PROJECT MANUAL

FOR

CITY OF HARRISONBURG, VIRGINIA

SMITHLAND ROAD PARK SOCCER FIELD IRRIGATION

CITY OF HARRISONBURG, VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

SEPTEMBER 2014

Prepared by
Department of Community Development
Division of Engineering
City of Harrisonburg
409 South Main Street
Harrisonburg, Virginia 22801

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DEPARTMENT OF FINANCE AND PURCHASING
345 South Main Street
Harrisonburg, VA 22801
540-432-7794
540-432-1640 Fax

ISSUE DATE: September 22, 2014	**INVITATION TO BID NUMBER:** 2015011-CD-B	**FOR:** Smithland Road Park Soccer Field Irrigation
DEPARTMENT: Community Development	**DATE/TIME OF CLOSING:** October 14, 2014 at 3:00pm local time	**CONTRACT ADMINISTRATOR:** Dan Rublee, City Engineer

A MANDATORY PRE-BID MEETING WILL BE HELD ON SEPTEMBER 30, 2014 at 10:00AM

Bids - In accordance with the following and in compliance with all terms and conditions, unless otherwise noted, the undersigned offers and agrees, if the bid is accepted, to furnish items or services for which prices are quoted, delivered or furnished to designated points within the time specified. It is understood and agreed that this entire ITB and any addendums shall constitute a contract.

NAME AND ADDRESS OF FIRM:

Telephone/Fax No.:

Federal Employer Identification # :

State Corporation Commission #:

E-mail:

By signing this bid, Vendor(s) certifies, acknowledges, understands, and agrees to be bound by the conditions set forth in this ITB.

CHECK ONE: ☐ **INDIVIDUAL** ☐ **PARTNERSHIP** ☐ **CORPORATION** ☐ **LLC**

Vendor's Legally Authorized Signature

Date

Print Name

Title

Sealed bids, subject to terms and conditions of this Invitation to Bid will be received by the City of Harrisonburg Purchasing Office, 345 South Main Street, Room 201, Harrisonburg, Virginia 22801 until the date/ time specified above for furnishing items or services delivered or furnished to specified destinations within the time specified or stipulated by the vendor(s).

The City does not discriminate against small and minority businesses or faith-based organizations.

**This document must be completed & returned with bid submission.*

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INVITATION TO BID

1. **Project**: Smithland Road Park Soccer Field Irrigation, for the City of Harrisonburg.

2. **Description of Work**: Furnish and install of an underground automatic irrigation system for a soccer field, including piping, fittings, sprinkler heads, accessories, pumps, wiring, concrete work, etc, for a functioning and complete system. Where provided, Contractor must use the manufacturer and model numbers listed on Plans or within the Specifications. Work to additionally include excavation and backfilling as necessary, as well as topsoiling and seeding of all disturbed areas. Complete work by **Friday, November 21, 2014.**

3. **A Mandatory Pre-Bid Conference** will be held on **Tuesday, September 30, 2014 at 10:00 AM**, local time **at Smithland Road Park, located at 1326 Smithland Road, Harrisonburg, VA 22802**. In the event of inclement weather, the pre-bid conference will still be held.

4. **Bid Security**: Bids must be accompanied by a certified check, cashier's check or acceptable bid bond in the amount of 5% of the total bid price.

5. **Bids Due**: **Tuesday, October 14, 2014 at 3:00pm** local time at the City of Harrisonburg, Purchasing Office, located at 345 South Main Street, Room 201, Harrisonburg, VA 22801.

   ***PLEASE NOTE:** The City of Harrisonburg Municipal Building (345 South Main Street) is currently undergoing construction around the facility. Parking options tend to be congested throughout the day. It is recommended to park on the North side of the building in visitor parking (follow signs). Please take this into account when submitting your bid/proposal document and give yourself enough time to park and take your bid/proposal to the correct office for acceptance.

6. **Owner**: City of Harrisonburg, 345 South Main Street, Harrisonburg, VA, 22801

7. **Engineer**: Dan Rublee, City Engineer, 409 South Main Street, Harrisonburg, VA 22801

8. **Instructions to Bidders**: This section of the project manual is hereby made a part of this Invitation to Bid by reference.

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INSTRUCTIONS TO BIDDERS

1. SECURING DOCUMENTS

Bid documents are available for viewing at the Department of Community Development, 409 South Main Street, Harrisonburg, and at DTS Reprographics, 4803 South Valley Pike, Harrisonburg, 22801 and on their website at http://www.dts-repro.com. Bid documents may also be downloaded on the City's website at www.harrisonburgva.gov/bids-proposals and on Virginia's e-procurement website (eVA) at www.eva.virginia.gov.

Bid documents are available for purchase at the Department of Community Development, 409 South Main Street, Harrisonburg, VA, 22801 for a fee of $30.00. Make checks payable to "City of Harrisonburg – Department of Community Development". For delivery, provide shipping address, mailing address, telephone number, fax number and account number for shipping costs.

2. BID SUBMISSION INFORMATION

All bids must be in an opaque, sealed envelope or box and clearly marked: "**Sealed Bid: Smithland Road Park Soccer Field Irrigation ITB#: 2015011-CD-B**". Bids shall clearly indicate the legal name, address and telephone number of the bidder (company, firm, partnership, or individual). All expenses for making bid to the City shall be borne by the bidder.

Bidders shall provide two (2) identical paper copies of the bid documents. Bid documents shall be mailed or hand-delivered to the **Purchasing Office located at 345 South Main Street, Room 201, Harrisonburg, VA 22801**. Faxed or emailed bids will not be accepted. Bids shall be received by the Purchasing Office no later than the date and time listed in the Invitation to Bid (Section 00001). Any bids received after this date and time will not be accepted. The City of Harrisonburg is not responsible for delays in the delivery of the mail by the U.S. Postal Service, private couriers, or the inter-office mail system. The bidder has the sole responsibility to have the bid received by the Harrisonburg Purchasing Office at the above address and by the above stated time and date.

All documents contained within the bid submission shall be completed in their entirety and signed and dated where required.

3. BID FORM

In order to receive consideration, submit bids in accordance with the following:

A. Make bids upon the forms provided herewith, properly signed and with all items filled out. Do not change the wording of the bid form, and do not add words to the bid form. Unauthorized conditions, limitations, or provisions attached to the bid will be cause for rejection of the bid. If alterations by erasures or interlineation are made for any reason, explain over such erasure or interlineation with a signed statement from the bidder.

B. Address bids to the Owner, and deliver to the address specified in the invitation to bid on or before the day and hour set for opening the bids. Enclose each bid in a sealed envelope bearing the title of the Work, the project number(s), the name of the bidder, Virginia contractor registration number and the date and hour of the bid opening, Submit only the original signed copy of the bid.

C. Indicate receipt of issued Addenda. All Bidders are cautioned to inquire in a timely fashion to assure that all Addenda have been received and that the cost consequences thereof have been included in the bid. Signed addenda will be required to be returned with the bid submittal.

4. BONDS

A. Bid security in the amount stated in the Invitation to Bid must accompany each bid. The successful bidder's security will not be returned until he has signed the Contract/Agreement and has furnished the required Certificates of Insurance.

B. The Owner reserves the right to retain the security of all bidders until the successful bidder enters into the Contract or until 90 days after bid opening, whichever is sooner. Other bid security will be returned as soon as practicable. If any bidder refuses to enter into a Contract, the Owner may retain his bid security as liquidated damages but not as a penalty.

C. Prior to signing the Contract/Agreement, the Owner will require the successful bidder to secure and post a Labor and Materials Payment Bond and a Performance Bond, each in the amount of 100% of the Contract Sum, on forms similar to those provided in the Project Manual. Such Bonds shall be issued by a Surety acceptable to the Owner.

5. EXAMINATION OF DOCUMENTS AND SITE OF WORK

Before submitting a bid, each bidder shall examine the Drawings carefully, shall read the Project Manual and all other proposed Contract Documents, and shall visit the site of the Work. Each bidder shall fully inform himself prior to bidding as to existing conditions and limitations under which the Work is to be performed, and shall include in his bid a sum to cover the cost of items necessary to perform the Work as set forth in the proposed Contract Documents. No allowance will be made to a bidder because of lack of such examination and knowledge. The submission of a bid will be considered as conclusive evidence that the bidder has made such examination. It is noted that in addition to any mandatory pre-bid conference and site visit, Bidders are welcome to visit the site at any time prior to bid submission. Site may be locked, so Bidders must schedule visits in advance with the Owner. To arrange a site visit, Bidders may contact Mr. Lee Foerster, Director of Parks and Recreation, at 540-433-9168.

6. BIDDER ELIGIBILITY

A. Bids will only be accepted from Contractors who are experienced in and actively engaged in the type of construction of the item(s) called for in the bid. No proposal will be accepted from or contract awarded to any person, firm, or corporation that is in arrears or is in default to the City upon any debt or contract, or that is a defaulter, as surety or otherwise, upon any obligation to said City or had failed to perform faithfully any previous contract with the City. Where an installation or assembly is to

be performed by a subcontractor, the bidder must name the subcontractor, and the City reserves the right to determine whether the named subcontractor is fit and capable to perform the required work.

B. Bidders are required under Chapter 11, Title 54, Code of Virginia, to show evidence of certificate of registration before bid may be received and considered.

C. The following documents fully completed and signed where appropriate are required for a responsive bid. Failure to return a completed or signed copy of any of these forms may be cause for rejection of the bid:

- Bid Cover Sheet
- Bid Form and all accompanying sheets in Section 00310
- Bid Security- certified check, cashier's check, or bidder's bond
- Signed Addenda

7. MODIFICATION AND WITHDRAWAL OF BIDS DUE TO ERROR

A. Bidder may modify or withdraw his bid, either personally or by written request, at any time prior to the scheduled time for opening of bids.

B. After bid opening, Code of Virginia 2.2-4330 B. 1. shall apply: "The bidder shall give notice in writing of his claim of right to withdraw his bid within two business days after the conclusion of the bid opening procedure and shall submit original work papers with such notice."

8. AWARD OF CONTRACT

The Contract, if awarded, will be awarded lump sum to the lowest responsive and responsible bidder meeting all applicable specifications. The City reserves the right to reject any or all bids and to waive or not waive any informality or irregularity in the bids and in the bidding. If the bid from the lowest responsive, responsible bidder exceeds available funds, the City may negotiate with the apparent low bidder to obtain a contract price within available funds.

9. EXECUTION OF AGREEMENT

A. The form of the Agreement which the successful bidder will be required to execute is included in the Project Manual.

B. The bidder to whom the Contract is awarded shall sign, notarize and deliver required copies of the Agreement forms to the Owner, within ten (10) calendar days after notice of award.

C. At or prior to delivery of the signed Agreement, the bidder to whom the Contract is awarded shall deliver to the Owner those Certificates of Insurance required by the Contract Documents and such Labor and Materials Payment Bonds and Performance Bond as are required by the Owner.

D. Bonds and Certificates of Insurance shall be approved by the Owner before the successful bidder may proceed with the Work. Failure or refusal to provide Bonds or Certificates of Insurance in a form satisfactory to the Owner shall subject the

successful bidder to loss of time from the allowable construction period equal to the time of delay in furnishing the required material.

E. At or prior to delivery of the signed Agreement, the bidder to whom the Contract is awarded shall deliver to the Owner an updated copy of the Contractor's W-9 form.

10. INTERPRETATION OF CONTRACT DOCUMENTS PRIOR TO BIDDING

If any person contemplating submitting a bid for construction of the Work is in doubt as to the true meaning of any part of the proposed Contract Documents, or finds discrepancies on or omissions from any part of the proposed Contract Documents, he shall submit a written request to Ms. Pat Hilliard, Procurement Manager, by email to Purchasing@harrisonburgva.gov, or by fax to 540-432-7778. Oral questions will not be permitted. All questions must be received no later than **five (5) working days before the bid due date at 12:00pm (noon) local time**. The person submitting the request shall be responsible for any other interpretations of the proposed Contract Documents. All responses to inquiries will be posted as addenda, as outlined in the invitation to bid, at www.harrisonburgva.gov/bids-proposals and at www.eva.virginia.gov. It is the responsibility of all bidders to ensure that they have received all addenda and to include signed copies of any and all addenda with their bid submission.

11. CITY BUSINESS LICENSE

The successful bidder shall obtain a City of Harrisonburg Business License before executing Agreement.

END OF SECTION

BID FORM

Mr. Daniel J. Rublee, PE
City Engineer
Department of Community Development
409 South Main Street
Harrisonburg, Virginia 22801

Dear Sir or Madam:

The undersigned, having visited and examined the site and having carefully studied the drawings and project manual for the City of Harrisonburg, Smithland Road Park Soccer Field Irrigation, hereby proposes to furnish all plant, labor, equipment, materials, and services and to perform all operations necessary to execute and complete the work required for the project in strict accordance with the Drawings dated September, 2014 and the Project Manual dated September, 2014, together with addenda numbered _____, issued during bidding period and hereby acknowledged subject to the terms and conditions of the Agreement for the following sums of money:

BASE BID PROPOSAL

All labor, material, services and equipment necessary for the completion of the work shown on the Drawings and in the Project Manual and in the Addenda (if issued).

$_____

Bid amount in written format:

_____

This bid submitted by (name of firm): _____

It is understood and agreed that the Owner, in protecting his best interests, reserves the right to:

Reject any and all bids, or waive any defects in favor of the City

or

Accept any bid at the bid price, whereupon the contractor shall furnish equipment and materials as specified.

BID SECURITY

We are properly equipped to execute work of the character and extent indicated by the bidding documents and so covered by this bid and will enter into agreement for the execution and completion of the work in accordance with the drawings and project manual and this bid; and we further agree that if awarded the contract, we will commence the work on the date stated in "Notice to Proceed" and prosecute the work and all obligations by the specified completion dates.

Enclosed herewith is the following security, offered as evidence that the undersigned will enter into agreement for the execution and completion of the work in accordance with the drawings and project manual.

Certified or Cashier's check for the sum of $_____

Name of Bank _____

Bidder's Bond in the amount of $_____

Bond issued by _____

The undersigned further agrees that in case of failure on his part to execute the said agreement within the ten (10) consecutive calendar days after written notice being given on the award of the contract, the monies payable by the security accompanying this bid shall be paid to the City of Harrisonburg, Virginia as liquidated damages for such failure, otherwise, the security accompanying this bid shall be returned to the undersigned.

This bid is subject to acceptance within a period of 60 days from this date.

Respectfully submitted,

_____

Contractor

By_____

Date _____

CONTRACTOR ELIGIBILITY AND REGISTRATION

This is to certify that I (we) are not currently barred from bidding on contracts by any agency, public entity/locality or authority of The Commonwealth of Virginia, nor am I (we) a part of any firm/corporation that is currently barred from bidding on contracts by any agency, public entity/locality or authority of The Commonwealth of Virginia.

Check one:

_____I am currently registered as a contractor in the Commonwealth of Virginia.
My registration number is _____.
A copy of my license, issued by the Commonwealth of Virginia's Department of Professional and Occupational Regulation, is included.

_____I am currently not required to register as a contractor in the Commonwealth of Virginia per Chapter 11, Title 54 of the Code of Virginia.

_____
Contractor

SEAL

_____
Address

_____

_____

_____
Attest

By_____

_____
Title

_____
Date

STATE CORPORATION COMMISION REGISTRATION

The undersigned Offeror:

☐ is a corporation or other business entity with the following State Corporation Commission (SCC) identification number: _____ **-OR-**

☐ is not a corporation, limited liability company, limited partnership, registered limited liability partnership, or business trust **-OR-**

☐ is an out-of-state business entity that does not regularly and continuously maintain as part of its ordinary and customary business any employees, agents, offices, facilities, or inventories in Virginia (not counting any employees or agents in Virginia who merely solicit orders that require acceptance outside Virginia before they become contracts, and not counting any incidental presence of the Offeror in Virginia that is needed in order to assemble, maintain, and repair goods in accordance with the contracts by which such goods were sold and shipped into Virginia from bidder's out-of-state location) **-OR-**

☐ is an out-of-state business entity that is including with this bid an opinion of legal counsel which accurately and completely discloses the undersigned Offeror's current contacts with Virginia and describes why those contacts do not constitute the transaction of business in Virginia within the meaning of § 13.1-757 or other similar provisions in Titles 13.1 or 50 of the Code of Virginia.

****NOTE**** >> Check the following box if you have not completed any of the foregoing options but currently have pending before the SCC an application for authority to transact business in the Commonwealth of Virginia and wish to be considered for a waiver to allow you to submit the SCC identification number after the due date for proposals (the Commonwealth reserves the right to determine in its sole discretion whether to allow such waiver): ☐

Signature: _____ Date: _____

Name (print): _____

Title: _____

Name of Firm: _____

NON-COLLUSION AFFIDAVIT

Under oath, I hereby affirm under penalty of perjury:

(1) That I am the bidder or a partner of the bidder, or an officer or employee of the bidding corporation with authority to sign on its behalf;

(2) That the attached bid or bids have been arrived at by the bidder and have been arrived at and submitted without collusion or any design to limit bidding or competition;

(3) That the contents of the bid or bids have not been communicated to any person not an employee or agent of the bidder on any bid furnished with the bid or bids, and will not be communicated to any such person prior to the official opening of the bid or bids; and

(4) That I have fully informed myself regarding the accuracy of the statements made in this affidavit.

Signed: _____ Date: _____

Name (print): _____

Title: _____

Name of Firm: _____

CITY/COUNTY OF:_____
STATE OF: _____, to wit:

I, _____, a Notary Public, do certify that

_____whose name is signed to the foregoing has this date acknowledged the same before me in my City foresaid.

Given under my hand this_____day of_____, 20__. My Commission expires

_____.

_____
Notary Public

[SEAL]

_____
Registration Number

INSURANCE REQUIREMENTS FORM

By signing and submitting a bid or proposal the Contractor certifies that if awarded the contract, they will have the following insurance coverages at the time the contract is awarded.

1.) The Contractor will maintain a General Liability policy with $1,000,000 combined single limits. Coverage is to be on an occurrence basis. Completed Operations shall be included.

2.) The Contractor will maintain Workers' Compensation coverage in compliance with the laws of the Commonwealth of Virginia. The coverage must have statutory limits. As an alternative, it is acceptable for the Contractor to be insured by a group self insurance association that is licensed by the Virginia Bureau of Insurance. The Contractor will also carry employers liability insurance with a limit of at least $100,000 bodily injury by accident/$500,000 bodily injury by disease policy limit/$100,000 bodily injury by disease each employee.

3.) The Contractor will maintain Automobile Liability insurance with limits of at least $1,000,000. The coverage is to be written with a symbol "1".

4.) The Contractor will maintain Builders Risk coverage on a replacement cost basis for the duration of the contract. The limit will be the full replacement cost of the building and/or structures being built under this contract. The City of Harrisonburg will be listed as an Additional Insured under this policy to protect any property owned at the construction site.

With all policies listed above, the insurer or agent of the insurer must be licensed to conduct business in the Commonwealth of Virginia and have an A.M. Best rating of A- or better. **The insurer must list the City of Harrisonburg as an Additional Insured. The endorsement must be issued by the insurance company and a copy sent to the City along with the Certificate of Insurance. A notation on the Certificate of Insurance is not sufficient.** All wording limiting the insurer responsibility to notify the City of Harrisonburg of any cancellation or non-renewal of the coverage must be removed.

