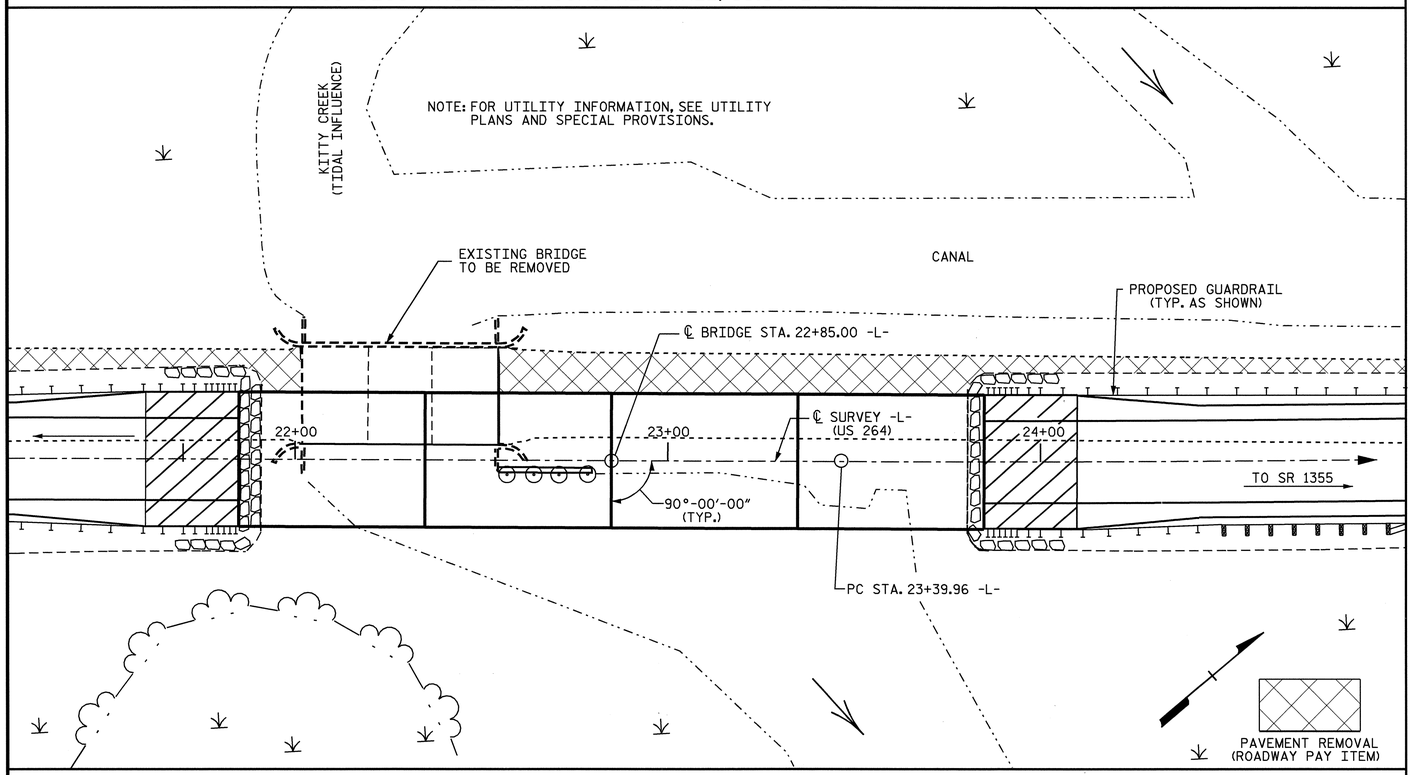
B.M. No.15 NCGS DISC (HYDE15) IN CONC. HEADWALL, 33.30' LT. STA. 22+02.20 -L- EL.=4.47' NGVD 29



LOCATION SKETCH

TOTAL BILL OF MATERIAL

	REMOVAL OF EXISTING STRUCTURE	UNCLASSIFIED STRUCTURE EXCAVATION	CLASS AA CONCRETE	BRIDGE APPROACH SLABS	EPOXY COATED REINFORCING STEEL	16" PRESTRESSED CONCRETE PILES		TWO BAR METAL RAIL	1'-2" X 2'-9" CONCRETE PARAPET	PLAIN RIP RAP CLASS B	FILTER FABRIC	ELASTOMERIC BEARINGS	3'-0" X 1'-9" PRESTRESSED CONCRETE CORED SLABS		PDA TESTING	PDA ASSISTANCE
	LUMP SUM	LUMP SUM	CU. YDS.	LUMP SUM	LBS.	No.	LIN. FT.	LIN. FT.	LIN. FT.	TONS	SQ. YDS.	LUMP SUM	No.	LIN. FT.	EACH	EACH
SUPERSTRUCTURE				LUMP SUM				384.75	400.00			LUMP SUM	52	2,593.50		
END BENT No. 1			16.9		2,640	10	450			86	96					
BENT No. 1			13.3		2,773	8	400								1	1
BENT No. 2			13.3		2,773	8	360									
BENT No. 3			13.3		2,773	8	360									
END BENT No. 2			16.9		2,640	10	450			77	86					
TOTAL	LUMP SUM	LUMP SUM	73.7	LUMP SUM	13,599	44	2,020	384.75	400.00	163	182	LUMP SUM	52	2,593.50	1	1

