



FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

LOCATION SKETCH

NOTES

ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.

THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

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

THIS BRIDGE IS LOCATED IN SEISMIC ZONE 1.

FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, 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 SAMPLES OF EACH SIZE BAR USED. THE SAMPLE BARS SHOULD COME FROM STEEL ACTUALLY USED IN THE PROJECT AND THE SAMPLE BARS SHOULD BE REPLACED BY SPLICED BARS AS SPECIFIED IN THE SAMPLE BAR REPLACEMENT CHART. PAYMENT FOR THE SAMPLE BARS AND REPLACEMENT REINFORCING STEEL SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

FOR VERTICAL CLEARANCE GAUGES, SEE SPECIAL PROVISIONS.

FOR SECURING OF VESSELS, SEE SPECIAL PROVISIONS.

FOR WORK IN, OVER, OR ADJACENT TO NAVIGABLE WATERS, SEE SPECIAL PROVISIONS.

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

THIS BRIDGE HAS BEEN DESIGNED FOR VESSEL COLLISION (CV) IN ACCORDANCE WITH SECTION 3.14 OF THE 2017 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS (8TH EDITION). THIS BRIDGE HAS AN OPERATIONAL CLASSIFICATION OF "CRITICAL" THE FOLLOWING CONTROLLING DESIGN CV LOADS WERE USED.

BENT NO.	CV LOAD (KIPS)
2 THROUGH 6	137
7 AND 8	250
9 THROUGH 27	137

FOR CARBON FIBER REINFORCED POLYMER (CFRP) F.I.B. PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.

FOR 24" CARBON FIBER REINFORCED POLYMER (CFRP) PRESTRESSED CONCRETE PILES, SEE SPECIAL PROVISIONS.

FOR CARBON FIBER REINFORCED POLYMER (CFRP) STRAND, SEE SPECIAL PROVISIONS.

FOR GLASS FIBER REINFORCED POLYMER (GFRP) BAR, SEE SPECIAL PROVISIONS.

FOR CARBON FIBER REINFORCED POLYMER (CFRP) BAR, SEE SPECIAL PROVISIONS.

FOR NAVIGATIONAL CLEARANCE VERIFICATION AND WATERWAY INSPECTION, SEE SPECIAL PROVISIONS.

FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.

THE DECK SLAB CONCRETE SHALL BE SAND LIGHTWEIGHT CONCRETE. FOR SAND LIGHTWEIGHT CONCRETE, SEE SPECIAL PROVISIONS.

ALL FALSEWORK AND FORMS FOR THE CAST-IN-PLACE DECK SLAB CONTINUOUS UNIT SHALL REMAIN IN PLACE UNTIL THE ENTIRE UNIT IS CAST AND CURED.

REMOVABLE FORMS SHALL BE USED FOR ALL SPANS.

FOR CONCRETE SHEET PILE WALL, SEE SPECIAL PROVISIONS.

AFTER SERVING AS A TEMPORARY STRUCTURE THE EXISTING STRUCTURE CONSISTING OF ONE 137-FT. STEEL PLATE GIRDER SWING SPAN AND TWENTY- EIGHT 45-FT± CORED SLAB APPROACH SPANS WITH A CONCRETE FILLED GRID WEARING SURFACE AND 29.3-FT CLEAR ROADWAY WIDTH, SUPPORTED ON REINFORCED CONCRETE CAPS AND PRESTRESSED PILES WITH STEEL CRUTCH BENTS ADDED SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY POSTED FOR LOAD LIMIT. SHOULD THE STRUCTURAL INTEGRITY OF THE BRIDGE DETERIORATE DURING CONSTRUCTION OF THE PROPOSED BRIDGE, A LOAD LIMIT MAY BE POSTED AND MAY BE REDUCED AS FOUND NECESSARY DURING THE LIFE OF THE PROJECT. FOR REMOVAL OF EXISTING STRUCTURE, SEE SPECIAL PROVISIONS.

REMOVAL OF THE EXISTING STRUCTURE SHALL BE PERFORMED IN A MANNER THAT PREVENTS DEBRIS FROM FALLING INTO THE WATER. THE CONTRACTOR SHALL SUBMIT DEMOLITION PLANS FOR REVIEW AND REMOVE THE BRIDGE IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

FOR MAINTENANCE OF WATER TRAFFIC, SEE SPECIAL PROVISIONS.

FOR NAVIGATIONAL LIGHTING SYSTEM, SEE SPECIAL PROVISIONS.

FOR STRUCTURE DRAINAGE SYSTEM, SEE SPECIAL PROVISIONS.

PREVIOUSLY CAST CONCRETE IN A CONTINUOUS UNIT SHALL HAVE ATTENDED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI BEFORE ADDITIONAL CONCRETE IS CAST IN THE UNIT.