If any part of the work is sublet, insurance meeting the same requirements shall be provided by or on behalf of the subcontractor and evidence of such insurance shall be submitted with the sublet request.

5.) Bid Security. Bid must be accompanied by a certified check, cashier's check or acceptable Bid Bond in the amount of 5% of the total bid price.

6.) The Contractor will maintain a Payment Bond and a Performance Bond in an amount not less than the total amount payable to the contractor for the terms of this contract. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of Work or the provisions of the Contract Documents, the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

7.) All bonds shall be written by sureties or insurance companies licensed to do business in the Commonwealth of Virginia.

Owner, in its sole discretion and at its expense, may purchase any insurance it deems necessary.

BIDDER STATEMENT

We understand the Insurance Requirements of these specifications and will comply in full if awarded this contract.

Signature: _____ Date: _____

Name: _____ Title:_____
(Print)

Name of Firm: _____

END OF SECTION

AGREEMENT

This AGREEMENT is dated as of the ___ day of _____ in the year 2014 between the City of Harrisonburg, Virginia (hereinafter called OWNER) and _____ (hereinafter called CONTRACTOR). OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

ARTICLE 1. WORK

1.1 CONTRACTOR shall complete all Work as specified or indicated in the Project Manual for the project titled City of Harrisonburg, Virginia, Smithland Road Park Soccer Field Irrigation, ITB#: 2015011-CD-B.

ARTICLE 2. ENGINEER

2.1 This Project has been designed by the Division of Engineering of the City of Harrisonburg. The City Engineer of Harrisonburg, Virginia is hereinafter called ENGINEER will assume all duties and responsibilities and will have the rights and authority assigned to ENGINEER in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

ARTICLE 3. CONSTRUCTION TIME AND LIQUIDATED DAMAGES

3.1 Contract Time shall be Fixed Completion Dates for the various phases of work as follows:
All work shall be completed by the date listed in the Invitation to Bid (section 00001).

3.2 Consideration for time extensions attributable to weather will not be given except as provided for in Section 108.04 of the VDOT Standard Specifications.

3.3 Liquidated Damages. OWNER and CONTRACTOR recognize that time is of the essence of this Agreement and that OWNER will suffer financial loss if the Work is not complete by or within the dates specified in paragraph 3.1. plus any extensions thereof allowed in accordance with Article 13 and 15 of the Standard General Conditions. They also recognize the delays, expense and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by OWNER if the Work is not completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty) CONTRACTOR shall pay OWNER $250.00 per day for each calendar day that expires after the date specified in paragraph 3.1 for completion until the Work is complete.

ARTICLE 4. CONTRACT PRICE

4.1 OWNER shall pay CONTRACTOR for performance of the Work in accordance with the Contract Documents such amounts as required by the Contract Documents.

ARTICLE 5. PAYMENT PROCEDURES

CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the Standard General Conditions.

5.1 Progress Payments. OWNER shall make progress payments on account of the Contract Price on the basis of CONTRACTOR'S Applications for Payment as recommended by ENGINEER, on or about the 15th day of each month during construction as provided below. All Progress Payments will be on the basis of the progress of the Work measured by the schedule of values established in Paragraph 2.09 of the Standard General Conditions.

5.1.1 Prior to completion, Progress Payments will be made in an amount equal to: 95% of the Work completed, and 95% of the materials and equipment not incorporated in the Work but delivered and suitably stored, less in each case the aggregate of payment previously made.

5.1.2 Upon substantial completion, OWNER shall pay amount sufficient to increase total payments to CONTRACTOR to 98% of the Contract Price, less such amount as ENGINEER shall determine in accordance with Paragraph 14.07 of the Standard General Conditions.

5.2 Final Payment. Upon final completion and acceptance of the Work in accordance with the General Conditions, OWNER shall pay the remainder of the Contract Price as recommended by ENGINEER as provided in said Standard General Conditions.

ARTICLE 6. INTEREST

6.1 All monies not paid when due hereunder shall bear interest at maximum rated allowed by law at the place of the Project.

ARTICLE 7. CONTRACTOR'S REPRESENTATIONS

7.1 CONTRACTOR has familiarized himself with the nature and extent of the Contract Documents, Work, locality, and with all local conditions, state and local laws, ordinances, rules and regulations that in any manner may affect cost, progress or performance of the Work.

7.2 CONTRACTOR has studied carefully all reports of investigations and tests of subsurface and latent physical conditions at the site or otherwise affecting cost, progress or performance of the Work which were relied upon by ENGINEER in the preparation of the Drawings and Specifications and which have been identified in the Supplementary Conditions.

7.3 CONTRACTOR has made or caused to be made examinations, investigations and tests and studies of such reports and related data in addition to those referred to in Paragraph 7.02. as he deems necessary for the performance of the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents; and no additional examination, investigations, tests, reports or similar data are or will be required by CONTRACTOR for such purposes.

7.4 CONTRACTOR has correlated the results of all such observations, examinations, investigations, tests, reports and data with the terms and conditions of the Contract Documents.

7.5 CONTRACTOR has given ENGINEER written notice of all conflicts, errors or discrepancies that he has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR.

ARTICLE 8. CONTRACT DOCUMENTS

The Contract Documents which comprise the entire agreement between OWNER and CONTRACTOR are attached by reference to this Agreement, made a part hereof and consist of the following:

8.1 This Agreement (pages 1 to 4, inclusive)

8.2 Performance and Payment Bonds

8.3 Certificate of Insurance and Endorsement from Insurance Company

8.4 Notice of Award

8.5 Notice to Proceed

8.6 Standard General Conditions

8.7 Supplementary Conditions

8.8 General Terms and Conditions for the City of Harrisonburg, VA

8.9 Project Manual entitled "Smithland Road Park Soccer Field Irrigation"

8.10 Drawings, consisting of a cover sheet and irrigation plan

8.11 Signed Addenda

8.12 Standard Specifications

8.13 Standard Drawings

8.14 Contractor's Bid

8.15 Documentation submitted by Contractor prior to Notice of Award.

8.16 Any modifications or change orders, duly delivered after execution of Agreement.

All contract documents must be listed in this article. Contract documents may be altered, amended or repealed only as allowed by the Standard General Conditions.

ARTICLE 9. MISCELLANEOUS

9.1 Terms used in this Agreement which are defined in Article 1 of the Standard General Conditions shall have the meanings indicated in the Standard General Conditions.

9.2 No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation, monies that may become due and monies that are now due may not

be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

9.3 OWNER and CONTRACTOR each binds himself, his partners, successors, assigns and legal representatives to the party hereto, his partners, successors, assigns and legal representatives in respect to all covenants, agreements and obligations contained in the Contract Documents.

ARTICLE 10. OTHER PROVISIONS

IN WITNESS WHEREOF, the parties hereto have signed this Agreement in duplicate. Two (2) originals have been sent by OWNER to CONTRACTOR. CONTRACTOR is to sign and notarize both originals, and return both to OWNER. OWNER will then sign both copies and return one (1) to CONTRACTOR. Effectively, one (1) counterpart each has been delivered to OWNER and CONTRACTOR. All portions of the Contract Documents have been signed or identified by OWNER and CONTRACTOR or by ENGINEER on their behalf.

This Agreement is effective: _____
Date

OWNER: City of Harrisonburg	CONTRACTOR:_____
Signature_____(Seal)	Signature_____(Seal)
Name & title: Kurt Hodgen, City Manager	Name & title:_____
Attest _____	Attest_____
	Address for giving notices:
345 South Main Street_____	_____
Harrisonburg, VA 22801_____	_____
	License No._____

END OF AGREEMENT

PERFORMANCE BOND

Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Address of Principal Place of Business):

OWNER (Name and Address):

CONTRACT
Date:
Amount:
Description (Name and Location):

BOND
Bond Number:
Date (Not earlier than Contract Date):
Amount:
Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Performance Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL
Company:

Signature: _____ (Seal)
Name and Title:

(Space is provided below for signatures of additional parties, if required.)

SURETY

_____ (Seal)
Surety's Name and Corporate Seal

By: _____
Signature and Title
(Attach Power of Attorney)

Attest: _____
Signature and Title

CONTRACTOR AS PRINCIPAL
Company:

Signature: _____ (Seal)
Name and Title:

SURETY

_____ (Seal)
Surety's Name and Corporate Seal

By: _____
Signature and Title
(Attach Power of Attorney)

Attest: _____
Signature and Title:

EJCDC No. C-610 (2002 Edition)
Originally prepared through the Joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, and the American Institute of Architects.

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner for the performance of the Contract, which is incorporated herein by reference.

2. If Contractor performs the Contract, Surety and Contractor have no obligation under this Bond, except to participate in conferences as provided in Paragraph 3.1.

3. If there is no Owner Default, Surety's obligation under this Bond shall arise after:

3.1. Owner has notified Contractor and Surety, at the addresses described in Paragraph 10 below, that Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with Contractor and Surety to be held not later than 15 days after receipt of such notice to discuss methods of performing the Contract. If Owner, Contractor and Surety agree, Contractor shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive Owner's right, if any, subsequently to declare a Contractor Default; and

3.2. Owner has declared a Contractor Default and formally terminated Contractor's right to complete the Contract. Such Contractor Default shall not be declared earlier than 20 days after Contractor and Surety have received notice as provided in Paragraph 3.1; and

3.3. Owner has agreed to pay the Balance of the Contract Price to:

1. Surety in accordance with the terms of the Contract;

2. Another contractor selected pursuant to Paragraph 4.3 to perform the Contract.

4. When Owner has satisfied the conditions of Paragraph 3, Surety shall promptly and at Surety's expense take one of the following actions:

4.1. Arrange for Contractor, with consent of Owner, to perform and complete the Contract; or

4.2. Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or

4.3. Obtain bids or negotiated proposals from qualified contractors acceptable to Owner for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by Owner and Contractor selected with Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Contract, and pay to Owner the amount of damages as described in Paragraph 6 in excess of the Balance of the Contract Price incurred by Owner resulting from Contractor Default; or

4.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:

1. After investigation, determine the amount for which it may be liable to Owner and, as soon as practicable after the amount is determined, tender payment therefor to Owner; or

2. Deny liability in whole or in part and notify Owner citing reasons therefor.

5. If Surety does not proceed as provided in Paragraph 4 with reasonable promptness, Surety shall be deemed to be in default on this Bond 15 days after receipt of an additional written notice from Owner to Surety demanding that Surety perform its obligations under this Bond, and Owner shall be entitled to enforce any remedy available to Owner. If Surety proceeds as provided in Paragraph 4.4, and Owner refuses the payment tendered or Surety has denied liability, in whole or in part, without further notice Owner shall be entitled to enforce any remedy available to Owner.

6. After Owner has terminated Contractor's right to complete the Contract, and if Surety elects to act under Paragraph 4.1, 4.2, or 4.3 above, then the responsibilities of Surety to Owner shall not be greater than those of Contractor under the Contract, and the responsibilities of Owner to Surety shall not be greater than those of Owner under the Contract. To a limit of the amount of this Bond, but subject to commitment by Owner of the Balance of the Contract Price to mitigation of costs and damages on the Contract, Surety is obligated without duplication for:

6.1. The responsibilities of Contractor for correction of defective Work and completion of the Contract;

6.2. Additional legal, design professional, and delay costs resulting from Contractor's Default, and resulting from the actions or failure to act of Surety under Paragraph 4; and

6.3. Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of Contractor.

7. Surety shall not be liable to Owner or others for obligations of Contractor that are unrelated to the Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than Owner or its heirs, executors, administrators, or successors.

8. Surety hereby waives notice of any change, including changes of time, to Contract or to related subcontracts, purchase orders, and other obligations.

9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located and shall be instituted within two years after Contractor Default or within two years after Contractor ceased working or within two years after Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

10. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the address shown on the signature page.

11. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

12. Definitions.

12.1 Balance of the Contract Price: The total amount payable by Owner to Contractor under the Contract after all proper adjustments have been made, including allowance to Contractor of any amounts received or to be received by Owner in settlement of insurance or other Claims for damages to which Contractor is entitled, reduced by all valid and proper payments made to or on behalf of Contractor under the Contract.

12.2. Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.

12.3. Contractor Default: Failure of Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.

12.4. Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract or to perform and complete or comply with the other terms thereof.

FOR INFORMATION ONLY – Name, Address and Telephone
Surety Agency or Broker
Owner's Respresentative (engineer or other party)

PAYMENT BOND

Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Address of Principal Place of Business):

OWNER (Name and Address):

CONTRACT
Date:
Amount:
Description (Name and Location):

BOND
Bond Number:
Date (Not earlier than Contract Date):
Amount:
Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Payment Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL
Company:

Signature: _____ (Seal)
Name and Title:

SURETY

_____ (Seal)
Surety's Name and Corporate Seal

By: _____
Signature and Title
(Attach Power of Attorney)

(Space is provided below for signatures of additional parties, if required.)

Attest: _____
Signature and Title

CONTRACTOR AS PRINCIPAL
Company:

Signature: _____ (Seal)
Name and Title:

SURETY

_____ (Seal)
Surety's Name and Corporate Seal

By: _____
Signature and Title
(Attach Power of Attorney)

Attest: _____
Signature and Title:

EJCDC No. C-615 (2002 Edition)
Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, the American Institute of Architects, the American Subcontractors Association, and the Associated Specialty Contractors.

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner to pay for labor, materials, and equipment furnished by Claimants for use in the performance of the Contract, which is incorporated herein by reference.

2. With respect to Owner, this obligation shall be null and void if Contractor:

2.1. Promptly makes payment, directly or indirectly, for all sums due Claimants, and

2.2. Defends, indemnifies, and holds harmless Owner from all claims, demands, liens, or suits alleging non-payment by Contractor by any person or entity who furnished labor, materials, or equipment for use in the performance of the Contract, provided Owner has promptly notified Contractor and Surety (at the addresses described in Paragraph 12) of any claims, demands, liens, or suits and tendered defense of such claims, demands, liens, or suits to Contractor and Surety, and provided there is no Owner Default.

3. With respect to Claimants, this obligation shall be null and void if Contractor promptly makes payment, directly or indirectly, for all sums due.

4. Surety shall have no obligation to Claimants under this Bond until:

4.1. Claimants who are employed by or have a direct contract with Contractor have given notice to Surety (at the addresses described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.

4.2. Claimants who do not have a direct contract with Contractor:

1. Have furnished written notice to Contractor and sent a copy, or notice thereof, to Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials or equipment were furnished or supplied, or for whom the labor was done or performed; and

2. Have either received a rejection in whole or in part from Contractor, or not received within 30 days of furnishing the above notice any communication from Contractor by which Contractor had indicated the claim will be paid directly or indirectly; and

3. Not having been paid within the above 30 days, have sent a written notice to Surety and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to Contractor.

5. If a notice by a Claimant required by Paragraph 4 is provided by Owner to Contractor or to Surety, that is sufficient compliance.

6. When a Claimant has satisfied the conditions of Paragraph 4, the Surety shall promptly and at Surety's expense take the following actions:

6.1. Send an answer to that Claimant, with a copy to Owner, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.

6.2. Pay or arrange for payment of any undisputed amounts.

7. Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by Surety.

8. Amounts owed by Owner to Contractor under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any performance bond. By Contractor furnishing and Owner accepting this Bond, they agree that all funds earned by Contractor in the performance of the Contract are dedicated to satisfy obligations of Contractor and Surety under this Bond, subject to Owner's priority to use the funds for the completion of the Work.

9. Surety shall not be liable to Owner, Claimants, or others for obligations of Contractor that are unrelated to the Contract. Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

10. Surety hereby waives notice of any change, including changes of time, to the Contract or to related Subcontracts, purchase orders and other obligations.

11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Paragraph 4.1 or Paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, Owner, or Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

13. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory Bond and not as a common law bond.

14. Upon request of any person or entity appearing to be a potential beneficiary of this Bond, Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15. DEFINITIONS

15.1. Claimant: An individual or entity having a direct contract with Contractor, or with a first-tier subcontractor of Contractor, to furnish labor, materials, or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of Contractor and Contractor's Subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

15.2. Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.

15.3. Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract or to perform and complete or comply with the other terms thereof.

FOR INFORMATION ONLY – Name, Address and Telephone
Surety Agency or Broker:
Owner's Representative (engineer or other party):

NOTICE OF AWARD

TO:

PROJECT: Smithland Road Park Soccer Field Irrigation, for the City of Harrisonburg, Virginia

The OWNER has considered the bid submitted by you on _____ for the above described project in response to its Invitation to Bid and Instructions to Bidders dated September 22, 2014.

You are hereby notified that your bid has been accepted in the amount of $_____.

You are required by the Instructions to Bidders to execute the Agreement and to furnish the required Contractor's Performance Bond, Payment Bond and Certificates of Insurance within ten (10) calendar days from the date of this Notice.

If you fail to execute said Agreement and to furnish said bonds within ten (10) days from the date of this Notice, said OWNER will be entitled to consider all your rights arising out of the OWNER'S acceptance of your bid as abandoned and as a forfeiture of your bid bond. The OWNER will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this Notice of Award to the ENGINEER.

Dated this_____day of_____, 20_____.

City of Harrisonburg
OWNER

By:_____
Dan Rublee

Title: City Engineer

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

Signature:_____

Title:_____

END OF NOTICE OF AWARD

NOTICE TO PROCEED

DATE:

TO:

PROJECT: Smithland Road Park Soccer Field Irrigation, for the City of Harrisonburg, Virginia

You are hereby notified to commence WORK in accordance with the AGREEMENT dated_____, on or before_____, and you are to complete the WORK or portions of the Work by the specified dates. The date of completion of all WORK is therefore November 21, 2014**.**

City of Harrisonburg_____
OWNER

By:_____

Title:_____City Engineer_____

Receipt to the above NOTICE TO PROCEED is hereby acknowledged by _____, this the _____ day of _____ ,20_____.

Signature: _____

Title: _____

END OF NOTICE TO PROCEED

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly by

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A Practice Division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

Endorsed by

CONSTRUCTION SPECIFICATIONS INSTITUTE

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These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor (EJCDC C-520 or C-525, 2007 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the Narrative Guide to the EJCDC Construction Documents (EJCDC C-001, 2007 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (EJCDC C-800, 2007 Edition).

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*—The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidder*—The individual or entity who submits a Bid directly to Owner.

7. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).

8. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and the Bid Form with any supplements.

9. *Change Order*—A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim*—A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*—The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

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12. *Contract Documents*—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

13. *Contract Price*—The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*—The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.

15. *Contractor*—The individual or entity with whom Owner has entered into the Agreement.

16. *Cost of the Work*—See Paragraph 11.01 for definition.

17. *Drawings*—That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

18. *Effective Date of the Agreement*—The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. *Engineer*—The individual or entity named as such in the Agreement.

20. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

21. *General Requirements*—Sections of Division 1 of the Specifications.

22. *Hazardous Environmental Condition*—The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.

23. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

24. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

26. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

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27. *Notice of Award*—The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

28. *Notice to Proceed*—A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.

29. *Owner*—The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.

30. *PCBs*—Polychlorinated biphenyls.

31. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

32. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.

33. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

34. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

35. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

36. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.

37. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

38. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

39. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

40. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.

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41. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

42. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.

43. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.

44. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

45. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.

46. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.

47. *Supplier*—A manufacturer, fabricator, supplier, distributor, material-man, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or Subcontractor.

48. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

49. *Unit Price Work*—Work to be paid for on the basis of unit prices.

50. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

51. *Work Change Directive*—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the

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parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 *Terminology*

A. The words and terms discussed in Paragraph 1.02.B through F are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives:*

1. The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. *Day:*

1. The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective:*

1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

a. does not conform to the Contract Documents; or

b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

c. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. *Furnish, Install, Perform, Provide:*

1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

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3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, "provide" is implied.

F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.

B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 *Starting the Work*

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely

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review:

1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 *Preconstruction Conference; Designation of Authorized Representatives*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.07 *Initial Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefore.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

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ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.

C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

A. Standards, Specifications, Codes, Laws, and Regulations

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies:*

1. *Contractor's Review of Contract Documents Before Starting Work*: Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers, or has actual knowledge of, and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.

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2. *Contractor's Review of Contract Documents During Performance of Work*: If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation , (b) any standard, specification, manual, or code, or (c) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

a. the provisions of any standard, specification, manual, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference in the Contract Documents); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order;

2. Engineer's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or

3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions; or

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2. reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor, or by Contractor to Owner or Engineer, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefore as provided in Paragraph 10.05.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

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4.02 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and

2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

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B. *Engineer's Review*: After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.

C. *Possible Price and Times Adjustments:*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

   a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and

   b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:

   a. Contractor knew or reasonably should have known of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or

   b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

   c. Contractor failed to give the written notice as required by Paragraph 4.03.A.

3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefore as provided in Paragraph 10.05. However, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall be liable to Contractor for any claims, costs, losses, or damages

(including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

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1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data provided by others; and

2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:

   a. reviewing and checking all such information and data;

   b. locating all Underground Facilities shown or indicated in the Contract Documents;

   c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and

   d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated:*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefore as provided in Paragraph 10.05.

4.05 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

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4.06 *Hazardous Environmental Condition at Site*

A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.

D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 4.06.E.

E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work

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is agreed to be resumed by Contractor, either party may make a Claim therefore as provided in Paragraph 10.05.

F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefore as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

G. ~~To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.~~

H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 – BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

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B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed each bond.

C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain. Contractor shall provide to OWNER, actual endorsement issued from insurance company adding the OWNER as Additional insured.

B. Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.

C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.

E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

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5.04 *Contractor's Insurance*

A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;

2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;

3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;

4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

   a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or

   b. by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and

6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;

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4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and

6. include completed operations coverage:

   a. Such insurance shall remain in effect for two years after final payment.

   b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

A. Unless otherwise provided in the Supplementary Conditions, Owner *may* purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;

2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.

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3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;

5. allow for partial utilization of the Work by Owner;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.

B. Owner may purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, ~~Contractor, Subcontractors, and Engineer,~~ and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.

D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under this Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

~~5.07 *Waiver of Rights*~~

~~A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or~~

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~~causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or loss payees thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.~~

~~B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for:~~

~~1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and~~

~~2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.~~

~~C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them.~~

5.08 *Receipt and Application of Insurance Proceeds*

A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.

B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall

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adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 – CONTRACTOR'S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

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6.02 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "Or-Equals"*

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless

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the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. *"Or-Equal" Items:* If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

    a. in the exercise of reasonable judgment Engineer determines that:

        1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

        2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole; and

        3) it has a proven record of performance and availability of responsive service.

    b. Contractor certifies that, if approved and incorporated into the Work:

        1) there will be no increase in cost to the Owner or increase in Contract Times; and

        2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. *Substitute Items:*

    a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.

    b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefore. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.

    c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Engineer may decide is appropriate under the circumstances.

    d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:

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1) shall certify that the proposed substitute item will:

   a) perform adequately the functions and achieve the results called for by the general design,

   b) be similar in substance to that specified, and

   c) be suited to the same use as that specified;

2) will state:

   a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,

   b) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and

   c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

3) will identify:

   a) all variations of the proposed substitute item from that specified, and

   b) available engineering, sales, maintenance, repair, and replacement services; and

4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.

B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.

C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.

D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

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E. *Engineer's Cost Reimbursement*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

F. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 *Concerning Subcontractors, Suppliers, and Others*

A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity; nor

2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the

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Work under a direct or indirect contract with Contractor.

E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.

F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

B. ~~To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.~~

C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys,

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and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 *Permits*

A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not

limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefore as provided in Paragraph 10.05.

6.10 *Taxes*

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas:*

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to

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any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the

Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 *Record Documents*

A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 *Safety and Protection*

A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall

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take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.

D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

F. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

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6.15 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*

a. Submit number of copies specified in the General Requirements.

b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples:*

a. Submit number of Samples specified in the Specifications.

b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Submittal Procedures:*

1. Before submitting each Shop Drawing or Sample, Contractor shall have:

a. reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;

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b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

c. determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.

3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. *Engineer's Review:*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. *Resubmittal Procedures:*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and

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approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 *Continuing the Work*

A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 *Contractor's General Warranty and Guarantee*

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on representation of Contractor's warranty and guarantee.

B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

1. observations by Engineer;

2. recommendation by Engineer or payment by Owner of any progress or final payment;

3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. use or occupancy of the Work or any part thereof by Owner;

5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;

6. any inspection, test, or approval by others; or

7. any correction of defective Work by Owner.

6.20 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents,

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consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .

B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:

1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or

2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.

B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

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C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 *Related Work at Site*

A. Owner may perform other work related to the Project at the Site with Owner's employees, or through other direct contracts therefore, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to Contractor prior to starting any such other work; and

2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefore as provided in Paragraph 10.05.

B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

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7.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;

2. the specific matters to be covered by such authority and responsibility will be itemized; and

3. the extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.

B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's wrongful actions or inactions.

C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's wrongful action or inactions.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 *Replacement of Engineer*

A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

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8.05 *Lands and Easements; Reports and Tests*

A. Owner's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

8.06 *Insurance*

A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents.

8.12 *Compliance with Safety Program*

A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed pursuant to Paragraph 6.13.D.

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ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents.

9.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative*

A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or

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Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefore as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.

C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.

D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.

B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

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C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Engineer has been informed pursuant to Paragraph 6.13.D.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract

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Documents (except as otherwise specifically provided).

B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefore as provided in Paragraph
10.05.

10.02 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.D.

10.03 *Execution of Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 *Claims*

A. *Engineer's Decision Required*: All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may

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otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

C. *Engineer's Action*: Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:

1. deny the Claim in whole or in part;

2. approve the Claim; or

3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may

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be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 11.01.B, and shall include only the following items:

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized in writing by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including the following:

   a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

   b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

   c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by

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Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, express and courier services, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not

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limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A.

C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 *Allowances*

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. *Cash Allowances:*

1. Contractor agrees that:

a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. *Contingency Allowance:*

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 *Unit Price Work*

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the

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purpose of comparison of Bids and determining an initial Contract Price. Determinations of the

actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

2. there is no corresponding adjustment with respect to any other item of Work; and

3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:
1. a mutually acceptable fixed fee; or
2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various

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portions of the Cost of the Work:

a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;

b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;

c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and

f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefore as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as

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contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.

D. Owner, Engineer, and their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 *Notice of Defects*

A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. Defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

13.03 *Tests and Inspections*

A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
   1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;

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2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and

3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation.

F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.

B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefore as provided in Paragraph 10.05.

D. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the

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parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefore as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or

2. correct such defective Work; or

3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and

4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting there from.

B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the

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defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

D. Where defective Work (and damage to other Work resulting there from) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and for the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefore as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct, or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude

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Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefore as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. *Applications for Payments:*

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an

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affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. *Review of Applications:*

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

   a. the Work has progressed to the point indicated;

   b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and any other qualifications stated in the recommendation); and

   c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

   a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or

   b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

   a. to supervise, direct, or control the Work, or

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b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or

c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or

d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or

e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:

a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;

b. the Contract Price has been reduced by Change Orders;

c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or

d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. *Payment Becomes Due:*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. *Reduction in Payment:*

1. Owner may refuse to make payment of the full amount recommended by Engineer because:

a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;

b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;

c. there are other items entitling Owner to a set-off against the amount recommended; or

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d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.

2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor remedies the reasons for such action.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

14.03 *Contractor's Warranty of Title*

A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 *Substantial Completion*

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.

B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefore.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the tentative certificate to Owner, notify Contractor in writing, stating the reasons therefore. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will, within said 14 days, execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities

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pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the tentative list.

14.05 *Partial Utilization*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 14.04.A through D for that part of the Work.

2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefore. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

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14.07 *Final Payment*

A. *Application for Payment:*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:

   a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.6;

   b. consent of the surety, if any, to final payment;

   c. a list of all Claims against Owner that Contractor believes are unsettled; and

   d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. *Engineer's Review of Application and Acceptance:*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

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C. *Payment Becomes Due:*

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefore as provided in Paragraph 10.05.

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15.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);

2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;

3. Contractor's repeated disregard of the authority of Engineer; or

4. Contractor's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:

1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);

2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere; and

3. complete the Work as Owner may deem expedient.

C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

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E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

F. If and to the extent that Contractor has provided a performance bond under the provisions of

Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B and 15.02.C.

15.03 *Owner May Terminate For Convenience*

A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. reasonable expenses directly attributable to termination.

B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is

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made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

~~ARTICLE 16 – DISPUTE RESOLUTION~~

~~16.01 *Methods and Procedures*~~

~~A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.~~

~~B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.~~

~~C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:~~

~~1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions; or~~

~~2. agrees with the other party to submit the Claim to another dispute resolution process; or~~

~~3. gives written notice to the other party of the intent to submit the Claim to a court of competent jurisdiction.~~

ARTICLE 17 – MISCELLANEOUS

17.01 *Giving Notice*

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or

2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

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17.02 *Computation of Times*

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

END OF SECTION

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SUPPLEMENTARY CONDITIONS

1. SUPPLEMENTS

1.01 These Supplementary Conditions amend or supplement the "Standard General Conditions of the Construction Contract" EJCDC C-700, 2007 Edition and other provisions of the Contract Documents to the extent indicated. All provisions which are so amended or supplemental remain in full force and effect. In cases where conflicts exist between the Standard General Conditions and these Supplementary Conditions, these Supplementary Conditions shall govern the Contract.

1.02 Also included as Supplementary Conditions are the “General Terms and Conditions For the City of Harrisonburg, VA” (Specification Section 00810 of this Project Manual).

2. DEFINITIONS

2.01 The following definitions and abbreviations shall apply to this Project:

A. ACI: American Concrete Institute.

B. AREA: American Railway Engineering Association.

C. ASTM: American Society for Testing and Materials.

D. AWS: American Welding Society.

E. AWWA: American Water Works Association.

F. Engineer: The Engineer as defined and referred to in the Contract Documents is the City Engineer of the City of Harrisonburg, Virginia.

G. Furnish: Purchase and deliver to the Work Site all items specified.

H. FS: Federal Specification.

I. Install: Incorporate into the Work equipment and materials furnished by others or by the Contractor.

J. OSHA: Occupational Safety Health Act.

K. Provide: Furnish and install as defined above all equipment as specified.

L. Standard Drawings: Roadway, earthwork and related - Virginia Department of Transportation Road and Bridge Standards, dated February 28, 2008, and as amended. Water and Sewer – City of Harrisonburg Design and Construction Standards Manual dated September 8, 2009 and as amended.

M. Standard Specifications (Std. Specs.): Roadway, earthwork and related - Virginia Department of Transportation Road and Bridge Specifications, dated May 17, 2011 and as amended. Water and Sewer - City of Harrisonburg Design and Construction Standards Manual dated September 8, 2009 and as amended.

N. VDOT: Virginia Department of Transportation.

O. VESCH: Virginia Erosion and Sediment Control Handbook.

3. BONDS AND INSURANCE

3.01 Additional Bond and Insurance requirements are contained within Specification Section 00310 – Bid Form titled "Insurance Requirements Form".

4. RESIDENT PROJECT REPRESENTATIVE RESPONSIBILITIES

4.01 Add the following to Article 8 of the Standard General Conditions:

A. Resident Project Representative is the Owner's field agent, will act as directed by and under the supervision of the Owner. Resident Project Representative's dealings in matters pertaining to the on-site work shall in general be only with Contractor, and dealings with subcontractors shall only be through or with the full knowledge of Contractor.

B. Duties and responsibilities of Resident Project Representative:

1. Schedules: Review the progress schedule, schedule or shop drawings submissions and schedule of values prepared by Contractor.

2. Conferences: Attend preconstruction conferences. Arrange a schedule of progress meetings and other job conferences as required and notify those expected to attend in advance. Attend meetings, and maintain and circulate copies of minutes thereof.

3. Liaison: Serve as Owner's liaison with Contractor, work principally through Contractor's superintendent and assist him in understanding the intent of the Contract documents.

4. Shop Drawings and Samples: Receive and record date of receipt of shop drawings and samples, receive samples which are furnished at the site by Contractor. Advise Contractor or its superintendent immediately of the commencement of any work requiring a shop drawing or sample submission if the submission has not been approved by the Owner.

5. Review of Work, Rejection of Defective Work, Inspections and Tests:

   Conduct on-site observations of the work in progress to assist the Owner in determining if the work is proceeding and is completed in accordance with the contract documents and that completed work will conform to the contract documents.

   Report to Owner whenever he believes that any work is unsatisfactory, faulty or defective or does not conform to the contract documents, or does not meet the requirements of any inspections, tests or approval required to be made or has been damaged prior to final payment; and advise Owner when he believes work should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval. Verify that tests, equipment and systems startups and operating and maintenance instructions are conducted as required by the contract documents and in presence of the required personnel, and that Contractor maintains adequate records thereof; observe, record and report to Owner appropriate details relative to the test procedures and startups.

   Accompany inspectors representing public or other agencies having jurisdiction over the project, record the outcome of these inspections and report to Owner.

6. Modifications: Consider and evaluate Contractor's suggestions for modifications in drawings or specifications and report them with recommendations to Owner.

7. Records: Maintain at the job site orderly files for correspondence, reports of job conferences, shop drawings and samples submissions, reproductions of original contract documents including all addenda, change orders, field orders, additional drawings issued subsequent to the execution of the Contract, Owner's clarification's and interpretations of the contract documents, progress reports, and other project-related documents.

   Keep a diary or log book, recording hours on the job site, weather conditions, data relative to questions of extras or deductions, list of visiting officials and representatives of manufacturers, fabricators, suppliers and distributors, daily activities, decisions, observations in general and specific observations in more detail, as in the case of observing test procedures. Send copies to Owner.

   Record names, addresses and telephone numbers of all contractors, subcontractors, and major suppliers of materials and equipment.

8. Reports: Furnish Owner periodic reports as required of progress of the Work and Contractor's compliance with the approved progress schedule and schedule of shop drawing submissions. Consult with Owner in advance of

scheduled major tests, inspections or start of important phases of work. Report immediately to Owner upon the occurrence of any accident.

9. Payment requisitions: Review applications for payment with Contractor for compliance with the established procedure for their submission and forward them with recommendations to Owner, noting particularly their relation to the schedule of values, work completed and materials and equipment delivered at the site but not incorporated in the Work.

10. Certificates, maintenance and operation manuals: During the course of the work, verify that certificates, maintenance and operation manuals and other data required to be assembled and furnished by Contractor are applicable to the items actually installed; and deliver this material to Owner for his review and forwarding to Owner prior to final acceptance of the Work.

11. Before Owner issues a Certificate of Substantial Completion, submit to Contractor a list of observed items requiring completion or correction. Conduct final inspection in the company of the Owner and Contractor and prepare a final list of items to be completed or corrected. Verify that all items on final list have been completed or corrected and make recommendations to Owner concerning acceptance.

C. Limitations of Authority. Except upon written instructions of Owner, Resident Project Representative shall:

1. not approve any deviations from the contract documents.

3. not assume any of the Contractor's responsibilities.

4. not dictate means, methods or procedures of construction.

5. not issue specific directions on safety precautions and programs.

6. not participate in specialized field or laboratory tests.

5. CONSTRUCTION SCHEDULE

5.01 The Contractor shall submit for review, a detailed construction schedule prior to starting work on the project. The Owner shall be notified in advance of any major changes in the construction schedule as the project progresses. On the last work day of each week, Contractor shall provide the Resident Project Representative with a detailed work schedule for the following week.

5.02 The Contractor shall provide the Engineer 72 hours notice for the following:

1. All concrete placements

2. All asphalt concrete placements
3. All survey party operations
4. Utility work
5. Structure excavation
6. All changes in traffic control, including lane or shoulder closures
7. All planned acceptance tests of underground utilities and components
8. Connection to existing water mains
9. Clearing and grubbing

6. MISCELLANEOUS PROVISIONS

6.01 Field Engineering

A. The City will provide the following:

1. Traverse points clearly marked and labeled in the field.
2. Listing of coordinates and elevations for all traverse points.

B. The Contractor is responsible for layout of the work, using the above information for reference and initial control. Contractor shall use a licensed land surveyor to establish bench marks, important key elevations and all major lines of work.

6.02 Inspections

The Contractor may be charged for inspection costs when material or workmanship is found to be not ready for inspection at the time designated by the Contractor.

6.03 Existing Utilities

Contractor shall exercise precaution when working in or near existing electric and telephone services, water services, water wells, sewer laterals or drain fields. Any interruption to such facilities shall require the Contractor to immediately make necessary repairs or connect to new system to re-establish service. Such work shall be accomplished at no additional cost to the Owner.

6.04 Provision for Legal Action

Any legal action brought by either party to this Contract shall be subject to the exclusive jurisdiction and venue of the Courts of the City of Harrisonburg, Virginia.

6.05 Additional Licensing Requirements

Contractor shall comply with the state licensing requirements of Chapter 11 of Title 54.1 of the Code of Virginia, as amended.

6.06 Errors and Omissions and Indemnification

If the Contractor knows, or should have known, that an ambiguity, discrepancy, error, omission or conflicting statement exists in the Bidding or Contract Documents, said Contractor has an obligation to seek a clarification thereof from the Owner prior to Bid and/or prior to executing the contract documents, in accordance with the dates and manner specified within the "Instructions to Bidders". The Owner will welcome such a clarification request, and, if deemed necessary by the Owner, the Owner will issue a written addendum clarifying the matter in question. Should the Contractor fail to seek such a clarification prior to the dates specified within the "Instructions to Bidders", Contractor thereby waives, and agrees to indemnify and hold the Owner harmless from any claim, suit or cause of action arising out of or related to such ambiguity, discrepancy, error, omission or conflicting statement which the Contractor knew or should have known existed at the time of Bid and/or contract. Additional Indemnification clauses are contained within Specification Section 00810 – "General Terms and Conditions For the City of Harrisonburg, VA".

6.07 Delays

If action or inaction by the Owner causes an unreasonable delay in the Contractor's performance, the Contractor shall notify the Owner in writing within seven (7) days of the delay and of the circumstances involved. Contractor's rights to claims, damages and lost wages/profit are further discussed within Specification Section 00810 - "General Terms and Conditions For the City of Harrisonburg, VA".

