

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION 11

PROPOSAL

DATE AND TIME OF BID OPENING: MARCH 21, 2019 AT 2:00 PM

CONTRACT ID: DK00267

WBS ELEMENT NO.: 34402.3.8

FEDERAL AID NO.: N/A

COUNTY: WATAUGA

TIP NO.: R-2237C(L)

MILES: N/A

ROUTE NO.: US 321

LOCATION: FROM SR 1500 (BLACKBERRY ROAD) TO US 221 AT BLOWING ROCK

TYPE OF WORK: LANDSCAPE ENHANCEMENTS

NOTICE:

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

BIDS WILL BE RECEIVED AS SHOWN BELOW:

THIS IS A LANDSCAPE PROJECT.

BID BONDS ARE REQUIRED.

NAME OF BIDDER

NC CONTRACTOR'S LICENSE NUMBER

ADDRESS OF BIDDER

**PROPOSAL FOR THE CONSTRUCTION OF
CONTRACT No. **DK00267** IN **WATAUGA COUNTY**, NORTH CAROLINA**

Date: February 28, 2019

**DEPARTMENT OF TRANSPORTATION,
RALEIGH, NORTH CAROLINA**

The Bidder has carefully examined the location of the proposed work to be known as Contract No. **DK00267**; 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 the forms of contract payment bond and contract performance bond; and thoroughly understands the stipulations, requirements and provisions. The undersigned bidder agrees to bound upon his execution of the bid and subsequent award to him by the Department of Transportation in accordance with this proposal to provide the necessary contract payment bond and contract performance bond within fourteen days after the written notice of award is received by him. 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 2018 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 State Highway Contract No. **DK00267** in **Watauga County**, 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 2018* 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.

Accompanying this bid is a bid bond secured by a corporate surety, or certified check payable to the order of the Department of Transportation, for five percent of the total bid price, which deposit is to be forfeited as liquidated damages in case this bid is accepted and the Bidder shall fail to provide the required payment and performance bonds with the Department of Transportation, under the condition of this proposal, within 14 calendar days after the written notice of award is received by him, as provided in the Standard Specifications; otherwise said deposit will be returned to the Bidder.

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PROPOSAL ITEM SHEET

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.

For preparing and submitting the bid electronically, refer to Article 102-8(B) of the *2018 Standard Specifications*.

Bidders that bid electronically on Raleigh Central-Let projects will need a separate Digital Signature from the approved electronic bidding provider for Division Contracts.

ELECTRONIC ON-LINE BID:

1. Download entire proposal from Connect NCDOT website. Download the electronic submittal file from the approved electronic bidding provider website.
2. Prepare and submit the electronic submittal file using the approved electronic bidding provider software.
3. Electronic bidding software necessary for electronic bid preparation may be downloaded from the Connect NCDOT website at: <https://connect.ncdot.gov/letting/Pages/EBS-Information.aspx> or from the approved electronic bidding provider website.

DIVISION CONTRACT

General Provisions

GENERAL

This contract is for the landscape development and plantings on US 321 from SR1500 Blackberry Road to US221 at Blowing Rock in Watauga County. The work shall consist of but not be limited to labor, materials, supervision, and equipment. All plant locations will be as shown on the project plans and/or as directed by the 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 any 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 in the contract.

All work and materials shall be in accordance with the provisions of the General Guidelines of this contract, the Project Special Provisions, the *North Carolina Department of Transportation Standard Specifications for Roads and Structures*, the *North Carolina Department of Transportation Roadway Standards Drawings*, and the current edition of the *Manual of Uniform Traffic Control Devices (MUTCD)*. These manuals may be found on the internet at:

<https://connect.ncdot.gov/resources/Specifications/Pages/2018-Specifications-and-Special-Provisions.aspx>

<https://connect.ncdot.gov/resources/Specifications/Pages/2018-Roadway-Standard-Drawings.aspx>

<https://mutcd.fhwa.dot.gov/>

SITE INVESTIGATION AND REPRESENTATION

By signing the proposal documents, the Contractor acknowledges that:

- (A) He understands the nature of the work and general and local conditions, particularly those bearing on transportation;
- (B) He is familiar with the availability and cost of labor and materials;
- (C) He will to adhere to State regulations for safety and security of property, roads, and facilities;
- (D) He is able to prosecute the work in accordance with all applicable local, state and federal rules and regulations, and;
- (E) He has thoroughly investigated the project site(s).

Any failure on the part of the Contractor to acquaint himself with all available information shall not relieve him from the responsibility any aspect of the contracting process. No adjustment in contract time or contract prices will be made due to the Contractor's negligence in familiarizing himself with the contract or project site(s).

BOND REQUIREMENTS:

(06-01-16)

102-8, 102-10

SPD 01-420A

A Bid Bond is required in accordance with Article 102-10 of the *2018 Standard Specifications for Roads and Structures*.

Contract Payment and Performance Bonds are required in accordance with Article 103-7 of the *2018 Standard Specifications for Roads and Structures*.

CONTRACT TIME AND LIQUIDATED DAMAGES:

(7-1-95) (Rev. 12-18-07)

108

SP1 G10 A

The date of availability for this contract is **April 15, 2019**.

No work will be permitted and no contract will be executed until all required bonds and prerequisite conditions and certifications have been satisfied. No work will be permitted prior to final execution of the contract.

The completion date for the Initial Planting for this contract is December 15, 2019. No extensions will be authorized except as authorized by Article 108-10 of the *2018 Standard Specifications*.

Liquidated damages for the **Initial Planting** are **Six Hundred Dollars (\$600.00)** per calendar day.

The completion date for the Establishment Period for this contract shall be Eighteen (18) Months following the completion and acceptance date of the Initial Planting.

Liquidated damages for the **Establishment Period** are **Six Hundred Dollars (\$600.00)** per calendar day.

The Initial Planting Completion Date and the Establishment Period Completion Date are subject to change if plant material becomes unavailable during the life of this contract. Planting operations may be delayed or suspended as determined by the Engineer. The Contractor will have no recourse against the Department for such suspension. Contract time will be adjusted per Article 108-10 of the *Standard Specifications*.

All time between the Date of Availability and the Completion Date for the Establishment Period will be considered contract time.

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 Map**, 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:

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 P.M.** December 31st and **8:30 A.M.** January 2nd. If New Year's Day is on a Friday, Saturday, Sunday or Monday, then until **8:30 A.M.** the following Tuesday.
3. For **Easter**, between the hours of **3:00 P.M.** Thursday and **8:30 A.M.** Monday.
4. For **Memorial Day**, between the hours of **3:00 P.M.** Friday and **8:30 A.M.** Tuesday.
5. For **Independence Day**, between the hours of **3:00 P.M.** the day before Independence Day and **8:30 A.M.** the day after Independence Day.

If **Independence Day** is on a Friday, Saturday, Sunday or Monday, then between the hours of **3:00 P.M.** the Thursday before Independence Day and **8:30 A.M.** the Tuesday after Independence Day.
6. For **Labor Day**, between the hours of **3:00 P.M.** Friday and **8:30 A.M.** Tuesday.
7. For **Thanksgiving Day**, between the hours of **3:00 P.M.** Tuesday and **8:30 A.M.** Monday.
8. For **Christmas**, between the hours of **3:00 P.M.** the Friday before the week of Christmas Day and **8:30 A.M.** the following Tuesday after the week of Christmas Day.
9. For **Fall Foliage Season**, all weekends in October, between the hours of **6:00 A.M.** Friday and **9:00 A.M.** Monday.
10. For **Appalachian State University Home Football Games**, between **12:00 P.M.** (noon) the day before the game to **9:00 A.M.** the Monday after the game.
11. As directed by the Engineer **any special event** occurring in the Town of Blowing Rock, between the hours of **6:00 A.M.** the day before the special event and **9:00 A.M.** the day after the special event.

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 **US 321** during the following time restrictions:

DAY AND TIME RESTRICTIONS

**Monday thru Friday from 7:00 AM to 8:30 AM and 4:00 PM to 6:00 PM
Weekends from 9:00 AM Saturday to 9:00 PM 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.

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)

108-6

SP1 G34

None of the items included in this contract will be specialty items (see Article 108-6 of the *2018 Standard Specifications*).

WORKMEN'S COMPENSATION INSURANCE

The contractor shall defend, indemnify and hold harmless the North Carolina Department of Transportation, its officers and employees from any claim, demand, suit, liability, judgment and expense (including attorney's fees and other costs of litigation) arising out of or relating to injury,

disease, or death of persons or damage to or loss of property resulting from or in connection with the negligent performance of this contract by the contractor, its agents, employees, and subcontractors or any one for whom the contractor may be responsible. The obligations, indemnities and liabilities assumed by the contractor under this paragraph shall not extend to any liability caused by the negligence of the Department of Transportation or its employees. The contractor's liability shall not be limited by any provisions or limits of insurance set forth in this contract.

The contractor shall indemnify and hold harmless the Department of Transportation from any claim, demand, suit, liability, judgment, and 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. The obligations, indemnities and liabilities assumed by the contractor under this paragraph shall not extend to any liability caused by the negligence of the Department of Transportation or its employees. The contractor's liability shall not be limited by any provisions or limits of insurance set forth in this contract.

The contractor further agrees to indemnify the Department of Transportation for any damages to the roadway, highway signs, highway equipment and other property owned or in possession of the Department of Transportation, brought about by reason of the negligent operation of the leased equipment. The contractor further agrees to indemnify and save harmless the Department of Transportation, its officers and employees from any claims or amounts recovered by any of the contractor's employees under the Worker's Compensation Act.

Pursuant to N.C.G.S. § 97-19, all contractors of the Department of Transportation are, prior to beginning services, required to show proof of coverage issued by a workers' compensation insurance carrier, or a certificate of compliance issued by the Department of Insurance for self-insured subcontractors stating that it has complied with N.C.G.S. § 97-93 irrespective of whether subcontractors have regularly in service fewer than three employees in the same business within the State of North Carolina, and subcontractors shall be hereinafter liable under the Workers' Compensation Act for payment of compensation and other benefits to its employees for any injury or death due to an accident arising out of and in the course of performance of the work insured by the subcontractor.

Proof of insurance shall be furnished to the Engineer prior to beginning work.

LICENSES

In accordance with G.S. 136-28.14, this project is not subject to the licensing requirements of Chapter 87 of the General Statutes.

DEFAULT OF CONTRACT

The Department of Transportation shall have the right to declare a default of contract for breach by the Contractor of any material term or condition of the contract. Default of contract shall be in accordance with the terms, conditions, and procedures of Article 108-9 of the *2018 Standard Specifications*.

PAYMENT AND RETAINAGE**Initial Planting:**

Quantities of planting, Mulch for Planting, Water for Planting, Pre-emergence Herbicidal Treatment, Post-emergence Herbicidal Treatment, Sod, Topsoil, Landscape Boulders, Landscape Grading, Advanced Warning Signs and Temporary Traffic Control will be paid for at 90% of the amount invoiced by the Contractor after the initial planting inspection and acceptance. The remaining 10% will be held as retainage and will be paid after the requirements for the establishment period, including replacement planting, if any, have been met.

Monthly Payment Requests:

The Contractor shall invoice the District Supervisor, Boone District/Resident Engineers office for the items included in this contract on a monthly basis. The amount of partial payments will be based on the work accomplished and accepted as the last day of the approved pay period. Minority Business Enterprise (MBE) and Women Business Enterprise (WBE) participation shall be listed on the appropriate form (DBE-IS) and shall accompany all requests for payment. If there is no participation the word "None" or the figure "0" shall be entered. Requests for payment will not be processed without the submission of the DBE-IS form.

Failure of the Contractor to perform at any point in the contract may be justification for (but not limited to) forfeiture of remaining payments, liquidated damages and/or disqualification from future NCDOT bidding.

MANDATORY SUBCONTRACTOR INFORMATION

The Contractor is to provide a list of all proposed subcontractors he or she plans to use on this project. This list shall include all subcontractors that will be used, not only MBE, WBE or DBE firms. Only pre-approved subcontractors that are registered with the NCDOT may be used. A listing of all contractors (prime or subcontractor) may be found at the following website:

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

Subcontract Approval Form (Form SAF) must be completed for each subcontractor that will be used and returned prior to the work being performed by the subcontractor. This form can be found at the following website:

<https://connect.ncdot.gov/projects/construction/Pages/default.aspx>

If the proposed subcontractor cannot fulfill their obligation and a substitute must be used, then an appropriate form for the replacement subcontractor must be delivered to the administering officer before the new subcontractor is used.

LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC**Laws to be Observed**

In accordance with 107-1 of the *Standard Specifications*, The Contractor shall keep himself fully informed of all Federal, State, and local laws, ordinances, and regulations, and all orders and decrees of bodies or tribunals having any jurisdiction or authority which may in any manner affect those engaged or employed in the work or which in any way affect the conduct of the work. He shall at all times observe and comply with all such laws, ordinances, regulations, orders, and decrees; and shall indemnify and hold harmless the Board of Transportation and the Department of Transportation and their agents and employees from any claim or liability arising from or based on the violation of any such law, ordinance, regulations, order, or decree, by the Contractor or by his agents and employees.

Responsibility For Damage Claims

In accordance with 107-14 of the *Standard Specifications*, The Contractor shall indemnify and save harmless the Board of Transportation and its members and the Department of Transportation and its officers, agents, and employees from all suits, actions, or claims of any character brought for any injury or damages received or sustained by any person, persons, or property by reason of any act of the Contractor, Subcontractor, its agents or employees, in the performance of the contract.

Safety and Accident Protection

In accordance with 107-21 of the *Standard Specifications*, The Contractor shall comply with all applicable Federal, State, and local laws, ordinances, and regulations governing safety, health, and sanitation, and shall provide all safeguards, safety devices, and protective equipment, and shall take any other needed actions, on his own responsibility that are 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.

All Contractors' personnel, all subcontractors and their personnel, and any material suppliers and their personnel shall wear a reflective vest or outer garment conforming to the requirements of MUTCD at all times while on the project.

BANKRUPTCY

The Department of Transportation, at its option, may terminate the contract upon the filing by the contractor of any petition for protection under the provisions of the Federal Bankruptcy Act.

EXTENSION OF CONTRACT TIME

Failure on the part of the Contractor to furnish bonds or certifications or to satisfy preliminary requirements necessary to issue the purchase order will not constitute grounds for extension of the contract time. If the Contractor has fulfilled all preliminary requirements for the issuance of a purchase order, and the purchase order authorization is not available by the date of availability, the Contractor shall be granted an extension equal to the number of calendar days the purchase order authorization is delayed after the date of availability.

CLAIMS FOR ADDITIONAL COMPENSATION OR EXTENSION OF TIME

Any claims for additional compensation and/or extensions of the completion date shall be submitted to the Division Engineer with detailed justification within thirty (30) days after receipt of the final invoice payment. The failure of the Contractor to submit the claim(s) within thirty days shall be a bar to recovery.

CONTRACTOR CLAIM SUBMITTAL FORM

If the Contractor elects to file a written claim or requests an extension of contract time, it shall be submitted on the Contractor Claim Submittal Form (CCSF) available through the Construction Unit or <https://connect.ncdot.gov/projects/construction/Pages/Construction-Resources.aspx>

PROSECUTION AND PROGRESS

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 except where the Engineer has authorized a suspension of the contractor's operations in writing.

The Contractor shall pursue the work diligently with workmen in sufficient numbers, abilities, and supervision, and with equipment, materials, and methods of construction as may be required to complete the work described in the contract by the completion date and in accordance with Section 108 of the *Standard Specifications*.

In the event that the Contractor's operations are suspended in violation of the above provisions, the sum of **One Hundred Dollars (\$100.00)** 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.

TEMPORARY SUSPENSION OF WORK

In accordance with Article 108-7 of the *2012 Standard Specifications*, the Engineer will have the authority to suspend the work wholly or in part by written order for such periods, as he may deem necessary for any of the following reasons.

1. Conditions considered unfavorable for the suitable prosecution of the work, or
2. The Contractor's failure for correct conditions unsafe for workmen or the general public,
or
3. The Contractor has not carried out orders given to him by the Engineer, or

4. The Contractor's failure to perform any provisions of the contract.

No extension of the completion date will be allowed for the above suspensions except as may be provided for in Article 108-10.

AUTHORITY OF THE ENGINEER

The Engineer for this project shall be the Division Engineer, Division 11, Division of Highways, North Carolina Department of Transportation, acting directly or through his duly authorized representatives.

The Engineer will decide all questions which may arise as to the quality and acceptability of work performed and as to the rate of progress of the work; all questions which may arise as to the interpretation of the contract; and all questions as to the acceptable fulfillment of the contract on the part of the Contractor. His decision shall be final, and he shall have executive authority to enforce and make effective such decisions and orders as the Contractor fails to carry out promptly.

APPROVAL OF PERSONNEL

The State shall have the right to approve or reject the project engineer and other supervisory personnel, assigned to a project.

The Engineers or any subcontractor for the Engineers which are employed to provide engineering services for this project shall not engage the services of any person or persons, now in the employment of the State during the time of this Agreement, without written consent of the State.

In the event of engagement, the Engineers or their subcontractors shall restrict such person or persons from working on any of the Engineers' contracted projects in which the person or persons were formerly involved while employed by the State. This restriction period shall be for the duration of the contracted project with which the person or persons was involved. "Involvement" shall be defined as active participation in any of the following activities:

- Drafting the contract;
- Defining the scope of the contract;
- Selection of the Engineers' firm for services;
- Negotiation of the cost of the contract (including calculating man-hours or fees); and
- Administration of the contract.

An exception to these terms may be granted when recommended by the Secretary and approved by the Board of Transportation. Failure to comply with the terms stated above in this section shall be grounds for termination of this contract.

SUPERVISION BY CONTRACTOR

At all times during the life of the project the Contractor shall provide one permanent employee who shall have the authority and capability for overall responsibility of the project and who shall

be personally available at the work site within 24 hours notice. Such employee shall be fully authorized to conduct all business with the subcontractors, to negotiate and execute all supplemental agreements, and to execute the orders or directions of the Engineer.

At all times that work is actually being performed, the Contractor shall have present on the project one competent individual who is authorized to act in a supervisory capacity over all work on the project, including work subcontracted. The individual who has been so authorized shall be experienced in the type of work being performed and shall be fully capable of managing, directing, and coordinating the work; of reading and thoroughly understanding the contract; and receiving and carrying out directions from the Engineer or his authorized representatives. He shall be an employee of the Contractor unless otherwise approved by the Engineer.

The Contractor may, at his option, designate one employee to meet the requirements of both positions. However, whenever the designated employee is absent from the work site, an authorized individual qualified to act in a supervisory capacity on the project shall be present.

CONTRACTOR PERSONNEL

The Department will not be responsible in any way to the Contractor's personnel for damages, destruction or loss, from any cause, to the Contractor's equipment, supplies, materials or tools or the personal property of the Contractor's personnel. The Contractor will be responsible for all repairs, regardless of cost, resulting from the negligence of the Contractor or Contractor's employees. The Department will not participate in the cost of such repairs.

INSPECTION

All work shall be subject to inspection by the Engineer at any time. The Department's field representative will conduct frequent, unscheduled inspections and maintain a log noting conditions and compliance with contract provisions and quality of workmanship. It will be the responsibility of the Contractor to keep the Engineer informed of his proposed work plan. The contact person for this project will be Ivan Dishman and he may be reached at (828) 268-6022.

The Contractor will be required to remove debris, trash, tools, equipment and other construction materials used daily and as determined by the inspections above. Payment for any of the requested work not performed by the Contractor will be withheld/deducted from final payment to the Contractor.

MATERIALS AND TESTING

The Engineer reserves the right to perform all sampling and testing in accordance with Section 106 of the *Standard Specifications* and the Department's "Materials and Test Manual." However the Engineer may reduce the frequency of sampling and testing where he deems it appropriate for the project under construction.

The Contractor shall furnish the applicable certifications and documentation for all materials as required by the *Standard Specifications*. Material that is not properly certified will not be accepted.

OUTSOURCING OUTSIDE THE USA

All work on consultant contracts, services contracts, and construction contracts shall be performed in the United States of America. No work shall be outsourced outside of the United States of America.