FOR PLASTIC LUMBER FENDER BOARDS AT CHANNEL BENTS, SEE SPECIAL PROVISIONS.

FERROUS REINFORCEMENT SHALL NOT BE USED IN THE STRUCTURE EXCEPT FOR IN THE CONCRETE PARAPET AND CONCRETE SHEET PILE RETAINING WALL. FOR STRUCTURE REINFORCEMENT, SEE SPECIAL PROVISIONS.

FOR BRIDGE DECK AND APPROACH SLAB RIDEABILITY (IRI), SEE SPECIAL PROVISIONS.

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 34+75.00 -L-"

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.

THE CONTRACTOR WILL BE REQUIRED TO CONSTRUCT, MAINTAIN AND AFTERWARDS REMOVE A TEMPORARY ACCESS AT STATION 34+75.00 -L- FOR USE DURING CONSTRUCTION OF THE PROPOSED STRUCTURE. FOR CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY ACCESS, 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.

FOR ASBESTOS ASSESSMENT FOR BRIDGE DEMOLITION AND RENOVATION ACTIVITIES, SEE SPECIAL PROVISIONS.

DRAWN BY :	B. N. BARODAWALA	DATE :	5-19
CHECKED BY :	T. H. CARROLL	DATE :	12-19
DESIGN ENGINEER OF RECORD :	A. K. PATEL	DATE :	01-20

NOTE:
SAMPLE BAR REPLACEMENT LENGTHS BASED ON 30" (SAMPLE LENGTH) PLUS TWO SPLICE LENGTHS AND fy = 60ksi.

SAMPLE BAR REPLACEMENT	
SIZE	LENGTH
#3	6'-2"
#4	7'-4"
#5	8'-6"
#6	9'-8"
#7	10'-10"

CORROSION PROTECTION NOTES

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

CLASS AA CONCRETE SHALL BE USED IN ALL CAST-IN-PLACE COLUMNS, BENT CAPS, AND FOOTINGS.

CLASS AA CONCRETE SHALL BE USED IN ALL CAST-IN-PLACE CONCRETE SHEET PILE WALL COPING AND 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 CONCRETE SHEET PILE WALL.

THE 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.

PRESTRESSED CONCRETE GIRDERS ARE DESIGNED FOR 400 PSI TENSION IN THE PRECOMPRESSED TENSILE ZONE UNDER ALL LOADING CONDITIONS.

THE WATER/CEMENT RATIO FOR CONCRETE PILES AND CONCRETE SHEET PILES SHALL NOT EXCEED 0.40.

PRESTRESSED CONCRETE SHEET PILES SHALL CONTAIN CALCIUM NITRITE CORROSION INHIBITOR IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, EXCEPT THAT THE INHIBITOR SHALL BE APPLIED AT A RATE OF 4.0 GALLONS PER CUBIC YARD. NO SEPARATE PAYMENT WILL BE MADE FOR THE ADDITION OF CALCIUM NITRITE, AS IT IS CONSIDERED INCIDENTAL TO THE PAY ITEM FOR THE PRESTRESSED CONCRETE SHEET PILES.

THE CONCRETE IN THE CONCRETE SHEET PILE WALL COPING AND THE FOOTINGS OF ALL BENTS SHALL CONTAIN SILICA FUME. SILICA FUME SHALL BE SUBSTITUTED FOR 5% OF THE 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.

ALL BAR SUPPORTS USED IN THE BARRIER RAIL AND ALL INCIDENTAL REINFORCING STEEL SHALL BE EPOXY COATED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

THE CONCRETE IN THE PRESTRESSED CONCRETE PILES AND PRESTRESSED CONCRETE SHEET PILES SHALL CONTAIN A MINIMUM OF 25% FLY ASH CLASS F OR A MINIMUM OF 40% GROUND GRANULATED BLAST FURNACE SLAG. ADDITIONALLY, SILICA FUME SHALL BE SUBSTITUTED FOR A MINIMUM 5% OF THE PORTLAND CEMENT BY WEIGHT. MINERAL ADMIXTURES SHALL REPLACE THE CEMENT CONTENT AT A 1:1 RATIO BY WEIGHT. NO PAYMENT WILL BE MADE FOR THIS SUBSTITUTION AS IT IS CONSIDERED INCIDENTAL TO THE VARIOUS PAY ITEMS.

PROJECT NO. B-4863
CARTERET COUNTY
 STATION: 34+75.00 -L-

SHEET 15 OF 16

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 FOR BRIDGE OVER
 'THE STRAITS'
 ON SR 1335 BETWEEN
 US 70 AND SR 1337

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-017
1			3			TOTAL SHEETS
2			4			194



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED