



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

April 09, 2019

Addendum No. 1

RE: Contract # C204244

WBS # 53061.3.GV1

F. A. # NHPP-0085(019)

Rowan County (I-5858)

I-85 FROM US-29/601 IN CHINA GROVE TO US-601 IN SALISBURY &
FROM S OF US-52 IN SALISBURY TO N OF SR-2120 IN SPENCER.

April 16, 2019 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.	Revision
1 (Title Sheet)	Revised to correct State Project number
1A	Revised to add SHEET NUMBER 2B-1 14" PCCP Slab Repair Detail
2A-1	Revised to clarify existing pavement depths
New Sheet 2B-1	Added sheet entitled SLAB REPAIR DETAIL FOR 14" PORTLAND CEMENT CONCRETE PAVEMENT

Please void the above listed existing Sheets in your plans and staple the revised Sheets thereto. Please staple new Sheet 2B-1 after existing Sheet 2C-1 in your plans.

The following revisions have been made to the proposal:

Page No.	Revisions
Proposal Cover	Note added that reads "Includes Addendum No. 1 Dated 04-09-2019"
Table of Contents	Revised to add Project Special Provision AWARD OF CONTRACT
G-4	Revised to add special provision entitled AWARD OF CONTRACT
R-5 thru R-10, New sheets R-11 and R-12	Revised project special provision entitled DIAMOND GRINDING CONCRETE PAVEMENT and added project special provision entitled JOINT CONSTRUCTION, REPAIR AND SEALING.

Please void the above listed existing Pages in your proposal and staple the revised Pages thereto. Staple new Pages R-11 and R-12 after revised Page R-10 in your proposal.

On the item sheets the following pay items revisions have been made:

<u>Item</u>	<u>Description</u>	<u>Old Quantity</u>	<u>New Quantity</u>
0014-1575000000-E-620	Asphalt Binder for Plant Mix	885 TON	890 TON
0083-1671000000-E-652	Permeable Asphalt Drainage Course, Type P-78M	New Item	145 TON
0084-1881000000-E-SP	Joint Construction, Repair and Seal	New Item	920,700 LF

The Contractor's bid must include these pay item revisions and additions.

The electronic bidding file has been updated to reflect these revisions. Please download the 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:

Ronald E. Davenport, Jr.

F81B6038A47A442...

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

RED/jjr
Attachments

cc: Mr. Lamar Sylvester, PE
Mr. Pat Ivey, PE
Mr. Ron Hancock, PE
Mr. Jon Weathersbee, PE
Mr. Ken Kennedy, PE
Ms. Lori Strickland
Project File (2)

Mr. Ray Arnold, PE
Mr. Jamie Lancaster, PE
Ms. Jaci Kincaid
Mr. Mike Gwyn
Mr. Mitchell Dixon
Ms. Penny Higgins

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

PROPOSAL

INCLUDES ADDENDUM No.1 DATED 04-09-2019

DATE AND TIME OF BID OPENING: **APRIL 16, 2019 AT 2:00 PM**

CONTRACT ID C204244
WBS 53061.3.GV1

FEDERAL-AID NO. NHPP-0085(019)
COUNTY ROWAN
T.I.P. NO. I-5858
MILES 10.888
ROUTE NO. I 85
LOCATION I-85 FROM US-29/601 IN CHINA GROVE TO US-601 IN SALISBURY &
FROM S OF US-52 IN SALISBURY TO N OF SR-2120 IN SPENCER.

TYPE OF WORK PAVEMENT REHABILITATION 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 ROADWAY PROPOSAL

5% BID BOND OR BID DEPOSIT REQUIRED

TABLE OF CONTENTS**COVER SHEET
PROPOSAL SHEET****PROJECT SPECIAL PROVISIONS**

CONTRACT TIME AND LIQUIDATED DAMAGES:	G-1
INTERMEDIATE CONTRACT TIME NUMBER 1 AND LIQUIDATED DAMAGES:	G-1
INTERMEDIATE CONTRACT TIME NUMBER 2 AND LIQUIDATED DAMAGES:	G-2
INTERMEDIATE CONTRACT TIME NUMBER 3 AND LIQUIDATED DAMAGES:	G-3
INTERMEDIATE CONTRACT TIME NUMBER 4 AND LIQUIDATED DAMAGES:	G-3
INTERMEDIATE CONTRACT TIME NUMBER 5 AND LIQUIDATED DAMAGES:	G-4
INTERMEDIATE CONTRACT TIME NUMBER 6 AND LIQUIDATED DAMAGES:	G-4
AWARD OF CONTRACT:.....	G-4
MAJOR CONTRACT ITEMS:	G-4
SPECIALTY ITEMS:.....	G-5
FUEL PRICE ADJUSTMENT:.....	G-5
SCHEDULE OF ESTIMATED COMPLETION PROGRESS:.....	G-6
DISADVANTAGED BUSINESS ENTERPRISE:	G-6
CERTIFICATION FOR FEDERAL-AID CONTRACTS:	G-19
CONTRACTOR'S LICENSE REQUIREMENTS:.....	G-20
U.S. DEPARTMENT OF TRANSPORTATION HOTLINE:	G-20
CARGO PREFERENCE ACT:	G-21
PORTABLE CONCRETE BARRIER - (Partial Payments for Materials):.....	G-21
REMOVABLE PAVEMENT MARKINGS - (Partial Payments for Materials):.....	G-21
MAINTENANCE OF THE PROJECT:	G-22
COOPERATION BETWEEN CONTRACTORS:.....	G-22
ELECTRONIC BIDDING:.....	G-23
TWELVE MONTH GUARANTEE:.....	G-23
EROSION AND SEDIMENT CONTROL/STORMWATER CERTIFICATION:	G-24
 ROADWAY.....	 R-1

STANDARD SPECIAL PROVISIONS

AVAILABILITY FUNDS – TERMINATION OF CONTRACTS	SSP-1
NCDOT GENERAL SEED SPECIFICATION FOR SEED QUALITY	SSP-2
ERRATA.....	SSP-5
PLANT AND PEST QUARANTINES	SSP-6
TITLE VI AND NONDISCRIMINATION	SSP-7
MINORITY AND FEMALE EMPLOYMENT REQUIREMENTS	SSP-15
REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONST. CONTRACTS	SSP-18
ON-THE-JOB TRAINING	SSP-27
MINIMUM WAGES	SSP-30

UNIT PROJECT SPECIAL PROVISIONS

TRAFFIC CONTROL	TC-1
EROSION CONTROL	EC-1

INTERMEDIATE CONTRACT TIME NUMBER 5 AND LIQUIDATED DAMAGES:

(2-20-07) (Rev. 6-18-13)

108

SP1 G14 F

The Contractor shall complete the work required of **Slab Repairs-Step #3 thru Slab Repairs-Step #4 at each work location** as shown on **Sheet TMP-3 and Sheets TMP-6 thru TMP-9**, and shall place and maintain traffic on same.

