



ROCKY MOUNT
ENGINEERING
THE CENTER OF IT ALL

Request for Proposal #: 320-130123AG-REBID

Dirt Streets Project: Emerald Lane, Coral Drive, and Topaz Avenue

Date of Issue: 3/1/2023

Proposal Due Date: 3/30/2023

at 02:00 P.M. ET

Direct all inquiries concerning this RFP to:

Alicia Gaines
Purchasing Associate III
Alicia.gaines@rockymountnc.gov
252-972-1227

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CITY SPECIFICATIONS DIVISION 15 - UTILITIES (EXCERPTS)

**CITY OF ROCKY MOUNT
STANDARD FORM OF INFORMAL CONTRACT
AND GENERAL CONDITIONS**

I. ADVERTISEMENT FOR BIDS

Per NCGS 143-129 sealed bids for **Dirt Street Project: Emerald Lane, Topaz Avenue, and Coral Drive**, CRM BID NUMBER 320-130123AG-REBID, will be received from contractors by the office of the City of Rocky Mount Purchasing Manager (hereinafter call the "City"), 331 South Franklin Street, Rocky Mount, North Carolina, 27802, until Thursday 3/30/2023 2:00 p.m. at which time and place all bids received will be publicly opened and read aloud.

Proposals must be enclosed in a sealed envelope addressed to Alicia Gaines, Purchasing Associate III, City of Rocky Mount. The project name and bid number as well as the name, address and license number of the Bidder must be plainly marked on the outside of the envelope.

The City of Rocky Mount is seeking 10% minority business participation on this project.

The City reserves the right to reject any and all bids and to waive any informality. The City will not discriminate against any bidder submitting a bid because of race, creed, color, national origin or handicap. The Contractor that is recommended for award of the contract shall be responsible for supplying a notarized e-verify affidavit before award of the contract if one is not on file with the City of Rocky Mount Purchasing Office.

The project includes the following major items: installation of asphalt pavement on unpaved and paved roads; installation of gravity sanitary sewer lines, services and manholes; replacement of driveway pipes; minor clearing and grubbing; reshaping and minor realignment of existing roadbed, etc.

Complete Bidding Documents may be obtained at the City of Rocky Mount Purchasing web site located at <https://rockymountnc.gov/services-finance-bids/>

The project person is Alicia Gaines, Purchasing Associate III (252.972.1227).

Bidders must conform to the provisions of the North Carolina Contractor's Licensing Act of 1925, as amended.

A Bid Security in the amount of five percent (5%) of the Bid must accompany each Bid a \$500,000.00 or more. A 100% Performance Bond and 100% Payment Bond will be required from the successful bidder or any bids \$300,000.00 or more. Bids for this project shall be guaranteed by all bidders for a period of **90** calendar days following the bid opening. See Attachment D for more information regarding bonding requirements.

City of Rocky Mount

Alicia Gaines
Purchasing Associate III, City of Rocky Mount

II. 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 shall cause the bid to be considered irregular and shall be grounds for rejection of the bid.

- A. The bid forms furnished by City of Rocky Mount Purchasing Division with the proposal shall be used and shall not be altered in any manner.
- B. All entries on the bid form, including signatures, shall be written in ink.
- C. The Bidder shall submit a unit price for every item on the bid form. The unit prices for the various contract items shall be written in figures. ***Unit prices must be limited to TWO decimal places.***
- D. An amount bid shall be entered on the bid form for every item. The amount bid for each item shall be determined by multiplying each unit bid by the quantity for that item and shall be written in figures in the "Amount Bid" column of the form.
- E. The total amount bid shall be written in figures in the proper place on the bid form. The total amount shall be determined by adding the amounts bid for each item.
- F. Changes in any entry shall be made by marking through the entry in ink and making the correct entry adjacent thereto in ink. A representative of the Bidder shall initial the change in ink. Do not use White Out or similar product to make corrections.
- G. The bid shall be properly executed. All bids shall show the following information:
 - a. Name of individual, firm, corporation, partnership, or joint venture submitting bid.
 - b. Name of individual or representative submitting bid and position or title.
 - c. Name, signature, and position or title of witness.
 - d. Federal Identification Number
 - e. Contractor's License Number
 - f. Bids submitted by corporations shall bear the seal of the corporation.
 - g. The bid shall not contain any unauthorized additions, deletions, or conditional bids.
 - h. The bidder shall not add any provision reserving the right to accept or reject an award, or to enter into a contract pursuant to an award.
- H. **THE PROPOSAL WITH THE BID FORM STILL ATTACHED SHALL BE PLACED IN A SEALED ENVELOPE AND SHALL HAVE BEEN DELIVERED TO AND RECEIVED IN THE PURCHASING OFFICE –ATTN: ALICIA GAINES, CITY OF ROCKY MOUNT – PURCHASING DIVISION, 331 S. FRANKLIN STREET, ROCKY MOUNT, NORTH CAROLINA, BY 2:00 PM on 3/30/23.**
- I. The sealed bid must display the following statement on the front of the sealed envelope:
PROPOSAL FOR: RFP 320-130123AG-REBID DIRT STREETS PROJECT: Emerald Lane, Coral Drive, Topaz Avenue.

AWARDING CONTRACT

"The North Carolina Department of Transportation, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252) and the Regulations of the Department of Transportation (49 C.F.R., Part 21), issued pursuant to this advertisement will be awarded to the lowest responsible bidder without discrimination on the ground of race, color, or national origin".

Award will be made to the lowest responsible and responsive Bidder for each Contract as soon as practicable, provided that in the selection of equipment or materials, a Contract may be awarded to a responsible Bidder other than the lowest in the interest of standardization or if ultimate economy is clearly evident.

SUBMISSIONS OF BIDS

All spaces for lump sum and unit prices in the Bid Form shall be filled in with a number. Spaces left blank will be evaluated as zero (\$0.00).

Discrepancies between the multiplication of units of Work and Unit Prices will be resolved in favor of the Unit Prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.

The award of the Contract, if it is awarded, will be to the lowest responsive, responsible bidder on the base bid whose qualifications indicate the award will be in the best interest of the City of Rocky Mount. The City of Rocky Mount reserves the right to waive technicalities and/or reject any or all bids.

The Owner will not consider any bid or award of Contract to any person, firm, or corporation who has defaulted in any obligation to the Owner or who, in the opinion of the Owner, failed to perform their work satisfactorily, either as to character or time.

A conditioned or qualified bid will not be accepted.

Requirements for the submittal information will vary based on the complexity and importance of the product to the project as a whole. Submittals should be prepared in a concise and straightforward manner. Submittals shall clearly identify variances from the specifications. Products that clearly do not meet the requirements of the specifications and plans should not be submitted. Unless noted, products shall be the manufacturer's standard offering, with standard options.

Incomplete submittals, or submittals received after the deadline, shall not be considered.

The Owner and Engineer shall review all submitted questions and issue an Addendum to all document holders no later than the project schedule shown herein unless extended by bid addenda. All requests for interpretations related to this RFP must be submitted in writing to the Purchasing Manager no later than the project schedule. All responses to timely submitted requests for interpretations will be published in the form of an addendum and emailed to the pre-bid meeting attendees.

Pre-approval of materials or equipment does not, in any manner, preclude the manufacturer from meeting the full requirements of the specifications, including any performance guarantees required, unless specific exceptions are noted in the pre-approval.

No Post-Bid substitutions shall be permitted except as herein provided.

A **Performance Bond** and a **Payment Bond**, each in the amount of one hundred percent (100%) of the contract price, with a corporate surety approved by the City of Rocky Mount, will be required for the faithful performance of the contract. Bidders shall provide certification that performance and payment bond sureties are licensed in North Carolina. Applies to bids \$300,000.00 or more.

Minority Business participation must be documented and submitted with bids, please see contract documents for further direction.

III. NCDOT STANDARD NOTES

- A. NCDOT Standard Specifications – The 2018 North Carolina Department of Transportation Standard Specifications for Roads and Structures, herein referred to as the ‘Standard Specifications’, and the 2018 Roadway Standard Drawings, shall apply to all portions of this project except as may be modified by this document.
- B. Bidder Prequalification - Bidders are required to be prequalified with NCDOT for their specific discipline. Contractors wishing to become prequalified may obtain information through the NCDOT website at: <https://connect.ncdot.gov/business/Pages/default.aspx>
- C. Disadvantaged Business Enterprise References - Since this is a Federal-aid project with DBE participation, only those requirements and goals set forth by NCDOT Goal Setting Committee are applicable. References to any other requirements or to N.C. General Statute 143-128.2 shall not apply to this project. Refer to Special Provision SP1 G63.
- D. Award of Contract - The contract will be awarded to the lowest responsible, responsive bidder. Alternate items will not be considered in determining the low bidder and will only be evaluated after the award of the contract is made.
- E. Contractor Licensing – On all Federal-aid contracts, non-licensed contractors are permitted to submit bids, however they must be licensed prior to performing any work. Bidders are permitted 60 days, after bid opening, to become licensed by the North Carolina Licensing Board. If they fail to do so within 60 days, their bid will be considered non-responsive and will be rejected. If the successful bidder does not hold the proper license to perform any plumbing, heating, air conditioning, or electrical work in this contract, he will be required to sublet such work to a contractor properly licensed in accordance with Article 2 of Chapter 87 of the General Statutes (licensing of heating, plumbing, and air conditioning contractors) and Article 4 of Chapter 87 of the General Statutes (licensing of electrical contractors).
- F. Bonds - Please note that all Bid Bonds, Payment Bonds, and Performance Bonds required for this project, shall be those found on the NCDOT website. The bonds are located at:
- Bid Bonds (M-5):
<https://connect.ncdot.gov/municipalities/Bid%20Proposals%20for%20LGA%20Content/04%20Bid%20Bonds.doc>
- Payment Bonds (M-6):
<https://connect.ncdot.gov/municipalities/Bid%20Proposals%20for%20LGA%20Content/05%20Payment%20Bonds.doc>
- Performance Bonds (M-7):
<https://connect.ncdot.gov/municipalities/Bid%20Proposals%20for%20LGA%20Content/06%20Performance%20Bonds.doc>
- G. Liability Insurance – In addition to any insurance requirements as may be required by the LGA, the Contractor is obligated to comply with Article 107-15 of the Standard Specifications including the dollar limits set forth.
- H. Proprietary Items - When a proprietary (brand name) product, whether material, equipment or procedure, are specified in the plans or specifications, they are used only to denote the style, type, character, and quality desired of the product. They do not restrict the bidder from proposing other brands, makes, or manufacturers, which are determined to be of equal quality. The approval, or disapproval of those products, will be made by the Engineer prior to allowing those product(s) or material(s) to be incorporated into the work.
- I. Retainage by LGAs - The LGA for this contract will not retain any amount or percentage from progress payments or final estimates due the contractor.
- Retainage by Contractors - Contractors are NOT permitted to retain any amount or percentage from monies due their subcontractors or material suppliers on federally funded projects except as permitted by Sub article 109-4(B) of the Standard Specifications.
- J. Traffic Control - The requirements of the Manual on Uniform Traffic Control Devices (MUTCD) FHWA, as amended by the NCDOT Supplement to MUTCD, shall apply. Traffic Control, both vehicular and pedestrian,

shall be maintained throughout the project as required by these specifications as modified by the project plans or special provisions.

IV. GENERAL SPECIFICATIONS

Reconstruction of existing roadside drainage swales; replacement of existing driveway pipes as directed; installation of proposed culvert and drainage swale; minor clearing and grubbing; reshaping and minor realignment of existing roadbed; installation of asphalt pavement; installation of gravity sewerline and services.

V. SPECIFICATIONS/SCOPE OF WORK

Asphalt paving of existing dirt streets Emerald Lane, Coral Drive and Topaz Avenue. Project includes paving of approximately 6,600 square yards of existing unsurfaced roadway, installation of gravity sewer lines with manholes and services, minor clearing and grubbing, installation of drainage culverts, patching existing pavements, mass grading and reconstruction of existing roadside swales. Project plans prepared by Appian Consulting Engineers, PA, and unit price schedule outline the location and estimated quantities for the required work. All work shall be done in accordance with NCDOT Standard Specifications for Roads and Structures, current version.

STREET NAME	EX. ROAD SURFACE	PRO. WORK DESCRIPTION	APPROX. LENGTH (LF)	APPROX. AREA (SY)
Emerald Lane	ABC	Paving, sewer extension	800	2,000
Coral Drive	ABC	Paving, sewer extension	1,200	3,000
Topaz Ave	ABC	Paving, sewer extension	600	1,600
Cox Ave	Asphalt	Sewer extension NOT INCLUDED IN THIS PROJECT	920	-

VI. THE WORK:

The contractor shall furnish all necessary equipment, labor, and material and permits required to complete the work including but not limited to:

- Clearing and Grubbing as directed to clear vegetation encroaching in the ROW and drainage easements.
- Clean out, regrade and stabilize existing roadside swales (Emerald Lane, Coral Drive, Topaz Avenue)
- Replace existing driveway culverts as directed by City to ensure proper drainage of the roadside swales.
- Replace existing cross drainage culvert in Coral Drive, install 24" RCP, 2'x3' drop inlet and regrade existing roadside ditch to ensure drainage to the proposed culvert.
- Replace existing cross drainage culverts in Coral Drive (at Topaz Drive) and install 18" RCPs and regrade existing roadside ditch to ensure drainage to the proposed culverts.
- Install additional aggregate base course as directed by the City and regrade existing roadbed in accordance with City Standard Detail 2.3 "Standard Ditch Section for Streets," and where directed by the City to address existing drainage patterns. All asphalt roadway widths are proposed to be 22 feet.
- Asphalt paving shall be 2 inches of S9.5B hot mix asphalt and shall include paving of adjacent driveway aprons to a distance of approximately 7 feet from the edge of payment.
- New surfaces shall be installed to maintain or improve the integrity of existing drainage.
- The newly placed asphalt shall tie in smoothly with the existing intersecting road surface.
- Install gravity sanitary sewer lines, services, cleanouts and associated manholes. Sewer along Cox Avenue is future and not included in this contract.
- Adjust existing valve boxes to match final grade.
- Remove/replace existing mailboxes (same day).
- Install Coir-Fiber Waffle Barrier pipe inlet protection and other erosion control devices as directed by the City.

- Undercut Excavation and Replace Existing Driveway Pipe items have been provided as contingency items should they be needed. Undercut unit price shall include removal of existing material (haul offsite) and installation/compaction of approved structural fill or aggregate base course. Quantity of undercut shall be cubic yards as measured in place.

VII. PROJECT SCHEDULE

Event	Responsibility	Date and Time
Issue RFP	City	3/1/2023
Submit Written Questions Deadline	Contractor	3/10/2023 5:00 pm
Provide Response to Questions/ Addendum Deadline	City	3/21/2023 5:00 pm
Submit Proposals	Contractor	3/30/2023 2:00 pm
Contract Award	City	4/13/2023, tentative
Estimated Completion Date	Contractor	9/11/2023, tentative (150 days)

VIII. QUESTIONS

Written questions shall be e-mailed to Alicia.gaines@rockymountnc.gov by the date and time specified above. Contractors will enter "RFP #320-130123AG-REBID – Questions" as the subject for the email.

Questions received prior to the submission deadline date, the Purchasing Managers response, and any additional terms deemed necessary by the City of Rocky Mount will be posted in the form of an addendum to the Interactive Purchasing System (IPS), <http://www.ips.state.nc.us>, the HUB solicitation website, and the City of Rocky Mount website and shall become an Addendum to this RFQ. No information, instruction or advice provided orally or informally by any City personnel, whether made in response to a question or otherwise concerning this RFQ, shall be considered authoritative or binding. Vendors shall rely only on written material contained in an Addendum to this RFQ.

Inquiries submitted no later than the date and time noted in the project schedule. Questions answered verbally will be followed up by written addenda as deemed necessary; oral interpretations shall have no effect.

IX. PROPOSAL SUBMITTAL

Contractors interested in performing the services requested must submit the following information:

- Two (2) copies** of their RFP response including name, address, and phone number of contact person. RFP responses shall be addressed to:

Attn: RFP #320-130123AG-REBID
 City of Rocky Mount
 Purchasing- Alicia Gaines
 331 S. Franklin Street
 Rocky Mount, NC 27802

All RFP responses shall be received by the date and time noted in the schedule above. RFP responses may be sent via US Mail, FedEx, UPS, or hand delivered. **Faxed RFP or emailed responses will not be accepted.**

X. REFERENCES

Contractors shall provide at least three (3) references for which your company has provided Services of similar size and scope to that proposed herein. City of Rocky Mount may contact these users to determine the Services provided are substantially similar in scope to those proposed herein and Contractor's performance has been satisfactory. The information obtained shall be considered in the evaluation of the proposal.

COMPANY NAME	CONTACT NAME	TELEPHONE NUMBER	EMAIL

ATTACHMENT A: PROPOSAL/ACCEPTANCE FORM

for

**City of Rocky Mount Dirt Street Project: Emerald Lane, Coral Drive, Topaz Avenue
320-130123AG-REBID**

Bidder acknowledges that estimated quantities are not guaranteed and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

The undersigned, as bidder, proposes and agrees if this proposal is accepted to contract with the City of Rocky Mount for the furnishing of all materials, equipment, and labor necessary to complete the construction of the work described in these documents in full and complete in accordance with plans, specifications, and contract documents, and to the full and entire satisfaction of the City of Rocky Mount per the unit prices below.

Item No.	Spec. Section	Description	Bid Quant	Unit	Unit Price	Bid Value
1		Mobilization	1	LS		
2		Clearing and Grubbing	1	LS		
3		Mass Grading & Ditch Reconstruction: Topaz Ave	1	LS		
4		Mass Grading & Ditch Reconstruction: Emerald Ln	1	LS		
5		Mass Grading & Ditch Reconstruction: Coral Dr	1	LS		
6	520	Aggregate Base Course (ABC)	620	TN		
7	10	#57 Stone	450	TN		
8	06	Asphalt Concrete Surface Course, S9.5B (2 inch)	800	TN		
9	06	Asphalt Concrete Base Course, B25.0C (1½ inch)	120	TN		
10	06	Asphalt Binder for Plant Mix, Grade PG 64-22	55	TN		
11	03	Remove ex DI at 12+50+/- Coral Drive and install 2x3 DI Box (CB-1) per NCDOT 840.14	1	EA		
12	03	24" RCP Pipe, Class III (including Stone Bedding, Backfill and Removal of Ex. Culvert at 12+50+/- Coral Drive)	30	LF		
13	03	18" RCP Pipe, Class III (including Stone Bedding, Backfill and Removal of Ex. Culvert at 13+50+/- Topaz Avenue)	80	LF		
14	03	18" FES	4	EA		
15	03	24" FES	1	EA		
16	15	8" PVC Sewer Pipe, 0'-6' Depth	720	LF		
17	15	8" PVC Sewer Pipe, 6'-8' Depth	345	LF		
18	15	8" PVC Sewer Pipe, 8'-10' Depth	750	LF		
19	15	8" PVC Sewer Pipe, 10'-12' Depth	270	LF		
20	15	4" Short-Side Sewer Service (Open-Cut)	270	LF		
21	15	4" Long-Side Sewer Service (Bore)	90	LF		
22	15	6" Short-Side Sewer Service (Open-Cut)/ Cleanouts (Topaz Ave)	190	LF		
23	15	4' Dia. Precast Sewer Manhole 6'-8' (Ext. base)	1	EA		
24	15	4' Dia. Precast Sewer Manhole 6'-8' (Extended Base, Sealed)	3	EA		
25	15	4' Dia. Precast Sewer Manhole 8'-10' (Extended Base, Sealed)	4	EA		

Form Continued Next Page

Item No.	Spec. Section	Description	Bid Quant	Unit	Unit Price	Bid Value
26	15	MH #7: 4' Dia. Precast Sewer Manhole 10'-12' (Extended Base)	1	EA		
27	15	MH #12: 4' Dia. Precast Sewer Manhole 10'-12' (Extended Base, Sealed, Vented) 18" above adjacent grade per CRM Det. 4.1	1	EA		
28	858	Adjustment of Meter Boxes or Valves	2	EA		
29	858	Adjustment of Ex. Manhole	1	EA		
30		Fire Hydrant Relocation (at Coral & Topaz)	1	LS		
31	1631	Seeding and Mulching all disturbed areas	1	LS		
32		Removal/ Replacement of Mailboxes	14	EA		
33	305	CI: Replace Ex. Driveway Pipe (15" RCP)	260	LF		
34	16	CI: Temporary Sediment (Silt) Fence	100	LF		
35	16	CI: Excelsior Matting for Erosion Control	900	SY		
36	10	CI: Filter Fabric	150	SY		
37	16	CI: Coir Fiber Wattle Barrier	200	LF		
38	16	CI: Sediment Control Stone	70	TN		
39	225	CI: Undercut Excavation and Backfill	100	CY		
40	230	CI: Borrow	50	CY		
41	16	CI: Class B Rip Rap	15	TN		
42	15	CI: Trench Rock Excavation	10	CY		
43	15	CI: 8" DIP Sewer Pipe, 0-6' Depth	80	LF		
44		CI: Allowance for Private Property Repair	1	LS	ALLOW	\$ 5,000.00
TOTAL BID AMOUNT:						\$

*Contingency Items (CI) will only be paid if directed by City.

BID ALTERNATE						
Item No.	CO #	Spec. Section	Description	Bid Quant.	Unit	Add/ (Deduct)
A1		15	Use 4' Dia. Precast Flat Top Sewer Manhole 10'-12' (Extended 1'x1' Base, Sealed, Vented) 18" above adjacent grade per CRM Det. 4.5, instead of conical MH described in Line Item #27	1.00	LS	

BASIS OF AWARD

- Unit prices to include all labor, material, and equipment cost unless otherwise noted.
- Where unit prices are requested, Contractor to be paid for actual installed quantities verified by the Engineer. Contractor shall provide supporting documentation and load tickets as required by the project specifications. Failure to obtain authorization from the Engineer for placement of any of the unit priced items beyond the previously authorized scope of work or failure to provide requires supporting documentation and quantity verification of material and/or quantities by the Engineer will null and void any claims by the Contractor for compensation for these items.

3. **Award Determination:** The award of a contract will be made to the lowest responsible bidder meeting the requirements of the Contract Documents. However, when it comes to evaluation of the proposal based on cost alone, the determination of the lowest bidder will be based solely on:

The TOTAL BID AMOUNT of ATTACHMENT A: Proposal/Acceptance Form, without adjustments or from unsolicited bid qualifiers – no exceptions.

In submitting this Bid, Bidder represents that Bidder has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged.

<u>Addendum No.</u>	<u>Addendum Date</u>
_____	_____
_____	_____
_____	_____

Respectively submitted this _____ day of _____ 20____

(Contractor's Name)

Federal ID#: _____

By: _____

Witness: _____

Title: _____
(Owner, partner, corp. Pres. Or Vice President)

(Proprietorship or Partnership)

Address: _____

Attest: (corporation)

Email Address: _____

(Corporate Seal)

By: _____ License #: _____

Title: _____
(Corporation, Secretary/Ass't Secretary.)

ATTACHMENT B: ACCEPTED by the City of Rocky Mount

For

Dirt Street Project: Emerald Lane, Coral Drive, and Topaz Avenue

320-130123AG-REBID

City of Rocky Mount

Total amount of accepted by the owner, included base proposal and proposal alternates: \$ _____

BY: _____ TITLE: Purchasing Manager
Ramona Plemmer

Date: _____

PRE-AUDIT

This instrument has been preaudited in the manner required by the Budget and Fiscal Control Act.

Abdul Baloch
Finance Director

Date

ATTACHMENT C: GENERAL CONDITIONS

1. GENERAL

It is understood and agreed that by submitting a proposal that the Contractor has examined these contract documents, drawings and specifications and has visited the site of the Work and has satisfied himself relative to the Work to be performed.

2. DEFINITIONS

Owner: "Owner" shall mean, The City of Rocky Mount

Contractor: "Contractor" shall mean the entity that will provide the services for the Owner.

Designer: The **designer(s)** are those referred to within this contract, or their authorized representatives. The Designer(s), as referred to herein, shall mean architect and/or engineer responsible for preparing the project plans and specifications. They will be referred to hereinafter as if each were of the singular number, masculine gender.

Contract Documents: "Contract Documents" shall consist of the Notice to Bidders; General Conditions of the Contract; special conditions if applicable; Supplementary General Conditions; the drawing and specifications, including all bulletins, addenda or other modifications of the drawings and specifications incorporated into the documents prior to their execution; the proposal; the contract; the performance bond if applicable; and insurance certificates. All of these items together form the contract.

INTENT AND EXECUTION OF DOCUMENTS

The drawings and specifications are complementary, one to the other. That which is shown on the drawings or called for in the specifications shall be as binding as if it were both called for and shown. The intent of the drawings and specifications is to establish the scope of all labor, materials, transportation, equipment, and any and all other things necessary to provide a complete job. In case of discrepancy or disagreement in the Contract Documents, the order of precedence shall be: Form of Contract, specifications, large-scale detail drawings, small-scale drawings.

In such cases where the nature of the work requires clarification by the Designer/ Owner, the Designer/ Owner shall furnish such clarification. Clarifications and drawings shall be consistent with the intent of the Contract Documents and shall become a part thereof.

4. AS-BUILT MARKED-UP CONSTRUCTION DOCUMENTS

Contractor shall provide one complete set of legible "as-built" marked-up construction drawings and specifications recording any and all changes made to the original design during the course of construction. In the event no changes occurred, submit construction drawings and specifications set with notation "No Changes." The Designer/Owner must receive "As-built" marked-up construction drawings and specifications before the final pay request can be processed.

In accordance with City of Rocky Mount Specifications 01 78 39 General Requirements, Contractor to provide RECORD PRINTS and surveyed AS-BUILT information. As-Built utility information to be included on the marked-up Record Prints and Project Record Drawings shall include the following provided by a Professional Land Surveyor (PLS):

- a. Storm Drainage:
Pipe size and material deviations from plan; pipe centerline and pipe bends locations; bottom invert, top and "in/out" invert elevations and location information for junction boxes, inlet structures, headwalls and control structures including elevation and size of all inlet and outlet controls; any other appurtenance based on the Drawings.
- b. Sewer:

- i. Pipe size and material deviations from plan; pipe centerline, bend and cleanout locations; location and elevation information for manholes and junction boxes, and other appurtenance based on the Drawings including bottom invert, invert "in/out," and top elevations.
- ii. "Tap Cards" are to be provide with the Project Record Drawings for each service installed detailing the following minimum information: 1) street address (or county tax parcel identification number if street address is unavailable); 2) type and size of pipe; 3) depth of pipe at cleanout; and 4) tie-down distance to permanent object [two (2) each minimum]. One (1) only tie-down will be allowed from existing meter box or new meter box which is installed as part of this contract. If property irons are existing, at least one tie-down shall be from a property iron along the right of way or easement. Blank "tap cards" shall be provided by the City upon request.

5. SUBMITTAL DATA

The Contractor awarded the contract shall submit all specified submittals to the Owner/Designer. A minimum number of copies as specified by the owner, of all required submittal data pertaining to construction, performance and general dimensional criteria of the components listed in the technical specifications shall be submitted. No material or equipment shall be ordered or installed prior to written approval of the submittals by the Designer/Owner. Failure to provide submittal data for review on equipment listed in the technical specifications will result in removal of equipment by the Contractor at his expense if the equipment is not in compliance with the specifications.

6. SUBSTITUTIONS

In accordance with the provisions of G.S. 133-3, material, product, or equipment substitutions proposed by the bidders to those specified herein can only be considered during the bidding phase until five (5) days prior to the receipt of proposals or by the date specified in the pre proposal conference, when submitted to the Designer with sufficient data to confirm material, product, or equipment equality. Proposed substitutions submitted after this time will be considered only as potential change order.

Submittals for proposed substitutions shall include the following information:

- c. Name, address, and telephone number of manufacturer and supplier as appropriate.
- d. Trade name, model or catalog designation.
- e. Product data including performance and test data, reference standards, and technical descriptions of material, product, or equipment. Include color samples and samples of available finishes as appropriate.
- f. Detailed comparison with specified products including performance capabilities, warranties, and test results.
- g. Other pertinent data including data requested by the Designer to confirm product equality.

If a proposed material, product, or equipment substitution is deemed equal by the Designer to those specified, all bidders of record will be notified by Addendum.

