STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION 13

ID/IQ PROPOSAL

DATE AND TIME OF BID OPENING: DECEMBER 16, 2026 AT 2:00 PM

CONTRACT ID: D13POC.D2.40666

WBS ELEMENT NO.: TBD

FEDERAL AID NO.: FEDERALLY FUNDED

COUNTY: BUNCOMBE, BURKE, MADISON, MCDOWELL, MITCHELL, RUTHERFORD, AND YANCEY

TIP NO.: D13POC.D2.40666

MILES: N/A

ROUTE NO.: VARIOUS

LOCATION: DIVISION-WIDE

TYPE OF WORK: SLOPE STABILIZATION UPON REQUEST

REQUIRED PREQUALIFICATION CONTRACTOR WORK CODES: 0075-ROCK SLOPE STABILIZATION FOR GEOTECHNICAL DESIGN, 3020-RETAINING WALLS (ANCHORED) 3100-MICROPILES

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 $40,000 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.

THIS IS A ROADWAY PROJECT. BID BOND IS NOT REQUIRED.

NAME OF BIDDER

ADDRESS OF BIDDER

PROPOSAL FOR THE CONSTRUCTION OF

CONTRACT No. D13POC.D2.40666 IN Buncombe, Burke, Madison, McDowell, Mitchell, Rutherford and Yancey Counties, NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION,

RALEIGH, NORTH CAROLINA

The Bidder has carefully examined the location of the proposed work to be known as Contract No. **D13POC.D2.40666**; has carefully examined the plans and specifications, which are acknowledged to be part of the proposal, the special provisions, the proposal, the form of contract; and thoroughly understands the stipulations, requirements and provisions. The undersigned bidder agrees to be bound upon his execution of the bid and subsequent award to him by the Department of Transportation in accordance with this proposal. Payment and performance bonds are not required on this project. The undersigned Bidder further agrees to provide all necessary machinery, tools, labor, and other means of construction; and to do all the work and to furnish all materials, except as otherwise noted, necessary to perform and complete the said contract in accordance with the *2024 Standard Specifications for Roads and Structures* by the dates(s) specified in the Project Special Provisions and in accordance with the requirements of the Engineer, and at the unit or lump sum prices, as the case may be, for the various items given on the sheets contained herein.

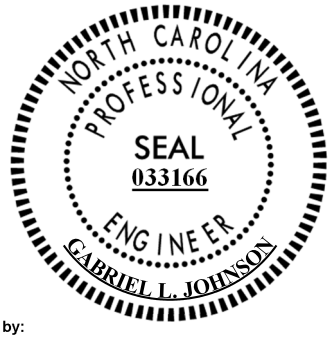
The Bidder shall provide and furnish all the materials, machinery, implements, appliances and tools, and perform the work and required labor to construct and complete Contract No. **D13POC.D2.40666** in **Buncombe, Burke, Madison, McDowell, Mitchell, Rutherford and Yancey Counties**, for the unit or lump sum prices, as the case may be, bid by the Bidder in his bid and according to the proposal, plans, and specifications prepared by said Department, which proposal, plans, and specifications show the details covering this project, and hereby become a part of this contract.

The published volume entitled *North Carolina Department of Transportation, Raleigh, Standard Specifications for Roads and Structures, January 2024* with all amendments and supplements thereto, is by reference incorporated into and made a part of this contract; that, except as herein modified, all the construction and work included in this contract is to be done in accordance with the specifications contained in said volume, and amendments and supplements thereto, under the direction of the Engineer.

If the proposal is accepted and the award is made, the contract is valid only when signed either by the Contract Officer or such other person as may be designated by the Secretary to sign for the Department of Transportation. The conditions and provisions herein cannot be changed except over the signature of the said Contract Officer or Division Engineer.

The quantities shown in the itemized proposal for the project are considered to be approximate only and are given as the basis for comparison of bids. The Department of Transportation may increase or decrease the quantity of any item or portion of the work as may be deemed necessary or expedient.

An increase or decrease in the quantity of an item will not be regarded as sufficient ground for an increase or decrease in the unit prices, nor in the time allowed for the completion of the work, except as provided for the contract.



Signed by:
Gabriel L Johnson
151E998B18C8487...

11/18/2026

TABLE OF CONTENTS

COVER SHEET
PROPOSAL SHEET

PROJECT SPECIAL PROVISIONS

PROJECT DESCRIPTION:..... G-1
DIVISION LET CONTRACT PREQUALIFICATION: G-1
INTERESTED PARTIES LIST NOT REQUIRED: G-2
BOND REQUIREMENTS – No Bonds Required..... G-2
HAUL ROADS:..... G-2
DOMESTIC MATERIAL: G-2
CONTRACT TIME FOR ID/IQ:..... G-7
WORK ORDER ASSIGNMENT (SINGLE AWARDS) FOR ID/IQ: G-7
BONDING REQUIREMENTS FOR ID/IQ::..... G-8
MOBILIZATION AND LIQUIDATED DAMAGES FOR ID/IQ: G-8
EMERGENCY MOBILIZATION FOR ID/IQ: G-9
RENEWAL OF CONTRACT (CPI PRICE ADJUSTMENT) FOR ID/IQ: G-9
DISPUTE RESOLUTION PROCESS FOR ID/IQ: G-10
INTERMEDIATE CONTRACT TIME NUMBER 1 AND LIQUIDATED DAMAGES: G-10
INTERMEDIATE CONTRACT TIME NUMBER 2 AND LIQUIDATED DAMAGES: G-11
INTERMEDIATE CONTRACT TIME NUMBER 3 AND LIQUIDATED DAMAGES: G-12
PROSECUTION OF WORK:..... G-12
RAILROAD GRADE CROSSING: G-13
NO MAJOR CONTRACT ITEMS: G-13
NO SPECIALTY ITEMS: G-13
FUEL PRICE ADJUSTMENT PAPER BID: G-14
DISADVANTAGED BUSINESS ENTERPRISE (DIVISIONS):..... G-15
MULTI-YEAR MAINTENANCE CONTRACTS (ID/IQ): G-29
CERTIFICATION FOR FEDERAL-AID CONTRACTS: G-29
RESTRICTIONS ON ITS EQUIPMENT AND SERVICES:..... G-29
USE OF UNMANNED AIRCRAFT SYSTEM (UAS): G-30
EQUIPMENT IDLING GUIDELINES:..... G-30
U.S. DEPARTMENT OF TRANSPORTATION HOTLINE: G-31
MATERIAL AVAILABILITY: G-31
SUBSURFACE INFORMATION:..... G-31

ROADWAY.....R-1

STANDARD SPECIAL PROVISIONS

AVAILABILITY OF FUNDS – TERMINATION OF CONTRACTS SSP-1
ERRATA.....SSP-2
PLANT AND PEST QUARANTINES SSP-5
TITLE VI AND NONDISCRIMINATION: SSP-6
CONTRACT PROVISIONS FOR FEDERAL-AID CONSTRUCTION CONTRACTS SSP-15
ON-THE-JOB TRAINING.....SSP-27

MINIMUM WAGES SSP-30
MINIMUM WAGES SSP-35

UNIT PROJECT SPECIAL PROVISIONS

GEOTECHNICAL.....GT-1
TRAFFIC CONTROL TC-1

SIGNATURE SHEETS AND FORMS S-1
BID/PAY ITEM SHEETS.....T-1
DOT EXECUTION SHEET U-1

INSTRUCTIONS TO BIDDERS

PLEASE READ ALL INSTRUCTIONS CAREFULLY
BEFORE PREPARING AND SUBMITTING YOUR BID.

All bids shall be prepared and submitted in accordance with the following requirements. Failure to comply with any requirement may cause the bid to be considered irregular and may be grounds for rejection of the bid.

TRADITIONAL PAPER BIDS:

1. Download the entire proposal from the Connect NCDOT website and return the entire proposal with your bid.
2. In accordance with Article 102-3 of the *Standard Specifications*, registration on the Interested Parties List is required unless SP1 G02 Interested Parties List Not Required provision is included in the proposal.
3. Enter required information on the cover page. The "Name of Bidder" and the "Address of Bidder" should be as it appears in the Directory of Firms found on the Department's website.
4. All entries on the itemized proposal sheet (bid form) shall be written in ink or typed.
5. The Bidder shall submit a unit price for every item on the itemized proposal sheet. The unit prices for the various contract items shall be written in figures. **Unit prices shall be rounded off by the Bidder to contain no more than TWO decimal places.**
6. An amount bid shall be entered on the itemized proposal sheet for every item. The amount bid for each item shall be determined by multiplying each unit cost bid by the quantity for that item, and shall be written in figures in the "Amount" column of the form.
7. The total amount bid shall be written in figures in the proper place on the bid form. The total amount bid shall be determined by adding the amounts bid for each item.
8. Changes to any entry shall be made by marking through the entry in ink and making the correct entry adjacent thereto in ink. A representative of the Bidder shall initial the change in ink. Do not use correction fluid, correction tape or similar products to make corrections.
9. The bid shall be properly executed on the included **Execution of Bid – Non-collusion, Debarment and Gift Ban Certification** form. All bids shall provide the following information:
   a. Complete one of the following forms: Corporation, Partnership, Limited Liability Company, Joint Venture, Individual Doing Business in His Own Name or Individual Doing Business Under a Firm Name, based on the business entity submitting the bid.
   b. Corporations that have a corporate seal shall include it on the bid, otherwise write your corporations name in the seal location.
   c. Provide the name of the individual or representative submitting bid along with their position or title held on behalf of the bidder.
   d. Name, signature, and position or title of witness.
10. The bid shall not contain any unauthorized additions, deletions, or conditional bids.
11. The Bidder shall not add any provision reserving the right to accept or reject an award, nor enter into a contract pursuant to an award.
12. **THE ENTIRE PROPOSAL WITH THE ITEMIZED PROPOSAL SHEET AND ALL OTHER APPLICABLE FORMS SHALL BE COMPLETED AND PLACED IN A SEALED ENVELOPE AND SHALL BE DELIVERED TO AND RECEIVED IN THE NCDOT DIVISION OFFICE, LOCATED AT 55 ORANGE STREET ASHEVILLE, NC 28801,BY 2:00 PM ON, DECEMBER 16, 2026.**
13. The sealed bid must display the following statement on the front of the sealed envelope:

QUOTATION FOR – CONTRACT ID D13POC.D2.40666 – SLOPE STABILIZATION UPON REQUEST ALONG VARIOUS INTERSTATE, PRIMARY, AND SECONDARY ROUTES IN DIVISION 13 TO BE OPENED AT 2:00 PM ON, DECEMBER 16, 2026.

ATTN: CHAD LOFTIS

As well as the following information:

a. Name of the Corporation, Partnership, Limited Liability Company, Joint Venture, Individual Doing Business in His Own Name or Individual Doing Business Under a Firm Name, submitting bid.
b. Provide the name of the individual or representative submitting bid along with their position or title held on behalf of the bidder.
c. Address of the Corporation, Partnership, Limited Liability Company, Joint Venture, Individual Doing Business in His Own Name or Individual Doing Business Under a Firm Name, submitting bid.
d. SAP Vendor Number of the Corporation, Partnership, Limited Liability Company, Joint Venture, Individual Doing Business in His Own Name or Individual Doing Business Under a Firm Name, submitting bid. This information can be found on the Directory of Firms found on the Department's website.
e. Contractor License Number, if available, of Corporation, Partnership, Limited Liability Company, Joint Venture, Individual Doing Business in His Own Name or Individual Doing Business Under a Firm Name, submitting bid.

14. If delivered by mail, the sealed envelope shall be placed in another sealed envelope and the outer envelope shall be addressed as follows:

N. C. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS, DIVISION 13
ATTN: CHAD E. LOFTIS
55 ORANGE STREET
ASHEVILLE, NC 28801

15. Questions should be emailed 7 calendar days prior to the bid opening to **Chad E. Loftis** at **celoftis@ncdot.gov** or **Gabe Johnson** at **gljohnson@ncdot.gov.** Contact with any other NCDOT personnel concerning this project is strictly prohibited, unless otherwise noted, and may result in bids being considered non-responsive.

PROJECT SPECIAL PROVISIONS

GENERAL

PROJECT DESCRIPTION:

This renewable contract is for slope stabilization upon request at various locations in Buncombe, Burke, Madison, McDowell, Mitchell, Rutherford, and Yancey Counties. This contract is contingent upon availability of funds, and budget constraints could require that this project be scaled back or canceled.

All work and materials shall be in accordance with the North Carolina Department of Transportation *Standard Specifications for Roads and Structures*, the North Carolina Department of Transportation *Roadway Standards Drawings*, the current edition of the Manual of Uniform Traffic Control Devices (MUTCD), and the provisions of this contract.

The NCDOT will provide the following services and materials:

- Site Surveying
- Right of Way Location
- Excavation of Materials
- Clearing and Grubbing
- Disposal of Excavated Materials
- Erosion Control
- Slope Armoring
- Rock Plating
- Shoulder and Slope Fill Materials
- Pipes (other than Horizontal Drains)
- Milling
- Asphalt
- Guardrail Installation
- Pavement Markings and Delineation
- Detour Installation

DIVISION LET CONTRACT PREQUALIFICATION:

(07-01-14)(12-1-16) SPD 01-410

Any firm that wishes to bid as a prime contractor shall be prequalified as a Bidder or PO Prime Contractor prior to submitting a bid. Information regarding prequalification can be found at: https://connect.ncdot.gov/business/Prequal/Pages/default.aspx.

Prior to performing the work, the prime contractor and/or subcontractor(s) shall be prequalified in the work code(s) which are identified as work items in the prime contractor's construction progress schedule that they will complete themselves. Any contractor identified as working outside their expertise may be considered in default of contract.

INTERESTED PARTIES LIST NOT REQUIRED:
(6-21-22)(Rev. 2-20-24) 102 SP1 G02

Revise the *Standard Specifications* as follows:

The *Interested Parties List* sign up process is not applicable to this contract.

Page 1-13, Article 102-3 PROPOSALS AND INTERESTED PARTIES LIST, lines 12-15, delete the first paragraph.

Page 1-14, Article 102-8 PREPARATION AND SUBMISSION OF BIDS, lines 43-44, delete the first sentence of the first paragraph.

BOND REQUIREMENTS – No Bonds Required
(6-1-16)(Rev. 1-16-24) SPD 01-420B

The provisions of Articles 102-10 and 103-7 of the *Standard Specifications* are waived for this project. No bonds required.

HAUL ROADS:
(7-16-24) 105 SP1 G04

Revise the *Standard Specifications* as follows:

Page 1-45, Article 105-15 RESTRICTION OF LOAD LIMITS, line 31, add the following after second sentence of the second paragraph:

At least 30 days prior to use, the Contractor shall notify the Engineer of any public road proposed for use as a haul road for the project.

DOMESTIC MATERIAL:
(10-21-26)(Rev. 11-17-26) 106 SP1 G05 E

Revise the *Standard Specifications* as follows:

Page 1-47 and 1-48, Article 106-1 GENERAL REQUIREMENTS, lines 30-47 and 1-49, delete and replace Article 106-1 with the following:

106-1 MATERIALS AND MANUFACTURING

(A) General Requirements

The Contractor shall furnish materials that conform to all contract requirements, are suitable for their intended use, and are free from defects. All materials used in the work shall meet the requirements of the contract and shall be subject to inspection, test, or rejection by the Engineer. All materials permanently incorporated into the completed work shall be new, unless otherwise specified in the contract or as approved by the Engineer.

The Contractor is responsible for selecting, procuring, and delivering materials of the types and quantities necessary to perform the work and meet contract requirements. Delays in

material delivery or quality control do not relieve the Contractor of obligations for schedule or quality.

All materials incorporated into the work shall be approved before use. Approval is based on testing, certification, or both, as required by the contract. Department review or acceptance does not relieve the Contractor of responsibility for material compliance. The Department may inspect, sample, and test materials at any time before, during, or after installation.

Materials shall be handled, stored, and protected to prevent damage, contamination, or deterioration. Materials determined to be defective, damaged, contaminated, or otherwise not in compliance shall be rejected and promptly removed from the project.

To facilitate inspection and testing, the Contractor shall furnish a complete statement of origin for all materials, including certifications or samples when requested. This information shall be submitted to the Materials and Tests Unit when required by the contract or as directed by the Engineer, in advance of fabrication, shipment, or use to allow for appropriate inspection.

The Contractor shall furnish Safety Data Sheets (SDS) for all paints and hazardous chemicals proposed for use on the project, in accordance with the North Carolina Hazard Communication Standard, 29 CFR 1910.1200 and NCGS § 95-174.

The Contractor shall provide access, equipment, means and assistance for the verification and calibration of any devices used in testing, measurement, or documentation of materials.

If the Contractor proposes to use materials from local deposits not identified in the contract, the Contractor shall be responsible for preliminary sampling, source approval, and production of acceptable material. Preliminary samples shall be furnished at no cost to the Department. If requested in writing, the Department may perform sampling, with costs to be charged to the Contractor as determined by the Engineer.

Sampling or testing by the Department does not constitute pre-approval or acceptance of material. The Contractor remains responsible for ensuring quality and uniformity of all materials produced or delivered, including those from local deposits. The Contractor shall indemnify and hold harmless the Department from any claims, costs, or damages related to the development or use of such sources, including, but not limited to, failure to meet quantity or quality requirements.

Materials covered by Subarticles 106-1(B) and 106-1(C) shall comply with applicable domestic content requirements, including those for iron and steel, construction materials, and manufactured products.

(B) Domestic Material Requirements

Domestic material requirements apply to iron and steel products permanently incorporated into any project in accordance with 23 U.S.C. § 313, 23 CFR 635.410, and NCGS § 136-28.7. Construction materials and manufactured products permanently incorporated into the work are subject to domestic-content requirements only on Federal-aid projects, in

accordance with 23 U.S.C. § 313, Build America Buy America Act (IIJA § 70914), 2 CFR 184, and as implemented for the Federal-aid highway program through 23 CFR Part 635.410.

All iron or steel products, construction materials, and manufactured products subject to domestic content requirements shall be of domestic origin and meet the applicable requirements of the contract based on the project's funding source.

Before any materials are delivered to the project, the Contractor shall submit a notarized letter acknowledging their understanding of the domestic material requirements for the specific contract. This acknowledgment is a contract-level affirmation that the Contractor is responsible for ensuring that no iron or steel product, construction material, or manufactured product subject to domestic content requirements is permanently incorporated into the work without the required certification. This acknowledgment does not substitute for product-level certifications from the manufacturer or supplier. The Department reserves the right to deny or recover payment for any material incorporated into the work without valid documentation.

For iron and steel, all manufacturing processes must occur in the United States.

For construction materials, all manufacturing processes must occur in the United States.

For manufactured products, final assembly must occur in the United States, and the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States must be greater than 55 percent of the total cost of all components of the manufactured product.

Before any iron or steel product, construction material, or manufactured product subject to domestic content requirements is eligible for payment, the Contractor shall submit a certification from the manufacturer or supplier confirming compliance with the applicable regulations. A separate certification is required for each shipment or delivery and must clearly identify the items covered, linked to the associated bill of lading, invoice, or packing list.

The Contractor shall ensure that all required certifications from the manufacturer or supplier are obtained and submitted to the Engineer prior to payment for any iron or steel product, construction material, or manufactured product subject to domestic content requirements. The Engineer will retain documentation in accordance with Department procedures. Compliance with domestic material requirements is the responsibility of the Contractor, based on certifications and documentation provided by the manufacturer or supplier.

(C) Material Category Requirements

(1) Iron and Steel Products

Items are considered iron or steel products if they consist wholly or predominantly of iron or steel. Predominantly means the cost of iron or steel components exceeds 50% of the total cost of all product components.

All steel and iron products that are permanently incorporated into the work shall be produced in the United States. This includes any such item that is melted, cast, rolled, formed, shaped, drawn, extruded, forged, fabricated, finished or otherwise processed in

the manufacture of the product. Coatings applied to iron and steel products shall also be applied in the United States.

A minimal amount of foreign iron or steel products may be permitted provided the total value of such foreign material, as delivered to the project, does not exceed 0.1% of the total contract cost or $2,500, whichever is greater. Documentation establishing the value of the foreign material shall be submitted when requested. This allowance is intended only for incidental quantities that may arise despite good-faith compliance efforts and may not be used to intentionally procure foreign iron or steel.

Domestically produced high-strength fasteners are required, and foreign-produced high-strength fasteners are not permitted under any circumstance.

Raw materials such as pig iron, processed pelletized iron ore, and reduced iron ore may be sourced internationally; however, all manufacturing processes to produce the final product, including coatings, must occur within the United States.

(2) Construction Materials

Construction materials shall consist of a single, listed material type permanently incorporated into the work as defined in 2 CFR 184.3. The following are classified as construction materials:

(a) Non-ferrous metals (such as aluminum, copper, and zinc);
(b) Plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);
(c) Glass (including optical glass);
(d) Fiber optic cable (including drop cable);
(e) Optical fiber;
(f) Lumber;
(g) Engineered wood;
(h) Drywall

For construction materials, all manufacturing processes must occur in the United States. If a construction material is combined with other materials, components, or features to form a product with new properties or functions, it shall be classified as a manufactured product.

Minor additions such as binding agents, dyes, or adhesives that do not materially alter the item’s properties do not affect classification.

(3) Manufactured Products

Manufactured products are articles, materials, or supplies that are made by combining one or more materials to create a product with new or different properties, functions, or uses. This includes items that incorporate multiple components, materials, or assemblies and cannot be classified as a single listed construction material.

Final assembly of all manufactured products must occur in the United States, and the cost of the components of the manufactured product that are mined, produced, or manufactured in

the United States must be greater than 55 percent of the total cost of all components of the manufactured product. Certification must address the product as a whole, including all incorporated components.

Items that meet the definition of construction materials or iron and steel products shall not be reclassified as manufactured products.

(4) Materials Not Subject to Domestic Content Requirements

The following materials are not subject to domestic content requirements and do not require certification, as identified below:

(a) Materials Excluded by Federal Statute or Regulation

The following materials are excluded from domestic content requirements under applicable Federal law or regulation:

(i) Cement and cementitious materials
(ii) Aggregates such as stone, sand, or gravel
(iii) Aggregate binding agents or additives

(b) Materials Not Permanently Incorporated into the Work

Materials that are not permanently incorporated into the completed project are not subject to domestic content requirements. Materials are not permanently incorporated when they are used solely to facilitate construction activities and do not perform an ongoing structural, operational, or functional role after construction is complete. Determinations regarding whether a material is permanently incorporated will be made by the Engineer.

(D) Classification and Clarification of Materials

All items subject to domestic content requirements shall be classified as either an iron or steel product, construction material, manufactured product, or a material not subject to domestic content requirements based on their final form as delivered to the project site. Each item may be classified into only one category and shall not be reclassified to avoid more stringent requirements. Classification of a manufactured product does not relieve the Contractor of compliance with iron and steel domestic manufacturing requirements applicable to embedded iron or steel components when required by Federal law or regulation. When an item’s classification is uncertain or does not clearly fall within the listed categories, the Contractor shall submit the item for review by the Engineer. Approval must be obtained prior to procurement or incorporation into the project.

CONTRACT TIME FOR ID/IQ:

(2-15-22)(Rev. 4-15-25) 108 SP1 G11

The date of availability for this contract is **January 25, 2027**.

The completion date for this contract is **January 24, 2028**.

Except where otherwise provided by the contract, observation periods required by the contract will not be a part of the work to be completed by the completion date and/or intermediate contract times stated in the contract. The acceptable completion of the observation periods that extend beyond the final completion date shall be a part of the work covered by the performance and payment bonds.

Work shall be accomplished in a continuous manner once the contractor begins.

The liquidated damages for this contract will be assessed per the Mobilization and Liquidated Damages for ID/IQ provision located elsewhere in this contract.

WORK ORDER ASSIGNMENT (SINGLE AWARDS) FOR ID/IQ:

(2-15-22)(Rev. 4-19-22) SPD 01-800A

Work orders will be assigned by the Engineer. The Contractor shall respond to the work order assignments with the anticipated start date, within three working days of notification unless noted otherwise. Failure to complete work in accordance with contract provisions and completion date may result in liquidated damages.

For federal ID/IQ contracts, all work orders will be assigned via the Work Order Assignment Form (Form IDIQ-1SA), and the Contractor is required to formally respond in writing for federal work orders within three working days, unless noted otherwise. The Work Order Assignment Form will also be used for any state ID/IQ contract in which the estimated work order cost meets the threshold for Performance and Payment Bonds in accordance with the Bonding Requirements for ID/IQ provision found elsewhere in this contract. For state ID/IQ contracts in which the work order assignment doesn't meet the threshold for bonds, the Department has the option to use the Work Order Assignment Form or other methods for work order assignments as agreed upon by the Engineer and Contractor.

The Contractor shall be required to prosecute the work in a continuous and uninterrupted manner from the time they begin the work until completion and final acceptance of the work order. Multiple failures of the Contractor to mobilize and begin work on the work order within the agreed upon time frame or failure to complete the work within the given time frame may result in the Contractor being excluded from future work on this contract in accordance with the *Standard Specifications*.

BONDING REQUIREMENTS FOR ID/IQ:
(2-15-22) SPD 01-810

For purposes of this ID/IQ contract, the following definitions apply:

Project Agreement: A transportation improvement with a defined scope of work; a written agreement between NCDOT and the Federal Government defining the extent of construction work to be undertaken in accordance with the submitted plans, specifications and estimates. Execution of the agreement prompts the authorization to proceed (construction funding).

Project: An undertaking issued to a contractor through a Work Order Assignment. The construction under a Project Agreement may be accomplished by one or more work order assignments, from one or more ID/IQ contracts. Note that for ID/IQ contracts this definition supersedes the definition in the *Standard Specifications*.

Award: The issuance of a signed Work Order Assignment by NCDOT shall constitute the notice of award of a project.

In accordance with North Carolina General Statute 44A-26, bonds are required on contracts awarded for any one project that exceeds $500,000. Beyond statutory requirements, NCDOT policy requires payment and performance bonds on all projects where the engineer's estimate is $450,000 or greater, all Asphalt Surface Treatment projects, and projects containing the 12-month guarantee provision. The limit for waiving bonds for all bridge replacement and major bridge rehabilitation projects (latex overlays, etc.) is $300,000 based on the engineer's estimate. The decision of bonding of a work order assignment below the dollar amounts listed shall be at the discretion of the Division's evaluation of the risks associated with the project.

The need for contract payment and performance bonds will be determined at the Work Order Assignment level. The Work Order Assignment will notify the Contractor of an award of a project and if required, to provide contract payment and performance bonds per Article 103-7 of the *Standard Specifications*. The Work Order Assignment replaces the Notification of Award Letter mentioned in Article 103-4(A) of the *Standard Specifications*.

MOBILIZATION AND LIQUIDATED DAMAGES FOR ID/IQ:
(2-15-22) SPD 01-820

The Contractor shall mobilize to each location he is required to perform work. There will be no direct pay for Mobilization as it will be incidental to the other bid items. The only exception is if there is an Emergency Mobilization provision within the contract.

The Contractor will be provided a Work Order Assignment for each project with location(s), estimated quantities, and liquidated damages unless waived by the Engineer. Notification will be verbal followed by a faxed or emailed signed Work Order Assignment. There will be no minimum quantities for any line item associated with a particular mobilization. The Contractor shall complete the work identified on each Work Order Assignment.

The Contractor shall mobilize and complete the work within the time specified on the Work Order Assignment. Failure to complete the work by the completion date may result in the

application of liquidated damages. Liquidated damage amounts will be based on the work order estimate and the liquidated damage table below.

Work Order Value	Liquidated Damages (per calendar day)
$0 - $100K	$100.00
$100K - $200K	$250.00
$200K - $300K	$500.00
$300K - $500K	$600.00
$500K - $1M	$700.00
$1M - $2M	$850.00

EMERGENCY MOBILIZATION FOR ID/IQ:
(2-15-22) SPD 01-830

The Contractor shall arrive on site within **twenty-four (24)** hours of notification. Compensation will be in addition to the specific line items in the contract. *Emergency Mobilization* will be paid for at the contract unit price per each. Failure to respond within the time frame will result in nonpayment of this item.

Payment will be made under:

Pay Item	Pay Unit
Emergency Mobilization	Each

RENEWAL OF CONTRACT (CPI PRICE ADJUSTMENT) FOR ID/IQ:
(2-15-22)(Rev. 9-19-23) SPD 01-840

The Contractor shall submit a bid for one year. At the option of the Department, this contract may be extended for **two (2)** additional periods of one year each (maximum (3) three years total). Each year shall have a limit of **$5 Million Dollars ($5,000,000.00)**.

The compensation payable to the contractor shall be fixed for the first twelve months of this contract. However, upon an application of renewal of the contract, or thirty days prior to the end of each contract period, the renewal contract may be adjusted to reflect the adjustment in the Consumer Price Index over the latest twelve month period as published by the US Bureau of Labor and Statistics at http://www.bls.gov/cpi to be applied to new work order assignments. The Consumer Price Index for All Urban Consumers (CPI-U), US City Average, All Items, 1982-84=100, not seasonally adjusted will be used. If the amount of the requested adjustment is more than ten percent, the Department of Transportation reserves the right to cancel this contract.

CPI adjustment values can be determined using the calculator on the NCDOT Construction website.

This price escalation method will not be applied to items of work that are separately covered under commodity price escalation clauses. No other changes in the terms, conditions, etc. of this contract will be made when an extension to the contract is implemented. The Engineer will notify the Contractor in writing **sixty (60) days before the contract completion date** if the

contract may be extended. The Contractor must notify the Engineer in writing **forty-five (45) before the contract completion date** of his acceptance or rejection of this offer. Failure on the part of the Contractor to reply will be received as a rejection of contract extension.

DISPUTE RESOLUTION PROCESS FOR ID/IQ:
(2-15-22) SPD 01-850

If a question should arise on the contract or assignment of a work order, the contractor should notify the Engineer noted on the assignment documentation or the Division Engineer within 48 hours after the scheduled time of bid opening or work order assignment. The following should be included in the notification if applicable:

- the contract for which bids were solicited;
- the particular law, regulation, or contract specification violated;
- a detailed description of the alleged violation; and
- any other information deemed to be relevant.

Once the initial evaluation has been completed, the contractor may be asked to attend a meeting for further discussion and clarification.

Once a determination has been made, the contractor will be notified of the decision by the Division Engineer. If the decision does not meet the satisfaction of the contractor, they have 24 hours from the Division Engineer's notification to elevate the dispute to the Chief Engineer. The Chief Engineer will make the final decision and will not be subject to further review by NCDOT.

INTERMEDIATE CONTRACT TIME NUMBER 1 AND LIQUIDATED DAMAGES:
(2-20-07) 108 SP1 G14 B

The Contractor shall not narrow or close a lane of traffic on **ANY ROAD**, detain and /or alter the traffic flow on or during holiday weekends, special events, or any other time when traffic is unusually heavy, including the following schedules **unless approved by the Engineer**:

HOLIDAY AND HOLIDAY WEEKEND LANE CLOSURE RESTRICTIONS

1. For **unexpected occurrence** that creates unusually high traffic volumes, as directed by the Engineer.

2. For **New Year's Day**, between the hours of **3:00 PM** December 31st and **7:00 AM** January 2nd. If New Year's Day is on a Friday, Saturday, Sunday or Monday, then until **7:00 AM** the following Tuesday.

3. For **Easter**, between the hours of **3:00 PM** Thursday and **7:00 AM** Monday.

4. For **Memorial Day**, between the hours of **3:00 PM** Friday and **7:00 AM** Tuesday.

5. For **Independence Day**, between the hours of **3:00 PM** the day before Independence Day and **7:00 AM** the day after Independence Day.

If **Independence Day** is on a Friday, Saturday, Sunday or Monday, then between the hours of **3:00 PM** the Thursday before Independence Day and **7:00 AM** the Tuesday after Independence Day.

6. For **Labor Day**, between the hours of **3:00 PM** Friday and **7:00 AM** Tuesday.

7. For **Thanksgiving Day**, between the hours of **3:00 PM** Tuesday and **7:00 AM** Monday.

8. For **Christmas**, between the hours of **3:00 PM** the Friday before the week of Christmas Day and **7:00 AM** the following Tuesday after the week of Christmas Day.

Holidays and holiday weekends shall include New Year's, Easter, Memorial Day, Independence Day, Labor Day, Thanksgiving, and Christmas. The Contractor shall schedule his work so that lane closures are not required during these periods, unless otherwise directed by the Engineer.

The time of availability for this intermediate contract work shall be the time the Contractor begins to install all traffic control devices for lane closures according to the time restrictions listed herein.

The completion time for this intermediate contract work shall be the time the Contractor is required to complete the removal of all traffic control devices for lane closures according to the time restrictions stated herein and place traffic in the existing traffic pattern.