Outsourcing for the purpose of this provision is defined as the practice of subcontracting labor, work, services, staffing, or personnel to entities located outside of the United States.

The North Carolina Secretary of Transportation shall approve exceptions to this provision in writing.

PLAN, DETAIL AND QUANTITY ADJUSTMENTS

The Department reserves the right to make, at any time during the progress of the work, such alterations in plans or the details of construction as may be found necessary or desirable by the Engineer to complete the project.

COOPERATION BETWEEN CONTRACTORS:

(7-1-95)

105-7

SP1 G133

The Contractor's attention is directed to Article 105-7 of the *2018 Standard Specifications*.

[Other Project Location-See Insert]

The Contractor on this project shall cooperate with the Contractor working within or adjacent to the limits of this project to the extent that the work can be carried out to the best advantage of all concerned.

ELECTRONIC BIDDING:

(2-19-19)

101, 102, 103

SP1 G140

Revise the *2018 Standard Specifications* as follows:

Page 1-4, Article 101-3, DEFINITIONS, BID (OR PROPOSAL) *Electronic Bid*, line 1, replace “Bid Express®” with “the approved electronic bidding provider”.

Page 1-15, Subarticle 102-8(B), Electronic Bids, lines 39-40, replace “to Bid Express®” with “via the approved electronic bidding provider”.

Page 1-15, Subarticle 102-8(B)(1), Electronic Bids, line 41, delete “from Bid Express®”

Page 1-17, Subarticle 102-9(C)(2), Electronic Bids, line 21, replace “Bid Express® miscellaneous folder within the .ebs” with “electronic submittal”.

Page 1-29, Subarticle 103-4(C)(2), Electronic Bids, line 32, replace “.ebs miscellaneous data file of Expedite” with “electronic submittal file”

MINORITY BUSINESS ENTERPRISE AND WOMEN BUSINESS ENTERPRISE

(DIVISIONS):

(10-16-07)(Rev. 2-19-19)

102-15(J)

SP1 G67

Description

The purpose of this Special Provision is to carry out the North Carolina Department of Transportation's policy of ensuring nondiscrimination in the award and administration of contracts financed in whole or in part with State funds.

Definitions

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

Combined MBE/WBE Goal: A portion of the total contract, expressed as a percentage that is to be performed by committed MBE/WBE subcontractors.

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

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

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

Manufacturer - A firm that operates or maintains a factory or establishment that produces on the premises, the materials or supplies obtained by the Contractor.

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

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

Regular Dealer - A firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials or supplies required for the performance of the contract are bought, kept in stock, 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, cement, gravel, stone, and

petroleum products need not keep such products in stock, if it owns and operates distribution equipment for the products. Brokers and packagers are not regarded as manufacturers or regular dealers within the meaning of this section.

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

North Carolina Unified Certification Program (NCUCP) - A program that provides comprehensive services and information to applicants for MBE/WBE certification. The MBE/WBE program follows the same regulations as the federal Disadvantaged Business Enterprise (DBE) program 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.

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

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

Forms and Websites Referenced in this Provision

Payment Tracking System - On-line system in which the Contractor enters the payments made to MBE and WBE 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 MBE/WBE 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 MBE/WBE Replacement Request Form - Form for replacing a committed MBE or WBE.
<http://connect.ncdot.gov/projects/construction/Construction%20Forms/DBE%20MBE%20WBE%20Replacement%20Request%20Form.pdf>

SAF Subcontract Approval Form - Form required for approval to sublet the contract.
<http://connect.ncdot.gov/projects/construction/Construction%20Forms/Subcontract%20Approval%20Form%20Rev.%202012.zip>

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.
<http://connect.ncdot.gov/projects/construction/Construction%20Forms/Joint%20Check%20Notification%20Form.pdf>

Letter of Intent - Form signed by the Contractor and the MBE/WBE subcontractor, manufacturer or regular dealer that affirms that a portion of said contract is going to be performed by the signed MBE/WBE 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 MBE and WBE Subcontractors Form - Form for entering MBE/WBE subcontractors on a project that will meet the Combined MBE/WBE goal. This form is for paper bids only. [http://connect.ncdot.gov/municipalities/Bid%20Proposals%20for%20LGA%20Content/09%20MBE-WBE%20Subcontractors%20\(State\).docx](http://connect.ncdot.gov/municipalities/Bid%20Proposals%20for%20LGA%20Content/09%20MBE-WBE%20Subcontractors%20(State).docx)

Subcontractor Quote Comparison Sheet - Spreadsheet for showing all subcontractor quotes in the work areas where MBEs and WBEs 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>

Combined MBE/WBE Goal

The Combined MBE/WBE Goal for this project is **0.0 %**

The Combined Goal was established utilizing the following anticipated participation for Minority Business Enterprises and Women Business Enterprises:

(A) Minority Business Enterprises **0.0 %**

- (1) *If the anticipated MBE participation is more than zero*, the Contractor shall exercise all necessary and reasonable steps to ensure that MBEs participate in at least the percent of the contract as set forth above.
- (2) *If the anticipated MBE participation is zero*, the Contractor shall make an effort to recruit and use MBEs during the performance of the contract. Any MBE participation obtained shall be reported to the Department.

(B) Women Business Enterprises **0.0 %**

- (1) *If the anticipated WBE participation is more than zero*, the Contractor shall exercise all necessary and reasonable steps to ensure that WBEs participate in at least the percent of the contract as set forth above.
- (2) *If the anticipated WBE participation is zero*, the Contractor shall make an effort to recruit and use WBEs during the performance of the contract. Any WBE participation obtained shall be reported to the Department.

The Bidder is required to submit only participation to meet the Combined MBE/WBE Goal. The Combined Goal may be met by submitting all MBE participation, all WBE participation, or a combination of MBE and WBE participation.

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 MBE and WBE certified shall be used to meet the Combined MBE / WBE 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 MBE/WBE Subcontractors

At the time of bid, bidders shall submit all MBE and WBE participation that they anticipate to use during the life of the contract. Only those identified to meet the Combined MBE/WBE goal will be considered committed, even though the listing shall include both committed MBE/WBE subcontractors and additional MBE/WBE subcontractors. Any additional MBE/WBE subcontractor participation above the goal will follow the banking guidelines found elsewhere in this provision. All other additional MBE/WBE subcontractor participation submitted at the time of bid will be used toward the Department's overall race-neutral goals. Only those firms with current MBE and WBE certification at the time of bid opening will be acceptable for listing in the bidder's submittal of MBE and WBE participation. The Contractor shall indicate the following required information:

(A) Electronic Bids

Bidders shall submit a listing of MBE and WBE participation in the appropriate section of the electronic submittal file.

- (1) Submit the names and addresses of MBE and WBE firms identified to participate in the contract. If the bidder uses the updated listing of MBE and WBE firms shown in the electronic submittal file, the bidder may use the dropdown menu to access the name and address of the firms.
- (2) Submit the contract line numbers of work to be performed by each MBE and WBE firm. When no figures or firms are entered, the bidder will be considered to have no MBE or WBE participation.
- (3) The bidder shall be responsible for ensuring that the MBE and WBE are 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 MBE's or WBE's participation will not count towards achieving the Combined MBE/WBE goal.

(B) Paper Bids

- (1) *If the Combined MBE/ WBE goal is more than zero,*
 - (a) Bidders, at the time the bid proposal is submitted, shall submit a listing of MBE/WBE participation, including the names and addresses on *Listing of MBE and WBE 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 MBE and WBE participation for the contract.
 - (b) If bidders have no MBE or WBE participation, they shall indicate this on the *Listing of MBE and WBE 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 MBE and WBE 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 MBE/WBE 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 MBE’s or WBE’s participation will not count towards achieving the Combined MBE/WBE goal.
- (2) *If the Combined MBE/WBE Goal is zero,* entries on the *Listing of MBE and WBE Subcontractors* are not required for the zero goal, however any MBE or WBE participation that is achieved during the project shall be reported in accordance with requirements contained elsewhere in the special provision.

MBE or WBE Prime Contractor

When a certified MBE or WBE firm bids on a contract that contains a Combined MBE/WBE Goal, the 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 MBE or WBE bidder on a contract will meet the Combined MBE/WBE goal by virtue of the work it performs on the contract with its own forces. However, all the work that is performed by the MBE or WBE bidder and any other similarly certified subcontractors will count toward the goal. The MBE or WBE bidder shall list itself along with any MBE or WBE subcontractors, if any, in order to receive credit toward the goals.

MBE/WBE prime contractors shall also follow Sections A or B listed under *Listing of MBE/WBE Subcontractors* just as a non-MBE/WBE bidder would.

Written Documentation – Letter of Intent

The bidder shall submit written documentation for each MBE/WBE that will be used to meet the Combined MBE/WBE goal of the contract, indicating the bidder's commitment to use the MBE/WBE 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 MBE and WBE to be used toward the Combined MBE/WBE goal, or if the form is incomplete (i.e. both signatures are not present), the MBE/WBE participation will not count toward meeting the Combined MBE/WBE goal. If the lack of this participation drops the commitment below the Combined MBE/WBE goal, the Contractor shall submit evidence of good faith efforts for the goal not met, completed in its entirety, to the Engineer no later than 2:00 p.m. of 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.

Banking MBE/WBE Credit

If the committed MBE/WBE participation submitted exceeds the algebraic sum of the Combined MBE/WBE goal by \$1,000 or more, the excess will be placed on deposit by the Department for future use by the bidder. Separate accounts will be maintained for MBE and WBE participation and these may accumulate for a period not to exceed 24 months.

When the apparent lowest responsive bidder fails to submit sufficient participation by MBE and WBE firms to meet the advertised goal, as part of the good faith effort, the Department will consider allowing the bidder to withdraw funds to meet the Combined MBE/WBE goal as long as there are adequate funds available from the bidder's MBE and WBE bank accounts.

Submission of Good Faith Effort

If the bidder fails to meet or exceed the Combined MBE/WBE goal, the apparent lowest responsive bidder shall submit to the Department documentation of adequate good faith efforts made to reach that specific 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 MBE/WBE 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 a Combined MBE/WBE Goal 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 MBE/WBE participation. Adequate good faith efforts also mean that the bidder actively and aggressively sought MBE/WBE 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 goals 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 MBEs/WBEs that are also prequalified subcontractors. The bidder must solicit this interest within at least 10 days prior to bid opening to allow the MBEs/WBEs to respond to the solicitation. Solicitation shall provide the opportunity to MBEs/WBEs within the Division and surrounding Divisions where the project is located. The bidder must determine with certainty if the MBEs/WBEs are interested by taking appropriate steps to follow up initial solicitations.
- (B) Selecting portions of the work to be performed by MBEs/WBEs in order to increase the likelihood that the Combined MBE/WBE goal will be achieved.
 - (1) Where appropriate, break out contract work items into economically feasible units to facilitate MBE/WBE 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 advertised goal when the work to be sublet includes potential for MBE/WBE participation (2nd and 3rd tier subcontractors).
- (C) Providing interested certified MBEs/WBEs that are also prequalified subcontractors 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 MBEs/WBEs. It is the bidder's

responsibility to make a portion of the work available to MBE/WBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available MBE/WBE subcontractors and suppliers, so as to facilitate MBE/WBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of MBEs/WBEs 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 MBEs/WBEs to perform the work.

- (2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including MBE/WBE subcontractors, and would take a firm's price and capabilities as well as the advertised goal into consideration. However, the fact that there may be some additional costs involved in finding and using MBEs/WBEs is not in itself sufficient reason for a bidder's failure to meet the advertised 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 MBEs/WBEs if the price difference is excessive or unreasonable.
- (E) Not rejecting MBEs/WBEs 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 MBEs/WBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or bidder.
- (G) Making efforts to assist interested MBEs/WBEs 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 MBEs/WBEs. 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 MBE or WBE quotes.
- (I) Any other evidence that the bidder submits which shows that the bidder has made reasonable good faith efforts to meet the advertised 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 Combined MBE/WBE goal.
- (2) The bidders' past performance in meeting the contract goal.
- (3) The performance of other bidders in meeting the advertised goal. For example, when the apparent successful bidder fails to meet the 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 advertised goal, but meets or exceeds the average MBE and WBE 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 Combined MBE/WBE goal can be met or that an adequate good faith effort has been made to meet the advertised 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 MBE/WBE Participation Toward Meeting the Combined MBE/WBE Goal

(A) Participation

The total dollar value of the participation by a committed MBE/WBE will be counted toward the contract goal requirements. The total dollar value of participation by a committed MBE/WBE will be based upon the value of work actually performed by the MBE/WBE and the actual payments to MBE/WBE firms by the Contractor.

(B) Joint Checks

Prior notification of joint check use shall be required when counting MBE/WBE 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 MBE/WBE may enter into subcontracts. Work that a MBE subcontracts to another MBE firm may be counted toward the anticipated MBE participation. The same holds for work that a WBE subcontracts to another WBE firm. Work that a MBE/WBE subcontracts to a non-MBE/WBE firm does not count toward the contract goal requirement. It should be noted that every effort shall be made by MBE and WBE contractors to subcontract to the same certification (i.e., MBEs to MBEs and WBEs to WBEs), in order to fulfill the MBE or WBE participation breakdown. This, however, may not always be possible due to the limitation of firms in the area. If the MBE or WBE firm shows a good faith effort has been made to reach out to similarly certified firms and there is no interest or availability, and they can get assistance from other certified firms, the Engineer will not hold the prime responsible for meeting the individual MBE or WBE breakdown. If a MBE or WBE 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 MBE or WBE is not performing a commercially useful function.

(D) Joint Venture

When a MBE or WBE 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 MBE or WBE in the joint venture, that portion of the total dollar value being a distinct clearly defined portion of work that the MBE or WBE performs with its forces.

(E) Suppliers

A contractor may count toward its MBE /WBE requirement 60 percent of its expenditures for materials and supplies required to complete the contract and obtained from a MBE or WBE regular dealer and 100 percent of such expenditures from a MBE or WBE manufacturer.

(F) Manufacturers and Regular Dealers

A contractor may count toward its MBE /WBE requirement the following expenditures to MBE/WBE firms that are not manufacturers or regular dealers:

- (1) The fees or commissions charged by a MBE/WBE 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 MBE/WBE, which is neither a manufacturer nor a regular dealer, count the entire amount of fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or

transportation charges for the delivery of materials or supplies required on a job site (but not the cost of the materials and supplies themselves), provided the fees are determined to be reasonable and not excessive as compared with fees customarily allowed for similar services.

Commercially Useful Function

(A) MBE/WBE Utilization

The Contractor may count toward its contract goal requirement only expenditures to MBEs and WBEs that perform a commercially useful function in the work of a contract. A MBE/WBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the MBE/WBE 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 MBE/WBE 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 actually performing and the MBE/WBE credit claimed for its performance of the work, and any other relevant factors. If it is determined that a MBE or WBE is not performing a Commercially Useful Function, the contractor may present evidence to rebut this presumption to the Department.

(B) MBE/WBE Utilization in Trucking

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

- (1) The MBE/WBE 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 the Combined MBE/WBE goal.
- (2) The MBE/WBE shall itself own and operate at least one fully licensed, insured, and operational truck used on the contract.
- (3) The MBE/WBE 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 MBE may subcontract the work to another MBE firm, including an owner-operator who is certified as a MBE. The same holds true that a WBE may subcontract the work to another WBE firm, including an owner-operator who is certified as a WBE. When this occurs, the MBE or WBE who subcontracts work

receives credit for the total value of the transportation services the subcontracted MBE or WBE provides on the contract. It should be noted that every effort shall be made by MBE and WBE contractors to subcontract to the same certification (i.e., MBEs to MBEs and WBEs to WBEs), in order to fulfill the participation breakdown. This, however, may not always be possible due to the limitation of firms in the area. If the MBE or WBE firm shows a good faith effort has been made to reach out to similarly certified transportation service providers and there is no interest or availability, and they can get assistance from other certified providers, the Engineer will not hold the prime responsible for meeting the individual MBE or WBE participation breakdown.

- (5) The MBE/WBE may also subcontract the work to a non-MBE/WBE firm, including from an owner-operator. The MBE/WBE who subcontracts the work to a non-MBE/WBE is entitled to credit for the total value of transportation services provided by the non-MBE/WBE subcontractor not to exceed the value of transportation services provided by MBE/WBE-owned trucks on the contract. Additional participation by non-MBE/WBE 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 MBE/WBE and the Contractor will not count towards the MBE/WBE contract requirement.
- (6) A MBE/WBE may lease truck(s) from an established equipment leasing business open to the general public. The lease must indicate that the MBE/WBE 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 MBE/WBE, so long as the lease gives the MBE/WBE absolute priority for use of the leased truck. This type of lease may count toward the MBE/WBE's credit as long as the driver is under the MBE/WBE's payroll.
- (7) Subcontracted/leased trucks shall display clearly on the dashboard the name of the MBE/WBE 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.

MBE/WBE Replacement

When a Contractor has relied on a commitment to a MBE or WBE subcontractor (or an approved substitute MBE or WBE subcontractor) to meet all or part of a contract goal requirement, the contractor shall not terminate the MBE/WBE subcontractor 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 MBE/WBE subcontractor, a non-MBE/WBE 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 MBE/WBE subcontractor, with a copy to the Engineer of its intent to request to terminate and/or substitute, and the reason for the request. The Contractor must give the MBE/WBE subcontractor five (5) business days to respond to the Contractor's Notice of Intent to Request Termination and/or

Substitution. If the MBE/WBE subcontractor objects to the intended termination/substitution, the MBE/WBE, 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 MBE/WBE subcontractor.

A committed MBE/WBE subcontractor may only be terminated after receiving the Department's written approval based upon a finding of good cause for the proposed termination and/or substitution. For purposes of this section, good cause shall include the following circumstances:

- (a) The listed MBE/WBE subcontractor fails or refuses to execute a written contract;
- (b) The listed MBE/WBE 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 MBE/WBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the prime contractor;
- (c) The listed MBE/WBE subcontractor fails or refuses to meet the prime contractor's reasonable, nondiscriminatory bond requirements;
- (d) The listed MBE/WBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness;
- (e) The listed MBE/WBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant to 2 CFR Parts 180, 215 and 1,200 or applicable state law;
- (f) The listed MBE/WBE subcontractor is not a responsible contractor;
- (g) The listed MBE/WBE voluntarily withdraws from the project and provides written notice of withdrawal;
- (h) The listed MBE/WBE is ineligible to receive MBE/WBE credit for the type of work required;
- (i) A MBE/WBE owner dies or becomes disabled with the result that the listed MBE/WBE contractor is unable to complete its work on the contract;
- (j) Other documented good cause that compels the termination of the MBE/WBE subcontractor. Provided, that good cause does not exist if the prime contractor seeks to terminate a MBE/WBE it relied upon to obtain the contract so that the prime contractor can self-perform the work for which the MBE/WBE contractor was engaged or so that the prime contractor can substitute another MBE/WBE or non-MBE/WBE contractor after contract award.

The Contractor shall comply with the following for replacement of a committed MBE/WBE:

(A) Performance Related Replacement

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

If a replacement MBE/WBE is not found that can perform at least the same amount of work as the terminated MBE/WBE, 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 MBE/WBEs that their interest is solicited in contracting the work defaulted by the previous MBE/WBE or in subcontracting other items of work in the contract.
- (2) Efforts to negotiate with MBE/WBEs for specific subbids including, at a minimum:
 - (a) The names, addresses, and telephone numbers of MBE/WBEs who were contacted.
 - (b) A description of the information provided to MBE/WBEs regarding the plans and specifications for portions of the work to be performed.
- (3) A list of reasons why MBE/WBE quotes were not accepted.
- (4) Efforts made to assist the MBE/WBEs contacted, if needed, in obtaining bonding or insurance required by the Contractor.

(B) Decertification Replacement

- (1) When a committed MBE/WBE 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 MBE/WBE 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.
- (2) When a committed MBE/WBE is decertified prior to the Department receiving the SAF (*Subcontract Approval Form*) for the named MBE/WBE firm, the Contractor shall take all necessary and reasonable steps to replace the MBE/WBE subcontractor with another MBE/WBE subcontractor to perform at least the same amount of work to meet the Combined MBE/WBE goal requirement. If a MBE/WBE 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 MBE/WBE 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 MBE/WBE, 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 MBE/WBE based upon the Contractor's commitment, the MBE/WBE shall participate in additional work to the same extent as the MBE/WBE 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 MBEs/WBEs 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 MBE/WBE, the Contractor shall seek participation by MBEs/WBEs 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 MBE/WBE, the Contractor shall seek additional participation by MBEs/WBEs equal to the reduced MBE/WBE 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 MBE/WBE subcontractor. The Department reserves the right to require copies of actual subcontract agreements involving MBE/WBE 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 MBE/WBE 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 MBE/WBE credit.

