

GENERAL NOTES :

ASSUMED LIVE LOAD = COOPER E-80 W/ IMPACT OR ALTERNATE LIVE LOADING.

THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT A.R.E.M.A. MANUAL, NORFOLK SOUTHERN RAILWAY GUIDELINES FOR DESIGN OF GRADE SEPARATION STRUCTURES, AND CSXT CRITERIA FOR OPEN DECK RAILROAD BRIDGES. IN CASE OF DISCREPANCY THE MORE STRINGENT CRITERIA WILL GOVERN.

ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES", JANUARY, 2012 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (HEREIN CALLED STANDARD SPECIFICATIONS), EXCEPT AS NOTED HEREIN, ELSEWHERE ON PLANS, OR IN THE SPECIAL PROVISIONS". (STRUCTURAL STEEL IN ACCORDANCE WITH CURRENT A.R.E.M.A. SPECIFICATIONS).

CONCRETE SHALL BE 4,500 PSI (SUBSTRUCTURE) OR 5,000 PSI (SUPERSTRUCTURE) CLASS AA CONCRETE WITH NO. 57 COARSE AGGREGATE AND SHALL BE AIR-ENTRAINED. MINIMUM CEMENT CONTENT PER CUBIC YARD OF CONCRETE SHALL BE 6.0 BAGS/CY. NO SUBSTITUTION OF FLY ASH, BLAST FURNACE SLAG OR OTHER MATERIAL WILL BE PERMITTED IN MEETING THIS MINIMUM CEMENT REQUIREMENT. NO RUBBED SURFACE FINISH IS REQUIRED. CHAMFER ALL EXPOSED EDGES AND CORNERS 3/4" INCH EXCEPT AS NOTED. THE USE OF GROUND GRANULATED BLAST FURNACE SLAG IS NOT PERMITTED IN THE STRUCTURE. SEE SPECIAL PROVISIONS FOR CAST-IN-PLACE CONCRETE.

REINFORCING STEEL SHALL BE ASTM DESIGNATION A615, GRADE 60. ALL REINFORCING BARS IN THE CONCRETE DECK AND CURBS SHALL BE EPOXY-COATED IN CONFORMANCE WITH ASTM A775 "STANDARD SPECIFICATION FOR EPOXY-COATED REINFORCING BARS". COMPATIBLE EPOXY-COATED STEEL TIE WIRES SHALL BE USED WITH THE EPOXY-COATED BARS. FABRICATION TO BE IN ACCORDANCE WITH THE "MANUAL OF STANDARD PRACTICE" A.C.I. 315-80.

EXPANSION JOINT MATERIAL SHALL BE EITHER RUBBER OR CORK CONFORMING WITH AASHTO SPECIFICATIONS M-153-84 EXCEPT AS SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS. CELLULAR AND BULB TYPE WATERSTOPS AND RUBBER JOINT COMPOUNDS SHALL BE AS SHOWN ON THE PLANS AND IN THE SPECIAL PROVISIONS.

STRUCTURE DRAINAGE SYSTEM: METAL DRAINS BEHIND ABUTMENTS AND DUCTILE IRON PIPE COLLECTOR SYSTEM, SHALL BE AS SHOWN ON THE PLANS AND OUTLINED IN THE SPECIAL PROVISIONS. DETAILS OF THE DRAINAGE SYSTEM SHALL BE SUBMITTED TO THE CHIEF ENGINEER-BRIDGES AND STRUCTURES, CSXT, JACKSONVILLE, FL. FOR APPROVAL.

CONTROL OF WORK: ALL WORK INVOLVED IN THE CONSTRUCTION OF THE RAILWAY STRUCTURE SHALL BE PERFORMED SATISFACTORY TO THE ENGINEER AND/OR CSXT. ALL METHODS OF HANDLING WORK AFFECTING THE SAFETY OF RAIL OPERATIONS MUST BE APPROVED BY THE RAILWAY ENGINEER BEFORE PROCEEDING WITH THAT PORTION OF THE WORK. RAIL TRAFFIC SHALL, AT ALL TIMES, BE MAINTAINED AND PROTECTED. THE CONTRACTOR SHALL NOT AT ANY TIME DELAY OR INTERFERE WITH RAIL OPERATIONS.

ALL CONSTRUCTION JOINTS SHOWN ON THESE PLANS SHALL BE REQUIRED UNLESS SHOWN OPTIONAL. CONSTRUCTION JOINTS SHALL NOT BE PERMITTED EXCEPT AS SHOWN ON THE PLANS, OR WHERE WRITTEN APPROVAL HAS BEEN OBTAINED.

DAMPPOOFING: PIER COLUMNS UP TO GROUND LINE, BACK OF BACKWALLS AND ABUTMENT SEATS, AND BACK OF WINGS SHALL BE DAMPPROOFED.

WATERPROOFING: ALL CONSTRUCTION JOINTS AND ANY SHRINKAGE CRACKS WHICH WILL BE COVERED BY FILL SHALL BE WATERPROOFED WITH A TWO PART WATERPROOFING SYSTEM CONSISTING OF A MEMBRANE LAYER AND A PROTECTION COURSE. STRIPS OF WATERPROOFING NO LESS THAN 2 FEET WIDE SHALL BE PLACED SYMMETRICALLY OVER JOINTS OR CRACKS. ADDITIONALLY, THE HORIZONTAL SURFACES OF THE BALLAST TROUGH (EXCLUDING THE END DAM) SHALL BE WATERPROOFED WITH A TWO PART WATERPROOFING SYSTEM CONSISTING OF A MEMBRANE LAYER AND A 1 INCH THICK ASPHALT PLANKING OR OTHER RAILWAY APPROVED PROTECTION MATERIAL. ALL WATERPROOFING MATERIALS SHALL CONFORM TO THE RECOMMENDED PRACTICES IN THE A.R.E.M.A. MANUAL OF RAILWAY ENGINEERING CHAPTER 29.