The liquidated damages are **Six Hundred Dollars ($ 600.00**) per hour.

INTERMEDIATE CONTRACT TIME NUMBER 2 AND LIQUIDATED DAMAGES:
(2-20-07) 108 SP1 G14 C

The Contractor shall complete the required work of installing, maintaining and removing the traffic control devices for lane closures and restoring traffic to the existing traffic pattern. The Contractor shall not close or narrow a lane of traffic on **I-40, I-26, and I-240 in Division 13 or any US route in Buncombe County** during the following time restrictions **unless approved by the Engineer**:

DAY AND TIME RESTRICTIONS

7:00 AM TO 7:00 PM EVERYDAY

In addition to the above restrictions, no work is allowed on I-26 south of I-40 7:00 AM to 12:00 AM (midnight) Friday, Saturday, and Sunday.

The time of availability for this intermediate contract time will be the time the Contractor begins to install traffic control devices required for the lane closures according to the time restrictions stated herein.

The completion time for this intermediate contract time will be the time the Contractor is required to complete the removal of traffic control devices required for the lane closures according to the time restrictions stated herein and restore traffic to the existing traffic pattern.

The liquidated damages are **Six Hundred Dollars ($ 600.00)** per hour.

INTERMEDIATE CONTRACT TIME NUMBER 3 AND LIQUIDATED DAMAGES:
(2-20-07) 108 SP1 G14 C

The Contractor shall complete the required work of installing, maintaining and removing the traffic control devices for lane closures and restoring traffic to the existing traffic pattern. The Contractor shall not close or narrow a lane of traffic on **any US route in Burke, Madison, McDowell, and Rutherford counties or any NC route in Buncombe, Burke, Madison, McDowell, and Rutherford counties** during the following time restrictions **unless approved by the Engineer**:

DAY AND TIME RESTRICTIONS

7:00 AM to 9:00 AM and 4:00 PM to 7:00 PM
(EVERYDAY)

The time of availability for this intermediate contract time will be the time the Contractor begins to install traffic control devices required for the lane closures according to the time restrictions stated herein.

The completion time for this intermediate contract time will be the time the Contractor is required to complete the removal of traffic control devices required for the lane closures according to the time restrictions stated herein and restore traffic to the existing traffic pattern.

The liquidated damages are **Six Hundred Dollars ($600.00**) per hour.

PROSECUTION OF WORK:
(7-1-95) (Rev. 8-21-12) 108 SP1 G15R

The Contractor will be required to prosecute the work in a continuous and uninterrupted manner from the time he begins the work until completion and final acceptance of the project. The Contractor will not be permitted to suspend his operations except for reasons beyond his control or except where the Engineer has authorized a suspension of the Contractor's operations in writing.

In the event that the Contractor's operations are suspended in violation of the above provisions, the sum of **$ 600.00** will be charged the Contractor for each and every calendar day that such suspension takes place. The said amount is hereby agreed upon as liquidated damages due to extra engineering and maintenance costs and due to increased public hazard resulting from a suspension of the work. Liquidated damages chargeable due to suspension of the work will be additional to any liquidated damages that may become chargeable due to failure to complete the work on time.

RAILROAD GRADE CROSSING:
(7-1-95) (Rev. 1-16-24) 107-9 SP1 G17R

When the use of slow moving or stopped equipment is required over at-grade railroad crossings, the contractor shall contact the appropriate track owner to gain Right of Entry. The contractor shall be responsible for ascertaining and contacting the railroad track owner.

No separate payment will be made for conforming with the requirements of this Special Provision. Please contact the Resident Engineer or the NCDOT Rail Division - Engineering Coordination & Safety Branch - Surfaces & Encroachment Manager with any questions pertaining to the Right of Entry

NO MAJOR CONTRACT ITEMS:
(2-19-02) (Rev. 8-21-07) 104 SP1 G31

None of the items included in this contract will be major items.

NO SPECIALTY ITEMS:
(7-1-95)(Rev. 1-16-24) 108-6 SP1 G34

None of the items included in this contract will be specialty items (see Article 108-6 of the *Standard Specifications*).

FUEL PRICE ADJUSTMENT PAPER BID:
(11-15-05)(Rev. 1-16-24) 109-8 SP1 G44

Revise the *Standard Specifications* as follows:

Page 1-82, Article 109-8, FUEL PRICE ADJUSTMENTS, add the following:

The base index price for DIESEL #2 FUEL is **$ 5.0299** 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
Erosion Control Stone	Gal/Ton	0.55
Rip Rap, Class _____	Gal/Ton	0.55
Asphalt Concrete Base Course, Type ____	Gal/Ton	0.90 or 2.90
Asphalt Concrete Intermediate Course, Type ____	Gal/Ton	0.90 or 2.90
Asphalt Concrete Surface Course, Type ____	Gal/Ton	0.90 or 2.90
Open-Graded Asphalt Friction Course	Gal/Ton	0.90 or 2.90
Permeable Asphalt Drainage Course, Type ____	Gal/Ton	0.90 or 2.90
Sand Asphalt Surface Course, Type ____	Gal/Ton	0.90 or 2.90
Ultra-thin Bonded Wearing Course	Gal/Ton	0.90 or 2.90
Aggregate for Cement Treated Base Course	Gal/Ton	0.55
Portland Cement for Cement Treated Base Course	Gal/Ton	0.55
> 11" Portland Cement Concrete Pavement	Gal/SY	0.327
Concrete Shoulders Adjacent to > 11” Pavement	Gal/SY	0.327
9” to 11" Portland Cement Concrete Pavement	Gal/SY	0.272
Concrete Shoulders Adjacent to 9” to 11” Pavement	Gal/SY	0.272
< 9” Portland Cement Concrete Pavement	Gal/SY	0.245
Concrete Shoulders Adjacent to < 9” Pavement	Gal/SY	0.245

For the asphalt items noted in the chart as eligible for fuel adjustments, the bidder may include the *Fuel Usage Factor Adjustment Form for Paper Bid* with their bid submission if they elect to use the fuel usage factor. The *Fuel Usage Factor Adjustment Form for Paper Bid* is included toward the end of this paper bid document when asphalt items noted in the chart as eligible for fuel adjustments are part of the project.

Select either 2.90 Gal/Ton fuel factor or 0.90 Gal/Ton fuel factor for each asphalt line item on the *Fuel Usage Factor Adjustment Form for Paper Bid*. The selected fuel factor for each asphalt item will remain in effect for the duration of the contract.

Failure to complete the *Fuel Usage Factor Adjustment Form for Paper Bid* will result in using 2.90 gallons per ton as the Fuel Usage Factor for Diesel for the asphalt items noted above. The contractor will not be permitted to change the Fuel Usage Factor after the bids are submitted.

DISADVANTAGED BUSINESS ENTERPRISE (DIVISIONS):
(10-16-07)(Rev. 10-21-25) 102-15(J) SP1 G62

Description

The purpose of this Special Provision is to carry out the U.S. Department of Transportation's policy of ensuring nondiscrimination in the award and administration of contracts financed in whole or in part with Federal funds. This provision is guided by 49 CFR Part 26.

Definitions

Additional DBE Subcontractors - Any DBE submitted at the time of bid that will not be used to meet the DBE goal. No submittal of a Letter of Intent is required.

Committed DBE Subcontractor - Any DBE submitted at the time of bid that is being used to meet the DBE goal by submission of a Letter of Intent. Or any DBE used as a replacement for a previously committed DBE firm.

Contract Goal Requirement - The approved DBE participation at time of award, but not greater than the advertised contract goal.

DBE Goal - A portion of the total contract, expressed as a percentage, that is to be performed by committed DBE subcontractor(s).

Disadvantaged Business Enterprise (DBE) - A firm certified as a Disadvantaged Business Enterprise through the North Carolina Unified Certification Program.

Goal Confirmation Letter - Written documentation from the Department to the bidder confirming the Contractor's approved, committed DBE participation along with a listing of the committed DBE firms.

Manufacturer - A firm that owns (or leases) and operates or maintains a factory or establishment that produces on the premises, the materials or supplies obtained by the Contractor. A firm that makes minor modifications to the materials, supplies, articles, or equipment is not a manufacturer.

Regular Dealer - A firm that owns (or leases), and operates a store, warehouse, or other establishment in which the materials or supplies required for the performance of the contract are bought, kept in sufficient quantities, and regularly sold to the public in the usual course of business. A regular dealer engages in, as its principal business and in its own name, the purchase and sale or lease of the products in question. A regular dealer in such bulk items as steel, concrete or concrete products, gravel, stone, asphalt and petroleum products need not keep such products in stock, if it owns and operates distribution equipment for the products. Any supplement of regular dealers' own distribution equipment shall be by a long-term operating lease and not on an ad hoc or contract-by-contract basis.

Distributor – A firm that engages in the regular sale or lease of the items specified by the contract. A distributor assumes responsibility for the items it purchases once they leave the point

of origin (e.g., a manufacturer's facility), making it liable for any loss or damage not covered by the carrier's insurance.

Replacement / Substitution – A full or partial reduction in the amount of work subcontracted to a committed (or an approved substitute) DBE firm.

North Carolina Unified Certification Program (NCUCP) - A program that provides comprehensive services and information to applicants for DBE certification, such that an applicant is required to apply only once for a DBE certification that will be honored by all recipients of USDOT funds in the state and not limited to the Department of Transportation only. The Certification Program is in accordance with 49 CFR Part 26.

United States Department of Transportation (USDOT) - Federal agency responsible for issuing regulations (49 CFR Part 26) and official guidance for the DBE program.

Forms and Websites Referenced in this Provision

DBE Payment Tracking System - On-line system in which the Contractor enters the payments made to DBE subcontractors who have performed work on the project. https://apps.dot.state.nc.us/Vendor/PaymentTracking/

DBE-IS *Subcontractor Payment Information* - Form for reporting the payments made to all DBE firms working on the project. This form is for paper bid projects only. https://connect.ncdot.gov/business/Turnpike/Documents/Form%20DBE-IS%20Subcontractor%20Payment%20Information.pdf

RF-1 *DBE Replacement Request Form* - Form for replacing a committed DBE. https://connect.ncdot.gov/projects/construction/Construction%20Forms/DBE%20MBE%20WBE%20Replacement%20Form%20and%20Instructions.pdf

SAF *Subcontract Approval Form* - Form required for approval to sublet the contract. https://connect.ncdot.gov/projects/construction/Construction%20Forms/SAF%20Form%20-%20Subcontract%20Approval%20Form%20Revised%2004-19.xlsm

JC-1 *Joint Check Notification Form* - Form and procedures for joint check notification. The form acts as a written joint check agreement among the parties providing full and prompt disclosure of the expected use of joint checks. https://connect.ncdot.gov/projects/construction/Construction%20Forms/Joint%20Check%20Notification%20Form.pdf

Letter of Intent - Form signed by the Contractor and the DBE subcontractor, manufacturer or regular dealer that affirms that a portion of said contract is going to be performed by the signed DBE for the estimated amount (based on quantities and unit prices) listed at the time of bid. http://connect.ncdot.gov/letting/LetCentral/Letter%20of%20Intent%20to%20Perform%20as%20a%20Subcontractor.pdf

Listing of DBE Subcontractors Form - Form for entering DBE subcontractors on a project that will meet this DBE goal. This form is for paper bids only.
http://connect.ncdot.gov/municipalities/Bid%20Proposals%20for%20LGA%20Content/08%20DBE%20Subcontractors%20(Federal).docx

Subcontractor Quote Comparison Sheet - Spreadsheet for showing all subcontractor quotes in the work areas where DBEs quoted on the project. This sheet is submitted with good faith effort packages.
http://connect.ncdot.gov/business/SmallBusiness/Documents/DBE%20Subcontractor%20Quote%20Comparison%20Example.xls

DBE Regular Dealer/Distributor Affirmation Form – Form is used to make a preliminary counting determination for each DBE listed as a regular dealer or distributor to assess its eligibility for 60 or 40 percent credit, respectively of the cost of materials or supplies based on its demonstrated capacity and intent to perform as a regular dealer or distributor, as defined in section 49 CFR 26.55 under the contract at issue. A Contractor will submit the completed form with the Letter of Intent.
https://connect.ncdot.gov/projects/construction/Construction%20Forms/DBE%20Regular%20Dealer-Distributor%20Affirmation%20Form%20-%20USDOT%202024.pdf

DBE Goal

There is NO goal for participation by Disadvantaged Business Enterprises for this contract.

Directory of Transportation Firms (Directory)

Real-time information is available about firms doing business with the Department and firms that are certified through NCUCP in the Directory of Transportation Firms. Only firms identified in the Directory as DBE certified shall be used to meet the DBE goal. The Directory can be found at the following link.

https://www.ebs.nc.gov/VendorDirectory/default.html

The listing of an individual firm in the directory shall not be construed as an endorsement of the firm's capability to perform certain work.

Listing of DBE Subcontractors

At the time of bid, bidders shall submit all DBE participation that they anticipate to use during the life of the contract. Only those identified to meet the DBE goal will be considered committed, even though the listing shall include both committed DBE subcontractors and additional DBE subcontractors. Additional DBE subcontractor participation submitted at the time of bid will be used toward the Department's overall race-neutral goal. Only those firms with current DBE certification at the time of bid opening will be acceptable for listing in the bidder's submittal of DBE participation. The Contractor shall indicate the following required information:

(A) Electronic Bids

Bidders shall submit a listing of DBE participation in the appropriate section of the electronic submittal file.

(1) Submit the names and addresses of DBE firms identified to participate in the contract. If the bidder uses the updated listing of DBE firms shown in the electronic submittal file, the bidder may use the dropdown menu to access the name and address of the DBE firm.

(2) Submit the contract line numbers of work to be performed by each DBE firm. When no figures or firms are entered, the bidder will be considered to have no DBE participation.

(3) The bidder shall be responsible for ensuring that the DBE is certified at the time of bid by checking the Directory of Transportation Firms. If the firm is not certified at the time of the bid-letting, that DBE's participation will not count towards achieving the DBE goal.

(B) Paper Bids

(1) *If the DBE goal is more than zero,*

(a) Bidders, at the time the bid proposal is submitted, shall submit a listing of DBE participation, including the names and addresses on *Listing of DBE Subcontractors* contained elsewhere in the contract documents in order for the bid to be considered responsive. Bidders shall indicate the total dollar value of the DBE participation for the contract.

(b) If bidders have no DBE participation, they shall indicate this on the *Listing of DBE Subcontractors* by entering the word "None" or the number "0." This form shall be completed in its entirety. **Blank forms will not be deemed to represent zero participation**. Bids submitted that do not have DBE participation indicated on the appropriate form will not be read publicly during the opening of bids. The Department will not consider these bids for award and the proposal will be rejected.

(c) The bidder shall be responsible for ensuring that the DBE is certified at the time of bid by checking the Directory of Transportation Firms. If the firm is not certified at the time of the bid-letting, that DBE's participation will not count towards achieving the DBE goal.

(2) *If the DBE goal is zero,* entries on the *Listing of DBE Subcontractors* are not required, however any DBE participation that is achieved during the project shall be reported in accordance with requirements contained elsewhere in the special provision.

DBE Prime Contractor

When a certified DBE firm bids on a contract that contains a DBE goal, the DBE firm is responsible for meeting the goal or making good faith efforts to meet the goal, just like any other bidder. In most cases, a DBE bidder on a contract will meet the DBE goal by virtue of the work it performs on the contract with its own forces. However, all the work that is performed by the DBE bidder and any other DBE subcontractors will count toward the DBE goal. The DBE bidder shall list itself along with any DBE subcontractors, if any, in order to receive credit toward the DBE goal.

For example, if the DBE goal is 45% and the DBE bidder will only perform 40% of the contract work, the prime will list itself at 40%, and the additional 5% shall be obtained through additional DBE participation with DBE subcontractors or documented through a good faith effort.

DBE prime contractors shall also follow Sections A or B listed under *Listing of DBE Subcontractor* just as a non-DBE bidder would.

Written Documentation – Letter of Intent

The bidder shall submit written documentation for each DBE that will be used to meet the DBE goal of the contract, indicating the bidder's commitment to use the DBE in the contract. This documentation shall be submitted on the Department's form titled *Letter of Intent*.

The documentation shall be received in the office of the Engineer no later than 2:00 p.m. of the fifth calendar day following opening of bids, unless the fifth day falls on Saturday, Sunday or an official state holiday. In that situation, it is due in the office of the Engineer no later than 10:00 a.m. on the next official state business day.

If the bidder fails to submit the Letter of Intent from each committed DBE to be used toward the DBE goal, or if the form is incomplete (i.e. both signatures are not present), the DBE participation will not count toward meeting the DBE goal. If the lack of this participation drops the commitment below the DBE goal, the Contractor shall submit evidence of good faith efforts, completed in its entirety, to the Engineer no later than 2:00 p.m. on the eighth calendar day following opening of bids, unless the eighth day falls on Saturday, Sunday or an official state holiday. In that situation, it is due in the office of the Engineer no later than 10:00 a.m. on the next official state business day.

Submission of Good Faith Effort

If the bidder fails to meet or exceed the DBE goal the apparent lowest responsive bidder shall submit to the Department documentation of adequate good faith efforts made to reach the DBE goal.

One complete set and **three (3)** copies of this information shall be received in the office of the Engineer no later than 2:00 p.m. of the fifth calendar day following opening of bids, unless the fifth day falls on Saturday, Sunday or an official state holiday. In that situation, it is due in the office of the Engineer no later than 10:00 a.m. on the next official state business day.

Note: Where the information submitted includes repetitious solicitation letters, it will be acceptable to submit a representative letter along with a distribution list of the firms that were solicited. Documentation of DBE quotations shall be a part of the good faith effort submittal. This documentation may include written subcontractor quotations, telephone log notations of verbal quotations, or other types of quotation documentation.

Consideration of Good Faith Effort for Projects with DBE Goals More Than Zero

Adequate good faith efforts mean that the bidder took all necessary and reasonable steps to achieve the goal which, by their scope, intensity, and appropriateness, could reasonably be expected to obtain sufficient DBE participation. Adequate good faith efforts also mean that the bidder actively and aggressively sought DBE participation. Mere *pro forma* efforts are not considered good faith efforts.

The Department will consider the quality, quantity, and intensity of the different kinds of efforts a bidder has made. Listed below are examples of the types of actions a bidder will take in making a good faith effort to meet the goal and are not intended to be exclusive or exhaustive, nor is it intended to be a mandatory checklist.

(A) Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising, written notices, use of verifiable electronic means through the use of the NCDOT Directory of Transportation Firms) the interest of all certified DBEs who have the capability to perform the work of the contract. The bidder must solicit this interest within at least 10 days prior to bid opening to allow the DBEs to respond to the solicitation. Solicitation shall provide the opportunity to DBEs within the Division and surrounding Divisions where the project is located. The bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.

(B) Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved.

(1) Where appropriate, break out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces.

(2) Negotiate with subcontractors to assume part of the responsibility to meet the contract DBE goal when the work to be sublet includes potential for DBE participation (2nd and 3rd tier subcontractors).

(C) Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

(D) (1) Negotiating in good faith with interested DBEs. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence

of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the work.

(2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Bidding contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.

(E) Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associates and political or social affiliations (for example, union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.

(F) Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or bidder.

(G) Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.

(H) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; Federal, State, and local minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs. Contact within 7 days from the bid opening the Business Opportunity and Work Force Development Unit at BOWD@ncdot.gov to give notification of the bidder's inability to get DBE quotes.

(I) Any other evidence that the bidder submits which shows that the bidder has made reasonable good faith efforts to meet the DBE goal.

In addition, the Department may take into account the following:

(1) Whether the bidder's documentation reflects a clear and realistic plan for achieving the DBE goal.

(2) The bidders' past performance in meeting the DBE goals.

(3) The performance of other bidders in meeting the DBE goal. For example, when the apparent successful bidder fails to meet the DBE goal, but others meet it, you

may reasonably raise the question of whether, with additional reasonable efforts the apparent successful bidder could have met the goal. If the apparent successful bidder fails to meet the DBE goal, but meets or exceeds the average DBE participation obtained by other bidders, the Department may view this, in conjunction with other factors, as evidence of the apparent successful bidder having made a good faith effort.

If the Department does not award the contract to the apparent lowest responsive bidder, the Department reserves the right to award the contract to the next lowest responsive bidder that can satisfy to the Department that the DBE goal can be met or that an adequate good faith effort has been made to meet the DBE goal.

Non-Good Faith Appeal

The Engineer will notify the Contractor verbally and in writing of non-good faith. A Contractor may appeal a determination of non-good faith made by the Goal Compliance Committee. If a Contractor wishes to appeal the determination made by the Committee, they shall provide written notification to the Engineer. The appeal shall be made within 2 business days of notification of the determination of non-good faith.

Counting DBE Participation Toward Meeting DBE Goal

(A) Participation

The total dollar value of the participation by a committed DBE will be counted toward the contract goal requirement. The total dollar value of participation by a committed DBE will be based upon the value of work performed by the DBE and the actual payments to DBE firms by the Contractor.

(B) Joint Checks

Prior notification of joint check use shall be required when counting DBE participation for services or purchases that involves the use of a joint check. Notification shall be through submission of Form JC-1 *(Joint Check Notification Form)* and the use of joint checks shall be in accordance with the Department's Joint Check Procedures.

(C) Subcontracts (Non-Trucking)

A DBE may enter into subcontracts. Work that a DBE subcontracts to another DBE firm may be counted toward the contract goal requirement. Work that a DBE subcontracts to a non-DBE firm does <u>not</u> count toward the contract goal requirement. If a DBE contractor or subcontractor subcontracts a significantly greater portion of the work of the contract than would be expected on the basis of standard industry practices, it shall be presumed that the DBE is not performing a commercially useful function. The DBE may present evidence to rebut this presumption to the Department. The Department's decision on the rebuttal of this presumption is subject to review by the Federal Highway Administration but is not administratively appealable to USDOT.

(D) Joint Venture

When a DBE performs as a participant in a joint venture, the Contractor may count toward its contract goal requirement a portion of the total value of participation with the DBE in the joint venture, that portion of the total dollar value being a distinct clearly defined portion of work that the DBE performs with its forces.

(E) Manufacturer, Regular Dealer, Distributor

A Contractor may count toward its DBE requirement 40 percent of its expenditures for materials or supplies (including transportation costs) from a DBE distributor, 60 percent of its expenditures for materials or supplies (including transportation costs) from a DBE regular dealer and 100 percent of such expenditures obtained from a DBE manufacturer.

A Contractor may count toward its DBE requirement the following expenditures to DBE firms that are not manufacturers, regular dealers or distributors:

(1) The fees or commissions charged by a DBE firm for providing a *bona fide* service, such as professional, technical, consultant, or managerial services, or for providing bonds or insurance specifically required for the performance of a DOT-assisted contract, provided the fees or commissions are determined to be reasonable and not excessive as compared with fees and commissions customarily allowed for similar services.

(2) With respect to materials or supplies purchased from a DBE, which is neither a manufacturer, regular dealer, nor a distributor count the entire amount of fees or commissions charged that the Department deems to be reasonable, including transportation charges for the delivery of materials or supplies. Do not count any portion of the cost of the materials and supplies themselves.

A Contractor will submit a completed *DBE Regular Dealer/Distributor Affirmation Form* with the Letter of Intent to the Engineer. The Engineer will forward to the State Contractor Utilization Engineer or DBE@ncdot.gov. The State Contractor Utilization Engineer will make a preliminary assessment as to whether a DBE supplier has the demonstrated capacity to perform a commercially useful function (CUF) on a contract-by-contract basis *prior* to its participation.

Commercially Useful Function

(A) DBE Utilization

The Contractor may count toward its contract goal requirement only expenditures to DBEs that perform a commercially useful function in the work of a contract. A DBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE shall also be responsible with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material and installing

(where applicable) and paying for the material itself. To determine whether a DBE is performing a commercially useful function, the Department will evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the contract is commensurate with the work it is performing and the DBE credit claimed for its performance of the work, and any other relevant factors.

(B) DBE Utilization in Trucking

The following factors will be used to determine if a DBE trucking firm is performing a commercially useful function:

(1) The DBE shall be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract, and there shall not be a contrived arrangement for the purpose of meeting DBE goals.

(2) The DBE shall itself own and operate at least one fully licensed, insured, and operational truck used on the contract.

(3) The DBE receives credit for the total value of the transportation services it provides on the contract using trucks it owns, insures, and operates using drivers it employs.

(4) The DBE may subcontract the work to another DBE firm, including an owner-operator who is certified as a DBE. The DBE who subcontracts work to another DBE receives credit for the total value of the transportation services the subcontracted DBE provides on the contract.

(5) The DBE may also subcontract the work to a non-DBE firm, including from an owner-operator. The DBE who subcontracts the work to a non-DBE is entitled to credit for the total value of transportation services provided by the non-DBE subcontractor not to exceed the value of transportation services provided by DBE-owned trucks on the contract. Additional participation by non-DBE subcontractors receives credit only for the fee or commission it receives as a result of the subcontract arrangement. The value of services performed under subcontract agreements between the DBE and the Contractor will not count towards the DBE contract requirement.

(6) A DBE may lease truck(s) from an established equipment leasing business open to the general public. The lease must indicate that the DBE has exclusive use of and control over the truck. This requirement does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. This type of lease may count toward the DBE's credit as long as the driver is under the DBE's payroll.

(7) Subcontracted/leased trucks shall display clearly on the dashboard the name of the DBE that they are subcontracted/leased to and their own company name if it is not identified on the truck itself. Magnetic door signs are not permitted.

DBE Replacement

When a Contractor has relied on a commitment to a DBE subcontractor (or an approved substitute DBE subcontractor) to meet all or part of a contract goal requirement, the contractor shall not terminate the DBE subcontractor or any portion of its work for convenience. This includes, but is not limited to, instances in which the Contractor seeks to perform the work of the terminated subcontractor with another DBE subcontractor, a non-DBE subcontractor, or with the Contractor's own forces or those of an affiliate.

The Contractor must give notice in writing both by certified mail and email to the DBE subcontractor, with a copy to the Engineer of its intent to request to terminate a DBE subcontractor or any portion of its work, and the reason for the request. The Contractor must give the DBE subcontractor five (5) business days to respond to the Contractor's Notice of Intent to Request Termination and/or Substitution. If the DBE subcontractor objects to the intended termination/substitution, the DBE, within five (5) business days must advise the Contractor and the Department of the reasons why the action should not be approved. The five-day notice period shall begin on the next business day after written notice is provided to the DBE subcontractor.

A committed DBE subcontractor may only be terminated or any portion of its work after receiving the Department's written approval based upon a finding of good cause for the proposed termination and/or substitution. Good cause does not exist if the Contractor seeks to terminate a DBE or any portion of its work that it relied upon to obtain the contract so that the Contractor can self-perform the work for which the DBE was engaged, or so that the Contractor can substitute another DBE or non-DBE contractor after contract award. For purposes of this section, good cause shall include the following circumstances:

(a) The listed DBE subcontractor fails or refuses to execute a written contract;
(b) The listed DBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the prime contractor;
(c) The listed DBE subcontractor fails or refuses to meet the prime contractor's reasonable, nondiscriminatory bond requirements;
(d) The listed DBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness;
(e) The listed DBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant to 2 CFR parts 180, 215 and 1200 or applicable State law;
(f) The listed DBE subcontractor is not a responsible contractor;
(g) The listed DBE voluntarily withdraws from the project and provides written notice of withdrawal;
(h) The listed DBE is ineligible to receive DBE credit for the type of work required;
(i) A DBE owner dies or becomes disabled with the result that the listed DBE contractor is unable to complete its work on the contract; and
(j) Other documented good cause that compels the termination of the DBE subcontractor.

The Contractor shall comply with the following for replacement of a committed DBE:

(A) Performance Related Replacement

When a committed DBE is terminated for good cause as stated above, an additional DBE that was submitted at the time of bid may be used to fulfill the DBE commitment. A good faith effort will only be required for removing a committed DBE if there were no additional DBEs submitted at the time of bid to cover the same amount of work as the DBE that was terminated.

If a replacement DBE is not found that can perform at least the same amount of work as the terminated DBE, the Contractor shall submit a good faith effort documenting the steps taken. Such documentation shall include, but not be limited to, the following:

(1) Copies of written notification to DBEs that their interest is solicited in contracting the work defaulted by the previous DBE or in subcontracting other items of work in the contract.

(2) Efforts to negotiate with DBEs for specific subbids including, at a minimum:

(a) The names, addresses, and telephone numbers of DBEs who were contacted.
(b) A description of the information provided to DBEs regarding the plans and specifications for portions of the work to be performed.

(3) A list of reasons why DBE quotes were not accepted.

(4) Efforts made to assist the DBEs contacted, if needed, in obtaining bonding or insurance required by the Contractor.

(B) Decertification Replacement

(1) When a committed DBE is decertified by the Department after the SAF (*Subcontract Approval Form*) has been received by the Department, the Department will not require the Contractor to solicit replacement DBE participation equal to the remaining work to be performed by the decertified firm. The participation equal to the remaining work performed by the decertified firm will count toward the contract goal requirement but not the overall goal.

(i) If the DBE's ineligibility is caused solely by its having exceeded the size standard during the performance of the contract. The Department may continue to count participation equal to the remaining work performed by the decertified firm which will count toward the contract goal requirement and overall goal.

(ii) If the DBE’s ineligibility is caused solely by its acquisition by or merger with a non-DBE during the performance of the contract. The Department may not continue to count the portion of the decertified firm’s

performance on the contract remaining toward either the contract goal or the overall goal, even if the Contractor has executed a subcontract with the firm or the Department has executed a prime contract with the DBE that was later decertified.

(2) When a committed DBE is decertified prior to the Department receiving the SAF (*Subcontract Approval Form*) for the named DBE firm, the Contractor shall take all necessary and reasonable steps to replace the DBE subcontractor with another DBE subcontractor to perform at least the same amount of work to meet the DBE goal requirement. If a DBE firm is not found to do the same amount of work, a good faith effort must be submitted to NCDOT (see A herein for required documentation).

All requests for replacement of a committed DBE firm shall be submitted to the Engineer for approval on Form RF-1 *(DBE Replacement Request).* If the Contractor fails to follow this procedure, the Contractor may be disqualified from further bidding for a period of up to 6 months

Changes in the Work

When the Engineer makes changes that result in the reduction or elimination of work to be performed by a committed DBE, the Contractor will not be required to seek additional participation. When the Engineer makes changes that result in additional work to be performed by a DBE based upon the Contractor's commitment, the DBE shall participate in additional work to the same extent as the DBE participated in the original contract work.

When the Engineer makes changes that result in extra work, which has more than a minimal impact on the contract amount, the Contractor shall seek additional participation by DBEs unless otherwise approved by the Engineer.

When the Engineer makes changes that result in an alteration of plans or details of construction, and a portion or all of the work had been expected to be performed by a committed DBE, the Contractor shall seek participation by DBEs unless otherwise approved by the Engineer.

When the Contractor requests changes in the work that result in the reduction or elimination of work that the Contractor committed to be performed by a DBE, the Contractor shall seek additional participation by DBEs equal to the reduced DBE participation caused by the changes.

Reports and Documentation

A SAF (*Subcontract Approval Form*) shall be submitted for all work which is to be performed by a DBE subcontractor. The Department reserves the right to require copies of actual subcontract agreements involving DBE subcontractors.

When using transportation services to meet the contract commitment, the Contractor shall submit a proposed trucking plan in addition to the SAF. The plan shall be submitted prior to beginning construction on the project. The plan shall include the names of all trucking firms proposed for use, their certification type(s), the number of trucks owned by the firm, as well as the individual truck identification numbers, and the line item(s) being performed.

Within 30 calendar days of entering into an agreement with a DBE for materials, supplies or services, not otherwise documented by the SAF as specified above, the Contractor shall furnish the Engineer a copy of the agreement. The documentation shall also indicate the percentage (60% or 100%) of expenditures claimed for DBE credit.

Reporting Disadvantaged Business Enterprise Participation

The Contractor shall provide the Engineer with an accounting of payments made to all DBE firms, including material suppliers and contractors at all levels (prime, subcontractor, or second tier subcontractor). This accounting shall be furnished to the Engineer for any given month by the end of the following month. Failure to submit this information accordingly may result in the following action:

(A) Withholding of money due in the next partial pay estimate; or

(B) Removal of an approved contractor from the prequalified bidders' list or the removal of other entities from the approved subcontractors list.

While each contractor (prime, subcontractor, 2nd tier subcontractor) is responsible for accurate accounting of payments to DBEs, it shall be the prime contractor's responsibility to report all monthly and final payment information in the correct reporting manner.

Failure on the part of the Contractor to submit the required information in the time frame specified may result in the disqualification of that contractor and any affiliate companies from further bidding until the required information is submitted.