The time of availability for **each independent** intermediate contract time is either the **Sunday at 10:00 P.M.** or **Monday at 10:00 P.M.** that the Contractor elects to begin the work.

The completion time for **each independent** intermediate contract time is the time which is **eighty (80)** consecutive hours after the time of availability.

The liquidated damages are **Two thousand Five Hundred Dollars (\$ 2,500.00)** per fifteen (15) minute time period. **The liquidated damages associated with Day and Time Restrictions, described in Intermediate Contract Time Number 2, will not apply to this work.**

INTERMEDIATE CONTRACT TIME NUMBER 6 AND LIQUIDATED DAMAGES:

(2-20-07) (Rev. 6-18-13)

108

SP1 G14 F

The Contractor shall complete the work required of **Drainage Improvements-Step #1 thru Drainage Improvements-Step #2 at each work location** as shown on **Sheet TMP-3 and Sheet TMP-5**, and shall place and maintain traffic on same.

The time of availability for **each independent** intermediate contract time is the **Friday at 10:00 P.M.** that the Contractor elects to begin the work.

The completion time for **each independent** intermediate contract time is the following **Monday at 6:00 A.M.** after the time of availability.

The liquidated damages are **One Thousand Two Hundred Fifty Dollars (\$ 1,250.00)** per fifteen (15) minute time period.

AWARD OF CONTRACT:

Revise the 2018 *Standard Specifications* as follows:

Page 1-23, Subarticle 103-4 (A) General, first paragraph, replace the 3rd and 4th sentences with the following:

Where award is to be made, the notice of award will be issued within 60 days after the opening of bids or upon issuance of any necessary debt instrument, whichever is later, but not to exceed 120 days; except with the consent of the lowest responsible bidder the decision to award the contract to such bidder may be delayed for as long a time as may be agreed upon by the Department and such bidder. In the absence of such agreement, the lowest responsible bidder may withdraw his bid at the expiration of 120 days without penalty if no notice of award has been issued.

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
17	Patching Concrete Pavement Spalls
18	Diamond Grinding PCC Pavement

UBWC	100 / 85	45	45	10
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A. Requirements apply to the design aggregate blend.

B. 95 / 90 denotes that 95% of the coarse aggregate has one fractured face and 90% has 2 or more fractured faces.

DIAMOND GRINDING CONCRETE PAVEMENT:

(4-15-08) (Rev 08-16-16)

SPI 7-9

Description

Perform the work covered by this provision including but not limited to diamond grinding and regrinding concrete pavement to meet final surface acceptable smoothness requirements detailed in Article 710-7, selecting diamond tipped saw blades and configuration of cutting head; continual removal of residual slurry from pavement and disposal; furnishing all labor, materials, supplies, tools, equipment and incidentals as necessary. Perform this work at locations indicated in the plans or as directed by the Engineer.

Prior to beginning any diamond grinding operations, schedule a pre-grind meeting with grinding subcontractor, Division Construction Engineer, Project Engineer, Area Roadway Engineer, State Pavement Construction Engineer, representatives from the Roadside Environmental Unit and the Materials and Tests Unit.

Equipment

Use equipment with diamond tipped saw blades gang mounted on a power driven self-propelled machine with a minimum wheel base length of 15 feet that is specifically designed to smooth and texture Portland Cement Concrete pavement. Utilize equipment that does not cause raveling; aggregate fracture; spalls or disturbance to the longitudinal or transverse joints; or damage and/or strain to the underlying surface of the pavement. Should any of the above problems occur immediately suspend operations.

Provide a minimum 3 feet wide grinding head with 50 to 60 evenly spaced grooves per foot. Prior to designing the grinding head, evaluate the aggregate hardness of the concrete pavement and select the appropriate diamond size, diamond concentration and bond hardness for the individual saw blades.

Provide vacuuming equipment to continuously remove slurry residue and excess water from the pavement as part of the grinding operation. Do not allow the slurry material to flow into a travel lane occupied by traffic or into any drainage facility.

Method of Construction

Grind the pavement surface to a uniform appearance with a high skid resistant longitudinal corduroy type texture. Provide grooves between 0.09 and 0.15 inches wide with the land area between the grooves between 0.06 and 0.13 inches wide. Ensure a ridge peak of approximately 0.0625 inches higher than the bottom of the grooves.

Begin and end diamond grinding at lines normal to the pavement centerline. Grind only in the longitudinal direction. All grooves and adjacent passes shall be parallel to each other with no variation. Completely lap adjacent passes with no unground surface remaining between passes and no overlap of more than 1½ inches. Adjacent passes shall be within 1/8 inch of the same height as measured with a 3 foot straightedge. Maintain positive cross-slope drainage for the duration of the grinding operation.

Grind all travel lanes to include auxiliary lanes, ramps and loops with not less than 98 percent of the specified surface being textured by grinding. Grinding of the bridge decks and concrete shoulders will not be required. Remove a minimum 0.0625 inches at all locations except dips. Extra grinding to eliminate minor depressions is not required. It is anticipated that extra grinding will be required on the high side of existing faults in the pavement. There shall be no ridge between lanes. In a separate operation, transition the grinding of any remaining ridges greater than 1/8 inch in height on the outside edge next to the shoulder or at a tie to an existing facility to the satisfaction of the Engineer.

Final surface testing is required on this project in accordance with Article 710-7 of the *2018 Standard Specifications*.

Disposal of Residual Slurry

Diamond grinding slurry disposal shall be in accordance with the Statewide Permit for Land Application of Diamond Grinding Slurry (DGS), Permit No. WQ0035749 dated June 3, 2014. Submit a slurry disposal plan to the Engineer detailing method of handling and disposing of slurry from the diamond grinding operation a minimum of 60 days prior to beginning the diamond grinding operation. Engineer shall review the slurry disposal plan. Plan must be accepted prior to beginning the diamond grinding operation.

Disposal options are:

- (A) Land apply slurry directly from diamond grinding machine within the DOT right-of-way in the median, shoulders and slopes.
- (B) Collect, contain, haul, and land apply slurry within DOT right-of-way as directed by the Engineer and a representative from the Roadside Environmental Unit. Contractor shall disperse slurry through an operation that spreads slurry within allowable agronomic rates in an interchange or designated area.

If the above options for disposal of slurry do not qualify as acceptable methods as determined by the Department, then the Contractor will be compensated under Article 104-7 for any other disposal methods required by the Department.

To prevent the migration of any direct discharge from the diamond grinding machine or land applied DGS from entering a drainage inlet or structure, the contractor shall install wattles and silt fence at the direction of the Engineer. Silt Fence shall be installed in accordance with Section 1605 of the NCDOT *2018 Standard Specifications*.

For more detailed information, see the Environmental Permits and Guidelines section under Environmental resources on the NC Connect website for the DG permit and guidelines at the following link. (NCID access required.)

