

# PROJECT MANUAL

# PERROW PARK

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JASPER, GEORGIA

for

CITY OF JASPER, GA

May 22, 2025



Bid Set  
Technical Specifications

Prepared By



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GMC PROJECT NUMBER: LATL240013

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The Project Manual, Technical Specifications, Drawings, and all other documents relating to this project have been prepared for this individual and particular project, and for the exclusive use of the original Owner, developer or other party so indicated.

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LANDSCAPE ARCHITECTURE ■ PLANNING ■ SURVEYING ■ TRANSPORTATION

**SECTION 00 0115****LIST OF DRAWING SHEETS****1.1 LIST OF DRAWINGS**

- A. Drawings: Drawings consist of the Contract Drawings and other drawings listed on the index of Drawings, Sheet G1, as modified by subsequent Addenda and Contract modifications.
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<b>Bid Date:</b>	<u>6/26/25</u>	<b>Project No.</b>	<u>LATL240013</u>
<b>Project:</b>	<u>Perrow Park</u>	<b>Technical Contact:</b>	<u>Natali Herrmann</u>
<b>Date of Issue:</b>	<u>5/22/25</u>	<b>City Bid No.</b>	<u>2025-002</u>

**OWNER**

City of Jasper  
200 Burnt Mountain Road  
Jasper, GA 30143  
706-692-9100 Phone

**ENGINEER/ARCHITECT**

Goodwyn Mills Cawood, LLC  
6120 Powers Ferry Rd. NW, Suite 500  
Atlanta, GA 30339  
770-952-2481 Phone  
770-955-1064 Fax

The **City of Jasper, Georgia** will be receiving separate sealed Bids for all material, labor and equipment for the “**Perrow Park**”. This includes **New Sidewalks, Planting, Restroom Building, Changing Facility, Stage/Pavilion, Amphitheater Lawn, and Parking** with all related accessories as shown on the plans and called for in the Contract Documents and Technical Specifications. Bids shall be based on Lump Sum Price.

The project shall be Substantially Complete within **320** calendar days from the date of notice to proceed of the contract.

A mandatory pre-bid meeting will be held on **June 3, 2025 at 11:00 AM at 200 Burnt Mountain Road**, followed by a site walk. All interested parties are invited to attend.

The **City of Jasper** will receive bids until **2:00 PM on June 26, 2025 at 200 Burnt Mountain Road, Jasper, GA 30143**. Bids received after this time will not be accepted. Bids will be opened and publicly read aloud. All interested parties are invited to attend.

Contract Documents, Technical Specifications and Plans may be examined at the following locations:

**City of Jasper, 200 Burnt Mountain Road, Jasper, GA 30143**

Bid Advertisement may be examined at the following locations:

**Georgia Procurement Registry (GPR):** <https://ssl.doas.state.ga.us/gpr/index>

**City of Jasper:** <https://www.jasper-ga.us/notices.htm>

**Bidder** questions shall be made via email to [natali.herrmann@gmcnetwork.com](mailto:natali.herrmann@gmcnetwork.com).

Questions should be submitted no later than **June 10, 2025** at 3:00 PM.

Each BIDDER must deposit with his bid, security in the amount of **5%**, and shall be subject to the conditions provided in Section 00 20 00 “INSTRUCTION TO BIDDERS.”

No BIDDER may withdraw his bid within sixty (60) days after the date of Bid opening.

Each Bidder is required to submit a “Bid form”, “Bid Bond”, “Form of Qualification of Bidder”, “Non-Collusion Affidavit” and “Immigration and Security Form” as outlined in Section 00 25 00.

This contract is Local & ARC funded. The Contractor must comply with: **Davis Bacon Act and Related Acts; The Copeland “Anti-Kickback” Act; The Contract Work Hours and Safety Standards Act and Wage Rate Determination.**

The **City of Jasper** reserves the right to waive any informalities or irregularities, or to reject any or all bids and to readvertise.

Visit <http://www.gmcnetwork.com/bids> for a list of projects out for bid. Then select the appropriate project for a list of bidders and additional bid information.

END OF SECTION 00 10 00



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## ARTICLE 1 DEFINED TERMS

- 1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions.

## ARTICLE 2 COPIES OF BIDDING DOCUMENTS

- 2.01 Complete sets of the Bidding Documents are available from the location and for the amount stated in Section 00 10 00 "Advertisement for Bids".
- 2.02 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.03 Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

## ARTICLE 3 QUALIFICATIONS OF BIDDERS

- 3.01 To demonstrate Bidder's qualifications to perform the Work, within five days of Owner's request, Bidder shall submit written evidence of any data requested by Owner.

## ARTICLE 4 EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA, AND SITE

### 4.02 UNDERGROUND FACILITIES

- A. Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site is based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.

### 4.03 HAZARDOUS ENVIRONMENTAL CONDITIONS

- A. The Supplementary Conditions identify those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that Engineer has used in preparing the Bidding Documents.
- B. Copies of reports and drawings referenced in Paragraph 4.03.A will be made available by Owner to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which Bidder is entitled to rely as provided in Paragraph 4.06 of the General

Conditions has been identified and established in Paragraph 4.06 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any “technical data” or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

- 4.04 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated conditions appear in Paragraphs 4.02, 4.03, and 4.04 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work appear in Paragraph 4.06 of the General Conditions.
- 4.05 On request, Owner will provide Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies, as Bidder deems necessary for submission of a Bid. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies. Bidder shall comply with all applicable Laws and Regulations relative to excavation and utility locates.
- 4.06 Reference is made to Article 7 of the General Conditions for the identification of the general nature of other work that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) that relates to the Work contemplated by these Bidding Documents. On request, Owner will provide to each Bidder for examination access to or copies of Contract Documents (other than portions thereof related to price) for such other work.
- 4.07 It is the responsibility of each Bidder before submitting a Bid to:
- A. Examine and carefully study the Bidding Documents, the other related data identified in the Bidding Documents, and any Addenda;
  - B. Visit the Site and become familiar with and satisfy Bidder as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
  - C. Become familiar with and satisfy Bidder as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work;
  - D. Carefully study all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in Paragraph 4.02 of the General Conditions, and (2) reports and drawings of Hazardous Environmental Conditions at the Site which have been identified in the Supplementary Conditions as provided in Paragraph 4.06 of the General Conditions;

- E. Obtain and carefully study (or accept consequences of not doing so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents, and safety precautions and programs incident thereto;
  - F. Agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents;
  - G. Become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;
  - H. Correlate the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents;
  - I. Promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder; and
  - J. Determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.
- 4.08 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying any specific means, methods, techniques, sequences, and procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents and the written resolutions thereof by Engineer are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

## ARTICLE 5 PRE-BID CONFERENCE

- 5.01 A mandatory pre-bid meeting will be held on June 3, 2025 at 11:00 AM at 200 Burnt Mountain Road, followed by a site walk. All interested parties are invited to attend.

## ARTICLE 6 SITE AND OTHER AREAS

- 6.01 The Site is identified in the Bidding Documents. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by Owner unless otherwise provided in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of materials and equipment to be incorporated in the Work is to be obtained and paid for by Contractor.

## ARTICLE 7 INTERPRETATIONS AND ADDENDA

- 7.01 The Owner or Engineer will not be responsible for oral discussion or interpretation of the meaning of the Plans, Specifications or other pre-bid documents during the Bid Advertisement period.
- 7.02 Every request for such interpretation should be made in writing addressed to **Goodwyn Mills Cawood, LLC, 6120 Powers Ferry Rd. NW, Suite 500, Atlanta, Georgia 30339, or faxed to 770-955-1064 or emailed to natali.herrmann@gmcnetwork.com**, and to be given consideration must be received at least seven (7) business days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written Addenda to the Specifications which, if issued, will be mailed and/or emailed and/or sent by facsimile transmission to all prospective BIDDERS (at the respective addresses furnished for such purposes), not later than seventy-two (72) hours prior to the date fixed for the opening of Bids. Failure of any BIDDER to receive any such Addendum or interpretation shall not relieve such BIDDER from any obligation under his Bid as submitted. All Addenda so issued shall become part of the Contract Documents.

## ARTICLE 8 BID SECURITY

- 8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of five percent (5%) of Bidder's maximum Bid price and in the form of a certified check or bank money order or a Bid bond (on the form attached) issued by a surety meeting the requirements of Paragraphs 5.01 and 5.02 of the General Conditions.
- 8.02 The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract Documents, furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, Owner may annul the Notice of Award and the Bid security of that Bidder will be forfeited. The Bid security of other Bidders whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Agreement or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be returned.
- 8.03 Bid security of other Bidders whom Owner believes do not have a reasonable chance of receiving the award will be returned within seven days after the Bid opening.

## ARTICLE 9 CONTRACT TIMES

- 9.01 BIDDER must agree to commence work within ten (10) working days after a date to be specified in a written "Notice to Proceed" from the OWNER and achieve Substantial Completion of the Project as specified in the Agreement, Section 00 52 00 Article 4.01.

## ARTICLE 10 LIQUIDATED DAMAGES

- 10.01 BIDDER must agree to pay as liquidated damages, as specified in the Agreement, Section 00 52 00 Article 4.02 for each and every consecutive calendar day thereafter the completion date, for which the completion of the project is delayed, as hereinafter provided in the General Conditions.

## ARTICLE 11 SUBSTITUTE AND "OR-EQUAL" ITEMS

- 11.01 Refer to General Conditions Article 6.05, as may be modified by the Supplementary Conditions

## ARTICLE 12 SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- 12.01 If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, individuals, or entities to be submitted to Owner in advance of a specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within ten (10) days after Bid opening, submit to Owner a list of all such Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, individual, or entity if requested by Owner. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit a substitute,
- 12.02 Contractor shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom Contractor has reasonable objection.

## ARTICLE 13 PREPARATION OF BID

- 13.01 The Bid Form is included with the Bidding Documents.
- 13.02 All blanks on the Bid Form shall be completed by printing in ink or typed and the Bid signed in ink. The person signing the Bid Form shall initial erasures or alterations in ink. A Bid

price shall be indicated for each Bid item listed therein, or the words “No Bid,” “No Change,” or “Not Applicable” entered.

- 13.03 A Bid by a corporation shall be executed in the corporate name by the president or a vice-president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown below the signature.
- 13.04 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be shown below the signature.
- 13.05 A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown below the signature.
- 13.06 A Bid by an individual shall show the **Bidder’s name, phone and official address.**
- 13.07 A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid Form. The official address of the joint venture shall be shown below the signature.
- 13.08 All names shall be typed or printed in ink below the signatures.
- 13.09 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.
- 13.10 The address and telephone number for communications regarding the Bid shall be shown.
- 13.11 The Bid shall contain evidence of Bidder’s authority and qualification to do business in the state where the Project is located or covenant to obtain such qualification prior to award of the Contract. Bidder’s Georgia utility contractor license number, if applicable, shall also be shown on the Bid Form.

## ARTICLE 14 BASIS OF BID; COMPARISON OF BIDS

- 14.01 The Bid Form for this project will contain 1 section(s). The “LUMP SUM PRICE BID PROPOSAL” will be the sum of the lump sum price amounts entered and, as more completely described below.
- 14.02 “LUMP SUM PRICE BID PROPOSAL” shall be for the completion of each estimated quantity identified in the Bid Form and shall have a lump sum price and corresponding extended cost for the estimated quantity. The total of all the extended costs shall constitute the “TOTAL AMOUNT OF BASE BID”.
- 14.03 ALTERNATES AND COMPARISON OF BIDS

- A. The Bid Form may include additional/deductive alternates for certain specified items of work. Prices must be provided for these special alternates as stated on the Bid Form. The Owner may select all, none or a combination of alternates. The Owner

reserves the right to make this selection after receipt of Bids and anticipates a decision within three (3) days after bid opening.

- B. The alternates selected by the Owner will be used in determining the Apparent Low Bidder. The Owner reserves the right to select the low bidder based on any combination of alternates desired. Thus, the lowest price determined from Additional/Deductive Alternates selected will be the basis for comparison to determine the Apparent Low Bidder.

## ARTICLE 15 SUBMITTAL OF BID

15.01 With each copy of the Bidding Documents, a Bidder is furnished one separate unbound copy of the Bid Form, the Bid Bond Form, and other forms required to be submitted. The unbound copy of the Bidding Documents is to be completed and submitted according to Section 00 25 00.

15.02 A Bid shall be submitted no later than the date and time prescribed and at the place indicated in the Advertisement or Invitation to Bid and shall be enclosed in an opaque sealed envelope plainly marked with the Project title, the Georgia Utility Contractor License Number, if applicable, of the Bidder, and the name and address of Bidder; and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate envelope plainly marked on the outside with the notation "BID ENCLOSED."

### 15.03 Bid backup requirements for Lump Sum Bid:

In addition to the lump sum price, the Bidder shall submit a detailed unit price bid backup that identifies the basis for the lump sum amount. The unit prices shall generally include all associated labor, material, equipment, overhead, and profit costs, and shall serve as the basis for pricing any adjustments to quantities or scope that may arise during the course of the Project.

The unit price bid backup shall include, at a minimum:

- A list of individual work items or components associated with the scope of work.
- A corresponding unit of measure for each item.
- The unit price for each item, inclusive of labor, equipment, materials, overhead, and profit.
- Estimated quantities (if applicable) and extended totals.

The Bidder shall provide this bid backup in a format that is **clear, concise, and easy to understand**. The bid backup will be reviewed by the Owner as part of the bid evaluation process. **Failure to provide adequate bid backup may result in the bid being deemed non-responsive.**

The Owner reserves the right to use the submitted unit prices as a basis for negotiating changes to the scope of work during construction. The Owner may also request clarification or additional information regarding submitted unit prices prior to contract award.



## ARTICLE 16 MODIFICATION AND WITHDRAWAL OF BID

- 16.01 A Bid which has been submitted may be modified or withdrawn by an appropriate document duly executed in a like manner that a Bid must be executed, and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids.
- 16.02 If within 24 hours after Bids are opened, any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, the Owner may allow that Bidder to withdraw his Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

## ARTICLE 17 OPENING OF BIDS

- 17.01 Bids will be opened at the time and place indicated in the Advertisement or Invitation to Bid and, unless obviously non-responsive, read aloud publicly. A tabulation of the amounts of the Base Bids and alternates, if any, will be made available to Bidders after Award of project.

## ARTICLE 18 BIDS TO REMAIN SUBJECT TO ACCEPTANCE

- 18.01 All Bids will remain subject to acceptance for the period of time stated in these documents, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

## ARTICLE 19 EVALUATION OF BIDS AND AWARD OF CONTRACT

- 19.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to not be responsible. Owner may also reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project to make an award to that Bidder. Owner also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder.

**"Balanced Bid" shall mean a Bid in which each of the prices and total amount bid for each of the listed items reasonably reflects the value of that item with regard to the entire job considering the prevailing cost of labor, material and equipment in the relevant market. A Bid is unbalanced when, in the opinion of the Owner or Engineer, any prices or total amounts bid on any of the listed items do not reasonably reflect such values.**

- 19.02 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an

interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.

- 19.03 In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, prices and other data as may be requested in the Bid Form.
- 19.04 In evaluating Bidders, Owner will consider the qualifications of Bidders and may consider the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the Supplementary Conditions.
- 19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities to perform the Work in accordance with the Contract Documents.

#### 19.06 NOTICE OF AWARD

The party to whom the contract is to be awarded will be issued the NOTICE OF AWARD from the OWNER within 60 days of bid opening. The NOTICE OF AWARD shall be accompanied by the Agreement, Bond forms, Indemnification requirements, and MBE, WBE, and EEO Compliance forms and documentation (if required for contract). The BIDDER shall execute the Agreement and furnish completed bonds, insurance certificates, any MBE, WBE, and EEO forms, and Construction/Payment Schedules to the OWNER within fifteen (15) calendar days of receipt of NOTICE OF AWARD. Failure to furnish the completed documentation shall constitute a forfeiture of the Contractor's Bid Bond.

- 19.07 **All contractors must comply with the major applicable laws and regulations relating to labor standards:**
- **The Davis-Bacon Act.**
  - **The Copeland "Anti-Kickback" Act.**
  - **The Contract Work Hours and Safety Standards Act.**

## ARTICLE 20 CONTRACT SECURITY AND INSURANCE

- 20.01 Article 5 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the executed Agreement to Owner, such bonds and insurance certificates shall accompany it.

## ARTICLE 21 SIGNING OF AGREEMENT

### 21.01 AGREEMENT

The OWNER within fifteen (15) calendar days of receipt of acceptable bonds, insurance certificates, AGREEMENT signed by the party to whom the AGREEMENT was awarded, and other required forms and schedules, shall sign the AGREEMENT and return to such party an executed duplicate of the AGREEMENT or shall notify the contractor of the reasons the documents are not acceptable. Should the OWNER not execute the AGREEMENT within such period or not notify the contractor of the reasons for not executing, the BIDDER may by WRITTEN NOTICE withdraw his signed AGREEMENT. Such notice of withdrawal shall be effective upon receipt of the notice by the OWNER.

#### **21.02 NOTICE TO PROCEED**

The NOTICE TO PROCEED shall be issued within fifteen (15) calendar days of the execution of the Agreement by the OWNER. Should there be reasons why the NOTICE TO PROCEED cannot be issued within such period, the time may be extended by mutual agreement between the OWNER and CONTRACTOR. If the NOTICE TO PROCEED has not been issued within the fifteen (15) calendar period or within the period mutually agreed upon, the CONTRACTOR may terminate the Agreement without further liability on the part of either party.

END OF SECTION 00 20 00

Bid Proposal packages are to be submitted on **separate forms** furnished or printed from electronic file provided for this purpose.

Submit as the "Bid" the following:

1. Bid Form – Section 00 41 00
2. Bid Bond – Section 00 43 00
3. Form of Qualification of Bidder – Section 00 45 00
4. Non-Collusion Affidavit – Section 00 48 00
5. Immigration and Security Form – Section 00 49 00
6. Tab the Bid Bond, Base Bid and all Alternates.
7. **All contractors must comply with the major applicable laws and regulations relating to labor standards:**
  - **The Davis-Bacon Act.**
  - **The Copeland "Anti-Kickback" Act.**
  - **The Contract Work Hours and Safety Standards Act.**

Place all of the above in a sealed envelope clearly marked as follows:

**BID PROPOSAL FOR**

**City of Jasper  
Perrow Park**

NOTE: The envelope should bear on the outside the **NAME** and **ADDRESS** of the **QUALIFIED BIDDER**, and **Georgia Utilities Contractors License Number** (if applicable).

If mailed, this envelope should be placed inside the mailing envelope.

Bids will be opened at **2:00 PM, June 26th** at **200 Burnt Mountain Road, Jasper, GA 30143.**

END OF SECTION 00 25 00

**TABLE OF ARTICLES**

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**ARTICLE 1 – BID RECIPIENT****1.01 BID RECIPIENT**

This Bid is submitted to: City of Jasper

200 Burnt Mountain Road

Jasper, GA 30143

This Bid is Submitted From: \_\_\_\_\_

\_\_\_\_\_  
Cell Phone: \_\_\_\_\_

(Name, Address and Cell Phone Contact of  
Individual, Partnership, or Corporation)

\_\_\_\_\_  
Georgia Utility Contractor No. (if applicable)

This Bid is for: Perrow Park

- 1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times Indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

**ARTICLE 2 – BIDDER’S ACKNOWLEDGMENTS**

- 2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

**ARTICLE 3 – BIDDER’S REPRESENTATIONS**

- 3.01 In submitting this Bid, Bidder represents that:

- A. Bidder has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged.

Addendum No.Addendum Date

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- B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local and Site conditions that may affect cost, progress, and performance of the Work.
- C. Bidder is familiar with and is satisfied as to all federal, state and local laws and regulations that may affect cost, progress and performance of the Work.
- D. Bidder has carefully studied all reports (if applicable) of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified and reports and drawings of Hazardous Environmental Conditions that have been identified in SC-4.06.
- E. Bidder has obtained and carefully studied (or accepts the consequences for not doing so) all additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents to be employed by Bidder, and safety precautions and programs incident thereto.
- F. Bidder does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents.
- I. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer is acceptable to Bidder.
- J. The Bidding Documents are generally sufficient to indicate and convey

understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

- K. Bidder will submit written evidence of its authority to do business in the state where the Project is located not later than the date of its execution of the Agreement.

## ARTICLE 4 – FURTHER REPRESENTATIONS

4.01 Bidder further represents that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner.

## ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

### **LUMP SUM BID PROPOSAL** **Perrow Park**

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	TOTAL PRICE
1.	Perrow Park 3.2-Acre Public Park (Complete as Shown)	1	L.S.	_____	_____

**TOTAL AMOUNT OF BID** \_\_\_\_\_  
(In Words)

\_\_\_\_\_  
(In Figures)



## ARTICLE 6 – TIME OF COMPLETION

- 6.01 Bidder agrees that the Work will be Substantially Complete in accordance with Paragraph 14.04 of the General Conditions, and will be Final Complete and ready for final payment in accordance with Paragraph 14.07 of the General Conditions on or before the date indicated in the Agreement.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the Contract Time.

## ARTICLE 7 – ATTACHMENTS TO THIS BID

- 7.01 The following documents are attached to and made a condition of this Bid:
- A. Bid Bond – Section 00 43 00.
  - B. Form of Qualification of Bidder – Section 00 45 00.
  - C. Affidavit of Non-Collusion – Section 00 48 00.
  - D. Immigration and Security Form – Section 00 49 00.

## ARTICLE 8 – DEFINED TERMS

- 8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

## ARTICLE 9 – BID SUBMITTAL

- 9.01 This Bid submitted by:

If Bidder is:

An Individual

Name (typed or printed): \_\_\_\_\_

By: \_\_\_\_\_  
(Individual's signature)

A Partnership

Partnership Name (typed or printed): \_\_\_\_\_

By: \_\_\_\_\_  
(Signature of general partner -- attach evidence of authority to sign)

Name (typed or printed): \_\_\_\_\_

**A Corporation**

Corporation Name: \_\_\_\_\_

State of Incorporation: \_\_\_\_\_

By: \_\_\_\_\_  
(Signature -- attach evidence of authority to sign)

Name (typed or printed): \_\_\_\_\_

Title: \_\_\_\_\_  
(CORPORATE SEAL)

Attest \_\_\_\_\_

Date of Authorization to do business in the state of Georgia is \_\_\_\_/\_\_\_\_/\_\_\_\_

END OF SECTION 00 41 00

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

\_\_\_\_\_  
BIDDER (Name)

\_\_\_\_\_  
(Address):

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

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

OWNER:

\_\_\_\_\_  
City of Jasper

\_\_\_\_\_  
200 Burnt Mountain Road

\_\_\_\_\_  
Jasper, GA 30143

BID

Bid Due Date: \_\_\_\_\_

\_\_\_\_\_  
Perrow Park

BOND

Bond Number: \_\_\_\_\_

Date (Not later than Bid due date): \_\_\_\_\_

Penal Sum: \_\_\_\_\_

(Words)

\_\_\_\_\_  
(Figures)

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

## BIDDER

## SURETY

\_\_\_\_\_(Seal) \_\_\_\_\_(Seal)  
 Bidder's Name and Corporate Seal Surety's Name and Corporate Seal

By: \_\_\_\_\_  
 Signature and Title

By: \_\_\_\_\_  
 Signature and Title  
 (Attach Power of Attorney)

Attest: \_\_\_\_\_  
 Signature and Title

Attest: \_\_\_\_\_  
 Signature and Title

Note: Above addresses are to be used for giving required notice.

Note: Surety companies executing bonds must appear on the Treasury Department's most current list (circular 570 as amended) and be authorized to transact business in the state where the project is located.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Surety's liability.
2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation shall be null and void if:
  - 3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
  - 3.2. All Bids are rejected by Owner, or
  - 3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default by Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of

Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from Bid due date without Surety's written consent.

and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

END OF SECTION 00 43 00

6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after Bid due date.
7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern

Name of Bidder\_\_\_\_\_

Phone Number(s) of Bidder\_\_\_\_\_

Address of Bidder\_\_\_\_\_

To: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Gentlemen:

The signer of this affidavit guarantees the truth and accuracy of all statements and information submitted herein in support of its bid proposal to furnish all materials, equipment, and labor, and to perform all work in accordance with the Contract Documents for:

**Perrow Park**

The undersigned hereby authorizes and requests any public official, engineer, architect, surety company, bank depository, material or equipment manufacturer or distributor, or any person, firm or corporation to furnish any pertinent information requested by Owner's Engineer, **Goodwyn Mills Cawood, LLC**, deemed necessary to verify the statements made, information submitted, or regarding the standing and general reputation of the applicant.

The undersigned has not been disqualified by any public agency in the State of Georgia except as is explained as follows: \_\_\_\_\_.

The undersigned further affirms that, if false information is furnished in support of its bid proposal, it can and will be prosecuted to the fullest extent of the law for perjury.

Dated at \_\_\_\_\_, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

Sworn to and subscribed  
before me this \_\_\_\_\_ day  
of \_\_\_\_\_, 20\_\_\_\_.\_\_\_\_\_  
Name of OrganizationBY: \_\_\_\_\_  
Title of Person Signing  
(If Corporation, Affix Seal)NOTARY PUBLIC:  
\_\_\_\_\_My Commission Expires:  
\_\_\_\_\_

State of \_\_\_\_\_

County of \_\_\_\_\_

\_\_\_\_\_, being first duly sworn, deposes and says that:

(1) He is (owner, partner, officer, representative, or agent) of \_\_\_\_\_  
the Bidder that has submitted the attached Bid;

(2) He is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid; including Section 36-91-21 (a) and other relevant parts of the Georgia Code.

(3) Such Bid is genuine and is not a collusive or sham Bid;

(4) Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees, or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly, with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the Bid price of any other bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the \_\_\_\_\_  
or any person interested in the proposed Contract; and

(5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(Signed) \_\_\_\_\_

Title \_\_\_\_\_

Subscribed and sworn to before me  
this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

Notary Public:

My Commission expires:

\_\_\_\_\_  
END OF SECTION 00 48 00

SB529 (The Ga Security and Immigration and Compliance Act) requires contractors to file an affidavit that the contractor and its subcontractors have registered and participate in a federal work authorization program intended to insure that only lawful citizens or lawful immigrants are employed by the contractor or subcontractor. This requirement of SB529 is a phased-in affidavit filing requirement based on the size of the contractor. Contractors with 500 or more employees are required to file an affidavit of compliance beginning 7/1/07. However, because the requirement is set forth in OCGA 13-10-91 which is a part of Chapter 10 of Title 13 governing public works contracts, the affidavit filing requirements of SB529 therefore only apply to public works contract.

- A. In order to insure compliance with the Immigration Reform and Control Act of 1986 (IRCA), D.L. 99-603 and the Georgia Security and Immigration Compliance Act OCGA 13-10-90 et.seq., Contractor must initial one of the sections below:

\_\_\_\_\_ Contractor has 500 or more employees and Contractor warrants that Contractor has complied with the Immigration Reform and Control Act of 1986 (IRCA), D.L. 99-603 and the Georgia Security and Immigration Compliance Act by registering at <https://www.vis-dhs.com/EmployerRegistration> and verifying information of all new employees; and by executing any affidavits required by the rules and regulations issued by the Georgia Department of Labor set forth at Rule 300-10-1-.01 et.seq.

\_\_\_\_\_ Contractor has 100-499 employees and Contractor warrants that no later than July 1, 2008, Contractor will register at <https://www.vis-dhs.com/EmployerRegistration> to verify information of all new employees in order to comply with the Immigration Reform and Control Act of 1986 (IRCA), D.L. 99-603 and the Georgia Security and Immigration Compliance Act; and by executing any affidavits required by the rules and regulations issued by the Georgia Department of Labor set forth at Rule 300-10-1-.01 et. seq.

\_\_\_\_\_ Contractor has 99 or fewer employees and Contractor warrants that no later than July 1, 2009, Contractor will register at <https://www.vis-dhs.com/EmployerRegistration> to verify information of all new employees in order to comply with the Immigration Reform and Control Act of 1986 (IRCA), D.L. 99-603 and the Georgia Security and Immigration Compliance Act; and by executing any affidavits required by the rules and regulations issued by the Georgia Department of Labor set forth at Rule 300-10-1-.01 et. seq.

- B. Contractor warrants that Contractor has included a similar provision in all written agreements with any subcontractors engaged to perform services under this Contract.

\_\_\_\_\_  
Signature Title  
Firm Name: \_\_\_\_\_  
Street/Mailing Address: \_\_\_\_\_  
City, State, Zip Code: \_\_\_\_\_  
Telephone Number: \_\_\_\_\_  
Email Address: \_\_\_\_\_



## CONTRACTOR AFFIDAVIT AND AGREEMENT

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. 13-10-91, stating affirmatively that the individual, firm, or corporation which is contracting with (name of public employer) has registered with and is participating in a federal work authorization program\* [any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603], in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

The undersigned further agrees that, should it employ or contract with any subcontractor(s) in connection with the physical performance of services pursuant to this contract with [NAME OF PUBLIC EMPLOYER], contractor will secure from such subcontractor(s) similar verification of compliance with O.C.G.A. 13-10-91 on the Subcontractor Affidavit provided in Rule 300-10-01-.08 or a substantially similar form. Contractor further agrees to maintain records of such compliance and provide a copy of each such verification to the [NAME OF THE PUBLIC EMPLOYER] at the time the subcontractor(s) is retained to perform such service.

\_\_\_\_\_  
EEV / Basic Pilot Program\* User Identification Number

\_\_\_\_\_  
BY: Authorized Officer or Agent  
(Contractor Name)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Title of Authorized Officer or Agent of Contractor

\_\_\_\_\_  
Printed Name of Authorized Officer or Agent

SUBSCRIBED AND SWORN  
BEFORE ME ON THIS THE

\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_

\_\_\_\_\_  
Notary Public  
My Commission Expires:

\* As of the effective date of O.C.G.A. 13-10-91, the applicable federal work authorization program is the "EEV / Basic Pilot Program" operated by the U. S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA).

## SUBCONTRACTOR AFFIDAVIT

By executing this affidavit, the undersigned subcontractor verifies its compliance with O.C.G.A. 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services under a contract with [NAME OF CONTRACTOR] on behalf of [NAME OF PUBLIC EMPLOYER] has registered with and is participating in a federal work authorization program\* [any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603], in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

\_\_\_\_\_  
EEV / Basic Pilot Program\* User Identification Number

\_\_\_\_\_  
BY: Authorized Officer or Agent  
(Contractor Name)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Title of Authorized Officer or Agent of Contractor

\_\_\_\_\_  
Printed Name of Authorized Officer or Agent

SUBSCRIBED AND SWORN

BEFORE ME ON THIS THE

\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_

\_\_\_\_\_  
Notary Public

My Commission Expires:

\_\_\_\_\_

\* As of the effective date of O.C.G.A. 13-10-91, the applicable federal work authorization program is the "EEV / Basic Pilot Program" operated by the U. S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA).

END OF SECTION 00 49 00

To: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Date: \_\_\_\_\_  
Project: Perrow Park

The OWNER has considered the BID submitted by you dated \_\_\_\_\_, 20\_\_\_\_\_, for the above described WORK in response to its Advertisement for Bids and Instructions to Bidders.

You are hereby notified that your BID has been accepted for items in the amount of \$\_\_\_\_\_.

You are required by the Instructions to Bidders to execute the Agreement, submit the Payment Bond, Performance Bond and Certificates of Insurance, within fifteen (15) calendar days from the date of this Notice to you.

Failure to comply with these conditions within the time specified will entitle OWNER to consider you in default, annul this Notice of Award and declare your Bid Security forfeited.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the OWNER.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

City of Jasper  
Owner

By \_\_\_\_\_

(s) \_\_\_\_\_

Title \_\_\_\_\_

#### ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged by

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

Contractor

By \_\_\_\_\_

(s) \_\_\_\_\_

Title \_\_\_\_\_

END OF SECTION 00 51 00

THIS AGREEMENT is by and between City of Jasper  
(Owner)  
and \_\_\_\_\_  
(Contractor)

Owner and Contractor, in consideration of the mutual covenants set forth herein, agree as follows:

## ARTICLE 1 WORK

- 1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

Completion of the Perrow Park as more completely described in Section "00 41 00 Bid Form".

## ARTICLE 2 THE PROJECT

- 2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

Same as Article 1.01 above.

## ARTICLE 3 ENGINEER

- 3.01 The Engineer is **Goodwyn Mills Cawood, LLC**, who is to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

## ARTICLE 4 CONTRACT TIMES

- 4.01 The date for Substantial Completion and Final Completion in accordance with Paragraph 14.04 of the General Conditions shall be **320** calendar days from the date of the Notice to Proceed.

- 4.02 Liquidated Damages

Contractor and Owner recognize that time is of the essence of this Agreement and that Owner will suffer financial loss if the Work is not completed within the time specified in Paragraph 4.01 above, plus any extensions thereof allowed in accordance with Article 12

of the General Conditions. The parties 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 each calendar day that expires after the time specified in Paragraph 4.01 for Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by Owner, Contractor shall pay Owner **\$1,000.00** for each day that expires after the time specified in Paragraph 4.01 for Substantial Completion and until the Work is completed.

## ARTICLE 5 CONTRACT PRICE

- 5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined, at the lump sum prices stated in Contractor's Bid, the amount of \_\_\_\_\_, for the several respective items of work completed subject to additions and deductions as provided in the General Conditions.

## ARTICLE 6 PAYMENT PROCEDURES

- 6.01 Submittal and Processing of Payments

Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

- 6.02 Progress Payments; Retainage

- A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the 25<sup>th</sup> day of each month during performance of the Work as provided in Paragraphs 6.02.B and C below. All such payments will be measured by the schedule of values established as provided in Paragraph 2.07.A of the General Conditions (and in the case of Lump Sum Price Work based on the percent completed) or, in the event there is no schedule of values, as provided in the General Requirements:
- B. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage of work completed but, in each case, less the aggregate of payments previously made and less such amounts as Engineer may determine or Owner may withhold as retainage, in accordance with Paragraph 14.02 of the General Conditions: If the Work has been 50 percent completed as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, Owner, on recommendation of Engineer, may determine that

as long as the character and progress of the Work remain satisfactory to them, there will be no additional retainage withheld beyond the previous retained amount.

- C. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to percent of the Work completed, less such amounts as Engineer shall determine in accordance with Paragraph 14.02.B.5 of the General Conditions and less percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the tentative list of items to be completed or corrected attached to the certificate of Substantial Completion.

#### **6.03 Final Payment**

Upon final completion and acceptance of the Work in accordance with Paragraph 14.07 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 14.07, less any liquidated damages.

### **ARTICLE 7 INTEREST**

- 7.01 All moneys not paid when due as provided in Article 8 and 14 of the General Conditions, as supplemented, accrue interest in the amount as allowed per code of Georgia 13-11-7.

### **ARTICLE 8 CONTRACTOR'S REPRESENTATIONS**

- 8.01 In order to induce Owner to enter into this Agreement, Contractor makes the following representations:
  - A. Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.
  - B. Contractor has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
  - C. Contractor is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.
  - D. Contractor has carefully studied all reports of explorations and tests of subsurface conditions, if any, at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in Paragraph 4.02 of the General Conditions and reports and drawings of a Hazardous Environmental Condition, if any, at the Site which has been identified in the Supplementary Conditions as provided in Paragraph 4.06 of the General Conditions.

- E. Contractor does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.
- F. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
- G. Contractor has correlated the information known to Contractor, information and observations obtained from visits to the Site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.
- H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
- I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

## ARTICLE 9 CONTRACT DOCUMENTS

### 9.01 Contents

- A. The Contract Documents consist of the following:
  - 1. This Agreement (pages 1 to 6, inclusive).
  - 2. Performance bond (pages 1 to 4, inclusive).
  - 3. Payment bond (pages 1 to 4, inclusive).
  - 4. General Conditions (pages 1 to 51, inclusive).
  - 5. Supplementary Conditions (pages 1 to 14, inclusive).
  - 6. Specifications as listed in the table of contents of the Project Manual.
  - 7. Drawings consisting of \_\_\_ sheets.
  - 8. Addenda (numbers \_\_\_ to \_\_\_, inclusive).
  - 9. Exhibits to this Agreement (enumerated as follows):
    - a. Contractor's Bid (pages \_\_\_ to \_\_\_, inclusive).

- b. Documentation submitted by Contractor prior to Notice of Award (pages\_\_ to \_\_, inclusive).
  - c. Insurance Certificates.
  - d. All MBE, WBE, & EEO Documentation, as applicable.
  - e. Funding Agency forms, as applicable.
- 10. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
  - a. Notice to Proceed (pages 1 to 1, inclusive).
  - b. Work Change Directives.
  - c. Change Order(s).
- B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 9.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in Paragraph 3.04 of the General Conditions.

## **ARTICLE 10 MISCELLANEOUS**

### **10.01 Terms**

Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

### **10.02 Assignment of Contract**

No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are 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.



## 10.03 Successors and Assigns

Owner and Contractor each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

## 10.04 Severability

Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

## 10.05 Other Provisions

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement in triplicate. Counterpart of each has been delivered to Owner and Contractor. All portions of the Contract Documents have been signed or identified by Owner and Contractor or on their behalf.

This Agreement will be effective on \_\_\_\_\_, \_\_\_\_ (which is the Effective Date of the Agreement).

OWNER:

City of Jasper

CONTRACTOR:

By: \_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

[CORPORATE SEAL]

Attest: \_\_\_\_\_

Attest: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Address for giving notices:

Address for giving notices:

License No: \_\_\_\_\_  
(Where applicable)

Agent for service or process:  
\_\_\_\_\_

END OF SECTION 00 52 00

To: \_\_\_\_\_ Date: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ Project: Perrow Park  
\_\_\_\_\_

You are notified that the contract Time under the above contract will commence to run on \_\_\_\_\_, 20\_\_\_\_. On this date you are to start performing your obligations under the Contract Documents and you are to achieve Substantial Completion within \_\_\_\_\_ consecutive calendar days thereafter. In accordance with Article 4 of the Agreement, the date to achieve Substantial Completion and readiness for final payment is \_\_\_\_\_, 20\_\_\_\_.

You are required to return an acknowledged copy of this NOTICE TO PROCEED to the OWNER.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

City of Jasper  
Owner

By \_\_\_\_\_

(s) \_\_\_\_\_

Title \_\_\_\_\_

## ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by

\_\_\_\_\_  
Contractor

By \_\_\_\_\_

(s) \_\_\_\_\_

Title \_\_\_\_\_

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

END OF SECTION 00 55 00

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

\_\_\_\_\_  
BIDDER (Name)

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

\_\_\_\_\_  
(Address):

\_\_\_\_\_  
OWNER:

\_\_\_\_\_  
CONTRACT:

\_\_\_\_\_  
City of Jasper

\_\_\_\_\_  
Date

\_\_\_\_\_  
200 Burnt Mountain Road

\_\_\_\_\_  
Amount

\_\_\_\_\_  
Jasper, GA 30143

\_\_\_\_\_  
Description

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.

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

CONTRACTOR AS PRINCIPAL

SURETY

Company: \_\_\_\_\_

\_\_\_\_\_  
Surety's Name and Corporate Seal  
(Seal)

Signature: \_\_\_\_\_ (Seal)  
Name and Title

By: \_\_\_\_\_  
Signature and Title  
(Attach Power of Attorney)

Print Name: \_\_\_\_\_

Attest: \_\_\_\_\_  
Signature and Title

CONTRACTOR AS PRINCIPAL  
Company:

SURETY

Signature: \_\_\_\_\_ (Seal)  
Name and Title:

\_\_\_\_\_  
Surety's Name and Corporate Seal

By: \_\_\_\_\_  
Signature and Title  
(Attach Power of Attorney)

Attest: \_\_\_\_\_  
Signature and Title:

Note: Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

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:
  - a. 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 therefore to Owner; or
  - b. Deny liability in whole or in part and notify Owner citing reasons therefore.
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.
- END OF SECTION 00 61 00
- GOODWYN MILLS CAWOOD, LLC**  
**GMC PROJECT NO. LATL240013**
- PERFORMANCE BOND**  
**00 61 00-4**

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

\_\_\_\_\_  
BIDDER (Name)

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

\_\_\_\_\_  
(Address):

OWNER:

CONTRACT:

\_\_\_\_\_  
City of Jasper

\_\_\_\_\_  
Date

\_\_\_\_\_  
200 Burnt Mountain Road

\_\_\_\_\_  
Amount

\_\_\_\_\_  
Jasper, GA 30143

\_\_\_\_\_  
Description

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

SURETY

Company: \_\_\_\_\_

\_\_\_\_\_  
Surety's Name and Corporate Seal  
(Seal)

Signature: \_\_\_\_\_ (Seal)  
Name and Title

By: \_\_\_\_\_  
Signature and Title  
(Attach Power of Attorney)

Print Name: \_\_\_\_\_



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

Attest: \_\_\_\_\_  
Signature and Title

CONTRACTOR AS PRINCIPAL  
Company:

SURETY

Signature: \_\_\_\_\_(Seal)  
Name and Title:

\_\_\_\_\_(Seal)  
Surety's Name and Corporate Seal

By: \_\_\_\_\_  
Signature and Title  
(Attach Power of Attorney)

Attest: \_\_\_\_\_  
Signature and Title:

Note: Surety companies executing bonds must appear on the Treasury Department's most Current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

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.

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.

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

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

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

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

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

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.

END OF SECTION 00 61 50

I, the undersigned, \_\_\_\_\_, the duly authorized and acting legal representative of \_\_\_\_\_ do hereby certify as follows:

I have examined the attached contract(s), surety bonds, certificate of insurance, and the manner of execution thereof, and I am of the opinion that each of the aforesaid agreements has been duly executed by the proper parties thereto acting through their duly authorized representatives; that said representatives have full power and authority to execute said agreements on behalf of the respective parties named thereon; and the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with terms, conditions and provisions thereof.

By \_\_\_\_\_

(s) \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

END OF SECTION 00 62 00

Project: Perrow Park	Owner: City of Jasper	Owner's Contract No.:
Contract:		Date of Contract:
Contractor:		Engineer's Project No.: LATL240013

**This [tentative] [definitive] Certificate of Substantial Completion applies to:**

- ☐ All Work under the Contract Documents: ☐ The following specified portions:

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\_\_\_\_\_  
Date of Substantial Completion

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Project or portion thereof designated above is hereby declared.

A [tentative] [revised tentative] [definitive] list of items to be completed or corrected, is attached hereto. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

**The responsibilities between OWNER and CONTRACTOR for security, operation, safety, maintenance, heat, utilities, insurance and warranties shall be as provided in the Contract Documents except as amended as follows:**

- ☐ Amended Responsibilities ☐ Not Amended

Owner's Amended Responsibilities:

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Contractor's Amended Responsibilities:

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The following documents are attached to and made part of this Certificate:

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This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract Documents.

\_\_\_\_\_  
Executed by Engineer

\_\_\_\_\_  
Date

\_\_\_\_\_  
Accepted by Contractor

\_\_\_\_\_  
Date

\_\_\_\_\_  
Accepted by Owner

\_\_\_\_\_  
Date

END OF SECTION 00 62 50

FROM: \_\_\_\_\_  
(Name of Contractor)

TO: \_\_\_\_\_

REFERENCE PROJECT NO. \_\_\_\_\_ ENTERED INTO THE \_\_\_\_\_ DAY

OF \_\_\_\_\_, 20\_\_, BETWEEN \_\_\_\_\_,

AND \_\_\_\_\_  
(Name of Contractor)

OF \_\_\_\_\_  
(City) (State)

FOR: \_\_\_\_\_,

PROJECT NO. \_\_\_\_\_,

LOCATED IN \_\_\_\_\_.

**KNOW ALL MEN BY THESE PRESENTS:**

1. The undersigned hereby certifies that there is due from and payable by the OWNER to the Contractor, under the contract and duly approved Change Orders and modifications the balance of \$\_\_\_\_\_.
2. The undersigned further certifies that in addition to the amount set forth in paragraph 1, there are outstanding and unsettled the following items which he claims are just and due and owing by the \_\_\_\_\_ to the Contractor:  
(Name of OWNER)
  - (a) \_\_\_\_\_
  - (b) \_\_\_\_\_
  - (c) \_\_\_\_\_
  - (d) \_\_\_\_\_(Itemize claims and amounts due) (If none, so state)
3. The undersigned further certifies that all work required under this contract including work required under change orders numbers \_\_\_\_\_ has been performed in accordance with the terms thereof, and that there are no unpaid claims for materials, supplies or equipment and no claims of laborers or mechanics for unpaid wages arising out of the performance of this contract, and that the wage rates paid by the Contractor and all Subcontractors were in conformity with the contract provisions relating to said wage rates.

4. Except for the amounts stated under paragraphs 1 and 2 hereof, the undersigned has received from \_\_\_\_\_ all sums of money payable to the undersigned under or pursuant to the above-mentioned contract or any modification or change thereof.
5. That in consideration of the payment of the amount stated in paragraph 1 hereof the undersigned does hereby release \_\_\_\_\_ from any and all claims arising under or by virtue of this contract, except the amount listed in paragraph 2 hereof; provided, however, that if for any reason, \_\_\_\_\_ does not pay in full the amount stated in paragraph 1 hereof, said deduction shall not affect the validity of this release, but the amount so deducted shall be automatically included under paragraph 2 as an amount which the Contractor has not released but will release upon payment thereof. The Contractor further certifies that upon the payment of the amount listed in paragraph 2 hereof, and of any amount which may be deducted from paragraph 1 hereof, he will release \_\_\_\_\_ from any and all claims of any nature whatsoever arising out of said contract or modification thereof, and will execute such further releases or assurances as the \_\_\_\_\_ may request.

IN WITNESS WHEREOF, the undersigned has signed and sealed this instrument this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Contractor

\_\_\_\_\_(SEAL)  
Signature

\_\_\_\_\_  
Title of Officer

\_\_\_\_\_, being first duly sworn on oath, deposes and says that he is the (Affiant)

\_\_\_\_\_ of the \_\_\_\_\_,  
Title Name of Company

second, that he has read the foregoing certificate by him subscribed as \_\_\_\_\_  
Title  
of \_\_\_\_\_.  
Name of Company

Affiant further states that the matters and things stated therein are, to the best of his knowledge and belief, true. \_\_\_\_\_  
(Affiant)

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

My Commission expires \_\_\_\_\_  
(Notary)

\_\_\_\_\_  
(Date)

END OF SECTION 00 64 00

## SECTION 00 70 00 – GENERAL CONDITIONS

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## GENERAL CONDITIONS

### 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.
  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's 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.A 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. The General Requirements pertain to all sections 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 in connection with the Work.
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.
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. *Related Entity* – An officer, director, partner, employee, agent, consultant, or subcontractor.
37. *Resident Project Representative* – The authorized representative of Engineer who may be assigned to the Site or any part thereof.
38. *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.
39. *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.
40. *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.
41. *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.
42. *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.

43. *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.
44. *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.
45. *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.
46. *Successful Bidder* – The Bidder submitting a responsive Bid to whom Owner makes an award.
47. *Supplementary Conditions* – That part of the Contract Documents which amends or supplements these General Conditions.
48. *Supplier* – A manufacturer, fabricator, supplier, distributor, materialman, 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 any Subcontractor.
49. *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.
50. *Unit Price Work* – Work to be paid for on the basis of unit prices.
51. *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.
52. *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 parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 *Terminology*

- A. The following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following 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 requirements of and information in the Contract Documents and conformance with the design concept of the completed 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.
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 which 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 three (3) 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 Time shall commence as established in the Notice to Proceed. A Notice to Proceed may be given at any time after the Effective Date of the Contract.