Failure on the part of any subcontractor to submit the required information in the time frame specified may result in the disqualification of that contractor and any affiliate companies from being approved for work on future projects until the required information is submitted.

Contractors reporting transportation services provided by non-DBE lessees shall evaluate the value of services provided during the month of the reporting period only.

At any time, the Engineer can request written verification of subcontractor payments.

The Contractor shall report the accounting of payments through the Department's DBE Payment Tracking System.

Failure to Meet Contract Requirements

Failure to meet contract requirements in accordance with Subarticle 102-15(J) of the *Standard Specifications* may be cause to disqualify the Contractor.

MULTI-YEAR MAINTENANCE CONTRACTS (ID/IQ):
(4-20-21) (Rev. 4-19-22) SP1 G75

This contract is a multi-year maintenance contract let pursuant to the provisions of N.C. General Statute §136-28.1(b). No minimum quantity of services is guaranteed to be awarded bidders under this contract. In accordance with N.C. General Statute §136-28.1(b), an award in a maintenance contract may be for an amount less but shall not exceed $5,000,000 per year. No payments in excess of this amount will be disbursed, in accordance with the Statute.

CERTIFICATION FOR FEDERAL-AID CONTRACTS:
(3-21-90) SP1 G85

The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

(A) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(B) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, *Disclosure Form to Report Lobbying*, in accordance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by *Section 1352, Title 31, U.S. Code*. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such subrecipients shall certify and disclose accordingly.

RESTRICTIONS ON ITS EQUIPMENT AND SERVICES:
(11-17-20) SP01 G090

All telecommunications, video or other ITS equipment or services installed or utilized on this project must be in conformance with UNIFORM ADMINISTRATIVE REQUIREMENTS, COST PRINCIPLES, AND AUDIT REQUIREMENTS FOR FEDERAL AWARDS **2 CFR, § 200.216 Prohibition on certain telecommunications and video surveillance services or equipment.**

USE OF UNMANNED AIRCRAFT SYSTEM (UAS):
(8-20-19)(Rev. 3-17-26) SP1 G092

The Contractor shall adhere to all Federal, State and Local regulations and guidelines for the use of Unmanned Aircraft Systems (UAS). This includes but is not limited to US 14 CFR Part 107, NC GS 15A-300, American Security Drone Act of 2023 (ASDA), Office of Management and Budget (OMB) Memorandum M-26-02, all FAA rules, regulations and policies and all NCDOT UAS Policies. The required operator certifications include possessing a current Federal Aviation Administration (FAA) Remote Pilot Certificate, as well as operating a UAS registered with the FAA.

All UAS operations shall be approved by the Engineer prior to beginning the operations.

All contractors or subcontractors operating UAS shall have UAS specific general liability insurance to cover all operations under this contract.

The use of UAS is at the Contractor's discretion. No measurement or payment will be made for the use of UAS. In the event that the Department directs the Contractor to utilize UAS, payment will be in accordance with Article 104-7 Extra Work.

EQUIPMENT IDLING GUIDELINES:
(1-19-21) 107 SP1 G096

Exercise reduced fuel consumption and reduced equipment emissions during the construction of all work associated with this contract. Employees engaged in the construction of this project should turn off vehicles when stopped for more than thirty (30) minutes and off-highway equipment should idle no longer than fifteen (15) consecutive minutes.

These guidelines for turning off vehicles and equipment when idling do not apply to:

1. Idling when queuing.
2. Idling to verify the vehicle is in safe operating condition.
3. Idling for testing, servicing, repairing or diagnostic purposes.
4. Idling necessary to accomplish work for which the vehicle was designed (such as operating a crane, mixing concrete, etc.).
5. Idling required to bring the machine system to operating temperature.
6. Emergency vehicles, utility company, construction, and maintenance vehicles where the engines must run to perform needed work.
7. Idling to ensure safe operation of the vehicle.
8. Idling when the propulsion engine is providing auxiliary power for other than heating or air conditioning. (such as hydraulic systems for pavers)
9. When specific traffic, safety, or emergency situations arise.
10. If the ambient temperature is less than 32 degrees Fahrenheit. Limited idling to provide for the safety of vehicle occupants (e.g. to run the heater).
11. If the ambient temperature is greater than 90 degrees Fahrenheit. Limited idling to provide for the safety of vehicle occupants of off-highway equipment (e.g. to run the air conditioning) no more than 30 minutes.
12. Diesel powered vehicles may idle for up to 30 minutes to minimize restart problems.

Any vehicle, truck, or equipment in which the primary source of fuel is natural gas or electricity is exempt from the idling limitations set forth in this special provision.

U.S. DEPARTMENT OF TRANSPORTATION HOTLINE:
(11-22-94) 108-5 SP1 G100

To report bid rigging activities call: **1-800-424-9071**

The U.S. Department of Transportation (DOT) operates the above toll-free hotline Monday through Friday, 8:00 a.m. to 5:00 p.m. eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the hotline to report such activities.

The hotline is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

MATERIAL AVAILABILITY:

The Contractor shall immediately notify the Engineer in writing of material availability issues that may delay the Contractor’s ability to complete a Work Order Assignment. The Contractor shall provide the Engineer with documentation from suppliers confirming the material availability issue. The Engineer will determine appropriate intermediate contract completion times for documented and confirmed material availability issues on a case-by-case basis.

SUBSURFACE INFORMATION:
(12-06-23) SPD

There is **no** subsurface information available on this project. The Contractor shall make his own investigation of subsurface conditions.

PROJECT SPECIAL PROVISIONS

ROADWAY

PRECONSTRUCTION CONFERENCE

Depending upon the size and location of any slope failures occurring during this contract, the contractor may or may not be required to have a preconstruction conference with Division Thirteen Engineering Personnel. The Contractor will be informed if a preconstruction conference will be necessary after his/her evaluation and submittal of slope failure recommendations.

CONTRACT REQUIREMENTS

The overall scope shall consist of stabilizing identified landslides by internally reinforcing the soil mass with reinforcing elements (soil nails and/or micropiles) using installation methods as specified in this contract. North Carolina Department of Transportation (NCDOT) will identify locations of all work to be performed as specified herein.

The Contractor may be called out for a site visit prior to the issuance of a work order assignment. The purpose of the site visit will be for the Contractor to evaluate and prepare an estimate of the materials and services needed to repair the site to the engineer's specifications. Unless otherwise requested by NCDOT, the Contractor shall schedule the site visit within **twenty-four (24) hours** following notification by NCDOT personnel and shall provide a detailed written estimate of materials and services needed to repair the site to NCDOT's specifications within **twenty-four (24) hours** following the site visit. Any necessary subsurface exploration, site survey, and slope stability modeling to prepare the estimate is the responsibility of the Contractor. **All written estimates must contain a warranty statement guaranteeing the roadway platform stability for the repaired section for a period of five (5) years and that any necessary repairs will be made in a timely manner at no cost to NCDOT. This warranty statement must be jointly endorsed by the Contractor and the Contractor's Engineer.**

Following issuance of a Work Request, the Contractor will provide all necessary engineering plans and details required to successfully repair landslides. These plans shall be stamped by a Registered Professional Engineer (PE), licensed in the State of North Carolina, who is knowledgeable and experienced in the design and implementation of slope stabilization with soil nails, micropiles, and related work. Changes or deviations from the approved submittals must be resubmitted for approval. No adjustments in project time will be allowed due to incomplete submittals. The PE stamped submittals shall include at a minimum the following information:

1. A description of the soil nail construction sequence and a schedule of work activities.

2. A description and detail of the size and spacing of soil nails to be placed in order to meet minimum static/seismic factors of safety for global stability of the repair. The materials and components selected will meet a 75-year design life. Designs will include

consideration of appropriate loadings, geometry, and material properties associated with the native soils, backfill, reinforcement connections, facing, and other design elements.

3. All necessary details to successfully construct any temporary/permanent facing and drainage system.

The Division Engineer or his duly appointed representative will review the estimate submitted by the contractor and once those measures needed have been agreed upon, contractor will be given the approval to commence work.

Unless otherwise approved by NCDOT, repair operations commencement and submittal of stamped plans shall be within **forty-eight (48) hours** after receipt of a work request. Once repair has commenced, it shall continue until completion. The Contractor must also have the ability to design and repair up to **three (3)** sites simultaneously, if necessary, in order to efficiently provide maintenance and emergency repairs as required.

BURNING RESTRICTIONS:

(7-1-95) 200, 210, 215 SP2 R05

Open burning is not permitted on any portion of the right-of-way limits established for this project. Do not burn the clearing, grubbing or demolition debris designated for disposal and generated from the project at locations within the project limits, off the project limits or at any waste or borrow sites in this county. Dispose of the clearing, grubbing and demolition debris by means other than burning, according to state or local rules and regulations.

ROADWAY EXCAVATION:

(10-20-26) 225 SP2 R50

Revise the *Standard Specifications* as follows:

Page 2-12, Article 225-1, DESCRIPTION, add the following after line 42:

When excavation operations encounter graves, temporarily discontinue operations in the vicinity of the graves and do not resume until directed by the Engineer.

When excavation operations encounter contaminated soils, temporarily discontinue operations in the vicinity of the contamination and do not resume until directed by the Engineer.

When excavation operations encounter artifacts or remains of historical, cultural, or archeological significance, temporarily discontinue operations in the vicinity of the artifacts or remains and do not resume until directed by the Engineer. Disposition of the artifacts shall be in accordance with the requirements of the Division of Archives and History.

Discontinuing operations shall include promptly ceasing all work in the vicinity, immediately notifying the Engineer as to the discovery for legally required authority notification, taking all precautions to protect the discovery from further disturbance to include securing the area and preventing access to it, and preserving all materials as found as directed by the Engineer.

Page 2-15, Article 225-3, UNCLASSIFIED EXCAVATION, lines 23-30, delete the last three paragraphs.

RETAINING WALL COORDINATES:
(12-15-26) SP4 R10

When a retaining wall is included in the contract and a wall survey is specified for the wall, submit the coordinates to the Engineer for the locations where the retaining wall begins and ends and all points where the wall changes direction, i.e., bends. Report the coordinates (latitude, longitude) in decimal degrees on the wall plan view that is submitted with the retaining wall design.

No direct payment will be made for the work required of this provision, as such work will be included in the contract unit price bid for the various retaining wall pay items in the contract.

HORIZONTAL DRAINS:
(12-17-19)(Rev. 1-16-24) SP8 R17

Description

Construct horizontal drains for slopes, rock cuts and retaining walls in accordance with the contract and Geotechnical Standard Detail No. 817.01. A horizontal drain typically consists of a slotted PVC pipe placed in a drilled hole inclined at an angle above horizontal but in some holes, the pipe may be omitted. Horizontal drains are required to drain water from slopes and rock cuts and from behind retaining walls at locations and elevations shown in the plans and as directed.

Materials

Refer to Division 10 of the *Standard Specifications*.

Item	**Section**
PVC Pipe	1044-6

Use solid and slotted PVC Schedule 40 or 80 pipes as shown in the plans for drain pipe. Provide slotted PVC pipes with 0.01" wide horizontal slots in the direction perpendicular to the pipe length and evenly spaced around and along pipe so that open area is at least 1 sq in per linear ft of pipe.

Construction Methods

The Engineer will determine the number, locations, elevations, inclination and lengths of horizontal drains required. The approximate known drain locations, elevations, inclination and lengths are shown in the plans. Drain pipe requirements including those drains without pipes will also be determined by the Engineer and known pipe information is shown in the plans.

Use drill rigs of the sizes necessary to install horizontal drains and with sufficient capacity to drill through whatever materials are encountered. Drilling through boulders, cobbles and rock lenses may be required but drilling in continuous intact weathered or hard rock as determined by the Engineer is not required unless drain pipe is omitted. Drill straight and clean holes with the

dimensions and orientation shown in the plans or as directed. Drill holes within 6" of planned locations and elevations and 2° of required inclination.

For horizontal drains with drain pipes, do not insert PVC pipes into drill holes until hole locations, elevations, dimensions, inclination and cleanliness are approved. Insert drain pipes through hollow stem augers or into open clean drill holes. Do not vibrate, drive or otherwise force pipes into holes. If a drain pipe cannot be completely and easily inserted into a drill hole, remove the pipe and clean or redrill the hole.

Extend solid PVC sections of drain pipes out past slope face far enough to connect pipe to a drainage system or discharge water as directed. Seal all around drain pipe at collar of drill hole with a method acceptable to the Engineer. Record horizontal drain number, location, elevation and installation date, description of drilling conditions and completed drain pipe, if applicable, and drill hole diameter, length and inclination for each horizontal drain and provide this information to the Engineer.

Measurement and Payment

Horizontal Drains and *Horizontal Drains Without Pipes* will be measured and paid in linear feet. Horizontal drains will be measured as the linear feet of hole drilled and no measurement will be made for any pipes installed in or extending out from drill holes.

The contract unit price for *Horizontal Drains* will be full compensation for providing labor, tools, equipment and drain materials, drilling and removing cuttings, installing, connecting and sealing around drain pipes and supplying PVC pipes, pipe fittings, sealing materials and any incidentals necessary to construct horizontal drains. The contract unit price for *Horizontal Drains Without Pipes* will be full compensation for the same except for pipe and sealing items.

Payment will be made under:

Pay Item	**Pay Unit**
Horizontal Drains	Linear Foot
Horizontal Drains Without Pipes	Linear Foot

WORK ZONE INSTALLER:

(7-20-21)(Rev. 4-21-26) 1101 SP11 R04

Revise the *Standard Specifications* as follows:

Page 11-4, Article 1101-14 WORK ZONE INSTALLER, lines 25-26, delete the first sentence of the first paragraph and replace with the following:

When temporary traffic control consists of more than flagging operations, the Contractor shall provide the service of at least one qualified work zone installer during the setup, installation, and removal of temporary traffic control within the highway right of way.

CONES:
(3-19-24) 1135 SP11 R35

Revise the *Standard Specifications* as follows:

Page 11-11, Article 1135-3 CONSTRUCTION METHODS, lines 19-20, delete the third sentence of the first paragraph, "Do not use cones in the upstream taper of lane or shoulder closures for multi-lane roadways.".

FLAGGERS:
(12-17-24)(Rev. 12-23-25) 1150 SP11 R50

Revise Section 1150 of the *Standard Specification* as follows:

Page 11-13, Article 1150-1, DESCRIPTION, add the following after line 31:

Alternatively, at the discretion of the Contractor, the Contractor may furnish, install, place in operation, repair, maintain, relocate, and remove remotely controlled Automated Flagging Assistance Devices (AFAD) or Temporary Portable Traffic Signal units (PTS units) to assist, supplement, or replace human flaggers for one-lane, two-way traffic maintenance during construction in accordance with this provision and the *Standard Specifications*.

For the purpose of this provision, an "approach" refers to a single lane of traffic moving in one direction toward a point of control or work zone. Flaggers, AFAD and PTS units are only used to control one lane of approaching traffic in a specific direction.

Page 11-13, Article 1150-2, MATERIALS, add the following after line 34:

Provide documentation to the Engineer that the AFAD or PTS units meets or exceeds the requirements of this special provision and is on the NCDOT APL or ITS and Signals QPL.

(A) Automated Flagging Assistance Devices (AFAD)

(1) AFAD General

Cover the automated gate arm with Department approved Type VII, VIII or IX retroreflective sheeting of vertical alternating red and white stripes at 16 inch intervals measured horizontally. When the gate arm is in the down position the minimum vertical aspect of the arm and sheeting shall be 4 inches. The retroreflectorized sheeting shall be on both sides of the gate arm. With the AFAD parked or positioned 2 feet outside or in a location deemed acceptable for the lane being controlled, the gate arm shall reach at least to the center of the lane but shall not exceed the width of the lane being controlled.

Design the system to be fail-safe. Provide a conflict monitor, malfunction monitoring unit, or similar device that monitors for malfunctions and prevents the display of conflicting indications. This system shall be electronic and operated by remote control.

(2) AFAD Type I System: RED/YELLOW

Provide a Red/Yellow AFAD with at least one set of CIRCULAR RED and CIRCULAR YELLOW lenses in a vertical configuration that are 12 inches in diameter. The bottom of the housing (including brackets) shall be at least 7 feet (2.1 meters) above the pavement.

This system is required to have yellow 12 inch aluminum or polycarbonate vehicle signal heads with 10 inch tunnel visors, backplates, and Light Emitting Diode (LED) modules. Provide signal heads, backplates, and LED modules listed on the ITS and Signals QPL available on the Department's website.

Provide an automated gate arm on the AFAD that descends to a down position across the approaching lane of traffic when the steady CIRCULAR RED lens is illuminated and then ascends to an upright position when the flashing CIRCULAR YELLOW lens is illuminated. The automated gate arm is to be designed such that if a motorist pulls underneath the gate arm while lowering, no damage to the vehicle occurs.

A STOP HERE ON RED (R10-6 or R10-6a) sign shall be installed on the right-hand side of the approach at the point at which drivers are expected to stop when the steady CIRCULAR RED lens is illuminated.

To stop traffic, the AFAD shall transition from the flashing CIRCULAR YELLOW lens by initiating a minimum 5 second steadily illuminated CIRCULAR YELLOW lens followed by the CIRCULAR RED lens.

Once the CIRCULAR RED lens is displayed, the system is to have a minimum 2 second delay between the time the steady CIRCULAR RED is displayed and the time the gate arm begins to lower. The maximum delay between CIRCULAR RED and the time the gate arm lowers is 4 seconds. To permit stopped road users to proceed, the AFAD shall display the flashing CIRCULAR YELLOW lens and the gate arm shall be placed in the upright position.

Ensure the system monitors for a lack of yellow or red signal voltage, total loss of indication in any direction, presence of multiple indications on any approach and low power conditions.

Additional sets of CIRCULAR RED and CIRCULAR YELLOW lenses located over the roadway or on the left side of the approach and operated in unison with the primary set, may be used to improve visibility of the AFAD. If the set of lenses is located over any portion of the roadway that can be used by motor vehicles, the bottom of the housing (including brackets) shall be at least 15 feet (4.6 meters) above the pavement.

(3) AFAD Type II System: STOP/SLOW

Provide STOP/SLOW signs that are octagonal in shape, made of rigid material, and at least 36 inch x 36 inch in size. Letters shall be a minimum of 8 inches high. The STOP face shall have a red background with white letters and border.

The SLOW face shall be diamond shaped, orange, or yellow background with black letters and border. Cover both faces in a Department approved Type VII, VIII or IX retroreflective sheeting. The minimum mounting height for the sign faces shall be 7 feet above the pavement to the bottom of the sign.

The AFAD's STOP/SLOW signs shall be supplemented with active conspicuity devices by incorporating a stop beacon (red lens) and a warning beacon (yellow lens). The stop beacon shall be no more than 24 inches above the STOP face. Mount the warning beacon no more than 24 inches above or beside of the SLOW face. Except for the mounting locations, the beacons shall conform to the provisions of Chapter 4L of the MUTCD and have 12 inch signal lenses.

Strobe/flashing lights are an acceptable alternative to flashing beacons. If utilized, they shall be either white or red flashing lights located within the STOP face and white or yellow flashing lights within the SLOW face and conform to the provisions of Chapter 6D of the MUTCD. If used, the lens diameter shall be a minimum of 5 inches with a minimum height of 6 inches. Equip strobes/flashing lights for both dual and quad flash patterns.

Type B warning lights shall not be used in lieu of the beacons or the strobe lights.

The faces of the AFADs STOP/SLOW sign may include louvers. If louvers are used, design the louvers such that the aspect of the sign face to approaching traffic is a full sign face at a distance of 50 feet or greater.

A WAIT ON STOP (R1-7) sign and a GO ON SLOW (R1-8) sign shall be displayed to traffic approaching the AFAD. Position signs on the same support structure as the AFAD. Both signs shall have black legends and borders on white Type III sheeting backgrounds. Each of these signs shall be rectangular in shape and be at least 24 inch x 30 inch size with letters at least 6 inches high.

Provide an automated gate arm on the AFAD that descends to a down position across the approaching lane of traffic when the STOP face is displayed and then ascends to an upright position when the SLOW face is displayed.

The automated gate arm is to be designed such that if a motorist pulls underneath the gate arm while lowering, no damage to the vehicle occurs.

A STOP HERE ON RED (R10-6 or R10-6a) sign shall be installed on the right-hand side of the approach at the point at which drivers are expected to stop when the STOP face is displayed.

When approaching motorists are to proceed, display the SLOW face and the warning beacon or strobes are to flash on the AFAD. When approaching motorists are will be stopped, display the STOP face and the stop beacon or strobes are to flash on the AFAD.

To stop traffic, the AFAD will transition from the SLOW face to the STOP face by initiating a minimum 5 second change cycle. First, the warning beacon is to be

steadily illuminated for the change cycle. If strobes are used in lieu of a warning beacon, they are to be placed in the quad flash pattern. At the end of the change cycle, the STOP face is to be displayed with the stop beacon flashing and the warning beacon or strobes are to stop flashing. Once the STOP face is displayed, the system is to have a minimum 2 second delay between the time the STOP face is displayed and the time the gate arm begins to lower. The maximum delay between the time the STOP face is displayed and the time the gate arm lowers is 4 seconds.

To permit stopped road users to proceed, the gate arm shall be placed in the upright position and the AFAD shall display the SLOW face and the warning beacon or strobes are to flash in the dual flash pattern.

Do not flash the stop beacon when the SLOW face is displayed, and do not flash the warning beacon when the STOP face is displayed.

(B) Portable Traffic Signals (PTS) Units

Provide PTS units with at least one set of CIRCULAR RED, CIRCULAR YELLOW, and CIRCULAR GREEN lenses in a vertical configuration that are 12 inch diameter aluminum or polycarbonate vehicle signal heads with 10 inch tunnel visors, backplates, and Light Emitting Diode (LED) modules. All signal heads, tunnel visors, and backplates shall be yellow in color.

The bottom of the housing (including brackets) shall be at least 7 feet above the pavement for single set units. Additional signal heads on units with more than one signal head shall be capable of extending over the travel lane.

Communication Requirements

All PTS units within the signal set up systems shall maintain communication at all times by either hardwire cable or wireless radio link communication. If the hardwire cable communication is utilized the communication cable shall be deployed in a manner that will not intrude in the direct work area of the project or obstruct vehicular and pedestrian traffic. Utilize radio communication with 900MHz frequency band and frequency hopping capability. The radio link communication system shall have a minimum range of 1 mile.

Fault Mode Requirements

Revert PTS units to a flashing red mode upon system default unless otherwise specified by the Engineer. Equip the PTS units with a remote monitoring system. Where cell communication availability exists, the remote monitoring system shall adhere to the remote monitoring system section of this provision.

Remote Monitoring System

The remote monitoring system (RMS) shall be capable of reporting signal location, battery voltage / battery history and system default. Provide a password protected website viewable from any computer with internet capability for the RMS. In the event of a system default, the RMS shall provide specific information concerning the cause of the system default (i.e. red lamp on signal number 1). Equip the RMS with a mechanism capable of immediately contacting a minimum of three previously designated individuals via text messaging and/or email upon a default.

The running program operating the PTS units shall be always available and viewable through the RMS website. Maintain a history of the RMS operating system in each signal including operating hours and events and the location of the PTS units.

Trailer / Cart

The AFAD and PTS units may be mounted on either a trailer or a moveable cart system.

Finish all exterior metal surfaces with Federal orange enamel per AMS-STD-595, color chip ID# 13538 or 12473 respectively with a minimum paint thickness of 2.5 mils (64 microns).

Design and test the AFAD or PTS units trailer / cart to withstand an 80 MPH wind load while in the operational position. Provide independent certification that the assembly meets the design wind load.

Equip the AFAD or PTS units with leveling jacks capable of stabilizing the unit in a horizontal position when located on slopes 6:1 or flatter.

Equip trailers in compliance with North Carolina Law governing motor vehicles and include a 12-volt trailer lighting system complying *with Federal Motor Carrier Safety Regulations 393*, safety chains and a minimum 2 inch ball hitch.

Provide a minimum 4 inch wide strip of fluorescent conspicuity sheeting retroreflective sheeting to the frame of the trailer. Apply the sheeting to all sides of the trailer. The sheeting shall meet the ASTM requirements of Type VII, VIII or IX.

Power System

Design the systems to operate both with and without an external power source. Furnish transmitters, generators, batteries, controls and all other components necessary to operate the device.

Provide equipment that is solar powered and supplemented with a battery backup system that includes a minimum 110/120 VAC powered on-board charging system capable of powering the unit for 7 continuous days with no solar power. Each unit shall also be capable of being powered by standard 110/120 VAC power sources, if applicable.

Locate batteries and electronic controls in a locked, weather and vandal resistant housings.

Page 11-14, Article 1150-3, CONSTRUCTION METHODS, add the following after line 11:

Flaggers shall have a path to escape an errant approaching vehicle at all times, unimpeded by barrier, guardrail, guiderail, parked vehicles, construction materials, slopes steeper than 2:1, or any other obstruction at all times. If an unimpeded path cannot be maintained, the Contractor shall use AFAD or PTS units in lieu of a flagger.

Provide documentation to the Engineer prior to deploying the device that the AFAD or PTS units operator(s) are qualified flagger(s) that have been properly trained through an NCDOT approved training agency or other NCDOT approved training provider and that the qualified flagger(s) have received manufacturer training to operate that specific device. This training shall include proper installation, remote control operation, central control systems and maintenance of the AFAD or PTS units. The training shall take place off the project site where training conditions are removed from live traffic. The documentation shall include the names of the authorized trainer, the trainees, the device on which they have been trained and the date of the training. Provide updated documentation to the Engineer prior to deploying any additional operators.

Install advance warning signs and operate AFADs in accordance with the attached detail drawings in this provision.

Install advance warning signs and operate PTS units in accordance with *NCDOT Roadway Standard Drawings* No. 1101.02, Sheet 17.

AFAD and PTS units shall only be used in situations where there is only one lane of approaching traffic in the direction to be controlled. **At no time shall an AFAD unit controlling traffic through the work area be placed in an autonomous mode and/or left unattended.**

Signal timing and operation of PTS units shall be field verified and accepted by the Engineer before use.

Do not use AFAD or PTS units in locations where queueing from the AFAD or PTS units will extend to within 150 feet of a signalized intersection or railroad crossing. Do not use AFAD and PTS units as a substitute for or a replacement for a continuously operating temporary traffic control signal as described in Section 6F.84 of the MUTCD.

If used at night, illuminate each AFAD or PTS units as described in Section 6D of the MUTCD.

Provide a complete AFAD or PTS units that is capable of being relocated as traffic conditions demand.

If AFADs or PTS units become inoperative, be prepared at all times to replace the unit with the same type and model of AFAD or PTS units, revert to human flagging operations or terminate all construction activities requiring the use of the AFAD or PTS units until the AFAD or PTS units become operative or qualified human flaggers are available.

When the work requiring the AFAD or PTS units is not pursued for 30 minutes or longer, power off each AFAD or PTS units. Removed the AFAD or PTS units from the travel lane and relocated to a minimum of 5 feet from the edge line. AFAD gate arms shall be in the upright position. Remove all traffic control devices from the road, place two cones by each AFAD or

PTS units and all signs associated with the lane closure operation shall be removed or laid down. At the end of each workday, remove all AFADs or PTS units from the roadway and shoulder areas.

Ensure the system's wireless communication links continuously monitor and verify proper transmission and reception of data used to monitor and control each AFAD or PTS units. Ensure ambient mobile or other radio transmissions or adverse weather conditions do not affect the system.

In the event of a loss of communications, immediately display the flashing RED or STOP indication on all AFAD or PTS units.

AFAD Specific Construction Methods

The flagger/operator controlling the AFAD units shall be on the project site at all times. If multiple AFAD units are used, one AFAD unit shall be the Main AFAD unit and all other units shall be remote AFAD units. Ensure that each device meets the physical display and operational characteristics as specified in the MUTCD.

Multiple AFAD units may be controlled with **one** flagger/operator when the AFAD units meet each of the following requirements:

(1) AFAD units are spaced no greater than the manufacturer's recommendations.

(2) Both AFAD units can be seen at the same time from the flagger/operator's position, or the AFAD is operating on its own secure network with malfunction detection and notification to the flagger/operator.

(3) The flagger/operator has an unobstructed view of approaching traffic in both directions from the flagger/operator position or the AFAD is operating on its own secure network, with cameras that provide the flagger/operator an unobstructed view of approaching traffic from both directions. The flagger/operator may control the AFAD units from a pilot vehicle.

If any of the above requirements are not met, flagger/operator control each AFAD unit.

AFAD operators may either control traffic at side streets or driveways between the AFAD units or operate the pilot car while operating the AFAD system if approved by the Engineer. AFAD units must continue to be within clear sight of the operator during these work activities.

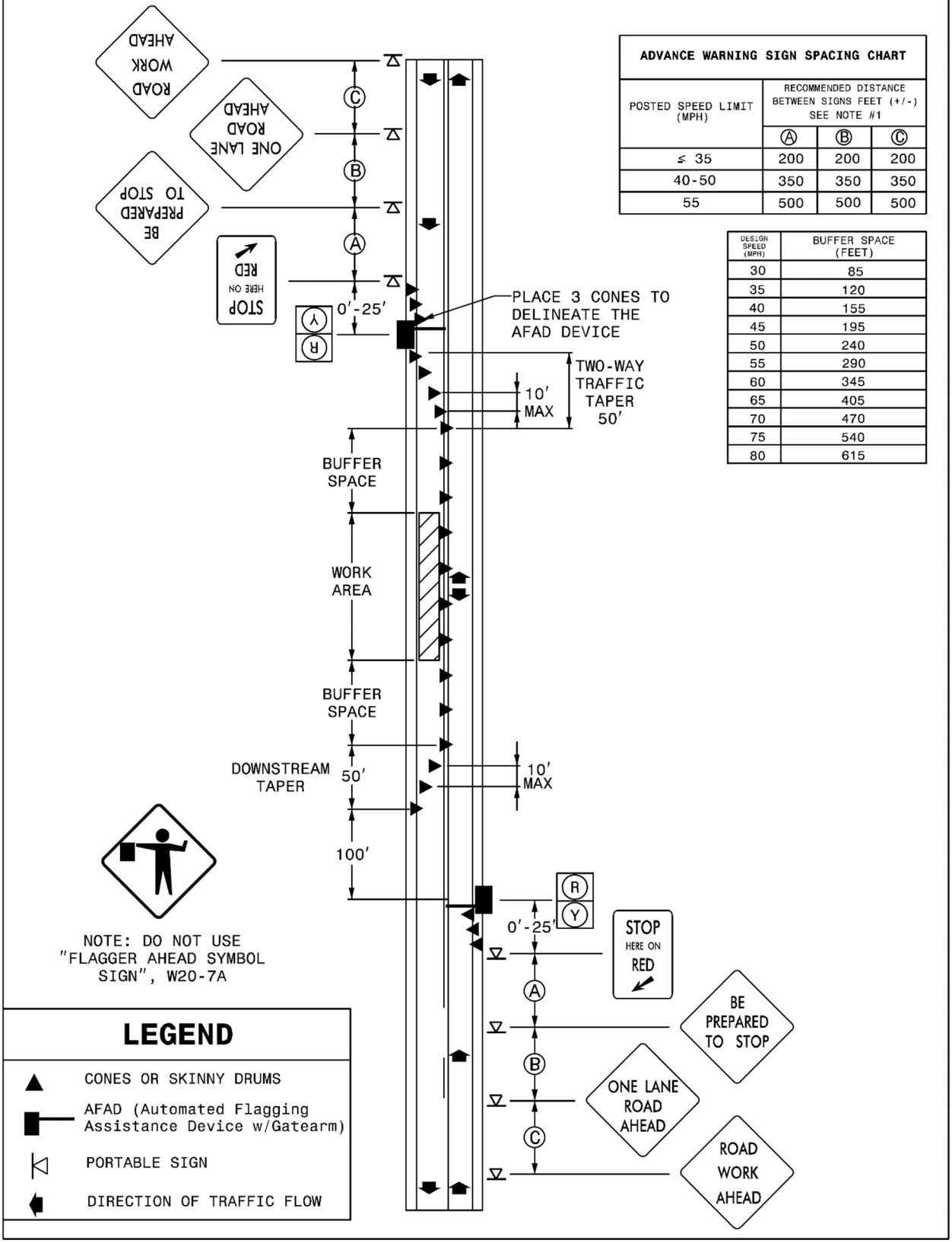
Page 11-14, Article 1150-4, MEASUREMENT AND PAYMENT, add the following after line 24:

Each AFAD or PTS unit will be measured and paid for as *Flaggers* paid by day in accordance with Article 1150-4 of the *Standard Specifications*. Where the pay item for *Flaggers* is not included in the original contract then no separate payment will be made for this item and payment will be included in the lump sum price bid for *Temporary Traffic Control* found elsewhere in this contract. Each approach controlled by AFAD or PTS units will be measured

and paid as one flagger, irrespective of the number of devices used. If multiple PTS units are required to control a single approach, these units will collectively be considered as replacing one flagger.