<https://connect.ncdot.gov/resources/Environmental/Environmental%20Permits%20and%20Guidelines/Forms/AllItems.aspx>

Measurement and Payment

The quantity of *Diamond Grinding PCC Pavement* to be paid for will be the actual number of square yards of pavement which has been satisfactorily diamond ground, measured along the final top surface of the pavement. No separate payment will be made for any overlapping, regrinding, or for extra grinding on the high side of existing faults.

Payment will be full compensation for the work, including but is not limited to grinding, disposal of slurry, final surface testing, furnishing all materials, equipment, labor and all incidentals necessary to satisfactorily complete the work.

Temporary Silt Fence will be measured and paid in linear feet, accepted in place, along the ground line of the fence.

Wattle will be measured and paid for by the actual number of linear feet of wattles which are installed and accepted. Such price and payment will be full compensation for all work covered by this section, including, but not limited to, furnishing all materials, labor, equipment and incidentals necessary to install the *Wattle*.

Payment will be made under:

Pay Item	Pay Unit
Diamond Grinding PCC Pavement	Square Yard
Temporary Silt Fence	Linear Foot
Wattle	Linear Foot

JOINT CONSTRUCTION, REPAIR AND SEALING:

(4-15-08) (Rev 3-20-18)

SPI 7-12A

Description

Saw existing backer rods joints, saw existing sawed joints, remove existing deteriorated backer rods and clean and seal joints with Low Modulus Silicone in accordance with the detail in the plans and the manufacturer's recommendations. Also, repair and reseal existing joints with Low Modulus Silicone, form joints in slab replacements and seal with Low Modulus Silicone in accordance with Standard Drawing No. 700.01.

Materials

Low Modulus Silicone Sealant shall meet the requirements of Section 1028-3(A) of the *Standard Specifications* for Low Modulus Silicone Sealant; and shall be on the Department's approved product listing that is being evaluated by National Transportation Product Evaluation Program (NTPEP).

Construction

Have on-site, a manufacture's representative during the initial start-up. This requirement will be suspended once the Engineer determines that the installation process is working smoothly.

Saw and seal pavement joints, and form control joints in one lane at a time.

Saw and seal joints at locations shown on the plans or as directed by the Engineer.

Saw and seal the centerline longitudinal joint according to Standard Drawing No. 700.01.

Form control joints in the proposed replacement slabs according to the spacing and dimensions as shown on the plans. Form the control joints by sawing with an approved concrete saw. Saw as

soon as the concrete has hardened sufficiently without spalling or raveling, but before the lane is reopened to traffic, and not more than 6 hours after the concrete is placed.

Equip air compressors for cleaning joints with suitable traps capable of removing all surplus water and oil in the compressed air. The Engineer will check the compressed air daily for contamination. Do not use contaminated air.

Cleaning and sealing shall be as follows:

(A) Cleaning Freshly Cut Sawed Joints

Immediately after sawing the joint, completely remove the resulting slurry from the joint and the immediate area by flushing with a jet of water under pressure, and other tools as necessary. After flushing, blow out the joint with compressed air. After the surfaces are thoroughly clean and dry and just before the joint sealer is placed, blow out the joint with compressed air having a pressure of at least 90 psi and remove all traces of dust. If freshly cut sawed joints become contaminated before they are sealed, clean as many times as necessary with cleaning methods approved by the Engineer.

(B) Installing Backup Material

When required, install closed cell, expanded polyethylene foam rod type backup material in a manner that will produce the shape factor specified. If the sealant bonds to the backup material, a bond-breaking type may be required.

(C) Taping Expansion Joints

When the joints have been cleaned and are thoroughly dry, place bond-breaking adhesive tape on top of the joint material or backup material to prevent any bonding action between the bottom of the joint sealer and the top of underlying material. The tape shall completely cover the top of the underlying material, but at no place shall the tape be allowed to adhere to the sides of the joint.

(D) Sealing Joints Requirements

- (1) Place joint sealer in accordance with the manufacturer's recommendations and these Specifications. Do not place silicone joint sealer when the air temperature near the joint is less than 50°F or is 50°F and falling or between October 15 and May 1, unless otherwise directed by the Engineer.
- (2) Filling the Joint: Do not seal a joint until the seal is thoroughly clean and dry, and properly taped, if taping is required. Place the sealer in reasonably close conformity with dimensions shown on the plans. The joints will be rejected for any unreasonable deviation until satisfactory corrective measures are taken.

Apply the joint sealer by an approved mechanical device or by manually pouring or troweling, depending upon the consistency used. When applied mechanically or by pouring, a nozzle or pouring spout shall be shaped to fit inside the joint to introduce

the sealer from inside the joint. Pouring consistency shall be used in horizontal joints, and troweling consistency shall be used in vertical joints, unless the pouring consistency is such that it can be satisfactorily placed in vertical joints.

Recess the joint sealer below the adjacent surface as shown in Standard Drawing No. 700.01.

If the joint material fails in either adhesion or cohesion, the joint shall be repaired to the Engineer's satisfaction at the Contractor's expense.

- (3) Special Requirements for Installation of Low Modulus Silicone Sealant: The sealant shall be applied or tooled in a manner which causes it to wet the joint faces and provide the required recess.
- (4) Cleaning Pavement: Promptly remove surplus joint sealer on the pavement after a joint has been sealed so that the joint sealer is not exposed to direct contact with traffic.

(E) Opening to Traffic

Do not permit traffic over sealed joints without the approval of the Engineer.

Measurement and Payment

Joint Construction, Repair and Sealing will be measured and paid for at the contract unit price of the actual number of linear feet of joints, which are satisfactorily constructed, repaired and sealed. The length will be measured along the joints that have been constructed or repaired and sealed. Such price and payment will be full compensation for this work, including but not limited to removal and disposal of existing joint sealant and backer rod, preparation of joints, and furnishing all labor, tools, materials, and supplies, tools equipment and incidentals needed to complete the work.

Payment will be made under:

Pay Item

Joint Construction, Repair and Sealing

Pay Unit

Linear Foot

GUARDRAIL END UNITS, TYPE - TL-3:

(4-20-04) (Rev. 7-1-17)

862

SP8 R65

Description

Furnish and install guardrail end units in accordance with the details in the plans, the applicable requirements of Section 862 of the *2018 Standard Specifications*, and at locations shown in the plans.

Materials

Furnish guardrail end units listed on the NCDOT Approved Products List at <https://apps.dot.state.nc.us/vendor/approvedproducts/> or approved equal.

Prior to installation the Contractor shall submit to the Engineer:

- (A) FHWA acceptance letter for each guardrail end unit certifying it meets the requirements of the AASHTO Manual for Assessing Safety Hardware, Test Level 3, in accordance with Article 106-2 of the *2018 Standard Specifications*.
- (B) Certified working drawings and assembling instructions from the manufacturer for each guardrail end unit in accordance with Article 105-2 of the *2018 Standard Specifications*.

No modifications shall be made to the guardrail end unit without the express written permission from the manufacturer. Perform installation in accordance with the details in the plans, and details and assembling instructions furnished by the manufacturer.

