



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

JAMES H. TROGDON, III  
SECRETARY

May 8, 2018

**Addendum No. 1**

RE: Contract # C204185

WBS # 15BPR.25, 2018CPT.03.22.10101 Etc.

STATE FUNDED

**Brunswick County (15BPR.25)**

Bridge #14 On NC-133 Over Intracoastal Waterway, 1Section Of NC-133

And 1 Section of SR-1190

**May 15, 2018 Letting**

To Whom It May Concern:

Reference is made to the plans and proposal form furnished to you on this project.

The following revisions have been made to the Roadway plans:

| Sheet No.            | Revisions                                    |
|----------------------|--|
| TMP-1C and<br>TMP-1D | Revised to remove references to Sheet TMP-10 |

Please void sheet Nos. TMP-1C and TMP-1D in your plans and staple the revised sheet Nos. TMP-1C and TMP-1D thereto.

The following revisions have been made to the Structure plans:

| Sheet No. | Revisions   |
|-----------|---|
| S-1       | Added column for "CP Integral Pile Jacket, 16 Inch to 30 Inch" to the Bill of Material              |
| S-2A      | Added note regarding placing construction equipment on proposed cored slab spans and grout strength |
| S-2B      | Revised the note *** regarding work to be completed during bridge closure ICT                       |
| S-4       | Revised crane matting note (note 2 under "Partial Structures Removal" heading) for clarification    |

Please void the above listed sheets in your plans and staple the revised sheets thereto.

*Mailing Address:*  
NC DEPARTMENT OF TRANSPORTATION  
CONTRACT STANDARDS AND DEVELOPMENT  
1591 MAIL SERVICE CENTER  
RALEIGH, NC 27699-1591

*Telephone:* (919) 707-6900  
*Fax:* (919) 250-4127  
*Customer Service:* 1-877-368-4968

*Location:*  
1020 BIRCH RIDGE DR.  
RALEIGH, NC 27610

*Website:* www.ncdot.gov

The following revisions have been made to the proposal:

| <b>Page No.</b> | <b>Revisions</b>   |
|-----------------|--|
| Proposal Cover  | Note added that reads "Includes Addendum No. 1 Dated May 8, 2018".   |
| G-5             | Revised to add the new pay item to the list in the project special provision entitled "Major Contract Items"   |
| BP-84           | Revised the project special provision entitled "Cathodic Protection Integral Pile Jackets" to add language for the new pay item "CP Integral Pile Jacket, 16 to 30 Inch" |

Please void the above listed pages your proposal and staple the revised pages thereto.

On the item sheets the following new pay item has been added:


| <u>Item</u>             | <u>Description</u>                     | <u>Old Quantity</u> | <u>New Quantity</u> |
|-------------------------|--|---------------------|---------------------|
| 058-8897000000-N-<br>SP | CP Integral Pile Jacket, 16"<br>to 30" | NEW ITEM            | 150 EA              |

The Contractor's bid must include the new pay item.

The Expedite File has been updated to reflect this revision. Please download the Expedite Addendum File and follow the instructions for applying the addendum. Bid Express will not accept your bid unless the addendum has been applied.

The contract will be prepared accordingly.

Sincerely,

DocuSigned by:  
  
 F81B6038A47A442...

Ronald. E. Davenport, Jr., PE  
 State Contract Officer

RED/jag  
 Attachments

cc: Mr. Lamar Sylvester, PE  
 Ms. Karen Collette, PE  
 Mr. Ron Hancock, PE  
 Mr. Jon Weathersbee, PE  
 Mr. Ken Kennedy, PE  
 Mr. Mitchell Dixon  
 Project File (2)

Mr. Ray Arnold, PE  
 Ms. Theresa Canales, PE  
 Mr. Mike Gwyn  
 Ms. Lori Strickland  
 Ms. Jaci Kincaid  
 Ms. Penny Higgins

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH, N.C.

PROPOSAL

**INCLUDES ADDENDUM No. 1 DATED 05-08-2018**

DATE AND TIME OF BID OPENING: **MAY 15, 2018 AT 2:00 PM**

CONTRACT ID C204185

WBS 15BPR.25, 2018CPT.03.22.10101, 2018CPT.03.22.20101

FEDERAL-AID NO. STATE FUNDED

COUNTY BRUNSWICK

T.I.P. NO.

MILES 6.300

ROUTE NO. NC 133

LOCATION BRIDGE #14 ON NC 133 OVER THE INTRACOASTAL WATERWAY, AND  
1 SECTION OF NC-133, AND 1 SECTION OF SR-1190.

TYPE OF WORK MILLING, RESURFACING, GUARDRAIL, AND BRIDGE PRESERVATION.

**NOTICE:**

ALL BIDDERS SHALL COMPLY WITH ALL APPLICABLE LAWS REGULATING THE PRACTICE OF GENERAL CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA WHICH REQUIRES THE BIDDER TO BE LICENSED BY THE N.C. LICENSING BOARD FOR CONTRACTORS WHEN BIDDING ON ANY NON-FEDERAL AID PROJECT WHERE THE BID IS \$30,000 OR MORE, EXCEPT FOR CERTAIN SPECIALTY WORK AS DETERMINED BY THE LICENSING BOARD. BIDDERS SHALL ALSO COMPLY WITH ALL OTHER APPLICABLE LAWS REGULATING THE PRACTICES OF ELECTRICAL, PLUMBING, HEATING AND AIR CONDITIONING AND REFRIGERATION CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA. NOTWITHSTANDING THESE LIMITATIONS ON BIDDING, THE BIDDER WHO IS AWARDED ANY FEDERAL - AID FUNDED PROJECT SHALL COMPLY WITH CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA FOR LICENSING REQUIREMENTS WITHIN 60 CALENDAR DAYS OF BID OPENING.

**BIDS WILL BE RECEIVED AS SHOWN BELOW:**

**THIS IS A STRUCTURE PROPOSAL**

**5% BID BOND OR BID DEPOSIT REQUIRED**

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**MAJOR CONTRACT ITEMS:**

(2-19-02)

104

SP1 G28

The following listed items are the major contract items for this contract (see Article 104-5 of the 2018 Standard Specifications):

| Line # | Description  |
|--------|--|
| 44     | — 3'-0" x 1'-8" Prestressed Concrete Cored Slabs     |
| 47     | — CP Integral Pile Jacket (Structural), 16 to 30 In. |
| 50     | — PPC Materials                                      |
| 58     | CP Integral Pile Jacket, 16" to 30"                  |

**SPECIALTY ITEMS:**

(7-1-95)(Rev. 1-17-12)

108-6

SP1 G37

Items listed below will be the specialty items for this contract (see Article 108-6 of the 2018 Standard Specifications).

| Line # | Description                 |
|--------|-----------------------------|
| 9-12   | Guardrail                   |
| 25-28  | Long-Life Pavement Markings |
| 29-30  | Permanent Pavement Markers  |
| 31-32  | Signals/ITS System          |

**FUEL PRICE ADJUSTMENT:**

(11-15-05) (Rev. 2-18-14)

109-8

SP1 G43

Revise the 2018 Standard Specifications as follows:

**Page 1-83, Article 109-8, Fuel Price Adjustments**, add the following:

The base index price for DIESEL #2 FUEL is \$ **2.0984** per gallon. Where any of the following are included as pay items in the contract, they will be eligible for fuel price adjustment.

The pay items and the fuel factor used in calculating adjustments to be made will be as follows:

| Description                                      | Units   | Fuel Usage Factor Diesel |
|--|---------|--------------------------|
| Unclassified Excavation                          | Gal/CY  | 0.29                     |
| Borrow Excavation                                | Gal/CY  | 0.29                     |
| Class IV Subgrade Stabilization                  | Gal/Ton | 0.55                     |
| Aggregate Base Course                            | Gal/Ton | 0.55                     |
| Sub-Ballast                                      | Gal/Ton | 0.55                     |
| Asphalt Concrete Base Course, Type _____         | Gal/Ton | 2.90                     |
| Asphalt Concrete Intermediate Course, Type _____ | Gal/Ton | 2.90                     |
| Asphalt Concrete Surface Course, Type _____      | Gal/Ton | 2.90                     |
| Open-Graded Asphalt Friction Course              | Gal/Ton | 2.90                     |
| Permeable Asphalt Drainage Course, Type _____    | Gal/Ton | 2.90                     |
| Sand Asphalt Surface Course, Type _____          | Gal/Ton | 2.90                     |
| Aggregate for Cement Treated Base Course         | Gal/Ton | 0.55                     |
| Portland Cement for Cement Treated Base Course   | Gal/Ton | 0.55                     |

Mr. Tim Sherrill  
 Staff Engineer – Preservation & Repair  
 North Carolina Department of Transportation  
 Structures Management Unit  
 1000 Birch Ridge Drive  
 Raleigh, NC 27610

E-mail: [tmsherrill@ncdot.gov](mailto:tmsherrill@ncdot.gov)

#### **METHOD OF MEASUREMENT**

The quantities to be paid for under this Section will be the total feet of integral pile or column jacket furnished, installed, completed and accepted. Measure length from bottom of the form to top of the form.