7. WORKING DRAWINGS AND SPECIFICATIONS AT THE JOB SITE

The contractor shall maintain, in readable condition at his job site one complete set of working drawings and specifications for his work including all shop drawings. Such drawings and specifications shall be available for use by the owner, designer or his authorized representative.

The contractor shall maintain at the job site, a day-to-day record of work-in-place that is at variance with the contract documents. Such variations shall be fully noted on project drawings by the contractor and submitted to the designer upon project completion and no later than 30 days after acceptance of the project.

8. MATERIALS, EQUIPMENT, EMPLOYEES

- a. The contractor shall, unless otherwise specified, supply and pay for all labor, transportation, materials, tools, apparatus, lights, power, fuel, heat, sanitary facilities, water, scaffolding and incidentals necessary for the completion of his work, and shall install, maintain and remove all equipment of the construction, other utensils or things, and be responsible for the safe, proper and lawful construction, maintenance and use of same, and shall construct in the best and most workmanlike manner, a complete job and everything incidental thereto, as shown on the plans, stated in the specifications, or reasonably implied therefrom, all in accordance with the contract documents.
- b. All materials shall be new and of quality specified, except where reclaimed material is authorized herein and approved for use. Workmanship shall at all times be of a grade accepted as the best practice of the particular trade involved, and as stipulated in written standards of recognized organizations or institutes of the respective trades except as exceeded or qualified by the specifications.
- c. Upon notice, the contractor shall furnish evidence as to quality of materials.
- d. Products are generally specified by ASTM or other reference standard and/or by manufacturer's name and model number or trade name. When specified only by reference standard, the Contractor may select any product meeting this standard, by any manufacturer. When several products or manufacturers are specified as being equally acceptable, the Contractor has the option of using any product and manufacturer combination listed. However, the contractor shall be aware that the cited examples are used only to denote the quality standard of product desired and that they do not restrict bidders to a specific brand, make, manufacturer or specific name; that they are used only to set forth and convey to proposals the general style, type, character and quality of product desired; and that equivalent products will be acceptable. Request for substitution of materials, items, or equipment shall be submitted to the designer for approval or disapproval; the designer prior to the opening of proposals shall make such approval or disapproval. Alternate materials may be requested after the award if it can clearly be demonstrated that it is an added benefit to the owner and the designer and owner approves.
- e. The designer is the judge of equality for proposed substitution of products, materials or equipment.
- f. If at any time during the construction and completion of the work covered by these contract documents, the language, conduct, or attire of any workman of the various crafts be adjudged a nuisance to the owner or designer, or if any workman be considered detrimental to the work, the contractor shall order such parties removed immediately from grounds.
- g. The Contractor shall cooperate with the designer and the owner in coordinating construction activities.
- h. The Contractor shall maintain qualified personnel and effective supervision at the site at all times during the project and exercise the appropriate quality control program to ensure compliance with the project drawings and specifications. The designer is responsible for determining compliance with the drawings and specifications.

9. CODES, PERMITS AND INSPECTIONS

The Contractor shall obtain the required permits, if required, give all notices, and comply with all laws, ordinances, codes, rules and regulations bearing on the conduct of the work under this contract. If the Contractor observes that the drawings and specifications are at variance therewith, he shall promptly notify the Designer in writing. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, codes, rules and regulations, and without such notice to the Owner, he shall bear all cost arising there from.

All work under this contract shall conform to the current North Carolina Building Code and other state and national codes as are applicable.

All fire alarm work shall be in accordance with the latest State Construction Office (SCO) *Guidelines for Fire Alarm Installation* (NFPA72). Where the contract documents are in conflict with the SCO guidelines, the SCO guidelines shall govern. The Contractor shall be responsible for all the costs for the correction of the work where he installs it in conflict with the latest edition of the SCO *Guidelines for Fire Alarm Installation*.

*Inspection and certification of compliance by local authorities is necessary if an architect or engineer was not employed on the project.

10. PROTECTION OF WORK, PROPERTY, THE PUBLIC AND SAFETY

- a. The contractors shall be jointly responsible for the entire site and the building or construction of the same and provide all the necessary protections, as required by the owner or designer, and by laws or ordinances governing such conditions. They shall be responsible for any damage to the owner's property or of that of others on the job, by them, their personnel, or their subcontractors, and shall make good such damages. They shall be responsible for and pay for any damages caused to the owner. All contractors shall have access to the project at all times, except as indicated in the Supplemental General Conditions.
- b. The contractor shall provide cover and protect all portions of the structure when the work is not in progress, provide and set all temporary roofs, covers for doorways, sash and windows, and all other materials necessary to protect all the work on the building, whether set by him, or any of the subcontractors. Any work damaged through the lack of proper protection or from any other cause, shall be repaired or replaced without extra cost to the owner.
- c. No fires of any kind will be allowed inside or around the operations during the course of construction without special permission from the designer and owner.
- d. The contractor shall protect all trees and shrubs designated to remain in the vicinity of the operations by building substantial boxes around it. He shall barricade all walks, roads, etc., as directed by the designer to keep the public away from the construction. All trenches, excavations or other hazards in the vicinity of the work shall be well barricaded and properly lighted at night.
- e. The contractor shall provide all necessary safety measures for the protection of all persons on the job, including the requirements of the A.G.C. *Accident Prevention Manual in Construction*, as amended, and shall fully comply with all state laws or regulations and North Carolina State Building Code requirements to prevent accident or injury to persons on or about the location of the work. He shall clearly mark or post signs warning of hazards existing, and shall barricade excavations, elevator shafts, stairwells and similar hazards. He shall protect against damage or injury resulting from falling materials and he shall maintain all protective devices and signs throughout the progress of the work.
- f. The contractor shall adhere to the rules, regulations and interpretations of the North Carolina Department of Labor relating to Occupational Safety and Health Standards for the Construction Industry (Title 29, Code of Federal Regulations, Part 1926, published in Volume 39, Number 122, Part II, June 24, 1974, *Federal Register*), and revisions thereto as adopted by General Statutes of North Carolina 95-126 through 155.
- i. In the event of emergency affecting the safety of life, the protection of work, or the safety of adjoining properties, the contractor is hereby authorized to act at his own discretion, without further authorization from anyone, to prevent such threatened injury or damage. Any compensation claimed by the contractor on account of such action shall be determined as provided for under Article 13(b).
- j. Any and all costs associated with correcting damage caused to adjacent properties of the construction site or staging area shall be borne by the contractor. These costs shall include but not be limited to flooding, mud, sand, stone, debris, and discharging of waste products.

11. SUBCONTRACTS AND SUBCONTRACTORS

The Contractor is and remains fully responsible for his own acts or omissions as well as those of any subcontractor or of any employee of either. The Contractor agrees that no contractual relationship exists between the subcontractor and the Owner in regard to the contract, and that the subcontractor acts on this work as an agent or employee of the Contractor.

12. CONTRACTOR-SUBCONTRACTOR RELATIONSHIPS

The Contractor agrees that the terms of these Contract Documents shall apply equally to each Subcontractor as to the Contractor, and the Contractor agrees to take such action as may be necessary to bind each Subcontractor to these terms. The Contractor further agrees to conform to the Code of Ethical Conduct as adopted by the Associated General Contractors of America, Inc., with respect to Contractor-Subcontractor relationships. The Owner reserves the right to limit the amount of portions of work to be subcontracted as hereinafter specified.

13. CHANGES IN THE WORK AND CLAIMS FOR EXTRA COST

- a. The owner may have changes made in the work covered by the contract. These changes will not invalidate and will not relieve or release the contractor from any guarantee given by him pertinent to the contract provisions. These changes will not affect the validity of the guarantee bond and will not relieve the surety or sureties of said bond. All extra work shall be executed under conditions of the original contract.
- b. Except in an emergency endangering life or property, no change shall be made by the contractor except upon receipt of approved change order from the designer, countersigned by the owner authorizing such change. No claim for adjustments of the contract price shall be valid unless this procedure is followed. Should a claim for extra compensation by the contractor be denied by the designer or the owner, the contractor may pursue his claim in accordance with G.S. 143-135.3.

In the event of emergency endangering life or property, the contractor may be directed to proceed on a time and material basis whereupon the contractor shall proceed and keep accurately on such form as specified by the designer or owner, a correct account of costs together with all proper invoices, payrolls and supporting data. Upon completion of the work the change order will be prepared as outlined under either Method "c(1)" or Method "c(2)" or both.

- c. In determining the values of changes, either additive or deductive, contractors are restricted to the use of the following methods:
 1. Where the extra work involved is covered by unit prices quoted in the proposal, or subsequently agreed to by the Contractor, Designer, an Owner the value of the change shall be computed by application of unit prices based on quantities, estimated or actual as agreed of the items involved, except in such cases where a quantity exceeds the estimated quantity allowance in the contract by one hundred percent (100%) or more. In such cases, either party may elect to proceed under subparagraph c (2) herein. If neither party elects to proceed under c (2), then unit prices shall apply.
 2. The contracting parties shall negotiate and agree upon the equitable value of the change prior to issuance of the change order, and the change order shall stipulate the corresponding lump sum adjustment to the contract price.
- d. Under Paragraph "b" and Methods "c(2)" above, the allowances for overhead and profit combined shall be as follows: all contractors (the single contracting entity (prime), his subcontractors (1st tier subs), or their sub-subcontractors (2nd tier subs, 3rd tier subs, etc.) shall be allowed a maximum of 10% on work they each self-perform; the prime contractor shall be allowed a maximum of 5% on contracted work of his 1st tier sub; 1st tier, 2nd tier, 3rd tier, etc. contractors shall be allowed a maximum of 2.5% on the contracted work of their subs. ; Under Method "c(1)", no additional allowances shall be made for overhead and profit. In the case of deductible change orders, under Method "c(2)" and Paragraph (b) above, the contractor shall include no less than five percent (5%) profit, but no allowances for overhead.
- e. The term "net cost" as used herein shall mean the difference between all proper cost additions and deductions. The "cost" as used herein shall be limited to the following:
 1. The actual costs of materials and supplies incorporated or consumed as part of the work;
 2. The actual costs of labor expended on the project site; labor expended in coordination, change

order negotiation, record document maintenance, shop drawing revision or other tasks necessary to the administration of the project are considered overhead whether they take place in an office or on the project site.

3. The actual costs of labor burden, limited to the costs of social security (FICA) and Medicare/Medicaid taxes; unemployment insurance costs; health/dental/vision insurance premiums; paid employee leave for holidays, vacation, sick leave, and/or petty leave, not to exceed a total of 30 days per year; retirement contributions; worker's compensation insurance premiums; and the costs of general liability insurance when premiums are computed based on payroll amounts; the total of which shall not exceed thirty percent (30%) of the actual costs of labor;
4. The actual costs of rental for tools, excluding hand tools; equipment; machinery; and temporary facilities required for the work;
5. The actual costs of premiums for bonds, insurance, permit fees and sales or use taxes related to the work.

Overtime and extra pay for holidays and weekends may be a cost item only to the extent approved by the owner.

- f. Should concealed conditions be encountered in the performance of the work below grade, or should concealed or unknown conditions in an existing structure be at variance with the conditions indicated by the contract documents, the contract sum and time for completion may be equitably adjusted by change order upon claim by either party made within thirty (30) days after the condition has been identified. The cost of such change shall be arrived at by one of the foregoing methods. All change orders shall be supported by a unit cost breakdown showing method of arriving at net cost as defined above.
- g. Change orders shall be submitted by the contractor in writing to the owner/designer for review and approval. The contractor will provide such proposal and supporting data in suitable format. The designer shall verify correctness. Delay in the processing of the change order due to lack of proper submittal by the contractor of all required supporting data shall not constitute grounds for a time extension or basis of a claim. Within fourteen (14) days after receipt of the contractor's accepted proposal including all supporting documentation required by the designer, the designer shall prepare the change order and forward to the contractor for his signature or otherwise respond, in writing, to the contractor's proposal. Within seven (7) days after receipt of the change order executed by the contractor, the designer shall, certify the change order by his signature, and forward the change order and all supporting data to the owner for the owner's signature. The owner shall execute the change order, within seven (7) days of receipt.

At the time of signing a change order, the contractor shall be required to certify as follows:

"I certify that my bonding company will be notified forthwith that my contract has been changed by the amount of this change order, and that a copy of the approved change order will be mailed upon receipt by me to my surety."

- h. A change order, when issued, shall be full compensation, or credit, for the work included, omitted or substituted. It shall show on its face the adjustment in time for completion of the project as a result of the change in the work.
- i. If, during the progress of the work, the owner requests a change order and the contractor's terms are unacceptable, the owner, may require the contractor to perform such work on a time and material basis whereupon the contractor shall proceed and keep accurately on such form as specified by the Designer or owner, a correct account of cost together with all proper invoices, payrolls and supporting data. Upon completion of the work a change order will be prepared with allowances for overhead and profit per paragraph d. above and "net cost" and "cost" per paragraph e. above. Without prejudice, nothing in this paragraph shall preclude the owner from performing or to have performed that portion of the work requested in the change order.

14. ANNULMENT OF CONTRACT

If the contractor fails to begin the work under the contract within the time specified, or the progress of the work is not maintained on schedule, or the work is not completed within the time specified, or fails to perform the work with sufficient workmen and equipment or with sufficient materials to ensure the prompt completion of said work, or shall perform the work unsuitably or shall discontinue the prosecution of the work, or if the contractor shall become insolvent or be declared bankrupt or commit any act of bankruptcy or insolvency, or allow any final judgment to stand against him unsatisfied for a period of forty-eight (48) hours, or shall make an assignment for the benefit of creditors, or for any other cause whatsoever shall not carry on the work in an acceptable manner, the owner may give notice in writing, sent by certified mail, return receipt requested, to the contractor and his surety (if applicable) of such delay, neglect or default, specifying the same, and if the contractor within a period of seven (7) days after such notice shall not proceed in accordance therewith, then the owner shall, declare this contract in default, and, thereupon, the surety shall promptly take over the work and complete the performance of this contract in the manner and within the time frame specified. In the event the contractor, or the surety (if applicable) shall fail to take over the work to be done under this contract within seven (7) days after being so notified and notify the owner in writing, sent by certified mail, return receipt requested, that he is taking the same over and stating that he will diligently pursue and complete the same, the owner shall have full power and authority, without violating the contract, to take the prosecution of the work out of the hands of said contractor, to appropriate or use any or all contract materials and equipment on the grounds as may be suitable and acceptable and may enter into an agreement, either by public letting or negotiation, for the completion of said contract according to the terms and provisions thereof or use such other methods as in his opinion shall be required for the completion of said contract in an acceptable manner. All costs and charges incurred by the owner, together with the costs of completing the work under contract, shall be deducted from any monies due or which may become due said contractor and surety (if applicable). In case the expense so incurred by the owner shall be less than the sum which would have been payable under the contract, if it had been completed by said contractor, then the said contractor and surety (if applicable) shall be entitled to receive the difference, but in case such expense shall exceed the sum which would have been payable under the contract, then the contractor and the surety (if applicable) shall be liable and shall pay to the owner the amount of said excess.

15. TERMINATION FOR CONVENIENCE

- a. Owner may at any time and for any reason terminate Contractor's services and work at Owner's convenience, after notification to the contractor in writing via certified mail. Upon receipt of such notice, Contractor shall, unless the notice directs otherwise, immediately discontinue the work and placing of orders for materials, facilities and supplies in connection with the performance of this Agreement.
- b. Upon such termination, Contractor shall be entitled to payment only as follows: (1) the actual cost of the work completed in conformity with this Agreement; plus, (2) such other costs actually incurred by Contractor as approved by Owner; (3) plus ten percent (10%) of the cost of the balance of the work to be completed for overhead and profit. There shall be deducted from such sums as provided in this subparagraph the amount of any payments made to Contractor prior to the date of the termination of this Agreement. Contractor shall not be entitled to any claim or claim of lien against Owner for any additional compensation or damages in the event of such termination and payment.

16. OWNER'S RIGHT TO DO WORK

If, during the progress of the work or during the period of guarantee, the contractor fails to prosecute the work properly or to perform any provision of the contract, the owner, after seven (7) days' written notice sent by certified mail, return receipt requested, to the contractor from the designer, may perform or have performed that portion of the work. The cost of the work may be deducted from any amounts due or to become due to the contractor, such action and cost of same having been first approved by the designer. Should the cost of such action of the owner exceed the amount due or to become due the contractor, then the contractor or his surety, or both, shall be liable for and shall pay to the owner the amount of said excess.

17. REQUESTS FOR PAYMENT

Contractor shall refer to the Supplemental General Conditions for specific directions on payment schedule, procedures and the name and address where to send applications for payments for this project. It is imperative that invoices be sent only to the above address in order to assure proper and timely delivery and handling.

The Designer/Owner will process all Contractor pay requests as the project progresses. The Contractor shall receive payment within thirty (30) consecutive days after Designer/Owner's approval of each pay request. Payment will only be made for work performed as determined by the Designer/Owner.

Retainage:

- a. Retainage withheld will not exceed 5% at any time.
- b. The same terms apply to general contractor and subcontractors alike.
- c. Following 50% completion of the project no further retainage will be withheld if the contractor/subcontractor has performed their work satisfactorily.
- d. Exceptions:
 1. Owner/Contractor can reinstate retainage if the contractor/subcontractor does not continue to perform satisfactorily.
 2. Following 50% completion of the project, the owner is authorized to withhold additional retainage from a subsequent periodic payment if the amount of retainage withheld falls below 2.5%.

Final payment will be made within thirty (30) consecutive days after acceptance of the work, receipt of marked-up "as-built" drawings and specifications and the submission both of notarized Contractor's affidavit and final pay request. All pay requests shall be submitted to the Designer/Owner for approval.

THE CONTRACTOR'S FINAL PAYMENT AFFIDAVIT SHALL STATE: "THIS IS TO CERTIFY THAT ALL COSTS OF MATERIALS, EQUIPMENT, LABOR, SUBCONTRACTED WORK, AND ALL ELSE ENTERING INTO THE ACCOMPLISHMENT OF THIS CONTRACT, INCLUDING PAYROLLS, HAVE BEEN PAID IN FULL."

18. PAYMENTS WITHHELD

The designer with the approval of the Owner may withhold payment for the following reasons:

- a. Faulty work not corrected.
- b. The unpaid balance on the contract is insufficient to complete the work in the judgment of the designer.
- c. To provide for sufficient contract balance to cover liquidated damages that will be assessed.
- d. The secretary of the Department of Administration may authorize the withholding of payment for the following reasons:
 - i. Claims filed against the contractor or evidence that a claim will be filed.
 - ii. Evidence that subcontractors have not been paid.

When grounds for withholding payments have been removed, payment will be released. Delay of payment due the contractor without cause will make owner liable for payment of interest to the contractor as provided in G.S. 143-134.1. As provided in G.S. 143-134.1(e), the owner shall not be liable for interest on payments withheld by the owner for unsatisfactory job progress, defective construction not remedied, disputed work, or third-party claims filed against the owner or reasonable evidence that a third-party claim will be filed.

19. MINIMUM INSURANCE REQUIREMENTS

Requirements. Providing and maintaining adequate insurance coverage is a material obligation of the Contractor and is of the essence of The Contract. All such insurance shall meet all laws of the City of Rocky Mount. Such insurance coverage shall be obtained from companies that are authorized to provide such coverage and that are authorized by the Commissioner of Insurance to do business in North Carolina. The Contractor shall at all times

comply with the terms of such insurance policies, and all requirements of the insurer under any such insurance policies, except as they may conflict with existing North Carolina laws or The Contract. The limits of coverage under each insurance policy maintained by the Contractor shall not be interpreted as limiting the Contractor's liability and obligations under the Contract.

Insurance. Contractor agrees to maintain **Commercial General Liability** in amount of \$1,000,000 each occurrence, \$1,000,000 each occurrence in Personal & Advertising Injury with \$2,000,000 General Aggregate, and \$2,000,000 Products/Completed Operations Aggregate. Contractor shall maintain \$1,000,000 in **automobile liability**, and other appropriate insurance, as well as Workers Compensation in the required statutory amount of \$500,000.00 for all employees participating in the provision of services under this Contract. Contractor also agrees to maintain \$1,000,000 in **professional liability insurance** if the Contractor is engaged in a professional service pursuant to this Contract. The City of Rocky Mount shall be named by endorsement as an additional insured on the General and Automobile Liability policies. Certificates of such insurance shall be furnished by Contractor to the City and shall contain an endorsement to provide the City at least 30 days' written notice of any intent to cancel or terminate by either Contractor or the insuring company. Failure to furnish insurance certificates or maintain such insurance shall be a default under this contract and shall be grounds for immediate termination of this Contract.

20. ASSIGNMENT

No assignment of the Contractor's obligations or the Contractor's right to receive payment hereunder shall be permitted. However, upon written request approved by the Owner and solely as a convenience to the Contractor, the Owner may: (1) forward the Contractor's payment check directly to any person or entity designated by the Contractor, and (2) include any person or entity designated by Contractor as a joint payee on the Contractor's payment check. In no event shall such approval and action obligate the Owner to anyone other than the Contractor, and the Contractor shall remain responsible for fulfillment of all contract obligations.

21. CLEANING UP AND RESTORATION OF SITE

The Contractor shall keep the sites and surrounding area reasonably free from rubbish at all times and shall remove debris from the site from time to time or when directed to do so by the Owner. Before final inspection and acceptance of the project, the Contractor shall thoroughly clean the sites, and completely prepare the project and site for use by the Owner.

At the end of construction, the contractor shall oversee and implement the restoration of the construction site to its original state. Restoration includes but not limited to walks, drives, lawns, trees and shrubs, corridors, stairs and other elements shall be repaired, cleaned or otherwise restored to their original state.

22. GUARANTEE

The contractor shall unconditionally guarantee materials and workmanship against patent defects arising from faulty materials, faulty workmanship or negligence for a period of twelve (12) months following the final acceptance of the work and shall replace such defective materials or workmanship without cost to the owner.

Where items of equipment or material carry a manufacturer's warranty for any period in excess of twelve (12) months, then the manufacturer's warranty shall apply for that particular piece of equipment or material. The contractor shall replace such defective equipment or materials, without cost to the owner, within the manufacturer's warranty period.

Additionally, the owner may bring an action for latent defects caused by the negligence of the contractor, which is hidden or not readily apparent to the owner at the time of beneficial occupancy or final acceptance, whichever occurred first, in accordance with applicable law.

Guarantees for roofing workmanship and materials shall be stipulated in the specifications sections governing such roof, equipment, materials, or supplies.

23. STANDARDS

All manufactured items and/or fabricated assemblies subject to operation under pressure, operation by connection to an electric source, or operation involving a connection to a manufactured, natural, or LP gas source shall be constructed and approved in a manner acceptable to the appropriate State inspector which customarily requires the

label or re-examination listing or identification marking of appropriate safety standard organization, such as the American Society of Mechanical Engineers for pressure vessels; the Underwriters Laboratories and/or National Electrical Manufacturers Association for electrically operated assemblies; or the American Gas Association for gas operated assemblies, where such approvals of listings have been established for the type of device offered and furnished. Further, all items furnished shall meet all requirements of the Occupational Safety and Health Act (OSHA), and State and federal requirements relating to clean air and water pollution.

All equipment and products must be independent third party tested and labeled (UL, FM, or CTS) before final connections to Owner services or utilities.

24. EQUAL OPPORTUNITY CLAUSE

The non-discrimination clause contained in Section 202 (Federal) Executive Order 11246, as amended by Executive Order 11375, relative to equal employment opportunity for all persons without regard to race, color, religion, sex or national origin, and the implementing rules and regulations prescribed by the secretary of Labor, are incorporated herein.

The contractor(s) agree not to discriminate against any employee or applicant for employment because of physical or mental disabilities in regard to any position for which the employee or applicant is qualified. The contractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified individuals with such disabilities without discrimination based upon their physical or mental disability in all employment practices.

25. MINORITY BUSINESS PARTICIPATION

GS 143-128.2 establishes a ten percent (10%) goal for participation by minority businesses valued \$100,000.00 or more for each State funded building project.

For construction contracts with a value of less than \$300,000, the Owner has the responsibility to make a good faith effort to solicit minority proposals and to attain the goal. The contractor shall include with his proposal a completed Identification of HUB Certified/Minority Business Participation form. Contractor shall submit completed Appendix F MBE Documentation for Contract Payments form with final payment request.

For construction contracts with a value of \$300,000 or greater, the contractor shall comply with the document *Guidelines for Recruitment and Selection of Minority Businesses for Participation in State Construction Contracts* including Identification of Minority Business Participation, Affidavits A, B, C, and D, and Appendix E. These forms provided herein are hereby incorporated and made a part of this contract. Forms can be found at <https://rockymountnc.gov/services-finance-mwbe/>

26. MINORITY BUSINESS RESOLUTION

The City of Rocky Mount is seeking 10% minority business participation on this project.

27. ACCESS TO PERSONS AND RECORDS

The State Auditor shall have access to persons and records as a result of all contracts or grants entered into by the Owner in accordance with General Statute 147-64.7. The Owner's internal auditors shall also have the right to access and copy the Contractor's records relating to the Contract and Project during the term of the Contract and within two years following the completion of the Project/close-out of the Contract to verify accounts, accuracy, information, calculations and/or data affecting and/or relating to Contractor's requests for payment, requests for change orders, change orders, claims for extra work, requests for time extensions and related claims for delay/extended general conditions costs, claims for lost productivity, claims for lost efficiency, claims for idle equipment or labor, claims for price/cost escalation, pass-through claims of subcontractors and/or suppliers, and/or any other type of claim for payment or damages from Owner and/or its project representatives.

28. GOVERNING LAWS

This contract is made under and shall be governed and construed in accordance with the laws of the State of North Carolina, without regard to its conflict of laws rules, and within which State all matters, whether sounding in Contract or tort or otherwise, relating to its validity, construction, interpretation and enforcement shall be determined.

ATTACHMENT D: SUPPLEMENTARY GENERAL CONDITIONS**1. Definitions**

- a. The Contract documents shall consist of the Contract, the accepted Proposal, the General Conditions of the Contract, and the Drawings and Specifications, including all modifications thereof incorporated in the documents before their execution.
- b. Whenever the term "Contractor" is used, it shall be understood as referring to the General Contractor, subcontractor, and all other contractors or their duly authorized agent to whom the work here described is awarded by Contract.
- c. Whenever the term "Engineer" is mentioned, it is understood to mean the Director of Public Works, his assistant or duly authorized agent. The Director of Public Works shall make all necessary explanations as to the meaning and intent of the Specifications and may correct any errors or omissions in same which is necessary for the proper fulfillment of its intentions.
- d. Whenever the term "City" is used, it is to mean the City of Rocky Mount, North Carolina.
- e. The term "Work" of the Contractor or subcontractor includes labor or materials, or both, equipment, transportation, or other facilities necessary to complete the Contract.

2. Time Of Completion

The Contractor shall commence work to be performed under this Contract on a date to be specified in written order from the Designer/Owner and shall fully complete all work hereunder within **150 consecutive calendar days** from the Notice to Proceed. The project over run, liquidated damages, shall be as defined in the Project Special Provisions. If the Contractor is delayed at any time in the progress of his work by any act or negligence of the Owner, his employees or his separate contractor, by changes ordered in the work; by abnormal weather conditions; by any causes beyond the Contractor's control or by other causes deemed justifiable by Owner, then the contract time may be reasonably extended in a written order from the Owner upon written request from the contractor within ten days following the cause for delay. Time extensions for weather delays, acts of God, labor disputes, fire, delays in transportation, unavoidable casualties or other delays which are beyond the control of the Owner do not entitle the Contractor to compensable damages for delays. Any contractor claim for compensable damages for delays is limited to delays caused solely by the owner or its agents.

CONSTRUCTION SCHEDULE (TBD BY CITY)

Project start date will be _____, 2023 with a completion date of _____, 2023.