**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 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.

**2.06     *Preconstruction Conference***

- 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.

**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 therefor.
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, in addition to preparing an initially acceptable schedule, shall be responsible for maintaining the schedule, including updating schedule. Schedule updates shall include progression of work as compared to scheduled progress on work. Schedule updates shall accompany each pay request.

### 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 may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended 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, or Engineer, or any of, their Related Entities, 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 may

discover and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.

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 any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, 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 knew or reasonably should have known 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, code, or instruction (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 or other individual or entity performing or furnishing all of the Work under a direct or indirect contract with Contractor, 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 Engineer's consultants, including electronic media editions; or

2. reuse any of 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 adaption by Engineer.
- B. The prohibition 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. Copies of data furnished by Owner or Engineer to Contractor or 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 therefor 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.

#### 4.02 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
  1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents; and

2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Contract Documents.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general 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 Related Entities 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 at or contiguous to the Site 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.
- 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 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 therefor as provided in Paragraph 10.05. However, Owner and Engineer, and any of their Related Entities 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.

#### 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:
  - 1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data; 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 therefor 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.

#### 4.06 *Hazardous Environmental Condition at Site*

- A. *Reports and Drawings:* Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the Engineer in the preparation of the Contract Documents.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general 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 Related Entities 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.
- 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 to Contractor written notice: (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 is agreed to be resumed by Contractor, either party may make a Claim therefor 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 therefor 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, 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, 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.

- 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 current 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 must be accompanied by a certified copy of the agent's authority to act.
- 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 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.
- B. Owner shall deliver to Contractor, with copies to each additional insured 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.

#### 5.04 *Contractor's Liability Insurance*

- A. Contractor shall purchase and maintain such liability and other 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, include as additional insured (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, 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 completed operations insurance;
  4. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;
  5. 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);
  6. 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
  7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment.
    - a. 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 shall 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, 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 an insured or additional insured;
  2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, 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 caused by flood) and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;
  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 additional insured to whom a certificate of insurance has been issued.
- B. Owner shall purchase and maintain such boiler and machinery 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, 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 an insured or additional insured.
- C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with 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 additional insured 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 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 to be listed as insureds or additional insureds (and the officers, directors, 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 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 additional insureds thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, 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 to be listed as insured or additional insured (and the officers, directors, 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, 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, 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 insureds, 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 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. The superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or received from the superintendent shall be binding on Contractor.

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 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,
  - 3) it has a proven record of performance and availability of responsive service; and
- 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 that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. 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 in 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:
  - 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 or not 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 or not 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;
  - 4) and 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 either a Change Order for a substitute or 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.
- 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 item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the 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 anything in the Contract Documents 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 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 an additional insured 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, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, 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, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, 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 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 primary 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 therefor 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 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, 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. These documents shall be annotated on a continuing basis to show all changes in red made during the construction process. Upon completion of the Work, these record documents, Samples, and Shop Drawings shall be submitted with the Application for Final Payment 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. Contractor shall 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. 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, 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).
- D. 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.

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 acceptable 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*: Contractor shall also submit Samples to Engineer for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals.
    - 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 determined and verified:
    - a. all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
    - b. the suitability of all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;
    - c. all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto; and
    - d. shall also have 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.
  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 Drawing's 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 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 Related Entities 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, 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 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 respective consultants, agents, officers, directors, partners, or employees 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, 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.
- 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 via other direct contracts therefor, 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 therefor 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, a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall 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 their work and will only cut or alter their 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.

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

**8.05     *Lands and Easements; Reports and Tests***

- A. Owner's duties in respect of 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 in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by Engineer in preparing the Contract Documents.

**8.06     *Insurance***

- A. Owner's responsibilities, if any, in 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 in 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. If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents, Owner's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

**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 and will not be changed without written consent of Owner and Engineer.

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 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 therefor 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 13.03, 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 believe 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.
- 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.

## 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 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 therefor 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.B.

### 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 notice 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) is required by the provisions

of any bond to be given to a surety, 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 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 Time 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 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 include only the following items, and shall not include any of the costs itemized in Paragraph 11.01.B.

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 at the Site. 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 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 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, 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 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, expeditors, 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 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 and 11.01.B.
- 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 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 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 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 Paragraph 12.01.C.2.a 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 therefor 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 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 the Related Entities of each of them 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. All 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, inspecting, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's Site 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;
  - 2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in said 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, it must, if requested by Engineer, be uncovered 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 therefor 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 parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor 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 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 therefrom.
- 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 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 therefrom) 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 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 therefor 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 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 therefor 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 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 on the Site 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, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and to 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. that 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
  - 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
  - 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 corrects to Owner's satisfaction the reasons for such action.
- 3. If it is subsequently determined 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.

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 therefor.



- 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 therefor. 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 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 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 will certify to Owner and Engineer that such part of the Work is substantially complete and request Engineer to issue a certificate of Substantial Completion 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 therefor. 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.

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.7;
  - 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 or Owner's property might in any way be responsible 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.

*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 therefor as provided in Paragraph 10.05.

**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 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.
- 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 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 their 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.

**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 00 70 00

**SECTION 00 80 00 – SUPPLEMENTARY CONDITIONS**

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract and other provisions of the Contract Documents as indicated below. All provisions, which are not so amended or supplemented, remain in full force and effect.

The terms used in these Supplementary Conditions will have the meanings indicated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings indicated below, which are applicable to both the singular and plural thereof.

**SC-1.01 Defined Terms**

SC-1.01.A.52 Add the following paragraphs immediate after Paragraph 1.01.A.52:

53. *Engineer's Consultant* — An individual or entity having a contract with Engineer to furnish services as Engineer's independent professional associate or consultant with respect to the Project. Engineer's Consultants are identified as follows:
  - a) Geotechnical Consultant.
54. *Performance Specifications* — Specifications that require the manufacturer or supplier of equipment, materials, or systems to design, manufacture, deliver, and install products to achieve specific results under stipulated conditions of operation and in environments described in applicable Specification Sections. Performance Specification will be identified as such in the Contract Documents.

**SC-2.01 Delivery of Bonds and Evidence of Insurance**

SC-2.01.B Add the following new paragraph immediately after Paragraph 2.01.B:

1. Provide Owner, at the time Contracts are returned by Owner for execution, four (4) copies of all insurance certificates. In addition, all coverages held jointly in names of Owner and/or Engineer, three (3) additional copies of policies shall be furnished. Each additional insured identified in the Supplementary Conditions shall be provided one copy of all insurance certificates. Owner reserves the right to request complete copies of policies if deemed necessary to ascertain details of coverage not provided by the certificates. Such policy copies shall be "originally signed copies" and so designated.

**SC-2.02 Copies of Documents**

SC 2.02 Delete Paragraph 2.02.A in its entirety and insert the following in its place:

Owner shall furnish to Contractor one (1) PDF copy of the Drawings and Project Manual by email. Additional hard copies will be furnished upon request at the cost of reproduction.

Upon written request, copies of the Contract Drawings, in their entirety or by individual Drawing, may be obtained in electronic format from Engineer for the purchase sum of \$30 per Drawing. Upon receipt of payment, Contract Drawings will be in the latest version of AutoCAD and delivered via email. Transfer will be permitted after signing a CADD Agreement form.

**SC-2.03 Commencement of Contract Times; Notice to Proceed**

SC-2.03.A Amend the last sentence of Paragraph 2.03.A, by striking out the word "sixtieth" and replacing it with the word "ninetieth."

**SC-2.07 Initial Acceptance of Schedules**

SC-2.07.A.3 Add the following language at the end of Paragraph 2.07.A.3:

Contractor shall not imbalance their Schedule of Values nor artificially inflates any element thereof. If required by Owner or Engineer, Contractor shall furnish any required documentation to substantiate that the Schedule of Values is balanced and not artificially inflated. Violation of this provision by Contractor may constitute a material breach of this Agreement.

**SC-3.01 Intent**

SC-3.01.A Add the following language at the end of Paragraph 3.01.A

In the event of any conflict, discrepancy, or inconsistency among any of the Contract Documents, the following hierarchy shall control:

1. as between figures given on Drawings and scaled measurements, the figures shall govern;
2. as between large scale drawings and small-scale drawings, the large-scale drawings shall govern;
3. as between drawings and specifications, the more stringent requirement/product shall govern;
4. as between the General Conditions and the specifications, the General Conditions shall govern;
5. as between the General Conditions and the Supplementary Conditions, the Supplementary Conditions shall govern.

**SC-4.01 Availability of Lands**

SC-4.01.C Add the following new paragraph immediately after Paragraph 4.01.C:

- D. Contractor has received a list of Work areas from Owner where some easements necessary to complete this Project may not have been obtained by Owner at Bid time, and may not be available until an undetermined time during the construction period. Owner will notify Contractor when such easements have been secured and when Contractor may proceed with Work in those areas.
  1. Contractor may request an extension of Contract Times in accordance with Article 10 of the General Conditions if Owner is unable to secure easements within 30 days after the effective date of the Agreement.
  2. Requests for a change in Contract Price for areas that have been identified as unavailable at time of Bid and may impact Contractor's work production will not be considered.

**SC-4.06 Hazardous Environmental Condition at Site**

SC-4.06.A Delete Paragraph 4.06.A and replace it in its entirety with:



- A. In the preparation of Drawings and Specifications, Engineer or Engineer's Consultants did not rely upon reports of Hazardous Environmental Conditions at the Site, except as noted on Drawings.

#### **SC-5.02 Licensed Sureties and Insurers**

SC-5.02.A Add the following language at the end of Paragraph 5.02.A:

In order to determine financial strength and reputation of insurance carriers, all companies providing the coverages required shall be licensed or approved by the Insurance Bureau of the State in which the Work is performed and shall have a financial rating not lower than VI and a policyholder's service rating no lower than A- as listed in A.M. Best's Key Rating Guide, current edition. Certificates of insurance shall note A.M. Best's Rating. All bonds and insurance coverages shall be with sureties or insurance companies that are acceptable to OWNER.

#### **SC-5.03 Certificates of Insurance**

SC-5.03.A Delete Paragraph 5.03.A and replace it in its entirety with:

- A. Provide Owner, at the time Contracts are returned by Owner for execution, four (4) copies of all insurance certificates. All coverages held jointly in names of Owner and Engineer, three (3) additional copies of policies shall be furnished. Each additional insured identified in the Supplementary Conditions shall be provided one copy of all insurance certificates. Owner reserves the rights to request complete copies of policies if deemed necessary to ascertain details of coverage not provided by the certificates. Such policy copies shall be "originally signed copies" and so designated.

SC-5.03.B Add the following new paragraphs at the end of Paragraph 5.03.B:

- C. All insurance certificates shall include an endorsement stating the following:
1. Thirty (30) days advance written notice of cancellation, non-renewal, reduction, and/or material change shall be sent, by Certified Mail, to the Engineer at **Goodwyn Mills Cawood, LLC, 6120 Powers Ferry Rd. NW, Suite 500, Atlanta, Georgia 30339.**
- D. Failure of Owner to demand such certificates or other evidence of compliance with these insurance requirements or failure of Owner to identify a deficiency from evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.
1. By requiring such insurance and insurance limits herein, Owner does not represent that coverage and limits will necessarily be adequate to protect Contractor and such coverage and limits shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.
- E. The identity of the additional insureds that are to be included on Contractor's insurance policies are:

1. **City of Jasper, Georgia**, and including all elected and appointed officials, all employees and volunteers, all boards, commissions, and/or authorities and their board members, employees, and volunteers.
2. **Goodwyn Mills Cawood, LLC**

#### **SC-5.04 Contractor's Liability Insurance**

SC-5.04 Add the following new paragraph immediately after Paragraph 5.04.B:

- C. The limits of liability for the insurance required by Paragraph 5.04 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Workers' Compensation, and related coverages under Paragraphs 5.04.A.1 and A.2 of the General Conditions:
  - a. State: Statutory
  - b. Applicable Federal (i.e., Longshoreman's): Statutory
  - c. Employer's Liability:
    - 1) Each Accident: \$1,000,000
    - 2) Disease Employee Limit: \$1,000,000
    - 3) Each Employee: \$1,000,000
2. Contractor's General Liability under Paragraphs 5.04.A.3 through A.5 of the General Conditions which shall include completed operations and product liability coverages and eliminate the exclusion with respect to property under the care, custody and control of Contractor:
  - a. General per Contract Aggregate: \$2,000,000
  - b. Products - Completed Operations
    - 1) Contract Aggregate: \$2,000,000
    - 2) Each Occurrence: \$2,000,000
  - c. Personal and Advertising Injury: \$1,000,000
  - d. Each Occurrence (Bodily Injury and Property Damage): \$1,000,000
  - e. Medical Expense Limit per person: \$5,000
  - f. Excess or Umbrella Liability (Occurrence Form):
    - 1) General per Contract Aggregate: \$3,000,000
    - 2) Each Occurrence: \$3,000,000
    - 3) Policy shall include Cross Liability (Separation of Insureds) coverage.
    - 4) Policy shall include endorsement that the policy is excess to the underlying coverage with any coverage exceptions identified.
  - g. Property Damage liability insurance shall provide Explosion, Collapse, and Underground coverages where applicable.
3. Automobile Liability under Paragraph 5.04.A.6 of the General Conditions:
  - a. Bodily Injury:
    - 1) Each person: \$1,000,000
    - 2) Each Accident: \$1,000,000
  - Property Damage:
    - 1) Each Accident: \$1,000,000
  - or

- b. Combined Single Limit  
(Bodily Injury and Property Damage): \$ 1,000,000  
Include applicable No-Fault coverages.
  - c. Include all owned vehicles, non-owned vehicles, and hired vehicles.
4. The Contractual Liability coverage required by Paragraph 5.04.B.4 of the General Conditions shall provide coverage for not less than the following amounts:
- a. Bodily Injury:
    - 1. Each Accident \$1,000,000
    - 2. Contract Aggregate \$2,000,000
  - b. Property Damage:
    - 1. Each Accident \$1,000,000
    - 2. Contract Aggregate \$2,000,000

#### SC-5.05 Owner's Liability Insurance

SC-5.05.A Delete Paragraph 5.05.A in its entirety and insert the following in its place:

- A. Contractor shall procure and maintain during the Contract Times a separate Owner's and Contractor's Protective (OCP) Liability Insurance in the name of Owner in an amount not less than \$1,000,000 for injuries, including accidental death for each occurrence, and property damage in an amount not less than \$500,000 each occurrence and \$500,000 per Contract aggregate combined single limit. **Goodwyn Mills Cawood, LLC shall be named on the policy as an additional insured.**

#### SC-5.06 Property Insurance

SC-5.06.A. Delete Paragraph 5.06.A in its entirety and insert the following in its place:

- A. Contractor shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof. This insurance shall:
  - 1. Include the interests of Owner, Contractor, Subcontractors, Engineer, Engineer's Consultants and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents and other consultants and subcontractors of any of them each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured listed in Paragraph SC-5.03.E;
  - 2. Be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss and 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, and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;
  - 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 additional insured to whom a certificate of insurance has been issued.
  8. Contractor shall be responsible for any deductible or self-insured retention.
  9. The policy will not cover Contractor's or its subcontractor's or supplier's equipment, tools or other property that is not consumed during construction or does not become a part of the Project. Contractor shall bear the expense of any additional policy to cover these items.
  10. The policies of insurance required to be purchased and maintained by Contractor in accordance with this Paragraph SC-5.06 shall comply with the requirements of Paragraph 5.06.C of the General Conditions.

SC-5.06 E Delete Paragraph 5.06 E in its entirety.

#### **SC-5.07 Waiver of Rights**

SC-5.07 Add the following new paragraph immediately after Paragraph 5.07.C:

- D. Any insurance policy maintained by Contractor 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 Owner, Subcontractors, or Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them.

#### **SC-5.08 Receipt and Application of Proceeds**

SC-5.08.A In the first sentence of Paragraph 5.08.A amend "... Paragraph 5.06 will be adjusted with Owner and ..." to read "... Paragraph 5.06 will be adjusted with Contractor and ...". The remaining language in Paragraph 5.08.A shall not be altered and remain in effect.

SC-5.08.B Delete Paragraph 5.08.B in its entirety and replace with:

- E. Contractor 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 Contractor's exercise of this power. If such objection be made, Contractor 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, Contractor as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Contractor as fiduciary shall give bond for the proper performance of such duties.

#### **SC-6.01 Supervision and Superintendence**

SC-6.01.A Add the following new paragraph immediately after Paragraph 6.01.A

1. Contractor's resident superintendent shall be dedicated full-time to the project. The superintendent shall have no less than three (3) years experience as a superintendent on one or more projects similar in nature, size and scope of the Project. Contractor shall furnish to Engineer a detailed resume setting forth the qualifications of the superintendent prior to their assignment to the Project. The qualifications of the superintendent must be acceptable to Owner.

#### **SC-6.05 Substitutes and "Or-Equals"**

SC-6.05A.2.b Add the following new paragraph immediately after Paragraph 6.05A.2.b:

- 1) CONTRACTOR shall submit each substitute item with the Substitution Request Application in Section 01 63 00. No substitute item will be reviewed prior to or without this application being submitted.

SC-6.05.C Add the following new paragraph immediately after Paragraph 6.05.C

2. Additional information or data may consist of completing Engineer's vendor checklist, field mock-ups, special samples, pilot testing, or other special requirements that Engineer determines necessary to assess if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefore.

SC-6.05.E Add the following new paragraphs immediately after Paragraph 6.05.E:

1. Prior to Engineer's review of a substitute, Engineer will prepare a Work Change Directive to document Engineer's anticipated costs in reviewing Contractor's substitute. The Work Change Directive shall be executed prior to Engineer commencing its review. Engineer will notify Contractor if the hours listed on the Work Change Directive are to be exceeded.
  - a. **Engineer's minimum cost for reviewing a substitute will be \$250.**
  - b. **Engineer's hourly rate for reviewing a substitute will be \$250 per hour.**
2. Costs associated with making changes in the Contract Documents for inclusion of Contractor's substitute will be prepared by Engineer after the Contractor's substitute is accepted by Engineer and Owner.

#### **SC-6.08 Permits**

SC-6.08 Add the following new paragraphs immediately after Paragraph 6.08.A:

- B. OWNER has secured or will secure the following permits, approvals and licenses and has paid or will pay any associated charges and fees. Contractor shall pay all 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.
  1. Georgia Environmental Protection Department (EPD) permit.
  2. Georgia Department of Transportation (GDOT) Utility Facility Encroachment Permit.
  3. Soil Erosion and Sediment Control Permit.

#### **SC-6.09 Laws and Regulations**

SC-6.09.C Add the following new paragraphs immediately after Paragraph 6.09.C:

- D. While not intended to be inclusive of all Laws or Regulations for which Contractor may be responsible for under Paragraph 6.09, the following Laws or Regulations are included as mandated by statute or the for convenience of Contractor:
1. Prevailing Wages: Contractor shall pay not less than the prevailing rate of wages in accordance with Code of Georgia 34-4-3.
  2. Hours of Labor: Employees that qualify, per code of Georgia 21-2-404, may take two hours off from work to vote in an election.
  3. Discrimination: Per Georgia Code 34-1-2, Contractor, Subcontractor, nor any person on its behalf, shall refuse to hire, employ, or license, nor bar or discharge from employment, any individual between the ages of 40 and 70 years, solely upon the grounds of age, when the reasonable demands of the position do not require such an age distinction, provided that individual is qualified physically, mentally, and by training and experience to perform satisfactorily the labor assigned to them or for which they apply.
  4. Notification Requirements for Excavations: Prior to blasting or excavating with mechanized excavating equipment, Contractor shall notify, within 72 hours, the Utilities Protection Center per Code of Georgia 25-9-6.
  5. "Georgia Security and Immigration Compliance Act" of 2006: Senate Bill 529 (The Ga Security and Immigration and Compliance Act) requires contractors to file an affidavit that the contractor and its subcontractors have registered and participate in a federal work authorization program intended to insure that only lawful citizens or lawful immigrants are employed by the contractor or subcontractor. This requirement of SB529 is a phased-in affidavit filing requirement based on the size of the contractor. Contractors with 500 or more employees are required to file an affidavit of compliance beginning 7/1/07. However, because the requirement is set forth in OCGA 13-10-91 which is a part of Chapter 10 of Title 13 governing public works contracts, the affidavit filing requirements of SB529 therefore only apply to public works contracts. All required forms are located in **Section 00 49 00**.
- E. Owner will require the use of prevailing wage rates on this Project. Contractor must comply with:
1. **Section 00 85 00 - Prevailing Wage Rates, General Decision Number GA20250291, dated January 3, 2025.**
- F. Owner will utilize funds from the **Appalachian Regional Commission (ARC)** on the Project. Contractor must comply with the following requirements. **Davis Bacon Act and Related Acts; The Copeland "Anti-Kickback" Act; The Contract Work Hours and Safety Standards Act and Wage Rate Determination.** A copy of the current requirements is located in **Section 00 85 00**.

**SC-6.11 Use of Site and Other Areas**

SC-6.11.A.3 Add a new paragraph immediately after Paragraph 6.11.A.3:

4. Contractor is responsible to ensure that all activities required to perform the Work are confined to the limits of Owner's property and easements established for the Work. Permanent structures placed outside the limits of Owner's property or defined permanent easements shall be relocated as necessary at no additional change in Contract Price.

#### **SC-6.17 Shop Drawings and Samples**

SC-6.17.E Add the following new paragraphs immediately after Paragraph 6.17.E:

- F. Contractor shall furnish required submittals with sufficient information and accuracy in order to obtain required review of an item with no more than three submittals. Engineer will record Engineer's time for reviewing subsequent submittals of Shop Drawings, samples or other items requiring review and Contractor shall reimburse Owner for Engineer's charges for such time.
  1. **In the event that Contractor requests a substitution for a previously reviewed item, Contractor shall reimburse Owner for Engineer's charges for such time unless the need for such substitution is beyond the control of Contractor.**

#### **SC-6.21 Delegation of Professional Design Services**

SC-6.21.B Add the following new paragraph immediately after Paragraph 6.21.B

1. Where Performance Specifications are used, required systems, equipment, and/or materials to be incorporated in the Project are specified in terms of required results, without mandating specific means for achieving the required results. The functional requirements for the systems, equipment, and/or materials are defined together with the operating conditions and/or environment in which they must operate and general standards which must be satisfied. Performance Specifications establish minimum standards that must be met.

SC-6.21.D Add the following new paragraph immediately after Paragraph 6.21.D

1. Observations or requirements that Engineer may communicate to Contractor or others are for clarification only and shall not alter the responsibility of any party nor be interpreted to impose on Owner or Engineer any liability to Contractor, subcontractors, suppliers, or manufacturers related to systems, equipment, or materials supplied pursuant to a Performance Specification. Neither Contractor nor anyone claiming rights by virtue of this Contract or any subcontract or order placed hereunder shall seek to recover from Owner or Engineer any losses or damages suffered as a result of any deficiency, defect, or performance problem in any systems, equipment, or materials supplied pursuant to a Performance Specification.

#### **SC-7.04 Claims Between Contractors**

SC-7.04 Add the following new paragraphs immediately after Paragraph 7.03.C:

SC-7.04 Claims Between Contractors

- A. Should Contractor cause damage to the work or property of any other contractor at the Site, or should any claim arising out of Contractor's performance of the Work at the Site be made by any other contractor against Contractor, Owner, Engineer, or

the construction coordinator, Contractor shall promptly attempt to settle with such other contractor by agreement, or to otherwise resolve the dispute by arbitration or at law.

- B. Contractor shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner, Engineer, the construction coordinator and the officers, directors, partners, employees, agents and other consultants and subcontractors of each and any of them from and against all claims, costs, losses and damages (including, but not limited to, fees and charges of engineers, architects, attorneys, and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any other contractor against Owner, Engineer, Engineer's Consultants, or the construction coordinator to the extent said claim is based on or arises out of Contractor's performance of the Work. Should another contractor cause damage to the Work or property of Contractor or should the performance of work by any other contractor at the Site give rise to any other Claim, Contractor shall not institute any action, legal or equitable, against Owner, Engineer, or the construction coordinator or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from Owner, Engineer, or the construction coordinator on account of any such damage or Claim.
- C. If Contractor is delayed at any time in performing or furnishing Work by any act or neglect of another contractor, and Owner and Contractor are unable to agree as to the extent of any adjustment in Contract Times attributable thereto, Contractor may make a Claim for an extension of times in accordance with Article 12. An extension of the Contract Times shall be Contractor's exclusive remedy with respect to Owner, Engineer, and construction coordinator for any delay, disruption, interference, or hindrance caused by any other contractor. This paragraph does not prevent recovery from Owner, Engineer, or construction coordinator for activities that are their respective responsibilities.

#### **SC-8.11 Evidence of Financial Arrangements**

SC-8.11 Add the following new paragraph immediately after Paragraph 8.11.A:

- B. On request of Contractor prior to the execution of any Change Order involving a significant increase in the Contract Price, Owner shall furnish to Contractor reasonable evidence that adequate financial arrangements have been made by Owner to enable Owner to fulfill the increased financial obligations to be undertaken by Owner as a result of such Change Order.

#### **SC-9.03 Project Representative**

SC-9.03 Add the following new paragraphs immediately after Paragraph 9.03.A:

- B. The Resident Project Representative (RPR) will be a member of the Engineer's firm. The responsibilities, authority and limitations of the RPR shall be in accordance with Article 9 of the General Conditions. Additional responsibilities, authority and limitations of the RPR shall be:



1. Review the Work at the Site during the periods as stipulated in the Owner-Engineer Agreement, and in accordance with Paragraph 9.02.
2. Communicate between the Owner, Contractor and Engineer.
3. Retain a copy of shop drawing submittals, testing results, Applications for Payment, Change Orders, Claims, and other correspondence at the Site.
4. Review Contractor's Application for Payment and Change Orders prior to submission to Engineer in accordance with Paragraph 9.06.
5. Perform the preliminary determination of the actual quantities and classifications of Unit Price Work performed by Contractor for the Engineer in accordance with Paragraph 9.07.
6. RPR will not participate in specialized field or laboratory tests or inspections conducted by others, except as specifically authorized by Engineer.

**SC-11.01 Cost of the Work**

SC-11.01.A.5.c Delete Paragraph 11.01.A.5.c in its entirety and insert the following in its place:

- c. Construction Equipment and Machinery:
  - 1) Rentals of all construction equipment and machinery, and the parts thereof in accordance with rental agreements approved by 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.
  - 2) Costs for equipment and machinery owned by Contractor will be paid at a rate shown for such equipment in the Blue Book, Building and Construction (Georgia). An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs. Costs will include the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, shall cease to accrue when the use thereof is no longer necessary for the changed Work. Equipment or machinery with a value of less than \$1,000 will be considered small tools.

**SC-11.03 Unit Price Work**

SC-11.03.D. Delete Paragraph 11.03.D. in its entirety and insert the following in its place:

- D. The unit price of an item of Unit Price Work shall be subject to reevaluation and adjustment in the Contract Price under the following conditions:
  1. if the Bid price of a particular item of Unit Price Work amounts to five percent or more of the Contract Price and the variation in the quantity of that particular item of Unit Price Work performed by Contractor differs by more than twenty

five percent from the estimated quantity of such item indicated in the Agreement; and

2. if there is no corresponding adjustment with respect to any other item of Work; and
3. if Contractor believes that Contractor has incurred additional expense as a result thereof or if Owner believes that the quantity variation entitles Owner to an adjustment in the unit price, either Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if the parties are unable to agree as to the effect of any such variations in the quantity of Unit Price Work performed.

#### SC-12.01 Change of Contract Price

SC-12.01.C.2.f Add the following new paragraphs immediately after Paragraph 12.01.C.2.f:

- g. An example of how the procedure works is:

Cost of Work Performed or Furnished by Sub-Subcontractor	\$10,000.00
Sub-Subcontractor's Fee (15%)	\$1,500.00
Total Cost Paid by Subcontractor to Sub-Subcontractor	\$11,500.00
Subcontractor's Fee (5%)	575.00
Total Cost Paid by Contractor to Subcontractor	\$12,075.00
Contractor's Fee (5%)	603.75
Total Cost of Work Plus Fee	\$12,678.75

#### SC-12.03 Delays

SC-12.03.E Add the following new paragraph immediately after Paragraph 12.0.3.E

- F. CONTRACTOR has acknowledged to have taken all problems due to normal inclement weather conditions (Rainy Days) into consideration in preparing his proposed Contract Price and in establishing his time for SUBSTANTIAL COMPLETION of the WORK under this Contract. He must be prepared and must take all precautions to protect WORK from normal inclement weather due to precipitation (Rainy Days). CONTRACTOR shall provide approved facilities for protecting against normal inclement weather at all times, to the entire satisfaction of OWNER.

Completion time will not be extended for normal inclement weather. Time for completion as stated in the CONTRACT DOCUMENTS includes time for calendar days on which work cannot be performed due to normal inclement weather conditions. For the purpose of this Contract, CONTRACTOR agrees that he may expect to lose calendar days due to normal inclement weather (Rainy Days) in accordance with the following table:

January <b>11 days</b>	May <b>11 days</b>	September <b>9 days</b>
February <b>10 days</b>	June <b>12 days</b>	October <b>7 days</b>
March <b>11 days</b>	July <b>14 days</b>	November <b>9 days</b>
April <b>10 days</b>	August <b>13 days</b>	December <b>11 days</b>

Rainy Day data in calendar days for each month in the above table is taken from the Georgia Automated Environmental Monitoring Network. The specific site for this project is **Etowah River Treatment Facility, Ball Ground, Cherokee County, Georgia** weather station provided by the University of Georgia at <http://www.georgiaweather.net/>.

If the total number of calendar days lost to inclement weather for any month exceeds the total number to be expected for that month, time for completion will be extended by the difference in number of calendar days lost. Example: For the month of **January** CONTRACTOR claims work could not be performed for **13** calendar days due to excessive inclement weather and the expected number of normal inclement weather is **11** calendar days then the CONTRACTOR is entitled to a time extension of **two (2)** calendar days. All requests for time extensions must be submitted in writing to the OWNER by the 15th day of each month following the month that had excessive inclement weather. No consideration will be given to late requests. No changes in the contract price will be authorized because of adjustment of contract time due to excessive inclement weather.

#### SC-14.02 Progress Payments

SC-14.02.A.3 Delete Paragraph 14.02.A.3 in its entirety and insert the following in its place:

3. Owner shall retain five percent (5%) of the amount of total payment due the Contractor throughout the entire per Senate Bill 438 (Act 781) which amended statutes: O.C.G.A. §§ 13-10-80 and 13-10-81.

SC-14.02.C.1 Delete Paragraph 14.02.C.1 in its entirety and insert the following in its place:

1. Thirty (30) 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; except when funds with which payments are made are provided by a department or agency of the State or Federal government, in which case payment to Contractor shall be made within fifteen (15) days after Owner receives said funds.
2. If Owner fails to make payment as herein provided, interest will accrue to each such payment that is past due in the amount as allowed per Code of Georgia 13-11-7.

#### SC-14.04 Substantial Completion

SC-14.04.A Add the following new paragraph at the end of Paragraph 14.04.A:

1. Substantial Completion for any portion of the Project shall include backfilling, testing, and acceptance by Owner of the **Perrow Park** for their intended use and include opening the entire road to vehicular or pedestrian traffic.
2. Substantial Completion for the Project shall include opening the entire road to traffic after all Bid Items of work are complete.

#### SC-16.01 Methods and Procedure

SC-16.01.C Add the following new paragraph at the end of Paragraph 16.01.C.3:

- D. Notwithstanding any applicable statute of limitations, a party giving notice under Paragraph GC-16.01.C.3 shall commence an action on the Claim within one year of giving such notice. Failure to do so shall result in the Claim being time-barred and Engineer's action or denial shall become final and binding.

END OF SECTION 00 80 00

**SECTION 00 85 00 - APPALACHIAN REGIONAL COMMISSION (ARC)  
SUPPLEMENTAL CONDITIONS****Section 3: Federal Labor Standards and Requirements**

The major applicable laws and regulations relating to labor standards are:

- The Davis-Bacon Act.
- The Copeland "Anti-Kickback" Act.
- The Contract Work Hours and Safety Standards Act.

In addition, the U.S. Department of Labor (DOL) has issued Regulations that supplement the laws listed above. Please note that Labor Standards laws and regulations are also applicable to construction contracts administered by another party on behalf of the Recipient, including the Department of Transportation (DOT), Regional Development Centers (RDCs), Consultants, etc. The Recipient must remember that it is ultimately responsible for its ARC program. Therefore, Recipients are strongly encouraged to closely monitor their contracts. Recipients are also required to maintain all applicable records in their official ARC files.

a. **The Davis-Bacon Act** is applicable to **all** contracts for construction, alteration and/or repairs in excess of \$2,000 which involve ARC funds (including Redevelopment Fund projects and EIP direct loans), with the exception of rehabilitation of a "project" designed for residential use by fewer than 8 families. If ARC funds are used to finance only a portion of the construction work, labor standards are applicable to the entire construction work. Contact the DCA Field Representative if you have any questions about applicability, especially regarding projecting which include demolition.

**The requirements of Davis-Bacon include:**

1. The minimum wages to be paid to contract laborers and mechanics (including apprentices) must be based on DOL's determination of the prevailing wage rates for the locality.
2. Recipients can obtain wage rate determinations by submitting a request to DCA's ARC Administration Section using a Request for Determination form. (A sample form DCA-WRI can be found in the Appendix 1.) **The request for a wage rate determination should be submitted to DCA at least 30 days in advance of the anticipated bid advertising date. It should not be requested so early as to cause multiple modifications to be issued. Requests must include the type of construction (Heavy, Highway, Residential, or Building) and must include descriptions of the type of work to be performed under the contract. (Wage Rates are included at the end of this section.)**
3. The ARC Recipient should examine the Wage Rate Determination to ensure all needed classes of laborers or mechanics are listed in the wage determination. The Recipient must request additional classifications not included to be added to the wage decision. Note that superintendents and the Recipient must make this request in writing to the DCA Compliance Officer. The request must include a Letter from the City/County where the project is taking place, and a letter from the contractor who employs the workers whose jobs need to be classified. The letter from the contractor must include the job classifications, rates of pay, and fringe benefits (if applicable) for the additional classifications. Subcontractor requests for additional classifications must go

through the prime contractor to be considered acceptable to DOL. Note that requests to DOL have a 30-day turnaround time.

4. Ten (10) days before the bid opening date, the Recipient must contact DCA to check the wage determination to make sure it has not been updated with any new modifications of the wage decision already received.

5. Changes, modifications, etc., to wage decisions published less than 10 days prior to bid opening do not apply if the Recipient's files include documentation establishing that reasonable time to notify all participants was not available.

6. If the Recipient fails to include a wage decision, or for any reason the wrong wage decision is included, the Department of Labor may issue a special wage decision reflecting the proper rates. Those rates must be incorporated into the contract and be retroactive to the beginning of the construction. The Recipient can either terminate and re-solicit or incorporate the wage decision by change order, provided the contractor is compensated for any increases in wages resulting from the change.

7. If a contract has not been executed within 90 days of bid opening, the Recipient must confirm the correct wage rate determination to be used by contacting the ARC Compliance Officer. If a contract has *not been* executed within 90 days of bid opening, the execution date is used as the date that determines the applicable wage decision and must be the wage decision used throughout the period of construction.

8. Cross withholding allows for agency withholding of funds for wage restitution from a prime contractor under a current Davis-Bacon contract for under payments made under an unrelated Davis-Bacon contract which may have been with another agency.

b. **The Copeland "Anti-Kickback" Act requires that:**

1. Payment to employees must be made *at least once a week* and without subsequent deductions or rebate on any account except for "permissible" salary deductions.

2. The Recipient must obtain **original** payrolls and "Statements of Compliance" from contractors and subcontractors (through the general) weekly. These documents must be maintained by the Recipient for three years after completion of the work. The Recipient must check these payrolls upon receipt for accuracy and compliance with requirements.

3. The basic records supporting the payrolls must also be maintained by each employer and the Recipient for three years after completion of the work.

c. **The Contract Work Hours and Safety Standards Act requires that for contracts of \$100,000 or more:**

1. Laborers and mechanics shall not work in excess of forty ( 40) hours in any workweek unless they receive overtime compensation at a rate not less than one and one-half times the basic rate of pay for those overtime hours. The contractor or subcontractor shall be liable to any affected employee for his unpaid wages.

2. Contractors in violation of the Contract Work Hours and Safety Standards Act ( overtime law) are also liable to the federal government for liquidated damages, computed at \$10.00 per day for

each employee who worked overtime and was not paid overtime wages. Funds may be withheld from contractors and subcontractors to satisfy unpaid wages and liquidated damages. (See information concerning wire transfer of these ARC funds at d. (16) below.)

3. Contractors and subcontractors must be advised in writing that if they are aggrieved by the withholding of a sum of liquidated damages, they have the right to appeal within 50 days. Written appeal must state the reason for liquidated damages and should be addressed to DCA.

## **Wage Rate Requirements**

"General Decision Number: GA20250291 01/03/2025

Superseded General Decision Number: GA20240291

State: Georgia

Construction Type: Heavy

Counties: Barrow, Bartow, Butts, Carroll, Cherokee, Clayton, Coweta, Dawson, Dekalb, Douglas, Fayette, Fulton, Gwinnett, Haralson, Heard, Henry, Jasper, Lamar, Meriwether, Morgan, Newton, Paulding, Pickens, Pike, Rockdale, Spalding and Walton Counties in Georgia.

### **HEAVY CONSTRUCTION PROJECTS**

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	Executive Order 14026 generally applies to the contract. The contractor must pay all covered workers at least \$17.75 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025.
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If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	Executive Order 13658 generally applies to the contract. The contractor must pay all covered workers at least \$13.30 per hour (or the
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	applicable wage rate listed
	on this wage determination,
	if it is higher) for all
	hours spent performing on
	that contract in 2025.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number      Publication Date  
0                              01/03/2025

SUGA2017-006 04/15/2021

	Rates	Fringes
CARPENTER (Form Work Only).....	\$ 19.99	0.00
CARPENTER, Excludes Form Work.....	\$ 21.64	3.90
CEMENT MASON/CONCRETE FINISHER.....	\$ 19.02	3.29
ELECTRICIAN .....	\$ 28.39	9.15
LABORER: Common or General .....	\$ 13.98 **	1.38
LABORER: Pipelayer.....	\$ 17.11 **	3.23
OPERATOR:		
Backhoe/Excavator/Trackhoe .....	\$ 24.17	4.70
OPERATOR: Bulldozer.....	\$ 16.29 **	0.00
OPERATOR: Crane.....	\$ 25.45	0.00
OPERATOR: Loader .....	\$ 17.86	0.65
OPERATOR: Roller .....	\$ 11.89 **	0.00
PIPEFITTER.....	\$ 24.72	13.82



WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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\*\* Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$17.75) or 13658 (\$13.30). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

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

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

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

### Union Rate Identifiers

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

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

### Union Average Rate Identifiers

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

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

### Survey Rate Identifiers

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

6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

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

#### State Adopted Rate Identifiers

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

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#### WAGE DETERMINATION APPEALS PROCESS

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

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

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

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

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

by mail to:

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

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

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

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

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

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

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END OF GENERAL DECISION"

END OF SECTION 00 85 00

Date of Issuance: \_\_\_\_\_ Effective Date: \_\_\_\_\_

Project: Perrow Park	Owner: City of Jasper	Owner's Contract No.:
Contract:		Date of Contract:
Contractor:		Engineer's Project No.: LATL240013

**You are directed to proceed promptly with the following change(s):**

Item No.	Description

**Attachments (list documents supporting change):**


**Purpose for Work Change Directive:**

- ☐ Authorization for Work described herein to proceed on the basis of Cost of the Work due to:
- ☐ Nonagreement on pricing of proposed change.
- ☐ Necessity to expedite Work described herein prior to agreeing to changes on Contract Price and Contract Time.

**Estimated change in Contract Price and Contract Times:**

Contract Price \$ \_\_\_\_\_ (increase/decrease)      Contract Time \_\_\_\_\_ days (increase/decrease)

If the change involves an increase, the estimated amounts are not to be exceeded without further authorization.

Recommended for Approval by Engineer:	Date
Authorized for Owner by:	Date
Accepted for Contractor by:	Date
Approved by Funding Agency (if applicable):	Date:

END OF SECTION 00 94 00

No. \_\_\_\_\_

Date of Issuance: \_\_\_\_\_ Effective Date: \_\_\_\_\_

Project: Perrow Park	Owner: City of Jasper	Owner's Contract No.:
Contract:		Date of Contract:
Contractor:		Engineer's Project No.: LATL240013

**The Contract Documents are modified as follows upon execution of this Change Order:**

Description: \_\_\_\_\_

Attachments: (List documents supporting change): \_\_\_\_\_

<b>CHANGE IN CONTRACT PRICE:</b>	<b>CHANGE IN CONTRACT TIMES:</b>
Original Contract Price:	Original Contract Times: ~ Working days ~ Calendar days
\$ _____	Ready for final payment (days or date): _____
[Increase] [Decrease] from previously approved Change Orders No. _____ to No. _____:	[Increase] [Decrease] from previously approved Change Orders No. _____ to No. _____:
\$ _____	Ready for final payment (days): _____
Contract Price prior to this Change Order:	Contract Times prior to this Change Order:
\$ _____	Ready for final payment (days or date): _____
[Increase] [Decrease] of this Change Order:	[Increase] [Decrease] of this Change Order:
\$ _____	Ready for final payment (days or date): _____
Contract Price incorporating this Change Order:	Contract Times with all approved Change Orders:
\$ _____	Ready for final payment (days or date): _____

RECOMMENDED:	ACCEPTED:	ACCEPTED:
By: _____ Engineer (Authorized Signature)	By: _____ Owner (Authorized Signature)	By: _____ Contractor (Authorized Signature)
Date: _____	Date: _____	Date: _____
Approved by Funding Agency (if applicable):	By: _____	Date: _____

END OF SECTION 00 94 10

Date of Issuance: \_\_\_\_\_ Effective Date: \_\_\_\_\_

**FIELD ORDER**  
**00 94 20-1**

**SECTION 01 01 00 - SUMMARY OF WORK****PART 1 GENERAL****1.01 DESCRIPTION**

- A. The scope of work shall include all material, labor and equipment to install **New Sidewalks, Planting, Restroom Building, Changing Facility, Stage/Pavilion, Amphitheater Lawn, and Parking** with all related accessories as shown on the plans and called for in the specifications.
- B. All Work described above shall be performed as shown on the Drawings and as specified and/or as directed by the Engineer.

**1.02 PROJECT REQUIREMENTS**

- A. All materials and construction shall be in accordance with the Contract Documents and with Georgia Department of Transportation Standard Specifications for Road and Bridge Construction, Latest Edition, and their Standard Detail Drawings.
- B. The contractor is required to contact **Georgia 811** at <https://www.georgia811.com/> in the State of Georgia call **811** prior to any excavation or construction. The contractor shall first, Call Before You Dig. Second, Wait the Required Amount of Time. Third, Respect the Marks and Lastly, Dig With Care.

**1.03 PROJECT LOCATION**

The equipment and materials to be furnished will be installed at the locations shown on the Drawings or as directed by the Engineer.

**1.04 QUANTITIES**

The Owner reserves the right to alter the quantities of work to be performed or to extend or shorten the improvements at any time when and as found necessary, and the Contractor shall perform the work as altered, increased or decreased. Payment for such increased or decreased quantity will be made in accordance with the Instructions to Bidders. No allowance will be made for any change in anticipated profits nor shall such changes be considered as waiving or invalidating any conditions or provisions of the Contract and Bond.

END OF SECTION 01 01 00



**SECTION 01 23 00  
ALTERNATES**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS:**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

**1.2 SUMMARY:**

- A. Section includes administrative and procedural requirements for alternates.

**1.3 DEFINITIONS:**

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if the Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
  - 1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
  - 2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternates into the Work. No other adjustments are made to the Contract Sum.

**1.4 PROCEDURES:**

- A. Coordination:
  - 1. Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
  - 2. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Execute accepted alternates under the same conditions as other work of the Contract.
- C. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION**

**3.1 SCHEDULE OF ALTERNATES:**

- A. **Alternate No. 1:** Provide pricing for stick built bathroom and greenroom building in lieu of pre-fabricated options shown on drawings. Contractor to submit stamped drawings showing proposed structure with equal finishes and performance for final approval & permitting prior to construction.
- B. **Alternate No. 2:** Remove Green Room and associated septic field and water lines from scope of work.
- C. **Alternate No. 3:** Provide existing picnic tables to remain in lieu of newly specified furniture.

**END OF SECTION**

**SECTION 01 2500  
SUBSTITUTION PROCEDURES**

**PART 1 - GENERAL**

**1.01 SUMMARY**

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Requirements:
  - 1. Section 01 2100 "Allowances" for products selected under an allowance.
  - 2. Section 01 6000 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

**1.02 DEFINITIONS**

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
  - 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
    - a. Note: Contractor's failure to order products or materials in a timely manner will not be considered a legitimate "Cause".
  - 2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

**1.03 ACTION SUBMITTALS**

- A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
  - 1. Substitution Request Form: Use CSI Form 13.1A, "Substitution Request (After the Bidding/Negotiating Phase)".
  - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
    - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
    - b. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
    - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
    - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
    - e. Samples, where applicable or requested.
    - f. Certificates and qualification data, where applicable or requested.
    - g. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.

- h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
  - i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
  - j. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
  - k. Cost information, including a proposal of change, if any, in the Contract Sum.
  - l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
  - m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven (7) days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within fifteen (15) days of receipt of request, or seven (7) days of receipt of additional information or documentation, whichever is later.
- a. Forms of Acceptance: Change Order, Work Changes Directive, or Architect's Supplemental Instructions for minor changes in the Work.
  - b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

#### **1.04 QUALITY ASSURANCE**

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

#### **1.05 PROCEDURES**

- A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

### **PART 2 - PRODUCTS**

#### **2.01 SUBSTITUTIONS**

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than fifteen (15) days prior to time required for preparation and review of related submittals.
1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
- a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
  - b. Requested substitution provides sustainable design characteristics that specified product provided for achieving LEED prerequisites and credits.

- c. Substitution request is fully documented and properly submitted.
  - d. Requested substitution will not adversely affect Contractor's construction schedule.
  - e. Requested substitution has received necessary approvals of authorities having jurisdiction.
  - f. Requested substitution is compatible with other portions of the Work.
  - g. Requested substitution has been coordinated with other portions of the Work.
  - h. Requested substitution provides specified warranty.
  - i. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- B. Substitutions for Convenience: Architect will consider requests for substitution if received within sixty (60) days after the Notice to Proceed. Requests received after that time may be considered or rejected at discretion of Architect.
1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
- a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
  - b. Requested substitution provides sustainable design characteristics that specified product provided for achieving LEED prerequisites and credits.
  - c. Substitution request is fully documented and properly submitted.
  - d. Requested substitution will not adversely affect Contractor's construction schedule.
  - e. Requested substitution has received necessary approvals of authorities having jurisdiction.
  - f. Requested substitution is compatible with other portions of the Work.
  - g. Requested substitution has been coordinated with other portions of the Work.
  - h. Requested substitution provides specified warranty.
  - i. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

### **PART 3 - EXECUTION (NOT USED)**

#### **END OF SECTION**

**SECTION 01 29 00 - PAYMENT PROCEDURES****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Requirements:
  - 1. Section 01 26 00 "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
  - 2. Section 01 32 00 "Construction Progress Documentation" for administrative requirements governing the preparation and submittal of the Contractor's construction schedule.