No separate measurement or payment will be made for AFAD or PTS unit operators, as the cost of such including their training and operational costs shall be included in the unit or lump sum price for *Flaggers* or *Temporary Traffic Control*. Such price and payment also includes the relocation, maintenance, and removal during repair periods of AFAD or PTS units as well as the signal controller, communication, vehicle detection system, traffic signal software of PTS units and any other incidentals necessary to complete the work.

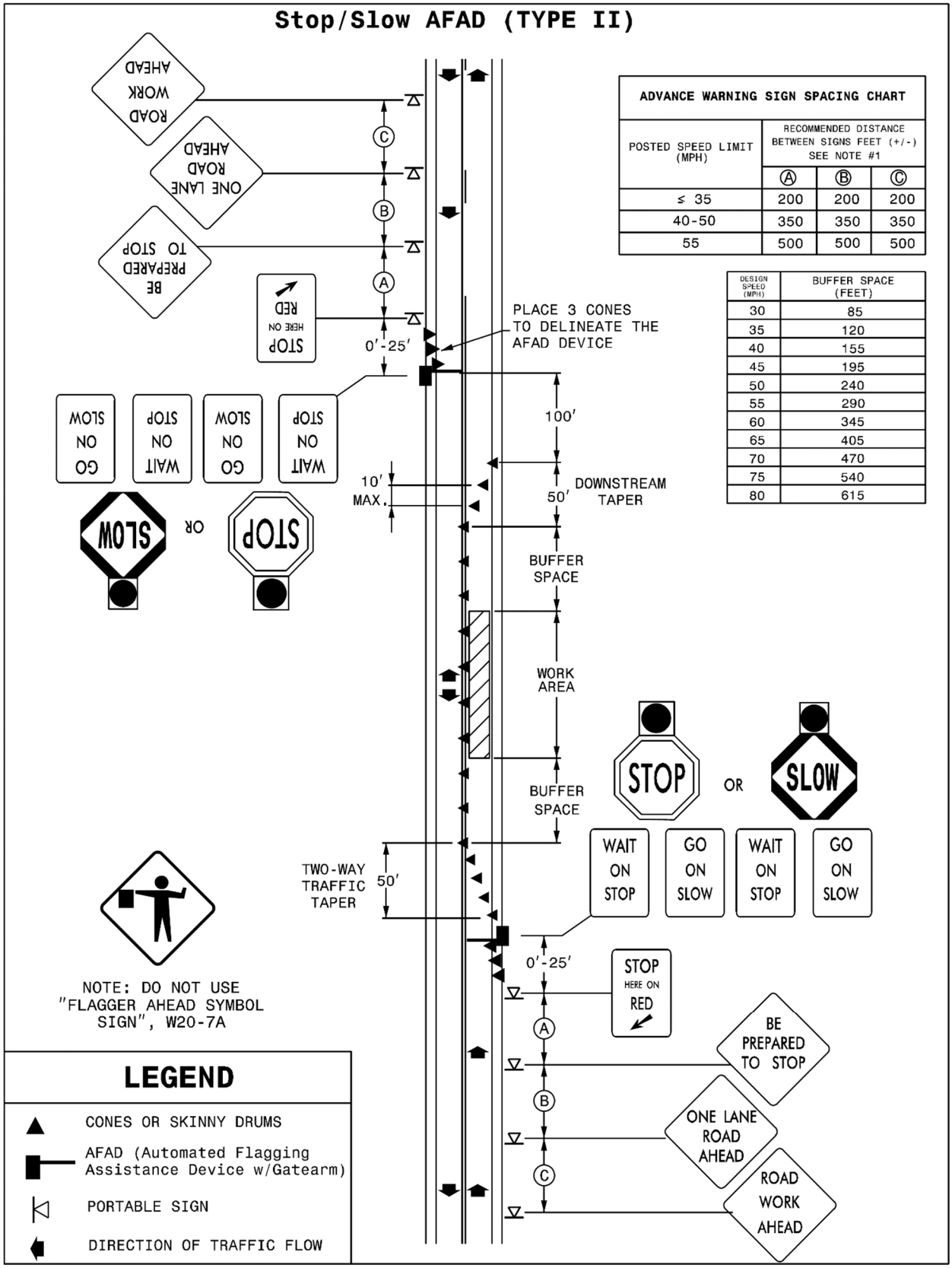
Red/Yellow Lens AFAD (TYPE I)



ADVANCE WARNING SIGN SPACING CHART			
POSTED SPEED LIMIT (MPH)	RECOMMENDED DISTANCE BETWEEN SIGNS FEET (+/-) SEE NOTE #1		
	Ⓐ	Ⓑ	Ⓒ
≤ 35	200	200	200
40-50	350	350	350
55	500	500	500

DESIGN SPEED (MPH)	BUFFER SPACE (FEET)
30	85
35	120
40	155
45	195
50	240
55	290
60	345
65	405
70	470
75	540
80	615

Stop/Slow AFAD (TYPE II)



NOTE: DO NOT USE "FLAGGER AHEAD SYMBOL SIGN", W20-7A

ADVANCE WARNING SIGN SPACING CHART			
POSTED SPEED LIMIT (MPH)	RECOMMENDED DISTANCE BETWEEN SIGNS FEET (+/-) SEE NOTE #1		
	Ⓐ	Ⓑ	Ⓒ
≤ 35	200	200	200
40-50	350	350	350
55	500	500	500

DESIGN SPEED (MPH)	BUFFER SPACE (FEET)
30	85
35	120
40	155
45	195
50	240
55	290
60	345
65	405
70	470
75	540
80	615

LEGEND

- CONES OR SKINNY DRUMS
- AFAD (Automated Flagging Assistance Device w/Gatearm)
- PORTABLE SIGN
- DIRECTION OF TRAFFIC FLOW

EXCAVATION EQUIPMENT:

The Contractor may provide the following types of equipment:

- Excavator, Tracked, Operating Weight < 20,000 LBS W/ Operator
- Excavator, Tracked, Operating Weight > 20,001 LBS & < 37,999 LBS W/ Operator
- Excavator, Tracked, Operating Weight > 38,000 LBS & < 53,999 LBS W/ Operator

If the contractor has more than one (1) of the pieces of equipment above, use of additional equipment must be approved by the Engineer.

Equipment Requirements

All equipment provided by the Contractor shall be equipped with warning lights similar to those used by the Department. Communication devices shall be available in each piece of equipment so the operators can communicate with the Contractor's designated supervisor. All equipment shall be equipped with reverse gear warning devices.

The Contractor shall furnish all equipment in good operating condition at the determination of the Engineer. Equipment shall be operated by properly trained and qualified personnel. The Contractor shall be responsible for all costs or charges by personnel or incurred in the operation and maintenance of the equipment during the performance of this contract. These costs shall be considered to be incidental to the other contract bid items. Upon request, the contractor shall provide any and all state and federal certifications for equipment safety.

The Contractor shall be responsible for the equipment provided in this contract at all times and at all locations during the term of the contract. The Contractor shall have no claim against the Department of Transportation for any expense involving damage or loss to the Contractor's equipment (including vandalism, theft, fire and acts of God) arising out of, or relating to, work performed under this agreement.

There will be **no payment for mobilization** of labor and equipment, as it will be **considered incidental** to the bid items of this contract.

Measurement and Payment

Excavation equipment will be paid for per hour of use. The Engineer or representative will maintain a time sheet. The Department's representative and the Contractor's supervisor shall review and agree on the recorded time on a daily basis. Time will be recorded to the nearest half hour (1/2) hour based upon the time each piece of equipment was in actual productive operation.

Payment will be made under:

Pay Item	**Pay Unit**
Excavator, Tracked, Operating Weight < 20,000 LBS W/ Operator	Hour
Excavator, Tracked, Operating Weight > 20,001 LBS & < 38,000 LBS W/ Operator	Hour
Excavator, Tracked, Operating Weight > 38,001 LBS & < 53,999 LBS W/ Operator	Hour

HAULING EQUIPMENT:

Provide the following types of hauling equipment as directed by the Engineer:

- Tandem-axle dump truck with operator.
- Tri-axle dump truck with operator.
- Quad-axle dump truck with operator.

If the contractor has more than one (1) of the pieces of equipment above, use of additional equipment must be approved by the Engineer.

Equipment Requirements

All vehicles provided by the Contractor shall be equipped with warning lights similar to those used by the Department. Communication devices shall be available in each piece of equipment so the operators can communicate with the Contractor's designated supervisor. All equipment shall be equipped with reverse gear warning devices. Any equipment that does not have a reverse warning or the warning is not working, will be ineligible for payment until a reverse warning is installed or repaired, and satisfactorily operating.

The Contractor shall furnish all equipment in good operating condition at the determination of the Engineer. Equipment shall be operated by properly trained and qualified personnel. The Contractor shall be responsible for all costs or charges by personnel or incurred in the operation and maintenance of the equipment during the performance of this contract. These costs shall be considered to be incidental to the other contract bid items. Upon request, the contractor shall provide any and all state and federal certifications for equipment safety.

The Contractor shall be responsible for the equipment provided in this contract at all times and at all locations during the term of the contract. The Contractor shall have no claim against the Department of Transportation for any expense involving damage or loss to the Contractor's equipment (including vandalism, theft, fire and acts of God) arising out of, or relating to, work performed under this agreement.

Operators shall wear OSHA approved reflective vest or outer garment at any time they are not occupying their vehicle.

There will be **no payment for mobilization** of labor and equipment, as it will be **considered incidental** to the bid items of this contract.

Measurement and Payment

Excavation equipment will be paid for per hour of use. The Engineer or representative will maintain a time sheet. The Department's representative and the Contractor's supervisor shall review and agree on the recorded time on a daily basis. Time will be recorded to the nearest half hour (1/2) hour based upon the time each piece of equipment was in actual productive operation.

Payment will be made under:

Pay Item	**Pay Unit**
Tandem-Axle Dump Truck w/ Operator	Hour
Tri-Axle Dump Truck w/ Operator	Hour
Quad-Axle Dump Truck w/ Operator	Hour

STANDARD SPECIAL PROVISION
AVAILABILITY OF FUNDS – TERMINATION OF CONTRACTS

(5-20-08)(Rev. 1-16-24) Z-2

General Statute 143C-6-11. (h) Highway Appropriation is hereby incorporated verbatim in this contract as follows:

(h) Amounts Encumbered. – Transportation project appropriations may be encumbered in the amount of allotments made to the Department of Transportation by the Director for the estimated payments for transportation project contract work to be performed in the appropriation fiscal year. The allotments shall be multiyear allotments and shall be based on estimated revenues and shall be subject to the maximum contract authority contained in *General Statute 143C-6-11(c)*. Payment for transportation project work performed pursuant to contract in any fiscal year other than the current fiscal year is subject to appropriations by the General Assembly. Transportation project contracts shall contain a schedule of estimated completion progress, and any acceleration of this progress shall be subject to the approval of the Department of Transportation provided funds are available. The State reserves the right to terminate or suspend any transportation project contract, and any transportation project contract shall be so terminated or suspended if funds will not be available for payment of the work to be performed during that fiscal year pursuant to the contract. In the event of termination of any contract, the contractor shall be given a written notice of termination at least 60 days before completion of scheduled work for which funds are available. In the event of termination, the contractor shall be paid for the work already performed in accordance with the contract specifications.

Payment will be made on any contract terminated pursuant to the special provision in accordance with Subarticle 108-13(D) of the *Standard Specifications*.

STANDARD SPECIAL PROVISION
ERRATA

(1-16-24)(Rev. 6-16-26) Z-4

Revise the *2024 Standard Specifications* as follows:

Division 1

Page 1-1, Article 101-2 ABBREVIATIONS, line 25, replace "American Wood-Preservers' Association" with "American Wood Protection Association".

Page 1-18, Article 102-10 BID BOND OR BID DEPOSIT, line 26, replace " Subarticle 102-8(A)(8)(b)" with "Subarticle 102-8(A)(12)(b)".

Page 1-20, Subarticle 102-14(A) State Funded Projects, line 3, replace "$30,000" with "$40,000".

Page 1-20, Subarticle 102-14(B) Federal Aid Projects, line 7, replace "$30,000" with "$40,000".

Page 1-36, Subarticle 104-12(B) Evaluation of Proposals, line 21, replace "Design-Build Unit" with "Alternative Delivery Unit".

Page 1-36, Subarticle 104-12(D) Preliminary Review, line 37, replace "Design-Build Unit" with "Alternative Delivery Unit".

Page 1-37, Subarticle 104-12(E) Final Proposal, line 3, replace "Design-Build Unit" with "Alternative Delivery Unit".

Page 1-37, Subarticle 104-12(F) Design-Build VEPs, line 36, replace "Design-Build Unit" with "Alternative Delivery Unit".

Page 1-38, Subarticle 104-12(G) Modifications, line 1, replace "Design-Build Unit" with "Alternative Delivery Unit".

Division 3

Page 3-5, Article 305-2 MATERIALS, after line 16, replace " 1032-3(A)(7)" with "1032-3" and add the item "Galvanized Corrugated Steel Pipe" with Section "1032-3".

Page 3-6, Article 310-2 MATERIALS, after line 9, add the item "Galvanized Corrugated Steel Pipe" with Section "1032-3".

Division 6

Page 6-15, Article 610-1 DESCRIPTION, line 20, replace "The work includes" with "The work includes, but is not limited to,".

Page 6-15, Article 610-1 DESCRIPTION, line 22, replace “applying the tack coat as specified.” with “applying the tack coat in accordance with Section 605.”.

Page 6-30, Article 610-14 DENSITY ACCEPTANCE, line 39, replace “QC process.” with “QC process in accordance with Section 609.”.

Page 6-31, Article 610-16 MEASUREMENT AND PAYMENT, line 13, replace "*Hot Mix Asphalt Pavement*” with “*Asphalt Concrete _____ Course, Type _____*”.

Page 6-50, Subarticle 661-4(A) Equipment, lines 4-7, replace the first two sentences of the seventh paragraph with the following:

When an erected fixed stringline is utilized for longitudinal profile and cross slope control furnish and erect the necessary guide line for the equipment.

Division 7

Page 7-18, Subarticle 710-10(A) General, lines 7-8, delete “for *Surface Testing Concrete Pavement*” from the last paragraph.

Division 8

Page 8-27, Article 846-1 DESCRIPTION, line 8, delete “4 inch” from the first paragraph.

Division 9

Page 9-17, Article 904-4 MEASUREMENT AND PAYMENT, prior to line 1, replace " Sign Erection, Relocate Type (Ground Mounted)” with “Sign Erection, Relocate Type ___ (Ground Mounted)”.

Division 10

Page 10-51, Article 1024-4 WATER, prior to line 1, delete the “unpopulated blank row” in Table 1024-2 between “Time of set, deviation from control” and “Chloride Ion Content, Max.”.

Page 10-170, Subarticle 1081-1(C) Requirements, line 4, replace "maximum” with “minimum”.

Division 11

Page 11-15, Article 1160-4 MEASUREMENT AND PAYMENT, line 24, replace “Where barrier units are moved more than one” with “Where barrier units are moved more than once”.

Division 15

Page 15-10, Article 1515-4 MEASUREMENT AND PAYMENT, lines 11, replace " All piping” with “All labor, the manhole, other materials, excavation, backfilling, piping”.

Division 16

Page 16-14, Article 1633-5 MEASUREMENT AND PAYMENT, line 20-24 and prior to line 25, delete and replace with the following " *Flocculant* will be measured and paid in accordance with Article 1642-5 applied to the temporary rock silt checks."

Page 16-3, Article 1609-2 MATERIALS, after line 26, replace "Type 4" with "Type 4a".

Page 16-25, Article 1644-2 MATERIALS, after line 22, replace "Type 4" with "Type 4a".

Page 16-27, Article 1644-5 MEASUREMENT AND PAYMENT, line 31, replace "Article 1630-4" with "Article 1630-3".

Division 17

Page 17-15, Article 1715-4 MEASUREMENT AND PAYMENT, line 23, delete and replace "1.25" with "1-1/4".

Page 17-15, Article 1715-4 MEASUREMENT AND PAYMENT, line 24, delete and replace ")(1.25" with ", 1-1/4".

STANDARD SPECIAL PROVISION

PLANT AND PEST QUARANTINES

(Imported Fire Ant, Guava Root Knot Nematode, Spongy Moth (formerly known as gypsy moth), Witchweed, Cogon Grass, And Any Other Regulated Noxious Weed or Plant Pest)

(3-18-03)(Rev. 3-18-25) Z-04a

Within Quarantined Area

This project may be within a county regulated for plant and/or pests. If the project or any part of the Contractor's operations is located within a quarantined area, thoroughly clean all equipment prior to moving out of the quarantined area. Comply with federal/state regulations by obtaining a certificate or limited permit for any regulated article moving from the quarantined area.

Originating in a Quarantined County

Obtain a certificate or limited permit issued by the N.C. Department of Agriculture/United States Department of Agriculture. Have the certificate or limited permit accompany the article when it arrives at the project site.

Contact

Contact the N.C. Department of Agriculture/United States Department of Agriculture at 1-800-206-9333, 919-707-3730, or *https://www.ncagr.gov/divisions/plant-industry/plant-protection/plant-industry-plant-pest-quarantines* to determine those specific project sites located in the quarantined area or for any regulated article used on this project originating in a quarantined county.

Regulated Articles Include

1. Soil, sand, gravel, compost, peat, humus, muck, and decomposed manure, separately or with other articles. This includes movement of articles listed above that may be associated with cut/waste, ditch pulling, and shoulder cutting.
2. Plants with roots including grass sod.
3. Plant crowns and roots.
4. Bulbs, corms, rhizomes, and tubers of ornamental plants.
5. Hay, straw, fodder, and plant litter of any kind.
6. Clearing and grubbing debris.
7. Used agricultural cultivating and harvesting equipment.
8. Used earth-moving equipment.
9. Any other products, articles, or means of conveyance of any character, if determined by an inspector present a hazard of spreading imported fire ant, guava root knot nematode, spongy moth (formerly known as gypsy moth), witchweed, cogon grass, or other regulated noxious weed or plant pest.

STANDARD SPECIAL PROVISION

TITLE VI AND NONDISCRIMINATION:

(6-28-77)(Rev 1/16/2024) Z-6

The North Carolina Department of Transportation is committed to carrying out the U.S. Department of Transportation's policy of ensuring nondiscrimination in the award and administration of contracts.

The provisions of this section related to United States Department of Transportation (US DOT) Order 1050.2A, Title 49 Code of Federal Regulations (CFR) part 21, 23 United States Code (U.S.C.) 140 and 23 CFR part 200 (or 49 CFR 303, 49 U.S.C. 5332 or 49 U.S.C. 47123) are applicable to all North Carolina Department of Transportation (NCDOT) contracts and to all related subcontracts, material supply, engineering, architectural and other service contracts, regardless of dollar amount. Any Federal provision that is specifically required not specifically set forth is hereby incorporated by reference.

(1) **Title VI Assurances (USDOT Order 1050.2A, Appendix A)**

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

(a) Compliance with Regulations

The contractor (hereinafter includes consultants) shall comply with the Acts and the Regulations relative to Nondiscrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration (FHWA), as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

(b) Nondiscrimination

The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

(c) Solicitations for Subcontractors, Including Procurements of Materials and Equipment

In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Nondiscrimination on the grounds of race, color, or national origin.

(d) Information and Reports

The contractor shall provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be

determined by the Recipient or the FHWA to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor shall so certify to the Recipient or the FHWA, as appropriate, and shall set forth what efforts it has made to obtain the information.

(e) Sanctions for Noncompliance:

In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it and/or the FHWA may determine to be appropriate, including, but not limited to:

(i) Withholding payments to the contractor under the contract until the contractor complies; and/or

(ii) Cancelling, terminating, or suspending a contract, in whole or in part.

(f) Incorporation of Provisions

The contractor shall include the provisions of paragraphs (a) through (f) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor shall take action with respect to any subcontract or procurement as the Recipient or the FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

(2) **Title VI Nondiscrimination Program (23 CFR 200.5(p))**

The North Carolina Department of Transportation (NCDOT) has assured the USDOT that, as a condition to receiving federal financial assistance, NCDOT will comply with Title VI of the Civil Rights Act of 1964 and all requirements imposed by Title 49 CFR part 21 and related nondiscrimination authorities to ensure that no person shall, on the ground of race, color, national origin, limited English proficiency, sex, age, or disability (including religion/creed or income-level, where applicable), be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any programs, activities, or services conducted or funded by NCDOT. Contractors and other organizations under contract or agreement with NCDOT must also comply with Title VI and related authorities, therefore:

(a) During the performance of this contract or agreement, contractors (e.g., subcontractors, consultants, vendors, prime contractors) are responsible for complying with NCDOT's Title VI Program. Contractors are not required to prepare or submit Title VI Programs. To comply with this section, the prime contractor shall:

1. Post NCDOT's Notice of Nondiscrimination and the Contractor's own Equal Employment Opportunity (EEO) Policy in conspicuous locations accessible to all employees, applicants and subcontractors on the jobsite.

2. Physically incorporate the required Title VI clauses into all subcontracts on federally-assisted and state-funded NCDOT projects, and ensure inclusion by subcontractors into all lower-tier subcontracts.

3. Required Solicitation Language. The Contractor shall include the following notification in all solicitations for bids and requests for work or material, regardless of funding source:

   "The North Carolina Department of Transportation, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 US.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award. In accordance with other related nondiscrimination authorities, bidders and contractors will also not be discriminated against on the grounds of sex, age, disability, low-income level, creed/religion, or limited English proficiency in consideration for an award."

4. Physically incorporate the FHWA-1273, in its entirety, into all subcontracts and subsequent lower tier subcontracts on Federal-aid highway construction contracts only.

5. Provide language assistance services (i.e., written translation and oral interpretation), free of charge, to LEP employees and applicants. Contact NCDOT OCR for further assistance, if needed.

6. For assistance with these Title VI requirements, contact the NCDOT Title VI Nondiscrimination Program at 1-800-522-0453.

(b) Subrecipients (e.g. cities, counties, LGAs, planning organizations) may be required to prepare and submit a Title VI Plan to NCDOT, including Title VI Assurances and/or agreements. Subrecipients must also ensure compliance by their contractors and subrecipients with Title VI. (23 CFR 200.9(b)(7))

(c) If reviewed or investigated by NCDOT, the contractor or subrecipient agrees to take affirmative action to correct any deficiencies found within a reasonable time period, not to exceed 90 calendar days, unless additional time is granted by NCDOT. (23 CFR 200.9(b)(15))

(d) The Contractor is responsible for notifying subcontractors of NCDOT's External Discrimination Complaints Process.

1. Applicability

   Title VI and related laws protect participants and beneficiaries (e.g., members of the public and contractors) from discrimination by NCDOT employees, subrecipients and contractors, regardless of funding source.

2. Eligibility

   Any person—or class of persons—who believes he/she has been subjected to discrimination based on race, color, national origin, Limited English Proficiency (LEP), sex, age, or disability (and religion in the context of employment, aviation, or transit) may file a written complaint. The law also prohibits intimidation or retaliation of any sort.

3. Time Limits and Filing Options

   Complaints may be filed by the affected individual(s) or a representative and must be filed no later than 180 calendar days after the following:

   (i) The date of the alleged act of discrimination; or

   (ii) The date when the person(s) became aware of the alleged discrimination; or

   (iii) Where there has been a continuing course of conduct, the date on which that conduct was discontinued or the latest instance of the conduct.

   Title VI and related discrimination complaints may be submitted to the following entities:

   - North Carolina Department of Transportation, Office of Civil Rights, Title VI Program, 1511 Mail Service Center, Raleigh, NC 27699-1511; toll free 1-800-522-0453
   - Federal Highway Administration, North Carolina Division Office, 310 New Bern Avenue, Suite 410, Raleigh, NC 27601, 919-747-7010
   - US Department of Transportation, Departmental Office of Civil Rights, External Civil Rights Programs Division, 1200 New Jersey Avenue, SE, Washington, DC 20590; 202-366-4070

4. Format for Complaints

   Complaints must be in writing and signed by the complainant(s) or a representative, and include the complainant's name, address, and telephone number. Complaints received by fax or e-mail will be acknowledged and processed. Allegations received by telephone will be reduced to writing and provided to the complainant for confirmation or revision before processing. Complaints will be accepted in other languages, including Braille.

5. Discrimination Complaint Form

   Contact NCDOT Civil Rights to receive a full copy of the Discrimination Complaint Form and procedures.

6. Complaint Basis

   Allegations must be based on issues involving race, color, national origin (LEP), sex, age, disability, or religion (in the context of employment, aviation or transit). "Basis" refers to the complainant's membership in a protected group category.

TABLE 103-1
COMPLAINT BASIS

Protected Categories	Definition	Examples	Applicable Nondiscrimination Authorities
Race and Ethnicity	An individual belonging to one of the accepted racial groups; or the perception, based usually on physical characteristics that a person is a member of a racial group	Black/African American, Hispanic/Latino, Asian, American Indian/Alaska Native, Native Hawaiian/Pacific Islander, White	Title VI of the Civil Rights Act of 1964; 49 CFR Part 21; 23 CFR 200; 49 U.S.C. 5332(b); 49 U.S.C. 47123. *(Executive Order 13166)*
Color	Color of skin, including shade of skin within a racial group	Black, White, brown, yellow, etc.	
National Origin *(Limited English Proficiency)*	Place of birth. Citizenship is not a factor. (*Discrimination based on language or a person's accent is also covered)*	Mexican, Cuban, Japanese, Vietnamese, Chinese	
Sex	Gender. The sex of an individual. *Note:* Sex under this program does not include sexual orientation.	Women and Men	1973 Federal-Aid Highway Act; 49 U.S.C. 5332(b); 49 U.S.C. 47123.
Age	Persons of any age	21-year-old person	Age Discrimination Act of 1975 49 U.S.C. 5332(b); 49 U.S.C. 47123.
Disability	Physical or mental impairment, permanent or temporary, or perceived.	Blind, alcoholic, para-amputee, epileptic, diabetic, arthritic	Section 504 of the Rehabilitation Act of 1973; Americans with Disabilities Act of 1990
Religion (in the context of employment) *(Religion/ Creed in all aspects of any aviation or transit-related construction)*	An individual belonging to a religious group; or the perception, based on distinguishable characteristics that a person is a member of a religious group. In practice, actions taken as a result of the moral and ethical beliefs as to what is right and wrong, which are sincerely held with the strength of traditional religious views. ***Note:*** Does not have to be associated with a recognized religious group or church; if an individual sincerely holds to the belief, it is a protected religious practice.	Muslim, Christian, Sikh, Hindu, etc.	Title VII of the Civil Rights Act of 1964; 23 CFR 230; FHWA-1273 Required Contract Provisions. *(49 U.S.C. 5332(b);* *49 U.S.C. 47123)*

(3) **Pertinent Nondiscrimination Authorities**

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest agrees to comply with the following non-discrimination statutes and authorities, including, but not limited to:

(a) Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.

(b) The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);

(c) Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);

(d) Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability) and 49 CFR Part 27;

(e) The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);

(f) Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);

(g) The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);

(h) Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;

(i) The Federal Aviation Administration's Nondiscrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);

(j) Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures Nondiscrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;

(k) Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);

(l) Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

(m) Title VII of the Civil Rights Act of 1964 (42 U.S.C. § 2000e et seq., Pub. L. 88-352), (prohibits employment discrimination on the basis of race, color, religion, sex, or national origin).

(4) **Additional Title VI Assurances**

***The following Title VI Assurances (Appendices B, C and D) shall apply, as applicable*

(a) Clauses for Deeds Transferring United States Property (1050.2A, Appendix B)

The following clauses will be included in deeds effecting or recording the transfer of real property, structures, or improvements thereon, or granting interest therein from the United States pursuant to the provisions of Assurance 4.

NOW, THEREFORE, the U.S. Department of Transportation as authorized by law and upon the condition that the North Carolina Department of Transportation (NCDOT) will accept title to the lands and maintain the project constructed thereon in accordance with the North Carolina General Assembly, the Regulations for the Administration of the Federal-Aid Highway Program, and the policies and procedures prescribed by the Federal Highway Administration of the U.S. Department of Transportation in accordance and in compliance with all requirements imposed by Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the U.S Department of Transportation pertaining to and effectuating the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252; 42 U.S.C. § 2000d to 2000d-4), does hereby remise, release, quitclaim and convey unto the NCDOT all the right, title and interest of the U.S. Department of Transportation in and to said lands described in Exhibit A attached hereto and made a part hereof.

(HABENDUM CLAUSE)

TO HAVE AND TO HOLD said lands and interests therein unto the North Carolina Department of Transportation (NCDOT) and its successors forever, subject, however, to the covenants, conditions, restrictions and reservations herein contained as follows, which will remain in effect for the period during which the real property or structures are used for a purpose for which Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits and will be binding on the NCDOT, its successors and assigns.

The NCDOT, in consideration of the conveyance of said lands and interests in lands, does hereby covenant and agree as a covenant running with the land for itself, its successors and assigns, that (1) no person will on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination with regard to any facility located wholly or in part on, over, or under such lands hereby conveyed [,] [and]* (2) that the NCDOT will use the lands and interests in lands and interests in lands so conveyed, in compliance with all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations and Acts may be amended [, and (3) that in the event of breach of any of the above-mentioned nondiscrimination conditions, the Department will have a right to enter or re-enter said lands and facilities on said land, and that above described land and facilities will thereon revert to and vest in and become the absolute property of the U.S. Department of Transportation and its assigns as such interest existed prior to this instruction].*

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary in order to make clear the purpose of Title VI.)

(b) Clauses for Transfer of Real Property Acquired or Improved Under the Activity, Facility, or Program (1050.2A, Appendix C)

The following clauses will be included in deeds, licenses, leases, permits, or similar instruments entered into by the North Carolina Department of Transportation (NCDOT) pursuant to the provisions of Assurance 7(a):

1. The (grantee, lessee, permittee, etc. as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree [in the case of deeds and leases add "as a covenant running with the land"] that:

   (i.) In the event facilities are constructed, maintained, or otherwise operated on the property described in this (deed, license, lease, permit, etc.) for a purpose for which a U.S. Department of Transportation activity, facility, or program is extended or for another purpose involving the provision of similar services or benefits, the (grantee, licensee, lessee, permittee, etc.) will maintain and operate such facilities and services in compliance with all requirements imposed by the Acts and Regulations (as may be amended) such that no person on the grounds of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities.

2. With respect to licenses, leases, permits, etc., in the event of breach of any of the above Nondiscrimination covenants, the NCDOT will have the right to terminate the (lease, license, permit, etc.) and to enter, re-enter, and repossess said lands and facilities thereon, and hold the same as if the (lease, license, permit, etc.) had never been made or issued. *

3. With respect to a deed, in the event of breach of any of the above Nondiscrimination covenants, the NCDOT will have the right to enter or re-enter the lands and facilities thereon, and the above described lands and facilities will there upon revert to and vest in and become the absolute property of the NCDOT and its assigns. *

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

(c) Clauses for Construction/Use/Access to Real Property Acquired Under the Activity, Facility or Program (1050.2A, Appendix D)

The following clauses will be included in deeds, licenses, permits, or similar instruments/ agreements entered into by the North Carolina Department of Transportation (NCDOT) pursuant to the provisions of Assurance 7(b):

1. The (grantee, licensee, permittee, etc., as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds and leases add, "as a covenant running with the land") that (1) no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, (2) that in the construction of any improvements on, over, or under such land, and the furnishing of services thereon, no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, (3) that the (grantee, licensee, lessee, permittee, etc.) will use the premises in compliance with all other requirements imposed by or pursuant to the Acts and Regulations, as amended, set forth in this Assurance.
2. With respect to (licenses, leases, permits, etc.), in the event of breach of any of the above Non¬ discrimination covenants, the NCDOT will have the right to terminate the (license, permit, etc., as appropriate) and to enter or re-enter and repossess said land and the facilities thereon, and hold the same as if said (license, permit, etc., as appropriate) had never been made or issued. *
3. With respect to deeds, in the event of breach of any of the above Nondiscrimination covenants, the NCDOT will there upon revert to and vest in and become the absolute property of the NCDOT and its assigns. *

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

FHWA-1273 -- Revised June 25, 2026

CONTRACT PROVISIONS FOR
FEDERAL-AID CONSTRUCTION CONTRACTS

I. General
II. Nondiscrimination
III. Davis-Bacon and Related Act Provisions
IV. Contract Work Hours and Safety Standards Act Provisions
V. Subletting or Assigning the Contract
VI. Safety: Accident Prevention
VII. False Statements Concerning Highway Projects
VIII. Implementation of Clean Air Act and Federal Water Pollution Control Act
IX. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
X. Certification Regarding Use of Contract Funds for Lobbying
XI. Use of United States-Flag Vessels:

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only).

