



LOCATION SKETCH

HYDRAULIC DATA

DESIGN DISCHARGE ----- = 8,700 CFS
 FREQUENCY OF DESIGN FLOOD ----- = 50 YR.
 DESIGN HIGH WATER ELEVATION ----- = 2575.0
 DRAINAGE AREA ----- = 56.9 SQ. MI.
 BASE DISCHARGE (Q100) ----- = 10,300 CFS
 BASE HIGH WATER ELEVATION ----- = 2576.3

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE ----- = 47,500 CFS
 FREQUENCY OF OVERTOPPING FLOOD ----- = + 500 YR.
 OVERTOPPING FLOOD ELEVATION ----- = 2590.9

TOTAL BILL OF MATERIAL

	CONSTRUCTION, MAINTENANCE, & REMOVAL OF TEMP. STRUCTURE @ STA. 42+71.13 -L-	REMOVAL OF EXISTING STRUCTURES @ STA. 42+71.13 -L-	ASBESTOS ASSESMENT	4'-6" DIA. DRILLED PIERS IN SOIL	4'-6" DIA. DRILLED PIERS NOT IN SOIL	PERMANENT STEEL CASING FOR 4'-6" DIA. DRILLED PIERS	PDA TESTING	SID INSPECTIONS	CSL TESTING	UNCLASSIFIED STRUCTURE EXCAVATION @ STA. 42+71.13 -L-	REINFORCED CONCRETE DECK SLAB	GROOVING BRIDGE FLOORS	CLASS A CONCRETE	BRIDGE APPROACH SLABS @ STA. 42+71.13 -L-
	LUMP SUM	LUMP SUM	LUMP SUM	LIN. FT.	LIN. FT.	LIN. FT.	EA.	EA.	EA.	LUMP SUM	SQ. FT.	SQ. FT.	CU. YDS.	LUMP SUM
SUPERSTRUCTURE											27,636	30,119	164.4	LUMP SUM
END BENT NO. 1				164	72	112			1				155.4	
BENT NO. 1													165.1	
END BENT NO. 2														
TOTAL	LUMP SUM	LUMP SUM	LUMP SUM	164	72	112	1	1	1	LUMP SUM	27,636	30,119	484.9	LUMP SUM

TOTAL BILL OF MATERIAL

	REINFORCING STEEL	SPIRAL COLUMN REINFORCING STEEL	72" PRESTRESSED CONCRETE MODIFIED BULB TEE GIRDERS	PILE DRIVING EQUIPMENT SETUP FOR HP12X53 STEEL PILES	HP12X53 STEEL PILES	STEEL PILE POINTS	CONCRETE BARRIER RAIL	CONCRETE MEDIAN BARRIER	RIP RAP CLASS II (2'-0" THICK)	GEOTEXTILE FOR DRAINAGE	ELASTOMERIC BEARINGS	EXPANSION JOINT SEALS	ELECTRICAL CONDUIT SYSTEM FOR SIGNALS @ STA. 42+71.13 -L-
	LB.	LB.	NO. LIN. FT.	EA.	NO. LIN. FT.	EA.	LIN. FT.	LIN. FT.	TONS	SQ. YDS.	LUMP SUM	LUMP SUM	LUMP SUM
SUPERSTRUCTURE			26 2950.8				499.6	282.0			LUMP SUM	LUMP SUM	LUMP SUM
END BENT NO. 1	21,997			32	32 960	32			425	470			
BENT NO. 1	46,647	9,020											
END BENT NO. 2	22,004			32	32 1120	32			420	435			
TOTAL	90,648	9,020	26 2950.8	64	64 2080	64	499.6	282.0	845	905	LUMP SUM	LUMP SUM	LUMP SUM

NOTES

ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.
 THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.
 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.

THE ELEVATION AND CLEARANCE SHOWN ON THE PLANS AT THE POINT OF MINIMUM VERTICAL CLEARANCE ARE FROM THE BEST INFORMATION AVAILABLE. PRIOR TO BEGINNING BRIDGE CONSTRUCTION, VERIFY THE ELEVATION ON THE EXISTING PAVEMENT AND CHECK THE CLEARANCE. REPORT ANY VARIATIONS TO THE ENGINEER. ANY PLAN REVISIONS NECESSARY TO ACHIEVE THE REQUIRED MINIMUM VERTICAL CLEARANCE WILL BE PROVIDED BY THE DEPARTMENT.