Reporting Minority and Women Business Enterprise Participation

The Contractor shall provide the Engineer with an accounting of payments made to all MBE and WBE 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 MBEs/WBEs, 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 further work on future projects until the required information is submitted.

Contractors reporting transportation services provided by non-MBE/WBE 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 *2018 Standard Specifications* may be cause to disqualify the Contractor.

Special Provisions

NOTES TO CONTRACTOR

1. Refer to the *Standard Specifications for Roads and Structures and Roadway Standard Drawings dated January 2018* - Section 1060 – Landscape Development Materials, Section 1670 – Planting and any Special Provisions in contract for guidelines on this project.
2. All work performed by the contractor shall be in compliance with the *2018 Standard Specifications* and Workmanship/Appearance done to the satisfaction of the Engineer.
3. All work items necessary to complete the work other than listed on the "Bid Proposal Form" will be considered incidental in nature and no further compensation will be made. Any work performed in an unsatisfactory manner could be basis for cancellation of the contract.

MANDATORY PRE-BID CONFERENCE

In order for all prospective bidders to have an extensive knowledge of the project, all prospective bidders shall attend a mandatory pre-bid conference as shown below:

Date and Time: March 14, 2019 at 1:00 PM

Place: Division 11 Roadside Environmental Office

Location: 606 Statesville Rd, North Wilkesboro, NC 28659

County: Wilkes

The Mandatory Pre-Bid Conference will begin promptly at **1:00 PM**. An official clock for the pre-bid conference will be designated. Contractors who are late will not be permitted to sign in or to participate in the conference.

The pre-bid conference will include a thorough discussion of the contract goals, typical projects, special provisions, pre-qualifications, and warranty requirements.

No questions concerning the project will be answered by any Department personnel at any time, except at the Mandatory Pre-Bid Conference.

This conference will be conducted by Department personnel to ensure all prospective bidders are given an opportunity to obtain information relevant to the project and given an opportunity to ask any questions they may have.

The Engineer will explain areas of responsibility, standards of performance and expected results. This is also intended to be a time for the Contractor to raise questions as to the present condition of the facility. Any changes made to the contract during the pre-bid conference will be documented

and included in an addendum. The entire addendum must be returned with the bid package, signed and dated. Failure to do so will result in disqualification of bid.

Eligibility to Bid

All prospective bidders at the Mandatory Pre-Bid Conference shall meet all of the requirements as shown below:

1. Only Bidders who have attended the entire conference and properly registered at the Mandatory Pre-Bid Conference will be considered eligible to bid on this project. A bid received from a Bidder who has not attended and properly registered at the conference will not be considered for award.
2. Attendance at the Mandatory Pre-Bid Conference will not meet the requirements of proper registration unless the individual attending has registered at the conference in accordance with the following:
 - The individual attending the Mandatory Pre-Bid Conference is a full time employee of the company being represented and has **administrative and/or supervisory** authority over the work to be performed under this contract.
 - The individual signs his/her name and company title on the official roster.
 - The individual writes in the name and address of the company he or she represents.
 - Only one company is shown as being represented by the individual attending.
 - The individual shall sign out when the conference is over.

Attendance at any prior pre-bid conference will not meet the requirement of this provision.

NOTIFICATION OF OPERATIONS

The Contractor or their appointed representative shall notify the Engineer one week in advance of beginning work on any site included in this contract. The Contractor shall give the Engineer sufficient notice of all operations for any sampling or acceptance testing required.

HOURS OF WORK

No work may be performed on Saturdays, Sundays, and Official State Holidays unless **approved by the Engineer**. Work shall only be performed when weather and visibility conditions allow safe operations.

CONTRACT BID QUANTITIES

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 any 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.

Contractor's pricing shall be based on the estimated quantities per Division. These estimated amounts are submitted to assist contractors in the bidding process. Estimated quantities are not to be regarded as actual requirements. The State shall not be obligated to purchase any specific quantity.

MOBILIZATION

In Article 800-2 of the *2018 Standard Specifications*, “**Compensation**”, is deleted; therefore; payment for Mobilization will be considered incidental to the various bid items.

REQUIRED LIST OF SOURCES

The Contractor will provide a list of sources for the Plant Material, Boulders, Sod, Topsoil and Mulch, **within seven days after notice of award.**

This following information must be provided:

- source’s name, address, phone number, fax number and contact person
- plant species
- plant quantities
- plant furnish requirements (sizes)

Failure of the Contractor to provide current and verifiable information may result in rescinding the award of the contract.

DELIVERY OF MATERIALS

Revise the *2012 Standard Specifications* as follows:

Page 10-77, 1060-10 Plant Materials – Nursery Grown, delete the second paragraph. Delete the last sentence in fourth paragraph and insert the following:

Copy of delivery ticket stating plant species, variety, and size of plant will be furnished to the Engineer or his representative when plants arrive on project.

Contractor shall provide 24 hour notice to the Engineer or his representative of the delivery of all plant material for this project. All materials to be delivered to the job site should be scheduled between 9:00 AM and 3:00 PM Monday through Friday. **Delivery of materials will not be permitted on Saturdays, Sundays, and Official State Holidays.**

Page 16-34, 1670-5 Plant Location, Delete the second and third paragraphs and insert the following:

The location of plantings will be coordinated as a joint responsibility between the Engineer and the Contractor. As directed by the Engineer, the Contractor shall furnish and install identification flags to designate individual plants before planting. All flagging shall conform to dimensioned and approximate locations as shown on the plans. However, plant locations will be determined and finalized in the field at the approval of the Engineer. All plant locations are subject to adjustments in the field by the Engineer. Locations are to be identified using 36" wire flags with 5" x 5" white flags (Surveyors Type). Plant names shall be written on the flag with a permanent marker. If the Contractor chooses, different plant species may be represented by a unique color. The method of identification should be approved by the Engineer prior to staking.

All trees or shrubs to be removed under this contract shall be tagged for approval by the Engineer before being removed.

Page 16-38, 1670-15 Replacement Planting, insert the following paragraph:

Replacements will be made prior to final acceptance during the establishment period. All replacements will be of the same size as the original plant. Replacement plants will not be furnished by the Department.

Page 16-39, 1670-17 Measurement and Payment, Delete this article in its entirety and insert the following:

The quantity of planting to be paid for during the initial planting will be the actual number of plants of each species and size as specified in the contract, planted by the Contractor as directed by the Engineer, that have been accepted by the Engineer.

The quantity of *topsoil* to be paid for during the initial planting will be the actual number of cubic yards of topsoil satisfactorily furnished and placed by the Contractor as directed by the Engineer, that have been accepted by the Engineer. The quantity of *topsoil* used on this project will be measured for payment by "truck measurement" as provided by Section 230-5 of the *2018 Standard Specifications* as directed by the Engineer.

The quantity of *mulch for planting* to be paid for during the initial planting will be the actual number of cubic yards of mulch satisfactorily furnished and placed by the Contractor as directed by the Engineer, that have been accepted by the Engineer. The quantity of *mulch for planting* used on this project will be measured for payment by "truck measurement" as provided by Section 230-5 of the *2018 Standard Specifications* as directed by the Engineer.

The quantity of *water* to be paid for during the initial planting will be the actual number of units of 1,000 gallons (M/G) of water which have been furnished and applied to plantings in accordance with the specifications, or as directed by the Engineer as specified in the contract. Measurement of *water* will be made from an approved metering device at the source of supply, or by determining the volumetric capacity of tank trucks used to deliver water to the project and recording the number of loads delivered by each truck.

The quantity of *boulder* will be measured and paid for per boulder satisfactorily furnished and placed by the Contractor as directed by the Engineer, that have been accepted by the Engineer.

The quantity of *landscape grading* shall be paid for by lump sum.

The quantity of *pre-emergent herbicide treatment* will be measured and paid for in square yards of plant bed measured along the surface of the ground that is satisfactorily applied by the Contractor and as directed by the Engineer, that have been accepted by the Engineer.

The quantity of *post-emergent herbicide treatment* will be measured and paid for in square yards of plant bed measured along the surface of the ground that is satisfactorily applied by the Contractor and as directed by the Engineer, that have been accepted by the Engineer.

The above prices and payments will be full compensation for all work covered by this section, including but not limited to tilling, excavating, and any other soil preparation and working; removal and disposal of any undesirable vegetation, furnishing limestone, sod and/or seed, water, pesticides, fertilizer, topsoil, mulch, and any other materials; pruning and planting; maintaining plants and grassed areas; and replacing dead, damaged, or stolen plants.

Payment for initial planting will be made under:

(Tree and shrub species and sizes indicated in the contract).....	Each
Landscape Grading.....	Lump Sum
Topsoil.....	Cubic Yard
Mulch for Planting.....	Cubic Yard
Water For Planting.....	M/G
Water For Sod.....	M/G
Sod.....	Square Yard
Boulder.....	Each
Pre-emergent Herbicide Treatment.....	Square Yard
Post-emergent Herbicide Treatment.....	Square Yard

PESTICIDE APPLICATIONS

The Contractor is responsible for Pesticide Applications in accordance with Article 1060-13 and applicable sections of Article 1670-7 of the *2018 Standard Specifications*, or as directed by the Engineer, with the following additions:

Reminders: All pesticide applications must be made by or under the direct supervision of an individual who possesses a valid North Carolina Commercial Applicator's license with a proper endorsement allowing for application on highway rights of way. The type and rate of the pesticides

to be used shall be approved by the Engineer. The inspector shall be notified and be given the opportunity to be present for all applications.

All pesticide handling and applications shall be according to NCDA&CS regulations and product label directions.

All pesticides shall be properly labeled and registered with the United States Department of Agriculture and the North Carolina Department of Agriculture and Consumer Services. A container shall contain only the pesticide, which meets the analysis guaranteed on the label. All pesticides shall be kept in such original labeled containers until used.

PRE-EMERGENT HERBICIDE TREATMENT

Pre-Emergent Herbicide Treatments shall be made in accordance with applicable sections of Article 1670-7 of the *2018 Standard Specifications*, or as directed by the Engineer, with the following additions:

The Contractor will apply pre-emergence herbicides to all plant beds, trees, and shrub mulch rings (all mulched areas) before mulching in the initial planting phase and on top of the mulched areas during the establishment period. The type and rate of herbicide to be used is shown in the table below. Any deviation desired by the contractor must be approved by the Engineer.

<i>Herbicide Brand Name</i>	<i>Chemical Name</i>	<i>Formulation</i>	<i>Amount of Formulation Per Acre</i>		<i>Adjuvants</i>	<i>Remarks</i>
<i>Endurance + Pennant</i>	Prodiamine + Metolachlor	65 WDG	1.5 lb. + 3 pints		NA	Apply before mulching has been completed in the initial planting phase and over the top of the mulch during establishment

Measurement and payment will be made as described under the project special provision for "Delivery of Materials".

POST-EMERGENT HERBICIDE TREATMENT

Post-Emergent Herbicide Treatments shall be made in accordance with applicable sections of Article 1670-7 of the *2018 Standard Specifications*, or as directed by the Engineer, with the following exceptions:

The Contractor will apply post-emergence herbicides to all plant beds, trees, and shrub mulch rings (all mulched areas) during the establishment period. The type and rate of herbicide to be used is shown in the table below. Any deviation desired by the contractor must be approved by the Engineer.

<i>Herbicide Brand Name</i>	<i>Chemical Name</i>		<i>Amount of Formulation Per Acre</i>		<i>Adjuvants</i>	<i>Remarks</i>
<i>RoundUp</i>	Glyphosate		2 quarts		NA	Apply during the establishment period

Measurement and payment will be made as described under the project special provision for "Delivery of Materials".

ESTABLISHMENT

See Standard Specifications Sections 1060 - Landscape Development Materials and 1670 - Planting.

Seasonal Limitations: The initial planting and replacement of plants will be accomplished between September 15th and June 1st for all woody plant material (trees, shrubs and ground covers). All herbaceous plants and containerized grasses will be planted between September 1st and November 30th and March 1st and June 1st depending on requirements of each species. Exceptions to these seasonal limitations are at the discretion of the Engineer and will be submitted in writing. Submit for approval proposed schedule for plant installation, along with plant sources and contact information for them, at the preconstruction conference.

Establishment Period for Planting: An establishment period will begin after satisfactory installation and acceptance of all of the planting. All plants must be in an upright healthy condition, planted at the proper depth, mulched areas will be weed free and tidy, fresh, and any staking or guying that is utilized must be in proper condition prior to beginning the establishment period. During the establishment period the contractor will be responsible for proper care of the plantings in accordance with Section 1670-14 Establishment.

All plants that do not continue to conform to the specifications and quality as approved when they were installed will be unacceptable. The contractor will remove all plants that are determined to be unacceptable from the site and make replacements within five days of request

by the Engineer unless its outside the planting season. Replacements will be installed within the Seasonal Limitations stated above.

Each month during the establishment period a meeting will be held between the Engineer, the Roadside Environmental Engineer and the Contractor to discuss establishment work required during that period. Additional meetings may be scheduled if deemed necessary by the Engineer. All the required work will be performed in a timely manner and with utmost regard to the safety and convenience of the installation. Failure on the part of the contractor to complete the required work in a satisfactory manner will result in the Department having the work performed by others and paid for by the Performance Bond.

All requirements of Section 1670-14 Establishment will also be applicable during the Establishment Period for Planting. The Establishment Period for Planting will last a minimum of 18 months and extend into the seasonal limitations for planting in order to allow replacement plantings to be installed. See contract times for exact time period and dates.

Basis of Payment: ESTABLISHMENT will be paid for at the contract "EACH" unit price per MONTH

Establishment.....EA

LANDSCAPE GRADING

General

Landscape and Site grading consists of placing topsoil material within seeding and planting beds, and cutting and backfilling within the Trailhead, medians, sidewalks, etc., to provide proper drainage and elevations as indicated on the grading plans, cross-sections, and as directed by the Engineer.

Material

Topsoil will be as specified herein and will be utilized for all fill/backfill operations as directed by the Engineer.

Topsoil will be a sandy loam, silt loam or clay loam that contains a reasonable amount of humus material. Topsoil will be of good texture, loose and friable and will be representative of topsoil in the general vicinity. It will be reasonably free from sod, hard lumps, subsoil, large roots, rocks and gravel, noxious weed seeds and/or toxic substances or other material, which would be harmful to plant growth. Topsoil when delivered to the job site will be approved by the Engineer prior to placement, whether or not the source of topsoil has been previously approved.

Installation

Place median topsoil and compact as described in the landscape details. Place topsoil fill and spread evenly to a depth of 18 inches or as directed by the Engineer, which after settlement, constitutes finish grade. Do not place topsoil when the ground is frozen, is excessively wet, or is

in a condition that the soil cannot be worked easily and dressed smoothly. Compact fill material under stairs, pavers to a density equal to or greater than undisturbed soil in the area.

Where fill material is needed within wooded areas, precautionary measures will be taken to prevent damage to trees and the roots of trees to be retained for landscape purposes. When placing or compacting fill material in or adjacent to wooded areas heavy machinery will not be allowed. Equipment for placing fill material will be approved by the Engineer prior to any grading work.

Compensation

'Landscape Grading' will be paid for at the contract lump sum price for the work detailed in this section that has been successfully accomplished and accepted. 'Topsoil' will be paid for in the actual number of cubic yards of topsoil placed and accepted. Topsoil will be measured by truck measurement. Each truck will be measured and will have a legible identification mark indicating its capacity. Load each truck to at least its measured capacity at the time it arrives at the point of delivery. The recorded capacity will be adjusted by making a 25 percent deduction to allow for shrinkage, and the adjusted capacity will be the quantity to be paid for.

Such price and payment will be full compensation for furnishing, all labor, equipment and all incidentals necessary to complete the work satisfactorily. Erosion Control at the Greenway Trailhead shall be included in the Landscape Grading.

Payment will be made under:

Landscape GradingLS
TopsoilCY

PAVERS & EDGING

General: The work covered by this section shall consist of furnishing and installing Pavers in accordance with dimensions and finishes as shown on the plans, the details, and as described herein.

Materials and Construction

Pavers shall be the standard paver that's currently utilized within the existing medians along the US 321 corridor. It shall be of the same or better quality paver that meets the current specs for the existing pavers. **(Consult with NCDOT's construction engineer to get exact specs.)** It shall be approved by the Town of Blowing Rock and the pattern shall match exactly like what's currently installed and maintained and as shown on hardscape plans. The 6" and 9" concrete banding shall be included in the overall cost of pavers and the edging and pavers shall be installed as noted on the plans and details. Concrete banding shall be placed in line and plumb with proposed grades and sidewalks. Contractor shall be an experienced contractor with a minimum of seven years' experience installing pavers. Contractor shall supply references and samples to engineer prior to construction.

Method of Measurement and Basis of Payment

The work of furnishing and installing Pavers as shown on the plans or as approved by the Engineer, when completed and accepted, will be paid for at the unit price per square feet for “Pavers”. Such price and payment will be full compensation for all work covered by this special provision; including but not limited to furnishing transport, all labor, materials, equipment, excavation and grading, and any other incidentals necessary to complete the work.

Payment will be made under:

Pavers & EdgingSF

CONCRETE STAIRS**General**

This provision consists of constructing concrete stairs/bike ramp combo as shown on the plans and details, including all materials, labor, equipment and grading to complete the work.

All applicable requirements of Incidental Concrete Construction-General, Section 825, Reinforced Brick Masonry Construction – General, Section 832 and Fabricating and Placing Reinforcement, Section 425 of the Standard Specifications will apply.

Materials

Concrete will be Class B. Handrails will be Schedule 40, 1 ½” outside diameter aluminum pipe with a clear brushed anodized finish.

Construction/Installation

Construct concrete in accordance with Section 825, except as otherwise noted herein. Furnish and place reinforcement, as shown on the plans and details, in accordance with the provisions of Section 425. Give formed surfaces of the concrete a rubbed finish. Give unformed surfaces a float finish.

Erect handrails as shown on the details, straight and true to line and grade. They will be core mounted into pipe sleeve as recommended by manufacturer. All welds will be filed smooth to the touch. **(SEE below details for additional insight for the development of the stairs and rails)**

PART 1 – GENERAL (Handrails)**1.1 SUMMARY****A. Section Includes:**

1. Steel pipe and tube railings.

1.2 ACTION SUBMITTALS

- A. Product Data: For the following:
 - 1. Manufacturer's product lines of mechanically connected railings.
 - 2. Railing brackets.
 - 3. Grout, anchoring cement, and paint products.
- B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.
- C. Samples: For each type of exposed finish required.
- D. Delegated-Design Submittal: For railings, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.3 INFORMATIONAL SUBMITTALS

- A. Product Test Reports: For pipe and tube railings, for tests performed by a qualified testing agency, according to ASTM E 894 and ASTM E 935.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Steel Pipe and Tube Railings:
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - a. VIVA Railings, LLC.
 - b. Wagner, R & B, Inc.

2.2 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design railings, including attachment to building construction.
- B. Structural Performance: Railings, including attachment to building construction, shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:
 - 1. Handrails and Top Rails of Guards:
 - a. Uniform load of 50 lbf/ ft. applied in any direction.
 - b. Concentrated load of 200 lbf applied in any direction.
 - c. Uniform and concentrated loads need not be assumed to act concurrently.
 - 2. Infill of Guards:

- a. Concentrated load of 50 lbf applied horizontally on an area of 1 sq. ft..
- b. Infill load and other loads need not be assumed to act concurrently.

2.3 METALS, GENERAL

- A. Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails unless otherwise indicated.
 - 1. Provide type of bracket with predrilled hole for exposed bolt anchorage and that provides 1-1/2-inch clearance from inside face of handrail to finished wall surface.

2.4 STEEL AND IRON

- A. Tubing: ASTM A 500 (cold formed) or ASTM A 513.
- B. Pipe: ASTM A 53/A 53M, Type F or Type S, Grade A, Standard Weight (Schedule 40), unless another grade and weight are required by structural loads.
 - 1. Provide galvanized finish for exterior installations and where indicated.
- C. Plates, Shapes, and Bars: ASTM A 36/A 36M.
- D. Cast Iron: Either gray iron, ASTM A 48/A 48M, or malleable iron, ASTM A 47/A 47M, unless otherwise indicated.

2.5 MISCELLANEOUS MATERIALS

- A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
- B. Etching Cleaner for Galvanized Metal: Complying with MPI#25.
- C. Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible with paints specified to be used over it.
- D. Shop Primers: Provide primers that comply with Section 099600 "High-Performance Coatings."
- E. Universal Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79 and compatible with topcoat.
- F. Epoxy Zinc-Rich Primer: Complying with MPI#20 and compatible with topcoat.
- G. Shop Primer for Galvanized Steel: Primer formulated for exterior use over zinc-coated metal and compatible with finish paint systems indicated.
- H. Epoxy Intermediate Coat: Complying with MPI #77 and compatible with primer and topcoat.

- I. Polyurethane Topcoat: Complying with MPI #72 and compatible with undercoat.
- J. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187/D 1187M.
- K. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107/C 1107M. Provide grout specifically recommended by manufacturer for interior and exterior applications.

2.6 FABRICATION

- A. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
- B. Form work true to line and level with accurate angles and surfaces.
- C. Welded Connections: Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.
 - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - 2. Obtain fusion without undercut or overlap.
 - 3. Remove flux immediately.
 - 4. At exposed connections, finish exposed surfaces smooth and blended so no roughness shows after finishing and welded surface matches contours of adjoining surfaces.
- D. Welded Connections for Aluminum Pipe: Fabricate railings to interconnect members with concealed internal welds that eliminate surface grinding, using manufacturer's standard system of sleeve and socket fittings.
- E. Nonwelded Connections: Connect members with concealed mechanical fasteners and fittings. Fabricate members and fittings to produce flush, smooth, rigid, hairline joints.
- F. Form changes in direction by bending or by inserting prefabricated elbow fittings.
- G. For changes in direction made by bending, use jigs to produce uniform curvature for each repetitive configuration required. Maintain cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of components.
- H. Close exposed ends of railing members with prefabricated end fittings.
- I. Provide wall returns at ends of wall-mounted handrails unless otherwise indicated.
- J. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, miscellaneous fittings, and anchors to interconnect railing members to other work unless otherwise

indicated.

1. At brackets and fittings fastened to plaster or gypsum board partitions, provide crush-resistant fillers or other means to transfer loads through wall finishes to structural supports and prevent bracket or fitting rotation and crushing of substrate.
- K. Expanded-Metal Infill Panels: Fabricate infill panels from expanded metal made from same metal as railings in which they are installed.
 1. Orient expanded metal with long dimension of diamonds as indicated on Drawings.

2.7 STEEL AND IRON FINISHES

PART 3 - Powder Coatings, Polyester, meeting performance requirements of AAMA 2604. 1. Product: PPG Industries, Inc., Envirocron 04 Ultra-Durable Powder Coating. 2. Pencil Hardness, ASTM D 3363: H – 2H. 3. Salt Spray Resistance, ASTM B 117: 3,000 hours. 4. Humidity Resistance, ASTM D 2247: 3,000 hours. 5. Dry Film Thickness, ASTM D 7901: 2.0 mil, minimum thickness.

1. Color: Black.

PART 4 - EXECUTION

4.1 INSTALLATION, GENERAL

- A. Set railings accurately in location, alignment, and elevation; measured from established lines and levels and free of rack.
 1. Do not weld, cut, or abrade surfaces of railing components that are coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
 2. Set posts plumb within a tolerance of 1/16 inch in 3 feet.
 3. Align rails so variations from level for horizontal members and variations from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet.
- B. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.
 1. Coat, with a heavy coat of bituminous paint, concealed surfaces of aluminum that are in contact with grout, concrete, masonry, wood, or dissimilar metals.

4.2 ANCHORING POSTS

- A. Use metal sleeves preset and anchored into concrete for installing posts. After posts are inserted into sleeves, fill annular space between post and sleeve with non-shrink, nonmetallic grout or anchoring cement, mixed and placed to comply with anchoring

material manufacturer's written instructions.

- B. Form or core-drill holes not less than 5 inches deep and 3/4 inch larger than OD of post for installing posts in concrete. Clean holes of loose material, insert posts, and fill annular space between post and concrete with nonshrink, nonmetallic grout or anchoring cement, mixed and placed to comply with anchoring material manufacturer's written instructions.
- C. Anchor posts to metal surfaces with oval flanges, angle type, or floor type as required by conditions, connected to posts and to metal supporting members.

4.3 ATTACHING RAILINGS

- A. Attach railings to wall with wall brackets, except where end flanges are used. Locate brackets as indicated or, if not indicated, at spacing required to support structural loads.
- B. Secure wall brackets and railing end flanges to building construction as follows:
 - 1. For concrete and solid masonry anchorage, use drilled-in expansion shields and hanger or lag bolts.
 - 2. For hollow masonry anchorage, use toggle bolts.
 - 3. For wood stud partitions, use hanger or lag bolts set into studs or wood backing between studs. Coordinate with carpentry work to locate backing members.
 - 4. For steel-framed partitions, use hanger or lag bolts set into fire-retardant- treated wood backing between studs. Coordinate with stud installation to locate backing members.
 - 5. For steel-framed partitions, use self-tapping screws fastened to steel framing or to concealed steel reinforcements.
 - 6. For steel-framed partitions, use toggle bolts installed through flanges of steel framing or through concealed steel reinforcements.

4.4 ADJUSTING AND CLEANING

- A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop painting to comply with SSPC-PA 1 requirements for touching up shop-painted surfaces.
- B. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas, and repair galvanizing to comply with ASTM A 780/A 780M.

PART 2 – GENERAL (Concrete Stairs)

CAST-IN-PLACE CONCRETE

- A. Class J: Normal-weight concrete used for exterior retaining walls.
 - 1. Exposure Class: ACI 318 F2.

2. Minimum Compressive Strength: 3500 psi at 28 days.
 3. Maximum w/cm: 0.45.
 4. Slump Limit: 5 inches, plus or minus 1 inch.
 5. Slump Flow Limit: 22 inches, plus or minus 1.5 inches.
 6. Air Content:
 - a. Exposure Classes F2 and F3: 6 percent, plus or minus 1.5 percent at point of delivery for concrete containing 1-inch nominal maximum aggregate size.
 7. Limit water-soluble, chloride-ion content in hardened concrete to 0.30 percent by weight of cement.
- B. Broom Finish: Apply a broom finish to exterior concrete platforms, steps, ramps, and locations indicated on Drawings.
1. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route.
 2. Coordinate required final finish with Architect before application.

4.5 CONCRETE CURING

- A. Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
1. Comply with ACI 301 and ACI 306.1 for cold weather protection during curing.
 2. Comply with ACI 301 and ACI 305.1 for hot-weather protection during curing.
 3. Maintain moisture loss no more than 0.2 lb/sq. ft. x h before and during finishing operations.
- B. Curing Formed Surfaces: Comply with ACI 308.1 as follows:
1. Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces.
 2. Cure concrete containing color pigments in accordance with color pigment manufacturer's instructions.
 3. If forms remain during curing period, moist cure after loosening forms.
 4. If removing forms before end of curing period, continue curing for remainder of curing period, as follows:
 - a. Continuous Fogging: Maintain standing water on concrete surface until final setting of concrete.
 - b. Continuous Sprinkling: Maintain concrete surface continuously wet.
 - c. Absorptive Cover: Pre-dampen absorptive material before application; apply additional water to absorptive material to maintain concrete surface continuously wet.
 - d. Water-Retention Sheeting Materials: Cover exposed concrete surfaces with sheeting material, taping, or lapping seams.

- e. Membrane-Forming Curing Compound: Apply uniformly in continuous operation by power spray or roller in accordance with manufacturer's written instructions.
 - 1) Recoat areas subject to heavy rainfall within three hours after initial application.
 - 2) Maintain continuity of coating and repair damage during curing period.

Compact backfill to a degree comparable to the adjacent undisturbed material.

Compensation

Concrete steps will be paid for as 'Concrete Steps' in cubic yards of concrete, computed from the dimensions shown on the plans or established by the Engineer, which has been completed and accepted.

Handrails will be paid for as 'Handrails' in linear feet as measured along the surface of the completed and accepted work.

Such price and payment will be full compensation for all work covered by this special provision; including but not limited to furnishing all labor, materials, equipment and any other incidentals necessary or required to complete the work.

Payment will be made under:

Concrete Steps CY
Handrail on Steps LF

HARD FESCUE/BLUEGRASS or ZYSOIA SODDING

Description

This work consists of placing sod in the median and other roadside areas, as directed. The sod shall be prepared in accordance with the requirements of Section 1664 of the *Standard Specifications* and the requirements of this section. See the Landscape Plans (L1-L12 and Consultant Plans) for areas to be sodded.

Materials

Only "approved sod" (trade designation) consisting of a mixture of 50% Kentucky Bluegrass and 50% Hard Fescue or Zoysia shall be used. The sod, machine cut to the suppliers standard width and length, shall be 5/8" minimum, excluding top growth and thatch, at the time of cutting. Before cutting, the sod shall be uniformly mowed at a height of 1 ½" to 2 ½". Standard sod sections shall be sufficiently strong to support their own weight and retain their size and shape when suspended vertically from a firm grasp on the upper 10% of the section. The sod may be either 42" wide roll sod or 18" by 36" strips.

Approved Kentucky Bluegrass Cultivars:

Adelphi	Brilliant	Kenblue	Princeton
Apollo	Bristol	Liberator	Ram I
Bariris	Challenger	Merit	Rugby
Baron	Columbia	Nuglade	Sydsport
Baronie	Fylking	Odyssey	Touchdown
Bartitia	Glade	Plush	Vantage

Approved Hard Fescue Cultivars:

Aurora	Minotaur	Scaldis	Waldina
Bardur	Nordic	Spartan	Warwick
Crystal	Reliant	Valda	

The Contractor shall obtain a certificate or limited permit issued by the North Carolina Department Of Agriculture and Consumer Services (1-800-206-9333) or (919-733-6932) stating that the sod has been found to be free of injurious plant pests.

Sod shall be delivered on site within 24 hours of being cut and be covered by acceptable means during delivery. A certificate from the sod producer stating the date and time of sod cutting shall accompany the sod when it arrives at the project site.

The Contractor shall provide sufficient water to meet the requirements of this section.

Construction Methods**(A) Soil Preparation**

Remove litter and other debris. Mow and satisfactorily dispose of weeds or other unacceptable growth on the areas to be sodded.

Prior to beginning preparation of the soil to receive sod, all eroded, uneven and rough areas shall be contour graded and/or filled with soil as directed. The soil shall be scarified or otherwise loosened to a depth of not less than 5". Clods shall be broken and the top 2" to 3" of soil shall be worked into an acceptable soil bed by the use of soil pulverizers, drags, or harrows.

After soil preparation, lime and fertilizer shall be uniformly distributed by mechanical means using a 42" drop-type spreader and thoroughly mixed with the top 5" of the soil by disking, harrowing, or other approved methods. The rates of lime and fertilizer per acre are as follows:

500#	10-20-20 Fertilizer
4000#	Limestone

The area shall then be harrowed, dragged, raked, or prepared by other approved methods which will give a lawn type finish. All trash, debris and stones larger than 1 ½" in diameter or other

obstructions that could interfere with the placing of the sod shall also be removed. The finished surface shall be moistened with water prior to placing the sod as directed.

(B) Sod Placement

Sod handling and placement shall be a continuous process of cutting, transporting and installing including repairing seams and voids. Sod shall always be installed within 48 hours after being cut. Sod shall be watered within 2 hours of installation.

Any sod or portions of sod rejected by the Engineer during the initial placement shall be removed from the project and replaced with acceptable sod immediately. The Contractor shall cease any and all other placement of sod on the project until rejected sod has been replaced.

After sod has been placed, and staked where necessary, according to Section 1664 of the *Standard Specifications*, it shall then be rolled or tamped carefully and firmly by means acceptable to the Engineer to ensure proper soil contact. If rolled, roller shall weigh 150 lb/ft of roller width. Use of rubber tired equipment to roll shall not be allowed. Metal staples, 12" long unless otherwise approved, shall be made of 11-gauge new steel wire so as not to bend when pinned or driven through the sod. Extreme care shall be taken to prevent the installed sod from being torn or displaced. After rolling or tamping the sod, it shall be watered uniformly and thoroughly with a minimum of 1" of water, 5.6 gallons per square yard, applied immediately after installation of sod. In no case shall the time interval between sod placement and initial watering exceed 2 hours. Water shall be placed to the required quantity through sequential passes to insure proper coverage and to prevent runoff. A minimum of ¼" should be placed on each pass.

(C) Maintenance

The Contractor shall be responsible year-round for all watering and other maintenance required to maintain the livability of the sod from installation until final acceptance, including monitoring the sod to ensure all watering and other maintenance is performed as required.

The Contractor shall be responsible for all watering and other maintenance required to maintain the livability and health of the sod from installation until completion of the 18 month establishment period. Additional water shall be applied as needed and as directed to maintain the livability of the sod. Each additional watering event shall be a minimum of 0.5" of water, 2.8 gallons per square yard, uniformly applied over the sodded area and may be placed in a series of passes to prevent runoff, with a minimum of ¼" on each pass.

Any sod or portions of sod rejected by the Engineer after placement, but prior to beginning the observation period, shall be removed from the project and replaced with acceptable sod. Satisfactory replacement of sod shall begin within 10 days of notification. Failure to replace and repair damaged or dead sod as directed may result in sanctions under Article 108-7 or Article 108-8 of the *Standard Specifications*.

(D) Observation Period

The observation period for the sod on this project shall be from March 1 to October 1. Sodding shall be inspected by the Roadside Environmental Field Operations Engineer to begin and end the observation period.

The Contractor shall maintain responsibility for the sod for an observation period beginning upon the satisfactory completion and acceptance of all work required in the plans or as directed. The Contractor shall guarantee the sod under the payment and performance bond in accordance with Article 109-10 of the *Standard Specifications*.

The observation period for sod installed between August 31 and March 1, shall not begin until March 1. Installation of sod shall be permitted between August 31 and March 1. However, the Engineer shall not accept such work and begin the observation period prior to March 1. Upon satisfactory completion of work and acceptance by the Engineer, the observation period shall begin.

After the first 30 days of the observation period, and every 30 days thereafter throughout the observation period, the Contractor and Engineer shall meet to review the project and identify dead or damaged sod to be replaced. The Contractor, at no additional expense to the Department, shall satisfactorily replace any sod that is not in a living and healthy condition as determined by the Engineer. Replacement sod shall be furnished and installed in accordance with the same requirements as for initial sodding operation, except that the amounts of limestone, sulfur, and water may be readjusted as directed. Satisfactory replacement of sod shall begin within 10 days of notification. Failure to replace and repair damaged or dead sod as directed may result in sanctions under Article 108-7 or Article 108-8 of the *Standard Specifications*. Upon completion and acceptance of the sod repairs, the next 30 days of the observation period shall begin.

(E) Acceptance

At the end of the observation period, the sod furnished and installed under this contract must be in a living and healthy condition, as determined by the Engineer. Acceptance of sod will be either at the end of the observation period or at final acceptance of the project, whichever is later. The sod shall be weed free at time of final acceptance.

Measurement and Payment

Sodding will be measured and paid for in accordance with Article 1664-5 of the *Standard Specifications*.

Water will be measured and paid as described in the Landscape Design Special Provision titled "Water for Planting".

Payment will be made under:

SoddingSY
Water for SodM/G

BOULDERS**General**

This special provision consists of furnishing and installing the boulders as shown on the plans and details and as described herein.

Materials

Boulders will be of natural stone and rounded in shape. Size, color and shape will be the selection of the Engineer and Consultants at a source to be approved by the Engineer or Landscape Architect Consultant. Backfill will be as specified for landscape grading with 1/4 of boulder buried below grade. See details for the boulders within the Consultants Trailhead plans for guidance and development. Consult with the consultants and Engineer for the boulder development.

Installation

Placement of boulders will be at the direction of the Engineer/Consultant and will require the cooperative effort of the contractor to maneuver into the desired position. Excavate and place boulder so that it sits embedded in the plant bed and not on top. Backfill around boulder with plant bed media or landscape graded areas. Boulders shall be placed at locations shown on plans or as designated by the Engineer at appropriate stages of construction. Contractor shall supply to the Engineer a staging plan showing the time frame of installment of stones and how he will not damage any existing and proposed hardscape (i.e. Roadway, sidewalks...)

The size of boulders shall be:

Small Boulders – 5 CF-10 CF (5 boulders)
 Medium Boulders – 15 CF-25 CF (10 boulders)
 Large Boulders – 30 CF-40 CF (5 boulders)

See the Consultant Landscape Plans

Care shall be taken during transport, delivery and placement to prevent chipping, cracking or scarring of surfaces. Boulders shall be placed in such a way so that they will be immovable and will not roll.

Compensation

The work of furnishing and installing boulders, when completed and accepted, will be paid for at the contract unit price per each 'Boulder'. Such price and payment will be full compensation for all work covered by this special provision; including but not limited to furnishing all labor, materials, equipment and any other incidentals necessary or required to complete the work.

Payment will be made under:

Boulder EA

SUPPLEMENTAL SEEDING & REPAIRING:

Supplemental Seeding & Repairing shall be performed in areas identified as "SUPPLEMENTAL SEEDING" on the Landscape Plans. The kinds of seed and fertilizer, and the rates of application of seed, fertilizer, and limestone, shall be as stated below. During periods of overlapping dates, the kind of seed to be used shall be determined. All rates are in pounds per acre.

August 1 - June 1

20#	Kentucky Bluegrass
75#	Hard Fescue
25#	Rye Grain
500#	Fertilizer
4000#	Limestone

May 1 - September 1

20#	Kentucky Bluegrass
75#	Hard Fescue
10#	German or Browntop Millet
500#	Fertilizer
4000#	Limestone

Approved Kentucky Bluegrass Cultivars:

Adelphi	Brilliant	Kenblue	Princeton
Apollo	Bristol	Liberator	Ram I
Bariris	Challenger	Merit	Rugby
Baron	Columbia	Nuglade	Sydsport
Baronie	Fylking	Odyssey	Touchdown
Bartitia	Glade	Plush	Vantage

Approved Hard Fescue Cultivars:

Aurora	Minotaur	Scaldis	Waldina
Bardur	Nordic	Spartan	Warwick
Crystal	Reliant	Valda	

Fertilizer shall be 10-20-20 analysis. Upon written approval of the Engineer, a different analysis of fertilizer may be used provided the 1-2-2 ratio is maintained and the rate of application adjusted to provide the same amount of plant food as a 10-20-20 analysis.

General

Prepare seedbed, furnish, place and incorporate limestone, fertilizer, and seed; rake, mulch, mow and perform other operations necessary for the permanent establishment of vegetation from seed on areas exposed due to construction operations. Adapt operations to variations in weather or soil conditions as necessary and as directed by the Engineer for the successful establishment and growth of the turf.

Installation

Remove existing vegetation where necessary. Contractor will discuss locations and whether there is a need for seeding or repair seeding as per NCDOT Specs Sections 1660, 1661 and Section 1662. Remove all construction debris, concrete, rocks, wood, brick, etc. that will interfere with

turf establishment. Loosen soil to a depth of not less than 5 inches. Break up any clods and work top 2 to 3 inches of soil to prepare an acceptable seedbed. Shape and smooth any uneven or rough surfaces. Do not prepare soil when ground is frozen, extremely wet or in an otherwise unfavorable working condition. Fertilizer and Limestone may be applied as part of or after the seedbed preparation. If applied after seedbed has been prepared, rake to thoroughly mix into soil.

