



BID DOCUMENTS FOR
DUVAL ST. CULVERT REPLACEMENT
PROJECT NO. 2014-009

BID NO. 2484

SET # _____

ENGINEERING DEPARTMENT
635 ALFRED BROWN JR. COURT SW,
POST OFFICE BOX 308
CONCORD, NORTH CAROLINA 28026-0308

TABLE OF CONTENTS

SECTION I – BIDS, AGREEMENTS, AND NOTICES

BID ADVERTISEMENT/INVITATION TO BID..... 4
INSTRUCTION TO BIDDERS..... 6
DEBARRED FIRMS CERTIFICATION FORM..... 12
EXHIBIT A – BID FORM 13
EXHIBIT B – STANDARD FORM OF PERFORMANCE BOND 20
EXHIBIT C – SPECIAL PROVISIONS 22
NOTICE OF AWARD..... 48
NOTICE TO PROCEED 49
STANDARD FORM OF CONSTRUCTION CONTRACT 50
EXHIBIT D – E-VERIFY 59
EXHIBIT E – TAX FORMS 60
EXHIBIT F – CERTIFICATE OF INSURANCE..... 61
PAY REQUEST FORM 62
ENGINEERING’S APPLICATION FOR PAYMENT FORM 63
CONTRACT CHANGE ORDER..... 64
CERTIFICATE OF INFRASTRUCTURE COMPLETION 65
FIELD ORDER..... 66
NC SALES TAX REPORT 67
NORTH CAROLINA ONE CALL..... 68

SECTION II – GENERAL CONDITIONS..... 69

SEE City Webpage

<http://www.concordnc.gov/Portals/0/Documents/Engineering/10%2001%2005%20General%20Conditions%20Horizontal.pdf>

APPENDIX A – GEOTECHNICAL BORING LOGS..... A-1

APPENDIX B – NCDEQ WATER QUALITY GENERAL CERTIFICATION NO. 4132..... A-2

APPENDIX C – USACE NATIONWIDE PERMIT 3..... A-3

SECTION I

BIDS, AGREEMENTS, AND NOTICES



BID ADVERTISEMENT/INVITATION TO BID

April 5, 2021

Project Title: **Duval St. Culvert Replacement
Project No. 2014-009**

Project Description: The **Duval St. Culvert Replacement** project consists of the removal of an existing bridge and abandoned loading platform, the installation of 43' of 2-10'x7' concrete box culverts and associated services that will include relocation of 15" and 24" storm sewer pipe, coordination with utility agencies on other utility adjustments by others, roadway pavement reconstruction, and other appurtenances along Duval St. in Concord NC.

Sealed Bids will be received by the City of Concord (Owner) at the address below. Please submit notarized bids in a sealed envelope by the bid opening time and date. All Bids must be in accordance with the Bidding Documents on file with the City of Concord Engineering Department. Bidders must be licensed contractors in the State of North Carolina. Bids will be received on a unit price basis. A Bid Bond must accompany each bid. The Successful Bidder will be required to furnish a Construction Performance Bond and a Construction Payment Bond as security for the faithful performance and the payment of all bills and obligations arising from the performance of the Contract. Contractor and all Subcontractors will be required to conform to the labor standards set forth in the Contract Documents. Owner reserves the right to reject any or all Bids, including without limitation the rights to reject any or all nonconforming, nonresponsive, unbalanced, or conditional Bids, and will award to lowest responsible Bidder taking into consideration quality, performance, and time specified in Bid Form for performance of Work. Owner also reserves the right to waive informalities.

Enrique A. Blat, PE
Deputy City Engineer

Engineer: City of Concord Engineering Department
Alfred M. Brown Operations Center
635 Alfred Brown Jr Court SW
P O Box 308, Concord, NC 28026-0308

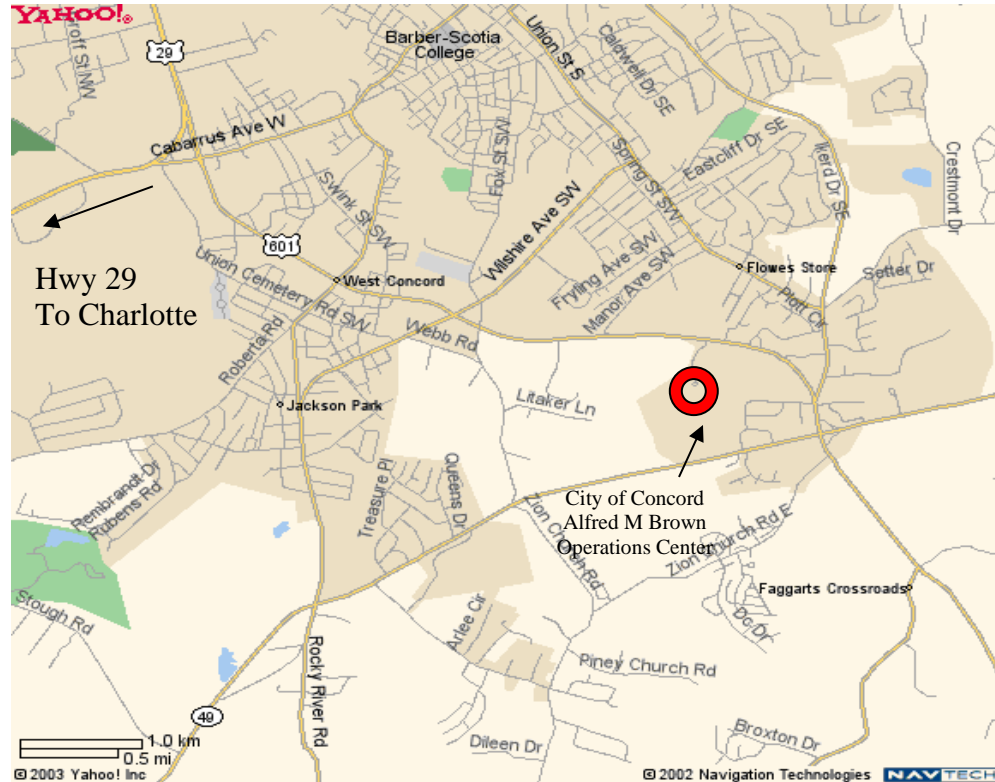
Contractors wishing to bid on this project must register to bid by sending an email to Carolina Garcia-Zaragoza, P.E. at gzaragozac@concordnc.gov. Registration for bidding requires the name of the company, physical address, email address, and telephone number. All communication regarding this bid will be done through email.

Bid documents are available free of charge from the City of Concord website at: <https://www.concordnc.gov/Departments/Finance/Purchasing/RFPs-and-Bids>

Technical questions: Contact Carolina Garcia-Zaragoza, P.E., (gzaragozac@concordnc.gov)
704.920.5425

Bid Due Date: **April 29, 2021 at 2:00 PM**
Location: City of Concord, Alfred M. Brown Operations Center
635 Alfred Brown Jr Court SW, Concord, NC 28026
Conference Room C
(See attached map/directions)

MAP AND DIRECTIONS TO CITY OF CONCORD ALFRED M BROWN OPERATIONS CENTER



Directions from Charlotte

- Take I-77 north to I-85 north from Charlotte to Concord.
- From I-85 north, take exit 49 to the right towards Lowe's Motor Speedway.
- At the Lowe's Motor Speedway, turn left onto Highway 29 (Concord Pkwy) north.
- Keep going north while you pass the Wal-Mart shopping center on your right.
- Turn right at the light at the Chevrolet dealership onto Cabarrus Avenue.
- Turn right at the next traffic light at the Walgreens onto Hwy 601 South (bypass). (Hwy 601 S is also Warren C. Coleman Boulevard).
- Go straight through two traffic lights at Old Charlotte Road and Wilshire Avenue.
- Pass the Bi-Lo shopping center on your left.
- Turn right at the next traffic light at Alfred Brown Jr Court SW (green & white sign on right for the City of Concord Alfred M. Brown Operations Center).
- You will be on the entrance road into our complex.
- Follow signs to the left to Visitor Parking.
- Proceed to the front desk at the Administration Building and sign in with the receptionist.

INSTRUCTIONS TO BIDDERS

1. DEFINED TERMS. Terms used in these Instructions to Bidders are meanings assigned to them in the General Conditions and the Supplementary Conditions. An additional term is defined as follows:

Successful Bidder - The lowest, qualified, responsible, and responsive Bidder to whom Owner (on the basis of Owner's evaluation as herein provided) makes an award.

2. COPIES OF BID DOCUMENTS. Bid Documents may be obtained from the Owner via the link below for the City of Concord's website.

	<u>Charge</u>
Complete set of Bid Documents	Free download

<http://www.concordnc.gov/Departments/Finance/Purchasing/RFPs-and-Bids>

Partial sets of Bid Documents will not be issued in response to requests by subject matter.

Complete sets of Bid Documents must be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misrepresentations resulting from the use of incomplete sets of Quoting Documents.

Owner and Engineer, in making copies of Quoting Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

3. QUALIFICATIONS OF BIDDERS. To demonstrate qualifications to perform the Work, Bidder may be required to submit written evidence on financial data, previous experience, present commitments, and other such data as may be requested by Owner or Engineer. Each Bid must contain evidence of Bidder's qualification to do business in the state where the Project is located, or Bidder must agree to obtain such qualification prior to award of the Contract.

4. EXAMINATION OF CONTRACT DOCUMENTS AND SITE. It is the responsibility of each Bidder, before submitting a Bid, to (a) thoroughly examine the Contract Documents, (b) visit the site to become familiar with local conditions that may affect cost, progress, performance, or furnishing of the Work, (c) consider federal, state, and local laws and regulations that may affect cost, progress, performance, or furnishing of the Work, (d) study and carefully correlate Bidder's observations with the Contract Documents, and (e) notify Engineer of all conflicts, errors, or discrepancies discovered by Bidder in the Contract Documents.

4.02. Underground Facilities. Information and data reflected in the Contract Documents with respect to underground facilities at or contiguous to the site are based upon information and data furnished to Owner and Engineer by owners of such underground facilities or others, and Owner and Engineer disclaim responsibility for the accuracy or completeness thereof unless it is expressly provided otherwise in the Supplementary Conditions.

4.03. Additional Information. Before submitting a Bid, each Bidder will, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests, and studies and obtain any additional information and data which pertain to the physical conditions (surface, subsurface, and underground facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance, or furnishing of the Work and which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price, and other terms and conditions of the Contract Documents.

On request 24 hours in advance, Owner will provide each Bidder access to the site to conduct such explorations and tests as each Bidder deems necessary for submission of a Bid. Bidder shall fill all holes and clean up and restore the site to its former condition upon completion of such explorations. Arrangements for site visits shall be made by calling the office of the Director of Engineering for the City of Concord at 704.920.5425.

4.04. Easements. The lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and other lands designated for use by Contractor in performing the Work are identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by Contractor. Easements for permanent structures or permanent changes in existing structures are to be obtained and paid for by Owner unless otherwise specified in the Contract Documents.

4.05. Unit Price Contracts. Bidders must satisfy themselves of the accuracy of the estimated quantities in the Bid schedule by examination of the site and a review of the drawings and the specifications, including the addenda. After Bids have been submitted, the Bidder shall not assert that there was a misunderstanding concerning the quantities of work or the nature of the work to be done.

4.06. Bidder's Representation. The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement concerning examination of the Contract Documents and the site, that without exception the Bid is premised upon performing and furnishing the Work required by the Contract Documents, and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

5. INTERPRETATIONS AND ADDENDA. All questions about the meaning or intent of the Quoting Documents and the Contract Documents shall be submitted to Owner in writing. Interpretations or clarifications considered necessary by Owner in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by Engineer as having received the Quoting Documents. Questions received less than 10 days prior to the date for opening of Bids may not be answered. Only answers issued by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

6. BID SECURITY. Each Proposal must be accompanied by a deposit equal to 5% of the net price bid. This deposit may consist of cash, or a Cashier's Check issued by, or a Certified Check drawn on a Bank or Trust Company authorized to do business in North Carolina, or on a Bank insured by the Federal Deposit Insurance Corporation, or a U.S. Money Order, payable to the City of Concord or 5% Bid Bond in the form required by G.S. 143-129 as amended, issued by an Insurance Company authorized to do business in North Carolina, said deposit to be retained in the event of failure of the successful bidder to execute a formal contract within ten (10) days after award or to give satisfactory surety required.

The Bid security of the Successful Bidder (if so required) will be retained until such Bidder has executed the Agreement, furnished the required contract security (if so required), and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Agreement and furnish the required contract security within the number of days set forth in the Bid Form, Owner may annul the Notice of Award and the Bid security of that Bidder will be forfeited. The Bid security (if so required) of other Bidders whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of 7 days after the Effective Date of the Agreement or the day after the last day the Bid remain subject to acceptance as set forth in the Bid Form, whereupon Bid security furnished by such Bidders will be returned. Bid security accompanying Bid which are deemed by Owner to be noncompetitive will be returned within 7 days after the designated Bid opening.

7. CONTRACT TIMES. The numbers of calendar days within which, or the dates by which, the Work is to be substantially completed and also completed and ready for final payment (the Contract Times) are set forth in the Bid Form.

8. LIQUIDATED DAMAGES. Provisions for liquidated damages, if any, are set forth in the Agreement.

9. SUBSTITUTES OR "OR-EQUAL ITEMS. Bidder's attention is directed to Article 6.5 of the General Conditions concerning substitutes and "or-equal" items. Where an item or material is specified by a proprietary name, it is done for the purpose of establishing a basis of quality and not for the purpose of limiting competition. The Engineer's intent is to consider alternative products which have the desired essential characteristics. The Engineer will consider any such products offered. Requests for acceptance of alternative products shall be made through Bidders quoting as prime Contractors. Acceptances for substitutions will not be granted directly to suppliers, distributors, or subcontractors. Pursuant to Section 133-3, General Statutes of North Carolina, the following procedures shall be used:

Bidders desiring to submit alternative product proposals for prior acceptance of the Engineers shall submit, in writing, such proposals from n/a, until n/a. Applications received after this time will not be reviewed. Each such request shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitute, including drawings, cuts, performance and test data, and other information necessary for an evaluation. A statement setting forth any changes in other materials, equipment, or other work that incorporation of the substitute would require shall be included. The Engineer shall consider and either accept or reject all alternative product proposals submitted.

If, by the close of the fifth day prior to the deadline for receiving Bid, the Engineer has accepted any alternative product proposals, the Quoting Documents shall be modified to include the alternative products. The Engineer shall publish the modification in an Addenda at least 5 days prior to the deadline for receiving Bids. The Engineer's decision of acceptance or rejection of a proposed substitute shall be final.

10. SUBCONTRACTORS, SUPPLIERS, AND OTHERS. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, and other persons and organizations (including those who are to furnish the principal items of material and equipment) to be submitted to Owner in advance of a specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within 3 days after the opening submit to Owner the List of Subcontractors completed with all such Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the Work for which such identification is required. The list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, person, or organization, if requested by Owner. If Owner or Engineer after due investigation has reasonable objection to any proposed Subcontractor, Supplier, or other person or organization, Owner may, before the Notice of Award is given, request the apparent Successful Bidder to submit an acceptable substitute without an increase in the Bid.

All Subcontractors shall be a licensed utility contractor in the State of North Carolina.

11. BID FORM. The Bid Form is bound in the Quoting Documents and shall not be removed therefrom. Bid Forms must be completed in ink.

Bids by corporations must be executed in the corporate name by the president or vice-president (or other corporate officer accompanied by evidence of authority to sign for the corporation). Bids by partnerships must be executed in the partnership name and signed by a partner. Bids by joint ventures shall be signed by each participant in the joint venture or by a representative of the joint venture accompanied by evidence of authority to sign for the joint venture.

The names of all persons signing shall be legibly printed below the signature. A Bid by a person who affixes to his signature the word "president", "secretary", "agent", or other designation without disclosing his principal may be held to be the Bid of the individual signing. When requested by Owner, evidence of the authority of the person signing shall be furnished.

All blanks in the Bid Form shall be filled. A Bid price shall be indicated for each unit price item listed therein, or the words "No Bid", "No Charge", "No Change", or other appropriate phrase shall be entered.

The Bid shall contain an acknowledgment of receipt of all Addenda; the numbers and dates of which shall be filled in on the Bid Form.

No alterations in Bids, or in the printed forms therefore, by erasures, interpolations, or otherwise will be acceptable unless each such alteration is signed or initialed by the Bidder; if initialed, Owner may require the Bidder to identify any alteration so initialed.

11.01. Bid Pricing. The Bidder shall complete the schedule of unit prices included in the Bid Form and shall accept all fixed unit prices listed therein.