**1.03 DEFINITIONS**

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

**1.04 SCHEDULE OF VALUES**

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.
  - 1. Coordinate line items in the schedule of values with other required administrative forms and schedules, including the following:
    - a. Application for Payment forms with continuation sheets.
    - b. Submittal schedule.
    - c. Items required to be indicated as separate activities in Contractor's construction schedule.
  - 2. Submit the schedule of values to Engineer at earliest possible date, but no later than 14 days before the date scheduled for submittal of initial Applications for Payment.
  - 3. Subschedules for Phased Work: Where the Work is separated into phases requiring separately phased payments, provide subschedules showing values coordinated with each phase of payment.

4. Subschedules for Separate Elements of Work: Where the Contractor's construction schedule defines separate elements of the Work, provide subschedules showing values coordinated with each element.
- B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section where a submittal is required.
1. Identification: Include the following Project identification on the schedule of values:
    - a. PERROW PARK and location.
    - b. Name of Architect.
    - c. Architect's project number.
    - d. Contractor's name and address.
    - e. Date of submittal.
  2. Arrange schedule of values consistent with format of Contract Documents used (EJCDC, AIA, etc.).
  3. Arrange the schedule of values in tabular form with separate columns to indicate the following for each item listed:
    - a. Related Specification Section or Division.
    - b. Description of the Work.
    - c. Name of subcontractor.
    - d. Name of manufacturer or fabricator.
    - e. Name of supplier.
    - f. Change Orders (numbers) that affect value.
    - g. Dollar value of the following, as a percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
      - 1) Labor.
      - 2) Materials.
      - 3) Equipment.
  4. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with Project Manual table of contents. Provide multiple line items for principal subcontract amounts in excess of five percent of the Contract Sum.
    - a. Include separate line items under contractor and principal subcontracts for Project closeout requirements in an amount totaling no less than 2.5% of the Contract Sum and subcontract amount.
  5. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
  6. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
    - a. Differentiate between items stored on-site and items stored off-site. If required, include evidence of insurance.

7. Provide separate line items in the schedule of values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
8. Allowances: Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
9. Each item in the schedule of values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
  - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the schedule of values or distributed as general overhead expense, at Contractor's option.
10. Schedule Updating: Update and resubmit the schedule of values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

#### 1.05 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as certified by engineer and contractor and paid for by Owner.
  1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
- C. Payment Application Times: Submit Application for Payment to Architect by the 25<sup>th</sup> day of the month. The period covered by each Application for Payment is one month, ending on the last day of the month.
  1. Submit draft copy of Application for Payment five days prior to due date for review by Engineer.
- D. Application for Payment Forms: Use form consistent with Contract Documents (EJCDC, AIA, etc.) for Applications for Payment.
- E. Application for Payment Forms: Use forms provided by Owner for Applications for Payment. Sample copies are included in Project Manual.
- F. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor.
  1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.



2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
  3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- G. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.
1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment, for stored materials.
  2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
  3. Provide summary documentation for stored materials indicating the following:
    - a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
    - b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
    - c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.
- H. Transmittal:
1. Deliverable:
    - a. Hard Copy: Submit three (3) signed and notarized original copies of each Application for Payment to Engineer by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.
    - b. Digital: Submit one (1) signed and notarized copy of each Application for Payment to Engineer by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.
  2. Contractor's Affidavit of Payment to Subcontractors
    - a. Shall be submitted with each Application for Payment.
  3. Contractor Progress Lien Waivers – Specification Section 01 29 00 A
    - a. Shall be submitted with each Application for Payment after No. 1.
  4. Subcontractor/Supplier Lien Waivers – Specification Section 01 29 00 B
    - a. Shall be submitted with each Application for Payment after No. 1.
  5. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.

- I. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
  2. Schedule of values.
  3. Contractor's construction schedule (preliminary if not final).
  4. Products list (preliminary if not final).
  5. List of Contractor's staff assignments.
  6. Copies of building and other local/state permits.
  7. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
  8. Report of preconstruction conference.
  9. Certificates of insurance and insurance policies.
  10. Performance and payment bonds.
  11. Data needed to acquire Owner's insurance.
- J. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
  2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- K. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
  2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
  3. Updated final statement, accounting for final changes to the Contract Sum.
  4. "Contractor's Affidavit of Payment of Debts and Claims."
  5. "Contractor's Affidavit of Release of Liens."
  6. "Consent of Surety to Final Payment."
  7. Evidence that claims have been settled.
  8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
  9. Final liquidated damages settlement statement.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 29 00

**SECTION 01 30 10 - PROJECT MANAGEMENT AND COORDINATION****PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Preconstruction Conference.
- B. Project Coordination
- C. Project Coordination Meetings.

**1.02 PRECONSTRUCTION CONFERENCE**

- A. The Engineer shall schedule the preconstruction conference prior to the issuance of the Notice to Proceed.
- B. Representatives of the following parties are to be in attendance at the meeting:
  - 1. Owner.
  - 2. Engineer.
  - 3. Contractor and superintendent.
  - 4. Major subcontractors.
  - 5. Representatives of governmental or regulatory agencies when appropriate.
- C. The agenda for the preconstruction conference shall consist of the following as a minimum:
  - 1. Distribute and discuss a list of major subcontractors and a tentative construction schedule.
  - 2. Critical work sequencing.
  - 3. Designation of responsible personnel and emergency telephone numbers.
  - 4. Processing of field decisions and change orders.
  - 5. Adequacy of distribution of Contract Documents.
  - 6. Schedule and submittal of shop drawings, product data and samples,

7. Pay request format, submittal cutoff date, paydate and retainage.
8. Procedures for maintaining record documents.
9. Use of premises, including office and storage areas and Owner's requirements.
10. Major equipment deliveries and priorities.
11. Safety and first aid procedures.
12. Security procedures.
13. Housekeeping procedures.
14. Workhours.
15. Execute Agreement and Notice to Proceed.

#### **1.03 COORDINATION**

The Contractor shall assume full responsibility for the coordination of the installation of all equipment, materials and products furnished under these Contract Documents. The Contractor shall be completely responsible for verification that all structures, piping and equipment components furnished by the Contractor and/or subcontractors and suppliers are compatible. The Contractor shall start-up each equipment system and shall make all necessary alteration. All such alterations shall be made at the Contractor's expense.

#### **1.04 PROJECT COORDINATION MEETINGS**

- A. Schedule regular monthly meetings as directed by the Engineer.
- B. Hold called meetings as the progress of the Work dictates.
- C. The meetings shall be held at the location indicated by the Engineer.
- D. Representatives of the following parties are to be in attendance at the meetings:
  1. Engineer.
  2. Contractor and superintendent.
  3. Major subcontractors as pertinent to the agenda.
  4. Owner's representative as appropriate.

5. Representatives of governmental or other regulatory agencies as appropriate.

E. The minimum agenda for progress meetings shall consist of the following:

1. Review and approve minutes of previous meetings. Contractor is required to keep minutes.
2. Review work progress since last meeting.
3. Note field observations, problems and decisions.
4. Identify problems which impede planned progress.
5. Review off-site fabrication problems.
6. Review Contractor's corrective measures and procedures to regain plan schedule.
7. Review Contractor's revision to the construction schedule as outlined in the Supplementary Conditions.
8. Review submittal schedule; expedite as required to maintain schedule.
9. Maintenance of quality and work standards.
10. Review changes proposed by Owner for their effect on the construction schedule and completion date.
11. Complete other current business.

END OF SECTION 01 30 10

**SECTION 01 3300  
SUBMITTAL PROCEDURES**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

- A. The Contract Documents, including but not limited to, the Drawings and individual Specification Sections and Contractor's Submission Schedule, apply to this Section.

**1.2 SUMMARY**

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Sections:
  - 1. Section 01 40 00 – Quality Requirements, for submitting test and inspection reports
  - 2. Section 01 77 00 – Closeout Procedures, for documents required to closeout contract.

**1.3 DEFINITIONS**

- A. Action Submittals: Written and graphic information and physical samples that require the Landscape Architect's responsive action. Action submittals are those submittals indicated in individual specification sections as action submittals.
- B. Informational Submittals: Written and graphic information and physical samples that do not require the Landscape Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual specification sections as informational submittals.
- C. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.
- D. Contractor's Submission Schedule: The itemized list of project submission requirements printed as a report from Contract Manager. The Contractor enters the date each item needs to be submitted in order to meet the CPM schedule and returns this document to the Landscape Architect and Owner.

**1.4 ACTION SUBMITTALS**

- A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making

corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.

1. Submittal number shall be five digits, numbered sequentially starting with 00001. Re-submittals shall include a dash and then a sequential number (e.g., 00001-1) starting with 1.
  2. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
  3. Submit in accordance with start-up construction schedule. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
    - a. Submit revised submittal schedule to reflect changes in current status and timing for submittals as changes occur.
  4. Submittal Schedule shall be submitted to Landscape Architect prior to commencement of construction activities.
- B. Format for Submittals: Submit required submittals in electronic (PDF) file format.

## **1.5 SUBMITTAL ADMINISTRATIVE REQUIREMENTS**

- A. Landscape Architect's Digital Data Files: Electronic copies of CAD Drawings of the Contract Drawings will not be provided by the Landscape Architect for the Contractor's use in preparing submittals.
- B. Coordination: Coordinate preparation and processing of submittals with the performance of the Work.
1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
  2. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
  3. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
    - a. The Owner or Landscape Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow time for submittal review, including time for re-submittals, as follows. Time for review shall commence on the Landscape Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including re-submittals.
1. Initial Review: Allow (10) days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. The Landscape Architect will advise the Contractor when a submittal being processed must be delayed for coordination.
  2. Re-submittal Review: Allow (10) days for review of each re-submittal.
  3. Sequential Review: Where sequential review of submittals by the Architect's consultants, the Owner, or other parties is indicated, allow (14) days for initial review of each submittal.

- D. Identification and Information: Identify and incorporate information in each PDF submittal file as follows:
1. Name file with submittal number, including revision identifier as follows:
    - a. 00001-2\_identifier (where 00001 indicates the five digit submittal number, 2 indicates the revision, and identifier indicates the submittal title or description)
  2. Include Transmittal.
- E. Transmittal: Assemble each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. The Landscape Architect will reject submittals, without review, received from sources other than the Contractor.
1. A Transmittal shall accompany all sample submittals submitted to the Landscape Architect for approval.
  2. Transmittal Format: Use the Contractor's office form.
  3. Transmittal Information: Provide locations on form for the following information:
    - a. Project name.
    - b. Date.
    - c. Name of Landscape Architect (To:).
    - d. Source (From:).
    - e. Submittal number.
    - f. Names of construction manager, contractor, subcontractor, manufacturer, and supplier.
    - g. Submittal purpose and description.
    - h. Indication partial submittal when applicable.
    - i. Drawing number and detail references, as appropriate.
    - j. Location(s) where product is to be installed, as appropriate.
    - k. Distribution record.
    - l. Remarks.
    - m. Other necessary identification.
    - n. Signature of transmitter.
    - o. For physical sample(s): Include addendum depicting actual photograph(s) of sample(s) being submitted for approval.**
- F. Options: Identify options requiring selection by the Landscape Architect.
- G. Deviations: **Highlight, encircle, or otherwise identify deviations from the Contract Documents on submittals.**
- H. Submittals: Unless the Landscape Architect observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal or submission.
- I. Re-submittals: Make re-submittals in same form and format.
1. Note date and content of previous submittal.
  2. Note date and content of revision in label or title block and clearly indicate extent of revision.
  3. Resubmit submittals until they are marked with approval notation from the Landscape Architect's action stamp.



- J. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, and installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- K. Use for Construction: Use only final submittals that are marked with approval notation from the Landscape Architect's action stamp.

## **PART 2 - PRODUCTS**

### **2.1 SUBMITTAL PROCEDURES**

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
  - 1. Submit submittals via email as electronic (PDF) files, to the Landscape Architect.
    - a. The Landscape Architect, through the Owner, will return annotated file. Annotate and retain one copy of file as an electronic Project turnover document file.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
  - 1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
  - 2. Mark each copy of each submittal to show which products and options are applicable.
  - 3. Include the following information, as applicable:
    - a. Submittal Package number and Submittal Item number.
    - b. Manufacturer's catalog cuts.
    - c. Manufacturer's product specifications.
    - d. Standard color charts.
    - e. Statement of compliance with specified referenced standards.
    - f. Testing by recognized testing agency.
    - g. Application of testing agency labels and seals.
    - h. Notation of coordination requirements.
    - i. Availability and delivery time information.
  - 4. For equipment, include the following in addition to the above, as applicable:
    - a. Wiring diagrams showing factory-installed wiring.
    - b. Printed performance curves.
    - c. Operational range diagrams.
    - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
  - 5. Submit Product Data concurrent with Samples.
  - 6. Submit Product Data in electronic (PDF) file format.

- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
    - a. Submittal Package number and Submittal Item number.
    - b. Identification of products.
    - c. Schedules.
    - d. Compliance with specified standards.
    - e. Notation of coordination requirements.
    - f. Notation of dimensions established by field measurement.
    - g. Relationship and attachment to adjoining construction clearly indicated.
    - h. Seal and signature of professional engineer if specified.
  2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 30 by 42 inches.
  3. Submit Shop Drawings in electronic (PDF) file format.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package with transmittal as described in this section.
  2. **Submit copy of transmittal accompanying Sample via email in electronic (PDF) file format.**
  3. Identification: Attach label to Samples that includes the following:
    - a. Submittal Package number and Submittal Item number.
    - b. Generic description of Sample.
    - c. Product name and name of manufacturer.
    - d. Sample source.
  4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
    - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
    - b. Samples not incorporated into the Work, or otherwise designated as the Owner's property, are the property of the Contractor.
  5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available. The Landscape Architect, through the Owner, will return submittal with options selected.
  6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of

color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.

- a. Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
  - b. If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least six sets of paired units that show approximate limits of variations.
- E. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
1. Name, address, and telephone number of entity performing subcontract or supplying products.
  2. Number and title of related Specification Section(s) covered by subcontract.
  3. Drawing number and detail references, as appropriate, covered by subcontract.
  4. Submit subcontract list in PDF electronic file, to the Owner.
- F. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- G. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on American Welding Society (AWS) forms. Include names of firms and personnel certified.
- H. OSHA Certificates: Upon the Owner's request, submit certificates of the OSHA 10-hour Construction Safety and Health Course – S1537-A, for all laborers, workers and mechanics working on site.
- I. Installer Certificates: Upon the Owner's request, submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- J. Manufacturer Certificates: Upon the Owner's request, submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- K. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.

**PART 3 - EXECUTION****3.1 CONTRACTOR'S REVIEW**

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to the Landscape Architect.
- B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, name of reviewer, date of the Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

**3.2 LANDSCAPE ARCHITECT'S ACTION**

- A. General: The Landscape Architect will not review submittals that do not bear the Contractor's approval stamp and will return them without action.
- B. Action Submittals: The Landscape Architect will review each submittal, make marks to indicate corrections or modifications required, and return it through the Owner. The Landscape Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action.
- C. Informational Submittals: The Landscape Architect will review each submittal and will return it if it does not comply with requirements.
- D. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from the Landscape Architect.
- E. Incomplete submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
- F. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

**END OF SECTION**

**SECTION 01 4000  
QUALITY REQUIREMENTS**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
  - 1. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
  - 2. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- C. See Divisions 2 through 32 Sections for specific test and inspection requirements.

**1.2 DEFINITIONS**

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.
- C. Mockups: Full-size, physical assemblies that are constructed on-site. Mockups are used to verify selections made under sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing, or operation; they are not Samples. Approved mockups establish the standard by which the Work will be judged.
- D. Laboratory Mockups: Full-size, physical assemblies that are constructed at testing facility to verify performance characteristics.

- E. Preconstruction Testing: Tests and inspections that are performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.
- F. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.
- G. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.
- H. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- I. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- J. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
  - 1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to trades people of the corresponding generic name.
- K. Experienced: When used with an entity, "experienced" means having successfully completed a minimum of 3 previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

### 1.3 CONFLICTING REQUIREMENTS

- A. General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

**1.4 SUBMITTALS**

- A. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- B. Reports: Prepare and submit certified written reports that include the following:
  - 1. Date of issue.
  - 2. Project title and number.
  - 3. Name, address, and telephone number of testing agency.
  - 4. Dates and locations of samples and tests or inspections.
  - 5. Names of individuals making tests and inspections.
  - 6. Description of the Work and test and inspection method.
  - 7. Identification of product and Specification Section.
  - 8. Complete test or inspection data.
  - 9. Test and inspection results and an interpretation of test results.
  - 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
  - 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
  - 12. Name and signature of laboratory inspector.
  - 13. Recommendations on retesting and re-inspecting.
- C. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

**1.5 QUALITY ASSURANCE**

- A. General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- C. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed

for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.

- F. Specialists: Certain sections of the Specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
  - 1. Requirement for specialists shall not supersede building codes and regulations governing the Work.
- G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 548; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
  - 1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
  - 2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
- H. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- I. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
  - 1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect.
  - 2. Notify Architect seven days in advance of dates and times when mockups will be constructed.
  - 3. Demonstrate the proposed range of aesthetic effects and workmanship.
  - 4. Obtain Architect's approval of mockups before starting work, fabrication, or construction.
  - 5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
  - 6. Demolish and remove mockups when directed, unless otherwise indicated.
- J. Laboratory Mockups: Comply with requirements of preconstruction testing and those specified in individual Sections in Divisions 2 through 16.

## **1.6 QUALITY CONTROL**

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
  - 1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.



2. Costs for retesting and re-inspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor.
- B. Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
    - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
  2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
  3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
  4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
  5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 1 Section "Submittal Procedures."
- D. Retesting/Re-inspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and re-inspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- E. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
  2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
  3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
  4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
  5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
  6. Do not perform any duties of Contractor.
- F. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:

1. Access to the Work.
  2. Incidental labor and facilities necessary to facilitate tests and inspections.
  3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
  4. Facilities for storage and field curing of test samples.
  5. Delivery of samples to testing agencies.
  6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
  7. Security and protection for samples and for testing and inspecting equipment at Project site.
- G. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.

## **1.7 SPECIAL TESTS AND INSPECTIONS**

- A. Special Tests and Inspections: Owner will engage a qualified testing agency to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner, and as follows:
- B. Special Tests and Inspections: Conducted by a qualified testing agency as required by authorities having jurisdiction, as indicated in individual Specification Sections, and as follows:
1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
  2. Notifying Architect and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
  3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect with copy to Contractor and to authorities having jurisdiction.
  4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
  5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
  6. Retesting and re-inspecting corrected work.

## **PART 2 - PRODUCTS (NOT USED)**

## **PART 3 - EXECUTION**

### **3.1 REPAIR AND PROTECTION**

- C. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

1. Provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.
  2. Comply with the Contract Document requirements for Division 1 Section "Cutting and Patching."
- D. Protect construction exposed by or for quality-control service activities.
- E. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

**END OF SECTION**

**SECTION 01 45 00 - TESTING LABORATORY SERVICES****PART 1 GENERAL****1.01 SCOPE**

- A. This Section includes testing which the Owner may require, beyond that testing required of the manufacturer, to determine if materials provided for the Project meet the requirements of these Specifications.
- B. This work also includes all testing required by the Owner to verify work performed by the Contractor is in accordance with the requirements of these Specifications, i.e., concrete strength and slump testing, soil compaction, etc.
- C. This work does not include materials testing required in various sections of these Specifications to be performed by the manufacturer, e.g., testing of pipe.

**1.02 SECTION INCLUDES**

- A. Selection of Testing Laboratory.
- B. Laboratory Duties.
- C. Payment for Testing Services.
- D. Contractor Responsibilities.
- E. Schedules for Testing.
- F. Transporting Samples.

**1.03 SELECTION OF TESTING LABORATORY**

The testing laboratory or laboratories will be selected by the owner. The testing laboratory or laboratories will work for the owner.

**1.04 LABORATORY DUTIES**

- A. Cooperate with the Owner, Engineer and Contractor.
- B. Provide qualified personnel promptly on notice.

- C. Perform specified inspections, sampling and testing of materials.
  - 1. Comply with specified standards, ASTM, other recognized authorities, and as specified.
  - 2. Ascertain compliance with requirements of the Contract Documents.
- D. Promptly notify the Engineer and Contractor of irregularity or deficiency of work which are observed during performance of services.
- E. Promptly submit three copies (two copies to the Engineer and one copy to the Contractor) of report of inspections and tests in addition to those additional copies required by the Contractor with the following information included:
  - 1. Date issued
  - 2. Project title and number
  - 3. Testing laboratory name and address
  - 4. Name and signature of inspector
  - 5. Date of inspection or sampling
  - 6. Record of temperature and weather
  - 7. Date of test
  - 8. Identification of product and Specification section
  - 9. Location of Project
  - 10. Type of inspection or test
  - 11. Results of test
  - 12. Observations regarding compliance with the Contract Documents
- F. Perform additional services as required.
- G. The laboratory is not authorized to release, revoke, alter or enlarge on requirements of the Contract Documents, or approve or accept any portion of the Work.

**1.05 PAYMENT FOR TESTING SERVICES**

- A. The cost of testing services required by the Contract shall be paid for by the Owner. This includes concrete, soil, and asphalt. This cost may or may not be provided for as an allowance in the Bid Schedule.
- B. The cost of additional testing services not specifically required in the Specifications, but requested by the Owner or Engineer, shall be paid for by the Owner.

- C. The cost of material testing described in various sections of these Specifications or as required in referenced standards to be provided by a material manufacturer (i.e. manhole and pipe vacuum/pressure testing), shall be included in the price bid for that item and shall not be paid for by the Owner.
- D. The cost of retesting any item that fails to meet the requirements of these Specifications shall be paid for by the Contractor. Retesting shall be performed by the testing laboratory working for the Owner.

#### 1.06 CONTRACTOR RESPONSIBILITIES

- A. Contractor will inform the Engineer a minimum of 24-hours prior to all testing and the Engineer will schedule ALL testing.
- B. Cooperate with laboratory personnel, provide access to Work and/or manufacturer's requirements.
- C. Provide to the laboratory, representative samples, in required quantities, of materials to be tested.
- D. Furnish copies of mill test reports.
- E. Furnish required labor and facilities to:
  - 1. Provide access to Work to be tested;
  - 2. Obtain and handle samples at the site (if certified to do so);
  - 3. Facilitate inspections and tests;
  - 4. Build or furnish a holding box(es) for concrete cylinders or other samples as required by the laboratory.
- F. Notify the Engineer a minimum of 24-hours in advance of operation to allow for the assignment of laboratory personnel and schedules of tests.
- G. Laboratory Tests: Where such inspection and testing are to be conducted by an independent laboratory agency, the sample(s) shall be selected by such laboratory or agency, or the Engineer, and shipped to the laboratory by the Contractor at Contractor's expense.
- H. Copies of all correspondence between the Contractor and testing agencies shall be provided to the Engineer.
- I. If the Contractor disagrees with the approved Engineers testing agency's methods or results during an onsite test, the Contractor may have another testing agency conduct an independent evaluation at the Contractor's expense. After an independent evaluation is performed, the contractor will submit their results to the engineer for review.

**1.07 SCHEDULES FOR TESTING****A. Establishing Schedule**

1. The Engineer shall, by advance discussion with the Contractor and testing laboratory selected by the Owner, determine the time required for the laboratory to perform its tests and to issue each of its findings, and make all arrangements for the testing laboratory to be on site to provide the required testing.
2. Provide all required time within the construction schedule.

**B. When changes of construction schedule are necessary during construction, coordinate all such changes of schedule with the Engineer.****C. When the testing laboratory is ready to test according to the determined schedule, but is prevented from testing or taking specimens due to incompleteness of the Work, all extra costs for testing attributable to the delay will be back-charged to the Contractor and shall not be borne by the Owner.****1.08 TRANSPORTING SAMPLES**

The Contractor shall be responsible for transporting all samples, except those taken by testing laboratory personnel, to the testing laboratory.

END OF SECTION 01 45 00

**SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS****PART 1 GENERAL****1.01 SCOPE**

Section includes requirements for installation, maintenance, and removal of temporary utilities, controls, facilities, and construction aids during construction.

**1.02 SECTION INCLUDES**

- A. Temporary facilities which may be necessary for this work include, but are not necessarily limited to:
  - 1. Temporary utilities such as water, sewer and electricity.
  - 2. First aid facilities.
  - 3. Parking facilities
  - 4. Dust control
  - 5. Environmental Protection
  - 6. Security

**1.03 TEMPORARY UTILITIES**

- A. Potable Water: Available from the Owner. Any required tap fees shall be paid by the owner. Contractor shall pay costs to tap existing water pipeline and connect the pipeline to the designated water source. Potable water can be used for construction and for drinking. Potable water must be available to the workers for their consumption during any construction activities. However, the water for worker consumption can be from a cooler.
- B. Sanitary Sewer: Not available from the Owner. Contractor must provide portable toilets or portable septic facilities during and construction activities. The contractor shall pay all costs for sanitary facilities. Contractor's personnel may not use Owner's or Engineer's rest rooms.
- C. Electricity: Not available from Owner. Contractor shall pay all costs to connect its facilities to electricity.



**1.04 FIRST AID FACILITIES**

The Contractor shall provide a suitable first aid station, equipped with all facilities and medical supplies necessary to administer emergency first aid treatment. The Contractor shall have standing arrangements for the removal and hospital treatment of any injured person. All first aid facilities and emergency ambulance service shall be made available by the Contractor to the Owner and the Engineer's personnel.

**1.05 PARKING FACILITIES**

- A. Parking facilities on and off-site for the Contractor's and Contractor's Subcontractors' personnel shall be the Contractor's responsibility. Storage and work facilities provided by the Owner can be used for parking by the Contractor's or subcontractor's personnel only with written permission from the Owner.
- B. The Contractor shall maintain the gravel parking area in the vicinity of the Engineer's trailers (as shown on the drawings) throughout the duration of the contract through periodic restoration (including regrading and dressing the surface with fresh graded aggregate base [GAB]) of the gravel surface to lines and grades existing at the time of contract award. Deterioration of the areas due to erosion or intrusion of other material (such as mud, dirt, silt, etc.) shall be repaired as necessary or determined by the Engineer.

**1.06 DUST CONTROL**

Limit blowing dust caused by construction operations by applying water or employing other appropriate means or methods to maintain dust control, subject to the approval of the Owner. As a minimum, this may require the use of a water wagon twice a day to suppress dusty conditions.

**1.07 ENVIRONMENTAL PROTECTION**

The Contractor shall provide and maintain environmental protection of the site during the life of the contract as defined herein. Environmental protection shall be provided to correct conditions that develop during the construction of permanent environmental protection features, or that are required to control pollution that develops during normal construction activities but are not associated with the permanent control structures included in the Project. The Contractor's activities shall comply with all applicable federal, state and local regulations pertaining to water, air, solid waste, hazardous and oily substances, fish and wildlife, historical and Archaeological Resources, and noise pollution.

**1.08 SECURITY**

Provide security and facilities to protect Work, and existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.

END OF SECTION 01 50 00

**SECTION 01 63 00 - SUBSTITUTION AND OR-EQUAL REQUEST APPLICATION**

CONTRACTOR: \_\_\_\_\_ Request Number: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Date: \_\_\_\_\_  
Project: \_\_\_\_\_  
\_\_\_\_\_  
To: Goodwyn Mills Cawood, LLC Contract: \_\_\_\_\_

Proposed Substitution: \_\_\_\_\_  
Specification Title: \_\_\_\_\_ Description: \_\_\_\_\_  
Section: \_\_\_\_\_ Page: \_\_\_\_\_ Article/Paragraph: \_\_\_\_\_  
Reason for not providing specified item: \_\_\_\_\_  
\_\_\_\_\_

**SUBSTITUTION IMPACT**

Will proposed Substitution affect other portions of the Work: ☐ No ☐ Yes

If yes, provide brief explanation: \_\_\_\_\_  
\_\_\_\_\_

Will proposed Substitution affect Contract Price: ☐ No ☐ Yes

If yes, provide

Deduct Price: \$ \_\_\_\_\_

Add Price: \$ \_\_\_\_\_

Will proposed Substitution affect Contract Times: ☐ No ☐ Yes

If yes, provide number of calendar days: \_\_\_\_\_

**CONTACT INFORMATION**

Manufacturer: \_\_\_\_\_

Address: \_\_\_\_\_

Contact Person: \_\_\_\_\_ Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Supplier: \_\_\_\_\_

Address: \_\_\_\_\_

Contact Person: \_\_\_\_\_ Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Installer/Subcontractor: \_\_\_\_\_

Address: \_\_\_\_\_

Contact Person: \_\_\_\_\_ Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Similar Installations; attach additional information, if required:

Project: \_\_\_\_\_ Owner: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_  
Contact Person: \_\_\_\_\_ Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Date Installed: \_\_\_\_\_ ENGINEER: \_\_\_\_\_  
Contact Person: \_\_\_\_\_ Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Address Installed: \_\_\_\_\_

Project: \_\_\_\_\_ Owner: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_  
Contact Person: \_\_\_\_\_ Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Date Installed: \_\_\_\_\_ ENGINEER: \_\_\_\_\_  
Contact Person: \_\_\_\_\_ Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Address Installed: \_\_\_\_\_

Project: \_\_\_\_\_ Owner: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_  
Contact Person: \_\_\_\_\_ Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Date Installed: \_\_\_\_\_ ENGINEER: \_\_\_\_\_  
Contact Person: \_\_\_\_\_ Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Address Installed: \_\_\_\_\_

#### PRODUCT INFORMATION

Brief description of differences between proposed substitution and specified product: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Copy of project specification with exceptions noted attached: ☐ Yes ☐ No

History: ☐ New Product ☐ 2-5 years old ☐ 5-10 years old ☐ More than 10 years old

Warranty same as specified product: ☐ Yes ☐ No

If no, provide proposed warranty period: \_\_\_\_\_

Closest maintenance service and replacement parts location: \_\_\_\_\_

\_\_\_\_\_

Supporting Data Attached: ☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Other \_\_\_\_\_

**CONTRACTOR CERTIFICATIONS**

The Undersigned Certifies:

1. Proposed substitution has been fully investigated and determined by CONTRACTOR to be equal or superior in all respects to specified product.
2. Cost data provided in this request includes all manufacturer's, supplier's, subcontractor's and CONTRACTOR's costs. CONTRACTOR shall not make further claims for additional Contract Times or Contract Price related to this request if OWNER accepts this substitution.
3. Proposed substitution does not affect dimensions and functional clearances.
4. Changes necessary to building design including, but not limited to, ENGINEER's design, detailing, and construction costs caused by the substitution will be borne by CONTRACTOR.
5. Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

CONTRACTOR: \_\_\_\_\_

Submitted by: \_\_\_\_\_ Date: \_\_\_\_\_

Signed by: \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_ Facsimile: \_\_\_\_\_

**ENGINEER's REVIEW AND RECOMMENDATIONS**

- ☐ Substitution reviewed and recommended for OWNER acceptance.
- ☐ Substitution reviewed with comments and recommended for OWNER acceptance. See review comments below.
- ☐ In ENGINEER's opinion, substitution appears not to adequately function and achieve the results of the originally specified product.
- ☐ ENGINEER recommends CONTRACTOR provide a special performance guarantee as a condition of OWNER acceptance. See review comments below.
- ☐ Substitution request too late. Use specified products.
- ☐ CONTRACTOR to make submittals in accordance with Specification Section 01330.

ENGINEER's review comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Additional review comments attached: ☐ Yes ☐ No

ENGINEER: \_\_\_\_\_

Recommended by: \_\_\_\_\_

Title: \_\_\_\_\_

Date \_\_\_\_\_

## OWNER's REVIEW AND ACTION

- ☐ Substitution reviewed and accepted by OWNER. CONTRACTOR to make submittals in accordance with Specification Section 01330.
- ☐ Substitution reviewed with comments and accepted by OWNER. See review comments below. CONTRACTOR to make submittals in accordance with Specification Section 01330.
- ☐ In accordance with ENGINEER's recommendations, substitution rejected by OWNER.
- ☐ Substitution rejected by OWNER.
- ☐ ENGINEER to prepare a Contract Change Order for execution by CONTRACTOR and OWNER to incorporate changes to the Contract Documents.

OWNER's review comments: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_Additional review comments attached: ☐ Yes ☐ No

OWNER: \_\_\_\_\_

Accepted by: \_\_\_\_\_

Title: \_\_\_\_\_

Date \_\_\_\_\_

Copy: ☐ OWNER ☐ CONTRACTOR ☐ RPR ☐ CPM ☐ Shop Dwg. File

END OF SECTION 01 63 00

**SECTION 01 70 00 – EXECUTION AND CLOSEOUT REQUIREMENTS****PART 1 GENERAL****1.01 GENERAL**

Comply with requirements stated in the General Conditions Article 14 for administrative procedures in serving notice of Substantial Completion, Retainage, Final Construction Review, Final Completion, Final Payment and Supplemental Conditions.

**1.02 SUBSTANTIAL COMPLETION**

- A. When contractor considers the work is substantially complete, he shall submit to Engineer:
  - 1. A written notice that the Work, or designated portion thereof, is substantially complete.
  - 2. A list of items to be completed or corrected.
- B. Within a reasonable time after receipt of such notice, the Engineer will make a construction review to determine the status of completion.
- C. If Engineer determines that the Work is not substantially complete:
  - 1. Engineer will promptly notify the contractor in writing giving the reasons therefore.
  - 2. Contractor shall remedy the deficiencies in the Work, and send a second written notice of substantial completion to the Engineer.
  - 3. Engineer will again review the Work for completion status.
- D. When the Engineer finds that the Work is substantially complete, he will:
  - 1. Prepare and deliver to Owner a tentative certificate of Substantial Completion with a tentative list of items to be completed or corrected before final payment.
  - 2. After consideration of any objections made by the Owner as provided in conditions of the contract, and when Engineer considers the Work substantially complete, he will execute and deliver to the Owner and the Contractor a definite Certificate of Substantial Completion with a revised tentative list of items to be completed or corrected

**1.03 RETAINAGE**

The retainage will be paid to the Contractor after the Project is SUBSTANTIALLY COMPLETE in accordance with these Contract Documents and all manuals, Project Record Documents, Contractor certifications, Contractor affidavits, etc. have been

submitted as required by these Contract Documents. However, the Owner may retain an amount equal to 200 percent of the value of any remaining incomplete minor item. Interest on all retained amounts shall accrue and this interest shall be paid to the Contractor by the Owner. The interest amount to be paid shall be at the current rate paid on a savings account at the local bank in which the Owner routinely transacts business. Interest on all retainage throughout the project period shall be paid to the Contractor in one lump sum amount following FINAL COMPLETION.

#### 1.04 FINAL CONSTRUCTION REVIEW

- A. When Contractor considers the Work is complete, he shall submit written certification that:
  - 1. Contract documents have been reviewed.
  - 2. Work has been reviewed for substantial compliance with contract documents.
  - 3. Work has been completed generally in accordance with contract documents.
  - 4. Equipment and systems have been tested in the presence of the Owner's representative and are operational.
  - 5. Work is completed and ready for final construction review,
- B. Engineer will perform a review to verify the status of completion with reasonable promptness after receipt of such certification.
- C. If Engineer considers the Work to be incomplete:
  - 1. Engineer will promptly notify the Contractor in writing, listing the incomplete or defective work.
  - 2. Contractor shall take immediate steps to remedy the stated deficiencies, and send a second written certification to Engineer that the work is complete.
  - 3. Engineer will again review the Work.
- D. When the Engineer finds that the work is acceptable under the contract documents, he will:
  - 1. Prepare and deliver to Owner in writing that he has examined the work and that, in his opinion, it appears to conform to these Contract Documents and therefore recommends the work be accepted for FINAL COMPLETION. It is understood and agreed that such statement by the Engineer does not in any way relieve the Contractor or his Sureties from any duties, responsibilities, and obligations under these Contract Documents.
  - 2. After work has been recommended by Engineer as acceptable for FINAL COMPLETION, the Engineer shall request that the Contractor submit closeout submittals.
  - 3. After the Engineer recommends the work for FINAL COMPLETION, the Owner will, if he concurs in the Engineer's recommendation, promptly notify the Contractor in writing. If the Owner does not concur in the Engineer's recommendation, the Owner will promptly notify the Contractor in writing that he does not accept the work as complete and stating the deficiencies and/or conditions that shall be corrected or resolved before FINAL COMPLETION will be issued. After the deficiencies and/or conditions are corrected or resolved and the Owner is satisfied that the work is complete, the Owner will issue to the Contractor notice of FINAL COMPLETION.

## 1.05 CONTRACTOR'S CLOSEOUT SUBMITTALS TO ENGINEER

- A. Operating and maintenance data, instructions to Owner's personnel: to requirements of Section 01 78 39.
- B. Spare Parts and Maintenance Materials: to requirements of Section 01 78 39.
- C. Evidence of Payment and Release of Liens: to requirements of General and Supplementary Conditions.
- D. Certificate of Insurance for Products and Completed Operation.
- E. Record Drawings with annotations made by the contractor during construction of the work, and including As-Built coordinates and elevations on all structures, pipe inverts and key locations as required by Engineer.
- F. The Contractor shall furnish the Owner with certified copies of paid invoices (or other proof) indicating Georgia Sales Tax paid on items for which the Owner is eligible for tax refunds. Tax refunded will be to the Owner, with none credited to the Contractor.
- G. Consent of Surety Company to Final Payment.
- H. Retainage will not be paid until the above documents have been submitted and are satisfactory and acceptable to the Owner.

## 1.06 FINAL PAYMENT

Upon Final Completion of the Work in accordance with the Contract Documents, the Contractor will be authorized to prepare a final estimate of the work and a Final Payment request. The Engineer will review the final payment request and will, if all items are satisfactory, recommend approval to the Owner. The Engineer will submit to the Owner the final estimate and the final payment request, together with a certification stating that the work is complete and in substantial conformance with these Contract Documents. The entire balance found to be due the Contractor including any retainages, except such sums as may be lawfully retained by the Owner, will be paid to the Contractor.

END OF SECTION 01 70 00



**SECTION 01 7400  
CLEANING & WASTE MANAGEMENT**

**PART 1 - GENERAL****1.1 SCOPE**

This section covers furnishing all labor, material, equipment, tools, supervision and incidentals necessary to the disposal of materials unsuitable for use or reuse of the Project as specified herein.

**1.2 DEFINITION**

“Waste materials” includes all material, unsuitable for reuse, which is encountered during operations performed under this contract. Materials such as, but not limited to, rock, refuse, stumps, logs, and other combustible or non-combustible materials, such as plant containers, straps, fertilizer and chemical containers, and wire baskets.

**PART 2 - PRODUCT**

Not applicable.

**PART 3 - EXECUTION****3.1 DISPOSAL OF DEBRIS OR WASTE**

- A. Waste Materials: Deposit all waste material in disposal areas so that adjacent property will not be adversely affected.
- B. Contractor shall make all arrangements necessary for the on site storage and off site disposal of all debris or waste, all at no additional cost to the Owner.

**END OF SECTION**

**SECTION 01 7700  
CLOSEOUT PROCEDURES**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
  - 1. Inspection procedures.
  - 2. Warranties.
  - 3. Final cleaning.
- B. See Division 01 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
- C. See Divisions 2 through 32 Sections for specific closeout and special cleaning requirements for the Work in those Sections.

**1.2 SUBSTANTIAL COMPLETION**

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
  - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
  - 2. Advise Owner of pending insurance changeover requirements.
  - 3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
  - 4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
  - 5. Prepare and submit Project Record Documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
  - 6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
  - 7. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
  - 8. Complete startup testing of systems.
  - 9. Submit test/adjust/balance records.
  - 10. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
  - 11. Advise Owner of changeover in heat and other utilities.

12. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
  13. Complete final cleaning requirements, including touchup painting.
  14. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.
  2. Results of completed inspection will form the basis of requirements for Final Completion.

### **1.3 FINAL COMPLETION**

- A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
1. Submit a final Application for Payment according to Division 1 Section "Payment Procedures."
  2. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
  3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
  4. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training videotapes if necessary.
- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.

### **1.4 LIST OF INCOMPLETE ITEMS (PUNCH LIST)**

- A. Preparation: Submit 3 copies of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

**1.5 WARRANTIES**

- A. Submittal Time: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
- B. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
  - 1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
  - 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
  - 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- C. Provide additional copies of each warranty to include in operation and maintenance manuals.

**PART 2 – PRODUCTS****2.1 MATERIALS**

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

**PART 3 – EXECUTION****3.1 FINAL CLEANING**

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
  - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:

- a. Clean project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
  - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
  - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
  - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
  - e. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
  - f. Remove debris and surface dust from limited access spaces, equipment vaults, manholes, attics, and similar spaces.
  - g. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
  - h. Remove all plant tags.
    - 1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
  - i. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
  - j. Replace parts subject to unusual operating conditions.
  - k. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
  - l. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.
  - m. Leave Project clean and ready for occupancy.
- C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

#### **END OF SECTION**

**SECTION 01 78 00 - RECORD DOCUMENTS****PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Project Record Documents.

**1.02 RECORD DOCUMENTS**

- A. Project Record Documents: Record documents shall be submitted prior to Final Application for Payment.
- B. Maintain on site one set of the following record documents; record actual revisions to the Work:
  - 1. Drawings.
  - 2. Specifications.
  - 3. Addenda.
  - 4. Change Orders and other modifications to the Contract.
  - 5. Reviewed shop drawings, product data, and samples.
  - 6. Manufacturer's instruction for assembly, installation, and adjusting.
- C. Ensure entries are complete and accurate, enabling future reference by.
- D. Store record documents separate from documents used for construction.
- E. Record information concurrent with construction progress.
- F. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
  - 1. Manufacturer's name and product model and number.
  - 2. Product substitutions or alternates utilized.
  - 3. Changes made by Addenda and modifications.
- G. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
  - 1. Generally anything shown on the plans as designed or modified shall be recorded and more specifically stated below as applicable.
  - 2. Measured depths of foundations in relation to finish first floor datum.

3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
4. Field changes of dimension and detail.
5. Details not on original Contract drawings
6. On completion of the Work and prior to Application for Final Payment, the Contractor will provide one complete set of Record Drawings in AutoCAD latest (.dwg) file format.

Sewer or Storm Sewer Projects:

1. Manhole top & invert elevations. (outside/inside drop, concrete encasement)
2. Obtain GPS locations using recognized surveying and engineering practices which shall be tied to Georgia state plane West coordinates for each manhole location with distance reference to permanent features (2 minimum per each per manhole).
3. Angles of sewer lines in/out of manholes
4. Ground elevation at manhole.
5. Distance between manholes.
6. Calculated slopes.
7. Pipe size, length, material and location (restraint information).
8. Location of any service laterals, as well as pipe size, length, material and location (If applicable).
9. Location of any force main connections and details of the connection (i.e. elevation, inside or outside drop, concrete encasement or joint restraint information) as well as force main size, length, material and location.
10. Obtain GPS locations using recognized surveying and engineering practices which shall be tied to Georgia state plane West coordinates of force main fittings (horizontal and vertical) and valves with distance references to permanent features (2 minimum per each per appurtenance) and description of size and type of (check valves, plug valves & air release valves). Provide photographs and sketched details of connections and fittings with each month's Pay Requests.
11. Pump station invert elevations, top elevations diameter and location.
12. Location of pump station accessories (Electrical service, control panel, security light, valve vault, hoist, water service, meter, fence, gate, cross drain, etc.).
13. Casing size, length, material and location.
14. Provided sketches with detailed information drawn in a larger size either on the plans (if there is space) or on a separate sheet attached to the record drawings is always very helpful. Good blow up details for complex tie-ins, crossings of multiple utilities, assemblies for multiple bends/fittings and for jack and bores and open-cut street crossings are important to help the owner locate their lines in the future for maintenance, repairs and extensions.

Water Projects: (also applies to force main installations or other pressure pipe projects)

1. Water main size, length and material with distance reference to edge of pavement or permanent features. Provide photographs and sketched details with each month's Pay Requests.
2. Water service line size, length, material and location (If applicable).
3. Service meter size and location (If applicable).
4. Obtain GPS locations using recognized surveying and engineering practices which shall be tied to Georgia state plane West coordinates with distance references to permanent features (2 minimum per each per appurtenance) and description of size and type for (valves, fire hydrants, blow-offs, meters, fittings (horizontal and vertical) & air release valves). Provide photographs and sketched details of connections and fittings with each month's Pay Requests.
5. Casing size, length, material and location.
6. Booster pump station Chlorine building location. (If applicable)
7. Pump station accessories locations (Electrical service, panels, security light, chemical feed & sample lines, valves, manholes, fence, gate, cross drain, etc.).
8. Blow up details on plans or separate sheets for complex installations (multiple fittings), jack and bore or open cut installations at intersections and busy/congested areas and for utility crossings.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION 01 78 00



**SECTION 01 78 50 - WARRANTY AND BONDS****PART 1 GENERAL****1.01 WARRANTY SUBMITTALS**

- A. Submit written warranties to the OWNER prior to the date fixed by the ENGINEER for Substantial Completion. If the Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the OWNER.
- B. When a special warranty is required to be executed by the CONTRACTOR, or the CONTRACTOR and a subcontractor, supplier or manufacturer, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the OWNER for approval prior to final execution.
- C. Refer to individual Sections of Divisions 2 through 46 for specific content requirements, and particular requirements for submittal of special warranties.

**1.02 PROJECT WARRANTY**

- A. The Contractor shall warrant and guarantee for a period of one year from the date of Substantial Completion of the Work, that the completed Work is free from all defects due to faulty products or workmanship. The Contractor shall promptly make such corrections as may be necessary by reason of such defects. The Owner will give notice of observed defects with reasonable promptness. In the event that the Contractor should fail to make such repairs, adjustments or other work that may be made necessary by such defects, the Owner may do so and charge the Contractor the cost thereby incurred. The Performance Bond shall remain in full force and effect throughout the warranty period.
- B. The Contractor shall not be obligated to make replacements which become necessary because of ordinary wear and tear, or as a result of gross negligence operation or maintenance, or as a result of improper work or damage by another Contractor or the Owner, or to perform any work which is normally performed by a maintenance crew during operation.
- C. The Contractor shall, at Contractor's own expense, furnish all labor, materials, tools and equipment required and shall make such repairs and removals and shall perform such work or reconstruction as may be made necessary by any structural or functional defect or failure resulting from neglect, faulty workmanship or faulty materials, in any part of the Work performed by the Contractor. Such repair shall also include refilling of trenches, excavations or embankments which show settlement or erosion after backfilling or placement.

- D. Except as noted on the Drawings or as specified, all structures such as embankments and fences shall be returned to their original condition prior to the completion of the Contract. Any and all damage to any facility not designated for removal, resulting from the Contractor's operations, shall be promptly repaired by the Contractor at no cost to the Owner.
- E. The Contractor shall be responsible for all road and entrance reconstruction and repairs and maintenance of same for a period of one year from the date of Substantial Completion. In the event the repairs and maintenance are not made immediately and it becomes necessary for the owner of the road to make such repairs, the Contractor shall reimburse the owner of the road for the cost of such repairs.
- F. In the event the Contractor fails to proceed to remedy the defects upon notification within 15 days of the date of such notice, the Owner reserves the right to cause the required materials to be procured and the work to be done, and to hold the Contractor and the sureties on Contractor's bond liable for the cost and expense thereof.
- G. Notice to Contractor for repairs and reconstruction will be made in the form of a registered letter addressed to the Contractor at Contractor's home office.
- H. Neither the foregoing paragraphs nor any provision in the Contract Documents, nor any special guarantee time limit implies any limitation of the Contractor's liability within the law of the place of construction.