3. **Intent of Documents**: The intention of the documents is to include all labor and materials, equipment and transportation necessary for the proper execution of the work. It is not intended, however, that materials or work not covered by or properly inferable from any heading, branch, class or trade of the Specifications shall be supplied unless distinctly so noted on the drawings. Materials or work described in words which so applied have a well-known technical or trade meaning shall be held to refer to such recognized standards.
4. **Detail Drawings and Instructions**: The City shall furnish with reasonable promptness, additional instructions, by means of drawings or otherwise, necessary for the proper execution of the work. All such drawings and instructions shall be consistent with the Contract documents, true developments thereof, and reasonably inferable therefrom.
5. **Progress Schedule**: The Contractor shall submit for approval by the Engineer prior to the pre-construction conference, a carefully prepared progress schedule, showing the proposed dates of starting and completing each of the various operations of the work. If applicable, liquidated damages may be deducted on a monthly basis based on contractors progress as compared to the approved project schedule. The progress schedule shall be in graphic form and if required, and in a format acceptable to the City.
6. **Contractor's Understanding**: It is understood and agreed that the Contractor has, by careful examination satisfied himself as to the nature and location of the work, the conformation of the ground, the character, quality and quantity of materials to be encountered, the character of equipment and facilities needed preliminary to and during the prosecution of the work, the general and local conditions, and all other matters which can in any way affect the work under this Contract. No verbal agreement or conversation with any officer, agent or employee

of the City, either before or after the execution of the Contract shall affect or modify any terms or obligations herein contained.

7. **Superintendence by Contractor:** Except where the Contractor is an individual and gives his personal superintendence to the work, the Contractor shall provide a competent superintendent, satisfactory to the City of Rocky Mount on the work at all times during working hours with full authority to act for him. The Contractor shall also provide an adequate staff for the proper coordination and prosecution of the work.
8. **Materials, Appliances, Employees:** Unless otherwise specified, the Contractor shall provide and pay for all materials, labor, water, tools, equipment, light, power, transportation and other facilities necessary for the execution and completion of the work.

Unless otherwise specified, all materials shall be new and both workmanship and materials shall be of good quality. The Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials.

The Contractor shall at all times enforce strict discipline and good order among his employees and shall not employ on the work any unfit person or anyone not skilled in the work assigned to him.

9. **Technical Specifications and Drawings:** Anything mentioned in the Technical Specifications and not shown on the Drawings or shown on the Drawings and not mentioned in the Technical Specifications shall be of like effect as if shown on or mentioned in both. In case of difference between Drawings and Technical Specifications, the Technical Specifications shall govern. In case of any discrepancy in Drawings, or Technical Specifications, the matter shall be immediately submitted to the City of Rocky Mount without whose decision, said discrepancy shall not be adjusted by the Contractor, save only at his own risk and expense.
10. **Royalties and Patents:** The Contractor shall pay all royalties and patent fees. He shall defend all suits or claims for infringement of any patent rights and shall save the City harmless from loss on account thereof, except that the city shall be responsible for such loss when a particular process or the product of a particular manufacturer or manufacturers is specified, but if the Contractor has information that the process or article specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the Engineer.
11. **Permits:** Permits and licenses of a temporary nature necessary for the prosecution of the work shall be secured and paid for by the Contractor unless otherwise stipulated. Permits, licenses and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the City unless otherwise stipulated.
12. **Protection of Work and Property:** The Contractor shall continuously maintain adequate protection of all his work from damage and shall protect the City's and private property from injury or loss arising in connection with this Contract. He shall make good any such damages, injury or loss, except such as may directly be due to errors in the Contract documents or caused by agents or employees of the City.
13. **Cooperation with Utility Owners:** Prior to the beginning of construction, the City will notify all utility owners known to have facilities affected by the construction of the project. The Contractor shall coordinate the schedule with the utility owners for the necessary adjustments of all affected public or private utility facilities. The utility adjustments may be made either before or after the beginning of construction of the project. The adjustments will be made by the utility owner or his representative or by the Contractor when such adjustments are part of the work covered by his Contract.

The Contractor shall use special care in working around and near all existing utilities that are encountered during construction, protecting them where necessary so that they will give uninterrupted service. The Contractor shall call the agency concerned for location of all utilities and shall be responsible for any damage to existing utilities and structures resulting from his work around these utilities or structures.

The Contractor shall cooperate with the utility owner, and/or the owner's representative in the adjustment or placement of utility facilities when such adjustment or placement is made necessary by the construction of the project or has been authorized by the City.

In the event that utility services are interrupted by the Contractor, the Contractor shall promptly notify the owners and shall cooperate with the owners and/or the owner's representative in the restoration of service in the shortest time possible.

Existing fire hydrants shall be kept accessible to fire department personnel at all times.

Prior to submitting his bid, the Contractor shall make his own determination as to the nature and extent of the

utility facilities, including proposed adjustments, new facilities, or temporary work to be performed by the utility owner or his representative; and as to whether or not any utility work is planned by the owner in conjunction with the project construction. The Contractor shall consider in his bid all of the permanent and temporary utility facilities in their present or relocated positions, whether or not specifically shown on the plans or covered in the project special provisions. It will be the Contractor's responsibility to anticipate any additional costs to him resulting from such utility work and to reflect these costs in his bid for the various items in the Contract.

Where changes to utility facilities are to be made solely for the convenience of the Contractor, it shall be the Contractor's responsibility to arrange for such changes and the Contractor shall bear all costs of such changes.

14. **Inspection of Work:** The Engineer and his representatives shall at all times have access to the work wherever it is in preparation or progress and the Contractor shall provide facilities for such access and for inspection. If the specifications, the Engineer's instructions, laws, or ordinances or any public authority require any work to be specially tested or approved, the Contractor shall give the Engineer timely notice of its readiness for inspection. Inspections by the Engineer shall be promptly made, and where practicable at the source of supply. If any work should be covered up without approval or consent of the Engineer, it must, if required by the Engineer, be uncovered for examination at the Contractor's expense.
15. **Changes in Work:** The City, without invalidating the Contract, may order extra work or make changes by altering, adding or deducting from the work, the Contract sum being adjusted accordingly. All such work shall be executed under the conditions of the original Contract except that any claims for extension of time caused thereby shall be adjusted at the time ordering such changes, as mutually agreed upon by the City and Contractor. As long as additional work does not exceed original estimates, additional days will not be granted unless otherwise approved by the Director of Public Works.

The value of any such extra work or change shall be determined by the unit prices named in the Contract, up to but not exceeding 25% of the original Contract total price.

For extra work which exceeds 25% of the original Contract total, the value of any such extra work or change shall be determined in one or more of the following ways:

- (a) By estimate and acceptance of a lump sum.
- (b) By unit prices named in the Contract or subsequently agreed upon.
- (c) By cost and percentage or by cost and a fixed fee.

16. **Conformity with Plans and Specifications:** All work performed, and all materials furnished shall be in reasonably close conformity with the lines, grades, cross sections, dimensions, and material requirements, including tolerances, shown on the plans, or indicated in the specifications.

In the event the Engineer finds the materials or the finished product in which the materials are used not within reasonably close conformity with the plans and specifications, but that reasonably acceptable work has been produced, he will then make a determination if the work is to be accepted and remain in place. If the Engineer agrees that the work is to be accepted, he will have the authority to make such adjustment in Contract price as he deems warranted based upon sound engineering judgment and the final estimate will be paid accordingly.

In the event the Engineer finds the materials or the finished product in which the materials are used, or the work performed are not in reasonably close conformity with the plans and specifications and have resulted in an inferior or unsatisfactory product, the work or materials shall be removed and replaced or otherwise corrected by the Contractor at no cost to the City.

17. **Liquidated Damages and Delays:**

- a. **Liquidated Damages.** If the work cannot be completed within the time stipulated in the Contract, including any extensions of time for excusable delays as herein provided, the Contractor shall pay to the City of Rocky Mount, a fixed and agreed amount, as liquidated damages for each calendar day of delay, until the work is completed, the amount as set forth in the Contract and the Contractor and his sureties shall be liable to the City of Rocky Mount for the amount thereof.
- b. **Excusable Delays.** The right of the Contractor to proceed shall not be terminated nor shall the Contractor be charged with liquidated damages for any delays in the completion of the work due to:
 - 1) Any act or omission of the City outside the scope of the Contract, including extra work; acts of God; unusually severe and abnormal weather conditions; acts of any other contractor in the performance of work for the City; or other conditions, events, or circumstances beyond the control and without the fault

or negligence of the Contractor, which the Contractor could not have reasonably anticipated; or

- 2) Any delay of any Subcontractor occasioned by any of the causes specified in subparagraph (1) above.

Provided, however, the Contractor shall provide written notice to the Engineer within ten (10) days from the occurrence, condition, event, or other cause which is claimed to have delayed the completion of the work. Such notice shall state what effect, if any, such occurrence, condition, event, or other cause is claimed to have upon the time for completing the Contract work, and shall state in what respects, if any, the Contract completion deadline should be revised, and the reasons therefore. No claim by the Contractor for an extension of time for completion shall be considered unless notice of such delay claim is given the City in accordance with the provisions of this subparagraph.

- c. **No Damages for Delays.** The City shall not be obligated or liable to the Contractor for, and the Contractor hereby expressly waives any claims against the City for, any damages, costs, or expenses of any nature occasioned by delays, work disruptions or interference, changes in work sequence, work suspension or rescheduling arising from any act or omission of the City outside the scope of the Contract, acts of God, unusually severe and abnormal weather conditions, or other causes beyond the Contractor's control, it being understood and agreed that the Contractor's sole and exclusive remedy in the event of his inability to achieve completion by the Contract deadline due to claimed delays shall be an extension of the Contract schedule, but only if a claim for such extension is properly made in accordance with the provisions of subparagraph (b) above.

18. **Opening Sections of Project to Traffic:** The City of Rocky Mount, at its election, may give notice to the Contractor and place in use those sections of the improvements which have been completed, inspected and can be accepted as complying with the technical specifications; and if, in its opinion, each such section is reasonably safe, fit, and convenient for the use and accommodations for which it was intended. On such sections which are open, the Contractor shall conduct the remainder of his operations to cause the least obstruction to traffic. The Contractor shall not be relieved of his liability or responsibility, shall not receive any additional compensation due to the added cost of the work, nor shall he receive any extension of the completion date, by reason of such openings. The Contractor shall not be responsible for any maintenance cost due directly to the use of such sections. The period of guarantee stipulated in Section 50 "Guarantee of Work," shall not begin to run until the date "of release of final inspection punch list items" for all work which the Contractor is required to construct under this Contract.
19. **City's Right to Do Work:** If the Contractor should neglect to prosecute the work promptly or fail to **perform** any provisions of the Contract, the City, after 24 hours written notice to the Contractor, may without prejudice to any other remedy he may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor.
20. **Correction of Work Before Final Payment:** Before issuing final payment, the Contractor shall promptly remove from the premises all materials condemned by the Engineer as failing to conform with the Contract, whether incorporated in the work or not, and the Contractor shall promptly replace and re-execute his own work in accordance with the Contract and without expense to the City and shall bear the expense of making good all work of other Contractors destroyed or damaged by such removal or replacement.
21. **Final Inspection, Clean Up and Project Final Acceptance:**
- 21.1. **Final Inspection**
- a. When the improvements contained in this Contract are substantially completed, the Contractor shall notify the Engineer in writing that the work will be ready for final inspection on a definite date which shall be stated in the notice. The notice shall be given at least ten (10) days prior to the date stated for final inspection and bear the signed concurrence of the representative of the Engineer having charge of the inspection. If the Engineer determines that the status of the improvements is accurately represented, the Engineer will make the arrangements necessary to have the final inspection on the date stated in the notice, or soon thereafter as is practicable. The Final Inspection Team will include the Engineer's representatives and the Contractor. The Final Inspection Team may also include representatives of each department of the City of Rocky Mount as well as a representative of the North Carolina Department of Transportation.
 - b. The Final Inspection Team, on the date agreed upon in 21.1(a), shall make a thorough visual inspection to ensure that the project is satisfactorily completed according to the plans and specifications of the Contract and that all clean-up work is complete.

- c. The Final Inspection Team, following the final inspection, shall prepare a written list of the deficient items and clean-up work that needs to be corrected before the issuance of the Final Acceptance Document. The list shall include a reasonable period of time, agreed upon with the Contractor, allowing for the completion of the deficient items and clean-up work. A copy of the list shall be mailed to the Contractor.

21.2. Clean Up Work: Clean up work shall include removal of resurfacing materials and debris, and trash in the medians, rights-of-way, and driveways of the project and intersecting streets.

21.3. Project Final Acceptance: The Contractor, after finishing all clean-up work and correction of all deficient items, shall notify the appropriate party on the Inspection Team to make a final inspection of the project. If the Final Inspection Team, during its inspection finds that the deficient items and clean-up work have been satisfactorily completed according to the terms of this Article and the contract specifications, then the Final Inspection Team recommends to the Engineer's Representative to issue the Final Acceptance Document.

22. Payments to Contractor and Retainage:

22.1. Partial Payments

- a. Partial payment will be based upon progress estimates prepared by the Engineer once each month on the date established by the Engineer.
- b. Monthly or partial payments made by the City of Rocky Mount to the Contractor are monies paid on completed work for the purpose of assisting the Contractor to expedite the work of construction. The Contractor shall be responsible for the care and protection of all materials and work upon which payments have been made until final acceptance of such work and materials by the City of Rocky Mount. Such payments shall not constitute a waiver of the right of the City of Rocky Mount to require the fulfillment of all terms of the contract and the delivery of all improvements embraced in this contract complete and satisfactory to the City of Rocky Mount in all details.

22.2. Retainage: Retainage will be deducted in accordance with Section 17 of the General Conditions.

22.3. Final Payment

- a. After final inspection and acceptance by the City of Rocky Mount of all work under the contract, the Contractor shall prepare his requisition for final payment which shall be the sum of the Bid Unit Prices multiplied by the quantities actually issued or this sum adjusted by approved change orders less prior payments. Final payment request must be accompanied by the Final Payment Affidavit.
- b. The City of Rocky Mount before paying the final estimate may require the Contractor to furnish releases or receipts from all subcontractors having performed any work and all persons having supplied materials, equipment and services to the Contractor, if the City of Rocky Mount deems the same necessary in order to protect its interest. The City of Rocky Mount, however, may, if it deems such action advisable, make payment in part or in full to the Contractor without requiring the furnishing of such releases or receipts and any payments so made shall in no way impair the obligations of any surety or sureties furnished under the contract.
- c. Withholding of any amount due the City of Rocky Mount as "Liquidated Damages", shall be deducted from payments due to the Contractor.

The City may withhold on account of subsequently discovered evidence, nullify whole or part of any certificate to such extent as may be necessary to protect itself from loss on account of:

- a. Defective work not remedied.
- b. Claims filed or reasonable evidence indicating probable filing of claims.
- c. Failure of the Contractor to make payments properly to Subcontractor or for materials or labor.
- d. A reasonable doubt that the Contract can be completed for the balance unpaid.
- e. Damage to another Contractor.

23. City's Right to Terminate Contract: If the Contractor should be adjudged as bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of insolvency, or if he should persistently or repeatedly refuse or should fail, except in cases for which extension

of time is provided, to supply enough properly skilled workmen or proper materials, or if he should fail to make prompt payment to Subcontractors or for material or labor, or persistently discharged laws, ordinances or the instructions of the Engineer, or otherwise be guilty of a substantial violation of any provision of the contract, then the City, upon the certificate of the Engineer that sufficient cause exists to justify such action, may without prejudice to any other right or remedy and after giving the Contractor seven days written notice, terminate the employment of the Contractor and take possession of the premises and of all materials, tools, appliances, there and finish the work by whatever method it may deem expedient. In such case, the Contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the contract price shall exceed the expense of finishing the work, including compensation for additional managerial and administrative services, such excess shall be paid to the Contractor. If such expense shall exceed the unpaid balance, the Contractor shall pay the difference to the City. The expense incurred by the owner as herein provided, and the damage incurred through the Contractor's default, shall be certified by the Engineer.

24. **Contractor's Right to Stop Work or Terminate Contract:** If the work should be stopped under an order of any Court, or other public authority, for a period of three months, through no act or fault of the Contractor or of anyone employed by him, then the Contractor may, upon seven days written notice to the Engineer, stop work or terminate this contract and recover from the City payment for all work executed and loss sustained upon any plant or materials and reasonable profit and damages.
25. **Liability Insurance:** The Contractor shall maintain such insurance as will protect him from claims under workman's compensation acts and such other insurance as will protect him and the City from any other claims for damages for property damage and personal injury, including death, which may arise from operations under this contract whether such operations be by himself, or by any subcontractor or anyone directly or indirectly employed by either of them. Certificates of insurance shall be filed with the City's Purchasing Manager, if he so requires, and shall be subject to his approval for adequacy of protection. Policies of insurance coverage for personal liability and property damage shall be in accordance with Section 19 of the General Conditions and name the City of Rocky Mount as an additionally insured.
26. **Care of Work:**
- a. The Contractor shall be responsible for all damages to person or property that occur as a result of his fault or negligence in connection with the prosecution of the work and shall be responsible for the proper care and protection of all materials delivered and work performed until completion and final acceptance, whether or not the same has been covered in whole or in part by payments made by the City of Rocky Mount.
 - b. In an emergency affecting the safety of life or property, including adjoining property, the Contractor, without special instructions or authorization is authorized to act at his discretion to prevent such threatened loss or injury and he shall so act. He shall likewise act if instructed to do so by the City of Rocky Mount. Any compensation claimed by the Contractor on account of such emergency work will be determined by the City of Rocky Mount as provided in Section 15 "CHANGES IN WORK".
 - c. The Contractor shall avoid damage as a result of his operations to existing sidewalks, streets, curbs, pavements, utilities (except those which are to be replaced or removed), adjoining property, etc., and he shall at his own expense completely repair any damage thereto caused by his operations.
 - d. The Contractor shall shore up, brace, underpin, secure, and protect as may be necessary, all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site, which may be in any way affected by the excavations or other operations connected with the construction of the improvements embraced in this contract. The Contractor shall be responsible for the giving of any and all required notices to any adjoining or adjacent property owner or other party before the commencement of any work. The Contractor shall indemnify and save harmless the City of Rocky Mount from any damages on account of settlements or the loss of lateral support of adjoining property and from all loss or expense and all damages for which the City of Rocky Mount may become liable in consequence of such injury or damage to adjoining and adjacent structures and their premises.
 - e. Any claim for damage arising under this contract shall be made in writing to the party liable within reasonable time of the first observance of such damage.
27. **Indemnity:** The Contractor shall indemnify, save harmless, and defend the City against all losses and claims, demands, payments, suits, actions, recoveries, and judgments of every nature and description brought or recovered against it by reason of any act or omission of the said Contractor, his agents and employees, in the execution of work or in the guarding of it.

28. Safety and Accident Prevention:

- 28.1. General The Contractor shall exercise proper precautions at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the site, which occur as a result of his prosecution of the work. The Contractor shall abide by all applicable safety standards and regulations contained in the Occupational Safety and Health Act, for the construction industry and any other applicable Laws.
- All excavation and trenching work shall conform to OSHA requirements under 29 CFR Part 1926 Subpart P and any other applicable requirements.
 - The Contractor shall have an employee who is a designated competent person as described under OSHA regulations, 29 CFR Part 1926 Subpart P. The person shall be capable of identifying existing or predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.
 - The Contractor shall provide and maintain safety equipment as outlined under OSHA 29 CFR Part 1926 Subpart P and other applicable safety provisions, which include trench boxes, ladders, shoring, barricades, warning vests, gas monitors, meter for hazardous atmospheres and other necessary safety equipment to protect the employees and the job site.
- 28.2. Records: The Contractor shall maintain an accurate record of all cases of death, occupational diseases, and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under the contract. The Contractor shall promptly furnish the City of Rocky Mount with reports concerning these matters.
- 28.3. Indemnity: The Contractor shall indemnify and save harmless the City of Rocky Mount from any claims for damages resulting from personal injury and/or death suffered or alleged to have been suffered by any person as a result of any work conducted under this contract.

29. Bidding Process and Guaranty Bonds:

- 29.1. Bidding Process: The City of Rocky Mount's bidding process policy is regulated by the North Carolina State GS 143-129, GS 143-131 and City of Rocky Mount Standard Procedure 501-3 which define Formal and Informal public contract.
- Formal Contracts, as described by GS 143-131 and **City of Rocky Mount Administrative Policy: Procurement Policy III.18**, are those contracts for construction or repair work that require expenditure of **\$500,000.00** or more; and for the purchase or lease purchase of apparatus, supplies, materials or equipment that require an expenditure of \$90,000.00 or more.
 - Informal Contracts, as described by GS 143-131 and City of Rocky Mount **Administrative Policy: Procurement Policy III.18**, are those contracts for construction or repair work that require expenditure of **\$30,000.00 to \$499,999.99**; and for the purchase or lease purchase of apparatus, supplies, materials or equipment that require expenditure of **\$30,000.00** to \$89,999.99.
 - All Bids as described in 29.01(a), shall be accompanied by a deposit equal to not less than 5 percent of the total amount of the Bid in the form of cash, cashier's check, a certified check or a bid bond by a surety authorized to do business in the State of North Carolina.
- 29.2. Guaranty Bonds
- 29.3. Guaranty Bonds for Formal Contracts
- The successful bidder in a contract **\$300,000.00 or more**, within ten (10) days after the notice of award is received by him, shall provide the City of Rocky Mount with a contract payment bond and a contract performance bond, each in an amount equal to 100 percent of the amount of the contract. All bonds shall be in conformance with GS 44A-33. The corporate surety furnishing the bonds shall be authorized to do business in the State of North Carolina.
 - The successful bidder's failure to execute the contract and file acceptable bonds within ten (10) days after the notice of award is received by him will be just cause for the forfeiture of the bid bond or bid deposit and rescinding the award of the contract. Award may then be made to the next lowest responsible bidder or the work may be re-advertised and constructed under contract, or otherwise as the City of Rocky Mount may decide.

29.4. Guaranty Bonds for Informal Contracts

- a. The successful bidder, within ten (10) days after the notice of award is received by him, shall provide a payment bond in the amount of 100 percent of the amount of the contract.
- b. No performance bond or payment bond will be required for individual construction contracts if the total cost is less than \$300,000.00. A performance bond and payment bond for the full amount of the contract is required for all construction contracts over \$50,000.00 if the contract is part of a project with a total cost of over \$300,000.00. In place of the bonds the Contractor may deposit money, a certified check, or acceptable government securities.

30. **Sanitary Facilities:** The Contractor shall furnish, install, and maintain ample sanitary facilities for the workers. As the needs arise, a sufficient number of enclosed temporary toilets shall be conveniently placed as required by the sanitary codes of the State and City of Rocky Mount. Drinking water shall be provided from an approved source, so piped or transported as to keep it safe and fresh and served from single service containers or satisfactory types of sanitary drinking stands or fountains. All such facilities and services shall be furnished in strict accordance with existing and governing health regulations.

31. **Use of Premises:**

- a. The Contractor shall confine his equipment, storage of materials, and construction operations to the contract limits as shown on the Drawings or if no contract limits are shown, to the right-of-way shown and as prescribed by ordinances or permits or as may be directed by the City of Rocky Mount and shall not unreasonably encumber the site or public rights of way with his materials and construction equipment.
- b. The Contractor shall comply with all reasonable instructions of the City of Rocky Mount and the ordinances and codes of the City of Rocky Mount, regarding signs, advertising, traffic, fires, explosives, danger signals, and barricades.

32. **Liens:**

Neither the final payment nor any part of the retained percentage shall become due until the Contractor, shall deliver to the City a complete release of all liens arising out of the contract, or receipts in full in lieu thereof and, if required in either case, an affidavit that so far as he has knowledge or information the releases and receipts include all labor and materials for which a lien could be filed but the Contractor may, if any subcontractor refuses to furnish a release or receipt in full, furnish a bond satisfactory to the Engineer, to indemnify the City against any lien. If any lien remains unsatisfied after all payments are made, the Contractor, shall refund to the City all monies that the latter may be compelled to pay in discharging such a lien, including all costs and a reasonable attorney's fee.

A copy of the Affidavit shall be submitted with the Contractor's request for final payment.

33. **Working Time Restrictions:** Work hours shall be restricted to 7:00 am to 7:00 pm Monday through Saturday unless otherwise approved by the Engineer.

The Contractor shall notify the Engineer 48 hours in advance of any work scheduled on weekends.

34. **Citizen Notification:** The Contractor shall be responsible for notifying, in writing, all property owners/residents directly affected by this project just prior to beginning construction. A copy of this notification shall be submitted and approved by the Engineer prior to its issuance to the residents. This also includes all businesses whether owned, leased or rented by the property owner of record. Notices are to be mailed and/or hand delivered. Hand delivered notices shall be door-hanger type printed on card stock.

If towing is necessary, the Engineer will make the final decision if the vehicles are to be towed. The time and location in which the "No Parking" signs were posted, and the Notices of Work were distributed will be a considering factor for the towing of vehicles.

On the day of actual work, any towing necessary may be carried out under CITY OF ROCKY MOUNT.

35. **Separate Contracts:** The City reserves the right to let other contracts in connection with this work. The Contractor shall afford other Contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work and shall properly connect and coordinate his work with others.

36. **Subcontracted Work and Subcontractors:**

- a. The Contractor shall, as soon as practicable after the signing of the contract, notify the Engineer in writing

of the names of subcontractors proposed for the work and shall not employ any subcontractors that the Engineer may within a reasonable time object to as incompetent or unfit. The Contractor agrees that he is as fully responsible to the City for the acts and omissions of his subcontractor and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him. Nothing in the Contract Documents shall create any contractual relation between any subcontractor and the City.

- b. The Contractor shall obtain approval of subcontractors as well as any change in subcontractors during the work on the contract from the Engineer. A period of seven (7) days minimum is required for the approval of a subcontractor.
37. **Points and Instructions**: The Contractor shall provide reasonable and necessary opportunities and facilities for setting points and making measurements. He shall not proceed until he has made timely demand upon the Engineer for, and has received from him, such points and instructions as may be necessary as the work progresses. The work shall be done in strict conformity with such points and instructions. The Contractor shall carefully preserve bench marks, reference points and stakes, and in case of willful or careless destruction, he shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their unnecessary loss or disturbance.
38. **Status of Engineer**: The Engineer shall have general supervision and direction of the work. He has authority to stop the work wherever such stoppage may be necessary to insure proper execution of the contract. He shall also have authority to reject all work and materials which do not conform to the contract, to direct the application of force to any portion of the work, as in his judgment is required, and to order the force increased or diminished, and to decide questions which arise in the execution of the work.
39. **Engineer's Decision**: The Engineer shall, within a reasonable time after their presentation to him, make decisions in writing on all claims of the City or the Contractor and on all other matters relating to the execution and progress of the work or the interpretation of the contract documents. All such decisions of the Engineer shall be final.
40. **Lands for Work**: The City shall provide the lands upon which the work under this contract is to be done, except that the Contractor shall provide land required for the erection of temporary construction facilities and storage of his materials, together with right of access to same.
41. **Cleaning Up**: The Contractor shall, as directed by the Engineer, remove from the City's property and from all other public and private property, at his own expense, all temporary structures, rubbish and waste materials resulting from his own operations.
42. **Access to Property**: The Contractor shall, where necessary, provide and maintain access to and from all properties along the line of his work.
43. **Safeguards**: The Contractor shall provide, erect and maintain adequate barricades, warning signs, and lights at all excavations, closures, detours and points of danger.
44. **Survey Construction Stakes**: The Contractor shall furnish all surveys unless otherwise specified.
45. **Materials Sampling and Testing**: All tests of material shall be made by a recognized and approved testing laboratory designated by the Engineer. The expense of such tests shall be borne by the City unless otherwise specified. The Engineer shall have the option to reject request for testing due to the Contractor's inadequate preparation of material or other reasonable causes determined by the Engineer as necessary for the delay of testing. The Contractor shall notify the Engineer 48 hours ahead of time for the needed test.
46. **Tools, Plant and Equipment**: If at any time before the commencement or during the work, tools, plant, or equipment appear to the Engineer to be insufficient, inefficient, or inappropriate to secure the quality of the work required or the proper rate of progress, the Engineer may order the Contractor to increase their efficiency, to improve their character, to augment their number, or to substitute new tools, plant or equipment as the case may be, and the Contractor must conform to such order; but the failure of the Engineer to give such an order shall not relieve the Contractor to secure the quality of work and the rate of progress necessary to complete the work within the time required.
47. **Measurement of Quantities**: The quantities of work performed will be computed by the Engineer on the basis of measurements taken by him or his assistants, and these measurements shall be final and binding. The specifications shall designate the manner in which the measurements of the various types of work shall be measured.