The total Bid will be determined as the sum of the products of the estimated quantity of each item and the unit price Bid. The final Contract Price will be subject to adjustment according to final measured, used, or delivered quantities as provided in Article 9.7 of the General Conditions, and the unit prices in the Bid will apply to such final quantities except that unit prices will be subject to change by Change Order as stipulated in the Supplementary Conditions.

11.02. Contingency. The Contingency is to be added to the Bid price and is to be used for minor change order items. If the Contingency is to be used, a scope of work and price would be negotiated. The Contingency is for the sole use of Owner. A change order will be issued to delete any unauthorized portion of the Contingency.

12. SUBMISSION OF BIDS. Bids shall be submitted at the time and place indicated in the Invitation to Bid, or the modified time and place indicated by Addendum. Bids shall be enclosed in a sealed envelope or wrapping, addressed to:

The City of Concord
Enrique Blat, PE, Deputy City Engineer
P.O. Box 308
635 Alfred Brown Jr Court SW
Concord, North Carolina 28026-0308

Bids shall be marked with the name, license number, and address of the Bidder and shall be accompanied by the Bid security (if required) and other required documents. If the Bid is sent through the mail or other delivery system, the sealed envelope shall be enclosed in a separate envelope with the notation "BID ENCLOSED" on the face of it.

Each Bid envelope shall be identified on the outside with the words:

“BID FOR DUVAL ST. CULVERT REPLACEMENT – PROJECT 2014-009”

Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids. Bids received after the time and date for receipt of Bids will be returned unopened.

One copy of all pages of the BID FORM must be submitted with the Bid, as well as a Bid Bond and Debarred Firms Certification Form.

Oral, telephone, facsimile, or telegraph Bids are invalid and will not receive consideration.

No Bidder may submit more than one Bid. Multiple Bids under different names will not be accepted from one firm or association.

A conditional or qualified Bid will not be accepted.

13. MODIFICATION AND WITHDRAWAL OF BIDS. Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.

If, within 24 hours after Bids are opened, any Bidder files a duly signed, written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid and the Bid security (if any) will be returned. Thereafter, that Bidder will be disqualified from further quoting on the Work to be provided under the Contract Documents.

14. OPENING OF BIDS. Bids will be opened at the office and at the discretion of the Director of Engineering and read aloud.

The procedure for opening Bids will follow guidelines issued by the State Building Commission dated December 10, 1990, and endorsed by the Consulting Engineers Council of North Carolina.

15. BIDS TO REMAIN SUBJECT TO ACCEPTANCE. All Bids will remain subject to acceptance for the number of days set forth in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the security (if any) prior to that date.

16. AWARD OF CONTRACT. Owner reserves the right to reject any or all Bids, including without limitation the rights to reject any or all nonconforming, nonresponsive, unbalanced, or conditional Bids, and will award to lowest responsible Bidder taking into consideration quality, performance, and time specified in Bid Form for performance of Work. Owner also reserves the right to waive informalities.

In evaluating Bids, Owner will consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements, and such alternatives, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.

Owner may consider the qualifications and experience of Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other persons and organizations must be submitted as provided in the Supplementary Conditions. Owner also may consider the operating costs, maintenance requirements, performance data, and guarantees of major items of materials and equipment proposed for incorporation in the Work when such data is required to be submitted prior to the Notice of Award.

Owner may conduct such investigations as Owner deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, and other persons and organizations to perform and furnish the Work in accordance with the Contract Documents to Owner's satisfaction within the prescribed time.

If the Contract is to be awarded, it will be awarded to the lowest Bidder whose evaluation by Owner indicates to Owner that the award will be in the best interests of Owner. If the Contract is to be awarded, Owner will give the Successful Bidder a Notice of Award within the number of days set forth in the Bid

Form. The evaluation of Suppliers' or manufacturers' data submitted with the Bid, or submitted upon request prior to the Notice of Award, will include consideration of the following:

- Owner-required inventory of spare parts.
- Building design changes which would be required to accommodate the proposed materials and equipment.
- Installation requirements and related engineering, training, and operating costs.
- Experience and performance record of the Supplier or the manufacturer.
- Maintenance and frequency of inspections required to assure reliable performance of the equipment.
- Suppliers' or manufacturers' service facilities and availability of qualified field service personnel.
- Efficiency and related operating expense during the anticipated useful life of the equipment.

17. CONTRACT SECURITY. The General Conditions set forth Owner's requirements as to Performance and Payment Bonds (required). These Bonds shall be delivered to Owner with the executed Agreement.

18. SIGNING OF AGREEMENT. When Owner gives a Notice of Award to the Successful Bidder, it will be accompanied by two unsigned counterparts of the Agreement with all other written Contract Documents attached. Within the number of days set forth in the Bid Form, the Successful Bidder shall sign, leaving the dates blank, and deliver the required number of counterparts of the Agreement and attached documents to Owner with the required Bonds and power of attorney. Within 30 days thereafter, Owner shall execute all copies of the Agreement and other Contract Documents submitted by Contractor (Successful Bidder); shall insert the date of contract on the Agreement, Bonds, and power of attorney; and shall distribute signed copies as stipulated in the Agreement.

Should the Owner not execute the Contract within the period specified, the Successful Bidder may, by written notice, withdraw his signed Contract. Such notice or withdrawal shall be effective upon receipt of the notice by the Owner.

19. SALES AND USE TAXES. Provisions for sales and use taxes, if any, are set forth in the Supplementary Conditions.

20. RETAINAGE. Provisions concerning retainage are set forth in the Agreement.

21. LAWS AND REGULATIONS. Modifications, if any, to the General Conditions concerning Laws and Regulations are set forth in the Supplementary Conditions. Additional provisions, if any, concerning Laws and Regulations are set forth in the Agreement.

21.01. Collusive Bidding. In accordance with Section 112(c) of Title 23 USC, and G.S. 75-5(b)(7) of the State of North Carolina, the Contractor (Bidder), by submission and execution of this bid or Bid, certifies that he has not entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding or quoting in connection with his Bid on this project.

End of Section

DEBARRED FIRMS CERTIFICATION FORM

**Duval St. Culvert Replacement
Project No. 2014-009**

The undersigned hereby certifies that the firm of _____ has not been suspended by the State of North Carolina or any agency or department thereof for conviction or indictment or any of the offenses enumerated in G.S. 133-27 nor will award subcontracts of any tier to firms that have been suspended for conviction or indictment of any of the offenses enumerated in G.S. 133-27.

Name of Firm

ATTEST _____ (SEAL)

Signature of Authorized Official

Title

Sworn and subscribed before me this
_____ day of _____, 20__

Notary Public

EXHIBIT A – BID FORM

PROJECT IDENTIFICATION:

**Duval St. Culvert Replacement
Project No. 2014-009**

THIS BID IS SUBMITTED TO:

Enrique Blat, PE, Deputy City Engineer
City of Concord
635 Alfred Brown Jr Court SW
P.O. Box 308
Concord, North Carolina 28026-0308

1. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an agreement with Owner in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents within the specified time and for the amount indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.
2. Bidder accepts all of the terms and conditions of the Invitation to Bid and the Instructions to Bid, including without limitation those dealing with the disposition of the Bid security (if security is required by the City Manager). This Bid will remain subject to acceptance for 60 days after the day designated for reception of Bids. Bidder will sign and submit the Agreement with the Bonds and other documents required by the Quoting Documents within 10 days after the date of Owner's Notice of Award.
3. In submitting this Bid, Bidder represents that:
 - a. Bidder has examined copies of all the Quoting Documents and of the following Addenda (receipt of all which is hereby acknowledged):

No. _____	Dated _____
No. _____	Dated _____
No. _____	Dated _____
No. _____	Dated _____
No. _____	Dated _____
 - b. Bidder has visited the site and become familiar with and satisfied itself as to the general, local, and site conditions that may affect cost, progress, performance, and furnishing of the Work.
 - c. Bidder is familiar with and has satisfied itself as to all Federal, State, and Local Laws and Regulations that may affect cost, progress, performance, and furnishing of Work.

- d. Bidder has carefully studied all reports of explorations and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except underground facilities) which have provided by the owner and under the conditions normally used and identified in the Supplementary Conditions and Special Conditions as provided in Paragraph 4.2.1 of the General Conditions. Bidder accepts the determination set forth in the Supplementary Conditions and Special Conditions of the extent of the "technical data" contained in such reports and drawings upon which Bidder is entitled to rely as provided in Paragraph 4.2 of the General Conditions. Bidder acknowledges that such reports and drawings are not Contract Documents and may not be complete for Bidder's purposes. Bidder acknowledges that Owner and Engineer do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Quoting Documents with respect to underground facilities at or contiguous to the site. Bidder has obtained and carefully studied (or assumes responsibility for having done so) all such additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and underground facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance, or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder and safety precautions and programs incident thereto. Bidder does not consider that any additional examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance and furnishing of the Work in accordance with the time, price, and other terms and conditions of the Contract Documents.
 - e. Bidder is aware of the general nature of Work to be performed by Owner and others at the site that relates to Work for which this Bid is submitted as indicated in the Contract Documents.
 - f. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.
 - g. Bidder has given Engineer written and verbal notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Contract Documents and the written resolution thereof by Engineer is acceptable to Bidder, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which this Bid is submitted.
 - h. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm, or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization, or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid Bidder has not solicited or induced any person, firm, or corporation to refrain from quoting; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner.
4. Bidder will complete the Work for the following unit prices. Quantities indicated are estimated and not guaranteed; they are solely for comparing Bids and establishing the initial Contract Price. Final payment will be based on actual quantities.

EXHIBIT A – BID FORM**Duval St. Culvert Replacement - Project No. 2014-009**

Culvert Replacement						
No.	Item	Description	Qty.	Units	Unit Price (\$)	Item Total (\$)
1	800	Mobilization	1	LS		
2	801	Construction Surveying	1	LS		
3	SP-01	Traffic Control	1	LS		
4	SP-02	Comprehensive Grading	1	LS		
5	SP-03	Select Material	1000	TN		
6	SP-04	Borrow Excavation	300	CY		
7	225	Undercut Excavation	100	CY		
8	300	Foundation Conditioning Material, Minor Structures	500	TN		
9	300	Foundation Conditioning Geotextile	850	SY		
10	SP-06	10' X 7' Precast R.C. Culvert	86	LF		
11	SP-07	Precast Modular Block Gravity Retaining Wall	750	SF		
12	SP-08	Non-standard Toewall	16	CY		
13	846	2'-6" Concrete Curb & Gutter	310	LF		
14	848	6" Concrete Driveway	10	SY		
15	610	Surface Course S 9.5B	65	TN		
16	610	Intermediate Course I 19.0C	60	TN		
17	610	Base Course B 25.0C	200	TN		
18	620	Asphalt Binder for Plant Mix	16	TN		
19	520	Aggregate Base Course	100	TN		
20	607	Milling Asphalt Pavement, 0" to 2.5" Depth	100	SY		
21	SP-09	Pedestrian Safety Rail	65	LF		
22	SP-10	Woven Wire Fence w/Steel Posts	135	LF		

No.	Item	Description	Qty.	Units	Unit Price (\$)	Item Total (\$)
23	SP-10	Woven Wire Fence Double Gate w/Steel Posts	2	EA		
24	305	15" RCP Storm Pipe (Class III)	90	LF		
25	305	24" RCP Storm Pipe (Class III)	40	LF		
26	WSACC	24" DIP for Storm (WSACC Sewer Specs)	17	LF		
27	840	Masonry Drainage Structures, Std. 840.02	2	EA		
28	840	Frame with Grate and Hood, Std 840.03 Type E	2	EA		
29	840	Masonry Drainage Structures, Std. 840.31	3	EA		
30	840	Masonry Drainage Structures, Std. 840.31 - Additional Depth	5	LF		
31	840	Frame with Cover, Std 840.54	3	EA		
32	SP-11	Stream Pump Around Operation	1	LS		
33	SP-13	Coir Fiber Matting	220	SY		
34	876	Rip Rap, Class 2	140	TN		
35	876	Geotextile for Drainage	150	SY		
36	SP-14	Storm Drain Inlet Protection	2	EA		
37	SP-15	8" Compost Filter Sock	300	LF		
38	SP-16	Safety Fence	500	LF		
39	1631	Matting for Erosion Control (Biodegradable Netting)	600	SY		
40	1660	Seeding and Mulching	0.5	AC		

TOTAL BASE COST \$ _____

10% CONTINGENCY \$ _____

TOTAL COST \$ _____

5. Bidder agrees that all work will be completed and ready for final payment in accordance with Paragraph 14.13 of the General Conditions within 180 days from the date of notice to proceed.
6. Liquidated damages are \$250.00 per each day past the contract completion date.
7. Communications concerning this Bid shall be sent to Bid at the following address:

NAME: _____

ADDRESS: _____

P.O. BOX: _____

CITY: _____

STATE: _____

ZIP: _____

8. The terms used in this BID, which are defined in the General Conditions (Section II), have the meanings assigned to them in the General Conditions.

SIGNATURE OF BIDDER: _____

Contractor's License Number _____

License Expiration Date _____

If an Individual

By _____
(signature of individual)

doing business as _____

Business address _____

Phone No. _____

Date _____, 20____

ATTEST _____ TITLE

If a Partnership

By _____
(firm name)

(signature of general partner)

Business address _____

Phone No. _____

Date _____, 20____

ATTEST _____ TITLE

If a Corporation

By _____
(corporation name)

By _____
(signature of authorized person) (title) _____

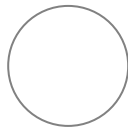
Business address _____

Phone No. _____

Date _____, 20____

ATTEST _____ TITLE _____

(Seal)



If a Joint Venture (Other party must sign below.)

By (name) _____

Contractor's License Number _____

License Expiration Date _____

If an Individual

By _____
(signature of individual)

doing business as _____

Business address _____

Phone No. _____

Date _____, 20____

ATTEST _____ TITLE _____

If a Partnership

By _____
(firm name)

(signature of general partner)

Business address _____

Phone No. _____

Date _____, 20____

ATTEST _____ TITLE _____

If a Corporation

By _____
(corporation name)

By _____
(signature of authorized person)(title) _____

Business address _____

Phone No. _____

Date _____, 20____

ATTEST _____ TITLE _____

(Seal)

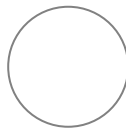


EXHIBIT B – STANDARD FORM OF PERFORMANCE BOND

Date of Execution of this Bond _____

Name and Address of Principal (Contractor) _____

Name and Address of Surety _____

Name and Address of Contracting Body _____

Amount of Bond _____

Contract That certain contract by and between the Principal and the Contracting Body above named dated _____
for _____

KNOW ALL MEN BY THESE PRESENTS, that we, the PRINCIPAL and SURETY above named, are held and firmly bound unto the above-named Contracting Body, hereinafter called the Contracting Body, in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal entered into a certain contract with the Contracting Body, identified as shown above and hereto attached;

NOW THEREFORE, if the Principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term of said contract and any extensions thereof that may be granted by the Contracting Body, with or without notice to the Surety, and during the life of any guaranty required under the contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of any and all duly authorized modifications of the contract that may hereafter be made, notice of which modifications to the Surety being hereby waived, then, this obligation to be void; otherwise, to remain in full force and virtue.

STANDARD FORM OF PERFORMANCE BOND: (Continued)

THIS PERFORMANCE BOND is made and given pursuant to the requirements and provisions of Section 129 of Chapter 143 of the General Statutes of North Carolina and pursuant to Article 3 of Chapter 44-A of the General Statutes of North Carolina, and each and every provision set forth and contained in Section 129 of Chapter 143 and in Article 3 of Chapter 44-A of the General Statutes of North Carolina is incorporated herein, made a part hereof, and deemed to be conclusively written into this Bond.

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their several seals as of the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned and representative, pursuant to authority of its governing body.