HYDRAULIC DATA

DESIGN DISCHARGE	170 CFS
FREQUENCY OF DESIGN FLOOD	50 YRS.
DESIGN HIGH WATER ELEVATION	2.2'
DRAINAGE AREA	492 ACRES
BASIC DISCHARGE (Q100)	210 CFS
BASIC HIGH WATER ELEVATION	2.3'

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE	1300 CFS
FREQUENCY OF OVERTOPPING FLOOD	500+ YRS.
OVERTOPPING FLOOD ELEVATION	3.6'

DRAWN BY : S.B. WILLIAMS DATE : 3-01-04
CHECKED BY : P.C. BREWER DATE : 5-19-04

28-FEB-2006 09:57
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NOTES

ASSUMED LIVE LOAD = HS 20 OR ALTERNATE LOADING. EXCEPT THAT CORED SLABS UNITS HAVE BEEN DESIGNED FOR HS 25.

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 MATERIAL SHOWN IN THE CROSS-HATCHED AREA SHALL BE EXCAVATED FOR A DISTANCE OF 28.0 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.

AFTER SERVING AS A TEMPORARY STRUCTURE THE EXISTING STRUCTURE CONSISTING OF 2 SPANS @ 18'-0" & 1 SPAN @ 17'-0" WITH 26.1 FOOT CLEAR ROADWAY WIDTH AND REINFORCED CONCRETE FLOOR WITH TIMBER JOISTS ON REINFORCED CONCRETE CAPS ON TIMBER PILES AND LOCATED AT PROPOSED STRUCTURE SHALL BE REMOVED IN STAGES. 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.

ASPHALT WEARING SURFACE IS INCLUDED IN ROADWAY QUANTITY ON ROADWAY PLANS.

THIS BRIDGE SHALL BE CONSTRUCTED USING TOP DOWN CONSTRUCTION METHODS. THE USE OF TEMPORARY CAUSEWAYS OR A WORK BRIDGE WILL NOT BE PERMITTED.

ALL PAVEMENT MARKING WILL BE IN ACCORDANCE WITH THE PAVEMENT MARKING PLANS AND SHALL PROVIDE FOR BICYCLES.

THIS STRUCTURE CONTAINS THE NECESSARY CORROSION PROTECTION REQUIRED FOR A CORROSIVE SITE.

CLASS AA CONCRETE SHALL BE USED IN ALL BENT CAPS AND END BENTS CAPS, AND SHALL CONTAIN CALCIUM NITRITE CORROSION INHIBITOR. FOR CALCIUM NITRITE CORROSION INHIBITOR, SEE SPECIAL PROVISIONS.

ALL BAR SUPPORTS USED IN THE PARAPET, END BENT CAPS, BENT CAPS AND ALL INCIDENTAL REINFORCING STEEL SHALL BE EPOXY COATED IN ACCORADANCE WITH THE STANDARD SPECIFICATIONS

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.

PRESTRESSED CONCRETE CORED SLAB UNITS SHALL CONTAIN CALCIUM NITRITE CORROSION INHIBITOR, SEE SPECIAL PROVISIONS FOR CALCIUM NITRITE CORROSION INHIBITOR.

THE CONTRACTOR MAY CHOOSE PRECAST BENT CAP OVER CAST IN PLACE BENT CAP FOR BENT NO'S.1, 2 & 3 IN ACCORDANCE WITH THE INCLUDED PLANS AT NO ADDITIONAL COST TO THE DEPARTMENT.