48. **Working Day Defined:** A day shall be counted as a working day in the opinion of the Engineer, whether conditions would permit the Contractor to do six (6) hours of work within daylight hours. Days of delay due to acts of GOD, strikes, court orders, and things of like nature causing delay of the work shall not be counted a working day. The Engineer shall keep a daily record of working conditions and when requested to do so, he/she shall furnish the Contractor within a reasonable time the number of working days that have elapsed. Unless crews are on site prior to 1:00 p.m. of any workday, the Engineer has the right to refuse any work that the Contractor may do. To start work after 1:00 p.m. on a workday, the Contractor must have prior permission from the Engineer. Should this occur, it will be counted as a working day that the Contractor should have worked. It will not be counted as a day of delay. When work is to resume, one (1) day prior notice must be given to the Engineer. That work will begin the next day. There are specific streets that need to be paved on weekends (Saturday and Sunday). Where possible, streets that can be identified, will be marked, streets not marked on Contract, as weekend work, may be added by the Engineer. Advance notice must be given to Contractor, and a date mutually set to pave on that weekend.
49. **Project Time Defined:** Project time shall consist of all calendar days, including weekends and holidays, from the contract notice to proceed date through the specified number of days allowed for the completion of the project in the contract document. The Contractor has been given a project time inclusive of an anticipated amount of bad weather, be it due to the winter months or abnormal rainfall during the remainder of the calendar year.
50. **Guarantee of Work:** The Contractor shall guarantee his work performed under his contract against failures or trouble due to faulty workmanship or materials for a period of twelve (12) months from the date of acceptance of the work.
51. **Force Account Work:** Force account reports shall be submitted to and approved by the Engineer within five (5) days following completion of the work. Failure on the part of the Contractor to submit such a report on time may result in refusal to pay for the work done.
52. **Disposal of Waste Materials from Street and any Other Types of Construction:** Disposal of all waste material from construction sites shall be made in strict accordance with all City ordinances pertaining to disposal of construction waste. It shall be the responsibility of the Contractor to secure the necessary permits and provide all information required to secure said permits. The Contractor shall designate the disposal site prior to beginning construction and in the event waste material is to be disposed of on private property a letter from the property owner shall be furnished the Engineer granting the Contractor or his agent such permission and listing the requirements made by the property owner or the Contractor, if any.
53. **Contractor License:** All invited bidders and contractors shall be advised that those who submit formal bids on this project must be licensed in the State of North Carolina whether he (they) is/are a resident or nonresident of this State, in accordance with GS 87-10 and shall be advised that they must show evidence of a license issued by the North Carolina Licensing Board for General Contractors before the bid is considered. The bidders are advised that Article 37 Subcontractors, of the General Conditions shall be strictly adhered to during the term of this contract.
54. **Emergency Work Crew:** The Contractor and/or the Contractor's subcontractors shall provide an emergency repair crew with adequate trucks and other equipment available when needed to make repairs, clean-up, signing and other work required in connection with this contract. This repair crew shall be on call during non-working hours and during weekends and holidays. The name, address and phone number of at least two responsible members of this crew shall be provided the Engineer or his representatives prior to beginning any work. The members of this crew shall be based, reside, live or stay in within 20 miles of the City Limits of Rocky Mount during the periods that they are on call. Should this "emergency" crew be unavailable for any reason when needed, the City shall have the right to have the required work performed by the quickest means available and the Contractor shall be back-charged at a rate of two (2) times the total cost to the City.
55. **Construction Water:**
- A. Contractors are responsible for securing adequate construction water for their job sites.
 - B. All construction water usage must be metered and will be billed to the Contractor. The Contractor must contact the City of Rocky Mount Water Resources Department to make the applicable arrangements for billing the water usage.
 - C. Contractors must furnish the following information for water usage.
 - a. Meter location and project name.
 - b. Address where applicable and responsible party name.

c. Duration of use and frequency of meter reading.

D. Contractors observed using unmetered water will be fined by the City of Rocky Mount in accordance with City Code provisions.

56. **Dust Control:** The Contractor shall, as directed by the Engineer provide adequate equipment and use other available means to control the dust during the term of this contract. Failure on the part of the Contractor to correct dust control problems as directed will result in the Engineer notifying the Contractor to comply with the contract provisions. In the event that the Contractor fails to begin such remedial action within 24 hours after receipt of such notice, the Engineer may proceed to have the work performed with other forces. The actual cost of the work so performed along with a 20% administrative fee will be deducted from monies due to the Contractor on his contract. Under adverse conditions, the Engineer may choose to suspend the Contractor's operations on the project until all dust control problems have been completed to his satisfaction. Such suspension will not justify an extension of contract time.

57. **Traffic Control:** All traffic control shall be performed in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD).

The contractor shall provide all traffic control devices and signs including Portable Changeable Message Signs (PCMS) in accordance with MUTCD to warn the traveling public. PCMS are required on all streets with four (4) or more marked lanes. PCMS shall be installed at least three (3) days in advance of work and maintained throughout the duration of the work.

Two-way traffic shall be maintained at all times unless otherwise approved by the traffic control plan or Director of Public Works. Total road closures shall not be allowed unless approved by the Director of Public Works.

Any work performed without traffic control per MUTCD, will not be paid for by the Owner.

Traffic Control will be considered **incidental to the work** unless otherwise specified in the contract documents. For projects that include Traffic Control as a lump sum pay item, payments will be made as a percentage of work completed on a monthly basis.

ATTACHMENT E: SUPPLEMENTAL VENDOR INFORMATION

HISTORICALLY UNDERUTILIZED BUSINESSES

Historically Underutilized Businesses (HUBs) consist of minority, women and disabled business firms that are at least fifty-one percent owned and operated by an individual(s) of the categories. Also included in this category are disabled business enterprises and non-profit work centers for the blind and severely disabled.

Pursuant to G.S. 143B-1361(a), 143-48 and 143-128.4, the State invites and encourages participation in this procurement process by businesses owned by minorities, women, disabled, disabled business enterprises and non-profit work centers for the blind and severely disabled. This includes utilizing subcontractors to perform the required functions in this RFP. Any questions concerning NC HUB certification, contact the [North Carolina Office of Historically Underutilized Businesses](#) at (919) 807-2330. The Vendor shall respond to question #1 and #2 below.

a) Is Vendor a Historically Underutilized Business? ☐ Yes ☐ No

b) Is Vendor Certified with North Carolina as a Historically Underutilized Business? ☐ Yes ☐ No

If so, state HUB classification: _____

CONTRACTOR REGISTRATION

New vendors must complete a vendor registration form using the link below. If you are a current vendor that has not completed the online vendor registration also complete the form. Once registration is complete email a copy of your W9 and E-Verify Affidavit to the contact person listed on the coversheet.

<https://rockymountnc.gov/services-finance-vendor-registration/>

ATTACHMENT F: PROPOSED PRODUCTS FORM****DO NOT SUBMIT WITH BID** **DO NOT SUBMIT WITH BID****

No.	Item	Proposed Product(s)	Supplier Names & Addresses
1			
2			
3			
4			
5			

CERTIFICATION BY PRIME CONTRACTOR:

Each supplier listed above has established his ability and responsibility to supply the specified materials in accordance with the Contract Documents.

Contractor

By: _____ Date: _____
Signature & Title

Approved: CITY OF ROCKY MOUNT

By: _____ Date: _____
Director of Public Works

****DO NOT SUBMIT WITH BID** **DO NOT SUBMIT WITH BID****

ATTACHMENT G: MWBE FORMS

Download the City of Rocky Mount HUB related forms and affidavits by accessing the link below. The forms are under the Business with the City header. <https://rockymountnc.gov/services-finance-vendor-registration/>

Identification of HUB Certified/ Minority Business Participation

I, _____
(Name of Bidder)

do hereby certify that on this project, we will use the following HUB Certified/ minority business as construction subcontractors, vendors, suppliers or providers of professional services.

Firm Name, Address and Phone #

Work Type

*Minority
Category

**HUB
Certified
(Y/N)

[illegible]

*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

**** HUB Certification with the state HUB Office required to be counted toward state participation goals.**

The total value of minority business contracting will be (\$)_____.

Attach this form and AFFIDAVIT A or this form and AFFIDAVIT B to the bid.

City of Rocky Mount AFFIDAVIT A – Listing of Good Faith Efforts

County of _____

(Name of Bidder)

Affidavit of _____

I have made a good faith effort to comply under the following areas checked:

Bidders must earn at least 50 points from the good faith efforts listed for their bid to be considered responsive. (1 NC Administrative Code 30 I.0101)

- ☐ **1 – (10 pts)** Contacted minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor, or available on State or local government maintained lists, at least 10 days before the bid date and notified them of the nature and scope of the work to be performed.
- ☐ **2 --(10 pts)** Made the construction plans, specifications and requirements available for review by prospective minority businesses, or providing these documents to them at least 10 days before the bids are due.
- ☐ **3 – (15 pts)** Broken down or combined elements of work into economically feasible units to facilitate minority participation.
- ☐ **4 – (10 pts)** Worked with minority trade, community, or contractor organizations identified by the Office of Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses.
- ☐ **5 – (10 pts)** Attended prebid meetings scheduled by the public owner.
- ☐ **6 – (20 pts)** Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors.
- ☐ **7 – (15 pts)** Negotiated in good faith with interested minority businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
- ☐ **8 – (25 pts)** Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.
- ☐ **9 – (20 pts)** Negotiated joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
- ☐ **10 - (20 pts)** Provided quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands.

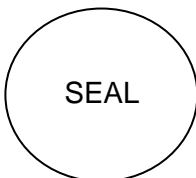
The undersigned, if apparent low bidder, will enter into a formal agreement with the firms listed in the Identification of Minority Business Participation schedule conditional upon scope of contract to be executed with the Owner. Substitution of contractors must be in accordance with GS143-128.2(d) Failure to abide by this statutory provision will constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of the minority business commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

**City of Rocky Mount --AFFIDAVIT B-- Intent to Perform Contract
with Own Workforce.**

County of _____

Affidavit of _____

(Name of Bidder)

I hereby certify that it is our intent to perform 100% of the work required for the _____

_____ contract.

(Name of Project)

In making this certification, the Bidder states that the Bidder does not customarily subcontract elements of this type project, and normally performs and has the capability to perform and will perform all elements of the work on this project with his/her own current work forces; and

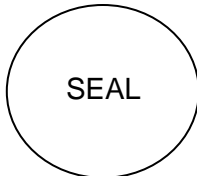
The Bidder agrees to provide any additional information or documentation requested by the owner in support of the above statement. The Bidder agrees to make a Good Faith Effort to utilize minority suppliers where possible.

The undersigned hereby certifies that he or she has read this certification and is authorized to bind the Bidder to the commitments herein contained.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

**DO NOT USE AFFIDAVIT 'B' UNLESS YOU ARE ONLY PROVIDING
LABOR AND NOT PURCHASING ANY MATERIALS OR SUPPLIES**

City of Rocky Mount - AFFIDAVIT C - Portion of the Work to be Performed by HUB Certified/Minority Businesses

County of _____

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the portion of the work to be executed by HUB certified/minority businesses as defined in GS143-128.2(g) and 128.4(a),(b),(e) is equal to or greater than 10% of the bidders total contract price, then the bidder must complete this affidavit.

This affidavit shall be provided by the apparent lowest responsible, responsive bidder within **72 hours** after notification of being low bidder.

Affidavit of _____ I do hereby certify that on the _____
(Name of Bidder)

(Project Name)
Project ID# _____ Amount of Bid \$ _____

I will expend a minimum of _____% of the total dollar amount of the contract with minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. Attach additional sheets if required

Name and Phone Number	*Minority Category	**HUB Certified Y/N	Work Description	Dollar Value

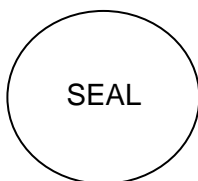
*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

**** HUB Certification with the state HUB Office required to be counted toward state participation goals.**

Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____



Signature: _____

Title: _____

State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

City of Rocky Mount

AFFIDAVIT D – Good Faith Efforts

County of _____

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the goal of 10% participation by HUB Certified/ minority business **is not** achieved, the Bidder shall provide the following documentation to the Owner of his good faith efforts:

Affidavit of _____ I do hereby certify that on the
(Name of Bidder)

Project ID# _____ (Project Name) Amount of Bid \$ _____

I will expend a minimum of _____% of the total dollar amount of the contract with HUB certified/ minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. (Attach additional sheets if required)

Name and Phone Number	*Minority Category	**HUB Certified Y/N	Work Description	Dollar Value

*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

**** HUB Certification with the state HUB Office required to be counted toward state participation goals.**

Examples of documentation that may be required to demonstrate the Bidder's good faith efforts to meet the goals set forth in these provisions include, but are not necessarily limited to, the following:

- Copies of solicitations for quotes to at least three (3) minority business firms from the source list provided by the State for each subcontract to be let under this contract (if 3 or more firms are shown on the source list). Each solicitation shall contain a specific description of the work to be subcontracted, location where bid documents can be reviewed, representative of the Prime Bidder to contact, and location, date and time when quotes must be received.
- Copies of quotes or responses received from each firm responding to the solicitation.
- A telephone log of follow-up calls to each firm sent a solicitation.
- For subcontracts where a minority business firm is not considered the lowest responsible sub-bidder, copies of quotes received from all firms submitting quotes for that particular subcontract.
- Documentation of any contacts or correspondence to minority business, community, or contractor organizations in an attempt to meet the goal.
- Copy of pre-bid roster
- Letter documenting efforts to provide assistance in obtaining required bonding or insurance for minority business.
- Letter detailing reasons for rejection of minority business due to lack of qualification.
- Letter documenting proposed assistance offered to minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letter of credit, including waiving credit that is ordinarily required.

Failure to provide the documentation as listed in these provisions may result in rejection of the bid and award to the next lowest responsible and responsive bidder.

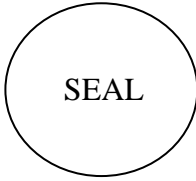
Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

ATTACHMENT H: PROJECT SPECIAL PROVISIONS

The Bidder has carefully examined the location of the proposed work to be known as RFP 320-130123AG-REBID; 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 City of Rocky Mount 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. 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 City of Rocky Mount Standard Specifications and 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. Engineer is herein defined as the Director of Public Works or their designee.

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 the project, 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 the City of Rocky Mount, which proposal, plans, and specifications show the details covering this project, and hereby become a part of this contract.

The City of Rocky Mount Standard Specifications and the published volume entitled North Carolina Department of Transportation, Rocky Mount, 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 City of Rocky Mount Purchasing Manager or such other person as may be designated to sign for the City of Rocky Mount. The conditions and provisions herein cannot be changed except over the signature of the said Purchasing Manager, Finance Director or Director of Public Works.

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 City of Rocky Mount 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.

Contingency Items (CI) will only be paid if directed by the Engineer, Project Manager or Construction Inspector.

DOCUMENTS:

The following documents are herein incorporated into the project documents:

- Dirt Street Project: Emerald Lane, Coral Drive, Topaz Avenue, prepared by Appian Consulting Engineers, PA, 1/24/23.

In addition to the plans and general specifications contained herein, the following are herein made part of this Scope of Work by reference.

- City of Rocky Mount Standard Details
- City of Rocky Mount Standard Specifications
- NCDOT Standard Specifications for Roads and Bridges, latest edition
- NCDOT Standard Drawings, latest edition

BOND REQUIREMENTS:

Bid Bond. For projects \$500,000.00 or more this bid shall be a bid bond secured by a corporate surety, or certified check payable to the order of the City of Rocky Mount, 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.as provided in the Standard Specifications; otherwise said deposit will be returned to the Bidder.

Contract Payment and Performance Bonds are required. Provide the necessary contract payment bond and contract performance bond within fourteen days after the written notice of award is received.

CONTRACT TIME AND LIQUIDATED DAMAGES:

Contract time for substantial completion is **150 days** from Notice to Proceed.

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

The liquidated damages for this contract are **Five Hundred Dollars (\$500) per calendar day.**

NO MAJOR CONTRACT ITEMS:

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

TWELVE MONTH GUARANTEE:

(7-15-03)

108

SP1 G145

(A) The Contractor shall guarantee materials and workmanship against latent and patent defects arising from faulty materials, faulty workmanship or negligence for a period of twelve months following the date of final acceptance of the work for maintenance and shall replace such defective materials and workmanship without cost to the City of Rocky Mount. The Contractor will not be responsible for damage due to faulty design, normal wear and tear, for negligence on the part of the City of Rocky Mount, and/or for use in excess of the design.

(B) Where items of equipment or material carry a manufacturer's guarantee for any period in excess of twelve months, then the manufacturer's guarantee shall apply for that particular piece of equipment or material. the City of Rocky Mount's first remedy shall be through the manufacturer although the Contractor is responsible for invoking the warranted repair work with the manufacturer. The Contractor's responsibility shall be limited to the term of the manufacturer's guarantee. the City of Rocky Mount would be afforded the same warranty as provided by the Manufacturer.

This guarantee provision shall be invoked only for major components of work in which the Contractor would be wholly responsible for under the terms of the contract. Examples would include pavement structures, bridge components, and sign structures. This provision will not be used as a mechanism to force the Contractor to return to the project to make repairs or perform additional work that the City of Rocky Mount would normally compensate the Contractor for. In addition, routine maintenance activities (i.e. mowing grass, debris removal, ruts in earth shoulders,) are not parts of this guarantee.

Appropriate provisions of the payment and/or performance bonds shall cover this guarantee for the project.

MOBILIZATION

The work covered for mobilization consists of preparatory work and operations, including but not limited to those necessary for the movement of personnel, equipment, supplies, and incidentals to the project site; for the establishment of all offices, buildings, and other facilities necessary for work on the project; and for all other work and operations which must be performed or costs incurred prior to beginning work on the various items on the project site.

All work covered by this section shall not be measured but shall be paid for at the lump sum contract price for mobilization. A lump sum payment up to three percent (3%) of the total bid price (to include all bonds, insurance, move-on expenses, etc.) will be allowed for 'mobilization' as a progress payment line item. Up to half of the cost for mobilization will be considered in the initial payment request provided that cost documentation suitable to the ENGINEER is furnished by the CONTRACTOR. Any outstanding balance of mobilization line item will be payable when the Project Work is ten percent (10%) complete as indicated by the approved progress payments.

PROSECUTION OF WORK:

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

In the event that the Contractor's operations are suspended in violation of the above provisions, the sum of \$500.00 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.

CONSTRUCTION PROGRESS SCHEDULE AND BI-WEEKLY MEETINGS

The Contractor shall provide, at the pre-construction conference, a completed progress schedule. The schedule shall be kept up to date and presented with each month's billing information and shall be made available at the bi-weekly progress meetings and at other times as may be deemed necessary by the Engineer or his representative. The Contractor will be represented at bi-weekly progress meetings during the construction of this project. The meetings will be held at the project site or in the City offices as determined by the City.

UNIT BID PRICE

The unit bid price on the items in this contract shall include all materials, labor, equipment, and incidentals necessary to satisfactorily install said items completely in place and accepted unless otherwise mentioned in this contract document.

POINT OF CONTACT

The Contractor upon start of construction shall provide the Engineer with names, addresses, and telephone numbers of two people to be contacted after office hours in case of emergency.

MATERIAL TICKETS

The Contractor shall turn in all material tickets for the purpose of payment to the Project Inspector on a daily basis.

TRENCHES

All trenches shall be back-filled and made safe at the end of each workday. Payment for installation of utility and drainage lines that requires open cut to existing pavement shall include the cost of pavement for repairs (including pavement saw cut and removal) as incidental to the installation of the utility. No separate payment will be made for this work unless otherwise specifically mentioned in this contract.

SUBSURFACE INVESTIGATION

The Contractor shall make his/her own subsurface investigations. Any information obtained by the City as a result of its own subsurface investigations will be made available upon request. This information is provided for informational purposes only and shall not relieve the Contractor of responsibility for making his own investigations.

CONSTRUCTION STAKING

The CONTRACTOR shall furnish all survey and construction staking for this project.

The Contractor shall set provide construction stakes, lines and grades necessary to construct the proposed project. The contractor will locate and mark right-of-way limits and construction easements (if applicable) within the work area. All construction staking shall be performed under the responsible charge of a North Carolina Professional Land Surveyor.

GRADING, SHOULDERS AND SLOPES

Shoulders and slopes shall be free of all stone and clods that exceed one inch in diameter. Fine grading (raking) shall take place just before seeding and mulching. No separate payment will be made for shoulder construction or material for shoulder construction as all work necessary to complete the work will be considered incidental to other items in the contract unless otherwise provided in the contract.

TRAFFIC CONTROL

The Contractor shall provide all traffic control devices and signs to warn the traveling public in accordance with the latest Manual on Uniform Traffic Control Devices (MUTCD). Two-way traffic shall be maintained at all times, unless otherwise required by the traffic control plan.

MATERIALS AND EQUIPMENT STORAGE AND PARKING

When vehicles, equipment, and materials are not being actively used they shall be moved at least 30 feet away from the edge of any travel way open to traffic (or as directed by the Engineer). All debris shall be immediately moved to a location at least 30 feet from the edge of any travel way open to traffic. If vehicles, equipment, materials, and debris are protected by guardrail or barrier, a 5-foot minimum offset from the rail shall be used.

PERSONNEL PARKING

All personnel involved with construction operations shall not park their personal vehicles within the right-of-way of the project limits for the duration of the construction project. The Contractor shall furnish a parking area that is located off the project limits. The Contractor shall be responsible for daily transportation of all employees to and from the provided parking area and the project site. There will be no direct payment for the work cover by this provision. Payment at the contract unit prices for the various items in the contract will be full compensation for all work covered by this provision.

SIDEWALK, DRIVEWAY, CURB & GUTTER REMOVAL AND REPLACEMENT

Care should be taken during construction to avoid damaging the existing sidewalk, curb & gutter and pavement outside the immediate construction area. If damaged, it shall be replaced in accordance with the NCDOT Standard Specifications for Roads and Structures/City of Rocky Mount Standards, as determined by the Engineer, without extra cost to the City. Prior to construction, the Contractor shall inspect the site and report to the Engineer any damages existing before construction. The Contractor shall be advised that when a portion of any area of concrete driveways, curb and gutter and pavement must be removed, all areas to be removed shall be defined by a machine-sawed joint, prior to removal. Saw cut of concrete driveway, curb & gutter and pavement are considered incidental to removal unless otherwise provided in the contract.

CONCRETE DRIVEWAYS

Rev. 4/18/22

Description:

The work covered by this section consists of, but is not limited to, excavating and backfilling, sawing the existing driveway, demolition/ removal/ hauling offsite of existing concrete, subgrade preparation, furnishing and placing new concrete (minimum of 4"), finishing, and constructing and sealing joints in accordance with NCDOT Standard Specifications.

Methods:

Contractor to repair existing concrete driveways that are disturbed by excavation and trenching to an original or better condition in accordance with NCDOT Standard Specifications Section 848.

Where it is necessary to remove a portion of existing driveway saw a neat edge along the pavement to be retained approximately 2" deep with a concrete saw before breaking the adjacent pavement away. Construct concrete in accordance with NCDOT Standard Section 825 and give a sidewalk finish, except as otherwise provided herein.

All forms must be approved by the City prior to pouring of concrete.

Broom the concrete surface in a transverse direction to traffic. Make joint spacing no less than 5 ft. Where existing sidewalks are being widened, line up new transverse joints with existing joints in the adjacent sidewalk. Seal expansion joints where sidewalk and curb ramps are placed adjacent to concrete curb and/or gutter. Do not seal grooved joints.

Do not place backfill adjacent to the sidewalk, driveway or curb ramp until at least 3 curing days have elapsed unless otherwise approved. Compact backfill to a degree comparable to the adjacent undisturbed material.

Do not place vehicles on the completed work until 7 curing days, have elapsed. When high early strength concrete is used, vehicles will be permitted on the completed work after 3 curing days have elapsed.

Payment

Concrete driveways (4") will be measured and paid in square yards, measured along the surface of the completed and accepted work.

MAINTENANCE OF MAILBOXES, SIGNS, MISCELLANEOUS APPURTENANCES

The Contractor shall be required to maintain mailboxes, signs and all miscellaneous appurtenances impacted by construction activities in working order for the duration of construction as directed by the Engineer. Work on the same items shall be done in a timely manner. No separate payment for work on these items will be made as the work will be considered incidental to other items in the contract unless otherwise mentioned in the contract document.

PROJECT COMPLETION

When the project is nearing completion, the City will obtain comments from the impacted property owners concerning items that are outstanding, yet to be completed. The Engineer will determine which items have sufficient justification to be included in the final punch-list, and the Contractor will be required to complete these items with no additional payment and in a timely fashion.

VIDEOTAPE OF PROJECT SITE

The Contractor will videotape the project site in its entirety before construction begins, with emphasis on properties adjoining the project, drives, trees, appurtenances and other distinguishing features. Appropriate narration will include location and description of property and physical features. The Contractor will provide two copies of the project tape in electronic format to the City. No separate payment will be made for this work, and all associated costs will be considered incidental to other items in the contract.

COORDINATION WITH UTILITY COMPANIES

Utilities as shown on the plans are intended to represent general locations only. It shall be the responsibility of the Contractor, prior to construction, to contact appropriate utility owners and precisely locate utilities that could be affected by the proposed construction. If the utility belongs to the City, the Contractor shall dig sample holes to uncover the utility. The digging of sample holes shall be coordinated with the Engineer who will determine the number of such holes and will schedule the City Surveyor to locate utility vertical and horizontal locations. There is no line item to pay for digging work. Work is considered incidental to other pay items.

The Contractor shall be responsible for repair of any damage to the utility as well as any other damage may be caused due to the disturbance of the utility. The Contractor will not be permitted to submit any claims for delays caused by utility relocation and proposed utility construction. The City has coordinated designs of utility relocation with private utility owner representatives

The Contractor shall call North Carolina One Call to identify underground utilities before starting any digging and/or excavation operation. The Contractor shall be responsible for field verifying heights and locations of power lines and will be required to maintain the distance from the power lines in accordance with local, State and Federal Safety regulations.

PROTECTION OF EXISTING PLANTS

The work under this item shall consist of the protection of selected trees, shrubs, or other woody plants.

The plants protective fencing encompass the plants to the drip-line. Deviations from this must be approved by the Engineer.

Plant protective fencing shall be installed prior to beginning any construction on this project. Plant protective fencing shall be constructed at the locations as directed by the Engineer and in accordance with City specification. The fencing shall be maintained in place until all construction operations in that particular area are complete. At completion, only light grading equipment such as small agricultural tractors shall be allowed on the plants' roots. Fill dirt no deeper than two inches shall be allowed under the limb spread of any plant.

No building materials, dirt, or equipment shall be stored inside the protective fencing. Plants that die as a result of the Contractor's negligence shall be removed and replaced as directed by the Engineer at the Contractor's expenses. The new plant shall be guaranteed for a year, planted in the proper season, and planted with approved arboricultural specifications.

The Contractor will be required to cooperate with other contractors, utility companies and others needing access to the project site as (approved by the engineer) to complete the work.

DIVISION 02 EARTHWORK**BURNING RESTRICTIONS:**

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

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

UNDERCUT EXCAVATION

Item has been provided as contingency items should it be needed. Undercut unit price shall include removal of existing material and installation/compaction of approved structural fill or aggregate base course. Quantity of undercut shall be cubic yards as measured in place.

BORROW EXCAVATION (Truck Measurement):

(7-1-95) 230 SP2 R57

The borrow material used on this project will be measured for payment by truck measurement as provided in Article 230-5 of the *2018 Standard Specifications*.

DIVISION 05 – SUBGRADE, BASES AND SHOULDERS**SHOULDER RECONSTRUCTION PER SHOULDER MILE:**

(11-16-10) (Rev. 8-21-12) 560 SP1 R07FR

DESCRIPTION

This work consists of reconstructing each shoulder (including median shoulders as applicable) in accordance with Standard Drawing No. 560.01 and 560.02 of the *2018 Roadway Standard Drawings* except that the rate of slope and width will be as shown on typical section, or to the existing shoulder point, whichever is nearer, as long as the desired typical is achieved, and when completed, seeding and mulching. This work shall be performed immediately after the resurfacing operations are complete as directed by the Engineer.

MATERIALS

The Contractor shall furnish all earth material necessary for the construction of the shoulders in accordance with Section 1019 of the *2018 Standard Specifications*. All soil is subject to test and acceptance or rejection by the Engineer.

CONSTRUCTION METHODS

Obtain material from within the project limits or approved borrow source. Prior to adding borrow material, the existing shoulder shall be scarified to provide the proper bond and shall be compacted to the satisfaction of the Engineer.