7. APPLICATIONS FOR PROGRESS PAYMENT

7.01 Add the following to Article 14, paragraph 14.02 of the Standard General Conditions:

A. Applications for progress payments shall be made on forms similar to those shown on the last three pages of this section.

B. Alteration of quantities or character of work shall be administered in accordance with Section 104.02 of the VDOT Standard Specifications. There are no major items of work in this contract.

C. Owner has 30 days to remit payment, beyond the 10 days described in Paragraph 14.02.C.

END OF SECTION

CONTRACTOR'S APPLICATION FOR PAYMENT

TO (OWNER):_____PROJECT:_____APPLICATION NO: _____
PERIOD TO:_____FROM (CONTRACTOR):_____CONTRACT DATE: _____

CHANGE ORDER SUMMARY

	ADDITIONS	DEDUCTIONS
Total Change Orders Approved Previously	_____	_____
Change Orders Approved This Month	_____	_____
Number_____ Date Approved_____	_____	_____
Number_____ Date Approved_____	_____	_____
Number_____ Date Approved_____	_____	_____
TOTALS	_____	_____
Net change by Change Orders	_____	

1. ORIGINAL CONTRACT SUM…… $_____
2. Net change by Change Orders……$_____
3. CONTRACT SUM TO DATE (line 1 + line 2)……$_____
4. TOTAL COMPLETED AND STORED TO DATE (column G)……$_____
5. RETAINAGE:

a. ____% of Completed Work (column D + column E) $_____
b. ____% of Stored Materials (column F) $_____
c. TOTAL RETAINAGE (line 5a + line 5b) $_____

6. TOTAL EARNED LESS RETAINAGE (line 4 less line 5c) ……$_____
7. LESS PREVIOUS APPLICATIONS FOR PAYMENT (line 6 from prior application)……$_____
8. CURRENT PAYMENT DUE……$_____
9. BALANCE TO FINISH, PLUS RETAINAGE (line 3 less line 6)……$_____

A	B	C	D	E	F	G		H
ITEM NO.	WORK DESCRIPTION	SCHEDULED VALUE	COMPLETED WORK PREVIOUS PERIODS	COMPLETED WORK THIS PERIOD	STORED MATERIALS (not in D or E)	TOTAL COMPLETED AND STORED (D+E+F)	% (G/C)	BALANCE TO COMPLETION (C-G)

The undersigned contractor hereby swears and under penalty of perjury that (1) all previous progress payments received from the owner on account of work performed under the contract referred to above have been applied by the undersigned to discharge in full all obligations of the undersigned incurred in connection with work covered by prior applications for payment under said contract, being Applications for Payment 1 through _____ inclusive; and (2) all materials and equipment incorporated in said project or otherwise listed in or covered by this application for payment are free and clear of all liens, claims, security and encumbrances.

Signature_____ Date_____

Printed name_____

Title_____

County of_____ State of_____

Before me this _____day of_____, 20___ personally appeared _____ known to me, who being duly sworn, did depose and say that he is the _____ of the contractor above mentioned, that he executed the above application for payment on behalf of said contractor and that all of the statements contained herein are true, correct and complete.

Notary Public_____ Registration Number_____

My commission expires_____

End of Section

8. MISCELLANEOUS

8.01 This solicitation and any resulting contract shall be governed in all respects by the laws of the Commonwealth of Virginia, excluding its conflict of laws provisions, and venue for litigation with any respect thereto shall be proper only in the Circuit Court of Rockingham County Virginia. The Contractor shall comply with all applicable federal, state and local laws, rules and regulations.

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GENERAL TERMS AND CONDITIONS FOR THE CITY OF HARRISONBURG, VA

PURCHASING AND CONTRACTING MANUAL: This solicitation is subject to the provisions of The Purchasing and Contracting Policy Manual for the City of Harrisonburg (City) and any revisions thereto, which are hereby incorporated into this contract in their entirety. A copy of the manual is available for review at www.Harrisonburgva.gov/bids-proposals.

APPLICABLE LAWS AND COURTS: This solicitation and any resulting contract shall be governed in all respects by the laws of the Commonwealth of Virginia and any litigation with respect thereto shall be brought in the courts of the Commonwealth. The contractor shall comply with all applicable federal, state and local laws, rules and regulations.

ANTI-DISCRIMINATION: By submitting their (bids/proposals), (bidders/offerors) certify to the City that they will conform to the provisions of the Federal Civil Rights Act of 1964, as amended, as well as the Virginia Fair Employment Contracting Act of 1975, as amended, where applicable, the Virginians With Disabilities Act, the Americans With Disabilities Act and 2.2-4311 of the *Virginia Public Procurement Act*.

In every contract over $10,000 the provisions below apply:

1. During the performance of this contract, the contractor agrees as follows:

    a. The contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the contractor. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

    b. The contractor, in all solicitations or advertisements for employees placed by or on behalf of the contractor, will state that such contractor is an equal opportunity employer.

    c. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting these requirements.

    The contractor will include the provisions of 1. above in every subcontract or purchase order over $10,000, so that the provisions will be binding upon each subcontractor or vendor.

2. The City does not discriminate against small and minority businesses or faith based organizations.

ETHICS IN PUBLIC CONTRACTING: By submitting their (bids/proposals), (bidders/offerors) certify that their (bids/proposals) are made without collusion or fraud and that they have not offered or received any kickbacks or inducements from any other (bidder/offeror), supplier, manufacturer or subcontractor in connection with their (bid/proposal), and that they have not conferred on any public employee having official responsibility for this procurement transaction any payment, loan, subscription, advance, deposit of money, services or anything of more than nominal value, present or promised, unless consideration of substantially equal or greater value was exchanged.

IMMIGRATION REFORM AND CONTROL ACT OF 1986: By submitting their (bids/proposals), (bidders/offerors) certify that they do not and will not during the performance of this contract employ illegal alien workers or otherwise violate the provisions of the federal Immigration Reform and Control Act of 1986.

DEBARMENT STATUS: By submitting their (bids/proposals), (bidders/offerors) certify that they are not currently debarred by the Commonwealth of Virginia from submitting bids or proposals on contracts for the type of goods and/or services covered by this solicitation, nor are they an agent of any person or entity that is currently so debarred.

ANTITRUST: By entering into a contract, the contractor conveys, sells, assigns, and transfers to the City all rights, title and interest in and to all causes of action it may now have or hereafter acquire under the antitrust laws of the United States and the Commonwealth of Virginia, relating to the particular goods or services purchased or acquired by the City under said contract.

MANDATORY USE OF CITY FORM AND TERMS AND CONDITIONS FOR ITBs AND RFPs

1. (For Invitation To Bids (ITB):) Failure to submit a bid on the form provided, (if provided) shall be a cause for rejection of the bid. Modification of or additions to any portion of the Invitation for Bids may be cause for rejection of the bid; however, the City reserves the right to decide, on a case by case basis, in its sole discretion, whether to reject such a bid as nonresponsive. As a precondition to its acceptance, the City may, in its sole discretion, request that the bidder withdraw or modify nonresponsive portions of a bid which do not affect quality, quantity, price, or delivery. No modification of or addition to the provisions of the contract shall be effective unless reduced to writing and signed by the parties.

2. (For Request For Proposals(RFP):) Failure to submit a proposal on the form provided, (if provided) shall be a cause for rejection of the bid. Modification of or additions to the General Terms and Conditions of the solicitation may be cause for rejection of the proposal; however, the City reserves the right to decide, on a case by case basis, in its sole discretion, whether to reject such a proposal.

REVISIONS TO THE OFFICIAL ITB/RFP: No offeror shall modify, revise, edit or make any unauthorized change(s) to the original Official Invitation to Bid (ITB) or Official Request for Proposal (RFP). The Official solicitation document and the Addenda(s) are the documents posted on the City of Harrisonburg's web site and/or authorized by the City of Harrisonburg's Purchasing Agent. Any such violation as stated above may result in rejection of the ITB/RFP response. In addition, violations may result in the debarment of the offeror by the City of Harrisonburg.

CLARIFICATION OF TERMS: If any prospective (bidder/offeror) has questions about the specifications or other solicitation documents, the prospective (bidder/offeror) should contact the person whose name appears on the face of the solicitation no later than five working days before the due date. Any revisions to the solicitation will be made only by addendum issued by the buyer.

PAYMENT:

1. To Prime Contractor: Refer to "Standard General Conditions of the Construction Contract" as well as the "Supplementary Conditions".

~~a. Invoices for items ordered, delivered and accepted shall be submitted by the contractor directly to the payment address shown on the purchase order/contract. All invoices shall show the purchase order number; social security number (for individual contractors) or the federal employer identification number (for proprietorships, partnerships, and corporations).~~

~~b. Any payment terms requiring payment in less than 30 days will be regarded as requiring payment 30 days after invoice or delivery, whichever occurs last. This shall not affect offers of discounts for payment in less than 30 days, however.~~

~~c. All goods or services provided under this contract or purchase order, that are to be paid for with public funds, shall be billed by the contractor at the contract price.~~

~~d. The following shall be deemed to be the date of payment: the date of postmark in all cases where payment is made by mail, or the date of offset when offset proceedings have been instituted as authorized under the Virginia Debt Collection Act.~~

~~e. Individual contractors shall provide their social security numbers, and proprietors , partnerships, and corporations shall provide the City with a federal employer identification number, prior to receiving any payment from the City.~~

~~f. Unreasonable Charges. Under certain emergency procurements and for most time and material purchases, final job costs cannot be accurately determined at the time orders are placed. In such cases, contractors should be put on notice that final payment in full is contingent on a determination of reasonableness with respect to all invoiced charges. Charges which appear to be unreasonable will be researched~~

~~and challenged, and that portion of the invoice held in abeyance until a settlement can be reached. Upon determining that invoiced as to those charges which it considers unreasonable and the basis for the determination. A contractor may not institute legal action unless a settlement cannot be reached within thirty (30) days of notification. The provisions of this section do not relieve the City of its prompt payment obligations with respect to those charges which are not in dispute (*Code of Virginia*, 2.2.4363.)~~

2. To Subcontractors:

   a. A contractor awarded a contract under this solicitation is hereby obligated:

      (1) To pay the subcontractor(s) within seven (7) days of the contractor's receipt of payment from the City for the proportionate share of the payment received for work performed by the subcontractor(s) under the contract; or

      (2) To notify the City and the subcontractor(s), in writing, of the contractor's intention to withhold payment and the reason.

   b. The contractor is obligated to pay the subcontractor(s) interest at the rate of one percent per month (unless otherwise provided under the terms of the contract) on all amounts owed by the contractor that remain unpaid seven (7) days following receipt of payment from the City, except for amounts withheld as stated in (2) above. The date of mailing of any payment by U. S. Mail is deemed to be payment to the addressee.

   c. Any such contract awarded shall further require the contractor to include in each of its subcontracts a provision requiring each subcontractor to include or otherwise be subject to the same payment and interest requirements with respect to each lower-tier subcontractor. A contractor's obligation to pay an interest charge to a subcontractor may not be construed to be an obligation of the City.

PRECEDENCE OF TERMS: General Terms and Conditions shall apply in all instances. In the event there is a conflict between any of the other General Terms and Conditions and any Special, Standard or Supplementary Terms and Conditions in this solicitation, the Special, Standard or Supplementary Terms and Conditions shall apply.

QUALIFICATIONS OF (BIDDERS/OFFERORS): The City may make such reasonable investigations as deemed proper and necessary to determine the ability of the (bidder/offeror) to perform the services/furnish the goods and the (bidder/offeror) shall furnish to the City all such information and data for this purpose as may be requested. The City reserves the right to inspect (bidder's/offeror's) physical facilities prior to award to satisfy questions regarding the (bidder's/offeror's) capabilities. The City further reserves the right to reject any (bid/ proposal) if the evidence submitted by, or investigations of, such (bidder/offeror) fails to satisfy the City that such (bidder/offeror) is properly qualified to carry out the obligations of the contract and to provide the services and/or furnish the goods contemplated therein.

TESTING AND INSPECTION: The City reserves the right to conduct any test/inspection it may deem advisable to assure goods and services conform to the specifications.

ASSIGNMENT OF CONTRACT: A contract shall not be assignable by the contractor in whole or in part without the written consent of the City.

~~**CHANGES TO THE CONTRACT:** Changes can be made to the contract in any of the following ways:~~

1. ~~The parties may agree in writing to modify the scope of the contract. An increase or decrease in the price of the contract resulting from such modification shall be agreed to by the parties as a part of their written agreement to modify the scope of the contract.~~

2. ~~The Purchasing Agent or City delegated agent may order changes within the general scope of the contract at any time by written notice to the contractor. Changes within the scope of the contract include, but are not limited to, things such as services to be performed, the method of packing or shipment, and the place of delivery or installation. The contractor shall comply with the notice upon receipt. The contractor shall be compensated for any additional costs incurred as the result of such order and shall give the City a credit for any savings.~~

DEFAULT: In case of failure to deliver goods or services in accordance with the contract terms and conditions, the City, after due oral or written notice, may procure them from other sources and hold the contractor responsible for any resulting additional purchase and administrative costs. This remedy shall be in addition to any other remedies, which the City may have.

CANCELLATION OF THE CONTRACT: The City may terminate any agreement resulting from this solicitation at any time, for any reason or for no reason, upon thirty days advance written notice to the Contractor. In the event of such termination the Contractor shall be compensated for services and work performed prior to termination.

~~**TAXES:** Sales to the City of Harrisonburg are normally exempt from State sales tax. State sales and use tax certificates of exemption, Form ST-12, will be issued upon request. **(NOT NORMALLY REQUIRED FOR SERVICE CONTRACTS)**~~

USE OF BRAND NAMES: Unless otherwise provided in this solicitation, the name of a certain brand, make or manufacturer does not restrict (bidders/offerors) to the specific brand, make or manufacturer named, but conveys the general style, type, character, and quality of the article desired. Any article which the public body, in its sole discretion, determines to be the equal of that specified, considering quality, workmanship, economy of operation, and suitability for the purpose intended, shall be accepted. ~~The (bidder/offeror) is responsible to clearly and specifically identify the product being offered and to provide sufficient descriptive literature, catalog cuts and technical detail to enable the City to determine if the product offered meets the requirements of the solicitation. This is required even if offering the exact brand, make or manufacturer specified. Normally in competitive sealed bidding only the information furnished with the bid will be considered in the evaluation. Failure to furnish adequate data for evaluation~~

~~purposes may result in declaring a bid nonresponsive. Unless the (bidder/offeror) clearly indicates in its (bid/proposal) that the product offered is an "equal" product, such (bid/proposal) will be considered to offer the brand name product referenced in the solicitation.~~ **~~(NOT NORMALLY REQUIRED FOR SERVICE CONTRACTS)~~**

~~TRANSPORTATION AND PACKAGING:~~ ~~By submitting their (bids/proposals), all (bidders/offerors) certify and warrant that the price offered for FOB destination includes only the actual freight rate costs at the lowest and best rate and is based upon the actual weight of the goods to be shipped. Except as otherwise specified herein, standard commercial packaging, packing and shipping containers shall be used. All shipping containers shall be legibly marked or labeled on the outside with purchase order number, commodity description, and quantity.~~ **~~(NOT NORMALLY REQUIRED FOR SERVICE CONTRACTS)~~**

INSURANCE: By signing and submitting a bid or proposal under this solicitation, the bidder or offeror certifies that if awarded the contract, it will have insurance coverages per the solicitation document at the time the contract is awarded. For construction contracts, if any subcontractors are involved, the subcontractor will have workers' compensation insurance in accordance with 2.2-4332 and 65.2-800 et seq. of the *Code of Virginia*. The bidder or offeror further certifies that the contractor and any subcontractors will maintain these insurance coverages during the entire term of the contract and that all insurance coverages will be provided by insurance companies authorized to sell insurance in Virginia by the Virginia State Corporation Commission. **~~(NOT NORMALLY REQUIRED FOR GOODS CONTRACTS. INSURANCE IS REQUIRED WHEN WORK IS TO BE PERFORMED ON CITY OWNED OR LEASED FACILITIES OR PROPERTY.)~~**

AVAILABILITY OF FUNDS: Agreements are made subject to the appropriation of funds by the Harrisonburg City Council and are null and void in the event of non-appropriation by the City Council. Non-appropriation of funds shall not be deemed a cancellation and shall terminate this agreement without recourse and with no liability on the part of the City.

SELECTION PROCESS/AWARD: Upon the award or the announcement of the decision to award a contract as a result of this solicitation, the department will publicly post such notice for a minimum of ten (10) days, or will notify all responsive bidders/offerors.

BID/PROPOSAL ACCEPTANCE PERIOD: A bid may not be withdrawn after the time and date bids must be received and for sixty (60) days thereafter; except that a bid may be withdrawn due to error as otherwise provided per Va Code 2.2-4330.

EXCUSABLE DELAY: The City shall not be in default of any failure in performance of this agreement in accordance with its terms if such failure arises out of causes beyond its reasonable control and without the fault of or negligence of the City. Such causes may include, but are not restricted to acts of God or the public enemy, fires, flood, epidemics, quarantine restrictions, strikes, freight embargoes, and usually severe weather, but in every case the failure to perform must be beyond the reasonable control and without the fault or negligence of the City.

DRUG-FREE WORKPLACE: During the performance of this contract, the contractor agrees to (i) provide a drug-free workplace for the contractor's employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the contractor that the contractor maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of over $10,000, so that the provisions will be binding upon each subcontractor or vendor.

SAFETY and OSHA STANDARDS: All parties performing services for the City shall comply with all Occupational Safety and Health Administration (OSHA), State Occupational Health Standards, and any other applicable rules and regulations. All parties shall be held responsible for the training, supervision, and safety of their employees. Any unsafe acts or hazardous conditions that may cause injury or damage to any persons or property within and around the work site areas under this contract shall be remedied per the regulatory agency's guidelines.

PERMITS AND FEES: All proposals submitted shall have included in price the cost of any business or professional licenses, permits or fees required by the City of Harrisonburg or the Commonwealth of Virginia. The offeror must have all necessary licenses to perform the services in Virginia and, if practicing as a corporation, be authorized to do business in the Commonwealth of VA.

COOPERATIVE PROCUREMENT: This procurement is being conducted on behalf of other public bodies, in accordance with 2.2-4304 (A) of the Code of VA. The successful bidder has the option to provide these same items (services), **except architectural and engineering services**, at the same prices, awarded as a result of this solicitation to any public body within the Commonwealth of Virginia. If any other Public body decides to use the final contract, the contractor(s) must deal directly with that public body concerning the placement of orders, issuance of the purchase orders, contractual disputes, invoicing and payment. Failure to extend a contract to any public body will have no effect on consideration of your bid.

LIABILITY AND LITIGATION: The City shall not indemnify or hold harmless any Contractor or other third party. The City does not waive any right or release any party from liability, whether on its own behalf or on behalf of any boards, employees or agents. The City does not waive the right to trial by jury for any cause of action arising from the Contract and shall not submit any Contract claim to binding arbitration or mediation. The City shall not be liable to Contractor for any special, punitive or exemplary damages arising from the performance of the contract, including, but not limited to, incidental damages, and lost profit and lost wages, even if such special damages are reasonably foreseeable. Any provision(s) in the Contract contrary to these statements is/are hereby deleted and rendered void.

