



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J. ERIC BOYETTE  
SECRETARY

April 12, 2021

**Addendum No. 2**

RE: Contract # C204499

WBS # 36599.3.1

STATE FUNDED

**Guilford County (R-4707)**

INTERCHANGE OF US-29 AND SR-4771 (REEDY FORK PARKWAY)

**April 20, 2021 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 Structure plans.

Sheet No.	Revision
C1-01	Language added to the General Note "Undercut any soft..." to clarify how contingency quantities for foundation conditioning material and undercutting shall be paid.
C1-01	Language added to the General Note "Install type V geotextile..." to clarify how type V geotextile shall be paid.

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

The following revisions have been made to the proposal:

Page No.	Revisions
Proposal Cover	Note added that reads "Includes Addendum No. 2 Dated 04-12-2021"
ST- 38	Revised Unit Project Special Provision entitled <b>CONCRETE REPAIRS</b> , revised "Description" paragraph to add "Any cleaning and removal of trash and debris required to complete concrete repair work shall be considered incidental".

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](http://www.ncdot.gov)

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

The contract will be prepared accordingly.

Sincerely,

DocuSigned by:

Ronald E. Davenport, Jr.

F81B6038A47A442...

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

RED/cms  
Attachments

cc:    Mr. Lamar Sylvester, PE                      Mr. Ray Arnold, PE  
       Mr. Wright R. Archer, III, PE            Ms. Jaci Kincaid  
       Mr. Boyd Tharrington, PE                Ms. Lori Strickland  
       Mr. Jon Weathersbee, PE                  Mr. Mike Gwyn  
       Mr. Ken Kennedy, PE                      Ms. Penny Higgins  
       Project File (2)                              Mr. Kyle Kempf

Project R-4707

**ST-38**

Guilford County

**CONCRETE REPAIRS****(2-11-19)****DESCRIPTION**

Work includes removal of concrete in spalled, delaminated and/or cracked areas of the existing bent caps, bent columns, underside of bridge decks, deck slabs, girders, and bridge rails in reasonably close conformity with the lines, depth, and details shown on the plans, described herein and as established by the Engineer. This work also includes straightening, cleaning, and replacement of reinforcing steel, doweling new reinforcing steel, removing all loose materials, removing and disposing of debris, formwork, applying repair material, and protecting adjacent areas of the bridge and environment from material leakage. Any cleaning and removal of trash and debris required to complete concrete repair work shall be considered incidental. The repair material shall be one of the materials described in this Special Provision, unless otherwise noted in the plans or special provisions.

The location and extent of repairs shown on the plans described herein are general in nature. The Engineer shall determine the extent of removal in the field based on an evaluation of the condition of the exposed surfaces. The Contractor shall coordinate removal operations with the Engineer. No more than 30% of a round or square column or 30% of the bearing area under a beam shall be removed without a temporary support system and approval from the Engineer.

Repair, to the Engineer's satisfaction, any portion of the structure that is damaged from construction operations. No extra payment is provided for these repairs.