Any excess material generated by the shoulder reconstruction shall be disposed of by the Contractor in an approved disposal site.

MEASUREMENT AND PAYMENT

Shoulder Reconstruction will be measured and paid as the actual number of miles of shoulders that have been reconstructed. Measurement will be made along the surface of each shoulder to the nearest 0.01 of a mile. Such price will include disposing of any excess material in an approved disposal site, and for all labor, tools, equipment, and incidentals necessary to complete the work.

Borrow Excavation will be paid in accordance with Section 230 of the *2018 Standard Specifications* for earth material furnished by the Contractor. The requirements of Article 104-5 of the *2018 Standard Specifications*

pertaining to revised contract prices for overrunning minor items will not apply to the item of *Borrow Excavation*.

Incidental Stone Base will be measured and paid as provided in Article 545-6 of the *2018 Standard Specifications*.

Seeding and Mulching will be measured and paid as shown elsewhere in the contract documents.

Payment will be made under:

Pay Item

Shoulder Reconstruction
Borrow Excavation

Pay Unit

Shoulder Mile
Cubic Yard

SHOULDER RECONSTRUCTION PROCEDURE:

(7-1-95) (Rev. 10-15-13)

560

SP1 R10BR

Perform shoulder reconstruction immediately following paving operations and in no case allow paving operations to exceed shoulder operations by more than two weeks without written permission of the Engineer. Failure to meet this requirement shall be cause to cease paving operations until it can be met. Place final pavement marking after shoulder reconstruction.

Upon completion of shoulder reconstruction, remove construction signs and use on other projects or store at the county maintenance installation or as directed by the Engineer.

DIVISION 06 – ASPHALT PAVEMENTS

PRICE ADJUSTMENT -ASPHALT BINDER FOR PLANT MIX:

(11-21-00) 620 SP6 R25

Price adjustments for asphalt binder for plant mix will be made in accordance with Section 620 of the 2018 Standard Specifications.

The base price index for asphalt binder for plant mix is **\$640.00** per ton. This base price index represents an average of F.O.B. selling prices of asphalt binder at supplier's terminals on **January 1, 2023**.

<https://connect.ncdot.gov/projects/construction/Lists/Monthly%20Terminal%20Asphalt%20Binder%20%20Fuel%20FOB%20Prices/AllItems.aspx>

ASPHALT BINDER CONTENT OF ASPHALT PLANT MIXES

The approximate asphalt binder content of the asphalt concrete plant mixtures used on this project will be as follows:

Asphalt Concrete Surface Course, Type S9.5A	6.7%
Asphalt Concrete Surface Course, Type S9.5B	6.0%
Asphalt Concrete Intermediate Course, Type I19.0C	4.8%
Asphalt Concrete Base Course, Type B25.0C	4.4%

The actual asphalt binder content will be established during construction by the Engineer within the limits established in the NCDOT Standard Specifications or Project Special Provisions.

FINAL SURFACE TESTING NOT REQUIRED:

(5-18-04) (Rev. 2-16-16) 610 SP6 R45

Final surface testing is not required on this project in accordance with Section 610-13, Final Surface Testing and Acceptance.

MILLING ASPHALT PAVEMENT:

(1-15-19) 607 SP6 R59

Revise the 2018 Standard Specifications as follows:

Page 6-5, Article 607-2, EQUIPMENT, lines 14-16, delete the seventh sentence of this Article and replace with the following:

Use either a non-contacting laser or sonar type ski system with a minimum of three referencing stations mounted on the milling machine at a length of at least 24 feet.

OPEN GRADED ASPHALT FRICTION COURSE, PERMEABLE ASPHALT DRAINAGE COURSE, AND ULTRA-THIN BONDED WEARING COURSE:

(4-17-12)(Rev. 12-15-15) 609, 610 SP6 R62

When producing and constructing open graded asphalt friction course, permeable asphalt drainage course, and ultra-thin bonded wearing course revise the 2018 Standard Specifications as follows:

Page 6-9, Subarticle 609-6(B) Required Sampling and Testing Frequencies, delete the third paragraph and replace with the following:

Sample and test the completed mixture from each mix design per plant per year at the following minimum frequency during mix production:

<u>Accumulative Production Increment</u>	<u>Number of Samples per Increment</u>
500 tons	1

Page 6-9, Subarticle 609-6(C) Control Charts, delete the second paragraph and replace with the following:

Record the following data on the standardized control charts and in accordance with the requirements of Section 7.4 of the Asphalt QMS Manual:

- (a) Aggregate Gradation Test Results:
 1. 12.5 mm (Types P57 & FC-2 Mod. Only)
 2. 9.5 mm (Excluding Type P57)
 3. 4.75 mm
 4. 2.36 mm
 5. 0.075 mm Sieves

- (b) Binder Content, %, Pb

Page 6-10, Subarticle 609-6(D) Control Limits, Table 609-1 CONTROL LIMITS, replace with the following:

Mix Control Criteria	Target Source	Moving Average Limit	Individual Limit
12.5 mm Sieve (Types P57 & FC-2 Mod)	JMF	±4.0	±8.0
9.5 mm Sieve (Excluding Type P57)	JMF	±4.0	±8.0
4.75 mm Sieve	JMF	±4.0	±8.0
2.36 mm Sieve	JMF	±4.0	±8.0
0.075 mm Sieve	JMF	±1.5	±2.5
Binder Content	JMF	±0.3	±0.7
TSR (Ultra-thin Only)	Min. Spec. Limit	-	- 15%

Page 6-14, Article 609-9 QUALITY ASSURANCE, Table 609-3 LIMITS OF PRECISION FOR TEST RESULTS, replace with the following:

TABLE 609-2 RETEST LIMITS FOR MIX DEFICIENCIES	
Property	Limit
% Binder Content	by more than $\pm 1.0\%$
12.5 mm Sieve (Types P 57 & FC-2 Mod)	by more than $\pm 9.0\%$
9.5 mm Sieve (Excluding Type P 57)	by more than $\pm 9.0\%$
4.75 mm sieve	by more than $\pm 9.0\%$
2.36 mm sieve	by more than $\pm 9.0\%$
0.075 mm sieve	by more than $\pm 3.0\%$
TSR (Ultra-thin only)	by more than -15% from Specification limit

Page 6-12, Subarticle 609-6(F) Allowable Retesting for Mix Deficiencies, Table 609-2 RETEST LIMITS FOR MIX DEFICIENCIES, replace with the following:

TABLE 609-3 LIMITS OF PRECISION FOR TEST RESULTS	
Mix Property	Limits of Precision
12.5 mm Sieve (Types P 57 & FC-2 Mod. Only)	$\pm 6.0\%$
9.5 mm Sieve (Excluding Type P 57)	$\pm 5.0\%$
4.75 mm Sieve	$\pm 5.0\%$
2.36 mm Sieve	$\pm 5.0\%$
0.075 mm Sieve	$\pm 2.0\%$
Asphalt Binder Content	$\pm 0.5\%$
TSR (Ultra-thin HMA Only)	$\pm 15.0\%$

Page 6-16, Article 610-3, COMPOSITION OF MIXTURES (MIX DESIGN AND JOB MIX FORMULA), line 30, add the following at the end of the sixth paragraph:

For OGAFC, the maximum percent of binder contributed from RAS or a combination of RAS and RAP is 18%.

ASPHALT CONCRETE PLANT MIX PAVEMENTS:

(2-20-18) (Rev. 1-15-19)

610, 1012

SP6 R65

Revise the 2018 Standard Specifications as follows:

Page 6-14, Table 609-3, LIMITS OF PRECISION FOR TEST RESULTS, replace with the following:

TABLE 609-3 LIMITS OF PRECISION FOR TEST RESULTS	
Mix Property	Limits of Precision
25.0 mm sieve (Base Mix)	$\pm 10.0\%$
19.0 mm sieve (Base Mix)	$\pm 10.0\%$
12.5 mm sieve (Intermediate & Type P-57)	$\pm 6.0\%$
9.5 mm sieve (Surface Mix)	$\pm 5.0\%$
4.75 mm sieve (Surface Mix)	$\pm 5.0\%$
2.36 mm sieve (All Mixes, except S4.75A)	$\pm 5.0\%$
1.18 mm sieve (S4.75A)	$\pm 5.0\%$
0.075 mm sieve (All Mixes)	$\pm 2.0\%$
Asphalt Binder Content	$\pm 0.5\%$
Maximum Specific Gravity (G_{mm})	± 0.020
Bulk Specific Gravity (G_{mb})	± 0.030
TSR	$\pm 15.0\%$

QA retest of prepared QC Gyratory Compacted Volumetric Specimens	± 0.015
Retest of QC Core Sample	± 1.2% (% Compaction)
Comparison QA Core Sample	± 2.0% (% Compaction)
QA Verification Core Sample	± 2.0% (% Compaction)
Density Gauge Comparison of QC Test	± 2.0% (% Compaction)
QA Density Gauge Verification Test	± 2.0% (% Compaction)

Page 6-17, Table 610-1, MIXING TEMPERATURE AT THE ASPHALT PLANT, replace with the following:

TABLE 610-1 MIXING TEMPERATURE AT THE ASPHALT PLANT	
Binder Grade	JMF Temperature
PG 58-28; PG 64-22	250 - 290°F
PG 76-22	300 - 325°F

Page 6-17, Subarticle 610-3(C), Job Mix Formula (JMF), lines 38-39, delete the fourth paragraph.

Page 6-18, Subarticle 610-3(C), Job Mix Formula (JMF), line 12, replace "SF9.5A" with "S9.5B".

Page 6-18, Table 610-3, MIX DESIGN CRITERIA, replace with the following:

TABLE 610-3 MIX DESIGN CRITERIA									
Mix Type	Design ESALs millions ^A	Binder PG Grade	Compaction Levels		Max. Rut Depth (mm)	Volumetric Properties ^B			
			G _{mm} @			VMA	VTM	VFA	%G _{mm}
			N _{ini}	N _{des}		% Min.	%	Min.-Max.	@ N _{ini}
S4.75A	< 1	64 - 22	6	50	11.5	16.0	4.0 - 6.0	65 - 80	≤ 91.5
S9.5B	0 - 3	64 - 22	6	50	9.5	16.0	3.0 - 5.0	70 - 80	≤ 91.5
S9.5C	3 - 30	64 - 22	7	65	6.5	15.5	3.0 - 5.0	65 - 78	≤ 90.5
S9.5D	> 30	76 - 22	8	100	4.5	15.5	3.0 - 5.0	65 - 78	≤ 90.0
I19.0C	ALL	64 - 22	7	65	-	13.5	3.0 - 5.0	65 - 78	≤ 90.5
B25.0C	ALL	64 - 22	7	65	-	12.5	3.0 - 5.0	65 - 78	≤ 90.5
	Design Parameter					Design Criteria			
All Mix Types	Dust to Binder Ratio (P _{0.075} / P _{be})					0.6 - 1.4 ^C			
	Tensile Strength Ratio (TSR) ^D					85% Min. ^E			

A. Based on 20 year design traffic.

B. Volumetric Properties based on specimens compacted to N_{des} as modified by the Department.

C. Dust to Binder Ratio (P_{0.075} / P_{be}) for Type S4.75A is 1.0 - 2.0.

D. NCDOT-T-283 (No Freeze-Thaw cycle required).

E. TSR for Type S4.75A & B25.0C mixes is 80% minimum.

Page 6-19, Table 610-5, BINDER GRADE REQUIREMENTS (BASED ON RBR%), replace with the following:

TABLE 610-5
BINDER GRADE REQUIREMENTS (BASED ON RBR%)

Mix Type	%RBR ≤ 20%	21% ≤ %RBR ≤ 30%	%RBR ≥ 30%
S4.75A, S9.5B, S9.5C, I19.0C, B25.0C	PG 64-22	PG 64-22 ^A	PG-58-28
S9.5D, OGFC	PG 76-22 ^B	n/a	n/a

A. If the mix contains any amount of RAS, the virgin binder shall be PG 58-28.

B. Maximum Recycled Binder Replacement (%RBR) is 18% for mixes using PG 76-22 binder.

Page 6-20, Table 610-6, PLACEMENT TEMPERATURES FOR ASPHALT, replace with the following:

**TABLE 610-6
PLACEMENT TEMPERATURES FOR ASPHALT**

Asphalt Concrete Mix Type	Minimum Surface and Air Temperature
B25.0C	35°F
I19.0C	35°F
S4.75A, S9.5B, S9.5C	40°F ^A
S9.5D	50°F

- A.** For the final layer of surface mixes containing recycled asphalt shingles (RAS), the minimum surface and air temperature shall be 50°F.

Page 6-21, Article 610-8, SPREADING AND FINISHING, lines 34-35, delete the second sentence and replace with the following:

Use an MTV for all surface mix regardless of binder grade on Interstate, US Routes, and NC Routes (primary routes) that have 4 or more lanes and median divided.

Page 6-21, Article 610-8, SPREADING AND FINISHING, lines 36-38, delete the fourth sentence and replace with the following:

Use MTV for all ramps, loops, Y-line that have 4 or more lanes and are median divided, full width acceleration lanes, full width deceleration lanes, and full width turn lanes that are greater than 1000 feet in length.

Page 6-23, Table 610-7, DENSITY REQUIREMENTS, replace with the following:

**TABLE 610-7
DENSITY REQUIREMENTS**

Mix Type	Minimum % G_{mm} (Maximum Specific Gravity)
S4.75A	85.0 ^A
S9.5B	90.0
S9.5C, S9.5D, I19.0C, B25.0C	92.0

- A.** Compaction to the above specified density will be required when the S4.75A mix is applied at a rate of 100 lbs/sy or higher.

Page 6-24, Article 610-13, FINAL SURFACE TESTING, lines 35-36, delete the second sentence and replace with the following:

Final surface testing is not required on ramps, loops and turn lanes.

Page 6-26, Subarticle 610-13(A)(1), Acceptance for New Construction, lines 29-30, delete the second sentence and replace with the following:

Areas excluded from testing by the profiler may be tested using a 10-foot straightedge in accordance with Article 610-12.

Page 6-27, Subarticle 610-13(B), Option 2- North Carolina Hearne Straightedge, lines 41-46, delete the eighth and ninth sentence of this paragraph and replace with the following:

Take profiles over the entire length of the final surface travel lane pavement exclusive of structures, approach slabs, paved shoulders, tapers, or other irregular shaped areas of pavement, unless otherwise approved by the Engineer. Test in accordance with this provision all mainline travel lanes, full width acceleration or deceleration lanes and collector lanes.

Page 6-28, Subarticle 610-13(B), Option 2- North Carolina Hearne Straightedge, lines 1-2, delete these two lines.

Page 6-32, Article 610-16 MEASUREMENT AND PAYMENT, replace with the following:

Pay Item	Pay Unit
Asphalt Concrete Base Course, Type B25.0C	Ton
Asphalt Concrete Intermediate Course, Type I19.0C	Ton
Asphalt Concrete Surface Course, Type S4.75A	Ton
Asphalt Concrete Surface Course, Type S9.5B	Ton
Asphalt Concrete Surface Course, Type S9.5C	Ton
Asphalt Concrete Surface Course, Type S9.5D	Ton

Page 10-30, Table 1012-1, AGGREGATE CONSENSUS PROPERTIES, replace with the following:

**TABLE 1012-1
AGGREGATE CONSENSUS PROPERTIES^A**

Mix Type	Coarse Aggregate Angularity^B	Fine Aggregate Angularity % Minimum	Sand Equivalent % Minimum	Flat and Elongated 5 : 1 Ratio % Maximum
<i>Test Method</i>	<i>ASTM D5821</i>	<i>AASHTO T 304</i>	<i>AASHTO T 176</i>	<i>ASTM D4791</i>
S4.75A; S9.5B	75 / -	40	40	-
S9.5C; I19.0C; B25.0C	95 / 90	45	45	10
S9.5D	100 / 100	45	50	10
OGFC	100 / 100	45	45	10
UBWC	100 / 85	45	45	10

A. Requirements apply to the design aggregate blend.

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

PAVING INTERSECTIONS:

(7-1-95) (Rev. 8-21-12) 610 SP6 R67BR

Condition, prime, and surface all unpaved intersections back from the edge of the pavement on the main line of the project a minimum distance of 50 feet. The pavement placed in the intersections shall be of the same material and thickness placed on the mainline of the project.

Resurface all paved intersections back to the ends of the radii, or as directed by the Engineer.

Widen the pavement on curves as directed by the Engineer.

PAVING DRIVEWAYS AND MAILBOX TURNOUTS:

(8-21-12) 610 SP6 R70BR

Condition, prime, and surface all driveway and mailbox turnouts as directed by the Engineer. Place pavement on driveway and mailbox turnouts of the same material as used on the main line and in depths directed by the Engineer. Widen the pavement on curves as directed by the Engineer.

DIVISION 11 – WORK ZONE TRAFFIC CONTROL**WORK ZONE TRAFFIC CONTROL GENERAL REQUIREMENTS****TEMPORARY TRAFFIC CONTROL (TTC):****TRAFFIC CONTROL:**

All traffic control shall be performed in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD).

The contractor shall provide all traffic control devices and signs including Portable Changeable Message Signs (PCMS) in accordance with MUTCD to warn the traveling public. PCMS are required on all streets with four (4) or more marked lanes. PCMS shall be installed at least three (3) days in advance of work and maintained throughout the duration of the work.

Two-way traffic shall be maintained at all times unless otherwise approved by the City. Total road closures shall not be allowed except as approved by the City.

Any work performed without traffic control per MUTCD, will not be paid for by the Owner.

The Traffic Control shall be considered incidental to the work.

ROAD CLOSURES, NOTICE AND MAINTENANCE OF TRAFFIC

Temporary Road closures proposed by the Contractor must be approved by the Engineer in advance. Approved Road closures will be set up and maintained by the contractor. Any detours required by the temporary closure will set up and maintained by the Owner. Contractor shall coordinate all road closures and detours with the Owner at least 72 hours in advance of closure.

Where construction operations are to take place under traffic, the Contractor shall maintain at least one lane of traffic at all times and shall provide serviceable access to all business and dwelling units in the project area. The Contractor shall provide such flagmen as are necessary to temporarily control traffic in the project area and is solely responsible for erection and maintenance of traffic control devices and barricades. All traffic control shall be in accordance with the MUTCD.

Where construction operations will impact parking on public ROW, Contractor shall notify area residents and business of need to move vehicles by door hanger. Notice of work must be provided at least 24 hours in advance of starting operations and shall include a contact number for the Contractor. Any vehicles remaining on the street or public ROW after proper notification will be towed by the Owner.

Where roadway closures have been approved by the City, Contractor shall provide notice of temporary road closures local residents and business by door hangar at least 48 hours in advance. Contractor shall make individual contact with impacted businesses to coordinate maintenance of access when temporary closures will exceed 24 hours. Reasonable access shall be provided for local residents and business throughout the closure period.

Access to driveways may be restricted until concrete has achieved sufficient strength to support the anticipated traffic load. However, Contractor must maintain reasonable access to the property. Contractor shall notify residents and business of restricted driveway access at least 24 hours in advance.

MEASUREMENT AND PAYMENT

No direct payment will be made for furnishing and installing necessary traffic control in accordance with the project plans and/or MUTCD. Installation and maintenance of adequate traffic control measures will be considered incidental to other work being paid for by the various items in the contract.

DIVISION 16 – EROSION CONTROL AND Roadside DEVELOPMENT**EROSION AND STORMWATER CONTROL FOR SHOULDER CONSTRUCTION AND RECONSTRUCTION:**

(11-16-10) (Rev. 8-21-12)

105-16, 225-2, Division 16

SP16 R03R

Land disturbing operations associated with shoulder construction/reconstruction may require erosion and sediment control/stormwater measure installation. National Pollutant Discharge Elimination System (NPDES) inspection and reporting may be required.

Erosion control measures shall be installed per the erosion control detail in any area where the vegetated buffer between the disturbed area and surface waters (streams, wetlands, or open waters) or drainage inlet is less than 10 feet. The Engineer may reduce the vegetated buffer threshold for this requirement to a value between 5 and 10 feet. Erosion control measures shall be spot checked every 14 days until permanent vegetative establishment.

In areas where shoulder construction/reconstruction includes disturbance or grading on the front slope or to the toe of fill, relocating ditch line or backslope, or removing vegetation from the ditch line or swale, NPDES inspection and monitoring are required every 14 days or within 24 hours of a rainfall event of 0.5" or greater. Maintain daily rainfall records. Install erosion control measures per detail.

In areas where the vegetated buffer is less than 10 feet between the disturbed area and waters of the State classified as High Quality Water (HQW), Outstanding Resource Water (ORW), Critical Areas, or Unique Wetlands, NPDES inspection and monitoring are required every 14 days or within 24 hours of a rainfall event of 0.5" or greater. The Engineer may reduce the vegetated buffer threshold for this requirement to a value between 5 and 10 feet. The plans or provisions will indicate the presence of these water classifications. Maintain daily rainfall records. Install erosion control measures per detail.

Land disturbances hardened with aggregate materials receiving sheet flow are considered non-erodible.

Sites that require lengthy sections of silt fence may substitute with rapid permanent seeding and mulching as directed by the Engineer.

NPDES documentation shall be performed by a Level II Erosion and Sediment Control/Stormwater certificate holder.

Materials used for erosion control will be measured and paid as stated in the contract.

Stabilization Requirements:

(5-1-15)

S-2

Stabilization for this project shall comply with the time frame guidelines as specified by the NCG-010000 general construction permit effective August 3, 2011 issued by the North Carolina Department of Environment and Natural Resources Division of Water Quality. 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.

SEEDING AND MULCHING:**(East Crimp)**

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.

All Roadway Areas**March 1 - August 31**

50# Tall Fescue
 10# Centipede
 25# Bermudagrass (hulled)
 500# Fertilizer
 4000# Limestone

September 1 - February 28

50# Tall Fescue
 10# Centipede
 35# Bermudagrass (unhulled)
 500# Fertilizer
 4000# Limestone

Waste and Borrow Locations**March 1 - August 31**

75# Tall Fescue
 25# Bermudagrass (hulled)
 500# Fertilizer
 4000# Limestone

September 1 - February 28

75# Tall Fescue
 35# Bermudagrass (unhulled)
 500# Fertilizer
 4000# Limestone

Note: 50# of Bahiagrass may be substituted for either Centipede or Bermudagrass only upon Engineer's request.

Approved Tall Fescue Cultivars

06 Dust	Escalade	Justice	Scorpion
2 nd Millennium	Essential	Kalahari	Serengeti
3 rd Millennium	Evergreen 2	Kentucky 31*	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	

***Note: Kentucky 31 will no longer be an approved NCDOT Tall Fescue Cultivar after December 31, 2015.**

On cut and fill slopes 2:1 or steeper Centipede shall be applied at the rate of 5 pounds per acre and add 20# of Sericea Lespedeza from 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.

All areas seeded and mulched shall be tacked with asphalt. Crimping of straw in lieu of asphalt tack shall not be allowed on this project.

CRIMPING STRAW MULCH:

Crimping shall be required on this project adjacent to any section of roadway where traffic is to be maintained or allowed during construction. In areas within six feet of the edge of pavement, straw is to be applied and then crimped. After the crimping operation is complete, an additional application of straw shall be applied and immediately tacked with a sufficient amount of undiluted emulsified asphalt.

Straw mulch shall be of sufficient length and quality to withstand the crimping operation.

Crimping equipment including power source shall be subject to the approval of the Engineer providing that maximum spacing of crimper blades shall not exceed 8".

Clearing and Grubbing

Mass Grading and Ditch Reconstruction:

Undercut Excavation and Backfill (contingency item)

Replace Existing Driveway Pipe (15" RCP Class III) (Contingency Item)

Shoulder Borrow and Reconstruction

Aggregate Base Course

Asph. Concrete Surface Course, Type S 9.5B (2 inch)

Adjustment of Meter Boxes or Valves

Adjustment of Manholes

Seeding and Mulching

Excelsior Matting for Erosion Control

Coir Fiber Wattle Barrier

ATTACHMENT I: PROJECT MAPS

Plan sheets prepared by Appian Consulting Engineers, PA, are uploaded to the project bid file on the purchasing webpage in PDF form. <https://rockymountnc.gov/services-finance-bids/>

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THESE EXCERPTED SPECIFICATIONS RELATED TO SEWER ARE PROVIDED FOR THE CONVENIENCE OF THE BIDDER. HOWEVER, CONTRACTOR IS TO ENSURE THAT PROJECT COMPLIES WITH ALL CITY SPECIFICATIONS AND REQUIREMENTS.

15 00 00 UTILITIES

15 05 00 COMMON WORK RESULTS FOR UTILITIES

15 05 01 UTILITY TRENCH FOUNDATION, BEDDING AND BACKFILL

01. DESCRIPTION

- A. This Section covers the stone bedding and soil or stone backfill materials, installation requirements and compaction standards used in pipe line construction, and other similar installations where shown on the drawings, required in the specifications or as directed by the Engineer.

02. QUALITY ASSURANCE

- A. The Owner (City) shall employ and pay for an independent testing laboratory to perform all testing as specified herein at the discretion of the engineer. The Contractor will be held liable for additional testing costs associated with work/areas that failed initial tests. The Owner will not be responsible for compensating the Contractor for additional work performed necessary to install the specified material and compact it to required standards.
- B. Testing Services
 - 1. Testing Services to be provided by testing laboratory include the following:
 - a. Test the Contractor's proposed materials in the laboratory and/or field for compliance with the Specifications.
 - b. Perform field moisture content and density tests to assure that the specified compaction of backfill materials has been obtained.
 - c. Report all test results to the Engineer and the Contractor.
 - 2. Authority and Duties of Testing Agency: Technicians representing the testing laboratory shall inspect the materials in the field and perform tests, and shall report their findings to the Engineer and the Contractor. When the materials furnished or work performed fails to fulfill specification requirements, the technician will direct the attention of the Engineer and the Contractor to such failure.
 - a. The technician shall not act as foremen or perform other duties for the Contractor. Work will be checked as it progresses, but failure to detect any defective work or materials shall not in any way prevent later rejection when such defect is discovered, nor shall it obligate the Engineer for final acceptance. Technicians are not authorized to revoke, alter, relax, enlarge, or release any requirements of the specifications, nor to approve or accept any portion of the work.
 - 3. Responsibilities and Duties of Contractor: The use of testing services shall in no way relieve the Contractor of his responsibility to furnish materials and construction in full compliance with the Drawings and Specifications.
 - a. Secure and deliver to the Engineer or to the testing agency, without cost, preliminary representative samples of the materials he proposes to use and which are required to be tested.
 - b. Furnish such casual labor as is necessary to obtain and handle samples at the Project or at other sources of material.
 - c. Advise the testing agency sufficiently in advance of operations to allow for completion of quality tests and for the assignment of personnel.
- C. Reference Standards:
 - 1. The Contractor shall comply with applicable provisions and recommendations of the following:
 - a. ASTM D 422, Particle-Size Analysis of Soils.
 - b. ASTM D 423, Liquid Limit of Soils.
 - c. ASTM D 427, Shrinkage Factors of Soils.
 - d. ASTM D 698, Moisture-Density Relations of Soils, using 5.5 lb (2.5 kg) Rammer and 12-in. (304.8 mm Drop).
 - e. ASTM D 1140, Amount of Material in Soils Finer than the No. 200 Sieve.
 - f. ASTM D 1556, Density of Soil in Place by the Sand-Cone Method.

- g. ASTM D 1557, Moisture-Density Relations of Soils, using 10.0 lb (4.5 kg) Rammer and 18-in. (457 mm) Drop.
- h. ASTM D 2166, Unconfined Compressive Strength of Cohesive Soil.
- i. ASTM D 36, Structural Steel.
- j. ASTM A 328, Steel Sheet Piling.

D. Test Reports

- 1. Submit copies of the following reports directly to the Engineer from the testing service, with a copy to the Contractor:
 - a. Tests on borrow material.
 - b. Tests on select material.
 - c. Field density tests.
 - d. Optimum moisture - maximum density curve for each soil used for backfill.

E. Site Conditions

- 1. Borrow, Select Fill or Granular material that is to be stored on site for a prolonged period of time shall be stabilized and proper erosion control measures installed to prevent erosion of the stockpile, loss of material and discharge into water courses.
- 2. Borrow or Select Fill material shall be tarped or protected from precipitation. Material that is exposed to precipitation and is not in compliance with specified thresholds of the established Optimum Moisture Content (OMC) must be scarified and aerated.