I. GENERAL

1. Historically, contracting agencies using Federal-aid highway funds were required to ensure Form FHWA-1273 was physically incorporated into all contracts and subcontracts. Effective June 10, 2026, this requirement was eliminated [91 FR 25492]. Future use of Form FHWA-1273 is now optional on the part of the contracting agency using Federal-aid highway funds. FHWA continues to make Form FHWA-1273 available as a convenience to contracting agencies. Contracting agencies must continue to ensure compliance with the provisions cited in Form FHWA-1273 in accordance with the provisions regardless of the use of Form FHWA-1273. Accordingly, the contracting agency retains the authority to determine whether the contractor must use Form FHWA-1273 to physically incorporate required contract provisions in each subcontract and in lower tier contracts. Where permitted by the contracting agency, the contractor may choose other ways to include required contract provisions in each subcontract, besides incorporating Form FHWA-1273. Contract provisions in Form FHWA-1273 are not required to be physically included in subcontracts for design services on Federal-aid design-build contracts, or in purchase orders, rental agreements and other agreements for supplies or services.

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor or design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents.

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION

The contractor and all subcontractors must comply with the following policies: 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27, including any amendments thereto.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27, including any amendments thereto.

The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract.

1. Assurances Required:

a. The requirements of 49 CFR Part 26, including any amendments thereto, and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26, including any amendments thereto, in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

(1) Withholding monthly progress payments;
(2) Assessing sanctions;
(3) Liquidated damages; and/or
(4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E, including any amendments thereto, are incorporated by reference. 49 CFR Part 21.

III. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages (29 CFR 5.5)

a. *Wage rates and fringe benefits.* All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of basic hourly wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act (40 U.S.C. 3141(2)(B)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in paragraph 4. of this section. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided,* That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph 1.c. of this section) and the Davis-Bacon poster (WH–1321) must be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. *Frequently recurring classifications.* (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in 29 CFR part 1, a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:

(i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

(ii) The classification is used in the area by the construction industry; and

(iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

c. *Conformance.* (1) The contracting officer must require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is used in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(3) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the

classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the contracting officer by email to *DBAconformance@dol.gov*. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30–day period that additional time is necessary.

(4) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer will, by email to *DBAconformance@dol.gov*, refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30–day period that additional time is necessary.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

d. *Fringe benefits not expressed as an hourly rate.* Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

e. *Unfunded plans.* If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided,* That the Secretary of Labor has found, upon the written request of the contractor, in accordance with the criteria set forth in § 5.28, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

f. *Interest.* In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. Withholding (29 CFR 5.5)

a. *Withholding requirements.* The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

b. Priority to withheld funds. The Department has priority to funds withheld or to be withheld in accordance with paragraph 2.a. of this section or Section IV, paragraph 3.a., or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its reprocurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901–3907.

3. Records and certified payrolls (29 CFR 5.5)

a. *Basic record requirements* (1) *Length of record retention.* All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

(2) *Information required.* Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act); daily and weekly number

of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

(3) *Additional records relating to fringe benefits.* Whenever the Secretary of Labor has found under paragraph 1.e. of this section that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act, the contractor must maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

(4) *Additional records relating to apprenticeship.* Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

b. *Certified payroll requirements* (1) *Frequency and method of submission.* The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(2) *Information required.* The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (*e.g.,* the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH–347 or in any other format desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division website at *https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/wh347/.pdf* or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

(3) *Statement of Compliance.* Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

(ii) That each laborer or mechanic (including each helper and apprentice) working on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR part 3; and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

(4) *Use of Optional Form WH–347.* The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 will satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(3) of this section.

(5) *Signature.* The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification.* The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 3729.

(7) *Length of certified payroll retention.* The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents.* The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access* (1) *Required record disclosures and access to workers.* The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements.* If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under 29 CFR part 6 any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures.* Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity (29 CFR 5.5)

a. *Apprentices* (1) *Rate of pay.* Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits.* Apprentices must be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio.* The allowable ratio of apprentices to journeyworkers on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates.* Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity.* The use of apprentices and journeyworkers under this part must be in conformity with 29 CFR part 30, including any amendments thereto.

c. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section III. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeyworkers shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs (1) through (11) of this section, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 29 CFR 5.5.

7. **Contract termination: debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the

contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility. a. By entering into this contract, the contractor certifies that neither it nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of 40 U.S.C. 3144(b) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of 40 U.S.C. 3144(b) or § 5.12(a).

c. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, 18 U.S.C. 1001.

11. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or 29 CFR part 1 or 3;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or 29 CFR part 1 or 3;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or 29 CFR part 1 or 3; or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or 29 CFR part 1 or 3.

IV. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchpersons and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph 1. of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchpersons and guards, employed in violation of the clause set forth in paragraph 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1. of this section.

* $33 as of January 15, 2025 (See 90 FR 1859) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with Section III paragraph 2.a. or paragraph 3.a. of this section, or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its reprocurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901–3907.

4. Subcontracts. The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or

d. Informing any other person about their rights under CWHSSA or this part.

V. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;
(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph 1. of this section is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however,

contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VI. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

VIII. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of $150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

IX. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this

covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. “First Tier Covered Transactions” refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/). 2 CFR 180.300, 180.320, and 180.325.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;.

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.355(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

* * * * *

3. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

* * * * *

4. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

* * * * *

X. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000. 49 CFR Part 20, App. A.

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

XI. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS (40 U.S.C. sections 14501(d) and 14701) and the Appalachian Regional Commission Code as authorized under 40 U.S.C. section 14302)
This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 40 U.S.C. 14501 allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

STANDARD SPECIAL PROVISION

ON-THE-JOB TRAINING

(10-16-07) (Rev. 6-16-26) Z-10

Description

The North Carolina Department of Transportation administers a custom version of the Federal On-the-Job Training (OJT) Program, commonly referred to as the Alternative OJT Program. All Contractors will be automatically placed in the Alternative OJT Program.

The Alternate OJT Program will allow a Contractor to train employees on Federal, State and privately funded projects located in North Carolina. However, priority shall be given to training employees on NCDOT Federal-Aid funded projects.

On the Job Training shall meet the requirements of 23 CFR 230.107 (b), 23 USC – Section 140, this special provision and the NCDOT On-the-Job Training Program Manual.

Minorities and Women

Developing, training and upgrading of minorities and women toward journeyman level status is a primary objective of this special provision. Accordingly, the Contractor shall make every effort to enroll minority and women as trainees to the extent that such persons are available within a reasonable area of recruitment. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

Assigning Training Goals

The Department, through the OJT Program Unit, will assign annual training goals based on the Contractor's activity over the past three years' on federal projects with the Department. At the beginning of each year, all eligible Contractors will be contacted by the Department to determine the number of trainees that will be assigned for the upcoming calendar year. At that time, the Contractor shall enter into an agreement with the Department to implement a self-imposed on-the-job training program for the calendar year. This agreement will specify the annual training goals agreed upon by both parties. The number of training assignments may range from 1 to 15 per Contractor per calendar year, unless a higher number is agreed to by the Contractor. The Contractor shall sign an agreement committing to fulfill their annual goal for the year.

Training Classifications

The Contractor shall provide on-the-job training aimed at developing full journeyman level workers in the construction craft/operator positions.

The Department has established common training classifications and their respective training requirements that may be used by the Contractors. However, the classifications established are not all-inclusive. Where the training is oriented toward construction applications, training will be allowed in lower-level management positions such as office engineers and estimators. Contractors shall submit new classifications for specific job functions that their employees are performing. The Department will review and recommend for acceptance to FHWA the new

classifications proposed by contractors, if applicable. New classifications shall meet the following requirements:

Proposed training classifications are reasonable and realistic based on the job skill classification needs, and

The number of training hours specified in the training classification is consistent with common practices and provides enough time for the trainee to obtain journeyman level status.

The Contractor may allow trainees to be trained by a subcontractor provided that the Contractor retains primary responsibility for meeting the training and this special provision is made applicable to the subcontract. However, only the Contractor will receive credit towards the annual goal for the trainee.

Where feasible, 25 percent of trainees in each occupation shall be in their first year of training. The number of trainees shall be distributed among the work classifications on the basis of the Contractor's needs and the availability of journeymen in the various classifications within a reasonable area of recruitment.

No employee shall be employed as a trainee in any classification in which they have successfully completed a training course leading to journeyman level status or in which they have been employed as a journeyman.

Records and Reports

The Contractor shall maintain enrollment, monthly and completion reports documenting company compliance under these contract documents. These documents and any other information as requested shall be submitted to the OJT Program Manager.

Upon completion and graduation of the program, the Contractor shall provide each trainee with a certification Certificate showing the type and length of training satisfactorily completed.

Trainee Interviews

All trainees enrolled in the program will receive at minimum an initial and Trainee/Post graduate interview conducted by the OJT program staff.

Trainee Wages

Contractors shall compensate trainees on a graduating pay scale based upon a percentage of the prevailing minimum journeyman wages (Davis-Bacon Act). Minimum pay shall be as follows:

60 percent	of the journeyman wage for the first half of the training period
75 percent	of the journeyman wage for the third quarter of the training period
90 percent	of the journeyman wage for the last quarter of the training period

In no instance shall a trainee be paid less than the local minimum wage. The Contractor shall adhere to the minimum hourly wage rate that will satisfy both the NC Department of Labor (NCDOL) and the Department.

Achieving or Failing to Meet Training Goals

The Contractor will be credited for each trainee currently enrolled or becomes enrolled in an approved program and who receives training for at least 50 percent of the specific program requirement. Trainees will be allowed to be transferred between projects if required by the Contractor's scheduled workload to meet training goals.

If a Contractor fails to attain their training assignments for the calendar year, they may be taken off the NCDOT's Bidders List.

Measurement and Payment

No compensation will be made for providing required training in accordance with these contract documents.

STANDARD SPECIAL PROVISION
MINIMUM WAGES
GENERAL DECISION NC20260086 05/18/2026 NC86

Z-086

Date: May 18, 2026

General Decision Number: NC20260086 05/18/2026 NC86

Superseded General Decision Numbers: NC20250086

State: North Carolina

Construction Type: HIGHWAY

COUNTIES:

Alleghany	Jackson	Surry
Ashe	Lincoln	Swain
Avery	Macon	Transylvania
Cherokee	McDowell	Watauga
Clay	Mitchell	Wilkes
Cleveland	Polk	Yancey
Graham	Rutherford	

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Modification Number	Publication Date
0	01/02/2026
1	05/18/2026

SUNC2014-001 11/13/2014

	Rates	Fringes
TRUCK DRIVER (GVWR of 26,001 Lbs or Greater)	13.50	
TRUCK DRIVER (GVWR of 26,000 Lbs or Less)	11.72	
POWER EQUIPMENT OPERATORS (Milling Machine)	13.88	
POWER EQUIPMENT OPERATORS (Mechanic)	18.51	
POWER EQUIPMENT OPERATORS (Tack Truck/Distributor Operator)	14.67	.06
POWER EQUIPMENT OPERATORS (Slip Form Machine)	20.79	
POWER EQUIPMENT OPERATORS (Scraper Rough)	11.53	
POWER EQUIPMENT OPERATORS (Scraper Finish)	13.87	
POWER EQUIPMENT OPERATORS (Roller Other)	11.75	
POWER EQUIPMENT OPERATORS (Roller Asphalt Finish)	14.98	.04
POWER EQUIPMENT OPERATORS (Roller Asphalt Breakdown)	14.05	.06
POWER EQUIPMENT OPERATORS (Paver Asphalt)	15.68	.05
POWER EQUIPMENT OPERATORS (Pavement Marking Equipment)	13.33	
POWER EQUIPMENT OPERATORS (Oiler/Greaser)	14.98	
POWER EQUIPMENT OPERATORS (Off-Road Hauler/Water Tanker)	13.87	
POWER EQUIPMENT OPERATORS (Material Transfer Vehicle (Shuttle Buggy))	17.39	
POWER EQUIPMENT OPERATORS (Loader Greater Than 2 Cubic Yards)	16.01	
POWER EQUIPMENT OPERATORS (Loader 2 Cubic Yards or Less)	13.38	
POWER EQUIPMENT OPERATORS (Grader/Blade Rough)	13.07	

	Rates	Fringes
POWER EQUIPMENT OPERATORS (Grader/Blade Fine)	19.24	
POWER EQUIPMENT OPERATORS (Excavator Rough)	13.10	
POWER EQUIPMENT OPERATORS (Excavator Fine)	16.11	
POWER EQUIPMENT OPERATORS (Drill Operator Structure)	20.92	
POWER EQUIPMENT OPERATORS (Drill Operator Rock)	15.25	
POWER EQUIPMENT OPERATORS (Crane Rough/All-Terrain)	21.25	
POWER EQUIPMENT OPERATORS (Crane Other)	19.59	
POWER EQUIPMENT OPERATORS (Crane Boom Trucks)	14.44	.53
POWER EQUIPMENT OPERATORS (Concrete Grinder/Groover)	24.66	
POWER EQUIPMENT OPERATORS (Bulldozer Rough)	13.89	
POWER EQUIPMENT OPERATORS (Bulldozer Fine)	16.20	
POWER EQUIPMENT OPERATORS (Asphalt Broom Tractor)	11.00	
PAINTER (Bridge)	19.62	
LABORER (Traffic Signal/Lighting Installer)	15.85	
LABORER (Pipelayer)	12.22	
LABORER (Guardrail/Fence Installer)	13.43	
LABORER (Common or General)	10.68	
LABORER (Cement Mason/Concrete Finisher Tender)	12.26	
LABORER (Carpenter Tender)	10.00	
LABORER (Asphalt Screed/Jackman)	15.22	
LABORER (Asphalt Raker and Spreader)	12.23	
IRONWORKER	14.53	
ELECTRICIAN (Telecommunications Technician)	15.13	
ELECTRICIAN (Electrician)	19.19	2.39
CEMENT MASON/CONCRETE FINISHER	14.10	
CARPENTER	12.54	
BLASTER	21.83	

Welders – Receive rate prescribed for craft performing operation to which welding is incidental.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at http://www.dol.gov/agencies/whd/government-contracts.

Note: Executive Order 13658 generally applies to contracts subject to the Davis-Bacon Act that were awarded on or between January 1, 2015 and January 29, 2022, and that have not been renewed or extended on or after January 30, 2022. Executive Order 13658 does not apply to contracts subject only to the Davis-Bacon Related Acts regardless of when they were awarded. If a contract is subject to Executive Order 13658, the contractor must pay all covered workers at least $13.65 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract from May 11, 2026, through December 31, 2026. The applicable Executive Order minimum wage rate will be adjusted annually.

Additional information on contractor requirements and worker protections under Executive Order 13658 is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(iii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than "SU", "UAVG", "SA", or "SC" denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing this classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The "SU" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

"SU" wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The "SA" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the "SA" identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

a) a survey underlying a wage determination
b) an existing published wage determination
c) an initial WHD letter setting forth a position on a wage determination matter
d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, D.C. 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, D.C. 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, D.C. 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, D.C. 20210

END OF GENERAL DECISION

STANDARD SPECIAL PROVISION
MINIMUM WAGES
GENERAL DECISION NC20260087 05/18/2026 NC87

Z-087

Date: May 18, 2026

General Decision Number: NC20260087 05/18/2026 NC87

Superseded General Decision Numbers: NC20250087

State: North Carolina

Construction Type: HIGHWAY

COUNTIES:

Alexander	Caldwell	Henderson
Buncombe	Catawba	Madison
Burke	Haywood	

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Modification Number	Publication Date
0	01/02/2026
1	05/18/2026

SUNC2014-002 11/13/2014

	Rates	Fringes
TRUCK DRIVER (GVWR of 26,000 Lbs or Less)	12.48	
TRUCK DRIVER (GVWR of 26,001 Lbs or Greater)	13.65	
POWER EQUIPMENT OPERATORS (Milling Machine)	15.08	
POWER EQUIPMENT OPERATORS (Mechanic)	17.86	
POWER EQUIPMENT OPERATORS (Tack Truck/Distributor Operator)	14.81	.02
POWER EQUIPMENT OPERATORS (Slip Form Machine)	20.38	
POWER EQUIPMENT OPERATORS (Scraper Rough)	13.83	
POWER EQUIPMENT OPERATORS (Scraper Finish)	12.86	
POWER EQUIPMENT OPERATORS (Roller Other)	12.51	.03
POWER EQUIPMENT OPERATORS (Roller Asphalt Finish)	16.08	.07
POWER EQUIPMENT OPERATORS (Roller Asphalt Breakdown)	15.00	.08
POWER EQUIPMENT OPERATORS (Paver Concrete)	18.20	
POWER EQUIPMENT OPERATORS (Paver Asphalt)	17.84	.08
POWER EQUIPMENT OPERATORS (Pavement Marking Equipment)	11.99	
POWER EQUIPMENT OPERATORS (Oiler/Greaser)	15.05	
POWER EQUIPMENT OPERATORS (Off-Road Hauler/Water Tanker)	11.95	
POWER EQUIPMENT OPERATORS (Material Transfer Vehicle (Shuttle Buggy))	15.44	
POWER EQUIPMENT OPERATORS (Loader Greater Than 2 Cubic Yards)	17.91	
POWER EQUIPMENT OPERATORS (Loader 2 Cubic Yards or Less)	12.38	
POWER EQUIPMENT OPERATORS (Grader/Blade Rough)	15.12	
POWER EQUIPMENT OPERATORS (Grader/Blade Fine)	19.86	
POWER EQUIPMENT OPERATORS (Excavator Rough)	14.67	
POWER EQUIPMENT OPERATORS (Excavator Fine)	16.02	

	Rates	Fringes
POWER EQUIPMENT OPERATORS (Drill Operator Structure)	21.07	
POWER EQUIPMENT OPERATORS (Drill Operator Rock)	15.00	
POWER EQUIPMENT OPERATORS (Crane Rough/All-Terrain)	19.19	
POWER EQUIPMENT OPERATORS (Crane Other)	18.69	
POWER EQUIPMENT OPERATORS (Crane Boom Trucks)	18.19	
POWER EQUIPMENT OPERATORS (Concrete Grinder/Groover)	19.20	
POWER EQUIPMENT OPERATORS (Bulldozer Rough)	14.51	
POWER EQUIPMENT OPERATORS (Bulldozer Fine)	16.28	
POWER EQUIPMENT OPERATORS (Asphalt Broom Tractor)	10.00	
PAINTER (Bridge)	20.67	
LABORER (Pipelayer)	12.87	
LABORER (Common or General)	11.90	
LABORER (Traffic Signal/Lighting Installer)	15.33	.22
LABORER (Guardrail/Fence Installer)	13.09	
LABORER (Cement Mason/Concrete Finisher Tender)	11.04	
LABORER (Carpenter Tender)	10.50	
LABORER (Asphalt Screed/Jackman)	15.38	.08
LABORER (Asphalt Raker and Spreader)	11.76	
IRONWORKER	12.48	
ELECTRICIAN (Telecommunications Technician)	14.67	1.67
ELECTRICIAN (Electrician)	18.79	2.62
CEMENT MASON/CONCRETE FINISHER	14.40	
CARPENTER	13.48	
BLASTER	20.93	

Welders – Receive rate prescribed for craft performing operation to which welding is incidental.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

Note: Executive Order 13658 generally applies to contracts subject to the Davis-Bacon Act that were awarded on or between January 1, 2015 and January 29, 2022, and that have not been renewed or extended on or after January 30, 2022. Executive Order 13658 does not apply to contracts subject only to the Davis-Bacon Related Acts regardless of when they were awarded. If a contract is subject to Executive Order 13658, the contractor must pay all covered workers at least $13.65 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract from May 11, 2026, through December 31, 2026. The applicable Executive Order minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under Executive Order 13658 is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(iii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than "SU", "UAVG", "SA", or "SC" denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The "SU" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

"SU" wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The "SA" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the "SA" identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

a) a survey underlying a wage determination
b) an existing published wage determination
c) an initial WHD letter setting forth a position on a wage determination matter
d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, D.C. 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, D.C. 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via mail to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, D.C. 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

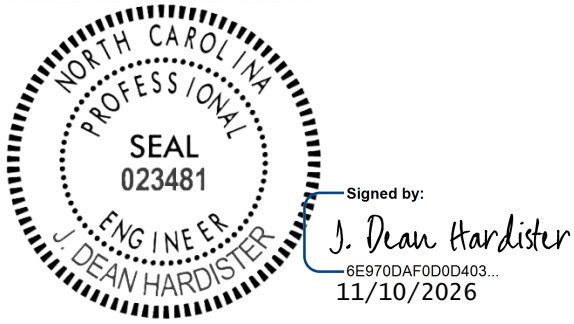
Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, D.C. 20210

END OF GENERAL DECISION

PROJECT SPECIAL PROVISIONS

GEOTECHNICAL

DESIGN PLAN SUBMITTAL:..... GT-2
HIGH REACH DRILLING:..... GT-2
LIMITED ACCESS DRILLING:..... GT-3
GEOSYNTHETICALLY REINFORCED WALL:..... GT-3
GEOTECHNICAL STABILIZATION:..... GT-4
POLYURETHANE GROUTING:..... GT-10
CEMENTITIOUS VOID FILL: GT-12



DESIGN PLAN SUBMITTAL:

Description

The work consists of providing a plan submittal reflecting the design for geotechnical stabilization work.

Submittal Method

The Contractor shall submit an electronic copy in PDF format of plans and calculations to the Engineer for review and approval in accordance with Section 105-2 of the *Standard Specifications*. When a prequalification classification exists, use a NCDOT prequalified design consultant, or prequalified in-house staff, to prepare geotechnical stabilization designs and calculations. Otherwise, prepare and seal the plans and calculations using a North Carolina Registered Professional Engineer.

Measurement and Payment

Design Plan Submittal will be measured and paid for as the complete design, as submitted in working drawings for each site requiring geotechnical stabilization.

Payment will be made under:

Pay Item	Pay Unit
Design Plan Submittal	Each

HIGH REACH DRILLING:

Description

High reach drilling is defined by drilling activities that require reaches in excess of 25 feet above or 15 feet below working platforms (i.e. road grades). High reach drilling for rock bolts, rock anchors, or soil nails will be accomplished by either using limited access drills or a high reach excavator, depending on site conditions, access and availability of equipment.

Measurement and Payment

High Reach Drilling will be measured by per linear foot of drilling within site areas defined in the reach descriptions above. Conditions meeting the *High Reach Drilling* descriptions will be applied in addition to any drilling line item needed for the design.

Ex 1) A Rock Bolt installed using Rope Access =
[High Reach Drilling per linear foot x 20'] + [unit price for Rock Bolts]

Ex 2) A Soil Nail up to 30' installed 30' above roadway =
[High Reach Drilling per linear foot x 30'] + [unit price for Soil Nail up to 30']

Payment at the per linear foot contract unit price shall be full compensation for all labor, equipment, and incidentals to perform high reach drilling. NCDOT will not make payment for materials on site and not installed.

Payment will be made under:

Pay Item	**Pay Unit**
High Reach Drilling	Linear Foot

LIMITED ACCESS DRILLING:

Description

Limited access drilling is defined by drilling activities that require rope access to install rock bolts, rock anchors, or soil nails.

Measurement and Payment

Limited Access Drilling will be measured by per linear foot of drilling using rope access. Conditions meeting the *Limited Access Drilling* description will be applied in addition to any drilling line item needed for the design.

Ex 1) A Rock Bolt installed using Rope Access =
[Limited Access Drilling per linear foot x 20'] + [unit price for Rock Bolts]

Ex 2) A Soil Nail up to 30' installed 30' above roadway =
[Limited Access Drilling per linear foot x 30'] + [unit price for Soil Nail up to 30']

Payment at the per linear foot contract unit price shall be full compensation for all labor, equipment, and incidentals to perform high reach drilling. NCDOT will not make payment for materials on site and not installed.

Payment will be made under:

Pay Item	**Pay Unit**
Limited Access Drilling	Linear Foot

GEOSYNTHETICALLY REINFORCED WALL:

Description

The work consists of constructing geosynthetically reinforced walls.

Materials

CMU blocks shall meet the requirements of Article 1040-2 of the Standard Specifications.

Backfill shall meet the requirements of Section 1016 of the Standard Specifications for Class IV Select Material. Compaction shall be at least 95% of AASHTO T-180.

Geotextile shall be per design but in no case shall have less than an ultimate wide width strip tensile strength of 2400 pounds per foot.

Method of Construction

Geosynthetically Reinforced Walls may be used in conjunction with soil nails/micropiles and/or shotcrete to create a wider roadway platform or to construct a small box or abutment wall. This wall shall consist of a standard split faced concrete masonry unit (CMU), Class IV Select Material backfill, and a woven polypropylene geosynthetic fabric placed between each block. Geosynthetically Reinforced Walls will be constructed to lines and grades determined by NCDOT and the Contractor's Engineer.

Measurement and Payment

Geosynthetically Reinforced Walls will be measured and paid for as the number of square feet of wall constructed and accepted. Such price and payment will be full compensation for all labor, materials, equipment, and incidentals to furnish and construct geosynthetically reinforced walls.

Aggregate Backfill will be measured and paid for as the number of tons of aggregate installed and accepted. Payment will be made under:

Payment will be made under:

Pay Item	**Pay Unit**
Geosynthetically Reinforced Wall	Square Feet
Aggregate Backfill	Ton

GEOTECHNICAL STABILIZATION:

Description

Geotechnical stabilization consists of designing and constructing geotechnical foundations, elements, and features to repair or improve roadways, slopes, and retaining walls.

Scope

North Carolina Department of Transportation (NCDOT) will identify locations of all work to be performed as specified herein. The Contractor may be called out for a site visit prior to issuance of a work request. The purpose of the site visit will be for the Contractor to evaluate and prepare an estimate of the materials and services needed to repair the site to the engineer's specifications. Unless otherwise requested by NCDOT, the Contractor shall schedule the site visit within **24 hours** following notification by NCDOT personnel and shall provide a detailed written estimate of materials and services needed to repair the site to NCDOT's specifications within **24 hours** following the site visit. Any necessary subsurface exploration, site survey, and slope stability modeling, to prepare the estimate, is the responsibility of the Contractor.

Following issuance of a work request, the Contractor will provide all necessary engineering plans and details required to successfully repair or stabilize the affected feature. These plans shall be stamped by a Registered Professional Engineer (PE) licensed in the State of North Carolina, who is knowledgeable and experienced in the design and implementation of geotechnical stabilization with soil nails, micropiles, etc. and related work. Where applicable, the stabilization design engineer shall be a Department-prequalified Key Person for the Work Code elements used for repair and/or stabilization. Changes or deviations from the approved submittals must be resubmitted for approval. No adjustments in project duration will be allowed due to incomplete submittals. The PE stamped submittals shall include at a minimum the following information:

1. A description of the repair or stabilization construction sequence and a schedule of work activities.

2. A description and detail of the size and spacing of geotechnical stabilization elements to be placed in order to meet minimum static/seismic factors of safety for global stability of the repair. The materials and components selected will meet a 75-year design life. Designs will include consideration of appropriate loadings, geometry, and material properties associated with the native soils, backfill, reinforcement connections, facing, and other design elements.

3. All necessary details to successfully complete the work.

The Division Engineer or his duly appointed representative will review the estimate submitted by the contractor and once those measures needed have been agreed upon, contractor will be given the approval to commence work.

Unless otherwise approved by NCDOT, repair operations commencement and submittal of stamped plans shall be within **48 hours** after receipt of a work request. Once repair has commenced, it shall continue until completion. The Contractor must also have the ability to design and repair **multiple** sites at the same time, if necessary, in order to efficiently provide maintenance and emergency repairs as required.

Materials

Shotcrete shall be provided in accordance with Section 1002 of the Standard Specifications.

Rock slope materials including, but not limited to, rock bolts, wire mesh and nets, and rockfall barriers shall meet the requirements of the current *Rock Slope Materials* provision.

Materials used for soil nails and micropiles shall be readily available standard geotechnical industry items such as casing, continuous threaded solid bars, and continuous threaded hollow bars with sacrificial bits.

Construction Methods

Soil Nails: Perform soil nail design and construction, including nail installation, grouting, shotcrete, and wall construction, in accordance with the current *Soil Nail Wall* provision, except as modified herein. Soil nails shall either be self-drilling or permanently cased depending on the design. Permanent shotcrete facing may be used to complete work for this contract. Please note that the minimum permanent shotcrete facing thickness is 6" for work for this contract. Soil nail proof testing shall be performed in accordance with the *Soil Nail Wall* provision.

Micropiles: Perform micropile design and construction in accordance with the current *Micropiles* provision, except as modified herein. For bidding purposes, define a micropile as constructed with a fully grouted 4" outside diameter, ½" wall thickness, 80 ksi casing extending from the top of the micropile to the top of weathered rock or rock and a #8 Grade 75 all-thread bar extending from the bottom of the bond zone to above the top of micropile, as necessary. Please note that mill secondary casing may be used to complete work for this contract.

Reinforced Shotcrete: Construct reinforced shotcrete with a minimum thickness shown in acceptable submittals with reinforcement a minimum of 3 inches from the ground surface. Do not begin reinforced shotcrete construction or incorporate materials into the work until the submittal requirements are satisfied and accepted by the Department. Any changes or deviations from the accepted submittals or re-submittals before proceeding with work are not allowed. No adjustments in contract time will be allowed due to incomplete submittals.

Ensure the minimum thickness of shotcrete using shooting wires, thickness control pins, or other devices acceptable to the Department. Install thickness control devices normal to the surface such that they protrude the required shotcrete thickness outside the surface. Ensure that the front face of the shotcrete does not extend beyond the limits established by the Department. Use either an undisturbed gun finish as applied from the nozzle or a rough screeded finish, as determined by the Department. Remove shotcrete extending into the structural face section beyond the tolerances specified herein.

A clearly defined pattern of continuous horizontal or vertical ridges or depressions at the reinforcing elements after they are covered with shotcrete will be considered an indication of insufficient reinforcement cover or poor nozzle techniques. In this case immediately suspend the application of shotcrete and implement corrective measures before resuming the shotcrete operations. Correct the shotcreting procedure by adjusting the nozzle distance and orientation, by ensuring adequate cover over the reinforcement, or other means.

Repair shotcrete surface defects as soon as possible after placement. Remove and replace shotcrete that exhibits segregation, honeycombing, lamination, voids, or sand pockets. In-place shotcrete not meeting the specified strength requirement will be subject to remediation. Possible remediation options include placement of additional shotcrete thickness or removal and replacement, at no additional cost to the Department.

Do not place shotcrete if the ambient air or ground temperature is below 40° F unless artificial heat and tenting is used to elevate the temperature. Maintain cold weather protection if the temperature after placement is below 40° F until the in-place compressive strength of the shotcrete is greater than 725 psi.

Cold weather protection includes blankets, heating under tents, or other means acceptable to the Department. The shotcrete mix shall have a temperature of not less than 50° F or more than 100° F at the nozzle during placement.

Suspend shotcrete application during high winds and heavy rains unless suitable protective covers, enclosures or wind breaks are installed. Remove and replace newly placed shotcrete exposed to rain that washes out cement or otherwise makes the shotcrete unacceptable. Provide a polyethylene film or equivalent to protect the work from exposure to adverse weather.

Wire Mesh Stabilization: Perform wire mesh stabilization design and construction in accordance with the current *Soil Nail Slope Stabilization, Rock Slope Materials,* or *Rock Slope Stabilization* provisions.

Rock Bolts: Perform rock slope stabilization design and install rock bolts in accordance with the current *Rock Slope Stabilization* provision. For bidding purposes, rock bolts will be #8 Grade 75 all thread bar and have an installed length of up to 20 feet and includes nuts and plates, as needed. Rock bolt proof testing to 120% of the Design Load will be required as determined by the Department.

Rock Slope Scaling: Define scaling as removing loose and/or potentially unstable rock from the rock slope and rock resting on any soil slope above the rock face. Scaling of loose or potentially unstable rock shall be accomplished by manual scaling methods. This work shall include scaling at locations shown on the plans, or as directed by the Department, to the specified degree. This work may also include vegetation removal from slope or excavation of soil/weathered rock. Scaling that creates a rockfall hazard such as overhangs or launching pads shall be remediated as directed by the Department. Erosion channels above the rock slope may require remediation prior to acceptance by the Department.

Care shall be taken to minimize damage by equipment or falling rock to the surface of any adjacent roadways, guardrail, drainage structures, signs, or other facilities. Damage attributable to the Contractor's means and methods shall be repaired at no additional cost to the Department.