STATE CORPORATION COMMISSION IDENTIFICATION NUMBER: Pursuant to Code of VA 2.2-4311.2 subsection B, a bidder or offeror organized or authorized to transact business in the Commonwealth pursuant to Title 13.1 or Title 50 is required to include in its bid or proposal the identification number issued to it by the State Corporation Commission (SCC).

Any bidder or offeror that is not required to be authorized to transact business in the Commonwealth as a foreign business entity under Title 13.1 or Title 50 or as otherwise required by law is required to include in its bid or proposal a statement describing why the bidder or offeror is not required to be so authorized. Link to the SCC site is http://www.scc.virginia.gov.

END OF SECTION

SECTION 01010

SUMMARY OF WORK

1.01 WORK COVERED BY CONTRACT DOCUMENTS

A. The "Project" which the "Work" of this Contract constitutes, is titled “Smithland Road Park Soccer Field Irrigation". The Work shall be completed in strict accordance with the Contract Documents as modified herein.

B. Related requirements specified elsewhere:

1. Project Meetings: Section 01200.

2. Construction Schedule: Section 01310.

3. Schedule of Values: Standard General Conditions

4. Temporary Facilities: Section 01510.

C. CONTRACTOR'S Duties:

1. Except as especially noted, provide and pay for:

a. Labor, materials and equipment

b. Tools, construction equipment and machinery

c. Water, heat, and utilities required for construction.

d. Other facilities and services necessary for proper execution and completion of Work.

2. Secure and pay for, as necessary for proper execution and completion of Work, and as applicable at time of receipt of bids.

a. Permits

b. Government fees

c. Licenses

3. Give required notices.

4. Comply with codes, ordinances, rules, regulations, orders and other legal requirements of public authorities which bear on performance of Work.

5. Promptly submit written notice to ENGINEER of observed variance of Contract Documents from legal requirements.

6. Enforce strict discipline and good order among employees. Do not employ on Work:

   a. Unfit persons

   b. Persons not skilled in assigned task.

1.02 CONTRACTS:

Construct Work specified by the Contract Documents under prices shown on Bid Form.

1.03 CONCURRENT WORK

Keep Work clear of encroachment into areas required for concurrent work.

1.04 WORK SEQUENCE:

A. Schedule Work as required in Section 01310 and coordinate all activities which will affect other contractors and the ENGINEER.

1.05 CONTRACTOR USE OF PREMISES:

A. Confine operations at site to areas permitted by:

   1. Law

   2. Ordinance

   3. Permits

   4. Contract Documents

B. Do not unreasonably encumber site with materials or equipment.

C. Do not load structure with weight that will endanger structure.

D. Assume full responsibility for protection and safekeeping of products stored on premises.

E. Move any stored products which interfere with operations of Owner or other contractor.

F. Obtain and pay for use of additional storage or work areas needed for operations.

G. Use of site: exclusive and complete, for execution of work, except:

1. For Owner, and Owner's representatives unrestricted access.

2. Access required for other construction or maintenance at the Site that may or may not be a part of these Contract Documents.

1.06 COMPLETION OF THE WORK

A. All Work described in these Contract Documents shall be complete and have passed all tests as required by the Contract Documents no later than the date stipulated in the Notice to Proceed.

END OF SECTION

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SECTION 01050

FIELD ENGINEERING

PART 1 - GENERAL

1.01 WORK INCLUDED

A. Furnish all labor and materials and perform all field engineering and construction layout necessary to insure that the work conforms to the lines, grades and elevations shown on the Contract Documents and as set out in Section 00800, SUPPLEMENTARY CONDITIONS.

B. Structural design of shores, forms, and similar items provided by the CONTRACTOR as part of his means and methods of construction.

1.02 RELATED WORK

A. Related Requirements Specified Elsewhere:

1. Owner's Responsibilities: Standard General Conditions

2. Summary of Work: Section 01010

3. Construction Schedules: Section 01310

4. Shop Drawings and Project Data: Section 01340

5. CONTRACTOR’s Record Drawings: Section 01720

1.03 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

1.04 SUBMITTALS

A. Comply with pertinent provisions of Section 01340.

B. Upon request of the ENGINEER submit:

1. Data demonstrating qualifications of persons proposed to be engaged for field engineering services.

2. Documentation verifying accuracy of field engineering work.

3. Certification, signed by the CONTRACTOR's retained field engineer, certifying that elevations and locations of improvements are in conformance or non-conformance with requirements of the Contract Documents.

1.05 PROCEDURES

A. In addition to procedures directed by the CONTRACTOR for proper performance of the CONTRACTOR's responsibilities:

1. Locate and protect traverse and other control points before starting work on the site.

2. Preserve permanent reference points during progress of the Work.

3. Do not change or relocate reference points or items of the Work without specific approval from the ENGINEER.

4. Promptly advise the ENGINEER when a reference point is lost or destroyed, or requires relocation because of other changes in the Work.

a. Upon direction of the ENGINEER require the field engineer to replace reference, points, stakes or markers.

b. Locate such replacements according to the original survey control.

END OF SECTION

SECTION 01153

CHANGE ORDER PROCEDURE

PART I - GENERAL

1.01 DESCRIPTION

A. Work included: Make such changes in the Work, in the Contract Sum in the Contract Time of Completion, or any combination thereof, as are described in written Change Orders signed by the OWNER and the ENGINEER and issued after execution of the Contract, in accordance with the provisions of the Section.

1.02 RELATED WORK SPECIFIED ELSEWHERE

A. Changes in the Work: Standard General Conditions

B. Change in the Contract Price: Standard General Conditions

C. Construction Schedules: Section 01310

D. Shop Drawings and Project Data: Section 01340

E. Contractor's Record Drawings: Section 01720

1.03 SUBMITTALS

A. Make submittals directly to the ENGINEER at the address shown on the Project Directory in the Project Manual.

B. Submit the number of copies called for under the various items listed in this Section.

1.04 PROJECT HANDLING

A. Maintain a "Register of Bulletins and Change Orders" at the job site, accurately reflecting current status of all pertinent data.

B. Make the Register available to the ENGINEER for review at his request.

1.05 PROCESSING CHANGES INITIATED BY THE OWNER

A. Should the OWNER contemplate making a change in the Work or a change in the Contract Time of Completion, the ENGINEER will issue a "Bulletin" to the CONTRACTOR.

1. Bulletins will be dated and will be numbered in sequence.

2. The Bulletin will describe the contemplated change and will carry one of the following instructions to the CONTRACTOR:

a. Make the described change in the Work at no change in the Contract Sum and no change in the Contract Time of Completion;

b. Make the described change in the Work, credit or cost for which will be determined in accordance with Article 11 of the Standard General Conditions;

c. Promptly advise the ENGINEER as to credit or cost proposed for the described change. This is not an authorization to proceed with the change.

B. If the CONTRACTOR has been directed by the ENGINEER to make the described change in the Work at no change in the Contract Sum and no change in the Contract Time of Completion, but the CONTRACTOR wishes to make a claim for one or both of such changes, the CONTRACTOR shall notify the ENGINEER as provided in Article 11 or Article 12 of the Standard General Conditions.

C. If the CONTRACTOR has been directed by the ENGINEER to promptly advise him as to credit or cost proposed for the described change, the CONTRACTOR shall:

1. Analyze the described change and its impact on costs and time;

2. Secure the required information and forward it to the ENGINEER for review;

3. Meet with the ENGINEER as required to explain costs and, when appropriate, determine other acceptable ways to achieve the desired objectives;

4. Alert pertinent personnel and subcontractors as to the impending change and, to the maximum extent possible, avoid such work as would increase the OWNER'S cost for making

the change, advising the ENGINEER in writing when such avoidance no longer is practicable.

1.06 PROCESSING CHANGES INITIATED BY THE CONTRACTOR

A. Should the CONTRACTOR discover a discrepancy among the Contract Documents, a concealed condition as described in Section 4.3 of the Standard General Conditions, or other cause for suggesting a change in the Work, a change in the Contract Sum, or a change in the Contract Time of Completion, he shall notify the ENGINEER as required by pertinent provisions of the Contract Documents.

B. Upon agreement by the ENGINEER that there is reasonable cause to consider the CONTRACTOR'S proposed change, the ENGINEER will issue a Bulletin in accordance with the provisions described in Article 1.05 above.

1.07 PROCESSING BULLETINS

A. Make written reply to the ENGINEER in response to each Bulletin:

1. State proposed change on the Contract Sum, if any;

2. State proposed change in the Contract Time of Completion, if any;

3. Clearly describe other changes in the Work required by the proposed change, or desirable therewith, if any;

4. Include full backup data such as subcontractor's letter of proposal or similar information;

5. Submit this response in a single copy.

B. When cost or credit for the change has been agreed upon by the OWNER and the CONTRACTOR, or the OWNER has directed that cost or credit be determined in accordance with provisions of Section 11.3 of the Standard General Conditions, the ENGINEER will issue a "Change Order" to the CONTRACTOR.

1.08 PROCESSING CHANGE ORDERS

A. Change Orders will be dated and will be numbered in sequence.

B. The Change Order will describe the change or changes, will refer to the Bulletin or Bulletins involved, and will be signed by the OWNER

and the ENGINEER.

C. The ENGINEER will issue three copies of each Change Order to the CONTRACTOR:

1. The CONTRACTOR promptly shall sign all three copies and return two copies to the ENGINEER.

2. The ENGINEER will retain one signed copy in his file, and will forward one signed copy to the OWNER.

D. Should the CONTRACTOR disagree with the stipulated change in the Contract Sum or change in the Contract Time of Completion, or both:

1. The CONTRACTOR promptly shall return three copies of the Change Order, unsigned by him, to the ENGINEER with a letter signed by the CONTRACTOR and stating the reason or reasons for the CONTRACTOR'S disagreement.

2. The CONTRACTOR'S disagreement with the Change Order shall not in any way relieve the CONTRACTOR of his responsibility to proceed with the change as ordered and to seek settlement of the dispute under pertinent provisions of the Contract Documents.

END OF SECTION

SECTION 01200

PROJECT COORDINATION AND PROGRESS MEETINGS

1.01 GENERAL

A. Related Requirements Specified Elsewhere:

1. Summary of Work: Section 01010

2. Construction Schedules: Section 01310

3. Shop Drawings and Project Data: Section 01340

B. The ENGINEER will schedule and administer progress meetings.

1. Prepare agenda.

2. Distribute written notice and agenda of regular and called meetings 4 days in advance of meeting date.

3. Make physical arrangements for meetings.

4. Preside at meetings.

5. Record minutes; include significant proceedings and decisions.

6. Distribute copies of minutes to participants, within 4 days after the meetings.

C. All Contractors working at the Project Site at the time of such project meetings shall attend meetings.

1.02 PRE-CONSTRUCTION MEETING

A. To be scheduled within 5 days after Date of Notice to Proceed.

B. Attendance:

1. OWNER

2. ENGINEER and his Consultants.

3. Other Contractors working at the Project Site.

4. Major subcontractors of all Contractors.

5. Representative of Governmental or other Regulatory Agencies as necessary.

C. Minimum Agenda:

1. Distribute and discuss:

a. List of major subcontractors.

b. Tentative Construction Schedule.

2. Critical Work Sequencing

3. Relation and coordination of Contractors.

4. Designation of responsible personnel.

5. Processing of field decisions and Change Orders.

6. Adequacy of distribution of Contract Documents.

7. Submittal of shop drawings, project data and samples.

8. Procedures for maintaining Record Documents.

9. Use of premises:

a. Office and storage areas.

b. OWNER'S requirements.

10. Major equipment deliveries and priorities.

11. Safety and first-aid procedures.

12. Security procedures.

13. Housekeeping procedures.

14. Traffic control procedures, designate officer

1.03 PROGRESS MEETINGS:

A. Schedule Regular Meetings to be held monthly at time and place mutually agreed upon between CONTRACTOR and ENGINEER and OWNER.

B. Hold Called Meetings as progress of Work dictates.

C. Attendance:

1. ENGINEER and his Consultants.

2. All Contractors working at the Project Site.

3. Subcontractors as pertinent to agenda.

4. Safety Representatives.

5. Representatives of Governmental or other Regulatory Agencies, as required.

D. Minimum Agenda:

1. Review, approve minutes of previous meeting.

2. Review Work Progress since last meeting.

3. ENGINEER will accept and give preliminary review of all Applications for Progress Payments.

4. Note field observations, problems. and decisions.

5. Identify problems which impede planned progress.

6. Review off-site fabrication problems.

7. Develop corrective measures and procedures to regain planned schedule.

8. Review Construction Schedule as indicated.

9. Plan progress during next work period.

10. Coordinate projected progress with other Contractors on the Project Site.

11. Review submittal schedules, expedite as required to maintain schedule.

12. Review maintaining of quality and work standards.

13. Review changes proposed by OWNER for:

a. Effect on Construction Schedule.

b. Effect on Completion Date.

14. Complete other current business.

END OF SECTION

SECTION 01310

CONSTRUCTION SCHEDULES

PART 1 - GENERAL

1.01 GENERAL

A. Related Requirements Specified Elsewhere:

1. Summary of Work: Section 01010.

2. Shop Drawings and Project Data: Section 01340

3. Schedule of Values: Standard General Conditions

B. Provide projected construction schedules for entire Work to ENGINEER - revise monthly.

The CONTRACTOR shall submit for review, a detailed construction schedule prior to beginning the project. The Owner shall be notified in advance of any major changes in the Construction Schedule as the project progresses. In order to assist the Engineer with Project Staffing Requirements for the following week, THE CONTRACTOR shall provide on each Friday, a detailed work schedule for the following week. The CONTRACTOR shall provide the Engineer with at least 72 hours notice for the following items, as applicable to scope of work:

1. All concrete placements
2. All asphalt concrete placements
3. All survey party operations
4. All painting
5. Utility work
6. All vehicle lane changes
7. All planned acceptance tests of underground utilities components
8. Connection to existing water or sewer mains
9. Connection to existing water or sewer laterals
10. Clearing and grubbing

1.02 FORM OF SCHEDULES:

A. Prepare in form of horizontal bar chart.

1. Provide separate horizontal bar column for each activity.

2. Order: Table of Contents of Specifications.

3. Identify each column:

a. By distinct graphic delineation.

b. Maximum of 100 activities will be allowed for all work.

c. Activity No. 1 shall be "Mobilization".

d. Activity No. 2 shall be "General Expense Items".

4. Horizontal time scale: Identify first work day of each week.

5. Scale and spacing: To allow space for updating.

B. Sheet Size: 11" x 17" on transparent reproducible material.

1.03 CONTENT OF SCHEDULES:

A. Provide complete sequence of construction by activity.

1. Shop Drawings, Project Data and Samples:

a. Submittal dates.

b. Dates reviewed copies will be required.

2. Product procurement and delivery dates.

3. Dates for beginning, and completion of, each element of construction, specifically:

a. Concrete placement.

b. Subcontractor work.

c. Material installations.

d. Material tests.

B. Identify Work of separate phases, or other logically grouped activities.

C. Provide separate sub-schedule showing submittals, review times, procurement schedules, and delivery dates.

D. Provide sub-schedule to define critical portions of entire schedule.

1.04 UPDATING:

A. Show all changes occurring since previous submission of updated schedule.

B. Indicate progress of each activity, show completion dates.

C. Include:

1. Major changes in scope.

2. Corrective action taken or proposed and its effect.

3. Revised projections due to changes.

4. Other identifiable changes.

D. Provide narrative report, including:

1. Discussion of problem areas, including current and anticipated delay factors, and their impact.

2. Corrective action taken or proposed and its effect.

3. Effect of change in schedules of other contractors at the Project Site.

4. Description of revisions:

a. Effect of schedule due to change of scope.

b. Revisions in duration of activities.

c. Other changes that may affect schedule.

1.05 SUBMITTALS

A. Submit initial schedules within 15 days after date of Notice to Proceed.

1. ENGINEER will review schedules and return review copy within 10 days after the receipt.

2. If required, re-submit within 7 days after return of review copy.

B. Submit monthly updated schedules accurately depicting progress.

C. Submit 2 copies to be retained by ENGINEER.

1.06 DISTRIBUTION

A. Distribute copies of review schedules to:

1. Job site file.

2. Other contractors.

3. Subcontractors.

END OF SECTION

SECTION 01340

SHOP DRAWINGS AND PROJECT DATA

1.01 GENERAL

A. Submit, to the ENGINEER, shop drawings, project data, warranty data, installation instructions, and samples (including hydraulic cement concrete mix designs, bituminous concrete mix designs, notarized letters of certification for all materials used) required by Specification sections.

B. Related requirements specified elsewhere:

1. Construction Schedules: Section 01310

2. CONTRACTOR'S Record Drawings: Section 01720

C. Prepare and submit, with Construction Schedule, a separate schedule listing dates for submission and dates for reviewing shop drawings.

D. No separate payment will be made for any of the requirements of this Section. The cost for all shop drawings submissions shall be deemed included in the Contract Lump Sum Price for this Contract.

1.02 SHOP DRAWINGS

A. Drawings, specifically prepared by CONTRACTOR, a subcontractor, supplier or distributor, for this Work, which illustrate some portion of the Work; showing fabrication, layout, setting or erection details. Installation instructions and any manufacturer's warranties that are required in a specific specifications section shall also be submitted with the shop drawings.

B. Shop drawings shall be prepared by a qualified detailer.

C. Identify details by reference to sheet and detail numbers shown on Contract Drawings and/or section number of the Specifications.

1.03 PROJECT DATA

A. Manufacturer's standard schematic drawings:

1. Modify drawings to delete information which is not applicable to Work.

2. Supplement standard information to provide additional information applicable to Work.

B. Manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations and other standard descriptive data.

1. Clearly mark each copy to identify pertinent materials, products or models.

2. Show dimensions and clearances required.

3. Show performance characteristics and capacities.

Show schematic and physical wiring diagrams and controls, where applicable

C. Materials certifications- City approval required prior to installation:

Item	Type of Certification
pavement markings	VDOT form C-85
concrete	VDOT formTL28
stone	VDOT form TL102A
asphalt	VDOT form TL102A
porous backfill	VDOT form TL102A
lime	VDOT approved list
fence	VDOT approved list
silt fence	VDOT QA program
filter barrier	VDOT QA program
stabilization mats	VDOT QA program
precast units	VDOT precast program
concrete pipe	VDOT stamp, signed certification
seeding	VDOT Green Tag, signed certification
traffic signal items	manufacturer’s certification
steel pipe	manufacturer’s certification & mill analysis
reinforcing steel	manufacturer’s certification & mill analysis
handrail	manufacturer’s certification & mill analysis
SWM low perm liner	manufacturer’s certification & mill analysis
water & sewer items	manufacturer’s certification & mill analysis

1.04 CONTRACTOR RESPONSIBILITIES

A. CONTRACTOR is responsible for: dimensions which shall be confirmed and correlated at the Work site; fabricating processes and techniques of construction; coordination of his work with that of all other trades and the satisfactory performance of his Work.