Distribute seed uniformly over the seedbed at the required rate of application and immediately rake to cover seed with a layer of soil. Apply mulch in a light but uniform layer that allows some sunlight penetration and air circulation but heavy enough to provide some shade to the soil/seed layer and conserve soil moisture. Hold mulch in place with a binding material specifically manufactured for this purpose if requested by the Engineer. Maintain areas in a satisfactory condition until the project is completed. Repair any areas that are disturbed with subsequent construction operations to the satisfaction of the Engineer.

Compensation

The work described above will be measured over the surface of the ground and will be paid for at the contract unit price per acre for 'Supplemental Seeding and Repairing' when properly installed and accepted. Repair of seeded and mulched areas will be incidental to this work and additional compensation will not be made.

Payment will be made under:

Supplemental Seeding & Repairing.ACRE

MOWING

After work begins the Contractor shall be responsible for mowing the established mowing pattern within the Right of Way through the initial planting period and the establishment period.

Once newly seeded and mulched areas have established and sod has rooted in sufficiently the Engineer will direct the contractor to begin mowing operations in these areas.

Mowing will occur on a regular schedule as directed by the Engineer until final acceptance of the contract. The schedule may be altered as needed by the Engineer due to growth rates, weather conditions and rainfall.

Remove all litter and debris prior to mowing. Mowing shall be completed in a neat and uniform manner to the desired heights of 4 inches for the Zoysia Sodded area and 6 inches for the Bluegrass/Fescue seeded / and or sodded areas. The Contractor shall not mow under wet conditions. Gaps, 'rolled down vegetation', uncut streaks and scalped areas will be unacceptable work and compensation will be adjusted accordingly.

Mower(s) shall be lawn type, such as z-mower, and approved by the Engineer. Any change to mower type shall require prior approval. Mower(s) shall have deflector shields to protect nearby traffic. Mowers shall be maintained properly off site and there shall be only minor maintenance

allowed on site during mowing operations. Care shall be taken when refueling equipment to prevent spills. Mower blades shall be properly sharpened prior to each mowing cycle.

The contractor shall line trim around signs, poles, structures or other roadway appurtenances within the seeded and mulched areas and within the sodded area as necessary and as directed by the Engineer.

Once begun, mowing of all seeded areas and the sod area shall be a continuous operation with no interruptions unless approved by the Engineer. Acceptable reasons for the Engineer to approve an interruption of the continuous operation would be circumstances beyond the contractor's control such as sudden change in weather conditions, traffic accident, etc.

Care shall be taken during the mowing operation to avoid damage to any roadside elements or traffic. All applicable portions of the current edition of the MUTCD shall apply.

The actual conditions which occur during the implementation of the project and during the establishment period of the project will determine the quantity of mowing. The quantity of mowing may be increased or decreased as needed. Such variations in quantity will not be considered as alterations in the details of construction or a change in the character of the work.

Mowing will be paid for in each cycle of mowing that has been satisfactorily completed and accepted. The entire established mowing pattern within the right of way as well as the area designated for seeding and mulching and the entire area to receive sod as shown on the plans must be mown to constitute one complete mowing cycle. Line trimming shall be considered incidental to the mowing operation and there shall be no additional compensation.

If the work required by the contract is not completed by the contract completion date for the initial planting, the contractor will be responsible for any additional mowing cycles required due to the eighteen month establishment period being extended past June 15, 2021.

Payment will be made under:

MowingEA (per cycle)

RELOCATE EXISTING FENCING

Relocating the existing fencing involves the relocation of the existing wooden fencing located at the trailhead parking area and as identified on the plans. Contractor shall be responsible for relocating this fencing and installing it in the new location. In relocating contractor shall take caution to not damage the fencing and or existing terrain. If grading is needed to adapt fencing that will be included in the "Landscape Grading " pay item. The fencing shall be installed and placed to match the original state and install. It should be field verified by the Engineer/Consultant in the field. This shall take place prior to the install of proposed plant beds.

Payment will be made under:

Relocate Existing FencingLump Sum

LANDSCAPE LIGHTING**Electrical Scope:**

1. Connect landscape lighting to existing pole light
2. Run lights to pavilion, fixtures to match boulder rock garden

Electrical Notes:

1. All electrical work shall be performed in accordance with national electrical code and local codes by licensed electrical contractor.
2. All materials, devices, appliances and equipment shall be new and label/listed by an approved third party testing agency approved by the state.
3. Contractor shall verify all dimensions, elevations and site conditions prior to starting work. Contact engineer, as appropriate, if conflicting or prohibitive conditions are encountered. Underground utilities exist and must be properly marked by contractor prior to excavation.
4. Electrical contractor to provide separate neutral conductor for each 120v circuit, and insulated ground conductor in all conduit runs.
5. Electrical plans to locate equipment and fixtures only. Final wire sizing and overcurrent protection per NEC requirements.
6. Final circuits to be clearly labeled on distribution panel by contractor.
7. All receptacle outlets in wet areas to be protected by GFCI circuits.
8. All exterior 120v wiring shall be copper single wire conductors in conduit, minimum wire sizing #12awg. Contractor to coordinate conduit placement and runs with contractor.
9. Coordinate electrical service and meter panel locations with local utility.
10. All gfi/wp receptacles to have in-use covers.
11. All exterior 24v shall be #10-2 use low voltage cable

Fixture Selections:

All fixtures "or equal" must be approved by engineer prior to installation.

GFCI receptacle:

Cooper TRAFGP15 or equal with #1991horizontal or #4966 vertical weather proof housing

Targetti Power Supply:

Electrician to confirm mounting on lamp post or below ground, will connect to #10-2 use cable for lighting fixtures

Aspect LED:

Micro Series 3w LED landscape light, 30 degree down light angle, confirm mounting per owner

Targetti Light Fixture(8):

Jupiter Mini Inground LED fixture, power supply cables recommended to be in 3/4" pvc conduit, confirm per owner

Licensed electrician to install (1) GFCI receptacle wp=weatherproof at base of lightpole

Targetti 24v power supply to plug into GFCI receptacle and run power to each light fixture, confirm hard-wire, photosensor and timer options with owner.

Payment will be made under:

Landscape LightingLump Sum

CONCRETE BOLLARD, KIOSK, & ENTRANCE SIGN FOOTERS

General

This provision consists of constructing the concrete footers for the Bollards and Kiosk as shown on the plans and details, including all materials, labor, equipment and grading to complete the work.

All applicable requirements of Incidental Concrete Construction-General, Section 825, Reinforced Brick Masonry Construction – General, Section 832 and Fabricating and Placing Reinforcement, Section 425 of the Standard Specifications will apply.

Materials

Concrete will be Class B. Steel reinforcement bars. SEE Summary

Construction/Installation

Construct concrete in accordance with Section 825, except as otherwise noted herein. Furnish and place reinforcement, as shown on the plans and details, in accordance with the provisions of Section 425. Give formed surfaces of the concrete a rubbed finish. Give unformed surfaces a float finish.

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes: Galvanized deformed steel reinforcement bars and accessories.
- B. Related Requirements:
 - 1. Section [03 21 13 - Galvanized Reinforcement Steel Bars]
 - 2. Section [03 30 00 - Cast-in-Place Concrete].

1.2 REFERENCES

- A. Reference Standards:
 - 1. American Association of State and Highway Transportation Officials (AASHTO).
 - a. AASHTO M111 Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products (ASTM Designation: A 123/A 123M).
 - 2. American Welding Society (AWS).
 - a. AWS D1.4/D1.4M Structural Welding Code - Reinforced Steel.
 - 3. Concrete Reinforcing Steel Institute (CRSI).
 - a. CRSI Manual of Standard Practice, 29th Edition
 - b. CRSI Placing Reinforcing Bars, 9th Edition.

1.3 ADMINISTRATIVE REQUIREMENTS

- A. Coordination: Coordinate work of this Section with Section 03 30 00 - Cast-in-Place Concrete

1.4 SUBMITTALS

- A. Product Data: Manufacturer's standard specifications and descriptive literature, including:

1. Physical characteristics.
2. Performance criteria.
3. Safety Data Sheets (SDS).
- B. Test Reports: Certified test reports showing compliance with specified performance characteristics and physical properties.
- C. Certificates: Product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria, and physical requirements.
- D. Welder's Certification: Submit verification of welder's certification from AWS.
 1. Manufacturer's 1-year warranty, from date of substantial completion, covering defects in materials.

1.5 QUALITY ASSURANCE

- A. Installer's Qualifications: Trained installers with two years minimum verifiable experience of work similar to work of this Section.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in accordance with manufacturer's written instructions and to ASTM A1094/A1094M.
 1. Deliver materials in with identification labels intact and product name and manufacturer clearly visible, and in lengths and sizes to suit Project.
- B. Store materials protected from exposure to harmful environmental conditions, clean and dry.

1.7 WARRANTY

- A. Project Warranty: Refer to Contract Conditions for Project warranty provisions.
- B. Manufacturer's warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official.
 1. Manufacturer's warranty is in addition to and not intended to limit other rights Owner may have under Contract Conditions.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. AZZ GalvaBar.or equal
- B. Contact Information: 5101 Bird Creek Avenue, Catoosa, OK 47015; Phone: (918) 379-0090;
Email: galvabar@azz.com; Website: www.azz.com/galvabar.

2.2 PERFORMANCE

- A. Comply with AASHTO M111.
- B. Comply with CSRI Manual of Standard Practice.
- C. Steel bars: To ASTM A1094/ A1094M.

2.3 DESCRIPTION

- A. Deformed galvanized steel reinforcing bars: To ASTM A1094/ A1094M.
 1. Bar designation size: As indicated.
 2. Metalurgically bond 50 micron (2 mil) minimum zinc alloy to steel reinforcement bars: To ASTM A1094/A1094M.
 3. Finish: Standard.

2.4 ACCESSORIES

- A. Reinforcement Ties: Galvanized steel wire to ASTM A641/A641M.

PART 3 EXECUTION

3.1 INSTALLER QUALIFICATIONS

- A. Use only trained installers with two years minimum experience of work similar to work of this Project.
- B. Use only welders certified by AWS.

3.2 EXAMINATION

- A. Verification of Conditions: Verify that existing conditions or conditions previously installed under other Sections or Contracts are acceptable for Work of this Section.
 - 1. Inform Engineer of unacceptable conditions immediately upon discovery.
 - 2. Proceed with application only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Engineer.
 - 3. Starting installation of concrete reinforcing bars implies conditions are acceptable for Work of this Section.

3.3 PREPARATION

- A. Ensure concrete forms are in place for work to be done in accordance with Section 03 30 00 - Cast-in-Place Concrete Section.

3.4 INSTALLATION

- A. Place concrete reinforcing bars within concrete forms in accordance with manufacturer's written recommendations, and to CSRI Placing Reinforcement Bars recommendations.
- B. Splicing Reinforcement Bars: Splice reinforcement bar lengths only after receipt of authorization from Engineer.
 - 1. Stagger splices.
 - 2. Ensure that distance between staggered splices is length required for lapped splice minimum.
 - 3. Ensure reinforcing bar splices are full contact splices.
 - 4. Splices are permitted only where distance between splice and adjacent bar or surface of concrete is two inches or greater.
- C. Welding Reinforcement Bars: Weld reinforcement bar lengths only after receipt of authorization from Engineer.
 - 1. Welding according to AWS D1.4.
- D. Repair damaged or uncoated areas of concrete reinforcing bars to ASTM A780/A780M.
- E. Secure reinforcing bars in place using galvanized steel wire ties in patterns and positions indicated.
- F. Ensure reinforcing bars are held in patterns and positions indicated and are ready to receive concrete in accordance with Section 03 30 00 - Cast-in-Place Concrete.

3.5 CLEANING

- A. Perform daily progress cleaning.
 - 1. Leave work area clean at end of each day.
- B. Upon completion, remove surplus materials, rubbish, tools and equipment.
- C. Collect recyclable waste and dispose of in accordance with manufacturer's written recommendations and at appropriate recycling facilities.

3.6 PROTECTION

- A. Protect installed reinforcement bars from damage during construction.

- B. Repair or replace adjacent materials damaged by installation of reinforcement bars.

SECTION 03 30 00 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Cast-in-place concrete, including concrete materials, mixture design, placement procedures, and finishes.
- B. Related Requirements:
1. Section 031000 "Concrete Forming and Accessories" for form-facing materials, form liners, insulating concrete forms, and waterstops.
 2. Section 032000 "Concrete Reinforcing" for steel reinforcing bars and welded-wire reinforcement.
 3. Section 312000 "Earth Moving" for drainage fill under slabs-on-ground.

1.2 DEFINITIONS

- A. Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash, slag cement, and other pozzolans materials subject to compliance with requirements.
- B. Water/Cement Ratio (w/cm): The ratio by weight of water to cementitious materials.

1.3 ACTION SUBMITTALS

- A. Product Data: For each of the following.
1. Portland cement.
 2. Fly ash.
 3. Slag cement.
 4. Blended hydraulic cement.
 5. Aggregates.
 6. Admixtures:
 - a. Include limitations of use, including restrictions on cementitious materials, supplementary cementitious materials, air entrainment, aggregates, temperature at time of concrete placement, relative humidity at time of concrete placement, curing conditions, and use of other admixtures.
 7. Vapor retarders.
 8. Liquid floor treatments.
 9. Curing materials.
 10. Joint fillers.
- B. Design Mixtures: For each concrete mixture, include the following.
1. Mixture identification.
 2. Minimum 28-day compressive strength.
 3. Durability exposure class.
 4. Maximum w/cm.
 5. Calculated equilibrium unit weight, for lightweight concrete.
 6. Slump limit.
 7. Air content.
 8. Nominal maximum aggregate size.

9. Indicate amounts of mixing water to be withheld for later addition at Project site if permitted.
 10. Intended placement method.
 11. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.
 - C. Shop Drawings:
 1. Construction Joint Layout: Indicate proposed construction joints required to construct the structure.
 - a. Location of construction joints is subject to approval of the Architect.
 - D. Concrete Schedule: For each location of each Class of concrete indicated in "Concrete Mixtures" Article, including the following:
 1. Concrete Class designation.
 2. Location within Project.
 3. Exposure Class designation.
 4. Formed Surface Finish designation and final finish.
 5. Final finish for floors.
 6. Curing process.
 7. Floor treatment if any.
- 1.4 INFORMATIONAL SUBMITTALS
- A. Material Certificates: For each of the following, signed by manufacturers:
 1. Cementitious materials.
 2. Admixtures.
 3. Curing compounds.
 4. Vapor retarders.
 5. Joint-filler strips.
 - B. Material Test Reports: For the following, from a qualified testing agency:
 1. Portland cement.
 2. Fly ash.
 3. Slag cement.
 4. Blended hydraulic cement.
 5. Aggregates.
 6. Admixtures:
 - C. Research Reports: For concrete admixtures in accordance with ICC's Acceptance Criteria AC198.
 - D. Preconstruction Test Reports: For each mix design.
 - E. Field quality-control reports.
 - F. Minutes of preinstallation conference.
- 1.5 QUALITY ASSURANCE
- A. Ready-Mixed Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C94/C94M requirements for production facilities and equipment.
 1. Manufacturer certified in accordance with NRMCA's "Certification of Ready Mixed Concrete Production Facilities."
- 1.6 PRECONSTRUCTION TESTING
- A. Preconstruction Testing Service: Engage a qualified testing agency to perform preconstruction testing on each concrete mixture.
 1. Include the following information in each test report:
 - a. Admixture dosage rates.

- b. Slump.
- c. Air content.
- d. Seven-day compressive strength.
- e. 28-day compressive strength.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Comply with ASTM C94/C94M and ACI 301.

1.8 FIELD CONDITIONS

- A. Cold-Weather Placement: Comply with ACI 301 and ACI 306.1.
- B. Hot-Weather Placement: Comply with ACI 301 and ACI 305.1.

PART 2 - PRODUCTS

2.1 CONCRETE, GENERAL

- A. ACI Publications: Comply with ACI 301 unless modified by requirements in the Contract Documents.

2.2 CONCRETE MATERIALS

- A. Cementitious Materials:

- 1. Portland Cement: ASTM C150/C150M, Type I, gray.
- 2. Fly Ash: ASTM C618, Class C or F.
- 3. Slag Cement: ASTM C989/C989M, Grade 100 or 120.
- 4. Blended Hydraulic Cement: ASTM C595/C595M, Type IL, portland-limestone cement.

- B. Normal-Weight Aggregates: ASTM C33/C33M, Class 3M coarse aggregate or better, graded. Provide aggregates from a single source.

- 1. Alkali-Silica Reaction: Comply with one of the following:

- a. Expansion Result of Aggregate: Not more than 0.04 percent at one-year when tested in accordance with ASTM C1293.
- b. Expansion Results of Aggregate and Cementitious Materials in Combination: Not more than 0.10 percent at an age of 16 days when tested in accordance with ASTM C1567.
- c. Alkali Content in Concrete: Not more than 4 lb./cu. yd. for moderately reactive aggregate or 3 lb./cu. yd. for highly reactive aggregate, when tested in accordance with ASTM C1293 and categorized in accordance with ASTM C1778, based on alkali content being calculated in accordance with ACI 301.

- 2. Maximum Coarse-Aggregate Size: 1 inch nominal.

- 3. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

- C. Lightweight Aggregate: ASTM C330/C330M, 3/8-inch nominal maximum aggregate size.

- D. Air-Entraining Admixture: ASTM C260/C260M.

- E. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures that do not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride in steel-reinforced concrete.

- 1. Water-Reducing Admixture: ASTM C494/C494M, Type A.

- 2. Retarding Admixture: ASTM C494/C494M, Type B.

- 3. Water-Reducing and -Retarding Admixture: ASTM C494/C494M, Type D.

- 4. High-Range, Water-Reducing Admixture: ASTM C494/C494M, Type F.

- 5. High-Range, Water-Reducing and -Retarding Admixture: ASTM C494/C494M, Type G.

- 6. Plasticizing and Retarding Admixture: ASTM C1017/C1017M, Type II.
- F. Water and Water Used to Make Ice: ASTM C94/C94M, potable

2.3 VAPOR RETARDERS

- A. Sheet Vapor Retarder, Class A: ASTM E1745, Class A; not less than 10 mils thick. Include manufacturer's recommended adhesive or pressure-sensitive tape.

2.4 CURING MATERIALS

- A. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. when dry.
- B. Moisture-Retaining Cover: ASTM C171, polyethylene film burlap-polyethylene sheet.
 - 1. Color:
 - a. Ambient Temperature Below 50 deg F: Black.
 - b. Ambient Temperature between 50 deg F and 85 deg F: Any color.
 - c. Ambient Temperature Above 85 deg F: White.
- C. Curing Paper: Eight-feet- wide paper, consisting of two layers of fibered kraft paper laminated with double coating of asphalt.
- D. Water: Potable or complying with ASTM C1602/C1602M.
- E. Clear, Waterborne, Membrane-Forming, Dissipating Curing Compound: ASTM C309, Type 1, Class B.
- F. Clear, Waterborne, Membrane-Forming, Non dissipating Curing Compound: ASTM C309, Type 1, Class B, certified by curing compound manufacturer to not interfere with bonding of floor covering.
- G. Clear, Waterborne, Membrane-Forming, Curing and Sealing Compound: ASTM C1315, Type 1, Class A.
- H. Expansion- and Isolation-Joint-Filler Strips: ASTM D1751, asphalt-saturated cellulosic fiber.

2.5 CONCRETE MIXTURES, GENERAL

- A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, in accordance with ACI 301.
 - 1. Use a qualified testing agency for preparing and reporting proposed mixture designs, based on laboratory trial mixtures.
- B. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than Portland cement in concrete as follows:
 - 1. Fly Ash or Other Pozzolans: 25 percent by mass.
 - 2. Slag Cement: 50 percent by mass.
 - 3. Total of Fly Ash or Other Pozzolans, Slag Cement: 50 percent by mass, with fly ash or pozzolans not exceeding 25 percent by mass.
 - 4. Total of Fly Ash or Other Pozzolans: 35 percent by mass with fly ash or pozzolans not exceeding 25 percent by mass.
- C. Admixtures: Use admixtures in accordance with manufacturer's written instructions.
 - 1. Use plasticizing admixture in concrete, as required, for placement and workability.
 - 2. Use water-reducing and -retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.
 - 3. Use water-reducing admixture in pumped concrete, and concrete with a w/cm below 0.50.