END OF SECTION 01 78 50

SECTION 04 2000  
UNIT MASONRY

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section includes unit masonry assemblies consisting of the following:
1. Concrete masonry units (CMUs).
  2. Decorative concrete masonry units.
  3. Pre-faced concrete masonry units.
  4. Concrete brick.
  5. Face brick.
  6. Building (common) brick.
  7. Hollow brick.
  8. Glazed Structural-clay facing tile.

- B. See Division 7 Section "Sheet Metal Flashing and Trim" for furnishing manufactured reglets installed in masonry joints for metal flashing.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: For reinforcing steel. Detail bending and placement of unit masonry reinforcing bars. Comply with ACI 315, "Details and Detailing of Concrete Reinforcement."
- C. Samples for each type and color of colored mortars.
- D. Material Certificates: For each type of product indicated. Include statements of material properties indicating compliance with requirements including compliance with standards and type designations within standards.
1. For masonry units include material test reports substantiating compliance with requirements.
- E. Mix Designs: For each type of mortar and grout. Include description of type and proportions of ingredients.

1.3 QUALITY ASSURANCE

- A. Preconstruction Testing Service: Owner will engage a qualified independent testing agency to perform preconstruction testing indicated below. Payment for these services will be made from the Testing and Inspecting Allowance, as authorized by Change Orders.
1. Clay Masonry Unit Test: For each type of unit required, per ASTM C 67.
  2. Concrete Masonry Unit Test: For each type of unit required, per ASTM C 140.
  3. Mortar Test (Property Specification): For each mix required, per ASTM C 780.
  4. Grout Test (Compressive Strength): For each mix required, per ASTM C 1019.
- B. Fire-Resistance Ratings: Where indicated, provide materials and construction identical to those of assemblies with fire-resistance ratings determined per ASTM E 119 by a testing and

- inspecting agency, by equivalent concrete masonry thickness, or by other means, as acceptable to authorities having jurisdiction.
- C. Sample Panels: Build sample panels to verify selections made under sample submittals and to demonstrate aesthetic effects.
1. Build sample panels for typical exterior wall in sizes approximately 48 inches long by 48 inches high.
- 1.4 PROJECT CONDITIONS
- A. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.
- B. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

## PART 2 – PRODUCTS

### 2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products specified.
  2. Products: Subject to compliance with requirements, provide one of the products specified.
  3. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers specified.
  4. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

### 2.2 CONCRETE MASONRY UNITS (CMUs)

- A. Shapes: Provide special shapes for lintels, corners, jambs, sashes, movement joints, headers, bonding, and other special conditions.
- B. Integral Water Repellent: Provide units made with liquid polymeric, integral water-repellent admixture that does not reduce flexural bond strength where indicated.
1. Available Products:
    - a. Addiment Incorporated; Block Plus W-10.
    - b. Grace Construction Products, a unit of W. R. Grace & Co. - Conn.; Dry-Block.
    - c. Master Builders, Inc.; Rheopel.
- C. Concrete Masonry Units: ASTM C 90 UBC Standard 21-4.
1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 2800 psi (19.3 MPa).
  2. Weight Classification: Lightweight.

3. Pattern and Texture for Decorative Units:

- a. Standard pattern, ground finish.
- b. Standard pattern, split-face finish.
- c. Standard pattern, split-ribbed finish.
- d. Scored vertically, standard finish.
- e. Triple scored vertically, standard finish.

4. Pre-faced Concrete Masonry Units: Lightweight concrete units, with smooth resinous facing complying with ASTM C 744.

- a. Size: Manufactured with pre-faced surfaces having 1/16-inch-wide returns of facing to create 1/4-inch-wide mortar joints.

D. Concrete Brick: ASTM C 55.

1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 2500 psi (17.3 MPa).
2. Weight Classification: Lightweight.

2.3 CONCRETE AND MASONRY LINTELS

- A. General: Provide either concrete or masonry lintels, at Contractor's option, complying with requirements below.
- B. Concrete Lintels: Precast units matching concrete masonry units and with reinforcing bars indicated or required to support loads indicated.
- C. Concrete Lintels: Precast or formed-in-place concrete lintels complying with requirements in Division 3 Section "Cast-in-Place Concrete."
- D. Masonry Lintels: Made from bond beam concrete masonry units with reinforcing bars placed as indicated and filled with coarse grout.

2.4 BRICK

- A. General: Provide shapes indicated and as follows:
  1. For ends of sills and caps and for similar applications that would otherwise expose unfinished brick surfaces, provide units without cores or frogs and with exposed surfaces finished.
  2. Provide special shapes for applications where shapes produced by sawing would result in sawed surfaces being exposed to view.
- B. Face Brick: ASTM C 216, Grade MW, Type FBX.
  1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 5500 psi (37.9 MPa).
  2. Initial Rate of Absorption: Less than 30 g/30 sq. in. (30 g/194 sq. cm) per minute when tested per ASTM C 67.
  3. Efflorescence: Provide brick that has been tested according to ASTM C 67 and is rated "not effloresced."

4. Surface Coating: Brick with colors or textures produced by application of coatings shall withstand 50 cycles of freezing and thawing per ASTM C 67 with no observable difference in the applied finish viewed from 10 feet (3 m).
  5. Size (Actual Dimensions): 3-1/2 inches (89 mm) wide by 2-1/4 inches (57 mm) high by 7-1/2 inches (190 mm) long.
  6. Size (Actual Dimensions): 4 inches (89 mm) wide by 2-1/4 inches (57 mm) high by 8 inches (203 mm) long.
  7. Size (Actual Dimensions): 3-1/2 inches (89 mm) wide by 2-3/4 inches (70 mm) high by 7-1/2 inches (190 mm) long or 3-5/8 inches (92 mm) wide by 2-13/16 inches (71 mm) high by 7-5/8 inches (194 mm) long.
- C. Hollow Brick: ASTM C 652 UBC Standard 21-1, Grade SW MW or SW, Class H40V (void areas between 25 and 40 percent of gross cross-sectional area) H60V (void areas between 40 and 60 percent of gross cross-sectional area), Type HBX HBS HBA HBB.
1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 4400 psi (30.3 MPa).
  2. Efflorescence: Provide brick that has been tested according to ASTM C 67 and is rated "not effloresced."
  3. Surface Coating: Brick with colors or textures produced by application of coatings shall withstand 50 cycles of freezing and thawing per ASTM C 67 with no observable difference in the applied finish when viewed from 10 feet (3 m).
  4. Size (Actual Dimensions): 5-1/2 inches (140 mm) wide by 3-1/2 inches (89 mm) high by 11-1/2 inches (292 mm) long.
  5. Size (Actual Dimensions): 7-1/2 inches (190 mm) wide by 3-1/2 inches (89 mm) high by 11-1/2 inches (292 mm) long .

## 2.5 MORTAR AND GROUT MATERIALS

- A. Portland Cement: ASTM C 150, Type I or II, except Type III may be used for cold-weather construction.
- B. Hydrated Lime: ASTM C 207, Type S.
- C. Masonry Cement: ASTM C 91.
  1. Products:
    - a. Capital Materials Corporation; Flamingo Color Masonry Cement.
    - b. Essroc, Italcementi Group; Brixment.
    - c. Holcim (US) Inc.; Mortamix Masonry Cement Rainbow Mortamix Custom Buff Masonry Cement White Mortamix Masonry Cement.
    - d. Lafarge North America Inc.; Magnolia Masonry Cement Lafarge Masonry Cement Florida Super Masonry Trinity Super White Masonry Type S Trinity White Masonry Type N.
    - e. Lehigh Cement Company.
    - f. National Cement Company, Inc.; Coosa Masonry Cement.

- D. Mortar Pigments: Iron oxides and chromium oxides, compounded for use in mortar mixes. Use only pigments with a record of satisfactory performance in masonry mortar.
1. Products:
    - a. Bayer Corporation, Industrial Chemicals Div.; Bayferrox Iron Oxide Pigments.
    - b. Davis Colors; True Tone Mortar Colors.
    - c. Solomon Grind-Chem Services, Inc.; SGS Mortar Colors.
- E. Colored Cement Product: Packaged blend made from masonry cement and mortar pigments, all complying with specified requirements, and containing no other ingredients.
1. Formulate blend as required to produce color indicated or, if not indicated, as selected from manufacturer's standard colors.
  2. Products:
    - a. Colored Portland Cement-Lime Mix:
      1. Capital Materials Corporation; Riverton Portland Cement Lime Custom Color.
      2. Holcim (US) Inc.; Rainbow Mortamix Custom Color Cement/Lime.
      3. Lafarge North America Inc.; Eaglebond.
      4. Lehigh Cement Company; Lehigh Custom Color Portland/Lime Cement.
    - b. Colored Masonry Cement:
      1. Capital Materials Corporation; Flamingo Color Masonry Cement.
      2. Essroc, Italcementi Group; Brixment-in-Color.
      3. Holcim (US) Inc.; Rainbow Mortamix Custom Color Masonry Cement.
      4. Lafarge North America Inc.
      5. Lehigh Cement Company; Lehigh Custom Color Masonry Cement.
      6. National Cement Company, Inc.; Coosa Masonry Cement.
- F. Aggregate for Mortar: ASTM C 144.
1. For joints less than 1/4 inch (6.5 mm) thick, use aggregate graded with 100 percent passing the No. 16 (1.18-mm) sieve.
  2. Colored-Mortar Aggregates: Natural sand or crushed stone of color necessary to produce required mortar color.
- G. Aggregate for Grout: ASTM C 404.
- H. Epoxy Pointing Mortar: ASTM C 395, epoxy-resin-based material formulated for use as pointing mortar for structural-clay tile facing units.
- I. Cold-Weather Admixture: Nonchloride, noncorrosive, accelerating admixture complying with ASTM C 494/C 494M, Type C, and recommended by manufacturer for use in masonry mortar of composition indicated.
1. Products:

- a. Addiment Incorporated; Mortar Kick.
- b. Euclid Chemical Company (The); Accelguard 80.
- c. Grace Construction Products, a unit of W. R. Grace & Co. - Conn.; Mor-set.
- d. Sonneborn, Div. of ChemRex; Trimix-NCA.

J. Water-Repellent Admixture: Liquid water-repellent mortar admixture intended for use with concrete masonry units, containing integral water repellent by same manufacturer.

1. Products:

- a. Addiment Incorporated; Mortar Tite.
- b. Grace Construction Products, a unit of W. R. Grace & Co. - Conn.; Dry-Block Mortar Admixture.
- c. Master Builders, Inc.;

K. Water: Potable.

## 2.6 REINFORCEMENT

A. Uncoated Steel Reinforcing Bars: ASTM A 615/A 615M or ASTM A 996/A 996M, Grade 60 (Grade 420).

B. Masonry Joint Reinforcement: ASTM A 951; mill galvanized, carbon-steel wire for interior walls and hot-dip galvanized, carbon-steel wire for exterior walls.

1. Wire Size for Side Rods: W1.7 or 0.148-inch (3.8-mm) diameter.
2. Wire Size for Cross Rods: W1.7 or 0.148-inch (3.8-mm) diameter.
3. Wire Size for Veneer Ties: W1.7 or 0.148-inch (3.8-mm) diameter.
4. Spacing of Cross Rods, Tabs, and Cross Ties: Not more than 16 inches (407 mm) o.c.
5. Single-Wythe Masonry: Either ladder or truss type with single pair of side rods.
6. Multi-wythe Masonry:
  - a. Ladder type with 1 side rod at each face shell of hollow masonry units more than 4 inches (100 mm) in width, plus 1 side rod at each wythe of masonry 4 inches (100 mm) or less in width.
  - b. Tab type, with 1 side rod at each face shell of backing wythe and with rectangular tabs sized to extend at least halfway through facing wythe but with at least 5/8-inch (16-mm) cover on outside face.
  - c. Adjustable (two-piece) type, with one side rod at each face shell of backing wythe and with ties that extend into facing wythe. Ties engage eyes or slots in reinforcement and extend at least halfway through facing wythe but with at least 5/8-inch (16-mm) cover on outside face.
7. Veneers Anchored with Seismic Masonry-Veneer Anchors: Single 0.188-inch-(4.8-mm-) diameter, hot-dip galvanized, carbon-steel continuous wire.

## 2.7 TIES AND ANCHORS



## A. Materials:

1. Hot-Dip Galvanized, Carbon-Steel Wire: ASTM A 82; with ASTM A 153/A 153M, Class B-2 coating.
2. Steel Sheet, Galvanized after Fabrication: ASTM A 1008/A 1008M, Commercial Steel, hot-dip galvanized after fabrication to comply with ASTM A 153/A 153M.
3. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

B. Wire Ties, General: Unless otherwise indicated, size wire ties to extend at least halfway through veneer but with at least 5/8-inch (16-mm) cover on outside face. Outer ends of wires are bent 90 degrees and extend 2 inches (50 mm) parallel to face of veneer.

C. Individual Wire Ties: Rectangular units with closed ends and not less than 4 inches (100 mm) wide.

1. Wire: Fabricate from 3/16-inch- (4.8-mm-) diameter, hot-dip galvanized steel wire.

D. Adjustable Anchors for Connecting to Structure: Provide anchors that allow vertical or horizontal adjustment but resist tension and compression forces perpendicular to plane of wall.

1. Anchor Section for Welding to Steel Frame: Crimped 1/4-inch- (6.4-mm-) diameter, hot-dip galvanized steel wire.
2. Tie Section: Triangular-shaped wire tie, sized to extend within 1 inch (25 mm) of masonry face, made from 0.188-inch- (4.8-mm-) diameter, hot-dip galvanized steel wire.
3. Connector Section for Concrete: Dovetail tabs for inserting into dovetail slots in concrete and attached to tie section; formed from 0.053-inch- (1.3-mm-) thick, steel sheet, galvanized after fabrication.

E. Partition Top anchors: 0.097-inch- (2.5-mm-) thick metal plate with 3/8-inch- (10-mm-) diameter metal rod 6 inches (150 mm) long welded to plate and with closed-end plastic tube fitted over rod that allows rod to move in and out of tube. Fabricate from steel, hot-dip galvanized after fabrication.

F. Rigid Anchors: Fabricate from steel bars 1-1/2 inches (38 mm) wide by 1/4 inch (6.4 mm) thick by 24 inches (600 mm) long, with ends turned up 2 inches (50 mm) or with cross pins.

1. Corrosion Protection: Hot-dip galvanized to comply with ASTM A 153/A 153M.

## G. Adjustable Masonry-Veneer Anchors

1. General: Provide anchors that allow vertical adjustment but resist tension and compression forces perpendicular to plane of wall, for attachment over sheathing to wood or metal studs, and as follows:
  - a. Structural Performance Characteristics: Capable of withstanding a 100-lbf (445-N) load in both tension and compression without deforming or developing play in excess of 0.05 inch (1.3 mm).
2. Screw-Attached, Masonry-Veneer Anchors: Units consisting of a wire tie and a metal anchor section.

- a. Anchor Section: Rib-stiffened, sheet metal plate with screw holes top and bottom, and slotted holes for inserting wire tie.
  - b. Fabricate sheet metal anchor sections from 0.067-inch- (1.7-mm-)thick, steel sheet, galvanized after fabrication.
  - c. Wire Ties: Triangular-, rectangular-, or T-shaped wire ties fabricated from 0.188-inch- (4.8-mm-) diameter, hot-dip galvanized steel wire.
  - d. Products:
    1. Dayton Superior Corporation, Dur-O-Wal Division;.
    2. Heckmann Building Products Inc.; 315-D with 316.
    3. Hohmann & Barnard, Inc.
    4. Wire-Bond.
3. Seismic Masonry-Veneer Anchors: Units consisting of a metal anchor section and a connector section designed to engage a continuous wire embedded in the veneer mortar joint.
- a. Anchor Section: Rib-stiffened, sheet metal plate with screw holes top and bottom, and slotted holes for inserting connector section.
  - b. Connector Section: Rib-stiffened, sheet metal bent plate; sheet metal clip; or wire tie and rigid extruded vinyl clip designed to engage continuous wire. Size connector to extend at least halfway through veneer but with at least 5/8-inch (16-mm) cover on outside face.
  - c. Fabricate sheet metal anchor sections and other sheet metal parts from 0.067-inch- (1.7-mm-) thick, steel sheet, galvanized after fabrication.
  - d. Fabricate wire connector sections from 0.188-inch- (4.8-mm-) diameter, hot-dip galvanized, carbon-steel wire.
  - e. Products:
    1. Dayton Superior Corporation, Dur-O-Wal Division; D/A 213S.
    2. Hohmann & Barnard, Inc.; DW-10-X-Seismiclip.
    3. Wire-Bond; RJ-711 with Wire-Bond clip.

## 2.8 EMBEDDED FLASHING MATERIALS

- A. Metal Flashing: Provide metal flashing, where flashing is exposed or partly exposed and where indicated, complying with Division 7 Section "Sheet Metal Flashing and Trim."
1. Metal Drip Edges: Fabricate from stainless steel. Extend at least 3 inches (75 mm) into wall and 1/2 inch (13 mm) out from wall, with outer edge bent down 30 degrees and hemmed.
  2. Metal Flashing Terminations: Fabricate from stainless steel. Extend at least 3 inches (75 mm) into wall and out to exterior face of wall. At exterior face of wall, bend metal back on itself for 3/4 inch (19 mm) and down into joint 3/8 inch (10 mm) to form a stop for retaining sealant backer rod.

3. Metal Expansion-Joint Strips: Fabricate from stainless steel to shapes indicated.
- B. Flexible Flashing: For flashing not exposed to the exterior, use the following, unless otherwise indicated:
1. Copper-Laminated Flashing: 5-oz./sq. ft. (1.5-kg/sq. m) 7-oz./sq. ft. (2-kg/sq. m) copper sheet bonded with asphalt between 2 layers of glass-fiber cloth.
  - a. Products:
    1. Advanced Building Products Inc.; Copper Fabric Flashing.
    2. AFCO Products Inc.; Copper Fabric.
    3. Hohmann & Barnard, Inc.; H & B C-Fab Flashing.
    4. Phoenix Building Products; Type FCC-Fabric Covered Copper.
    5. Polytite Manufacturing Corp.; Copper Fabric Flashing.
    6. Sandell Manufacturing Co., Inc.; Copper Fabric Flashing.
    7. York Manufacturing, Inc.; York Copper Fabric Flashing.
  2. Rubberized-Asphalt Flashing: Composite flashing product consisting of a pliable, adhesive rubberized-asphalt compound, bonded to a high-density, cross-laminated polyethylene film to produce an overall thickness of not less than 0.030 inch (0.8 mm).
  - a. Products:
    1. Advanced Building Products Inc.; Peel-N-Seal.
    2. Carlisle Coatings & Waterproofing; CCW-705-TWF Thru-Wall Flashing.
    3. Dayton Superior Corporation, Dur-O-Wal Division; Dur-O-Barrier-44.
    4. Grace Construction Products, a unit of W. R. Grace & Co. - Conn.; Perm-A-Barrier Wall Flashing.
    5. Heckmann Building Products Inc.; No. 82 Rubberized-Asphalt Thru-Wall Flashing.
    6. Hohmann & Barnard, Inc.; Textroflash.
    7. Polyguard Products, Inc.; Polyguard 300.
    8. Polytite Manufacturing Corp.; Poly-Barrier Self-Adhering Wall Flashing.
    9. Williams Products, Inc.; Everlastic MF-40.
  3. Elastomeric Thermoplastic Flashing: Composite flashing product consisting of a polyester-reinforced ethylene interpolymer alloy 0.025 inch (0.6 mm) thick, with a 0.015-inch- (0.4-mm-) thick coating of rubberized-asphalt adhesive.
  - a. Products:
    1. Hyload, Inc.; Hyload Cloaked Flashing System.

4. EPDM Flashing: Sheet flashing product made from ethylene-propylene-diene terpolymer, complying with ASTM D 4637, 0.040 inch (1.0 mm) thick.

a. Products:

1. Carlisle Coatings & Waterproofing; Pre-Kleened EPDM Thru-Wall Flashing.
2. Firestone Building Products; FlashGuard.
3. Heckmann Building Products Inc.; No. 81 EPDM Thru-Wall Flashing.

C. Solder and Sealants for Sheet Metal Flashings: As specified in Division 7 Section "Sheet Metal Flashing and Trim."

D. Adhesives, Primers, and Seam Tapes for Flashings: Flashing manufacturer's standard products or products recommended by flashing manufacturer.

2.9 MISCELLANEOUS MASONRY ACCESSORIES

A. Compressible Filler: Pre-molded filler strips complying with ASTM D 1056, Grade 2A1; compressible up to 35 percent; formulated from neoprene.

B. Preformed Control-Joint Gaskets: Made from styrene-butadiene-rubber compound, complying with ASTM D 2000, Designation M2AA-805 and designed to fit standard sash block and to maintain lateral stability in masonry wall.

C. Bond-Breaker Strips: Asphalt-saturated, organic roofing felt complying with ASTM D 226, Type I (No. 15 asphalt felt).

D. Weep/Vent Products: Use the following, unless otherwise indicated:

1. Rectangular Plastic Weep/Vent Tubing: Clear butyrate, 3/8 by 1-1/2 by 3-1/2 inches (9 by 38 by 89 mm) long.
2. Cellular Plastic Weep/Vent: One-piece, flexible extrusion made from UV-resistant polypropylene copolymer, full height and width of head joint and depth 1/8 inch (3 mm) less than depth of outer wythe, in color selected from manufacturer's standard.

b. Products:

1. Advanced Building Products Inc.; Mortar Maze weep vent.
2. Dayton Superior Corporation, Dur-O-Wal Division; Cell Vents.
3. Heckmann Building Products Inc.; No. 85 Cell Vent.
4. Hohmann & Barnard, Inc.; Quadro-Vent.
5. Wire-Bond; Cell Vent.

3. Mesh Weep/Vent: Free-draining mesh; made from polyethylene strands, full height and width of head joint and depth 1/8 inch (3 mm) less than depth of outer wythe; in color selected from manufacturer's standard.

a. Products:

1. Mortar Net USA, Ltd.; Mortar Net Weep Vents.
- E. Cavity Drainage Material: Free-draining mesh, made from polymer strands that will not degrade within the wall cavity.
  1. Provide one of the following configurations:
    - a. Strips, full-depth of cavity and 10 inches (250 mm) wide, with dovetail shaped notches 7 inches (175 mm) deep.
    - b. Strips, not less than 1-1/2 inches (38 mm) thick and 10 inches (250 mm) wide, with dimpled surface designed to catch mortar droppings and prevent weep holes from being clogged with mortar.
    - c. Sheets or strips full depth of cavity and installed to full height of cavity.
  2. Products:
    - a. Advanced Building Products Inc.; Mortar Break.
    - b. Archovations, Inc.; CavClear Masonry Mat.
    - c. Dayton Superior Corporation, Dur-O-Wal Division; Polytite MortarStop.
    - d. Mortar Net USA, Ltd.; Mortar Net.

## 2.10 MASONRY CLEANERS

- A. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains from new masonry without damaging masonry. Use product approved for intended use by cleaner manufacturer and manufacturer of masonry units being cleaned.
  1. Manufacturers:
    - a. Diedrich Technologies, Inc.
    - b. EaCo Chem, Inc.
    - c. ProSoCo, Inc.

## 2.13 MORTAR AND GROUT MIXES

- A. General: Do not use admixtures, unless otherwise indicated.
  1. Do not use calcium chloride in mortar or grout.
  2. Limit cementitious materials in mortar for exterior and reinforced masonry to portland cement and lime.
  3. Add cold-weather admixture (if used) at same rate for all mortar that will be exposed to view, regardless of weather conditions, to ensure that mortar color is consistent.
- B. Mortar for Unit Masonry: Comply with ASTM C 270, Proportion Specification.
- C. Mortar for Unit Masonry: Comply with ASTM C 270, Property Specification.
  1. For masonry below grade or in contact with earth, use Type M.
  2. For reinforced masonry, use Type S.
  3. For mortar parge coats, use Type S.
  4. For exterior, above-grade, load-bearing and non-load-bearing walls and parapet walls; for interior load-bearing walls; for interior non-

load-bearing partitions; and for other applications where another type is not indicated, use Type N.

5. For interior non-load-bearing partitions, Type O may be used instead of Type N.

D. Pigmented Mortar: Use colored cement product or select and proportion pigments with other ingredients to produce color required. Do not add pigments to colored cement products.

1. Pigments shall not exceed 10 percent of portland cement by weight.
2. Pigments shall not exceed 5 percent of masonry cement by weight.

E. Grout for Unit Masonry: Comply with ASTM C 476.

1. Use grout of type indicated or, if not otherwise indicated, of type (fine or coarse) that will comply with Table 1.15.1 in ACI 530.1/ASCE 6/TMS 602 for dimensions of grout spaces and pour height.
2. Provide grout with a slump of 8 to 11 inches (200 to 280 mm) as measured according to ASTM C 143/C 143M.

F. Epoxy Pointing Mortar: Mix epoxy pointing mortar to comply with mortar manufacturer's written instructions.

## PART 3 – EXECUTION

### 3.1 INSTALLATION, GENERAL

- A. Use full-size units without cutting if possible. If cutting is required, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.
- B. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures.
- C. Wetting of Brick: Wet brick before laying if initial rate of absorption exceeds 30 g/30 sq. in. (30 g/194 sq. cm) per minute when tested per ASTM C 67. Allow units to absorb water so they are damp but not wet at time of laying.
- D. Comply with tolerances in ACI 530.1/ASCE 6/TMS 602 and with the following:
  1. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 feet (3 mm in 3 m), 1/4 inch in 20 feet (6 mm in 6 m), or 1/2 inch (12 mm) maximum.
  2. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than 1/8 inch in 10 feet (3 mm in 3 m), 1/4 inch in 20 feet (6 mm in 6 m), or 1/2 inch (12 mm) maximum.

### 3.2 LAYING MASONRY WALLS

- A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.
- B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in running bond; do not use units with less than nominal 4-inch (100-mm) horizontal face dimensions at corners or jambs.
- C. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.
- D. Fill space between steel frames and masonry solidly with mortar, unless otherwise indicated.
- E. Fill cores in hollow concrete masonry units with grout 24 inches (600 mm) under bearing plates, beams, lintels, posts, and similar items, unless otherwise indicated.

### 3.3 MORTAR BEDDING AND JOINTING

- A. Lay hollow brick and concrete masonry units as follows:
  - 1. With face shells fully bedded in mortar and with head joints of depth equal to bed joints.
  - 2. With webs fully bedded in mortar in all courses of piers, columns, and pilasters.
  - 3. With webs fully bedded in mortar in grouted masonry, including starting course on footings.
  - 4. With entire units, including areas under cells, fully bedded in mortar at starting course on footings where cells are not grouted.
- B. Lay solid masonry units with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.
- C. Lay structural-clay tile as follows:
  - 1. Lay vertical-cell units with full head joints, unless otherwise indicated. Provide bed joints with full mortar coverage on face shells and webs.
  - 2. Lay horizontal-cell units with full bed joints, unless otherwise indicated. Keep drainage channels, if any, free of mortar. Form head joints with sufficient mortar so excess will be squeezed out as units are placed in position.
  - 3. Maintain joint thicknesses indicated except for minor variations required to maintain bond alignment. If not indicated, lay walls with 1/4- to 3/8-inch- (6- to 10-mm-) thick joints.
  - 4. Where epoxy-mortar pointed joints are indicated, rake out setting mortar to a uniform depth of 1/4 inch (6 mm) and point with epoxy mortar.
- D. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness, unless otherwise indicated.
- E. Cut joints flush for masonry walls to receive plaster or other direct-applied finishes (other than paint), unless otherwise indicated.

### 3.4 COMPOSITE MASONRY

- A. Bond wythes of composite masonry together using one of the following methods:
  - 1. Individual Metal Ties: Provide ties as shown installed in horizontal joints, but not less than one metal tie for 4.5 sq. ft. (0.42 sq. m) of wall area spaced not to exceed 36 inches (914 mm) o.c. horizontally and 16 inches (406 mm) o.c. vertically. Stagger ties in alternate courses. Provide additional ties within 12 inches (305 mm) of openings and space not more than 36 inches (915 mm) apart around perimeter of openings. At intersecting and abutting walls, provide ties at no more than 24 inches (610 mm) o.c. vertically.
  - 2. Masonry Joint Reinforcement: Installed in horizontal mortar joints.
    - a. Where bed joints of both wythes align, use ladder-type reinforcement extending across both wythes.
    - b. Where bed joints of wythes do not align, use adjustable (two-piece) type reinforcement with continuous horizontal wire in facing wythe attached to ties.
- B. Collar Joints: Solidly fill collar joints by parging face of first wythe that is laid and shoving units of other wythe into place.
- C. Collar Joints in Clay Tile Masonry: After each course is laid, fill the vertical, longitudinal joint between wythes solidly with mortar at exterior walls, and except cavity walls.
- D. Corners: Provide interlocking masonry unit bond in each wythe and course at corners, unless otherwise indicated.
- E. Intersecting and Abutting Walls: Unless vertical expansion or control joints are shown at juncture, bond walls together as follows:
  - 1. Provide individual metal ties not more than 8 inches (203 mm) o.c.
  - 2. Provide continuity with masonry joint reinforcement by using prefabricated T-shaped units.
  - 3. Provide rigid metal anchors not more than 24 inches (610 mm) o.c. If used with hollow masonry units, embed ends in mortar-filled cores.

### 3.5 CAVITY WALLS

- A. Bond wythes of cavity walls together using one of the following methods:
  - 1. Individual Metal Ties: Provide ties as shown installed in horizontal joints, but not less than one metal tie for 4.5 sq. ft. (0.42 sq. m) of wall area spaced not to exceed 36 inches (914 mm) o.c. horizontally and 16 inches (406 mm) o.c. vertically. Stagger ties in alternate courses. Provide additional ties within 12 inches (305 mm) of openings and space not more than 36 inches (915 mm) apart around perimeter of openings. At intersecting and abutting walls, provide ties at no more than 24 inches (610 mm) o.c. vertically.
  - 2. Masonry Joint Reinforcement: Installed in horizontal mortar joints.



- a. Where bed joints of both wythes align, use ladder-type reinforcement extending across both wythes.
    - b. Where bed joints of wythes do not align, use adjustable (two-piece) type reinforcement with continuous horizontal wire in facing wythe attached to ties.
    - c. Where one wythe is of clay masonry and the other of concrete masonry, use adjustable (two-piece) type reinforcement with continuous horizontal wire in facing wythe attached to ties to allow for differential movement regardless of whether bed joints align.
  3. Masonry Veneer Anchors: Comply with requirements for anchoring masonry veneers.
  - B. Keep cavities clean of mortar droppings and other materials during construction. Bevel beds away from cavity, to minimize mortar protrusions into cavity. Do not attempt to trowel or remove mortar fins protruding into cavity.
  - C. Parge cavity face of backup wythe in a single coat approximately 3/8 inch (10 mm) thick. Trowel face of parge coat smooth.
  - D. Coat cavity face of backup wythe to comply with Division 7 Section "Bituminous Damp-proofing."
  - E. Installing Cavity-Wall Insulation: Place small dabs of adhesive, spaced approximately 12 inches (300 mm) o.c. both ways, on inside face of insulation boards, or attach with plastic fasteners designed for this purpose. Fit insulation between wall ties and other confining obstructions, with edges butted tightly. Press units firmly against inside wythe of masonry.
- 3.7 MASONRY JOINT REINFORCEMENT
- A. General: Install in mortar with a minimum cover of 5/8 inch (16 mm) on exterior side of walls, 1/2 inch (13 mm) elsewhere. Lap reinforcement a minimum of 6 inches (150 mm).
  - B. Interrupt joint reinforcement at control and expansion joints, unless otherwise indicated.
  - C. Provide continuity at wall intersections by using prefabricated T-shaped units.
  - D. Provide continuity at corners by using prefabricated L-shaped units.
- 3.9 ANCHORING MASONRY VENEERS
- A. Anchor masonry veneers to concrete and masonry backup with masonry-veneer anchors to comply with the following requirements:
    1. Fasten screw-attached anchors through sheathing to wall framing with metal fasteners of type indicated. Use two fasteners.
    2. Embed tie sections in masonry joints. Provide not less than 2 inches (50 mm) of air space between back of masonry veneer and face of sheathing.
    3. Locate anchor sections to allow maximum vertical differential movement of ties up and down.
    4. Space anchors as indicated, but not more than 16 inches (406 mm) o.c. vertically and 32 inches (813 mm) o.c. horizontally with not less than 1 anchor for each 3.5 sq. ft. (0.33 sq. m) of wall area. Install additional

anchors within 12 inches (305 mm) of openings and at intervals, not exceeding 36 inches (914 mm), around perimeter.

### 3.10 FLASHING, WEEP HOLES, CAVITY DRAINAGE, AND VENTS

- A. General: Install embedded flashing and weep holes in masonry at shelf angles, lintels, ledges, other obstructions to downward flow of water in wall, and where indicated. Install vents at shelf angles, ledges, and other obstructions to upward flow of air in cavities, and where indicated.
- B. Install flashing as follows, unless otherwise indicated:
  - 1. Prepare masonry surfaces so they are smooth and free from projections that could puncture flashing. Where flashing is within mortar joint, place through-wall flashing on sloping bed of mortar and cover with mortar. Before covering with mortar, seal penetrations in flashing as recommended by flashing manufacturer.
  - 2. At lintels and shelf angles, extend flashing a minimum of 6 inches (150 mm) into masonry at each end. At heads and sills, extend flashing 6 inches (150 mm) at ends and turn up not less than 2 inches (50 mm) to form end dams.
  - 3. Install metal drip edges beneath flexible flashing at exterior face of wall. Stop flexible flashing 1/2 inch (13 mm) back from outside face of wall and adhere flexible flashing to top of metal drip edge.
  - 4. Install metal flashing termination beneath flexible flashing at exterior face of wall. Stop flexible flashing 1/2 inch (13 mm) back from outside face of wall and adhere flexible flashing to top of metal flashing termination.
- C. Install weep holes in head joints in exterior wythes of first course of masonry immediately above embedded flashing and as follows:
  - 1. Use vent products to form weep holes.
  - 2. Space weep holes 24 inches (600 mm) o.c., unless otherwise indicated.
  - 3. Cover cavity side of weep holes with plastic insect screening at cavities insulated with loose-fill insulation.
- D. Place cavity drainage material in cavities to comply with configuration requirements for cavity drainage material in Part 2 "Miscellaneous Masonry Accessories" Article.
- E. Install vents in head joints in exterior wythes at spacing indicated. Use vent products to form vents.
  - 1. Close cavities off vertically and horizontally with blocking in manner indicated. Install through-wall flashing and weep holes above horizontal blocking.

### 3.11 REINFORCED UNIT MASONRY INSTALLATION

- A. Temporary Formwork and Shores: Construct formwork and shores as needed to support reinforced masonry elements during construction.

1. Construct formwork to provide shape, line, and dimensions of completed masonry as indicated. Make forms sufficiently tight to prevent leakage of mortar and grout. Brace, tie, and support forms to maintain position and shape during construction and curing of reinforced masonry.
  2. Do not remove forms and shores until reinforced masonry members have hardened sufficiently to carry their own weight and other temporary loads that may be placed on them during construction.
- B. Placing Reinforcement: Comply with requirements in ACI 530.1/ASCE 6/TMS 602.
- C. Grouting: Do not place grout until entire height of masonry to be grouted has attained enough strength to resist grout pressure.
1. Comply with requirements in ACI 530.1/ASCE 6/TMS 602 for cleanouts and for grout placement, including minimum grout space and maximum pour height.
  2. Limit height of vertical grout pours to not more than 60 inches (1520 mm).

### 3.12 FIELD QUALITY CONTROL

- A. Inspectors: Owner will engage qualified independent inspectors to perform inspections and prepare reports. Allow inspectors access to scaffolding and work areas, as needed to perform inspections.
1. Place grout only after inspectors have verified compliance of grout spaces and grades, sizes, and locations of reinforcement.
- B. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections indicated below and prepare test reports:
1. Payment for these services will be made from Testing and Inspecting Allowance, as authorized by Change Orders.
- C. Testing Frequency: One set of tests for each 5000 sq. ft. (465 sq. m) of wall area or portion thereof.
- D. Clay Masonry Unit Test: For each type of unit provided, per ASTM C 67.
- E. Concrete Masonry Unit Test: For each type of unit provided, per ASTM C 140.
- F. Mortar Test (Property Specification): For each mix provided, per ASTM C 780. Test mortar for mortar air content and compressive strength.
- G. Grout Test (Compressive Strength): For each mix provided, per ASTM C 1019.

### 3.13 PARGING

- A. Parge exterior faces of below-grade masonry walls, where indicated, in 2 uniform coats to a total thickness of 3/4 inch (19 mm) with a steel-trowel finish. Form a wash at top of parging and a cove at bottom. Damp-cure parging for at least 24 hours and protect parging until cured.

### 3.14 CLEANING

- A. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.
- B. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:

1. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes.
2. Protect adjacent surfaces from contact with cleaner.
3. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing surfaces thoroughly with clear water.
4. Clean brick by bucket-and-brush hand-cleaning method described in BIA Technical Notes 20.
5. Clean masonry with a proprietary acidic cleaner applied according to manufacturer's written instructions.
6. Clean concrete masonry by cleaning method indicated in NCMA TEK 8-2A applicable to type of stain on exposed surfaces.

### 3.15 MASONRY WASTE DISPOSAL

- A. Waste Disposal as Fill Material: Dispose of clean masonry waste, including excess or soil-contaminated sand, waste mortar, and broken masonry units, by crushing and mixing with fill material as fill is placed.
  1. Do not dispose of masonry waste as fill within 18 inches (450 mm) of finished grade.
  2. Remove excess clean masonry waste that cannot be used as fill, as described above, and other masonry waste, and legally dispose of off Owner's property.

END OF SECTION

## PERROW PARK – GREEN ROOM

### SECTION 13 34 23 - PRE-ENGINEERED ROMTEC BUILDING

Specification Date: 5/20/2025

#### SECTION 1: BUILDING SUPPLIER SCOPE

##### 1.1 SUMMARY

- A. The work shall include furnishing the sealed architectural, structural, mechanical, and electrical plan sets and furnishing the structural, mechanical, and electrical building components as a complete, pre-designed Romtec building package as shown on drawings and as specified herein.

##### 1.2 GENERAL REQUIREMENTS

- A. Packaged building design and engineering and furnishing all specified building package components shall be supplied by Romtec, Inc., or pre-approved alternate, hereafter designated as the **building supplier**.
- B. The **building supplier** shall be a single source design, engineering, and manufacturing firm who shall meet all the following requirements.
- C. The packaged building shall be a current standard product of **building supplier**.
- D. **Building supplier** shall be regularly engaged in and have at least ten (10) years of experience in packaged building engineering, design, supply, and construction.
- E. The **building supplier** must meet or exceed the product specifications. The Romtec, Inc. building package is an approved guide and example.
- F. Alternate **building suppliers** shall demonstrate that they have designed, engineered, produced, delivered, and constructed at minimum ten (10) functioning site-built buildings of similar type. Project completion dates and a reference contact from the owner of each project must be provided.
- G. Alternate **building suppliers** must disclose all instances of any prior municipal reviewer or landscape architect's rejection of the same or similar product as an "or equal" to the specified basis of design building package.
- H. Bidders who propose and alternate **building supplier** other than Romtec, Inc. are required to provide a complete submittal package minimum of ten (10) calendar days prior to the bid opening date with full sealed plan sets, calculations, and all pre-engineered structural items.
- I. Any products proposed as "or equal" that are not as specified must be specifically listed in the alternate **building supplier** submittal package and accompanied by manufacturers data sheets for review. These products will be approved or denied prior to the bid opening. Incomplete submittals will be rejected and returned to the bidder.
- J. The building and its concrete footings, foundation, and slab are to be engineered by the **building supplier** to meet site-specific conditions, including wind and snow loading, local frost depth, and ground conditions.
- K. Fasteners that are normally included with individual components, as well as any atypical fasteners, shall be supplied by **building supplier**.
- L. Building is to be designed and constructed to meet local codes and approvals for permanent structures. Any building that is temporary, permanently relocatable, prefabricated modular, an offsite constructed product, or constructed of precast material is not an accepted equal to permanent, onsite, conventional construction.
- M. No approval by any external entity will override the local building authority's codes and inspections. Seals meant for modular homes and production plant certifications will not be allowed in lieu of sealed plans from a licensed engineer and conventional inspection during construction.
- N. Building sidings, treatments, and roofing are to be as specified. Precast buildings with painted textures are not considered architecturally equivalent.
- O. The **building supplier** shall provide complete, code-compliant building plans including plans, elevations, sections, and details, under seal of a National Kitchen and Bathroom Association (NKBA) certified technical designer.
- P. The **building supplier** shall provide complete structural calculations meeting code for design loads and seismic design under seal of a professional Engineer with current license in the state where the project is located.
- Q. The reviewing authority reserves the right to review or reject all submittals at its sole discretion.
- R. All work and materials shall comply with current industry building codes and regulations for the state where the project is located.
- S. Americans with Disabilities Act Accessibility Guidelines (ADAAG) will be followed in design, manufacture, and construction.

##### 1.3 DESIGN & SUBMITTAL DOCUMENTATION

- A. The **building supplier** work shall include the design of the architectural, mechanical, structural, and electrical components that will be required for this building.
- B. The building will be designed as a complete building package to be delivered to the job site for construction on-site by the contractor.

- C. Within one (1) week of contract award, the **building supplier** shall submit the packaged building preliminary Scope of Supply and Design Submittal (SSDS), including the building plan view and elevation drawings.
- D. The **building supplier** will provide complete submittal documentation in the **building supplier's** standard electronic submittal format for review.
- E. The preliminary SSDS will be reviewed by relevant parties and returned to the **building supplier** with any required revisions to the terms, product data sheets, and/or building plan view and elevation drawings noted as comments.
- F. The **building supplier** shall make any required corrections or revisions and resubmit the preliminary SSDS until the preliminary SSDS is approved by the relevant parties.
- G. Once the preliminary SSDS has been approved, the **building supplier** will provide full sealed plan sets stamped by an engineer licensed in the state that the building is located for review by the permitting authority.
- H. Up to three (3) wet stamped sets of the plans and structural calculations shall be provided by **building supplier** before any additional fees apply. Standard plan set size is 11" x 17".
- I. Permitting authority will review the full sealed plan set and return with any required revisions or corrections noted as comments.
- J. **Building supplier** shall provide one full round of sealed plan revisions in response to permitting authority comments before any additional fees are allowed.
- K. The following sections shall be included in the **building supplier's** preliminary Scope of Supply and Design Submittal. Incomplete submittals will be rejected and returned to the bidder.
  - 1. INTRODUCTION
  - 2. BUILDING DESIGN,
    - (a) SUPPLIED ITEMS
    - (b) EXCLUDED ITEMS
    - (c) PLAN VIEW AND ELEVATION DRAWINGS
  - 3. PRODUCT DATA
  - 4. WARRANTY & LIMITATIONS

*Note: Overall site plan is not part of **building supplier's** scope.*

#### 1.4 WARRANTY

- A. The building package and all associated components provided by **building supplier** shall be warranted against defects in materials and workmanship for a period of not less than one (1) year from the date of acceptance. Acceptance is the date of delivery of the building package, or, if delivery is delayed for any reason beyond **building supplier's** control, the date that the building and all its associated components were ready to deliver.
- B. **Building supplier** shall pass through to owner all relevant manufacturers' warranties for individual products and components of the building package.

## SECTION 2: BUILDING PACKAGE PRODUCTS

### 2.1 APPROVED BUILDING SUPPLIERS

- A. Romtec, Inc.,  
18240 North Bank Road, Roseburg, OR 97470  
Tel: 541-496-3541; Fax: 541-496-0803; Email: [RIsales@romtec.com](mailto:RIsales@romtec.com)  
Web: [www.Romtec.com](http://www.Romtec.com)
- B. Requests for use of an alternate **building supplier** will be considered in accordance with provisions of Section 1.

### 2.2 BUILDING DESCRIPTION

- A. Refer to drawings for quantities, dimensions, locations, and installation methods for the materials and items described in this section.
- B. Building dimensions shall match what is indicated on drawings.

### 2.3 PLUMBING FIXTURES & ACCESSORIES

- A. The following plumbing fixtures and accessories shall be supplied by **building supplier**.
- B. Toilet shall be wall mount, stainless steel with elongated toilet bowl, self-draining flushing rim, and integral seat.
  - 1. Flush valve shall be a chrome, manual lever with ADA compliant metal oscillating non-hold-open handle.
- C. Stainless steel wall mounted lavatory with rectangular lavatory basin, integral ribbed soap tray, 4" high backsplash and deck punched for faucets as required.
  - 1. Faucets shall be a 2.2gpm, pivot action lever style faucet.
- D. Grab bars shall be stainless steel.
- E. Mirror shall be 18" x 36", framed with one-piece, roll-formed stainless steel with ¾" face and neatly mitered corners.

- F. Soap/Sanitizer Dispenser shall be Bradley Corp. Diplomat Series Model 6A03, surface-mounted automatic foam soap/sanitizer dispenser, with face formed with contemporary contours, radii, and finish matching related accessories in manufacturer's designer series. Capacity 27 oz (800 ml). Equipped with hinged cover and completely concealed mounting plate. Vandal resistant filler hole cover and sight gauge. Corrosion-resistant foam soap/sanitizer valve.
- G. Paper Towel Dispenser & Waste Receptacle – Surface Mounted. Dispenses 600 C-fold or 800 multi-fold paper towels. 12 gal. (46 L) stainless steel waste receptacle.
- H. Surface mounted seat cover and toilet paper dispenser with sanitary napkin disposal for toilet compartments is specially manufactured to meet new Building Code requirements for ADA accessibility when mounted properly. Sleek and durable type 304 stainless steel, and double toilet tissue dispensers with vandal resistant rollers. Dispenser door shall be 18-gauge type 304 stainless steel satin finish; face frame & Cabinet shall be 22-gauge same material. Cabinet door attached w/ multi staked piano hinge and tumbler lock.

## 2.1 ELECTRICAL

- A. The following electrical fixtures shall be supplied by **building supplier**.
- B. Light fixtures shall be supplied by **building supplier**.
  - 1. Exterior lights to be LED downlights with cast-aluminum housing with corrosion-resistant paint in dark bronze. Polycarbonate lens.
  - 2. Exterior lights controlled by photocell.
  - 3. Interior surface mount, 48" LED light fixtures.
  - 4. Restroom lights controlled by motion sensor.
  - 5. Mech room lights controlled by switch (switches by installer).
- C. Single point, 4.8kW tankless/electric water heater supplied by **building supplier**.
- D. Mini split cooling-heating multi-indoor unit
- E. Mechanical exhaust package with in-line fans shall be supplied by **building supplier**.
- F. Main breaker panel shall be supplied by **building supplier**.
  - 1. Breaker Panel shall be 100 Amp, single-phase, rain tight.