An additional quantity to be paid for under this section will be the number of pile jacket assemblies furnished, installed, completed and accepted. Measure total number of completed and accepted pile jackets. All survey work shall be incidental to the cathodic protection system installation.

#### **BASIS OF PAYMENT**

Price and payment will be full compensation for all work specified in this Section. No separate payment will be made for reinforcing steel or filler material. Include payment for anode material, jackets, and concrete or filler in the price per foot for cathodic protection integral pile jackets.

Include payment for anode connection accessories, testing, pile jacket survey, and activation in the price per each for cathodic protection integral pile jackets.

Remove and replace jackets with misalignment exceeding 3/4 inch or CP jackets with the anode electrically shorted to the reinforcement at no additional cost to the Department. Price and payment will also be full compensation for removal, containment and disposal off-site of unsound concrete, as well as all other work necessary to complete the work per contract documents

Payment will be made under:

| <b>Pay Item</b>                                      | <b>Unit</b> |
|--|-------------|
| CP Integral Pile Jacket (Structural)<br>16 to 30 In. | Linear Foot |
| CP Integral Pile Jacket<br>16 to 30 In.              | Each        |

| Line #               | Item Number  | Sec # | Description  | Quantity      | Unit Cost | Amount |
|----------------------|--------------|-------|--|---------------|-----------|--------|
| <b>ROADWAY ITEMS</b> |              |       |  |               |           |        |
| 0001                 | 0000100000-N | 800   | MOBILIZATION   | Lump Sum      | L.S.      |        |
| 0002                 | 1297000000-E | 607   | MILLING ASPHALT PAVEMENT, ****<br>DEPTH<br>(1-1/2")          | 129,085<br>SY |           |        |
| 0003                 | 1330000000-E | 607   | INCIDENTAL MILLING   | 335<br>SY     |           |        |
| 0004                 | 1523000000-E | 610   | ASPHALT CONC SURFACE COURSE,<br>TYPE S9.5C                   | 10,888<br>TON |           |        |
| 0005                 | 1524000000-E | SP    | ASPHALT CONC SURFACE COURSE,<br>TYPE S9.5C (LEVELING COURSE) | 40<br>TON     |           |        |
| 0006                 | 1575000000-E | 620   | ASPHALT BINDER FOR PLANT MIX                                 | 657<br>TON    |           |        |
| 0007                 | 1880000000-E | SP    | GENERIC PAVING ITEM<br>PATCHING EXISTING PAVEMENT<br>(MILL)  | 601<br>TON    |           |        |
| 0008                 | 2845000000-N | 858   | ADJUSTMENT OF METER BOXES OR<br>VALVE BOXES                  | 5<br>EA       |           |        |
| 0009                 | 3030000000-E | 862   | STEEL BEAM GUARDRAIL   | 575<br>LF     |           |        |
| 0010                 | 3215000000-N | SP    | GUARDRAIL ANCHOR UNITS, TYPE<br>III                          | 4<br>EA       |           |        |
| 0011                 | 3287000000-N | SP    | GUARDRAIL END UNITS, TYPE TL-3                               | 4<br>EA       |           |        |
| 0012                 | 3360000000-E | 863   | REMOVE EXISTING GUARDRAIL                                    | 930<br>LF     |           |        |
| 0013                 | 4400000000-E | 1110  | WORK ZONE SIGNS (STATIONARY)                                 | 530<br>SF     |           |        |
| 0014                 | 4405000000-E | 1110  | WORK ZONE SIGNS (PORTABLE)                                   | 971<br>SF     |           |        |
| 0015                 | 4410000000-E | 1110  | WORK ZONE SIGNS (BARRICADE<br>MOUNTED)                       | 171<br>SF     |           |        |
| 0016                 | 4413000000-E | SP    | WORK ZONE ADVANCE/GENERAL<br>WARNING SIGNING                 | 447<br>SF     |           |        |
| 0017                 | 4420000000-N | 1120  | PORTABLE CHANGEABLE MESSAGE<br>SIGN                          | 12<br>EA      |           |        |
| 0018                 | 4445000000-E | 1145  | BARRICADES (TYPE III)  | 48<br>LF      |           |        |

| Line # | Item Number  | Sec # | Description  | Quantity      | Unit Cost | Amount |
|--------|--------------|-------|--|---------------|-----------|--------|
| 0019   | 4455000000-N | 1150  | FLAGGER  | 120<br>DAY    |           |        |
| 0020   | 4457000000-N | SP    | TEMPORARY TRAFFIC CONTROL                                      | Lump Sum      | L.S.      |        |
| 0021   | 4480000000-N | 1165  | TMA  | 2<br>EA       |           |        |
| 0022   | 4485000000-E | 1170  | PORTABLE CONCRETE BARRIER                                      | 100<br>LF     |           |        |
| 0023   | 4500000000-E | 1170  | REMOVE & RESET PORTABLE CONCRETE BARRIER                       | 1,000<br>LF   |           |        |
| 0024   | 4516000000-N | 1180  | SKINNY DRUM  | 185<br>EA     |           |        |
| 0025   | 4686000000-E | 1205  | THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)            | 132,150<br>LF |           |        |
| 0026   | 4710000000-E | 1205  | THERMOPLASTIC PAVEMENT MARKING LINES (24", 120 MILS)           | 500<br>LF     |           |        |
| 0027   | 4725000000-E | 1205  | THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)                | 201<br>EA     |           |        |
| 0028   | 4770000000-E | 1205  | COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (4") (II) | 7,280<br>LF   |           |        |
| 0029   | 4900000000-N | 1251  | PERMANENT RAISED PAVEMENT MARKERS                              | 1,452<br>EA   |           |        |
| 0030   | 4905000000-N | 1253  | SNOWPLOWABLE PAVEMENT MARKERS                                  | 50<br>EA      |           |        |
| 0031   | 7444000000-E | 1725  | INDUCTIVE LOOP SAWCUT  | 499<br>LF     |           |        |
| 0032   | 7456000000-E | 1726  | LEAD-IN CABLE (*****<br>(14-2)                                 | 499<br>LF     |           |        |

**STRUCTURE ITEMS**

|      |              |     |  |          |      |  |
|------|--------------|-----|--|----------|------|--|
| 0033 | 8035000000-N | 402 | REMOVAL OF EXISTING STRUCTURE AT STATION *****<br>(43+95.83 TO 55+16.87) | Lump Sum | L.S. |  |
| 0034 | 8065000000-N | SP  | ASBESTOS ASSESSMENT  | Lump Sum | L.S. |  |