**SURFACE PREPARATION**

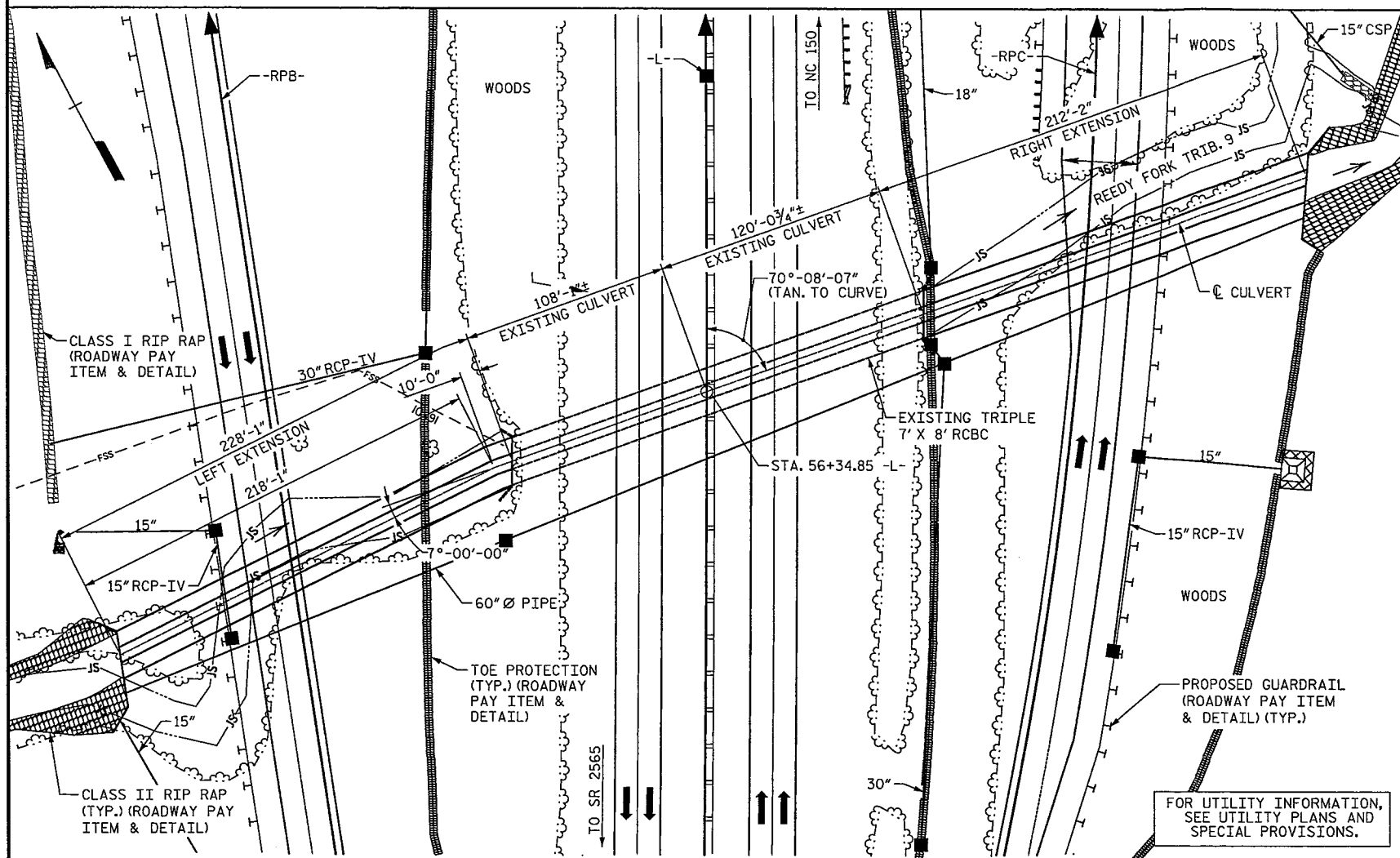
Adhere to the following surface preparation requirements or the repair material manufacturer's requirements, whichever is more stringent.

Prior to starting the repair operation, delineate all surfaces and areas assumed to be deteriorated by visually examining and sounding the concrete surface with a hammer or other approved method. The Engineer is the sole judge in determining the limits of deterioration.

Prior to concrete removal, introduce a shallow saw cut, 1/2" in depth, around the repair area at right angles to the concrete surface. Sawcut should be located a minimum 2" beyond the perimeter of the deteriorated concrete area to be repaired. Remove all concrete within the sawcut to a minimum depth of 1/2". If concrete removal exposes reinforcing steel, remove all deteriorated concrete 1" below the reinforcing steel with a 17 lb (maximum) pneumatic hammer, with points that do not exceed the width of the shank, or with hand picks or chisels, as directed by the Engineer. Do not cut or remove the existing reinforcing steel. Unless specifically directed by the Engineer, do not remove concrete deeper than 1" below the reinforcing steel.

Abrasive blast all exposed concrete surfaces and existing reinforcing steel in repair areas to remove all debris, loose concrete, loose mortar, rust, scale, etc. After blasting, examine the reinforcing steel to ensure at least 90% of the original diameter remains. If there is more than 10% reduction in the rebar diameter, splice in and securely tie supplemental reinforcing bars as directed by the Engineer. This might require additional removal of concrete, in order to achieve an appropriate splice length of the reinforcing steel.