2.6 CONCRETE MIXTURES

- A. Class A: Normal-weight concrete used for footings, grade beams, and tie beams, (for footers)

1. Exposure Class: ACI 318 F2.
 2. Minimum Compressive Strength: 3500 psi at 28 days.
 3. Maximum w/cm: 0.45.
 4. Slump Limit: 4 inches, plus or minus 1 inch.
 5. Slump Flow Limit: 22 inches, plus or minus 1.5 inches.
 6. Air Content:
 - a. Exposure Classes F2 and F3: 5.5 percent, plus or minus 1.5 percent at point of delivery for concrete containing 1-1/2-inch nominal maximum aggregate size.
 7. Limit water-soluble, chloride-ion content in hardened concrete to 0.30 percent by weight of cement.
- B. Class J: Normal-weight concrete used for exterior retaining walls (for concrete stairs)
1. Exposure Class: ACI 318 F2.
 2. Minimum Compressive Strength: 3500 psi at 28 days.
 3. Maximum w/cm: 0.45.
 4. Slump Limit: 3 inches, plus or minus 1 inch.
 5. Slump Flow Limit: 22 inches, plus or minus 1.5 inches.
 6. Air Content:
 - a. Exposure Classes F2 and F3: 6 percent, plus or minus 1.5 percent at point of delivery for concrete containing 1-inch nominal maximum aggregate size.
 7. Limit water-soluble, chloride-ion content in hardened concrete to 0.30 percent by weight of cement.
- C. Broom Finish: Apply a broom finish to exterior concrete platforms, steps, ramps, and locations indicated on Drawings.
1. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route.
 2. Coordinate required final finish with Architect before application.
- 2.7 CONCRETE MIXING
- A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete in accordance with ASTM C94/C94M and ASTM C1116/C1116M, and furnish batch ticket information.
- B. Project-Site Mixing: Measure, batch, and mix concrete materials and concrete in accordance with ASTM C94/C94M. Mix concrete materials in appropriate drum-type batch machine mixer.
1. For mixer capacity of 1 cu. yd. or smaller, continue mixing at least 1-1/2 minutes, but not more than five minutes after ingredients are in mixer, before any part of batch is released.
 2. For mixer capacity larger than 1 cu. yd., increase mixing time by 15 seconds for each additional 1 cu. yd..
 3. Provide batch ticket for each batch discharged and used in the Work, indicating Project identification name and number, date, mixture type, mixture time, quantity, and amount of water added. Record approximate location of final deposit in structure.

PART 3 - EXECUTION

3.1 INSTALLATION OF EMBEDDED ITEMS

- A. Place and secure anchorage devices and other embedded items required for adjoining Work that is attached to or supported by cast-in-place concrete.
1. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

2. Install anchor rods, accurately located, to elevations required and complying with tolerances in Section 7.5 of ANSI/AISC 303.
3. Install reglets to receive waterproofing and to receive through-wall flashings in outer face of concrete frame at exterior walls, where flashing is shown at lintels, shelf angles, and other conditions.

3.2 INSTALLATION OF VAPOR RETARDER

- A. Sheet Vapor Retarders: Place, protect, and repair sheet vapor retarder in accordance with ASTM E1643 and manufacturer's written instructions.
 1. Install vapor retarder with longest dimension parallel with direction of concrete pour.
 2. Face laps away from exposed direction of concrete pour.
 3. Lap vapor retarder over footings and grade beams not less than 6 inches, sealing vapor retarder to concrete.
 4. Lap joints 6 inches and seal with manufacturer's recommended tape.
 5. Terminate vapor retarder at the top of floor slabs, grade beams, and pile caps, sealing entire perimeter to floor slabs, grade beams, foundation walls, or pile caps.
 6. Seal penetrations in accordance with vapor retarder manufacturer's instructions.
 7. Protect vapor retarder during placement of reinforcement and concrete.
 - a. Repair damaged areas by patching with vapor retarder material, overlapping damages area by 6 inches on all sides, and sealing to vapor retarder.

3.3 JOINTS

- A. Construct joints true to line, with faces perpendicular to surface plane of concrete.
- B. Construction Joints: Coordinate with floor slab pattern and concrete placement sequence.
 1. Install so strength and appearance of concrete are not impaired, at locations indicated on Drawings or as approved by Architect.
 2. Place joints perpendicular to main reinforcement.
 - a. Continue reinforcement across construction joints unless otherwise indicated.
 - b. Do not continue reinforcement through sides of strip placements of floors and slabs.
 3. Form keyed joints as indicated. Embed keys at least 1-1/2 inches into concrete.
 4. Locate joints for beams, slabs, joists, and girders at third points of spans. Offset joints in girders a minimum distance of twice the beam width from a beam-girder intersection.
 5. Locate horizontal joints in walls and columns at underside of floors, slabs, beams, and girders and at the top of footings or floor slabs.
 6. Space vertical joints in walls as indicated on Drawings. Unless otherwise indicated on Drawings, locate vertical joints beside piers integral with walls, near corners, and in concealed locations where possible.
- C. Control Joints in Slabs-on-Ground: Form weakened-plane control joints, sectioning concrete into areas as indicated. Construct control joints for a depth equal to at least one-fourth of concrete thickness as follows:
 1. Grooved Joints: Form control joints after initial floating by grooving and finishing each edge of joint to a radius of 1/8 inch. Repeat grooving of control joints after applying surface finishes. Eliminate groover tool marks on concrete surfaces.
 2. Sawed Joints: Form control joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- wide joints into concrete when

cutting action does not tear, abrade, or otherwise damage surface and before concrete develops random cracks.

- D. Isolation Joints in Slabs-on-Ground: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.
 - 1. Extend joint-filler strips full width and depth of joint, terminating flush with finished concrete surface unless otherwise indicated on Drawings.
 - 2. Terminate full-width joint-filler strips not less than 1/2 inch or more than 1 inch below finished concrete surface, where joint sealants, specified in Section 079200 "Joint Sealants," are indicated.
 - 3. Install joint-filler strips in lengths as long as practicable. Where more than one length is required, lace or clip sections together.
- E. Doweled Joints:
 - 1. Install dowel bars and support assemblies at joints where indicated on Drawings.
 - 2. Lubricate or asphalt coat one-half of dowel bar length to prevent concrete bonding to one side of joint.
- F. Dowel Plates: Install dowel plates at joints where indicated on Drawings.

3.4 CONCRETE PLACEMENT

- A. Before placing concrete, verify that installation of formwork, reinforcement, embedded items, and vapor retarder is complete and that required inspections are completed.
 - 1. Immediately prior to concrete placement, inspect vapor retarder for damage and deficient installation, and repair defective areas.
 - 2. Provide continuous inspection of vapor retarder during concrete placement and make necessary repairs to damaged areas as Work progresses.
- B. Notify Architect and testing and inspection agencies 24 hours prior to commencement of concrete placement.
- C. Do not add water to concrete during delivery, at Project site, or during placement unless approved by Architect in writing, but not to exceed the amount indicated on the concrete delivery ticket.
 - 1. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.
- D. Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301, but not to exceed the amount indicated on the concrete delivery ticket.
 - 1. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.
- E. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete is placed on concrete that has hardened enough to cause seams or planes of weakness.
 - 1. If a section cannot be placed continuously, provide construction joints as indicated.
 - 2. Deposit concrete to avoid segregation.
 - 3. Deposit concrete in horizontal layers of depth not to exceed formwork design pressures and in a manner to avoid inclined construction joints.
 - 4. Consolidate placed concrete with mechanical vibrating equipment in accordance with ACI 301.
 - a. Do not use vibrators to transport concrete inside forms.
 - b. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6 inches into preceding layer.
 - c. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity.

- d. At each insertion, limit duration of vibration to time necessary to consolidate concrete, and complete embedment of reinforcement and other embedded items without causing mixture constituents to segregate.
- F. Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.
 - 1. Do not place concrete floors and slabs in a checkerboard sequence.
 - 2. Consolidate concrete during placement operations, so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
 - 3. Maintain reinforcement in position on chairs during concrete placement.
 - 4. Screed slab surfaces with a straightedge and strike off to correct elevations.
 - 5. Level concrete, cut high areas, and fill low areas.
 - 6. Slope surfaces uniformly to drains where required.
 - 7. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, before excess bleedwater appears on the surface.
 - 8. Do not further disturb slab surfaces before starting finishing operations.
- G. Related Unformed Surfaces:
 - 1. At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a color and texture matching adjacent formed surfaces.
 - 2. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.

3.5 CONCRETE CURING

- A. Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
 - 1. Comply with ACI 301 and ACI 306.1 for cold weather protection during curing.
 - 2. Comply with ACI 301 and ACI 305.1 for hot-weather protection during curing.
 - 3. Maintain moisture loss no more than 0.2 lb/sq. ft. x h before and during finishing operations.
- B. Curing Formed Surfaces: Comply with ACI 308.1 as follows:
 - 1. Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces.
 - 2. Cure concrete containing color pigments in accordance with color pigment manufacturer's instructions.
 - 3. If forms remain during curing period, moist cure after loosening forms.
 - 4. If removing forms before end of curing period, continue curing for remainder of curing period, as follows:
 - a. Continuous Fogging: Maintain standing water on concrete surface until final setting of concrete.
 - b. Continuous Sprinkling: Maintain concrete surface continuously wet.
 - c. Absorptive Cover: Pre-dampen absorptive material before application; apply additional water to absorptive material to maintain concrete surface continuously wet.
 - d. Water-Retention Sheeting Materials: Cover exposed concrete surfaces with sheeting material, taping, or lapping seams.
 - e. Membrane-Forming Curing Compound: Apply uniformly in continuous operation by power spray or roller in accordance with manufacturer's written instructions.
 - 1) Recoat areas subject to heavy rainfall within three hours after initial application.
 - 2) Maintain continuity of coating and repair damage during curing period.

- C. Concrete Tests: Testing of composite samples of fresh concrete obtained in accordance with ASTM C 172/C 172M shall be performed in accordance with the following requirements:
1. Testing Frequency: Obtain one composite sample for each day's pour of each concrete mixture exceeding 5 cu. yd., but less than 25 cu. yd., plus one set for each additional 50 cu. yd. or fraction thereof.
 - a. When frequency of testing provides fewer than five compressive-strength tests for each concrete mixture, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.
 2. Slump: ASTM C143/C143M:
One test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture.
Perform additional tests when concrete consistency appears to change.
- Slump Flow: ASTM C1611/C1611M:
One test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture.
Perform additional tests when concrete consistency appears to change.
- Air Content: ASTM C231/C231M pressure method, for normal-weight concrete; ASTM C173/C173M volumetric method, for structural lightweight concrete.
One test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
- Concrete Temperature: ASTM C1064/C1064M:
One test hourly when air temperature is 40 deg F and below or 80 deg F and above, and one test for each composite sample.
- Unit Weight: ASTM C567/C567M fresh unit weight of structural lightweight concrete.
One test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
- Compression Test Specimens: ASTM C31/C31M:
Cast and laboratory cure two sets of two 6-inch by 12-inch or 4-inch by 8-inch cylinder specimens for each composite sample.
Cast, initial cure, and field cure two sets of standard cylinder specimens for each composite sample.
- Compressive-Strength Tests: ASTM C39/C39M.
Test one set of two laboratory-cured specimens at seven days and one set of two specimens at 28 days.
Test one set of two field-cured specimens at seven days and one set of two specimens at 28 days.
A compressive-strength test shall be the average compressive strength from a set of two specimens obtained from same composite sample and tested at age indicated.
- When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, Contractor shall evaluate operations and provide corrective procedures for protecting and curing in-place concrete. Strength of each concrete mixture will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength, and no compressive-strength test value falls below specified compressive strength by more than 500 psi if specified compressive

1. strength is 5000 psi, or no compressive strength test value is less than 10 percent of specified compressive strength if specified compressive strength is greater than 5000 psi.
 2. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Architect but will not be used as sole basis for approval or rejection of concrete.
 3. Additional Tests:
 - a. Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Architect.
 - b. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C42/C42M or by other methods as directed by Architect.
 - 1) Acceptance criteria for concrete strength shall be in accordance with ACI 301 section 1.6.6.3.
 4. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
 5. Correct deficiencies in the Work that test reports and inspections indicate do not comply with the Contract Documents.
- D. Measure floor and slab flatness and levelness in accordance with ASTM E1155 within 48 hours of completion of floor finishing and promptly report test results to Architect.

3.6 PROTECTION

A. Protect concrete surfaces as follows:

1. Protect from petroleum stains.
2. Diaper hydraulic equipment used over concrete surfaces.
3. Prohibit vehicles from interior concrete slabs.
4. Prohibit use of pipe-cutting machinery over concrete surfaces.
5. Prohibit placement of steel items on concrete surfaces.
6. Prohibit use of acids or acidic detergents over concrete surfaces.
7. Protect liquid floor treatment from damage and wear during the remainder of construction period. Use protective methods and materials, including temporary covering, recommended in writing by liquid floor treatments installer.
8. Protect concrete surfaces scheduled to receive surface hardener or polished concrete finish using Floor Slab Protective Covering.

MULCH FOR PLANTING

The Contractor is responsible for "Mulch For Planting" in accordance with Article 1670-10 of the *2018 Standard Specifications*, or as directed by the Engineer, with the following additional requirements:

Approved quality shredded hardwood bark mulch consistent in composition, rich in medium to dark brown color, and free of metal, foreign debris, weeds and insects shall be supplied, delivered, and installed by the contractor. The mulch applied to the ground shall be sized so as to pass a maximum of a 2.5 - inch screen (with minimum particle size of 1.0") and consist of a maximum of 15% "wood" defined as the interior hard fibrous celluletic xylem of trees. No large pine bark nuggets will be permitted for use. NCDOT reserves the right to require contractor to furnish a

representative sample of the mulch to be supplied or to make available the source of mulch supply for inspection by NCDOT. Mulch not meeting the specifications described in this contract proposal, not consistent in color, texture, and type across the entire project, and not acceptable to the Engineer will be rejected. Mulch may be stockpiled prior to application on the highway right-of-way at approved sites according to the Engineer. Mulch not meeting specifications shall be removed from the highway right-of-way at the contractor's expense, without compensation. Contractor shall be responsible for clean-up of the stockpile area to the satisfaction of the Engineer.

Mulch depth applied shall be 4 inches unless otherwise noted or directed by the Engineer. Mulch amounts must be verified and approved by the Engineer through monitoring a properly functioning meter, or other means deemed acceptable by the NCDOT. The NCDOT reserves the right to measure the dimensions of contractor trucks used for hauling and / or applying mulch in order to verify volume quantities. Contractor agrees to make such trucks available to NCDOT if measuring is desired. The Contractor shall furnish a delivery ticket to NCDOT for each load of mulch delivered and applied according to these specifications. Delivery ticket(s) to include cubic yards volume per each individual load, date, and work site. NCDOT should check delivery tickets for discrepancies at the delivery site or as soon as possible and notify the contractor immediately for any verification or measurement desired if discrepancies are noticed. Resolution of discrepancies will be a joint responsibility of the Engineer and the Contractor. Failure of contractor to properly notify or receive signed verification will result in forfeiture of contractor's right to collect on any mulch applied under such circumstances.

Place mulch within seventy-two (72) hours of initial planting at each bed site completed or as otherwise approved by the Engineer.

Additional mulching is not anticipated for the establishment period. However, the Engineer reserves the right to require additional mulching at any time during the course of the contract. In the case of mulching after the initial planting acceptance, the same requirements of this entire provision will be applicable except the required depth may be less than 4 inches. In the case of replacement plants where there is adequate depth of mulch, the contractor will be expected to pull back the existing mulch, replace the plant, and re-use the existing mulch.

Measurement and payment will be made as described under the project special provision for "Delivery of Materials".

WATER FOR PLANTING AND WATER AFTER PLANTING

The Contractor is responsible for *Water For Planting* and *Water After Planting* in accordance with Article 1670-9 and 1670-11 of the *2018 Standard Specifications*, and as directed by the Engineer, with the following additions:

Water for Planting will be performed during the initial planting phase of the project and also during the establishment period.

The Contractor shall provide twenty-four (24) hours notice to the Engineer or his representative prior to any water applications in order to receive payment, and must receive approval from the

Engineer to perform each water event. **Any watering provided for the project without notification and approval of the Engineer will result in non-payment for that watering event.**

Request for watering by the Contractor will be made at the discretion of the Engineer. If requested watering is not commenced within **seventy-two (72) hours** following the request, the contractor will be subject to liquidated damages as stated elsewhere in this proposal.

If water restrictions are implemented, the Contractor shall provide water from a non-public source.

Measurement and payment will be made as described under the project special provision for "Delivery of Materials".

FERTILIZER

Osmocote 17-5-11 with micronutrients, or comparable product, shall be applied during "Initial Planting" and for replacement plants at label rates. Fertilizer shall be placed in the planting hole, being evenly distributed and incorporated within the backfill material. Fertilizer type(s) and quantity shall be discussed with and approved by the Engineer prior to incorporation in plant beds. **No direct compensation will be made for fertilizer as it will be considered incidental to the other work on the project.**

PRUNING

Pruning shall be in accordance with Article 1670-6 of the *201 Standard Specifications* with the following addition: Pruning of trees and other plant materials may be required by the Engineer as part of new and/or existing planting and establishment requirements. All pruning work will be done only at the direction of the Engineer. **No direct compensation will be made for pruning as it will be considered incidental to the other work on the project.**

LITTER REMOVAL

The Contractor shall remove and properly dispose of all trash and litter from the general vicinity of existing and new plantings as part of the initial planting and the establishment period. No stockpiling of trash bags will be permitted on highway right of way. Disposal of litter shall be at an approved disposal site or landfill. **There will be no compensation for this work, as it will be considered incidental to initial planting and monthly establishment work.**

FINAL ACCEPTANCE

Final acceptance will not be made before the completion of the Establishment Period. Final acceptance will be made only after the satisfactory completion of all work covered by this contract. All plant material shall be well-rooted, in a living and healthy condition at the time of final acceptance. All work shall be completed in a neat, workmanlike manner. Work not completed in such manner will not be accepted.

TEMPORARY TRAFFIC CONTROL (TTC)

Maintain traffic in accordance with Divisions 10, 11 and 12 of the *2012 Standard Specifications* and the following provisions:

Install Work Zone Advance Warning Signs in accordance with the detail drawing provided in these plans prior to beginning any other work. Use a lane closure or slow moving operation to complete the work, as necessary, unless otherwise indicated. Refer to Standard Drawing No. 1101.02, 1101.11, 1110.01, 1110.02, 1130.01 1135.01 and 1180.01 of the *2018 Roadway Standard Drawings*. Use a moving operation only if the minimum speed maintained at all times is 3 mph with no stops that narrow or close a lane of travel. If the moving operation is progressing slower than 3 mph at any time, install a lane closure. Maintain the existing traffic pattern at all times, except in the immediate work zone where lane closures are allowed as determined by the Engineer.

Refer to attached details and Standard Drawing No. 1101.02, 1101.03, 1101.04, 1101.05, 1101.11, 1110.01, 1110.02, 1115.01, 1130.01, 1135.01, 1145.01, 1150.01, 1165.01, and 1180.01 of the *2018 Roadway Standard Drawings* when closing a lane of travel in a stationary work zone such as pavement patching resurfacing, or pavement marking removal. Properly ballasted cones and skinny drums may be used instead of drums. However, drums are required for the upstream taper portion of lane closures in all applications. The stationary work zone shall be a maximum of 1 mile in length at any given time on 2 Lane, 2 Way facilities unless otherwise approved by the Engineer. A pilot vehicle operation may be used in conjunction with flaggers and the appropriate pilot vehicle warning signing as directed by the Engineer. During periods of construction inactivity, return the traffic pattern to the existing alignment and remove or cover any work zone signs. When covering work zone signs, use an opaque material that prevents reading of the sign at night by a driver using high beam headlights. Use material, which does not damage the sign sheeting. Replace any obliterated markings as required by other sections of the *2018 Standard Specifications* and the Engineer.