| Line # | Item Number  | Sec # | Description   | Quantity      | Unit Cost | Amount |
|--------|--------------|-------|---|---------------|-----------|--------|
| 0035   | 8161000000-E | 420   | GROOVING BRIDGE FLOORS  | 115,700<br>SF |           |        |
| 0036   | 8475000000-E | 460   | TWO BAR METAL RAIL  | 8,482<br>LF   |           |        |
| 0037   | 8517000000-E | 460   | 1'-***X ***** CONCRETE PARAPET<br>(1'-2" X 2'-9")                               | 2,240<br>LF   |           |        |
| 0038   | 8559000000-E | SP    | CLASS II, SURFACE PREPARATION   | 9<br>SY       |           |        |
| 0039   | 8657000000-N | 430   | ELASTOMERIC BEARINGS  | Lump Sum      | L.S.      |        |
| 0040   | 8660000000-E | SP    | CONCRETE REPAIRS  | 74<br>CF      |           |        |
| 0041   | 8664000000-E | SP    | SHOTCRETE REPAIRS   | 275<br>CF     |           |        |
| 0042   | 8678000000-E | SP    | EPOXY RESIN INJECTION   | 799<br>LF     |           |        |
| 0043   | 8867000000-E | SP    | GENERIC STRUCTURE ITEM<br>1'-2" X 1'-11" CONCRETE<br>PARAPET FOR RAIL RETROFIT  | 6,249<br>LF   |           |        |
| 0044   | 8867000000-E | SP    | GENERIC STRUCTURE ITEM<br>3'-0" X 1'-8" PRESTRESSED<br>CONC CORED SLABS         | 13,398<br>LF  |           |        |
| 0045   | 8867000000-E | SP    | GENERIC STRUCTURE ITEM<br>3'-2" X 1'-6" PRESTRESSED<br>CONC CORED SLABS         | 2,233<br>LF   |           |        |
| 0046   | 8867000000-E | SP    | GENERIC STRUCTURE ITEM<br>BRIDGE JOINT REMOVAL                                  | 1,739<br>LF   |           |        |
| 0047   | 8867000000-E | SP    | GENERIC STRUCTURE ITEM<br>CP INTEGRAL PILE JACKET<br>(STRUCTURAL), 16 TO 30 IN. | 998<br>LF     |           |        |
| 0048   | 8867000000-E | SP    | GENERIC STRUCTURE ITEM<br>RAIL REMOVAL (SPANS 29-65)                            | 6,249<br>LF   |           |        |
| 0049   | 8867000000-E | SP    | GENERIC STRUCTURE ITEM<br>SILICONE JOINT SEALANT                                | 2,202<br>LF   |           |        |
| 0050   | 8881000000-E | SP    | GENERIC STRUCTURE ITEM<br>PPC MATERIALS   | 1,019<br>CY   |           |        |



County : Brunswick

| Line # | Item Number  | Sec # | Description  | Quantity | Unit Cost | Amount |
|--------|--------------|-------|--|----------|-----------|--------|
| 0051   | 8882000000-E | SP    | GENERIC STRUCTURE ITEM<br>REPAIRS TO PRESTRESSED<br>CONCRETE GIRDERS | 152      | CF        |        |
| 0052   | 8892000000-E | SP    | GENERIC STRUCTURE ITEM<br>CP SYSTEM, ZINC ALUMINUM SPRAY             | 12,400   | SF        |        |
| 0053   | 8893000000-E | SP    | GENERIC STRUCTURE ITEM<br>CONCRETE DECK REPAIR FOR PPC<br>OVERLAY    | 9        | SY        |        |
| 0054   | 8893000000-E | SP    | GENERIC STRUCTURE ITEM<br>PLACING AND FINISHING PPC<br>OVERLAY       | 20,905   | SY        |        |
| 0055   | 8893000000-E | SP    | GENERIC STRUCTURE ITEM<br>SCARIFYING BRIDGE DECK                     | 16,347   | SY        |        |
| 0056   | 8893000000-E | SP    | GENERIC STRUCTURE ITEM<br>SHOTBLASTING BRIDGE DECK                   | 20,905   | SY        |        |
| 0057   | 8897000000-N | SP    | GENERIC STRUCTURE ITEM<br>CP SYSTEM (ZINC BULK ANODE)                | 22       | EA        |        |
| 0058   | 8897000000-N | SP    | GENERIC STRUCTURE ITEM<br>CP INTEGRAL PILE JACKET, 16"<br>TO 30"     | 150      | EA        |        |
|        |              |       | <b>Total Amount Of Bid For Entire Project :</b>                      |          |           |        |

1422/May07/Q521902.0/D348409100000/E58

## GENERAL NOTES (CONT.)

TRAFFIC BARRIER:

Z) INSTALL TEMPORARY BARRIER ACCORDING TO THE TRANSPORTATION MANAGEMENT PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION PROCEED IN A CONTINUOUS MANNER TO COMPLETE THE PROPOSED WORK IN THAT LOCATION UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE.

ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE TEMPORARY BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE / RESET TEMPORARY BARRIER AT NO COST TO THE DEPARTMENT UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS, TEMPORARY BARRIER IS PROTECTING A HAZARD, OR AS DIRECTED BY THE ENGINEER.

INSTALL TEMPORARY BARRIER WITH THE TRAFFIC FLOW BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE TEMPORARY BARRIER AGAINST THE TRAFFIC FLOW BEGINNING WITH THE DOWNSTREAM SIDE OF TRAFFIC.

INSTALL AND SPACE DRUMS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH) TO CLOSE OR KEEP THE SECTION OF THE ROADWAY CLOSED UNTIL THE TEMPORARY BARRIER CAN BE PLACED OR AFTER THE TEMPORARY BARRIER IS REMOVED.

AA) PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER AT ALL TIMES DURING THE INSTALLATION AND REMOVAL OF THE BARRIER BY EITHER A TRUCK MOUNTED ATTENUATOR (MAXIMUM 72 HOURS) OR A TEMPORARY CRASH CUSHION.

PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER FROM ONCOMING TRAFFIC AT ALL TIMES BY A TEMPORARY CRASH CUSHION UNLESS THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER IS OFFSET FROM ONCOMING TRAFFIC AS FOLLOWS OR AS SHOWN IN THE PLANS: (SEE ALSO 1101.05)

| POSTED SPEED LIMIT | MINIMUM OFFSET |
|--------------------|----------------|
| 40 OR LESS         | 15 FT          |
| 45 - 50            | 20 FT          |
| 55                 | 25 FT          |
| 60 MPH or HIGHER   | 30 FT          |

## PCMS MESSAGES

PCMS MESSAGE  
ONE WEEK  
PRIOR TO BRIDGE CLOSURE

| MESSAGE NO. 1         | MESSAGE NO. 2  |
|-----------------------|----------------|
| NC 133 BRIDGE CLOSURE | MM/DD TO MM/DD |

CHANGEABLE MESSAGE SIGN

PCMS MESSAGE  
DURING  
BRIDGE CLOSURE

| MESSAGE NO. 1       | MESSAGE NO. 2 |
|---------------------|---------------|
| NC 133 CLOSED AHEAD | FOLLOW DETOUR |

CHANGEABLE MESSAGE SIGN

PROVIDE PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) AT MINIMUM OF (7) CALENDAR DAYS IN ADVANCE OF ANY WORK AND RETAIN THESE MESSAGE BOARDS ON THE PROJECT WITH UPDATED MESSAGING THROUGHOUT THE DURATION OF THE PROJECT. THE PCMS' SHALL BE PLACED A MINIMUM OF 500' IN ADVANCE OF THE WORK ZONE. SEE ABOVE FOR TIMING AND MESSAGES. SIGN LOCATION AND MESSAGE CAN BE CHANGED AT THE APPROVAL OF THE ENGINEER.

## PHASING NOTES

PERFORM ALL WORK AS SHOWN IN THE CONTRACT AND BRIDGE PLANS IN ACCORDANCE WITH ALL COAST GUARD REGULATIONS & REQUIREMENTS. FOR U.S. COAST GUARD CONTACT INFORMATION, SEE PROJECT SPECIAL PROVISIONS.

ALL LANE CLOSURES SHALL BE IN ACCORDANCE WITH THE MOST RECENT EDITION OF THE NCDOT STANDARD SPECIFICATIONS, STANDARD DRAWINGS AND THE TRANSPORTATION MANAGEMENT PLAN.

PHASING:

CONTRACTOR MAY WORK ON MULTIPLE LOCATIONS SIMULTANEOUSLY IF APPROVED BY THE ENGINEER.

USE NCDOT RSD 1101.01 SHEETS 1 THRU 3 OF 3 TO INSTALL ADVANCED WARNING SIGNS AND DEVICES.

FOR PHASE 7 ONLY: INTERMEDIATE CONTRACT TIME FOR BRIDGE AND OFFSITE DETOUR. THE BRIDGE MAY BE CLOSED FOR A PERIOD NOT TO EXCEED 26 WEEKS. THIS TIME PERIOD MAY BEGIN NO EARLIER THAN OCTOBER 15, 2018 AND END NO LATER THAN APRIL 15, 2019.

SECTION 1

PHASE 1:

STEP 1: USE NCDOT RSD 1101.02 SHEET 1 OF 14 AND ROADWAY PLANS VICINITY MAP, TMP-9 TO CLOSE THE NORTHBOUND AND CENTER LANES OF NC 133/COUNTRY CLUB DURING ALLOWABLE LANE CLOSURE TIMES TO PERFORM WORK ON THE NORTHBOUND AND CENTER LANES. PERFORM MILL-PATCH ON THE NORTHBOUND AND CENTER LANES AS REQUIRED IN THE ROADWAY PLANS. AT THE END OF THE WORK PERIOD, REOPEN TO TRAFFIC.