03. MATERIALS

A. General

- 1. All fill material shall be subject to approval of the Engineer.
- 2. For approval of imported fill material, notify the Engineer at least four working days in advance of intention to import material, designate the proposed borrow area, and permit the Engineer to sample as necessary from the borrow area for the purpose of making acceptance tests to prove the quality of the material.

B. On-Site Fill Material

- 1. All on-site fill material shall be soil-rock mixture which is free from organic matter and other deleterious substances. It shall contain no rocks or lumps over four inches in greatest dimension and not more than 15% of the rocks or lumps shall be larger than two inches (2") in greatest dimension.

C. Imported Trench Bedding Material

- 1. All imported trench bedding material for utility pipe installation shall be Standard Size 57 stone in accordance with Section 1016 of the NCDOT Standard Specifications for Roads and Structures 2006 Edition or Borrow Aggregate as defined by ASTM C33, Coarse Aggregate Size Number 67.

D. Imported Trench Fill Material

- 1. Where other than local material is used for backfill above the foundation, such material will be classified as select backfill. This material shall be approved by the Engineer and shall meet either of the criteria below as directed by the Engineer.

E. Select Engineered Fill

1. All Select Engineered Fill material shall be consistent with the following soil and gravel classifications as covered in Section 1016 of the NCDOT Standard Specifications for Roads and Structures 2006 Edition and restated below:
 - a. Class II - Type 1 (fine aggregate) or Type 2 (granular soil material)
 - b. Class III – Type 1 (natural or manufactured fine aggregate)

F. Select Borrow

1. Approved borrow material shall meet the statewide and local criteria outlined in Section 1018 of the NCDOT Standard Specifications for Roads and Structures. In addition, this material shall be a soil material which meets the requirements of AASHTO M 145 for class A-2-4 soils. This material shall be a well graded gravelly, silty, or clayey sand with a plasticity index equal to or less than ten (10), and liquid limit equal to or less than forty (40).

G. Geotechnical Fabric for Soil Stabilization

1. Where soil stabilization woven fabric is specified in the Bid Schedule, called out on the drawings or directed by the Engineer, the Contractor shall furnish and install a woven textile product specially designed and manufactured to stabilize the sub-base of trenches and ditches and control the migration of select fill into the surrounding soils. The product shall meet or exceed AASHTO M288 Specification for serviceability level class 2, and shall be Style 250ST Geotex woven geotextiles manufactured by SI Geosolutions or equal as may be approved by the Engineer.

04. EXECUTION

A. General

1. The usage and installation of stone bedding shall be in accordance with the specification for the particular item being installed.
2. Select backfill will be used only when directed by the Engineer or when specifically called for in another section of these specifications.

B. Moisture Conditioning

1. Water or aerate the fill material as necessary and thoroughly mix to obtain a moisture content which will permit proper compaction (+/- 2% of Optimum Moisture Content)

C. Compaction

1. After subgrade compaction has been approved by the Engineer, spread approved fill material in layers not exceeding six inches (6") in uncompacted thickness.
2. Compact each soil layer to at least the specified minimum degree; repeat compaction process until plan grade is attained.
3. Degree of compaction requirements are as follows and shall be evaluated by Standard Proctor, except where noted
 - a. General Fill:
 - i. Density all structural fill, including recompacted existing fill and backfill, to a minimum degree of compaction of 90%.
 - b. Structural fill under or within five feet (5') of buildings and pavement areas:
 - i. Compact approved backfill material greater than twelve inches (12") from finished subgrade to a minimum of 95% of Maximum Dry Density (MDD).
 - ii. Compact approved fill within twelve inches (12") of finished subgrade to a minimum of 100% of Maximum Dry Density (MDD).

05. MEASUREMENT AND PAYMENT

A. Geotechnical Fabric for Soil Stabilization

1. Measurement: Measurement of soil stabilization fabric shall be the area of fabric laid within the trench as determined by the horizontal measurement along the trench bottom plus the vertical measurement along the trench walls multiplied by the linear feet of installation.
2. Payment: Payment for soil stabilization shall be the area as measured in square yards incorporated into the completed and accepted work.

B. Pipe Bedding

1. Measurement: Measurement of Bedding shall be the depth of the undercut multiplied by the maximum allowable trench width on each side of the pipe as described in Section 15 11 13 (Water) or Section 15 31 13 (Sewer) multiplied by the linear feet of installation. Depth of undercut is considered the vertical measurement from the centerline of the pipe (to account for haunching) to the bottom of the undercut. Note that six inches (6") of aggregate bedding/conditioning stone required for all gravity sanitary sewer pipe as described in Section 15 31 13 is considered incidental to the cost of pipe installation and will not be paid.
2. Payment: At unit price for the tonnage of stone or approved material (converted from the number of cubic yards incorporated into the completed and accepted work) as verified by weight tickets.
 - a. Payment includes work for excavation, trenching, undercut, and removal of unsuitable material off site.

C. Backfill (Engineered Fill or Select Borrow)

1. Measurement: Measurement of backfill shall be the depth of cut multiplied by the maximum allowable trench width on each side of the pipe as described in Section 15 11 13 (Water) or Section 15 31 13 (Sewer) multiplied by the linear feet of installation. Depth of cut is considered the vertical measurement from the surface grade to the bottom of the invert of the pipe or top of bedding, if used. When different backfills are used within the same trench, the depth of cut is considered the vertical measurement of the bottom of the individual backfill material to the top of the same material.
2. Payment: At unit price for each cubic yard of identified backfill material as listed in the Bid Schedule and part of the completed and accepted work.
 - a. Payment includes work for excavation, trenching, and removal of unsuitable material off site.

D. Payment will be made under:

Pay Item	Pay Unit
Geotechnical Fabric for Soil Stabilization	Square Yard
Pipe Bedding	TN
Borrow Material	CY
Select Material Class II - Type 1	CY
Select Material Class III - Type 1	CY

15 05 02 ROCK EXCAVATION FOR UTILITIES

01. GENERAL

A. Description

1. The Contractor shall furnish all labor, materials, tools, equipment and all else required for and to excavate rock as hereinafter defined, remove and dispose of unsuitable materials, and protect the public and his own employees from harm during the construction operations.
2. Rock Excavation shall be defined as removal and disposal of solid, ledge rock in place which, in the opinion of the Engineer, cannot be removed practically without the use of specialized pre-splitting methods such as: drilling, blasting, wedging, prying, jacking, hydraulic hammering, etc. Soft, disintegrated rock that can be removed with a picking or scarifying action shall not be classified as Rock Excavation. Excavated boulders or rock fragments with a volume of One (1) Cubic Yard or less shall not be classified as Rock Excavation.

02. QUALITY ASSURANCE

- A. The Contractor shall use licensed and sufficient workmen and competent supervisors in the execution of this portion of the work to ensure adequate, safe and proper execution throughout.
 - 1. It shall be the Contractor's responsibility to have adequate insurance to cover any damages resulting from blasting or other construction activities.
 - 2. It shall also be the responsibility of the Contractor to ensure that any subcontractors hired to perform blasting services shall have adequate insurance to cover any damages.
 - 3. The Contractor shall hold the Engineer and Owner together with its employees harmless from any claims of damages due to blasting or other construction related activities.
- B. A Blasting Permit shall be obtained by the Contractor or his subcontractor from the City of Rocky Mount Department of Engineering.
- C. The Contractor shall take all necessary precautions to protect life and property while engaged in blasting operations.
 - 1. The Contractor shall provide and use an appropriate blast mat at locations where the danger of rock or overburden being thrown by a blast.
 - 2. No blasting shall be allowed unless a galvanometer is used to check cap circuits.
 - 3. Blasting procedures shall conform to all applicable local, state, and federal laws and ordinances.
- D. The Contractor shall be required to keep a blasting log containing the following minimum information:
 - 1. Date of shot
 - 2. Time of shot
 - 3. Foreman's name
 - 4. Number and depth of holes
 - 5. Approximate depth of overburden
 - 6. Amount and type of explosive used in each hole
 - 7. Type of caps used (instant or delay)
 - 8. Weather conditions
- E. Contractor shall comply with all Local, State, and Federal Regulations regarding the receipt, transport and storage of explosives.
- F. Explosives kept on site shall be contained in clearly painted, signed, or otherwise permanently marked container and shall be locked with the key in the possession of the person in charge of the blasting operations.
- G. Rock shall be excavated to the same limits as other trench, roadway, or structure excavations except that the excavations shall extend an additional six (6") Inches vertically below subgrade or bottom of pipe and an additional nine (9") Inches on all sides horizontally to allow for placement and compaction of cushioning material.
- H. Acceptable cushioning material shall be either Class II or III material as defined in ASTM D2321 and restated in Section 2225. Class of bedding material shall be consistent with initial backfill material on typical Bedding Detail or Cross-Section shown on the Drawings.
- I. The excavation shall be filled with select cushioning material to subgrade of the pipe, roadway, or structure and compacted to appropriate compaction density for backfilling in accordance with Section 2225 for trench excavations and Section 2226 for roadways and structures.
- J. Contractor shall remove all rock fragments, boulders, and debris from site and dispose of in an approved waste area.

03. MEASUREMENT AND PAYMENT

- A. Trench Rock Excavation
 - 1. Measurement of rock excavation shall be the depth of rock removed within the trench multiplied by the width of rock removed within the trench multiplied by the linear feet of rock removed within the trench. Depth of rock removed is considered the vertical measurement from the surface grade to the bottom of

the invert of the pipe or undercut. Width of rock removed is considered the horizontal measurement from rock face to rock face on each side of the trench. Linear feet of rock removed is considered the horizontal measurement along the trench alignment from manhole to manhole. Individual boulders greater than 1 cubic yard will be estimated by multiplying the approximate width, length and height of the boulder.

2. Payment for rock excavation shall be the number of cubic yards excavated from the completed and accepted work.

B. Payment will be made under:

Pay Item	Pay Unit
Trench Rock Excavation	CY

15 05 23.13 HORIZONTAL DIRECTIONAL DRILLING (HDD) OF PRESSURE MAINS

01. DESCRIPTION

- A. The work in this Section covers the requirements for Horizontal Directional Drilling (HDD) of the furnishing and installation of all pipe required to complete the water and sewer pressure systems as shown on the drawings, as described in these specifications, and as directed by the Engineer.

02. QUALITY ASSURANCE

- A. Experience: Actively engaged in horizontal directional drilling for a minimum of 3 years.
- B. Field Supervisory Personnel: Experience in the performance of the work and tasks as stated herein for a minimum of 3 years.

03. SUBMITTAL

- A. Submit for Information Only:
 1. Presentation of similar experience in the last 3 years
 2. Include, but not limited to, project owner name, address, telephone numbers, contact person, date and duration of work, location, pipe information, and contents handled by the pipeline.
 3. Supervisory field personnel and historical information of HDD experience.
 - a. At least one of the field supervisors must be on site when HDD operations are in progress
- B. Submit with other required material/product information
 1. Size, capacity and arrangement of equipment
 2. Location and size of drilling and receiving pits
 3. Dewatering and methods of removing spoils material
 4. Method of installing detection wire and pipe
 5. Type, location and method of installing locator station
 6. Method of fusion pipe segment and type of equipment
 7. Type of cutting head
 8. Method of monitoring and controlling line and grade
 9. Detection of surface movement
 10. Bentonite drilling mud for information only:
 - a. Products information, material specifications and handling procedures
 - b. Material safety data sheet and special precautions required
 - c. Method of mixing and application

04. PRODUCTS

- A. Product requirements for pipe, service pipe, valves, fittings and other materials for this work are included elsewhere in these specifications.
- B. Allowable materials on this project are as follows:

sufficient to achieve negative bacteriological test results, then he shall direct the Contractor to rechlorinate the water mains until negative test results are obtained.

- f. Upon obtaining negative test results for two consecutive samples, written notice of the negative bacteriological contamination testing shall be given by the Laboratory to the Water Plant Superintendent, who, in turn, shall give written approval of the water mains tested to the Director of Engineering or his representative. The Director of Engineering shall then give written certification to the Contractor that the water mains may be placed into service. No water mains shall be placed into service until written approval based on satisfactory bacteriological test results is issued by the City of Rocky Mount Water Plant Superintendent, and until written certification is issued by the Director of Engineering stating that the water mains have been installed in accordance with the Drawing and Specifications.

05. MEASUREMENT AND PAYMENT

- A. Work associated with pressure testing and disinfection of water mains shall be considered incidental to the work performed during installation of water mains described within Section 15 11 13.

15 30 00 SANITARY SEWERAGE UTILITIES

15 31 00 SANITARY UTILITY SEWERAGE PIPING

15 31 13 PUBLIC SANITARY SEWER GRAVITY MAINS

A. Description

1. The work in this Section covers the requirements for furnishing and installation of all piping required to complete the sanitary sewer collection system(s) as shown on the drawings, as described in these specifications, and as directed by the Engineer. Wastewater Utility Pump Stations is specified within Section 15 32 16. Sanitary Sewer Force Mains is specified within Section 15 34 00.

02. QUALITY ASSURANCE

1. The Contractor shall use sufficient workmen and competent supervisors in the execution of this portion of the work to ensure adequate and proper installation throughout.
2. The pipe class numbers or pressure ratings shall be clearly shown on the pipe.
3. Contractor shall follow the procedures and recommendations for receiving, storage, and handling of pipe, fittings, joint lubricant and other items necessary and required to construct the pipeline contained in the UNI-Bell Plastic Pipe Association," Handbook of PVC Pipe," and recommended by the pipe manufacturer.
4. Storage: Store pipe, fittings, valves and appurtenances off the ground using sound wood blocks, placed on stable foundation or using other appropriate means. Allow space between rows, individual pieces and bundles with clearance below and above to allow full view for inspection purposes.
 - a. Store in well-drained area away from brush and accessible for inspection.
 - b. Do not stack pipe higher than 54 inches high; packages shall be supported by racks to prevent damage to the underside of the pipe
 - c. Keep spigot ends of pipe clean and clear for dimensioning purposes
 - d. Don not place excavated or other material over or against stored material.
 - e. PVC pipe shall be stored so that it does not deform or bend. Pipe stored outdoors or otherwise exposed to direct sunlight shall be covered with canvas or other opaque material with provision for adequate air circulation.
5. Handling: unload and handle materials with crane, backhoe, or equipment of adequate capacity, equipped with appropriate slings or padding to protect materials from damage.
6. Workmanship: Pipe and fittings shall be homogenous throughout and free from visible cracks, holes, foreign inclusions or other injurious defects. Pipe and fittings shall be as uniform as commercially practical in color, opacity, density and other physical properties.
7. Non C900 or C905 PVC pipe shall conform to the ASTM standards and testing requirements:

- a. Pipe Flattening: ASTM D3034
 - b. Impact Resistance: ASTM D2444
 - c. Pipe Stiffness: ASTM D2412
 - d. Extrusion Quality: ASTM D2152
- B. Submittal
- 1. Prior to the installation of any pipe, the Contractor shall submit and receive the Engineer's approval of shop drawings and/or manufacturer's material certification of compliance with specifications.
 - 2. Submittals shall be in five (5) copies and shall be provided to the Engineer at least 15 days prior to the planned installation time.

03. PRODUCTS

- A. Allowable materials on this project are as follows:
- 1. Solid Wall Polyvinyl Chloride Pipe (PVC) 4 inch to 15 inch
 - a. Allowable standard dimension ratios (SDR) and ASTM Designations shall be determined as follows for all gravity sewer mains and services:
 - i. For excavation depths of zero (0) to eight (8) feet the SDR shall not exceed thirty-five (35) and the pipe shall conform to the requirements of ASTM D3034.
 - ii. For excavation depths of eight (8) to eighteen (18) feet the SDR shall not exceed twenty-six (26) and shall conform to the requirements of ASTM D3034.
 - iii. For excavation depths greater than eighteen (18) but less than twenty two (22) feet the SDR shall not exceed twenty-one (21) and shall conform the requirements of ASTM D2241 or conform with AWWA C900 with a Diameter Ratio (DR) not to exceed eighteen (18).
 - iv. PVC sewer pipe shall not be laid in depths greater than twenty-two (22) feet.
 - 2. Solid Wall Polyvinyl Chloride Pipe (PVC) 18 inch to 24 inch
 - a. Allowable standard dimension ratios (SDR) and ASTM Designations shall be determined as follows:
 - i. For excavation depths of zero (0) to eight (8) feet the SDR shall not exceed thirty-five (35) and the pipe shall conform to the requirements of ASTM F679.
 - ii. For excavation depths of eight (8) to eighteen (18) feet the SDR shall not exceed twenty-six (26) and shall conform to the requirements of ASTM F679.
 - iii. For excavation depths greater than eighteen (18) but less than twenty two (22) feet the conform with AWWA C905 with a Diameter Ratio (DR) not to exceed eighteen (18).
 - iv. PVC sewer pipe shall not be laid in depths greater than twenty-two (22) feet.
 - v. Profile Wall Polyvinyl Chloride Pipe (PVC) 8 inch to 24 inch
 - 3. Profile Wall Polyvinyl Chloride Pipe (PVC) 8 inch to 24 inch
 - a. Profile Wall pipe is allowable for excavation depths not to exceed eight (8) feet and shall be in accordance with either ASTM 749, ASTM 949 or ASTM F1803.
 - 4. Pipe Joints
 - a. Pipe joints shall meet the requirements or exceed the requirements of ASTM D3212 or D3139 and shall be "push-on" type using elastomeric gaskets in accordance with ASTM F477.
 - i. Pipe shall be joined by means of an integral bell formed with a race design to accept the gasket in accordance with ASTM 3212.
 - ii. When assembled, the gasket is compressed radially on the pipe spigot so as to affect a positive seal under all combinations of joint tolerances and is the only element depended upon to make the joints flexible and watertight.
 - iii. PVC main connection to DIP mains shall be made with a Mechanical Joint Solid Sleeve with transitional gasket to connect DIP to PVC.

5. Ductile Iron (DI) Pipe (Mechanical or Push on Joints, standard application)
 - a. Pipe shall be manufactured in accordance with AWWA C150 and C151 and shall be a minimum Pressure Class of 350 and Thickness Class 50, except as noted on the plans.
 - i. Pipe joints: Pipe shall be either the "push-on" or "mechanical joint" in accordance with AWWA C111 unless otherwise shown on the plans and specified herein
 - ii. Coatings: Ductile iron pipe shall be bituminous coated outside and cement mortar lined in accordance with ANSI/AWWA Standard C104/A 21.4.
 - iii. Pipe lengths: 18 to 20 feet
 - iv. Ductile iron pipe used within encasements and in aerial lines, shall be furnished with "mechanical" joints according to ANSI/AWWA C151/A 21.51.
6. Connection Appurtenances
 - a. Connections of 6" and larger will be made by way of a Doghouse Manhole built over existing sewer main per the Standard Details.
 - b. For connecting new service laterals to new sewer mains:
 - i. Laterals shall be wye branches of the same material of the pipe.
 - ii. Plugs for stub outs shall be of the same material as the pipe and gasketed with the same gasket material as the pipe joint. The plug shall be secured to withstand test pressures specified hereinafter.
 - c. Saddles: For connecting sewer house connection to existing sewer main 6" to 15"
 - i. Saddles shall be wye connections unless approved by the Engineer.
 - ii. For PVC Main, follow manufacturer's recommendation
 - iii. FERNCO Flexible Tap with stainless steel bands or approved equal is approved for connecting to asbestos cement, vitrified clay pipe, concrete, cast iron or ductile iron.
 - d. For point repairs: Fernco Joint Sealer Co. with shear ring
 - e. For connecting pipes to sewer manholes, see Section 15 39 13

04. EXECUTION

A. Preparation

1. Contact appropriate utility locating agency(ies) prior to any earthwork
2. Dig test pit to determine size, type, composition and exact location of existing pipe which the proposed pipe network will connect to.
3. Excavate sufficient trench in advance and test pit all existing underground utilities or structures, whether shown on the drawings or visually identified in the field to verify:
 - a. Field verify actual locations
 - b. Make reasonable adjustments to line and grade to avoid conflict, with Engineer's approval.
 - c. Furnish Engineer with location and elevation information when previously unknown or different underground utilities and structures are encountered.
 - d. Additional work performed because above mentioned precautions were not taken will not be compensated by the owner.

B. Relation of Water Mains to Sewers

1. Lateral Separation of Sewers and Water Mains - Sewer mains shall be laid at least 10 feet laterally from existing or proposed water mains, unless local conditions or barriers prevent a 10-foot lateral separation--in which case:
 - a. The water main is laid in a separate trench, with the elevation of the bottom of the water main at least 18 inches above the top of the sewer; or

- b. The water main is laid in the same trench as the sewer with the water main located at one side on a bench of undisturbed earth, and with the elevation of the bottom of the water main at least 18 inches above the top of the sewer.
 - 2. Crossing a Sewer Main Under a Water Main - Whenever it is necessary for a sewer main to cross under a watermain, the sewer main shall be laid at such an elevation that the bottom of the water main is at least 18 inches above the top of the sewer, unless local conditions or barriers prevent an 18 inch vertical separation in which case both the water main and sewer shall be constructed of ferrous materials and with joints that are equivalent to water main standards for a distance of 10 feet on each side of the point of crossing.
 - 3. Crossing a Sewer Main Over a Water Main - Whenever it is necessary for a sewer main to cross over a sewer, both the water main and the sewer shall be constructed of ferrous materials and with joints equivalent to water main standards for a distance of 10 feet on each side of the point of crossing. A section of sewer main pipe shall be centered at the point of crossing.
 - 4. Where it is impossible to maintain a minimum of 10 feet of horizontal clearance between the water and sewer installations, a vertical separation of 18 inches (water main above sewer) must be maintained.
- C. Trench Excavation
- 1. General
 - a. Open no more trench in advance of pipe laying than is necessary to expedite the work.
 - i. Excavate trenches to a width that will provide adequate working space, but not more than maximum design width so not to undercut trench walls.
 - ii. Excavate bell holes at each joint to provide full-length barrel support of the pipe and to prevent point loading at the bells or couplings.
 - iii. Unless trench banks above the top of the pipe are cut back on a stable slope, sheet and brace trenches as necessary to prevent caving and sliding, to provide protection for workmen and the pipe, and to protect adjacent structures and facilities. Do not remove trench sheeting unless the pipe strength is sufficient to support the external loads. The width of the trench at any point below the top of the pipe should not be greater than that necessary to provide adequate room for joining the pipe and compacting the haunching and initial backfill.
 - iv. During the course of construction, should the trench be over-excavated below a point 6 inches below the bottom of the pipe, fill that area of over-excavation with an acceptable class of embedment material and compact to a minimum of 90 percent.
 - b. Where trench construction conditions require the use of a trench box, the trench box shall be sufficient length to extend four (4) feet beyond both ends of one (1) joint of pipe in order to allow the workmen to make-up the pipe joint inside the protection of the trench box. The workmen required to work inside the trench shall:
 - i. Enter and leave the trench box from the ground surface only
 - ii. Not travel along the trench bottom outside the protection of the trench box
 - c. The trench box shall conform to current OSHA regulations and shall have been designed by a Registered Professional Engineer. The Contractor shall furnish proof of such design to the Engineer upon request.
 - 2. Trench Width
 - a. Trench width at the ground surface may vary width and depend upon depth, type of soils, positions of surface structures, or other conditions authorized by the engineers.
 - b. The maximum clear width of the trench excluding sheeting shall not exceed the outside diameter of the pipe plus one foot (1') on each side at the top of the area of initial backfill and one foot (1') above the outside top of pipe. The minimum width of the trench at the top of the pipe when placed shall be a width that will permit the proper construction of joints and compaction of backfill around the pipe, but shall be at least equal to the largest outside diameter of the pipe plus eight inches (8") on each side of the pipe. The sides of the trenches shall be vertical unless otherwise approved by the Engineer. In no case shall the vertical walls project less than two inches (2") above the top of the pipe line laid to a grade unless the finished grade fill depth is less than two feet (2'). The

maximum allowable width of trench on each side of the pipe shall not exceed twelve inches (12") for pipe which is twelve inches (12") in diameter or smaller; eighteen inches (18") for pipe which is between fourteen inches (14") and thirty-six inches (36") in diameter; and twenty-four inches (24") for pipe diameters greater than thirty-six inches (36"), unless otherwise approved by the Engineer.

3. Parallel Roadway Trenches

- a. Where utility installation is to take place upon the shoulder of any paved street or highway, excavate trench to a width that will provide adequate working space but in no case shall the hard surfaced, traveled portion of roadway be damaged. Where the structural integrity of the roadway pavement is jeopardized, proper sheeting and bracing shall be installed to provide adequate protection to adjacent roadway and structures, and to afford the necessary protection to the workmen and pipe.
- b. Excavation material shall not be stored on the pavement if it can be reasonably handled otherwise. In cases where storing of excavated material on pavement is absolutely necessary, same shall be moved as quickly as practical and the pavement shall be thoroughly cleaned.
- c. Excavation in the immediate vicinity of drainage structures shall be made with special care so as not to damage or interfere with the use of the existing drainage facilities.
- d. Drainage facilities that are inadvertently damaged must be repaired or replaced immediately.
- e. Parallel open trench installations that involve possible damage in event of rain or other falling weather, or which may be hazardous to traffic due to open trench, should be closed without undue delay. In no case should a trench remain open longer than a 24- hour period, except with approval of the Engineer.

4. Trenching Within Pavement

- a. Where it is necessary to open-cut asphalt or concrete pavements surface cuts shall be made with a concrete saw with a maximum width of ten (10) feet.
- b. Where excessive depths of pipe installations are encountered and the structural integrity of the roadway surface and/or the safety of the workmen is in doubt, proper sheeting and bracing of the trench shall be required.
- c. Handling and placement of the excavated material within this area shall be handled as in Paragraph 3.03 C.
- d. All excess excavated material shall be removed and disposed of outside the limits of the right-of-way in such a manner as not to interfere with the drainage of highways unless otherwise permitted or directed by the Engineer or his representative.
- e. Compaction test(s) for open-cut crossings may be required at the discretion of the engineer in addition to any supplemental or more stringent testing requirements are specified in the approved North Carolina Department of Transportation Encroachment Agreement. All geotechnical testing required as specified above to meet the compaction requirements within Section 15 05 02 shall be the responsibility of the Contractor, the cost of which shall be included in the price bid for asphalt roadway (remove & replace).

D. Rock Excavation

1. [Rock excavation methods and payment shall be in accordance with Section 15 05 01.](#)

E. Preparation of Pipe Foundation

1. General

- a. The pipe foundation shall be true to line and grade and uniformly firm. Where bell and spigot type pipe is used, recesses shall be excavated to receive the pipe bells.

2. Unsuitable Foundation Material

- a. Where the foundation material is found to be of poor supporting value or of rock, the Engineer may make minor adjustment in the location of the pipe to provide a more suitable foundation.
- b. Where this is not practical, the Contractor shall act upon the directions of the Engineer to stabilize the trench bottom by undercutting and installing: (a) soil stabilization woven fabric; and (b) NCDOT Class VI Stone (clean #57) or (c) approved select or borrow material and compacting to a minimum density of ninety (90%) as directed by the Engineer. Compensation for the undercut will be

included in the cost of the foundation material furnished. Approved bedding and backfill material is further specified within Section 15 05 02.

3. Placement of Bedding Material

- a. Stone bedding shall be placed beneath all gravity sewers of 6" diameter or larger. Bedding shall be a minimum of four (4") inches deep beneath the pipe, and shall be along the sides of the pipe at least up to the springline, unless shown otherwise in the Pipe specification or Plans. Bedding width shall be at least the width of the pipe O.D. plus 24 inches. This stone bedding shall not be a separate pay item, but will be included in the unit price bid for Sanitary Sewer Pipe. (Stone required by the Engineer beneath this sewer bedding will be paid for a unit price bid in accordance with Section 15 05 02.
- b. In order to ensure that adequate and uniform support is provided along the entire length of pipe, the Contractor shall carefully bring the bedding material to grade along the entire length of pipe prior to installation. Material used for the formation of the pipe bedding and haunch shall be carefully placed by hand shoveling to ensure that sufficient material has been worked under the pipe to form the haunch and to ensure that the pipe does not become dislodged during backfilling. Contractor's workmen shall fill evenly on both sides of the pipe to the centerline and shall compact the fill using hand shoveling or mechanical tamps. Extreme care shall be taken when using mechanical tamps adjacent to the pipe, when removing sheeting, and removing trench boxes so as to avoid disturbing the pipe.