*Note: Breaker panel shall be sized to accept only the loads of the **building supplier** electrical fixture package. The **building supplier** should modify the main breaker panel as needed to be most efficient based on any design changes.*

## 2.2 STRUCTURE

- A. Concrete Masonry Units (CMU) shall be supplied by **building supplier**.
  - 1. Walls shall be constructed of 8"W x 16"L x 8"H smooth-face mortar joint concrete masonry units (concrete blocks).
  - 2. Blocks shall be manufactured to ASTM C90 designation for load bearing concrete masonry units.
  - 3. Block color to be **Gray**.
- B. Exterior wall finish shall be fiber cement board and batten siding.
  - 1. Siding shall be mounted over OSB sheathing and insulation supplied by **building supplier**.
- C. Sanitary tile cove base on interior restroom walls to be supplied by **building supplier**.
- D. Door system components shall be supplied by **building supplier**.
  - 1. Doors shall be Steelcraft® SL18 standard laminated honeycomb core and 18-gauge galvanized steel.
  - 2. Door frame shall be pre-welded Steelcraft® 3-Sided flush frame, 16-gauge galvanized A-60 steel.
  - 3. Doors and frames shall be powder coated **black**.
  - 4. Masonry door clips (3/16" dia.) for door frame shall be fitted between the doorframe and concrete blocks to bond frame to wall. Door clips shall allow full internal grouting of the frame during installation.
  - 5. Hinges shall meet ANSI A5112 with non-removable pin and two ball bearings.
  - 6. Hager 5100 Series Grade 1 door closer shall be constructed of cast iron.
  - 7. Door shall have 0.038" gauge, stainless steel protection plates.
  - 8. Doors shall have aluminum alloy 6063, T5 temper mill finish saddle thresholds, model 424E.
  - 9. Door lock shall be Grade 2, standard duty commercial cylindrical lever locks with no exposed mounting screws.
    - (i) Hager 341C latch protection plate with lock cut out.

## 2.3 ROOFING

- A. Roof system shall consist of wood truss package.
  - 1. **Building supplier** shall provide the following items:
    - (i) Batt insulation.
    - (ii) 1"x4" Cedar Trim
    - (iii) Simpson anchors/ties
    - (iv) Roof Sheathing
    - (v) Lumber for truss blocking, top-of-wall blocking, eave/vent blocking

- (vi) Vents
- (vii) Ice and water shield.
- (viii) Interior trim boards
- B. Roofing shall be Fabral, 26-gauge, Horizon 16, standing seam panels, with 16 in. coverage width.
  1. Roofing package shall include inside and outside foam closures, matching trim (eaves, gables, and ridge) and fasteners, sheet metal flashing (all sides), and 30# felt (under metal).
  2. Roofing color to be selected by the **owner** from the manufacturers' standard color chart.

#### 2.4 DELIVERY, STORAGE, AND HANDLING

- A. The **building supplier** freight shall be based on delivering the product on a 48' to 53' flatbed or van truck and trailers, or as close to those dimensions as can legally access the site. Overall dimensions of the truck and trailers allowed to access the site are: 70' overall length, 102" wide and 168" high.
- B. **Building supplier** shall deliver organized building package components in stages as shrink-wrapped pallets that correspond to a typical sequence of construction. A bill of material stating the stages of palletized components shall be included with every delivery.
  1. Stage 1 pallets shall include structural components such as block, frames, vents, beams, connectors, trusses, etc.
  2. Stage 2 pallets shall include second stage structural components such as filler wall material, windows, skylights, roofing, etc.
  3. Stage 3 pallets shall include structural finish components such as siding material, tile, doors etc.
  4. Stage 4 pallets shall include plumbing and electrical fixtures and other finish materials such as toilets, sinks, drinking fountains, electrical fixtures, accessories, etc.

### SECTION 3: BUILDING INSTALLER SCOPE

The installing contractor or subcontractor, hereafter designated as the **building installer**, is responsible for building package installation. **Building installer** work will generally include foundation/pad construction and building package assembly/construction.

*Note: Building supplier's scope is separate from the building installer's scope. Romtec, Inc., is the approved building supplier, not a designated building installer.*

#### 3.1 CONSTRUCTION SUBMITTALS

- A. If required by **owner** and/or reviewing authority, **building installer** shall submit product data sheets and relevant information about the specified **building installer** supplied products below for review and approval.

#### 3.2 WARRANTY

- A. **Building installer's** work shall be warranted against defects in materials and workmanship for a period of not less than one (1) year from the date of acceptance. Acceptance is the date that installation work for the building package is completed, including any relevant final punch list. In the event that final acceptance of the completed building is delayed for reasons beyond **building installer's** control, the warranty shall be one (1) year from the completion of **building installer's** installation work and demobilization.
- B. **Building installer** shall pass through to owner all relevant manufacturers warranties for individual products and components supplied by **building installer**.

#### 3.3 STRUCTURE

- A. Masonry (concrete) grout shall be supplied and installed by **building installer**.
  1. Grout shall have a minimum compressive strength of 2,500 psi at 28 days, 9+/-1" slump, with max ½" aggregate.
  2. Fine or coarse grout may be used in accordance with 2009 UBC.
  3. All CMU block must be fully grouted and may not be wetted.

*Note: If required for installation, building installer will be responsible for providing appropriate equipment and labor for notching CMU block for bond beams, cutting CMU block to make any required shapes, and/or grinding CMU block for fixture mounting.*

- B. Rebar for walls shall be supplied and installed by **building installer**.
  1. All walls shall have # 4 and # 5 rebar. See final approved plans for spacing.
  2. All rebar used in the building must meet ASTM A615 manufacturing standards and is to be placed per the final approved plans.
- C. Interior block wall finish shall be latex epoxy paint supplied and installed by **building installer**.
- D. Ceiling finish shall be supplied and installed by **building installer** per the final approved plans.
- E. Interior floors to be sealed concrete finish supplied by **building installer**.



- F. Sealant for all exposed wood shall be supplied and installed by **building installer**.
- G. Sealant for all exterior CMU block is required, to be supplied and installed by **building installer**.
- H. Fiber cement siding is primed to be painted on-site by **building installer**.
  - 1. Siding shall be mounted over OSB sheathing (sheathing supplied by **building supplier**).
- I. Rain gutters and downspouts are supplied and installed by **building installer**.

### 3.4 ELECTRICAL

- A. Electrical rough-in, installation and trim shall be provided by **building installer**.
  - 1. All underground and/or overhead service to building shall be as specified in the final site plan.
  - 2. **Building installer** is responsible for all necessary wire, connectors, grounding, conduit, and related items to install the building package electrical components and meet all relevant national, state, and local codes.
  - 3. **Building installer** shall supply and install all switches and outlets required to complete the building package installation.

### 3.5 CAST IN-PLACE CONCRETE FOR BUILDING PACKAGE

- A. All equipment, labor, trades, and materials for cast-in-place concrete shall be provided by **building installer**.
  - 1. Includes all materials and labor for building package foundations/footings and interior slabs.
- B. Footings for the building package are to be dug by the **building installer** and poured on-site to meet local code for permanent structures. A prefabricated, modular mat placed on compacted base is not an accepted equal to a site specific, site poured, engineered foundation.
- C. Engineered fill shall be ¾" minus crushed aggregate around footings, foundations, and slabs, or as required in the final approved plans.
- D. Slab vapor barrier shall be 6-mil continuous plastic under the concrete slab, or as required in the final approved plans.
- E. The foundation shall be installed as designed with all cast in-place concrete poured to dimensions specified, or as required in the final plans.
  - 1. Footings will be built to minimum 24" depth or greater if required by local frost depth or permitting authority.
  - 2. Minimum compressive strength of foundation concrete shall be 3,000 psi at 28 days, 4" +/-1" slump, with max ¾" aggregate, cured in accordance with ACI 308, or as required in approved final plans.
  - 3. Slabs shall have a fine broom finish with joints required in flat work as shown on plans.
  - 4. Steel rebar shall be installed as specified in final plans.
- F. **Building installer** shall supply and install concrete slab sealer.
  - 1. Concrete slab sealer shall be a water-based, transparent curing, sealing and dust proofing compound with two (2) coats to be applied per manufacturer's instructions.

### 3.6 PLUMBING

- A. Plumbing rough-in, installation and trim within 10' of the building footprint shall be provided by **building installer**.
  - 1. All underground water service and sewer drain(s) from building to be as specified in final approved site plan.
  - 2. Building water shutoff valve, drain, and all rough piping shall be as shown on final building plans. Final installation location to be determined onsite.
  - 3. Install the building package plumbing fixtures per the final approved plans.
  - 4. Piping shall be installed per the final approved plans with minimum pipe sizing per 2009 Uniform Plumbing Code Section 610.
- B. Floor drains in the building shall be supplied and installed by **building installer**.
  - 1. All floor drains shall be as shown on final approved plans.

### 3.7 OTHER MATERIALS & EQUIPMENT

- A. Unless otherwise specified, the following products and materials are supplied by **building installer** (if applicable).
  - 1. Building package installation
  - 2. Cast-in-place concrete foundations, footings, interior slabs.
  - 3. Concrete slab & block sealer
  - 4. Mortar
  - 5. Concrete grout
  - 6. Rebar
  - 7. Latex epoxy paint
  - 8. Caulk for siding
  - 9. Plumbing rough in, installation and trim
  - 10. Electrical rough in, installation and trim

11. Switches & outlets
12. Typical fasteners; for example: roofing nails, staples, etc.
13. Fasteners not included in product packaging.
14. Wood sealant for all decking, glulam beams, posts, and extensions
15. All other items within the building footprint indicated on final plans or required by building codes to complete installation of the building package which are not specifically stated as supplied by **building supplier**.

### 3.8 DELIVERY, STORAGE, AND HANDLING

- A. The **building installer** will be responsible for all equipment and labor required for off-loading of the delivered building package onsite.
- B. The **building installer** will assume responsibility for adequate protection and maintenance of delivered building package materials from weather, damage, and pilferage during installation work. Any failure to adequately protect building package materials that affects the warranty of those materials will be at **building installer's** expense.
- C. **Building installer** shall collect and maintain for final delivery to owner any operation & maintenance manuals included by individual product manufacturers with their respective product packaging. Any failure to collect, maintain, and/or deliver these O&M manuals to the **owner** that results in fees from **building supplier** for additional copies shall be at **building installer's** expense.

## SECTION 4: CONTRACTOR SCOPE ITEMS

The items in this section may be provided by the same **building installer** as defined in Section 3 above (typically when a single entity is acting as both the **building installer** and **contractor**), or the items in this section may be provided by a separate entity such as a general contractor or site contractor, hereafter designated as **contractor** (typically when the **building installer** is a separate subcontractor). **Contractor** work will generally include site preparation and grading, excavations for structures, backfill and/or structural backfill, and any site or utility work outside the building package footprint.

Items in this section are generally to be completed prior to **building installer** beginning its installation work described in Section 3 above.

### 4.1 CONSTRUCTION SUBMITTALS

- A. If required by **owner** and/or reviewing authority, **contractor** shall submit product data sheets and relevant information about the specified **contractor** supplied products below for review and approval.

### 4.2 WARRANTY

- A. **Contractor's** work shall be warranted against defects in materials and workmanship for a period of not less than one (1) year from the date of acceptance. Acceptance is the date that installation work for the building package is completed, including any relevant final punch list. In the event that final acceptance of the completed building is delayed for reasons beyond **contractor's** control, the warranty shall be one (1) year from the completion of **contractor's** installation work and demobilization.
- B. **Contractor** shall pass through to owner all relevant manufacturers' warranties for individual products and components supplied by **contractor**.

### 4.3 ELECTRICAL

- A. Incoming electrical utility lines to within approximately 10' of the building shall be provided by **contractor**.
  1. All underground and/or overhead service to building shall be as specified in the final site plan.
  2. Electric meter base and all rough wiring, switches, plugs and circuit breakers shall be as shown on final plans.
- B. **Contractor** supplies and installs the meter base and meter.

### 4.4 CAST IN-PLACE CONCRETE FOR BUILDING EXTERIOR

- A. All equipment, labor, trades, and materials shall be supplied by **contractor**.
  1. Includes all materials and labor for exterior/entry slabs and sidewalks.
- B. Refer to drawings for sidewalks and entry slabs.
  1. Minimum concrete compressive strength of 2,500 psi at 28 days, or as required in final approved plans.
  2. Remesh or rebar reinforcement shall be used in sidewalks.
  3. All sidewalks shall be finished with a fine broom with control joints installed per the final approved site plan.

### 4.5 PLUMBING

- A. Incoming plumbing to within approximately 10' of the building shall be provided by **contractor**.
  - 1. All underground water service and sewer drain(s) from building to be as specified in final approved site plan.
  - 2. Building water shutoff valve is to be supplied and installed by **contractor**.
  - 3. **Contractor** is responsible to ensure that incoming water pressure is sufficient to meet building package fixture demands.
  - 4. Minimum water pressure at toilet and urinal flush valves shall be 40 psi with minimum pipe sizing as per 2009 Uniform Plumbing Code Section 610, or as required in final approved plans.
- B. Water line drain valve shall be supplied and installed by **contractor**.
- C. Sewer line backflow check valve shall be supplied and installed by **contractor**.

#### 4.6 OTHER MATERIALS & EQUIPMENT

- A. Unless otherwise specified, the following products and materials are supplied by **contractor**.
  - 1. All items not specifically listed as supplied by **building supplier** or **building installer**.
  - 2. Any item listed as supplied by "contractor" or "others."
- B. Unless specified in the plans or submittals, **contractor** supplies the following items (if applicable):
  - 1. Incoming electrical, water, sewer, and gas utilities.
  - 2. Asphalt paving
  - 3. Masonry pavers
  - 4. Sidewalks
  - 5. Landscaping
  - 6. Site grading
  - 7. Exterior/entry slabs
  - 8. Drain valves and backflow check valves.
  - 9. Branch circuit breakers
  - 10. Irrigation Equipment
  - 11. Fire alarm and fire suppression equipment.
  - 12. Lighting equipment not attached to the building.
  - 13. All other items exterior of the building footprint indicated on final plans or required by building codes which are not specifically stated as supplied by **building supplier** or **building installer**.

#### 4.7 DELIVERY, STORAGE, AND HANDLING

- A. The **contractor** will assume responsibility for adequate protection and maintenance of the installed building package materials after completion of installation work by **building installer**. Any failure to adequately protect building package materials that affects the warranty of those materials will be at **contractor's** expense.

### SECTION 5: OWNER'S SCOPE

#### 5.1 ONGOING MAINTENANCE

- A. **Owner** is responsible for ongoing maintenance of the completed building after completion of work by building installer and contractor.

#### 5.2 SITE PLAN

- A. **Owner** (or owner's site engineer) is responsible for providing the final approved site plan to **building supplier** and/or **building installer**.

#### 5.3 SPECIAL INSPECTION

- A. If required, special inspection(s) services shall be provided by **owner**.
- B. If special inspection(s) are required by the permitting authority or relevant agency(ies), then the **building supplier**, **building installer**, and/or **contractor** shall provide reasonable assistance to the **owner** to accommodate the special inspection(s).

## PERROW PARK - RESTROOM

### SECTION 13 34 23 - PRE-ENGINEERED RESTROOM BUILDING

Specification Date: 5/20/2025

#### SECTION 1: BUILDING SUPPLIER SCOPE

##### 1.1 SUMMARY

- A. The work shall include furnishing the sealed architectural, structural, mechanical, and electrical plan sets and furnishing the structural, mechanical, and electrical building components as a complete, pre-designed restroom building package as shown on drawings and as specified herein.

##### 1.2 GENERAL REQUIREMENTS

- A. Packaged building design and engineering and furnishing all specified building package components shall be supplied by Romtec, Inc., or pre-approved alternate, hereafter designated as the **building supplier**.
- B. The **building supplier** shall be a single source design, engineering, and manufacturing firm who shall meet all the following requirements.
- C. The packaged building shall be a current standard product of **building supplier**.
- D. **Building supplier** shall be regularly engaged in and have at least ten (10) years of experience in packaged building engineering, design, supply, and construction.
- E. The **building supplier** must meet or exceed the product specifications. The Romtec, Inc. building package is an approved guide and example.
- F. Alternate **building suppliers** shall demonstrate that they have designed, engineered, produced, delivered, and constructed at minimum ten (10) functioning site-built buildings of similar type. Project completion dates and a reference contact from the owner of each project must be provided.
- G. Alternate **building suppliers** must disclose all instances of any prior municipal reviewer or landscape architect's rejection of the same or similar product as an "or equal" to the specified basis of design building package.
- H. Bidders who propose and alternate **building supplier** other than Romtec, Inc. are required to provide a complete submittal package minimum of ten (10) calendar days prior to the bid opening date with full sealed plan sets, calculations, and all pre-engineered structural items.
- I. Any products proposed as "or equal" that are not as specified must be specifically listed in the alternate **building supplier** submittal package and accompanied by manufacturers data sheets for review. These products will be approved or denied prior to the bid opening. Incomplete submittals will be rejected and returned to the bidder.
- J. The building and its concrete footings, foundation, and slab are to be engineered by the **building supplier** to meet site-specific conditions, including wind and snow loading, local frost depth, and ground conditions.
- K. Fasteners that are normally included with individual components, as well as any atypical fasteners, shall be supplied by **building supplier**.
- L. Building is to be designed and constructed to meet local codes and approvals for permanent structures. Any building that is temporary, permanently relocatable, prefabricated modular, an offsite constructed product, or constructed of precast material is not an accepted equal to permanent, onsite, conventional construction.
- M. No approval by any external entity will override the local building authority's codes and inspections. Seals meant for modular homes and production plant certifications will not be allowed in lieu of sealed plans from a licensed engineer and conventional inspection during construction.
- N. Building sidings, treatments, and roofing are to be as specified. Precast buildings with painted textures are not considered architecturally equivalent.
- O. The **building supplier** shall provide complete, code-compliant building plans including plans, elevations, sections, and details, under seal of a National Kitchen and Bathroom Association (NKBA) certified technical designer.
- P. The **building supplier** shall provide complete structural calculations meeting code for design loads and seismic design under seal of a professional Engineer with current license in the state where the project is located.
- Q. The reviewing authority reserves the right to review or reject all submittals at its sole discretion.
- R. All work and materials shall comply with current industry building codes and regulations for the state where the project is located.
- S. Americans with Disabilities Act Accessibility Guidelines (ADAAG) will be followed in design, manufacture, and construction.

##### 1.3 DESIGN & SUBMITTAL DOCUMENTATION

- A. The **building supplier** work shall include the design of the architectural, mechanical, structural, and electrical components that will be required for this building.
- B. The building will be designed as a complete building package to be delivered to the job site for construction on-site by the contractor.

- C. Within one (1) week of contract award, the **building supplier** shall submit the packaged building preliminary Scope of Supply and Design Submittal (SSDS), including the building plan view and elevation drawings.
- D. The **building supplier** will provide complete submittal documentation in the **building supplier's** standard electronic submittal format for review.
- E. The preliminary SSDS will be reviewed by relevant parties and returned to the **building supplier** with any required revisions to the terms, product data sheets, and/or building plan view and elevation drawings noted as comments.
- F. The **building supplier** shall make any required corrections or revisions and resubmit the preliminary SSDS until the preliminary SSDS is approved by the relevant parties.
- G. Once the preliminary SSDS has been approved, the **building supplier** will provide full sealed plan sets stamped by an engineer licensed in the state that the building is located for review by the permitting authority.
- H. Up to three (3) wet stamped sets of the plans and structural calculations shall be provided by **building supplier** before any additional fees apply. Standard plan set size is 11" x 17".
- I. Permitting authority will review the full sealed plan set and return with any required revisions or corrections noted as comments.
- J. **Building supplier** shall provide one full round of sealed plan revisions in response to permitting authority comments before any additional fees are allowed.
- K. The following sections shall be included in the **building supplier's** preliminary Scope of Supply and Design Submittal. Incomplete submittals will be rejected and returned to the bidder.
  - 1. INTRODUCTION
  - 2. BUILDING DESIGN,
    - (a) SUPPLIED ITEMS
    - (b) EXCLUDED ITEMS
    - (c) PLAN VIEW AND ELEVATION DRAWINGS
  - 3. PRODUCT DATA
  - 4. WARRANTY & LIMITATIONS

*Note: Overall site plan is not part of **building supplier's** scope.*

#### 1.4 WARRANTY

- A. The building package and all associated components provided by **building supplier** shall be warranted against defects in materials and workmanship for a period of not less than one (1) year from the date of acceptance. Acceptance is the date of delivery of the building package, or, if delivery is delayed for any reason beyond **building supplier's** control, the date that the building and all its associated components were ready to deliver.
- B. **Building supplier** shall pass through to owner all relevant manufacturers' warranties for individual products and components of the building package.

## SECTION 2: BUILDING PACKAGE PRODUCTS

### 2.1 APPROVED BUILDING SUPPLIERS

- A. Romtec, Inc.,  
18240 North Bank Road, Roseburg, OR 97470  
Tel: 541-496-3541; Fax: 541-496-0803; Email: [RIsales@romtec.com](mailto:RIsales@romtec.com)  
Web: [www.Romtec.com](http://www.Romtec.com)
- B. Requests for use of an alternate **building supplier** will be considered in accordance with provisions of Section 1.

### 2.2 BUILDING DESCRIPTION

- A. Refer to drawings for quantities, dimensions, locations, and installation methods for the materials and items described in this section.
- B. Building dimensions shall match what is indicated on drawings.

### 2.3 PLUMBING FIXTURES & ACCESSORIES

- A. The following plumbing fixtures and accessories shall be supplied by **building supplier**.
- B. Toilets shall be wall mount, top supply, stainless steel.
  - 1. Flush valve shall be a chrome, manual lever with ADA compliant metal oscillating non-hold-open handle.
- C. Urinal shall be top supply, stainless steel.
  - 1. Flush valve shall be a chrome, manual lever with ADA compliant metal oscillating non-hold-open handle.
- D. Lavatories shall be stainless steel, wall mounted fixture. Rectangular lavatory basin with integral ribbed soap try, 4" high back splash and deck punched for faucets.
  - 1. Faucets shall be a 1.5gpm, single-handle lever style faucet.
- E. Grab bars shall be stainless steel.

- F. Mirror shall be 18" x 36", framed with one-piece, roll-formed stainless steel with ¾" face and neatly mitered corners.
- G. Soap/Sanitizer Dispenser shall be Bradley Corp. Diplomat Series Model 6A03, surface-mounted automatic foam soap/sanitizer dispenser, with face formed with contemporary contours, radii, and finish matching related accessories in manufacturer's designer series. Capacity 27 oz (800 ml). Equipped with hinged cover and completely concealed mounting plate. Vandal resistant filler hole cover and sight gauge. Corrosion-resistant foam soap/sanitizer valve.
- H. Paper Towel Dispenser & Waste Receptacle – 18 gallon. Dispenses 600 C-fold or 800 multi-fold paper towels. 18 gal. (68 L) waste receptacle. Projects 8" (205 mm) from wall.
- I. Surface mounted seat cover and toilet paper dispenser with sanitary napkin disposal for toilet compartments is specially manufactured to meet new Building Code requirements for ADA accessibility when mounted properly. Durable type 304 stainless steel, and double toilet tissue dispensers with vandal resistant rollers. Dispenser door shall be 18-gauge type 304 stainless steel satin finish; face frame & Cabinet shall be 22-gauge same material. Cabinet door attached w/ multi staked piano hinge and tumbler lock.
- J. Surface mounted baby changing station shall be solid light grey (9631) molded bacterial-resistant, high-density polyethylene. Steel to steel support hinges with pneumatic gas shock mechanism. Unit shall have integrated liner dispenser and bag hooks. Unit shall have an anti-microbial safety belt. Unit shall be operable with less than 5lbs. of force and complies with ASTM F2285 Standard.
- K. Drinking fountain shall include bi-level electric water cooler with bottle filling station. VRCTLDWS shall deliver non-chilled drinking water. Units shall be stainless steel construction and include vandal-resistant bubbler. Bottle filling unit shall include an automatic 20-second shut-off timer. Shall include Green Ticker™ displaying count of plastic bottles saved from waste. Bottle filler shall provide 1.1 - 1.5 gpm flow rate with laminar flow to minimize splashing. Unit shall meet ADA guidelines. Unit shall be lead-free design which is certified to NSF/ANSI 61 and 372 and meets federal and state low-lead requirements. Unit shall be certified to UL399 and CAN/CSA 22.2 No. 120.
- L. Bradley phenolic restroom partitions shall be supplied by **building supplier**.
  - 1. Solid Phenolic core is composed of compressed cellulose fibers impregnated with resins. The surface laminate is fused to the resin-impregnated core. All edges are machined and finished smooth with a 15-degree beveled edge. Materials shall be non-absorbent, impact and graffiti resistant. Materials shall be impervious to steam, soaps/detergents, and mildew.
  - 2. Partition color shall be **Graphite Grafix (006F)**.

## 2.4 ELECTRICAL

- A. The following electrical fixtures shall be supplied by **building supplier**.
- B. Light fixtures shall be supplied by **building supplier**.
  - 1. Exterior lights to be LED downlights with cast-aluminum housing with corrosion-resistant paint in dark bronze. Polycarbonate lens.
  - 2. Exterior lights controlled by photocell.
  - 3. Interior surface mount, 48" LED light fixtures.
  - 4. Restroom lights controlled by motion sensor.
  - 5. Mech room lights controlled by switch (switches by installer).
- C. Electric tank, 20-gallon, 2.5kw water heater with 2-gallon expansion tank supplied by **building supplier**.
- D. Surface mount, 1000 - 2750-Watt wall heater in mechanical room only shall be supplied by **building supplier**.
- E. Mechanical exhaust package with in-line fans shall be supplied by **building supplier**.
- F. Main breaker panel shall be supplied by **building supplier**.
  - 1. Breaker Panel shall be 100 Amp, single-phase, rain tight.  
*Note: Breaker panel shall be sized to accept only the loads of the building supplier electrical fixture package. The building supplier should modify the main breaker panel as needed to be most efficient based on any design changes.*

## 2.5 STRUCTURE

- A. Concrete Masonry Units (CMU) shall be supplied by **building supplier**.
  - 1. Walls shall be constructed of 8"W x 16"L x 8"H smooth-face mortar joint concrete masonry units (concrete blocks).
  - 2. Blocks shall be manufactured to ASTM C90 designation for load bearing concrete masonry units.
  - 3. Block color to be **Gray**.
- B. Exterior wall finish shall be fiber cement board and batten siding.
  - 1. Siding shall be mounted over OSB sheathing and insulation supplied by **building supplier**.
- C. Sanitary tile cove base on interior restroom walls to be supplied by **building supplier**.
- D. Door system components shall be supplied by **building supplier**.
  - 1. Doors shall be Steelcraft® SL18 standard laminated honeycomb core and 18-gauge galvanized steel.
  - 2. Door frame shall be pre-welded Steelcraft® 3-Sided flush frame, 16-gauge galvanized A-60 steel.

3. Doors and frames shall be powder coated **black**.
4. Masonry door clips (3/16" dia.) for door frame shall be fitted between the doorframe and concrete blocks to bond frame to wall. Door clips shall allow full internal grouting of the frame during installation.
5. Hinges shall meet ANSI A5112 with non-removable pin and two ball bearings.
6. Hager 5100 Series Grade 1 door closer shall be constructed of cast iron.
7. Door shall have 0.038" gauge, stainless steel protection plates.
8. Doors shall have aluminum alloy 6063, T5 temper mill finish saddle thresholds, model 424E.
9. Doors shall have pull handles with stainless steel plates and deadbolt locks.

## 2.6 ROOFING

- A. Roof system shall consist of wood truss package.
  1. **Building supplier** shall provide the following items:
    - (i) Batt insulation.
    - (ii) 1"x4" Cedar Trim
    - (iii) Simpson anchors/ties
    - (iv) Roof Sheathing
    - (v) Lumber for truss blocking, top-of-wall blocking, eave/vent blocking
    - (vi) Vents
    - (vii) Ice and water shield.
    - (viii) Interior trim boards
- B. Roofing shall be Fabral, 26-gauge, Horizon 16, standing seam panels, with 16 in. coverage width.
  1. Roofing package shall include inside and outside foam closures, matching trim (eaves, gables, and ridge) and fasteners, sheet metal flashing (all sides), and 30# felt (under metal).
  2. Roofing color to be selected by the **owner** from the manufacturers' standard color chart.

## 2.7 DELIVERY, STORAGE, AND HANDLING

- A. The **building supplier** freight shall be based on delivering the product on a 48' to 53' flatbed or van truck and trailers, or as close to those dimensions as can legally access the site. Overall dimensions of the truck and trailers allowed to access the site are: 70' overall length, 102" wide and 168" high.
- B. **Building supplier** shall deliver organized building package components in stages as shrink-wrapped pallets that correspond to a typical sequence of construction. A bill of material stating the stages of palletized components shall be included with every delivery.
  1. Stage 1 pallets shall include structural components such as block, frames, vents, beams, connectors, trusses, etc.
  2. Stage 2 pallets shall include second stage structural components such as filler wall material, windows, skylights, roofing, etc.
  3. Stage 3 pallets shall include structural finish components such as siding material, tile, doors etc.
  4. Stage 4 pallets shall include plumbing and electrical fixtures and other finish materials such as toilets, sinks, drinking fountains, electrical fixtures, accessories, etc.

## SECTION 3: BUILDING INSTALLER SCOPE

The installing contractor or subcontractor, hereafter designated as the **building installer**, is responsible for building package installation. **Building installer** work will generally include foundation/pad construction and building package assembly/construction.

*Note: Building supplier's scope is separate from the building installer's scope. Romtec, Inc., is the approved building supplier, not a designated building installer.*

### 3.1 CONSTRUCTION SUBMITTALS

- A. If required by **owner** and/or reviewing authority, **building installer** shall submit product data sheets and relevant information about the specified **building installer** supplied products below for review and approval.

### 3.2 WARRANTY

- A. **Building installer's** work shall be warranted against defects in materials and workmanship for a period of not less than one (1) year from the date of acceptance. Acceptance is the date that installation work for the building package is completed, including any relevant final punch list. In the event that final acceptance of the completed building is delayed for reasons beyond **building installer's** control, the warranty shall be one (1) year from the completion of **building installer's** installation work and demobilization.
- B. **Building installer** shall pass through to owner all relevant manufacturers warranties for individual products and components supplied by **building installer**.

### 3.3 STRUCTURE

- A. Masonry (concrete) grout shall be supplied and installed by **building installer**.
  - 1. Grout shall have a minimum compressive strength of 2,500 psi at 28 days, 9+/-1" slump, with max ½" aggregate.
  - 2. Fine or coarse grout may be used in accordance with 2009 UBC.
  - 3. All CMU block must be fully grouted and may not be wetted.

*Note: If required for installation, **building installer** will be responsible for providing appropriate equipment and labor for notching CMU block for bond beams, cutting CMU block to make any required shapes, and/or grinding CMU block for fixture mounting.*

- B. Rebar for walls shall be supplied and installed by **building installer**.
  - 1. All walls shall have # 4 and # 5 rebar. See final approved plans for spacing.
  - 2. All rebar used in the building must meet ASTM A615 manufacturing standards and is to be placed per the final approved plans.
- C. Interior block wall finish shall be latex epoxy paint supplied and installed by **building installer**.
- D. Ceiling finish shall be supplied and installed by **building installer** per the final approved plans.
- E. Interior floors to be sealed concrete finish supplied by **building installer**.
- F. Sealant for all exposed wood shall be supplied and installed by **building installer**.
- G. Sealant for all exterior CMU block is required, to be supplied and installed by **building installer**.
- H. Fiber cement siding is primed to be painted on-site by **building installer**.
  - 1. Siding shall be mounted over OSB sheathing (sheathing supplied by **building supplier**).
- I. Rain gutters and downspouts are supplied and installed by **building installer**.

### 3.4 ELECTRICAL

- A. Electrical rough-in, installation and trim shall be provided by **building installer**.
  - 1. All underground and/or overhead service to building shall be as specified in the final site plan.
  - 2. **Building installer** is responsible for all necessary wire, connectors, grounding, conduit, and related items to install the building package electrical components and meet all relevant national, state, and local codes.
  - 3. **Building installer** shall supply and install all switches and outlets required to complete the building package installation.

### 3.5 CAST IN-PLACE CONCRETE FOR BUILDING PACKAGE

- A. All equipment, labor, trades, and materials for cast-in-place concrete shall be provided by **building installer**.
  - 1. Includes all materials and labor for building package foundations/footings and interior slabs.
- B. Footings for the building package are to be dug by the **building installer** and poured on-site to meet local code for permanent structures. A prefabricated, modular mat placed on compacted base is not an accepted equal to a site specific, site poured, engineered foundation.
- C. Engineered fill shall be ¾" minus crushed aggregate around footings, foundations, and slabs, or as required in the final approved plans.
- D. Slab vapor barrier shall be 6-mil continuous plastic under the concrete slab, or as required in the final approved plans.
- E. The foundation shall be installed as designed with all cast in-place concrete poured to dimensions specified, or as required in the final plans.
  - 1. Footings will be built to minimum 24" depth or greater if required by local frost depth or permitting authority.
  - 2. Minimum compressive strength of foundation concrete shall be 3,000 psi at 28 days, 4" +/-1" slump, with max ¾" aggregate, cured in accordance with ACI 308, or as required in approved final plans.
  - 3. Slabs shall have a fine broom finish with joints required in flat work as shown on plans.
  - 4. Steel rebar shall be installed as specified in final plans.
- F. **Building installer** shall supply and install concrete slab sealer.
  - 1. Concrete slab sealer shall be a water-based, transparent curing, sealing and dust proofing compound with two (2) coats to be applied per manufacturer's instructions.

### 3.6 PLUMBING

- A. Plumbing rough-in, installation and trim within 10' of the building footprint shall be provided by **building installer**.
  - 1. All underground water service and sewer drain(s) from building to be as specified in final approved site plan.
  - 2. Building water shutoff valve, drain, and all rough piping shall be as shown on final building plans. Final installation location to be determined onsite.
  - 3. Install the building package plumbing fixtures per the final approved plans.



4. Piping shall be installed per the final approved plans with minimum pipe sizing per 2009 Uniform Plumbing Code Section 610.
- B. Floor drains in the building shall be supplied and installed by **building installer**.
  1. All floor drains shall be as shown on final approved plans.

### 3.7 OTHER MATERIALS & EQUIPMENT

- A. Unless otherwise specified, the following products and materials are supplied by **building installer** (if applicable).
  1. Building package installation
  2. Cast-in-place concrete foundations, footings, interior slabs.
  3. Concrete slab & block sealer
  4. Mortar
  5. Concrete grout
  6. Rebar
  7. Latex epoxy paint
  8. Caulk for siding
  9. Plumbing rough in, installation and trim
  10. Electrical rough in, installation and trim
  11. Switches & outlets
  12. Typical fasteners; for example: roofing nails, staples, etc.
  13. Fasteners not included in product packaging.
  14. Wood sealant for all decking, glulam beams, posts, and extensions
  15. All other items within the building footprint indicated on final plans or required by building codes to complete installation of the building package which are not specifically stated as supplied by **building supplier**.

### 3.8 DELIVERY, STORAGE, AND HANDLING

- A. The **building installer** will be responsible for all equipment and labor required for off-loading of the delivered building package onsite.
- B. The **building installer** will assume responsibility for adequate protection and maintenance of delivered building package materials from weather, damage, and pilferage during installation work. Any failure to adequately protect building package materials that affects the warranty of those materials will be at **building installer's** expense.
- C. **Building installer** shall collect and maintain for final delivery to owner any operation & maintenance manuals included by individual product manufacturers with their respective product packaging. Any failure to collect, maintain, and/or deliver these O&M manuals to the **owner** that results in fees from **building supplier** for additional copies shall be at **building installer's** expense.

## SECTION 4: CONTRACTOR SCOPE ITEMS

The items in this section may be provided by the same **building installer** as defined in Section 3 above (typically when a single entity is acting as both the **building installer** and **contractor**), or the items in this section may be provided by a separate entity such as a general contractor or site contractor, hereafter designated as **contractor** (typically when the **building installer** is a separate subcontractor). **Contractor** work will generally include site preparation and grading, excavations for structures, backfill and/or structural backfill, and any site or utility work outside the building package footprint.

Items in this section are generally to be completed prior to **building installer** beginning its installation work described in Section 3 above.

### 4.1 CONSTRUCTION SUBMITTALS

- A. If required by **owner** and/or reviewing authority, **contractor** shall submit product data sheets and relevant information about the specified **contractor** supplied products below for review and approval.

### 4.2 WARRANTY

- A. **Contractor's** work shall be warranted against defects in materials and workmanship for a period of not less than one (1) year from the date of acceptance. Acceptance is the date that installation work for the building package is completed, including any relevant final punch list. In the event that final acceptance of the completed building is delayed for reasons beyond **contractor's** control, the warranty shall be one (1) year from the completion of **contractor's** installation work and demobilization.
- B. **Contractor** shall pass through to owner all relevant manufacturers' warranties for individual products and components supplied by **contractor**.

#### 4.3 ELECTRICAL

- A. Incoming electrical utility lines to within approximately 10' of the building shall be provided by **contractor**.
  - 1. All underground and/or overhead service to building shall be as specified in the final site plan.
  - 2. Electric meter base and all rough wiring, switches, plugs and circuit breakers shall be as shown on final plans.
- B. **Contractor** supplies and installs the meter base and meter.

#### 4.4 CAST IN-PLACE CONCRETE FOR BUILDING EXTERIOR

- A. All equipment, labor, trades, and materials shall be supplied by **contractor**.
  - 1. Includes all materials and labor for exterior/entry slabs and sidewalks.
- B. Refer to drawings for sidewalks and entry slabs.
  - 1. Minimum concrete compressive strength of 2,500 psi at 28 days, or as required in final approved plans.
  - 2. Remesh or rebar reinforcement shall be used in sidewalks.
  - 3. All sidewalks shall be finished with a fine broom with control joints installed per the final approved site plan.

#### 4.5 PLUMBING

- A. Incoming plumbing to within approximately 10' of the building shall be provided by **contractor**.
  - 1. All underground water service and sewer drain(s) from building to be as specified in final approved site plan.
  - 2. Building water shutoff valve is to be supplied and installed by **contractor**.
  - 3. **Contractor** is responsible to ensure that incoming water pressure is sufficient to meet building package fixture demands.
  - 4. Minimum water pressure at toilet and urinal flush valves shall be 40 psi with minimum pipe sizing as per 2009 Uniform Plumbing Code Section 610, or as required in final approved plans.
- B. Water line drain valve shall be supplied and installed by **contractor**.
- C. Sewer line backflow check valve shall be supplied and installed by **contractor**.

#### 4.6 OTHER MATERIALS & EQUIPMENT

- A. Unless otherwise specified, the following products and materials are supplied by **contractor**.
  - 1. All items not specifically listed as supplied by **building supplier** or **building installer**.
  - 2. Any item listed as supplied by "contractor" or "others."
- B. Unless specified in the plans or submittals, **contractor** supplies the following items (if applicable):
  - 1. Incoming electrical, water, sewer, and gas utilities.
  - 2. Asphalt paving
  - 3. Masonry pavers
  - 4. Sidewalks
  - 5. Landscaping
  - 6. Site grading
  - 7. Exterior/entry slabs
  - 8. Drain valves and backflow check valves.
  - 9. Branch circuit breakers
  - 10. Irrigation Equipment
  - 11. Fire alarm and fire suppression equipment.
  - 12. Lighting equipment not attached to the building.
  - 13. All other items exterior of the building footprint indicated on final plans or required by building codes which are not specifically stated as supplied by **building supplier** or **building installer**.

#### 4.7 DELIVERY, STORAGE, AND HANDLING

- A. The **contractor** will assume responsibility for adequate protection and maintenance of the installed building package materials after completion of installation work by **building installer**. Any failure to adequately protect building package materials that affects the warranty of those materials will be at **contractor's** expense.

### SECTION 5: OWNER'S SCOPE

#### 5.1 ONGOING MAINTENANCE

- A. **Owner** is responsible for ongoing maintenance of the completed building after completion of work by building installer and contractor.

#### 5.2 SITE PLAN

- A. **Owner** (or owner's site engineer) is responsible for providing the final approved site plan to **building supplier** and/or **building installer**.

#### 5.3 SPECIAL INSPECTION

- A. If required, special inspection(s) services shall be provided by **owner**.
- B. If special inspection(s) are required by the permitting authority or relevant agency(ies), then the **building supplier, building installer**, and/or **contractor** shall provide reasonable assistance to the **owner** to accommodate the special inspection(s).

## PERROW PARK - STAGE

### SECTION 13 34 23 - PRE-ENGINEERED PAVILION

Specification Date: 5/20/2025

#### SECTION 1: BUILDING SUPPLIER SCOPE

##### 1.1 SUMMARY

- A. The work shall include furnishing the sealed architectural, structural, mechanical, and electrical plan sets and furnishing the structural, mechanical, and electrical building components as a complete, pre-designed pavilion package as shown on drawings and as specified herein.

##### 1.2 GENERAL REQUIREMENTS

- A. Packaged building design and engineering and furnishing all specified building package components shall be supplied by Romtec, Inc., or pre-approved alternate, hereafter designated as the **building supplier**.
- B. The **building supplier** shall be a single source design, engineering, and manufacturing firm who shall meet all the following requirements.
- C. The packaged building shall be a current standard product of **building supplier**.
- D. **Building supplier** shall be regularly engaged in and have at least ten (10) years of experience in packaged building engineering, design, supply, and construction.
- E. The **building supplier** must meet or exceed the product specifications. The Romtec, Inc. building package is an approved guide and example.
- F. Alternate **building suppliers** shall demonstrate that they have designed, engineered, produced, delivered, and constructed at minimum ten (10) functioning site-built buildings of similar type. Project completion dates and a reference contact from the owner of each project must be provided.
- G. Alternate **building suppliers** must disclose all instances of any prior municipal reviewer or landscape architect's rejection of the same or similar product as an "or equal" to the specified basis of design building package.
- H. Bidders who propose and alternate **building supplier** other than Romtec, Inc. are required to provide a complete submittal package minimum of ten (10) calendar days prior to the bid opening date with full sealed plan sets, calculations, and all pre-engineered structural items.
- I. Any products proposed as "or equal" that are not as specified must be specifically listed in the alternate **building supplier** submittal package and accompanied by manufacturers data sheets for review. These products will be approved or denied prior to the bid opening. Incomplete submittals will be rejected and returned to the bidder.
- J. The building and its concrete footings, foundation, and slab are to be engineered by the **building supplier** to meet site-specific conditions, including wind and snow loading, local frost depth, and ground conditions.
- K. Fasteners that are normally included with individual components, as well as any atypical fasteners, shall be supplied by **building supplier**.
- L. Building is to be designed and constructed to meet local codes and approvals for permanent structures. Any building that is temporary, permanently relocatable, prefabricated modular, an offsite constructed product, or constructed of precast material is not an accepted equal to permanent, onsite, conventional construction.
- M. No approval by any external entity will override the local building authority's codes and inspections. Seals meant for modular homes and production plant certifications will not be allowed in lieu of sealed plans from a licensed engineer and conventional inspection during construction.
- N. Building sidings, treatments, and roofing are to be as specified. Precast buildings with painted textures are not considered architecturally equivalent.
- O. The **building supplier** shall provide complete, code-compliant building plans including plans, elevations, sections, and details, under seal of a National Kitchen and Bathroom Association (NKBA) certified technical designer.
- P. The **building supplier** shall provide complete structural calculations meeting code for design loads and seismic design under seal of a professional Engineer with current license in the state where the project is located.
- Q. The reviewing authority reserves the right to review or reject all submittals at its sole discretion.
- R. All work and materials shall comply with current industry building codes and regulations for the state where the project is located.
- S. Americans with Disabilities Act Accessibility Guidelines (ADAAG) will be followed in design, manufacture, and construction.

##### 1.3 DESIGN & SUBMITTAL DOCUMENTATION

- A. The **building supplier** work shall include the design of the architectural, mechanical, structural, and electrical components that will be required for this building.
- B. The building will be designed as a complete building package to be delivered to the job site for construction on-site by the contractor.

- C. Within one (1) week of contract award, the **building supplier** shall submit the packaged building preliminary Scope of Supply and Design Submittal (SSDS), including the building plan view and elevation drawings.
- D. The **building supplier** will provide complete submittal documentation in the **building supplier's** standard electronic submittal format for review.
- E. The preliminary SSDS will be reviewed by relevant parties and returned to the **building supplier** with any required revisions to the terms, product data sheets, and/or building plan view and elevation drawings noted as comments.
- F. The **building supplier** shall make any required corrections or revisions and resubmit the preliminary SSDS until the preliminary SSDS is approved by the relevant parties.
- G. Once the preliminary SSDS has been approved, the **building supplier** will provide full sealed plan sets stamped by an engineer licensed in the state that the building is located for review by the permitting authority.
- H. Up to three (3) wet stamped sets of the plans and structural calculations shall be provided by **building supplier** before any additional fees apply. Standard plan set size is 11" x 17".
- I. Permitting authority will review the full sealed plan set and return with any required revisions or corrections noted as comments.
- J. **Building supplier** shall provide one full round of sealed plan revisions in response to permitting authority comments before any additional fees are allowed.
- K. The following sections shall be included in the **building supplier's** preliminary Scope of Supply and Design Submittal. Incomplete submittals will be rejected and returned to the bidder.
  - 1. INTRODUCTION
  - 2. BUILDING DESIGN,
    - (a) SUPPLIED ITEMS
    - (b) EXCLUDED ITEMS
    - (c) PLAN VIEW AND ELEVATION DRAWINGS
  - 3. PRODUCT DATA
  - 4. WARRANTY & LIMITATIONS

*Note: Overall site plan is not part of **building supplier's** scope.*

#### 1.4 WARRANTY

- A. The building package and all associated components provided by **building supplier** shall be warranted against defects in materials and workmanship for a period of not less than one (1) year from the date of acceptance. Acceptance is the date of delivery of the building package, or, if delivery is delayed for any reason beyond **building supplier's** control, the date that the building and all its associated components were ready to deliver.
- B. **Building supplier** shall pass through to owner all relevant manufacturers' warranties for individual products and components of the building package.

## SECTION 2: BUILDING PACKAGE PRODUCTS

### 2.1 APPROVED BUILDING SUPPLIERS

- A. Romtec, Inc.,  
18240 North Bank Road, Roseburg, OR 97470  
Tel: 541-496-3541; Fax: 541-496-0803; Email: [RIsales@romtec.com](mailto:RIsales@romtec.com)  
Web: [www.Romtec.com](http://www.Romtec.com)
- B. Requests for use of an alternate **building supplier** will be considered in accordance with provisions of Section 1.

### 2.2 BUILDING DESCRIPTION

- A. Refer to drawings for quantities, dimensions, locations, and installation methods for the materials and items described in this section.
- B. Building dimensions shall match what is indicated on drawings.

### 2.3 STRUCTURE

- A. Concrete Masonry Units (CMU) for column base shall be supplied by **building supplier**.
  - 1. Walls shall be constructed of 8"W x 16"L x 8"H smooth-face mortar joint concrete masonry units (concrete blocks).
  - 2. Blocks shall be manufactured to ASTM C90 designation for load bearing concrete masonry units.
  - 3. Block color to be **Gray**.
- B. Steel posts to be powder coated **black**.
- C. Exterior wall finish shall be stone veneer.
  - 1. Stone veneer color shall be selected by **owner** from the manufacturer's standard color chart.
  - 2. Column bases to have marble tile inset.