STEP 2: REPEAT STEP 1 UNTIL COMPLETE.

PHASE 2:

STEP 1: USE NCDOT RSD 1101.02 SHEET 2 OF 14 AND ROADWAY PLANS VICINITY MAP, TMP-9 TO CLOSE THE SOUTHBOUND LANE OF NC 133/COUNTRY CLUB DURING ALLOWABLE LANE CLOSURE TIMES TO PERFORM WORK ON THE SOUTHBOUND LANE. PERFORM MILL-PATCH ON THE SOUTHBOUND LANE AS REQUIRED IN THE ROADWAY PLANS. AT THE END OF THE WORK PERIOD, REOPEN TO TRAFFIC.

STEP 2: REPEAT STEP 1 UNTIL COMPLETE.

PHASE 3:

STEP 1: USE NCDOT RSD 1101.02 SHEET 1 OF 14 AND ROADWAY PLANS VICINITY MAP, TMP-9 TO CLOSE THE WESTBOUND AND CENTER LANES OF E OAK ISLAND DRIVE BETWEEN THE LIMITS SHOWN IN THE ROADWAY PLANS DURING ALLOWABLE LANE CLOSURE TIMES TO PERFORM WORK ON THE WESTBOUND AND CENTER LANES. PERFORM MILL-PATCH ON THE WESTBOUND AND CENTER LANES AS REQUIRED IN THE ROADWAY PLANS. AT THE END OF THE WORK PERIOD, REOPEN TO TRAFFIC.

STEP 2: REPEAT STEP 1 UNTIL COMPLETE.

SECTION 2:


PHASE 4:

STEP 1: USE NCDOT RSD 1101.02 SHEET 2 OF 14 AND ROADWAY PLANS VICINITY MAP, TMP-9 TO CLOSE THE EASTBOUND LANE OF E OAK ISLAND DRIVE BETWEEN THE LIMITS SHOWN IN THE ROADWAY PLAN DURING ALLOWABLE LANE CLOSURE TIMES TO PERFORM WORK ON THE EASTBOUND LANE. PERFORM MILL-PATCH ON THE EASTBOUND LANE AS REQUIRED IN THE ROADWAY PLANS. AT THE END OF THE WORK PERIOD, REOPEN TO TRAFFIC.

STEP 2: REPEAT STEP 1 UNTIL COMPLETE.

|   |  |  |   |
|---|--|--|---|
| APPROVED: <i>Jacob H. Duke</i><br>9CD53ADC68D6400<br>DATE: 5/2/2018<br>SEAL |  |  | GENERAL NOTES (2 OF 2)<br>&<br>PHASING NOTES (1 OF 2) |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED            |  |  |   |

5/2/2018 2:42:07 PM C:\Users\scullum\Documents\TrafficControl\200\_020\_15BPR.25.TC.TMP-1C\_GENERAL NOTES (2 OF 2).dgn  
 User: scullum  
 #DOCSET\_CURRENTSETIDOC#

|  |           |
|--|-----------|
| PROJ. REFERENCE NO.  | SHEET NO. |
| 15BPR.25   | TMP-1D    |
|  Kisinger Campo & Associates Corp.<br>4800 Six Forks Rd.<br>Suite 120<br>Raleigh, NC 27609<br>KCSINGER CAMPO ASSOCIATES<br>Jacob H. Duke, PE No. 043777 |           |

## PHASING NOTES (CONT.)

**PHASE 5:**

- STEP 1:** USE NCDOT RSD 1101.02 SHEET 1 OF 14 AND ROADWAY PLANS VICINITY MAP, TMP-9 TO CLOSE THE WESTBOUND AND CENTER LANES OF E OAK ISLAND DRIVE BETWEEN THE LIMITS SHOWN IN THE ROADWAY PLANS DURING ALLOWABLE LANE CLOSURE TIMES TO PERFORM WORK ON THE WESTBOUND AND CENTER LANES. PERFORM MILL-PATCH ON THE WESTBOUND AND CENTER LANES AS REQUIRED IN THE ROADWAY PLANS. AT THE END OF THE WORK PERIOD, REOPEN TO TRAFFIC.
- STEP 2:** REPEAT STEP 1 UNTIL COMPLETE.

**SECTION 3:**

**PHASE 6:**

- STEP 1:** USE NCDOT RSD 1101.02 SHEET 2 OF 14 AND ROADWAY PLANS VICINITY MAP, TMP-9 TO CLOSE THE EASTBOUND LANE OF E OAK ISLAND DRIVE BETWEEN THE LIMITS SHOWN IN THE ROADWAY PLANS DURING ALLOWABLE LANE CLOSURE TIMES TO PERFORM WORK ON THE EASTBOUND LANE. PERFORM MILL-PATCH ON THE EASTBOUND LANE AS REQUIRED IN THE ROADWAY PLANS. AT THE END OF THE WORK, PERIOD REOPEN TO TRAFFIC.
- STEP 2:** REPEAT STEP 1 UNTIL COMPLETE.

**PHASE 7:**

- STEP 1:** USE TMP-2 THRU TMP-6 FOR THE OFFSITE DETOUR. PLACE DETOUR SIGNS AND DEVICES FOR CLOSURES ALONG NC 133/LONG BEACH RD SE, COUNTRY CLUB DR/CASWELL BEACH RD, E OAK ISLAND DR, W OAK ISLAND DR, NC 906/E F MIDDLETON AVE, NC 211/SOUTHPORT-SUPPLY RD SE, NC 906/ MIDWAY RD SE. COVER SIGNS UNTIL DETOUR IS READY FOR OPERATION.
- STEP 2:** UNCOVER SIGNS AND CLOSE BRIDGE #14 TO TRAFFIC.
- STEP 3:** PERFORM ALL WORK PER BRIDGE PLANS.
- STEP 4:** COMPLETE ALL APPROACH ROADWAY WORK, TIE-INS AND ASSOCIATED ITEMS.
- STEP 5:** AFTER ALL WORK IS COMPLETE, REMOVE ALL SIGNS AND DEVICES TO REOPEN BRIDGE #14 TO TRAFFIC.

**SECTION 1:**

**PHASE 8:**

- STEP 1:** USE NCDOT RSD 1101.02 SHEET 1 OF 14 AND ROADWAY PLANS VICINITY MAP, TMP-9 TO CLOSE THE NORTHBOUND AND CENTER LANES OF NC 133/COUNTRY CLUB DURING ALLOWABLE LANE CLOSURE TIMES TO PERFORM WORK ON THE NORTHBOUND AND CENTER LANES. PERFORM MILLING AND RESURFACING OPERATIONS, AND STRIPING PER ROADWAY APPLICABLE STANDARD ON THE NORTHBOUND AND CENTER LANES AS REQUIRED IN THE ROADWAY PLANS. AT THE END OF THE WORK PERIOD, REOPEN TO TRAFFIC.
- STEP 2:** REPEAT STEP 1 UNTIL COMPLETE.

**PHASE 9:**

- STEP 1:** USE NCDOT RSD 1101.02 SHEET 2 OF 14 AND ROADWAY PLANS VICINITY MAP, TMP-9 TO CLOSE THE SOUTHBOUND LANE OF NC 133/COUNTRY CLUB DURING ALLOWABLE LANE CLOSURE TIMES TO PERFORM WORK ON THE SOUTHBOUND LANE. PERFORM MILLING AND RESURFACING OPERATIONS, AND STRIPING PER ROADWAY APPLICABLE STANDARD ON THE SOUTHBOUND LANE AS REQUIRED IN THE ROADWAY PLANS. AT THE END OF THE WORK PERIOD, REOPEN TO TRAFFIC.
- STEP 2:** REPEAT STEP 1 UNTIL COMPLETE.