BM #3: R/R SPIKE IN 32" Ø GUM TREE, 162.15' RT OF STA. 48+52.28 -L-, EL. 747.31



LOCATION SKETCH

HYDRAULIC DATA

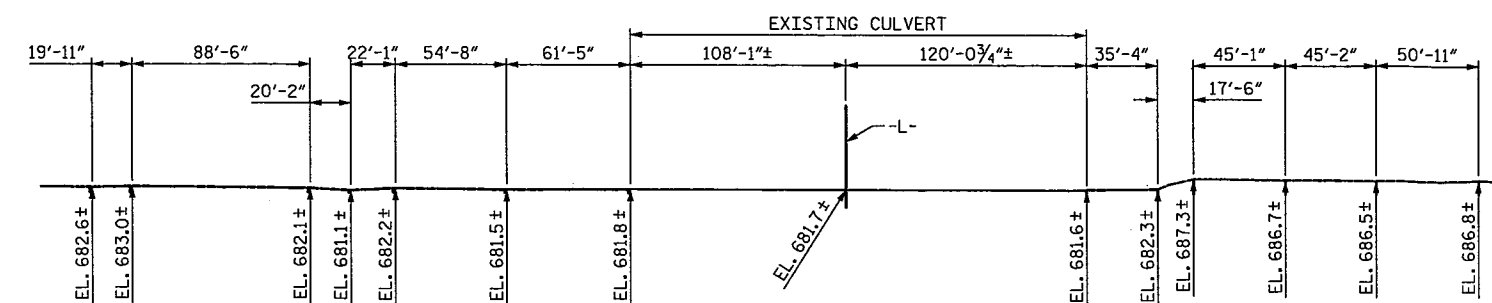
DESIGN DISCHARGE = 1,700 C.F.S.  
 FREQUENCY OF DESIGN FLOOD = 50 YRS.  
 DESIGN HIGH WATER ELEVATION = 691.4'  
 DRAINAGE AREA = 3.16 SQ. MI.  
 BASE DISCHARGE (Q100) = 2,100 C.F.S.  
 BASE HIGH WATER ELEVATION = 695.1

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE = 3,870 C.F.S.  
 FREQUENCY OF OVERTOPPING FLOOD = 500+ YRS.  
 OVERTOPPING FLOOD ELEVATION = 720.2'

ROADWAY DATA

G.P. ELEV. @ STA. 56+34.85 -L- (-L- SB) = 719.37  
 BED ELEV. @ STA. 56+34.85 -L- = 681.7  
 ROADWAY FILL SLOPES = 2:1



PROFILE ALONG CULVERT

NOTES

ASSUMED LIVE LOAD ----- HL-93 OR ALTERNATE LOADING.  
 MAX. DESIGN FILL (RIGHT EXTENSION) ----- 36.90 FT.  
 MAX. DESIGN FILL (LEFT EXTENSION) ----- 30.22 FT.  
 FOR OTHER DESIGN DATA AND NOTES SEE STANDARD NOTE SHEET.  
 3" Ø WEEP HOLES INDICATED TO BE IN ACCORDANCE WITH THE SPECIFICATIONS.  
 CONCRETE IN CULVERT EXTENSIONS TO BE POURED IN THE FOLLOWING ORDER:  
 PHASE I:  
 1. WING FOOTINGS AND FLOOR SLAB INCLUDING 4" OF ALL VERTICAL WALLS.  
 PHASE II:  
 3. FLOOR SLAB INCLUDING 4" OF VERTICAL WALL.  
 4. THE REMAINING PORTION OF PHASE II WALL FULL HEIGHT FOLLOWED BY ROOF SLAB AND HEADWALL.  
 CONCRETE IN 60" Ø PIPE WINGS, FOOTINGS, AND HEADWALL SHALL BE POURED IN THE FOLLOWING ORDER:  
 1. WINGS AND HEADWALL FOOTING UP TO CONSTRUCTION JOINT.  
 2. REMAINING PORTION OF WINGS AND HEADWALL FULL HEIGHT.  
 THE RESIDENT ENGINEER SHALL CHECK THE LENGTH OF CULVERT BEFORE STAKING IT OUT TO MAKE CERTAIN THAT IT WILL PROPERLY TAKE CARE OF THE FILL.  
 DIMENSIONS FOR WING LAYOUT AS WELL AS ADDITIONAL REINFORCING STEEL EMBEDDED IN BARREL ARE SHOWN ON WING SHEET.  
 DOWELS SHALL BE USED TO CONNECT THE CULVERT EXTENSION TO THE EXISTING CULVERT AS SHOWN, FOR NOTE REGARDING SETTING OF DOWELS, SEE SHEET SN.  
 IF APPROVED BY THE ENGINEER, THE CONTRACTOR MAY USE THE EXISTING WINGS AS TEMPORARY SHORING FOR THE CONSTRUCTION OF THE CULVERT EXTENSIONS. IN THIS CASE, THE BOTTOM SLAB OF THE EXTENSION SHALL BE POURED AT LEAST 72 HOURS PRIOR TO CUTTING THE WINGS. THE WINGS MAY BE CUT EARLIER PROVIDED THE SLAB CONCRETE STRENGTH HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 1500 PSI.