REMOVABLE FORMS MAY BE USED IN LIEU OF METAL STAY-IN-PLACE FORMS IN ACCORDANCE WITH ARTICLE 420-3 OF THE STANDARD SPECIFICATIONS.

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

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 42+71.13 -L-.'

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.

ALL METALLIZED SURFACES SHALL RECEIVE A SEAL COATING AS SPECIFIED IN TABLE 2 OF THE DEPARTMENTS THERMAL SPRAYED COATINGS (METALLIZATION) PROGRAM. FOR THERMAL SPRAYED COATINGS, SEE SPECIAL PROVISIONS.

THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA SHALL BE EXCAVATED FOR A DISTANCE OF 80 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. SEE SECTION 412 OF THE STANDARD SPECIFICATIONS.

STEEL SHEET PILING REQUIRED FOR SHORING SHALL BE HOT ROLLED.

TEMPORARY SHORING SHALL BE REQUIRED IN THE AREA INDICATED IN THE PLAN.

FOR TEMPORARY SHORING, SEE SPECIAL PROVISIONS.

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 STRUCTURE AT STATION 42+55.00 -DET01.EB- FOR USE DURING CONSTRUCTION OF THE PROPOSED STRUCTURE. FOR CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY STRUCTURE, SEE SPECIAL PROVISIONS.

THE BRIDGE RAILS ON THE TEMPORARY STRUCTURE SHALL BE DESIGNED FOR THE AASHTO LRFD TEST LEVEL 3 (TL-3) CRASH TEST CRITERIA. FOR CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY STRUCTURE, SEE SPECIAL PROVISIONS.

THE SUBSTRUCTURE OF THE EXISTING BRIDGES INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. 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 DIFFERENCE BETWEEN THE EXISTING BRIDGES SUBSTRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

REMOVAL OF THE EXISTING BRIDGE 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.

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

FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.

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

FOR ELECTRICAL CONDUIT SYSTEM FOR SIGNALS, SEE SPECIAL PROVISIONS.

EXISTING BRIDGES #430155 AND #430158, EACH CONSISTING OF FOUR (4) 50 FOOT STEEL SPANS WITH A CLEAR ROADWAY WIDTH OF 28 FEET ON A CAST IN PLACE CONCRETE DECK ON END BENTS WITH PILE FOUNDATIONS AND INTERIOR BENTS ON SPREAD FOOTINGS, AND EACH LOCATED ± 18'-0" UPSTREAM OR ± 18'-0" DOWNSTREAM (RESPECTIVELY) FROM PROPOSED STRUCTURE, SHALL BE REMOVED WHEN INDICATED BY THE CONSTRUCTION SEQUENCE. THE EXISTING BRIDGES ARE PRESENTLY NOT POSTED FOR LOAD LIMIT. SHOULD THE STRUCTURAL INTEGRITY OF THE BRIDGES 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.

SAMPLE BAR REPLACEMENT

SIZE	LENGTH
#3	6'-2"
#4	7'-4"
#5	8'-6"
#6	9'-8"
#7	10'-10"
#8	12'-0"
#9	13'-2"
#10	14'-6"
#11	15'-10"

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

PROJECT NO. B-3186/B-5898

HAYWOOD COUNTY

STATION: 42+71.13 -L-

SHEET 3 OF 4

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 LOCATION SKETCH
 AND NOTES



1/25/2022

DES BY: K. DICKENS DATE: 03/21 DWG BY: D. CARTER DATE: 03/21
 DES CHK: B. ROGERS DATE: 03/21 CHK BY: H. ABU NIMEH DATE: 07/21



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO. 501-03
NO.	BY:	DATE:	NO.	BY:	DATE:	
1	--	--	3	--	--	TOTAL SHEETS 59
2	--	--	4	--	--	

PLOT DRIVER: NCDOT_STRUCTURE_DEFAUL_PLOTTER.plt
 PENTABLE: NCDOT_STRUCTURE_DEFAUL_PEN.tbl
 USER: PPRETSON
 DATE: 1/25/2022
 TIME: 10:03:20 AM
 FILE: ... \401-010-B569883186-SMU-GD-003-430168.dgn