Construction Methods

Guardrail end delineation is required on all approach and trailing end sections for both temporary and permanent installations. Guardrail end delineation consists of yellow reflective sheeting applied to the entire end section of the guardrail in accordance with Article 1088-3 of the *2018 Standard Specifications* and is incidental to the cost of the guardrail end unit.

Measurement and Payment

Measurement and payment will be made in accordance with Article 862-6 of the *2018 Standard Specifications*.

Payment will be made under:

Pay Item	Pay Unit
Guardrail End Units, Type TL-3	Each

THERMOPLASTIC PAVEMENT MARKING MATERIAL – COLOR TESTING:

3-19-19

1087

SP10 R05

Revise the *2018 Standard Specifications* as follows:

Pages 10-183 and 10-184, Subarticle 1087-7(D)(1)(b) Yellow, lines 9-11, delete and replace with the following:

Obtain Color Values Y,x,y per ASTM E1349 using C/2° illuminant/observer.
Results shall be $Y \geq 45\%$, and x,y shall fall within PR#1 chart chromaticity limits.

POLYUREA PAVEMENT MARKING MATERIAL – TYPE 2 TYPICAL CERTIFIED MILL TEST REPORT:

3-19-19

1087

SP10 R06

Amend the *2018 Standard Specifications* as follows:

Page 10-184, Subarticle 1087-8 Material Certification, in accordance with Subarticle 106-3 provide a Type 2 Typical Certified Mill Test Report and a Type 3 Manufacturer's Certification for Polyurea pavement marking material.

When tested, the material shall meet the physical and chemical characteristics provided by the manufacturer. NCDOT reserves the right to compare these test results to baseline test results gathered by the NCDOT Materials and Test Unit.

SNOWPLOWABLE PAVEMENT MARKERS:

3-19-19

1086, 1250, 1253

SP10 R07

Revise the *2018 Standard Specifications* as follows:

Pages 10-177 and 10-178, Subarticle 1086-3 SNOWPLOWABLE PAVEMENT MARKERS, delete items (A), (B) and (C)(1) and replace with the following:

(A) General

Use snowplowable pavement markers evaluated by NTPEP. The snowplowable pavement marker shall consist of a housing with one or more glass or plastic face lens type reflective lenses to provide the required color designation. Shape the housing to deflect a snowplow blade upward in both directions without being damaged. Plastic lens faces shall use an abrasion resistant coating.

Use recycled snowplowable pavement markers that meet all the requirements of new snowplowable pavement markers except Subarticle 1086-3(B)(1). Recycled snowplowable pavement markers with minimal variation in dimensions are acceptable only when the reflector fits in the housing of the recycled snowplowable pavement marker as originally designed.

(B) Housings**(1) Dimensions**

The dimension, slope and minimum area of reflecting surface shall conform to dimensions as shown in the plans. The minimum area of each reflecting surface shall be 1.44 sq.in.

(2) Materials

Use snowplowable pavement markers that are on the NCDOT Approved Products List.

(3) Surface

The surface of the housing shall be free of scale, dirt, rust, oil, grease or any other contaminant which might reduce its bond to the epoxy adhesive.

(4) Identification

Mark the housing with the manufacturer's name and model number of marker.

(C) Reflectors**(1) General**

Laminate the reflector to an elastomeric pad and attach with adhesive to the housing. The thickness of the elastomeric pad shall be 0.04".

Pages 12-14, Subarticle 1250-3(C) Removal of Existing Pavement Markers, lines 19-29, delete and replace with the following:

Remove the existing raised pavement markers or the snowplowable pavement markers including the housings, before overlaying an existing roadway with pavement. Repair the pavement by filling holes as directed by the Engineer.

When traffic patterns are changed in work zones due to construction or reconstruction, remove all raised pavement markers or snowplowable markers including housings that conflict with the new traffic pattern before switching traffic to the new traffic pattern. Lens removal in lieu of total housing removal is not an acceptable practice for snowplowable markers.

Properly dispose of the removed pavement markers. No direct payment will be made for removal or disposal of existing pavement markers or repair of pavement, as such work will be incidental to other items in the contract.

Pages 12-16 and 12-17, Subarticle 1253-3 CONSTRUCTION METHODS, delete items (A), (B) and (C) and replace with the following:

(A) General

Bond marker housings to the pavement with epoxy adhesive. Mechanically mix and dispense epoxy adhesives as required by the manufacturer's specifications. Place the markers immediately after the adhesive has been mixed and dispensed.

Install snowplowable pavement marker housings into slots sawcut into the pavement. Make slots in the pavement to exactly duplicate the shape of the housing of the snowplowable pavement markers.

Promptly remove all debris resulting from the saw cutting operation from the pavement surface. Install the marker housings within 7 calendar days after saw cutting slots in the pavement. Remove and dispose of loose material from the slots by brushing, blow cleaning or vacuuming. Dry the slots before applying the epoxy adhesive. Fill the cleaned slots totally with epoxy adhesive flush with the surface of the existing pavement. Install snowplowable pavement markers according to the manufacturer's recommendations.

Protect the snowplowable pavement markers until the epoxy has initially cured and is track free.

(B) Reflector Replacement

In the event that a reflector is damaged, replace the damaged reflector by using adhesives and methods recommended by the manufacturer of the markers and approved by the Engineer. This work is considered incidental if damage occurs during the initial installation of the marker housings and maintenance of initial snowplowable markers specified in this section. This work will be paid for under the pay item for the type of reflector replacement if the damage occurred after the initial installation of the snowplowable pavement marker.

Missing housings shall be replaced. Broken housings shall be removed and replaced. In both cases the slot for the housings shall be properly prepared prior to installing the new housing. Removal of broken housings and preparation of slots will be considered incidental to the work of replacing housings.

(C) Recycled Snowplowable Pavement Marker Housings

Use properly refurbished snowplowable pavement marker housings as approved by the Engineer such that approved new reflectors can be installed inside the housings.

County : Rowan

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
ROADWAY ITEMS						
0001	0000100000-N	800	MOBILIZATION	Lump Sum	L.S.	
0002	0000400000-N	801	CONSTRUCTION SURVEYING	Lump Sum	L.S.	
0003	0156000000-E	250	REMOVAL OF EXISTING ASPHALT PAVEMENT	17,480 SY		
0004	0318000000-E	300	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES	20 TON		
0005	0320000000-E	300	FOUNDATION CONDITIONING GEOTEXTILE	40 SY		
0006	0448200000-E	310	15" RC PIPE CULVERTS, CLASS IV	87 LF		
0007	0582000000-E	310	15" CS PIPE CULVERTS, 0.064" THICK	25 LF		
0008	0636000000-E	310	**** CS PIPE ELBOWS, ***** THICK (15", 0.064")	2 EA		
0009	1121000000-E	520	AGGREGATE BASE COURSE	7 TON		
0010	1297000000-E	607	MILLING ASPHALT PAVEMENT, **** DEPTH (3")	35,904 SY		
0011	1491000000-E	610	ASPHALT CONC BASE COURSE, TYPE B25.0C	5,360 TON		
0012	1503000000-E	610	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0C	2,930 TON		
0013	1523000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5C	8,330 TON		
0014	1575000000-E	620	ASPHALT BINDER FOR PLANT MIX	890 TON		
0015	1735000000-E	723	REPAIR OF JOINTED CONCRETE PAVEMENT SLABS	580 SY		
0016	1736000000-E	723	SELECT MATERIAL, CLASS IV	290 TON		
0017	1737000000-E	723	PATCHING CONCRETE PAVEMENT SPALLS	10,550 SF		