## 2.4 ROOFING

- A. The following roof components shall be supplied by **building supplier**.
  - 1. Glulam beam shall be 24F-V4 and architectural grade.
  - 2. Tongue & groove decking shall be 2x6 V-edge deck boards, select deck Douglas fir.
- B. Roofing shall be Fabral, 26-gauge, Horizon 16, standing seam panels, with 16 in. coverage width.
  - 1. Roofing package shall include inside and outside foam closures, matching trim (eaves, gables, and ridge) and fasteners, sheet metal flashing (all sides), and 30# felt (under metal).
  - 2. Roofing color to be selected by the **owner** from the manufacturers' standard color chart.

## 2.5 DELIVERY, STORAGE, AND HANDLING

- A. The **building supplier** freight shall be based on delivering the product on a 48' to 53' flatbed or van truck and trailers, or as close to those dimensions as can legally access the site. Overall dimensions of the truck and trailers allowed to access the site are: 70' overall length, 102" wide and 168" high.
- B. **Building supplier** shall deliver organized building package components in stages as shrink-wrapped pallets that correspond to a typical sequence of construction. A bill of material stating the stages of palletized components shall be included with every delivery.
  - 1. Stage 1 pallets shall include structural components such as block, frames, vents, beams, connectors, trusses, etc.
  - 2. Stage 2 pallets shall include second stage structural components such as filler wall material, windows, skylights, roofing, etc.
  - 3. Stage 3 pallets shall include structural finish components such as siding material, tile, doors etc.
  - 4. Stage 4 pallets shall include plumbing and electrical fixtures and other finish materials such as toilets, sinks, drinking fountains, electrical fixtures, accessories, etc.

## SECTION 3: BUILDING INSTALLER SCOPE

The installing contractor or subcontractor, hereafter designated as the **building installer**, is responsible for building package installation. **Building installer** work will generally include foundation/pad construction and building package assembly/construction.

*Note: Building supplier's scope is separate from the building installer's scope. Romtec, Inc., is the approved building supplier, not a designated building installer.*

### 3.1 CONSTRUCTION SUBMITTALS

- A. If required by **owner** and/or reviewing authority, **building installer** shall submit product data sheets and relevant information about the specified **building installer** supplied products below for review and approval.

### 3.2 WARRANTY

- A. **Building installer's** work shall be warranted against defects in materials and workmanship for a period of not less than one (1) year from the date of acceptance. Acceptance is the date that installation work for the building package is completed, including any relevant final punch list. In the event that final acceptance of the completed building is delayed for reasons beyond **building installer's** control, the warranty shall be one (1) year from the completion of **building installer's** installation work and demobilization.
- B. **Building installer** shall pass through to owner all relevant manufacturers warranties for individual products and components supplied by **building installer**.

### 3.3 STRUCTURE

- A. Masonry (concrete) grout shall be supplied and installed by **building installer**.
  - 1. Grout shall have a minimum compressive strength of 2,500 psi at 28 days, 9+/-1" slump, with max ½" aggregate.
  - 2. Fine or coarse grout may be used in accordance with 2009 UBC.
  - 3. All CMU block must be fully grouted and may not be wetted.

*Note: If required for installation, building installer will be responsible for providing appropriate equipment and labor for notching CMU block for bond beams, cutting CMU block to make any required shapes, and/or grinding CMU block for fixture mounting.*

- B. Rebar for walls shall be supplied and installed by **building installer**.
  - 1. All walls shall have # 4 and # 5 rebar. See final approved plans for spacing.
  - 2. All rebar used in the building must meet ASTM A615 manufacturing standards and is to be placed per the final approved plans.
- C. Ceiling finish shall be supplied and installed by **building installer** per the final approved plans.
- D. Interior floors to be sealed concrete finish supplied by **building installer**.

- E. Sealant for all exposed wood shall be supplied and installed by **building installer**.
- F. Sealant for all exterior CMU block is required, to be supplied and installed by **building installer**.

### 3.4 CAST IN-PLACE CONCRETE FOR BUILDING PACKAGE

- A. All equipment, labor, trades, and materials for cast-in-place concrete shall be provided by **building installer**.
  - 1. Includes all materials and labor for building package foundations/footings and interior slabs.
- B. Footings for the building package are to be dug by the **building installer** and poured on-site to meet local code for permanent structures. A prefabricated, modular mat placed on compacted base is not an accepted equal to a site specific, site poured, engineered foundation.
- C. Engineered fill shall be ¾" minus crushed aggregate around footings, foundations, and slabs, or as required in the final approved plans.
- D. Slab vapor barrier shall be 6-mil continuous plastic under the concrete slab, or as required in the final approved plans.
- E. The foundation shall be installed as designed with all cast in-place concrete poured to dimensions specified, or as required in the final plans.
  - 1. Footings will be built to minimum 24" depth or greater if required by local frost depth or permitting authority.
  - 2. Minimum compressive strength of foundation concrete shall be 3,000 psi at 28 days, 4" +/-1" slump, with max ¾" aggregate, cured in accordance with ACI 308, or as required in approved final plans.
  - 3. Slabs shall have a fine broom finish with joints required in flat work as shown on plans.
  - 4. Steel rebar shall be installed as specified in final plans.
- F. **Building installer** shall supply and install concrete slab sealer.
  - 1. Concrete slab sealer shall be a water-based, transparent curing, sealing and dust proofing compound with two (2) coats to be applied per manufacturer's instructions.

### 3.5 ELECTRICAL

- A. Electrical rough-in, installation and trim shall be provided by **building installer**.
  - 1. All underground and/or overhead service to building shall be as specified in the final site plan.
  - 2. **Building installer** is responsible for all necessary wire, connectors, grounding, conduit, and related items to install the building package electrical components and meet all relevant national, state, and local codes.
  - 3. **Building installer** shall supply and install all switches and outlets required to complete the building package installation.

### 3.6 OTHER MATERIALS & EQUIPMENT

- A. Unless otherwise specified, the following products and materials are supplied by **building installer** (if applicable).
  - 1. Building package installation
  - 2. Cast-in-place concrete foundations, footings, interior slabs.
  - 3. Concrete slab & block sealer
  - 4. Mortar
  - 5. Concrete grout
  - 6. Rebar
  - 7. Caulk for siding
  - 8. Typical fasteners; for example: roofing nails, staples, etc.
  - 9. Fasteners not included in product packaging.
  - 10. Wood sealant for all decking, glulam beams, posts, and extensions
  - 11. All other items within the building footprint indicated on final plans or required by building codes to complete installation of the building package which are not specifically stated as supplied by **building supplier**.

### 3.7 DELIVERY, STORAGE, AND HANDLING

- A. The **building installer** will be responsible for all equipment and labor required for off-loading of the delivered building package onsite.
- B. The **building installer** will assume responsibility for adequate protection and maintenance of delivered building package materials from weather, damage, and pilferage during installation work. Any failure to adequately protect building package materials that affects the warranty of those materials will be at **building installer's** expense.
- C. **Building installer** shall collect and maintain for final delivery to owner any operation & maintenance manuals included by individual product manufacturers with their respective product packaging. Any failure to collect, maintain, and/or deliver these O&M manuals to the **owner** that results in fees from **building supplier** for additional copies shall be at **building installer's** expense.

## SECTION 4: CONTRACTOR SCOPE ITEMS

The items in this section may be provided by the same **building installer** as defined in Section 3 above (typically when a single entity is acting as both the **building installer** and **contractor**), or the items in this section may be provided by a separate entity such as a general contractor or site contractor, hereafter designated as **contractor** (typically when the **building installer** is a separate subcontractor). **Contractor** work will generally include site preparation and grading, excavations for structures, backfill and/or structural backfill, and any site or utility work outside the building package footprint.

Items in this section are generally to be completed prior to **building installer** beginning its installation work described in Section 3 above.

#### 4.1 CONSTRUCTION SUBMITTALS

- A. If required by **owner** and/or reviewing authority, **contractor** shall submit product data sheets and relevant information about the specified **contractor** supplied products below for review and approval.

#### 4.2 WARRANTY

- A. **Contractor's** work shall be warranted against defects in materials and workmanship for a period of not less than one (1) year from the date of acceptance. Acceptance is the date that installation work for the building package is completed, including any relevant final punch list. In the event that final acceptance of the completed building is delayed for reasons beyond **contractor's** control, the warranty shall be one (1) year from the completion of **contractor's** installation work and demobilization.
- B. **Contractor** shall pass through to owner all relevant manufacturers' warranties for individual products and components supplied by **contractor**.

#### 4.3 CAST-IN-PLACE CONCRETE FOR BUILDING EXTERIOR

- A. All equipment, labor, trades, and materials shall be supplied by **contractor**.
  - 1. Includes all materials and labor for exterior/entry slabs and sidewalks.
- B. Refer to drawings for sidewalks and entry slabs.
  - 1. Minimum concrete compressive strength of 2,500 psi at 28 days, or as required in final approved plans.
  - 2. Remesh or rebar reinforcement shall be used in sidewalks.
  - 3. All sidewalks shall be finished with a fine broom with control joints installed per the final approved site plan.

#### 4.4 OTHER MATERIALS & EQUIPMENT

- A. Unless otherwise specified, the following products and materials are supplied by **contractor**.
  - 1. All items not specifically listed as supplied by **building supplier** or **building installer**.
  - 2. Any item listed as supplied by "contractor" or "others."
- B. Unless specified in the plans or submittals, **contractor** supplies the following items (if applicable):
  - 1. Incoming electrical, water, sewer, and gas utilities.
  - 2. Asphalt paving
  - 3. Masonry pavers
  - 4. Sidewalks
  - 5. Landscaping
  - 6. Site grading
  - 7. Exterior/entry slabs
  - 8. Lighting equipment not attached to the building.
  - 9. All other items exterior of the building footprint indicated on final plans or required by building codes which are not specifically stated as supplied by **building supplier** or **building installer**.

#### 4.5 DELIVERY, STORAGE, AND HANDLING

- A. The **contractor** will assume responsibility for adequate protection and maintenance of the installed building package materials after completion of installation work by **building installer**. Any failure to adequately protect building package materials that affects the warranty of those materials will be at **contractor's** expense.

### SECTION 5: OWNER'S SCOPE

#### 5.1 ONGOING MAINTENANCE

- A. **Owner** is responsible for ongoing maintenance of the completed building after completion of work by building installer and contractor.

#### 5.2 SITE PLAN



- A. **Owner** (or owner's site engineer) is responsible for providing the final approved site plan to **building supplier** and/or **building installer**.

#### 5.3 SPECIAL INSPECTION

- A. If required, special inspection(s) services shall be provided by **owner**.
- B. If special inspection(s) are required by the permitting authority or relevant agency(ies), then the **building supplier, building installer**, and/or **contractor** shall provide reasonable assistance to the **owner** to accommodate the special inspection(s).

**SECTION 32 1373  
CONCRETE PAVING JOINT SEALANTS**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. Related Sections:

**1.2 REFERENCES**

- A. Reference Standards: See Section 01 40 00 - Quality Requirements, in addition to requirements shown or specified. Contractor to comply with applicable provisions of the following for design, materials, fabrication, and installation of component parts:
1. Chapter I – Joints and Chapter II – Sealants of SWR “Sealants: The Professionals’ Guide;” Sealant, Waterproofing and Restoration Institute.

**1.3 DEFINITIONS**

- A. Use definitions in ASTM C717.
1. Non-Bleeding: Not capable of exuding liquid chemical components of sealant.
  2. Non-Staining: Not capable of discoloring joint substrate.
  3. Sealant System: Sealant, sealant backing, and primer intended for use in particular condition.

**1.4 SUBMITTALS**

- A. General: Submit in accordance with Section 01 33 00 - Submittal Procedures.
- B. Product Data: For each product.
1. Include data to indicate chemical characteristics, performance criteria, limitations, substrate preparation, installation requirements, and curing requirements.
  2. Include information for accessories and other required components.
  3. Include color charts indicating manufacturer’s full color range available of each sealant type for Architect’s initial selection.
  4. Include sample of warranty customized for this project.
- C. Samples: Four 1/4 inch diameter by 2 inch long samples illustrating sealant colors for each product exposed to view.
- D. Informational Submittals: Submit following packaged separately from other submittals:
1. Test Reports: Written results of testing specified as part of Source and Field Quality Control articles.
  2. Certification specified in Quality Assurance article.

3. Manufacturer's Instructions. Include requirements for surface preparation, priming, joint size ratios, adhesion and compatibility testing, and perimeter conditions requiring special attention.
4. Manufacturer's field reports.

E. Closeout Submittals: Submit specified warranty in accordance with Section 01 78 00

## **1.5 QUALITY ASSURANCE**

- A. Single Source Responsibility: Provide products for each sealant system from one manufacturer for entire project, unless otherwise acceptable to Architect.
1. Provide products from single manufacturer to ensure material compatibility where different sealant materials come in direct contact with each other.
  2. Provide each sealant system as complete unit, including accessory items necessary for proper function.
- B. Manufacturer Qualifications: Company specializing in manufacturing products specified in this Section with minimum five years documented experience.
- C. Applicator Qualifications: Acceptable to manufacturer, specializing in applying sealants, with documented experience on at least five projects of similar nature in past five years.
- D. Certifications: Submit following:
1. Manufacturer's Certification that Products:
    - i. Components for each joint assembly are compatible with each other and with joint substrates under conditions of service and application.
    - ii. Are suitable for indicated use.
  2. Manufacturer's certification that sealants, primers, and cleaners, comply with local regulations controlling use of volatile organic compounds.
  3. Contractor's and installer's certification that products are installed in accordance with Contract Documents, based on inspection and testing specified in Field Quality Control.

## **1.6 PRE-INSTALLATION CONFERENCE**

- A. Pre-installation Conference
1. Convene pre-installation conference with landscape architect two weeks prior to commencing work detailed in this section.
- B. Conference Purpose and Agenda:
1. Visit Project site to analyze site conditions, and inspect surfaces and joints to be sealed in order that recommendations may be made should adverse conditions exist.
  2. Discuss following items:
    - i. Substrate conditions.

- ii. Compatibility of sealants with substrates.
- iii. Adhesion and compatibility test results.
- iv. Preparatory work.
- v. Weather conditions under which work will be done.
- vi. Anticipated frequency and extent of joint movement.
- vii. Joint design.
- viii. Sealants installation procedures.

#### **1.7 DELIVERY, STORAGE AND HANDLING**

##### **A. Deliver materials to Site in Unopened Containers and Bundles with Labels Indicating:**

- 1. Manufacturer's name.
- 2. Product name and designation.
- 3. Color.
- 4. Expiration period for use.
- 5. Working life.
- 6. Curing time.
- 7. Mixing instructions for multi-component materials.

##### **B. Storage and Protection: Store products within manufacturer's required temperature and humidity ranges.**

- 1. Prior to use, condition products within manufacturer's required temperature range, humidity range, and time period.

#### **1.8 PROJECT CONDITIONS**

##### **A. Environmental Requirements:**

- 1. Apply sealant when following are within manufacturer's limits during and for 24 hours after sealant installation:
  - i. Ambient and surface temperatures.
  - ii. Relative humidity.
- 2. Do not apply sealants to wet or frozen surfaces.
- 3. Comply with manufacturer's requirements regarding application of sealants in vicinity of curing sealants of different material.

#### **1.9 SEQUENCING AND SCHEDULEING**

##### **A. Sequence work in accordance with Section 01 12 16 - Work Sequence.**

- 1. Coordinate work with Sections referencing this Section.
- 2. Coordinate installation of sealants with substrates to which they are applied.

#### **1.10 WARRANTY**

##### **A. Warranty: Prepare and submit in accordance with Section 01 78 00.**

1. Warrant installed products to be free from defects in material, labor, or installation techniques for twenty years.
2. Include Coverage for Installed Sealants and Accessories Which:
  - i. Fail to achieve air tight seal.
  - ii. Fail to achieve watertight seal.
  - iii. Exhibit loss of adhesion.
  - iv. Exhibit loss of cohesion.
  - v. Exhibit loss of color.
  - vi. Do not cure.

## **PART 2 - PRODUCTS**

### **2.1 JOINT SEALANT MANUFACTURERS**

#### **A. Acceptable Acrylic Joint Sealant Manufacturers:**

1. Pecora Corporation, Harleysville, PA.
2. Sonneborn Building Products/ ChemRex, Inc., Minneapolis, MN.
3. Tremco Incorporated, Beachwood, OH.
4. Accepted Substitute in accordance with Section 01 25 00 - Substitution Procedures.

#### **B. Acceptable Silicone Joint Sealant Manufacturers:**

1. Dow Corning Corporations, Midland, MI.
2. General Electric Silicone Products Division, Waterford, NY.
3. Pecora Corporation, Harleysville, PA.
4. Tremco Incorporated, Beachwood, OH.
5. Accepted Substitute in accordance with Section 01 25 00 - Substitution Procedures.

#### **C. Acceptable Urethane Joint Sealant Manufacturers:**

1. Sika Corporation, Lyndhurst, NJ.
2. Sonneborn Building Products/ ChemRex, Inc., Minneapolis, MN.
3. Tremco Incorporated, Beachwood, OH.
4. No Substitutions.

### **2.2 JOINT SEALANT MATERIALS**

#### **A. Silicone – General Purpose (Designation S-GP): ASTM C920, Type S Grade NS:**

1. Class: 25. Joint movement range without cohesive/adhesive failure: Plus 50 percent to minus 50 percent of joint width.
2. Uses: NT, G, A, O
3. Low modulus, single component, neutral curing, non-staining, non-bleeding silicone sealant.
4. Color: Selected by Architect from manufacturer's full color range.

## 5. Acceptable Products:

- i. 790, Dow Corning.
- ii. Silpruf, General Electric.
- iii. 864, Pecora.
- iv. Spectrum I, Tremco.

## B. Silicone – Sanitary (Designation S-S): ASTM C920, Type S Grade NS:

1. Class: 25.
2. Uses: NT, G, A, O
3. Neutral or acid curing, non-staining, non-bleeding, fungicide-containing.
4. Color: Selected by Architect from manufacturer's full color range.
5. Acceptable Products:
  - i. 786 Mildew-Resistant Silicone Sealant, Dow Corning.
  - ii. Sanitary 1700 Series, General Electric.
  - iii. 898 Sanitary Silicone, Pecora.

## C. Urethane – Multi-Component (Designation U-MC): ASTM C920, Type S, Grade NS:

1. Class: 25. Joint movement range without cohesive/adhesive failure: Plus 50 percent to minus 50 percent of joint width.
2. Uses: NT, G, A, O
3. Chemical curing, non-staining, and non-bleeding.
4. Color: Selected by Architect from manufacturer's full color range.
5. Acceptable Products:
  - i. Vulkem 922, Tremco.
  - ii. Sikaflex-2c NS, Sika.
  - iii. Dymeric 511, Tremco

## D. Urethane – Traffic-Bearing (Designation U-TB): ASTM C920, Type M, Grade P or NS:

1. Class: 25. Joint movement range without cohesive/adhesive failure: Plus 50 percent to minus 50 percent of joint width.
2. Uses: T, M, O
3. Chemical curing, non-staining, non-bleeding.
4. Shore A Hardness: 40 minimum, when tested in accordance with ASTM C661.
5. Color: Selected by Architect from manufacturer's full color range.
6. Acceptable Products:
  - i. Dynatred, Pecora.
  - ii. Vulkem 245, Tremco.
  - iii. Sikaflex 2c/SL, Sika.
  - iv. SL 2 Sealant, Sonneborn.
  - v. THC-900, Tremco.

**2.3 ACCESSORIES**

- A. Joint Cleaner: Chemical cleaners required by sealant manufacturer for substrates encountered, compatible with sealant backing bond breaker materials.
  - 1. Free of Substance Capable of Staining, Corroding, or Harming:
    - i. Joint substrates.
    - ii. Adjacent nonporous surfaces.
    - iii. Sealant.
    - iv. Sealant backing.
  - 2. Formulated to promote optimum adhesion of sealants to joint substrates.
- B. Primer: Dyed coating material required by sealant manufacturer for enhancing sealant adhesion to joint substrates.
  - 1. Non-staining to joint substrates beyond substrate surface.
    - i. Required for use, except as directed by manufacturer.
- C. Backer Rod: Non-staining, bond-breaking material.
  - 1. Backer rods manufactured with CFC blowing agents not allowed.
  - 2. Compatible with sealant, joint substrates, primers, and other sealant backing bond breakers.
  - 3. Sealant manufacturer approved.
  - 4. Sized and shaped to provide optimum performance and backing to sealant.
  - 5. Compatible and non-adhering to sealant, ASTM C1330.
    - i. Type O, Open Cell Polyurethane: Not allowed.
    - ii. Type C, Closed Cell Polyethylene: Non-absorbent to liquid water.
      - a. Use in wall and ceiling joints unless otherwise required by sealant manufacturer.
    - iii. Type B, Reticulated polymeric: Contractor's option Bicellular material with a surface skin for use at vertical joints only.
      - a. Sof – Rod, Nomaco Inc., Zebulon, NC.
  - 6. Unless otherwise required by sealant manufacturer, oversize rod to be larger than joint width by following minimum amounts:
    - i. Closed Cell Polyethylene: 33 percent.
    - ii. Reticulated Polymeric: 25 percent.
- D. Elastomeric Tubing Joint Filler: Neoprene, Butyl, EPDM, or silicone tubing, ASTM D 1056.
  - 1. Shore A hardness of 70.
  - 2. Compatible with sealant, joint substrates, primers, and other sealant backing bond breakers.
  - 3. Use in pavement joints, unless otherwise required by sealant manufacturer.
  - 4. Use sealant backing bond breaker tape to separate sealant from rod.

5. Unless otherwise required by sealant manufacturer, oversize rod to be larger than joint width by 25 percent.
- E. Sealant Backing Bond Breaker Tape: Pressure sensitive polyethylene tape or tetrafluorethylene self adhesive tape required by sealant manufacturer to suit application.
  1. Minimum Thickness of 11 mils.
- F. Sealant Tape: Pre-compressed, expanding foam tape, urethane impregnated, used to span irregularities and as gasket between substrates and surface mounted reglets, termination bars, cleats, and other continuously, mechanically fastened applications.
  1. Acceptable Products and Manufacturers:
    - i. Blocoband BF, Salamander Industries.
    - ii. Polytite B, Polytite Manufacturing Corp., Cambridge, MA.
- G. Tooling Liquids: Non-staining material approved by manufacturer to reduce adhesion of sealant to joint finishing tools.

## **2.4 MIXES**

- A. General: Comply with manufacturer's instructions.
  1. Mix thoroughly with mechanical mixer without mixing air into sealants.
  2. Continue mixing until sealant is uniform in color and free from streaks of unmixed materials.

## **2.5 SOURCE QUALITY CONTROL**

- A. General: Comply with Section 01 40 00.
- B. Tests:
  1. Coordinate Testing of Sealant Compatibility and Adhesion to:
    - i. Sealant backing materials.
    - ii. Plant-Precast architectural concrete specified in Section 03 33 00.
    - iii. Unit Masonry Assemblies (Brick) specified in Section 04 20 00.
    - iv. Window system specified in Section 08 50 00.
    - v. Curtain wall system specified in Section 08 44 00.
  2. Manufacturer's Sealant-Substrate Compatibility and Adhesion Test:
    - i. Test Methods: Determine if priming and other specific joint preparation techniques are not required to obtain rapid, optimum adhesion of sealants to joint substrates.
      - a. Comply with ASTM C510, ASTM C794, and ASTM C1087.
    - ii. Submit not less than 9 pieces 3 by 5 inches in size of each type of material, including joint substrates, shims, sealant backing, and miscellaneous materials.
    - iii. Schedule sufficient time for testing and analysis of results to prevent delay in progress of work.



- iv. Investigate sealant material's failing compatibility/adhesion tests and obtain manufacturer's written instructions for corrective measures, including use of specially formulated primers.
- v. Include in Test Report, Manufacturer's:
  - a. Interpretation of test results regarding sealant performance.
  - b. Primers and substrate preparation required to achieve adhesion.

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

- A. Examine conditions and proceed with work in accordance with Section 01 40 00.
  - 1. Ensure that concrete and masonry have cured minimum of 28 days.
  - 2. Verify that sealant backing is compatible with sealant.
  - 3. Verify that Substrate Surface:
    - i. Is within manufacturer's moisture content range.
    - ii. Complies with manufacturer's cleanliness and surface preparation requirements.
- B. Joint Width: Verify joints are greater than minimum widths required by manufacturer.
  - 1. If joints are narrower than minimum required widths, widen narrow joints to indicated width.
  - 2. Do not place sealant in joints narrower than manufacturer's required minimum.

### **3.2 PREPARATION**

- A. General: Prepare, clean, and prime joints in accordance with manufacturer's instructions.
  - 1. Remove loose materials and matter which might impair adhesion of primer and sealant to substrate.
  - 2. Remove form release agents, laitance, and chemical retarders, which might impair adhesion of primer and sealant to concrete and masonry surfaces.
  - 3. Comply with ASTM C1193.
  - 4. Protect elements adjoining and surrounding work of this Section from damage and disfiguration.
- B. Priming:
  - 1. Apply primer to substrate areas where joint sealant is to adhere.
  - 2. Comply with manufacturer's sequencing requirements for joint priming and sealant backing bond breaker rod installation to assure required primer application coverage and rate without placement of primer on backer rod surface to be in contact with sealant and avoid three-sided sealant adhesion.
  - 3. Do not allow spillage and migration of primer onto surfaces not to receive primer.
  - 4. Install sealant to primed substrates after primer has cured.

### **3.3 JOINT SEALANT APPLICATION**

A. General: Comply with Section 01 25 00 - Substitution Procedures:

1. Provide compatible sealant system between dissimilar assemblies and adjacent construction.
2. Seal locations necessary to create and secure continuous enclosure even though Drawings may not indicate all locations; do not seal weep holes.
3. Seal to prevent migration of water, vapor, and air through joints.
4. Comply with manufacturer's required application temperature and relative humidity ranges.

B. Sealant Backing Bond Breaker: Measure joint dimensions and size materials to achieve manufacturer required width-to-depth ratios.

1. Install to achieve sealant depth and sealant contact depth no greater than distance required by manufacturer for sealant material, joint width, and joint movement range.
2. Install using blunt instrument to avoid puncturing.
3. Do not:
  - i. Twist, puncture, and tear material.
  - ii. Leave gaps between ends of material pieces.
  - iii. Stretch or compress material along its length.
  - iv. Stretch or compress tape material along its width.
4. Install to provide optimum joint profile and in manner to provide not less than 1/4 inch sealant depth when tooled.
5. Install tape where insufficient joint depth makes use of rod not possible. Match tape width to joint width to prevent three-side adhesion. Do not wrap tape onto sides of joint.
6. Replace backing bond breaker materials which have become wet with dry materials prior to sealant application.

C. Joint: Install sealants at same time as installation of backing bond breaker materials.

1. Do Not Exceed Manufacturer's Required:
  - i. Material shelf life.
  - ii. Material working life.
  - iii. Installation time after mixing.
2. Comply with manufacturer's requirements for applying different sealant materials in direct contact with each other.
3. Use gun nozzle size to suit joint size and sealant material.
4. Install sealant with pressure-operated devices to form uniform continuous bead.
5. Use sufficient pressure to fill voids and joints full.
6. Install to adhere to both sides of joint.
7. Install to not adhere to back of joint; provide sealant backing.
8. Install sealant free of air pockets and embedded matter.
9. Recess sealant 1/8 inch from surface of pavements and horizontal surfaces.

D. Sealant Tooling: Comply with manufacturer's tooling method requirements.

1. Tool sealant within manufacturer's tooling time limits.
2. Tooling Liquids:
  - i. Comply with manufacturer's requirements regarding use.
  - ii. Do not use when not permitted by manufacturer.
  - iii. Do not allow tooling liquids to come in contact with surfaces receiving sealant.
3. Produce smooth exposed surface.
4. Tool Sealant to be Free of:
  - i. Air pockets and voids.
  - ii. Embedded impurities.
  - iii. Surface ridges, sags, and indentation.
5. Achieve full sealant contact and adhesion with substrate.
6. Form concave tooled joint shape indicated in Section A of Figure 5 of ASTM C1193, unless otherwise indicated.
7. Remove excess sealant from surfaces adjacent to joint.

### **3.4 CLEANING AND PROTECTION**

- A. General: Clean excess sealants and sealant smears from adjacent surfaces as application progresses; comply with sealant manufacturer's requirements and manufacturer of surface in which joints occur.
- B. Repair or replace defaced or disfigured finishes caused by work of this Section and replace where installation techniques result in unsatisfactory joining of materials and unsightly conditions.
- C. Protect in accordance with Section 01 45 00.
  1. Protect sealants from contamination until cured.
  2. Protect sealants joints in horizontal surfaces from foot and vehicular traffic until cured.

### **3.5 SCHEDULE**

- A. Items Not to be Sealed:
  1. Joints, perimeter, and penetrations in fire-rated assemblies. Use firestopping specified in Section 07 84 00.
  2. Weep holes in masonry, stone, windows, and doors.
- B. Joint Sealant Schedule for Exterior Locations: Provide compatible, closed cell backer rod where secondary material not designated.
  1. Wall Joints and Control Joints:
    - i. Bordered On One Or Both Sides By Stone: Designation U-MC.

- ii. Bordered On Both Sides By Porous Building Material Other Than Stone (Concrete, CMU, Brick, EIFS): Designation S-GP.
  - iii. Bordered on Both Sides by Non-Porous Building Material (Coated and Uncoated Metals, Anodized Aluminum, and Glass): Designation S-GP.
  - iv. Bordered on One Side by Porous Building Material (Coated and Uncoated metals, Anodized Aluminum, and Glass): Designation S-GP.
- 2. Where dissimilar materials not identified above abut: Designation U-MC.
  - 3. Perimeter of Penetrations through Walls: Same as at wall joints and control joints.
  - 4. Control Joints and Perimeter of Penetrations in Ceilings, Soffits, and Overhead Surfaces: Designation U-MC.
  - 5. Wall and Ceiling Joints Between Frames and Their Rough Opening: Same as scheduled at wall joints and control joints above.
  - 6. Wall and Ceiling Joints Between Frames and Adjoining Surfaces: Same as scheduled at wall joints and control joints above.
  - 7. Joints and Perimeter of Penetrations In Horizontal Pedestrian and Vehicle Traffic Surfaces: Designation U-TB.
  - 8. Joints at outside face of precast concrete panels: Designation S-GP.
- C. Joint Sealant Schedule for Interior Locations:
- 1. Wall and Ceiling Joints Subject to Movement: Designation U-MC.
  - 2. Wall and Ceiling Joints Not Subject to Movement: Designation U-MC.
  - 3. Interior Side of Exterior Openings: U-MC.
  - 4. Floor Joints: Designation U-TB.
  - 5. Wall and Ceiling Joints Between Frames and Their Rough Opening: Designation U-MC.
  - 6. Wall and Ceiling Joints Between Frames and Adjoining Surfaces: Designation U-MC.
  - 7. Interior Sanitary Joints: Joints Between Plumbing Fixtures and Adjoining Floor, Wall, and Ceiling Surfaces; Joints Between Back Splashes and Wall Substrates and Between Back Splashes and Countertops: Designation S-S.

**END OF SECTION**

**SECTION 32 1813**  
**SYNTHETIC GRASS SURFACING**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. Section Includes:
  - 1. Synthetic grass surfacing for landscaping.
- B. Related Requirements:
  - 1. Section 312000 "Earth Moving" for preparation, compaction, and grading of granular base.

**1.2 PREINSTALLATION MEETINGS**

- A. Preinstallation Conference: Conduct conference at Perrow Park.

**1.3 ACTION SUBMITTALS**

- A. Product Data:
  - 1. Synthetic grass surfacing.
- B. Shop Drawings: For synthetic grass surfacing.
  - 1. Include sections and details.
  - 2. Show locations of seams and method of seaming.
- C. Samples: For each type of synthetic grass surfacing indicated.
  - 1. Turf Fabric: 12 inches square.
  - 2. Infill Material: 4 oz. of each type.
  - 3. Impact-Attenuation Pad: 12 inches square.

**1.4 INFORMATIONAL SUBMITTALS**

- A. Qualification Data: For ASTM.
- B. Product Test Reports: For each synthetic grass surfacing assembly.
- C. Field quality-control reports.
- D. Sample Warranties: For special warranties.

**1.5 CLOSEOUT SUBMITTALS**

- A. Maintenance Data: For synthetic grass surfacing, including maintenance cleaning instructions, to include in maintenance manuals.

**1.6 MAINTENANCE MATERIAL SUBMITTALS**

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Turf Fabric: Minimum of 300 sq. ft. for each type indicated.
  - 2. Infill: Minimum of two bags of each type.
  - 3. Seaming Tape and Adhesive: One roll of seaming tape and one gallon of adhesive.
  - 4. One new set of maintenance tools, of type recommended by synthetic grass surfacing manufacturer for installation.

**1.7 QUALITY ASSURANCE**

- A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

**1.8 DELIVERY, STORAGE, AND HANDLING**

- A. Store materials in location and manner to allow installation of synthetic grass surfacing without excess disturbance of granular base.

**1.9 WARRANTY**

- A. Special Warranty: Manufacturer agrees to repair or replace synthetic grass surfacing that fails in materials within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Deterioration and excessive wear.
    - b. Deterioration from UV light.
  - 2. Warranty Period: 8 years from date of Substantial Completion.

**PART 2 - PRODUCTS****2.1 SOURCE LIMITATIONS**

- A. Provide components and materials specified in this Section from single manufacturer for a complete and compatible assembly.

## 2.2 PERFORMANCE REQUIREMENTS

- A. Turf Fabric: Turf fabric tested in accordance with the following methods, with additional test method conditions for each method in accordance with ASTM F1551, ASTM D7968, EN71-3, EN12616, and EPA-537-A.
  - 1. Tuft Bind: Not less than 8 lbf in accordance with ASTM D1335.
  - 2. Breaking Strength: Minimum 200 lbf in warp direction and minimum 200 lbf perpendicular to warp direction, in accordance with ASTM D5034.
- B. Permeability: >800 in/hr of rainfall capacity in accordance with EN 12616.
- C. Exterior Fire Test Exposure: Class A for application indicated in accordance with ASTM D2859. Identify products with appropriate markings to applicable testing agency.

## 2.3 SYNTHETIC GRASS SURFACING

- A. Synthetic Grass Surfacing for Landscaping: Complete surfacing system, consisting of synthetic yarns bound to water-permeable backing and infill indicated, suitable for lawns.
  - 1. Basis-of-Design Product: Subject to compliance with requirements, provide SYNLawN; SYNAugustine 347 or comparable product by one of the following:
    - a. ForeverLawn.
    - b. XGrass.
  - 2. Yarn Fiber: Multifiber monofilament and slit-film polyethylene.
  - 3. Lead Content of Yarn Fiber: Maximum of 100 ppm in accordance with ASTM F2765.
  - 4. Pile Weight: 75 oz./sq. yd. in accordance with ASTM D5848.
  - 5. Pile Height: 1-7/8 inches in accordance with ASTM D5823.
- B. Backing: Manufacturer's standard polypropylene polyester primary backing with urethane-coated secondary backing; provide perforations or drainage channels sufficient to meet permeability indicated.
- C. Infill: Manufacturer's standard organic infill.
  - 1. Infill Proportions: Manufacturer's standard proportions.
- D. Seaming Method: Adhesive.

## 2.4 MATERIALS

- A. Sand Infill: Uniformly sized latex-coated silica sand free of silts, clays, and contaminants, and of subangular or rounder shape in accordance with ASTM F1632; mesh size as recommended by synthetic grass surfacing manufacturer.
- B. Organic Fiber Infill: Coconut or cork fiber granules free of contaminants, and as recommended by synthetic grass surfacing manufacturer.

- C. Seam Adhesive: One- or two-part urethane, recommended or approved by synthetic grass surfacing manufacturer, and suitable for ambient conditions at time of installation.
- D. Seam Tape: Synthetic grass manufacturer's recommended seam tape, minimum 12 inches wide.
- E. Impact-Attenuation Pad: Manufacturer's standard impact-attenuation pad with permeability sufficient to meet synthetic grass surfacing assembly permeability indicated.

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

- A. Examine base and other conditions, with Installer present, for compliance with requirements for installation tolerances, permeability, and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### **3.2 INSTALLATION OF SYNTHETIC GRASS SURFACING**

- A. Avoid disturbance of base during installation of impact-attenuation pad and turf fabric.
- B. Impact-Attenuation Pad Installation: Roll out pad and allow to relax a minimum of six hours prior to final fit and trim. Stagger head seams between adjacent rows. Fit seams snugly without stretching or forcing.
- C. Roll out turf fabric and allow to relax at least four hours prior to seaming.
- D. Provide seams flat and snug, with no gaps or fraying. Remove yarns that are trapped within seams. Attach turf fabric to perimeter restraint system as recommended by the manufacturer.
- E. Repair loose seams and bubbles formed due to expansion of turf fabric prior to installation of infill.
- F. Evenly broadcast and groom infill by machine in proportions and depth after settling as recommended by the manufacturer, and to meet indicated performance requirements. Rake fibers trapped by infill to surface.

### **3.3 FIELD QUALITY CONTROL**

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- B. Perform the following tests and inspections:
  - 1. Permeability: >800 inches/h of rainfall capacity in accordance with EN 12616.



**3.4 DEMONSTRATION**

- A. Train Owner's maintenance personnel in proper maintenance procedures for synthetic grass surfacing.

**END OF SECTION**

**SECTION 32 8000  
IRRIGATION PERFORMANCE SPEC**

**PART 1 GENERAL**

**1.1 SUMMARY**

- A. Work Included: Provide an underground sprinkler system based on these specifications and as required for complete coverage of designated landscaped areas. Work includes, but is not limited to:
- B. Piping, valves, sprinkle heads, accessories, controls and wiring for automatic irrigation system.
- C. Water meter, tap, and backflow preventer.
- D. Provide a complete and operable system for the irrigation of all landscaped areas on the project site, unless indicated otherwise. The Contractor is responsible to furnish all labor, materials, and equipment required for a proper system.
- E. The Contractor is responsible for full/complete coverage so that the irrigation system layout is coordinated with designated planted areas and actual field conditions. Any adjustments of head and nozzle type/size, and any other system components shall be made at no cost to the Owner.
- F. The Contractor is responsible for testing of all equipment prior to backfilling trenches.
- G. Specified maintenance and guarantee period.

**1.2 RELATED WORK**

- A. Section 32 93 00 – Exterior Landscape

**1.3 QUALITY ASSURANCE**

- A. Codes and Standards: Perform the work in compliance with applicable requirements of all governing authorities having jurisdiction.
- B. Manufacturer Qualifications: Provide underground sprinkler system as complete unit produced by a single acceptable manufacturer, including heads, valves, piping circuits, controls, and accessories.
- C. Installer Qualifications: Contractor shall specialize in irrigation installation and shall successfully completed five (5) projects similar in material, size, scope, and complexity to that indicated for this Project that have resulted in construction with a record of successful in-service performance.
- D. Firm Experience Period: Five (5) years of experience.
- E. Field Foreman Experience: Five (5) years of experience with installing firm.

- F. It is the Irrigation Contractor's responsibility to coordinate and cooperate with the other Contractors/Disciplines to enable work to proceed rapidly and efficiently. Irrigation Contractor shall protect existing site conditions and other Contractor's work from any damage by irrigation installation operations.
- G. The Irrigation Contractor's area of operation shall be confined to the area to be improved and to the areas allotted by the General Contractor for materials and equipment.

#### **1.4 SUBMITTALS**

- A. Refer to Division 1 Submittals Section for general requirements.
- B. Product Data: Submit Manufacturer's specifications, product data, installation instructions, and general recommendations for ALL components of the irrigation system.
  - 1. Irrigation Contractor shall submit an irrigation layout design for approval. The design shall show head location/type, pipe layout/size, valve location, controller location, and equipment schedule with description including flow rate, pressure rate, arc, and radius.
  - 2. Irrigation layout shall be designed so that spray, rotor, and/or impact type heads will be on separate zones. DO NOT mix different irrigation heads on one zone.
- C. Project Record Drawings: Provide separate and complete reproducible As-Built Drawings. Drawings should show the irrigation system as it was built and reflect any changes to the proposed irrigation design.
  - 1. Drawings to show all sprinkler heads, valves, drains, pipe, controller, etc. locations.
  - 2. All valves, quick couplers, and wire splice locations shall be shown with actual dimensions to reference points so they may be located easily in the field.
- D. Irrigation Contractor shall provide three (3) sets of a site map showing the installed irrigation system with the individual zones, numbered and color coded. One set of the site maps is to be laminated and placed in the door of the irrigation controller for site reference.

#### **1.5 SITE CONDITIONS**

- A. Utilities: Determine location of underground utilities and perform work in a manner which will avoid all possible damage. Hand excavate, as required. Repair damage to utility owner's satisfaction at no additional cost.
- B. Irrigation Contractor is responsible for connection to water main. This includes but is not limited to the water meter, tap, and backflow preventer. This connection is to be installed as per the local governing authority's standards and requirements.
- C. Provide and maintain all passageways, guard fences, warning lights, barricades, and other protection devices required by the local authorities or that have been provided by other Contractors/Disciplines working at the same site.
- D. Avoid possible damage to other work being performed. Irrigation Contractor is responsible for any damage resulting from leaks in the irrigation system whether due to negligence or otherwise.
  - 1. Protect improvements on adjoining properties and on Owner's property.
  - 2. Restore damaged improvements to their original condition at the Contractor's expense.

- E. Water Conditions: The Irrigation Contractor shall check the pressure downstream of the irrigation water source connection and confirm minimum operating pressure is available.
  - 1. If water pressure is not sufficient enough for required minimal operating pressure, submit a proposal for installing a booster pump system capable of increasing the pressure to sufficiently supply the irrigation system.
  - 2. If water pressure significantly exceeds the required minimal operating pressure, provide a pressure regulator downstream of the backflow preventer.
- F. Damages resulting from irrigation installation to work of other trades must be repaired at the expense of the Irrigation Contractor in a timely fashion.
- G. Keep project site clean and orderly at all times during construction.

## **1.6 CODES, PERMITS, WARRANTY, AND GUARANTEE**

- A. Codes and Ordinances: All materials, installation parameters, and operations shall conform to all applicable codes, standards, regulations, and ordinances. The Irrigation Contractor has the responsibility to investigate and follow all regulations.
- B. Permits and Fees: The Irrigation Contractor shall obtain all required permits and pay all required fees at no additional cost to the Owner. Any penalties imposed due to failure to obtain permits and/or pay fees are the responsibility of the Contractor.
- C. Warranty and Guarantee: The Irrigation Contractor shall furnish a certificate of warranty registration and a written guarantee against defects in materials, equipment, workmanship, and any repairs required resulting from leaks or other defects of workmanship, material or equipment. Warranty irrigation system for a one (1)-year period from the date of final acceptance of the Irrigation System by the Owner and Landscape Architect.

## **PART 2 PRODUCTS**

### **2.1 PIPE AND FITTINGS**

- A. All mainline piping and fittings for mainline piping two and one-half (2 ½)-inches and larger will be equipped with gaskets.
- B. All piping downstream of remote-control valves three (3)-inches and smaller shall be rigid PVC Class 200 psi working pressure, free from visible cracks, holes, foreign materials, blisters, wrinkles, and permanently marked with the manufacture's name, material, size, and schedule type. Pipe must bear the NFS seal.
- C. All mainline piping and underground piping under continuous pressure shall be rigid PVC Class 200 psi working pressure, free from visible cracks, holes, and foreign materials, blisters, wrinkles, and dents.
- D. All plastic fittings to be installed shall be molded fittings manufactured of the same material as the pipe and shall be suitable for solvent weld, slip joint right tight seal, or screwed connections. NO fitting made of other material shall be used.
- E. Fittings for all mainline piping four (4)-inches and larger shall be ductile iron gasketed fittings.

- F. All mainline piping shall utilize approved thrust blocking and/or restraints. Thrust blocking and restraints to be installed as per manufacturer's recommendations for pipe type, pipe size, and local conditions.

## **2.2 SLEEVES**

- A. All sleeves shall be PVC Class 200 or stronger. All sleeves are required at every pipe crossing under paved areas.
- B. All sleeves shall be installed under proposed pavement areas prior to subgrade and base construction.
- C. Sleeves shall have a minimum horizontal separation of eighteen (18)-inch and a maximum of twenty-four-(24)-inch clearance below bottom of curb/pavement.
- D. Stub up sleeve pipe twelve (12)-inches above ground surface and cap. Paint cap with fluorescent orange paint for easy identification.
- E. Sleeve diameter shall be equal to twice the diameter of the pipe or wiring bundle.
- F. The Contractor shall make necessary adjustments to accommodate existing vegetation, utilities, or other existing and proposed conditions.
- G. If sleeve locations are to be bore locations, the bore must be of ample size to accommodate the sleeve size required.

## **2.3 JOINING MATERIALS**

- A. Solvent Cement shall be ASTM F 656 primer and ASTM D 2564 solvent cement.
- B. Gaskets for plastic flanged joints: Materials recommended by plastic pipe and fittings manufacturer.

## **2.4 WATER METER AND BACKFLOW PREVENTER**

- A. The Irrigation Contractor is responsible for installation of irrigation water meter, tap, and backflow preventer.
  - 1. Use and install equipment approved and/or recommended by local governing authority.
  - 2. If needed, use and install pressure reducing valve as local governing authority's requirements and as per manufacturer's recommendation.

## **2.5 ISOLATION VALVES**

- A. Valves for isolation purposes shall be manually operated gate valves, allowing full diameter opening when in the fully open position of the same size as line.

## **2.6 CONTROL VALVES**

- A. Electric Remote-Control Valves shall be properly sized for zone.

- B. Globe-type diaphragm valves of normally closed design with durable heavy-duty plastic construction. Operation accomplished by heavy-duty AC solenoid, water proof and suitable for direct burial.
- C. Valves shall have self-cleaning seal/screen to prevent contamination and pressure regulating capabilities.

## **2.7 VALVE BOXES**

- A. All valves shall be installed in thermoplastic valve access boxes of appropriate size to allow access to valve or valve group. Valve boxes shall include thermoplastic locking covers.
- B. All valve boxes shall be installed on two (2)-inch cubic foot gavel base to provide foundation and drainage.
- C. All valve box elevations shall be one-half (1/2)-inches below finished grade.

## **2.8 SPRINKLERS**

- A. Pop-up Spray Heads: Constructed of heavy-duty, ultra-violet resistant plastic, heavy-duty stainless steel retract spring.
  - 1. Fixed and variable arc in full or part circle pattern and varying distances for uniform coverage.
  - 2. Rotary nozzles in full or part circle pattern and varying distances for uniform coverage.
  - 3. Spray Sprinklers shall have internal pressure regulator and check valve.
  - 4. Spray Sprinklers to have self-cleaning seal for cleaning debris from pop-up stem.
- B. Pop-up Rotor Heads: Constructed of heavy-duty, ultra-violet resistant plastic, water lubricated gear drive.
  - 1. Fixed and variable circle pattern and varying distances for uniform coverage.
  - 2. Rotor Heads to have self-cleaning seal for cleaning debris from pop-up stem and check valve.
- C. All spray sprinkler bodies are to be produced by the same manufacturer. A MIX of product manufacturers is not acceptable.
- D. All sprinkler heads located in turf areas shall be four (4) or six (6)-inch pop-up height. All sprinkler heads located in plant beds shall be twelve-inch (12") pop-up height.

## **2.9 DRIP IRRIGATION**

- A. Drip Irrigation Emitters: In-line self-cleaning, pressure compensating spaced as required for site conditions.
- B. Pressure Regulators: In-line pressure regulator with maximum regulated pressure not to exceed 45 psi.
- C. Automatic Flush Valves: All drip zones shall be installed with an automatic line flushing valve(s), number of valves will be based on the size of zones and location of dead ends.