When personnel and/or equipment are working on the shoulder adjacent to and within 5 feet of an open travel lane, close the nearest open travel lane using Standard Drawing No. 1101.02 of the *2018 Roadway Standard Drawings*. When personnel and/or equipment are working within a lane of travel of an undivided facility, close the lane according to the traffic control plans, *2018 Roadway Standard Drawings* or as directed by the Engineer. Conduct the work so that all personnel and/or equipment remain within the closed travel lane. Do not work simultaneously, on both sides of an open travel way, within the same location, on a two-lane, two-way road. Perform work only when weather and visibility conditions allow safe operations as directed by the Engineer.

When utilizing a slow-moving operation for such items as pavement marking and marker placement, as a minimum the slow moving operation caravan shall consist of the vehicles and devices shown on the Moving Operation Caravan Details according to Roadway Standard Drawing No. 1101.02, sheet 11 of the *2018 Roadway Standard Drawings*. Traffic cones may be used when necessary to provide additional protection of wet pavement markings. Ballast all traffic cones so they will not be blown over by traffic.

TRAFFIC OPERATIONS:**1) Project Requirements:**

Failure to comply with the following requirements will result in a suspension of all other operations:

1. Before working on ANY MAP, the Contractor shall submit a written construction sequence for traffic control and construction lighting for ALL MAPS to the Engineer at the first pre-construction meeting and the sequence must be approved before closing a lane of traffic. The Contractor and Engineer will coordinate with the Traffic Management Unit at 919-773-2800 or Traffic Services for additional traffic control guidance, as necessary.
2. Obtain written approval of the Engineer before working in more than one location or setting up additional lane closures. The maximum length of any one lane closure is 1 mile unless otherwise directed by the Engineer.
3. If lane closure restrictions apply, see Special Provision, "Intermediate Contract Times and Liquidated Damages".

2) Work Zone Signing:**Description**

Install advance/general warning work zone signs according to the Detail Drawing provided in these plans prior to beginning of work. Install and maintain signing in accordance with the attached drawings and Divisions 11 and 12 of the *2018 Standard Specifications*.

(A) Installation

All stationary Advance/General warning work zone signs require notification to existing Utility owners per Article 105-8 of the *2018 Standard Specifications* and Special Provision SP1 G115 within 3 to 12 full working days prior to installation.

Install all Advance/General warning work zone signs before beginning work on a particular map. If signs are installed more than seven (7) calendar days prior to the beginning of work on a particular map, cover the signs until the work begins. Install each work zone Advance/General warning sign separately and not on the same post or stand with any other sign except where an advisory speed plate or directional arrow is used.

All stationary signing is to be installed as shown on the detail drawing(s) unless otherwise directed by the Engineer. All sign locations to be verified by the Engineer prior to installation. Once the signs have been installed and accepted, any sign relocations requested by the Department will be compensated in accordance with Article 104-7. Any additional signs other than the ones shown in the drawing will be compensated in accordance with Article 104-7.

No stationary -Y- Line advance warning signage is required unless there's more than 1,000 feet of resurfacing along the -Y- line. Whenever work proceeds through an intersection, portable signs shall be used for traffic control. There will be no direct compensation for any portable signing.

If there is a period of construction inactivity longer than 14 calendar days, remove or cover advance/general warning work zone signs. Uncover advance/general warning work zone signs no more than 7 calendar days before work resumes. All other operations may be suspended upon failure to comply with the above requirements. Such suspended operations would not be resumed until the above requirements are fulfilled.

(B) Sign Removal

All stationary work zone signs shall be removed once the project is substantially complete. The project is substantially complete when the resurfacing operations are completed and the shoulders are brought up to the same elevation as the proposed pavement and when pavement markings are installed. The pavement marking doesn't have to be the final marking material to be considered substantially complete. Any remaining punch list items are to be completed with portable work zone signing. There will be no compensation for any portable signing. Sign removal is a condition of final project acceptance.

(C) Lane Closure Work Zone Signs

Install any required lane closure signing needed during the life of the project **including the establishment period** in accordance with the Standard Drawing No. 1101.02, 1101.11 and 1110.02 of the *2018 Roadway Standard Drawings*. Any required portable signs for lane closures are compensated in the contract pay item for *Temporary Traffic Control*.

3) Measurement and Payment:

Temporary traffic control work, including, but not limited to installation and removal of portable signs, cones, drums, skinny drums, flaggers, AFAD's, changeable message boards, truck mounted attenuators, flashing arrow boards, and pilot vehicles will be paid at the contract lump sum price for *Temporary Traffic Control*. The *Temporary Traffic Control* pay item does not include work zone advance or general warning signs. Partial payments for *Temporary Traffic Control* will be made as follows: The cumulative total of the lump sum price for temporary traffic control will be equal to the percent complete (project) as calculated for each partial pay estimate. Additional flashing arrow boards and message boards beyond those shown in the contract, detail drawings or *Roadway Standard Drawings* required by the Engineer will be paid as extra work in accordance with Article 104-7 of the *Standard Specifications*.

The work of satisfactorily installing and removing work zone advance and/or general warning signs, including, but not limited to, furnishing, locating, installing, covering, uncovering and removing stationary signs will be measured for each required sign and paid at the contract price for *Work Zone Advance/General Warning Signing (SF)*. Payment for *Work Zone Advance/General Warning Signing* will be limited to a maximum of 90% of the total installed quantity. The remaining 10% will be paid once all signs have been removed.

The Lump Sum price for *Temporary Traffic Control* will include the work of four (4) flaggers per operation per map being utilized at the same time on any day. If a pilot vehicle is used for an operation, the Lump Sum Price for *Temporary Traffic Control* will include the work of five (5) flaggers. The operator of a pilot vehicle will be considered one of the five flaggers.

Any additional flagging beyond the “included” amount covered in the *Temporary Traffic Control* pay item will be considered supplemental flagging and compensated at a rate of \$20.00 per hour for each additional flagger as approved by the Engineer.

Payment will be made under:

Pay Item

Temporary Traffic Control

Work Zone Advance/General Warning Signing

Pay Unit

Lump Sum

Square Foot

EROSION, SILTATION, AND POLLUTION CONTROL

The Contractor shall exercise every reasonable precaution and take all necessary measures throughout the life of the project to prevent erosion, siltation, and pollution in accordance with Section 107-12 of the *Standard Specifications*. Silt fence and erosion control measures shall be installed in accordance with the Section 1605 of the *Standard Specifications*, and in locations directed by the Engineer or his representative.

ENVIRONMENTAL STEWARDSHIP AND PERFORMANCE OF EROSION CONTROL

The Contractor shall perform all aspects of his / her work related to the project in a manner that is considerate of the environment and is representative of the Department’s commitment to environmental stewardship. The Contractor shall take initiative to adhere to the erosion control plans and all provisions stated in the related permits. The Contractor shall provide additional measures above and beyond the plans and provisions when required to protect the environment. The Contractor shall also comply with all other general requirements of the regulatory agencies. These include but are not limited to the US Army Corps of Engineers, NC Wildlife Resources Commission (comments included in the Corps permit), NC Department of Environment and Natural Resources – Land Quality Section, NC Department of Environment and Natural Resources – Water Quality Section, etc. It is the responsibility of the Contractor to be familiar and to comply with the contract permit provisions, erosion control plan, general requirements of the agencies, and all laws pertaining to land disturbing activities.

Erosion Control Devices shall be installed and maintained in a timely manner throughout the life of the project. Such devices shall be constructed and maintained by the end of each workday. Modifications to the Erosion Control Plan shall be approved by the Engineer or his representative. Prior to grubbing and / or grade-work, erosion control devices shall be installed to prevent any loss of sedimentation into streams or outside the perimeter of the project. Inlet and outlet protection for

pipes shall be constructed as part of the pipe installation in a continuous manner. Erosion control devices should not be placed in the stream itself.

In the event the Contractor does not comply with the erosion control plan and environmental conditions of the contract, **liquidated damages of \$1,000.00 per day** shall be imposed until the corrective action is taken in order to meet the requirements. These damages shall pertain to any permit condition and erosion control measure that is not installed and maintained in accordance with the erosion control plan, permit conditions, project special provisions, *Standard Specifications*, and directions provided by the Engineer or his/her representative. Disregard for the environment by the Contractor shall also subject the Contractor to such damages.

In the event that a Notice of Violation is issued for the project by NCDENR, the Contractor shall be **assessed a single amount of \$5,000.00**. If additional Violations are issued on the same project, **liquidated damages of \$10,000.00 per occurrence** will be imposed on the Contractor. Subsequent to the issuance of a NOV, the Contractor shall work in a continuous manner to comply with the required corrective action by the deadline given by the issuing agency. If the corrective actions are not completed by the required date of compliance, the Department shall impose additional **liquidated damages of \$1,000.00 per day**. All damages stated above shall also apply to the issuance of an **Immediate Corrective Action (ICA)** by the Department.

All liquidated damages described above shall be deducted from monies due to the Contractor. The Contractor shall also comply with Article 107-12 and Division 16 of the *Standard Specifications*.

ENVIRONMENTAL NOTES TO CONTRACTOR

1. Environmental stewardship and timely performance of erosion control shall be expected of the Contractor on this project.
2. The Contractor may be subject to fines imposed by the Department for violations and / or non-compliance related to environmental permits and erosion control issues (see special provisions).
3. Pipe installation shall include immediate protection of the inlet and outlet with appropriate erosion control measures as part of the pipe installation process by the end of each day.
4. Installation of all pipe(s) shall be completed in a continuous manner.
5. Vegetation shall not be disturbed beyond the limits of construction without approval by the Engineer.
6. Any ground disturbance beyond areas protected by installed erosion control devices shall be protected immediately – no exceptions. This may require hand seeding and mulching in some cases.
7. Temporary erosion control measures to protect areas of work shall be installed by end of each day, regardless the construction stage of a particular operation.
8. Erosion control measures installed after the fact is not acceptable practice.
9. Ditches that are not to final grade shall have the necessary temporary erosion control measures installed by the end of the day, including any basins and rock checks.
10. Filter stone and Class B Rip Rap for erosion control shall be installed at any location where runoff leaves the project. Class B Rip Rap only is not acceptable.

11. Blasting shall be controlled with appropriate measures to prevent fly rock and loss of material into rivers and streams and outside the limits of construction. Blasting mats will be required. Blasting shall not take place without the presence of an Inspector. The Contractor shall provide a 24-hour notice prior to blasting in a particular area. The Contractor shall be responsible for any and all damages that may occur from blasting, including any fines. The Contractor shall consider and implement when feasible alternative methods to blasting around environmentally sensitive areas.
12. No disturbed area shall be left unprotected from sediment runoff by the end of each day.
13. Grubbing shall not take place in an area until immediately before grading operations are to commence in that particular area.
14. The Contractor is responsible for being familiar with the conditions of the environmental permits.
15. The Contractor must comply with all provisions of the contract, standard specifications and drawings, and best management practices for bridge demolition and erosion control.
16. The presence of the Engineer or Inspector shall in no way lessen the Contractor's responsibility for compliance with the permits, conformity with erosion control, and protection of the environment. Should the Engineer or Inspector fail to point out work that is not in compliance for any reason, it shall in no way prevent later rejection or correction to the unsatisfactory materials or work when discovered.

STABILIZATION REQUIREMENTS:

(3-11-16)

S-3

Stabilization for this project shall comply with the time frame guidelines as specified by the NCG-010000 general construction permit effective August 1, 2016 issued by the North Carolina Department of Environmental Quality Division of Water Resources. Temporary or permanent ground cover stabilization shall occur within 7 calendar days from the last land-disturbing activity, with the following exceptions in which temporary or permanent ground cover shall be provided in 14 calendar days from the last land-disturbing activity:

- Slopes between 2:1 and 3:1, with a slope length of 10 ft. or less
- Slopes 3:1 or flatter, with a slope of length of 50 ft. or less
- Slopes 4:1 or flatter

The stabilization timeframe for High Quality Water (HQW) Zones shall be 7 calendar days with no exceptions for slope grades or lengths. High Quality Water Zones (HQW) Zones are defined by North Carolina Administrative Code 15A NCAC 04A.0105 (25). Temporary and permanent ground cover stabilization shall be achieved in accordance with the provisions in this contract and as directed.

REPAIR SEEDING

For areas of the project that are disturbed by the contractor and will not be planted or re-planted, all provisions of Section 1661 – Repair Seeding in the *2012 Standard Specifications* will be applicable with the following exception:

Under “1661-5 Measurement and Payment”, there will be no compensation for either *Seed for Repair Seeding* or *Fertilizer for Repair Seeding* as the entire work of “Repair Seeding” will be considered incidental to the other work on the project. **There will be no compensation for repair seeding.**

Repair seeding shall adhere to the following "Seeding and Mulching (West)" provision.

SEEDING AND MULCHING:

(West)

The kinds of seed and fertilizer, and the rates of application of seed, fertilizer, and limestone, shall be as stated below. During periods of overlapping dates, the kind of seed to be used shall be determined. All rates are in pounds per acre.

Shoulder and Median Areas

20#	Kentucky Bluegrass	20#	Kentucky Bluegrass
75#	Hard Fescue	75#	Hard Fescue
25#	Rye Grain	10#	German or Browntop Millet
500#	Fertilizer	500#	Fertilizer
4000#	Limestone	4000#	Limestone

Areas Beyond the Mowing Pattern, Waste and Borrow Areas:

100#	Tall Fescue	100#	Tall Fescue
15#	Kentucky Bluegrass	15#	Kentucky Bluegrass
30#	Hard Fescue	30#	Hard Fescue
25#	Rye Grain	10#	German or Browntop Millet
500#	Fertilizer	500#	Fertilizer
4000#	Limestone	4000#	Limestone

Approved Tall Fescue Cultivars

06 Dust	Escalade	Justice	Scorpion
2 nd Millennium	Essential	Kalahari	Serengeti
3 rd Millennium	Evergreen 2		Shelby
Apache III	Falcon IV	Kitty Hawk 2000	Sheridan
Avenger	Falcon NG	Legitimate	Signia
Barlexas	Falcon V	Lexington	Silver Hawk
Barlexas II	Faith	LSD	Sliverstar
Bar Fa	Fat Cat	Magellan	Shenandoah Elite
Barrera	Festnova	Matador	Sidewinder
Barrington	Fidelity	Millennium SRP	Skyline
Barrobusto	Finelawn Elite	Monet	Solara
Barvado	Finelawn Xpress	Mustang 4	Southern Choice II
Biltmore	Finesse II	Ninja 2	Speedway
Bingo	Firebird	Ol' Glory	Spyder LS
Bizem	Firecracker LS	Olympic Gold	Sunset Gold

Blackwatch	Firenza	Padre	Taccoa
Blade Runner II	Five Point	Patagonia	Tanzania
Bonsai	Focus	Pedigree	Trio
Braveheart	Forte	Picasso	Tahoe II
Bravo	Garrison	Piedmont	Talladega
Bullseye	Gazelle II	Plantation	Tarheel
Cannavaro	Gold Medallion	Proseeds 5301	Terrano
Catalyst	Grande 3	Prospect	Titan Ltd
Cayenne	Greenbrooks	Pure Gold	Titanium LS
Cessane Rz	Greenkeeper	Quest	Tracer
Chipper	Gremlin	Raptor II	Traverse SRP
Cochise IV	Greystone	Rebel Exeda	Tulsa Time
Constitution	Guardian 21	Rebel Sentry	Turbo
Corgi	Guardian 41	Rebel IV	Turbo RZ
Corona	Hemi	Regiment II	Tuxedo RZ
Coyote	Honky Tonk	Regenerate	Ultimate
Darlington	Hot Rod	Rendition	Venture
Davinci	Hunter	Rhambler 2 SRP	Umbrella
Desire	Inferno	Rembrandt	Van Gogh
Dominion	Innovator	Reunion	Watchdog
Dynamic	Integrity	Riverside	Wolfpack II
Dynasty	Jaguar 3	RNP	Xtremegreen
Endeavor	Jamboree	Rocket	

Approved Kentucky Bluegrass Cultivars:

4-Season	Blue Velvet	Gladstone	Quantum Leap
Alexa II	Blueberry	Granite	Rambo
America	Boomerang	Hampton	Rhapsody
Apollo	Brilliant	Harmonie	Rhythm
Arcadia	Cabernet	Impact	Rita
Aries	Champagne	Jefferson	Royce
Armada	Champlain	Juliet	Rubicon
Arrow	Chicago II	Jump Start	Rugby II
Arrowhead	Corsair	Keeneland	Shiraz
Aura	Courtyard	Langara	Showcase
Avid	Delight	Liberator	Skye
Award	Diva	Madison	Solar Eclipse
Awesome	Dynamo	Mercury	Sonoma
Bandera	Eagleton	Midnight	Sorbonne
Barduke	Emblem	Midnight II	Starburst
Barnique	Empire	Moon Shadow	Sudden Impact
Baroness	Envicta	Moonlight SLT	Total Eclipse
Barrister	Everest	Mystere	Touche
Barvette HGT	Everglade	Nu Destiny	Tsunami
Bedazzled	Excursion	NuChicago	Unique

Belissimo	Freedom II	NuGlade	Valor
Bewitched	Freedom III	Odyssey	Voyager II
Beyond	Front Page	Perfection	Washington
Blacksburg II	Futurity	Pinot	Zinfandel
Blackstone	Gaelic	Princeton 105	
Blue Note	Ginney II	Prosperity	

Approved Hard Fescue Cultivars:

Aurora II	Eureka II	Oxford	Scaldis II
Aurora Gold	Firefly	Reliant II	Spartan II
Berkshire	Granite	Reliant IV	Stonehenge
Bighorn GT	Heron	Rescue 911	
Chariot	Nordic	Rhino	

On cut and fill slopes 2:1 or steeper add 20# Sericea Lespedeza January 1 - December 31.

Fertilizer shall be 10-20-20 analysis. A different analysis of fertilizer may be used provided the 1-2-2 ratio is maintained and the rate of application adjusted to provide the same amount of plant food as a 10-20-20 analysis and as directed.

NCDOT GENERAL SEED SPECIFICATION FOR SEED QUALITY

(5-17-11)

Z-3

Seed shall be sampled and tested by the North Carolina Department of Agriculture and Consumer Services, Seed Testing Laboratory. When said samples are collected, the vendor shall supply an independent laboratory report for each lot to be tested. Results from seed so sampled shall be final. Seed not meeting the specifications shall be rejected by the Department of Transportation and shall not be delivered to North Carolina Department of Transportation warehouses. If seed has been delivered it shall be available for pickup and replacement at the supplier's expense.

Any re-labeling required by the North Carolina Department of Agriculture and Consumer Services, Seed Testing Laboratory, that would cause the label to reflect as otherwise specified herein shall be rejected by the North Carolina Department of Transportation.

Seed shall be free from seeds of the noxious weeds Johnsongrass, Balloonvine, Jimsonweed, Witchweed, Itchgrass, Serrated Tussock, Showy Crotalaria, Smooth Crotalaria, Sicklepod, Sandbur, Wild Onion, and Wild Garlic. Seed shall not be labeled with the above weed species on the seed analysis label. Tolerances as applied by the Association of Official Seed Analysts will NOT be allowed for the above noxious weeds except for Wild Onion and Wild Garlic.

Tolerances established by the Association of Official Seed Analysts will generally be recognized. However, for the purpose of figuring pure live seed, the found pure seed and found germination percentages as reported by the North Carolina Department of Agriculture and Consumer Services, Seed Testing Laboratory will be used. Allowances, as established by the NCDOT, will be recognized for minimum pure live seed as listed on the following pages.

The specifications for restricted noxious weed seed refers to the number per pound as follows:

<u>Restricted Noxious Weed</u>	<u>Limitations per Lb. Of Seed</u>	<u>Restricted Noxious Weed</u>	<u>Limitations per Lb. of Seed</u>
Blessed Thistle	4 seeds	Cornflower(Ragged Robin)	27 seeds
Cocklebur	4 seeds	Texas Panicum	27 seeds
Spurred Anoda	4 seeds	Bracted Plantain	54 seeds
Velvetleaf	4 seeds	Buckhorn Plantain	54 seeds
Morning-glory	8 seeds	Broadleaf Dock	54 seeds
Corn Cockle	10 seeds	Curly Dock	54 seeds
Wild Radish	12 seeds	Dodder	54 seeds
Purple Nutsedge	27 seeds	Giant Foxtail	54 seeds
Yellow Nutsedge	27 seeds	Horsenettle	54 seeds
Canada Thistle	27 seeds	Quackgrass	54 seeds
Field Bindweed	27 seeds	Wild Mustard	54 seeds
Hedge Bindweed	27 seeds		

Seed of Pensacola Bahiagrass shall not contain more than 7% inert matter, Kentucky Bluegrass, Centipede and Fine or Hard Fescue shall not contain more than 5% inert matter whereas a maximum of 2% inert matter will be allowed on all other kinds of seed. In addition, all seed shall not contain more than 2% other crop seed nor more than 1% total weed seed. The germination rate as tested by the North Carolina Department of Agriculture shall not fall below 70%, which includes both dormant and hard seed. Seed shall be labeled with not more than 7%, 5% or 2% inert matter (according to above specifications), 2% other crop seed and 1% total weed seed.