County : Rowan

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0018	1891000000-E	SP	GENERIC PAVING ITEM DIAMOND GRINDING PCC PAVEMENT	342,720 SY		
0019	2099000000-E	816	SHOULDER DRAIN	20 LF		
0020	2110000000-E	816	4" SHOULDER DRAIN PIPE	20 LF		
0021	2121000000-E	816	4" OUTLET PIPE FOR SHOULDER DRAINS	10 LF		
0022	2132000000-N	816	CONCRETE PAD FOR SHOULDER DRAIN PIPE OUTLET	1 EA		
0023	2286000000-N	840	MASONRY DRAINAGE STRUCTURES	2 EA		
0024	2364200000-N	840	FRAME WITH TWO GRATES, STD 840.20	2 EA		
0025	2556000000-E	846	SHOULDER BERM GUTTER	120 LF		
0026	3030000000-E	862	STEEL BEAM GUARDRAIL	125 LF		
0027	3287000000-N	SP	GUARDRAIL END UNITS, TYPE TL-3	42 EA		
0028	3360000000-E	863	REMOVE EXISTING GUARDRAIL	125 LF		
0029	3649000000-E	876	RIP RAP, CLASS B	5 TON		
0030	3656000000-E	876	GEOTEXTILE FOR DRAINAGE	10 SY		
0031	4400000000-E	1110	WORK ZONE SIGNS (STATIONARY)	368 SF		
0032	4405000000-E	1110	WORK ZONE SIGNS (PORTABLE)	450 SF		
0033	4410000000-E	1110	WORK ZONE SIGNS (BARRICADE MOUNTED)	36 SF		
0034	4415000000-N	1115	FLASHING ARROW BOARD	8 EA		
0035	4420000000-N	1120	PORTABLE CHANGEABLE MESSAGE SIGN	6 EA		
0036	4422000000-N	1120	PORTABLE CHANGEABLE MESSAGE SIGN (SHORT TERM)	40 DAY		

County : Rowan

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0037	4423000000-N	SP	WORK ZONE DIGITAL SPEED LIMIT SIGNS	6 EA		
0038	4424000000-N	SP	WORK ZONE PRESENCE LIGHTING	5 EA		
0039	4430000000-N	1130	DRUMS	280 EA		
0040	4434000000-N	SP	SEQUENTIAL FLASHING WARNING LIGHTS	60 EA		
0041	4445000000-E	1145	BARRICADES (TYPE III)	32 LF		
0042	4465000000-N	1160	TEMPORARY CRASH CUSHIONS	1 EA		
0043	4470000000-N	1160	REMOVE & RESET TEMPORARY CRASH CUSHION	11 EA		
0044	4480000000-N	1165	TMA	7 EA		
0045	4485000000-E	1170	PORTABLE CONCRETE BARRIER	1,000 LF		
0046	4500000000-E	1170	REMOVE & RESET PORTABLE CONCRETE BARRIER	14,000 LF		
0047	4510000000-N	1190	LAW ENFORCEMENT	200 HR		
0048	4595000000-E	SP	GENERIC TRAFFIC CONTROL ITEM TEMPORARY RUMBLE STRIP PATCHING	41,120 SF		
0049	4600000000-N	SP	GENERIC TRAFFIC CONTROL ITEM CONNECTED LANE CLOSURE DEVICE	4 EA		
0050	4600000000-N	SP	GENERIC TRAFFIC CONTROL ITEM STOC MANAGED PCMS	1 EA		
0051	4650000000-N	1251	TEMPORARY RAISED PAVEMENT MARKERS	1,100 EA		
0052	4710000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (24", 120 MILS)	745 LF		
0053	4775000000-E	1205	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (6") (IV)	51,150 LF		

County : Rowan

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0054	4805000000-N	1205	COLD APPLIED PLASTIC PAVEMENT MARKING SYMBOL, TYPE ** (IV)	100 EA		
0055	4815000000-E	1205	PAINT PAVEMENT MARKING LINES (6")	471,173 LF		
0056	4825000000-E	1205	PAINT PAVEMENT MARKING LINES (12")	23,352 LF		
0057	4847030000-E	1205	POLYUREA PAVEMENT MARKING LINES (6", 20 MILS)	471,173 LF		
0058	4847070000-E	1205	POLYUREA PAVEMENT MARKING LINES (12", 20 MILS)	23,352 LF		
0059	4855000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (6")	498,673 LF		
0060	4865000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (12")	23,352 LF		
0061	4875000000-N	1205	REMOVAL OF PAVEMENT MARKING SYMBOLS & CHARACTERS	100 EA		
0062	4905000000-N	1253	SNOWPLOWABLE PAVEMENT MARKERS	5,613 EA		
0063	5255000000-N	1413	PORTABLE LIGHTING	Lump Sum	L.S.	
0064	6000000000-E	1605	TEMPORARY SILT FENCE	150 LF		
0065	6036000000-E	1631	MATTING FOR EROSION CONTROL	360 SY		
0066	6071010000-E	SP	WATTLE	30 LF		
0067	6084000000-E	1660	SEEDING & MULCHING	0.1 ACR		
0068	6090000000-E	1661	SEED FOR REPAIR SEEDING	100 LB		
0069	6093000000-E	1661	FERTILIZER FOR REPAIR SEEDING	25 TON		
0070	6117000000-N	SP	RESPONSE FOR EROSION CONTROL	2 EA		
0071	6117500000-N	SP	CONCRETE WASHOUT STRUCTURE	1 EA		

County : Rowan

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0083	1671000000-E	652	PERMEABLE ASPHALT DRAINAGE COURSE, TYPE P-78M	145	TON	
0084	1881000000-E	SP	GENERIC PAVING ITEM JOINT CONSTRUCTION, REPAIR & SEAL	920,700	LF	
STRUCTURE ITEMS						
0072	8660000000-E	SP	CONCRETE REPAIRS	5	CF	
0073	8664000000-E	SP	SHOTCRETE REPAIRS	1	CF	
0074	8699000000-N	SP	STRIP SEALS	Lump Sum	L.S.	
0075	8867000000-E	SP	GENERIC STRUCTURE ITEM FOAM JOINT SEALS FOR PRESERVATION	1,026	LF	
0076	8867000000-E	SP	GENERIC STRUCTURE ITEM POURABLE SILICONE JOINT SEALANT	286	LF	
0077	8882000000-E	SP	GENERIC STRUCTURE ITEM ELASTOMERIC CONCRETE FOR PRESERVATION	379.5	CF	
0078	8892000000-E	SP	GENERIC STRUCTURE ITEM BRIDGE JOINT DEMOLITION	1,312	SF	
0079	8892000000-E	SP	GENERIC STRUCTURE ITEM CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	35	SF	
0080	8892000000-E	SP	GENERIC STRUCTURE ITEM CONCRETE WORK FOR JOINT REPLACEMENT	715	SF	
0081	8893000000-E	SP	GENERIC STRUCTURE ITEM SHOTBLASTING BRIDGE DECK	15,646	SY	