F. Laying Pipe

1. Inspection

- a. After delivery alongside the trench, all pipeline material shall be carefully examined for both soundness and specifications compliance.

2. Installation of Pipe

- a. Installed sewer pipe shall be checked for tolerance to proper line and grade from manhole to manhole as soon as the sewer pipe has been installed and prior to the installation of the next run of pipe. Any tolerance error shall not be cumulative beyond the run of a specific sewer line from manhole to manhole. The invert elevation of the influent pipe of the upstream manhole shall always be taken as the beginning elevation for the next run of sewer pipe to be installed. If the grade tolerance error for the previous run of sewer line from manhole to manhole exceeds the allowable drop in the upstream manhole as shown on the Drawings, then this condition defines an unacceptable sewer line installation and will be re-installed at the Contractor's expense.
- b. Sanitary sewer mains shall be installed in accordance with the minimum grades shown on the approved Drawings but at not time shall mains be installed with grades flatter than the minimum grades mandated by the North Carolina Administrative Code as shown below:

Diameter of Pipe (inches)	Minimum Slope (feet per 100 feet)
6	0.60
8	0.40
10	0.28
12	0.22
14	0.17
15	0.15
16	0.14
18	0.12
21	0.10
24	0.08
27	0.07
30	0.06
36 & Larger	0.05

- c. Clean joint contact surfaces immediately prior to jointing. Use lubricants, primers, or adhesives as recommended by the pipe or joint manufacturer. All pipe shall be laid on the prepared foundation, bell end up grade with each joint being checked for proper alignment and grade as the work proceeds. Excavate bell holes for each pipe joint. When jointed in the trench, the pipe shall form a true and smooth line. Whenever practicable, start pipe laying at the lowest point.
- d. Four (4) feet minimum cover shall be provided for all PVC sewer pipes. Where the cover is less than four feet (4') the Engineer shall direct the Contractor as to the most acceptable condition; i.e. installation of ductile iron pipe or mounding over the PVC.

3. Steep Slope Protection

- a. Sewers on twenty (20) percent slopes or greater shall be anchored securely with concrete, or approved, equal, with the anchors spaced as follows:
 - i. Not greater than thirty-six (36) feet center to center on grades 21% to 35%; and
 - ii. Not greater than twenty-four (24) feet center to center on grades 35% to 50%; and
 - iii. Not greater than sixteen (16) feet center to center on grades 50% and over.

4. Cutting and Beveling PVC Pipe

- a. For shorter than standard pipe lengths, field cuts may be made using special pipe cutters for PVC pipe. Pipe ends shall be cut square and perpendicular to the pipe centerline axis. Spigots shall have burrs removed and ends smoothly beveled by a mechanical beveler tool or by hand with a rasp or file. Field spigots shall be stop-marked with a felt tip marker or wax crayon for the proper length of assembly insertion. The angle and depth of field bevels and length to stop-mark shall be comparable to factory pipe spigots.

5. Dewatering

- a. Keep trenching dry during pipe laying. Divert surface water from the trench area to the greatest extent practicable without causing damage to the adjacent property. Before pipe laying is started remove all water that may have entered the trench and continue to dewater trench by the most expedient method.

G. Manhole Installation

- 1. Manholes to be furnished and installed per Section 15 39 13

H. Backfilling

- a. After the bedding has been prepared and the pipe installed, selected material from excavation or borrow, at a moisture content which will facilitate compaction, shall be placed alongside the pipe in layers not exceeding 6 inches in depth. Care shall be taken to insure thorough compaction of the fill under the haunches of the pipe. Each layer shall be thoroughly compacted by rolling, tamping

and mechanical rammers, or by hand tamping with heavy iron tampers, the tamping face area of which shall not exceed 25 square inches. The method of filling and compacting shall be continued until the fill has reached an elevation 12 inches above the top of the pipe. The remainder of the trench shall be backfilled and thoroughly compacted in layers not exceeding 12 inches.

- b. Care shall be taken during backfill and compaction operations to maintain alignment and prevent damage to the joints. The backfill shall be kept free from stone, frozen lumps, chunks of highly plastic clay, or other objectionable material.
- c. All local backfill materials shall be compacted at a moisture content satisfactory to the Engineer, which shall be approximately that required to produce the maximum density. The contractor shall dry or add moisture to the local material when required to provide a uniformly compacted and stable embankment.
- d. When other than local material is used for backfilling above the foundation, such material will be classified as select backfill material as specified in Section 15 05 01 of these specifications. Use of this select backfill material shall be only when directed by the Engineer or his representative.
- e. Backfill over and around the pipe and backfill around and adjacent to all drainage structure shall be compacted to a minimum density of 80 percent as determined by the AASHO Standard Method T-99, except the backfill under pavements and adjacent areas within 4 to 10 feet of the proposed pavement shall be compacted to a minimum density of 100%.
- f. Tests for density of compaction may be made at the option of the Engineer, and deficiencies shall be corrected by the Contractor without additional cost to the Owner. The operation of heavy equipment shall be conducted so that no damage to the pipe shall result.
- g. Heavy equipment shall not be operated over any pipe until it has been properly backfilled and has a minimum cover of three (3) feet, unless approved otherwise by the Engineer.

I. Aerial Crossings

1. Aerial pipe crossings to include steel casing pipe and pier construction shall be in accordance with the Plans and shall be compensated as per the Bid Schedule.

J. Sewer Service Connections

1. Connection to new sewer main shall be done as follows:
 - a. Tie into new wye fitting at main and run service at 2 percent minimum grade. If 2 percent cannot be obtained, remand to engineer for resolution.
 - b. Service line material shall be SDR 26 PVC or ductile iron and bedded, backfilled and compacted in accordance as specified for mains hereinabove.
 - c. Place cleanout at the property line or as depicted on the plans or directed by the Engineer. Cleanouts shall be in accordance with the Standard Details and shall be flush to grade. In non traffic areas, a plastic, watertight cap may be installed. For traffic areas, riser section of cleanout shall be protected by cast iron sleeve for the final 18" and a brass plug cap
2. Connection to existing sewer main shall be done as follows:
 - a. Tap existing sewer main with motor driven tapping machine utilizing the appropriate drill bit.

K. Testing

1. Testing and television of new sewer mains shall be in accordance with Section 15 31 13.01

L. Abandonment of Sewer Mains and/or Services

1. For abandonment of sewer mains install approved plug or cap at each location where pipe was cut or valve removed; or Contractor may fill severed abandoned pipe with flowable fill.
2. Abandon house connections with watertight plug at cleanout, along the service line or as shown on the Drawings or as specified below:
 - a. If service is to be abandoned at sewer main and connection to sewer main is with tee, wye or saddle, remove house service and install a watertight plug.
 - b. If service is to be abandoned at the sewer main and connection to main is with a thimble, remove thimble and perform mainline point repair.

05. MEASUREMENT AND PAYMENT

A. Public Sanitary Sewer Gravity Mains

1. Measurement: By linear foot of various sizes and types provided at the measured depth. The installed pipe shall be measured horizontally along the centerline of the installed pipe from manhole to manhole as part of the completed and accepted work. Depth shall be measured from the invert of the pipe to the top of the ditch bank along the completed and accepted alignment.
2. Payment: At unit price for each size and type of pipe installed at the measured depth as listed in the Bid Schedule. Payment includes work for location of utilities, excavation, trenching, backfilling, removal and replacement of driveway pipes, guardrails and other obstructions, connecting to new and existing mains, abandonment of mains and services, installation of stone bedding, and pressure and mandrel testing of mains, and disinfecting and testing of mains.

B. Sewer Services

1. Measurement: By linear foot of various sizes and types provided, measured horizontally along the centerline of the installed service from the centerline of the main to the property line (or directed location) as part of the completed and accepted work.
2. Payment: At unit price for each size and type of fitting installed as listed in the Bid Schedule as part of the completed and accepted work. Payment includes work for location of utilities, excavation, trenching, backfilling, removal and replacement of driveway pipes, guardrails and other obstructions, connecting to new and existing mains, furnishing and installation of fittings, installation of cleanout and associated plugs and fittings, pressure and leakage testing of mains and fittings, and disinfecting and testing of mains and fittings.

C. Payment will be made under:

Pay Item	Pay Unit
___" (mat. type) Sewer Pipe, ___ - ___ ft.	LF
4" Short-Side Sewer Service (Open-Cut)	LF
4" Long-Side Sewer Service (Bore)	LF
___" Concrete Encasement Pipe	LF

15 31 16 TESTING OF SANITARY SEWER GRAVITY MAINS

01. DESCRIPTION

- A. The work in this Section covers the requirements for conducting pressure testing and deflection testing for all new sanitary sewer gravity mains. Testing for Sanitary Sewer Manholes is specified with Section 15 39 13. Testing for Sanitary Sewer Force Mains is specified within Section 15 34 00.

02. QUALITY ASSURANCE

- A. The Contractor shall use sufficient workmen and competent supervisors in the execution of this portion of the work to ensure adequate and proper testing.
- B. Testing shall be in segments from manhole to manhole and all stubs outs and/or service laterals for future connection shall be included in testing.
- C. Copies of all certified reports and logs of all tests and inspections conducted shall be submitted to the Engineer.

03. PRODUCTS

A. Low Pressure Air Testing Materials

1. The contractor shall provide all materials, labor, equipment, tools etc to perform all work and services necessary for and incidental to a complete low pressure air test of the sanitary sewer gravity system.
 - a. Pressure Gauge
 - i. Pressure gauge shall have a four inch (4") minimum diameter face with maximum gradation increments of .10 psi.
 - b. By-pass Pump

- i. Pump or pressurizing equipment shall have a pressure relief valve or regulator to avoid damaging the lines.
- ii. The Contractor shall provide all temporary plugs and blocking as necessary for administering the required testing

B. Deflection Test Materials

1. The Contractor shall provide all materials, labor, equipment, tools etc to perform all work and services necessary for and incidental to a complete deflection Test. Final long term deflection shall not exceed five percent (5%).
 - a. Mandrel
 - i. The mandrel (go/no-go) device shall be cylindrical in shape and constructed with nine (9) or ten (10) evenly spaced arms or prongs. Mandrels with fewer arms (in odd or even numbers) will be rejected as insufficiently accurate. The contact length "L" of the mandrel's arms and the actual mandrel diameter "D" (ID of the proving ring) shall equal the dimensions in Table 1. Critical mandrel dimensions shall carry a tolerance of ± 0.01 inch. Larger mandrel dimensions shall be provided by the Engineer.

TABLE 15 31 13.03			
NOMINAL DIAMETER		ASTM D3034 SDR 35	
		5 %	7.5 %t
8"	8"	7.52"	7.33"
10"	10"	9.41"	9.16"
12"	10"	11.19"	10.90"
15"	12"	13.70"	13.34"

- ii. The Engineer shall be responsible for approving the mandrel. Proving rings may be used to assist in this. Drawings of the mandrel with complete dimensions shall be furnished by the Contractor to the engineer for each diameter and specification of pipe.

C. Television Inspection

1. The City will perform a television inspection to verify accuracy of alignment, freedom from debris or obstruction, displacement of gaskets or joints and leaks at joint and manhole connections. Any of the above discrepancies observed shall be corrected by the Contractor at no additional cost to the City.
2. The cost of the initial television inspection and the first reinspection to confirm correction of previously identified deficiencies will be borne by the City. In the event additional television inspections are necessary due to inadequate or otherwise unacceptable repairs, the costs for such inspection shall be charged to the Contractor.

04. EXECUTION

A. Pre Testing

1. General
 - a. Gravity mains will be checked by the Engineer to determine whether any displacement, cracking, deflections or any other damage to the pipe has occurred, after the trench has been filled to two feet (2') above the pipe and tamped as specified; and upon completion of the project. The test will be physical inspection of each joint for pipe of forty-eight inch (48") in diameter and larger or, for pipes smaller than forty-eight inch (48") in diameter, by light flashed between manholes, or, if the manholes have not as yet been constructed, between the locations of the manholes by means of a flashlight or by reflecting sunlight with a mirror. If the interior or exterior of the pipe shows any misaligned pipe, displaced pipe, concrete pipe with cracks greater than 0.01", deflections greater

than five percent (5%) for steel and plastic sewer pipe, or any other defects, the defects designated by the Engineer shall be remedied by the Contractor at his expense.

- b. Prior to other tests, all sewer outfall lines shall be cleaned by flushing, pigging, or flushing with an appropriately sized sewer cleaning ball. In some cases, cleaning by high velocity jet or other method may be necessary.
 - c. All low pressure tests and deflection tests shall be witnessed by the Engineer.
2. Low Pressure Air Test
- a. The Contractor shall flush and clean the sewer line prior to testing. Plug all pipe outlets sufficient to resist the test pressure.
 - b. During construction, all manhole connections for future laterals shall be properly capped or plugged to avoid loss of test pressure.
 - c. Determine the test duration for the section under test by computations from the applicable equations as per ASTM C828 for ductile iron pipe, and reinforced concrete pipe or as per UNI-B-6 for PVC corrugated pipe and PVC solid-wall pipe. (See Table 1 or 2)
 - d. Determine groundwater elevation and head above the section of line to be tested. Adjust test pressure for groundwater by adding 0.43 psig per foot of groundwater head above pipe invert (each foot of groundwater divided by 2.31 is equivalent to 0.43 psig.) At no time shall the starting test pressure exceed 9.0 psig.
 - e. The pressure holding time is based on an average holding pressure of 3 psig or a drop from 3.5 to 2.5 psig.

TABLE 15 31 13.04.1
AIR TEST TABLE
FOR DUCTILE IRON PIPE, VITRIFIED CLAY PIPE, AND CONCRETE PIPE
 (Based on Equations from ASTM C828)

Specification time (min:sec) required for pressure drop from 3½ to 2½ psig when Testing one pipe diameter only

Line Length (ft)	Pipe Diameter Nominal Size (in)								
	4	6	8	10	12	15	18	21	24
25	0:04	0:10	0:18	0:28	0:40	1:02	1:29	2:01	2:38
50	0:09	0:20	0:35	0:55	1:19	2:04	2:58	4:03	5:17
75	0:13	0:30	0:53	1:23	1:59	3:06	4:27	6:04	7:55
100	0:18	0:40	1:10	1:50	2:38	4:08	5:56	8:05	10:34
125	0:22	0:50	1:28	2:18	3:18	5:09	7:26	9:55	11:20
150	0:26	0:59	1:46	2:45	3:58	6:11	8:30	9:55	11:20
175	0:31	1:09	2:03	3:13	4:37	7:05	8:30	9:55	11:20
200	0:35	1:19	2:21	3:40	5:17	7:05	8:30	9:55	12:06
225	0:40	1:29	2:38	4:08	5:40	7:05	8:30	10:25	13:36
250	0:44	1:39	2:56	4:35	5:40	7:05	8:31	11:35	15:07
275	0:48	1:49	3:14	4:43	5:40	7:05	9:21	12:44	16:38
300	0:53	1:59	3:31	4:43	5:40	7:05	10:12	13:53	18:09
350	1:02	2:19	3:47	4:43	5:40	8:16	11:54	16:12	21:10
400	1:10	2:38	3:47	4:43	6:03	9:27	13:36	18:31	24:12
450	1:19	2:50	3:47	4:43	6:48	10:38	15:19	20:50	27:13
500	1:28	2:50	3:47	5:14	7:34	11:49	17:01	23:09	30:14

TABLE 15 31 13.04.2
AIR TEST TABLE
FOR CORRUGATED AND SOLID-WALL POLYVINYL CHLORIDE PIPE
 (Based on Uni-Bell's Recommended Practice)

Specification time (min:sec) required for pressure drop of 1 psig for size and length of pipe indicated for $q=0.0015$

Line Length (ft)	Pipe Diameter Nominal Size (in)						
	4	6	8	10	12	15	18
100	3:46	5:40	7:34	9:26	11:20	14:10	17:00
150	3:46	5:40	7:34	9:26	11:20	14:10	19:13
200	3:46	5:40	7:34	9:26	11:24	17:48	25:38
250	3:46	5:40	7:34	9:53	14:15	22:15	32:03
300	3:46	5:40	7:36	11:52	17:05	26:42	38:27
350	3:46	5:40	8:52	13:51	19:56	31:09	44:52
400	3:46	5:42	10:08	15:49	22:47	35:36	51:16
450	3:46	6:24	11:24	17:48	25:38	40:04	57:41
Time for Longer Lengths (Seconds per total length in feet)							
	0.380(L)	0.854(L)	1.520(L)	2.374(L)	3.418(L)	5.342(L)	7.692(L)

- f. The Contractor shall manipulate the air valves and gauges during the test in the presence of the Engineer or his representative. Add air until the internal air pressure of the sewer line is raised to 4.0 psig. After an internal pressure of 4.0 psig is obtained in the pipe, allow time for the pressure to stabilize. The pressure will normally show some drop until temperature of the air in the test section of pipe stabilizes.
 - g. When the pressure has stabilized and is at or above the starting test pressure of 3.5 psig, commence the test.
 - h. Before starting the test, the internal pressure in the section of pipe being tested may be allowed to drop to 3.5 psig or the adjusted value due to groundwater head. Record the drop in pressure for the test period. If the pressure has dropped more than 1.0 psig during the test period, the line has failed and the Contractor shall not be paid for his work until the condition is corrected and the line does pass the test. The test may be discontinued when the prescribed test time has been completed even though the 1.0 psig drop has not occurred.
 - i. No one shall be allowed inside the manholes during testing.
3. Deflection Test with Mandrel
- a. The Contractor shall have a deflection test conducted no earlier than thirty days after reaching final trench backfill for all PVC pipe provided, in the opinion of the Engineer, that sufficient water densification or rainfall has occurred to thoroughly settle the soil throughout the entire trench depth.
 - b. If this densification condition cannot be achieved in the time after installation of the pipe but prior to the project completion date, then the testing of pipe deflection or deformation shall be conducted using a mandrel for which the size has been increased to measure one-third (1/3) less of the deflection allowance. Under these testing conditions the entire length of the sewer outfall shall be tested by means of a rigid go-no-go mandrel to ensure that a pipe deflection or deformation of Three and one-third (3-1/3%) percent or greater has not occurred.

- c. The go-no-go mandrel shall be hand pulled by the Contractor through the sewer outfall. No mechanical equipment such as winches or heavy machinery shall be used for pulling or pushing the mandrel through the sewer outfall.
- 4. Correction and Retesting
 - a. Any sections of sewer outfall that do not pass minimum test requirements for any of testing parameters enumerated hereinbefore shall be replaced and/or corrected prior to retesting when directed by the Engineer.
 - b. No additional compensation shall be paid to the Contractor for correcting and retesting defective sewer outfall lines.

05. MEASUREMENT AND PAYMENT

A. Testing of Sanitary Sewer Gravity Mains

- 1. Work associated with Testing of Sanitary Sewer Gravity Mains shall be considered incidental to the work performed during installation of sanitary sewer described within Section 15 13 00.

15 31 19 SANITARY SEWER MANHOLES, FRAMES AND COVERS

01. DESCRIPTION

- A. The work in this Section covers the requirements for furnishing, installation of and testing of sanitary sewer manholes and appurtenances.

02. QUALITY ASSURANCE

- A. The Contractor shall use sufficient workmen and competent supervisors in the execution of this portion of the work to ensure adequate and proper installation throughout.
- B. Manholes shall comply with all pertinent codes and regulations, and with these specifications. Where the provisions of the codes and standards conflict with these specifications, the more stringent provisions shall apply.
- C. Handling: unload and handle materials with crane, backhoe, or equipment of adequate capacity, equipped with appropriate slings or padding to protect materials from damage.
- D. Workmanship: Manholes, frames and covers shall be free from visible cracks, holes, foreign inclusions or other injurious defects.

03. SUBMITTAL

- A. Before any materials covered in this section are delivered to the job site, the Contractor shall submit in five (5) copies, shop drawings for these items to the Engineer for review and approval. Shop drawings shall include all manhole materials, precast manhole units, invert and critical elevations, steps, ring and cover units, gaskets and flexible manhole sleeves.

04. PRODUCTS

A. Precast Reinforced Concrete Manhole Sections

- 1. Design
 - a. Design of precast sections shall be in strict accordance with ASTM C 478 (latest) and H-20 loading standards.
 - b. Wall thickness shall be in accordance shall be a minimum of five inches (5") for four foot (4') inside diameter manholes and six inches (6") for five foot (5') inside diameter manholes.
 - c. Bases of all manholes shall have a minimum thickness of six inches (6") over an eight inch (8") stone base for leveling, and cast top section shall have eccentric cone, unless shown otherwise on drawings.
 - d. Risers and grade rings shall all be of one type.
 - e. Joints shall be formed with male and female ends and sealed with a flexible joint material meeting Federal Specifications SS-5-00210 "Sealing Compound, Preformed Plastic for Pipe Joints," Type I, rope form, or Type II, flat type.

- f. Manholes for use on pipelines eighteen inches (18") and larger, over fifteen feet (15') deep (top rim to lowest point) and/or manholes with inside drops shall be 5'-0" in diameter. Either an approved reinforced concrete slab or pre-cast reducer section will be acceptable. The reinforced concrete slab shall have the following minimum design:
 - i. 1'-0" thick minimum (3,000 psi) plus the depth of the riser groove;
 - ii. Reinforced at the top with No. 4 bars at 12" o.c. EW;
 - iii. Reinforced at the bottom with No. 5 bars at 6" o.c. EW for manhole depths from 22' to 32', and No. 7 bars at 6" o.c. EW for manhole depths greater than 32'; and
 - iv. Bottom half of this slab shall have the equivalent of 6 extra No. 6 bars as beam reinforcement around opening for the 4' riser section.
 - g. In the case where total base to 4' riser section reductions greater than 2' are desired or necessary, a minimum of 36" of vertical riser section shall be used between successive reducers, unless otherwise approved. Four-foot base diameters shall not be reduced further except for placement of ring and cover. Both the tongue and groove of joints shall have reinforcing steel equal in area to that of the wall sections.
 - h. Except where restricted by shallow cuts or otherwise shown on the Contract Drawings, minimum heights for base sections (excluding poured base thickness) shall be as follows:
 - i. 46" for 4' diameter; and
 - ii. 48" for 5' diameter
 - i. The base section shall not have a monolithic pre-cast base slab. The pre-cast base riser section shall be placed in a reinforced concrete (3,000 psi) slab to a depth equal to the length of the groove of the riser section. The slab shall have a diameter or side of at least 1' greater than the manhole base section outside diameter. The slab shall be a minimum of 1'-0" thick plus the depth of the riser groove and shall be reinforced top and bottom with a minimum of No. 4 bars at 12" o.c. EWEF for 4' and 5' diameter sections.
2. Steps
- a. The pre-cast manholes shall have cast in place nonskid manhole steps of press set plastic or other approved material. Step irons shall be generally located at 90 degrees from the direction of flow on the vertical wall. The steps shall be set in the wall a maximum of 12" and/or 16" maximum on centers vertically as required by OSHA standards. All steps shall have a minimum vertical load resistance of 750 pounds with no permanent deflection and pullout resistance of 1,000 pounds. Steps shall be imbedded in the wall a minimum of 4" and project from the wall a minimum of 6" and shall be a minimum of 12" in width with lateral foot stops.
3. Flexible Manhole Sleeves
- a. Sleeves shall be used at each entry hole of all sewer manholes. The sleeve flange shall be integrally cast into the manhole wall forming a waterstop and the sleeve portion shall extend through the base at right angles to the wall into which the pipe is inserted.
 - b. Physical properties of the material for this sleeve are: (1) Minimum tensile strength - 1500 psi, (2) Elongation at rupture, min. - 450%, (3) Compression set, max. 25% ASTM D-396, Method B, and (4) Durometer 50 5, ASTM D 2240.
 - c. A stainless steel sealing clamp shall secure the sleeve to the pipe.

B. Manhole Frame and Cover

1. General

- a. The frames and covers shall be constructed of tough, gray cast iron and must meet the requirements of ASTM Specification A-48 latest revision, Class Thirty (30). The covers shall be machined, lie flat on the frame seat, and shall not rattle under the impact of traffic. Covers shall be solid with no holes. Frames and covers shall be thoroughly cleaned and then hot-dipped in asphaltum or coal-tar varnish. Frame and cover shall weigh not less than three hundred (300) lbs. Manhole covers for sanitary sewers shall indicate "Sanitary Sewer" on the cover. Sealed manhole covers shall be furnished with four (4) brass flat head machine screws at 90° and a single polyvinyl gasket between cover and frame seat.
- b. For standard applications, manhole frame and cover shall be manufactured by East Jordan Iron Works, Neenah Foundry or approved equal

2. Special Applications

- a. Manhole frames and covers that are below the required base flood elevation + two (2) feet shall be watertight. Rings/Frames shall be bolted down into the concrete manhole tops and have at three bolts and a gasket to sit the cover to the frame. Frame and Cover shall be the V-2384 Watertite Frame and Cover manufactured in the United States by East Jordan Iron Works, Inc. or approved equal.
- b. For manholes with rim elevation three feet (3') above grade all castings shall be revolution type frames and covers manufactured in the United States of America by East Jordan Iron Works, Inc., or approved equal. The cover shall rotate horizontally away from the frame, allowing access to the manhole.

C. Vent Pipes

1. Vent pipes, when called for on the Contract Drawings or in the Proposal shall be made of 4-inch diameter, Schedule 40 steel pipe. They shall be furnished and installed with 3/8 inch mesh galvanized screen to cover outside opening.

D. Drop Manholes

1. Drops shall be constructed as shown on the Drawings and/or Standard Details at the location(s) where the invert elevation of a main entering a manhole is two feet (2') or more above the lowest invert of the manhole. Inside drops will not be allowed unless authorized by the engineer. Inside drops shall be RELINER, as manufactured by Duran, or approved equal.

05. EXECUTION

A. General

1. All outfall manholes shall be placed with a minimum of two (2) feet reveal from the top of rim to the existing surface grade with no more than four (4) feet of reveal. It is at the contractor's discretion for raising the manhole above the minimum requirement amount though compensation will only be made for the first two feet. For any manholes within the flood hazard areas, they must be vented or raised to the base flood elevation (BFE) + two (2) feet as identified on the Construction Drawings.

B. Excavation and Backfill

1. Undercut below all manhole footings and/or precast bases to a depth not less than six (8) inches nor greater than twelve (12) inches. Backfill this area with stone bedding material as specified in Section 15 05 01 of these specifications.
2. Where concrete footings are to be poured, the area in which the concrete is to be placed must be kept dry until concrete has set-up.

C. Inverts

1. The invert channels shall be smooth and semi-circular in shape conforming to the inside of the adequate sewer section. Changes in direction of flow shall be made with a smooth curve of as large a radius as the size of the manhole will permit. Changes in size and grade of the channels shall be made gradually and evenly. The invert channels shall be formed directly in the concrete of the manhole base, or shall be built up with brick and mortar, or shall be half tile laid in concrete, or shall be constructed by laying full-section sewer pipe through the manhole and breaking out the top half after the surrounding concrete has hardened. The floor of the manhole outside the channels shall be smooth and shall slope toward the channels not less than 1 inch per foot nor more than 2 inches per foot.

D. Walls

1. Mortar for jointing and plastering shall consist of one part portland cement and two parts fine sand. For brickwork, lime may be added to the mortar in the amount of not more than 25 percent of the volume of cement. The joints shall be completely filled and shall be smooth and free from surplus mortar on the inside of the manhole. Brick manholes shall be plastered with 1/2 inch of mortar over the entire outside surface of the walls. Brick shall be laid radially with every sixth course laid as a stretcher course.

E. Rings and Covers

1. The rings and covers shall be set so that the top of the cover will be flush with or higher than finish grade, as per the Plans or as directed by the Engineer.
2. All manhole rings in roadways shall be encased in a concrete collar 18" x 6" of 3,000 psi concrete beneath the asphalt, with the cover flush with the top of the pavement.

