE FOR USE BY MAINTENANCE FORCES TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

TOTAL BILL OF MATERIAL

	CONSTRUCTION MAINTENANCE AND REMOVAL OF TEMPORARY ACCESS	REMOVAL OF EXISTING STRUCTURE	UNCLASSIFIED STRUCTURE EXCAVATION	3'-6" DIA. DRILLED PIERS IN SOIL	3'-6" DIA. DRILLED PIERS NOT IN SOIL	PERMANENT STEEL CASING FOR 3'-6" Ø DRILLED PIER	CROSSHOLE SONIC LOGGING	CSL TUBES	SID INSPECTION	REINFORCED CONCRETE DECK SLAB
	LUMP SUM	LUMP SUM	CU.YDS.	LIN.FT.	LIN.FT.	LIN.FT.	EACH	FEET	EACH	SQ. FT.
SUPERSTRUCTURE										5560
END BENT 1			475		31.00	17.00	23.00	1	212.0	1
BENT 1					46.80	14.00	25.80	1	263.2	1
BENT 2										
END BENT 2			1035							
TOTAL	LUMP SUM	LUMP SUM	1510	77.80	31.00	48.80	2	475.2	2	5560

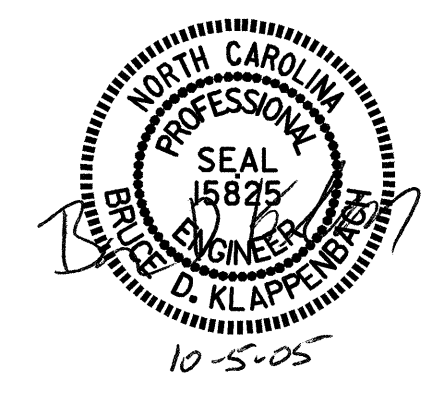
TOTAL BILL OF MATERIAL

	GROOVING BRIDGE FLOORS	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	SPIRAL COLUMN REINFORCING STEEL	36" 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
	SQ. FT.	CU. YDS.	LUMP SUM	LBS.	LBS.	NO. LIN.FT.	NO. LIN. FT.	LIN. FT.	TONS	SQ. YDS.	LUMP SUM	LUMP SUM
SUPERSTRUCTURE	5134		LUMP SUM			12	702.00	355.83			LUMP SUM	LUMP SUM
END BENT 1		19.3		2937			7	105	339	377		
BENT 1		17.9		7159	1333							
BENT 2		18.0		7839	1614							
END BENT 2		19.3		2937			7	155	352	391		
TOTAL	5134	74.5	LUMP SUM	20872	2947	12	702.00	14	260	355.83	691	768

PROJECT NO. B-3877
NASH COUNTY
 STATION: 25+80.65 -L-

SHEET 4 OF 4

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING FOR
 BRIDGE OVER
 TURKEY CREEK
 ON SR 1101 BETWEEN
 SR 1100 AND SR 1111



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-4
1			3			TOTAL SHEETS
2			4			33

DRAWN BY : M. G. SHAIKH DATE : 08/19/04
 CHECKED BY : B. D. KLAPPENBACH DATE : 07/18/05