B. Review and approve Shop Drawings, Project Data and Samples prior to submission.

C. Verify:
   1. Field measurements.
   2. Field construction criteria.
   3. Catalog numbers and similar data.

D. Coordinate each submittal with requirements of Work and of Contract Documents.

E. CONTRACTOR'S responsibility for errors and omissions in submittals is not relieved by ENGINEER'S review of submittals.

F. CONTRACTOR'S responsibilities of deviations in submittals from requirements of Contract Documents is not relieved by ENGINEER'S review of submittals. The CONTRACTOR may submit specific deviations to the ENGINEER for review, but such deviations require the ENGINEER'S written approval.

G. Notify ENGINEER, in writing at time of submission, of deviations in submittals from requirements of Contract Documents.

H. Begin no work which requires submittals until return of submittals with ENGINEER'S stamp and initials or signature indicating review.

I. Where shop drawings prepared by one trade require cross checking with the shop drawings of some other trade or trades, the CONTRACTOR shall assemble the shop drawings of all interdependent trades, cross check and coordinate them himself, require corrections as necessary from the various trades and then present the corrected drawings in one submission. As an alternate to this procedure, the CONTRACTOR may make composite drawings showing the interrelation of the concerned trades and subsequent shop drawings of these trades shall be required to conform to these reviewed composite drawings. Fragmentary or piecemeal transmittals of shop drawings for individual trades in violation of this requirement will be returned to the CONTRACTOR unchecked and will not be considered as a submission.

J. Distribute copies after ENGINEER’S review.

1.05 SUBMISSION REQUIREMENTS

A. Allow a minimum of 14 days for review of submittals.

B. Submit five (5) copies and one reproducible of shop drawings. Reproducible will be returned to the CONTRACTOR for his further distribution.

C. Submit number of Samples specified in each of Specification sections.

D. Accompany submittals with transmittal letter, in duplicate, containing: (Submittals without proper letter of transmittal will be returned without review):

1. Date
2. Project title and OWNER'S and ENGINEER'S project numbers.
3. CONTRACTOR'S name and address.
4. The number of each shop drawing, project datum and sample submitted.
5. Statement that the submittals meet the requirements of the Contract Documents or notification of deviations from Contract Documents and justification for such deviations.
6. Other pertinent data.

E. Submittals shall include:

1. Date and revision dates.
2. Project title and number.
3. Names of each of the following:
    a. ENGINEER
    b. CONTRACTOR
    c. Subcontractor
    d. Supplier
    e. Manufacturer
    f. Separate detailer when pertinent.
3. Identification of product or material.
4. Relation to adjacent structure or materials.
6. Field dimensions, clearly identified as such.
7. Applicable specification section number.
8. Applicable standards, such as ASTM number or Federal Specifications.
9. A blank space, 4" x 4".
10. Identification of deviations from Contract Documents.

11. CONTRACTOR'S stamp, initialed or signed, certifying the review of submittal, verification of field measurements and compliance of Contract Documents.

1.06 RESUBMISSION REQUIREMENTS

A. Shop Drawings

1. Review initial drawings as required and resubmit as specified for initial submittal.

2. Indicate on drawings any changes including those requested by ENGINEER.

B. Project Data and Samples: Submit new data and samples as required for initial submittal.

C. Each submittal, regardless of action taken, will count as one submission.

1.07 ENGINEER'S DUTIES

A. Review submittals within 14 days of receipt.

B. Review for general compliance with the design concept of the Project and general compliance with the information given in the Contract Documents. Any action shown is subject to the requirements of the Plans and Specifications.

C. Review of separate item does not constitute review of an assembly in which item functions.

D. Affix reviewer’s stamp, indicate disposition and sign name. Disposition will be one of the following:

1. Accepted for construction- complies with city standards,
2. Accepted for construction-make corrections noted
3. Acceptance withheld pending revisions.

F. Return required copies of submittals to CONTRACTOR for distribution.

END OF SECTION

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SECTION 01510

TEMPORARY FACILITIES

PART I - GENERAL

1.01 RESPONSIBILITY OF WORK

A. Except as may be otherwise specifically noted herein, all work covered by this section shall be the responsibility of the CONTRACTOR.

1.02 WORK INCLUDED

A. Furnish labor and materials to complete all temporary construction and services essential to the carrying on of the complete construction.

B. The cost of permanently installed utilities shall be borne by the CONTRACTOR until issuance of the Certificate of Substantial Completion and occupancy of the Project by the OWNER at which time the OWNER will assume responsibility for such costs.

PART 2 - FACILITIES TO BE PROVIDED

2.01 TEMPORARY ENCLOSURES

A. Provide temporary weather tight enclosures as needed. Trailer placement shall be approved and permitted subject to the City's Building and Zoning Codes.

2.02 TEMPORARY HEAT

A. Provide, without extra cost to OWNER, temporary heating required for proper protection and drying of work. The system of temporary heat to be used shall be subject to the acceptance of the ENGINEER. Salamanders and similar temporary heating equipment will not be permitted. Heat shall be maintained around the clock (24 hours), seven days a week, as necessary to meet Contract Requirements.

2.02 TEMPORARY ELECTRIC POWER

A. Provide temporary service and remove as required for construction.

B. All power required for construction shall be furnished and paid by the CONTRACTOR. Electrical work shall conform to all applicable laws, rules, and regulations. Cost of all lamps shall be paid by the CONTRACTOR.

2.03 TEMPORARY SIGNS

A. Signs or advertisements: Not permitted to be without OWNER'S written permission. CONTRACTOR may erect one painted sign giving project name, names and addresses of ENGINEER, CONTRACTOR, and various subcontractors. Such sign shall be subject to the OWNER'S review and acceptance. Sign shall be no larger than 8'0" X 4'0" with edges sealed, painted plywood, free standing. Locate as directed.

2.04 TEMPORARY STAIRS, LADDERS, RAMPS, ETC.

A. Furnish, maintain equipment such as temporary stairs, ladders, ramps, scaffolds, runways, derricks, chutes, elevators and the like as required for proper execution of work by trades. Such apparatus, equipment, construction: as per Labor Law, other State or local laws applicable thereto.

2.05 TEMPORARY TOILET

A. Provide, maintain, sanitary temporary toilets located where directed and in close proximity to the work in progress for use by those engaged in work.

2.06 STORAGE SHEDS

A. CONTRACTOR shall provide all storage sheds and work space as required and shall remove same when directed.

2.07 PUMPS AND DRAINAGE

A. CONTRACTOR shall do all pumping, bailing and drainage of all water which may be discharged into any portion of the project during its construction. Water accumulating in trenches must be removed. Bypass pumping of any nature as necessary for completion of the sanitary sewer work shall be the Contractor's responsibility. City must approve bypass pumping scheme prior to beginning such work.

2.08 TEMPORARY WATER

A. The CONTRACTOR shall furnish, maintain and pay for water needed for drinking, cleaning and other uses.

END OF SECTION

SECTION 01551

SITE ACCESS, PARKING AND MAINTENANCE

PART I - GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

A. General requirements: Standard General Conditions

B. Summary of Work: Section 01010

C. Clearing: Section 02100

1.02 ACCESS

A. The CONTRACTOR shall provide reasonable and safe access to the Project Site at all reasonable times for the OWNER, ENGINEER, representatives of governmental agencies and his workmen.

B. The CONTRACTOR shall be given a key for entry to the site during construction, and shall return the key to the OWNER upon completion of the project.

1.03 PARKING

A. The CONTRACTOR shall provide on site parking for all workmen engaged on the work of the Project and shall endeavor to ensure the use thereof.

1.04 MAINTENANCE

A. The CONTRACTOR shall provide for the prompt removal from traveled streets and roadways of all dirt and other materials that have been deposited thereon by his operation whenever the accumulation is sufficient to cause the formation of dust or mud, damage to pavements or creates a traffic hazard.

END OF SECTION

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SECTION 01630

PRODUCT DELIVERY, STORAGE AND PROTECTION

PART 1 - GENERAL

1.01 APPLICABILITY

A. These specifications apply to all products furnished under this contract.

1.02 DELIVERY

A. Shipments of material to be used by the CONTRACTOR or any subcontractor under this contract should be delivered to the job site only during the regular working hours of the CONTRACTOR or subcontractor. If a delivery is made during the off hours of the CONTRACTOR or subcontractor, his authorized agent must be on duty to receive such material. No employee of the OWNER or the ENGINEER is authorized to receive any shipment designated for the CONTRACTOR or subcontractor.

B. Products shall not be delivered to the OWNER or the ENGINEER.

C. Products shall not be delivered to project site until related shop drawings have been reviewed by the ENGINEER.

D. Products shall not be delivered to project site until required storage facilities as specified below have been reviewed by the ENGINEER.

E. Products shall be delivered to site in manufacturer's original, unopened, labeled containers.

F. The CONTRACTOR shall not drop, roll or skid products off delivery vehicles. Hand carry or use suitable materials handling equipment.

1.03 STORAGE AND PROTECTION

A. General:

1. The CONTRACTOR shall store and protect products in accordance with the manufacturer's recommendations and the requirements specified herein. Except as noted below, no on-site or existing storage facilities are available for use by the CONTRACTOR. All on-site facilities shall be furnished by the CONTRACTOR if space is available in the area reserved for the Work.

2. When adequate area for storage facilities is not available within the "Site Limits" the CONTRACTOR shall provide off-site, weather proof storage facilities reviewed by the ENGINEER at no extra charge to the OWNER in accordance with the storage requirements in the Contract Documents.

3. The CONTRACTOR shall provide weatherproof storage for all spare parts. This storage shall be off site in a facility reviewed by the ENGINEER when area within the "Site Limits" for provision of such shall provide for security of such spare parts and for the segregation of spare parts from un-installed products that will be used by the CONTRACTOR in the performance of his work.

4. The CONTRACTOR shall provide all equipment, spare parts and supplies that are to be delivered to the OWNER in accordance with the Contract Documents in properly marked, original packages that show the name of the item, the equipment, or system in which the item belongs, the Owner's requisition number, the quantity and the Specification's Section Number.

5. The CONTRACTOR shall not store products in the structures being constructed unless consented to in writing by the ENGINEER.

6. The CONTRACTOR shall not block or restrict the use of access roads with stored materials.

7. The CONTRACTOR shall not store products where they will interfere with operations of the OWNER or other contractors or on the OWNER'S property outside the "Site Limits" of the Work.

8. The CONTRACTOR shall protect stored materials from damage by vandals. CONTRACTOR is fully responsible for products stored within his limits of work.

9. The CONTRACTOR shall protect all products from damage or deterioration by weather.

10. The CONTRACTOR shall not store any products directly on the ground.

11. The CONTRACTOR shall not store any products in drainage ditches or areas where water may stand.

12. The CONTRACTOR shall label containers to identify materials inside using the terminology found in these specifications.

B. Uncovered Storage:

1. The following types of materials may be stored outdoors without cover:

   a. Masonry units

   b. Reinforcing steel

   c. Structural steel

   d. Piping

   e. Precast concrete items

   f. Castings

   g. Gratings

   h. Hand railing

2. Store the above materials on wood blocking.

C. Covered Storage:

1. The following types of materials may be stored outdoors if covered with material impervious to water.

   a. Rough lumber

2. Tie down covers with rope and slope to prevent accumulation of water on covers.

3. Store materials on wood blocking of sufficient height to insure no contact of materials with ground.

D. Fully Protected Storage:

1. Store all products not named above in buildings or trailers which have a concrete or wooden floor, a roof and fully closed walls on all sides.

2. Provide heated storage space for materials which would be damaged by freezing.

3. Protect mechanical and electrical equipment from being contaminated by dust and dirt.

4. Maintain temperature and humidity at levels recommended by manufacturer's for electrical and electronic equipment.

END OF SECTION

SECTION 01700

CONTRACT CLOSEOUT

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work included: Provide an orderly and efficient transfer of the completed work to the Owner.

1.02 RELATED WORK SPECIFIED ELSEWHERE

A. Substantial Completion: Standard General Conditions

B. Completion: Standard General Conditions

C. Final Inspection: Standard General Conditions

D. Final Application for Payment: Standard General Conditions

E. Waiver of Claims: Standard General Conditions

F. Change Order Procedure: Section 01153

G. Operations and Maintenance Data: Section 01350

H. Cleaning: Section 01710

I. CONTRACTOR'S Record Drawings: Section 01720

1.03 PROCEDURES

A. Substantial Completion:

1. Prepare and submit a list of items completed or to be completed.

2. Within a reasonable time after receipt of the list, the ENGINEER will inspect to determine status of completion.

3. Should the ENGINEER determine that the work is not substantially complete:

a. The ENGINEER promptly will so notify the CONTRACTOR, in writing, giving the reasons therefore.

b. CONTRACTOR will remedy the deficiencies and notify the ENGINEER when ready for re-inspection.

c. The ENGINEER will re-inspect the work.

4. When the ENGINEER concurs that the work is substantially complete:

a. The ENGINEER will prepare a "Certificate of Substantial Completion" accompanied by the CONTRACTOR'S list of items to be completed or corrected, as verified by the ENGINEER.

b. The ENGINEER will submit the Certificate to the OWNER and the CONTRACTOR for their written acceptance of the responsibilities assigned to them in the Certificate.

B. Final Completion:

1. Prepare and submit the notice that work is ready for final inspection and acceptance.

2. Verify that the work is complete including, but not necessarily limited to, payment affidavits, consent of surety, receipts, waivers, operation and maintenance manuals.

3. Certify that:

a. Contract Documents have been reviewed;

b. Work has been inspected for compliance with the Contract Documents;

c. Work has been completed in accordance with the Contract Documents;

d. Equipment and systems have been tested as required, and are operational;

e. Work is completed and ready for final inspection.

4. The ENGINEER will make an inspection to verify status of completion.

5. Should the ENGINEER determine that the work is incomplete or defective:

a. The ENGINEER promptly will so notify the CONTRACTOR, in writing, listing the incomplete or defective work;

b. CONTRACTOR will remedy the deficiencies promptly, and notify the ENGINEER when ready for re-inspection.

6. When the ENGINEER determines that the work is acceptable under the Contract Documents, he will request the CONTRACTOR to make closeout submittals.

C. Closeout submittals include, but are not necessarily limited to:

1. Project Record Documents

2. Operation and Maintenance Data for items so listed in pertinent other Sections of these Specifications, and for other items when so directed by the ENGINEER.

3. Warranties and Bonds

4. Spare parts and materials extra stock.

5. Evidence of compliance with requirements of governmental agencies having jurisdiction including, but not necessarily limited to:

a. Certificate of Inspection

b. Certificates of Occupancy

6. Certificates of Insurance for products and completed operations.

7. Evidence of payment and release of liens.

8. List of subcontractors, service organizations, and principal vendors, including names, addresses, and telephone numbers where they can be reached for emergency service at all times including nights, weekends, and holidays.

D. Final adjustment of accounts:

1. Submit a final statement of accounting to the ENGINEER showing all adjustments to the Contract Sum.

2. If so required, the ENGINEER will prepare a final Change Order showing adjustments to the Contract Sum which were not made previously by Change Orders.

1.04 INSTRUCTION

A. Instruct the OWNER'S personnel in proper operation and maintenance of systems, equipment, and similar items which were provided as part of the Work.

END OF SECTION

SECTION 01710

CLEANING

PART 1 - GENERAL

1.01 DESCRIPTION

A. Related Requirements Specified Elsewhere:

1. Summary of Work: Section 01010

2. Cleaning for Specific Products of Work: Specifications Section for that work.

B. Maintain premises and public and private properties free from accumulations of waste, debris, and rubbish, caused by operations.

C. At completion of Work, remove waste materials, rubbish, tools, equipment, machinery and surplus materials, and clean all sight exposed surfaces; leave project clean and ready for occupancy.

1.02 SAFETY REQUIREMENTS:

A. Standards: Maintain project in accord with following safety and insurance standards.

1. Applicable State, City, County and Federal Codes and Regulations.

B. Hazards Control

1. Store volatile wastes in covered metal containers and remove from premises daily.

2. Prevent accumulation of wastes which create hazardous conditions.

3. Provide adequate ventilation during use of volatile or noxious substances.

C. Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.

1. Do not burn or bury rubbish and waste materials on project site.
2. Do not dispose of volatile wastes such as mineral spirits, oil, or paint thinner in storm or sanitary drains.

3. Do not dispose of wastes into streams or waterways.

PART 2 - PRODUCTS

2.01 MATERIALS:

A. Use only cleaning materials recommended by manufacture of surface to be cleaned.

B. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

PART 3 - EXECUTION

3.01 DURING CONSTRUCTION:

A. Execute cleaning to ensure that Work, grounds, and public properties are maintained free from accumulations of waste materials and rubbish.

B. Wet down dry materials and rubbish to lay dust and prevent blowing dust.

C. At reasonable intervals during progress of Work, clean site and public properties, and dispose of waste materials, debris, and rubbish.

D. Provide on-site dump containers for collection of waste materials, debris and rubbish.

E. Dispose of waste materials, debris and rubbish in a legal manner.

3.02 FINAL CLEANING

A. Employ experienced workmen, or professional cleaners, for final cleaning.

B. In preparation for substantial completion or occupancy conduct final inspection of sight exposed interior and exterior surfaces and of concealed spaces.

C. Broom clean paved surfaces; rake clean other surfaces of grounds.

D. Maintain cleaning until project, or portion thereof, is occupied by OWNER.

END OF SECTION

SECTION 01720

CONTRACTOR'S RECORD DRAWINGS

1.01 - GENERAL

A. Related requirements specified elsewhere:

1. Shop Drawings and Project Data: Section 01340

1.02 MAINTENANCE OF DOCUMENTS:

A. Maintain at job site, one copy of:

1. Contract Drawings
2. Contract Specifications
3. Addenda
4. Reviewed Shop Drawings
5. Change Orders
6. Other Modifications to Contract
7. Field Test Records

B. Provide files and racks for storage of documents.

C. Maintain drawings in clean, dry, legible condition.

D. Do not use record drawings for construction purposes.

E. Make drawings available at all times for inspection by ENGINEER and OWNER.

1.03 MARKING DEVICES

A. Provide felt marking pen for marking, conforming to the following color codes, as applicable:

1. Blue for architectural work
2. Green for structural work
3. Yellow for piping work

4. Black for heating, ventilating and air conditioning work

5. Purple for electrical work

6. Red for other written notations

1.04 RECORDING:

A. Label each drawing "Contractor's Record Drawings" in 2 inch high printed letters.

B. Keep record drawings current.

C. Do not permanently conceal any work until required information has been recorded.

D. Record Drawings: Legibly marked to record actual construction on full size prints:

1. Depths of various elements of foundations and footings.

2. Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements.

3. Location of internal utilities and appurtenances concealed in construction referenced to visible and accessible features of structure.

4. Field changes of dimension and detail.

5. Changes made by Change Order.

6. Details not on original Contract Drawings.

E. Specifications and Addenda: Legibly mark up each Section to record:

1. Manufacturer , trade name, catalog number, and supplier of each product and item of equipment actually installed.

2. Changes made by Change Order.

3. Other matters not originally specified.

F. Shop Drawings: Maintain as record documents; legibly annotate all drawings to record changes made after review.

1.05 SUBMITTAL

A. At completion of Work:

1. CONTRACTOR'S Record Drawings: One set of reproducible drawings, furnished to the CONTRACTOR by the ENGINEER, which the CONTRACTOR has revised, at appropriate scale and suitable for tracing, to show the required information.