F. Pipe to Manhole Connections (for new and existing manholes)

1. Cut pipe square before installation. Place so springline edges of pipe are flush with inside wall or extend a maximum of 2.5" in accordance with manufacturer's recommended installation procedures.
2. Where pipe is extended into manhole, coordinate slope of pipe and slope of notch in invert to ensure smooth transition.
3. Fit flexible gasket connector between pipe and manhole described herein except for the following connections:
 - a. Where the pipe enters manhole at slope greater than 10%
 - b. Where pipe enters the manhole at an angle
 - c. Where manhole is built over existing sewer pipe, except when existing sewer is PVC
 - d. When either DIP or RCP is connected to existing brick manhole
 - e. Parallel connection
4. Insert pipe was pipe following connector manufacturer's written recommendations.
 - a. Ensure that pipe is centered in connector, that full barrel portion of pipe is fully inserted, and that pipe is properly bedded immediately to the manhole.
 - b. When flexible gasket connector is not used for reasons stated herein, use quick-non shrink grouted pipe to manhole connections and bentonite collar.
 - c. Keep excavation dry and do not backfill until 2 hours have elapsed to permit grout to cure.
5. When AWWA C900 and C905 is to be grouted using solvent cement:
 - a. Apply solvent cement following manufacturer's instructions to entire exterior portion of pipe to be grouted into wall
 - b. Coat softened pipe exterior with concrete sand and allow pipe exterior to harden,.
 - c. Grout sand-coated pipe into wall.
6. New connections to existing manholes shall be made by core drilling through the walls. Flexible seals as described herein shall be used for the pipe penetration. Apply a protective epoxy coating to the cored concrete and the ends of any exposed reinforcement.

G. Backfilling

1. After the bedding has been prepared and the manhole installed, selected material from excavation or borrow, at a moisture content which will facilitate compaction, shall be placed alongside the manhole in layers not exceeding 6 inches in depth. Care shall be taken to insure thorough compaction of the fill under the haunches of the pipe lines. Each layer shall be thoroughly compacted by rolling, tamping and mechanical rammers, or by hand tamping with heavy iron tampers, the tamping face area of which shall not exceed 25 square inches. The method of filling and compacting shall be continued until the fill has reached an elevation 12 inches above the top of the pipes. The remainder of the hole shall be backfilled and thoroughly compacted in layers not exceeding 12 inches.
2. Care shall be taken during backfill and compaction operations to maintain alignment and prevent damage to the joints. The backfill shall be kept free from stones, frozen lumps, chunks of highly plastic clay, or other objectionable material.
3. All local backfill materials shall be compacted at a moisture content satisfactory to the Engineer, which shall be approximately that required to produce the maximum density. The Contractor shall dry or add moisture to the local material when required to provide a uniformly compacted and stable embankment.
4. When other than local material is used for backfilling above the foundation, such material will be classified as select backfill material as specified in Part 2.03 of these specifications. Use of this select backfill material shall be only when directed by the Engineer or his representative.

H. Manhole Sealing

1. All manholes shall be sealed with plastic cement putty meeting Federal Specifications SS-C-53. O-ring joints shall conform to the requirements of ASTM C443. A rubber water stop shall be supplied with the manholes to tie the pipe to the barrel section. These gaskets and clamps shall meet the requirements of ASTM C923.

I. Manhole Testing

1. All manholes shall be tested after assembly and prior to backfilling using a vacuum tester manufactured by P.A. Glazier or MMVT, Inc.. Tester shall be provided by the Contractor.
 - a. Procedure for Vacuum Test
 - i. All lift holes shall be plugged with a non-shrink grout. All pipes entering the manhole shall be plugged. All plugs must be braced to keep plug from being drawn into the manhole. The inside of the manhole shall be wet down with visibly indicate areas of leakage (if any) after the test is performed. Test head shall be placed on or in the cone section and the seal inflated as per the manufacturer's specifications. A vacuum of 10 inches of mercury shall be drawn and the vacuum pump shut off. With the valve closed, the time it takes for the vacuum to drop to 9 inches shall be measured. The manhole shall pass if the time is greater than the values in the table below:

Manhole Depth	Manhole Diameter		
	48"	60"	72"
10' or less	60 Sec	75 Sec	90 Sec
10' – 15'	75 Sec	90 Sec	105 Sec
Over 15'	90 Sec	105 Sec	120 Sec

- ii. If the manhole fails, necessary repairs shall be made using a non-shrink grout while the vacuum is still being drawn. Retesting shall proceed until the manhole is acceptable.

06. MEASUREMENT AND PAYMENT

A. Sanitary Sewer Manholes

1. Measurement: By linear foot of height of various sizes, measured to the nearest tenth vertically from the inside bottom (invert) to the to the final finished top of the manhole ring (not to exceed two (2) feet above grade) as part of the completed and accepted work.
2. Payment: At unit price for each diameter size and depth of manhole installed as listed in the Bid Schedule as part of the completed and accepted work. Payment includes work for location of utilities, excavation, trenching, backfilling, removal and replacement of driveway pipes, guardrails and other obstructions, connecting to pipes, base construction, incidental concrete and grout used for sealing and invert construction, bedding stone, furnishing and installing appropriate manhole frame and covers and vacuum testing of manholes.

B. Payment will be made under:

Pay Item	Pay Unit
___' Diameter Precast Sewer Manhole, ___' - ___' (Drop, Seal, Vent)	EA

Addendum No. 1

Issue Date: February 15, 2023

Project Name: City of Rocky Mount Dirt Streets Project: Emerald, Coral, Topaz
CRM RFP #: 320-130123AG
Bids Due: Tuesday, February 21, 2023 - 2:00 pm

TO: Prospective Bidders

This addendum forms a part of the Contract Documents and modifies the original Contract Documents 2/2/23 as noted below. Acknowledge receipt of this Addendum by inserting the number and issue date of this addendum in the blank space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This **Addendum No. # 1** consists of 2 pages and the attached documents. Addendum 1 and attachments may be downloaded from the City of Rocky Mount Purchasing web site at:

https://rockymountnc.gov/departments_services/finance/purchasing/bids

1. Pre-Bid Meeting Minutes
2. Pre-Bid Meeting Attendance
3. Supplemental Project Special Provisions
4. Revised Attachment A: Proposal/Acceptance Form

CLARIFICATIONS:

1. Soils Testing

The City or the City's geotechnical consultant will provide inspection of foundation subgrade, suitability of backfill material, and concrete testing. Testing associated with sewer and asphalt is considered incidental and included in those line items. Unless noted otherwise, all other testing is the responsibility of the Contractor.

2. Allowance for Private Property Repair (CI)

The allowance is for repairs that may become necessary during construction that are not listed on the Bid Documents. Payment will be made on a lump sum basis for actual amount invoiced by the Contractor. This line item is only to be used to make repairs to damage incidental to construction as approved by the Engineer. Damage caused by negligence will be the responsibility of the Contractor to repair. All expenses applied to this allowance shall be approved by the City prior to the construction of the repair. An allowance of \$5,000 has been set to establish bids.

CHANGES TO BID DOCUMENTS:

1. Revised Attachment A: Proposal/Acceptance form to replace original bid form
2. Revised Bid Form includes line item for construction surveying/staking/as-builts
3. Revised Bid Form includes line item for utility coordination.
4. Supplemental Project Special Provisions.

CHANGES TO PLANS:

No Change

CHANGES TO BIDDING REQUIREMENTS:

No Change

CHANGES TO CONDITIONS OF THE CONTRACT:

1. Substantial completion should be 120 consecutive days from Notice to Proceed. Contract time extensions or staged Notice to Proceed to address extended material lead times will be considered by the owner by change order after contract award upon documentation of confirmed material order and anticipated delivery date.

CHANGES TO SPECIFICATIONS:

No Change

END OF ADDENDUM

<i>Prepared by Appian Consulting Engineers, PA for:</i>	<i>City of Rocky Mount Alicia Gaines Purchasing Associate III 252-972-1227</i>
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ROCKY MOUNT, NC
THE CENTER OF IT ALL

PRE-BID CONFERENCE

City of Rocky Mount Dirt Streets Project: Emerald Lane, Topaz Avenue, Coral Lane

February 9, 2023

331 S. Franklin Street - 10:00 am
Conference Room 3

CITY RFP#: 320-130123AG

MINUTES

1. Welcome, Sign-in and Introductions
2. Project Description
3. Bid Form
4. Questions
5. Scope of Work
6. Worked Performed by The City
7. Permits
8. Construction Schedule
9. Change Orders and Field Decisions
10. Record Documents
11. Payment Requests
12. Liquidated Damages
13. Storage of Materials and Security
14. Safety
15. Housekeeping
16. Work Hours
17. Miscellaneous
18. Questions

1. Welcome, Sign-in and Introductions

2. Project Description

- 2.1. Asphalt paving of existing dirt streets Emerald Lane, Coral Drive and Topaz Avenue. Project includes paving of approximately 6,600 square yards of existing unsurfaced roadway, installation of approximately 2,960 linear feet of gravity sewer lines with manholes and services, minor clearing and grubbing, construction staking, installation of drainage culverts, patching existing pavements, mass grading and reconstruction of existing roadside swales. Project plans prepared by Appian Consulting Engineers, PA, and unit price schedule outline the location and estimated quantities for the required work. All work shall be done in accordance with NCDOT Standard Specifications for Roads and Structures, current version.

3. Bid Form

- 3.1. The Bid Form is included in the Project RFP. Bidders must submit bids on the original bound Project RFP. Bidders desiring copies of the bid documents may download them from the City's website at: https://www.rockymountnc.gov/departments_services/finance/purchasing/bids
- 3.2. Bid bond will be required.
- 3.3. Minority Business Participation: MBE goal for this project is 10%. Due diligence is required if any work is to be subcontracted. **Certification that work is to be completed by Contractor's own forces means no subcontractors of any kind may work on the project.** Complete all applicable Attachment Forms and Affidavits and include in proposal submittal.
- 3.4. Contractor/ Vendor Registration and E-Verify Affidavit

4. QUESTIONS

- 4.1. Written questions shall be e-mailed to Alicia.Gaines@rockymountnc.gov by **2/13/23 at 5:00 pm**. Contractors will enter "RFP #320-130123AG – Questions" as the subject for the email.
- 4.2. Questions received prior to the submission deadline date, the Purchasing Associates response, and any additional terms deemed necessary by the City of Rocky Mount will be posted in the form of an addendum to the Interactive Purchasing System (IPS), <http://www.ips.state.nc.us>, and the City of Rocky Mount website and shall become an Addendum to this RFQ. No information, instruction or advice provided orally or informally by any City personnel, whether made in response to a question or otherwise concerning this RFQ, shall be considered authoritative or binding. Vendors shall rely only on written material contained in an Addendum to this RFQ.
- 4.3. Inquiries shall be submitted no later than the date and time noted in the project schedule. Questions answered verbally will be followed up by written addenda as deemed necessary; oral interpretations shall have no effect.

5. Scope of Work

- 5.1. Clearing and Grubbing as directed to clear vegetation encroaching in the ROW and drainage easements.
- 5.2. Contingency Items will only be paid if directed by the Engineer, Project manager, or Construction Inspector.

- 5.3. Clean out, regrade and stabilize existing roadside swales (Emerald Lane, Coral Drive, Topaz Avenue)
- 5.4. Replace existing driveway culverts as directed by City to ensure proper drainage of the roadside swales.
- 5.5. Asphalt paving shall be 2 inches of S9.5B hot mix asphalt and shall include paving of adjacent driveway aprons to a distance of approximately 7 feet from the edge of payment.
- 5.6. New surfaces shall be installed to maintain or improve the integrity of existing drainage.
- 5.7. The newly placed asphalt shall tie in smoothly with the existing intersecting road surface.
- 5.8. Access to all driveways to be paved.
- 5.9. Install sanitary sewer lines, services, cleanouts and associated manholes.
- 5.10. Adjust existing valve boxes to match final grade.
- 5.11. Remove/replace existing mailboxes (same day).
- 5.12. Install Coir-Fiber Waffle Barrier pipe inlet protection and other erosion control devices as directed by the City.
- 5.13. Undercut Excavation and Replace Existing Driveway Pipe items have been provided as contingency items should they be needed. Undercut unit price shall include removal of existing material (haul offsite) and installation/compaction of approved structural fill or aggregate base course. Quantity of undercut shall be cubic yards as measured in place.
- 5.14. Sanitary Sewer along Cox Avenue is designated for future and not included in contract.
- 5.13 Contractor shall supply mobilization/demobilization, permits, furnishing all materials, labor, equipment, and work necessary to construct a finished product as proposed by the specifications and plans. All work shall be done in accordance with the NCDOT Standard Specifications for Roads and Structures, current version.
- 6. Work Performed by City:
 - 6.1 City to relocate gas utilities, if needed.
 - 6.2 City to provide geotechnical, if needed
- 7. Permits
 - 7.1. Building plans are approved by the City. Contractor is responsible for: obtaining and paying for building permit; calling for and coordinating inspections with the City's Building Inspections Department at the applicable times required by the City Inspectors; obtaining approval from Inspections on this scope of work.
- 8. Construction Schedule
 - 8.1. Two (2) copies of the completed RFP response shall be sent to Alicia Gaines, City of Rocky Mount Purchasing Associate. RFP response proposals shall be sent via US Mail, FedEx, UPS or hand delivered. Faxed and emailed RFP responses will not be accepted.

- 8.2.** Response proposals are due to the City of Rocky Mount Purchasing Manager, 331 South Franklin Street, Rocky Mount, North Carolina, 27804, by **2:00 PM** local time, **February 21, 2023**. Public Bid Opening in Conference Room #3 at 2:00 p.m.
- 8.3.** Notice to Proceed will be issued after approval of the contract award by the Rocky Mount City Council. Notice to Proceed is expected to be issued in on April 1st, 2023.
- 8.4.** Substantial completion should be **120** consecutive days from Notice to Proceed. Contract time extensions or staged Notice to Proceed to address extended material lead times will be considered by the owner by change order after contract award upon documentation of confirmed material order and anticipated delivery date.

9. Change Orders and Field Decisions

- 9.1.** The Inspector or Engineer may authorize minor field changes so long as the change does not result in a change in contract price or completion time. Any change that results in a change in contract price or completion date must be approved by change order. The Contractor must identify and notify the City in writing of any change affecting the contract price or time in a timely manner. Except in emergency conditions, the Contractor may not proceed with work requiring a change order until the City executes a change order. Contractor is responsible for submitting change order on form 00 63 63-1 along with any supporting information necessary to justify the change.

10. Record Documents

- 10.1.** The Contractor is responsible for keeping one set of record documents. The Contractor shall keep the record set of drawings updated on a daily basis. A complete set of record drawings must be submitted to the City prior to final payment.

11. Payment Requests

- 11.1.** The Contractor should submit a payment request form to the City for approval or use the City's standard form. The cut off date is the 25th day of the month and the Contractor should submit to the Inspector to verify quantities. The payment request must be signed by the authorized party and be complete to insure timely payments. There will be no payment for stored materials.

12. Liquidated Damages

- 12.1.** Liquidated damages are \$200.00 for each day that expires after the time specified in Attachment D: Supplementary General Conditions until the Work is substantially complete.

13. Storage of Materials and Security

- 13.1.** The Contractor is responsible for finding locations to store materials. The Contractor is also responsible for making sure that materials purchased for this job are stored in secure areas.

14. Safety

- 14.1.** Contractor is to be familiar with and abide by all local, state and federal safety requirements.

15. Housekeeping

- 15.1.** All areas must be kept clean and free of blowing debris. Mud tracked on paved areas shall be removed immediately. All erosion and sediment control devices must be regularly maintained.

16. Work Hours

- 16.1.** Construction will be limited to 7:00 am to 7:00 pm Monday through Friday, or as approved by the City.

17. Miscellaneous Items

- 17.1.** Damage caused by negligence will be the responsibility of the Contractor to repair.

18. Questions

Prepared for City of Rocky Mount

By Appian Consulting Engineers, PA

TRJ, 2/14/23



ROCKY MOUNT, NC
THE CENTER OF IT ALL

PRE-BID CONFERENCE
CRM Dirt Streets Project: Emerald, Coral, Topaz
February 9, 2023
AGENDA SIGN-IN SHEET

Name	Organization/Title	Phone	e-mail
WBC Brad Kerr	City of Rocky Mount Director of Public Works	252.972.1120	Brad.Kerr@rockymountnc.gov
SPM Scott Miles	City of Rocky Mount Assistant City Engineer-Water Resources	252.972.1122	Scott.miles@rockymountnc.gov
A76 Alicia Gaines	City of Rocky Mount Purchasing Associate I	252.972.1227	Alicia.gaines@rockymountnc.gov
Ramona Plemmer	City of Rocky Mount Purchasing Manager	252.972.1228	Ramona.plemmer@rockymountnc.gov
ORM Ramon Muckle	City of Rocky Mount Traffic Engineer	252.972.1202	Ramon.muckle@rockymountnc.gov
WCP Bill Pridgen	City of Rocky Mount Construction Inspector	252.467.4936	Bill.pridgen@rockymountnc.gov
Allen Goff	City of Rocky Mount Construction Inspector	252.467.4941	Allen.goff@rockymountnc.gov
GC Gabrielle Bryson	City of Rocky Mount Stormwater Engineer	252.972.1340	Gabrielle.Bryson@rockymountnc.gov
DR David Revoir	Appian	252.972.7703	Drevoir@appianengineers.com
ES Ryan Joyner	Appian	252.972.7703	Rtjoyner@appianengineers.com
BR Brian Colbert	BCS	252-937-7218	BCS Contractor & Engineer brcolbert@bcas.com
John Rich	Weavers Asphalt	252-903-0303	mjkrich@suddenlink.net mwrch74@gmail.com
Shawn Sorow	Bridgeway Contractors	252-883-3413	bridgewaycontractors@yahoo.com
Steve Yetman	CRM	252-751-8627	steve.yetman@rockymountnc.gov

SUPPLEMENTAL PROJECT SPECIAL PROVISIONS

SUPPLEMENTAL PROJECT SPECIAL PROVISION 1 (SP-1):
CONSTRUCTION SURVEYING/STAKING/ AS-BUILT SURVEYS**1. Description:**

Work covered in this special provision consists of providing construction stakes, lines and grades necessary to construct the proposed project. Drainage and Utility Easements located on the disturbed parcels shall be staked by a North Carolina Professional Land Surveyor prior to construction, if deemed necessary by the Engineer. Work covered also includes as-built surveys as described herein.

2. Construction Methods:

The contractor will locate and mark right-of-way limits and construction easements within the work area. Contractor shall be responsible for all computations and information relating to stakes, lines, and grades for the entire project. All construction staking shall be performed under the responsible charge of a North Carolina Professional Land Surveyor.

As-built survey shall be completed to show that all elements of the project have been construction in compliance with the locations elevations and dimensions shown on the plans. All elevations shall be NAD 83 & NAVD 88. A hard copy of the final as-built survey sealed by a NC Licensed Professional Land surveyor shall be submitted to the Owner along with digital CAD files prior to final acceptance. As built survey shall also include:

- a. Sanitary Sewer: Location and Elevation of manholes tops and invert, invert in and out of pipes, pipe size, slope and material;
- b. Catch Basin: Top Flow Line Location and Elevation, inverts
- c. Storm Pipe: Size, Material, Location, Elevation, inverts (including invert into Box Culvert) and slope.
AS-BUILT SURVEY OF DRIVEWAY CULVERTS IS NOT REQUIRED
- d. Any Other items determined to be critical by the City for project acceptance.

SUPPLEMENTAL PROJECT SPECIAL PROVISION 2 (SP-2):
UTILITY COORDINATION**1. Description:**

Work covered under this special provision includes verification of existing utilities as shown on the drawings prior to the start of construction and submittal of findings to the Engineer and all general coordination necessary to remove, amend, relocate and/or repair existing utilities in and around the project area. Contractor shall, through the use of a private utility locator service or publicly provided service have all subsurface utilities within the project area located, marked and recorded. Information including but not limited to, utility owner, type, material, size, and depth must be recorded within the project area and submitted to the Engineer prior to start of construction. The Contractor shall verify the horizontal and vertical locations of existing utilities locations prior to the start of construction.

Utility Coordination shall also include the following:

- a. Relocating guy wires, if required, shall be in accordance with all governing codes, regulations and provisions of the City.
- b. Temporary pump around services for sanitary sewer as needed during construction. Sanitary Sewer Pump Around shall be completed in accordance with the most recent City of Rocky Mount regulations.

2. Payment:

Payment shall be made on a Lump Sum basis for Utility Coordination.

ATTACHMENT A: PROPOSAL/ACCEPTANCE FORM

for

**City of Rocky Mount Dirt Street Project: Emerald Lane, Coral Drive, Topaz Avenue
320-130123AG**

Bidder acknowledges that estimated quantities are not guaranteed and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

The undersigned, as bidder, proposes and agrees if this proposal is accepted to contract with the City of Rocky Mount for the furnishing of all materials, equipment, and labor necessary to complete the construction of the work described in these documents in full and complete in accordance with plans, specifications, and contract documents, and to the full and entire satisfaction of the City of Rocky Mount per the unit prices below.

Item No.	Spec. Section	Description	Bid Quant	Unit	Unit Price	Bid Value
1		Mobilization	1	LS		
2		Clearing and Grubbing	1	LS		
3		Mass Grading & Ditch Reconstruction: Topaz Ave	1	LS		
4		Mass Grading & Ditch Reconstruction: Emerald Ln	1	LS		
5		Mass Grading & Ditch Reconstruction: Coral Dr	1	LS		
6	520	Aggregate Base Course (ABC)	620	TN		
7	10	#57 Stone	450	TN		
8	06	Asphalt Concrete Surface Course, S9.5B (2 inch)	800	TN		
9	06	Asphalt Concrete Base Course, B25.0C (1½ inch)	120	TN		
10	06	Asphalt Binder for Plant Mix, Grade PG 64-22	55	TN		
11	03	Remove ex DI at 12+50+/- Coral Drive and install 2x3 DI Box (CB-1) per NCDOT 840.14	1	EA		
12	03	24" RCP Pipe, Class III (including Stone Bedding, Backfill and Removal of Ex. Culvert at 12+50+/- Coral Drive)	30	LF		
13	03	18" RCP Pipe, Class III (including Stone Bedding, Backfill and Removal of Ex. Culvert at 13+50+/- Topaz Avenue)	80	LF		
14	03	18" FES	4	EA		
15	03	24" FES	1	EA		
16	15	8" PVC Sewer Pipe, 0'-6' Depth	720	LF		
17	15	8" PVC Sewer Pipe, 6'-8' Depth	345	LF		
18	15	8" PVC Sewer Pipe, 8'-10' Depth	750	LF		
19	15	8" PVC Sewer Pipe, 10'-12' Depth	270	LF		
20	15	4" Short-Side Sewer Service (Open-Cut)	270	LF		
21	15	4" Long-Side Sewer Service (Bore)	90	LF		
22	15	6" Short-Side Sewer Service (Open-Cut)/ Cleanouts (Topaz Ave)	190	LF		
23	15	4' Dia. Precast Sewer Manhole 6'-8' (Ext. base)	1	EA		
24	15	4' Dia. Precast Sewer Manhole 6'-8' (Extended Base, Sealed)	3	EA		
25	15	4' Dia. Precast Sewer Manhole 8'-10' (Extended Base, Sealed)	4	EA		

Form Continued Next Page

Item No.	Spec. Section	Description	Bid Quant	Unit	Unit Price	Bid Value
26	15	MH #7: 4' Dia. Precast Sewer Manhole 10'-12' (Extended Base)	1	EA		
27	15	MH #12: 4' Dia. Precast Sewer Manhole 10'-12' (Extended Base, Sealed, Vented) 18" above adjacent grade per CRM Det. 4.1	1	EA		
28	858	Adjustment of Meter Boxes or Valves	2	EA		
29	858	Adjustment of Ex. Manhole	1	EA		
30		Fire Hydrant Relocation (at Coral & Topaz)	1	LS		
31	1631	Seeding and Mulching all disturbed areas	1	LS		
32		Removal/ Replacement of Mailboxes	14	EA		
33	305	CI: Replace Ex. Driveway Pipe (15" RCP)	260	LF		
34	16	CI: Temporary Sediment (Silt) Fence	100	LF		
35	16	CI: Excelsior Matting for Erosion Control	900	SY		
36	10	CI: Filter Fabric	150	SY		
37	16	CI: Coir Fiber Wattle Barrier	200	LF		
38	16	CI: Sediment Control Stone	70	TN		
39	225	CI: Undercut Excavation and Backfill	100	CY		
40	230	CI: Borrow	50	CY		
41	16	CI: Class B Rip Rap	15	TN		
42	15	CI: Trench Rock Excavation	10	CY		
43	15	CI: 8" DIP Sewer Pipe, 0-6' Depth	80	LF		
44		CI: Allowance for Private Property Repair	1	LS	ALLOW	\$ 5,000.00
45	SP-1	Construction Surveying/ Staking/ As-Builts	1	LS		
46	SP-2	Utility Coordination	1	LS		
TOTAL BID AMOUNT:						\$

*Contingency Items (CI) will only be paid if directed by City.

BID ALTERNATE						
Item No.	CO #	Spec. Section	Description	Bid Quant.	Unit	Add/ (Deduct)
A1		15	Use 4' Dia. Precast Flat Top Sewer Manhole 10'-12' (Extended 1'x1' Base, Sealed, Vented) 18" above adjacent grade per CRM Det. 4.5, instead of conical MH described in Line Item #27	1.00	LS	

BASIS OF AWARD

- Unit prices to include all labor, material, and equipment cost unless otherwise noted.
- Where unit prices are requested, Contractor to be paid for actual installed quantities verified by the Engineer. Contractor shall provide supporting documentation and load tickets as required by the project specifications. Failure to obtain authorization from the Engineer for placement of any of the unit priced items beyond the previously authorized scope of work or failure to provide requires supporting documentation and quantity verification of material and/or quantities by the Engineer will null and void any claims by the Contractor for compensation for these items.

3. **Award Determination:** The award of a contract will be made to the lowest responsible bidder meeting the requirements of the Contract Documents. However, when it comes to evaluation of the proposal based on cost alone, the determination of the lowest bidder will be based solely on:

The TOTAL BID AMOUNT of ATTACHMENT A: Proposal/Acceptance Form, without adjustments or from unsolicited bid qualifiers – no exceptions.

In submitting this Bid, Bidder represents that Bidder has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged.

<u>Addendum No.</u>	<u>Addendum Date</u>
_____	_____
_____	_____
_____	_____

Respectively submitted this _____ day of _____ 20____

(Contractor's Name)

Federal ID#: _____

By: _____

Witness: _____

Title: _____
(Owner, partner, corp. Pres. Or Vice President)

(Proprietorship or Partnership)

Address: _____

Attest: (corporation)

Email Address: _____

(Corporate Seal)

By: _____ License #: _____

Title: _____
(Corporation, Secretary/Ass't Secretary.)

Addendum No. 1-REBID

Issue Date: March 1, 2023

Project Name: City of Rocky Mount Dirt Streets Project: Emerald, Coral, Topaz
CRM RFP #: 320-130123AG-REBID
Bids Due: Tuesday, March 30, 2023 - 2:00 pm

TO: Prospective Bidders

This addendum forms a part of the Contract Documents and modifies the original Contract Documents 2/2/23 as noted below. Acknowledge receipt of this Addendum by inserting the number and issue date of this addendum in the blank space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This **Addendum No. # 1** consists of 2 pages and the attached documents. Addendum 1 and attachments may be downloaded from the City of Rocky Mount Purchasing web site at:

https://rockymountnc.gov/departments_services/finance/purchasing/bids

CLARIFICATIONS:

No Change

CHANGES TO BID DOCUMENTS:

Schedule Change

Event	Responsibility	Date and Time
Issue RFP	City	3/1/2023
Submit Written Questions Deadline	Contractor	3/10/2023 5:00 pm
Provide Response to Questions/ Addendum Deadline	City	3/21/2023 5:00 pm
Submit Proposals	Contractor	3/30/2023 2:00 pm
Contract Award	City	4/13/2023, tentative
Estimated Completion Date	Contractor	9/11/2023, tentative (150 days)

CHANGES TO PLANS:

No Change

CHANGES TO BIDDING REQUIREMENTS:

No Change

CHANGES TO CONDITIONS OF THE CONTRACT:

1. Substantial completion should be **150** consecutive days from Notice to Proceed. Contract time extensions or staged Notice to Proceed to address extended material lead times will be considered by the owner by change order after contract award upon documentation of confirmed material order and anticipated delivery date.

CHANGES TO SPECIFICATIONS:

No Change

END OF ADDENDUM

<i>Prepared by Appian Consulting Engineers, PA for:</i>	<i>City of Rocky Mount Alicia Gaines Purchasing Associate III 252-972-1227</i>
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