WITNESS:

(Proprietorship or Partnership)
Printed Name _____

Principal (Name of individual and trade name,
partnership, corporation, or joint venture)

BY _____ (SEAL)
Printed Name _____

TITLE _____
(Owner, Partner, Office held in
corporation, joint venture)

ATTEST: (Corporation)

(Corporate Seal of Principal)

BY _____
Printed Name _____

TITLE _____
(Corporation Secretary or
Assistant Secretary Only)

Surety (Name of Surety Company)

WITNESS:

BY _____
Printed Name _____

TITLE _____ Attorney in Fact

(Corporate Seal of Surety)

(Address of Attorney in Fact)

EXHIBIT C – PROJECT SPECIAL PROVISIONS

Duval St. Culvert Replacement Project No. 2014-009

- 1) Contractor shall utilize the 2018 edition of NCDOT Standard Specifications & Standard Drawings for Roads and Structures, the City of Concord Technical Standards, and Water & Sewer Authority of Cabarrus County Technical Standard specifications, the most restrictive requirement shall apply unless otherwise noted. NCDOT Article Numbers in the Bid Form and these Project Special Provisions reference the NCDOT Standard Specifications for Roadways and Structures.
- 2) Boring logs are available in Appendix A. Boring log locations are shown in the Construction Plans. It should be noted that the data provided does not reflect the variations in subsurface conditions which could exist between boring locations and/or unexplored areas of the site.
- 3) Bidder agrees all excavation is unclassified.
- 4) Hours of work at between 7:00 am – 6:00 pm; Monday through Friday.
- 5) Culvert concrete headwalls will be furnished with the culvert units as shown in the project plans. The Contractor shall include all the costs associated with culvert headwalls in the culvert price.
- 6) The Contractor shall include the cost of any coordination and cooperation of utilities in his bid. No additional compensation shall be allowed for delays or inconvenience sustained by the Contractor due to utility relocation or adjustments. No additional payment will be made for re-mobilization required by the utility's failure to relocate a utility at the request of the Contractor.
- 7) This project is subject to an NCDEQ DWR 401 Water Quality Certification permit. The pre-construction notification has been submitted and it is pending approval. Contractor shall comply with the conditions set in NCDEQ DWR Water Quality General Certification No. 4132 (available in Appendix B) and USACE Nationwide Permit 3 (available in Appendix C).
- 8) This project does not require an Erosion Control permit under the "North Carolina Department of Environmental Health and Natural Resources Sediment Pollution Control Act". However, contractor is to avoid migration of fines into the stream as much as possible.

SP-01 – TRAFFIC CONTROL

1.0 DESCRIPTION

Beginning Work and Street Closings: The Contractor is responsible for notifying the Concord Department of Transportation for any work where the number of travel lanes is reduced from normal conditions.

The Contractor shall install advance warning signs for the Project. These signs shall be in place for one week before construction activity begins. The Contractor shall begin construction activity on a street on the scheduled date for the closing of the travel lane.

Traffic Control Plan: Traffic control will be performed by the Contractor based upon the Traffic Control Special Provisions. The Traffic Control Special Provisions may refer to plan sheets for major work items or details, or both.

All traffic control devices and procedures shall conform to the requirements of the current edition of the Federal Highway Administration (FHWA) *Manual on Uniform Traffic Control Devices* (MUTCD), the current edition of the North Carolina Department of Transportation (NCDOT) Supplement to the *Manual on Uniform Traffic Control Devices for Streets and Highways*, the NCDOT Roadway Standard Drawings and the current edition of the NCDOT Standard Specifications for Roads and Structures.

The Contractor shall maintain the traffic control as described herein unless the Contractor submits an alternate traffic control plan to the Engineer and it is approved by the Engineer. The Engineer may direct the Contractor to modify the traffic control if, in the Engineer's opinion, traffic is not moving safely or efficiently.

Traffic Control Phasing for this project shall be in accordance with the Traffic Control Plans. The Contractor shall adhere rigidly to these plans. The standards are the minimum required. Additional signs, cones, drums, barricades and warning devices may be used, but at no time will less than what is specified on the plans or in the standards be acceptable.

Maintenance of Traffic: The Contractor shall maintain all travel lanes in accordance with the Traffic Control Plan sheets.

In areas of drop-offs and low shoulders, the Contractor shall backfill up to the edge and elevation of the existing pavement.

The Contractor will be required to maintain ingress and egress to all businesses and dwellings, and easy access to fire hydrants.

The Contractor shall provide adequate drainage under driveways and within the Project area for the duration of the Project.

The Contractor shall mark all hazards within the Project limits with well-maintained signs, barricades, warning and/or channelizing devices.

Traffic Control Devices: The Contractor shall furnish, install, operate, relocate, maintain and remove all temporary traffic control devices necessary for controlling traffic in accordance with the Traffic Control Plans and standards. The Contractor shall notify Engineer regarding conflicting permanent signs. Only Concord Department of Transportation personnel shall install, remove or relocate any permanent signs within the right-of-way. All construction signs and barricades shall remain in place until the appropriate permanent signs and pavement markings are installed.

Equipment and Material Storage: During periods of construction inactivity, all construction materials and equipment shall be stored by the Contractor. The right-of-way or temporary project easement may be used for this purpose, but equipment and materials must be placed safely 10 or more feet away from any open travel lane. It is recommended that all construction equipment and materials be stored on private property, which is posted against trespassing. It is the responsibility of the organization performing the work to obtain the permission to use a property for this purpose.

Excavation and Trenches: Excavations and trenches that cannot be properly backfilled and patched prior to the end of the workday shall be secured.

2.0 MEASUREMENT

There will be no separate measurement made for Traffic Control.

3.0 PAYMENT

Traffic Control will be paid at the lump sum price for “Traffic Control”. This payment will be full compensation for all elements of work required to complete the Project as specified.

Partial payments will be made as follows:

- 25% of the lump sum price on the first partial payment estimate made after any work has been performed on the item of “Traffic Control”.
- 25% of the lump sum price on the first partial payment after work is 25% complete.
- 25% of the lump sum price on the first partial payment after work is 50% complete.
- 25% of the lump sum price on the first partial payment after work is 100% complete.

Payment will be made under:

TRAFFIC CONTROL..... LS

SP-02, COMPREHENSIVE GRADING

1.0 DESCRIPTION

This item shall include all elements of work covered by the referenced NCDOT Specifications and the numbered Additional City Specifications provided herein.

NCDOT Specifications

- 200, “Clearing and Grubbing”
- 225, “Roadway Excavation”
- 235, “Embankments”
- 240, “Ditch Excavation”
- 250, “Removal of Existing Pavement”
- 260, “Proof Rolling”
- 340, “Pipe Removal”
- 412, “Unclassified Structure Excavation”
- 416, “Channel Excavation”
- 500, “Fine Grading, Sub-grade, Shoulders and Ditches”
- 545, “Incidental Stone Base”
- 560, “Shoulder Construction”
- 1530, “Abandon or Remove Utilities”
- 1607, “Gravel Construction Entrance”

Additional City Specifications

1. **Clearing and Grubbing**: Clearing on this Project shall be performed to the slope stake line or the right-of-way or easement lines unless directed otherwise. Removal of trees and shrubs are to be minimized as much as possible. Contractor to avoid and minimize damage to those trees and shrubs determined to remain.
2. **Excavation**: all excavation will be considered unclassified.
3. **Existing Road Signs**: remove, protect, and reset road signs. Repair or replace signs damaged in relocating. Erect signs and supports according to requirements of NCDOT Specifications 903 and 904.
4. **Removal and Disposal of Existing Infrastructure**: concrete curb, sidewalk, miscellaneous concrete, asphalt, driveways, pads, slabs, walls, culverts, structures, catch basins, manholes, etc. within the construction limits as shown on the plans and any additional infrastructure removal identified by the Contractor's means and methods shall be included in this item.
5. **Shoring**: The Contractor shall be responsible for all shoring to include means, methods, materials and engineering needed to construct the project.
6. **Saw Cutting**: all saw cutting required to build the Project. Where asphalt or concrete (curb, sidewalk, roadway, driveways, parking lots, etc.) is to be removed, the Contractor shall provide a neat edge along the pavement being retained by sawing the pavement a minimum of 2" deep and 1' wide before breaking and removing adjacent pavement. When the Contractor proposes to saw pavement more than one foot from the proposed pavement (curb, sidewalk, structure, etc.), the Contractor shall obtain approval from the Engineer prior to saw cutting and removing pavement. The cost of sawing asphalt or concrete shall be included in this item.
7. **Tree and/or Stump Removal and Disposal**: as shown on the plans and any additional tree and/or stump removal identified by the Contractor's means and methods shall be included in this item. Trees to be removed shall be approved by the Engineer prior to removal.
8. **Utility Pipe/Conduit Removal and Disposal**: existing public or private utility pipe / conduit, subsurface and shoulder drain pipe removal and disposal as shown on the plans and any additional utility pipe / conduit removal identified by the Contractor's means and methods shall be included in this item.
9. **Property Access**: all labor and materials required to maintain access to properties during construction as directed by the Engineer.
10. **Stream restoration to preconstruction conditions**: Stream areas impacted by the pump around operation, temporary access road or any other contractor's means and methods, shall be returned to natural conditions within 60 calendar days after the temporary impact is no longer necessary. The impacted areas shall be restored to original grade, including each stream's original cross-sectional dimensions, platform pattern, and longitudinal profile.

2.0 MEASUREMENT

There will be no separate measurement made for Comprehensive Grading.

3.0 PAYMENT

For the above-referenced NCDOT sections and numbered Additional City Specifications, there will be no direct measurement, payment or compensation, all cost incurred to complete the work as specified shall be included in the Lump Sum price bid for “Comprehensive Grading”.

There will be **no separate measurement or payment** for the items listed or referenced in this specification.

Payment will be made under:

COMPREHENSIVE GRADINGLS

SP-03, SELECT MATERIAL

1.0 DESCRIPTION

Work covered in this special provision consists of furnishing, placing, and compacting select material as shown on the plans or as directed.

Select material shall be placed in pipe culvert excavations within the existing or proposed roadway, including beneath the proposed curb and gutter, or as directed. The Engineer will determine the amount and location of select material to be used on the project. The Contractor shall not remove material from the project without approval from the Engineer.

2.0 MATERIALS

Select material shall meet the requirements of NCDOT Standard Specifications for Roads and Structures, Select Material, Class III, Type 2 (Section 1016-3), or other approved classes or materials as directed.

With written approval and without additional compensation, a higher class of material may be substituted than stated in the Contract Documents.

3.0 MEASUREMENT AND PAYMENT

There will be no separate measurement or payment for select bedding and select backfill material required in the installation of pipe as illustrated in NCDOT 300.01. All bedding and select backfill material required in the installation of the pipe as illustrated in NCDOT 300.01 will be included in cost of the installed pipe.

When local material meeting the requirements for suitable materials as defined in the *Earthwork, Excavation, Unsuitable Materials, and Backfill Materials* Special Provision is approved for use by

the Engineer, there will be no separate measurement or payment for the local suitable material incorporated into the completed and accepted Project. The cost to furnish, haul, place and compact local suitable material that meets the requirements will be included in the lump sum price bid for SP-02 *Comprehensive Grading* (a special provision and pay item in this contract).

When other than local material meeting the requirement for select material is used, the quantity of select material for backfill shall be measured by weighing material in trucks in accordance with section 106-7 Scales and Public Weighmaster, as determined by the Engineer. At the Engineer's discretion, truck measurement in accordance with Article 230-5 (B) may be used instead of weighing material in trucks. A unit weight of 135 lb/cf will be used to convert the weight of select material to tons.

The contract unit prices for *Select Material* as described above will be full compensation for furnishing, transporting, handling, placing, compacting, and maintaining select material. Unless otherwise directed by the Engineer, there will be no separate payment for select material above the select bedding and backfill materials included in the cost of the installed pipe culvert, which exceeds the following extents:

Storm Drainage

- Pipe
 - Horizontally – the outer diameter of the pipe plus three feet;
 - Vertically – from the top of the select backfill material to the ground line, as illustrated in NCDOT 300.01
- Box Culverts/Bends/Bottomless Culverts
 - Horizontally – outer width of culvert or footer plus six feet (three feet each side);
 - Vertically – from the top of the bedding material or bottom of the structure to the ground line, as illustrated in Figure 2.1 of the *Precast Reinforced Concrete Culvert Special Provision*;

Structures

(Includes but not limited to: headwalls, drainage structures (catch basins, drop inlets, risers, etc.), flared end sections, retaining walls, etc.)

- Vertically – to the ground line elevation as shown on the plans or details;
- Horizontally – two (2) feet from each exterior surface (outer wall of the structure or footer whichever is further)

Material used for the Contractor's means and methods outside of these trench limits shall meet the material requirement and will be at the Contractor's expense.

Do not use *Select Material* until all local material meeting the requirements of suitable material as defined in the *Earthwork, Excavation, Unsuitable Materials, and Backfill Materials Special Provision* has been incorporated into the Project. If the Contractor brings select material onto the Project for its own convenience, that material will not be measured or paid for as *Select Material*.

Payment will be made under:

SELECT MATERIAL.....TN

SP-04, BORROW EXCAVATION

1.0 DESCRIPTION

The work covered in this special provision includes all elements of work covered in section 230 "Borrow Excavation" of the Standard Specifications with the following exception pertaining to payment.

2.0 MEASUREMENT

Measurement shall be made in accordance with the Standard Specifications, Section 230-5(A) In-Place Measurement or Section 230-5(B) Truck Measurement as directed by the Engineer.

3.0 PAYMENT

The quantity of Borrow Excavation, measured as provided above, will be paid for at the contract unit price per cubic yard for *Borrow Excavation*. When Borrow Excavation is used to replace soil that has been determined to be unsuitable by the Engineering Department due to moisture, poor soil composition, or other factors, the contract unit price for Borrow Excavation shall include all excavation, removal from site, and proper disposal of unsuitable soil.

The contract unit price for *Borrow Excavation* as described above will be full compensation for furnishing, transporting, handling, placing, compacting, and maintaining borrow material. Unless otherwise directed by the Engineer, there will be no separate payment for borrow material above the select bedding and backfill materials included in the cost of the installed pipe, which exceeds the following extents:

Storm Drainage

- Pipe
 - Horizontally – the outer diameter of the pipe plus three feet;
 - Vertically – from the top of the select backfill material to the ground line, as illustrated in NCDOT 300.01;
- Box Culverts/Bends/Bottomless Culverts
 - Horizontally – outer width of culvert or footer plus six feet (three feet each side);
 - Vertically – from the top of the bedding material or bottom of the structure to the ground line, as illustrated in Figure 2.1 of the *Precast Reinforced Concrete Culvert* Special Provision;

Structures

(Includes but not limited to: headwalls, drainage structures (catch basins, drop inlets, risers, etc.), flared end sections, retaining walls, etc.)

- Vertically – to the ground line elevation as shown on the plans or details;
- Horizontally – two (2) feet from each exterior surface (outer wall of the structure or footer whichever is further)

Material used for the contractor's means and methods outside of these trench limits shall meet the material requirement and will be at the contractor's expense.

Payment will be made under:

BORROW EXCAVATION **CY**

SP-05, EARTHWORK, EXCAVATION, UNSUITABLE MATERIALS, AND BACKFILL MATERIALS

1.0 DESCRIPTION

Earthwork shall be performed to the lines and grades indicated on the plans. The work shall include excavation, furnishing, placement, compaction, and satisfactory disposal of all materials encountered within the limits of the Work necessary for the construction of the Project.

All excavated materials that are not required for the Project or are unsuitable for fills shall be considered as waste and shall be hauled off the site at the Contractor's expense.

The Contractor shall be responsible for all borrow material required to construct the Project as shown on the plans.

2.0 MATERIALS

Provide bedding material in accordance with Article 1016-3 for Class II, Type 1 or Class III, Type 1 or Type 2 select material.

Provide backfill material in accordance with Article 1016-3 for Class II, (Type 1 for flexible pipe) or Class III select material.

Provide foundation conditioning material in accordance with Article 1016-3 for Class V or VI select material.

Provide foundation conditioning geotextile in accordance with Article 1056-4 for Type 4 geotextile.

Provide borrow material in accordance with Article 1018.

3.0 MEASUREMENT AND PAYMENT

There will be no direct payment for earthwork, excavation, unsuitable materials, and backfill materials described in this special provision. Payment will be made at the contract unit prices for the various items covered by sections 226 *Undercut Excavation*, 300 *Pipe Installation*, 305 *Drainage Pipe*, 310 *Pipe Culverts*, SP-02 *Comprehensive Grading*, SP-03 *Select Material*, and SP-04 *Borrow Excavation*.

(A) Unsuitable Material

Unsuitable material shall be defined as any and all unsuitable materials regardless of its nature. Unsuitable Material not incorporated into the Project shall be removed, hauled, and disposed by the Contractor only as authorized by the Engineer. Stockpiled Unsuitable Material shall be disposed of no less than once per week.

Proposed Project Subgrade, other than Pipe Culvert Trench Subgrade

Unsuitable material *below* the proposed project sub-grade, including but not limited to below the invert of an open channel or bottom of detention facilities, shall be removed, measured, hauled, disposed of, replaced, and paid for under NCDOT Section 226 *Undercut Excavation*. Unsuitable material *above* the proposed project sub-grade shall be removed, hauled, and disposed of at no additional cost to the City.

Proposed Pipe Culvert Trench Subgrade

Unsuitable material *below* the proposed project pipe culvert trench subgrade within the approved trench excavation limits for storm drainage pipe and storm drainage culvert (including but not limited to box culverts, oval pipe culverts and three-sided culverts/bridges) shall be removed, measured, hauled, disposed of, replaced, and paid for in accordance with Section 300-9 (B) *Foundation Conditioning Material* and Section 300-9 (C) *Foundation Conditioning Geotextile*.