County : Rowan

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0082	8893000000-E	SP	GENERIC STRUCTURE ITEM SILANE DECK TREATMENT	15,646 SY		

1518/Apr08/Q3009783.6/D352343510000/E84

Total Amount Of Bid For Entire Project :

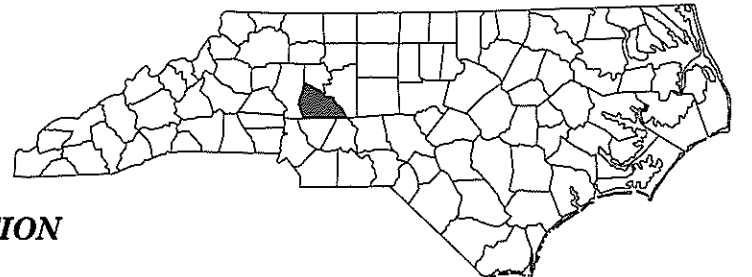
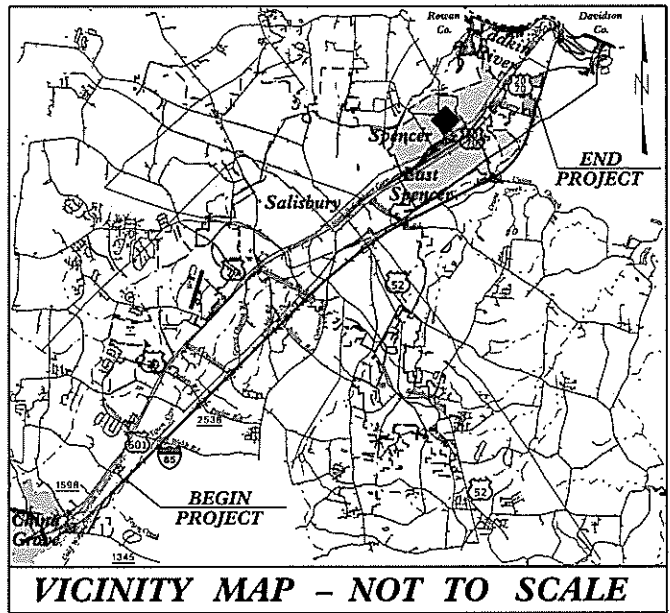
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N.C.	I-5858	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
53061.1.1	NHPP-0085(019)	PE	
53061.3.GVI	NHPP-0085(019)	CONST	

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ROWAN COUNTY

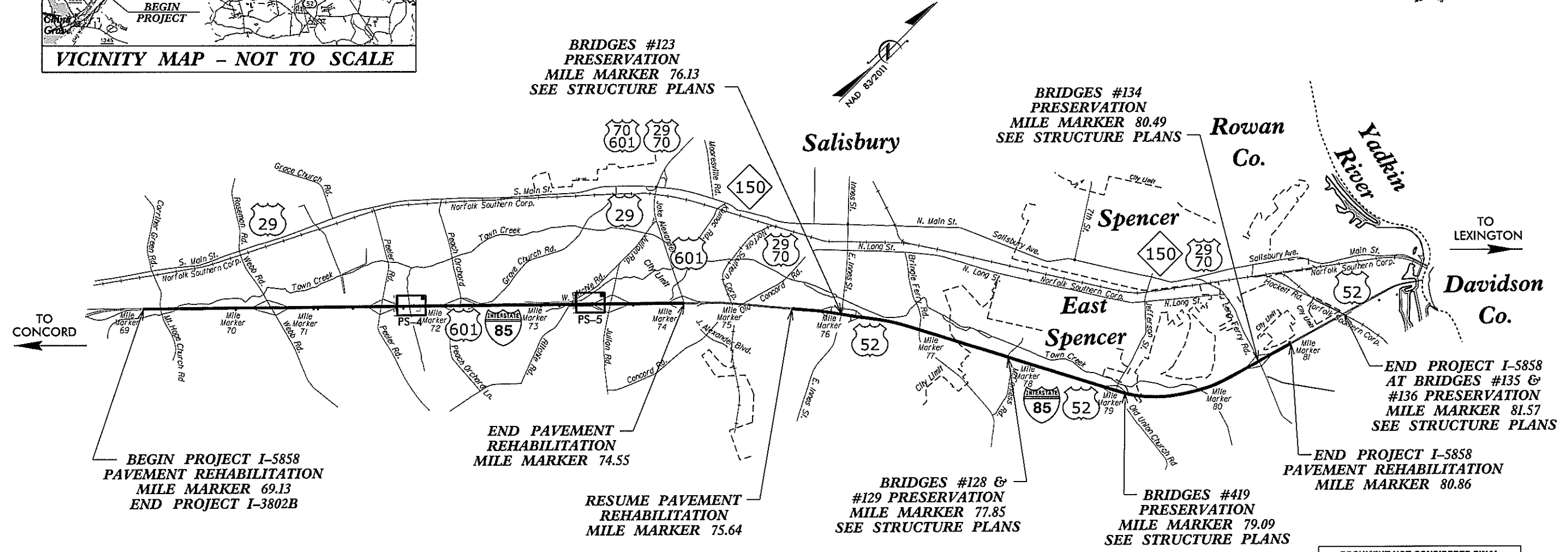
LOCATION: I-85 FROM US 29/US 601 IN CHINA GROVE TO US 601 (JAKE ALEXANDER BLVD) IN SALISBURY AND FROM SOUTH OF US 52 IN SALISBURY TO NORTH OF SR 2120 (LONG FERRY RD) IN SPENCER.