Measurement and Payment

Permanently Cased Soil Nails up to __ Ft. will be measured and paid for as the number of soil nails furnished and installed in the following incremental lengths: up 20 feet, up to 30 feet, up to 40 feet, up to 50 feet, up to 60 feet, up to 70 feet, and up to 80 feet in length. Such price and payment will be full compensation for all labor, materials, equipment, and incidentals to furnish, install and proof test required soil nails. No additional payment will be made for soil nail proof testing. No payment will be made for materials which are not installed.

Self-Drilling Soil Nails up to __ Ft. will be measured and paid for as the number of soil nails furnished and installed in the following incremental lengths: up 20 feet, up to 30 feet, up to 40 feet, up to 50 feet, up to 60 feet, up to 70 feet, and up to 80 feet in length. Such price and payment will be full compensation for all labor, materials, equipment, and incidentals to furnish, install and proof test required soil nails. No additional payment will be made for soil nail proof testing. No payment will be made for materials which are not installed.

Micropiles will be measured and paid for as the number of micropiles furnished and installed in the following incremental lengths: up 20 feet, up to 30 feet, up to 40 feet, up to 50 feet, up to 60 feet, up to 70 feet, and up to 80 feet in length. Such price and payment will be full compensation for all labor, materials, equipment, and incidentals to furnish and install required micropiles. No payment will be made for materials which are not installed.

Reinforced Shotcrete will be measured and paid for in square feet per that has been completed and accepted in the following incremental thicknesses: up 6 inches, up to 8 inches, and up to 12 inches. Such price and payment will be full compensation for all labor, materials, equipment, and incidentals to furnish and construct reinforced shotcrete, including but not limited to geocomposite drainage strips, weep holes, reinforcing steel, shotcrete, any preparatory trimming and cleaning of soil/rock surfaces and shotcrete cold joints in preparation for receiving new shotcrete, and all incidentals for placing shotcrete around the soil nails or micropiles. No additional payment will be made for additional shotcrete thickness or area not required by the accepted submittal or as requested by the Department.

Shotcrete Shoulder Build-Up will be paid for in linear feet that has been completed and accepted. Such price and payment will be full compensation for all labor, materials, equipment, and incidentals to furnish and construct reinforced shotcrete, including but not limited to geocomposite drainage strips, weep holes, reinforcing steel, shotcrete, any preparatory trimming and cleaning of soil/rock surfaces and shotcrete cold joints in preparation for receiving new shotcrete, and all incidentals for placing shotcrete around the soil nails or micropiles. No payment will be made for materials which are not installed. No payment will be made for partial deliveries.

Wire Mesh Stabilization will be measured and paid for as the number of square feet of Type 1 or Type 2 wire mesh furnished and installed according to the plans, including plates. Price and payment will be full compensation for all materials, labor, and equipment necessary for the placement of the wire mesh surface treatment.

Rock Bolts will be measured and paid for as the number of rock bolts furnished and installed. Such price and payment will be full compensation for all labor, materials, equipment, and incidentals to furnish, and install required rock bolts. No payment will be made for materials which are not installed.

Rock Bolt Proof Tests will be measured and paid in units of each. Testing will be measured as the number of initial proof tests performed. The contract unit prices for *Rock Bolt Proof Tests* will be full compensation for initial bolt testing. No payment will be made for subsequent testing performed on the same or replacement test bolts.

Rock Slope Scaling will be measured in units per day and will be paid for at the contract unit price and shall be full compensation for all labor, materials, equipment, and incidentals for a four-man crew. Scaling rate does not include resizing, haul off or disposal of materials brought down during scaling operations.

Payment will be made under:

Pay Item	**Pay Unit**
Permanently Cased Soil Nails up to 20'	Each
Permanently Cased Soil Nails up to 30'	Each
Permanently Cased Soil Nails up to 40'	Each
Permanently Cased Soil Nails up to 50'	Each
Permanently Cased Soil Nails up to 60'	Each
Permanently Cased Soil Nails up to 70'	Each
Permanently Cased Soil Nails up to 80'	Each
Self-Drilling Soil Nails up to 20'	Each
Self-Drilling Soil Nails up to 30'	Each
Self-Drilling Soil Nails up to 40'	Each
Self-Drilling Soil Nails up to 50'	Each
Self-Drilling Soil Nails up to 60'	Each
Self-Drilling Soil Nails up to 70'	Each
Self-Drilling Soil Nails up to 80'	Each
Reinforced Shotcrete Up To 6” Thickness	Square Foot
Reinforced Shotcrete Up To 8” Thickness	Square Foot
Reinforced Shotcrete Up To 12” Thickness	Square Foot
Shotcrete Shoulder Build-Up	Linear Foot
Type 1 Pinned Wire Mesh Stabilization	Square Foot
Type 1 Draped Wire Mesh Stabilization	Square Foot
Type 2 Pinned Wire Mesh Stabilization	Square Foot
Type 2 Draped Wire Mesh Stabilization	Square Foot
Rock Bolts	Each
Rock Bolt Proof Testing	Each
Rock Slope Scaling	Day

POLYURETHANE GROUTING

This work shall consist of soil densification to strengthen base and sub-base soils under flexible asphalt, concrete, or composite pavement, and structures such as bridge approaches with sleeper slabs, by furnishing and injecting expansive polyurethane material into the foundation soils beneath the pavement through holes or injection tubes inserted into drilled holes at locations and depths as shown on the plans, or as directed by the District Engineer or their designee, while monitoring for movement at the surface. If necessary, injection of material shall continue as needed to lift the pavement to grade.

Material Requirements:

- High-Density Polyurethane Foam: Prior to the start of work, vendor must provide a supplier certification with each shipment to ensure the material conforms to the following requirements for property test results and properties listed below:

Property	**Test**	**Test Results**
Density	ASTM D1622	3-4.5 pcf
Compressive Strength	ASTM D1621	80 psi
Tensile Strength	ASTM D1623	115 psi
Shear Strength	ASTM C273	52 psi
Close Cell Content	ASTM D6226	>92%
Flexural Strength	ASTM D790	87 psi

HDPF shall reach 90% of maximum compressive strength within 30 minutes of injection. The material used shall be a two-part 1:1 by volume HDPF, such as NCFI-4RH or approved equal. Other polyurethanes submitted must meet all the required specifications as amended and be preapproved by the NCDOT. All polyurethane materials used must be listed on the NCDOT Approved Products List (APL). The material shall be water blown, not chemically blown. The material shall be a polyurethane-forming mixture, having water insoluble diluents, which permits the formation of polyurethanes in the presence of water. Water insoluble diluents shall provide polyurethane foam with improved dimensional stability properties. The presence of water insoluble diluents and the characteristics and properties listed above must be certified by the manufacturer. The certification from the polyurethane manufacturer must be submitted prior to award.

Panel Test for Hydro-Insensitivity of High-Density Polyurethane Grout: Polyurethane must pass the New York State Department of Transportation (NYSDOT) Panel Test for HydroInsensitivity of High-Density Polyurethane Grout. The Vendor must submit a certificate from an independent third-party testing lab under the supervision and review of a licensed Professional Engineer certifying that the polyurethane material meets or exceeds the limits set forth in the panel test specification. The applicable test standard is NYSDOT GTP-92 (Hydro-Insensitivity of High

Density Polyurethane Grout – Panel Test). Material must demonstrate a minimum Retention of Density of 80% and a minimum Wet Compressive Strength of 38 psi per NYSDOT GTP-92. The certification from the third-party testing lab must be submitted prior to award.

Equipment Requirements:

1. Portable Dynamic Cone Penetrometer (DCP): Vendor must provide a portable DCP for on-site soils investigation to assist in location and depth of weak foundation soils and determination of correct injection pattern and injection elevations through tubes to densify weak soils. The DCP must be a Pagani DPM 30 or equal, capable of taking readings up to 30 feet below grade. DCP testing may be required, as directed by the District Engineer or their designee, to confirm existing sub-grade soil conditions.
2. Pumping Units and Flow Meters: Trucks in vendors fleet should be mounted with two pumping units capable of injecting the polyurethane material at a rate of at least 50 lbs per minute per pump. Each truck should be capable of pumping 100 lbs per minute. Pumping units should be electrically powered and not hydraulic. All pumping units used must be equipped with flow meters to precisely measure the amount of each component injected, so that the 1:1 ratio by volume is maintained for quality control and a certified volume of injected polyurethane material is obtained for proper payment.
3. Equipment for Monitoring Movement: Vendor must supply satisfactory equipment such as rotating laser levels and receivers to monitor movement of pavement to within .5 mm, to verify that the injected voids and base material have been properly densified and to ensure proper lift of pavement to grade if required. Vendor must follow the laser equipment manufactures safety precautions and shall ensure that motorists and personnel are not subjected to laser exposure.

Quality Management:

1. Drilling Holes and Installation of Injection Tubes: Pneumatic or electric drills are required, capable of efficiently drilling injection holes through the pavement without damaging the structural integrity of the existing pavement. Drill injection holes in the pattern shown on the plans, or as indicated on the approved field Quality Control plan, as approved by the District Engineer or their designee. Drill 5/8” to 2” diameter holes, vertical and round, and to a depth indicated on the approved field Quality Control plan. Install injection tubes to the prescribed injection depth(s). Tubes must be pushed a minimum of 4” below the grade of the road prior to the commencement of injections.
2. Mixing: Using the flow meters, a quality check shall be performed on the ratio of the two-part chemical system. The part A (Resin) to the part B (ISO) ratio by volume should be 1:1. Prior to performing the work each day, the Vendor shall reset the flow meters on the pumping units to zero. The Vendor shall perform a test shot of material from one (1) injection gun at a time with a minimum of 0.5 gallons of each material, comparing the digital output in gallons of resin to the gallons of ISO to determine the injected ratio. If the ratio is less than 0.95 or greater than 1.05, the system is to be checked for problems, adjusted, and the ratio rechecked until a proper ratio is assured. Vendor shall repeat the quality check for all the injection guns to be used on the project.
3. Injection of the HDPF: Vendor shall inject the HDPF through holes, via injection tubes when needed, to fill voids and into the foundation soils beneath the pavement to the prescribed injection depth(s). Vendor shall control the stabilization of the concrete by regulating the rate of injection

of the material. Vendor shall continuously monitor for movement of the pavement. Foundation soils are sufficiently stabilized when movement of the pavement is detected. If necessary, injection of material shall continue as needed to lift the pavement to grade. If no vertical movement has occurred, the District Engineer or their designee may direct the Vendor to cease injecting. Do not inject components when the air temperature, measured at the location of the injection operation in the shade away from artificial heat, is below 40°F.

Experience & Personnel Requirements:

1. Vendor must assign a crew supervisor that has at least five (5) years of experience in stabilization of pavement foundation soils by injecting two-part 1:1 by volume expansive polymers through holes or tubes into soils, while monitoring at the surface for movement to demonstrate sufficient densification of the soils.

Measurement and Payment:

1. HDPF Injection, will be measured to the nearest pound as displayed on the certified flow meter and paid per pound of polyurethane injected, including all materials, tools, equipment, labor, Standard Warranty, and incidentals necessary to perform the work.

Pay Item	**Pay Unit**
Polyurethane Grouting	LB

CEMENTITIOUS VOID FILL

Description

The work consists of furnishing and placing cellular concrete, flowable fill, or other approved alternative to be used as backfill/void fill material.

Construction Method

The cementitious void fill may be premixed and delivered to the job site or mixed on-site. If ambient temperatures are anticipated to be below 32 degrees Fahrenheit within 8 hours after cementitious void fill placement, mixing water must either be heated as approved by the Engineer or placement must be prohibited.

Measurement and Payment

Cementitious Void Fill will be measured and paid for by the cubic yard of cementitious void fill furnished and installed at the contract unit price, and shall be full compensation for all labor, materials, equipment, and incidentals. Payment will not be made for partial deliveries. Payment will not be made for materials on site and not installed.

Payment will be made under:

Pay Item	**Pay Unit**
Cementitious Void Fill	Cubic Yard

GEOTECHNICAL APPENDICES

FOR REFERENCE ONLY

GEOTECHNICAL APPENDIX A

SOIL NAIL SLOPE STABILIZATION: (SPECIAL)

GENERAL

A soil nail is defined as a steel bar grouted in a drilled hole inclined at an angle below horizontal. Soil nail slope stabilization consists of soil nails spaced at a regular pattern and connected to a flexible, steel wire mesh facing. Construct soil nail slope stabilization based on actual elevations and dimensions in accordance with this provision, the accepted submittals and the plans. For this provision, "Soil Nail Slope Stabilization Contractor" refers to the contractor installing the soil nails and applying the facing.

SUBMITTALS

Submit a soil nail slope stabilization installation and testing plan. Provide an electronic copy of the plan in PDF format. Allow 10 working days for the review of the Soil Nail Slope Stabilization submittal. Do not begin soil nail slope stabilization construction including sacrificial soil nails for verification tests until the installation and testing plan is accepted.

Submit detailed project specific information including the following.

Excavation methods and equipment.

List and sizes of proposed drilling rigs and tools, tremies and grouting equipment.

Sequence and step-by-step description of soil nail slope stabilization construction including details of drilling and grouting methods, soil nail installation and facing construction.

Examples of construction and test nail records to be provided in accordance with Sections 6.0 and 7.0, Item F, respectively.

Grout mix design including laboratory test results in accordance with the Grout for Structures Special Provision and acceptable ranges for grout flow and density.

Soil nail testing details, procedures and plan sealed by a Professional Engineer registered in North Carolina with calibration certificates within one year of submittal date in accordance with Section 7.0.

Other information shown on the plans or requested by the Engineer.

If alternate installation and testing procedures are proposed or necessary, a revised installation and testing plan submittal may be required. If the work deviates from the accepted submittal without prior approval, the Engineer may suspend soil nail slope stabilization construction until a revised plan is submitted and accepted.

MATERIALS

Provide Type 3 Manufacturer's Certifications in accordance with Article 106-3 of the *Standard Specifications* for soil nail materials.

Soil Nails

Store steel materials on blocking a minimum of 12" (300 mm) above the ground and protect it at all times from damage; and when placing in the work make sure it is free from dirt, dust, loose mill scale, loose rust, paint, oil or other foreign materials. Do not crack, fracture or otherwise damage grout inside sheathing of shop grouted encapsulated soil nails.

Provide materials consisting of grouted steel or hollow bars and nail head assemblies. Use epoxy coated steel bars that meet AASHTO M 275 or M 31, Grade 60 or 75. Splice bars in accordance with Article 1070-9 of the Standard Specifications. Provide epoxy coated bars that meet Article 1070-7 of the Standard Specifications. For galvanized bars, provide galvanized steel meeting the requirements of Section 1076 of the *Standard Specifications*. Use hollow steel bars manufactured by DYWIDAG-Systems International USA Inc., Nucor Skyline, Williams Form Engineering Corp. or an approved equal.

Fabricate bar centralizers from schedule 40 polyvinyl chloride (PVC) plastic pipe or tube, steel or other material not detrimental to steel bars (no wood). Size centralizers to position the bar within 1" (25 mm) of the drill hole center and allow a tremie to be inserted to the bottom of the hole. Use centralizers that do not interfere with grout placement or flow around soil nail bars. For encapsulated bars, centralizers are required both inside and outside of encapsulation.

Use grout meeting the requirements of Article 1003-3 of the *Standard Specifications.*

Wire Mesh, Wire Ropes, Connectors and Anchor Plates

Wire mesh, wire ropes, hardware, anchor plates and other items for soil nail stabilization shall meet the requirements of the Rock Slope Materials provision. Provide any wire mesh and net components or hardware not addressed in Rock Slope Materials provision in accordance with the Wire Mesh/Net Manufacturer's recommendations. Galvanize steel components not addressed in this provision in accordance with Section 1076 of the *Standard Specifications*.

At the Contractor's option, use galvanized steel plates recommended by the Wire Mesh/Net Manufacturer instead of anchor plates required above to anchor wire mesh or nets to excavation or slope faces.

Provide support ropes to suspend wire mesh or nets from rock anchors. At the Contractor's option and when noted in the plans, suspend wire mesh or nets from grouted rope anchors instead of rock anchors and connect rope anchors to support ropes with shackles.

SOIL NAIL SLOPE STABILIZATION PRECONSTRUCTION MEETING

Before starting soil nail slope stabilization construction, conduct a preconstruction meeting to discuss the construction and inspection of the soil nail slope stabilizations. Schedule this meeting after all soil nail slope stabilization submittals have been accepted. The Resident or Bridge Maintenance Engineer, Bridge Construction Engineer, Geotechnical Operations Engineer, General Contractor and the Soil Nail Slope Stabilization Contractor Superintendent, and Project Manager will attend this preconstruction meeting.

CONSTRUCTION METHODS

Perform all necessary clearing and grubbing in accordance with Section 200 of the *Standard Specifications*. Perform any blasting in accordance with the contract special provisions. Do not excavate beyond the face of the soil nail slope stabilization.

Use equipment and methods reviewed and accepted in the installation and testing plan or approved by the Engineer. Inform the Engineer of any deviations from the accepted plan.

Excavation

Construct the soil nail slope stabilization from the top down. Excavate in staged horizontal lifts with heights not to exceed the vertical soil nail spacing. The excavated surface must be to the grades of the project drawings for the slope. Do not excavate the slope more than 3 feet (1 m) below the level of the row of nails to be installed in that lift. Do not excavate a lift until nail installation and nail testing for the preceding lift are complete and acceptable to the Engineer. After a lift is excavated, clean the cut surface of all loose materials, mud, and other foreign material. The excavated face cannot be unprotected for more than 24 hours for any reason. Prior to advancing the excavation, allow nail grout on the preceding lift to achieve the required 3 day compressive strength.

If the excavation face becomes unstable at any time, suspend soil nail slope stabilization construction and temporarily stabilize the face by immediately placing an earth berm against the unstable face. Soil nail slope stabilization construction may not proceed until the conditions have been reviewed by the Engineer. A revised soil nail slope stabilization installation and testing plan submittal may be required after the slope conditions have been reviewed.

Take all necessary measures to ensure that installed nails are not damaged during excavation. Repair or replace to the satisfaction of the Engineer and at no cost to the Department nails that are damaged or disturbed during excavation.

Installation of Wire Mesh and Bearing Plates

Prior to installing wire mesh, excavate depression around each nail location as shown in plans. Install wire mesh in accordance with the drawings and manufacturer's specifications, including any required overlapping.

Following soil installation, connect the bearing plates to the nails as shown on the plans and as directed by the Engineer. Replace bearing plates, nuts or washers that are damaged or defective as determined by the Engineer at no additional cost to the Department. Once the bearing plates and nuts have been attached to the nails, tighten each nut until they have reached a torque reading of 265 ft-lbs.

Soil Nail Installation

Install soil nails to the depth indicated on the plans and in the same way as acceptable verification test nails. Drill and grout soil nails the same day and do not leave drill holes open overnight. Install supplemental soil nails, as directed by the Engineer, to the depth indicated on the plans beyond the slope face through the wire mesh to improve contact with the slope face.

Control drilling and grouting to prevent excessive ground movements, damaging structures and fracturing rock and soil formations. If ground heave or subsidence occurs, suspend soil nail slope

stabilization construction and take action to minimize movement. If structures are damaged, suspend construction and repair structures at no additional cost to the Department with a method proposed by the Contractor and accepted by the Engineer. The Engineer may require a revised soil nail slope stabilization installation and testing plan when corrective action is necessary.

Drilling

Use drilling rigs capable of drilling through whatever materials are encountered to the dimensions and orientations required for the soil nail slope stabilization design. Drill straight and clean holes at the locations shown in the accepted submittals. Drill hole locations and inclinations are required to be within 6" (150 mm) and 2 degrees, respectively, of that shown in the accepted submittals unless approved otherwise by the Engineer.

Stabilize drill holes with temporary casings if unstable, caving or sloughing material is anticipated or encountered. Do not use drilling fluids to stabilize drill holes or remove cuttings.

Using manufacturer approved methods, increase the opening in the wire mesh to allow installation of the soil nail through the mesh.

Soil Nail Bars

Use centralizers to center steel bars in drill holes. Securely attach centralizers at maximum 8 ft (2.4 m) intervals along bars. Attach upper and lowermost centralizers 24" (450 mm) from the top and bottom of the bars.

Before placing soil nail bars, allow the Engineer to check location, orientation and cleanliness of drill holes. Provide steel bars as shown in the accepted submittals and insert bars without difficulty or forcing insertion. Do not vibrate or drive soil nail bars. If a bar can not be completely inserted easily, remove the bar and clean or redrill the hole.

Grouting

Remove all oil, rust inhibitors, residual drilling fluids and similar foreign materials from holding tanks/hoppers, stirring devices, pumps, lines, tremie pipes and all other equipment in contact with grout before use.

Place grout with a tremie in accordance with the contract and accepted submittals. Inject grout at the lowest point of drill holes through a tremie pipe, e.g., grout tube, casing, hollow-stem auger or drill rod, in one continuous operation. Fill drill holes progressively from the bottom to top and withdraw tremie at a slow even rate as the hole is filled to prevent voids in the grout. Extend tremie pipe into grout a minimum of 5 ft (1.5 m) at all times except when grout is initially placed in a drill hole.

Provide grout free of segregation, intrusions, contamination, structural damage or inadequate consolidation (honeycombing). Cold joints in grout are not allowed except for soil nails that are tested. Extract temporary casings as grout is placed. Monitor and record grout volumes during placement.

Bar threads should be kept clean to allow tightening of the anchor plate and nut.

CONSTRUCTION RECORDS

Provide an electronic copy in PDF format of soil nail slope stabilization construction records including the following within 24 hours of completing each lift.

1. Names of Soil Nail Slope Stabilization Contractor, Superintendent, Nozzleman, Drill Rig Operator, and Project Manager.
2. Description, county, NCDOT contract, TIP and WBS element number
3. Stations and lift location, dimensions, elevations and description
4. Soil nail locations, diameters, lengths and inclinations, bar types, sizes and grades, corrosion protection and temporary casing information
5. Date and time drilling begins and ends, soil nail bar is placed, grout is mixed and/or arrives on-site, grout placement begins and ends
6. Grout volume, temperature, flow and density records
7. Ground and surface water conditions and elevations, if applicable
8. Weather conditions including air temperature at time of grout placement
9. All other pertinent details related to soil nail slope stabilization construction

After completing all lifts for a soil nail slope stabilization or a stage of a soil nail slope stabilization, submit electronic copies (pdf or jpg format on CD or DVD) of all corresponding construction records.

SOIL NAIL TESTING

For this provision, “verification tests” are performed on test nails not incorporated into the work, i.e., sacrificial soil nails “Verification test nails” refer to soil nails on which verification tests are performed and “proof test nails” refer to soil nails on which proof tests are performed.

One verification test is required at each soil nail slope stabilization location, or as directed by the Engineer. The Engineer will select the test location in the field. Proof tests on 5 percent of production soil nails with a minimum of 1 test per nail row are required. More or less soil nail testing may be required depending on the subsurface conditions encountered. The Engineer will decide the actual number and specific locations of each verification and proof test required.

Do not test soil nails until grout achieves the required 3 day compressive strength. Do not begin construction of any production soil nails until verification tests are satisfactorily completed.

Testing Equipment

Use testing equipment that includes the following.

- 2 dial gauges
- dial gauges rigid supports

- hydraulic jack and pressure gauge
- electronic load cell
- jacking block or reaction frame

Provide pressure gauges graduated in 100 psi (690 kPa) increments or less. Use dial gauges capable of measuring to 0.001" (0.025 mm) and accommodating the maximum anticipated movement. Submit identification number and calibration records for each load cell, jack and pressure gauge with the soil nail slope stabilization installation and testing plan. Calibrate the jack and pressure gauge as a unit.

Align testing equipment to ensure uniform loading. Use a jacking block or reaction frame that does not damage the slope or contact the slope face within 3 ft (1 m) of test nails. Align dial gauges within 5 degrees of the test nail axis. Place dial gauges opposite each other on either side of the test nail. Set up test equipment and measuring devices such that resetting or repositioning the components before completing testing is not required. A load cell is not required for proof tests if the same jack and pressure gauge are used for verification tests.

Test Nails

Test nails have both bonded and unbonded lengths. Grout only the bonded length before testing. Minimum bonded and unbonded lengths of 10 ft (3 m) and 5 ft (1 m), respectively, are required.

Soil nail bars for production soil nails may be overstressed under higher test nail loads. Use larger or higher grade steel bars to allow for higher loads instead of shortening bond lengths to less than the minimum. Any costs associated with higher capacity bars will be considered incidental to the soil nail testing pay items.

Verification Tests

Install sacrificial soil nails in accordance with the accepted submittals and this provision. Use the same equipment, methods and drill hole diameter for sacrificial soil nails as will be used for production soil nails.

Use the following equation to determine maximum bond length for verification test nails, L_{BVT} (ft or m).

$$L_{BVT} \leq \frac{C_{RT} \times A_t \times f_y}{Q_{ALL} \times 3}$$

Where,
C_{RT} = reduction coefficient, 0.9 for Grade 60 and 75 (420 and 520) bars or 0.8 for Grade 150 (1035) bars, A_t = bar area (in^2 or mm^2)
F_y = bar yield stress (ksi or kPa) and
Q_{ALL} = allowable unit grout/ground bond strength (kips/ft or kN/m).

Use the following equation to determine design verification test load, DTL (kips or kN).

$$DTL = L_{BVT} \times Q_{ALL}$$

Calculate DTL based on as-built bond lengths. Perform verification tests by incrementally loading test nails to failure or a maximum test load of 300 percent of DTL according to the following schedule.

Load	Hold Time
AL*	1 minute
0.25 DTL	10 minutes
0.50 DTL	10 minutes
0.75 DTL	10 minutes
1.00 DTL	10 minutes
1.25 DTL	10 minutes
1.50 DTL	60 minutes (creep test)
1.75 DTL	10 minutes
2.00 DTL	10 minutes
2.50 DTL	10 minutes
3.00 DTL	10 minutes
AL*	1 minute

*Alignment load (AL) is the minimum load required to align testing equipment and should not exceed 0.05 DTL.

Reset dial gauges to zero after applying alignment load. Record test nail movement at each load increment and permanent set after load is reduced to alignment load.

Monitor test nails for creep at the 1.50 DTL load increment. Measure and record test nail movement during the creep portion of the test at 1, 2, 3, 5, 6, 10, 20, 30, 50 and 60 minutes. Repump jack as needed to maintain the intended load during hold times.

Proof Tests

Use the following equation to determine maximum bond length for proof test nails, L_{BPT} (ft or m).

$$L_{BVT} \leq \frac{C_{RT} \times A_t \times f_y}{Q_{ALL} \times 1.5}$$

Where variables are as defined in Item C of this section.

Use the following equation to determine design proof test load, DTL (kips or kN).

$$DTL = L_{BPT} \times Q_{ALL}$$

Calculate DTL based on as-built bond lengths. Perform proof tests by incrementally loading test nails to failure or a maximum test load of 150 percent of DTL according to the following schedule.

Load	Hold Time
AL*	Until movement stabilizes
0.25 DTL	Until movement stabilizes
0.50 DTL	Until movement stabilizes
0.75 DTL	Until movement stabilizes
1.00 DTL	Until movement stabilizes
1.25 DTL	Until movement stabilizes
1.50 DTL	10 or 60 minutes (creep test)
AL*	1 minute

*Alignment load (AL) is the minimum load required to align testing equipment and should not exceed 0.05 DTL.

Reset dial gauges to zero after applying alignment load. Record test nail movement at each load increment and monitor test nails for creep at the 1.50 DTL load increment. Measure and record test nail movement at 1, 2, 3, 5, 6 and 10 minutes. When the test nail movement between 1 minute and 10 minutes exceeds 0.04" (1 mm), maintain the maximum test load for an additional 50 minutes and record movements at 20, 30, 50 and 60 minutes. Repump jack as needed to maintain the intended load during hold times.

Test Nail Acceptance

Test nail acceptance is based on the following criteria.

For verification tests, total creep movement is less than 0.08" (2 mm) between the 6 and 60 minute readings and creep rate is linear or decreasing throughout the creep test load hold time.

For proof tests, total creep movement is less than 0.04" (1 mm) between the 1 and 10 minute readings or less than 0.08" (2 mm) between the 6 and 60 minute readings and creep rate is linear or decreasing throughout the creep test load hold time.

Total test nail movement at maximum test load exceeds 80 percent of the theoretical elastic elongation of the test nail unbonded length.

Pullout failure does not occur at the 1.5 DTL load increment or before. Pullout failure is defined as the inability to increase the load while test nail movement continues. Record the pullout failure load as part of the test data.

Maintain stability of test nail unbonded lengths for subsequent grouting. If the test nail unbonded length of a proof test nail can not be satisfactorily grouted after testing, do not incorporate the test nail into the work and replace the nail with another production soil nail at no additional cost to the Department.

Test Nail Results

Submit an electronic copy in PDF format of test nail records including load versus movement curves within 24 hours of completing each test. The Engineer will review the test nail records and associated construction records to determine if the test nail is acceptable.

If the Engineer determines a verification test nail is unacceptable, the Engineer may revise the soil nail slope stabilization design and/or installation methods. The Engineer will have up to 10 working days to revise the soil nail slope stabilization design and/or installation and testing plan at no additional cost to the Department.

If the Engineer determines a proof test nail is unacceptable as a result of the contractor's activities, then either additional proof tests on adjacent production soil nails or a revision to the soil nail slope stabilization design and/or installation methods for the production soil nails represented by the unacceptable proof test nail may be required at no additional cost to the Department. If required, remove representative production soil nails and provide new production soil nails with the revised design and/or installation methods at no additional cost to the Department.

After completing all soil nail testing, submit an electronic copy in PDF format of all corresponding testing records.

GEOTECHNICAL APPENDIX B

MICROPILES: (10-19-21)

GENERAL

A micropile is a small diameter, drilled and grouted non-displacement pile with a reinforcing casing and typically a center reinforcing bar. Load testing is required when noted in the plans. Design and construct micropiles with the required resistance in accordance with the contract and accepted submittals. Use a prequalified Micropile Contractor for micropile work. Define "pile" as a micropile, "casing" as reinforcing casing and "bar" as a center reinforcing bar.

MATERIALS

Refer to the *Standard Specifications.*

Item	Section
Portland Cement	1024-1
Water	1024-4

Use neat cement grout that only contains cement and water with a water cement ratio of 0.4 to 0.5 which is approximately 5.5 gallons of water per 94 lb of Portland cement. Provide grout with a compressive strength at 3 and 28 days of at least 1,500 psi and 4,000 psi, respectively.

Reinforcement

Provide Type 1 material certifications in accordance with Article 106-3 of the *Standard Specifications* for steel casings and bars. Store casings and bars on blocking at least 12" above the ground and protect it at all times from damage; and when placing in the work make sure it is free from dirt, dust, loose mill scale, loose rust, paint, oil or other foreign materials. Load, transport, unload and store micropile materials so materials are kept clean and free of damage.

Reinforcing Casings

Use steel pipes that meet American Petroleum Institute (API) 5CT, Grade N80 or ASTM A252 with a yield strength of 80 ksi for reinforcing casings. Provide prime mill certified steel pipes that meet Subarticle 106-1(B) of the *Standard Specifications* for casings. Do not use "New or Mill Secondary", "Structural" or "Limited Service" steel pipes as described by the *National Association of Steel Pipe Distributors Tubular Products Manual*. Use casings with the nominal wall thickness shown in the plans and outside diameters ranging from the minimum shown in the plans to 3" larger.

Center Reinforcing Bars

Use deformed steel bars that meet AASHTO M 275 or M 31, Grade 60 or 75 for center reinforcing bars. Splice bars in accordance with Article 1070-9 of the *Standard Specifications*. Locate casing joints at least 2 ft from bar splices.

For self-drilling micropiles, hollow bars may be used as allowed by the Engineer. Use hollow steel bars manufactured by DYWIDAG-Systems International USA Inc., Nucor Skyline, Williams Form Engineering Corp. or an approved equal.

Centralizers

Use bar centralizers that meet Article 6.3.5 of the *AASHTO LRFD Bridge Construction Specifications*. Size centralizers to position bars within 1" of drill hole centers and allow tremies to be inserted to bottom of holes. Use centralizers that do not interfere with grout placement or flow around bars.

Corrosion Protection

Provide epoxy coated bars that meet Article 1070-7 of the *Standard Specifications*. Galvanize exposed casings in accordance with Section 1076 of the *Standard Specifications*. After installing piles, clean exposed galvanized surfaces of casings with a 2,500 psi pressure washer. Apply organic zinc repair paint to exposed casing joints and repair damaged galvanized surfaces that are exposed in accordance with Article 1076-7 of the *Standard Specifications*.