**SECTION 2:**

**PHASE 10:**

- STEP 1:** USE NCDOT RSD 1101.02 SHEET 1 OF 14 AND ROADWAY PLANS VICINITY MAP, TMP-9 TO CLOSE THE WESTBOUND AND CENTER LANES OF E OAK ISLAND DRIVE BETWEEN THE LIMITS SHOWN IN THE ROADWAY PLANS DURING ALLOWABLE LANE CLOSURE TIMES TO PERFORM WORK ON THE WESTBOUND AND CENTER LANES. PERFORM MILLING AND RESURFACING OPERATIONS, AND STRIPING PER ROADWAY APPLICABLE STANDARD ON THE WESTBOUND AND CENTER LANES AS REQUIRED IN THE ROADWAY PLANS. AT THE END OF THE WORK PERIOD, REOPEN TO TRAFFIC.
- STEP 2:** REPEAT STEP 1 UNTIL COMPLETE.

**PHASE 11:**

- STEP 1:** USE NCDOT RSD 1101.02 SHEET 2 OF 14 AND ROADWAY PLANS VICINITY MAP, TMP-9 TO CLOSE THE EASTBOUND LANE OF E OAK ISLAND DRIVE BETWEEN THE LIMITS SHOWN IN THE ROADWAY PLAN DURING ALLOWABLE LANE CLOSURE TIMES TO PERFORM WORK ON THE EASTBOUND LANE. PERFORM MILLING AND RESURFACING OPERATIONS, AND STRIPING PER ROADWAY APPLICABLE STANDARD ON THE EASTBOUND LANE AS REQUIRED IN THE ROADWAY PLANS. AT THE END OF THE WORK PERIOD, REOPEN TO TRAFFIC.
- STEP 2:** REPEAT STEP 1 UNTIL COMPLETE.

**SECTION 3:**

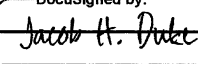
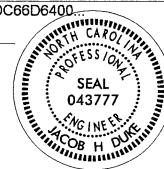

**PHASE 12:**

- STEP 1:** USE NCDOT RSD 1101.02 SHEET 1 OF 14 AND ROADWAY PLANS VICINITY MAP, TMP-9 TO CLOSE THE WESTBOUND AND CENTER LANES OF E OAK ISLAND DRIVE BETWEEN THE LIMITS SHOWN IN THE ROADWAY PLANS DURING ALLOWABLE LANE CLOSURE TIMES TO PERFORM WORK ON THE WESTBOUND AND CENTER LANES. PERFORM MILLING AND RESURFACING OPERATIONS, AND STRIPING PER ROADWAY APPLICABLE STANDARD ON THE WESTBOUND AND CENTER LANES AS REQUIRED IN THE ROADWAY PLANS. AT THE END OF THE WORK PERIOD, REOPEN TO TRAFFIC.
- STEP 2:** REPEAT STEP 1 UNTIL COMPLETE.

**PHASE 13:**

- STEP 1:** USE NCDOT RSD 1101.02 SHEET 2 OF 14 AND ROADWAY PLANS VICINITY MAP, TMP-9 TO CLOSE THE EASTBOUND LANE OF E OAK ISLAND DRIVE BETWEEN THE LIMITS SHOWN IN THE ROADWAY PLANS DURING ALLOWABLE LANE CLOSURE TIMES TO PERFORM WORK ON THE EASTBOUND LANE. PERFORM MILLING AND RESURFACING OPERATIONS, AND STRIPING PER ROADWAY APPLICABLE STANDARD ON THE EASTBOUND LANE AS REQUIRED IN THE ROADWAY PLANS. AT THE END OF THE WORK, PERIOD REOPEN TO TRAFFIC.
- STEP 2:** REPEAT STEP 1 UNTIL COMPLETE.
- STEP 3:** AFTER ALL WORK IS COMPLETE, REMOVE ALL SIGNS AND DEVICES.

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| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED   |   |   |                        |

PROJECT NUMBER: 15BPR.25

CONTRACT: C204185

## SUMMARY OF QUANTITIES

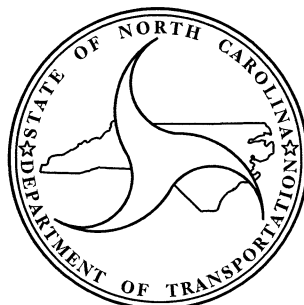
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|-----------------|-----------------------------|-------------|--------------|
| STATE           | STATE PROJECT REFERENCE NO. | SHEET NO.   | TOTAL SHEETS |
| N.C.            | 15BPR.25                    | S-1         | 111          |
| STATE PROJ. NO. | F.A. PROJ. NO.              | DESCRIPTION |              |
| 15BPR.25        | -                           | P.E.        |              |
| 15BPR.25        | -                           | CONST.      |              |
|                 |                             |             |              |
|                 |                             |             |              |
|                 |                             |             |              |
|                 |                             |             |              |

### TOTAL BILL OF MATERIAL - STRUCTURES

|                | REMOVAL OF EXISTING STRUCTURE | ASBESTOS ASSESSMENT | GROOVING BRIDGE FLOORS | TWO BAR METAL RAIL | 1'-2" X 2'-9" CONCRETE PARAPET | CLASS II. SURFACE PREPARATION | ELASTOMERIC BEARINGS | REPAIRS TO PRESTRESSED CONCRETE GIRDERS | CONCRETE REPAIRS | SHOTCRETE REPAIRS | EPOXY RESIN INJECTION | SILICONE JOINT SEALANT | RAIL REMOVAL (SPANS 29-65) | CP INTEGRAL PILE JACKET (STRUCTURAL) 16 TO 30 IN. | BRIDGE JOINT REMOVAL |
|----------------|-------------------------------|---------------------|------------------------|--------------------|--------------------------------|-------------------------------|----------------------|---|------------------|-------------------|-----------------------|------------------------|----------------------------|---|----------------------|
|                | LUMP SUM                      | LUMP SUM            | SO. FT.                | LIN. FT.           | LIN. FT.                       | SO. YDS.                      | LUMP SUM             | CU. FT.                                 | CU. FT.          | CU. FT.           | LIN. FT.              | LIN. FT.               | LIN. FT.                   | LIN. FT.  | LIN. FT.             |
| SUPERSTRUCTURE |                               |                     | 115700                 | 8482               | 2240                           | 9                             |                      | 152                                     | 52               |                   | 285                   | 2202                   | 6249                       |   | 1739                 |
| SUBSTRUCTURE   |                               |                     |                        |                    |                                |                               |                      |   | 22               | 275               | 514                   |                        |                            | 998   |                      |
| TOTAL          | LUMP SUM                      | LUMP SUM            | 115700                 | 8482               | 2240                           | 9                             | LUMP SUM             | 152                                     | 74               | 275               | 799                   | 2202                   | 6249                       | 998   | 1739                 |

### TOTAL BILL OF MATERIAL - STRUCTURES CONT.

|                | 3'-2" X 1'-6" PRESTRESSED CONC CORED SLAB | 3'-0" X 1'-8" PRESTRESSED CONC CORED SLAB | 1'-2" X 1'-11" CONCRETE PARAPET FOR RAIL RETROFIT | PPC MATERIALS | CP SYSTEM ZINC ALUMINUM SPRAY | SHOTBLASTING BRIDGE DECK | SCARIFYING BRIDGE DECK | PLACING AND FINISHING PPC OVERLAY | CONCRETE DECK REPAIR FOR PPC OVERLAY | CP SYSTEM (ZINC BULK ANODES) | CP INTEGRAL PILE JACKET 16 TO 30 IN. |
|----------------|---|---|---|---------------|-------------------------------|--------------------------|------------------------|-----------------------------------|--------------------------------------|------------------------------|--------------------------------------|
|                | LIN. FT.                                  | LIN. FT.                                  | LIN. FT.  | CU. YDS.      | SO. FT.                       | SO. YDS.                 | SO. YDS.               | SO. YDS.                          | SO. YDS.                             | EA.                          | EA.                                  |
| SUPERSTRUCTURE | 2233                                      | 13398                                     | 6249  | 1019          |                               | 20905                    | 16347                  | 20905                             | 9                                    |                              |                                      |
| SUBSTRUCTURE   |   |   |   |               | 12400                         |                          |                        |                                   |                                      | 22                           | 150                                  |
| TOTAL          | 2233                                      | 13398                                     | 6249  | 1019          | 12400                         | 20905                    | 16347                  | 20905                             | 9                                    | 22                           | 150                                  |



**KCA** 4800 SIX FORKS ROAD SUITE 120  
 KISINGER CAMPO & ASSOCIATES RALEIGH, NC 27609  
 (919) 882-7839



DocuSigned by:  
*Samuel Cullum*  
 19C97095C75A467...