B. Accompany submittal with transmittal letter, in duplicate, containing:

1. Date

2. Project title and number

3. CONTRACTOR'S name and address

3. Title and number of each Record Document.

4. Certification that each drawing as submitted is complete and accurate.

5. Signature of CONTRACTOR, or his authorized representative.

END OF SECTION

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SECTION 02120

SUBSURFACE SOIL CONDITIONS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Excavation work under this Contract is unclassified, and includes, without being limited to, excavation and removal of all soil, shale, rock, fill and all subsurface conditions encountered in the Contract area.

B. The CONTRACTOR shall make his own investigation of existing subsurface conditions and assume all responsibility in excavating for this project, without recourse to subsurface information obtained from any other source. The risk of unanticipated soil conditions is solely the CONTRACTOR's. CONTRACTORS and subcontractors shall contact the ENGINEER to arrange for an appointment to enter the site for the purpose of conducting their own investigation of subsurface conditions. The CONTRACTOR must fill in all holes that are either dug or drilled during site investigation, prior to bid date.

C. No extra or additional compensation for excavation or claim otherwise will be made or paid under the Contract for work included in the Bid at the time of bidding. No claim shall be entertained for conditions found to be different from those discovered by any field testing.

END OF SECTION

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SECTION 02200

EARTHWORK

PART 1 - GENERAL

1.01 DESCRIPTION

A. This work shall consist of all excavation, hauling, embankment construction, drainage ditch construction, and compaction not covered by other items. The construction shall be in accordance with the Specifications and in reasonably close conformance with the lines, grade, thickness, and typical cross sections shown on the Plans or established by the Engineer.

B. Specific requirements herein, in other sections and on Plans, shall supersede the requirements for same item listed in applicable sections of the Standard Specifications.

1.02 CLASSIFICATION

A. The cost of all excavation of any nature of material called for by construction items set forth in the Contract Documents including the excavation and hauling of borrow material or the hauling and disposal of excess or unsuitable excavated material as applicable, shall be included in the base bid for the project.

B. All excavation work shall be bid unclassified. Claims for extra compensations arising from presence of rock or latent sub-surface conditions will not be considered.

1.03 QUALITY ASSURANCE

A. The CONTRACTOR shall perform tests specified to assure that soils are qualified for use and meet compaction requirements. Portions of fill which do not meet compaction requirements shall be reworked, re-compacted and retested until required compaction is achieved.

B. Dust conditions shall be kept to a minimum, as directed by the Engineer, by use of water, salt, calcium chloride or other means.

1.04 RELATED WORK SPECIFIED ELSEWHERE

A. Clearing: Section 02100
B. Subsurface Soil Conditions: Section 02120

PART 2 - MATERIALS

2.01 All materials used for fill and backfill shall be approved by City Inspector prior to use.

2.02 Soils excavated from the project site may be used provided the moisture content is controlled and the required compaction criteria are maintained. Excavated soils shall be spread to dry until the required moisture content is controlled.

2.03 CONTRACTOR is responsible to obtain, transport and install all fill material required to complete the work, whether to replace on-site soils unsuitable for use, to make up deficient quantity of on-site material and to replace unsuitable soils removed. Select Borrow used as such shall have a minimum CBR of 6.

2.04 Unsuitable excavated materials shall be removed from site at no additional cost to owner.

2.05 All materials shall meet the requirements of the Standard Specifications.

PART 3 - EXECUTION

3.01 Prepare sub-grade to lines and grades required. Existing wet or unsuitable soils at subgrade level in cuts and fills shall be scarified and allowed to dry before placing fill or stone base, or shall be removed and replaced with suitable material.

3.02 Unless otherwise specified, work under this section shall comply with the applicable provisions of Section 303 of the Standard Specifications.

3.03 Blasting shall be performed in accordance with all local, state and federal regulations. Coordinate with City Fire Chief or his designee.

3.04 Extreme care shall be taken to divert stormwater away from project soils. Contractor shall construct dikes, slope soil grades and provide temporary measures to protect soils from standing water. Adjust or provide additional erosion control measures regularly based on specific diversion techniques.

3.05 Seal exposed soils at the end of each day using a smooth roller. Scarify prior to continuance of work on subsequent days.

3.06 Fine grading of grass areas shall be to such tolerances that will allow cutting by normal tractor-drawn mowing equipment without damage to turf and without ponding.

END OF SECTION

SECTION 02790

EROSION CONTROL

PART 1 - GENERAL

1.01 DESCRIPTION

A. This work consists of providing temporary facilities as shown on the plans and as directed by the Engineer to control erosion and siltation.

1.02 RELATED WORK SPECIFIED ELSEWHERE

A. Earthwork: Section 02200

1.03 SUBMITTALS

A. Certificates

1. Certify that materials comply with specification requirement.

2. Signed by supplier and CONTRACTOR.

PART 2 - PRODUCTS

2.01 Comply with Virginia Erosion and Sediment Control Handbook.

2.02 Erosion control stone, and filter fabric shall comply with the Standard Specifications.

PART 3 - EXECUTION

3.01 Comply with the applicable provisions of

A. City Code of the City of Harrisonburg;

B. Erosion and Sediment Control Regulations (latest date of issue) of the Commonwealth of Virginia;

C. Erosion and Sediment Control Handbook (latest date of issue) of the Commonwealth of Virginia; and

D. Standard Specifications.

END OF SECTION

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SECTION 02821

SEEDING AND GRASS ESTABLISHMENT

PART 1 - GENERAL

1.01 DESCRIPTION

A. This Work consists of fertilizing, mulching, and seeding to establish an acceptable stand of grass. It includes providing seed, fertilizer, lime, and mulch in a prepared seed bed.

1.02 LOCATION

A. All disturbed areas shall be mulched and seeded.

1.03 RELATED WORK SPECIFIED ELSEWHERE

A. Clearing: Section 02100

B. Topsoil: Section 02823

1.04 SUBMITTALS

A. Certificates

1. Certify that materials comply with the specifications requirements. Provide seed mix for approval.

2. Signed by Supplier and CONTRACTOR

PART 2 - PRODUCTS

2.01 Comply with Section 244 of the Standards Specifications

2.02 GRASS MATERIALS

A. Grass Seed: Provide fresh, clean, new-crop seed complying with tolerance for purity and germination established by Official Seed Analysts of North America. Provide seed mixture composed of grass species, proportions and minimum percentages of purity, germination and maximum percentage of weed seed, as specified below.

B. Playing field seed mix shall be 85% bluegrass and 15% perennial ryegrass and shall contain no less than 4 varieties of bluegrass. Apply 2.5 lb. per 1000 square feet. Example of an approved mix:

25% Diva Kentucky Bluegrass
25% Ginney 2 Kentucky Bluegrass
25% Midnight Kentucky Bluegrass
10% Princeton 105 Kentucky Bluegrass
15% Panther GLS Perennial Ryegrass

C. Field surrounds seed mix shall be 90% fescue, 10% bluegrass and shall contain no less than 4 varieties of hybrid turf type tall fescue. Apply 6 lb. per 1000 square feet.

D. All seeds shall be certified. Labels must be inspected and collected by City inspector prior to placement.

E. Comply with Section 244 of the Standards Specifications

PART 3 - EXECUTION

3.01 FERTILIZER, MULCH AND SEEDING

A. Fertilizer shall be incorporated into topsoil or applied with seed at a rate of 0.5 lb. of nitrogen per 1000 square feet. Fertilizer shall be standard starter type fertilizer 13-25-12, 15-30-15 or equivalent.

B. Playing field surface shall be straw mulched at a rate of 1000-1200 lb. per acre.

C. Field surrounds shall be straw mulched at the rate of 1400-1600 lb. per acre.

D. Apply seed at specified rates.

E. Comply with Section 603 of the Standard Specifications.

3.02 SUPPLEMENTAL SEEDING

A. The Contractor shall perform supplemental seeding when less than a 90% uniform stand of the grass is obtained. Supplemental seeding shall consist of over-seeding at the rate of 50% of the seed mix specified above.

3.03 MAINTENANCE AND ACCEPTANCE OF SEEDED AREAS

A. The seeded areas shall be maintained until project close-out. Maintenance shall consist of providing protection against traffic, re-seeding, weeding, re-fertilizing,

watering, and mowing as necessary to produce a uniform and vigorous stand of grass. At the beginning of the next planting season after that in which the permanent crop is sown, the seeded areas will be inspected. Any section not showing vigorous growth at that time shall be promptly reseeded by the contractor at his own expense. The work under this area will be accepted only after a uniform stand of grass has been established, regardless of final completion date.

3.04 HYDROSEEDING

A. Mix specified seed, lime, fertilizer and pulverized mulch in water, using equipment specifically designed for hydroseed application (lime may be applied separately at the discretion of the Contractor). Continue mixing until uniformly blended into homogenous slurry suitable for hydraulic application.

B. Apply slurry uniformly to all areas to be seeded. Rate of application as required to obtain specified seed sowing rate.

C. Hydroseeding does not eliminate the need for straw mulching specified in paragraph 3.01.

END OF SECTION

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SECTION 02823

TOPSOIL

PART 1 - GENERAL

1.01 DESCRIPTION

A. This Work consists of providing topsoil where required for seeding work.

PART 2 - PRODUCTS

2.01 TOPSOIL DESCRIPTION

A. Topsoil shall be Class A conforming to the applicable provisions of the Standard Specifications. Topsoil shall consist primarily of soil loam material. Topsoil with large quantities of gravel, silt, clay and vegetative material shall not be used. Engineer shall determine usability of all topsoil.

B. Although Contractor should make every effort to reuse excavated topsoil, stockpiled topsoil will be available on-site for additional use. Stockpiled topsoil should be screened for rocks and large debris.

C. The top 6 inches of soil shall be drawn from the onsite topsoil stockpile and shall be free of large quantities of gravel, silt, clay and vegetative material.

D. All topsoil shall be tamped for compaction.

E. Topsoil shall additionally meet requirements listed in Specification Section 32800 – Irrigation System.

PART 3 - EXECUTION

3.01 REVIEW BY ENGINEER

A. Do not incorporate topsoil in the Work until it has been approved for use by the ENGINEER.

3.02 INSTALLATION

A. Place topsoil in all areas to be sodded or seeded.

B. Topsoil Depth: 6 inches minimum

C. Comply with Section 602.03 of the Standard Specifications except as follows: Topsoil shall be raked and re-raked as necessary to remove all stones, lumps, roots and unsuitable materials larger than ¾" in diameter for the full depth of topsoil in the playing field boundaries and unsuitable materials larger than 1" in diameter for the full depth of topsoil outside the playing field boundaries

END OF SECTION

SECTION 03300

CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

A. This Section specifies cast-in place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes.

1. Foundations and footings
2. Equipment and Site Furnishing pads

B. See Division 2 Section "Earthwork" for drainage fill under slabs-on-grade.

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Quality Control Submittals: Submit the following information related to quality assurance requirements specified:

1. Design data: Submit proposed mix designs and test data before concrete operations begin. Identify for each mix submitted the method by which proportions have been selected.
   a. For mix designs based on field experience, include individual strength test results, standard deviation, and required average compressive strength f(cr) calculations.
   b. For mix designs based on trial mixtures, include trial mix proportions, test results, and graphical analysis and show required average compressive strength f(cr).
   c. Indicate quantity of each ingredient per cubic yard of concrete.
   d. Indicate type and quantity of admixtures proposed or required.

1. Test reports: Submit laboratory test reports for all testing specified.

2. Certifications: Submit mill test certificates for all reinforcing steel furnished under this section, showing physical and chemical analysis.
   a. Include in chemical analysis for steel to be welded the percentages of carbon, manganese, copper, nickel, and chromium, and optionally the percentages of molybdenum and vanadium.

3. Certifications: Submit certifications signed by AWS Certified Welding Inspector (CWI) of prequalified welding procedures, qualifications of welding procedures unless prequalified, qualification of welding operators, and qualification of welders.
4. Certifications: Provide certification from an independent testing agency that mechanical connectors for reinforcing steel comply with specified requirements.
5. Placement schedule: Submit concrete placement schedule prior to start of any concrete placement operations. Include location of all joints indicated on drawings, plus anticipated construction joints.
6. Submit batch tickets complying with ASTM C 685 or delivery tickets complying with ASTM C 94, as applicable, for each load of concrete used in the work.
   a. Include on the tickets the additional information specified in the ASTM document.
7. Cold weather concreting: Submit description of planned protective measures.
8. Hot weather concreting: Submit description of planned protective measures.

1.3 QUALITY ASSURANCE

A. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.

   1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."

B. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:

   1. ACI 301, “Specification for Structural Concrete.”
   2. ACI 117, “Specifications for Tolerances for Concrete Construction and Materials.”

PART 2 - PRODUCTS

2.1 FORM-FACING MATERIALS

A. Smooth-Formed Finished Concrete: Form-facing panels that will provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.

B. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.

2.2 STEEL REINFORCEMENT

A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (Grade 420), deformed..

B. Plain-Steel Welded Wire Reinforcement: ASTM A 1064, plain, fabricated from as-drawn steel wire into flat sheets.

2.3 CONCRETE MATERIALS

A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:

1. Portland Cement: ASTM C 150, Type I.
   a. Type I may be replaced by Type III (high early strength) for concrete placed during cold weather.

   b. Fly Ash: ASTM C 618, Class F.
   c. Ground Granulated Blast-Furnace Slag: ASTM C 989, Grade 100 or 120.

B. Normal-Weight Aggregates: ASTM C 33, graded, 1-1/2-inch nominal maximum coarse-aggregate size.

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

C. Water: ASTM C 94/C 94M and potable.

D. Air-Entraining Admixture: ASTM C 260.

E. Chemical Admixtures: Provide admixtures only as needed and certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.

1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
2. Retarding Admixture: ASTM C 494/C 494M, Type B.
3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
4. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
6. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.

2.4 VAPOR RETARDERS

A. Plastic Vapor Retarder: ASTM E 1745, Class B. Include manufacturer's recommended adhesive or pressure-sensitive tape.

2.5 CURING MATERIALS

A. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.

B. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd.when dry.

C. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

D. Water: Potable.

E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating.

2.6 RELATED MATERIALS

A. Expansion and Isolation Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber or ASTM D 1752, cork or self-expanding cork.

2.7 CONCRETE MIXTURES

A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301.

B. Proportion normal-weight concrete mixture as follows:

1. Minimum Compressive Strength: 3000 psi at 28 days.
2. Slump Limit: 4 inches for concrete with verified slump of 2 to 4 inches before adding high-range water-reducing admixture or plasticizing admixture, plus or minus 1 inch.
3. Air Content: 5-1/2 percent, plus or minus 1.5 percent at point of delivery for 1-1/2-inch nominal maximum aggregate size.

2.8 FABRICATING REINFORCEMENT

A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

2.9 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M and ASTM C 1116, and furnish batch ticket information.

1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

PART 3 - EXECUTION

3.1 FORMWORK

A. Design, erect, shore, brace, and maintain formwork according to ACI 301 to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads. The contractor is responsible for design, engineering, and construction of formwork, and for its timely removal.

B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.

1. Permanent openings: Provide openings to accommodate work of other trades, sized and located accurately. Securely support items built into forms; provide additional bracing at openings and discontinuities in formwork.
2. Temporary openings: Provide temporary openings for cleaning and inspection in most inconspicuous locations at base of forms, closed with tight-fitting panels designed to minimize appearance of joints in finished concrete work.
3. Release Agent: Provide either form materials with factory-applied nonabsorptive liner or field-applied form coating. If field-applied coating is employed, thoroughly clean and recondition formwork and reapply coating before each use. Rust on form surfaces is unacceptable.

C. Earth Forms: Hand-trim bottoms and sides of earth forms to profiles indicated on the drawings. Remove loose dirt before placing concrete.

D. Chamfer exterior corners and edges of permanently exposed concrete.

3.2 EMBEDDED ITEMS

A. General: Set anchorage devices and other items required for other work connected to or supported by cast-in-place concrete, using templates, setting drawings, and instructions from suppliers of items to be embedded.

1. Edge Forms and Screeds: Set edge forms and intermediate screeds as necessary to achieve final elevations indicated for finished slab surfaces.

3.3 VAPOR RETARDERS

A. Plastic Vapor Retarders: Place, protect, and repair vapor retarders according to ASTM E 1643 and manufacturer's written instructions.

1. Lap joints 6 inches and seal with manufacturer's recommended tape.

3.4 STEEL REINFORCEMENT

General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement, ACI 301 and as herein specified.

1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

B. Preparation: Clean reinforcement of loose rust and mill scale, soil, and other materials which adversely affect bond with concrete.

C. Placement: Place reinforcement to achieve not less than minimum concrete coverages required for protection. Accurately position, support, and secure reinforcement against displacement. Provide Class B tension lap splices complying with ACI 318 unless otherwise indicated. Do not field-bend partially embedded bars unless otherwise indicated or approved.

1. Use approved bar supports and tie wire, as required. Set wire ties to avoid contact with or penetration of exposed concrete surfaces. Tack welding of reinforcing is not permitted.
2. Wire fabric: Install in maximum lengths possible, lapping adjoining pieces not less than one full mesh. Offset end laps to prevent continuous laps in either direction, and splice laps with tie wire.

D. Welding: Welding of reinforcement is not permitted, except with the Engineer's specific approval.

1. Perform welds in accordance with AWS D1.4.

3.5 JOINTS

A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.

B. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Engineer.

C. Contraction Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness as follows:

1. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint to a radius of 1/8 inch. Repeat grooving of contraction joints after applying surface finishes. Eliminate groover tool marks on concrete surfaces.

D. Isolation Joints in Slabs-on-Grade: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.

3.6 CONCRETE PLACEMENT

A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.

B. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.

1. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.

C. Cold-Weather Placement: Comply with ACI 306.1.

D. Hot-Weather Placement: Comply with ACI 305.

3.7 FINISHING FORMED SURFACES

A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

1. Apply to concrete surfaces not exposed to public view.

B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defects. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

C. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture

matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated.

3.8 FINISHING FLOORS AND SLABS

A. General: Comply with ACI 302.1R recommendations for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

B. Broom Finish: Apply a broom finish perpendicular to direction of traffic to exterior concrete platforms, steps, walkways, and ramps, and elsewhere as indicated.

3.9 CONCRETE PROTECTING AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.

B. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.

C. Cure concrete according to ACI 308.1, by one or a combination of the following methods:

1. Moisture Curing: Keep surfaces continuously moist for not less than seven days.
2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

4. Curing and Sealing Compound: Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.

3.10 CONCRETE SURFACE REPAIRS

A. Defective Concrete: Repair and patch defective areas. Remove and replace concrete that cannot be repaired and patched to Engineer's approval.

3.11 FIELD QUALITY CONTROL

A. Testing and Inspecting: Owner’s Construction Inspectors will perform field tests and inspections, and have the authority to deem work unsuitable.