Exceptions may be made for minimum pure live seed allowances when cases of seed variety shortages are verified. Pure live seed percentages will be applied in a verified shortage situation. Those purchase orders of deficient seed lots will be credited with the percentage that the seed is deficient.

FURTHER SPECIFICATIONS FOR EACH SEED GROUP ARE GIVEN BELOW:

Minimum 85% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 83% pure live seed will not be approved.

Sericea Lespedeza
Oats (seeds)

Minimum 80% pure live seed; maximum 1% total weed seed; maximum 2% total other crop; maximum 144 restricted noxious weed seed per pound. Seed less than 78% pure live seed will not be approved.

Tall Fescue (all approved varieties)
Kobe Lespedeza
Korean Lespedeza
Weeping Lovegrass

Bermudagrass
Browntop Millet
German Millet – Strain R
Clover – Red/White/Crimson

Carpetgrass

Minimum 78% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 76% pure live seed will not be approved.

Common or Sweet Sundangrass

Minimum 76% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 74% pure live seed will not be approved.

Rye (grain; all varieties)

Kentucky Bluegrass (all approved varieties)

Hard Fescue (all approved varieties)

Shrub (bicolor) Lespedeza

Minimum 70% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 noxious weed seed per pound. Seed less than 70% pure live seed will not be approved.

Centipedegrass

Crownvetch

Pensacola Bahiagrass

Creeping Red Fescue

Japanese Millet

Reed Canary Grass

Zoysia

Minimum 70% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 5% inert matter; maximum 144 restricted noxious weed seed per pound.

Barnyard Grass

Big Bluestem

Little Bluestem

Bristly Locust

Birdsfoot Trefoil

Indiangrass

Orchardgrass

Switchgrass

Yellow Blossom Sweet Clover

PLANT AND PEST QUARANTINES

(Imported Fire Ant, Gypsy Moth, Witchweed, Emerald Ash Borer, And Other Noxious Weeds)

(3-18-03) (Rev. 12-20-16)

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 <http://www.ncagr.gov/plantindustry/> 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 to present a hazard of spreading imported fire ant, gypsy moth, witchweed, emerald ash borer, or other noxious weeds.

PEST AND DISEASE MANAGEMENT

The Contractor shall scout and control all insects and diseases throughout the establishment period. The Engineer shall approve any treatments necessary for preventive or curative measures. **There will be no compensation for this work as it will be considered incidental to monthly establishment work.**

STANDARD SPECIAL PROVISION
AVAILABILITY OF FUNDS – TERMINATION OF CONTRACTS

(5-20-08)

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 *2018 Standard Specifications*.

STANDARD SPECIAL PROVISION**ERRATA**

(10-16-18) (Rev.1-15-19)

Z-4

Revise the *2018 Standard Specifications* as follows:

Division 6

Page 6-7, Article 609-1 DESCRIPTION, line 29, replace article number “609-10” with “609-9”.

Division 7

Page 7-27, Article 725-1 MEASUREMENT AND PAYMENT, line 4, replace article number “725-1” with “724-4”.

Page 7-28, Article 725-1 MEASUREMENT AND PAYMENT, line 10, replace article number “725-1” with “725-3”.

Division 10

Page 10-78, Article 1056-4 GEOTEXTILES, TABLE 1056-1, Permittivity, Type 2, replace “Table 6^D” with “Table 7^D” and **Permittivity, Type 3^B,** replace “Table 7^D” with “Table 8^D”.

Page 10-162, Article 1080-50 PAINT FOR VERTICAL MARKERS, line 1, replace article number “1080-50” with “1080-10”.

Page 10-162, Article 1080-61 EPOXY RESIN FOR REINFORCING STEEL, line 5, replace article number “1080-61” with “1080-11”.

Page 10-162, Article 1080-72 ABRASIVE MATERIALS FOR BLAST CLEANING STEEL, line 22, replace article number “1080-72” with “1080-12”.

Page 10-163, Article 1080-83 FIELD PERFORMANCE AND SERVICES, line 25, replace article number “1080-83” with “1080-13”.

Division 17

Page 17-15, Article 1715-4 MEASUREMENT AND PAYMENT, lines 42-44, replace the second sentence with the following:

An example is an installation of a single 1.25 inch HDPE conduit would be paid as:

Directional Drill (1)(1.25”) Linear Foot

STANDARD SPECIAL PROVISION**MINIMUM WAGES**

(7-21-09)

FEDERAL: The Fair Labor Standards Act provides that with certain exceptions every employer shall pay wages at the rate of not less than SEVEN DOLLARS AND TWENTY FIVE CENTS (\$7.25) per hour.

STATE: The North Carolina Minimum Wage Act provides that every employer shall pay to each of his employees, wages at a rate of not less than SEVEN DOLLARS AND TWENTY FIVE CENTS (\$7.25) per hour.

The minimum wage paid to all skilled labor employed on this contract shall be SEVEN DOLLARS AND TWENTY FIVE CENTS (\$7.25) per hour.

The minimum wage paid to all intermediate labor employed on this contract shall be SEVEN DOLLARS AND TWENTY FIVE CENTS (\$7.25) per hour.

The minimum wage paid to all unskilled labor on this contract shall be SEVEN DOLLARS AND TWENTY FIVE CENTS (\$7.25) per hour.

This determination of the intent of the application of this act to the contract on this project is the responsibility of the Contractor.

The Contractor shall have no claim against the Department of Transportation for any changes in the minimum wage laws, Federal or State. It is the responsibility of the Contractor to keep fully informed of all Federal and State Laws affecting his contract.

STANDARD SPECIAL PROVISION**TITLE VI AND NONDISCRIMINATION:**

(6-28-77)(Rev 6/19/2018)

Z-6

Revise the *2018 Standard Specifications* as follows:

Replace Article 103-4(B) with the following:

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 U.S.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. (<i>Executive Order 13166</i>)
Color	Color of skin, including shade of skin within a racial group	Black, White, brown, yellow, etc.	
National Origin (<i>Limited English Proficiency</i>)	Place of birth. Citizenship is not a factor. (<i>Discrimination based on language or a person's accent is also covered</i>)	Mexican, Cuban, Japanese, Vietnamese, Chinese	
Sex	Gender. The sex of an individual.	Women and Men	1973 Federal-Aid Highway Act; 49 U.S.C. 5332(b); 49 U.S.C. 47123.

	<i>Note:</i> Sex under this program does not include sexual orientation.		
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) <i>(Religion/ Creed in all aspects of any aviation or transit-related construction)</i>	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. <i>Note:</i> 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. <i>(49 U.S.C. 5332(b); 49 U.S.C. 47123)</i>

(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.)

STANDARD SPECIAL PROVISION**ON-THE-JOB TRAINING**

(10-16-07) (Rev. 4-21-15)

Z-10

Description

The North Carolina Department of Transportation will administer a custom version of the Federal On-the-Job Training (OJT) Program, commonly referred to as the Alternate OJT Program. All contractors (existing and newcomers) will be automatically placed in the Alternate Program. Standard OJT requirements typically associated with individual projects will no longer be applied at the project level. Instead, these requirements will be applicable on an annual basis for each contractor administered by the OJT Program Manager.

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

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.

Minorities and Women

Developing, training and upgrading of minorities and women toward journeyman level status is a primary objective of this special training 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 Manager, will assign training goals for a calendar year based on the contractors' past three years' activity and the contractors' anticipated upcoming year's activity with the Department. At the beginning of each year, all contractors eligible 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 provide a self-imposed on-the-job training program for the calendar year. This agreement will include a specific number of annual training goals agreed to by both parties. The number of training assignments may range from 1 to 15 per contractor per calendar year. The Contractor shall sign an agreement 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. Preference shall be given to providing training in the following skilled work classifications:

Equipment Operators	Office Engineers
Truck Drivers	Estimators
Carpenters	Iron / Reinforcing Steel Workers
Concrete Finishers	Mechanics
Pipe Layers	Welders

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 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 apprentices or trainees in each occupation shall be in their first year of apprenticeship or 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 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 employed by him on the contract work who is 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.

ADDENDUM(S)

ADDENDUM #1

I, _____
(SIGNATURE)

representing _____

Acknowledge receipt of Addendum #1.

ADDENDUM #2

I, _____
(SIGNATURE)

representing _____

Acknowledge receipt of Addendum #2.

ADDENDUM #3

I, _____
(SIGNATURE)

representing _____

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 than 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 the provisions of Article 102-8, Item 7, shall be authorized to sign this form.

County : Watauga

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
ROADWAY ITEMS						
0001	0000970000-E	SP	GENERIC MISCELLANEOUS ITEM SUPPLEMENTAL SEEDING & REPAIRING	12 ACR		
0002	3577000000-N	SP	GENERIC FENCING ITEM RELOCATE EXISTING FENCING	Lump Sum	L.S.	
0003	4413000000-E	SP	WORK ZONE ADVANCE/GENERAL WARNING SIGNING	360 SF		
0004	4457000000-N	SP	TEMPORARY TRAFFIC CONTROL	Lump Sum	L.S.	
0005	6078000000-E	1651	SELECTIVE UNDERGROWTH REMOVAL	2 ACR		
0006	6102000000-E	1664	SODDING	5,510 SY		
0007	6210000000-N	1670	ACER RUBRUM, RED MAPLE, 'AUTUMN BLAZE', 2 1/2-3" CAL., 14-16', B&B, SPECIMEN	36 EA		
0008	6210000000-N	1670	ACER RUBRUM, RED MAPLE, 'OCTOBER GLORY', 2 1/2-3" CAL., 14-16', B&B, SPECIMEN	31 EA		
0009	6215000000-N	1670	ACER SACCHARUM, SUGAR MAPLE, 'GEEN MOUNTAIN', 2 1/2-3" CAL., 14-16', B&B, SPECIMEN	53 EA		
0010	6245000000-N	1670	CERCIS CANADENSIS, REDBUD, 2-2 1/2" CAL., 8-10', B&B, SPECIMEN	35 EA		
0011	6255000000-N	1670	CHIONANTHUS VIRGINICUS, FRINGE TREE, 2-2 1/2" CAL., 8-10', B&B, SINGLE STEM SPECIMEN	92 EA		
0012	6255000000-N	1670	CHIONANTHUS VIRGINICUS, FRINGE TREE, WHITE, MULTI-STEM / LOW BRANCHED SPECIMEN	1 EA		
0013	6340000000-N	1670	HEMEROCALLIS, DAYLILY 'BUTTERED POPCORN', #1 CONT.	815 EA		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0014	6500000000-N	1670	NYSSA SYLVATICA, BLACK GUM, 'WILDFIRE', 2 1/2-3" CAL., 14-16', B&B, SPECIMEN	54 EA		
0015	6560000000-N	1670	QUERCUS COCCINEA, SCARLET OAK, 2 1/2-3" CAL., 14-16', B&B, SPECIMEN	29 EA		
0016	6560000000-N	1670	QUERCUS COCCINEA, SCARLET OAK, 3" CAL.	1 EA		
0017	6575000000-N	1670	QUERCUS PHELLOS, WILLOW OAK, 2 1/2-3" CAL., 14-16', B&B, SPECIMEN	25 EA		
0018	6605000000-N	1670	TAXODIUM DISTICHUM, BALD CY- PRESS, 2-2 1/2" CAL. 8-10', B&B, SPECIMEN	18 EA		
0019	6610000000-N	1670	TSUGA CANADENSIS, CANADA HEM- LOCK, 8-10', B&B, SPECIMEN 3.1.2.4	4 EA		
0020	6640000000-N	1670	GENERIC PLANTING ITEM ABIES CONCOLOR, CONCOLOR FIR 8-10', B&B, SPECIMENT 3.1.2.4	16 EA		
0021	6640000000-N	1670	GENERIC PLANTING ITEM ACER RUBRUM, RED MAPLE, SWAMP MAPLE, 2.5-3" CAL.	1 EA		
0022	6640000000-N	1670	GENERIC PLANTING ITEM AMELANCHIER X GRADNIFLORA AUTUMN BRILLANCE SERVICEBERRY, 8-10', B&B, SPEC	57 EA		
0023	6640000000-N	1670	GENERIC PLANTING ITEM ARUNCUS DIOICUS GOATSBEARD, BRIDE'S FEATHERS, 1 GL	10 EA		
0024	6640000000-N	1670	GENERIC PLANTING ITEM ASTILBE CHINENSIS 'VISIONS' ASTILBE, 1 GL	37 EA		
0026	6640000000-N	1670	GENERIC PLANTING ITEM COREOPSIS 'CREME CARAMEL', 1 GL	10 EA		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0027	6640000000-N	1670	GENERIC PLANTING ITEM CORNUS FLORIDA RUBRA, PINK FLOWERING DOGWOOD, 2-2 1/2" CAL., 8-10', B&B, SPEC	50 EA		
0028	6640000000-N	1670	GENERIC PLANTING ITEM CRATAEGUS VIRIDIS 'WINTER KING' HAWTHORN, 2-2.5" CAL.	1 EA		
0029	6640000000-N	1670	GENERIC PLANTING ITEM CRATEAGUS VIRIDIS 'WINTER KING , HAWTHORNE, 2-2 1/2" CAL, 8-10' , B&B, SP.	52 EA		
0030	6640000000-N	1670	GENERIC PLANTING ITEM ECHINACEA PURPUREA 'FIREBIRD' PURPLE' CONEFLOWER, #1 CONT.	798 EA		
0031	6640000000-N	1670	GENERIC PLANTING ITEM HAMAMELIX VIRGINIANA, WITCH HAZEL, 5 GL, 4' MIN.	2 EA		
0032	6640000000-N	1670	GENERIC PLANTING ITEM HEMEROCALLIS X 'HAPPY RETURNS' DWARF DAYLILY, 1 GL	49 EA		
0033	6640000000-N	1670	GENERIC PLANTING ITEM HYDRANGEA ARBORESCENS 'NCHA5', INVICIBELLE WEE WHITE, 3 GL	35 EA		
0034	6640000000-N	1670	GENERIC PLANTING ITEM HYDRANGEA ARBORESCENS, ANNABELLE HYDRANGEA, 3 GL	22 EA		
0035	6640000000-N	1670	GENERIC PLANTING ITEM IRIS 'CEASAR'S BROTHER' CEASAR 'S BROTHER BEARDED IRIS, SINGLE FAN RHIZOME	1,550 EA		
0036	6640000000-N	1670	GENERIC PLANTING ITEM LIRIOPE SPICATA, CREEPING LILYTURF, #1 CONT.	1,550 EA		
0037	6640000000-N	1670	GENERIC PLANTING ITEM MATTEUCCIA STRUTHIOPTERIS, EUROPEAN OSTRICH FERN, 1 GL	20 EA		
0038	6640000000-N	1670	GENERIC PLANTING ITEM NARCISSUS 'DUTCH MASTER' DAFFODIOL, DN II	1,240 EA		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0039	6640000000-N	1670	GENERIC PLANTING ITEM PANICUM VIRGATUM 'CLOUD NINE' SWITCHGRASS, #1 CONT.	400 EA		
0040	6640000000-N	1670	GENERIC PLANTING ITEM PARROTIA PERSICA 'RUBY VASE' PERSIAN IRONWOOD, 2-3" CAL.	3 EA		
0041	6640000000-N	1670	GENERIC PLANTING ITEM PICEA ABIES 'PUMILA' DWARF NORWAY SPRUCE, 3 GL	3 EA		
0042	6640000000-N	1670	GENERIC PLANTING ITEM PICEA ABIES, NORWAY SPRUCE, 8-10', B&B, SPECIMEN 3.1.2.4	29 EA		
0043	6640000000-N	1670	GENERIC PLANTING ITEM QUERCUS SHUMARDII, SHUMARD OAK 2 1/2-3" CAL., 14-16', B&B, SP ECIMEN	47 EA		
0044	6640000000-N	1670	GENERIC PLANTING ITEM RHODODENDRON CATAWBIENSE 'ROSEUM ELEGANS' RHODODENDRON, #5 CONT	60 EA		
0045	6640000000-N	1670	GENERIC PLANTING ITEM RHODODENDRON 'ROSEUM ELEGANS' RHODODENDRON, 5-7 CAL.	21 EA		
0046	6640000000-N	1670	GENERIC PLANTING ITEM RHODODENDRON X 'YAKU PRINCESS' RHODODENDRON, 3 GL	17 EA		
0047	6640000000-N	1670	GENERIC PLANTING ITEM RUDBECKIA FULGIDA 'GOLDSTRUM' BLACK EYED SUSAN, #1 CONT.	595 EA		
0048	6640000000-N	1670	GENERIC PLANTING ITEM SCHIZACHYRIUM SCOPARIUM 'SMOKE SIGNAL' LITTLE BLUESTEM, 1 GL	14 EA		
0049	6640000000-N	1670	GENERIC PLANTING ITEM SEDUM 'AUTUMN JOY' STONECROP, 1 GL	33 EA		
0050	6640000000-N	1670	GENERIC PLANTING ITEM SPIREA X BUMALDA 'ANTHONY WATERER' SPIREA, 3 GL	29 EA		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0051	6640000000-N	1670	GENERIC PLANTING ITEM TAXUS BACCATA 'REPANDENS', ENGLISH WEeping YEW, 7 GL	11 EA		
0052	6645000000-N	SP	GENERIC PLANTING ITEM BOULDERS	18 EA		
0053	6645000000-N	SP	GENERIC PLANTING ITEM ESTABLISHMENT	18 EA		
0054	6645000000-N	SP	GENERIC PLANTING ITEM MOWING	50 EA		
0055	6650000000-E	1670	MULCH FOR PLANTING	2,000 CY		
0056	6655000000-E	1670	WATER FOR PLANTING	100 M/G		
0057	6665000000-E	1670	POSTEMERGENT HERBICIDAL TREAT- MENT FOR PLANT BEDS	11,000 SY		
0058	6670000000-E	1670	PREEMERGENT HERBICIDAL TREAT- MENT FOR PLANT BEDS	11,000 SY		
0060	6674000000-N	SP	GENERIC PLANTING ITEM (LS) BIKE RACK INSTALL	Lump Sum	L.S.	
0061	6674000000-N	SP	GENERIC PLANTING ITEM (LS) BOLLARD, KIOSK, & ENTRANCE SIGN FOUNDATION INSTALL	Lump Sum	L.S.	
0062	6674000000-N	SP	GENERIC PLANTING ITEM (LS) LANDSCAPE GRADING	Lump Sum	L.S.	
0063	6674000000-N	SP	GENERIC PLANTING ITEM (LS) LANDSCAPE LIGHTING INSTALLATION	Lump Sum	L.S.	
0064	6676000000-E	SP	GENERIC PLANTING ITEM PAVERS & EDGING	2,423 SF		
0065	6680000000-E	SP	GENERIC PLANTING ITEM TOPSOIL	2,400 CY		
0066	6685000000-E	SP	GENERIC PLANTING ITEM WATER FOR SOD	200 M/G		
0067	6890000000-E	SP	CONCRETE STEPS	7 CY		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0068	6895000000-E	SP	HANDRAIL ON STEPS	20 LF		
0926/Mar18/Q43082.0/D420704970000/E66			Total Amount Of Bid For Entire Project :			

Execution of Contract

Contract No: DK00267

County: Watauga County

ACCEPTED BY THE DEPARTMENT

Proposals Engineer

Date

EXECUTION OF CONTRACT AND BONDS
APPROVED AS TO FORM:

Division Engineer

Date

Signature Sheet (Bid) - ACCEPTANCE SHEET