TRANSVERSE CONSTRUCTION JOINTS SHALL BE USED IN THE BARREL, SPACED TO LIMIT THE POURS TO A MAXIMUM OF 70 FT. LOCATION OF JOINTS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.  
 A 3 FOOT STRIP OF FILTER FABRIC SHALL BE ATTACHED TO THE FILL FACE OF THE WING COVERING THE ENTIRE LENGTH OF THE EXPANSION JOINT.  
 AT THE CONTRACTOR'S OPTION, HE MAY SPLICE THE VERTICAL REINFORCING STEEL IN THE INTERIOR FACE OF EXTERIOR WALLS AND BOTH FACES OF INTERIOR WALLS ABOVE LOWER WALL CONSTRUCTION JOINT. THE SPLICE LENGTH SHALL BE AS PROVIDED IN THE SPLICE LENGTH CHART SHOWN ON THE PLANS. EXTRA WEIGHT OF STEEL DUE TO THE SPLICES SHALL BE PAID FOR BY THE CONTRACTOR.  
 EXCAVATE A MINIMUM OF 1 FOOT BELOW CULVERT BEARING ELEVATION AND REPLACE WITH FOUNDATION CONDITIONING MATERIAL PER SECTION 414 OF THE STANDARD SPECIFICATIONS.  
 UNDERCUT ANY SOFT/LOOSE ALLUVIAL SOILS THAT MAY BE ENCOUNTERED BENEATH THE BOTTOM OF THE FOUNDATION CONDITIONING MATERIAL. BACKFILL UNDERCUT AREAS WITH FOUNDATION CONDITIONING MATERIAL (SELECT MATERIAL CLASS VI; NO. 57 STONE). INCLUDE 200 CUBIC YARDS OF UNDERCUT AND 300 TONS OF FOUNDATION CONDITIONING MATERIAL AS CONTINGENCY ITEMS IN THE CONTRACT FOR LEFT CULVERT EXTENSION AND 185 CUBIC YARDS OF UNDERCUT AND 275 TONS OF FOUNDATION CONDITIONING MATERIAL FOR RIGHT CULVERT EXTENSION. THE COST OF THE CONTINGENCY QUANTITY OF FOUNDATION CONDITIONING MATERIAL SHALL BE PAID FOR AT THE CONTRACT UNIT BID PRICE. THE COST OF THE CONTINGENCY UNDERCUT SHALL BE CONSIDERED INCIDENTAL TO THE CULVERT EXCAVATION LUMP SUM.  
 INSTALL TYPE V GEOTEXTILE AT THE BOTTOM OF EXCAVATION PRIOR TO PLACING FOUNDATION CONDITIONING MATERIAL. THE GEOTEXTILE SHOULD BE PLACED AT THE BOTTOM OF THE EXCAVATION AND WRAPPED UP THE SIDE WALLS OF THE EXCAVATION. INCLUDE 1,200 SQ. YDS. OF TYPE V GEOTEXTILE IN THE CONTRACT FOR LEFT CULVERT EXTENSION AND 1,100 SQ. YDS FOR RIGHT CULVERT EXTENSION. THE COST OF TYPE V GEOTEXTILE SHALL BE CONSIDERED INCIDENTAL TO FOUNDATION CONDITIONING MATERIAL.  
 FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.  
 FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.  
 FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.  
 FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

NO PRECAST REINFORCED BOX CULVERT OPTION WILL BE ALLOWED.  
 FOR CULVERT DIVERSION DETAILS AND PAY ITEMS, SEE EROSION CONTROL PLANS.  
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.  
 FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.  
 FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

I HEREBY CERTIFY THESE PLANS ARE THE AS-BUILT PLANS

TOTAL STRUCTURE QUANTITIES		
CULVERT EXCAVATION		LUMP SUM
FOUNDATION COND. MAT'L		
LEFT EXTENSION	451	TONS
RIGHT EXTENSION	419	TONS
TOTAL	870	TONS
CLASS A CONCRETE		
LEFT EXTENSION	853.2	C.Y.
RIGHT EXTENSION	877.9	C.Y.
TOTAL	1,731.1	C.Y.
REINFORCING STEEL		
LEFT EXTENSION	102,286	LBS.
RIGHT EXTENSION	96,215	LBS.
TOTAL	198,501	LBS.
CONCRETE REPAIRS	1.2	CU. FT.
SHOTCRETE REPAIRS	11.5	CU. FT.
EPOXY RESIN INJECTION	420.0	LIN. FT.

**Mead & Hunt**

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 Raleigh, NC 27601  
 919-714-8670  
 meadhunt.com  
 NC License No. F-1235



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT NO. R-4707  
GUILFORD COUNTY  
 STATION: 56+34.85 -L-

EXTENDS CULVERT NO. 355

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
TRIPLE 7 FT. x 8 FT. CONCRETE BOX CULVERT LEFT EXTENSION AND RIGHT EXTENSION WITH 60" Ø PIPE					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					C1-01
					TOTAL SHEETS 24

DRAWN BY: J.S. HOBSON DATE: 04/12/19  
 CHECKED BY: J.A. LEE DATE: 04/24/19  
 DESIGN ENGINEER OF RECORD: J.S. HOBSON DATE: 04/26/19