Unsuitable material *above* the proposed pipe culvert trench sub-grade shall be removed, hauled, disposed of at no additional cost to the City.

(B) Bedding and Backfill

- Pipe (including round, elliptical, etc.)
 - There will be no separate measurement or payment for select bedding and select backfill material required in the installation of pipe as illustrated in NCDOT 300.01. All bedding and select backfill material will be included in cost of the installed pipe.
- Culvert (Box Culverts/Bends/Bottomless Culverts)
 - There will be no separate measurement or payment for bedding required in the installation of culverts as illustrated in Figure 2.1 of the *Precast Reinforced Concrete Culvert* Special Provision or as shown on the plans. All bedding material will be included in cost of the installed pipe or culvert.
 - Material needed for buried culvert inverts and channel inverts inside three-sided bridge/culverts shall be incidental to the cost of the culvert unless otherwise directed by the Engineer.

When local material meeting the requirements for the select bedding and backfill is approved for use by the Engineer, no deductions in the cost of pipe culvert will be made. Local material is defined as material generated on the project site or within the project limits.

Within the Existing or Proposed Roadway

- Pipe (including round, elliptical, etc.)
 - For pipe located within the existing or proposed roadway, including beneath the proposed curb and gutter or between road ditch lines, the Contractor shall use suitable material from the elevation of the select backfill material included in the cost of the installed pipe to the subgrade.
- Culvert (Box Culverts/Bends/Bottomless Culverts)
 - For culverts located within the existing or proposed roadway, including beneath the proposed curb and gutter or between road ditch lines, the Contractor shall use suitable material from the elevation of the bedding included in the cost of the installed culvert to the subgrade.

When local material meeting the requirements for suitable material is approved for use by the Engineer, there will be no separate measurement or payment for the material incorporated into the completed and accepted Project.

Suitable material shall be defined as material meeting both:

- Unified Soil Classification System (USCS) designation of GW, GP, GM, GC, SW, SP, SM, or SC and
- American Association State Highway Transportation Official (AASHTO) Soil Classification System designation of A-1, A-3, A-2-4, or A-2-5.

When local suitable material is not available to complete the backfill of the trench, the Contractor shall use select material in accordance with SP-03 *Select Material*.

Do not use *Select Material* until all local suitable material has been incorporated into the Project. There shall be no measurement or payment made for *Select Material* brought to the site at the Contractor's convenience.

Outside of the Proposed or Existing Roadway

- Pipe (including round, elliptical, etc.)
 - For pipe located outside the existing or proposed roadway, the Contractor shall use local suitable material from the elevation of the select backfill material included in the cost of the installed pipe to the finished grade or subgrade.
- Culvert (Box Culverts/Bends/Bottomless Culverts)
 - For culverts located outside the existing or proposed roadway, the Contractor shall use local suitable material from the elevation of the bedding included in the cost of the installed culvert to the finished grade or subgrade.

When local suitable material is not available to complete the backfill of the trench, the Contractor shall use borrow material in accordance with SP-04, *Borrow Excavation*.

Do not use *Borrow Excavation* material until all local suitable material has been incorporated into the Project. There shall be no measurement or payment made for borrow excavation material brought to the site at the Contractor's convenience.

When local suitable material is not available to complete the backfill of the trench, the Contractor shall use select material in accordance with SP-03, *Select Material*.

Do not use *Select Material* until all local suitable material has been incorporated into the Project. There shall be no measurement or payment made for select material brought to the site at the Contractor's convenience.

(C) Other

No separate measurement or payment will be made for any other excavation, furnishing, placement, compaction or satisfactory disposal of material encountered within the limits of Work necessary for construction of the Project. All other earthwork shall be considered incidental to the Project and paid for in *Comprehensive Grading*, unless noted elsewhere in the Contract Documents.

SP-06, PRECAST REINFORCED CONCRETE CULVERT

Description

Work covered by this special provision consists of installation of a precast reinforced concrete culvert or arch culvert (culvert), in accordance with the plans and specifications at locations shown on the plans. The work shall also include the construction of such joints and connections to other culverts, pipes, drainage structures, and steps as may be necessary to complete the work shown on the plans. This culvert will be installed in phases matching the requirements in the construction plans.

Materials and Construction Methods

Installation of the culvert shall conform to Section 414 of the NCDOT Standard Specifications as well as any requirements of this provision. Backfill shall be as specified in the *Earthwork, Excavation, Unsuitable Materials, and Backfill Materials* Special Provision.

Design and Manufacture

Culvert sections shall conform to ASTM C-1577 or the latest edition of the AASHTO LRFD Bridge Design Specifications. Provide a precast culvert that meets the requirements of Section 1077 and any other applicable parts of the Standard Specifications.

The concrete mixture shall meet the requirements for Single Cell Box Sections shown in Table 1077-1 in Section 1077 of the NCDOT Standard Specifications. Movement of the precast sections should be minimized during the initial curing period. Any damage caused by moving or handling during the initial curing phase will be grounds for rejection of that precast section. Air entrain the concrete in accordance with Section 1077 - 5(A) of the NCDOT Standard Specifications. For dry cast manufacturing, air entrainment is not required.

Handling devices or holes are permitted in each culvert section for the purpose of handling and laying. Submit details of handling devices or holes for approval and do not cast any concrete until approval is granted. Remove all handling devices flush with concrete surfaces as directed. Fill

holes in a neat and workmanlike manner with an approved non-metallic non-shrink grout, concrete, or hole plug.

Each culvert section shall be checked at the plant for fitment and numbered which shall correspond to the laying schedule.

Concrete sills to hold invert fill material shall be furnished with the culvert end units.

All openings shown on the plans in the culvert shall be formed during the manufacturing process.

Culvert minimum waterway area shown on the plans shall be verified with the manufacturer for the culvert sizes due to manufacturing differences.

Joints

Produce the precast reinforced concrete culvert section with tongue and groove ends. Design and form these ends of the culvert section so, when the sections are laid together, they make a continuous line of culvert sections with a smooth interior free of appreciable irregularities in the flowline. The internal joint formed at the tongue and groove ends of the precast units shall be sealed with either bitumen/butyl sealant or closed-cell neoprene material conforming to ASTM C990 or C1677. The internal joint material shall be installed in accordance with the manufacturer's recommendations. The material shall be shown on the shop drawings when they are submitted for review.

Seal the external joint with an outside sealer wrap conforming to ASTM C877 that is at least 12 inches wide and covers the joint on both the sides and the top of the box section. Use ConWrap CS-212 from Concrete Sealants, Inc., EZ-Wrap from Press-Seal Gasket Corporation, Seal Wrap from Mar-Mac Manufacturing Co., Inc., Cadilloc External Pipe Joint from Cadilloc, or an approved equal for the outside sealer wrap. If the outside sealer wrap is not applied in a continuous strip along the entire joint, a 12 inch minimum lap of the outside sealer wrap is permitted. Before placing the outside sealer wrap, clean and prime the area receiving the outside sealer wrap in accordance with the sealer wrap manufacturer recommendations. The joint wrap manufacturer installation recommendations shall be included with shop drawings submitted for review.

Cover the external joint sealer with a 3 foot strip of filter fabric conforming to Type 4 requirements in Section 1056 of the Standard Specifications.

Installation

This culvert will be installed in phases matching the requirements in the construction plans.

Ensure that equipment of the correct lifting capacity is available to install precast concrete units. Site conditions must be checked well in advance of shipping to ensure proper equipment location and to avoid any lifting restrictions. The lift anchors or holes provided in each section are only means to lift the elements unless otherwise approved by manufacturer.

In no case shall equipment operating in excess of the design load be permitted over the culvert units unless otherwise approved by manufacturer.

No construction equipment shall cross the bare precast concrete unit. The contractor shall refer to the Manufacturers specifications for additional restrictions.

No backfill shall be placed against any structural elements until they have been approved by the Engineer. Complete backfill in accordance with Sections 410-8 and 414-7 of the NCDOT Standard Specifications, Manufacturer's Specifications, and as specified in the *Earthwork, Excavation, Unsuitable Materials, and Backfill Materials* Special Provision. Sections 410-10 and 414-9 of the NCDOT Standard Specifications do not apply.

Bedding for precast culvert shall meet the requirements of Section 410 and 414 of the NCDOT Standard Specifications. Excavate 12 inches below the bottom of barrel and footings and backfill with Class VI select material in accordance with Section 1016 of the NCDOT Standard Specifications or as shown on the plans. Bedding shall extend 12 inches outside of the culvert or footings. In addition, bedding material shall be placed on filter fabric conforming to Type 4 requirements in Section 1056 of the NCDOT Standard Specifications. The filter fabric shall be placed perpendicular to the culvert barrel and extend 1 foot vertically onto the culvert wall/footing. Perpendicular sections of fabric shall be continuous. A minimum lap of 2 feet shall be provided between sections of fabric.

- a) Culvert sections shall be placed at the beginning of the outlet end of the culvert with the groove end being laid upgrade. Tongue sections shall be laid into the groove sections. Positive means shall be provided to pull each section firmly into the previously placed section so that the joints are tightly homed. Use a "come-along", box pullers or other approved methods to create a positive means of joining box sections. Construction equipment shall not have direct contact with the culvert section. The load of the culvert sections shall be suspended by a lifting device during joining procedure.
- b) Place multiple, parallel lines of a culvert such that the separation between the lines of culvert has a minimum width of 3 inches. Fill the separation between multiple lines of culvert with non-shrink, non-corrosive grout. Use grout that meets the requirements listed in Section 1003 of the NCDOT Standard Specifications for Type 3 grout, except that Field Compressive Strength Specimens are not required. Other fill materials may be used if approved by the Engineer.

Invert Fill Material (as needed)

- a) The culvert shall be filled with native soil as shown on the plans and details. Native material consists of material that is excavated from the stream bed or floodplain at the project site during culvert construction. Only material that is excavated from the stream bed may be used to line the low flow channel or culvert barrel. Rip rap may be used to supplement the native material. If rip rap is used, native material shall be placed on top to fill voids and provide a flat surface for animal passage. Native material is subject to approval by the Engineer and may be subject to permit conditions. If native material is not available, the Engineer shall approve an alternate source of material.

- b) The material shall be compacted as little as possible but firm enough to walk on without leaving footprints.

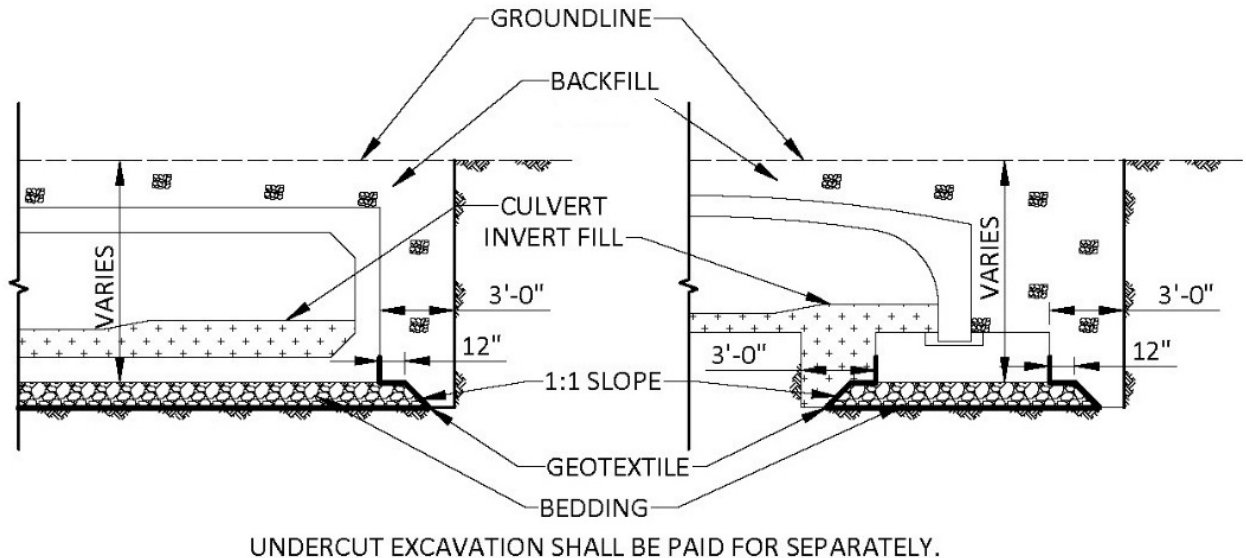


Figure 2.1 – Precast Reinforced Concrete Culvert Typical Section

Submittals

The designs of the precast culverts are the responsibility of the Contractor and are subject to review, comments, and approval. Submit two sets of detailed plans for review. Include all details in the plans, including the size and spacing of the required reinforcement necessary to build the precast culverts and the laying schedule. A North Carolina Registered Professional Engineer shall seal the plans and design calculations. **The shop drawings must show the proposed openings (top and sides) and reinforcing for pipe connections, structure openings, and precast holes for steps.**

The Contractor shall submit the manufacturer's certification for the culvert sections and those products to be used in the installation.

All submittals shall be made a minimum of two weeks prior to construction or placing an order for materials for review by the Engineer.

Measurement

The quantity of precast reinforced concrete culvert to be paid for will be the actual number of linear feet of culvert which has been installed and accepted. Measurement will be made horizontally along the centerline of the installed culvert. Measurement will not be made across precast bends or other drainage structures.

Payment

Payment for all work covered by this special provision will be made at the contract unit price per linear foot for "Precast Reinforced Concrete Culvert". Such payment will be full compensation for all work covered by this special provision including, but not limited to, furnishing all labor, materials, filter fabric, equipment, excavating, bedding, invert fill material, concrete sill, grout,

segmental phasing culvert installation matching the phasing in the plans, constructing joints and connections, furnishing project submittals and other incidentals necessary to complete this work. There shall be no separate payment for Culvert Excavation, filter fabric, bedding, or any other items required by Section 410 (Articles 1-6 and 9) or 414 (Articles 1-5 and 8) of the NCDOT Standard Specifications. Backfill shall be as specified in the Earthwork, Excavation, Unsuitable Materials, and Backfill Materials special provision. Sections 410-10 and 414-9 of the NCDOT Standard Specifications do not apply.

Payment will be made under:

10' x 7' PRECAST R. C. CULVERTLF

SP-07, PRECAST MODULAR BLOCK GRAVITY RETAINING WALL

1.0 DESCRIPTION

The work covered by this special provision includes furnishing and constructing a modular concrete block gravity retaining wall system comprised of a mortar-less, interlocking masonry concrete units. The system shall not require geosynthetic reinforcement for soil stability. The system should allow for curves, straight walls, terraces, near vertical or battered wall face, and/or 90 degree bends. The retaining walls shall be in accordance with the manufacturer's specifications, and the provisions of these specifications.

2.0 MATERIALS

Precast modular blocks shall be Stone Strong units or equivalent.

All concrete units and any other necessary materials shall be installed in accordance with the manufacture's specifications and the submitted shop drawings.

3.0 SUBMITTALS

The Contractor shall submit style, color and appearance for review by the City of Concord.

Prior to fabrication, the Contractor shall submit shop drawings for the Precast Modular Block Gravity Retaining Wall, including information necessary for installation. The shop drawings must show the proposed load calculations and any proposed fabric reinforcing.

The shop drawings must be signed and sealed by a Professional Engineer registered in the State of North Carolina.

The Contractor will also submit the manufacturer's certification for the Precast Modular Block Gravity Retaining Wall units and those products to be used in the installation.

4.0 CONSTRUCTION METHODS

The modular block wall shall be constructed per manufacture’s specifications and in accordance with the plans and details.

5.0 MEASUREMENT

The quantity of gravity precast modular block retaining walls to be paid for will be the actual square footage of wall, measured along the front surface of the wall from the top of the leveling pad or footer to the top of the wall cap, which has been installed and accepted.

If the lower courses must be backfilled before the wall can be completed, the contractor shall coordinate with the city’s inspector to measure and record this quantity for payment before backfilling.

There will be no measurement of leveling stone, backfill, or filter fabric, or other items needed for wall construction.

6.0 PAYMENT

The quantity of Precast Modular Block Gravity Retaining Wall, measured as provided above, will be paid for at the contract unit price per square foot for “Precast Modular Block Gravity Retaining Wall”. Such payment will be full compensation for all work covered by this special provision including but not limited to excavating, constructing foundation, furnishing and constructing modular block retaining wall including leveling stone, backfill; drainage system and any incidental items necessary to construct the work as shown on the plans, the manufacturers specifications, and the provisions of these specifications.