BACKFILLING AROUND STRUCTURE: SEE SPECIAL PROVISIONS FOR BACKFILL BEHIND ABUTMENTS AND OTHER BACKFILL AROUND THE STRUCTURE.

FOR FOUNDATION RECOMMENDATION NOTES, SEE SHEET 2 OF 5.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, 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 USED. THE BARS FROM 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. PAYMENT FOR THE SAMPLES OF REINFORCING STEEL SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

FOR MAINTENANCE AND PROTECTION OF TRAFFIC BENEATH PROPOSED STRUCTURE, SEE SPECIAL PROVISIONS.

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

A 3/32" THICK BUTYL RUBBER MEMBRANE CONFORMING TO A.R.E.M.A. CHAPTER 8 SECTION 29.9.5 WILL BE INSTALLED ON THE BRIDGE DECK BALLAST RETAINERS. COST OF BUTYL RUBBER MEMBRANE MATERIAL AND INSTALLATION TO BE INCLUDED WITH THE COST OF "WATERPROOFING (RAILROAD STRUCTURES)", FOR "WATERPROOFING (RAILROAD STRUCTURES)", SEE SPECIAL PROVISIONS.

FOR STRUCTURAL STEEL, SEE SPECIAL PROVISIONS.

FOR PAINTING STEEL STRUCTURES, SEE SPECIAL PROVISIONS.

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

FOR METAL HANDRAIL, SEE SPECIAL PROVISIONS.

FOR GROUT, SEE A.R.E.M.A. CHAPTER 8 ARTICLE 14.4.8 AND ARTICLE 14.5.5. AND SPECIAL PROVISIONS.

FOR SUPERSTRUCTURE CONCRETE, SUBSTRUCTURE CONCRETE, REINFORCING STEEL, EPOXY COATED REINFORCING STEEL, SPIRAL COLUMN REINFORCING STEEL, AND DAMPPROOFING (RAILROAD STRUCTURES), SEE SPECIAL PROVISIONS FOR CAST-IN-PLACE CONCRETE.

THE EXISTING STRUCTURE CONSISTING OF 3 SPAN STRUCTURAL STEEL GIRDERS WITH TIMBER FLOOR ON STEEL TRESTLE BENTS AND LOCATED AT PROPOSED STRUCTURE SITE SHALL BE REMOVED.

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.

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 13+22.18 -CSXN-."

THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA SHALL BE EXCAVATED FOR A DISTANCE OF 14 FT (LEFT) AND 16 FT (RIGHT) 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.

THE CONTRACTOR WILL BE REQUIRED TO CONSTRUCT, MAINTAIN AND AFTERWARDS REMOVE A TEMPORARY SPAN FOR USE DURING CONSTRUCTION OF THE PROPOSED STRUCTURE. FOR CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY SPAN, SEE TEMPORARY SPAN SPECIAL PROVISIONS.

FOR TEMPORARY RAILROAD SHORING SPECIAL PROVISION AND PAY ITEM, SEE STR. #3.

FOR ELASTOMERIC FLASHING, SEE SPECIAL PROVISIONS.

FOR SELF-LUBRICATING EXPANSION BEARING ASSEMBLIES, SEE SPECIAL PROVISIONS.

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

THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE EXISTING ABANDONED BRIDGE SOUTH OF THE PROPOSED -CSXN- BRIDGE. ANY REQUIREMENTS PERTAINING TO THE EXISTING STRUCTURE REMOVAL ARE ALSO APPLICABLE TO THE EXISTING ABANDONED BRIDGE.

DESIGN DATA:

SPECIFICATIONS: CURRENT A.R.E.M.A., CSX TRANSPORTATION, AND NORFOLK SOUTHERN DESIGN CRITERIA FOR GRADE SEPARATION PROJECTS.

LIVE LOAD: COOPERS E-80 + ALTERNATE WITH IMPACT AS PER A.R.E.M.A. SPECIFICATIONS.

STRUCTURAL STEEL: ASTM A709 GRADE 50 (Fy = 50 KSI)

REINFORCED CONCRETE: SUPERSTRUCTURE: f'c = 5000 PSI
SUBSTRUCTURE: f'c = 4500 PSI

REINFORCING STEEL: ASTM A615 GRADE 60

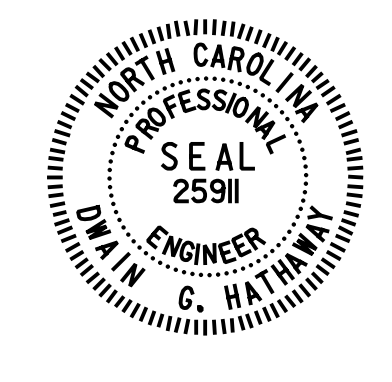
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PROJECT NO. U-3308
DURHAM COUNTY
 STATION: 24+55.20 -LALT-
13+22.18 -CSXN-
 SHEET 4 OF 5

DRAWN BY : J. N. AUSTIN DATE : 1-7-14
 CHECKED BY : S. A. DENNEY DATE : 2-24-14



Disseminated by:
 Dwan Hathaway
 202378071040460
 5/3/2016

Michael Baker
 INTERNATIONAL

Michael Baker Engineering
 8000 Regency Parkway, Suite 600
 Cary, North Carolina 27618
 NC License No.: F-1084

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 FOR BRIDGE ON CSXT RAILWAY
 OVER ALSTON AVE. BETWEEN
 NC 147 AND ANGIER AVE.

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S4-4
1			3			TOTAL SHEETS
2			4			68