- D. Each independent irrigation drip zone shall be installed with an air/vacuum relief valve at the zone's highest points.

## **2.10 AUTOMATIC CONTROLLER**

- A. General: Provide low voltage system manufactured expressly for control of automatic circuit valves of underground sprinkler systems. Provide unit of capacity to suit the number of stations as needed.
- B. Exterior Control Enclosure: Manufacturer's standard weatherproof enclosure with locking cover, complying with NFPA 70 (National Electric Code).
- C. Transformer: To convert building service voltage to control voltage of 24 volts.
- D. Station Control: Each station variable from approximately 5 to 60 minutes. Include switch for manual or automatic operation of each circuit.
- E. Timing Device: Adjustable, 24-hour and 7 or 14-day clocks to operate any time of day and skip any day in a 7 or 14-day period. Allow for manual or semi-automatic operation without disturbing preset automatic operation.
- F. Provide controller type as per Owner's preference, (i.e.: modular, two-wire, wi-fi). Provide compatible wiring and accessories for controller type. Install as per manufacturer's recommendation.
- G. Controller location to be coordinated with Owner. Provide appropriate enclosure for location. Location shall be easily accessible for maintenance.

## **2.11 SURGE AND LIGHTNING PROTECTION EQUIPMENT**

- A. Provide lightning arrestor for controllers not equipped with primary surge protection.
- B. All equipment shall be grounded as per manufacturer's recommendations. Damage to equipment resulting from faulty or non-existent lighting protection will be replaced at the Irrigation Contractor's expense.

## **2.12 THRUST BLOCKS**

- A. Place one (1) cubic foot of concrete for each inch of pipe diameter for thrust block. Thrust shall not allow vertical or horizontal movement of pipe in any direction unless otherwise noted on design. Thrust blocking shall be provided on all piping three-inch (3") diameter and larger.

## **PART 3 EXECUTION**

### **3.1 GENERAL**

- A. Inspect project site prior to start of work to determine that all site conditions are acceptable for work to begin. Inform Owner and Architect of unsuitable conditions. Do not proceed with installation of irrigation system until unsatisfactory conditions have been corrected to Irrigation Contractor's satisfaction.

- B. Locate all existing underground utilities prior to trenching and/or boring operations and protect them against damage during the work. Obtain utility locations from Owner, General Contractor, and/or Utility Company/Utility Locating Service.
- C. Investigate and determine available water supply, water pressure, and flow characteristics.
- D. Irrigation Contractor shall be acquainted with all site conditions. Should utilities not properly located or known about found during excavations, Contractor shall promptly notify the Owner for instructions as to further actions. Failure to do so will make the Irrigation Contractor liable for any and all damage from his operations subsequent to discovery of such utilities.
- E. Furnish temporary support, adequate protection and maintenance of all underground and surface utilities, structures, drains, sewers, and other obstructions encountered in the progress of the work.
- F. Where the grade or alignment of the pipe is obstructed by existing utility structures such as conduit, ducts, pipe branch connections to sewer mains, main drains, water services, etc., the obstruction shall be permanently supported, relocated, removed, or reconstructed by the Contractor in cooperation with the Owner of such utility.
- G. Coordinate all installation with landscape planting work, especially fine grading, and soil preparation for planting areas.
- H. Coordinate and cooperate with all other contractors to enable the work to proceed as rapidly and efficiently as possible.

### **3.2 EXCAVATION AND BACKFILL**

- A. Trenching for pipe sprinkler lines shall be excavated of sufficient depth and width to permit proper handling of installation if approved by the Owner, pipe manufacturer, and Architect.
- B. Excavate straight and true with bottom uniformly sloped to low points. Protect existing or previously installed lawns and plantings. Remove and replant as necessary to complete installation. Replace damaged plants with new to match existing.
- C. Minimum Cover: Provide twelve (12)-inches minimum cover over top of installed main line piping, twelve (12)-inches minimum cover over lateral lines, or meet local requirements for minimum cover, whichever is greater.
- D. Backfill: Backfill with clean material free from rocks, large stones, and other unsuitable substance which could damage the pipe or create unusual settling problems. Remove organic material as well as rocks and debris larger than one (1)-inch diameter. Place acceptable backfill material in six (6)-inch layers, compacting each layer to prevent excessive settling.
- E. Any open trenches or partially backfilled trenches left overnight or left unsupervised shall be barricaded to prevent undue hazard to the public.
- F. In the spring following the year of installation, the Irrigation Contractor shall repair any settlement of the trenches by bringing them to grade with topsoil, and seeding/planting with the existing planting beds and lawn type. Watering and maintenance of the repaired areas shall be the Owner's responsibility.



- G. Pavements: Where existing pavements must be cut to install landscape irrigation system, cut smoothly to straight lines six (6)-inches wider than trench. Wherever possible, bore under paved areas. Excavate trench to required depth and width. Trench depth shall be a minimum equal to depth of pavement and base, and of sufficient depth to meet minimum coverage requirements. Remove cut-out pavement and excavated material from the site. Replace pavement cuts with equal materials and finishes.

### **3.3 SLEEVING**

- A. Locate sleeves as necessary for pipe extension under paved surfaces.
- B. Locate sleeves to avoid existing vegetation, utilities, and other existing conditions. Should damage occur, repair of damage to existing vegetation, utilities, structures, or other construction resulting from installation of sleeves is the responsibility of the Irrigation Contractor.

### **3.4 WATER METER AND BACKFLOW PREVENTER**

- A. General: Comply with requirements of the Standard Plumbing Code and all local codes and ordinances.
- B. Connection to Main: Determine main line location. Connect to existing main line in such a manner as to reduce wasted pipe. Install new valve and union.
- C. Maintain uninterrupted water service to building during normal working hours. Coordinate temporary water shut-off with Owner.
- D. Backflow Preventer: Provide union on downstream side of main line. Assembly shall be housed in an above ground, waterproof housing. This housing shall be accessible for periodic testing purposes. Irrigation Contractor is to consult local codes and authorities to assure proper installation of the assembly.
- E. If the pressure downstream of the backflow device exceeds the design pressure by more than 20%, provide and install an approved pressure regulator with shutoff valve and strainer on inlet and pressure gauge on outlet.

### **3.5 PIPE INSTALLATION**

- A. Pipe to be installed in a manner that permits expansion and contraction as recommended by the Pipe Manufacturer.
- B. Plastic pipe shall be cut with a handsaw or hacksaw with the assistance of a square in sawing vice or in a manner so as to ensure a square cut. Burrs at cut ends shall be removed prior to installation so that a smooth unobstructed flow will be obtained.
- C. Plastic-to-Plastic Joints: Joints shall be solvent weld joints or slip seal joints. Only the solvent recommended for the pipe and fittings shall be installed as outlined and instructed by the pipe manufacturer. The Irrigation Contractor shall assume full responsibility for the correct installation.
- D. The joints shall be allowed to set at least twenty-four (24) hours before pressure is applied to the system on PVC pipe.

- E. Dissimilar Materials Pipe Joints: Construct joints using adapters that are compatible with both piping materials, outside diameters, and system working pressure.
- F. Install piping free of sags and bends. Lay pipe on solid subbase, uniformly sloped without humps or depressions.
- G. Groups of pipes shall be installed parallel to each other with enough space to permit valve servicing.
- H. Main Line: Install according to the Pipe Manufacturer's recommendations. Provide concrete thrust blocks at all directional changes on all pipe three (3)-inches and larger that is of the gasketed variety.
- I. Lateral Lines: Install according to the Pipe Manufacturer's recommendations.
  - 1. Combine lateral lines and main lines in common trenches wherever possible.
  - 2. Plug lines immediately upon installation to minimize infiltration of foreign matter.
  - 3. Flush lateral lines and risers prior to sprinkler head installation.

### **3.6 SPRINKLER INSTALLATION**

- A. Design Pressures: Follow manufacturer's performance recommendations for specific head type and intended coverage.
- B. Location of Heads: Lay out heads to achieve complete and uninterrupted coverage and minimize water wasted by overthrow on pavement.
  - 1. Locate part-circle heads to maintain a minimum distance of four (4)-inches from walls and two (2)-inches from other boundaries.
- C. Pop-up Sprinkler Heads: Install in such a manner that top is one (1)-inch above finish grade. Where finish grade has not been established, extend a riser a minimum of twelve (12)-inches above existing grade to mark location of head.
- D. All spray sprinklers installed below grade should be accessed through the bottom inlet so as not to void the internal check valve feature.
- E. Irrigation layout shall be designed so that spray, rotor, and/or impact type heads will be on separate zones. DO NOT mix different irrigation heads on one zone.
- F. Backfill around sprinkler head assembly in such a manner as to stabilize the sprinkler head so that no lateral motion is exhibited during operation.
- G. Drip Irrigation Emitters: To be located in a manner that will provide optimum concentration of water to the plant material.
  - 1. Drip tubing should be located on both sides of the plant root ball parallel to each other, (two rows of drip tubing for every row of plant material).
  - 2. Drip irrigation shall be installed in a grid pattern with a PVC distribution line with manifolds to insure hydraulic balance.
  - 3. Drip zones are to be pressure regulated and are NOT to be operated at pressures that exceed 45 psi, automatic flush valves at the ends of drip grid, and air relief valves at the high point(s) of the zone.

### **3.7 WIRE AND VALVE INSTALLATION**

- A. All electrical connections shall conform to the National Electrical Code, latest edition.
- B. Control wires installed beneath walks, drives, or other permanent surfaces shall be placed in sleeves.
- C. Install control wires in orderly fashion, locate in main line trench. Bundle wires together and tape at ten (10) foot intervals. Position wires to the right of the water supply line in the direction of the water flow.
- D. Provide looped slack at directional changes in supply line to allow contraction of wires.
- E. Keep wire splices to a minimum and provide ten (10)-inch round valve box at each splice location.
- F. For each open station on any given controller, there shall be spare wires to the furthest two (2) control valves located in diametrically opposed directions from the controller, plus one (1) additional spare wire.
- G. Controllers and Valves shall be from the same company.
- H. Electrical power supply to controller will be supplied by other. Irrigation Contractor to coordinate controller location with Electrical Contractor.

### **3.8 IRRIGATION CONTROLLER**

- A. Install controller(s) according to Irrigation Manufacturer's written instructions.
- B. Install surge protection and lightning protection devices according to the Irrigation Manufacturer's recommendations and instructions.
- C. Irrigation Controller Location: Coordinate and verify controller location with Owner. Controller shall be located in an accessible area to allow for maintenance.
- D. Irrigation Controller Enclosure: Irrigation controller shall be installed in a plastic or metal box or pedestal with locking capabilities. Enclosure type shall be appropriate for controller location whether interior or exterior application. Verify with Owner as to the type of enclosure preferred.

### **3.9 FLUSHING AND TESTING**

- A. After all new irrigation piping and risers are in place and connected for a given section and all necessary division work has been completed and prior to the installation of the sprinkler heads, all control valves shall be opened and a full head of water used to flush out the system.
- B. Irrigation mainline shall be pressure tested as follows:
  - 1. Two (2) hour pressure test at one and one-half (1 ½) times the system operating pressure.
  - 2. Twenty-four (24) hour pressure test at the system operating pressure.
  - 3. If leaks, occur, repair and repeat the test until no leaks occur (pressure does not drop).
- C. Testing of the system shall be performed after completion of the entire installation and any necessary repairs shall be made at the Irrigation Contractor's expense to put the system in good working order.

- D. Adjustment of sprinkler heads, and automatic equipment will be done by the Irrigation Contractor, upon completion of installation, to provide optimum performance. Minor adjustments during the warranty period will be made by the Owner.

### **3.10 CLEANUP AND PROTECTION**

- A. During irrigation work, the Irrigation Contractor shall keep project site clean and orderly.
- B. Flush dirt and debris from piping before installing sprinklers and other devices.
- C. Upon completion of Work, clear grounds of debris, superfluous materials, and all equipment. Remove from site to the satisfaction of the Owner.
- D. Cover all openings into the system as it is being installed to prevent obstructions in the pipe and the breakage, misuse, or disfigurement of the equipment.
- E. Theft: The Irrigation Contractor is responsible for theft of equipment and material at the job site before, during, and after installation, until Date of Substantial Completion of the Work in total.

### **3.11 OWNER ORIENTATION**

- A. Upon completion of the Irrigation Work and at a time and place acceptable to the Owner, the Irrigation Contractor is responsible for the orientation of the Owner's maintenance personnel in the operation, maintenance, and repair of the system. Furnish copies of all available parts lists, troubleshooting lists, and specification sheet to the Owner.
  - 1. Operating and Maintenance Manuals shall constitute the basis of operation.
- B. The Irrigation Contractor shall set the initial watering schedules and programming of the irrigation controllers at the direction of the Landscape Contractor.

### **3.12 WINTERIZING THE SYSTEM**

- A. The Irrigation Contractor's responsibility to winterize the irrigation system the first winter following Substantial Completion of the Project. Contractor shall also be responsible to de-winterize the system the following spring (even if that time period is outside of the warranty period of the system).

### **3.13 OBSERVATION AND ACCEPTANCE**

- A. Periodic site visits will be made by the Landscape Architect to review the quality and progress of the work. Work found to be unacceptable must be corrected with five (5) calendar days. Remove rejected materials promptly from the project.
- B. Upon completion of the work, the Landscape Architect will issue a punch list for work to be corrected. Where work does not comply with requirements, replace rejected work.
- C. It will be the responsibility of the Irrigation Contractor to provide a reliable communication system (i.e.: Two-way radios or remote radio control activations system) for Substantial Completion and all periodic site visits.

- D. If a site visit to verify Substantial Completion has been scheduled and the Landscape Architect arrives at the site and determines that the irrigation system is not substantially complete (all system components in place, operations, and checked) the Irrigation Contractor shall be responsible for all costs incurred by the Landscape Architect to visit the site. Reimbursable expenses include but are not limited to the following: mileage, airfare, consultants time, parking fee, meals, rental car, etc. All incurred expenses will be deducted from the final contact amount.

**END OF SECTION**

**SECTION 32 9100  
FINISH GRADING****PART 1 – GENERAL****1.1 DESCRIPTION**

This section covers furnishing all labor, materials, equipment, tools, and incidentals necessary to finish grade the landscaped areas shown on the drawings. This section includes work along roadways, in parking islands and planters adjacent to buildings.

**PART 2 – EXECUTION****2.1 BACKFILLING**

- A. The general contractor shall be responsible for rough grading all site areas to within  $\pm .20$  of a foot of final proposed grades. The landscape contractor will be responsible for fine grading of parking islands as well as backfilling of low spots or inequities in parking islands, medians, behind curbs, and all other landscaped areas on site. Any additional soil needed to correct the grade inequities left by the general contractor may be available on site.
- B. The general contractor is responsible for backfilling all planters up to the bottom of the sidewalk slab. The landscape subcontractor shall be responsible for backfilling the planters as required to provide for positive drainage away from the buildings and out of planters.

**2.2 LANDSCAPE BERM SHAPING**

- A. The landscape contractor shall be responsible for final shaping of all landscape berms in parking islands, landscape areas and road frontages at the direction of the Landscape Architect. Landscape contractor shall be responsible for the removal and off-site disposal of all debris collected during the berm grading operations.

**2.3 PREPARATION FOR LAWNS**

- A. The landscape contractor shall be responsible for fine grading with a small rubber tired tractor all the areas on site to receive lawn type grassing and sodding. The landscape architect will inspect all fine graded areas for approval prior to grassing operations.

**PART 3 - OWNER'S ACCEPTANCE**

- A. The landscape contractor is responsible for maintaining the finish grades until final acceptance by the Owner or Owner's representative. Repairs required resulting from negligence are at the contractor's expense.

**END OF SECTION**

SECTION 32 90 00  
EXTERIOR LANDSCAPE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Extent of Landscape Work is indicated on Drawings and in schedules.
- B. Provide and furnish all labor, materials and equipment required or inferred from Drawings and Specifications to complete the Work of this Section.

1.3 UNIT PRICES

- A. Work of this Section is affected by unit prices specified in Division 00 Section "Proposal Form – Unit Price" or Division 01 Section "Unit Prices."
  - 1. Unit prices apply to authorized work covered by quantity allowances.
  - 2. Unit prices apply to additions to and deletions from Work as authorized by Change Orders.

1.4 DEFINITIONS

- A. Backfill: The earth used to replace or the act of replacing earth in an excavation.
- B. Balled and Burlapped Stock (B&B): Plants dug with firm, natural balls of earth in which they were grown, with ball size not less than diameter and depth recommended by ANSI Z60.1 for type and size of plant required; wrapped with burlap, tied, rigidly supported, and drum laced with twine with the root flare visible at the surface of the ball as recommended by ANSI Z60.1.
- C. Container-Grown Stock (Cont.): Healthy, vigorous, well-rooted plants grown in a container, with a well-established root system reaching sides of container and maintaining a firm ball when removed from container. Container shall be rigid enough to hold ball shape and protect root mass during shipping and be sized according to ANSI Z60.1 for type and size of plant required.
- D. Finish Grade: Elevation of finished surface of planting soil.
- E. Manufactured Topsoil Backfill Media: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil for use in planting soil mix or topsoil planting backfill media.

- F. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. This includes insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. It also includes substances or mixtures intended for use as a plant regulator, defoliant, or desiccant.
- G. Pests: Living organisms that occur where they are not desired, or that cause damage to plants, animals, or people. These include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.
- H. Planting Area: Areas to be planted.
- I. Planting Soil Mix: Standardized topsoil; existing, native surface topsoil; imported topsoil; or manufactured topsoil that is modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.
- J. Plant; Plants; Plant Material: These terms refer to vegetation in general, including trees, shrubs, vines, ground covers, ornamental grasses, bulbs, corms, tubers, or herbaceous vegetation.
- K. Root Flare: Also called "trunk flare." The area at the base of the plant's stem or trunk where the stem or trunk broadens to form roots; the area of transition between the root system and the stem or trunk.
- L. Stem Girdling Roots: Roots that encircle the stems (trunks) of trees below the soil surface.
- M. Subgrade: Surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.
- N. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.
- O. Surface Soil: Soil that is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil; but in disturbed areas such as urban environments, the surface soil can be subsoil.

## 1.5 SUBMITTALS

- A. Approval: Obtain approval from Landscape Architect for all submittals prior to the beginning of Work, unless otherwise approved.
- B. Section Cross Reference: Refer to Division 01 Submittals Section for general requirements.
- C. Topsoil Location and Sample: Furnish Landscape Architect with written statement stating location of property from which topsoil is to be obtained, depth to be stripped, and crops grown during past two (2) years. Submit one (1) gallon Ziploc bag of topsoil proposed for use.
- D. Topsoil Test Report: Submit results of soil analysis by a qualified soil-testing laboratory, for information only, for standardized ASTM 5268 topsoil proposed for use in planting soil mixes. Report shall include percentages of deleterious materials; organic matter; gradation of sand, silt, and clay content, as determined by test methods included in Part 2 - Products; cation exchange capacity; pH level; mineral, major nutrient and micro nutrient content of top soil.



- E. Planting Soil Mix Sample: Submit one (1) gallon Ziploc bag of each proposed planting soil mix.
- F. Planting Soil Mix Test Report: Submit results of soil analysis by a qualified soil-testing laboratory, for information only, of each planting soil mix as specified. Report shall include percentages of organic matter; pH level; mineral; major nutrient and micro nutrient content of each mix.
  - 1. State recommended quantities of nitrogen, phosphorus, potash and other nutrients and soil amendments to be added for suitable plant growth.
- G. Plant Material Photographs: Include color photographs in digital format of each required species and size of plant material as it will be furnished to the Project. Take photograph from an angle that depicts true size and condition of the typical plant to be furnished. Include a scale rod or other measuring device in each photograph. Identify each photograph with the full scientific name of the plant, plant size, and name of the growing nursery.
- H. On Site Soil Report: Submit results of soil analysis by a qualified soil-testing laboratory, for information only, of onsite soil. Report shall include pH level, mineral; major nutrient and micro nutrient content of onsite soil.
- I. Product Data: Submit, for information only, product data for proprietary materials and items, including soil amendments, soil conditioner, and other packaged and manufactured products.
- J. Tree Pit Drainage Certification: Submit written documentation certifying that results of drainage test on tree pits and planting beds comply with requirements contained herein.
- K. Fertilizer Analysis: Submit, for information only, label or technical data for fertilizer bearing the trade name, manufacturer's name, weight and analysis for fertilizers used in planting soil mixes and on sodded lawn areas.
- L. Certification: Submit seed vendor's certified statement for each grass seed mixture required, stating botanical and common name, percentage by weight, and percentages of purity, germination, and weed seed for each grass seed species.

## 1.6 QUALITY ASSURANCE

- A. Industry Reference Standards: Refer to Division 01 References Section.  
National List of Scientific Plant Names, latest edition.  
  
American National Standards Institute, Inc. (ANSI):  
  
ANSI Z60.1                      American Standard for Nursery stock by the American Association of Nurseryman.  
  
a.
- B. Soil-Testing Laboratory Qualifications: Engage a reputable independent laboratory, recognized by the State Department of Agriculture, with the experience and capability to conduct testing and analysis of existing surface soils representative of planting areas and lawn areas on site, new topsoil to be used in soil mixes and soil mixes with reference to specified plant materials. Soil

report to include analysis of a minimum of three (3) soil samples from different locations for existing on-site surface soils.

- C. Soil Analysis: For each unamended soil type, furnish soil analysis and a written report by a qualified soil-testing laboratory stating percentages of organic matter; gradation of sand, silt, and clay content; cation exchange capacity; [sodium absorption ratio;] deleterious material; pH; and mineral and plant-nutrient content of the soil.
1. Testing methods and written recommendations shall comply with USDA's Handbook No. 60.
  2. The soil-testing laboratory shall oversee soil sampling; with depth, location, and number of samples to be taken per instructions from Landscape Architect. A minimum of three representative samples shall be taken from varied locations for each soil to be used or amended for planting purposes.
  3. Report suitability of tested soil for plant growth.
    - a. Based upon the test results, state recommendations for soil treatments and soil amendments to be incorporated. State recommendations in weight per 1000 sq. ft. (92.9 sq. m) or volume per cu. yd. (0.76 cu. m.) for nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory planting soil suitable for healthy, viable plants.
    - b. Report presence of problem salts, minerals, or heavy metals, including aluminum, arsenic, barium, cadmium, chromium, cobalt, lead, lithium, and vanadium. If such problem materials are present, provide additional recommendations for corrective action.
- D. Measurements: Measure according to ANSI Z60.1. Do not prune to obtain required sizes.
1. Trees and Shrubs: Measure with branches and trunks or canes in their normal position. Take height measurements from or near the top of the root flare for field-grown stock and container grown stock. Measure main body of tree or shrub for height and spread; do not measure branches or roots tip to tip. Certain tree species, particularly conifers, may have extended leaders which protrude well beyond the body of the crown. In such cases, only the first foot of growth of the leader beyond the closest side branch will count towards its overall height measurement. Take caliper measurements 6 inches (150 mm) above the root flare for trees up to 4-inch (100-mm) caliper size, and 12 inches (300 mm) above the root flare for larger sizes.
  2. Each plant procured for the project must, at the minimum, meet all of the specified size parameters listed, i.e. caliper, height, spread, container size, comment. The Landscape Architect has the right to reject any material that falls short of the specified sizes.
  3. All container sizes listed are full sizes (e.g. one gallon must fit the dimensions of a full one-gallon pot). No trade gallons will be acceptable unless prior approval is granted by the Landscape Architect.
  4. Other Plants: Measure with stems, petioles, and foliage in their normal position.

#### 1.7 MATERIAL QUANTITIES:

- A. It is the Contractor's responsibility to total and confirm all material quantities. Items quantified by an area (i.e., square feet - sf., square yard - sq. yd.) or volume (cubic feet - cu. ft., cubic yard -

cu. yd.) shall be calculated and confirmed by the Contractor. The quantities listed on the plant list are estimated. In the event of a discrepancy between the totals listed on the plant list and the numerical callouts on the Drawings, the Drawings shall govern. The actual total quantities shall be determined by the Contractor.

1. The plants listed on the unit price proposal form in the project manual is provided for convenience. In the event of a discrepancy between the unit price proposal form and plant quantities indicated on the Drawings, the Drawings shall govern.

#### 1.8 MATERIAL SIZES:

- A. It is the Contractor's responsibility to confirm that the sizes indicated on the Drawing callouts match the sizes on the Drawing plant list. The plants list on the Drawings is provided for convenience and is only a summary. In the event of a discrepancy between the sizes on callouts and the plant sizes indicated on the Drawing plant list, the larger of the two sizes shall govern. The Contractor shall bring any discrepancy to the Landscape Architect's and Owner's attention.
  1. The plants listed on the unit price proposal form in the project manual is provided for convenience. In the event of a discrepancy between the unit price proposal form and the plant sizes indicated on the Drawing callouts, the Drawings shall govern.

#### 1.9 DELIVERY, STORAGE AND HANDLING:

- A. Packaged Materials: Deliver packaged materials in original and unopened containers showing weight, certified analysis and name of manufacturer. Protect materials from deterioration during delivery and while stored on site.
- B. Bulk Materials
  1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
  2. Provide erosion-control measures to prevent erosion or displacement of bulk materials, discharge of soil-bearing water runoff, and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
  3. Accompany each delivery of bulk fertilizers, lime, and soil amendments with appropriate certificates.
- C. Sod: Time delivery so that sod will be placed within twenty-four (24) hours after stripping. Protect sod against drying and breaking of rolled strips.
- D. Trees, Shrubs and Ground Cover: Provide freshly dug trees and shrubs. Do not prune prior to delivery. Do not bend or bind-tie trees or shrubs in such manner as to damage bark, break branches or destroy natural shape. Provide protective covering during shipment.
  1. Immediately after digging up bare-root stock, pack root system in wet straw, hay, or other suitable material to keep root system moist until planting.
- E. Deliver trees, shrubs and ground cover after preparations for planting have been completed and plant immediately. If planting is delayed more than six (6) hours after delivery, set trees, shrubs

and ground cover in shade, protect from current and forecasted weather and mechanical damage, and keep roots moist.

1. Set balled stock on ground or in partially excavated hole and cover rootball with soil, peat moss, sawdust or other acceptable material.
2. Do not remove container-grown stock from containers until planting time.
3. Heal-in bare-root stock. Soak roots in water. Do not let roots dry out.
4. Water root systems of plant material stored on-site. Water as often as necessary to maintain root systems in a moist condition.

#### 1.10 PROJECT CONDITIONS:

- A. Insurance on plant material and other materials stored or installed is the responsibility of the Contractor. Such insurance shall cover fire, theft, vandalism and other unusual phenomenon. Should the Contractor elect not to provide such insurance, he will in no way hold the Owner responsible for any losses incurred by the aforementioned acts. The Contractor is responsible for all costs incurred in replacing damaged or stolen materials prior to Date of Substantial Completion of the Work.
- B. Proceed with and complete landscape work as rapidly as portions of Site become available, working within seasonal limitations for each kind of landscape work required.
- C. Existing Grades: Existing grades will be within 0.2 feet of grades shown on the Civil Engineering Drawings when landscape work is to begin. Determine condition of existing grades prior to beginning the Work. When irregular or incomplete grading conditions are encountered, notify the Owner in writing before beginning the Work. Determine location of existing drainage patterns and maintain patterns in completed Work. Perform Work in a manner which will avoid damage to finished grading and drainage patterns. All damage to finished grading and drainage resulting from Work covered in these Contract Documents shall be repaired at the Contractor's expense.
- D. Existing Utilities: Determine location of underground utilities. Perform Work in a manner which will avoid possible damage. Excavate as required. Maintain grade stakes set by others unless removal is mutually agreed upon by parties concerned. All damage to utilities resulting from Work covered in these Contract Documents shall be repaired at the Contractor's expense.
- E. Existing Conditions: Perform landscape Work in the Tree Protection Zones and in existing or previously completed landscape areas to avoid damage and disturbance to these areas. Limit work in these areas to only that necessary to perform work specified herein and shown on the Drawings. Return and repair any areas damaged or disturbed while performing the Work to the existing conditions encountered prior to the Work.
- F. Excavation: When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, notify Landscape Architect in writing before planting.
- G. Weather Limitations: Proceed with planting when existing and forecasted weather conditions are suitable.

- H. Planting Schedule: Prepare a proposed planting schedule. Schedule dates for each type of landscape work during contract period. Coordinate schedule with General Contractor and Irrigation Contractor.
- I. Coordination With Turf Areas (Lawns): Plant trees and shrubs after final grades are established and prior to planting of turf, unless otherwise acceptable to Landscape Architect. If planting of trees and shrubs occurs after turf Work, protect turf areas and promptly repair damage to turf areas resulting from plant operations.

#### 1.11 WARRANTY:

- A. Warranty for a period of one (1) year, following the Date of Substantial Completion, all trees, shrubs, groundcovers, plants and grass against any defects including death and unsatisfactory growth, as determined by the Landscape Architect. Warranty shall include the complete cost to supply and install all replacement plant materials according to the requirements herein. Defects resulting from lack of adequate maintenance, neglect or abuse by the Owner, abuse or damage by others, or unusual phenomenon or incidents beyond the Contractor's control are excepted. Should questions arise concerning the responsibility of replacement, the Landscape Architect will be available for arbitration provided the Owner and Contractor mutually desire.
- B. Remove and replace all trees, shrubs, groundcovers and lawn, or other plants found to be more than 25 percent dead or in unhealthy condition during warranty period as determined by Landscape Architect or Owner. Make replacements immediately unless required to plant in the succeeding planting season.
- C. Replacements: Match adjacent specimens of same species. Replacements are subject to all requirements stated in the Contract Documents and are subject to observation by the Landscape Architect prior to digging.
- D. Repair grades, lawn areas, paving and any other damage resulting from replacement planting operations, at no additional cost to the Owner.
- E. Replacements made during the Warranty Period or following the site visit for Final Acceptance will carry an additional one (1) year warranty beginning at the time of replacement.

## PART 2 - PRODUCTS

### 2.1 SOURCE QUALITY CONTROL:

- A. General: Only plant material grown in a recognized nursery in accordance with good horticultural practice will be accepted. Provide healthy, vigorous stock free of disease, insects, eggs, larvae, and defects such as knots, sun-scald, injuries, abrasions or disfigurement.
- B. Observation of Plant Material Prior to Digging:
  - 1. Contractor must locate all plant material to be supplied for the Project and inform the Landscape Architect in writing of location within thirty (30) days of the date of the Contract or notice to proceed, whichever is first.

2. The Landscape Architect may select and tag the trees required for the Project, at the Contractor's sources. In any event the Landscape Architect shall approve 100 percent of the trees required for the Project.
  3. In the event plant material is found to be unacceptable, the Contractor will pursue other sources until acceptable plant material is found, at no additional cost to the Owner. If, due to unacceptable plant material at the Contractor's source, additional tagging trips are required by the Landscape Architect, the Contractor will reimburse the Landscape Architect for his time and travel expenses.
  4. Approval at the plant source does not impair the right of the Landscape Architect to observe and reject material at the time of shipping or during progress of the Work.
- C. Do Not Make Substitutions: If specified landscape material is not obtainable, submit to Landscape Architect proof of non-availability and for use of equivalent material. For proof of non-availability submit a written statement from a minimum of twelve (12) reliable nursery sources (American Nurserymen's Association Members) that the plant in question is not obtainable in the Eastern United States.
- D. Approval and Selection of Materials and Work: The selection of all materials and the execution of all operations required under the Drawings and Specifications is subject to the approval of the Landscape Architect. The Landscape Architect has the right to reject any and all materials and any and all Work which, in his opinion, does not meet the requirements of the Contract Documents at any stage of the operations. The Contractor shall remove rejected work and/or materials from Project site and replace promptly.

## 2.2 TOPSOIL:

- A. Topsoil has not been stockpiled for re-use in planting soil and other Landscape Work.
- B. Provide new topsoil which is fertile, friable, pervious, sandy loam, surface soil; free of subsoil, clay lumps, brush, weeds and other litter, and free of roots, stumps, stones larger than one and one-half (1½) inches in any dimension, and other extraneous or toxic matter harmful to plant growth.
- C. Obtain topsoil from local sources or from areas having similar soil characteristics to that found at Project Site. Obtain topsoil only from naturally, well-drained sites where topsoil occurs in a depth of not less than four (4) inches; do not obtain from bogs or marshes, unless specified.
- D. Topsoil: ASTM D 5268 complying with the following composition as determined by the indicated test methods:
1. Deleterious Materials: 2 percent max. by mass; ASTM D 2487. (Rock, gravel, slag, cinder, stone).
  2. Organic Material: 5-10 percent min. by mass; ASTM D 2974.
  3. Sand Content: 20 - 30 percent by mass.
  4. Silt Content: 25 - 35 percent by mass.
  5. Clay Content: 25 - 35 percent by mass.
  6. pH Range: 5 to 7; ASTM D 4972.

## 2.3 INORGANIC SOIL AMENDMENTS:

- A. Lime: ASTM C 602, Class T, agricultural liming material containing a minimum of 80 percent calcium carbonate equivalent, with a minimum 99 percent passing a No. 8 sieve and a minimum 75 percent passing a No. 60 sieve.
- B. Aggregate Soil Conditioner: Rotary kiln expanded slate specially graded for use as a horticultural soil conditioner with the following composition as determined by the indicated test methods:
1. Dry Loose Unit Weight: 48-55 lbs/cu.ft.; ASTM C 29.
  2. Specific Gravity: To meet 1.45 to 1.60 dry bulk; ASTM C 127.
  3. Gradation: 3/8-inch to No. 8; ASTM C 330 with 100 percent passing the 3/4-inch sieve.
  4. Absorption: Five percent or more; ASTM C 127.
  5. LA Abrasion: Weight loss between 20 percent and 30 percent; AASHTO T 96.
  6. Chemical Characteristic:
    - a. pH: 6.5 to 10 range.
    - b. Soluble salts: To meet horticultural rural range of 0.75 to 3.5 mmhos/cm.
  7. Process the slate using only non-hazardous fuels such as coal or natural gas.
  8. The expanded slate shall be free of clay lumps and organic impurities.
  9. Obtain aggregate soil conditioner from a single supplier.
  10. Available Products: Subject to compliance with the requirements, aggregate soil conditioners that may be incorporated in the Work includes, but is not limited to the following:
    - a. Acceptable Supplier and Products:
      - 1) Supplier: Caroline Stalite Company (or approved equal)
        - a) Product: 5/16-inch Perma Till
- C. Coarse Sand: Clean, washed, natural or manufactured sand, free of extraneous or toxic matter with the following grain size distribution or coarser; ASTM C136.

Sieve Size	% Passing
.5 in.	100.0
.375 in.	98.0
#4	98.0
#10	93.0
#20	21.0
#60	1.0
#140	0.5
#200	0.5

## 2.4 ORGANIC SOIL AMENDMENTS:

- A. Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1-inch (25-mm) sieve; soluble salt content of 4 to 6 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
1. Organic Matter Content: 50 percent minimum of dry weight.
  2. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source-separated or compostable mixed solid waste that meet all State Environmental Protection Agency requirements.
  3. Available Products: Subject to compliance with the requirements, compost products that may be incorporated in the Work includes, but is not limited to the following:
    - a. Acceptable Supplier and Products:
      - 1) Supplier: EARTH Products, LLC
        - a) Product: EARTH Food
      - 2) Supplier: It Saul Natural, LLC
        - a) Product: Hen Manure Compost
- B. Humus: Air dried, finely shredded, and pH range suitable for intended horticultural use. Humus shall be completely decomposed forest type including composted leaves, bark and organic wastes.
- C. Peat: Air dried, finely shredded or granular texture, completely decomposed and free of fibers with pH range suitable for intended horticultural use. Peat shall be a naturally occurring, highly organic and derived primarily from plant materials.
- D. Organic Pre-Mixed Soil Amendment: Composted and screened 100 percent organic manufactured soil amendment.
1. Acceptable Supplier and Products:
    - a. Supplier: It Saul Natural, Inc.
      - 1) Product: Mr. Natural CLM.
      - 2) Product: Mr. Natural WSM.
    - b. Supplier: EARTH Products, LLC
      - 1) Product: Total Landscape Planting Mix.
- E. Shredded Pine Bark: Shredded bark pieces between one-quarter (1/4) inch and one (1) inch in length with partially decomposed bark matter.

## 2.5 FERTILIZER:



- A. Bonemeal: Commercial, raw, finely ground; minimum of 4 percent nitrogen and 20 percent phosphoric acid.
- B. Superphosphate: Commercial phosphate mixture, soluble, minimum of 20 percent available phosphoric acid.
- C. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-released nitrogen, 50 percent derived from natural organic sources, phosphorous, and potassium in the following composition:
  - 1. General: For trees, shrubs and ground cover, provide a homogeneous fertilizer complete with micro nutrients having an analysis of 12-4-8 (12 pounds of nitrogen, 4 pounds of available phosphoric acid, and 8 pounds of water soluble potash respectively for each 100 pounds of mixture).
  - 2. For trees, shrubs, and ground cover provide fertilizer with adjusted analysis in accordance with results and recommendations of planting soil mix test reports.
  - 3. For lawns, provide fertilizer in accordance with results and recommendations of existing on site surface soil report relative to lawn installation. Provide nitrogen in a form that will be available to lawn during initial period of growth.
- D. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
  - 1. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in existing on site surface soil reports from a qualified soil-testing laboratory.
- E. Chelated Iron: Commercial-grade FeEDDHA for dicots and woody plants, and commercial-grade FeDTPA for ornamental grasses and monocots.

## 2.6 PLANTING SOIL:

- A. Planting Soil Mix for On-Grade Plantings: Provide soil mix amended as per laboratory recommendations. Basic planting soil mix consists of:
  - 1. 70 percent topsoil (as specified)
  - 2. 30 percent prepared additives (by volume as follows)
    - a. 2 parts humus, peat, and/or nutrient grade compost
      - 1) Compost shall be manufacturer by a composter enrolled in the United States Compost Council (USCC) Seal of Testing Assurance (STA) Program.
    - b. 1 part shredded and partially composted pine bark (bark pieces 1/2 inch maximum length)
    - c. 1 part sterilized composted cow manure
  - 3. Commercial fertilizer as recommended in soil report
  - 4. Lime as recommended in soil report

- B. Planting Soil Mix For Rhododendron/Mt. Laurel/Pieris Plantings: Provide soil mix amended as follows by volume:
1. 30 percent shredded pine bark (bark pieces to be between 1/2 inch and 1 inch in length)
  2. 20 percent peat
  3. 20 percent composted humus and/or shredded and composted pine bark less than 1/2" in length
  4. 15 percent topsoil (as specified)
  5. 15 percent sand (coarse river sand)
  6. Commercial fertilizer recommended for Rhododendron/Mt. Laurel/Pieris and as recommended in soil report for these species
- C. Planting Soil Mix for Annual Color and Perennial Plantings: Provide manufacturer's pre-mixed soil mix.
1. Acceptable Manufacturer and Product:
    - a. Manufacturer: It Saul Natural, LLC.
      - 1) Product: Mr. Natural CLM
- D. Humus shall be omitted from planting soil mixes if topsoil used has an organic content of 40 percent or greater as determined by the topsoil test report.

## 2.7 PLANT MATERIALS:

- A. General:
1. Provide plants true to species and variety, complying with recommendations of ANSI Z60.1 "American Standard for Nursery Stock". Nomenclature to comply with "National List of Scientific Plant Names."
  2. Specific requirements concerning plant material and the manner in which it is to be supplied are shown on the Drawings and plant list.
  3. Plant material indicated as pre-tagged and pre-purchased on the Drawings has been selected and purchased for the Project by the Owner at the nursery indicated. Contractor shall be responsible for the total installation of the material including freight, labor, profit, complete warranty and replacement, and all items specified herein and as indicated on the Drawings.
  4. Acclimatization: Plants must have grown under climatic conditions similar to those of the locality of the project site for a minimum of two (2) years immediately prior to being planted on the Project.
- B. Quality and Size:
1. Furnish nursery grown plants, freshly dug, normally shaped and well branched, fully foliated when in leaf and with healthy well developed root systems. Plants to be free of disease, insect infestations or their eggs and larvae, and defects such as knots, sun scald, injuries, abrasions and disfigurement.
  2. Furnish plants to match as closely as possible whenever symmetry is called for.

3. Provide trees and shrubs of sizes shown or specified. Trees and shrubs of larger size may be used if acceptable to the Landscape Architect, and if sizes of roots or rootballs are increased proportionately. The increased size will not result in additional cost to the Owner.
4. Stock Specified in a Size Range: Within each size range not less than 50 percent the plants must be of the maximum size specified.
5. Balled and Burlapped Plants: Plants designated "B&B" are to have firm, natural balls of soil corresponding to sizes specified in ANSI Z60.1 "American Standard for Nursery Stock". Balls to be firmly wrapped in biodegradable burlap and securely tied with biodegradable heavy twine, rope and/or wire baskets. Plants with loose, broken or manufactured rootballs will be rejected. Rootballs shall be lifted from the bottom only, not by stems or trunks.
6. Container grown plants in cans, plastic containers or timber boxes will be acceptable in lieu of balled and burlapped plants provided that they are of specified quality. The container must be removed prior to planting, with care being exercised as to not injure the plant.

C. Trees:

1. Provide trees of height and caliper listed or shown and with branching configuration recommended by ANSI Z60.1 for type and species required. Provide single stem trees except where special forms are specified in the Contract Documents.
2. Provide self supporting trees with straight trunks and leaders intact. Where required in the Contract Documents, provide trees with character as described.
3. Determining dimensions for trees are caliper, height and spread. Caliper shall be measured six (6) inches above ground for trees up to and including four (4) inch caliper. Trees over four (4) inch caliper shall be measured twelve (12) inches above ground. Specified height and spread dimensions refer to the main body of the plant and not branch tip to tip. Take measurements with branches in natural position.

D. Tree Forms: Do not limb up tree forms more than two (2) feet before planting. Prune to desired shape as directed by Landscape Architect.

E. Shrubs: Provide established and well-rooted plants, in removable containers, with not less than the minimum number of canes required by and measured according to ANSI Z60.1 for type, shape, and height of shrub.

F. Ground Cover: Provide established and well-rooted plants, in removable containers or integral peat pots, having not less than minimum number and length of runners by ANSI Z60.1 for the pot size specified.

G. Grass Materials:

1. Grass Seed: Provide fresh, clean, new crop-seed complying with tolerance for purity and germination established by Association of Official Seed Analysts. Provide seed of grass species, proportions and minimum percentages of purity, germination, and maximum percentage of weed seed, as specified on Drawings.
2. Sod: Provide viable sod of uniform density, color, and texture, strongly rooted, not less than two (2) years old and free of weeds and undesirable native grasses. Only provide sod capable of growth and development when planted (viable, not dormant). Provide machine

cut sod of a uniform minimum soil thickness of five-eighths (5/8) inch, plus thickness of top growth and thatch. Sod pieces to be consistent in size and shape. All sod must be a true certified turfgrass.

## 2.8 MISCELLANEOUS LANDSCAPE MATERIALS:

- A. Burlap for wrapping earthball shall be biodegradable jute mesh not less than 7.2 oz. per square yard. Wrapping materials made from manmade fibers are unacceptable.
- B. Guy Stakes, Upright Stakes, and Deadmen: Grade No. 2 or better, uniform grade pressure preservative treated pine AWP C-2, or sound new hardwood or redwood free of knots, holes and other defects, two (2) by two (2) inches by thirty (30) inches long, pointed at one end.
- C. Guy Anchors: No. 4 rebars or comparable size steel stakes, three (3) feet in length.
- D. Arbortape: generic name; rot resistant, flat woven polypropylene or similar material, 3/4 inch wide min., 900 lb break strength min., resistant to degradation by the sun, cold weather, chemicals and contact with soil.
  - 1. Color: Green/Olive
- E. Palm Bracing: Battens or blocks, struts, straps, and protective padding as indicated.
  - 1. Battens or Blocks and Struts: Rough-sawn, sound, new hardwood or softwood, free of knots, holes, cross grain, and other defects, 2-by-4-inch nominal by lengths indicated.
  - 2. Straps: Adjustable steel or plastic package banding straps.
  - 3. Padding: Burlap.
- F. Drainage/Separation Fabric: Manufacturer's standard nonwoven pervious geotextile fabric of polypropylene, nylon or polyester fibers, or a combination.
  - 1. Provide filter fabrics that meet or exceed the listed minimum physical properties determined according to ASTM D 4759 and the referenced standard test method:
    - a. Grab Tensile Strength (ASTM D 4632): 100 lb.
    - b. Apparent Opening Size (ASTM D 4751): #100 U.S. Standard Sieve.
    - c. Permeability (ASTM D 4491): 150 gallons per minute per sq. ft.
- G. Drainage Gravel: Washed crushed stone.
- H. Water and water transportation is the sole responsibility of the Contractor.
- I. Mulch:
  - 1. Pinestraw: Pine needle mulch predominately composed of Longleaf Pine needles and other long needled Southern Yellow Pine species. Clean, fresh, dark brown, and free of branches, cones, foreign matter, insects and disease.
- J. Lawn Anti-Erosion Mulch: Clean, threshed straw of wheat, rye, oats or barley.

- K. Anti-Desiccant: Water-insoluble emulsion type, film-forming agent designed to permit transpiration but retard excessive loss of moisture from plants. Deliver in manufacturer's fully labeled containers and mix in accordance with manufacturer's instructions.

### PART 3 - EXECUTION

#### 3.1 PREPARATION:

##### A. General:

1. Contractor shall examine conditions under which planting is to be installed, review applicable architectural and engineering Drawings, and be familiar with alignment of underground utilities before digging.
2. Planting Time: Planting operations are to be performed at such times of the year as the job may require, with the stipulation that the Contractor guarantees the plant material as specified. Plant only during periods when weather conditions are suitable.
3. Verify layout information shown on the Drawings, in relation to property survey and existing bench marks before proceeding to layout the work. Locate and protect existing benchmarks and control points. Preserve reference points (coordinates) shown on the Drawings during construction.
4. Work from lines established by the property survey, established bench marks and markers to set coordinate points for the tree locations on the Project. Calculate and measure required dimensions. Do not scale Drawings to determine dimensions.
5. Tree Locations: Locate and layout tree (coordinate) locations by instrumentation and similar appropriate means.
6. Layout individual tree and shrub locations and areas for multiple plantings. Stake locations and outline areas and secure Landscape Architect's acceptance before start of excavation for planting work. Make adjustments as requested.
7. Notify Landscape Architect of adverse sub-surface drainage or soil conditions. State conditions and submit a recommendation for correction including costs. Obtain approval for method of correction prior to continuing Work in the affected area. In the event that alternate locations are selected, the Contractor shall prepare such areas at no additional expense to the Owner.

##### B. Excavation for Trees and Specimen Shrubs:

1. Excavate pits, beds and trenches with vertical sides, as specified and as shown on the Drawings.
2. Loosen hardpan and moisture barrier until hardpan has been broken and moisture is allowed to drain freely.
3. For balled and burlapped (B&B trees and shrubs), make excavations at least four (4) feet wider than the ball diameter for the top twelve (12) inches of the pit. For the remaining depth of the pit, excavate at least two (2) feet wider than the full diameter and equal to the ball depth, plus an allowance for setting of ball on a layer of compacted backfill. Allow for six (6) inch minimum setting layer of excavated soil.
4. For container grown stock, excavate as specified for balled and burlapped stock, adjusted to size of container width and depth.