Payment will be made under:

PRECAST MODULAR BLOCK GRAVITY RETAINING WALL SF

SP-08, NON-STANDARD STRUCTURES

1.0 DESCRIPTION

The work covered by this special provision applies to non-standard endwalls, non-standard toewalls and non-standard drainage structures.

2.0 CONSTRUCTION METHODS AND MATERIALS

Work shall be in accordance with Section 414 *Box Culvert Excavation*, Section 420 *Concrete Structures*, Section 425 *Fabricating and Placing Reinforcement*, Section 830 *Brick Masonry Construction*, and Section 1040 *Masonry* of the NCDOT Standard Specifications. There will be an exception made to the articles of each referenced section for the measurement and payment and backfill materials.

Install 6" bedding #57 stone beneath all structures and drainage column behind endwalls.

Use cast in place concrete, brick masonry, block masonry or precast concrete construction as shown on the plans.

Concrete for the structure shall be Class A, as per the Standard Specification Section 1000 except that the minimum compressive strength at 28 days shall be 3,600 psi. Fill concrete indicated on the plans shall be class A or B as described in Section 1000 *Portland Cement Concrete Production and Delivery* of the NCDOT Standard Specifications.

Materials shall be as shown on the plans or described in Article 838-2 and 840-2 *Materials* of the NCDOT Standard Specifications.

Methods shall be as described in Article 838-3 and 840-3 *Construction Methods* of the NCDOT Standard Specifications.

Bottomless structures (i.e. catch basin chimneys, etc.) shall be attached to the base structure or culvert as shown on the plans. (If applicable)

3.0 SUBMITTALS (If applicable)

For all Non-Standard Structures, the Contractor shall submit the manufacturer's certification and shop drawings for the Non-Standard Structures and those products to be used in the installation.

When a designed structure is not provided in the contract documents, the Contractor shall be responsible for the design of the Non-Standard Structures which are subject to review, comments, and approval. Submit two sets of detailed plans for review. Include all details in the submittal, including the size and spacing of the required reinforcement necessary to build the Non-Standard Structure. A North Carolina Registered Professional Engineer shall seal the submittal, which includes plans and design calculations. **The submittal must show the proposed openings (top and sides) and reinforcing for pipe connections, structure openings, and precast holes for steps, if necessary.**

All submittals shall be made a minimum of two weeks prior to construction or placing an order for materials for review by the Engineer.

4.0 MEASUREMENT AND PAYMENT

The quantity of non-standard endwalls, non-standard toewalls and non-standard drainage structures will be measured and paid for in accordance with sections 838-4 and 840-4 *Measurement and Payment*, of the NCDOT Standard Specifications.

The payment for all work covered by this special provision will be made at the contract unit price per cubic yard for "Non-Standard Endwalls", "Non-Standard Toewalls", and/or "Non-Standard Drainage Structures". Such payment will be full compensation for all elements of work required to construct the structures in accordance with the specifications including, but is not limited to furnishing labor, materials, excavation, stone bedding and drainage column; hauling; disposal of materials; transporting and placing concrete, brick masonry, precast units, mortar, grout,

reinforcing steel, hardware, castings and miscellaneous metal; fabrication, welding, and galvanizing to construct cast in place concrete, brick masonry, block masonry or precast concrete walls, weepholes, catch basins, junction boxes, spring boxes, manholes, concrete aprons and other non-standard endwalls, non-standard toewalls and non-standard drainage structures, with all necessary steps, and other hardware, and connection of the structure.

Backfill will be made in accordance with the *Earthwork, Excavation, Unsuitable Materials, and Backfill Materials* Special Provision.

Fabricated steel and gray iron cast frames, grates, manhole rings and covers shall be measured and paid separately in accordance with the contract.

Payment will be made under:

NON-STANDARD ENDWALL.....CY
NON-STANDARD TOEWALL.....CY
NON-STANDARD DRAINAGE STRUCTURE.....CY

SP-09, PEDESTRIAN SAFETY RAIL

Furnish and install steel pipe safety rail at locations as shown in the plans, in accordance with the detail in the plans and as directed by the Engineer.

Measurement and Payment

Pedestrian Safety Rail will be measured and paid as the actual number of linear feet of steel pipe safety rail measured along the top of the rail to the nearest 0.1 of a foot. Such price and payment shall be full compensation for fabricating, furnishing, installing, painting and all incidentals necessary to satisfactorily install the safety rail.

Payment will be made under:

Pay Item	Pay Unit
Pedestrian Safety Rail	Linear Foot

SP-10, WOVEN WIRE FENCE WITH STEEL POSTS

1.0 DESCRIPTION

This special provision shall include all labor and materials to furnish and erect woven wire fence with steel posts and gates in accordance with Section 866 of the NCDOT Standard Specifications, NCDOT Standard Detail 866.03, the construction plans and the contract.

2.0 MATERIALS

Per Section 866-2 of the NCDOT Standard Specifications.

3.0 CONSTRUCTION METHODS

Per Section 866-3 of the NCDOT Standard Specifications.

4.0 MEASUREMENT AND PAYMENT

Woven Wire Fence with Steel Posts will be measured and paid in linear feet of fence, measured in place from center of each post or gate post to center of end post or gate post exclusive of gate sections, that has been completed and accepted. All posts used for the fence are included in the price of the *Woven Wire Fence with Steel Posts* and will not be paid separately.

Woven Wire Double Gate with Steel Posts will be measured and paid in units of each for the number of gates actually erected on the project. Double gates will be measured as one gate. All posts used for the gate are included in the price of the *Woven Wire Double Gate with Steel Posts* and will not be paid separately.

Payment will be made under:

WOVEN WIRE FENCE WITH STEEL POSTS	LF
WOVEN WIRE DOUBLE GATE WITH STEEL POSTS	EA

SP-11, STREAM PUMP AROUND OPERATION

1.0 DESCRIPTION

Work under this section, includes all work necessary for the installation and maintenance of the pump around operation, and the stream restoration to preconstruction conditions. Work shall be performed in the dry by pumping stream base flow around project work areas for sediment and erosion control purposes as may be necessary or directed by the Engineer and to conform to the plans, specifications, details, permits, local laws, state laws and federal laws and the City of Concord’s Ordinances, Policies and Standards Specifications where applicable.

The pump around shall provide a passageway for the normal stream flow through the work site. This pump around operation is for storm drainage work only and should not be considered for sanitary sewer bypass pumping.

2.0 METHODS AND MATERIALS

The measures and works shall include, but are not limited to, the following:

Pump Around Operation – A pump shall be used to convey the stream base flow around the work area during channel excavation, installation of structures, and stabilization. The pump well shall be cased and filter provided to prevent pumping of sediment fines. The intake for the drain mechanism upstream of the impervious dike should be located near the top of the water column unless otherwise specified by the City. Impervious dikes shall be installed at the upstream and downstream locations of the pump around operations. The size of pumps used shall be determined

by the onsite contractor with approval from the Engineer. The pump includes temporary flexible hose in sufficient length to pump the water from the upstream side of the active working area to the downstream end. Pumps shall be silent or quiet rated (70 decibels at 25 feet). Water removed from the pond or excavated project site shall pass through a temporary stabilized outlet to be located upstream of the receiving stream unless otherwise noted.

Dewatering Sediment Filter Bag Systems – A special sediment removal device shall be used to filter pumped water from the excavated project site during construction. The quantity of sediment filter bag systems may be increased, decreased, or eliminated entirely at the direction of the on-site Engineer.

Stream restoration to preconstruction conditions - Stream areas impacted by the pump around operation shall be regraded to its preconstruction contours and revegetated with appropriate native species.

3.0 MEASUREMENT

No measurement will be made of any materials under this item. Impervious dikes, dewatering sediment filter bag systems and any grading and revegetating will be incidental to this item.

4.0 PAYMENT

The Pump Around Operation specified under this section consists of furnishing all labor, materials, equipment, supplies, supervision, tools, and performing all work necessary for maintaining baseflow downstream of stream, culverts, and pipes, and the installation, maintenance, removal of impervious dikes and dewatering sediment filter bag systems, regarding to original contours and revegetating, in conjunction with stream restoration/stabilization construction and shall be paid for at the contract lump sum for *Pump Around Operation*.

Payment will be made under:

STREAM PUMP AROUND OPERATION.....LS

SP-12, IMPERVIOUS DIKE

The Contractor shall construct an impervious dike in such a manner as approved by the Engineer, including, but not limited to furnishing materials, construction, maintenance, and removal of an impervious dike for the purpose of preventing normal stream flow and dewatering a stream segment for construction operations. The impervious dike shall not permit seepage of water into the construction site.

1.0 SUBMITTALS

Prior to construction, the Contractor shall submit a detail illustrating the component materials and dimensions of the impervious dike. The impervious dike shall impound water to a depth range as shown on the impervious dike detail and shall minimize erosion and discharge of sediment in the event of overtopping.

2.0 METHODS

The impervious dike shall be constructed in locations as directed by the Engineer. Establish and maintain temporary drainage ditches and other diversions outside excavation limits to convey rain water and water removed from excavation to collecting or run-off areas. Do not use trench excavations as temporary drainage ditches.

The intake for the drain mechanism upstream of the impervious dike should be located near the top of the water column unless otherwise specified by the City. Water removed from the pond or excavated project site shall pass through a special stilling basin to be located upstream of the receiving stream unless otherwise noted.

3.0 MEASUREMENT

There will be no measurement made for *Impervious Dike*.

4.0 PAYMENT

No direct payment will be made for *Impervious Dike*. All work covered in this special provision, including, but not limited to furnishing all labor materials, construction, maintenance, and removal of the impervious dike will be incidental to the lump sum price for *Pump Around Operation*.

SP-13 – COIR FIBER MATTING

1.0 DESCRIPTION

This work consists of furnishing and installing erosion control matting on the finished grade, as designated on the plans and details, or as directed by the Engineer.

2.0 MATERIALS

Coir matting is proposed to be used on stream banks and designated areas within the wetland for the purpose of managing the shear stresses associated with flows through the stream and wetland. Straw matting is to be used on all other areas as directed in the Quoting Documents or required by the conditions of the erosion control permit. The matting shall meet the requirements shown on the plans and conform to the following properties:

Property	Coir Matting
Matrix	100% Coconut Fiber (Coir)
Nettings	100% Biodegradable fiber
Threading	100% Biodegradable
Matting Description	100% Biodegradable
Weight (oz/SY)	12-15
Width (m)	1 - 3

Property	Coir Matting
Length (m)	25- 50
Open area (calculated)	55% - 65%
Light Penetration	-
Tensile Strength (Dry) (lbs/ft)	400-600
Elongation (Wet) (%)	25 - 35
Thickness (inch)	0.30 – 0.35
Maximum Flow Velocity (fps)	8 - 10
Typical Slope	1V:2H – 1V:1H

Certifications from each coir fabric manufacturer that furnished products have specified property values. Certified property values shall be either minimum or maximum average roll values, as appropriate, for fabric furnished.

Stakes shall be cut to the appropriate length from untreated boards. In fabricating these units, each board of the selected length shall be cut again diagonally across the face to make two stakes from each length. The diagonal cut will occur 1/2 inch from the edge of the piece so the finished stake will have a 1/2 inch tip. Only new, sound, unused material shall be used. The stakes are to be used to secure erosion control matting in place at the top and toe of the stream bank. Two-foot long, 1/2-inch hooked rebar may be substituted when it is necessary to secure materials in rocky areas.

Use stakes of a size and type(s) as specified by the Manufacturer or as otherwise specified in the Quoting Documents. Wood stakes shall be made of untreated wood. Metal stakes or staples may be used in certain areas of this work pending approval of the City.

3.0 METHOD

Products should be handled in a manner that prevents damage prior to and during installation. Fabric should be stored with suitable wrapping for protection against moisture and ultraviolet exposure prior to installation.

Install erosion control fabric lengthwise (horizontally) along the stream bank in accordance with the plans and as follows.

- a) Excavate a trench along the toe of the stream bank in the location shown on the plans.
- b) Place fabric in the trench, secure the fabric with a dead stout stake, backfill with clean soil, and then the wrap the fabric over the top surface of the trench and be positioned for installation over the stream bank surface.
- c) Prepare, seed, and straw mulch the stream bank surface in accordance with the Quoting Documents prior to the placement of the fabric over the stream bank surface.
- d) Lay fabric over the stream bank surface so as to not be in tension, but be placed neatly and with no gaps or wrinkles. Any fabric overlaps necessary shall be as specified in the plans.

- e) Bring fabric up and over the top of the stream bank and secure it into a trench located as shown on the plans. The trench width and depth shall be per the plans.
- f) Place fabric into the trench, secure the fabric with a dead stout stake, and backfill with clean soil.
- g) Install field stakes of a size, type, in a pattern, and with spacing dimensions as specified by the Manufacturer or as otherwise specified in the Quoting Documents.
- h) Secure erosion control fabric neatly around any project elements, undisturbed trees/shrubs, and existing structures to prevent any loose or frayed edges. There shall be no loose ends or unsecured erosion control fabric on the completed work.
- i) Repeat steps a) through h) until the matting for erosion control installation area is in compliance with the Quoting Documents.

Site conditions may require slight deviation from the planting plan and shall be approved by the City.

4.0 MEASUREMENT AND PAYMENT

Coir Fiber Matting will be measured and paid as the actual number of square yards of coir fiber matting which are installed and accepted. Such price and payment will be full compensation for all work covered by this section, including, but not limited to, furnishing all materials, labor, equipment and incidentals necessary to install the coir fiber matting.

Payment will be made under:

COIR FIBER MATTINGSY

SP-14, STORM DRAIN INLET PROTECTION:

1.0 DESCRIPTION

The Work covered in this section consists of installing storm drain inlet protection as necessary help reduce the effects of soil erosion and to retain sediment.

2.0 INSPECTION AND MAINTENANCE OF SEDIMENT TUBES

Inspect filter sacks after installation to ensure that no gaps exist under the filter sack and the rim of structure.

Inspect filter sacks every seven (7) days. Repair any damage to filter sack or replace per engineer request.

Remove sediment deposits that impair the filtration capability of a filter sack when the sediment reaches sediment capacity line on filter. Remove and/or replace installed filter sacks as required to adapt to changing construction site conditions.

3.0 MEASUREMENT AND PAYMENT

The quantity of "Filter Sack Inlet Protection" is to be paid for per each filter sack installed and accepted. All work consisting of, but not limited to, purchases, storing, and installing the filter sack and all material, time, and labor costs associated will be considered incidental to the work.

Payment will be made under:

STORM DRAIN INLET PROTECTIONEA

SP-15, COMPOST FILTER SOCK:

1.0 DESCRIPTION

Compost Filter Sock shall consist of furnishing, installing, maintaining and disposing of compost filter sock as required in the plans and details, or as directed by the Engineer. Compost filter sock shall be Filtrexx SiltSoxx, Diamond Sock or equivalent.

2.0 MEASUREMENT AND PAYMENT

Compost Filter Sock will be measured and paid as the actual number of linear feet of compost filter sock installed in place and accepted. No additional payment will be made for overlaps, splices or the anchoring of the system. Such payment will be full compensation including but not limited to all labor, material, tools, equipment and incidentals necessary to complete this work.

Payment will be made under:

XX" COMPOST FILTER SOCKLF

SP-16, SAFETY FENCE AND JURISDICTIONAL FLAGGING:

1.0 DESCRIPTION

Safety Fence shall consist of furnishing materials, installing and maintaining polyethylene or polypropylene fence along the outside riparian buffer, wetland, or water boundary, or other boundaries located within the construction corridor to mark the areas that have been approved to infringe within the buffer, wetland, endangered vegetation, culturally sensitive areas or water. The fence shall be installed prior to any land disturbing activities.

Interior boundaries for jurisdictional areas noted above shall be delineated by stakes and highly visible flagging.

Jurisdictional boundaries at staging areas, waste sites, or borrow pits, whether considered outside or interior boundaries shall be delineated by stakes and highly visible flagging.

2.0 MATERIALS

(A) Safety Fencing

Polyethylene or polypropylene fence shall be a highly visible preconstructed safety fence approved by the Engineer. The fence material shall have an ultraviolet coating.

Either wood posts or steel posts may be used. Wood posts shall be hardwood with a wedge or pencil tip at one end, and shall be at least 5 ft. in length with a minimum nominal 2" x 2" cross section. Steel posts shall be at least 5 ft. in length, and have a minimum weight of 0.85 lb/ft of length.

(B) Boundary Flagging

Wooden stakes shall be 4 feet in length with a minimum nominal 3/4" x 1-3/4" cross section. The flagging shall be at least 1" in width. The flagging material shall be vinyl and shall be orange in color and highly visible.

3.0 CONSTRUCTION METHODS

No additional clearing and grubbing is anticipated for the installation of this fence. The fence shall be erected to conform to the general contour of the ground.