THE CONCRETE IN THE END BENT CAPS, BENT CAPS (OR PRECAST BENT CAP OPTION) AND ALL PILES SHALL CONTAIN SILICA FLUME, SILICA FLUME SHALL BE SUBSTITUTED FOR 5% OF PORTLAND CEMENT BY WEIGHT. IF THE OPTION OF ARTICLE 1024-1 OF THE STANDARD SPECIFICATIONS TO PARTIALLY SUBSTITUTE CLASS F FLY ASH FOR PORTLAND CEMENT IS EXERCISED, THEN THE RATE OF FLY ASH SUBSTITUTION SHALL BE REDUCED TO 1.0 LB. OF FLY ASH PER 1.0 LB. OF CEMENT. NO PAYMENT WILL BE MADE FOR THIS SUBSTITUTION AS IT IS CONSIDERED INCIDENTAL TO THE VARIOUS PAY ITEMS.

THIS BRIDGE HAS BEEN DESIGNED AN ACCORDANCE WITH THE REQUIREMENTS OF THE AASHTO STANDARD SPECIFICATIONS FOR SEISMIC DESIGN OF HIGHWAY BRIDGES FOR SEISMIC PERFORMANCE CATEGORY A.

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

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.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

PILES AT END BENTS No. 1 AND No. 2 SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 50 TONS EACH.

PILES AT BENT No. 1 SHALL BE DRIVEN TO AN ELEVATION NO HIGHER THAN -31.0 FEET AND SATISFY THE BEARING CAPACITY OF 50 TONS EACH

PILES AT BENT No. 2 & BENT NO. 3 SHALL BE DRIVEN TO AN ELEVATION NO HIGHER THAN -25.0 FEET AND SATISFY THE BEARING CAPACITY OF 50 TONS EACH.

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

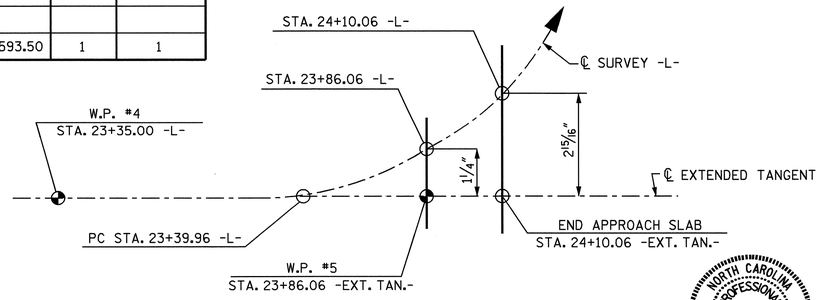
IT HAS BEEN ESTIMATED THAT A HAMMER WITH AN EQUIVALENT RATED ENERGY IN THE RANGE OF 28,000 TO 51,500 FT-LBS. PER BLOW WILL BE REQUIRED TO DRIVE THE CONCRETE PILES. THIS ESTIMATED ENERGY RANGE DOES NOT RELEASE THE CONTRACTOR FROM THE PROVISIONS OUTLINED IN ARTICLE 450-6 OF THE STANDARD SPECIFICATIONS.

TESTING THE FIRST PRODUCTION PILE WITH THE PILE DRIVING ANALYZER (PDA) DURING DRIVING, RESTRIKING, OR REDRIVING IS REQUIRED AT BENT NO. 1 OR BENT NO. 3 SEE PILE DRIVING ANALYZER SPECIAL PROVISION.

THE CONTRACTOR SHALL OBSERVE A ONE MONTH WAITING PERIOD BEFORE BEGINNING ANY WORK FOR END BENT CONSTRUCTION AFTER COMPLETION OF THE STAGE 1 EMBANKMENT AT EACH END BENT. THE CONTRACTOR MAY BEGIN THE REINFORCED BRIDGE APPROACH FILL CONSTRUCTION AFTER COMPLETION OF END BENT INCLUDING WINGWALLS.

THE SCOUR CRITICAL ELEVATION FOR BENT No. 1 IS ELEVATION -17.0 FT. THE SCOUR CRITICAL ELEVATION FOR BENT Nos. 2 & 3 IS ELEVATION -15.5 FT. THE SCOUR ELEVATIONS ARE FOR USE BY MAINTENANCE FORCES TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.



EXTENDED TANGENT LAYOUT

NOTE: THE EFFECTS OF THE HORIZONTAL CURVE SHALL BE NEGLECTED IN THE CONSTRUCTION OF THIS BRIDGE. BRIDGE TO BE BUILT ALONG THE TANGENT AND EXTENDED TANGENT BETWEEN WORK POINTS.

NORTH CAROLINA PROFESSIONAL SEAL 10257 ENGINEER DESERT C. OUTLAW
3/1/06

PROJECT NO. B-3348
HYDE COUNTY
STATION: 22+85.00 -L-

SHEET 4 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE ON US 264
OVER KITTY CREEK
BETWEEN SR 1315
AND SR 1355

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-35
1			3			TOTAL SHEETS
2			4			76

STR. #2