5/2/2018

**DRAWINGS AND DIMENSIONS:**

- DO NOT SCALE DRAWINGS FOR DIMENSIONS NOT GIVEN.
- VERIFY ALL EXISTING FIELD CONDITIONS AND DIMENSIONS (INCLUDING MINIMUM VERTICAL CLEARANCE) PRIOR TO COMMENCING REPAIRS OR ORDERING ANY MATERIAL. NOTIFY ENGINEER OF ANY DISCREPANCIES FOUND.
- ALL DIMENSIONS ARE IN FEET AND INCHES.

**DESIGN SPECIFICATIONS:**

- LRFD BRIDGE DESIGN SPECIFICATIONS (8TH EDITION, 2017)
- 2018 NCDOT STANDARD SPECIFICATIONS AND PROJECT SPECIAL PROVISIONS.

**PROJECT SCOPE:**

- SUPERSTRUCTURE REPLACEMENT (SPANS 1 - 28)
- POLYESTER POLYMER CONCRETE (PPC) OVERLAY
- APPROACH ROADWAY - MILLING AND GUARDRAIL REPLACEMENT
- BRIDGE RAIL RETROFIT
- SUPERSTRUCTURE CONCRETE REPAIRS
- SUBSTRUCTURE CONCRETE REPAIRS
- GALVANIC CATHODIC PROTECTION PILE JACKET
- GALVANIC CATHODIC PROTECTION - METALIZING
- GALVANIC CATHODIC PROTECTION - BULK ANODE
- JOINT REPLACEMENT
- NAVIGATIONAL LIGHT SYSTEM

**GENERAL NOTES:**

- IT IS THE CONTRACTORS RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL REQUIREMENTS.
- FOR SUBMITTAL OF FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLAN.
- FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
- FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.
- FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.
- FOR CONCRETE REPAIRS, SEE PLAN DETAILS AND SPECIAL PROVISIONS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
- FOR CONCRETE DECK REPAIR FOR PPC OVERLAY, SEE SPECIAL PROVISIONS.
- ALL PROPOSED EXPANSION JOINT DIMENSIONS, OPENINGS AND BLOCKOUTS ARE SHOWN AT 60°F. CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTALLATION GUIDELINES AND MAKE ANY NECESSARY ADJUSTMENTS.
- WORK ON BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL INTO THE WATER. THE CONTRACTOR SHALL SUBMIT PLANS FOR CONSTRUCTION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.
- PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL, A COMPLETE SEQUENCE OF TASKS FOR EACH OPERATION AFFECTING THE BRIDGE SURFACE AND/OR TRAFFIC.
- ANY DAMAGE TO EXISTING REINFORCING STEEL, DURING CONTRACTOR'S OPERATIONS, SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AND PERFORMED AT NO ADDITIONAL COST.
- FOR SURFACE PREPARATION FOR PPC OVERLAY, SEE SPECIAL PROVISIONS.
- FOR PPC OVERLAY, SEE SPECIAL PROVISIONS.
- FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.
- FOR MAINTENANCE OF WATER TRAFFIC, SEE SPECIAL PROVISIONS.
- FOR WORK IN, OVER AND ADJACENT TO NAVIGABLE WATERS, SEE SPECIAL PROVISIONS.

**DATUM:**

ALL ELEVATIONS REFER TO NGVD '29 UNLESS NOTED OTHERWISE.

**ENVIRONMENT:**

SUPERSTRUCTURE: EXTREMELY AGGRESSIVE - COASTAL  
SUBSTRUCTURE: EXTREMELY AGGRESSIVE - COASTAL

**SITE CONDITIONS:**

HABITAT BEYOND THE LIMITS OF CONSTRUCTION SHALL NOT BE DISTURBED.

**CONCRETE CLASS:**

SEE PROJECT SPECIAL PROVISIONS FOR CONCRETE REPAIR MATERIALS.

**CONCRETE COVER:**

- CONCRETE COVER SHOWN IN THE PLANS DOES NOT INCLUDE PLACEMENT OR FABRICATION TOLERANCES UNLESS SHOWN AS "MINIMUM COVER." SEE NCDOT SPECIFICATIONS FOR ALLOWABLE REINFORCEMENT PLACEMENT TOLERANCES.
- CONSTRUCTION JOINTS ARE PERMITTED ONLY AT LOCATIONS SPECIFIED IN THE PLANS. ADDITIONAL CONSTRUCTION JOINTS OR ALTERATIONS TO THOSE SHOWN REQUIRE THE ENGINEER'S APPROVAL.

**CONCRETE FINISHES:**

FINISH IN ACCORDANCE WITH THE LATEST NCDOT SPECIFICATIONS. MATCH EXISTING FINISH ON ALL EXPOSED EDGES UNLESS OTHERWISE NOTED. A CLASS 5 FINISH COATING SHALL BE APPLIED TO THE BEAM ENDS WHERE CONCRETE REPAIRS HAVE BEEN PERFORMED, MATCHING THE COLOR OF SURROUNDING CONCRETE.

**REINFORCING STEEL:**

- ALL REINFORCING STEEL SHALL BE ASTM A615-96, GRADE 60.
- ALL DIMENSIONS PERTAINING TO LOCATION OF REINFORCEMENT ARE TO CENTERLINE OF BARS EXCEPT WHERE THE CLEAR DIMENSION IS SHOWN TO FACE OF CONCRETE.
- REINFORCEMENT DETAIL DIMENSIONS ARE OUT-TO-OUT OF BARS.

**ADJACENT EDGE CONCRETE REPAIRS:**

WHEN PROPOSED CONCRETE REPAIRS (OR DETERMINED LOCATIONS) ARE ADJACENT TO A CORNER, REPAIR ON THE ADJACENT EDGE SHOULD BE ANTICIPATED IN ADDITION TO THE AREA SHOWN ON CONCRETE REPAIR SHEETS. CONTRACTOR IS RESPONSIBLE FOR THIS REPAIR AT ALL LOCATIONS REGARDLESS OF CALL-OUT ON RESPECTIVE SHEET(S).

**LIMIT OF REPAIRS:**

- LIMITS OF REPAIRS PROVIDED IN THESE PLANS ARE BASED ON PREVIOUS NBIS ELEMENT INSPECTIONS AND LIMITED FIELD WORK. THE EXTENT OF THE REPAIRS IS EXPECTED TO VARY DURING CONSTRUCTION.
- DUE TO TIME SINCE INSPECTION, DEFICIENCIES MAY HAVE DETERIORATED OR INCREASED IN NUMBER. NOTIFY THE ENGINEER OF SIGNIFICANT CHANGES.

**FORMS CONSTRUCTION:**

FORMS MUST BE SUPPORTED BY THE EXISTING STRUCTURE. FULL DEPTH COFFERDAMS WILL NOT BE ACCEPTED. THE CONTRACTOR SHALL SUBMIT DETAILED PLANS FOR FORMS AND FALSEWORK TO BE USED FOR CONSTRUCTION OF THE PIER AND CONCRETE REPAIR.

**CONSTRUCTION SURVEYING:**

ALL SURVEYING AND STAKING IS INCIDENTAL TO ALL OTHER PAY ITEMS FOR THIS PROJECT.

**ENVIRONMENTAL NOTES:**

STANDARD CONSTRUCTION CONDITIONS SHALL BE IMPLEMENTED FOR THE FOLLOWING PROTECTED/ENDANGERED SPECIES AS APPLICABLE AND INCLUDED IN CONTRACT DOCUMENTS.

- WEST INDIAN MANATEE
- VARIOUS SEA TURTLE SPECIES
- ATLANTIC STURGEON

**POLLUTION CONTROL:**

- THE CONTRACTOR SHALL SUBMIT A POLLUTION CONTROL PLAN TO THE ENGINEER IN ACCORDANCE THE NCDOT STANDARD SPECIFICATIONS, PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITIES.
- THE CONTRACTOR SHALL NOT ALLOW, AT ANY TIME, ANY DISCHARGE OR MATERIALS TO FALL INTO THE WATERWAY.
- THE CONTRACTORS SHALL SUBMIT TO THE ENGINEER AN EROSION CONTROL PLAN AS REQUIRED BY THE NCDOT STANDARD SPECIFICATIONS AND BEST MANAGEMENT PRACTICES.
- NO OFFSITE IMPACTS SHALL BE PERMITTED.