(A) Safety Fencing

Posts shall be set at a maximum spacing of 10 ft., maintained in a vertical position and hand set or set with a post driver. Posts shall be installed a minimum of 2 ft. into the ground. If hand set, all backfill material shall be thoroughly tamped. Wood posts may be sharpened to a dull point if power driven. Posts damaged by power driving shall be removed and replaced prior to final acceptance. The tops of all wood posts shall be cut at a 30-degree angle. The wood posts may, at the option of the Contractor, be cut at this angle either before or after the posts are erected.

The fence geotextile shall be attached to the wood posts with one 2" galvanized wire staple across each cable or to the steel posts with wire or other acceptable means.

Place construction stakes to establish the location of the safety fence in accordance with Article 105-9 or Article 801-1 of the *Standard Specifications*. No direct pay will be made for the staking of the safety fence. All stakeouts for safety fence shall be considered incidental to the work being paid for as "Construction Surveying", except that where there is no pay item for construction surveying, all safety fence stakeout will be performed by state forces.

The Contractor shall be required to maintain the safety fence in a satisfactory condition for the duration of the project as determined by the Engineer.

(B) Boundary Flagging

Boundary flagging delineation of interior boundaries shall consist of wooden stakes on 25 feet maximum intervals with highly visible orange flagging attached. Stakes shall be installed a minimum of 6” into the ground. Interior boundaries may be staked on a tangent that runs parallel to buffer but must not encroach on the buffer at any location. Interior boundaries of hand clearing shall be identified with a different colored flagging to distinguish it from mechanized clearing.

Boundary flagging delineation of interior boundaries will be placed in accordance with Article 105-9 or Article 801-1 of the *Standard Specifications*. No direct pay will be made for delineation of the interior boundaries. This delineation will be considered incidental to the work being paid for as *Construction Surveying*, except that where there is no pay item or construction surveying the cost of boundary flagging delineation shall be included in the unit prices bid for the various items in the contract. Installation for delineation of all jurisdictional boundaries at staging areas, waste sites, or borrow pits shall consist of wooden stakes on 25 feet maximum intervals with highly visible orange flagging attached. Stakes shall be installed a minimum of 6” into the ground. Additional flagging may be placed on overhanging vegetation to enhance visibility but does not substitute for installation of stakes.

Installation of boundary flagging for delineation of all jurisdictional boundaries at staging areas, waste sites, or borrow pits shall be performed in accordance with Subarticle 230-4(B)(5) or Subarticle 802-2(F) of the *Standard Specifications*. No direct pay will be made for this delineation, as the cost of same shall be included in the unit prices bid for the various items in the contract.

The Contractor shall be required to maintain alternative stakes and highly visible flagging in a satisfactory condition for the duration of the project as determined by the Engineer.

4.0 MEASUREMENT AND PAYMENT

Safety Fence will be measured and paid as the actual number of linear feet of polyethylene or polypropylene fence installed in place and accepted. Such payment will be full compensation including but not limited to furnishing and installing fence geotextile with necessary posts and post bracing, staples, tie wires, tools, equipment and incidentals necessary to complete this work.

Payment will be made under:

SAFETY FENCE.....LF

NOTICE OF AWARD

TO:

FROM: City of Concord City Council (OWNER)
P.O. Box 308
35 Cabarrus Ave. W
Concord, North Carolina 28026-0308

PROJECT: **Duval St. Culvert Replacement
Project No. 2014-009**

You are hereby notified that the bid submitted by you for the above named project in response to the City of Concord's Invitation to Bid, dated **April 29, 2021** in the amount of

_____ and _____/100 DOLLARS

(\$_____) has been accepted.

You are hereby required to execute the formal AGREEMENT with the City of Concord City Council and to furnish any and all Contractor's Bond(s), Certificate of Insurance and Power of Attorney(s) along with other documents pertaining to the work as designated by the City of Concord.

If you fail to execute said AGREEMENT and to furnish this and any other required documents pertaining to the work within ten (10) days from the date of delivery of this NOTICE OF AWARD, said Owner will be entitled to consider all your rights arising out of the Owner's acceptance of your bid as abandoned and to award the work covered by your proposal to another, or to re-bid the work or otherwise dispose thereof as the Owner may see fit.

Dated this the _____ day of _____, 20_____

City of Concord, North Carolina

CONTRACTOR

By: _____

By: _____

Title: City Manager

Title: _____

ACCEPTANCE OF NOTICE OF AWARD

Receipt of the above NOTICE OF AWARD is hereby acknowledged this the ____ day of _____, 20_____.

NOTICE TO PROCEED

TO:

FROM: City of Concord City Council (OWNER)
P.O. Box 308
35 Cabarrus Ave. W
Concord, North Carolina 28026-0308

PROJECT: **Duval St. Culvert Replacement**
Project No. 2014-009

Contract Amount: _____ and ____/100 DOLLARS

(\$ _____).

You are hereby notified to commence work on or before the _____ day of ____, 20__, pending acceptance of your Certificate of Insurance and any other required documents, and are to fully complete the work by the _____ day of _____, 20__.

Your project final completion date is therefore the _____ day of _____, 20__, and as set forth in the above named project's schedule unless an extension is granted by the City of Concord Director of Engineering in writing.

City of Concord, North Carolina

By: _____

Title: City Manager

Dated this the ____ day of _____, 20__.

STANDARD FORM CONSTRUCTION CONTRACT (Revised 07/03/18)

This contract (together with all exhibits and valid amendments, the “Agreement” or the “Contract”) is made and entered into as of the ___ day of _____, 20____, by the City of CONCORD (“City”) and _____ (“Contractor”), () a corporation, () a professional corporation, () a professional association, () a limited partnership, () a sole proprietorship, or () a general partnership; organized and existing under the laws of the State of _____.

Sec. 1. Background and Purpose.

The Duval St. Culvert Replacement project consists of the removal of an existing bridge and abandoned loading platform, the installation of 43’ of 2-10’x7’ concrete box culverts and associated services that will include relocation of 15” and 24” storm sewer pipe, coordination with utility agencies on other utility adjustments by others, roadway pavement reconstruction, and other appurtenances along Duval St. in Concord NC.

Sec. 2. Services and Scope to be Performed. The Contractor shall provide the services at the charges set forth either in this paragraph or in Exhibit “A”. Additional exhibits may be used to further define this Agreement when the Contractor and City so agree. Any additional exhibits shall be designated as exhibits to the Agreement with capitalized, sequential letters of the alphabet, shall be attached hereto and incorporated herein by reference as if the same were fully recited, and shall become terms of this Agreement upon execution by both parties.

In this Contract, “services” means the services that the Contractor is required to perform pursuant to this Contract and all of the Contractor’s duties to the City that arise out of this Contract. Any amendments, corrections, or change orders by either party must be made in writing signed in the same manner as the original. (This form may be used for amendments and change orders.) The City reserves the right to refuse payment for any work outside that authorized herein or pursuant to a duly approved amendment or change order.

Sec. 3. Complete Work without Extra Cost. Unless otherwise provided, the Contractor shall obtain and provide, without additional cost to the City, all labor, materials, equipment, transportation, facilities, services, permits, and licenses necessary to perform the Work.

Sec. 4. Compensation. The City shall pay the Contractor for the Work as described in this paragraph below OR as described in Exhibit “A” attached. In the event of a conflict, the provisions of this paragraph shall control. Any additional expenses or charges shall only be paid after both the City and the Contractor agree to and execute a written change order. The City shall not be obligated to pay the Contractor any fees, payments, expenses or compensation other than those authorized in this Contract or in a duly-approved change order. All payments shall be deemed inclusive of tax and other obligations.

Sec. 4a. Retainage. The City shall withhold no retainage on Contracts having a “total project cost” of less than \$100,000.00. The City may withhold retainage on contracts having a total project cost between \$100,000 and \$200,000. The City shall withhold retainage on contracts whose total project cost exceeds \$300,000. When withheld, retainage shall equal no more than five percent of each progress payment. When the project is fifty per cent complete, the City shall not retain anything from future project payments provided that (i) the surety concurs in writing, (ii) the Contractor continues to perform satisfactorily, (iii) any non-conforming work identified in writing by the architect, engineer(s) or City has been corrected by the Contractor and accepted by the architect, engineer(s) or City. However, if the City determines that the Contractor’s performance is unsatisfactory, the City may withhold up to five percent retainage from each project payment. The City may withhold additional amounts above five percent for unsatisfactory job progress, defective construction not remedied, disputed work, third party claims filed against the owner or reasonable evidence that a third-party claim will be filed.

Definitions:

“Total Project Cost”: Total value of the Contract and any approved change orders or amendments.

“Project is Fifty Percent Complete”: When the Contractor’s validly-issued gross project invoices (excluding the value of the materials stored off-site) equal or exceed fifty percent of the value of the Contract, except that the value of materials stored on-site shall not exceed twenty percent of the Contractor’s gross project invoices for the purpose of determining whether the project is fifty percent complete.

Sec. 5. Term. The Contractor shall commence work within **ten (10)** days of the date of its receipt of written Notice to Proceed from the City. The date that is **ten (10)** days from the date of the Contractor’s receipt of the Notice to Proceed shall be the “Commencement Date.” All work as set forth in the Scope of Services in Exhibit “A” shall be completed within **one hundred eighty (180)** calendar days of the Commencement Date. The date that is **one hundred eighty (180)** calendar days from the Commencement Date shall be the “Completion Date.” Time is of the essence with regard to this Project. If Contractor’s obligations are not completed by the Completion Date, the City reserves the right to nullify this Agreement, order the Contractor to immediately cease all work under this Agreement and vacate the premises, and to seek professional services equivalent to those outlined in Exhibit “A.” The Contractor shall be held accountable for all damages incurred by the City as a consequence of the missed Completion Date. The exercise of any of these rights by the City shall not be interpreted to prejudice any other rights the City may have under this Agreement or in law or equity. This Contract shall not be automatically extended unless agreed to in writing by the City or as provided in Exhibit “A”.

Sec. 6. Contractor’s Billings to City. Payments will be made in accordance with the schedule found in this section below OR attached at Exhibit “A”. Contractor shall submit an original pay request (invoice) to the City Purchasing Agent by the first of each month in order to expedite payment. Upon receipt of the request the City Purchasing Agent shall verify the amounts and if correct forward the request to the Accounts Receivable Division of the Finance Dept. Final payment on the Contract shall be made in 45 days, except in the case of retainage. Within 60 days after the submission of the final pay request, the City (with the written consent of the surety) shall release to the Contractor all retainage payments IF the City receives a certificate of substantial completion from the architect, engineer or designer-in-charge of the project OR the City receives beneficial occupancy and use of the project. In either case, the City may retain up to 2.5 times the estimated value of the work to be completed or corrected.

Sec. 7. Insurance. Contractor shall maintain and cause all sub-contractors to maintain insurance policies at all times with minimum limits as follows:

<u>Coverage</u>	<u>Minimum Limits</u>
Workers’ Compensation	\$500,000 each accident, \$500,000 bodily injury by disease each employee, \$500,000 bodily injury by disease policy limit
General Liability	\$1,000,000 per occurrence regardless of the contract size
Automobile Liability	\$1,000,000 per occurrence regardless of the contract size
Umbrella	<input type="checkbox"/> \$1,000,000 per occurrence if contract does not exceed 180 days; otherwise,
	<input type="checkbox"/> \$2,000,000 per occurrence

Contractor shall provide a Certificate of Insurance to the City listing the City as an additional insured. Such Certificate shall be in a form acceptable to the City.

Sec. 8. Documentation Requirements:

A. Contractor shall provide the City with a **Certificate of Insurance** for review prior to the issuance of any contract or Purchase Order. Certificates of insurance must be submitted on an Acord Form (revised 2010/05), and the City must be named as additional insured on all lines of coverage, except for Professional liability and Workers’ Compensation. Contractor shall provide a Certificate of Insurance to the City listing the City as additional insured as required by written contract. The General Liability, Automobile Liability and Workers Compensation policies include a Waiver of Subrogation in favor of the City of Concord. The Umbrella Policy shall follow the form of the General Liability and Automobile Liability Policies. All Certificates of Insurance will require written notice by the insurer or Contractor’s agent in the event of cancellation, reduction or other modifications of coverage by the insurer. Such notice shall be not less than 30 days for nonrenewal by the insurer, not less than 10 days for cancellation due to nonpayment of the premium and as soon as possible for all other types of modifications. In addition to the notice requirement above, Contractor shall provide the City with written notice of cancellation, reduction, or other modification of coverage of insurance whether instigated by the insurer or by the Contractor immediately upon Contractor’s receipt of knowledge of such modifications. Upon failure of the Contractor to provide such notice, Contractor assumes sole responsibility for all losses incurred by the City for which insurance would have provided

coverage. The insurance certificate shall be for the insured period in which the initial contract period begins and shall be renewed by the Contractor for each subsequent renewal period of the insurance for so long as the contract remains in effect.

The City shall be named as an **additional insured** on all policies except Workers' Compensation and professional liability and it is required that coverage be placed with "A" rated insurance companies acceptable to the City. Statement should read, "City of Concord is added as an additional insured as evidenced by an endorsement attached to this certificate." Failure to maintain the required insurance in force may be cause for termination of this Agreement. In the event that the Contractor fails to maintain and keep in force the insurance herein required, the City has the right to cancel and terminate the Agreement without notice.

Without limiting the coverage required pursuant to this Agreement, Contractor shall provide Workers' Compensation insurance if it employs three or more employees. The Worker's Compensation insurance shall have the North Carolina mandated statutory limits. Contractor shall fully comply with all applicable laws including, but not limited to, North Carolina's Workers' Compensation Act (Chapter 97 of the NC General Statutes).

B. Contractor shall provide a completed W-9 form to the City prior to execution by the City of this Agreement.

Sec. 9. Performance of Work by Contractor.

(a) The Contractor warrants that all work performed under this Contract conforms to the Contract requirements and is free of any defect in equipment, material, or design furnished, or workmanship performed by the Contractor or any subcontractor or supplier at any tier. This warranty shall continue for a period of 1 year from the date of issuance by the City of written final completion of the work.

(b) The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to City - owned or controlled real or personal property, when that damage is the result of--

- (1) The Contractor's failure to conform to contract requirements; or
- (2) Any defect of equipment, material, workmanship, or design furnished.

(c) The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for 1 year from the date of repair or replacement.

(d) The City shall notify the Contractor, in writing, within a reasonable time, not to exceed 30 days, after the discovery of any failure, defect, or damage.

(e) If the Contractor fails to remedy any failure, defect, or damage within a reasonable time, not to exceed 30 days unless otherwise agreed in writing and signed by the City Manager or his designee, after receipt of notice, the City shall have the right to replace repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

(f) With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this Contract, the Contractor shall--

- (1) Obtain all warranties that would be given in normal commercial practice,
- (2) Require all warranties to be executed, in writing, for the benefit of the City, if directed to do so by the City; and

(3) Enforce all warranties for the benefit of the City, if directed to do so by the City

(g) In the event the Contractor's warranty has expired, the City may bring suit at its expense to enforce a subcontractor's, manufacturer's, or supplier's warranty.

(h) Unless a defect is caused by the negligence of the Contractor or subcontractor or supplier at any tier, the Contractor shall not be liable for the repair of any defects of material or design furnished by the City nor for the repair of any damage that results from any defect in City-furnished material or design.

Sec. 10. Performance of Work by City. If the Contractor fails to perform the Work in accordance with the schedule referred to in Exhibit "A", the City may, in its discretion, perform or cause to be performed some or all of the Work, and doing so shall not waive any of the City's rights and remedies. Before doing so, the City shall give the Contractor reasonable notice of its intention. The Contractor shall reimburse the City for all costs incurred by the City in exercising its right to perform or cause to be performed some or all of the Work pursuant to this section.

Sec. 11. Attachments. Additional exhibits may be used to further define this Agreement when the Contractor and City so agree. Any additional exhibits shall be designated as exhibits to the Agreement with capitalized, sequential letters of the alphabet, shall be attached hereto and incorporated herein by reference as if the same were fully recited, and shall become terms of this Agreement upon execution by both parties.

The following attachments are made a part of this Contract and incorporated herein by reference:

- (a) Exhibit "A" – Bid Form
- (b) Exhibit "B" – Standard Form of Performance Bond
- (c) Exhibit "C" – Special Provisions
- (d) Exhibit "D" – Contractor must execute the Affidavit attached as Exhibit "D", attesting to compliance with state and federal laws related to E-Verify. ***This requirement only applies to contracts that fall within the formal bidding range.**
- (e) Exhibit "E" – Tax Form(s).
- (f) Exhibit "F" – Certificate of Insurance.
- (g) Exhibit "G" - Drawings

In case of conflict between an attachment and the text of this contract excluding the attachment, the text of this contract shall control. Any attachment that materially alters the standard terms contained herein must be reviewed by the City Attorney and approved by the City in writing.