TYPE OF WORK: PAVEMENT REHABILITATION & BRIDGE PRESERVATION

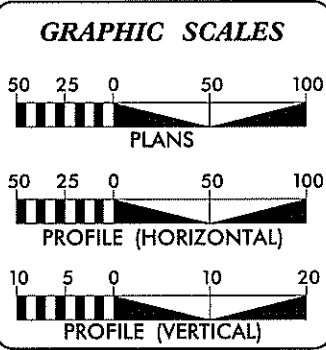


TIP PROJECT: I-5858

CONTRACT: C204244



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



DESIGN DATA

ADT 2013 =	75000
DHV =	11 %
D =	55 %
T =	27 % *
V =	70 MPH
* TTST =	21 DUAL 6
FUNC CLASS =	INTERSTATE
STATEWIDE TIER	(REF. PROJECT I-2511CA)

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT I-5858 =	10.640 MILES
LENGTH STRUCTURE TIP PROJECT I-5858 =	0.248 MILES
TOTAL LENGTH TIP PROJECT I-5858 =	10.888 MILES

Prepared in the Office of:

DIVISION OF HIGHWAYS
NINTH DIVISION DESIGN/CONSTRUCT
375 SILAS CREEK PARKWAY WINSTON-SALEM, N.C. 27127
2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: N/A	W. AL BLANTON, PE, PLS PROJECT ENGINEER
LETTING DATE: APRIL 16, 2019	SCOTT JONES, PE PROJECT DESIGN ENGINEER

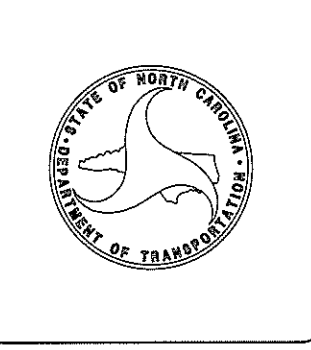
HYDRAULICS ENGINEER

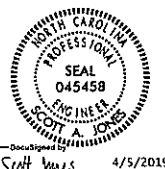
SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

3/19/2019



PROJECT REFERENCE NO. 1-5858	SHEET NO. 1A
ROADWAY DESIGN ENGINEER	
	
Scott James 4/5/2019	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
1C-1	SURVEY CONTROL SHEET
2A-1	TYPICAL SECTION
2B-1	14" PCCP SLAB REPAIR DETAIL
2C-1	GUARDRAIL INSTALLATION DETAILS
3B-1	SUMMARY OF CONTINUOUSLY REINFORCED CONCRETE PAVEMENT REPAIR & SUMMARY OF SHOULDER BERM GUTTER REMOVE & REPLACE
3B-2	SHOULDER DRAIN AND GUARDRAIL SUMMARY
3D-1	DRAINAGE SUMMARY
4-7	PLAN SHEETS
TMP-1 THRU TMP-11	TRAFFIC MANAGEMENT PLANS
EC-1	EROSION CONTROL DETAILS

GENERAL NOTES:

2018 SPECIFICATIONS
EFFECTIVE: 01-16-2018
REVISED:

GRADING AND SURFACING OR RESURFACING AND WIDENING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

SHOULDER CONSTRUCTION:

ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.02

SHOULDER DRAINS:

SHOULDER DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 816.03 AND DETAILS IN PLANS AT LOCATIONS DIRECTED BY THE ENGINEER.

GUARDRAIL:

THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

EFF. 01-16-2018
REV.

2018 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2018 are applicable to this project and by reference hereby are considered a part of these plans:

STD. NO.	TITLE
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
DIVISION 8 - INCIDENTALS	
816.02	Aggregate Shoulder Drain
840.00	Concrete Base Pad for Drainage Structures
840.19	Concrete Grated Drop Inlet Type 'D' - 12" thru 36" Pipe
840.20	Frames and Wide Slot Flat Grates
840.25	Anchorages for Frames - Brick or Concrete or Precast
840.28	Brick Grated Drop Inlet Type 'D' - 12" thru 36" Pipe
846.01	Concrete Curb, Gutter and Curb & Gutter
846.04	Drop Inlet Installation in Shoulder Borm Gutter
862.01	Guardrail Placement
862.02	Guardrail Installation
876.02	Guide for Rip Rap at Pipe Outlets

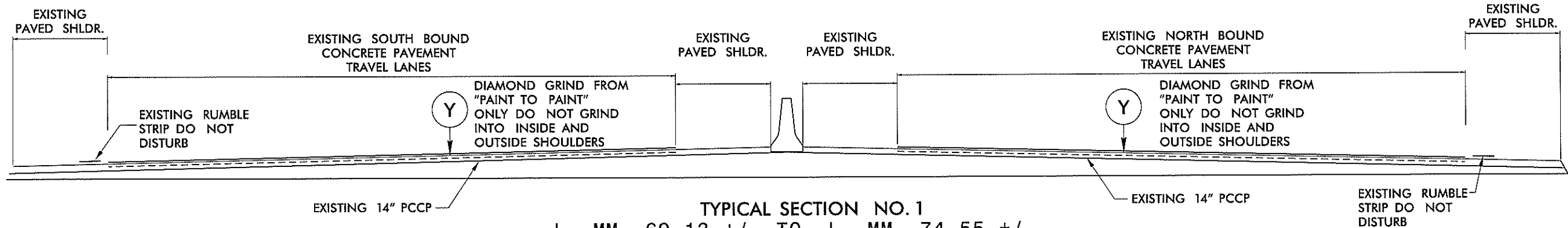
8/17/99

PAVEMENT SCHEDULE

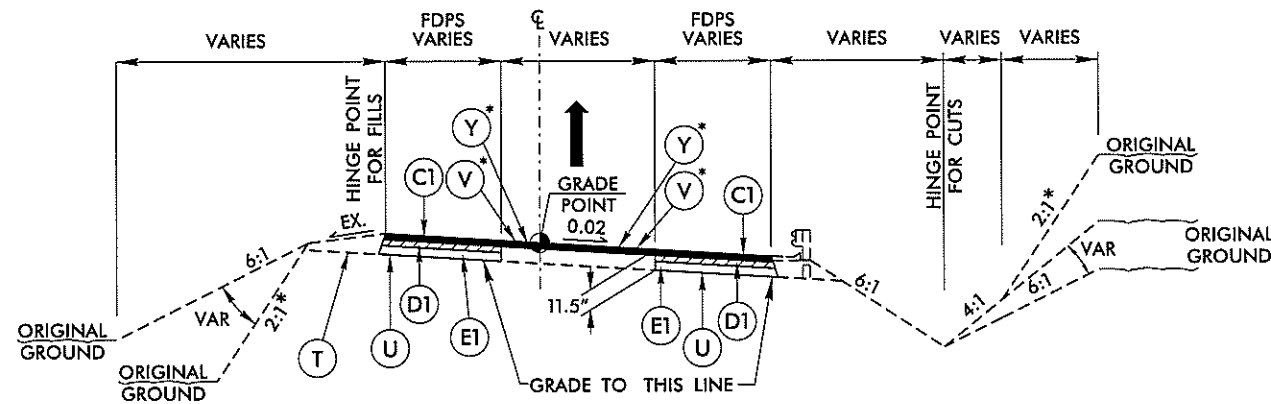
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	T	EXISTING EARTH MATERIAL
D1	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.	U	EXISTING PAVEMENT (VARIES FROM 8.5" TO 12.5" DEPTH)
E1	PROP. APPROX. 5.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	V	3" MILLING
J1	PROP. VARIABLE DEPTH AGGREGATE BASE COURSE	Y	DIAMOND GRINDING
R1	PROP. SHOULDER BERM GUTTER		

PROJECT REFERENCE NO. 1-5858	SHEET NO. 2A-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
Documented by Scott Jones 4/5/2019	
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NOTE: PAV. EDGES ARE 1:1 UNLESS SHOWN OTHERWISE.