1. Testing Services: Tests shall be performed according to ACI 301.

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SECTION 32800

IRRIGATION SYSTEM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provision of Contract, including General, Supplementary and Special Conditions, apply to work of this section.

1.2 DESCRIPTION

A. Provide a complete underground irrigation system for the site as shown and specified. The work includes: Automatic irrigation system including piping, fittings, sprinkler heads, and accessories.

1. Automatic irrigation system including piping, fittings, sprinkler heads, and accessories.

2. Valves and fittings.

3. Controller.

4. Control wire.

5. Testing.

6. Excavation and Backfilling irrigation system work.

1.3 QUALITY ASSURANCE

A. Installers Qualifications:

1. Upon request, Contractor must provide the following, to include name of contact, name of project, address of project, & phone number of contact. If all of this criteria can't be met, then Contractor will be disqualified:

   a. Virginia Class A Contractors Licenses in continued force for the last 5 years.
   b. Five verifiable references in Virginia to attest to the Contractor's ability to install.

2. Projects of the size and complexity of this project.

3. Experience of individual working for the contracting company will not be accepted as qualified job submittals. Experience must come from the company. Omission of any required information will be grounds for disqualification.

4. Only one irrigation bid will be accepted for the project. No qualified bids will be accepted.

5. Above information will be requested of the lowest bidder, prior to award. Owner must be satisfied with contractor and subcontractor qualifications in order to award contract, regardless of bid price.

B. Conform to applicable codes for piping and component requirements.

C. Materials, equipment, and methods of installation shall comply with the following codes and standards:

1. City of Harrisonburg, Design and Construction Standards Manual.

2. National Fire Protection Association, (NFPA): National Electrical Code.

3. American Society of Testing and Materials, (ASTM).

4. National Sanitation Foundation, (NSF).

5. Virginia Uniform Statewide Building Code, (USBC).

1.4 SUBMITTALS

A. Submit manufacturer's product data and installation instructions for each of the system components to include electric valves, heads, controller, wire, pipe, fittings, valve boxes, manual valves, wire splices, and all other equipment installed on project. Submittals must be organized and semi-permanently bound in booklet form with a table of contents to each section. This book must be periodically updated as material changes on the project.

B. Plumbing and Electrical Permits are to be obtained prior to the commencement of work on the Irrigation System, including the Reduced Pressure Principal (RPZ) type Backflow Preventer. A minimum of two (2) working days are required to process the Plumbing Permit application for the RPZ.

C. Upon irrigation system acceptance, submit written operating and maintenance instructions. Provide format and contents as directed by the Owner.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver irrigation system components in manufacturer's original undamaged and unopened containers with labels intact and legible.

B. Deliver plastic piping in bundles, packaged to provide adequate protection of pipe ends, either threaded or plain.

C. Store and handle materials to prevent damage and deterioration.

D. Provide secure, locked storage for valves, sprinkler heads, and similar components that cannot be immediately replaced, to prevent installation delays.

E. Reference Specification Section 01630 – Product Delivery, Storage and Protection, for further details.

1.6 PROJECT CONDITIONS

A. Protect existing trees, plants, lawns, and other features designated to remain as natural area.

B. Promptly repair damage to adjacent facilities caused by irrigation system work operations. Cost of repairs at Contractor's expense.

C. Promptly notify the Owner of unexpected sub-surface conditions.

D. Irrigation system layout is diagrammatic. Contractor in the field shall establish exact locations of piping, sprinkler heads, valves, and other components at time of installation. Contractor is ultimately responsible for maintaining 100% coverage on entire irrigated site.

1. Space sprinkler components as indicated.

2. Minor adjustments in system layout will be permitted to clear existing fixed obstructions. Final system layout shall be acceptable to the Owner.

E. Cutting and Patching:

1. Cut through concrete and masonry with core drills. Jackhammers not permitted.

2. Materials and finishes for patching shall match existing cut surface materials and finish. Exercise special care to provide patching at openings and exterior walls. Subject to approval of Owner.

3. Methods and materials used for cutting and patching shall be acceptable to the Owner.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General:

1. Provide only new materials, without flaws or defects and of the highest quality of their specified class and kind to be provided by an authorized Product Distributor. Product Distributors will be asked to submit their factory authorization to sell and service all components that they provide.

2. Comply with pipe sizes indicated. No substitution of smaller pipes will be permitted. Larger sizes may be used subject to acceptance of the Owner. Remove damaged and defective pipe.

3. Provide pipe continuously and permanently marked with manufacturer's name or trademark, size schedule and type of pipe, working pressure at 73 degrees F. and National Sanitation Foundation (NSF) approval.

B. Pipe, Fittings, and Connections:

1. PVC Pipe: 3.0" diameter and under: SDR21, class 200, bell end.

2. PVC pipe fittings: ASTM D2241 schedule 40 PVC molded fittings suitable for solvent weld connections. Fittings made of other materials are not permitted. Saddle and cross fittings not permitted.

3. Copper Pipe, Fittings and Connections: 2" diameter and under. Sizing determined by the diameters of the input and output of the booster pump and RPZ backflow preventer. Copper fittings and connections as required for a complete and functioning system; use plans only as a reference. Copper to be Type K, conform to ASTM B 88.

C. Sprinkler Heads, Valves, and Associated Equipment: Provide manufacturer's data on each type of equipment to obtain Owners approval.

1. Outlets

a. Quick Coupler: Solid bronze, 1" size to include swivel and key model #474-00 as manufactured by The Toro Company, Riverside California.

b. Sprinklers: 1" threaded inlet, stainless steel riser with the ability to mount below grade. Sprinklers shall discharge 14.0 GPM @60 PSI base pressure. Sprinklers shall be model T7PSS manufactured by the Toro Company.

2. Valves

a. Automatic remote control valves (RCV) shall be sized as specified on drawings. RCVs shall be installed per manufacturer's recommendations and shall be rated for pressure and flow as required. RCV shall be low voltage. Valves shall be constructed of plastic. Valves shall be the P220-26-06, 11/2" model as manufactured by The Toro Company, Riverside, California.

3. Wire

a. Control wire shall be 14/1 gauge UL/UF, direct burial red in color. Common wire shall be 14/1 gauge UL/UF, direct burial white in color.

b. All wire splices below grade shall be made waterproof with correctly sized wire splice connectors, made for direct burial and rated for minimum of 30 volts.

c. Wire shall be color-coded. White is to be used for common, red is to be used for control, blue for extra, green for stub-out and yellow for sensor. Any deviation will be replaced.

4. Field Controller

a. Field controller shall have 24 zones and be installed in lockable cabinet. Controller shall have four independent programs, non-volatile memory, battery backup, water delay, and seasonal adjust. Controller shall be Toro Custom Command. Controller Shall be mounted on a Unistrut assembly. The Unistrut assembly, which is shown on the Plans, will be provided by the Owner. Power for the irrigation controller shall come from a 120VAC 10AMP breaker.

5. Sleeves

a. Sleeves shall be schedule 40 PVC as indicated on the plan. Any additional sleeves shall be two sizes larger than the pipe routed through them.

2.2 ACCESSORIES

A. Drainage Fill: 2" washed pea gravel.

B. Fill: Clean soil free of stones larger than 1" diameter foreign matter, organic material, and debris.

1. Provide imported fill material as required to complete the work. Obtain rights and pay all costs for imported materials.

2. Suitable excavated materials removed to accommodate the irrigation system work may be used as fill material subject to the Owners review and acceptance.

C. Clamps: Stainless steel, worm gear hose clamps with stainless steel screws or ear type clamps.

D. Low Voltage Wire Connectors: Socket seal type wire connectors and waterproof gel sealer with wire connectors 3M DBY's and DBR's or approved equal only.

E. Valve Access Boxes:

1. Ametek shall manufacture valve access boxes. All valves shall be installed in 10" circular valve boxes.

F. Booster Pump:

1. Contractor shall install a booster pump and VFD controller per plan. Booster pump shall be a Berkeley model B11/2TPMS 7.5hp. Controller shall be a Pentek model PPC3-2-46A2-1 Mounted in a NEMA 4 enclosure. Pump and controller power shall be 240VAC 1Phase. Power supply for the pump controller and booster pump shall be a 50 AMP breaker. VFD pump controller to be mounted on the same Unistrut assembly as the irrigation controller. All electrical wiring from the Pentek controller to the pump shall be in conduit. Irrigation Contractor is responsible for all necessary reducer bushings to plumb pump with 2-1/2" Type K copper per plan. Pump flange shall be bolted to pad using stainless steel lag bolts. Any support spacers needed to achieve proper height are the responsibility of the Irrigation Contractor. Link Seals or other approved connections must be used for any pipe penetration through the concrete slab.

G. Water meter installation shall be by the City.

H. A reduced pressure principal (RPZ) type Blackflow Prevention Control Device shall be installed to protect the City of Harrisonburg water supply and any drinking water. The device is to be protected against freezing and is to be tested before it is placed in use. The test is to be accomplished by a Commonwealth of Virginia Department of Professional and Occupational Regulation certified backflow prevention device worker. A report of the test is to be delivered to the City of Harrisonburg Building Inspection Division. Irrigation Contractor is responsible for all plumbing necessary including 2-1/2" to 2" reducer bushings to install the backflow device. Irrigation Contractor shall install two (2) support brackets on the backflow to support the weight of the device.

PART 3 - EXECUTION

3.1 INSPECTION

A. Examine final grades and installation conditions. Verify that field measurements are as shown on Contractor's Record Drawings (reference Specification Section 01720 – Contractor's Record Drawings). Do not start irrigation system work until unsatisfactory conditions are corrected.

B. Verify the location of utilities, plant materials, shrub bed lines, and tree lines. No irrigation lines are to be routed within 5 feet of any tree on project. Contractor is responsible for coordinating the location of all trees with Owner. No irrigation heads will be installed until all trees have been installed or staked.

C. Verify that required utilities are available, in proper location, and ready for use.

D. Beginning of installation means installer accepts existing conditions.

E. Contractor must provide one experienced on-site foreman or supervisor subject to approval of the Owner, who must be on site at all times when a crew is working, and is required to attend the Pre-Construction/Pre-Installation Meetings.

3.2 PREPARATION

A. Prior to excavation, utility companies shall be notified in accordance with local codes and ordinances. Contractor must contact Miss Utility prior to beginning of installation. All current Miss Utility rules for contact and digging will be followed.

B. Contractor shall be responsible for damage to existing utilities and structures due to negligence and/or misuse by his crews or equipment.

C. Layout and stake the location of each pipe run and all sprinkler heads and sprinkler valves. Obtain Owner's acceptance of layout prior to excavating.

D. Strip sod for pipe trenches with a mechanical sod stripper uniformly 6" to 12" wide with clean-cut edges.

E. Place sleeves as necessary for installation of piping and control wire. All piping under walks and walls shall be within a Schedule 40 PVC sleeve 2 sizes larger than the pressure pipe.

3.3 INSTALLATION

A. Excavation and Backfilling:

1. See also, all applicable Specification Sections, such as:

    a. Specification Section 02120 – Subsurface Soil Conditions
    b. Specification Section 02200 – Earthwork
    c. Specification Section 02221 – Trenching and Backfilling
    d. Specification Section 02790 – Erosion Control
    e. Specification Section 02821 – Seeding and Grass Establishment
    f. Specification Section 02823 – Topsoil

2. All excavation shall be considered unclassified excavation and include all material encountered.
3. Excavate trenches of sufficient depth and width to permit proper handling and installation of pipe and fittings.

4. Excavate to depths required to provide 3" depth of debris free earth fill or sand bedding for piping when rock or other unsuitable bearing material is encountered.

5. Fill to match adjacent grade elevations with approved earth fill material. Place and compact fill in layers not greater than 8" depth.

    a. Provide approved earth fill or sand to a point 4" above the top of pipe. Fill to within 6” of final grade with approved excavated or borrow fill materials free of lumps or rocks larger than 1” in any dimension.
    b. Provide clean topsoil fill free of rocks and debris for top 6" of fill.

6. Install irrigation lateral lines with a minimum cover of 18" based on finished grades. Install irrigation mainline with a minimum of 24" based on finished grade.

7. Excavate trenches and install piping and fill during the same working day. Do not leave open trenches or partially filled trenches open overnight. If trenches must be left open overnight, notify Owner. Owner will have signs installed at entrances to prevent trespassing, as a safety precaution.

8. Replace stripped sod in sufficient time to allow for satisfactory sod recovery and growth. Water stripped and reinstalled sod until irrigation system is place in operation.

9. Valves boxes installed per specifications on design.

B. Plastic Pipe and Fittings:

1. Install plastic pipe in accordance with manufacturer's installation instructions. Provide for thermal expansion and contraction. Do not install plastic pipe if temperature is below 32 degrees.

2. Saw cut plastic pipe. Use an electric miter saw, to ensure a square cut. Remove burrs and shavings at cut ends prior to installation. Use a hand beveller on all gasket pipe cuts.

3. Make plastic-to-plastic joints with solvent weld joints or slip seal joints. Use only solvent recommended by the pipe manufacturer. Install plastic pipe fittings in accordance with pipe manufacturer's instructions. Contractor shall make arrangements with pipe manufacturer for all necessary field assistance.

4. Make plastic to metal joints with plastic male adapters.

5. Make solvent weld joints in accordance with manufacturer's recommendations.

6. Allow joints to set **at least 24 hours** before pressure is applied to the system.

7. Maintain pipe interiors free of dirt and debris. Close open ends of pipe by acceptable methods (duct tape ends) when pipe installation is not in progress.

C. Copper Pipe and Fittings: All copper connections to be completed with either soldered or powered crimped connections. Additionally reference ASTM B88.

D. Sprinklers, Fittings, Valves, and Accessories:

1. Install fittings, valves, sprinkler heads, risers, and accessories in accordance with manufacturer's instructions, except as otherwise indicated.

2. Set sprinkler heads perpendicular to finished grades, except as otherwise indicated.

3. Locate sprinkler heads to assure proper coverage of indicated areas. Do not exceed sprinkler head spacing distances indicated.

4. Install quick-coupling valves with an adjustable double swing joint riser assembled by the use of at least 3 standard 90-degree elbows. Fabricate double swing joint risers of schedule 80 PVC nipples and schedule 40 PVC elbows. Pre-fabricated swing joints are acceptable.

5. Install controller in accordance with manufacturer's written instructions. All controller footings will be 12" deep concrete.

6. Install valve access boxes on a suitable base of bricks to provide a level foundation at proper grade and to provide drainage of the access box. 1 and 1/2 cubic feet of pea gravel below box to be provided for drainage.

7. Automatic valves shall be installed plumb with valve access box with all valve handles, bolts, connections and electrical splices accessible through the valves box opening (not less than 6" below valve box cover).

8. All seal threaded connections of control valves with Teflon tape. **Plastic joint type compound is not acceptable.**

E. Control Wiring:

1. Install electric control cable in the piping trenches wherever possible. Place wire in trench adjacent to pipe. Install wire with slack to allow for thermal expansion and contraction. Expansion joints in wire may be provided at 200-foot intervals. Where necessary to run wire in a separate trench, provide a minimum cover of 15". Wire cannot be plowed or pulled with a vibratory plow.

2. Provide sufficient slack at site connections at remote control valves in control boxes and at all wire splices to allow raising the valve bonnet or splice to the surface without disconnecting the wires when repair is required.

3. Connect each remote control valve to one station of a controller except as otherwise indicated.

4. Connect remote control valves for each controller to a common ground wire system, independent of all other controllers.

5. Make wire connections to remote control electric valves and splices of wire in the field, using water proof wire connectors and sealing cement in accordance with manufacturer's recommendations, dry splices will not be accepted. Make wire splices in accessible splice or valve boxes 10" in diameter or greater.

6. Provide tight joints to prevent leakage of water and corrosion build-up on the joint.

7. When control wiring is in common trench with main line, wiring shall be below main line with 4" of fill dirt between pipe and wire.

8. Aboveground wire is to be installed in conduit and/or in accordance with electrical codes.

9. All materials and methods of installation shall conform to local electrical codes.

F. Quick-Coupling Valves:

1. When installed in lawn area, provide a 10" valve box for location. Stabilize the valve with a stake and 1 and 1/2" cubic feet of pea gravel (½" to ¾").

G. Field Satellite:

1. Field satellite shall be installed as per manufacturer's recommendation. All grounding equipment necessary shall be included.

H. Flushing, Testing, and Adjustment:

1. After sprinkler piping and risers are installed and before sprinkler heads are installed, open control valves and flush out the system with full head of water.

2. Perform system testing upon completion of each section. Make necessary repairs and retest-repaired sections as required.

3. Adjust sprinklers after installation for proper and adequate distribution of the water over the coverage pattern. Adjust for the proper arc of coverage.

4. Adjust all electric remote control valve flow control stems for system balance. Contractor must set pressure-regulating valves prior to acceptance specification on design.

5. Test and demonstrate the controller by operating all programs, day, hour, and station selection features as required to automatically start and shut down irrigation cycles to accommodate plant requirements and weather conditions.

I. Service:

1. When requested, return to the site during the subsequent fall season and winterize the system. Drain all water from the system and blow out the system with compressed air.

2. When requested, return to the site during the subsequent spring season and demonstrate, to the Owner Representative, the proper procedures for the

system start-up, operation, and maintenance.

3. After 3 months of continuous operation, after acceptance of job, Contractor must return to the site and re-adjust all irrigation heads, by re-packing heads that have become dislodged due to resettling of ground, torque of spray, or vibration. Re-adjust radius, arc, and trajectory of spray of all heads.

3.4 DISPOSAL OF WASTE MATERIAL

A. Stockpile, haul from site, and legally dispose of waste materials, including unsuitable excavated materials, rock, trash, and debris.

B. Maintain disposal route clear, clean, and free of debris.

3.5 ACCEPTANCE

A. Test and demonstrate to the Owner the satisfactory operation of the system free of leaks.

B. Instruct the Owner's designated personnel in the operation of the system including adjustment of sprinklers, controller(s), valves, and pump controls.

C. Upon acceptance, the Owner will assume operation of the system.

D. Provide Owner with all manuals for products used on project.

E. Provide owner with one (1) key for every seven (7) manual valves used on project. More than one (1) type of valve may require more than one (1) type of key.

F. Provide Irrigation System Record Drawings:

1. Legibly mark drawings to record actual construction.

2. Indicate a measured distance triangulated to locate each installed valve-automatic, manual, quick-coupling type.

3. Identify field changes of dimension and detail and changes made by Change Order, if any.

4. Submit As-Built drawings to the Owner.

5. As-Builts shall also indicate control valve wiring routing paths, wire splice locations, and controller location.

3.6 GUARANTEE

A. The Contractor shall guarantee all workmanship covered by the specifications to be free of defects for a period of one (1) year from the date of final acceptance of the project. He shall replace any part or parts found to be defective within the period of guarantee at no cost to the owner, except repairs or replacement necessitated by damage by others.

B. Backfilling of all excavation shall be guaranteed. If, at any time during the first year of the guarantee period, trenches or heads should settle, the Contractor shall repair any settling at no cost to the Owner.

3.7 CLEANING

A. Perform cleaning during installation of the work and upon completion of the work. Remove from site all excess materials, soil, debris, and equipment. Repair damage resulting from irrigation system installation.

END OF SECTION

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