Sec. 12. Notice. (a) All notices and other communications required or permitted by this Contract shall be in writing and shall be given either by personal delivery, fax, or certified United States mail, return receipt requested, addressed as follows:

To the City:

Sue Hyde, Director of Engineering
City of Concord
P.O. Box 308
Concord, NC 28026
Fax Number: (704) 786-4521

To the Contractor:

VaLerie Kolczynski, Esq.
City Attorney
PO Box 308
Concord, NC 28026
Fax Number: (704) 784-1791

(b) **Change of Address, Date Notice Deemed Given:** A change of address, fax number, or person to receive notice may be made by either party by notice given to the other party. Any notice or other communication under this Contract shall be deemed given at the time of actual delivery, if it is personally delivered or sent by fax. If the notice or other communication is sent by US Mail, it shall be deemed given upon the third calendar day following the day on which such notice or other communication is deposited with the US Postal Service or upon actual delivery, whichever first occurs.

Sec. 13. Indemnification. To the maximum extent allowed by law, the Contractor shall defend, indemnify, and save harmless the City of Concord, its agents, officers, and employees, from and against all charges that arise in any manner from, in connection with, or out of this Contract as a result of the acts or omissions of the Contractor or subcontractors or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable except

for damage or injury caused solely by the negligence of the City its agents, officers, or employees. In performing its duties under this section, the Contractor shall at its sole expense defend the City of Concord, its agents, officers, and employees with legal counsel reasonably acceptable to City. As used in this subsection – “Charges” means claims, judgments, costs, damages, losses, demands, liabilities, duties, obligations, fines, penalties, royalties, settlements, expenses, interest, reasonable attorney’s fees, and amounts for alleged violations of sedimentation pollution, erosion control, pollution, or other environmental laws, regulations, ordinances, rules, or orders. Nothing in this section shall affect any warranties in favor of the City that are otherwise provided in or arise out of this Contract. This section is in addition to and shall be construed separately from any other indemnification provisions that may be in this Contract. This section shall remain in force despite termination of this Contract (whether by expiration of the term or otherwise) and termination of the services of the Contract under this Contract.

Sec. 14. Corporate Status. If the Contractor is dissolved or suspended and the Contractor does not notify the City of such dissolution within three (3) business days from date of dissolution or suspension, and/or the corporate status is not reinstated within thirty (30) days, this Contract, at the sole option of the City and without prejudice to City’s other remedies, shall be declared null and void or the Contractor shall execute a new contract showing the Contractor’s correct legal entity.

Sec. 15. Miscellaneous.

(a) Choice of Law and Forum. This Contract shall be deemed made in Cabarrus County, North Carolina. This Contract shall be governed by and construed in accordance with the laws of North Carolina. The exclusive forum and venue for all actions arising out of this Contract shall be the appropriate division of the North Carolina General Court of Justice, in Cabarrus County. Such actions shall neither be commenced in nor removed to federal court. This section shall not apply to subsequent actions to enforce a judgment entered in actions heard pursuant to this section.

(b) Waiver. No action or failure to act by the City shall constitute a waiver of any of its rights or remedies that arise out this Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed in writing.

(c) Performance of Government Functions. Nothing contained in this Contract shall be deemed or construed so as to in any way estop, limit, or impair the City from exercising or performing any regulatory, policing, legislative, governmental, or other powers or functions.

(d) Severability. If any provision of this Contract shall be unenforceable, the remainder of this Contract shall be enforceable to the extent permitted by law.

(e) Assignment, Successors and Assigns. Without the City’s written consent, the Contractor shall not assign (which includes to delegate) any of its rights (including the right to payment) or duties that arise out this Contract. Unless the City otherwise agrees in writing, the Contractor and all assigns shall be subject to all of the City’s defenses and shall be liable for all of the Contractor’s duties that arise out of this Contract and all of the City’s claims that arise out of this Contract. Without granting the Contractor the right to assign, it is agreed that the duties of the Contractor that arise out of this Contract shall be binding upon it and its heirs, personal representatives, successors, and assigns.

(f) Compliance with Law. In performing all of the Work, the Contractor shall comply with all applicable law. Without limitation, Contractor shall comply with the requirements of Article 2, Chapter 64 (Verification of Work Authorization) of the North Carolina General Statutes relating to E-Verify. Further, if Contractor utilizes a subcontractor, Contractor shall require the subcontractor to comply with the requirements of Article 2 of Chapter 64 of the General Statutes. Pursuant to the requirements of the Iran Divestment Act, N.C.G.S. § 143C-6A-1, et. seq., Contractor certifies that that as of the Effective Date of this Agreement, Contractor is not on the Final Divestment List as created by the State Treasurer in compliance with N.C.G.S. § 143-6A-4 and located at www.nctreasurer.com/Iran. Furthermore, Contractor agrees that it will not enter into any subcontracts for the performance of this Agreement with any entity on the Final Divestment List.

(g) City Policy. THE CITY OPPOSES DISCRIMINATION ON THE BASIS OF RACE AND SEX AND URGES ALL OF ITS CONTRACTORS TO PROVIDE A FAIR OPPORTUNITY FOR MINORITIES AND WOMEN TO PARTICIPATE IN THEIR WORK FORCE AND AS SUBCONTRACTORS AND VENDORS UNDER CITY CONTRACTS.

(h) EEO Provisions. During the performance of this Contract the Contractor agrees as follows:
(1) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, political affiliation or belief, age, or disability. The Contractor shall take affirmative action to insure that applicants are employed and that employees are treated equally during employment, without regard to race, color, religion, sex, national origin, political affiliation or belief, age, or disability. The Contractor shall post in conspicuous places available to employees and applicants for employment, notices setting forth these EEO provisions. (2) The Contractor in all solicitations or advertisements for employees placed by or on behalf of the

Contractor, state all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, political affiliation or belief, age, or disability.

(i) No Third Party Right Created. This Contract is intended for the benefit of the City and the Contractor and not any other person.

(j) Principles of Interpretation. In this Contract, unless the context requires otherwise the singular includes the plural and the plural the singular. The pronouns “it” and “its” include the masculine and feminine. Reference to statutes or regulations include all statutory or regulatory provisions consolidating, amending, or replacing the statute or regulation. References to contracts and agreements shall be deemed to include all amendments to them. The word “person” includes natural persons, firms, companies associations, partnerships, trusts, corporations, governmental agencies and units, and any other legal entities.

(k) Modifications, Entire Agreement. A modification of this Contract is not valid unless signed by both parties and otherwise in accordance with requirements of law. Further, a modification is not enforceable against the City unless the City Manager or other duly authorized official signs it for the City. This Contract contains the entire agreement between the parties pertaining to the subject matter of this Contract. With respect to that subject matter, there are no promises, agreements, conditions, inducements, warranties, or understandings, written or oral, expressed or implied, between the parties, other than as set forth or referenced in this Contract.

(l) Corporate Seal. If a corporate seal is included by any party to this Contract, it is only for authentication purposes. This Contract is not signed under seal.

(m) No Employment Relationship. For all matters relating to this Agreement, Contractor shall be deemed an Independent Contractor. Nothing in this Agreement shall be construed in such a manner as to create an employee-employer relationship between City and Contractor.

(The following section applies to construction contracts only if amount is over \$50,000)

Sec. 16. Bonding. Both performance and payment bonds for the full amount of this Contract are required to be attached. Instead of bonds, you may submit a deposit of money, certified check or government securities for the full amount of the Contract. The performance bond shall have a value equal to 100% of this Contract. This bond shall be conditioned upon faithful performance of the Contract in accordance with the plans, specifications and conditions of the Contract. The performance bond shall be solely for the protection of the City. The payment bond shall be in an amount equal to 100% of the Contract, and conditioned upon the prompt payment for all labor or materials for which a contractor or subcontractor is liable. The payment bond shall be solely for the protection of the persons furnishing materials or performance labor for which a contractor or subcontractor is liable.

Sec. 17. Dispute Resolution. It is understood and agreed that NCGS 143-128(f1-g) requires that disputes arising under an agreement for the erection, construction, alteration or repair of a building be subject to a dispute resolution process specified by the City. The amount in controversy shall be at least \$15,000.00 before this dispute resolution procedure may be used. In compliance with this statutory provision, the City specifies this Section as the dispute resolution process to be used on this Project. It is further understood and agreed that this dispute resolution process is based on non-binding mediation and will only be effective to the extent that the Parties to any mediated dispute participate in the mediation in good faith. It is also understood and agreed that the City is under no obligation under any circumstance to secure or enforce the participation of any other Party in the mediation of any dispute subject to this Section and NCGS 143-128(f1-g).

This Section 17 does not apply to:

(a) **The purchase and erection of prefabricated or relocatable buildings or portions of such buildings, except that portion of the work that must be performed at the construction site; or**

(b) **The erection, construction alteration or repair of a building when the cost of such building is \$300,000 or less.**

17.1 Any dispute arising between or among the Parties listed in Section 17.3 that arises from an agreement to construct the Project, including without limitation a breach of such agreement, shall be subject to non-binding mediation administered by the American Arbitration Association under its Construction Industry Mediation Rules (“Rules”), except as otherwise expressly set forth in this Section. To the extent any provision of the Rules is inconsistent with the provisions of this Section, the provisions of this Section shall control. The mediation provided in this Section shall be used pursuant to this Agreement and NCGS 143-128(f1-g) and is in lieu of any

dispute resolution process adopted by the North Carolina State Building Commission, which process shall not apply to this Project.

17.2 For purposes of this Section the following definitions shall apply:

- a. *Agreement to construct the Project* means an agreement to construct the Project that is subject to the requirements of NCGS 143-128 and does not include any agreement related to the Project that is not subject to said statute.
- b. *Construct or construction* refers to and includes the erection, construction, alteration or repair of the Project.
- c. *Party or Parties* refers to the parties listed in Section 16.4.
- d. *Project* means the building to be erected, constructed, altered or repaired pursuant to this Agreement.

17.3 The City and any Party contracting with the City or with any first-tier or lower-tier subcontractor for the construction of the Project agree to participate in good faith in any mediation of a dispute subject to this Section and NCGS 143-128(f1-g), including without limitation the following Parties (if any): architect(s), engineer(s), surveyor(s), construction manager, construction manager at risk, prime contractor(s), surety(ies), subcontractor(s), and supplier(s).

17.4 In order to facilitate compliance with NCGS 143-128(f1-g), the Contractor and all other Parties shall include this Section 17 in every agreement to which it (any of them) is a Party for the construction of the Project without variation or exception. Failure to do so will constitute a breach of this Agreement, and the Contractor or other Party failing to include this Section in any agreement required by this Section shall indemnify and hold harmless the remaining Parties from and against any and all claims, including without limitation reasonable attorney fees and other costs of litigation, arising in any manner from such breach. Notwithstanding the foregoing provisions of this Section, it is expressly understood and agreed that the Parties are intended to be and shall be third-party beneficiaries of the provisions of this Section and can enforce the provisions hereof.

17.5 The following disputes are not subject to mediation: (i) a dispute seeking a non-monetary recovery; and (ii) a dispute seeking a monetary recovery of \$15,000 or less.

17.6 A dispute seeking the extension of any time limit set forth in an agreement to construct the Project shall be subject to mediation pursuant to this Section and NCGS 143-128(f1-g), but only if the damages which would be suffered by the Party seeking the extension would exceed \$15,000 if the disputed extension is denied. To the extent that liquidated damages are set forth in such agreement as the measurement of damages for failure by such Party to meet such time limit, such liquidated damages shall be the exclusive standard for determining the amount of damages associated with such dispute.

17.7 For purposes of this Section, a dispute is limited to the recovery of monetary damages from the same transaction or occurrence against a single Party or two or more Parties alleged to be liable jointly, severally or in the alternative. Two or more disputes may not be consolidated or otherwise combined without the consent of all Parties to such disputes.

17.8 In addition to such matters as are required by the Rules, a request for mediation shall include the amount of the monetary relief requested.

17.9 Prior to requesting mediation, a Party must form a good faith belief that it is entitled under applicable law to recover the monetary amount to be included in the request from one or more of the remaining Parties. Such belief must be based on a reasonable and prudent investigation into the dispute that is the subject of the request. The request for mediation must be based on such investigation and may not include any amount or the name of any remaining Party, unless supported by such investigation and good faith belief by the Party requesting the mediation.

17.10 If a Party breaches any provision of Section 17.9, it shall indemnify and hold harmless all other Parties from any costs, including reasonable attorney fees and other costs of litigation, and damages incurred by such other Parties that arise from such breach.

17.11 All expenses incurred by a Party to a dispute in preparing and presenting any claim or defense at the mediation shall be paid by the Party. Such expenses include without limitation preparation and production of witnesses and exhibits and attorney fees. All other expenses of the mediation, including filing fees and required traveling and other expenses of the mediator, shall be borne as follows: one half by the Party requesting the mediation, with the remaining parties paying equal shares of the remaining expenses and costs; provided that, if the City is named as a party to the mediation, the City shall pay at least one-third of the mediation expenses and costs divided among the Parties. If more than one Party to a dispute requests a mediation, the mediation expenses and costs to be divided among the Parties shall be borne equally by the Parties to the dispute; provided that, if the City is named as a Party to the mediation, the City shall pay at least one-third of the mediation expenses and costs divided among the Parties.

17.12 The mediation shall be held at a location agreeable to the mediator and all of the Parties; provided that, if no agreement can be reached, the mediation will be held at such location in Cabarrus County as the mediator shall determine.

17.13 The provisions of this Section are subject to any other provision of this Agreement concerning the submission, documentation and/or proof of any claim or dispute. Such other provisions shall apply in full force and shall be satisfied as a condition precedent to mediation pursuant to this Section.

17.14 The Parties understand and agree that mediation in accordance with this Section shall be a condition precedent to institution of any legal or equitable proceeding seeking monetary recovery based on any dispute that is subject to mediation pursuant to this Section.

Sec. 18. Breach. In the event of a violation of any material term of this Agreement, the non-violating party may terminate the Agreement upon written notice. Such notice shall state the violation with specificity and shall give ten (10) days to cure the violation. The cure period shall be measured as ten (10) days from the date of receipt of notice by the violating party, or, if the date is not known, then thirteen (13) days from the date the notice is placed in the United States Post. If the violation remains uncorrected at the end of the cure period, the Agreement shall be terminated without any further action by the non-violating party. Any remaining disputes shall be subject to the dispute resolution procedure set forth above, if applicable.

[Signature Page to Follow]

IN WITNESS WHEREOF, the City of Concord and the Contractor have caused this Contract to be executed by their respective duly authorized agents or officers.

CITY OF CONCORD:

(Typed or Printed Legal Name of Contractor)

By: _____
City Manager

By: _____
Signature of President/Vice President/Manager/Partner

Date: _____

Printed Name: _____

Title: _____

ATTEST BY:

Date: _____

City Clerk

ATTEST:

BY: _____
Signature of Vice President, Secretary, or other officer

APPROVED AS TO FORM:

Printed Name: _____

Title _____

Attorney for the City of Concord

SEAL

APPROVAL BY CITY FINANCE OFFICER

This instrument has been pre-audited in the manner required by the Local Government Budget and Fiscal Control Act.

Signature

EXHIBIT "D"

STATE OF NORTH CAROLINA

AFFIDAVIT

COUNTY OF CABARRUS

I, _____ (the individual signing below), being duly authorized by and on behalf of _____ (the legal name of the entity entering the contract, "Employer") after first being duly sworn hereby swears or affirms as follows:

1. Employer understands that E-Verify is the federal E-Verify program operated by the United States Department of Homeland Security and other federal agencies, or any successor or equivalent program used to verify the work authorization of newly hired employees pursuant to federal law in accordance with NCGS §64-26.
2. Employer understands that Employers Must Use E-Verify. Each employer (as such term is defined in NCGS § 64-25), after hiring an employee (as such term is defined in NCGS § 64-25) to work in the United States, shall verify the work authorization of the employee through E-Verify in accordance with NCGS§64-26(a). Employer attests that Employer is in compliance with the requirements of the federal and state laws relevant to E-verify.
3. Employer is a person, business entity, or other organization that transacts business in the State of North Carolina. Employer employs 25 or more employees in this State. (mark Yes or No)
 - a. YES _____, or
 - b. NO _____.
4. Employer attests that all subcontractors employed by it as part of this contract comply with the requirements of E-Verify, and Employer will ensure compliance with E-Verify by any subcontractors subsequently hired by Employer as part of any contract with the City of Concord.
5. Employer shall have a continuing duty to inform the City of Concord of any changes to this sworn information.

This ___ day of _____, 20__.

Signature of Affiant
Print or Type Name: _____

State of North Carolina County of Cabarrus

Signed and sworn to (or affirmed) before me, this the _____ day of _____, 20__.