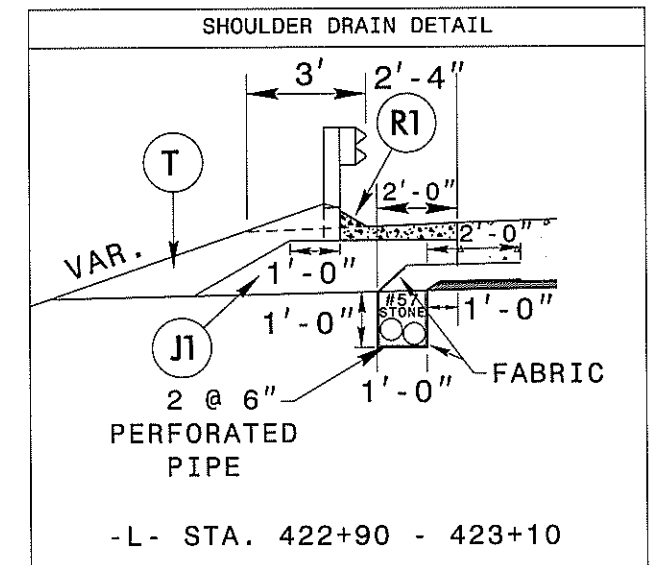


TYPICAL SECTION NO. 1
 -L- MM. 69.13 +/- TO -L- MM. 74.55 +/-
 -L- MM. 75.64 +/- TO -L- MM. 80.86 +/-
 I-85 - NORTH BOUND
 I-85 - SOUTH BOUND



RAMP TYPICAL SECTION

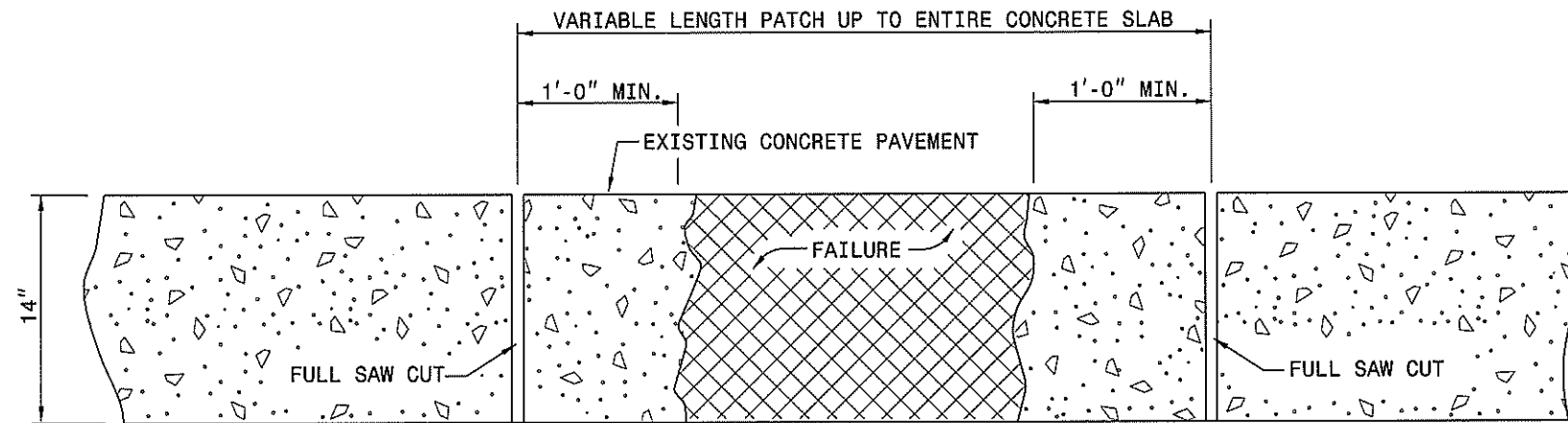
* NOTE: DIAMOND GRIND EXISTING PCCP IN TRAVEL LANES, IN LIEU OF 3" S9.5C MILL & FILL



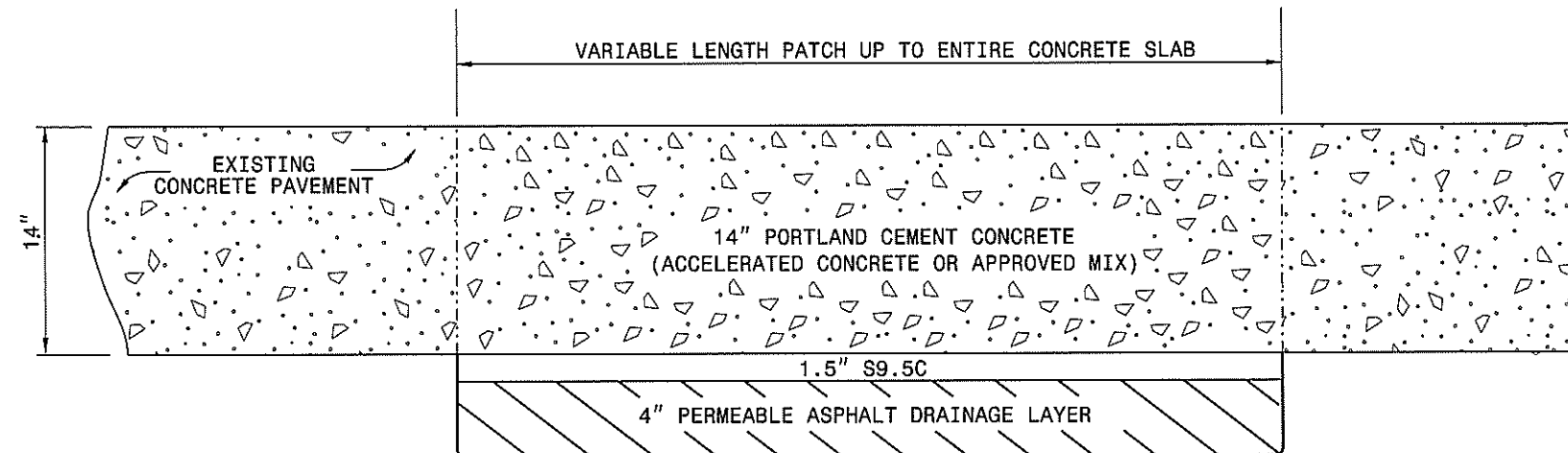
-L- STA. 422+90 - 423+10

REVISIONS

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 scottjones

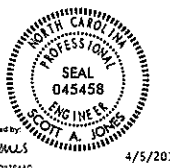


DETAIL OF SAW CUTS



DETAIL OF CONCRETE PAVEMENT REPAIR

* DIMENSIONS ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED



Designed by Scott Jones 4/5/2019

**SLAB REPAIR DETAIL FOR
14" PORTLAND CEMENT
CONCRETE PAVEMENT**

ORIGINAL BY: _____	DATE: _____
MODIFIED BY: _____	DATE: _____
CHECKED BY: _____	DATE: _____
FILE SPEC.: _____	