PRECONSTRUCTION REQUIREMENTS

Micropile Designs

For micropile designs, submit PDF files of working drawings and design calculations at least 30 days before the preconstruction meeting. Do not begin micropile construction until a design submittal is accepted.

Use a prequalified Micropile Design Consultant to design piles. Provide designs sealed by a Design Engineer approved as a Geotechnical Engineer (key person) for the Micropile Design Consultant.

The pile layout and inclination, casing dimensions and tip elevations, pile to cap/footing connection, top of pile elevations and pile resistances are shown in the plans. Verify existing site conditions and survey information before designing piles.

Design piles in accordance with the *AASHTO LRFD Bridge Design Specifications* unless otherwise required. Define “bond length” as the pile length below the casing tip elevation noted in the plans. Determine the bond length and reinforcement for the factored resistance noted in the plans. Assume a design casing wall thickness of 12.5% less than nominal plus an additional 0.125" less due to corrosion. A bond length of at least 10 ft is required for each pile. If verification load testing is required, use a resistance factor of
0.70 for axial compression and uplift resistance. Otherwise, use a resistance factor of
0.55. When using tension load tests to determine nominal grout-to-ground bond resistances for axial compression resistance, neglect pile tip resistance.

Either extend casings below required tip elevations or use bars for reinforcement. Extend bars or casings full length of piles and provide at least 0.50" of grout cover outside casings. Design and locate casing joints as shown in the plans.

Submit working drawings and design calculations including estimated unit nominal resistances for acceptance in accordance with Article 105-2 of the *Standard Specifications*. Submit working drawings showing all micropile details including any dimensions, quantities, elevations and cross-sections necessary to construct the piles.

Micropile Construction Plan

Submit a PDF file of a micropile construction plan at least 30 days before the preconstruction meeting. Do not begin micropile construction until the construction plan submittal is accepted. Provide detailed project specific information in the micropile construction plan that includes the following:

1. List and sizes of proposed equipment including micropile drilling rigs and tools, tremies and grouting equipment;
2. Sequence of pile construction and step-by-step description of pile installation including details of casing installation, drilling methods and flushing;
3. List of reinforcement including grades or yield strength and sizes;
4. Methods for placing reinforcement with procedures for supporting and positioning the reinforcement including centralizers;
5. Procedures for placing grout including how the grout will be initially placed in drill holes and acceptable ranges for grout pressures and volumes;
6. Equipment and procedures for monitoring and recording grout levels, pressures and volumes with calibration certificates dated within 90 days of the submittal date;
7. Examples of construction records to be provided that meet Section 4.0(C) of this provision;
8. Procedures for containment and disposal of drilling spoils, drill flush and waste grout;
9. Grout mix design with acceptable ranges for grout flow and density;
10. If load testing is required, load testing details, procedures and plan sealed by the Design Engineer or Project Engineer for the Load Test Supplier with calibration certificates dated within 90 days of the submittal date;
11. Load Test Supplier, when applicable, including Project Engineer; and
12. Other information shown in the plans or requested by the Engineer.

If alternate installation and testing procedures are proposed or necessary, a revised micropile construction plan submittal may be required. If the work deviates from the accepted submittal without prior approval, the Engineer may suspend pile construction until a revised plan is accepted.

Demonstration Micropiles

When shown in the plans or as directed, construct demonstration piles in accordance with the accepted submittals and this provision. The pile inclination, minimum reinforcement and locations of demonstration piles are shown in the plans. Install demonstration piles to the depth of the longest pile on the project or the length required for verification load tests.

The purpose of demonstration piles is to demonstrate the Micropile Contractor's ability to successfully install micropiles. The demonstration pile results will be used to evaluate the grouting operation and possibly revise acceptable grouting ranges established with the micropile construction plan. If load testing is required for a demonstration pile, the results will be used to evaluate the pile design including estimated unit nominal resistances.

If the Engineer determines a demonstration pile is unsatisfactory, a replacement pile is required. Do not begin construction of any production piles until all demonstration piles are accepted.

Preconstruction Meeting

Before starting micropile construction, hold a preconstruction meeting to discuss the construction, monitoring and testing of the piles. If this meeting occurs before all pile submittals have been accepted, additional preconstruction meetings may be required before beginning pile construction without accepted submittals. The Resident or Bridge Maintenance Engineer, Area Construction Engineer, Geotechnical Operations Engineer, Contractor and Micropile Contractor Superintendent will attend preconstruction meetings.

CONSTRUCTION METHODS

Use equipment and methods accepted in the micropile construction plan or approved by the Engineer. Inform the Engineer of any deviations from the accepted plan. Install production piles in the same way as satisfactory demonstration piles, if applicable.

Dispose of drilling spoils, drill flush and waste grout as directed and in accordance with Section 802 of the *Standard Specifications*. Drilling spoils consist of all excavated material and fluids removed from drill holes.

Control drilling and grouting to prevent excessive ground movements, damaging structures and pavements and fracturing rock and soil formations. If ground heave or subsidence occurs, suspend pile construction and take corrective action to minimize movement. If property damage occurs, make repairs with an approved method and a revised micropile design or construction plan may be required.

Drilling and Reinforcement

Use micropile drilling rigs capable of drilling through whatever materials are encountered to the dimensions and elevations required for the pile design. Install piles with tip elevations no higher than shown in the accepted submittals or approved by the Engineer.

Do not install casings or begin drilling within 6 pile diameters, center to center, or 5 ft, whichever is greater, of completed piles until grout in piles reaches initial set. More clearance may be necessary if pile construction affects adjacent piles.

Install casings to a tip elevation no higher than that noted in the plans. Also, when noted in the plans, install casings with a penetration of at least 5 ft into rock as determined by the Engineer. Locate casing joints in accordance with the accepted submittals. If any welding is required for casings, comply with Article 33.3.6 of the *AASHTO LRFD Bridge Construction Specifications*. Submit welding procedures for approval before welding casings.

Use drilling methods that result in the annulus between casings and the ground filled with grout. Check for correct pile location and plumbness or proper inclination before beginning drilling. Stabilize drill holes with casings from beginning of drilling through grouting if unstable material is anticipated or encountered. After drilling, flush drill holes with water or air to remove drill cuttings and other loose materials.

Use centralizers to center bars in drill holes. Securely attach bar centralizers at maximum 10 ft intervals along bars. Attach upper and lowermost centralizers 5 ft from the top and bottom of piles.

Place bars before grouting or after while grout is still fluid. Do not vibrate or drive reinforcement. Bars may be gently pushed into grout. If bars can only be partially inserted, redrill or clean drill holes to permit complete insertion.

Grouting

Remove oil, rust inhibitors, residual drilling fluids and similar foreign materials from holding tanks/hoppers, stirring devices, pumps, lines, tremie pipes and all other equipment in contact with grout before use. Size grouting equipment to grout each pile in one continuous operation. Field calibrate grout pumps at the beginning of construction.

Mix and place grout in accordance with Subarticles 1003-5, 1003-6 and 1003-7 of the *Standard Specifications*. Measure grout temperature, density and flow during grouting with at least the same frequency grout cubes are made for compressive strength. Perform density and flow field tests in the presence of the Engineer in accordance with American National Standards Institute/API Recommended Practice 13B-1 (Section 4, Mud Balance) and ASTM C939 (Flow Cone), respectively.

Grout piles the same day the bond length is drilled and do not leave drill holes open overnight. Place grout with a tremie in accordance with the contract and accepted submittals until uncontaminated grout flows from the top of the pile. Extend tremie pipe into grout at least 5 ft at all times except when grout is initially placed in drill holes. Provide grout free of segregation, intrusions, contamination, structural damage or inadequate consolidation (honeycombing).

Monitor and record grout levels, pressures and volumes during placement. To monitor grout pressure, use pumps equipped with a pressure gauge and locate a second pressure gauge at the point of injection into the drill hole. Use pressure gauges that can measure pressures of at least 150 psi or twice the actual grout pressures, whichever is greater.

Construction Records

Provide 2 copies of pile construction records within 24 hours of completing each pile. Include the following in construction records:

1. Names of Micropile Contractor, Superintendent, Drill Rig Operator, Project Manager and Design Engineer;
2. Bridge description, county, Department’s contract, TIP and WBS element number;
3. Bent station and number, pile location and identifier and required resistance;

4. Pile diameters, length and tip elevation and top of pile and ground surface elevations;
5. Reinforcement types, grades or yield strength, sizes and elevations;
6. Date and time drilling begins and ends, reinforcement is placed, grout is mixed and arrives on-site and grout placement begins and ends;
7. Grout level, pressure, volume, temperature, flow and density records;
8. Ground and surface water conditions and elevations;
9. Weather conditions including air temperature at time of grout placement; and
10. All other pertinent details related to pile construction.

After completing piles for each structure or stage of a structure, provide a PDF file of all corresponding construction records.

LOAD TESTING

When noted in the plans, load test piles in accordance with the accepted submittals, this provision and the plans. The piles to be tested are shown in the plans or as directed. "Verification tests" are performed on demonstration piles and "proof tests" are performed on piles incorporated into the structure, i.e., production piles based on test piles acceptable in accordance with Section 6.0 of this provision.

When using a Load Test Supplier, use a prequalified Load Test Supplier for foundation testing work. Provide load test reports sealed by an engineer approved as a Project Engineer (key person) for the Load Test Supplier.

Do not load test piles until grout attains the required 28 day compressive strength. Do not begin construction of any production piles until verification tests are satisfactorily completed. For proof tests, install only the test piles and those piles needed to anchor the reaction frame, if applicable. Do not install the remaining piles for the bent until the corresponding test piles are satisfactory.

Design test piles so that applied loads do not exceed 80% of the pile's structural resistance including steel yielding or buckling or grout failing. It may be necessary to design test piles with additional reinforcement to allow for higher applied loads. Use a center reinforcing bar for tension load tests when the reinforcement design for production piles does not include one.

If reinforcement design for production piles does not include a center reinforcing bar, tension load tests are required. Otherwise, test piles in either compression or tension at the Contractor's option.

Do not apply loads with known weights; a reaction frame and a hydraulic jack are required. Use reaction piles or cribbing and a frame with sufficient strength to prevent excessive deformation, misalignment or racking under peak loading. Do not use existing structures as part of the reaction frame.

Load test piles in accordance with the accepted submittals and Article 33.5 of the *AASHTO LRFD Bridge Construction Specifications*. For demonstration piles, cut off piles 2 ft below the ground surface when testing is complete.

Submit a PDF file of each load test report within 7 days of completing load testing. Submit reports sealed by the same engineer that sealed the load testing details, procedures and plan in the accepted micropile construction plan. Provide load test reports that meet ASTM D1143, D3689 or the Load Test Supplier's recommendations. Also, include load versus movement curves for the top of pile and pile tip.

MICROPILE ACCEPTANCE

The Engineer will review the load test reports, if applicable and construction records to determine if piles are acceptable. Micropile acceptance is based in part on the following criteria.

- Grout pressures, volumes, flow and densities are within acceptable ranges. Grout is properly placed and does not have any evidence of segregation, intrusions, contamination, structural damage or inadequate consolidation (honeycombing).
- Pile is within maximum tolerances per Article 33.4.4 of the *AASHTO LRFD Bridge Construction Specifications*.
- Reinforcement is properly placed and inclination and top of reinforcement is within tolerances for the pile. Tip of casing is no higher than that noted in the plans and casing penetrates rock at least 5 ft when noted in the plans.
- Pile is satisfactory based on results of load testing, when applicable. Creep and failure acceptance criteria for verification and proof tests is per Articles 33.5.2 and 33.5.3, respectively, of the AASHTO LRFD specifications. Movement acceptance criteria for verification and proof tests is per Articles 33.5.2 and 33.5.3, respectively, of the AASHTO LRFD specifications when the permissible total vertical movement at top of pile is noted in the plans.

If the Engineer determines a pile is unacceptable, remedial measures or replacement piles are required. Do not begin remediation work until remediation plans are approved. No extension of completion date or time will be allowed for remedial work or replacement piles.

GEOTECHNICAL APPENDIX C

SOIL NAIL RETAINING WALLS: (10-19-21)

GENERAL

Construct soil nail retaining walls consisting of soil nails spaced at a regular pattern and connected to a CIP reinforced concrete face. A soil nail consists of a solid steel bar grouted in a drilled hole inclined at an angle below horizontal. Use shotcrete for temporary support of excavations during construction. Design and construct soil nail retaining walls based on actual elevations and wall dimensions in accordance with the contract and accepted submittals. Use a prequalified Anchored Wall Contractor to construct soil nail retaining walls. Define "soil nail wall" as a soil nail retaining wall and "Soil Nail Wall Contractor" as the Anchored Wall Contractor installing soil nails and applying shotcrete. Define "nail" as a soil nail and "concrete facing" as a CIP reinforced concrete face. An abutment wall is defined as a soil nail wall with nails that extend under a bridge end bent or a soil nail wall connected to an abutment wall. Even if only one nail extends under a bridge end bent, the entire soil nail wall is considered an abutment wall.

MATERIALS

Refer to the *Standard Specifications.*

Item	Section
Geosynthetics	1056
Joint Materials	1028
Masonry	1040
Portland Cement	1024-1
Portland Cement Concrete, Class A	1000
Reinforcing Steel	1070
Select Material, Class VI	1016
Shotcrete	1002
Shoulder Drain Materials	816-2
Steel Plates	1072-2
Water	1024-4
Welded Stud Shear Connectors	1072-6

Provide Class VI select material (standard size No. 57 stone) for leveling pads. Use neat cement grout that only contains cement and water with a water cement ratio of 0.4 to 0.5 which is approximately 5.5 gallons of water per 94 lb of Portland cement. Provide grout with a compressive strength at 3 and 28 days of at least 1,500 psi and 4,000 psi, respectively.

Provide materials consisting of grouted steel or hollow bars and nail head assemblies. Use epoxy coated steel bars that meet AASHTO M 275 or M 31, Grade 60 or 75. Splice bars in accordance with Article 1070-9 of the Standard Specifications. Provide epoxy coated bars that meet Article 1070-7 of the Standard Specifications. For galvanized bars, provide galvanized steel meeting the requirements of Section 1076 of the *Standard Specifications.* Use hollow steel bars manufactured by DYWIDAG-Systems International USA Inc., Nucor Skyline, Williams Form Engineering Corp. or an approved equal.

Provide nail head assemblies consisting of nuts, washers and bearing plates with welded stud shear connectors. Use steel plates for bearing plates and steel washers and hex nuts recommended by the

Soil Nail Manufacturer.

Provide Type 3 material certifications for soil nail materials in accordance with Article 106- 3 of the *Standard Specifications*. Store steel materials on blocking at least 12" above the ground and protect it at all times from damage; and when placing in the work make sure it is free from dirt, dust, loose mill scale, loose rust, paint, oil or other foreign materials. Load, transport, unload and store soil nail wall materials so materials are kept clean and free of damage. Do not crack, fracture or otherwise damage grout inside sheaths of encapsulated nails. Bent, damaged or defective materials will be rejected.

PRECONSTRUCTION REQUIREMENTS

Soil Nail Wall Surveys

The Retaining Wall Plans show a plan view, typical sections, details, notes and an elevation or profile view (wall envelope) for each soil nail wall. Before beginning soil nail wall design, survey existing ground elevations shown in the plans and other elevations in the vicinity of soil nail wall locations as needed. For proposed slopes above or below soil nail walls, survey existing ground elevations to at least 10 ft beyond slope stake points. Based on these elevations, finished grades and actual soil nail wall dimensions and details, submit revised wall envelopes for acceptance. Use accepted wall envelopes for design.

Soil Nail Wall Designs

For soil nail wall designs, submit PDF files of working drawings and design calculations at least 30 days before the preconstruction meeting. Do not begin soil nail wall construction until a design submittal is accepted.

Use a prequalified Anchored Wall Design Consultant to design soil nail walls. Provide designs sealed by a Design Engineer approved as a Geotechnical Engineer (key person) for the Anchored Wall Design Consultant.

Design soil nail walls in accordance with the plans and the *AASHTO LRFD Bridge Design Specifications* unless otherwise required. For abutment walls only, design soil nail walls for seismic if wall sites meet either or both of the following:

- Wall site is in seismic zone 2 based on Figure 2-1 of the *Structure Design Manual*,
- Wall site is classified as AASHTO Site Class E, as noted in the plans, and is in or west of Pender, Duplin, Wayne, Johnston, Wake, Durham or Person County.
- Design soil nails that meet the following unless otherwise approved:

1. Horizontal and vertical spacing of at least 3 ft,
2. Inclination of at least 12° below horizontal,
3. Clearance between ends of bars and drill holes of at least 6",
4. Grout cover between epoxy coated bars and drill hole walls of at least 1" or in accordance with Article 11.12.8 of the AASHTO LRFD specifications for encapsulated bars and

5. Diameter of 6" to 10".

Four inch diameter soil nails may be approved for nails in rock at the discretion of the Engineer. Do not extend nails beyond right-of-way or easement limits. If existing or future obstructions such as foundations, guardrail, fence or handrail posts, pavements, pipes, inlets or utilities will interfere with nails, maintain a clearance of at least 6" between obstructions and nails.

When noted in the plans, design soil nail walls for a live load (traffic) surcharge of 250 psf. For steel beam guardrail with 8 ft posts above soil nail walls, analyze facing and top row of nails for a nominal horizontal load (P_{H1}) of 300 lb/ft of wall in accordance with Figure 3.11.6.3-2(a) of the AASHTO LRFD specifications. For concrete barrier rail above soil nail walls, analyze facing and top row of nails for a nominal P_{H1} of 500 lb/ft of wall in accordance with Figure 3.11.6.3-2(a).

Provide wall drainage systems consisting of geocomposite sheet drains, an aggregate shoulder drain and outlet components. Place sheet drains with a horizontal spacing of no more than 10 ft and center drains between adjacent nails. Attach sheet drains to excavation faces and connect drains to aggregate leveling pads. Locate a continuous aggregate shoulder drain along the base of concrete facing in front of leveling pads. Provide aggregate shoulder drains and outlet components in accordance with Roadway Standard Drawing No. 816.02.

Use No. 57 stone for aggregate leveling pads. Use 6" thick leveling pads beneath concrete facing. Unless required otherwise in the plans, embed top of leveling pads at least 12" below bottom of walls shown in the plans.

Design shotcrete and concrete facing in accordance with the plans and Article 11.12.6.2 of the *AASHTO LRFD Bridge Design Specifications*. Use shotcrete and concrete facing with the dimensions shown in the plans and attach facing to nail heads with welded stud shear connectors. When concrete barrier rail is required above soil nail walls, use concrete barrier rail with moment slab as shown in the plans.

Submit working drawings and design calculations including unit grout/ground bond strengths for acceptance in accordance with Article 105-2 of the *Standard Specifications*. Submit working drawings showing plan views, wall profiles with nail locations including known test nail locations, typical sections and details of nails, drainage, shotcrete, leveling pads and concrete facing. If necessary, include details on working drawings for concrete barrier rail with moment slab and obstructions extending through walls or interfering with nails, barriers or moment slabs. Submit design calculations for each wall section with different surcharge loads, geometry or material parameters. Include analysis of temporary conditions in design calculations. At least one analysis is required for each wall section with different nail lengths. Analyze internal and compound stability with a computer software program that uses limit equilibrium methods and submit all PDF output files from the program with the design calculations. See Article C11.12.2 of the AASHTO LRFD specifications for determining the maximum soil nail force, T_{maxsn}. Once T_{maxsn} and pullout length behind slip surface, $L_{P,}$ are determined from limit equilibrium methods at the target soil failure resistance factor (1 over factor of safety output from computer software), use these values for soil nail (pullout and tensile resistance) and wall facing (flexure, punching shear and headed-stud tensile resistance) design in accordance with Articles 11.12.5.2, 11.12.6.1 and 11.12.6.2 of the AASHTO LRFD specifications.

When designing soil nail walls with computer software Snail manufactured by the California Department of Transportation (CALTRANS), use Snail, version 2.2.0 or later, to calculate factors of safety and T_{maxsn} and L_P values in accordance with the following:

1. Allowable Stress Design for Analysis Method with no load factors applied except those applied to factored surcharge loads from structures or traffic,
2. Perform Below Toe Search option selected when any soil layer has a friction angle less than 30° and
3. Default value of 0.33 for Interface Friction Reduction Factor.

When designing soil nail walls with computer software other than Snail, use bi-linear (or tri-linear, as applicable) search surfaces intended to reproduce Snail results. Factors of safety and T_{maxsn} and L_P values are acceptable if they are within 5% of the factors of safety and T_{maxsn} and L_P values calculated by the Engineer using the computer software Slide2 manufactured by Rocscience, Inc.

Soil Nail Wall Construction Plan

Submit a PDF file of a soil nail wall construction plan at least 30 days before the preconstruction meeting. Do not begin soil nail wall construction until the construction plan submittal is accepted. Provide detailed project specific information in the soil nail wall construction plan that includes the following:

1. Overall description and sequence of soil nail wall construction;
2. List and sizes of excavation equipment, drill rigs and tools, tremies and grouting equipment;
3. Procedures for excavations, drilling and grouting, soil nail and wall drainage system installation and facing construction;
4. Details of shotcrete equipment and application including mix process, test panels, thickness gauges and shooting methods;
5. Shotcrete nozzleman with certification in accordance with Article 1002-1 of the *Standard Specifications*;
6. Plan and methods for nail testing with calibration certificates dated within 90 days of the submittal date;
7. Examples of construction records to be provided that meet Section 4.0(F) and test nail records to be used in accordance with Section 5.0(D) of this provision;
8. Grout mix design with acceptable ranges for grout flow and density;
9. Shotcrete mix design that meets Section 1002 of the *Standard Specifications*; and
10. Other information shown in the plans or requested by the Engineer.

If alternate construction procedures are proposed or necessary, a revised soil nail wall construction plan submittal may be required. If the work deviates from the accepted submittal without prior approval, the Engineer may suspend soil nail wall construction until a revised plan is accepted.

Preconstruction Meeting

Before starting soil nail wall construction, hold a preconstruction meeting to discuss the construction, inspection and testing of the soil nail walls. If this meeting occurs before all soil nail wall submittals have been accepted, additional preconstruction meetings may be required before beginning construction of soil nail walls without accepted submittals. The Resident or Bridge Maintenance Engineer, Area Construction Engineer, Geotechnical Operations Engineer, Contractor and Soil Nail Wall Contractor Superintendent will attend preconstruction meetings.

CONSTRUCTION METHODS

Control drainage during construction in the vicinity of soil nail walls. Direct run off away from soil nail walls and areas above and behind walls.

Notify the Engineer before blasting in the vicinity of soil nail walls. Perform blasting in accordance with the contract. Unless required otherwise in the plans, install foundations located behind soil nail walls before beginning wall construction.

Install soil nail walls in accordance with the accepted submittals and as directed. Do not excavate behind soil nail walls. If overexcavation occurs, repair walls with an approved method and a revised soil nail wall design or construction plan may be required.

Excavation

Excavate for soil nail walls from the top down in accordance with the accepted submittals. Excavate in staged horizontal lifts with no negative batter (excavation face leaning forward). Excavate lifts in accordance with the following:

1. Heights not to exceed vertical nail spacing,
2. Bottom of lifts no more than 3 ft below nail locations for current lift and
3. Horizontal and vertical alignment within 2" of location shown in the accepted submittals.

Remove any cobbles, boulders, rubble or debris that will protrude more than 2" into the required shotcrete thickness. Rocky ground such as colluvium, boulder fills and weathered rock may be difficult to excavate without leaving voids.

Apply shotcrete to excavation faces within 24 hours of excavating each lift unless otherwise approved. Shotcreting may be delayed if it can be demonstrated that delays will not adversely affect excavation stability. If excavation faces will be exposed for more than 24 hours, use polyethylene sheets anchored at top and bottom of lifts to protect excavation faces from changes in moisture content.

If an excavation becomes unstable at any time, suspend soil nail wall construction and temporarily stabilize the excavation by immediately placing an earth berm up against the unstable excavation face. When this occurs, repair walls with an approved method and a revised soil nail wall design or construction plan may be required.

Do not excavate the next lift until nail installations and testing and shotcrete application for the current lift are accepted and grout and shotcrete for the current lift have cured at least 3 days and 1 day, respectively.

Soil Nails

Install soil nails in the same way as acceptable test nails. Drill and grout nails the same day and do not leave drill holes open overnight.

Control drilling and grouting to prevent excessive ground movements, damaging structures and pavements or fracturing rock and soil formations. If ground heave or subsidence occurs, suspend soil nail wall construction and take corrective action to minimize movement. If property damage occurs, make repairs with an approved method and a revised soil nail wall design or construction plan may be required.

Drilling

Use drill rigs of the sizes necessary to install soil nails and with sufficient capacity to drill through whatever materials are encountered. Drill straight and clean holes with the dimensions and inclination shown in the accepted submittals. Drill holes within 6" of locations and 2° of inclination shown in the accepted submittals unless otherwise approved.

Stabilize drill holes with temporary casings if unstable, caving or sloughing material is anticipated or encountered. Do not use drilling fluids to stabilize drill holes or remove cuttings.

Steel Bars

Center steel bars in drill holes with centralizers. Securely attach centralizers along bars at no more than 8 ft centers. Attach uppermost and lowermost centralizers 18" from excavation faces and ends of holes.

Do not insert steel bars into drill holes until hole locations, dimensions, inclination and cleanliness are approved. Do not vibrate, drive or otherwise force bars into holes. If a steel bar cannot be completely and easily inserted into a drill hole, remove the bar and clean or redrill the hole.

Grouting

Mix and place grout in accordance with Subarticles 1003-5, 1003-6 and 1003-7 of the *Standard Specifications*. Remove oil, rust inhibitors, residual drilling fluids and similar foreign materials from holding tanks/hoppers, stirring devices, pumps, lines, tremie pipes and any other equipment in contact with grout before use. Measure grout temperature, density and flow during grouting with at least the same frequency grout cubes are made for compressive strength. Perform density and flow field tests in the presence of the Engineer in accordance with American National Standards Institute/American Petroleum Institute Recommended Practice 13B-1 (Section 4, Mud Balance) and ASTM C939 (Flow Cone), respectively.

Inject grout at the lowest point of drill holes through tremies, e.g., grout tubes, casings, hollow-stem augers or drill rods, in one continuous operation. Fill drill holes progressively from ends of holes to excavation faces and withdraw tremies at a slow even rate as holes are filled to prevent voids in grout. Extend tremies into grout at least 5 ft at all times except when grout is initially placed in holes.

Provide grout free of segregation, intrusions, contamination, structural damage or inadequate consolidation (honeycombing). Cold joints in grout are not allowed except for test nails. Remove any temporary casings as grout is placed and record grout volume for each drill hole.

Nail Heads

Weld stud shear connectors to bearing plates of nails in accordance with Article 1072- 6 of the *Standard Specifications*. Install nail head assemblies after shotcreting. Before shotcrete reaches initial set, seat bearing plates and tighten nuts so plates contact shotcrete uniformly. If uniform contact is not possible, install nail head assemblies on mortar pads so nail heads are evenly loaded.

Wall Drainage Systems

Install wall drainage systems as shown in the accepted submittals and in accordance with Section 816 of the *Standard Specifications*. Before installing shotcrete reinforcement, place geocomposite sheet drains with the geotextile side against excavation faces. For highly irregular faces and at the discretion of the Engineer, sheet drains may be placed after shotcreting over weep holes through the shotcrete. Hold sheet drains in place with anchor pins so drains are in continuous contact with surfaces to which they are attached and allow for full flow the entire height of soil nail walls. Discontinuous sheet drains are not allowed. If splices are needed, overlap sheet drains at least 12" so flow is not impeded. Connect sheet drains to aggregate leveling pads by embedding drain ends at least 4" into No. 57 stone.

Shotcrete

Clean ungrouted zones of drill holes and excavation faces of loose materials, mud, rebound and other foreign material. Moisten surfaces to receive shotcrete. Install shotcrete reinforcement in accordance with the contract and accepted submittals. Secure reinforcing steel so shooting does not displace or vibrate reinforcement. Install approved thickness gauges on 5 ft centers in the horizontal and vertical directions to measure shotcrete thickness.

Apply shotcrete in accordance with the contract, accepted submittals and Subarticle 1002-3(F) of the *Standard Specifications*. Use approved shotcrete nozzlemen who made satisfactory preconstruction test panels to apply shotcrete. Direct shotcrete at right angles to excavation faces except when shooting around reinforcing steel. Rotate nozzle steadily in small circular patterns and apply shotcrete from bottom of lifts up.

Make shotcrete surfaces uniform and free of sloughing or sagging. Completely fill ungrouted zones of drill holes and any other voids with shotcrete. Taper construction joints to a thin edge over a horizontal distance of at least the shotcrete thickness. Wet joint surfaces before shooting adjacent sections.

Repair surface defects as soon as possible after shooting. Remove any shotcrete which lacks uniformity, exhibits segregation, honeycombing or lamination or contains any voids or sand pockets and replace with fresh shotcrete to the satisfaction of the Engineer. Protect shotcrete from freezing and rain until shotcrete reaches initial set.

Leveling Pads and Concrete Facing

Construct aggregate leveling pads at elevations and with dimensions shown in the accepted submittals. Compact leveling pads with a vibratory compactor to the satisfaction of the Engineer.

Construct concrete facing in accordance with the accepted submittals and Section 420 of the *Standard Specifications*. Do not remove forms until concrete attains a compressive strength of at

least 2,400 psi. Unless required otherwise in the plans, provide a Class 2 surface finish for concrete facing that meets Subarticle 420-17(F) of the *Standard Specifications*. Construct concrete facing joints at a spacing of 10 ft to 12 ft unless required otherwise in the plans. Make 1/2" thick expansion joints that meet Article 420- 10 of the *Standard Specifications* for every third joint and 1/2" deep grooved contraction or sawed joints that meet Subarticle 825-10(B) or 825-10(E) respectively for the remaining joints. Stop reinforcing steel for concrete facing 2" on either side of expansion joints.

If a brick veneer is required, construct brick masonry in accordance with Section 830 of the *Standard Specifications*. Anchor brick veneers to soil nail walls in accordance with Subarticle 453-4 of the *Standard Specifications*. Seal joints above and behind soil nail walls between concrete facing and slope protection with silicone sealant.

Construction Records

Provide 2 copies of soil nail wall construction records within 24 hours of completing each lift. Include the following in construction records:

1. Names of Soil Nail Wall Contractor, Superintendent, Nozzleman, Drill Rig Operator, Project Manager and Design Engineer;
2. Wall description, county, Department's contract, TIP and WBS element number;
3. Wall station and number and lift location, dimensions, elevations and description;
4. Nail locations, dimensions and inclinations, bar types, sizes and grades, corrosion protection and temporary casing information;
5. Date and time drilling begins and ends, steel bars are inserted into drill holes, grout and shotcrete are mixed and arrives on-site and grout placement and shotcrete application begins and ends;
6. Grout volume, temperature, flow and density records;
7. Ground and surface water conditions and elevations if applicable;
8. Weather conditions including air temperature at time of grout placement and shotcrete application; and
9. All other pertinent details related to soil nail wall construction.

After completing each soil nail wall or stage of a wall, provide a PDF file of all corresponding construction records.

Nail Testing

Test soil nails in accordance with the contract and as directed. "Verification tests" are performed on nails not incorporated into soil nail walls, i.e., sacrificial nails and "proof tests" are performed on nails incorporated into walls, i.e., production nails. Define "verification test nail" and "proof test nail" as a nail tested with either a verification or proof test, respectively. Define "test nails" as verification or proof test nails.

Verification tests are typically required for at least one nail per soil type per soil nail wall or 2 nails per wall, whichever is greater. Proof tests are typically required for at least one nail per nail row per soil nail wall or at least 5% of production nails, whichever is greater. More or less test nails may be required depending on subsurface conditions encountered. The Engineer will determine

the number and locations of verification and proof tests required. The approximate known test nail locations may be shown in the plans.

Do not test nails until grout and shotcrete attain the required 3-day compressive strength. Do not install any production nails until verification tests are accepted.

A. Test Equipment

Use the following equipment to test nails:

1. Two dial gauges with rigid supports,
2. Hydraulic jack and pressure gauge,
3. Jacking block or reaction frame and
4. Electrical resistance load cell (verification tests only).

Provide dial gauges with enough range and precision to measure the maximum test nail movement to 0.001". Use pressure gauges graduated in 100 psi increments or less. Submit identification numbers and calibration records for load cells, jacks and pressure gauges with the soil nail wall construction plan. Calibrate each jack and pressure gauge as a unit.

Align test equipment to uniformly and evenly load test nails. Use a jacking block or reaction frame that does not damage or contact shotcrete within 3 ft of nail heads. Place dial gauges opposite each other on either side of test nails and align gauges within 5° of bar inclinations. Set up test equipment so resetting or repositioning equipment during nail testing is not needed.