**INCIDENTAL NOTES:**

- PAYMENT FOR INCIDENTAL ITEMS NOT SPECIFICALLY COVERED IN THE INDIVIDUAL BID ITEMS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE BID ITEMS CONTAINED IN THE CONTRACT.

**INTERMEDIATE CONTRACT TIME:**

- FOR ICT, SEE CONTRACT DOCUMENTS.

**CONSTRUCTION EQUIPMENT ON PROPOSED CORED SLAB SPANS (1-28):**

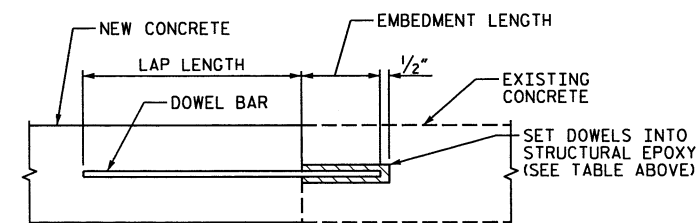
THE CONTRACTOR MAY PLACE CONSTRUCTION EQUIPMENT ON PROPOSED REPLACEMENT SPANS WITH CRANE MATTING WHEN ALL TRANSVERSE POST-TENSIONING (PT) TENDONS ARE INSTALLED, TENSIONED, AND GROUT TEST CYLINDERS FOR RESPECTIVE SPAN ATTAIN 3000 PSI COMPRESSIVE STRENGTH. SPECIFICATIONS FOR 28-DAY STRENGTH REQUIREMENTS ARE NOT CHANGED.

ALTERNATIVELY, THE CONTRACTOR MAY PLACE CONSTRUCTION EQUIPMENT ON PROPOSED SPANS WITH PT TENDONS INSTALLED AND TENSIONED AND THE CONTRACTOR HAS DEMONSTRATED THE SAFE LOAD CARRYING CAPACITY WITH APPROPRIATE SERVICE STRESS IN THE MEMBERS OF THE PROPOSED CORED SLABS WITH SPECIFIC EQUIPMENT USING CRANE MATTING. ANALYSIS SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT EDITION OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND MAY ASSUME SUFFICIENTLY CONNECTED FOR LIVE LOAD DISTRIBUTION FACTORS IF CRANE MATTING IS USED AND ALL TRANSVERSE PT TENDONS ARE INSTALLED AND TENSIONED.

**DOWEL DETAIL:**

| DOWEL DIMENSIONS<br>(UNLESS OTHERWISE NOTED) |               |                  |                |
|--|---------------|------------------|----------------|
| DOWEL SIZE                                   | HOLE DIAMETER | EMBEDMENT LENGTH | MIN LAP LENGTH |
| 4  | 5/8"          | 8"               | 1'-9"          |
| 5  | 3/4"          | 9"               | 2'-2"          |
| 6  | 7/8"          | 11"              | 2'-7"          |
| 8  | 1 1/8"        | 1'-4"            | 4'-0"          |

- ANY REQUIRED DOWEL HOLES SHALL BE DRILLED INTO EXISTING CONCRETE ACCORDING TO THE DETAIL AND NCDOT SPECIFICATIONS.
- NOTIFY THE ENGINEER OF ANY BROKEN BARS OR BARS WHICH ARE DETERMINED TO HAVE A SECTION LOSS OF 25% OR GREATER.
- INSTALL DOWELS IN ACCORDANCE WITH NCDOT SPECIFICATIONS.



Designed by:  
Samuel Cullum  
1903709675487

5/2/2018

PROJECT NO. 15BPR.25  
BRUNSWICK COUNTY  
BRIDGE NO. 14

SHEET 1 OF 2

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

**GENERAL NOTES**

**REVISIONS**

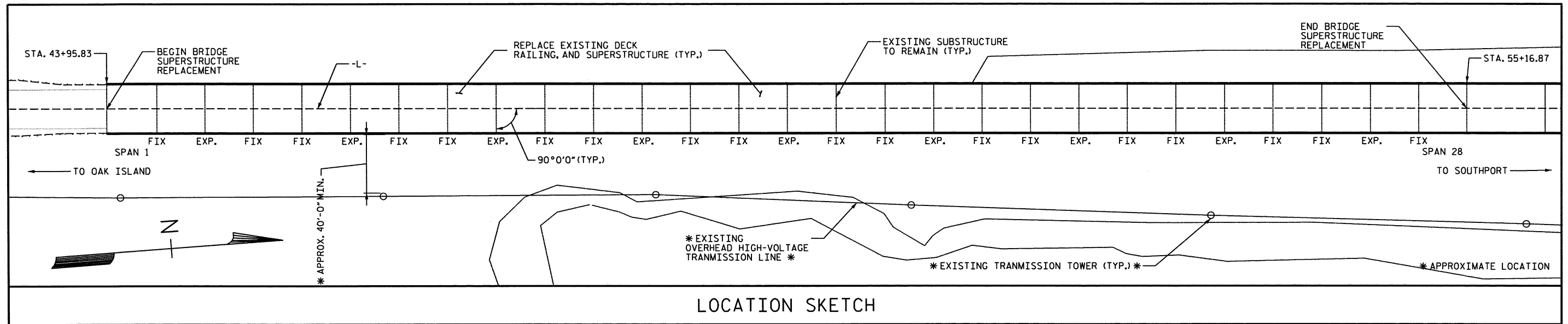
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| 1   |     |       | 3   |     |       | S-2A             |
| 2   |     |       | 4   |     |       | TOTAL SHEETS 111 |

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

**KCA** 4800 SIX FORKS ROAD SUITE 120  
KISINGER CAMPO & ASSOCIATES RALEIGH, NC 27609  
(919) 882-7839

DRAWN BY : JACOB H. DUKE DATE : 03-2018  
CHECKED BY : DIEGO A. AGUIRRE DATE : 03-2018  
DESIGN ENGINEER OF RECORD : SAMUEL L. CULLUM DATE : 03-2018





**NOTES:**

ASSUME LIVE LOAD = HL 93 OR ALTERNATE LOADING

FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE GENERAL NOTE SHEETS AND SHEET S-109.

THIS BRIDGE (NEW SUPERSTRUCTURE) HAS BEEN DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

THE BRIDGE (NEW SUPERSTRUCTURE) SHALL BE CONSTRUCTED USING TOP-DOWN CONSTRUCTION METHODS. THE USE OF A TEMPORARY CAUSEWAY OR WORK BRIDGE IS NOT PERMITTED.

REMOVAL OF EXISTING STRUCTURE AT STATION 43+95.83 TO 55+16.87 CONSISTS OF 28 SPANS (40'-0") WITH 16 PRECAST CONCRETE CORED SLABS PER SPAN, WITH AN ASPHALT WEARING SURFACE AND A CLEAR ROADWAY WIDTH OF 40'-0". THE STRUCTURE SHALL BE FULLY CLOSED FOR THE DURATION OF THE PARTIAL SUPERSTRUCTURE REPLACEMENT.

FOR ASBESTOS ASSESSMENT, SEE SPECIAL PROVISIONS.

REMOVAL OF THE EXISTING SUPERSTRUCTURE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL INTO ANY AREA BENEATH THE BRIDGE. THE CONTRACTOR SHALL REMOVE THE BRIDGE AND SUBMIT PLANS FOR DEMOLITION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

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

FOR BILL OF MATERIALS, SEE QUANTITY SHEETS.

NO KNOWN UTILITY CONFLICTS.

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.

FOR SECURING VESSELS, SEE SPECIAL PROVISIONS.

THIS BRIDGE IS IN SEISMIC ZONE 1.

ALL PAVEMENT MARKING WILL BE IN ACCORDANCE WITH THE TRANSPORTATION MANAGEMENT PLANS.

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

FOR ADHESIVELY ANCHORED RODS OR DOWELS, SEE ARTICLE 420-13 OF THE STANDARD SPECIFICATIONS.

FOR HYDRAULIC DATA AND OVERTOPPING FLOOD DATA, SEE ORIGINAL PLANS.