My Commission Expires:

Notary Public

|||
(Affix Official/Notarial Seal)

EXHIBIT “E”

TAX FORM(S)

EXHIBIT “F”

CERTIFICATE OF INSURANCE

4824-4465-9749, v. 1

City of Concord
 Post Office Box 308
 Concord, North Carolina 28026-0308



For City Use Only
 Charge to PO #

Project Name	
Date Notice to Proceed	
Final Completion Date	
Days Remaining in Contract	
Percent Work Complete	
Percent Time Complete	
Percent Payment Complete	

APPLICATION FOR PAYMENT NO.
 PERIOD FROM: TO:

CERTIFICATE OF THE CONTRACTOR

To the best of my knowledge and belief, I certify that this periodical estimate is correct and all work has been performed and materials supplied in full accordance with the terms and conditions of the contract documents between the undersigned contractor and the City of Concord.

GROSS AMOUNT OF PARTIAL PAYMENT		\$
RETAINAGE AT 5.0000%	\$	
PREVIOUS PAYMENTS	\$	
LIQUIDATION DAMAGES 0.00 DAYS AT \$0.00 PER DAY, \$0.00 this period.	\$	
OTHER DEDUCTIONS \$0.00 this period.	\$	
TOTAL DEDUCTIONS		\$
NET AMOUNT DUE THIS ESTIMATE		\$

Name of Contractor: _____ Address: _____
 Signed: _____ Title: _____ Date: _____

CERTIFICATE OF CONSTRUCTION ADMINISTRATOR/ENGINEER

I certify that I have verified this periodical estimate and that to best of my knowledge and belief, it is a true and correct statement of work performed and materials supplied under the contract.

Consultant Engineer: _____ Date: _____
 Engineering Construction Manager: _____ Date: _____

APPROVED AND PAYMENT RECOMMENDED: CITY OF CONCORD

Signed: _____ Title: _____ Date: _____

Engineering's Application For
Payment Form

Project Title: Duval St. Culvert Replacement Project No. 2014-009													
ITEM	DESCRIPTION	QUANTITY		UNIT PRICE	TOTAL PRICE	QUANT. THIS EST.	TOTAL THIS EST.	QUANT. PREV. EST.	TOTAL PREVIOUS	QUANT. TO DATE	TOTAL TO DATE	QUANT. DIFF.	TOTAL DIFF.
1			LF		\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
2			LF		\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
3			LF		\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
4			LF		\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
5			LF		\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
6			LF		\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
7					\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
8			EA		\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
9			LBS		\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
10			SF		\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
11			SF		\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
12			LF		\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
13													
a			EA		\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
b			EA		\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
c			EA		\$ -		\$ -		\$ -	0.00	\$ -	0.00	\$0.00
Add 1			EA				\$ -		\$ -	0.00	\$ -	0.00	\$0.00
Add 2			LS				\$ -		\$ -	0.00	\$ -	0.00	\$0.00
Add 3			LF				\$ -		\$ -	0.00	\$ -	0.00	\$0.00
Add 4			SY				\$ -		\$ -	0.00	\$ -	0.00	\$0.00
Add 5			SY				\$ -		\$ -	0.00	\$ -	0.00	\$0.00
	Base Bid	\$			\$ -		\$ -		\$ -		\$ -		\$0.00
	10 % Contingency	\$			\$ -								\$ -
	Total Base Bid	\$			\$ -								\$0.00

**CITY OF CONCORD
CONCORD, NORTH CAROLINA
CONTRACT CHANGE ORDER**

Date: _____

Project Title: Duval St. Culvert Replacement **Project #: 2014-009**

Owner: City of Concord **Change Order No.**

To:
(CONTRACTOR)
Account No.
Purchase Order No.

You are hereby requested to make the following changes in this Contract to comply with the provisions of the attached and/or the original Contract Documents.

Item No.	Description of Changes	Additions	Deductions
		\$0.00	\$0.00
Original Contract Amount			
Net Changes by Previous Change Orders			
Net Changes this Change Order			\$0.00
New Contract Amount			\$0.00

The Contract Time will be _____ by _____ calendar days.

The Completion Date as of this Change Order is:

Accepted: (Contractor)

By: **Date:**

Accepted: CITY OF CONCORD

By: **Date:**

This instrument has been pre-audited in the manner required by Local Government Budget and Fiscal Control Act.

By: **Date:**
Finance Director

Certificate of Infrastructure Completion

Project Name & Number: Duval St. Culvert Replacement		Project #: 2014-009
Contractor Name & Address:		Owner Name & Address:
Miscellaneous Information:		
Inspector:		Signature:

The following items have been inspected, reviewed and found to be complete in substantial accordance with the approved plans and specifications. The dates of completion are those agreed upon by the City of Concord when all construction Work and testing was completed. These dates DO NOT initiate the start of any Warranty periods of said item(s). Warranty periods shall begin as specified on the CERTIFICATION OF FINAL COMPLETION.

Sanitary Sewer:	Approved: Initial: Date:
Potable Water:	Approved: Initial: Date:
Storm Water:	Approved: Initial: Date:
Asphalt Base Course:	Approved: Initial: Date:
Asphalt Surface Course:	Approved: Initial: Date:
Curb & Gutter	Approved: Initial: Date:
Sidewalks:	Approved: Initial: Date:
Street Trees:	Approved: Initial: Date:
Other:	Approved: Initial: Date:

FIELD ORDER

**CITY OF CONCORD
ENGINEERING DEPARTMENT**

Post Office Box 308
Concord, North Carolina 28026-0308

Project Title: **Duval St. Culvert Replacement**

Project #: 2014-009

FIELD ORDER NO _____ **CONTRACT** _____ **DATE** _____

PROJECT _____

LOCATION _____

TO: _____



THIS ORDER AUTHORIZES YOU TO PROCEED WITH THE ALTERATIONS AND/OR ADDITIONS TO THE WORK AS DESCRIBED HEREIN, IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF OUR STANDARD FORM OF CONTRACT.

DESCRIPTION OF WORK: _____

- QUOTATION RECEIVED AND APPROVED BY THE CITY OF CONCORD.
- QUOTATION NOT RECEIVED. PLEASE FURNISH QUOTATION IMMEDIATELY TO THE CITY OF CONCORD FOR CHECK AND APPROVAL.
- TIME AND MATERIAL BASIS. FURNISH TIME AND MATERIAL REPORTS DAILY TO THE CITY OF CONCORD FOR VERIFICATION AND SIGNATURE.
- OTHER _____

AUTHORIZED BY: _____

North Carolina One Call Center, Inc.

North Carolina One Call Center, Inc., a non-profit organization funded by participating utility companies and municipalities in the interest of community and job safety and improved service through damage reduction to the utilities.

A ONE CALL TOLL FREE TELEPHONE NUMBER, 811 or 1-800-632-4949, PROVIDES AN AVENUE TO ALL OF THE PARTICIPATING MEMBERS FROM ANY POINT WITHIN THE STATE OF NORTH CAROLINA.

Anyone proposing to excavate, dig, bore, tunnel, blast or disturb the earth in any manner in which buried utilities may be damaged is requested to call the toll-free number between the hours of 6:00 a.m. and 10:00 p.m., Monday through Friday, forty-eight hours before starting the proposed work.

Within minutes of your telephone call, the participating members will be made aware of your plans and will be given pertinent information that has been provided by you about your planned work. You will be told the names of the participating members from whom you can expect a response - if there are buried facilities in the path of your activity, the route of the utilities will be staked and/or marked at no expense to you. If there are no facilities in the area of the planned work, you will be called or notified by a representative of a participating company accordingly.

Should a non-participating utility operator be serving your area, we recommend that you call them on an individual basis. All utility operators, whether company or municipality, will be provided an opportunity to become a member of North Carolina One Call Center, Inc.

Naturally, knowing the route of utilities, the excavator is expected to exercise caution and to avoid damage as the project progresses.

Damage prevention does not just happen – it is a planned and orderly process through which each of us can participate - **YES, WE CAN AND WE WILL DRAMATICALLY REDUCE DAMAGES TO THE UTILITIES IN THE STATE OF NORTH CAROLINA!! THANKS FOR YOUR HELP.**

BEFORE YOU DIG

IN THE INTEREST OF COMMUNITY AND JOB SAFETY AND IMPROVED SERVICE

CALL NORTH CAROLINA ONE CALL CENTER, INC.

811 or 1-800-632-4949

**North Carolina One Call Center, Inc
2300 West Meadowview Rd., Suite 227
Greensboro, NC 27407
www.nc811.org**

SECTION II

GENERAL CONDITIONS

Please reference online at:

<http://www.concordnc.gov/Portals/0/Documents/Engineering/10%2001%2005%20General%20Conditions%20Horizontal.pdf>

Dated: 01/08/2010

APPENDIX A

GEOTECHNICAL BORING LOGS

January 5, 2021

Rick Blat, PE
City of Concord
PO Box 308
Concord, NC 28026-0308

RE: **Duval Street Culvert**
Duval Street NW
Concord, North Carolina
Culvert Foundation Recommendations

As requested, Stewart has completed a geotechnical evaluation for the proposed culvert.

Project Description

The project will involve placing the existing, dilapidated bridge between Bleachery Court NW and Cedar Drive NW with a new reinforced concrete box culvert (RCBC) – see attached drawing. Details regarding the RCBC were limited at the time of this report, but as we understand it, the culvert will be a 15± foot wide, double-barrel structure. Based on our experience with similar structures, we have assumed that the bottom of the culvert will have a 1-foot thick concrete base/bottom that shall serve as its foundation.

The geotechnical fieldwork was conducted in mid-December 2020. The drilling activities were conducted by FST using an ATV-mounted Dietrich D-50 with an auto-hammer. In total, two soil test borings with Standard Penetration Tests (SPT) were performed to evaluate subsurface conditions. Soil samples were manually-visually classified by a geotechnical engineer from Stewart and logged accordingly (see attached).

Foundation Recommendations

Culverts of this type are typically founded on a 12-inch thick layer of “conditioning material”, which is NCDOT Class VI select material as described in Section 1016 of the NCDOT Standard Specifications for Roads and Structures, 2018 Edition; however, to provide a suitable base for the culvert at this site, we recommend thickening the conditioning material to 18 inches. The conditioning material should extend laterally to at least 18 inches beyond the edges of the RCBC and be encapsulated in a Type 4 geotextile fabric. The fabric should be placed perpendicular to the barrel, with a minimum of 2 feet of overlap between sheets.

After foundation excavation, the exposed subgrade soils should be free of boulders, old construction/demolition debris, or other deleterious material. The bearing material should be inspected and approved by a representative of Concord immediately prior to placement of foundation conditioning material.

Prepared by,

DocuSigned by:



C06817F5F770411...



Donald W. Brown, Jr., PE, LEED AP
Practice Leader, Geotechnical & Construction Services

Stewart License No. C-1051



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Note: All test locations are approximate (unless otherwise reported) and intended for illustration purposes only.



BORING LOCATION DIAGRAM
DUVAL ST. CULVERT REPLACEMENT
 Concord, NC

Project No.:	F20029.00
Scale:	NTS
Prepared by:	DB
Date:	1-5-21

Figure No.:

1



STEWART

BORING LOG: B-1

PAGE 1 OF 1

619 ft based on survey - CGZ

PROJECT DUVAL STREET CULVERT REPLACEMENT

CLIENT CITY OF CONCORD

LOCATION CONCORD, NC

PROJECT NO. F20029.00

DATE DRILLED 12/15/20 LOGGED BY J. NANCE

GROUND SURFACE EL. 623 ft BORING DEPTH 24.8 ft

DRILLING CONTRACTOR FST

TIME OF DRILLING: WL 6 ft CAVE-IN 20 ft

DRILLING METHOD HSA AUGER SIZE 2-1/4 INCH (ID)

AFTER DRILLING: WL 5 ft CAVE-IN 16.5 ft

DRILL RIG DIETRICH D-50 HAMMER TYPE AUTO

(24± HR)

DEPTH (ft)	MATERIAL TYPE	MATERIAL DESCRIPTION	ELEVATION (ft)	WL / CAVE EL (ft)	SAMPLE DEPTH (ft) TYPE ID NUMBER	SPT BLOW COUNTS	N-VALUE (bpf)	▲ SPT N-VALUE (BPF) ▲										
								10	20	30	40	50	60	70	80	90		
0.7		ASPHALT (8.5 INCHES)	622.3															
1.1		CONCRETE (5 INCHES)	621.9															
3.0	CH	FILL - MEDIUM STIFF, DARK BROWN AND BLACK TO TAN, MOIST, SANDY FAT CLAY WITH TRACE MICA	620.0		1 SS 1	8 4 6	10											
		ALLUVIAL - VERY SOFT TO SOFT, BROWN AND GRAY, SATURATED, SANDY FAT CLAY			2.5 SS 1													
					3.5 SS 2	WOH 1 1	2											
					5 SS 2													
					6 SS 3	WOH WOH 1	1											
	CH				7.5 SS 3													
					8.5 SS 4	WOH 1 2	3											
					10 SS 4													
13.0		RESIDUAL - STIFF TO HARD, DARK GREEN AND GRAY-OLIVE, WET, SILT WITH LITTLE TO SOME MICA	610.0															
					13.5 SS 5	4 5 10	15											
					15 SS 5													
					18.5 SS 6	12 13 23	36											
					20 SS 6													
					23.5 SS 7	30 49	50/0.3											
24.5		WEATHERED ROCK - HARD, OLIVE, MOIST, SANDY SILT, TRACE MICA	598.5															
24.8	WR	WEATHERED ROCK - HARD, OLIVE, MOIST, SANDY SILT, TRACE MICA	598.2															

606 ft - CGZ

NOTE(S): GSE INTERPOLATED FROM CABARRUS COUNTY GIS TOPOGRAPHIC DATA AND SHOULD BE CONSIDERED APPROXIMATE.

Note: SPT Blow Counts are per 6 inches of penetration unless otherwise noted.



STEWART

BORING LOG: B-2

PAGE 1 OF 1

PROJECT DUVAL STREET CULVERT REPLACEMENT

CLIENT CITY OF CONCORD

619 ft based on survey - CGZ

LOCATION CONCORD, NC

PROJECT NO. F20029.00

DATE DRILLED 12/15/20 LOGGED BY J. NANCE

GROUND SURFACE EL. 625 ft BORING DEPTH 25 ft

DRILLING CONTRACTOR FST

TIME OF DRILLING: WL 8.5 ft CAVE-IN 18 ft

DRILLING METHOD HSA AUGER SIZE 2-1/4 INCH (ID)

AFTER DRILLING: WL 6.5 ft CAVE-IN 18 ft
(24± HR)

DRILL RIG DIETRICH D-50 HAMMER TYPE AUTO

DEPTH (ft)	MATERIAL TYPE	MATERIAL DESCRIPTION	ELEVATION (ft)	WL / CAVE EL (ft)	SAMPLE DEPTH (ft) TYPE ID NUMBER	SPT BLOW COUNTS	N-VALUE (bpf)	▲ SPT N-VALUE (BPF) ▲	
								10 20 30 40 50 60 70 80 90	10 20 30 40 50 60 70 80 90
								PL	WC LL
								10 20 30 40 50 60 70 80 90	10 20 30 40 50 60 70 80 90
								□ FINES CONTENT (%) □	10 20 30 40 50 60 70 80 90
0.6	ASPHALT		624.4						
1.1	CONCRETE		623.9						
1.1 - 6.0	FILL - VERY LOOSE TO MEDIUM DENSE, BLACK AND BROWN, MOIST, SILTY SAND								
6.0	ALLUVIAL - VERY SOFT TO SOFT, BROWN AND GRAY, SATURATED, SANDY FAT CLAY		619.0						
6.0 - 14.5									
14.5	RESIDUAL - VERY STIFF TO HARD, OLIVE AND BROWN, MOIST TO WET, SANDY SILT WITH TRACE MICA		610.5						
14.5 - 25.0									
25.0			600.0						

613 ft - CGZ

604.5 ft - CGZ

NOTE(S):
GSE INTERPOLATED FROM CABARRUS COUNTY GIS TOPOGRAPHIC DATA AND SHOULD BE CONSIDERED APPROXIMATE.

Note: SPT Blow Counts are per 6 inches of penetration unless otherwise noted.

APPENDIX B

NCDEQ WATER QUALITY GENERAL CERTIFICATION NO. 4132

Please reference online at:

<https://files.nc.gov/ncdeq/Water%20Quality/Surface%20Water%20Protection/401/Certs%20and%20Permits/2017-gcs-4000s/GC4132.pdf>

APPENDIX C

USACE NATIONWIDE PERMIT 3

Please reference online at:

<https://saw-reg.usace.army.mil/NWP2017/2017NWP03.pdf>