##### C. Test Drainage:

1. Tree and Specimen Shrub Pits: Fill each pit with water. If percolation is less than 100 percent within a period of twelve (12) hours, drill a ten (10) inch diameter auger hole to a depth up to five (5) feet below the bottom of the pit. Fill auger hole with drainage gravel and cover with filter fabric. Retest pit. In case drainage is still unsatisfactory, notify Landscape Architect, in writing, of the condition before planting trees in the questionable areas. Contractor is fully responsible for warranty of the plant material.

D. Subsoil Removal:

1. Dispose of subsoil removed from landscape excavations at an off-site location. Do not mix with planting soil. Do not use as backfill.

3.2 PREPARATION OF PLANTING SOIL:

- A. Before mixing, clean topsoil, or existing surface soil if using a soil conditioner, of roots, plants, clods, stones, clay lumps, and other extraneous materials harmful or toxic to plant growth.
- B. Mix specified soil amendments and fertilizers with topsoil, or soil conditioner with existing surface soil at rates specified. Delay mixing of fertilizer if planting will not follow placing of planting soil within a few days.
- C. For pit and trench type backfill, mix planting soil prior to backfilling and keep covered until used.
- D. For planting soil prepared with a manufactured soil conditioner, mix planting soil in large batches before backfilling, stock pile for use at site and keep covered until used. Do not mix soil conditioner at individual planting sites.
- E. For groundcover and shrub beds, mix planting soil either prior to planting or apply on a surface layer over prepared bed area and mix both thoroughly in the bed before planting.
  1. Mix lime, if required, with dry soil prior to mixing of fertilizer.
  2. Prevent lime from contacting roots of acid-loving plants.
  3. Apply phosphoric acid fertilizer (in addition to that constituting a portion of complete fertilizers) directly to subgrade before applying planting soil and tilling.

3.3 PREPARATION OF SHRUB AND GROUNDCOVER PLANTING BEDS:

- A. Layout planting beds on the ground to the lines shown on the Drawings. Have layout approved by Landscape Architect prior to constructing the bed.
- B. Outline bed with a trench edge as shown on the Drawings. Place soil for trench edge within bed area.
- C. Loosen existing soil to a minimum depth of twelve (12) inches using a roto tiller or similar equipment. Remove all sticks, stones, rubbish and other material detrimental to plant growth.
- D. Spread four (4) inch minimum layer of planting soil mix over entire bed area. (Additional soil mix may be necessary to build up shrub beds to grade as shown on the Drawings.) Work planting soil mix into top of loosened soil with roto tiller.

- E. Smooth planting areas to conform to specified grades after settlement has occurred. Slope surface of shrub beds to drain toward the trench edge.
- F. Mass preparation of beds is not applicable for areas exceeding 4:1 slope.

### 3.4 PREPARATION FOR PLANTING LAWNS:

- A. Loosen the grade of lawn areas to a minimum depth of six (6) inches. Remove stones over one and one-half (1½) inches in any dimension and sticks, roots, rubbish and other extraneous matter. Limit preparation to areas which will be planted promptly after preparation.
- B. Place approximately one-half (1/2) of total amount of topsoil required. Work into top of loosened subgrade to create a transition layer and then place remainder of topsoil mixture to minimum depth required to meet lines, grades and elevations shown, after light rolling and natural settlement. (Insert Paragraph if included in scope and coordinate with Alternate No. 2 & 3).
- C. Allow for sod thickness in areas to be sodded.
- D. Grade lawn areas to smooth, even surface with loose, uniformly fine texture. Roll and rake, remove ridges and fill depressions as required to meet finish grades. Limit fine grading to areas which can be planted immediately after grading.
- E. Fertilize and lime prior to start of grassing operation. Apply ground limestone at the rate recommended by soil test analysis and work into top six (6) inches of soil. Apply fertilizer at the recommended rate; work into top two (2) inches of soil. The fertilizer application shall not precede the placement of sod by more than three (3) days.
- F. Moisten prepared lawn areas before planting if soil is dry. Water thoroughly and allow surface moisture to dry before planting lawns. Do not create a muddy soil condition.
- G. Restore lawn areas to specified condition if eroded or otherwise disturbed after fine grading and prior to planting.
- H. Preparation of Unchanged Grades: Where lawns are to be planted in areas that have not been altered or disturbed by excavating, grading, or stripping operations, prepare soil for lawn planting as follows: Till to a depth of not less than six (6) inches; apply soil amendments and initial fertilizers as specified; remove high areas and fill in depressions; till soil to a homogenous mixture of fine texture, free of lumps, clots, stones, roots and other extraneous matter. Prior to preparation of unchanged areas, remove existing grass, vegetation and turf. Dispose of such material outside of Owner's property; do not turn over into soil being prepared for lawns.

### 3.5 PLANTING TREES AND SPECIMEN SHRUBS:

- A. Set balled and burlapped (B&B) stock on layer of compacted excavated existing soil, plumb and in center of pit or trench with top of ball two to three (2-3) inches above the finish grade and also two to three (2-3) inches above the grade they bore to natural grade before transplanting. Remove all straps and ropes made of man-made fibers completely from rootball. Loosen and remove burlap and biodegradable ropes from top half of rootball. Cut and remove the top half of all wire baskets before backfilling. Use planting soil mixture to backfill plant pits. When plants are set,

place additional backfill around base and sides of ball, and work each layer to settle backfill and eliminate voids and air pockets. When excavation is approximately two thirds (2/3) full, water thoroughly before placing remainder of backfill. Repeat watering until no more is absorbed. Water again after placing final layer of backfill.

- B. Remove all manmade or impervious materials from the rootball and trunk before final installation of trees and specimen shrubs.
- C. Set container grown stock as specified for balled and burlapped stock, except remove containers, without damaging rootballs, prior to backfilling.
- D. Apply anti-desiccant using power spray to provide an adequate film over trunks, branches, stems, twigs and foliage. If deciduous trees or shrubs are moved in full leaf, spray with anti-desiccant at nursery before moving and again after planting as per manufacturer's recommendations.
- E. Mulching: Immediately after planting work has been completed, mulch pits, trenches and planting beds. Provide a minimum depth of two (2) inches of bark or three (3) inches of pinestraw. Finish edges according to the Drawings.
- F. Water: Soak all plants immediately after planting, continue watering thereafter as necessary until Date of Substantial Completion.
- G. Smooth planting areas to conform to specified grades after full settlement has occurred and mulch has been applied.

### 3.6 STAKING, GUYING AND PRUNING:

- A. Stake and guy trees immediately after planting. Plants shall be plumb after staking or guying. Maintain stakes, wires and guys until Final Acceptance of the Work.
- B. Staking trees of one (1) inch caliper and under or four (4) feet height: Use single stake with rubber hose and wire loop around trunk. Use only wooden stakes as specified.
- C. Staking trees of one (1) inch caliper and up to two and three quarters (2-3/4) inch caliper: Drive two stakes, 180 degrees to each other, securely into ground and fasten to tree with wire and tie. Use hose around wire so wire is not in contact with plant, or use Cinch-tie of appropriate size. Adhere to staking details unless alternate detail has been approved by Landscape Architect prior to beginning of planting operation.
- D. Guying trees of three (3) inch caliper and larger: Guy trees according to detail. Position guys around trunk at approximately two-fifths (2/5) the height of the tree. Anchor guys in ground either to notched stakes or steel rods driven securely into ground with top end three (3) inches below finish grade.
- E. Palm Bracing: Install bracing system at three or more places equally spaced around perimeter of trunk to secure each palm until established unless otherwise indicated.

#### 1. Site-Fabricated Palm-Bracing Method



- a. Place battens over padding and secure battens in place around trunk perimeter with at least two straps, tightened to prevent displacement. Ensure that straps do not contact trunk.
  - b. Place diagonal braces and cut to length. Secure upper ends of diagonal braces with galvanized nails into battens or into nail-attached blocks on battens. Do not drive nails, screws, or other securing devices into palm trunk; do not penetrate palm trunk in any fashion. Secure lower ends of diagonal braces with stakes driven into ground to prevent outward slippage of braces.
- F. Pruning: Unless otherwise directed by the Landscape Architect do not cut tree leaders. Remove only injured or dead branches from trees, if any. Prune shrubs at the direction of the Landscape Architect.
- G. Remove and replace promptly any plants pruned or mis-formed resulting from improper pruning.
- H. Inspect tree trunks for injury, improper pruning and insect infestation and take corrective measures.

### 3.7 PLANTING SHRUB AND GROUNDCOVER BEDS:

- A. Excavate large enough area in loosened soil to install specified container grown plants.
- B. Remove containers without damaging the rootball and set in excavated hole. If the plants are root bound, gently pull roots apart by hand to loosen up the rootball.
- C. Place container grown plant in excavated hole with top of rootball even with final shrub bed elevation.
- D. Backfill rootball with soil from the bed and lightly compact soil around plant to eliminate voids and air pockets.
- E. Mulching: Immediately after planting mulch planting beds with a minimum depth of two (2) inches of bark or three (3) inches of pine straw. Finish edges according to the Drawings. Remove all mulch from foliage of plants.
- F. Watering: Soak entire area immediately after planting. Continue watering thereafter as necessary until Date of Substantial Completion.

### 3.8 SPACING AND LAYOUT OF SHRUBS AND GROUNDCOVER:

- A. Layout bed outline per the plans.
- B. Layout individual shrubs and groundcovers per the spacing indicated on the plans. Mass plantings are usually laid out by either staggered rows (SR) or even rows. Note that the spacing between rows may be different than the on-center spacing between the plants.
- C. Unless otherwise noted, all shrubs and groundcover shall be given the same spacing from hardscape edges (i.e. sidewalks, roads, or buildings) as their on center spacing (e.g. a shrub labeled as thirty-six inches (36") on center shall have the row closest to the hardscape edge planted

thirty-six inches (36") from the hardscape edge.) The Landscape Architect shall approve all plant placement prior to plant material installation.

- D. When two shrub or groundcover beds abut, the on-center spacing between the different plant beds shall be the combined on-center spacing of the two differing plants (e.g. if one plant spaced thirty-six inches (36") on center abut another plant spaced twenty-four inches (24") on center, the on-center spacing between the two different plant beds shall be sixty inches (60"))
- E. Should the site conditions differ from that indicated on the Drawings, notify the Landscape Architect of such conditions with a recommendation for correcting the condition. Obtain approval of method of correction prior to continuing Work.
- F. All plant beds and plants shall be laid out prior to the review of the Landscape Architect.
- G. Should the number of plants not properly match the space allocated for the layout, notify the Landscape Architect prior to installation and obtain an approved, alternate course of action prior to continuing Work.
- H. In cases where the number of too many plants listed on the Drawing become too many for the bed area in the field, maintain the specified spacing. Do not change the spacing in an attempt to use all of the plants listed.
- I. Refer to the Drawings for clarification of spacing details and layout information.

### 3.9 INSTALLING LAWNS:

- A. Seeding New Lawns:
  - 1. The grass seed shall be applied at the rate specified in the Seed Schedule and at the planting dates indicated.
  - 2. Sow seed using a spreader or hydro-seeding machine.
  - 3. Do not seed when wind velocities affect even distribution. Do not sow when seed bed is crusty or frozen. Sow in equal quantities in two (2) directions at right angles to each other.

## GRASS SEEDING SCHEDULE

Seed Type	Seeding Rate Lbs/1000 sf	Planting Dates	Visible Seedling Stand Under Ideal Conditions	Ultimate Mowing Height
1. Common Bermuda	2 – 3	May 1 – Aug. 15	12 days*	1-1/4 – 1”
2. Tall Fescue	6 – 8	Sept 15 – Nov 15	8 days*	2 – 2-1/2”
3. Annual Ryegrass	4 – 6	Oct 1 – Mar 1	6 days*	2 – 2-1/2”
4. Bahia	4 – 5	Feb. 15 – Aug 31	8 days	2 – 3”

\*Planting dates for type 1-3 are for Atlanta/North Georgia region only. These dates differ for other areas where seasonal variations require modification. According to the Plant Hardiness Zone Map published by the United States Department of Agriculture, 1990, these dates refer to Zones 7a and 7b.

4. If seed bed is left slightly rough or furrowed, no "planting" of the seed is necessary. If seed bed is smooth and very dry, the seed should be lightly raked into the top quarter (1/4) inch of seed bed.
5. Protect seeded areas with slopes not exceeding 1:5 by spreading wheat straw or hay mulch. The quantity of mulch to be applied shall be that to uniformly form a continuous blanket at least three-quarters (3/4) of an inch and not more than one and one-half (1½) inches in loose depth over the seeded area. Spread by hand, blower, or other suitable equipment.
  - a. Bond straw mulch by spraying with asphalt emulsion at a rate of 10 to 13 gal./1000 sq. ft. Take precautions to prevent damage or staining of structures or other plantings adjacent to mulched areas. Immediately clean damaged or stained areas.
6. Protect seeded areas with slopes exceeding 1:5 with erosion-control fiber mesh and 1:3 with erosion-control blankets installed and stapled according to manufacturer's written instructions.
7. Hydroseeding: Mix specified seed, fertilizer, and fiber mulch in water, using equipment specifically designed for hydroseed application. Continue mixing until uniformly blended into homogeneous slurry suitable for hydraulic application.
  - a. Mix slurry with nonasphaltic tackifier.
  - b. Apply slurry uniformly to all areas to be seeded in a one-step process. Apply mulch at a minimum rate of 1500-lb/acre dry weight but not less than the rate required to obtain specified seed-sowing rate.
8. Thoroughly moisten seeded area immediately after seeding. If rainfall is insufficient lightly water planting area until grass is established.
9. Protect seeded areas from traffic and disturbance.

10. Scarify, re-seed and re-fertilize seeded areas that do not show satisfactory growth within fifteen (15) days after sowing, until a satisfactory stand is established. Seeded areas are considered established when a dense grass stand has developed of a uniform green color, reasonably free from weeds, the specified grass is vigorous and growing well, and no bare spots larger than one (1) square foot area is apparent. Full coverage is required in thirty (30) days. Irregularities resulting from diseases and insect infestation are unacceptable. Mow grass at height specified in seeding schedule.
11. After two (2) or three (3) mowings the new lawn shall be fertilized with ammonium nitrate at the rate of 50 lbs/acre. Nitrogen shall be applied with mechanical hand spreader capable of producing uniform coverage. One (1) application is mandatory. Nitrogen shall not be applied between October 15 and March 15, unless noted otherwise.

B. Sodding New Lawns:

1. Water soil prior to receiving sod. At the time of sod placement soil must be moist but not saturated.
2. Lay sod within twenty-four (24) hours from time of stripping. If not possible, sod may be stored on site up to thirty-six (36) hours after stripping provided sod is properly protected: unstack, unroll and place in shade and keep moist until installation.
3. Do not plant dormant sod.
4. Do not plant sod on frozen ground.
5. Lay sod to form a solid mass with tightly fitted joints. Snugly fit ends and sides of sod strips; do not overlap. Stagger strips to offset joints in adjacent courses. Work from boards to avoid damage to subgrade or sod. Tamp or roll lightly to ensure contact with subgrade. Work sifted soil into minor cracks between pieces of sod; remove excess to avoid smothering of adjacent grass.
6. Anchor sod with wood pegs to prevent slippage on slopes equal to or greater than 3:1 and wherever erosion can be anticipated. Lay sod perpendicular to slope direction, with staggered joints.
7. Water sod thoroughly with a fine spray immediately after planting until soil is damp to a depth of four (4) inches. If rainfall is insufficient, keep sodded area moist until grass has securely rooted into the planting area.

C. Reconditioning Existing Lawns:

1. Recondition existing lawn areas damaged by Contractor's operations including storage of materials and equipment and movement of vehicles. Also recondition existing lawn areas where minor regrading is required.
2. Provide fertilizer, seed or sod and soil amendments as specified for new lawns and as required to provide a satisfactorily reconditioned lawn. Provide new topsoil as required to fill low spots and meet new finish grades.
3. Cultivate bare and compacted areas thoroughly to provide a satisfactory planting bed.
4. Remove diseased and unsatisfactory lawn areas; do not bury under soil. Remove topsoil containing foreign materials resulting from Contractor's operations including oil drippings, stone, gravel and other loose building materials.
5. Where substantial lawn remains (but is thin), mow, rake, aerate if compacted, fill low spots, remove humps and cultivate soil, fertilize, and seed. Remove weeds before seeding or if extensive, apply selective chemical weed killers as required. Apply a seedbed mulch, if required, to maintain moist condition.

6. Thoroughly water newly planted areas immediately after planting. If rainfall is insufficient, lightly water planting area until new grass is established.

### 3.10 MAINTENANCE:

- A. Begin maintenance immediately after planting.
- B. Maintain trees, shrubs lawns, and other plants until Date of Substantial Completion of the Work.
- C. Maintain trees, shrubs, lawns and other plants by watering, pruning, cultivating, weeding, and re-mulching as required for healthy growth. Restore trench edges around mulch rings and along bed limes. Tighten and repair stake and guy supports and reset trees and shrubs to proper grades or vertical position as required. Restore or replace damaged wrappings. Spray as required to keep trees and shrubs free of insects and disease.
- D. Maintain lawns by watering, weeding, mowing, repair of eroded areas and re-seeding or re-sodding as necessary to establish a uniform stand of the specified grasses.
- E. Remove all trees, shrubs, ground covers, lawn or other plants which die, turn brown and/or defoliate prior to Date of Substantial Completion from the site. Replace immediately with plant material of the same species, quantity, size and meeting all requirements.

### 3.11 CLEAN UP AND PROTECTION:

- A. During Landscape Work, keep pavements clean and work area in an orderly condition.
- B. Upon completion of Work, clear grounds of debris, superfluous materials and all equipment. Remove from site to satisfaction of Landscape Architect and Owner.
- C. Protect landscape Work and materials from damage due to landscape operations, operations by other contractors and trades and trespassers. Maintain protection during installation and maintenance periods. Treat, repair or replace damaged landscape Work as directed, at no additional cost to the Owner.
- D. Theft: Contractor is responsible for theft of plant material at the Project site before, during and after planting, until the Date of Substantial Completion of the Work.

### 3.12 OBSERVATION AND ACCEPTANCE:

- A. Periodic site visits will be made by the Landscape Architect to review the quality and progress of the Work. Work found to be unacceptable must be corrected within five (5) calendar days. Remove rejected plants and materials promptly from the Project.
- B. Upon completion of Work, the Contractor shall notify the Landscape Architect and the Owner at least ten (10) days prior to requested date of site visit for Substantial Completion of all or portions of the Work. Landscape Architect will issue a punch list for work to be corrected. All work on the punch list must be completed within five (5) working days from date of site visit. Where

Work does not comply with requirements, replace rejected Work and continue specified maintenance until by Landscape Architect finds work to be acceptable.

- C. If a site visit to verify Substantial Completion has been scheduled and the Landscape Architect arrives at the site and determines that the Landscape Development is not substantially complete, the Contractor shall be responsible for all costs incurred by the Landscape Architect to re-visit the site. Reimbursable expenses include but are not limited to the following: mileage, airfare, consultant's time, parking fee, meals, rental car, etc. All incurred expenses will be deducted from the final contract amount.
- D. Certificate of Substantial Completion will be issued for acceptable Work. If punch list items are issued with the Certificate, they must be corrected within five (5) working days.
- E. One (1) Year Warranty commences on the date of issuance of the Certificate of Substantial Completion. Refer to Section 32 90 00, 1.11 Warranty.
- F. Final Acceptance: One (1) year after Date of Substantial Completion of the Work in total the Landscape Architect and/or the Owner will visit the site to determine Final Acceptance. Upon satisfactory completion of repairs and/or replacements the Landscape Architect and/or the Owner will certify the Work.

END OF SECTION 329000

**SECTION 33 1000  
WATER UTILITIES**

**PART 1 GENERAL**

**1.1 RELATED DOCUMENTS:**

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.
- B. Related work specified elsewhere includes:
  - 1. Section 31 2000 - "Earth Moving"
  - 2. Division 22 – "Plumbing"

**1.2 SUMMARY:**

- A. This Section includes water service piping system, meter, vaults, valves, and appurtenances from the existing on-site utility source of potable water to a point 5 feet outside the building, and as indicated on the Drawings, and in this Section of the Project Manual.
- B. Note that the Contractor shall furnish and install connection, water meter, etc., acceptable to the utility company and call on the utility company to approve the meter and inspect the installation prior to covering.
- C. All fees and charges for water service, meters, taps, permits, impact fees, etc., if any, shall be paid by the Contractor from their contract amount.
- D. The extent of water service piping system, fire hydrants, etc., is indicated on the Drawings, in this Section, other referenced Sections of the Project Manual, and as otherwise required by authorities having jurisdiction.
  - 1. All water pipe which run under roads, streets, driveways, and other vehicular paving shall be sleeved in AWWA C151 ductile iron sleeves.
- E. Utility Compliance: Comply with Jasper/Pickens County Water Authority regulations and standards pertaining to sanitary sewerage systems.
  - 1. Where conflicts or discrepancies occur with the plans or these specifications, Jasper/Pickens County Authority regulations and standards shall govern.

**1.3 SUBMITTALS:**

- A. General: Submit the following in accordance with conditions of Contract and Division 1 Specification Sections
  - 1. Product data for water service piping and fire protection pipe and specialties.
  - 2. Shop drawings for vaults, junction boxes, valve boxes, manholes, meters, back-flow preventers, and other similar water service equipment.

**PART 2 PRODUCTS****2.1 PIPE AND PIPE FITTINGS - GENERAL:**

- A. General: Pipe, valves, fittings and installation in R.O.W. and on site shall comply with requirements of this Section, other referenced Sections of the Project Manual, the Drawings, and the Jasper/Pickens County Water Authority.
1. Pipe, fittings, hydrants and valves shall be as specified herein, subject to acceptance by the Jasper/Pickens County Water Authority, unless other specific materials acceptable to the Jasper/Pickens County Water Authority are indicated on the Drawings.
  2. PVC piping and fittings smaller than 4" shall be C900 PVC, Class 200 plastic pipe, Schedule 40, or Type K Copper; and pipe 4" and larger, below paving and fire lines shall be ductile iron, of type(s) acceptable to the Jasper/Pickens County Water Authority, unless other specific materials acceptable to the Jasper/Pickens County Water Authority are indicated on the Drawings.
  3. PVC water piping and fittings 4" and larger shall be C900, Class 250 plastic pipe of type acceptable to local utility company, unless other specific materials acceptable to utility company are indicated on the Drawings.
  4. Ductile iron pipe for fire lines, pipe below paving and where indicated shall meet ANSI A21.51, Grade 60-42-10, and special thickness pressure class 50, (For 6" Pipe this is the same 0.25" wall thickness as Class 350) ductile iron, of type(s) acceptable to local utility company, unless other specific materials acceptable to utility company are indicated on the Drawings.
  5. Note that all water pipe which run under roads, streets, driveways, and other vehicular paving shall be either ductile iron or shall be sleeved in ductile iron sleeves.
  6. Copper pipe where indicated, provide Soft Copper Tube, ASTM B 88-62, Type K hard drawn, water tube, annealed temper.
    - a. Copper, Solder-Joint Fittings: AWWA C800-6 and 66. Corp stops shall be ¾" Ford F-1000 CC x COMP or equal, curb stops shall be ¾" Ford B-41-233W COMP x FIP or equal, and service saddles shall be dresser style 194 or equal. Furnish only wrought-copper fittings if indicated.
- B. PVC Plastic, Schedule 40/80 PVC with pressure-rated fittings: Conform to ASTM D 1785 standard specifications for PVC plastic pipe.
- A. C. PVC Plastic, Water Pipe: AWWA C900, Class 200. Include elastomeric seal according to ASTM F477.
- B.
- C. 1. Ductile Iron Fittings: AWWA C110, ductile-iron; or AWWA C153, ductile-iron, compact type, and specifically designed for joining PVC pipe; Include elastomeric seals according to ASTM F 477 or as otherwise required for joining plastic pipe specified



- D.
- E. 2. Plastic Pipe-Flange Gasket, Bolts, and Nuts: Type and material recommended in writing by piping system manufacturer, unless otherwise indicated.
- F.
- G. D. Where copper pipe is indicated, provide Soft Copper Tube, ASTM B 88, Type K, water tube, annealed temper.
- H.
- I. 1. Copper, Solder-Joint Fittings: ASME B16.18, cast-copper-alloy or ASME B16.22, wrought-copper, solder-joint pressure type. Furnish only wrought-copper fittings if indicated.
- E. Ductile-Iron, Push-on-Joint Pipe: AWWA C151 and ANSI C150, C151, A21.50, and A21.15 respectively, Class 350 as approved by the Jasper/Pickens County Water Authority, tar coated outside, with cement lining and seal coat according to AWWA C104. Include rubber compression gasket according to AWWA C111.
  - 1. Ductile-Iron, Push-on-Joint Fittings: AWWA C110, ductile-iron; or AWWA C153, ductile-iron, compact type. Include cement-mortar lining and seal coat according to AWWA C104 and rubber compression gaskets according to AWWA C111 (ANSI 21.11) and according to ASTM D-3139.
  - 2. Joining Materials: AWWA C111 rubber gaskets and lubricant according to ASTM F477 requirements.
- F. Ductile-Iron, Mechanical-Joint Pipe: AWWA C151, with cement-mortar lining and seal coat according to AWWA C104. Include gland, rubber gasket, and bolts and nuts according to AWWA C111.
  - 1. Ductile-Iron, Mechanical-Joint Fittings: AWWA C110, ductile-iron; or AWWA C153, ductile-iron, compact type. Include cement-mortar lining and seal coat according to AWWA C104 and glands, rubber gaskets, and bolts and nuts according to AWWA C111.
  - 2. Joining Materials: AWWA C111 ductile-iron or gray-iron glands, high-strength steel bolts and nuts, and rubber gaskets.
- G. PE Encasement for Ductile-Iron Piping: ASTM A 674 or AWWA C105, PE film, 0.008-inch (0.20-mm) minimum thickness, tube or sheet.
- H. Pipe Sleeves: Provide pipe sleeves at least one size larger than water service piping required below existing concrete and paving, and as follows.
  - 1. Below Concrete, Entry Pads, and Paving Subject to Only Pedestrian Traffic, and for Future Irrigation: Schedule 40/80 PVC.
  - 2. Below Concrete, Equipment Pads, Dumpster Pads, Valley Gutters, Curbs and Gutters, Paving Subject to Vehicular Traffic, and Where Indicated: Ductile Iron, as specified above herein this Section.
- I. Identification for Underground Plastic Pipe:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Allen Systems, Inc.; Reef Industries, Inc.
    - b. Brady (W.H.) Co.; Signmark Div.
    - c. Calpico, Inc.
    - d. Carlton Industries, Inc.
    - e. EMED Co., Inc.
    - f. Seton Name Plate Co.
  2. Plastic Underground Warning Tapes: Polyethylene plastic tape with metallic core, 6 inches wide by 4 mils thick, solid blue in color with continuously printed caption in blue letters "CAUTION - WATER LINE BURIED BELOW."
- K. Domestic Water Meter – Provide in accordance with Jasper/Pickens County Water Authority specifications.
1. Meter box and cover shall be traffic-bearing in all paved areas.
- L. Tapping Sleeve and Valve:
1. Tapping sleeves and valves shall be Mueller, mechanical joint, 250 psi or equal.
  2. Tapping sleeves shall have 24"x24"x8" concrete pad in undisturbed soil with solid blocking to support tapping valves.
- M. Valves:
1. Unless otherwise specified, all gate valves up to 12" shall be resilient seat, and all gate valves larger than 12" shall be butterfly type. All valves larger than 12" shall receive approval from the City before installation.
  2. Acceptable manufacturers of gate valves are American-Darling, Dresser M&H, or equal.
- N. Valve Accessories:
1. All buried valves shall be furnished with cast iron, screw type; extendable valve boxes marked "WATER". Acceptable manufacturers are Mueller, M&H Valve, or equal.
  2. Valve boxes shall be mounted plumb in an 18" round concrete valve pad and centered over the operating nut.
  3. One concrete valve marker shall be furnished and set at each line valve. The marker shall be made of 3,000 psi concrete with four #4 reinforcing bars. The size shall be four feet long by 4" on each side.
- O. Hydrants
1. Fire Hydrants shall meet AWWA C-502-80 as well as the local authorities having jurisdiction.
  2. Hydrants shall be manufactured by Mueller or an approved equal.

3. Hydrants shall be equipped with tamper proof caps that will work with City operating wrenches to prevent unauthorized use of water.
4. Hydrants shall be warranted by the manufacturer against defects in materials or workmanship for at least 10 years from the date of manufacture.

### **PART 3 EXECUTION:**

#### **3.1 INSTALLATION:**

- A. Comply with requirements of Division 22, the International Plumbing Code, Drawings, the Jasper/Pickens County Water Authority and requirements of other authorities having jurisdiction.
- B. Comply with requirements of the State Health Department, the local Health Department, and authorities having jurisdiction.

#### **3.2 DEPTH OF COVER:**

- A. Provide minimum cover of 36-inches for all water bearing piping.

#### **3.3 INSTALLATION OF IDENTIFICATION:**

- A. Install continuous plastic underground warning tape during back-filling of trench for underground water service piping. Locate 6 to 8 inches below finished grade, directly over piping.

#### **3.4 CLEANING:**

- A. Clean and disinfect water distribution piping as follows, or as required by utility company, Code, and authorities having jurisdiction:
  1. Purge all new water distribution piping systems and parts of existing systems that have been altered, extended, or repaired, prior to use.
  2. Use the purging and disinfecting procedure prescribed by the authority having jurisdiction or, in case a method is not prescribed by that authority, use the procedure described in AWWA C651, or as described below:
    - a. Fill the system or part thereof with a water/chlorine solution containing at least 50 parts per million of chlorine. Isolate (valve off) the system or part thereof and allow to stand for 24 hours.
    - b. Drain the system or part thereof of the previous solution and refill with a water/chlorine solution containing at least 200 parts per million of chlorine and isolate and allow to stand for 3 hours.

- c. Following the allowed standing time, flush the system with clean, potable water until chlorine does not remain in the water coming from the system.
  - d. Submit water samples in sterile bottles to the authority having jurisdiction. Repeat the procedure if the biological examination made by the authority shows evidence of contamination.
- B. Prepare reports for all purging and disinfecting activities and submit for review and along with each set of "Record Documents".

**END OF SECTION**

**SECTION 33 3000  
SANITARY SEWERAGE**

**PART 1 GENERAL**

**1.1 RELATED DOCUMENTS:**

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.
- B. Related work specified elsewhere includes:
  - 1. Section 31 2000 - "Earth Moving"
  - 2. Section 03 3100 - "Concrete"
  - 3. Division 22 - "Plumbing"

**1.2 SUMMARY:**

- A. This Section includes sanitary sewerage system piping and appurtenances from a point 5 feet outside the building to the point of disposal.
- B. The extent of sanitary sewerage system is indicated on the Drawings, in this Section 33 3000, and as otherwise required by authorities having jurisdiction.
- C. All fees and charges for sanitary sewerage service, taps, connections, permits, impact fees, etc., shall be paid by the Contractor from their contract amount.

**1.3 SUBMITTALS:**

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
  - 1. Product data for drainage piping and specialties.
  - 2. Shop drawings for precast concrete sanitary manholes, including frames and covers
    - a. Shop drawings for cast-in-place concrete or field-erected masonry sanitary manholes, if any, including frames and covers
  - 2. Test Reports.

**1.4 QUALITY ASSURANCE:**

- A. Environmental Compliance: Comply with applicable portions of local environmental agency regulations pertaining to sanitary sewerage systems.
- B. Utility Compliance: Comply with Jasper/Pickens County Sewer Authority regulations and standards pertaining to sanitary sewerage systems.

- 1. Where conflicts or discrepancies occur with the plans or these specifications, the Jasper/Pickens County Sewer Authority regulations and standards shall govern.

- C. Health Department Compliance: Comply with the State Department of Health Code or the local Health Department code, regulations and standards, whichever is more stringent.
- D. Comply with requirements of authorities having jurisdiction, when more stringent than specified or otherwise indicated.

## **1.5 PROJECT CONDITIONS:**

- A. Site Information: Perform site survey, research public utility records consult with Jasper/Pickens County Sewer Authority Department and verify existing utility locations. Verify that sanitary sewerage system piping may be installed in compliance with original design and referenced standards.

## **1.6 SEQUENCING AND SCHEDULING:**

- A. Coordinate any connection to public sewer with Jasper/Pickens County Sewer Authority.
- B. Coordinate with interior building sanitary drainage piping.
- C. Coordinate with other utility work.

## **PART 2 PRODUCTS**

### **2.1 MANUFACTURERS:**

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. Cleanouts:
    - a. Ancon, Inc.
    - b. Josam Co.
    - c. Smith (Jay R.) Mfg. Co.
    - d. Wade Div.; Tyler Pipe.
    - e. Zurn Industries, Inc.; Hydromechanics Div.
  - 2. Underground Warning Tapes:
    - a. Allen Systems, Inc.; Reef Industries, Inc.
    - b. Brady (W.H.) Co.; Signmark Div.
    - c. Calpico, Inc.
    - d. Carlton Industries, Inc.
    - e. EMED Co., Inc.
    - f. Seton Name Plate Co.

### **2.2 PIPE AND FITTINGS:**

## 1.1 A. Ductile-Iron, Gravity Sewer Pipe and Fittings:

A.

- B. 1. Pipe: Ductile iron pipe meeting AWWA C-150, C-151 and ANSI A21-50 and A 21.15 for coated outside and cement lined inside. Cement lining according to AWWA C104, Class 350.
- C. 2. Standard Fittings: AWWA C110, ductile or gray iron, for push-on joints.
- D. 3. Compact Fittings: AWWA C153, for push-on joints.
- E. 4. Gaskets: AWWA C111, rubber.
- F.

B. Pipe 8-inches and smaller, unless indicated otherwise:

- 1. PVC (Polyvinyl Chloride) Sewer Pipe and Fittings: ASTM D 3034, SDR 26, for solvent cement or elastomeric gasket joints.
- 2. Solvent Cement: ASTM D 2564, for pipe 4-inches and smaller.
- 3. Gaskets: ASTM F 477, elastomeric seal, for pipe larger than 4-inches.

C. Couplings: Rubber or elastomeric sleeve and stainless-steel band assembly fabricated to match outside diameters of pipes to be joined.

- 1. Sleeves: ASTM C 425, rubber for vitrified clay pipe; ASTM C 443, rubber for concrete pipe; ASTM C 564, rubber for cast-iron soil pipe; and ASTM F 477, elastomeric seal for plastic pipe. Sleeves for dissimilar or other pipe materials shall be compatible with pipe materials being joined.
- 2. Bands: Stainless steel, one at each pipe insert.

D. PE Encasement for Ductile-Iron Piping: ASTM A 674 or AWWA C105, PE film, 0.008-inch (0.20-mm) minimum thickness, tube or sheet.

E. Couplings: Rubber or elastomeric compression gasket, made to match pipe inside diameter or hub, and adjoining pipe outside diameter.

**2.3 MANHOLES (if any):**

A. Precast Concrete Manholes: ASTM C 478, precast reinforced concrete, of depth indicated with provision for rubber gasket joints. All manhole covers shall be round.

- 1. Base Section: 6-inch minimum thickness for floor slab and 4-inch minimum thickness for walls and base riser section and having a separate base slab or base section with integral floor.
- 2. Riser Sections: 4-inch minimum thickness; 48-inch diameter, and lengths to provide depth indicated.
- 3. Top Section: Concentric cone type, unless flat-slab-top type is indicated suitable for mounting cast from manhole frames and covers. Top of cone to match grade rings.
- 4. Grade Rings: Provide 2 or 3 reinforced concrete rings, of 6 to 9 inches total thickness and match 24-inch diameter frame and cover.
- 5. Gaskets: ASTM C 443, rubber.

6. Steps: Cast into base, riser, and top sections sidewall at 12-to 16-inch equally spaced intervals.
  7. Pipe Connectors: ASTM C 923, resilient, of size required, for each pipe connecting to base section.
  8. Channel and Bench: Concrete 8" wide.
- B. Cast-in-Place Manholes (if any): Reinforced concrete of dimensions and with appurtenances indicated. All manhole covers shall be round.
1. Bottom, Walls, and Top: Reinforced concrete.
  2. Channel and Bench: Concrete.
  3. Steps: Cast into sidewall at 12- to 16-inch intervals.
- C. Concrete: Portland cement mix, 4000 psi at 28 days
1. Cement: ASTM C 150, Type II with C3A content of 6.5% or less.
  2. Fine Aggregate: ASTM C 33, sand.
  3. Coarse Aggregate: ASTM C 33, crushed gravel.
  4. Water: Potable.
  5. Refer to Section 033000 – “Cast-In-Place Concrete” for additional information and requirements.
- D. Reinforcement: Steel conforming to the following:
1. Fabric: ASTM A 185, welded wire fabric, plain.
  2. Reinforcement Bars: ASTM A 615, Grade 60, deformed.
  3. Refer to Section 033000 – “Cast-In-Place Concrete” for additional information and requirements.
- E. Steps: Same as for precast concrete manholes.

## **2.4 MANHOLE STEPS:**

1. General: Wide enough for a man to place both feet on one step and designed to prevent lateral slippage off the step.
  1. Material: Ductile iron or cast aluminum.

## **2.5 CLEANOUTS:**

- A. General: Provide Mission adjustable repair coupling (or approved equal) with stainless steel bends and stainless-steel shear ring and a Zurn #ZN1400HD-3, Smith 4220 (or approved equal) cover set flush in a minimum 14" square concrete slab.

## **2.6 IDENTIFICATION:**



- A. Plastic Underground Warning Tapes: Polyethylene plastic tape with metallic core, 6 inches wide by 4 mils thick, solid green in color with continuously printed caption in black letters "CAUTION - SEWER LINE BURIED BELOW."

### **PART 3 EXECUTION**

#### **3.1 PREPARATION OF FOUNDATION FOR BURIED SANITARY SEWERAGE SYSTEMS:**

- A. Grade trench bottom to provide a smooth, firm, stable, and rock-free foundation, throughout the length of the pipe.
- B. Remove unstable, soft, and unsuitable materials at the surface upon which pipes are to be laid and backfill according to provisions in Section 31 2000 – Earth Moving.
- C. Shape bottom of trench to fit bottom of pipe. Fill unevenness with tamped sand backfill. Dig bell holes at each pipe joint to relieve the bells of all loads and to ensure continuous bearing of the pipe barrel on the foundation.

#### **3.2 PIPE APPLICATIONS FOR UNDERGROUND SANITARY SEWERS:**

- A. Refer to Paragraph 2.2 above.

#### **3.3 INSTALLATION, GENERAL:**

- A. General Locations and Arrangements: Drawings (plans and details) indicate the general location and arrangement of the underground sanitary sewerage system piping. Location and arrangement of piping layout take into account many design considerations. Install the piping as indicated, to the extent practical.
- B. Install piping beginning at low point of systems, true to grades and alignment indicated with unbroken continuity of invert. Place bell ends of piping facing upstream. Install gaskets, seals, sleeves, and couplings in accordance with manufacturer's recommendations for use of lubricants, cements, and other installation requirements. Maintain swab or drag in line and pull past each joint as it is completed.
- C. Use fittings for changes in direction. Use fittings for branch connections, except where direct tap into existing sewer is indicated.
- D. Use proper size increasers, reducers, and couplings, where different size or material of pipes and fittings are connected. Reduction of the size of piping in the direction of flow is prohibited.
- E. Install piping pitched down in direction of flow, at minimum slope of 1 percent, except where indicated otherwise.
- F. Extend sanitary sewerage system piping to connect to building sanitary drains, of sizes and in locations indicated.

- G. Tunneling: Install pipe under streets or other obstructions that cannot be disturbed, by tunneling, jacking, or a combination of both.

### **3.4 PIPE JOINT CONSTRUCTION AND INSTALLATION:**

- A. Join and install PVC pipe as indicated in Part 2 above, and the following:
  - 1. Solvent cement joint pipe and fittings, joining with solvent cement in accordance with ASTM D 2855 and ASTM F 402.
  - 2. Pipe and gasketed fittings, joining with elastomeric seals in accordance with ASTM D 3212, and for truss pipe ASTM D 2680, Appendix XI.
  - 3. Installation in accordance with ASTM D 2321.
- B. Join and install ductile iron pipe as indicated in Part 2 above.

### **3.5 CLEANOUTS:**

- A. Install cleanouts and extension from sewer pipe to cleanout at grade as indicated. Set cleanout lid in concrete block 14 by 14 by 12 inches deep, except where location is in concrete paving. Set top of cleanout 1 inch above surrounding earth grade or flush with grade when installed in paving.

### **3.6 TAP CONNECTIONS:**

- A. Make connections to existing piping and underground structures so that finished work will conform as nearly as practicable to the requirements specified for new work.
- B. When tapping into existing man holes, use flexible rubber boot in accordance with Jasper/Pickens County Sewer Authority requirements.
- C. Use commercially manufactured wye fittings for piping branch connections. Remove section of existing pipe, install wye fitting into existing piping, and encase entire wye fitting plus 6-inch overlap, with not less than 6 inches of 3000-psi 28-day compressive-strength concrete.
- D. Make branch connections from side into existing 4- to 21-inch piping by removing section of existing pipe and installing wye fitting, into existing piping. Encase entire wye with not less than 6 inches of 3000-psi 28-day compressive-strength concrete.
  - 1. Provide concrete that will attain minimum 28-day compressive strength of 3000 psi, unless otherwise indicated.
  - 2. Use epoxy bonding compound as interface between new and existing concrete and piping materials.
- E. Protect existing piping and structures to prevent concrete or debris from entering while making tap connections. Remove debris, concrete, or other extraneous material that may accumulate.

### **3.7 INSTALLATION OF IDENTIFICATION:**

- A. Install continuous plastic underground warning tape during back-filling of trench for underground water service piping. Locate 6 to 8 inches below finished grade, directly over piping.

### **3.8 FIELD QUALITY CONTROL:**

- A. Testing: Perform testing of completed piping in accordance with local authorities having jurisdiction.
- B. Cleaning: Clear interior of piping and structures of dirt and other superfluous material as work progresses. Maintain swab or drag in piping and pull past each joint as it is completed.
  - 2. In large, accessible piping, brushes and brooms may be used for cleaning.
  - 2. Place plugs in ends of uncompleted pipe at end of day or whenever work stops.
  - 3. Flush piping between manholes, if required by local authority, to remove collected debris.
- C. Interior Inspection: Inspect piping to determine whether line displacement or other damage has occurred.
  - 3. Make inspections after pipe between manholes and manhole locations has been installed and approximately 2 feet of backfill is in place, and again at completion of project.
  - 2. If inspection indicates poor alignment, debris, displaced pipe, infiltration or other defects correct such defects, and reinspect.

**END OF SECTION**

**SECTION 33 4000  
STORMWATER UTILITIES**

**PART 1 GENERAL****1.1 RELATED DOCUMENTS:**

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.
- B. Related work specified elsewhere includes:
  - .. Section 31 2000 - "Earth Moving"
  - .. Section 03 3000 - "Cast-in-Place Concrete"

**1.2 DESCRIPTION OF WORK:**

- A. Work described in this section includes the construction of new storm drainage pipe and structures as shown on the Drawings

**1.3 QUALITY CONTROL:**

- A. Certifications: The Contractor shall submit to the Architect copies of certificates from suppliers of pipe, gaskets, reinforcing steel, cast iron downspout boots, cast iron frames, covers and grates, pre-cast structures, ready-mix concrete and other manufactured items, certifying that these products comply with the specifications and standards listed herein-after.
- B. Standard Specifications: Unless otherwise noted, all specifications referred to shall be the Georgia Department of Transportation (GDOT) "Standard Specifications Construction of Transportation Systems", Latest Edition.
- C. Testing: All laboratory and field testing as required to ensure compliance with these specifications will be performed by an independent testing laboratory.
- D. Comply with requirements of the International Plumbing Code, the American Concrete Pipe Association, and authorities having jurisdiction, when more stringent than specified or otherwise indicated

**PART 2 PRODUCTS****2.1 MATERIALS:**

- A. Where indicated, pipe smaller than 12-inches in diameter shall be Schedule 80 PVC, Contech A2000 PVC (or approved equal), or ADS N-12 HP HDPE (or approved equal), or as indicated on the drawings.
  - 1. Where indicated on the Drawings for "french drain", "perforated underdrain", foundation drain, planting or other areas, pipe shall be equivalent to ADS N-12

(perforated) corrugated HDPE pipe with smooth interior or perforated Contech A2000 PVC, complete with filter fabric “sock” and all required or necessary system accessories, fittings, and components, specified in in GDOT Standard Specifications Section 845.2.01, unless otherwise indicated on the Drawings..

- B. Pipe larger than 12-inches (or equivalent area in arch pipe) shall be one of the following unless specifically shown otherwise as specified in the GDOT Standard Specifications and as indicated on the Drawings:
  - 1. Class 3 minimum reinforced concrete pipe (RCP) with rubber o-ring type gaskets.
  - 2. Aluminized Type 2 “Ultra-flo” corrugated metal pipe (or approved equal) 16 gauge or thicker with hugger type bands and flat band style gaskets installed according to the manufacturer’s specifications.
- C. Concrete and reinforcing steel for headwalls, inlets, manholes, and other storm drainage structures shall comply with GDOT Standard Specifications. Concrete shall have a compressive strength of 4000 PSI.
- D. Masonry materials and precast concrete units shall conform to (GDOT) “Standard Specifications Construction of Transportation Systems”, Latest Edition
- E. Castings for frames, covers and grates in drainage structures shall comply with (GDOT) “Standard Specifications Construction of Transportation Systems”, Latest Edition.
  - 1. All manhole covers shall be round.
- F. Identification for Underground Plastic Pipe:
  - 1. Plastic Underground Warning Tapes: Polyethylene plastic tape with metallic core, 6 inches wide by 4 mils thick, solid yellow in color with continuously printed caption in black letters “CAUTION – STORM SEWER LINE BURIED BELOW.”
  - 2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Allen Systems, Inc.; Reef Industries, Inc.
    - b. Brady (W.H.) Co.; Signmark Div.
    - c. Calpico, Inc.
    - d. Carlton Industries, Inc.
    - e. EMED Co., Inc.
    - f. Seton Name Plate Co.

## **PART 3 EXECUTION**

### **3.1 STORM DRAIN PIPE:**

- A. Construction requirements, including excavation of trench, placing pipe, and backfilling around pipe shall conform to the applicable portions of (GDOT) “Standard Specifications Construction of Transportation Systems”, Latest Edition
- B. Bedding for storm pipe shall be as detailed in the construction plans and as per the pipe manufacturer’s requirements, Type 3 or better installation. Open graded stone, such as #57 stone, is not allowed as backfill.
- C. Compaction requirements for backfill shall be the same as specified for type of surface constructed over the trench, paved or planted areas as described in Section 31 2000 - “Earth Moving.”
- D. Properly coordinate with elevations of grades, footings, other below grade work, and etc.

### **3.2 INSTALLATION OF IDENTIFICATION:**

- A. Install continuous plastic underground warning tape during back-filling of trench for underground water service piping. Locate 6 to 8 inches below finished grade, directly over piping.

### **3.3 STRUCTURES:**

- A. Inlets, manholes, cleanouts and other storm drainage structures shall be installed or constructed in accordance with applicable portions of the following sections of the (GDOT) “Standard Specifications Construction of Transportation Systems”, Latest Edition:

**END OF SECTION**