OOI-CAD PRESTRESSED CORED SLAB NOTES:

THE OLD OAK ISLAND ("OOI-CAD") PRESTRESSED UNIT IS A HYBRID MODIFIED SECTION DEVELOPED BY COMBINING ELEMENTS FROM NCDOT STANDARDS FOR THE 18", 21", AND TOP-DOWN CONSTRUCTION PRESTRESSED CONCRETE CORED SLABS. THE OOI-CAD SECTION'S DEPARTURES FROM STANDARDS, AS WELL AS ANALYSIS AND IMPLEMENTATION NOTES ARE PROVIDED BELOW:

MODIFIED DETAILS DESCRIPTION:

1. INTERIOR UNITS WILL BE CAST AT A DEPTH OF 20", BUT CAN USE ALREADY AVAILABLE 21" STANDARD FORMS.
2. EXTERIOR UNITS WILL BE CAST AT A DEPTH OF 18", BUT WITH ADDITIONAL WIDTH TO ACCOMMODATE A 2-BAR METAL RAIL AS SHOWN IN PLANS.
3. SHEAR KEYS CAN REMAIN IN THE SAME LOCATION AS THE 21" FORM, OR CAN HEIGHT ADJUST TO MATCH THE REVISED DEPTH.
4. TOP STEEL IN THE INTERIOR UNITS WILL BE SHIFTED DOWN TO MATCH THE 18" STANDARD SECTION HEIGHT FROM BOTTOM. THIS IS IN ORDER TO ACCOUNT FOR TOP OF UNIT GRINDING WHICH WILL BE PERFORMED TO PROVIDE APPROPRIATE CROSS SLOPE TO RECEIVE THE PROPOSED PPC OVERLAY.
5. BECAUSE OF THE LOWERED TOP STEEL, 10" Ø VOIDS WILL BE USED IN ALL SECTIONS. THESE MUST BE CENTERED AT 9" FROM THE BOTTOM OF THE CROSS SECTION FOR BOTH INTERIOR AND EXTERIOR UNITS.
6. NO ANCHOR DOWEL BLOCKOUTS WILL BE USED. EXISTING DOWELS WILL BE CUT AND LATERAL RESTRAINT WILL BE PROVIDED BY KEEPERS ON ENDS OF EACH BENT.
7. OOI CAD UNITS WILL USE GROUT AS SHOWN IN PLANS.
8. EACH SPAN WILL HAVE EXTRA TRANSVERSE POST-TENSIONING AS SHOWN IN THE PLANS. THIS WILL CONSIST OF DOUBLE TRANSVERSE POST-TENSIONING AT 1/4 POINTS ALONG EACH SPAN. THE HEIGHT OF THE TRANSVERSE POST-TENSIONING WILL BE AT 9 3/4" FROM BOTTOM OF SECTION.
9. BEARINGS MAY CONSIST OF STANDARD INDIVIDUAL PADS FOR EACH BEAM, OR A CONTINUOUS STRIP OF RUBBER OF THE SAME THICKNESS AND WIDTH.

PARTIAL STRUCTURES REMOVAL (REMOVAL OF EXISTING STRUCTURES AT STATION 43+95.83):

1. REMOVE THE EXISTING CORED SLAB SUPERSTRUCTURE WITH ASPHALT WEARING SURFACE (AWS), TRAFFIC RAILING, BEARINGS AND BEARING ANCHOR RODS IN SPANS 1-28 FROM STATION 43+95.83 TO STATION STA. 55+16.87 PER SECTION 402 OF THE STANDARD SPECIFICATIONS.
2. USE CRANE MATTING TO PROTECT ALL BEAM AND DECK SURFACES.
3. SUBMIT REMOVAL AND REPLACEMENT PLAN PRIOR TO BEGINNING WORK. THE PLAN SHALL INCLUDE THE FOLLOW MINIMUM ITEMS:

PHASING AND SCHEDULE FOR REMOVAL AND REPLACEMENT  
 CRANE SIZE AND TYPE  
 CRANE MATTING  
 PROTECTION OF EXISTING STRUCTURE PLAN INCLUDING SAFE LOADING ON EXISTING/PROPOSED SPANS  
 DISPOSAL PLAN  
 PROPOSED TRUCK ROUTE(S)  
 METHODS OF REMOVAL

4. REMOVE EXISTING TRANSVERSE POST-TENSIONING, LOOSEN SHEAR KEYS AND OTHERWISE SEPARATE CORED SLABS AS NECESSARY TO FACILITATE REMOVAL.
5. DISPOSE OF EXISTING AWS, CORED SLABS, AND OTHER SUPERSTRUCTURE MATERIALS LEGALLY OFF-SITE PER THE STANDARD SPECIFICATIONS.
6. REMOVE EXISTING BEARINGS
7. CUT AND GRIND EXISTING ANCHOR DOWELS FLUSH WITH THE TOP OF THE BENT CAPS.
8. COVER CUT DOWELS WITH EPOXY PAINT.
9. CLEAN CAPS OF DEBRIS AND ENSURE FLAT/SMOOTH BEARING SURFACE ON TOP OF BENT CAP.

OOI-CAD PRESTRESSED CORED SLABS, CONTINUED:

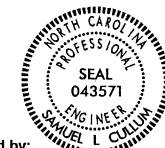
ANALYSIS & IMPLEMENTATION DETAILS:

1. THE UNIT WAS DESIGNED PER CURRENT SPECIFICATIONS FOR HL-93 LIVE LOAD AND APPROPRIATE DEAD LOAD.
2. IN ORDER TO FACILITATE TOP-DOWN CONSTRUCTION, THE PROPOSED SECTIONS, AS WELL AS EXISTING GIRDER SPAN SECTIONS (SPANS 29-31) WERE CHECKED FOR A MANITOWOC 222 CRANE TO SIMULATE STRESSES PROVIDED BY CRANE UNIT DURING CONSTRUCTION. THE CRANE ANALYSIS WAS PERFORMED ASSUMING TRANSVERSE POST-TENSIONING AND GROUT HAS BEEN INSTALLED IN EACH SPAN.
3. IF THE CONTRACTOR WISH TO PLACE CRANES ON THE EXISTING 17" PRESTRESSED CONCRETE CORED SLAB UNIT SPANS, THEY MUST DEMONSTRATE THAT THE UTILIZED CRANE CAN BE SAFELY CARRIED BY THE STRUCTURE.
4. THE CONTRACTOR IS RESPONSIBLE FOR LIMITING CRANE SIZE AND CONSTRUCTION LOADING TO ENSURE SAFE CARRYING CAPACITY FOR ALL ACTIVITIES ON ALL SPANS.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF ALL SPANS DURING ALL PHASES OF CONSTRUCTION, AND MUST SUBMIT WORKING DRAWINGS SHOWING THE SAFETY OF ALL EQUIPMENT AND CONSTRUCTION LIVE LOADS AND DEAD LOADS ON THE BRIDGE.

MEASUREMENT AND PAYMENT:

1. MEASUREMENT AND PAYMENT FOR OOI-CAD SECTIONS WILL BE IN ACCORDANCE WITH THE SPECIAL PROVISION FOR OOI-CAD PRESTRESSED CONCRETE CORED SLABS. THE PAY ITEM USED WILL BE  
 3'-0" x 1'-8" PRESTRESSED CONC CORED SLABS (LF)  
 3'-2" x 1'-6" PRESTRESSED CONC CORED SLABS (LF)
2. WORK OOI-CAD PRESTRESSED CONCRETE CORED SLABS WITH STANDARD SPECIFICATIONS SECTION 1078 FOR PRESTRESSED CONCRETE MEMBERS.

PROJECT NO. 15BPR.25  
BRUNSWICK COUNTY  
 BRIDGE NO. 14



DocuSigned by:  
 Samuel Cullum  
 5/2/2018  
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|--|-----|-------|-----|-----|-------|
| STATE OF NORTH CAROLINA<br>DEPARTMENT OF TRANSPORTATION<br>RALEIGH |     |       |     |     |       |
| GENERAL DRAWING<br>FOR SUPERSTRUCTURE<br>REPLACEMENT               |     |       |     |     |       |
| REVISIONS  |     |       |     |     |       |
| NO.  | BY: | DATE: | NO. | BY: | DATE: |
| 1  |     |       | 3   |     |       |
| 2  |     |       | 4   |     |       |
| SHEET NO.  |     |       |     |     | S-4   |
| TOTAL SHEETS   |     |       |     |     | 111   |

**KCA** 4800 SIX FORKS ROAD SUITE 120  
 KISINGER CAMPO & ASSOCIATES RALEIGH, NC 27609  
 (919) 882-7839

DRAWN BY : JACOB H. DUKE DATE : 03-2018  
 CHECKED BY : DIEGO A. AGUIRRE DATE : 03-2018  
 DESIGN ENGINEER OF RECORD : SAMUEL L. CULLUM DATE : 03-2018