B. Test Nails

Test nails include both unbonded and bond lengths. Grout only bond lengths before nail testing. Provide unbonded and bond lengths of at least 3 ft and 10 ft, respectively.

Steel bars for production nails may be overstressed under higher test nail loads. If necessary, use larger size or higher grade bars with more capacity for test nails instead of shortening bond lengths to less than the minimum required.

C. Nail Tests

Install verification test nails with the same equipment, installation methods and drill hole diameter and inclination as production nails. Test verification and proof test nails in accordance with the accepted submittals and Articles 34.5.5.2 and 34.5.5.3, respectively of the *AASHTO LRFD Bridge Construction Specifications* except correct Eq. 34.5.5.2-2 to $VTL = L_{BVT} \times r_{po}$ (kips/ft).

D. Test Nail Acceptance

Submit 2 copies of test nail records including load versus movement and time versus creep movement plots within 24 hours of completing each verification or proof test. The Engineer will review the test nail records to determine if test nails are acceptable. Test nail acceptance is based in part on the acceptance criteria in Article 34.5.5.4 of the *AASHTO LRFD Bridge Construction Specifications*.

For proof test nails, maintain stability of unbonded lengths for subsequent grouting. If a proof test nail is accepted but the unbonded length cannot be satisfactorily grouted, do not incorporate the proof test nail into the soil nail wall and add another production nail to replace the test nail.

If the Engineer determines a verification test nail is unacceptable, revise the soil nail design or installation methods. Submit a revised soil nail wall design or construction plan for acceptance and provide acceptable verification test nails with the revised design or installation methods.

If the Engineer determines a proof test nail is unacceptable, either perform additional proof tests on adjacent production nails or revise the soil nail design or installation methods for the production nails represented by the unacceptable proof test nail as determined by the Engineer. Submit a revised soil nail wall design or construction plan for acceptance, provide an acceptable proof test nail with the revised design or installation methods and install additional production nails for the nails represented by the unacceptable proof test nail.

After completing nail testing for each soil nail wall or stage of a wall, provide a PDF file of all corresponding test nail records.

GEOTECHNICAL APPENDIX D

ROCK SLOPE STABILIZATION (SPECIAL)

Description

A rock bolt is defined as a steel bar grouted in a drilled hole inclined at an angle below horizontal. Rock slope stabilization consists of individual rock bolts passively or actively stabilizing a boulder or rock mass or several rock bolts spaced at a regular pattern and connected to a flexible, steel wire mesh facing. The mesh may be installed in a draped or pinned condition. Construct rock slope stabilization based on actual elevations and dimensions in accordance with this provision, the accepted submittals and the plans. For this provision, "Rock Slope Stabilization Contractor" refers to the contractor installing the rock bolts and/or applying the facing.

This provision addresses anchors for wire mesh and wire mesh to be used for rock slope stabilization, rockfall protection and other applications in accordance with the contract. Provide rock slope materials as shown in the plans and as directed.

Materials

Rock slope materials including, but not limited to, rock bolts, wire mesh and nets, and rockfall barriers shall meet the requirements of the current *Rock Slope Materials* provision.

Use grout meeting the requirements of Section 1003 of the *Standard Specifications.*

Submittals

Submit a rock slope stabilization design. Perform the analysis and design in accordance with current industry standards and FHWA guidelines. Provide an electronic copy of the plan in PDF format. Allow 10 working days for the review of the submittal.

Submit a rock slope stabilization installation and testing plan. Provide an electronic copy of the plan in PDF format. Allow 10 working days for the review of the submittal. Do not begin rock slope stabilization construction until the installation and testing plan is accepted.

Submit detailed project specific information including the following.

1. Excavation methods and equipment.
2. List of proposed drilling equipment and tools, tremies and grouting equipment.
3. Description of rock slope stabilization construction including details of drilling and grouting methods, and rock bolt installation.
4. Examples of construction and test records to be provided.
5. Other information shown on the plans or requested by the Engineer.

If alternate installation and testing procedures are proposed or necessary, a revised installation and testing plan submittal may be required. If the work deviates from the accepted submittal without prior approval, the Engineer may suspend rock slope stabilization construction until a revised plan is submitted and accepted.

Construction Methods

Perform any blasting in accordance with the *Standard Specifications.*

Use drilling equipment capable of drilling through whatever materials are encountered to the dimensions and orientations required for the rock slope stabilization design. Drill straight and clean holes at the locations shown in the accepted submittals. Drill hole locations and inclinations are required to be within 6" and 2 degrees, respectively, of that shown in the accepted submittals unless approved otherwise by the Engineer. Use equipment and methods reviewed and accepted in the installation and testing plan or approved by the Engineer. Inform the Engineer of any deviations from the accepted plan. Stabilize drill holes with temporary casings if unstable, caving or sloughing material is encountered. Do not use drilling fluids to stabilize drill holes or remove cuttings. Control drilling and grouting to prevent excessive slope movement. The Engineer may require a revised rock slope stabilization installation and testing plan when corrective action is necessary.

For post-tensioned rock bolts, smooth an area ½" larger on all sides of the bearing plate using a facing bit to achieve uniform bearing behind the plate prior to installing the rock bolt. Install rock bolts to the depth indicated on the plans. Do not vibrate or drive bars. If a bar cannot be completely inserted easily, remove the bar and clean or redrill the hole.

Remove all oil, rust inhibitors, residual drilling fluids and similar foreign materials from holding tanks/hoppers, stirring devices, pumps, lines, tremie pipes and all other equipment in contact with grout before use.

Place grout with a tremie in accordance with the contract and accepted submittals. Inject grout at the lowest point of drill holes through a tremie in one continuous operation. Fill drill holes progressively from the bottom to top and withdraw tremie at a slow even rate as the hole is filled to prevent voids in the grout. Extend tremie pipe into grout a minimum of 5 ft at all times except when grout is initially placed in a drill hole. Bar threads should be kept clean to allow tightening of the bearing plate and nut.

Provide grout free of segregation, intrusions, contamination, structural damage or inadequate consolidation (honeycombing). Cold joints in grout are not allowed except for rock bolts that are tested. Extract temporary casings as grout is placed. Monitor and record grout volumes during placement.

Allow the grout to achieve the required 3-day strength prior to testing and the required 28-day strength prior to post-tensioning. Install the bearing plate, washer and nut and tension active rock bolts to the design requirements using a jack and stressing chair. Tighten the nut flush with the bearing plate and slowly reduce the jack pressure.

Install wire mesh in accordance with the drawings and manufacturer's specifications, including any required overlapping. Connect the bearing plates to the bolts as shown on the plans and as directed by the Engineer.

Cut off rock bolts 1" above the nut or rock face. Rock dowels (passive bolts) may be cut 2" shorter than the drill hole depth prior to installation to allow the bolt to finish below the rock face and be covered by grout. Apply an epoxy repair or zinc-rich paint for corrosion protection to each cut end of all rock bolts.

Replace rock bolts, bearing plates, nuts or washers that are damaged or defective as determined by the Engineer at no additional cost to the Department.

Construction Records

Provide an electronic copy in PDF format of rock slope stabilization construction records including the following within 24 hours of completing each lift.

1. Names of Rock Slope Stabilization Contractor, Superintendent, Drill Rig Operator, and Project Manager.
2. Description, county, NCDOT contract, TIP and WBS element number
3. Stations and lift location, dimensions, elevations and description
4. Rock bolt locations, diameters, lengths and inclinations, bar types, sizes and grades, corrosion protection and temporary casing information
5. Date and time drilling begins and ends, rock bolt bar is placed, grout is mixed and/or arrives on-site, grout placement begins and ends
6. Grout volume, temperature, flow and density records
7. Ground and surface water conditions and elevations, if applicable
8. Weather conditions including air temperature at time of grout placement
9. All other pertinent details related to rock slope stabilization construction

After completing all lifts for a rock slope stabilization or a stage of a rock slope stabilization, submit electronic copies in PDF format of all corresponding construction records.

Rock Bolt Testing

For this provision, “verification tests” are performed on test bolts not incorporated into the work, i.e., sacrificial rock bolts “Verification test bolts” refer to rock bolts on which verification tests are performed and “proof test bolts” refer to rock bolts on which proof tests are performed.

One verification test is required at each rock slope stabilization location, or as directed by the Engineer. The Engineer will select the test location in the field. Proof tests on 5 percent of production rock bolts with a minimum of 1 test per bolt row are required. More or less rock bolt testing may be required depending on the subsurface conditions encountered. The Engineer will decide the actual number and specific locations of each verification and proof test required.

Do not test rock bolts until grout achieves the required 3 day compressive strength. Do not begin construction of any production rock bolts until verification tests are satisfactorily completed.

E. Testing Equipment

Use testing equipment that includes the following.

- 2 dial gauges
- dial gauges rigid supports
- hydraulic jack and pressure gauge
- jacking block

Provide pressure gauges graduated in 100 psi increments or less. Use dial gauges capable of measuring to 0.001” and accommodating the maximum anticipated movement. Submit identification number and calibration records for each jack and pressure gauge with the rock slope stabilization installation and testing plan. Calibrate the jack and pressure gauge as a unit.

Align testing equipment to ensure uniform loading. Use a jacking block that does not damage the slope. Align dial gauges within 5 degrees of the test bolt axis. Place dial gauges opposite each other on either side of the test bolt. Set up test equipment and measuring devices such that resetting or repositioning the components before completing testing is not required.

F. Test Bolts

Test bolts have both bonded and unbonded lengths. Grout only the bonded length before testing. Minimum bonded and unbonded lengths of 10 ft and 5 ft, respectively, are required.

Rock bolt bars for production rock bolts may be overstressed under higher test bolt loads. Use larger or higher grade steel bars to allow for higher loads instead of shortening bond lengths to less than the minimum. Any costs associated with higher capacity bars will be considered incidental to the rock bolt testing pay items.

G. Verification Tests

Install sacrificial rock bolts in accordance with the accepted submittals and this provision. Use the same equipment, methods and drill hole diameter for sacrificial rock bolts as will be used for production rock bolts.

Use the following equation to determine maximum bond length for verification test bolts, L_{BVT} (ft).

$$L_{BVT} \leq \frac{C_{RT} \times A_t \times f_y}{Q_{ALL} \times 3}$$

Where,

C_{RT} = reduction coefficient, 0.9 for Grade 60 and 75 bars or 0.8 for Grade 150 bars,

A_t = bar area (in^2),

f_y = bar yield stress (ksi) and

Q_{ALL} = allowable unit grout/rock bond strength (kips/ft).

Use the following equation to determine design verification test load, DTL (kips).

$$DTL = L_{BVT} \times Q_{ALL}$$

Calculate DTL based on as-built bond lengths. Perform verification tests by incrementally loading test bolts to failure or a maximum test load of 300 percent of DTL according to the following schedule.

Load	Hold Time
AL*	1 minute
0.25 DTL	10 minutes
0.50 DTL	10 minutes
0.75 DTL	10 minutes
1.00 DTL	10 minutes
1.20 DTL	60 minutes (creep test)
1.50 DTL	10 minutes

AL*	1 minute

*Alignment load (AL) is the minimum load required to align testing equipment and should not exceed 0.05 DTL.

Reset dial gauges to zero after applying alignment load. Record test bolt movement at each load increment and permanent set after load is reduced to alignment load.

Monitor test bolts for creep at the 1.20 DTL load increment. Measure and record test bolt movement during the creep portion of the test at 1, 2, 3, 5, 6, 10, 20, 30, 50 and 60 minutes. Repump jack as needed to maintain the intended load during hold times.

H. Proof Tests

Use the following equation to determine maximum bond length for proof test bolts, L_{BPT} (ft).

$$L_{BVT} \leq \frac{C_{RT} \times A_t \times f_y}{Q_{ALL} \times 1.5}$$

Where variables are as defined in Item C of this section.

Use the following equation to determine design proof test load, DTL (kips).

$$DTL = L_{BPT} \times Q_{ALL}$$

Calculate DTL based on as-built bond lengths. Perform proof tests by incrementally loading test bolts to failure or a maximum test load of 150 percent of DTL according to the following schedule.

Load	Hold Time
AL*	Until movement stabilizes
0.25 DTL	Until movement stabilizes
0.50 DTL	Until movement stabilizes
0.75 DTL	Until movement stabilizes
1.00 DTL	Until movement stabilizes
1.20 DTL	10 or 60 minutes (creep test)
AL*	1 minute

*Alignment load (AL) is the minimum load required to align testing equipment and should not exceed 0.05 DTL.

Reset dial gauges to zero after applying alignment load. Record test bolt movement at each load increment and monitor test bolts for creep at the 1.20 DTL load increment. Measure and record test bolt movement at 1, 2, 3, 5, 6 and 10 minutes. When the test bolt movement between 1 minute and 10 minutes exceeds 0.04”, maintain the maximum test load for an additional 50 minutes and record movements at 20, 30, 50 and 60 minutes. Repump jack as needed to maintain the intended load during hold times.

I. Test Bolt Acceptance

Test bolt acceptance is based on the following criteria.

For verification tests, total creep movement is less than 0.08” between the 6 and 60 minute readings and creep rate is linear or decreasing throughout the creep test load hold time.

For proof tests, total creep movement is less than 0.04” between the 1 and 10 minute readings or less than 0.08” between the 6 and 60 minute readings and creep rate is linear or decreasing throughout the creep test load hold time.

Total test bolt movement at maximum test load exceeds 80 percent of the theoretical elastic elongation of the test bolt unbonded length.

Pullout failure does not occur at the 1.5 DTL load increment or before. Pullout failure is defined as the inability to increase the load while test bolt movement continues. Record the pullout failure load as part of the test data.

Maintain stability of test bolt unbonded lengths for subsequent grouting. If the test bolt unbonded length of a proof test bolt cannot be satisfactorily grouted after testing, do not incorporate the test bolt into the work and replace the bolt with another production rock bolt at no additional cost to the Department.

J. Test Bolt Results

Submit an electronic copy in PDF format of test bolt records including load versus movement curves within 24 hours of completing each test. The Engineer will review the test bolt records and associated construction records to determine if the test bolt is acceptable.

If the Engineer determines a verification test bolt is unacceptable, the Engineer may revise the rock slope stabilization design and/or installation methods. The Engineer will have up to 10 working days to revise the rock slope stabilization design and/or installation and testing plan at no additional cost to the Department.

If the Engineer determines a proof test bolt is unacceptable as a result of the contractor’s activities, then either additional proof tests on adjacent production rock bolts or a revision to the rock slope stabilization design and/or installation methods for the production rock bolts represented by the unacceptable proof test bolt may be required at no additional cost to the Department. If required, remove representative production rock bolts and provide new production rock bolts with the revised design and/or installation methods at no additional cost to the Department.

After completing all rock bolt testing, submit an electronic copy in PDF format of all corresponding testing records.

WORK ZONE TRAFFIC CONTROL:

(12-16-26) 1101 SPD

Description

Provide work zone control in accordance with the *Standard Specifications,* the *Roadway Standard Drawings,* and as directed by the Engineer at locations designated in the work order assignment. The Contractor shall comply with all applicable Federal, State, and local laws, ordinances, and regulations governing safety, health, and sanitation.

Materials

Traffic control devices shall include but will not be limited to cones, drums, flaggers, work zone signs, traffic control signs, portable changeable message signs, and flashing arrow boards. Not all items will be used at every site. The Department will inform the Contractor which devices are to be installed at each site at the work order level.

Refer to Division 10 of the *Standard Specifications*.

Pay Item	Pay Unit
Work Zone Signs	1089-1
Work Zone Signs Supports	1089-2
Cones	1089-4
Channelizing Devices	1089-5
Flashing Arrow Boards	1089-6
Portable Changeable Message Signs	1089-7
Flagger	1089-10

Construction Methods

The Engineer will determine the location and type of work zone traffic control needed. Temporary lane closures shall be in accordance with Standard Drawing 1101.02 of the *Roadway Standard Drawings*. Temporary shoulder closures shall be in accordance with Standard Drawing 1101.04 of the *Roadway Standard Drawings*.

Two Lane Two Way Traffic Control shall be conducted using flaggers or an AFAD system as described in other parts of this contract.

The Contractor shall conduct work zone traffic control operations in a manner that is safe for the traveling public, the Contractor, and Department personnel on the job site. The Engineer or his duly authorized representative will monitor the Contractor’s operations on a periodic basis to assure compliance with proper traffic control procedures.

Measurement and Payment

Work Zone Traffic Control will be paid per each site indicated on the work order where traffic control operations are satisfactorily conducted.

Such payment will be full compensation for all work covered by this section including mobilization and all equipment, labor, devices, and materials necessary for installing, maintaining, relocating, and removing lane or shoulder closures as directed by the Engineer.

Flagging will be paid according to the *Standard Specifications* and other provisions in this contract.

Payment will be made under:

Pay Item	**Pay Unit**
Multilane Work Zone Traffic Control	Each
Shoulder Closure Work Zone Traffic Control	Each



Signed by:
Gabriel L Johnson
151E998B18C8487...

11/18/2026

LISTING OF DBE SUBCONTRACTORS

Sheet _____ of _____

Firm Name and Address	Item No.	Item Description	* Agreed upon Unit Price	** Dollar Volume of Item
Name Address				
Name Address				
Name Address				
Name Address				
Name Address				
Name Address				
Name Address				

* The Dollar Volume shown in this column shall be the Actual Price Agreed Upon by the Prime Contractor and the DBE subcontractor, and these prices will be used to determine the percentage of the DBE participation in the contract.

** Dollar Volume of DBE Subcontractor Percentage of Total Contract Bid Price:

If firm is a Material Supplier Only, show Dollar Volume as 60% of Agreed Upon Amount from Letter of Intent.

If firm is a Manufacturer, show Dollar Volume as 100% of Agreed Upon Amount from Letter of Intent.

LISTING OF DBE SUBCONTRACTORS

Sheet _____ of _____

Firm Name and Address	Item No.	Item Description	* Agreed upon Unit Price	** Dollar Volume of Item
Name Address				
Name Address				
Name Address				
Name Address				
Name Address				

**** Dollar Volume of DBE Subcontractor $_____**

Percentage of Total Contract Bid Price _____%

*** The Dollar Volume shown in this column shall be the Actual Price Agreed Upon by the Prime Contractor and the DBE subcontractor, and these prices will be used to determine the percentage of the DBE participation in the contract.**

**** Dollar Volume of DBE Subcontractor Percentage of Total Contract Bid Price:**
If firm is a Material Supplier Only, show Dollar Volume as 60% of Agreed Upon Amount from Letter of Intent.
If firm is a Manufacturer, show Dollar Volume as 100% of Agreed Upon Amount from Letter of Intent.

ADDENDA

ADDENDUM #1

I, _____ representing _____
(SIGNATURE)

Acknowledge receipt of Addendum #1.

ADDENDUM #2

I, _____ representing _____
(SIGNATURE)

Acknowledge receipt of Addendum #2.

ADDENDUM #3

I, _____ representing _____
(SIGNATURE)

Acknowledge receipt of Addendum #3.

AWARD LIMITS ON MULTIPLE PROJECTS

It is the desire of the Proposer to be awarded contracts, the value of which will not exceed a total of $_____, for those projects indicated below on which bids are being opened on the same date as shown in the Proposal Form. Individual projects shall be indicated by placing the project number and county in the appropriate place below. Projects not selected will not be subject to an award limit.

_____	_____
(Project Number)	(County)
_____	_____
(Project Number)	(County)
_____	_____
(Project Number)	(County)
_____	_____
(Project Number)	(County)

*If a Proposer desires to limit the total amount of work awarded to him in this letting, he shall state such limit in the space provided above in the second line of this form.

It is agreed that in the event that I am (we are) the successful bidder on indicated projects, the total value of which is more that the above stipulated award limits, the Board of Transportation will award me (us) projects from among those indicated which have a total value not exceeding the award limit and which will result in the best advantage to the Department of Transportation.

_____

**Signature of Authorized Person

**Only those persons authorized to sign bids under Subarticle 102-8(A)(12) of the *Standard Specifications* shall be authorized to sign this form.

NON-COLLUSION, DEBARMENT AND GIFT BAN CERTIFICATION

CORPORATION

The prequalified bidder, declares (or certifies, verifies, or states) under penalty of perjury under the laws of the United States that neither he, nor any official, agent or employee has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract, that the prequalified bidder has not been convicted of violating *N.C.G.S. §133-24* within the last three years, and that the prequalified bidder intends to do the work with his own bona fide employees or subcontractors and will not bid for the benefit of another contractor.

By submitting this non-collusion, debarment and gift ban certification, the prequalified bidder is attesting his status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

N.C.G.S. §133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

SIGNATURE OF PREQUALIFIED BIDDER

_____

Full name of Corporation

_____

Address as prequalified

Attest _____

Signature of **Secretary, Assistant Secretary**

Select appropriate title

_____

Print or type Signer's name

By _____

Signature of **President, Vice President, Assistant Vice President**

Select appropriate title

_____

Print or type Signer's name

CORPORATE SEAL

NON-COLLUSION, DEBARMENT AND GIFT BAN CERTIFICATION

PARTNERSHIP

The prequalified bidder, declares (or certifies, verifies, or states) under penalty of perjury under the laws of the United States that neither he, nor any official, agent or employee has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract, that the prequalified bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the prequalified bidder intends to do the work with its own bona fide employees or subcontractors and will not bid for the benefit of another contractor.

By submitting this non-collusion, debarment and gift ban certification, the prequalified bidder is attesting his status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

SIGNATURE OF PREQUALIFIED BIDDER

_____

Full name of
Partnership

_____

Address as
prequalified

_____	_____
Signature of Witness	Signature of Partner
_____	_____
Print or type Signer's name	Print or type Signer's name

NON-COLLUSION, DEBARMENT AND GIFT BAN CERTIFICATION

LIMITED LIABILITY COMPANY

The prequalified bidder, declares (or certifies, verifies, or states) under penalty of perjury under the laws of the United States that neither he, nor any official, agent or employee has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract, that the prequalified bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the prequalified bidder intends to do the work with its own bona fide employees or subcontractors and will not bid for the benefit of another contractor.

By submitting this non-collusion, debarment and gift ban certification, the prequalified bidder is attesting his status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

SIGNATURE OF PREQUALIFIED BIDDER

_____
Full name of Firm

_____
Address as prequalified

_____	_____
Signature of Witness	Signature of **Member, Manager, Authorized Agent** *Select appropriate title*
_____	_____
Print or type Signer's Name	Print or type Signer's Name

NON-COLLUSION, DEBARMENT AND GIFT BAN CERTIFICATION

JOINT VENTURE (2) or (3)

The prequalified bidder, declares (or certifies, verifies, or states) under penalty of perjury under the laws of the United States that neither he, nor any official, agent or employee has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract, that the prequalified bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the prequalified bidder intends to do the work with its own bona fide employees or subcontractors and will not bid for the benefit of another contractor.

By submitting this non-collusion, debarment and gift ban certification, the prequalified bidder is attesting his status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

SIGNATURE OF PREQUALIFIED BIDDER

Instructions: **2 Joint Venturers** Fill in lines (1), (2) and (3) and execute. **3 Joint Venturers** Fill in lines (1), (2), (3) and (4) and execute. On Line (1), fill in the name of the Joint Venture Company. On Line (2), fill in the name of one of the joint venturers and execute below in the appropriate manner. On Line (3), print or type the name of the other joint venturer and execute below in the appropriate manner. On Line (4), fill in the name of the third joint venturer, if applicable and execute below in the appropriate manner.

(1) _____
Name of Joint Venture

(2) _____
Name of Contractor

_____
Address as prequalified

By

_____ _____
Signature of Witness or Attest — Signature of Contractor

_____ _____
Print or type Signer's Name — Print or type Signer's Name

If Corporation, affix Corporate Seal and

(3) _____
Name of Contractor

_____
Address as prequalified

By

_____ _____
Signature of Witness or Attest — Signature of Contractor

_____ _____
Print or type Signer's Name — Print or type Signer's Name

If Corporation, affix Corporate Seal and

(4) _____
Name of Contractor

_____
Address as prequalified

By

_____ _____
Signature of Witness or Attest — Signature of Contractor

_____ _____
Print or type Signer's Name — Print or type Signer's Name

If Corporation, affix Corporate Seal

CORPORATE SEAL(S)

NON-COLLUSION, DEBARMENT AND GIFT BAN CERTIFICATION

INDIVIDUAL DOING BUSINESS UNDER A FIRM NAME

The prequalified bidder, declares (or certifies, verifies, or states) under penalty of perjury under the laws of the United States that neither he, nor any official, agent or employee has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract, that the prequalified bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the prequalified bidder intends to do the work with its own bona fide employees or subcontractors and will not bid for the benefit of another contractor.

By submitting this non-collusion, debarment and gift ban certification, the prequalified bidder is attesting his status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

SIGNATURE OF PREQUALIFIED BIDDER

Name of Prequalified Bidder _____

Print or type Individual Name

Trading and doing business as _____

Full name of Firm

_____

Address as prequalified

_____ _____

Signature of Witness Signature of Prequalified Bidder, Individual

_____ _____

Print or type Signer's Name Print or type Signer's Name

NON-COLLUSION, DEBARMENT GIFT BAN CERTIFICATION

INDIVIDUAL DOING BUSINESS IN HIS OWN NAME

The prequalified bidder, declares (or certifies, verifies, or states) under penalty of perjury under the laws of the United States that neither he, nor any official, agent or employee has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract, that the prequalified bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the prequalified bidder intends to do the work with its own bona fide employees or subcontractors and will not bid for the benefit of another contractor.

By submitting this non-collusion, debarment and gift ban certification, the prequalified bidder is attesting his status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

SIGNATURE OF PREQUALIFIED BIDDER

Name of Prequalified Bidder _____

Print or type Individual Name

_____

Address as prequalified

_____

Signature of Prequalified Bidder, Individually

_____

Print or type Signer's Name

_____

Signature of Witness

_____

Print or type Signer’s name

DEBARMENT CERTIFICATION

Conditions for certification:

1. The prequalified bidder shall provide immediate written notice to the Department if at any time the bidder learns that his certification was erroneous when he submitted his debarment certification or explanation that is file with the Department, or has become erroneous because of changed circumstances.

2. The terms *covered transaction*, *debarred*, *suspended*, *ineligible*, *lower tier covered transaction*, *participant*, *person*, *primary covered transaction*, *principal*, *proposal*, and *voluntarily excluded*, as used in this provision, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. A copy of the Federal Rules requiring this certification and detailing the definitions and coverages may be obtained from the Contract Officer of the Department.

3. The prequalified bidder agrees by submitting this form, that he will not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in NCDOT contracts, unless authorized by the Department.

4. For Federal Aid projects, the prequalified bidder further agrees that by submitting this form he will include the Federal-Aid Provision titled *Required Contract Provisions Federal-Aid Construction Contract (Form FHWA PR 1273*) provided by the Department, without subsequent modification, in all lower tier covered transactions.

5. The prequalified bidder may rely upon a certification of a participant in a lower tier covered transaction that he is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless he knows that the certification is erroneous. The bidder may decide the method and frequency by which he will determine the eligibility of his subcontractors.

6. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this provision. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

7. Except as authorized in paragraph 6 herein, the Department may terminate any contract if the bidder knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available by the Federal Government.

DEBARMENT CERTIFICATION

The prequalified bidder certifies to the best of his knowledge and belief, that he and his principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records; making false statements; or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph b. of this certification; and

d. Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

e. Will submit a revised Debarment Certification immediately if his status changes and will show in his bid proposal an explanation for the change in status.

If the prequalified bidder cannot certify that he is not debarred, he shall provide an explanation with this submittal. An explanation will not necessarily result in denial of participation in a contract.

Failure to submit a non-collusion affidavit and debarment certification will result in the prequalified bidder's bid being considered non-responsive.

☐ Check here if an explanation is attached to this certification.

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

BID FORM

Contract Number: D13POC.D2.40666
TIP Number: N/A
FA Number: To Be Determined
WBS Element: GMR13.BUN.1P, ETC.
Description: Slope Stabilization Upon Request

Line No.	Sect	Description	Qty	Unit	Unit Price	Amount Bid
1	SP	Rock Slope Scaling	60	DAY		
2	SP	Emergency Mobilization	4	EA		
3	SP	Design Plan Submittal	4	EA		
4	SP	Aggregate Backfill	750	TON		
5	SP	High Reach Drilling	375	LF		
6	SP	Limited Access Drilling	375	LF		
7	SP	Horizontal Drains Less Than or Equal to 30 LF	175	LF		
8	SP	Horizontal Drains Greater Than 30 LF	175	LF		
9	SP	Horizontal Drains Without Pipes Less Than or Equal to 30 LF	350	LF		
10	SP	Horizontal Drains Without Pipes Greater Than 30 LF	350	LF		
11	SP	Geotextile For Soil Stabilization	750	SF		
12	SP	Geosynthetically Reinforced Wall	7,500	SF		
13	SP	Cementitious Void Fill	7	CY		
14	1150	Flagger	25	DAY		
15	SP	Two Lane Work Zone Traffic Control	4	EA		
16	SP	Multilane Work Zone Traffic Control	4	EA		
17	SP	Shoulder Closure Work Zone Traffic Control	4	EA		
18	SP	Permanently Cased Soil Nails Up to 20'	40	EA		
19	SP	Permanently Cased Soil Nails Up to 30'	30	EA		
20	SP	Permanently Cased Soil Nails Up to 40'	30	EA		
21	SP	Permanently Cased Soil Nails Up to 50'	15	EA		
22	SP	Permanently Cased Soil Nails Up to 60'	15	EA		
23	SP	Permanently Cased Soil Nails Up to 70'	15	EA		
24	SP	Permanently Cased Soil Nails Up to 80'	15	EA		
25	SP	Self-Drilling Soil Nails Up to 20'	40	EA		
26	SP	Self-Drilling Soil Nails Up to 30'	30	EA		
27	SP	Self-Drilling Soil Nails Up to 40'	30	EA		

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

BID FORM

(CONTINUED)

Line No.	Sect	Description	Qty	Unit	Unit Price	Amount Bid
28	SP	Self-Drilling Soil Nails Up to 50'	15	EA		
29	SP	Self-Drilling Soil Nails Up to 60'	15	EA		
30	SP	Self-Drilling Soil Nails Up to 70'	15	EA		
31	SP	Self-Drilling Soil Nails Up to 80'	15	EA		
32	SP	Micropiles Up To 20'	40	EA		
33	SP	Micropiles Up To 30'	30	EA		
34	SP	Micropiles Up To 40'	30	EA		
35	SP	Micropiles Up To 50'	15	LF		
36	SP	Micropiles Up To 60'	15	LF		
37	SP	Micropiles Up To 70'	15	EA		
38	SP	Micropiles Up To 80'	15	EA		
39	SP	Rock Bolts	750	EA		
40	SP	Rock Bolt Proof Testing	75	EA		
41	SP	Shotcrete Shoulder Buildup	75	LF		
42	SP	Reinforced Shotcrete Up to 6” Thickness	3,750	SF		
43	SP	Reinforced Shotcrete Up to 8” Thickness	3,750	SF		
44	SP	Reinforced Shotcrete Up to 12” Thickness	3,750	SF		
45	SP	Type 1 Pinned Wire Mesh Stabilization	1,125	SF		
46	SP	Type 1 Draped Wire Mesh Stabilization	1,125	SF		
47	SP	Type 2 Pinned Wire Mesh Stabilization	1,125	SF		
48	SP	Type 2 Draped Wire Mesh Stabilization	1,125	SF		
49	SP	Polyurethane Grouting	50	LB		
50	SP	Excavator, Tracked, Operating Weight <20,000 LBS w/ Operator	240	HR		
51	SP	Excavator, Tracked, Operating Weight >20,001 LBS & <37,999 LBS w/ Operator	240	HR		
52	SP	Excavator, Tracked, Operating Weight >38,000 LBS & <53,999 LBS w/ Operator	240	HR		
53	SP	Tandem-Axle Dump Truck W/ Operator	240	HR		
54	SP	Tri-Axle Dump Truck W/ Operator	240	HR		
55	SP	Quad-Axle Dump Truck W/ Operator	240	HR		

TOTAL BID FOR PROJECT:_____

Contractor: _____

Address: _____

Phone: _____ Federal Id: _____

Contractor's License Number: _____

Authorized Agent: _____ Title: _____

Signature: _____ Date: _____

Execution of Contract

Contract No: D13POC.D2.40666

County: Buncombe, Burke, Madison, McDowell, Mitchell, Rutherford and Yancey Counties

ACCEPTED BY THE DEPARTMENT

_____

Division Contracts Engineer

_____

Date

EXECUTION OF CONTRACT AND BONDS
APPROVED AS TO FORM:

_____

Division Project Manager

_____

Date